// PEN SPINNING

History and Notation

ペン回しの
歴史と表記

RPD
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Third Edition

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Introduction

Discovering the world of pen spinning is fascinating. What seems like an activity to pass time during class turns out to have an incredible **international community**, with its own **complex culture**, events, videos and tournaments. A **language** exists to describe not only tricks, but also deeper concepts like aesthetic and technical values. As one starts to learn more about pen spinning, it becomes natural to wonder more about these topics: the language, the community-based society, the presentation of pen spinning videos, how pens are modified, and even the way tournaments are judged.

One may find the answer to those questions by reading old blogs and talking with experienced members. However, word of mouth fades with time. Additionally, it is hard to quickly obtain a broad view: to comprehend the importance of this language, its origins and its influence. That is why I decided to start this project eight years ago, as a way to **conserve and share our history**. The book was written with intermediate spinners in mind, although I think that anyone familiar with the basics can follow. If you decide to take on this lecture, thank you! I really hope that you find it entertaining and helpful.

The book is organized as follows: The first part covers **pen spinning history** as a whole. In Chapter 1, the core ideas are presented and explained: pen spinning before the internet, the impact of the first websites, which pens were used and what language can tell us about community exchanges and influences. Chapter 2 shows the origins of various spinner communities and their evolution up until the present day. Here we can see how much has happened during the last twenty years and how the internet in its various forms has been the medium that powered this development. Chapter 3 explains the history of competitive spinning: from the first World Tournament and World Cup to the present day, reviewing the top performers in each

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of them, as well as their impact in future generations of spinners.

The second part focuses on the **language of pen spinning**. Notation, which started as a necessity in the early days, has evolved immensely thanks to the contributions of hundreds of spinners. In Chapter 4 we do a comprehensive review of English notation, from the most widely used concepts to the more precise and forward-looking innovations. In Chapter 5 we review some alternative systems, whose main objective is pen spinning analysis rather than communication per se. In Chapters 6 and 7, Japanese and Korean notations are explained, which allows us to see the problem of translating tricks to text under completely different perspectives. Finally, in Chapter 8, a comprehensive trick dictionary can be found. Its focus isn't to teach the reader how to spin, but rather to explain the etymologies, creators, alternative names, origins and history of each trick.

The reader can either use this book as a regular book, reading it **from start to finish**; or as a **reference**, searching for and reading any parts that they may be interested in. Similar tricks are listed together in the trick dictionary, so for an alphabetic list, please check the index at the end of the book.

Improvements in the third edition − Community histories were given their own chapter to accomodate the various additions and rewrites. The trick dictionary was expanded with new entries, photos, etymologies and scores for how well each trick name is known. The notation chapters were proofread and slightly restructured, removing repeated information. An index was added and the bibliography, expanded.

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Part I

History

1   Origins

Pen spinning is a form of object manipulation or juggling dating back to the 1970s, and quite possibly even earlier. Thanks to the advent of internet and video sharing platforms, it developed at an unprecedented rate during the early 2000s. Considering the central role of the internet, its history can be divided into four eras: starting from pre-internet period to the present day. After this review, we will focus on each of the following aspects of pen spinning: videos, pen modding, notation and tournaments; and explain how they have evolved throughout the years.

1.1   Pen spinning history

Although some sources say that pen spinning predates World War 2, it's difficult to verify these claims as no written evidence (for example, trick guides) has been found thus far. However, it's fair to assume that some tricks like the thumbaround, sonic and pass have been known for very long.

1.1.1   Before the internet (1970-1997)

Pen spinning media from the pre-internet era is extremely rare. The **earliest known video** was the French TV commercial by the pen brand Bic, where passes between the thumb, index, middle and ring fingers are quickly performed. It was also present in Korean pop culture since at least the 80s, being a quirk of one of the characters of 수사반장 *(Chief Inspector)*, a detective TV show. Anecdotal evidence of pen spinning exists in

Bic - Stylo à quatre couleurs (1970) [1]

the 70s in China and other countries. From all of these sources, it's **Japanese pre-internet history** that is the most documented and will be the basis of early pen spinning.

During the 70s, there was a **pen spinning boom** in Japan. There were two main driving factors: the new widespread availability of mechanical pen-

cils, which previously used to be a luxury item, as well as the steady increase in students thanks to the ongoing economic miracle. Because these writing utensils were easier to spin, students all across the country started independently discovering and sharing tricks like the Thumbaround Normal and Reverse,

Weekly post - Ronin mawashi (1989)

Sonic, Neosonic and so on. It is said that written trick guides were also made and shared between students, although none remain today. At this time, the current term ペン回し *(pen spinning)* wasn't used, either being called シャーペンローリング *(mechanical pencil rolling)* or 浪人回し *(wanderer's spinning)*. This was due to its popularity among students who had to take an extra year to obtain better grades in the university

entrance examinations, called 浪人 *(ronin/wanderer)*. It was precisely in these **preparatory and private schools** where it became the most popular, many masters being said to be from Sundai Preparatory School, located in Tokyo and the oldest in all of Japan.

Pen spinning started to get even more well-known across the country during the 80s. A guide appeared in a popular kid's magazine called **Korokoro Comic**, and the idol **Matsumoto Iyo** performed a Thumbaround on stage in The Best Ten, an incredibly popular TV program at the time in 1989. The Kyoto university researcher **Hiromichi Hosoma** gave that same year a presentation about how these tricks, so difficult

Korokoro comic special feature (1990)

to discover by yourself, could be learned so easily from others, proposing pen spinning as an example of human observational learning. Both Hiromichi and the Japanese Zoological Society have confirmed with me that the original slides were lost. Various newspaper articles were published, talking about this popularity boom and how some schools were banning its practice.

1.1.2 Personal web pages (1997-2002)

Since there was no easy way for spinners from various schools or countries to communicate, its development stagnated until the availability of the internet. In 1997, Hideaki Kondo made the **first ever pen spinning website**, called 私のペン回しの歴史 *(My History with Pen Spinning)* and soon afterwards, the bulletin board ペン回し研究室 *(Pen Spinning Research Room)*. In his website, explanations and videos of tricks were compiled and presented. Thanks to the attention brought to the site by traditional media, the bulletin board gained traction, and thus even more tricks were developed.
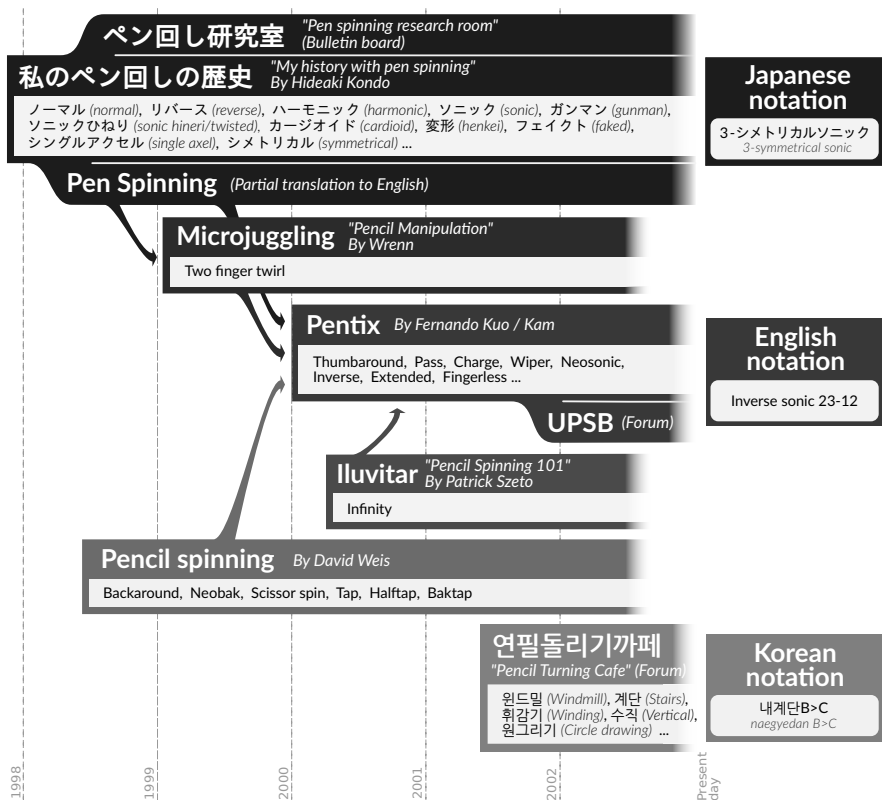
The first pen spinning websites and the terms they created.

Hideaki's website wasn't the only one created. From mid-1998 to the beginning of the new millenium, various **websites in English** also appeared: "Pencil spinning" by David Weis, "Iluvitar" by Patrick Szeto, "Microjuggling"

by Chris and "Pentix" by Fernando Kuo, better known as Kam. In addition, multiple smaller sites, often powered by the free web hosting service Geocities, linked or re-posted their information. The dawn of the internet was what pen spinning needed to thrive: it served as both an archive for tutorials and a communication method to develop new techniques. The perspective shifted **from local to global**, and tricks didn't need to be constantly rediscovered anymore.

During this early stage, the concept of combos didn't exist yet. **Notation was extremely important**: bandwidths were small and data transfer rates limited, so videos were scarce and heavily compressed. In order to discuss in forums, it was imperative to do so through text. Thus, new tricks were named as they were discovered. While the interactions between websites were rare, they did happen. When one website learned a trick from another, it also adopted the name, and in this way allows us to understand the **early interactions and discoveries** of the community.

The concept of **modifiers** was introduced by Hideaki, inspired by organic chemistry. As we can see in Pentix' trick name table (2002), not all reverses were thought to be possible. Modifiers were extremely helpful for people discovering new tricks, as they could be attempted to be applied to all other known tricks to generate new ones.

1.1.3   Forums (2002-2015)

Hideaki's **bulletin board** proved to be an invaluable tool: It was an organized and easy way for anyone to discuss with each other, and let new people catch up by reading past messages. Bulletin boards hadn't been included in English websites yet, providing guestbooks at most. The addition of forums would mark the next big era of pen spinning.

The first forum to be created outside of Japan was the **연필돌리기까페** *(Pencil Turning Cafe)* on May 31, 2001. It was created as the internet grew more wide-spread in Korea, and was built on a popular forum platform "Daum Cafe" at the time. Soon after that, Kam started the **Pentix board** (also referred to as UPSB v1) on November 15, 2001. Conscious of the current situation with multiple web pages and small communities, his idea was to create a common platform with moderators from all sites. That way, all of their members would feel represented.

The personal pages provided learning materials and new tricks, but forums allowed communities to grow together. It was during this time that most of the **aspects of modern pen spinning** originated: pen modifications, collaboration and solo videos, freestyles and planned combos, tournaments, gatherings, as well as technical and aesthetical values about combos (execution, difficulty, creativity...). With the advent of video sharing websites like YouTube, there was no need to use notation to develop pen spinning anymore. After being freed from this restriction, some spinners continued pushing notation just for the sake of understanding pen spinning better.

Since the release of the Pen Spinning Research Room, the use of bulletin boards for pen spinning in Japan was common. On August 29, 2005, the **JapEn Board** (JEB) was founded as a more organized platform for the Japanese community. For the years to come, JEB remained as a strong community thanks to a solid media presence, a constant influx of new members and projects like the JapEn collaboration series, in which participation became something for members to pursue. That same year, on the 8th of February, 2005, the **French Pen Spinning Board** (FPSB) was also created. FPSB became one of the strongest boards, winning several world competitions as well as having the most consistent yearly collaboration series outside of JapEn. **UPSB** was established as the central hub for pen spinning, where updates for international events and tournaments were posted, among other projects. As for **Korea**, its history had its ups and downs. After the Pencil Turning Cafe, another cafe called Pendolsa was created in 2003. It would gain immense popularity thanks to a key TV appearance, but internal disputes caused it to decline. In **China**, a board called PSH was created. Due to the country's large size, as well as strong promotion from ZhiGao and other pen brands, it would go on to become one of the largest boards ever.

1.1.4   Social media (2016-)

In the decade of 2010, **another change would occur** and affect the ways in which spinners communicated with each other. Forums and personal websites pose a problem: they are too scattered across various domains which makes it hard to keep up-to-date on many of them at the same time. Because of this, social media platforms like Twitter, Instagram, and Facebook became more popular options: centralizing the communications, giving easy access to notifications and focusing on individuals.

Throughout 2010 and for few years after, social media and forums were both simultaneously used as popular communication options. However, as 2014 came around, inactivity in forums was becoming evident. After years of consistent yearly World Tournaments and World Cups, 2016 was the first year without the usual organized world event. Most Japanese spinners moved to Twitter, leaving the forum as an announcement board for projects and collaborations and on October 1, 2018, **UPSB closed** indefinitely as the administration couldn't cover the costs of the website anymore.

This didn't mean that pen spinning was dead. Spinners moved to **Discord**, a popular chat platform, which substituted forums; social media made pen spinning more visible to the world and the organization of World Tournaments and World Cups went back to normal. In 2020, the measures to contain the **COVID-19** pandemic resulted in numerous lockdowns across the world, which brought many retired members to pick up the hobby again.

1.2   Aspects of pen spinning

Pen spinning is comprised of various aspects: several kinds of video productions, tournaments, pen modding and notation. Often times, members dedicate their time in only a few of those aspects but even as separate as these sub-cultures may be, the development of them is well-connected.

1.2.1   Videos

One of the oldest types of pen spinning videos is **tutorials**. In the early website days, these videos or gifs were low-resolution, heavily compressed, containing one to two second-long single-trick demonstrations with complementary text explanations. As the infrastructure of the internet improved, explanations and slow-motion clips were incorporated, resulting in the much longer tutorials that we're used to now.

At the beginning, pen spinning consisted mainly of doing tricks separately, sometimes chaining a few tricks together, which eventually led to the discovery of **freestyles** and full-length **combos**. Since this gave more room for the spinners to express their identities, filming videos outside of tutorials became more common. This would be one of the main activities of the Pencil Turning Cafe in 2001-2003, where members uploaded their combos directly to the forum. The concept of freestyle would then be introduced in Japan by Aysh in 2004, through his website ペン回し資料室 *(Pen Spinning reference room)*.

KiRer in SPSL 7th (2010)

The combos uploaded to the cafe were evaluated and the best were moved into the Hall of Fame. In 2003, spinners from the newly created Pendolsa took various combos from the Hall of Fame, compiled them and added background music. This was called 펜돌사 1기 대문영상 *(Pendolsa 1st Daemun video)*, Daemun being the name of the video uploading platform of the cafes. Japanese spinners from that time called it 神動画 *(kami douga/god video)*, as it was reuploaded to a website named that way. It was also shared in English websites, which called it Pendolsa 1st.

Pendolsa 1st is a **promo** (PV): a compilation of previously released videos from various spinners. The series continued after until the 7th, which all included the concept of submissions and the filtering of participants. When the compiled video contains new and unreleased combos they are called **collaboration** videos (CV). The Pendolsa series set various trends that continued throughout the history of pen spinning: the naming scheme of 1st, 2nd..., electronic music as the usual background music choice, an intro segment and spinners' names displayed next to their combos.

Inspired by this, other spinners organized more collaborative projects. Among them, Japen 1st stands out. Organized by the Japanese spinner DaReKa, it was released on December 25, 2005 and like Pendolsa 1st, became very well known and marked the start of a renowned CV series. Japanese spinners became known for their high quality collaboration videos, from which we can highlight other series like SPSL. Although CVs have some peculiarities that set them apart from other non-pen spinning videos, their evolution is mostly defined by video editing and pen spinning trends of the time that represented it overall.

Another type of video also emerged at the time, which contained a compilation video of only one spinner. Using the combos uploaded to the various Korean cafes, the Japanese spinner 342 made several **unofficial solos**. From his solos the trend of writing *"(Spinner name) in (Board name)"* in white text over a black background at the beginning of the video first started.

That introduction style would be continued to be used by another Japanese spinner, AREZERT (Ponkotu). On the other hand, official **solo** videos (SV) are made by the spinner themselves. The first solo released was by Darren, better known as nhk_9, on December 18, 2003, which was uploaded to his website The Troposphere. Later on, it would become a trend for some spinners to upload a solo every one or two years. Notable solo series are the ones made by Freeman from Spain and i.suk from Australia.

Even though, at the beginning, the videos that impacted pen spinning and those that went **viral** used to be the same (Japen 1st, Pendolsa 1st, Pentrix x Superhandz, UPSB + PDS), that would stop being the case. From recent years, we can highlight videos like "Epic Pen Spinning" by Kuma films (December 5, 2013) with 15M views on YouTube, "160 TRICKS - 2 YEARS OF PEN SPINNING" by

Freeman - Best of 2010

Thomasdagua (March 25, 2018) with 9.2M views on YouTube or Domo spinning a sausage (July 22, 2020) with more than 20M combined views on TikTok, Twitter and YouTube.

1.2.2   Pens

Pen spinning used to be done with regular pens and mechanical pencils. Even though there were some common trends among them, like being fairly light, balanced, and having a uniform body, the particular models depended on the country. In the US, the most common one was the **Pentel RSVP**, although the Pilot G2 and Pentel Hybrid Gel Roller (HGR) were also used. In Japan, the main products were the **Pilot Dr. Grip**, Tombow Playcolor, Rushon, Pentel Sharplet and the Pilot Super Grip. **Pencils** were also common: in the US the Sanford American #2 Pencil was sometimes preferred for being heavier than others and in Japan, one with two metal caps at the ends was popular for its length and weight.

Putting a second cap on the other end of pens like the Rushon (Japan) or comssa (Korea) was a common modification in early years. The Canadian spinner nhk_9 popularized the **Zebra 3000*F**, a double-capped version of

the Zebra F-3000. However, the 3000*F was already extremely rare back in the early 2000s. Although some purists like David Weis and nhk_9 rejected modifications and continued spinning unmodded pens, this practice became less popular with time. Nowadays, this prejudice is mostly extinct, with some spinners choosing unmodded pens like the Dr.Grip or Stalogy purely for aesthetic reasons.

Pentel Sharplet (Hideaki, 1997)

*3000*F (nhk_9, 2003)*

As the pen spinning communities started to grow, a need for better pens emerged. On April 28th, 2003, Kam posted an article on Pentix detailing how to do variations of his **RSVP-based** modifications. The first version (v1) consisted of a RSVP with its cap on the back, the clip cut and the inktube reversed. The second version (v2) changed the original grip by replacing it with the grip from a Pentel Hybrid Gel Grip (HGG), as well as attaching the HGG's metal tip to the front and sliding a decorative paper design into the transparent barrel of the pen. The paper design in a modified pen was replicated in other mods, and later became known as an insert. The Pentix board user Nate proposed using the spare RSVP grip inside the cap so that the pen could be more balanced and longer. Some of Nate's own mods were featured in a Pentix article. The MMX (Momentum MaXimum) had a G2 barrel instead of the HGG grip and was created to be optimal for spinning. However, as its construction was considered to be too complicated, Kam made his final design: the **RSVP MX**, considered to be easier to make and more affordable. This style of single-capped modification became popular in all countries even though the base pen (RSVP) was only available in America. In early Pendolsa, a variant called the **Jellpin MX** was devised, using MonAmi Jell·Pin for the body [26], Evergreen Curvejell for the cap and optionally, MonAmi Jeller for the tip. In both Japan and China, mods like the Lakubo SG (Super Grip) and the G3 Jimnie were invented, using the Uni Lakubo and Pilot G3 as base pens to substitute the non-existent RSVP.

Eventually, Penspinstore (Pendolsa's shop) imported RSVPs from the US, giving Asian spinners access to the pen which made the RSVP MX one of the most popular mods.

RSVP V1, V2 and MX (Kam, 2003)

Comssa DC (Mr.LSC, circa 2003)

In Korea, the Dong-A com.ssa was a common and cheap marker. Spinning it double-capped was common, but further modifications like removing the inktube and adding Dong-A Anyball grips to the caps were done later. In a 2003 gathering, a young member showed Mr.LSC an HGG tip, which he then screwed onto the comssa caps, thus creating the **metal comssa**. Mr.LSC would later start Penspinstore, where he sold these modifications made with exclusive comssa bodies and later on, with outserts (decorative papers affixed to the outside of the body). As more pen modification took place, the gate-keeping around what was considered or wasn't considered a valid pen for spinning continued, as Kam said to Mr.LSC that *"The comssa is a stick, not a pen"*. However, they would end up trading pens later.

Explaining the Dr.KT name and its parts in the Japanese TV (RYO, Jun 2006)
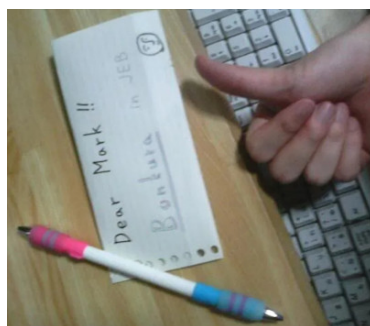
Bonkura showing the Dr.M&M he used in WT07 (Bonkura, 2007)

We have seen the origins of double- and single-capped mods, but we shouldn't forget about center-connected mods. The first one was the **Vortex**, which was sold by Pendolsa and used two cut RSVPs to make a symmetrical body on which comssa caps and anyball grips were added. Other versions would be made with different pens and without the comssa caps, like the G2-vortex in FPSB, made by connecting two Pilot G2 pens.

During the first half of 2006, RYO created a mod which he called the **Dr.KT**, as the tips were from Dr.Grip and the body from a marker called KeyTyo. He later appeared on Japanese TV demonstrating his pen spinning skills and explained how he made his new mod. Thanks to it being significantly heavier than mods made prior, the TV appearance and the use of it by a popular spinner named Bonkura, who used it in World Tournament 2007, the Dr. KT became very famous all around the world. Many variations became common: using Miffy & Melanie markers for the body (Dr.M&M), using Dr Grip grips instead of Sailor Gel or using Color Twin instead of Keytyo (Dr.CT) to have more color choices. Two other well known modifications from that time were made in France: the **Grip Aviaire** by Banz, published in August 12th, 2006 and the **Waterfall mod**.

Buster CYL (Peem, Oct 2008)

VGG emboss (VicGotGame, Jun 2010)

At this point, spinners began to understand that longer and heavier pens were very helpful for performing difficult tricks. This was taken to the next level by Spinnerpeem on October 21, 2008, when he designed the **Buster CYL**. As it used Crayola Supertips for its body, it was longer than the Dr. KT, and due to the Zebra Airfit tips, it was also heavier. Aesthetically, the completely white makeup of the mod gave off the impression that it was even bigger when spun. The Buster helped Peem win the World Tournament of 2009, with many spinners opposing these modifications, as they thought that his tricks couldn't be performed without very heavy pens like his.

Two years later, on June 19, 2010, VicGotGame from UPSB created the **VGG Emboss mod**. The Japanese spinner Kirbo had already made a mod with an Emboss, which was a pen considerably thicker than the Supertips or Keytyo. However, VicGotGame extended the body and used airfit tips to make the pen heavier and longer than any mod before it. This was the first of many popular heavy emboss-based mods, which due to their weight and design were especially apt for tournaments and hard tricks. The trend would be pushed even further by A13X with his **Giotto bullet mod**.

The single-capped style of modding was also perfected. Around 2006 and 2007, Japanese spinners started making their own **personal G3-based mods**, sometimes also publishing tutorials on their personal blogs. Some of the first were the ones made by kuzu, seven, key3 and coulomb, all inspired by the original G3 Jimnie mod. In 2008, the German spinner F1r3fly made his personal G3, which was very popular in UPSB at the time.

Syrti G3 (Syrti, May 2010)   *Trinity mod (James, Jul 2012)*
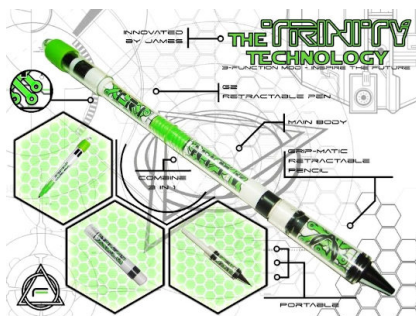
In 2009, 2011 and 2013, a **Pen Modding World Tournament** was organized. This series of world events was born from a notion that was starting to appear in pen modding: creating designs as an art form, rather than purely for their spinning performance. Competitors created complex mods, some with patterned gripcuts, additional functionality, and intricate designs. As time passed, people became more aware of the presentation of their pens and became to focus on photography and photo editing when showing their work. From this point onwards we can distinguish **three main aspects of pen modding**: spinning performance (heavy tournament mods), spinning effect (mostly single-capped mods and un-modded pens, but also some double-capped mods) and aesthetic purposes (featuring intricate designs, or very clean grip cuts that aren't fully seen while spinning).

PEN'Z GEAR (2008)

PENMAWASHI (2008)

As the popularity of pen spinning increased, **factory-made mods** were designed and commercialized. The first three models were all made in 2008: the PEN'Z GEAR by Takaratomy in collaboration with the Japanese Pen Spinning Foundation; the Spinz Axis, Spinz Zero and Spinz Ronin (2008), made by Pentech; and the PENMAWASHI (2008), made by Megahouse in collaboration with Hideaki. Years later, Pendolsa started manufacturing the Spinsticks (2013) and PSH did the same with MG-Zero (2013), Wonderpen (2014) and Spinpro (2016). Companies like ZhiGao, ZhiWu/Finger Dance and Nope keep making and commercializing new designs to this day.

Additionally, the Chinese spinner Eno worked towards creating **parts specifically for pen spinning**. Although often called the pejorative-sounding name "fake parts", most of the community is grateful for their existence as they allowed for customized materials, shapes, and colors at reduced prices. Due to collection purposes as well as slight differences in weight and sizes, online shops who have sold factory-made parts under the guise of original parts have received huge backlashes from the pen spinning community.

As time goes on, some pens are **discontinued** and become rare. Manufacturing them again, for the sole purpose of pen spinning, is often not cost efficient, as the molds and dies for them require an immense amount of production to be economical. However, Eno has made his own versions of pen parts like the Reynolds 094 cap (the one used in the Waterfall mod), Vega gel tip or Penzgear rings, all of which come from discontinued pens. Some spinners have also been able to contact the original producers, like Vore-Tex did with Beifa grips. Regardless, there is an avid group of **pen collectors** who try to hunt rare and expensive pens like the 3000*F, Pendolsa comssa versions v1-v5 (only 500 exist of the v1), Bonkura penzgear (only 500 exist),

commemorative RSVPs (of PSAJ, UPSB, UCPSB, FPSB, JapEn), Aqua comssa, RSVP Moonz and many more.

PenDolSa Comssa v1 to v5 (photo: Banz)

Japen 4th G3, Bonkura PEN'Z GEAR and two PSAJ RSVP (photo: Crasher)

1.2.3 Language

In order to discuss pen spinning efficiently via text or voice, new **terminology had to be developed**. We have already seen how important this was in the early 2000s, as data rates were incredibly restrictive so videos and photos were few and very compressed. Each community developed its own way to precisely write down and describe tricks and concepts, which got more complex as pen spinning developed.

In the timeline of early websites, we saw the origins of some terms commonly used today. Most of the time, **websites conserved the names** given to the tricks by their creators, which lets us know a bit about their influences and relationships. For example, the Japanese trick name *Gunman* was coined in 1990, in the Korokoro comic special feature, which Hideaki then kept on using. *Reverse* also originated in Korokoro as *Reverse Roll*, a name for the *Thumbaround Reverse*. It was also used that way by Hideaki, and later extended to become a modifier and applied to many other trick names by both Hideaki and Kam.

Thanks to this **bond between technique and name**, the place where people learned these tricks often determined how they refer to them. Nowadays, there are **three very distinct notations**. Japan continued with Hideaki's naming. In Korea, it evolved from the names given by the Pencil Turning Cafe. For everywhere else, which not only included English-speaking countries, but all those in Europe, South America and the rest of Asia, the names given by Kam in Pentix stuck around.

As new tricks appeared, more **advanced naming systems** were made. UPSB's Naming Committee had a great influence, defining many naming concepts that formed what is now known as "formal notation". The old notation style that continued with the original rules was given the name of "informal notation". Improvements to this formal notation were also made later on in FPSB's Laboratoire and in SPSC's Departamento de Investigación. Since the border between the two notation styles was left intentionally unclear, some improvements made to formal notation began to make their way into informal notation as well. In Japan, a spinner named Sunrise introduced a big notational improvement, although since its structure was too different than the usual practice, it ended up being unused. In Korea, the NX lectures gave birth to abcd notation, a small notational improvement that was successfully adopted by the community.

	Common use	Precision	Analysis
English	Informal not. (2000-)	Formal not. (2007-)	Elementary not. (2012)
Japanese	Japanese not. (1997-)	Sunrise's not. (2010)	-
Korean	Korean not. (2001-)	ABCD not. (2004-05)	-

While notational research is very important, I want to stress that **the language of pen spinning extends beyond notation**. Words like mod, body, weight distribution, linkage, powertrick, control, finger positioning, density, structure, tech, planned combo or freestyle have meanings which are exclusive to pen spinning. As time went on, their meanings evolved to reflect the ideas of each era, although it can be difficult even for people who use those terms to properly define their meanings.

1.2.4   Tournaments

While it's fair to assume that comparisons between spinners have always happened, tournaments, as we know them today, started to be conceived around 2003 when freestyles and combos were made standard. It was then that nhk_9 wrote on the Troposphere a small post about his **vision for possible tournaments**, with ideas like a test-based qualification, themed rounds, simple methods of evaluation for combos, as well as objective, record-based rounds. But at this time, it wasn't clear if giving numerical scores to combos made sense.

Some of the earliest known organized battles started in UPSB v2, in 2004 and 2005. The Battle Records Committee (BRC) was established, their first project being the **UPSB official battles**. Spinners could submit previously unreleased videos during one week, following the theme of each battle. The spinner name couldn't be published, to avoid biases while voting. Results were decided by the UPSB members during a 1 week-long poll. The battles started on June 11th, 2004, and at least 10 of them occurred. Another event was called **Capture the Throne**, which was announced in January 14th, 2005 [24]. It consisted of ten rounds in which participants had to overcome the challenges created by the BRC. For example, copying some tricks, small combos, or even doing a trick with greater speed. In 2004, Zombo proposed an UPSL (Universal Pen Spinning League) but it wasn't organized. However, on July 11th, 2005, Phya announced the **first UPSB tournament**, which consisted both of an overall category and various themed ones (speed, smoothness, air, stalls, creativity and strange object spinning).

Cases and CDs of the 2005, 2007 and 2008 Pendolsa winter tournaments.

In 2005, there was another important event: the first known offline tournament. It was the first of the **Pendolsa winter tournaments**, for which CDs with video recordings were sold. Other interesting formats also originated at this time. In 2005, in UPSB v2, Rookie proposed the **tack-on** format [23]. After a starting trick, each participating spinner had to append a new trick while copying what was done before until no one else could continue to add to the chain. This format was shared in a Russian website in 2007, and tack-on became a very popular format in Russian pen spinning communities.

In 2007, Zombo, who was also a member of the BRC, organized the **Team Spinning Tournament** (TST). It was the first tournament to feature teams, as well as the first one to span internationally, with 16 teams from 8 boards. This event introduced a now common format of holding various 1 vs. 1 with an additional 2 vs. 2 for each team battle. It was also in this year when the **first World Tournament** (WT07) was organized by Crash with the help of various other spinners. The tournament had judges chosen by the committee and a basic point score system. Its final round was a battle royale among five spinners, in which a Korean spinner named KTH won.

Since it was thought that pen spinning wouldn't change much from one year to another, a team cup was organized instead of another WT. Inspired by the format used by TST, the **World Cup 2008** (WC08) was intended as a way to introduce more international events while not becoming repetitive. As the reputation for these events grew, spinners now started taking them more seriously. It was won by the Japanese team of Ayatori, Key3, Saizen, kUzu, Pesp and toro. After this, the **Asian Cup 2008** (AC08) was held, which was won by the Korean board KPSA. The live tournament called **PSTJ** (Pen Spinning Tournament Japan) was organized in 2008, in Tokyo, which was sponsored by various companies, cov-

Poster for WT15

ered by the television and had more than 1000 USD in prizes. The **Bic Pen Spinning Awards** were held in France, which was the first tournament to be organized by an official pen brand.
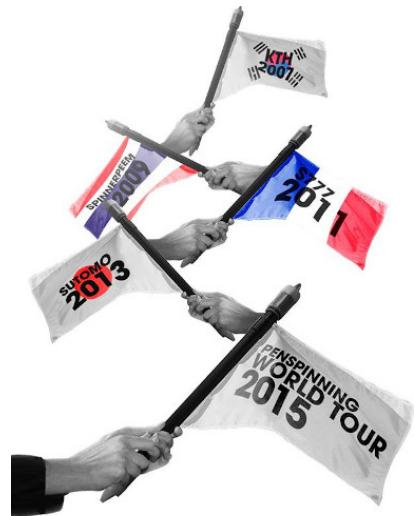
From 2004 to 2008, the basis for how tournaments should be conducted were formed. Individual and team tournaments in the style of WT and WC became standard for high-level competitions, while other formats were relegated to a more casual status. WC and WT proceeded to be held in alternating years, pushing the boundaries of pen spinning further and further.

Chapter 3 - "International tournaments" goes into a more detailed analysis of these events and the influences of spinners like s777, fel2fram, Spinnerpeem and i.suk in pen spinning.

WPSAL Finals 2018

In Japan, there are two yearly tournaments: the **Naranja pen festival** (NPF), which takes place in person and the **Japan Cup** (JC), which happens online. There are various yearly tournaments in France: the **FPSBT** and the **TD** (tournoi débutant), as well as live tournaments in their official summer gatherings. Lately, in China, the **ZhiGao tournaments** (renamed to WPSAL Finals after 2018) are notable, which invite powerful spinners from abroad to participate. From 2018, another international tournament series started: the **Pen Spinning Olympics**, which features various themed categories. Finally, while not considered a tournament as no scores are given, **Spinfest** is a popular international event for which every participating board releases a collaboration video.

2 Boards and communities

Communication between individuals has been crucial to the development of the hobby. Communities, once local and exclusive to those in the same school, grew into country-wide or international groups with a **common language**, regardless of physical distance. This change began with the first personal web pages and fully developed with the advent of forums. The organization of individual **boards** became very influential, as spinners tried to boost their public view by winning tournaments and organizing collabs in their name. Nowadays, with the rise of social media and the seamless integration of automated translation software, the borders between **historical communities** have almost faded completely. Here, we have shown the board histories and accomplishments for eight regions.

2.1 Japanese

In 1997, Hideaki Kondo made the **first ever pen spinning website**, called 私のペン回しの歴史 *(My History with Pen Spinning)* and soon afterwards, the bulletin board ペン回し研究室 *(Pen Spinning Research Room)*. In his website, explanations and videos of tricks were compiled and presented. Thanks to the attention brought to the site by traditional media, the bulletin board gained traction, and thus even

Detail of Hideaki Kondo's page.

more tricks were developed. While other sites appeared later, like Crasher's ペン回し道場 *(Pen Spinning Dojo)* in 2001, Hideaki's site remained the one with the most information. As more tricks were discovered, Hideaki decided to create a more elaborate nomenclature based on organic chemistry, which became the basis of the current Japanese notation system. Spinners like Crasher opposed these changes, arguing that individual names represent the history and originality of each trick.

From 2003-2004, there was a feeling of having **exhausted all the possibilities** of pen spinning and so many experienced spinners, including Hideaki,

either quit or reduced their activity. However, in the first half of 2004, the Korean promo video Pendolsa 1st started being shared in Japan, appearing on the viral video website 神動画 (*Kami Douga*, meaning "god video") as well as in some discussion threads in **2ch** (2ch was a website similar in structure to 4chan, but whose influence in Japanese society at the time was comparable to that of TV and radio.) The 2ch spinners marked the beginning of a **revitalization**, a new generation that was interested in spinners abroad and saw the creative potential of the hobby.

On February 2, 2004, Aysh launched a website called ペン回し資料室 *(Pen Spinning Reference Room)*, in which fresh concepts from overseas like freestyle and wipers were introduced. Also that year, DaReKa opened ペン回しの惑星 (Pen Spinning Planet). Aysh, in collaboration with PenstudioZ made a CV called "The Asia Pen Spinning Presentation". Thanks to the influence of UPSB and Pendolsa, spinners from 2ch opened the **JapEn Board** in August 2005, with okkar as its admin. Bulletin boards would continue to be used throughout these years, both because of the large user-base of the Pen Spinning Research Room, as well the anonymity they provided.
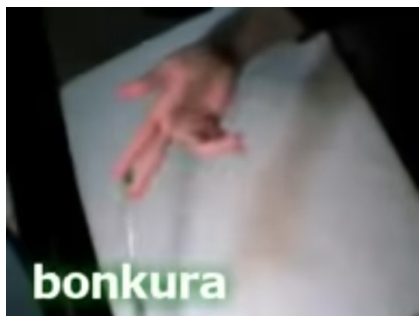
Bonkura in PSN 2nd

On August 2005, ps-728 was inspired by Pendolsa 1st and released the "2ch Pen Spinning PV", later known as PSN 1st. DaReKa organized the first official board collaboration: **JapEn 1st**, which was released the 25th of December of 2005. Although these two influential series started this year, the overall number of CVs organized was still low. From 2006 onwards, this number increased substantially, from which we can highlight WLPS 1st and 2nd. Bonkura became well known after his appearance in PSN 2nd (May 2006) thanks to his unique style and novel combo structure. This would attract people's attention, with both positive and negative evaluations. In January 2007, the first **SPSL** (Scissor's Pen Spinning Laboratory) CV was released. It would be the start of one of the longest collaboration series, with 17 entries, the last one released in 2020. The first オフ会 (short for *offline meeting*) was held in Kanto in October 2005. Spinners then began to film videos during them, some becoming well known series like Tokyo Off, おpオフ and Sendai Off.

Pen spinning has had a strong presence in **Japanese television**. Even before 2001, Hideaki had already appeared in several TV programs. From 2003 to 2007, not only Hideaki but also other spinners like Aysh, Crasher, Bonkura, DaReKa, RYO and awawa appeared at least 20 times in total. This contributed to the popularity of the hobby in the country to the point at which a lot of the young population knows what pen spinning is, and that Dr.Grip is a pen commonly used for it.

In July 2007, the **Pen Spinning Association Japan (PSAJ)** was established to promote pen spinning. Several projects were put into motion, which were completed towards the end of 2007 and the beginning of 2008. In collaboration with the toy company Takaratomy, they released a factory-made mod, the PEN'Z GEAR. They wrote a book with pen spinning tutorials (ペンスピニングーペン回しをはじめようー, *Penspinning, Let's learn Pen Spinning!*) and also sold a CD with more in-depth guides and videos (ペン回し王, *The King of Pen Spinning*).

On September 13, 2007, a tragedy struck the community. The highly respected member and vice chairman of the PSAJ, **Bonkura**, passed away at 21 years old due to a heart failure. In his memory, events were held and tribute videos made. The community was still incredibly active, but this tragic event slowly took its emotional toll on it. The JEB organization changed, thus opening a v2 on February 3, 2008.

As for tournaments, the first one was in 2007, called the **JEB tournament**. The next year it was renamed to JapEn Cup (2008) and later on, to Japan Cup, which has been held annually ever since. The PSAJ organized one of the biggest tournaments in history: the **Pen Spinning Tournament Japan 2008** (PSTJ). A total of 173 participants sent videos through the forum, from which the best 16 were

kUzu and SEVEN in the PSTJ (2008)

selected and given paid tickets to the offline finals in Tokyo, which were covered on television. Sponsored by Takaratomy, Pentel, and Pony Canyon, the prizes were a PSP for third place, an Xbox 360 for second place and 100.000 JPY (~1000 USD) for the winner, which were Zunda, Key3, and SEVEN

respectively. 500 units of a limited edition PEN'Z GEAR were created in memory of Bonkura, which were given to the participants of the tournament and to the spectators of the live finals. Also during this year, the team consisting of Ayatori, Key3, Saizen, kUzu, Pesp and toro **won WC08**.

Since the incident, the PSAJ kept working, but their activity started to dwindle. They commissioned a manga to Iso Naoki, called *"Pen Spinning Legend, Spinner King Tsubasa"*, which used a PEN'Z GEAR as his main mod. One of their last contributions was in July 2009, as they collaborated in the organization of the Naranja Pen Spinning Festival, intended as a sucessor to the 2008 national convention. Even without the PSAJ, the Naranja Pen Spinning Festival kept being organized, each year in a different location.

Monatyo in JapEn 7th

The period from 2008 to 2010 was an all-time high in terms of number and quality of collaboration videos. This was the prime for SPSL and the outset of other series like Skyper, ZUNDA, vacation, POTATO, Pearls, Deryck and 0+. The activity remained fairly consistent in the following years. Joshin made Talentica in 2012, after which he continued making various creative and distinctive CVs. Friendly 1st by kznk was released in 2013 and is the longest CV to this day, with 123 participants. From 2013 to 2014, Noel made three instalments of his personal CV series, as well as Nacht-Vision. TMrW was one of the most prolific editors, making TMrW 1st and 2nd, the Tethnic series, and 1993CV, among others. Two JapEn CV's from this period rose above the rest in terms of popularity: JapEn 7th, edited by Lotus and Omoa, with 360k views, and JapEn 10th, edited by TMrW, with 180k views. During JapEn 10th, the **Spinning of the Year** (SoY) winners were also announced. The categories depend on the year, but the idea is that the best spinners, combos, and/or collabs within the board are chosen via a public poll.

In late 2010, a pen spinning circle in Keio University called the 慶應ペン回し研究会 (**Keio Penspinning Society**) was created. While enrolled in the university, Miyusu was in charge of this group. Various promotional videos for the circle were created. In particular, the 2014 promo video with Kay and Menowa* became viral and reached 140k views on YouTube.

One of the first **teams** formed in Japan was Evolving Spinners (ES). Their first, relatively unknown project was two videos (う p 祭り CV) in 2006. Two years later, they would start the Saz'ect series. New Generation (NG) is another team worth mentioning. Since NG1st in 2009, they have made numerous collabs, the last one being NG6th in 2020. MG+ selected their members in 2014, and have continued up to MG+ 5th in 2021. In 2016, the team Sephirot was formed. Led by VAIN, they've produced Sephirot, Sœphistication and omachi-kudasai, as well as 5 episodes of a podcast.

In 2015, the first **PSA cup** was held. In this event, teams could register and submit their own collaborations, after which the best ones were selected by public voting. In this first edition, teams like NG, Lovetrap and Jaunty Fool participated. The event has also been held in 2017, 2019 and 2021.

JEB also had a very strong international tournament presence, **winning four consecutive World Tournaments** and World Cups. Sutomo won WT13 and ctionist finished in the top 4. The team consisting of ACT, HAL, Kay, Menowa*, mi and oZone won WC14. In WT15, Menowa* took the trophy and Ease, a Dr Grip spinner, finished in the top 8. The 2017 PWT was won by Beige.

Ease in WT15 R4 (2015)

There were various problems with the forum server which the busy administration couldn't take care of. Ease was already a respected spinner but he wasn't an admin of the v2. After receiving the approval of the community via a Twitter poll, he launched **JEB v3** in August 10, 2016. As we have already explained, this year marked the transition between the dominance of forums to the prevalence of social media platforms. Ease's idea was to keep the new board to a minimum, as most of the communication was already happening either via Twitter or Line. However, its functionality was eventually expanded to replicate the features of the old website.

Because of the disorganization during this year, **two JapEn project teams** were formed, which gave rise to JapEn12th "Twelve Moments" and "LittleMemory". All of the official board videos since then (JapEn project, Spinning of the Year, and Spinfest, among others) have been uploaded to the official JEB YouTube channel. In 2017, the **Japanese Pen Spinning Foun-**

dation (JPSF) was founded by Iteza, Takopetty (formerly Miyusu), and Menowa*, to continue with pen spinning's promotion. They have organized numerous lectures, meetings and opened their own online shop.

Two **youtubers** lead the promotion of the hobby nowadays: Kay and Teruosan, with 59k and 74k subscribers respectively, both with multiple videos surpassing a million views. In addition to them, both Ease and the JPSF have made quite comprehensive and popular trick tutorial series. Menowa* and Vain, as well as Laku and Iteza, have recorded their own podcasts.

Posters for 2019's JEB spinfest entry (left) and JapEn 15th live premiere (right).

The ceiling of high-level edits steadily rose as editors like Lotus ventured into the professional world and the tendency shifted from long series to one-off projects. From these, we can highlight -.Lab- by Takan and Noel, Cygnus by Drowsy, Faint Golden Time by Takan and Julia, End of the World Album by Ippei, Stylø by Mel, and Anone by Wabi. Lotus has been in charge of edits like 0+ the final, JEB Spinfest 2019 and Dance Above the Floor. Other great editors to mention are Lagoon, who made 春風 and Fanfare!; as well as Amausa, who was in charge of editing JEB Spinfest 2021.

JapEn 15th stands out thanks to its promotion, planification and filming. Its production team consisted of 9 spinners. In addition to the custom BGM and merch, it had elaborate guest performances like those of Menowa*, Kay, and Ocha. The premiere was done live in a cinema, together with that year's Spinning of the Year announcement [11][12].

2.2   Korean

In 2001, the **연필돌리기까페** *(Pencil Turning Cafe)* opened. The name of the cafe, *"pamspin"*, is a word play with 팸 *(pam)*, short for "team" or "family", as the forum was organized into various teams of spinners (like the ones called BC, Se, ND, VS and RF). Compared to other boards and their emphasis on innovation, Korean spinners paid careful attention to imitation. Tricks from overseas were shared and the most proficient combos were shown in the Hall of Fame, which featured spinners like Mr.Sundenglee and Bukpa.

In 2003, the forum called **펜돌사** *(PenDolSa)* was created. The name, given by Mr. LSC (also known as Mr.Sundenglee or Jushin), means "people who spin the pen", which was a fashionable use of abbreviations at the time. Combos from the Pencil Turning Cafe's Hall of Fame from 2002 were compiled in the would-be viral video **"PenDolSa 1st"**, which ended up shaping the world of pen spinning going forward. This kind of compila-

두부 *in PenDolSa 1st (c. 2003)*

tion was new, so at the end of the video they included an apology message which translates to *"It's a bit long, but thank you for watching to the end. I'm sorry for making this video without getting permission from the people who recorded them."*

While it didn't directly increase the number of members by itself, Pendolsa 1st attracted the attention of TV producers, which held great influence at the time. In August of 2003, Korean spinners appeared in the program called **TV 특종 놀라운 세상** *(TV special amazing world)* by the MBC. After its airing, the number of members of the cafe went from 3000 to 100000 within a month. This new surge in popularity meant that a new member rank system was needed. Post permissions in the cafe were split based on these ranks. Unofficially, there was also distinction among the members, where those from before the aired TV special, like the cast of Pendolsa 1st, were treated like legends.

Some notable members from these early days are zlzlzb, GPC, and Two Tempers man. The PenDolSa series was continued, now exclusively via combo

submissions. A joint collab with UPSB was made: **UPSB + Pendolsa**. Exchanges with overseas spinners had been rare up until now, due to language barriers and slow site speeds. Between 2004 and 2005, Jushin, 원빈택MA, and zlzlzb among others produced the **"NX lectures"** (*NX* is an acronym for *New eXperiences*), a series of posts, meetings and video tutorials which covered NX-style courses and abcd notation.
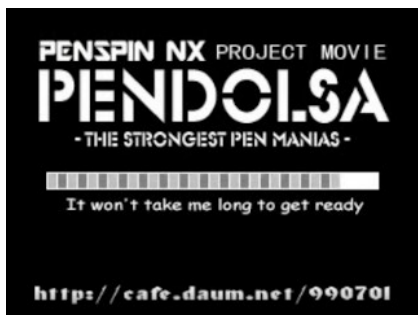
A video commemorating the NX lectures.

Pendolsa also had a pen store: **Penspinstore**, which was well known because of its unique versions of comssa. Mr. LSC, who owned both the store and forum, heavily promoted it in the cafe, which wasn't to the liking of most members. Because of this, on August 28, 2005, there was a major attack in which a hacker transferred the admin role from Mr. LSC to his own account, removed the admin permissions of the other members, and wrote offensive messages to Mr. LSC. This would later be solved and order would be partially restored, but the general **dissatisfaction** wouldn't end.

Some interesting projects from this era are the 2007 book (ペン回し魂, *Pen Spinning Soul*), and also the CDs from the Korean winter tournaments from 2005 to 2008. Interestingly, the book was written in Japanese and sold in Japan. Spinners like Nagi, Choochun, Cheukii, KTH, Vision, Nanna and Taeryong were very relevant, as well as the Sangkm CV series.

In February 2006, there were some disagreements among the admins of Pendolsa, which lead to the birth of **UKPS (United Korea Pen Spinner)**, later known as **KPSA (Korean Pen Spinning Association)**. Most experienced spinners moved from Pendolsa to KPSA, although both communities remained active. Although KTH (Pendolsa) won WT07, most international achievements were claimed by KPSA, so many oblivious foreigners believed that Pendolsa remained only a shop.

KPSA's results in WC08 were poor, but the Korean team won the Asian Cup 08 and Taeryong (KPSA) advanced to WT09's top 8. From this era (2008-2011), spinners like Nia, Crew, ZzaJae and Skydigital became well-known, as

well as the Skydigital CV series. The success of KPSA was unexpected, as it remained active in parallel to Pendolsa. However, from 2011 onwards, there was a **great decline in the activity** of both boards due to their members entering university or enlisting in mandatory military service.

From 2011 to 2016, the **Naver Pendolsa** forum was used, from which we can highlight FLow (formerly known as Kipple), Tez, Kune and the Pendolsa X UPSB collab. In 2016, still unsatisfied with the direction of Pendolsa, a group of spinners lead by FLow moved to a private Google Plus group, which later became **KIPS (Korean Institute for Pen Spinning)**. From KIPS, the spinners Fizz, FLaSh, Naru and Plum are to be mentioned, as well as the G_Code series. In the present-day, reminiscent of the old NX lectures, FLow can be found making trick tutorials on his Youtube channel as well as improving the Korean naming system [5][6][7].

2.3 English

The first pen spinning website in English appeared in 1998: it was the **translation of Hideaki Kondo's** *"My History with Pen Spinning"*. Not all of the content was translated and unlike its Japanese counterpart, there was no bulletin board, which made it less engaging. However, it was a very valuable resource thanks to the number of short videos and trick explanations.

There are two key personalities who shaped the development of the English community. The first one is **David Weis**, a spinner from Austin, Texas, who started practicing around 1991. At that time there was no World Wide Web and thus no websites, so he only spun with his friends at school. It wasn't until 1997 when he found Hideaki Kondo's site, with whom he started talking by mail [20].


Weis doing continuous half-taps (1998)

Until now, pen spinning was focused on individual tricks, which were always pushed by the fingers. Inspired by his other passion, BMX, he tried to implement the idea of **conservation of momentum** by linking tricks into combos and creating continuous sequences. He tried to explain his vision

to Hideaki, but he didn't understand, so in 1998 Weis became inspired to launch his own site: **Pencil Spinning**. It stayed online for a few months until the domain expired.

The second key personality is **Kam**, also known as Fernando Kuo, a Chinese-American spinner who started practicing in 1993. Four years later, together with some school friends, they created a **pen spinning club**. After an annoyed teacher asked them if they spun pens because they had tics in their hands, they decided to name the club **Pentix**. The club had about 6 members and it didn't last more than a few weeks.
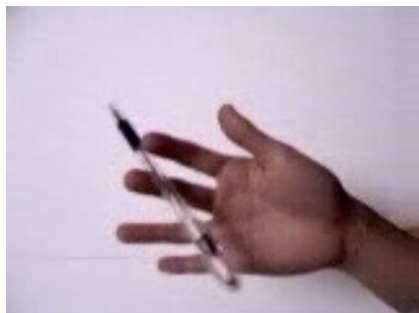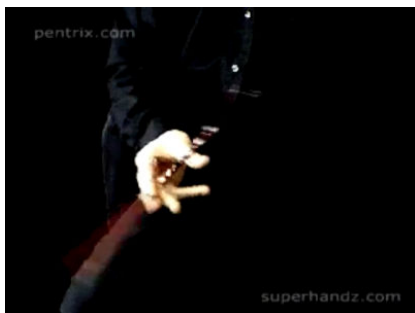

Kam doing a Neosonic for Pentix (2001)

A year later, the World Wide Web was becoming more popular, so Kam's interest in pen spinning was rekindled. He visited Weis' website frequently and he had even backed it up, so after it went down, they exchanged some emails and were able to put it back online. He also knew about Hideaki's website, but Kam wanted something more didactic, with more in depth explanations. Together with Eiji, a former Pentix club member, they decided to create their own website: **Pentix - The Art of Pen Spinning**, which opened in January 2000. By the end of 2001, the word about Pentix was spreading over the internet, constantly exceeding the bandwidth offered by Geocities, their first host, as well as ModenStudios, their second host. It was even nominated for "Hot Site of the Day" by USAToday.com. There were other projects alongside the **text tutorials and videos** for various tricks: as no standard naming convention had been set, in June 2002 Kam created the **trick names table**, comparing notations from six websites. Two months later he created a suggested **trick learning order** chart [169].

In 2001, the **Pentix users section** was created. Spinners from all around the world could list their name, hobbies and location, so other nearby spinners could interact with them. As it wasn't very effective in that regard, on June 18, 2002, the **Pentix board** was created. Eventually, a moderation team consisting of AC, nhk_9, tohlz and Zombo was formed. The improved communication between spinners led to many new projects, a comprehensive

pen spinning guide called "The Guide" being the most notable among them. Their proponents were quickly overwhelmed, so Kam built upon their initial ideas and published them in the article "Types of Spins".

Several personal sites were created: in 2002 De'vo launched **Superhandz**, which focused on making well produced videos on XCM and pen spinning among other manipulation arts. In August 2002 the Singaporean spinner Tohlz started his own project, **PenstudioZ**. Over three years, a total of 128 videos on individual tricks and short combos were compiled, which made PenstudioZ the most complete

Kam in 2003 Superhandz PS video.

site for learning new tricks. In August 2003, nhk_9 made **The Troposphere**, where he also taught tricks of his own creation. The same year, Kam created **Pentrix - Pen Spinning Revolution**. It was planned as an upgraded version of Pentix, with more tricks and higher quality videos. However, due to a lack of time, that was never realized. Due to popular demand, Kam hosted a backup of Pentix in the new site, which is what most spinners ended up visiting. Kam and De'Vo filmed the 2003 Superhandz PS Video which became as famous as other legendary ones like Pendolsa 1st or Japen 1st.

Kam wished to create a hub for all spinners in English, organized independently from any website but with moderators from all of them so that everyone could feel welcome and represented. This **Universal Pen Spinning Board** (first shortened as UB, later as UPSB) was announced and started to be built in `www.pentrix.com/upsb2/`, with `/upsb/` just showing the an-

Zombo in UPSB + Pendolsa.

nouncement message. After its release, he continued using the `/upsb2/` URL, which is why many consider the Pentix board as UPSB v1. From 2004 onwards, UPSB's activity increased and spinners like Tohlz, Zombo, nhk_9 and kelvinchan appeared in the "UPSB + Pendolsa Collaboration Video".

Many committees were formed during the v2 era. One of those was the **Kammys** Awards Committee. These were some pen spinning awards to commemorate UPSB's first year anniversary, proposed by Phya on January 13, 2005. Additionally, the **Battle Records Committee** (BRC), the Pen Spinning **Naming Committee** (NC), the Pen Spinning **History Committee** (PSHC), The Trick Guide Project Committee, and the Records Approval Committee (RAC) were formed.

UPSB v2 closed in October 2005 due to the lack of moderation and problems with the forum software. As the opening of v3 was severely delayed, the former UPSB member Nigel decided to create **UCPSB (Uber Cool Pen Spinning Board)**. It was intended to be provisional so it was scarce in features. In January 2006, thanks to growing interest from the community and the addition of Zombo to the moderator team, UCPSB v2 opened. Later that year it was renamed "UCPSB: the Collective Pen Spinning Board", making the acronym recursive and giving a more serious look. As UCPSB's popularity continued to grow, projects like the Naming Committee and the History Department resumed their activity.
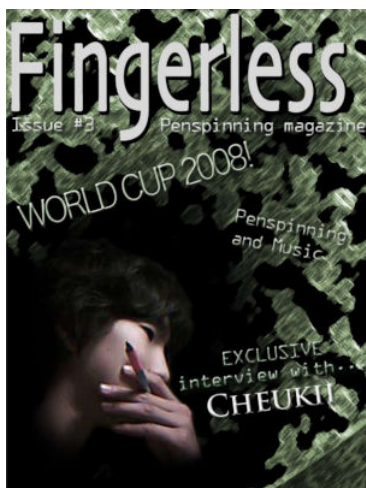
The cover of Fingerless magazine #3

UCPSB v2's poor search engine motivated the community leaders to create a new site, which became **UPSB v3** in September 2007. This was a prolific era for the community: Crash organized the **first WT**, in which Eriror finished in second place. For the following years, UPSB would be in charge of the **organization of WT and WC** events. In 2009, Near and Tek organized the first **Pen Modding World Tournament**. UPSB-only tournaments, which had started in the v2, continued to be organized. Shoeman and KTrinh started their Youtube tutorial channels and Zombo started a **podcast**, where personalities like Kam and David Weis were interviewed. Three issues of a short **UPSB magazine**, *"Fingerless"*, were also made. UPSB 1st and 2nd were organized; iconic members of the community like vicgotgame, Baaron, ChauTran, Ellusion67, shadow, Pen Ninja, awesome, neoknux, nachoaddict, iColor, and zkhan started spinning around this time.

The **Research Department** (RD) was created, with the Naming Committee and the History Committee embedded within. It was during the v3 that the Naming Committee was the most impactful, thanks to the influence of the **UPSB wiki**, which was open for everyone to read and was the main outlet for the Naming Committee articles. Members like Sketching and Mats went to great lengths to ensure that proposed notational changes were similar and compatible with what was already being used, so most changes were adopted by the general public.

The forum software was prone to SQL injections and other vulnerabilities. An attack forced the community to move to a **v4** in June 2010, which featured a brand new premium membership to help cover its operating costs. The WT, WC and UPSB Tournaments were still organized as usual, and a team composed of Eriror, Hippo2626, i.suk, neoknux_009, Pen Ninja and Twine reached second place in WC12. More casual events were also held: Reason started **MX Monday**, where spinners would post a combo every Monday with an MX. Zkhan ran podcasts covering the WT and WC, tentcell & theaafg organized a radio show, and HobbyLogics started a talkshow. v4 is warmly remembered thanks to its shoutbox feature and its integration with Tinychat, a video meeting service where both new and old spinners spun together while chatting. Tek, mainly known for his innovative modding, released the popular collab Weapon of Choice in 2012.

Baaron in Weapon of Choice

After a hacking attempt on September 16, 2014, which forced Zombo to roll back the server, a **v5** was needed, which opened in December 2014. Events were held like usual, although now other members like Zkhan took care of their organization. Having spun for a long time, i.suk, Padrace, and coffeelucky had impressive achievements during these years. As for CVs, the

Pixel and Coffeelucky series are of note. As time passed, the donations dwindled and the administration couldn't keep up with the on-going server costs,

Poster for UPSB 4th by DioBrando.

which led to its **final closure** on October 1, 2018. This led to its members moving to other platforms: the activity in the pen spinning subreddit increased and some others moved to Mango's Pen Spinning Discord Server, which had been created while the UPSB was still active. The organization of international events was now carried by the members of the **Pen spinning Board Of Directors** (PBOD) Discord server. Hobby created another server called **The Workshop** on December 10, 2018, and was released to the public on March 26, 2019. It wasn't intended as a substitute for UPSB, but it became one of the main platforms for international spinners to communicate. To honour the board's legacy, the four bots on that server (Rhythm, Dyno, Mee6, and Carl) were renamed to Eso, Kam, nhk_9, and David Weis. After a failed attempt years prior, in 2021, UPSB 4th was released. In the words of v3's member ShonenBatman:

"[The UPSB] represents what was once our home, our birthplace, and really when the internet was in an infancy compared to the massive flow and access to information we all have now. Logging into the forum and chatting in the shoutbox, browsing the show off your pens thread, keeping up with cvs and solos— it was a lifestyle man. Getting home from school, typing upsb.info into firefox just to continue to spin more and more after spinning in class all day. [...] UPSB is a big, definitive chunk of my life" (ShonenBatman, 2021)

In 2020, a new version of the UPSB forum was released by Arteq. The staff was completely different from that of UPSB v5 and it didn't even reach the point of having active members. Old-timers like Tigres expressed their doubts about the viability of a new UPSB forum at all. In the end, the structure of the **modern international community** is completely different from the monolythic forum that existed back then, but for many, UPSB keeps on living as the abstract project that joins all of the different communities together [15][17][27].

2.4   French

On January 1, 2005, a French Super Smash Bros player called **Radek** was browsing unusual videos on the internet when he stumbled upon Pendolsa 1st. Impressed by it, he posted a link to both the CV and Pentix to the forum which he used to talk to other Smash players: the **Cube forum**. The topic became very popular and the number of threads related to pen spinning rapidly increased. In order not to encumber that platform, Radek created the **French Pen Spinning Board (FPSB)** on February 8, 2005 and asked the moderators of the Cube Forum to lock all pen spinning threads.

Unknown to Radek, another French website had already been made in 2003 by the Canadian spinners Réda, Simon and Stefan: **Xtend Spin**. They had created their own short videos and explanations for many of the tricks shown on PenstudioZ, the Troposphere and UPSB v2. Xtend Spin also had a small forum where advice was shared on how to do these tricks. Radek got to know about this website after announcing the his forum on UPSB. In turn, the Xtend Spin members joined the FPSB.

At this moment, less than 50 members had registered to the forum, but it was a thriving community. Four of those members, A_Qui, Scelus, Skatox and Sorez, on April 21, 2005, formed the team **SpowasH** and created a blog for it. About a month later, **Tourneffaceur** made his personal website, for which he made several trick tutorials. Thanks to their proactivity, Tourneffaceur and the SpowasH

Radek in FPSB: The Beginning (2005)

members became the **leaders of the French penspinning scene**. In the following years the SpowasH blog reached millions of views and in honour of Tourneffaceur, the **Tourni awards** were created, which were the French equivalent of the Kammy's.

Radek, Romain HXC and Tourneffaceur were the webmasters of the v1. On August 4, 2005, the first collaboration was released, **FPSB: The Beginning**, in which we can see some of the members of Spowash, Tourneffaceur, Radek, and Joanna Dark, among others. In late 2005, FPSB v1 was hacked, so a

temporary board was created while Radek prepared what would become the FPSB v2. During this time, Fratleym was in charge of several big projects: FPSB Hall of Honor, FPSB+UKPS, and FPSB 2: the next step.

The **v2 opened** in March 22, 2006, with the members of Spowash in command. Tikle, Gollumsk8, Gunnies, Lanfear, Kirgo, and Sandaime also joined the moderation team in the following years. The first **FPSB tournament (FPSBT)** was held, which was won by A_Qui. The board was becoming bigger, with 350 users in August 2006. Inspired by FPSB+UKPS, a flurry of **inter-board CVs** were released during the second half of 2006 and 2007: once with GPC, PDS, Penzone, and SweSpin, and three times with JEB. In 2006 Tourneffaceur and Fratleym opened a board called **EuRaPen**: The European Re-Arised PenSpinners, as there were quarrels between them and some members of the UCPSB. However, the forum didn't stay online for very long due to disagreements within the staff.

The tutorials found in Xtend Spin were very up to date for the time, with tricks like shadow being explained just a few months after being discovered in the UPSB. However, the available resources started to fall behind during the next two years. Thus, Tikle made some efforts in the vulgarisation of **breakdowns** and notation, as well as the promotion of the new tricks discovered in the English communities. These efforts culminated in a great trick list, made between 2006 and 2008 by DaftSystem among others [173].

Members of the 1st FPSB official meet.

2007 was a key year for the development of French pen spinning. The **Laboratoire** was formed, a group similar to UPSB's RD. Skatox was one of its main driving forces and Zombo was very active as well. Fratleym and Banz reached the finals of WT07, with Banz's R1 combo being particularly impressive for the time. Three traditions started here: although there was no regular FPSBT, the first **FPSB Beginner Tournament** was organized, which was won by Nemz in a final vs Sweety. Spowash organized the first official **FPSB gathering**. Finally, the first CV of the Hope series was created, in which we can see s777 who had just recently started spinning.

A notable event was held in Paris in 2008. It was the first tournament organized by a pen brand: the **Bic Pen Spinning Awards**. Spinners from all over Europe flew to participate in it. It had Eriror, Skatox, Scelus, and Alucard as judges; Pudels Kern, Cookieslover, Gold angel, Twim, and Badzdu as finalists. In the end, the German Pudels Kern won the tournament, earning a 10 day long trip to Japan.

Finals of the Bic PS Awards.

The forum kept on growing, reaching 3800 registered members towards the end of 2008. This year's official collaboration, FPSB 3rd, as well as the unofficial France 1st had a great reception on YouTube.

Picool and Badtzu created **penspinning.fr** in 2009, its main portal showing various guides, videos, trick and pen modding tutorials. The videos were uploaded to their official YouTube channel, thanks to which they could reach an even larger audience. After the v2 was hacked, a new FPSB had to be created. Thus, the **v3** was hosted under the **penspinning.fr** domain with Picool and Tikle as administrators. An important CV from this time is FPSB+GPC. Some minor boards were created: Raeik, inspired by JEB private boards, created **aVoid**. The forum had about 15 members and remained online for less than a year. Their first CV, "Rose Quartz", was edited by s777. After the release of this video, Flagadoss among other spinners created **UFSC**: United French Spinners Community, from which FPSB mods and s777 were forbidden to enter.

s777 was in charge of the organization of **FPSB 4th**. Although it was well received by the international community, it was very controversial within FPSB due to the edit, music, cast, and overall because of the mediocre organization. s777 was mocked for setting up everything just to highlight his combo, which he believed was incredibly ambitious.

As for competitions, the French teams didn't have top finishes in either WC08 nor WC10, but Fratleym reached the quarterfinals of WT09. Within the board, the beginner tournament still happened yearly and in 2010 the organization of the official **FPSB tournament** was restarted, won by Gollumsk8.

One important team was **Jamabe**, comprised of Yaemgo, Nix, Sheepside, Leftfinger, fel2fram, daimo, chozo, kinger, hexbinmos & Gisele_8, most active from 2010 to 2013. Following the trajectory of spinners like Fratleym, Pyralux, Lindor, kirgo and chronos, many new tricks were developed, like the 8 powerpass variations. They consolidated the ideas of modern **tech**: great focus on innovation and on trying to raise difficulty via how tricks are linked instead of raising the difficulty of individual tricks. This came at the cost of disregarding both sides of the "Style vs Power" debate, which resulted in quarrels with any spinner that didn't share their values. Be that as it may, **fel2fram won the FPSBT in 2011 and 2012**, consolidating their views on pen spinning and spreading them internationally. FPSB experienced a **period of competitive dominance**: s777 won WT11 and A13X finished in the top 8. The joint French and Belgian team won WC12 and in WT13, half of the top 8 was composed of French-speaking spinners: fel2fram, Leftfinger, Ivabra and A13X. For more details check Chapter 3.

A13x at the Pen Spinning World Tournament 2013 : 2nd Place

As for CVs, Seindfu and Skyblue made **Just a Dream**. Near edited **FunSpinning** and **Smile - a penspinning hint**, pioneering the direction of pen spinning videos shot outside. Yaemgo and Neptune made **FPSB Echoes**, which narrates the history of the board.

Up until now, **Belgian** spinners had gathered separately. On December 27, 2006, Trademark, Yogui, and WestMyst created **BPST**: the Belgian Pen Spinning Team. They filmed BPST 1st (2007) as well as another CV together with FPSB, GPC and PPP. On March 2008, they thought about creating a forum that supported the three official languages in Belgium: Dutch, French & German, although that wasn't realized until October-November 2008. This new board was **BPSC**: the Belgian Pen Spinning Community. They made videos like FPSB x BPSC, the BPSC promo, BPSC 2nd and BPSC 3rd. The Belgian team of Ivabra, Littleboy, Gisele 8, knuckles, kr4zy, and voltaic

finished second in WC10. Towards 2011 the board was becoming less and less active so the administrators at the time, Twim, Knuckles, Aka, Gisele 8, Ivabra, Katix and Neslux decided to make the last official video: BPSC Final. In its description, Gisele8 said that *"[...] the board isn't entertaining anymore, for anyone. [...] [It] doesn't mean that the website will be closed, it is just a way to say a nice goodbye for many of us, proudly."*

In 2012, Gisele 8 appeared in FPSB 5th; in WC12, the FPSB team had various Belgian spinners. As close as these two communities worked together, they wouldn't merge definitely just yet. Ivabra finished in the top 4 of WT13 with BPSC and in WC14, Blue and Ivabra teamed up with SPSC and GPC for another 3rd-4th place finish. It was only after these events that FPSB and BPSC finally merged. The acronym remained the same, but the FPSB was renamed to "French-speaking Pen Spinning Board".

Gisele 8 in BPSC 3rd (2010)

In 2013, after some quarrels among the staff, **FPSB v4** was made. Yaemgo was in charge of the official collabs, making FPSB 6th and FPSB 7th. Around 2015-2016, with the rise of social media, activity shifted to Skype and Whatsapp groups. On May 17, 2016, the first official **FPSB Discord server** was created, which was among the first pen spinning servers. After a while, the Discord server became the main community hub, with most events being organized there. By 2019, the FPSB v4 forum was considered inactive.

An important team of spinners during this time is the **Far West**, composed by Tchus, tache, aaytowi2, banz, gollumsk8, seindfu, megas & dryd. They had been organizing meetings and collabs since 2007, but it was from 2015 onwards that they started taking over the official projects, their members either organizing or editing FPSB 8th, 9th, 10th, 11th and FPSB x JEB. The organization of **FPSB 10th** in particular was controversial due to the disagreements between Far West, the old, and the new moderation teams, but the collab is now considered by far the best of the series due to its edit, combos, and guests. Gollumsk8, who had participated in all past editions of the tournament, obtained great results in both WT17 and WT19.

In order to more easily manage the community and not lose all visibility on the internet, Banz made the **FPSB v5**. It wasn't intended as a replacement for the Discord server, but nowadays it's still one of the most active pen spinning forums. In WC20, the team composed by Ark0nix, Gunter, Ivabra, Tchus, Thebeygeek and Leftfinger won the event.

Neptune for PMWT (2009)

Nowadays, FPSB is well known for their **pen modders**. Two world-famous mods can be traced back to the early days of the board: Banz designed the **Grip Aviaire** in August 2006, which became his signature mod. The **Waterfall mod** was first made by skatox as a modification of A_qui's rey.as mod. In May-June 2008, Waterfall reinvented and popularized it. **Neptune** was a pioneer in grip cutting techniques, with his decorative grip cutting tutorial translated to English and still used to this day. Near, who was the owner of the biggest French blog of penmodding tutorials, created a new website in 2008: **The Spyre**. In 2009, Near, in collaboration with Tek (UPSB) organized the first **Pen Modding World Tournament** (PMWT). In 2013, Saurkk successfully organized the second edition of the PMWT after a failed attempt two years prior. Vore-Tex took over the management of The Spyre, which moved to `penmodding.pm` in March 2019. In April 2018 he created the International Pen Modding Community (IPMC) Discord server, whose members have translated many tutorials to English, added them to the Spyre and even continued with old projects like the Lost Angelus [UPSB] pen index. After organizing it for several years, the CV called **X Incipiens Stabilus** premiered in February 2020. It was edited by Near and featured 10 famous spinners, each using mods custom-made by Vore-Tex for this project.

FPSB has a complex history. The tournament scene not only created strong personalities like s777, A13X and fel2fram; the consistent organization of beginner and official tournaments was a major player in keeping the board alive even during the pre-Discord era. Old and new spinners still meet yearly in the official gatherings. During them, a Super Smash Bros tournament takes place, commemorating their origins in the Cube forum [28][29].

2.5 Chinese

The development, achievements and present day communities in Hong Kong, Taiwan, and Mainland China are different; because of the geopolitical and language barriers. However, they do have some **common origins**, which is what we will show before branching out to history of each of the individual regions [30][31][32].

The first pen spinning website in Chinese was created in June 6, 2003 by the Hong Kong spinner Eddie. This website was first called ePentix, but renamed to **Penzemi** in November 2003 so as not to be a copy of Kam's site name. Here, some basic pen modification tutorials were shown, as well as text and image tutorials for some of the tricks found on Pentrix. Penzemi was moderately well known, even appearing in the magazine "PC Game 2000" in 2004, together with The Troposphere.

Penzemi on PC Game 2000, 184 (2004)

The Eighteen Subduing Dragon Palms (降龍十八掌) is a martial arts book written by the novelist Jin Yong, which was incredibly popular at the time. In August 10, 2003, the Taiwanese spinner sula_la created a pen spinning trick tutorial website called **降龍十八轉**. 掌 means palm and 轉 means spin, thus the name 降龍十八轉 is a word play on Jin Yong's novel name. The tricks were given names based on the palms from this novel. For example, 亢龍有悔 (thumbaround) is the first palm and means *"the proud dragon repents"*, 雙龍取水 (sonic) is the ninth palm and means *"the twin dragons fetch water"*. This website was very well-known, attracting a lot of new members to the world of pen spinning.

More personal websites were created in the following years, like Strong-Penspinning (2004) and Justspin (2005). In Yahoo Taiwan, various groups were made, as well as the Troposphere group in Yahoo Hong Kong. KiT-CaT, who had started learning how to spin in winter of 2003 from one of Kam's videos, created his first website in April 10, 2004. In December 13, 2004, he established the first forum: **KiT-CaT Pen Spinning Forum** (KCF) [25]. Soon after that, **Penzone** (PZ) was created by 2kin and Sing.

2.5.1 Hong Kong

2kin in Penzone 1st (2004)

Both KiT-CaT and Penzone forums were made by Hong Kong spinners, but people from Taiwan and Mainland regions —mainly from the Guangdong province— also participated, as well as Chinese speakers living overseas, like Shawn Tohlz. At this time, the Tack-On game was brought from UPSB for the forum members to learn from each other. During the first few years, the style of the Penzone spinners grew closer to that of the Koreans. There were various remarkable CVs: KCF 1st-4th, Penzone 1st-4th, and Penzone + FPSB. Penzone 4th showcased several notable spinners like x1213, Angelic x Allure, Leo and Sing. During the initial half of 2007, the first **World Tournament** was held. KCF and PZ each sent 10 members to join the tournament (20 in total). x1213 represented Penzone and Leo finished in the top 10.

Old members like Leo, Edwin, KiT-CaT, and sing started being less active; Taiwanese spinners moved to the newly created TWPS and Mainland members moved to PSH. Because of this, KiT-CaT and Penzone had to participate together in World Cup 2008 and then merge into a new board, **HKPSA** (Hong Kong Pen Spinning Association). KiT-CaT, OnLy (former KCF moderator) and Taihoi (former Penzone moderator) took part in the administration of the new forum. In 2009, the HKPSA Facebook group was made and HKPSA 1st was organized. Also during this year, the first **HKT** (Hong Kong Tournament) took place. With similar rules to the WT, its main purpose was to nurture new members so they could then participate in international events like WT. It was won by Fls-noibita.

In January 2010, the Hong Kong shopping mall APM organized a live competition. They invited famous spinners such as Peem and Lip from THPSC, and Seven and Saizen from JEB to be the judges and do some performances. A spinner called En-

Spinners invited to the APM event (2010)

gine won the competition. The HKPSA team qualified for the quarterfinals of WC10 and the HKT2010 was organized, with ccw and Leon finishing in first and second place respectively. At the end of the year, Fls-noibita performed in TV as a pen spinning stunt double for Trevor, the main character of the show "Every move you make" (讀心神探).

HKPSA obtained their best ever results in an international tournament in 2011, with kin finishing in 2nd place in the World Tournament. The next year, HKT2012 was organized, with LaYe winning the tournament and Engine finishing in 2nd place. However, from then on, activity in the forum dwindled as members gradually moved onto social media. The administration decided to close the forum and officially move to the **Facebook group**, which has been the main discussion place since then. In 2020, LaYe was interviewed by the Apple Daily, and his video reached half a million views on YouTube before it was taken down. In recent years, kin's tournament results have been remarkable, finishing in 2nd place in both PSO18 wipers and PSO20 wipers.

2.5.2 Taiwan

Some of the first known Taiwanese spinners are sula_la (the author of 降龍十八轉) and Joey, who learned pen spinning from 降龍十八轉. Stephen and Dark-Scorpion were moderators of the KiT-CaT Pen Spinning Forum, and x1213 was a member of Penzone. Although Taiwan didn't have its own forum at the time, the first two national CVs were organized: KCF-Taiwan (2005) and Taiwan PenSpin

x1213 in Taiwan PenSpin 2nd video (2006)

2nd video (2006). The community started to become more organized from June 2007, when x1213 established **TWPS**: the Taiwanese Pen Spinning Forum. The first official competition was held online, around 2007-2008. It was won by Joey, and kin [HKPSA] finished in second place.

In 2007, TWPS held their first **national gathering** in Taichung. As the largest city in Central Taiwan, it could be easily accessed from the whole country. The national gathering began to be organized once a year during the summer vacation, since most spinners were students. Offline competitions and

other activities were held during the gatherings, which usually had between 50 and 70 participants, sometimes even more than 100.

Joey in TWPS 4th (2008)

From 2007 to 2011 activity on the forum was very high, mainly because of various pen spinning forum **games and competitions**. Spinners could post their freestyles to the forum; x1213, CYW and TKspin would grade them and increase the "forum points" of their accounts, obtaining badges once enough points were obtained. In addition to that, 1v1 battles, team battles, battle royale (called TWPS battle) and theme battles were very popular. Most old spinners think of this as the **golden era of TWPS**, since they were able to meet many new friends and grow like a family. The **TWPS series** was continued, making up to two videos per year. TWPS 4th in particular went viral on Youtube, reaching more than 100.000 views.

In July 2011, as the usage of social media increased, a TWPS **Facebook group** was created. The forum software had some security issues and was often attacked by spam and other advertisements. It suddenly disappeared at the beginning of 2012 because of unknown reasons, and although it is believed that it wasn't a hacking attack, nobody could access it. x1213 created a new forum, but many established tutorials and resources disappeared. After this tragic event, the number of users in the forum decreased, and most moved to the Facebook group. Here, various **teams** were formed. "Eternal Cycle", formed by Shakespeare in 2012 was the strongest of them. "PSFA", made by u91x in 2013, consisted of many of the new generation spinners. TWPS was able to collect enough money in gatherings to maintain the new forum until 2015, when it was closed and everything was officially moved to Facebook.

In 2014, the **TWPS Official Skills Competition** was organized by u91x and Zuo. Videos were submitted online and foreigners could also participate. The tournament was divided into three levels: Advanced, which was won by KieOlt [VNPSC] with Kagami [PSH] as the runner-up; intermediate, with Nope [PSH] in 1st place and Farly [TWPS] in 2nd place; and beginner, won by Herenz [TWPS] with Joker [TWPS] as the runner-up. The Taiwanese team

consisting of minzian, MKSFT, PPM, Rex, Shakespeare and Zuo finished fourth in WC14, their best WC result at the time.

A pen spinning club was created by Darcy in Chung Shan Medical University, although the particulars have been lost to time. In September 2014, Zuo created a new club in Zhongli Senior High School, called the **Pen Spinning Art Club**, to which he invited famous Taiwanese spinners to teach the club members each week. This initiative was covered by some newspapers at the time. In 2015, they

2015 CLHS Pen Spinning Art Club Comp.

took Japan's Naranja Penspinning Festival as an example and held the **2015 CLHS Pen Spinning Art Club Competition** in their High School. The winner and 2nd place spinners were Rex and MKSFT. The club continued to exist up until July 2019.

In 2015, **activity decreased**. The national gathering stopped being held. Experienced spinners graduated from school and had less time for spinning. The organization of the official collab series, which had been made up until TWPS 13th (2014), was also ceased. However, some spinners stayed active in **international competitions**. In WT15, x1213 finished 4th and MKSFT lost in the quarterfinals against Menowa* in a very controversial match. Herenz won IIT15 (International Intermediate Tournament) and in PSO18, Herenz won the complexity category over another Taiwanese spinner, Mei (formerly known as PT/Promethez). In 2018, TWPS 14th was released and recently, TWPS 15, for which commemorative mods were sold. Aside from the TWPS series, the Ramirez series was also very popular.

After the COVID-19 pandemic, the number of new members and the overall **activity increased**. In PSO20, Dove and MG finished 2nd in the aestheticism and counters categories respectively. A new moderating team was formed and official Youtube and Instagram accounts for TWPS were created. In 2020, Herenz, Mei, MG, Farly and Dove created "Yggdrasill", with the objective of teaching new, promising spinners.

2.5.3   Mainland China

Baidu Tieba was the most used Chinese communication platform, hosted by the web services company and search engine Baidu since December 2003. Communities for virtually any topic existed, including one for pen spinning. Around 2003-2005, some spinners from Mainland China also visited websites like 降龍十八轉, KiT-CaT and Penzone. The content in these websites was very deep compared to the one in Tieba. However, the language barrier limited their growth, with mostly spinners from the Guangdong Province visiting the Hong Kong forums: KiT-CaT and Penzone.

Before continuing, let me explain why the **Guangdong Province** is so important for understanding the development of pen spinning in the Mainland. Not only is it one of the economically prosperous provinces in China, but it is also physically close to Hong Kong. Most locals in Guangdong are billingual in both Mandarin, the language spoken in virtually all of the Mainland; and Cantonese, the language spoken in Hong Kong. Because of these circumstances, they are able to surf the internet more freely and become exposed to content from other regions. They have also served as a nexus through The Great Firewall, both translating content to Mandarin and also reuploading videos to websites like YouTube via VPNs.

Solar and 3+7 met on one of those forums around 2004, where they became online friends. Although they were only middle school students, in September 3, 2005, they created **PSH**, short for PSerHome. In the period from 2005 to 2007 the board was promoted mainly through other online forums, IM chatting groups, video platforms and Weibo. PSH 1st and 2nd were made to promote the site. However, since Solar and 3+7 couldn't afford private hosting, PSH had to exist in free servers, which weren't stable.
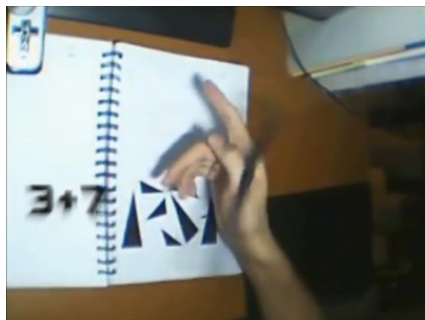
3+7 in PSH 3rd (2008)

In 2007, the hosting situation stabilized and the Simplified Chinese members of the other websites moved to PSH. This resulted in a peak of activity for the forum and during this time, many collaboration videos were made. Eagle started the **Chinese Spirit** (華魂) series, with its first installment being released in August 9, 2007. It was a very inspiring project for the community, uniting

Chinese spinners from all around the globe. The PSH series and the EaglE series also took place, alongside many other one-off projects like KCF+PSH.

The board didn't participate in WT07 but they sent teams to both WC08 and AC08. The World Cup results weren't good, but the team consisting of 12ve, 3Shine, Answer, Garlic, PaleMaster, and ssEno finished in **3rd place in the Asian Cup**. There were more interactions with foreign boards in this year, like the PSH+THPSC collab. The results in international tournaments would only get better from here: Answer finished in the top 4 of WT09, losing vs minwoo in the semifinals. Snow, who was a pioneer in both 1p2h and 2p2h styles, also achieved top 4 in WT11, losing vs s777.

Various interesting projects happened during this time. The spinner Xiao Gui drew a **manwha** about pen spinning in 2009, which was three years later fan-translated to English. In late 2011, EaglE announced **Spinny**, a pen spinning organization based in Guangzhou, capital of Guangdong, with the purpose of promoting pen spinning. In the announcement video not only EaglE, but also co2, alexis, menophenon and fish appeared. As of today, Spinny is the pen spinning organization that has remained active for the longest time. The **SharpSpinner** team was formed, led by ENO, and in 2011 they released their first team CV.

PSH had held several offline meetings already, but in 2011 the premade pen manufacturing company Zhigao offered to sponsor the national offline tournaments. These would be called **Zhigao Cup** (智高杯) and would be held annually since 2011. Because Zhigao would pay for both players' and judges' plane ticket and hotel fees, the PSH administration was more than pleased to hold the official meetings

2011 Zhigao Cup group photo

together with the Zhigao Cup. Most of the tournament structure was overseen by EaglE and Eager and it was finally held in Guangdong. Spinners who wanted to participate submitted their videos through the PSH forum, and the 20 best were selected for the offline finals. Spinny was quite active around this time. Aside from taking part in the organization of the first Zhigao Cup, they provided commentary on TV for WC12 and members like Airgear gave

live lectures about pen spinning. They also appeared in Pearl River Story, a program featuring stories from the Guangdong Province.

From 2012 onwards, the company was in full charge, and later it developed a **commercial campaign** to promote the Zhigao brand, less focused on the competitive aspect. From 2014 onwards, famous foreign spinners like peem, supawit, precel, ppm, and x1213, among many others, were invited to participate in the tournament and do live performances. Things went south in 2017 when Zhigao decided to rename the tournament to **WPSAL finals**, WPSA (World Pen Spinning Alliance) being a sub-brand of Zhigao. The 2017 edition was just done online and it never paid what it promised to players and judges. Although the company has done many TV commercials and animations, thus promoting the hobby, their brand image within the community was weak and this didn't help. In 2017 Spinny held their own meeting and offline tournament independently from Zhighao, which had more than 100 participants.

Snow, WPSAL 2017 banner

In 2018, Zhigao decided to **rebuild their image** within the community and reinvent how the tournament was structured. They sponsored nine national tournaments: UPSBT (International), JC (Japan, adult and teenager categories), PPST (Philippines), VNPST (Vietnam), BRET (Brazil), MP (Poland), FPSBT (France), TT (Thailand) and SCT (China). The winners from each would fly to Guangzhou for the WPSAL finals. i.suk, who qualified by winning the SCT, also won the offline finals. In 2019, the WPSAL final was also held offline, which was won by the Japanese spinner Kay.

Independently from the works of Zhigao, PSH has designed and commercialized three pen models. The first one is the **MG-Zero**, made in 2013. The first two editions of the tutorial series called **Baishi** (百式, meaning *"a hundred tricks"*) had been created some time ago by Solar but the third, most professional and popular edition was made in 2013 by Eagle and co2, with the MG-Zero. In 2014, a second community-designed model was commercialized: the **Wonderpen**. In 2015, their most famous and successful model was launched, the **Spinpro**, which is still sold to this day.

After 2013, when smartphones and high-speed Internet became widely available in China, the popularity of forums declined, now substituted by groups on **instant messaging apps** like QQ and WeChat. **Short video platforms** became popular, with spinners like Nope accumulating more than 3 million followers on Kuaishou and TikTok China. Nowadays, most of the new members discover pen spinning through short video apps. The website was separated into two parts: the main portal and the online forum. The former showcases pen spinning tutorials, news and other things related to pen spinning, while the forum has been quiet for many years now.

This doesn't mean that **collaboration videos** weren't made anymore. The cLear series (1st-5th) was made, as well as the Prearp series (I-V). Prearp III was PSH's entry to Spinfest 2016, and they also participated in the 2019 and 2021 editions. Lately, Mr Pearl has been reuploading to YouTube collaborations made by Chinese members, just like others have also reposted the most relevant

Nope, 10 years solo (2021)

foreign collaborations to BiliBili. In 2018, Spinny also made some long-form horizontal videos with spinners like Kagami, Airgear and Knifores explaining their philosophies and views on the hobby. Professionally recorded and edited videos have also been made, like Spinny - Alone (2017) and Nope's 10 years solo (2021). Non-short videos still have their niche within PSH, but it pales in comparison to the popularity of TikTok.

As for **tournaments**, the team consisting of cLear, Cloud, EaglE, GSL, jin and Orange finished 2nd in WC14, with GSL never losing a single match throughout the whole tournament. Vice finished in the 3rd place in WT15, losing vs Menowa* in the semifinals. Kagami reached 3rd place in the 2017 PWT, and in WT17 both GSL and Scream were in the top 8. Two PSH teams participated in WC20. As for national, online tournaments, the **Summer Cup** and the **Winter Cup** are organized within some discussion groups, which have about 300-400 members. These tournaments aren't very public, as submissions are just uploaded to the group folder. However, the organizers have great passion for them.

Inspired by staff spinning, Ian Juggler/Laputa did in 2017 **fishing tricks** with regular pen mods for the first time. Together with other flashy movements like index spin and power tricks, their popularity on TikTok made many Chinese spinners master them beyond other boards. Due to the communication barrier, some **records** are disputed overseas while someone on PSH has already recorded tens of repetitions more.

Finally, with respect to pens and **modding**: Sanchiu is internationally renowned for his designs and precise grip cuts. He created a whole series based on Marvel heroes, each mod selling at 1,000 CNY (∼150 USD). In the online marketplace Taobao, shops like Eno, Whirl, Xhand, and Oasis sell premade and custom parts for pen spinning. In particular, Eno has allowed for reduced prices and new stock of discontinued parts for spinners all around the globe. Nope, Finger Dance, and other companies also started commercializing their own models of premade pens, like the Element and the ZW series.

2.6 Thailandese
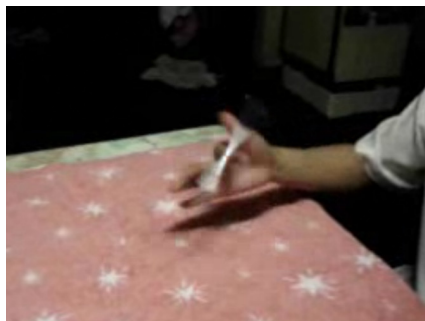
Mr. CsPSer, combo which he uploaded to various forums (2005)

Mr. CsPSer had been fascinated by pen spinning since the age of 10, after his uncle taught him how to do the thumbaround and its reverse. Eleven years later, in 2005, a friend showed him Pendolsa 1st. With a rekindled passion for learning those new tricks, he registered in the Korean forum and then in Pentrix. He wondered if others in his country had also started practicing, so he recorded his spinning, attached his **MSN** address and posted the video to various **general purpose Thai forums** like Pantip, Mthai and Webboard. The clips got quite popular, and about 60 people contacted him on MSN. The information in other websites was hard to read due to the language barrier, so to guide this new generation he **created ThaiSpinner** in 2005. This was first done on a free hosting and domain, which he then moved to www.thaispinner.com on the 19th of May, 2006. More than 6000 members quickly gathered in this new forum, among them the soon-to-be famous spinners Sathonmig and Dongza.

In the forum, tutorials for **overseas mods** were translated and shared, and although members also discussed single capped pens like RSVP MX, Colorgel MX, and Flexible MX, it was Metal ComSSA and Dr. KT that resonated with them the most. In an attempt make similar **versions with local materials**, symmetrical mods like Syn-Neji83, Syn-Tex83, and Na-mae83 were made. These used Synectic Brand permanent markers and Pentel Meteor BK83 tips, which are extremely heavy. Since mid April of 2007, the **ThaiSpinner online shop** opened, which imported Pendolsa and exclusive ThaiSpinner RSVP MX and Metal ComSSA, among other materials. Thanks to the success of this shop, as well as the general growth of the forum, Mr. CsPSer opened an **official shop in Union Mall**, a shopping mall in the north of Bangkok in June 19, 2008. Aside from selling pens, Mr. CsPSer held on-demand events for the forum members, like live tack ons.

The ThaiSpinner shop storefront (left) and its inside (right) (c. 2009, photo: Clyde)

During 2007, the international presence of THPSC was still low. There was no proper Thai team in the first World Tournament; only Sathonmig joined under the representation of UCPSB, as he lived in the States. However, one of the **strongest new generations** of spinners was being formed. A team consisting of Dongza, mr.showtimez (aka Mez), Golfzabemix (aka Chawthai), longhorn, highwave, and MJ joined WC08 and the team of GZSakuraz, Tanexat, Niceget, highwave, Tigeroat, and longhorn joined AC08.

There were two **offline tournaments**: the "Thai Pen Spinner Offline Battle 2008" and the "WE-PCT Thailand Pen Spinner Championship 2008", which lasted two days and was sponsored by the telephone company PCT/True corp. The best 64 spinners were selected during the first day, and then spun on stage in 1v1 format on the second day. The winner got a plane ticket for the 2008 Pendolsa winter tournament. **Spinnerpeem**, who had mastered powertricks, won all three of them with his personal mod: the **Buster CYL**.

Over the next two years, **THPSC dominated the competitive scene**. Spinnerpeem won WT09, and Supawit127 and Dongza finished in top 4 and top 8 respectively. After that, the team consisting of Spinnerpeem, Supawit127, Dongza, BaiMai, The Legend, and 8 won WC10. This tournament was very theme-focused, so aside from Spinnerpeem and Supawit127's consistency, it was thanks to BaiMai's participation in themes like 2h, creativity, and spinless that they were able to obtain the victory.

Dongza (l), The Legend (c), and Spinnerpeem (r) in Game Pun Naa (Aug 15, 2010)

Mr. CsPSer introduced pen spinning on various TV programs around 2007, which brought many new members to the community. The surge in popularity of the hobby, as well as the WT09 and WC10 wins drew even more attention of the media. Official ThaiSpinner apparel was made, which they wore on their numerous **TV and newspaper appearances**. The participation of Mr. CsPSer, Dongza, Spinnerpeem, Supawit127, and The Legend on Game Pun Naa was particularly relevant. The video went viral, which resulted in a new influx of members, Coffeelucky among them.

Although it wasn't the focus of the community, 2008 was a great year in terms of **CV productions**, with Tribute to Mr.CsPSer, THPSC stars, and the BusterCYL Promo. One year later, the WC10 Qualification Collab was also heavily watched. The first official board project, ThaiSpinner 1st, was organized to celebrate the victories in WT09 and WC10. 2010 also marked the beginning of the Coffeelucky series, of which he has made seven instalments.

There were some online **local tournaments**, organized by cheesecake. The first one was the "THPSC mini-team tournament 1st" (TMT), similar to WC10 in its format, with the peculiarity of participants being randomly placed in the teams. In 2011 he organized the "Thaispinner Solo Tournament" (TST11), which was won by Metal. In WT11, eight Thai spinners participated, from which only supawit127 was able to reach the top 4. Metal was one of the highest hopes of the board, but a bad group placement hindered his run. Peem withdrew from the tournament, allegedly because of an injury.

The period from 2011 to 2012 marked the **downfall of THPSC**. The shop closed as sales weren't enough to cover the rental fees. Peem withdrew again from WC12, and the Thai team didn't end up performing well. That year's local tournament, "Thaispinner Tournament 2012" (TT12) only had 23 participants and various spinners didn't even send their combos. Zui Nyaa organized two CVs, RE-start and RE-novation, which were some of the last CVs made on the forum. Members moved to the **Facebook group**, as the forum stopped being used. The board participated in both WT13 and WC14 without much success, and coffeelucky tried to host TT13, which was cancelled due to a lack of participants.

The revival of the community began in 2015, with Spinnerpeem creating **Windwalk**, a small team focused on content creation. They made several tutorials, custom Windwalk Buster CYL and Ivan mods, viral videos like Ultimate Pen Spinning! (120k views), and organized various gatherings. Coffeelucky organized TT16, which ran with just 12 participants and was won by Cladoublev. Thaispinner 2nd was their submission for SpinFest 2016. **Sirapob won WT17** thanks to his mastery of fingercrossings. In the same year, another local tournament was held. In 2017 Coffeelucky created the THPSC Discord group, which became the main place for the community. He also organized a national meeting, which was a big success, with many old-timers coming back for it. He kept organizing it as a yearly event. Supawit was interviewed by The Standard and despite this video reaching more than 350k views on YouTube, almost no new members entered the community.

In 2018, **OhYeaH! won TWC18** as part of The Front Row, a multi-board team. Since then, THPSC participated on all international tournaments and the Thaispinner Tournament was organized on a yearly basis. Coffeelucky created a team called Asura with the intention of motivating the community. Aside from tutorial videos, both Asura 1st and 2nd were organized. Enkronidus, one of its
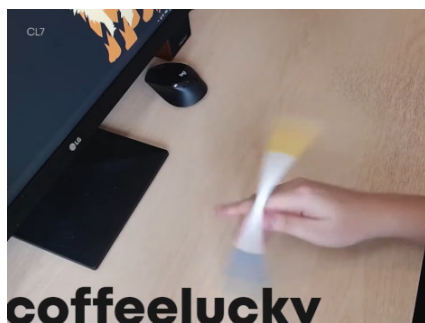
Coffeelucky in Coffeelucky 7th (2020)

members, kept making trick tutorials in his own channel, which reached 16k subscribers. To commemorate this revival, Coffeelucky made Thaispinner 3rd. Aside from his work within the board, he is in charge of PS Calendar and has taken part in the organization of various international events. [33]

2.7   German

In the summer of 2005, **Robert** discovered pen spinning from one of his classmates. After learning the TA by himself and motivated to go further, he searched for tutorials and was able to find Pentrix, together with other English and Japanese sites. Robert was convinced that by documenting his journey, others could learn pen spinning faster so together with Bobbycartuner, his kindergarten friend, they designed the first German pen spinning website in November 2005: `penskills.de.vu`.

Robert and his friends filmed and uploaded videos of the tricks that they had learnt, but they quickly realized that it would be more convenient to have a forum. Thus, in the same month of Penskills' creation, Robert took it down and rebuilt it in the form of the **German Pen spinning Community (GPC)**. Bobbycartuner stepped down from the web construction but became one of the most active members during the early days of the board.

Robert in GPC 1st (2006)

The GPC became incredibly active in a short time: it took less than 4 months for the first thousand posts to be written and less than 6 months for their first hundred registered users. Their first project was **GPC 1st**, which was released in July 2006, edited by Le0n and with animations done by Robert. McDudelsaeck wrote & summarized a lot of content, motivated new users, answered their questions & administrated the forum, which was invaluable during these first years with a high influx of users. The first offline gathering, the **Euro-Gather**, happened in the same month in Neuss, Germany, with spinners from the Netherlands and Denmark coming as well.

Although the bulk of their members are from Germany, we should keep in mind that German is also the official language in Austria and Switzerland, with most Dutch people also learning it in school as their second or third language. Together with the ease of transportation from other European countries like France and Spain, this has made their meetings **highly international**. It also meant that GPC members had lofty expectations when the **EuRaPen** board went online in November 2006. Robert and Le0n

were included in the moderation team as German representatives during the short lifespan of the board. The first tournament with German spinners was the **2007 UCPSBT**. Just a month later the first German-only tournament would be organized: the **Bundesvision Penspinning Contest**, which had participants from each federal state and was won by Le0n. The **BIC Pen Spinning Awards** were held in Paris, won by the German Pudels Kern.

As it was customary at the time, **interboard collaborations** were made. The first one with FPSB, in late 2006. Two more instalments were released in 2009 and 2016. Other ones were with PPP and PSH. A source of controversy was the **GPC + SweSpin Collab**. There were some disagreements between Robert and the Swedish organizers, which resulted in GPC pulling out of it. Regardless of this, the CV was released in May 2007 with combos from both boards as well as a statement regarding its organization.

Since early 2007, the **TV presence** of pen spinning was incredibly strong, with Robert appearing on news programs on RTL, Sat1 & Kabel1, doing advertisements for **E-plus**, Fujitsu, Faber Castell, Mentos, Duplo, 5 against Jauch, Guiness, Wrigleys, Ültje among others. He even appeared in national magazines like DB, dpa & Zeit, as well as other local ones. Robert then started to arrange some of those jobs for other younger penspinners and negotiating fair wages for them. The result of that was the following.

Finals of the 2008 De-Gather live tournament between Eriror and Minwoo.

In 2008, 51 spinners participated in a country-wide gathering called the De-Gather, which was **broadcast** in an almost 14 minute feature in the evening TV program Galileo. With Minwoo as its protagonist, the viewer could follow Minwoo's run on the live tournament, which he won in a final match vs. Eriror. This kickstarted a year full of high profile videos. In April

2008, **GPC 2nd** was released. With more than 235k views on YouTube it was an absolute success and set very high expectations for future official collaborations. The Elite Collaboration of GPC and the first GPC Girls CV were released towards the end of the year and DontKnow started his incredibly popular trick tutorial series.

Various long-lived **teams** were formed: **Vengeance**, formed by TheK0ok, Neophine, Steffen, Jopi, Kazeem, Minwoo, Samuirai and Stuhl; as well as **Fusion** and **Pencia**. The Mindcore series was filmed during the De-Gathers, where teams also met and filmed relay videos.

Thanks to his consistency, his innovative use of two handed spinning and his tournament finishes, **Minwoo** became the most prominent German spinner. He was on both of the teams that finished 4th in WC08 and 2nd in AC08. He finished second in WT09, only defeated by Spinnerpeem. After a popular qualifier CV, Minwoo, together with colddi, Stuhl, TheKOok, thumbskiller and taichi1082 finished 3rd in WC10. During these years he organized his **Minovate series**, which featured some of the best and most creative spinners at the time.

Taichi, Product/3A5 and Might were the writers of the **PSWS** blog (Pen Spinners With Sunglasses), which was a big source of news, opinions and debate among the community. The first big project of PSWS was **(Thumb)Around the World**, in which Zombo, Kam, Hideaki and 74 other world-famous spinners were shown together in what is considered one of the most iconic pen spinning CVs. Their second project, 45 Sec CV, is also
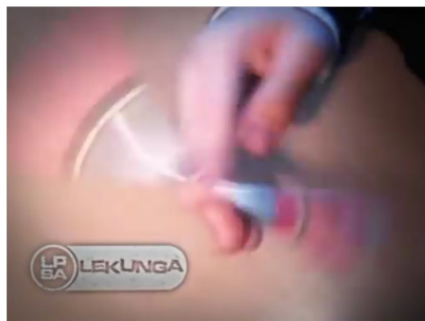
very remarkable. A year after the creation of the blog, in a Hannover gather during the summer of 2010, the PSWS staff considered the idea of creating a new board in which only a select number of spinners could enter. This led to the birth of **LPSA (Liechtestein Pen Spinning Association)** and soon afterwards the organization of LPSA 1st began. Of course, the members weren't from Liechtestein

Lekunga in LPSA 1st (2010)

and the whole project was highly controversial, raising questions like what are the requirements for constituting a board or if it was acceptable for them

to participate in tournaments under that name. LPSA 50 was released as they reached 50 members and a year later, LPSA 2nd was made. Their international renown granted them a spot in WT11, despite opposition. Minwoo, kirua, Däne, Sponge, clay and colddi participated as GPC; Vstrike, Taichi and Might participated as LPSA.

With an average of 500 posts a day and all-time high De-Gather attendance, GPC was at its peak of activity. Despite this, whether fueled by or simply concurrent to the birth of LPSA, it was also starting to break down. The common debate of **style vs power** often resulted in personal attacks and furthered the LPSA vs GPC duality. There was a surge in small boards like GPSA (Green Pen Spinners Association), TCPA (The Chocolate Spinners Association) and ASCPB (Another Stupid Closed Penspinning Board) which imitated or parodied LPSA's exclusiveness.

P@sc@l tried to organize a tournament in 2010 but the judges Taichi, Sherni and Vstrike posted a video showing how they had rolled dice to set the scores. The joke video was taken as a fact, which resulted in the **tournament being cancelled** and the judges banned. P@sc@l tried again in 2012, now able to finish the tournament, which was won by Sponge. The long awaited **GPC 3rd** came out in February 2011 but was deleted two hours after its release, flamed by the community after not meeting the expectations. After McDudelsaeck quit, it was Ilasor who took on the administration, but it was not enough. Most members were said to have alt accounts in order to troll or post harsh messages, which gave rise to debates questioning if just more moderation would be enough to tame the situation.

But not all projects failed: following Robert's yearly **GPC newsletter**, from 2008 to 2012 four volumes of the newsletter **"PS-press"** were made. Kickstarted by the beautiful trailer "Penspinning is art", Minwoo and Samuirai created **Penspinning: Online**, a page with well produced tutorials as well as a new social network specifically for spinners.

A team composed of Kirua, Josh_Pr, Sponge, Minwoo, Deathfish and Swob participated in WC12 alongside the LPSA team. GPC's team was incredibly strong, which made the community fairly excited. However, Minwoo was found to be **cheating** in Round 5, overshadowing the team's great performance. Although he is still in touch with his spinner friends, Minwoo completely quit pen spinning and deleted his Youtube channel.

Some participants of the 2012 De-Gather

After the failure of the 3rd GPC collab, the organisation of a new project was met with doubts. On January 1, 2013, GPC 3.5 was released, and the next year, GPC 4th, both including spinners from LPSA. Nashi, together with the French spinner Yaemgo, successfuly organized the first **European Tournament** in 2013. Activity was declining and 2013 would be the year of the **last De-Gather** but despite this, both GPC and LPSA participated in WT13, WC14 and WT15 with varying degrees of success.

The forum became inactive and people kept in touch via various Whatsapp groups. From 2016 onwards, **Juzzle** made 11 collabs for which he managed to relentlessly motivate old and new German spinners alike. Videos were made for Spinfest 2016, 2019 and 2021, as well as WC20. The **GPC discord** was founded in January 2017, although at the beginning only 4 or 5 people were active. Robert asked for donations to keep the forum servers running. Various members, many of whom were not even active anymore, donated because they still cherished the time they had spent with their friends. Despite all of the controversy, they remember the gatherings kindly, visiting new towns and meeting spinners from both Germany and abroad. Nashi and Eriror, who met thanks to pen spinning, became married, their engagement pen made by the German modder Syrti. Activity in the Discord server increased in 2020 and for the first time, a De-Gather was organized in September 2021. [34]

2.8   Spanish

The first pen spinning web page in Spanish was made by **Shalafi**, around 2002 while he was still a university student. In his website he translated most of the content on Pentix, together with explanations for various other hobbies. His website was very popular, appearing in the front page of the Spanish online magazine Yonkis and being reposted to other popular forums like Taringa. In 2006-2010, Shalafi also made some pen spinning workshops in the European Juggling Convention.

Unaware of this website, in 2006 the Mexican spinner Chino88 created his own blog, **El Bolígrafo**, after having practiced pen spinning for two years. He translated some of the content on Pentix and linked CVs like "The Asia Pen Spinning Presentation". In September of 2007, Maggot created a thread about pen spinning in **El Otro Lado**, a popular forum at the time.

In November of 2007, Chino88 created the forum **Penspinning-latino**. The forum didn't have much information or members, but that changed when the spinners from El Otro Lado and other new members joined. Chino88 had met **Freeman** on YouTube, and in January of 2008 he invited him to join as an administrator on the site. After various proposals, the name **Spanish Pen Spinning Community** was decided. In March 2008 the first collaboration was made, which was a tag between Chino88 and Freeman.

Most users weren't happy with Chino88's administration so on May 20, 2008, the **SPSC v2** was created, now with a more visible domain name. These first few years were the **golden age** of the forum, with spinners like Freeman, Vikroal, Maggot, Makis, AzuL, JTS, Tioloco, Nozarok, Chisko, Dry0n, Dargroth, SebuiX, arcano80, Yeh and Kurotsuki. Chats were held daily in the MGC (a group

AzuL for WT11 R1 (2011)

chat within MSN) and meetings were organized, with cities like Madrid, Barcelona and Malaga being especially active. Freeman made one of the most complete trick video tutorial series at the time. Mods were made with both foreign materials and local ones. A single-capped called **Fluo M.A.**, designed by Mythos and AzuL was particularly famous at the time, despite how difficult it was to gather the various discontinued materials for it (Milan Fluo Junior cap and two metal Colorgel tips). Following the trend of other boards, official collaborations were organized: from SPSC 1st in 2008 to SPSC 4th in 2012. There were participations in international tournaments: Freeman, JTS and AzuL participated in WT11 and in WC12, SPSC finished in the 3rd-4th bracket in a joint team with MyPSC and KPSA. There were two official tournaments in 2008 and 2010, both won by JTS. In July 2010, VikroaL and AzuL started a blog, **SpinAlong**, where they wrote about JEB collabs, mod tutorials and pen spinning news in general.

VikroaL in SPSC 4th (2012)

Although many spinners from this first generation quit, there was a **resurgence in activity** from 2011 to 2013, thanks to spinners like Ikari Riota, Shekleor, Yorch, Swike and RPD, as well as the tutorials made by HeyFerre!. To commemorate 5 years since the creation of SPSC, Freeman organized Emerald in 2013, a collaboration with both the old and new spinners of the board. It's around this time when I started a forum thread answering questions about notation, which later led to the writing of this book. Vikroal, Yorch and RPD participated in WT13 and in WC14, SPSC finished yet again in the 3rd-4th bracket, now in a joint team with BPSC and GPC. A series of casual tournaments called **Torneo de Verano** (*Summer Tournament*) was held, the winners for each year being Vikroal (2012), RPD (2013), Ikari Riota (2014) and Chisko (2015). There hasn't been any significant activity in the forum for some years, but it remains one of the most **well organized and complete forums**.

The name "Spanish Pen Spinning Community", given by Freeman, has always been controversial, as "Spanish" can be interpreted as "Spanish-speaking" (its intended meaning) or "from Spain". Thus, historically, latin spinners wanted a new board with a new name to better represent their **national identities**. Groups like the Mexican and Chilean (CLPSA) communities, as well as SAPSA (South American Pen Spinning Association) emerged, but they all quickly became inactive. Around 2018-2019, Allwars and JNK formed the **LSPSC** (Latin Spanish Pen Spinning Community), centered around a Whatsapp group. Allwars finished 4th in the B-side of WT19 and organized CVs like the LSPSC entries for Spinfest 2019 and 2021. In 2020, the influencer JustSpinning created accounts on TikTok, Instagram and Youtube dedicated to teaching pen spinning. In order to guide this new generation, RPD created a discord server called "Club de Pen Spinning", which later merged with LSPSC. Thanks to the proposal of former-LSPSC members like DarKko, the **name SPSC was adopted once again**. To celebrate this, SPSC 5th was organized, in which members like Freeman, JTS, and JustSpinning participated. [37]

3 International tournaments

International tournaments have been one of the main driving forces for pen spinning development. In this chapter we will show their leaderboards, comment on their structure and analyze how these tournaments have influenced pen spinning as a whole. For an overview of their origins and early history, check (Section 1.2.4). Rulebooks, pairings and videos for each tournament can be found in the references at the end of the book.

3.1 Results and analysis

	WT07
1st	KTH (PDS)
2nd	eriror (UCPSB)
3rd	fratleym (FPSB)
4th	banz (FPSB)
5th	ps-728 (JEB)
6th-10th	Ayatori (JEB), Uriel (PDS), Bonkura (JEB), Gollumsk8 (FPSB), Leo (Penzone)

Organized by Crash during the first months of 2007, this was the **first international tournament**. There were 80 participants from 8 communities, 10 spinners from each, who battled in 4 rounds of single elimination. After this, five finalists remained, who battled for the last two rounds. The judges were chosen by the organizing committee, whose names were not revealed under the logic that public judge

KTH (Pendolsa)

names could lead to bribery. The criteria that served as guidelines were very unpolished: scores were given out of 10 for smoothness, style, difficulty and creativity, yielding a maximum of 40 points for each combo.
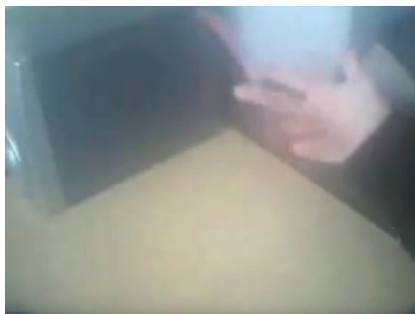
Coming into the tournament, Pendolsa was one of the biggest and most dominant boards, and among their participants, **Nagi** was considered one of the strongest. Outside of Korea, three spinners were established as the main forces: **Bonkura**, **Banz** and **Eriror**. Due to his hand motions and overall artistic elements, Bonkura's way of spinning originated several debates, but nevertheless he was one of the top contenders. Fratleym was very ahead of his time with his use of **fingercrossings and thumbcross** in his combos. Despite Fratleym's third place finish, those kinds of tricks didn't become mainstream. The results were quite unexpected: the tournament was won by KTH, from Korea, while Nagi lost in round three. Another controversial match happened in round 4, when Eriror won vs Bonkura.

WT07 was announced in several traditional media like **newspapers and television**. This, together with the participation of many of the best spinners at the time, consolidated the reputation of the brand new tournament series. Even though it didn't have much impact on the pen spinning meta by itself, the importance of WT07 was in **laying the foundations** for future international tournaments and pen spinning as a serious hobby to pursue.

TST

1st	SwS - ShadoW Spin Team (FPSB)	Val, DaftSystem, SnOz, Sallem, Franou, Romfist
2nd	TSX - Team Sex (UPSB)	Fitzgeraldhimself, Blackhero, Eriror, Asian Tim, Scott Shaputis, Toast
3rd	TPS - ThaiSpinner (THPSC)	Sathon, Dongza5047, Bluehawk, Shineo, MJ, Pinyo9801
4th	C.b.S - Courageous but Suicidal (FPSB)	.Nightfall, Noctambul, s777, Spartan, Yomea, Aelema

The **Team Spinning Tournament** was organized by Zombo in 2007. While it isn't as well known as WT07 nor WC08, it was the first international team tournament. In TST, 16 teams from 8 boards battled in 4 rounds of single elimination. It was in this tournament that the custom of various 1vs1 and one 2vs2 per team battle started.

The **structure** of the event was quite **complex**. Each team had a manager, who could use "cards": special actions which affected the outcomes of the random pairings. Cards were either "swap", which exchanged two

spinners in the lineup and "freeze", which prevented a match from being swapped by the opponents. Up to three cards could be used per round. This gave the manager a strategic role.

Zombo had already been a member of the BRC and contributed to the organization of WT07. Despite this, his tournament wasn't taken very seriously and several spinners forfeited. Even in the last round, some members from C.b.S didn't send their videos. However, TST served as a testing ground for what would become the rulebook of the future World Cups, and thus the base upon which most future team tournaments would be built.

Daftsystem & Val (FPSB)

WC08

1st	JEB	Ayatori, Key3, Saizen, kUzu, Pesp, toro
2nd	Swespin	Sfsr, Hamor, Ceedgee, Ålan, Baovern, Pe/PDR
3rd	PPP	Thelian, Zaliwaja, Rarka, Przemo, Gumix89, Mikul
4th	GPC	Minwoo, LeOn, Alucard, Stuhl, Maniok, McDudelsaeck

Crash, who organized WT07, wanted to wait until 2009 for the next event since he argued that the overall level of pen spinning wouldn't change that much from one year to another, which would make it boring. However, due to the high demand for more events, Zombo proposed the idea of **team cups in alternating years with WT**s. For this event, a rulebook was made, based on the one used for TST.

The structure was the following: 10 teams of 6 spinners each competed over 4 rounds. The first two were group stages. During those rounds, each team took part in 5 individual matches, one for each other team in the group. Judges weren't required to assign numerical scores to the combos. Points were given for each match won, and the teams with the highest amounts of points advanced. The last two rounds were on a team vs team basis, with two singles and one doubles match. The prizes were custom rings for the winners as well as SpinZ, one of the first ever premade mods.

Kuzu (JEB)

Prize Rings

Going into the event, **JEB** had already established itself as the **most prominent board**, and just like that they ended up taking the first place. The Korean board had previously split into Pendolsa and KPSA, only the latter participating in this tournament. Although their team was formed by spinners like KTH, Nory and Sound, it wasn't enough to advance past the group stages.

Another notable point was the merge of KiT-CaT and PenZone into a single team: HKPSA. As usual, the controversy in UPSB's discussion threads mostly centered around Eriror. in this tournament in particular, it was about his win over Ayatori in the first round and his loss to Toro in the second round.

As the tournament was seen as a sort of follow-up to WT07, participants took it more seriously than TST. Not only were there very few forfeits, the overall level of the combos had increased significatively with respect to that of WT07. This meant that spinners who had good runs in WT07 didn't necessarily perform as well in WC08. The board-based tournament structure was well received so it continued to be used for future World Cups. However, the addition of themes, which are now considered one of the most distinctive characteristics of World Cups, had to wait until WC10.

AC08

1st	KPSA	Taeryong, Caras, Saturn, Skydigital, Sound, Rafe
2nd	UPSB	ChauTran, DaThroat, ellusion67, Minwoo, pholord, Toast
3rd	PSH	12ve, 3Shine, Answer, Garlic, PaleMaster, ssEno
4th	JEB	Coco_A, SEVEN, PenSOn, RiAsON, MaKiN, RYO

The **Asian Cup** was a tournament inspired in WC08 but in which all participants were from Asian countries. Of the 8 participating teams, UPSB was one of them, although only spinners of Asian descent like Minwoo and Chautran were allowed in it. As we mentioned, the Korean board had recently split, and thus they participated in two teams, one for PDS and another for KPSA, the latter becoming the winner.

As for the tournament's structure, it was very short, with only two rounds. The first one was comprised of 100% individual (1vs1) matches. The best 4 teams advanced to the last round, which was a **battle royale** between four **collaboration videos**.

WT09

1st	Spinnerpeem (THPSC)
2nd	Minwoo (GPC)
3rd-4th	Supawit127 (THPSC), Answer (PSH)
5th-8th	Taeryong (KPSA), Eriror (UPSB), Dongza (THPSC), Fratleym (FPSB)

As initially planned, the second World Tournament was held again by Crash and Zombo. The **structure was improved**, restricting the number of participants to 64, which allowed for 6 rounds of single elimination without reaching awkward situations like WT07's five spinner finals. The judging criteria was mostly the same as in WT07, with 5 judges each giving scores out of 40 up to a maximum of 200 points for each combo.

JEB could have been one of the major contenders to win this tournament, but the spinners from the WC08 winning team (kUzu, Ayatori, Key3, Seven...) didn't participate this year. Areso, who lost in round two, was the Japanese spinner that advanced the furthest.

WT09 was the first tournament that showed the dominance of **continuous tricks**, notably pioneered by the

Spinnerpeem (THPSC)

Thai spiners **Spinnerpeem**, **Supawit** and **Dongza**, as well as the French **s777**. After having changed his style in comparison with his WC08 submissions, s777 was one of the best contenders for the trophy. However, he was defeated in round three by Spinnerpeem. Two other spinners were regarded as great candidates for a top finish: **Minwoo**, who explored 1p2h in his combos; and **Stuhl**, whose execution made the pen look like it was floating. Minwoo finished in second place, after defeating Stuhl in round three.

The tricks that Peem and Supawit used completely **reinvented the definition of difficulty**. While Peem was already known before this tournament −his standalone battle vs Chautran in UPSB got some attention− it was WT09 that really popularized their style of spinning. The key idea was that by practicing more, instead of doing a trick once you could do it multiple times, increasing its difficulty. Peem used a mod (Buster CYL) longer and heavier than the other participants, which was also revolutionary in itself. Some parts of the community **disregarded the use of those mods and tricks** and considered that powertricks couldn't be done with lighter or shorter mods. This, of course, was later shown to be false. Peem and supawit also showed that doing difficult tricks didn't necessarily require compromising your control nor execution.

Supawit and Peem faced in R5, which took supawit out of the tournament. Peem then won the final over Minwoo by just one point (174-173). This tournament showed the world not only powertricks, but how these events were **powerful at popularizing styles** and advancing pen spinning.

WC10

1st	THPSC	Spinnerpeem, Supawit127, Dongza, BaiMai, The Legend, 8
2nd	BPSC	Ivabra, Littleboy, knuckles, Gisele 8, Kr4zy, Voltaic
3rd	GPC	colddi, Stuhl, TheKOok, thumbskiller, Minwoo, taichi1082
4th	JEB	hibachi, ponkotu, Fire@fox, forever, Sister_R, HAL

Crash and Zombo organized the second World Cup, in which a total of 15 communities participated. Teams were composed of 6 spinners. It was the first WC to have a **CV qualification round**: each board edited a collab with 6 to 10 spinners, which then didn't need to be the members of the team. The collabs were ranked by all other communities and assigned points so that the 8 teams with the most points advanced.

Themes were implemented for the first time. There were 10 in total, half categorized as technical (*speed, difficulty, control, smoothness, variety*) and half as artistic (*two hands, aerials, spinless, creativity, body and environment*). Each team battle had one technical, one artistic and one double match. The first three rounds were group stages and for those, themes were drawn randomly. The last two

Supawit127 (THPSC)

were single elimination rounds and managers had the option to block one theme from the list. Themes drawn in the semifinals couldn't be drawn in the finals. This ability for the managers to block themes gave an extra dimension of strategy without being as complex as the freeze/swap card system of TST.

The two highest voted collabs from the qualification round (THPSC and JEB) were very popular, still being watched and commented on years later. However, JEB's selection of spinners for their team could have been stronger. Ponkotu was their MVP, not losing a single match and carrying the team to a fourth place finish. Neither FPSB nor UPSB qualified for the tournament, which meant that notable spinners like s777, pyralux, and Eriror couldn't participate. PSH opted to rely on their new generation of spinners rather than on oldies like answer, who didn't participate. **THPSC** clearly **dominated** the tournament, as their lineup was suited perfectly for the themes. Powertrickers like Spinnerpeem and Supawit would be in charge of the technical matches, while BaiMai took care of creativity, spinless and two hands (twice), winning all four of his matches.

The point system used for the qualification round resulted in awkward situations. For example, UPSB being in 71% of top 8s but having fewer total points than HKPSA, which was in just 43% of them. The judging system was also criticised, as for rounds 1 to 5, judges gave no numerical scores to the combos, unlike what was done in WTs. Although the inclusion of themes was very well received and would define World Cups for years to come, the **theme selection** was dubious. Body and enviroment, two hands and spinless were considered gimmicks and became community in-jokes. However, it has left us with legendary combos like Stuhl's round 4 for body and environment, or the two hands duel between Stuhl and Ponkotu in round 5.

WT11

1st	s777 (FPSB)
2nd	kin (HKPSA)
3rd-4th	snow (PSH), supawit127 (THPSC)
5th-8th	A13X (FPSB), Sponge (GPC), x1213 (TWPS), HAL (JEB)

Organized by Zombo, WT11 had 99 participants from 19 communities. A new structure was implemented in order not to be limited to 64 participants: Round 1 was a **group stage**, with 8 groups of variable size out of which the best 4 spinners advanced. 5 single elimination rounds followed as usual.

Each manager gave a ranking of their candidates based on their strengths. The **groups weren't completely random**, but made so that spinners from the same board didn't battle in R1, and the groups were balanced based on those rankings. This was an interesting idea, but it's common for new gen spinners to overperform after entering a WT. Sponge (GPC) and snow (PSH) were ranked as the weakest of GPC and PSH respectively, and their incredible performances lead to some spinners suspecting that the managers had ill-intent in their initial rankings, as putting strong spinners last would place the rest of their members in easier groups.
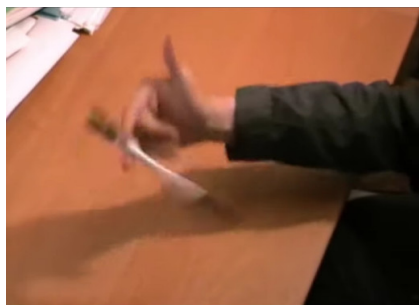
s777 (FPSB)

Every community had to submit two judges. The criteria were still simple and relatively unrefined, although **penalties** based on poor structure, bad camera, unappealing movements, unfitting mod and excessive filler were introduced for the first time. An option was given for judges to vote without following the criteria, as long as a comment in any language was given.

The **hype for powertricks started to die down**. Spinnerpeem was in the initial participant list, but withdrew as he didn't think that his results would be good enough, Tigeroat taking his place. However, other **new styles** were greatly developed during this event. BaiMai and snow showed great ideas for two handed combos; and A13X pioneered a new way of approaching powertricks not so centered around fingerless arounds.

WT11 wasn't short of **controversies**. BaiMai's R2 combo looked like it was spliced to cover a failed finisher. This was pointed out by various spinners, most notably taichi1082, who argued that this couldn't be a camera glitch. On the other hand, Tek made a video arguing that BaiMai was too good to resort to cheating in a combo like that one. In the end, he was allowed to continue in the tournament, and lost vs the Japanese spinner HAL in the next round, in an incredibly tight match. Both spinners were tied at 8.5 points, and only tiebreakers gave HAL the win.

Another heated match took place in the fifth round, when **kin won vs supawit**. Since kin was using a RSVP mx, his combo was given a difficulty bonus, while the popular opinion is that supawit's breakdown was harder. This stirred a debate over taking into account mod use in tournaments, since light and unbalanced mods are harder to spin, but can't be confirmed without disassembling them. This debate was further stirred by s777 often doing incredibly hard combos with comssa and rushon DC's, which many people thought had heavy weights under the caps. From then on, rulebooks stated that no bonus would be given because of suboptimal pens, making the viability of MX and Dr. Grip in tournaments much lower.

Going into the tournament, **s777**'s status as the **greatest spinner** was indisputable. Soon before the beginning of the tournament he had released his 4th year solo, which had left the community speechless. With a style reminiscent of Bonkura's, it was a breath of fresh air in a competitive scene that had been so dominated by powertricks. His win showed that well balanced combos, with equal difficulty, creativity and aesthetic appeal are key for good tournament performance. Having participated in international events for the past few years, shortly after after winning, **s777 quit pen spinning**, as university entrance exams would leave him with no free time.

WC12

1st	FPSB	Anikis, Fel2fram, Futhark, Gisele8, Ivabra, Lindor
2nd	UPSB	Eriror, Hippo2626, i.suk, neoknux_009, Pen Ninja, Twine
3rd-4th	KMSC	VikroaL (SPSC), Yorch (SPSC), Lucky (MyPSC), Alvaris (MyPSC), Kipple (KPSA), Tose (KPSA)
3rd-4th	GPC	Deathfish, Josh_Pr_, Kirua, Minwoo, Sponge, Swob

Organized by Zombo, WC12 had 16 teams of 6 participants each. It was one of the longest World Cups, with a total of 6 rounds. The tournament

started with a **round-robin**: teams were put into groups of four, and all teams in the group faced eachother throughout the first three rounds. Afterwards, 8 teams advanced, which went through three single elimination rounds. The battles were divided into 2 individual matches (1vs1) and 1 doubles (2vs2). The 1vs1 battles were themed, although the themes were limited to **artistic** and **technical**. This was done in order not to constraint the freedom of the spinners, who in WC10 had to participate in narrow or niche themes like "aerials" or "two hands", or themes that weren't considered serious, like "body and environment" or "spinless". **Numerical scores** were given for the first time in a World Cup, evaluating execution, difficulty, creativity, presentation and theme for each combo. Each participating board submitted one judge.
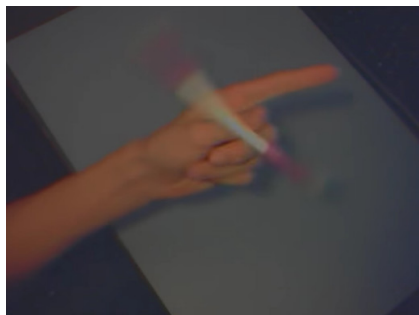
Fel2Fram (FPSB)

The clear favorites for winning this tournament were **JEB and FPSB**. However, the Japanese team, which consisted of imiga, Kay, Menowa*, Meves, ocha and ZUNDA, finished in the 5th-8th bracket after losing to UPSB. On the other hand, FPSB managed to **completely dominate** the tournament, even without the help of s777. For this tournament, they joined forces with the Belgian board (BPSC) and thus, spinners like Gisele8, Ivabra and Blue could become part of their team, resulting in an incredibly strong lineup.

Fel2fram, who had been spinning for less than three years, had already become well known thanks to his 2011 FPSB tournament combos, as well as the video "The 8 main PowerPasses". Although his execution was controversial, nobody doubted his genius, which was reflected in his results in this tournament: he won all of his five matches.

This event showed **the power of alliances** in tournaments. Three boards that by themselves couldn't send one team were allowed for the first time to participate together (KMSC), finishing in third place. And of course, the winning team was also an alliance. BPSC and FPSB would merge as communities in the future, but they hadn't done so yet. The Belgian board would still participate with that name in both WT13 and WC14.

WC12 is infamous for some of its videos. In R2, the Russian spinner **Sly** submitted a drunk video for the aesthetic category. Lucky (MYPSC) submitted a foot combo for the R3 doubles category, which forced Alvaris and VikroaL to film and submit a last minute tag. In R5, the German spinner **Minwoo** cheated in a 2p2h section of his combo by filming each part separately and joining them together, as he had filmed with a black background. taichi1082 raised the brightness of the raw video and exposed the cheat in UPSB. neoknux_009, his opponent, said that he didn't wish for judges to disqualify him but rather for Minwoo to send a version without the edited segment. After this incident, Minwoo quit pen spinning.

WT13

1st	sutomo (JEB)
2nd	A13X (FPSB)
3rd-4th	Ivabra (BPSC), ctionist (JEB)
5th-8th	Leftfinger (FPSB), Gibki (PPP), fel2fram (FPSB), Baaron (LPSA)

Organized by Zombo, WT13 had 105 participants from 20 boards, thus being **the largest WT** to date. It employed the same structure as WT11, with the first round being a group stage and afterwards, five rounds of single elimination. The judging system was also more or less the same as the one used in WT11. However, there was one important difference. In WT11 each board could only submit one judge, while in WT13, **multiple judges could be registered**. All communities had the same voting power in round 1, regardless of the amount of judges, but from round 2 onwards more judges meant higher voting power, which some argue that skewed the results towards **the views of the bigger boards**.

sutomo (JEB)

FPSB, which won the past World Cup, showed their power again by placing three spinners in the top 8, four if we count the Belgian spinner Ivabra. Coming into the tournament, **Fel2fram** was one of the favourites to win, but his run ended in the third round, defeated by sutomo in a very controversial match. Although his combos were still very creative, Fel2fram

was becoming increasingly frustrated with the amount of time that they took to plan and film. Unsatisfied with his WT13 combos, he deleted all of them from his channel. The university entrance exams that forced s777 to quit did the same to Fel2fram.

In terms of popularity in the international community, **A13X** shined. Prior to the tournament he had claimed several records: busts, inverse busts, pun new and pinkybak 2.5, among others. He pioneered a new era of powertricks with his consistency, clean execution, fewer aerials in favour of tricks with extra 0.5 spins and even a new way of filming, using fisheye lenses instead of the usual flat webcams.

He won the first five rounds unscathed, after which he faced one of the big surprises of this tournament. **Sutomo**, just a 2 year spinner at the time, showed mastery of countless triangle pass variations in combos somewhat reminiscent of s777's balanced style. On the finals, sutomo won over A13X by a narrow margin.

Even today, opinions on who should have won are quite divided. What is clear is how big **A13X's influence** has been. His combos popularized the use of extremely heavy mods, with bullets as tips and Giotto for their body; as well as cont backarounds with multiple spins, pun new and lever tricks. After this tournament, Sutomo had to quit pen spinning because his family broke all of his mods, as they distracted him too much from his studies.

WC14

1st	JEB	ACT, HAL, Kay, Menowa*, mi, oZone
2nd	PSH	cLear, Cloud, EaglE, GSL, jin, Orange
3rd-4th	GSB	RPD (SPSC), Blue (BPSC), Ivabra (BPSC), Swob (GPC), Deathfish (GPC), Der Däne (GPC)
3rd-4th	TWPS	minzian, MKSFT, PPM, Rex, Shakespeare, Zuo

WC14 was the last tournament organized by Zombo. It featured 14 teams of 6 spinners each, which first battled in a qualification round via CV. The top 8 CVs advanced to the next three rounds, which were a round-robin, just like in WC12. After that, four teams remained, which battled in two rounds of single elimination. The matches between teams were divided into technical, artistic and doubles, just like in the past edition.

One of the big surprises was **FPSB** not qualifying for the tournament. However, although their CV wasn't bad, none of the spinners on the WC12 winning team, nor the ones that reached top 8 in WT13 participated in it.

We saw an increase in small community alliances: the GPC, SPSC & BPSC team (which was called **GSB**) finished in the 3rd-4th bracket. The two Vietnamese communities, VPC and VNPSC, decided to form teams with SGPSC and THPSC respectively. However, neither of them qualified. **PSH** showed one of their strongest lineups to date, which resulted in their best team finish and only WC top 4. We also saw a very strong **TWPS**, which until now had been mostly absent from the top WT and WC spots.

In this tournament we could see one of the disadvantages of the round-robin system. In round 3, both HKPSA and LPSA had no points so they had no chance to pass while PSH and TWPS were certain to advance into round 4. This made their matchup somewhat pointless. Due to this, the participants of **LPSA didn't want to continue**, so for this round they completely changed their lineup. It was decided between HKPSA and LPSA that it would just be a friendly match, so it wasn't meant as disrespectful, but things got heated in UPSB for not taking the tournament seriously.

Unlike in past tournaments, where several of the top Japanese spinners didn't participate, this year **JEB** went all-in from the start. Their qualification CV is worthy of note, with combos from many top spinners like Kay, Sutomo, akiza, kzzn, VAIN, iteza, ACT (ponkotu), caster, Menowa*, and including some two-handed combos from oZone and TMrW, who also edited the video. They qualified in first place, and

Kay (JEB) in the qualification CV

after their lineup was revealed, there were little to no doubts about their upcoming victory. They lost no matches during the round-robin, and only lost twice in the last two rounds, both in the technical category: ACT vs MKSFT, and mi vs GSL. This left clear that the Japanese board was the strongest, and also gave a glimpse into WT15, as we could now see **Menowa*** becoming a rising star.

WT15

1st	Menowa* (JEB)
2nd	xound (PPSC)
3rd	vice (PSH)
4th	x1213 (TWPS)
5th-8th	Pixels (PUPSC), Ease (JEB), Rotation87 (IPSB), MKSFT (TWPS)

WT15 was organized by zkhan and featured 64 spinners from 17 communities. Similar to previous years, it had a group stage in the first round followed by 5 more rounds of 1vs1. The group stage wasn't necessary since the number of spinners was 64, but it was thought to be useful to **reduce pairing variance**. This was one of the efforts to refine the rulebook, trying to make the tournament more fair while still keeping its traditional structure. The judging **criteria were improved** with more detailed definitions. **Effectiveness**, which was a criteria only previously seen in WT09, was reintroduced and its definition became more developed.

Menowa (JEB)*

Among the top performing participants we mostly see well known names, with no breakthroughs or completely new styles like in past tournaments. It may be surprising to see **Ease in the top 8**, as he is a Dr Grip spinner and the rules stated that non-optimal mods shouldn't be given a difficulty bonus. However, some judges didn't abide by that and gave Ease a significant point advantage. One of them was fired mid-tournament. Up until now, the judge names were unknown to the public, but in order to avoid these situations, they would be public from now on.

The favourite spinner for winning this tournament was **Menowa***. He was considered one of the strongest spinners at the time, thanks to his great performance in WC14 as well as his participation in high-level CVs like Abyss Nova and Japen 10th. Most heated debates in this tournament occured around him, notably in his round 4 match vs MKSFT and in the finals vs xound.

The final match, **Menowa* vs xound**, is usually considered **one of the most memorable battles** in all of competitive pen spinning. Xound's style was based on difficulty, complex finger movements and fingercrossings while Menowa*'s style was more focused on powertricks, precise hand motions, creativity, speed and rhythm. Usually more execution focused, he opted to do more high-difficulty combos for this tournament. His finals showed a style similar to that of Xound, who commented on Menowa's winning combo: *"You do Xound better than Xound. I don't know who I am anymore".*

Menowa*, who now had made true his dream of winning a World Tournament, retired from international competitions. Far from quitting pen spinning, he kept on being incredibly active. From then on, he focused his efforts on the team Sephiroth, CV participations and pen spinning outreach via viral music sync videos and the Japanese Pen Spinning Foundation.

What happened with WC16?

The year 2016 was very hard for competitive pen spinning, as there was **no World Cup**. There was less and less activity in UPSB and in general, this year was the pivotal point in the transition phase from forums to social media. **Discord**, which started being implemented as the new de-facto communication tool for spinners, made it harder than public forums for the community to gather interest and organize.

2016 ended without any World Cup, and people were increasingly worried that there wouldn't be a UPSB-organized WT17 either. Thus, other spinners took initiative. The French spinner Aaytowi2 ran the **Global Pen Spinning League**, a 16-person tournament. However, it wasn't completely successful. Tez and Mr.LSC, from Korean Pendolsa organized the Pendolsa World Tournament (**PWT**) sometimes referred to as the PDS cup.

PWT (2017)

1st	Beige (JEB)
2nd	Pixels (SGPSC)
3rd	Kagami (PSH/JEB)
4th	Piruru (PSH)

The tournament had 45 participants from 11 boards, a qualification round from which 16 spinners were selected and 4 single elimination rounds

afterwards. The prizes were 500 USD, a PDS gift set and a custom spinsticks for 1st, 2nd and 3rd place respectively. **Kagami** had a great run in this tournament and his style became very popular in PSH for the next years. **Beige**'s energetic and creative wiper style wasn't new, but it indicated the beginning of an upward trend in good tournament results for modern wiper spinners, in contrast to old school style spinners like mind.

PWT17 contributed to the interest for an official WT, but the organization is generally considered the worst of all international tournaments to date. The rulebook lacked many details, communication from the organizers was mediocre and the judges were only from Japan and Korea, which some argue biased the results.

WT17

1st	Sirapob (THPSC)
2nd	Gollumsk8 (FPSB)
3rd	i.suk (UPSB)
4th	Van (UPSB)
5th-8th	kAtts (JEB), DArKT (PSB), GSL (PSH), Scream (PSH)
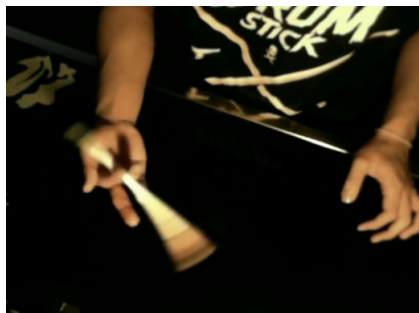
Sirapob (THPSC)

To the surprise of many, 2017 did have an official WT: it had 64 spinners from 16 boards and a total of 6 rounds. Due to some problems involving its organization, it took place in the second half of the year instead of in the first half as usual. It was organized by Zkhan, and it was the last WT/WC made before UPSB closed. To continue with the **variance-reducing strategy** of WT15, the first two rounds were group rounds. Otherwise, the criteria was the same as the last WT.

For the first time, the **judge names were public** from the beginning. The bribery concerns that organizers had in 2007 didn't turn out to be a problem, and this allowed the participants to check that the judges were indeed capable spinners, and to consult with them in case they heavily disagreed with any of their judgements.

Until now, fitting the number of participants to 64 was done with a **concession-request system**: boards requested a certain number of slots to participate, without revealing which spinners would occupy those slots, and then a number of those were granted by the organization. WT17 is the first one in which the managers registered their spinners as either **participants or wildcards**. The ones registered as particicipants would always participate, and then the wildcards would be used to fit the remaining slots up to exactly 64. Coincidentally, it just happened that 52 participants + 12 wildcards was exactly 64, so everyone participated.

To bypass the cap on the number of participants per board, PSH registered two spinners (Wayne and Isa) under the name of two inactive boards (NLPSC and PSUK). After the evasion was foiled, they were listed as PSH without any penalties.

DArKT had an incredibly solid performance in this tournament, although that would only be the beginning of his competitive career. Gollumsk8, who had been participating since the very first world tournament, reached the top 4 for the first time.

i.suk, who had also been spinning for very long, was considered the clear favourite for winning this event. When the tournament started, he held between 40 and 50 world records, and had made various popular mods and tutorials for practicing powertricks. He was exploring more than just fundamental powertricks, and delving into more creative spinning. However, his style as we know it today wasn't completely fleshed out: he hadn't designed his personal emboss yet, and his combos were still around 25 seconds long. In a **controversial match**, he lost round 5 vs Sirapob, whose spinning was based on fingercrossings. This was largely due to the judging of Menowa*, which was heavily criticized at the time.

However, that is not to say that **Sirapob** didn't deserve the win. After intensive flexibility practice, he was able to master fingercrossings in a way that had never seen before. As his technique didn't compromise the execution of his combos, there was enough balance between difficulty, creativity and execution for him to consistently receive good scores. While Sirapob's win gave rise to some fingercross-based spinners, it's a style that didn't really become widespread.

PSO18

	1st	2nd
Power	Arkonix (France)	ocha (Japan)
2 Hands	i.suk (Australia)	Laku (Japan)
Complexity	Herenz (Taiwan)	PT (Taiwan)
Wipers	DioBrando (New Zealand)	kin (Hong Kong)
Taps & Counters	Van (USA)	Taeko (France)

More than a decade prior, there had been another attempt to run an Olympics-style event, but it failed. In 2018, Coffeelucky revived this idea and organized the first successful Pen Spinning Olympics. It was an individual tournament, with its distinctive feature being that spinners would register into **various categories**. The idea behind the different categories was to make room for more diversity, as the style that World Tournament criteria favour is quite narrow. In theory, as the criteria are different for each category and the combos are more similar to eachother, this should allow judges to be more precise and more fair in their scores.

There were **five categories**: *power, two hands, complexity, wipers and taps & counters*; with 11, 13, 25, 15 and 11 participants respectively. Each of those consisted of three rounds. The first one was a battle royale between all of the participants of the category. For each category, five spinners advanced to round two, which was another battle royale. The two best combos would battle in the finals in a 1vs1 battle. Since the events were inspired by the Olympics, spinners represented their **countries** instead of their boards, something that was both very innovative and increasingly relevant, in a time when UPSB had closed and new spinners started wondering if they were also considered to be from UPSB. Each country could send up to two spinners to each category, and any individual spinner could only participate in up to two categories.

As the event series was still new, it was seen more like a casual event rather than something in the level of a WT or WC. Thus, some categories like power were notably empty of some of the top performers at the time, like i.suk or Katts. The number of forfeits due to unsent videos was also quite high: 7 in the first round and 4 in the second round, while all finalists sent a video. The most popular category was **complexity**, as it was the most broad in scope. Some argued that complexity led to a **mini-WT**, which is why it was removed in PSO20.

The match between Arkonix and ocha in the power category was very close, and heavily debated. Arkonix' combo had very clean execution, although it didn't show any particularly new techniques. On the other hand, ocha's combo was very inspired by juggling, including vertical stalls as well as other tricks reminiscent of devil sticks. The judges initially considered it a draw, although the win was then granted to Arkonix in the tiebreakers.

In 2 hands, i.suk won with a very tech-heavy style, where he intertwined his fingers in tricks which, at times, had never been seen before; in contrast to Laku, who was more focused on controlled hand movements, integrating twirls with wipers, planes of rotation and the overall harmony of the combo. Herenz won complexity almost uncontested, with intricate yet pleasantly executed and well presented

DioBrando (New Zealand)

combos. DioBrando won over kin with a tech heavy wiper style, further developing the tricks that he had been practicing for years prior. In taps & counters, Van won vs Taeko 2-1 in a relatively close battle. In the end, the event was a great success and this new tournament scheme allowed for very **creative and unique** combos that weren't as common in regular World Tournaments.

TWC18

1st	The Front Row	DArKT (BrPSC), Rotation87 (IPSB), juan (PPSC), OhYeah! (THPSC), Pixels (UPSB)
2nd	Eastern Youth (JEB)	yua, kAtts, Beige, Ennis, TUv4
3rd	Pun Kannot (FPSB)	DustFall, Gunter, Taeko, Mushwoom, Patchwork
4th	Among the Baguette (FPSB)	Tidus, Ivabra, Aaytowi2, Neir'da, Arkonix

While the forumless order was more or less established by now, the uncertainty regarding the WC organization continued. Two FPSB members, Tidus and Dustfall, took the initiative and organized a team tournament.

Although it was in the same spirit as the former World Cup, it was also slightly experimental, so they gave it a different name: **Team World Cup (TWC)**. Boards were allowed to send **multiple teams**, which resulted up in FPSB registering four and PSH, eight. Later, it was suggested that this number should be limited. Alliances could also be made without any restrictions, which resulted in the quintuple alliance that formed the winning team, **The Front Row**. In total, the event had 16 teams of 5 spinners each, from 10 boards. The first round was a CV qualification round, followed by three rounds of single elimination.

There were three matches for each team battle. A more varied selection of **themes** was implemented, although they were much less niche than in WC10. The themes were pulled randomly from the following: *complexity*, *power*, *taps and counters*, *aestheticism*, *wipers* and *duet* (2vs2). There needn't be a duet in each team match. The criteria weren't based in the known and tested past WC criteria, and although the point system was more complex, the definitions were very vague, which was criticised. The organization was, in general, not widely liked. However, we have to keep in mind that no other group volunteered at the time, and in the end, no major issues occurred.

DArKT (The Front Row)

Following the trend, the **alliance team won**, their team having five members from five different boards. **DArKT** consolidated his position as one of the top spinners in the world. **OhYeah!** showed very innovative ideas, establishing himself as one of the most creative spinners of the past few years. From the second place team, **TUv4** submitted some interesting complexity combos. **kAtts**, who had also reached the top 8 in WT17, proved that he was one of the strongest Japanese powertrickers.

Overall, some interesting combos came out of the tournament, although no breakthroughs were made. The most important aspect about TWC18 was establishing a **new organizing group** for international events, what would become known as the Pen spinning Board of Directors (**PBoD**), and showing that the closure of UPSB didn't imply the death of the tournament series.

WT19 (A-side)

1st	i.suk (UPSB)
2nd	DArKT (PSB)
3rd	Gollumsk8 (FPSB)
4th	Padrace (UPSB)
5th-8th	kAtts (JEB), monheim (UPSB), wala (PHPS), Drowsy (JEB)

The time had come for the first World Tournament after the closure of UPSB. Tidus and Dustfall, who were the organizers of TWC18, joined forces with other experienced spinners to form the Pen Spinning Board of Directors (PBoD) and tackle the organization of their first WT.

This committee devised several innovations. First, the tournament was divided in two: the **A side** (called WTA) was the usual World Tournament, which had 64 participants and 6 rounds. The **B side** (called WTB) was a more beginner friendly tournament. The participants of WTB were comprised of up to 32 spinners who lost during the first round of WTA and wanted to participate, as well as an-

i.suk (UPSB)

other 32 spinners. In total, WTB had 62 participants and 6 rounds. The first three rounds in both sides were group rounds, and while they contributed to reduce pairing variance, they created less excitement than the 1vs1 matches, so some people argued that just one or two were enough.
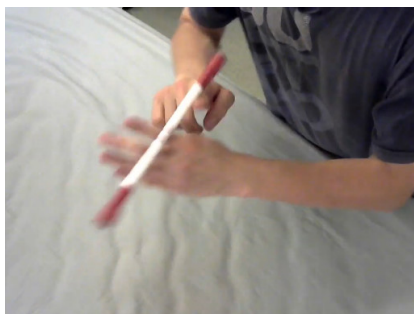
As for the judging guidelines, the penalties for misconduct and unfit videos still weren't very fleshed out, but the **judging criteria** and their definitions were upgraded to be the most **detailed and precise** they have ever been, mostly thanks to the contributions of i.suk. However, some people criticised that the criteria which were chosen favoured i.suk heavily, who also was a participant.

The level of the spinners who lost R1 of the A side wasn't necessarily low, which resulted in a power level imbalance in the B side. For example, Neir'da, who finished 3rd in the B-side, was one of the spinners eliminated from the

A side. Ketain was eliminated in A side's round 1 due to an incredibly hard group placement, and he would have probably finished in the top 4 of the B side if he had decided to participate in the B side.

The A-side showcased by far the **highest level** of competitive pen spinning that had been seen to date. Drowsy, who was already very popular thanks to his CV submissions, showed a creative and aesthetic style of spinning based on fishing tricks and **changes of plane of rotation**. Padrace, with creative spinning based mostly on slides and hand motions, finished in the top 4. Monheim, also known as nine, based his spinning in hard tech, **cardioid variations** and fxxk with very clean execution. Gollumsk8 did one of the first and **most impressive 2p1h** combos in R5 vs i.suk. DArKT further developed his spinning based on **changes of direction**, balanced between creative and technical.

Finally, **i.suk** showed impressive dilligence by filming months in advance, dedicating an enormous amount of time to every combo and showing **completely new concepts**, both in their creativity and difficulty. His mod, the i.suk emboss v3 became one of the de-facto mods for powertricks. Coming into the tournament, the popular opinion favored him uncontestedly, and his final win just confirmed what was known since at least WT17.

WC20

1st	X (FPSB)	Ark0nix, Gunter, Ivabra, Tchus, Thebeygeek, Leftfinger
2nd	Dawn Wanderer (JEB)	Ennis, Fukrou, KoVi, Laku, Kyousuke Kanbara
3rd	W (PHPS)	abc, ch, Mond, wla, Xound
4th	Ultimate Rookies (JEB)	C17H27NO3, Haro, sututu, tetora, Vekzy

Again under the name of PBoD, a committee of spinners from all around the world organized 2020's World Cup. The tournament featured 16 teams and 4 rounds, the first one being a CV qualification round. The rulebook was mostly the same as the one for TWC18, with some minor changes: *1p2h* was added to the pool of themes that could be drawn. Alliances were limited to a maximum of two boards, and large ones (UPSB, JEB, PSH and FPSB) weren't allowed to form any, in order to avoid what had happened with *The*

Front Row in TWC18. Other than that, the imprecise criteria definitions, no tiebreakers and no definite penalties were the same as in 2018, completely disregarding the feedback.

During the qualification round, UPSB and the French team "Y" were **tied** for 8th place. Carelessness by some members of the committee resulted in it not being noticed until after the results were announced. After the participants noticed it, there was no official course of action as there were no tiebreakers in the rulebook. Judges were asked again, one of them changed his opinion which gave UPSB the win.

Fukrou (Dawn Wanderer)

The vague criteria definitions received several **complaints** this year, so for the first time in all WT and WC history, an amendment to the rules was written mid-tournament. Unlike two years before, the deficiencies of the organization were more evident, and the backlash was stronger. Thankfully, the great submissions more than made up for these problems. Additionally, some members decided to step up for helping in the organization of future tournaments, in order to avoid these situations.

As for the **qualification collabs**, both JEB teams were very powerful. Some notable spinners were Haro and his standup (performance) combos, abc with very crisp execution in taps and counters, Xound coming back to competitive spinning and **Thebeygeek**, which was later crowned as spinner of the year and the one with highest difficulty by 2020's Spinawards. It was said that his high difficulty combos were key to FPSB X's final win.

One of the members of JEB's Dawn Wanderer, **Fukrou**, lost in R3 in the wipers category versus wla from PHPS. Being considered a wipers expert, Fukrou wasn't happy with the result and decided to put all of his efforts in his final round combo, which turned out to be vs Arkonix in the aestheticism category. His R4 combo blew everyone away, not only winning the battle but being awarded the second best combo in JEB's Spinner of the Year 2020, the third best spinner of the year and best refinement by Spinawards.

PSO20

	1st	2nd
Aestheticism	VAIN (JEB)	Dove (TWPS)
Power	Neir'da (FPSB)	Allwars (LSPSC)
2 Hands	Zefia (UPSB)	Jiv. (JEB)
Wipers	MEL (JEB)	Kin (HKPSA)
Counters	DArKT (PSB)	Cowabunga (TWPS)
Multipen	RPD (SPSC)	Gollumsk8 (FPSB)
Standup	PSAkkey (PHPS)	ponkotu (JEB)

As PSO18 successfully established the new tournament series, the second edition was a great success. This tournament was also organized by PBoD; in particular, Coffeelucky and Ketain were the main organizers, while Patchwork and RPD were in charge of the rulebook.

There were some **updates to the categories**: complexity was removed as it was too broad in scope, which had resulted in a mini-WT in the previous edition. *Aestheticism* took its place, which was intended to be a category focused on CV-style combos. *Taps & counters* was changed to just *counters*, as taps can be done without changes of direction, which isn't the main focus of the category. Each of these five categories consisted of **three rounds**.

Padrace (UPSB)
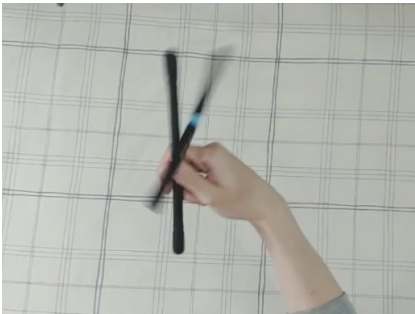
RPD (SPSC)

In addition to those, there were two completely new ones: **multipen** and **standup**, which consisted of 2p1h and performance spinning respectively. As they were considerably less developed than the other five, they consisted of only one round, in which all spinners did a battle royale. This allowed those spinners to go all-out in one combo.

In order not to have issues like the ones seen in WC20, the **criteria** definitions were written in a much more precise way and penalties were clearly stated. The criteria were completely different for each category. Notably, standup combos had to be longer, execution was less important in multipen, difficulty didn't count at all for aestheticism and in wipers, and both aesthetic and technical approaches were taken into account for the first time in a tournament.

The submissions to the **3-round categories** were of an incredible level. i.suk, who was busy working on his 12 years solo, was missing from both 2 hands and power, participating as a judge. Some notable combos from the 3-round categories, as evidenced by the SpinAwards results, were Dove's aestheticism R2, Cowabunga (MG) counters R2 and all three DArKT counters combos. Kin finished in second place in wipers, again losing the finals like in PSO18. Allwars, who had also participated in the power category two years earlier, was able to reach that top 2.

Before the tournament started, the success of the **1-round categories** was unknown, and it was a hit or miss, many doubting that something decent could come out and having considerably less participants. Many feared that it would be like the infamous *body and environment* in WC10. Now, some consider them the most memorable part of PSO20. For multipen, Gollumsk8 one-upped his incredible WT19 combo and RPD won the category, partly thanks to some new developments in 2p1h modding. As for standup, there was a very controversial judging by Bula which was key in giving PSAkkey the final victory. However, the popular opinion was favorable towards ponkotu (2nd place) and Padrace (3rd place). In particular, Padrace got over 760 likes in the Twitter upload of his combo, which was among the highest that any pen spinning combo had gotten up to that point.

WT21 (A-side)

1st	i.suk (ESPC)
2nd	Beck (ESPC)
3rd	Saltient (MYPSC)
4th	Haton (PSH)
5th-8th	Arthur (SGPSC), Padrace (ESPC), V01D (ESPC), Zefia (ESPC)

The 2021 World Tournament was organized by PBoD and took place during the latter half of the year. Tigres was the leader of the organizing team and his objective was to take what had been done in WT19, improve upon it and document the process of its organization so that future generations of spinners could also make these tournaments by themselves.

The tournament was again divided in two. The **A side** (WTA) had 64 participants and 6 rounds. WT19 had 3 groups rounds, which were said to be too many, so on this occasion the organization opted for only 2 group rounds and 4 individual rounds. The **B side** (WTB) was comprised of 32 participants and 5 rounds. Unlike in the last edition, spinners who lost during the first round of WTA didn't had the option of participating in WTB, a change implemented to keep the WTB shorter and truer to its objective.

i.suk (ESPC)

The rulebook received several improvements. The requirements for participants, managers, and judges were more clearly stated, and what could constitute a community was defined for the first time. In order not to use the name of the now closed UPSB and to treat the relatively scattered community in an unified way, the acronym **ESPC** (English Speaking Penspinning Collective) was used. Video submissions were not done through YouTube but by directly sending the video to the organizers. These were then reuploaded to the PBoD channel for **archival** purposes. In order to make the **pairings more fair**, spinners who had and hadn't participated in past tournaments were distributed in equal numbers within each group. The criteria were very similar to those used in WT19, although some descriptions were improved and the point scales were written in a more detailed way.

There were various trends during this tournament. Power combos were pushed to levels never seen before, thanks to the pioneering efforts of i.suk and new developments in tricks like the Fl PD arounds. i.suk and Arthur are to be mentioned in this category, as well as vanilla. The vast majority of the top performing spinners opted for technical combos but with a lot of care put into the spinning effect and overall aesthetics. Among these I should

mention Haton, Zefia, TUv4, Beck, Padrace, and V01D. It's not uncommon for spinners to opt for non-traditional combos in order to hedge over the competition, but this was particularly important in this tournament: Jiv., i.suk, and Zefia submitted 1p2h combos, Padrace's R2 was a standup combo, CrisWea!!'s whole WT run (R1-R3) was 2p1h, and i.suk's R6 was in xpxh style.

Saltient practiced and prefilmed several months before the tournament started. Using extreme fingercrossings as a medium, he implemented new concepts from cardistry, finger tutting as well as his own ideas in a way never seen before. He hadn't participated in any past tournaments so he was relatively unknown, but his combo for MYPSC 6th was promising enough that made him one of the top candidates for the first place finish. However, he lost in the semifinals vs i.suk.

Saltient (MYPSC)

The second place was for **Beck**, another experienced but relatively unknown spinner, as he had notoriously missed the WT19 registration period. His R3 combo was very remarkable, making use of very creative hand positions, taking down early another one of the favourites of this tournament, the Japanese spinner TUv4.

i.suk became the first spinner to win a World Tournament twice. He continued pushing the boundaries of spinning in a similar direction as during his WT19 run and his 12 year solo, using around-spin powertricks, two hands, two pens and in general leaving no breathing room in his breakdowns. His R3 was vs Gollumsk8, which was a rematch for their legendary battle during WT19. He submitted an incredibly technical 1p2h combo for his R4 vs Padrace which would be eclipsed by his semifinals combo vs Saltient, another 1p2h combo which he estimates took more than 600 hours to prepare. His final combo had a mix of linked 2 hand tricks, 2p2h, as well as some 2p1h.

Part II

Notation

4 English notation

In this chapter we will learn about the notation commonly used in English-speaking boards and communities. Both **informal** and **formal notation** are shown together in order to avoid repeated information. To distinguish notation from surounding text, a `typewriter font` is used.

4.1 Trick names

A **trick** is a relatively short, distinctive sequence of pen movements that usually can't be easily subdivided into simpler tricks. When combining various tricks, we form a **combo**. **Linkages** are simple sequences of movements used to connect tricks within a combo. In 2004, Kam designated four tricks and their reverses as **fundamental**: `Charge`, `fingerpass`, `sonic` and `thumbaround`. He considered including `infinity` as the fifth, but in the end he opted not to. In 2007, Freeman made another similar category called **utility tricks**, comprised of `pass`, `wiper` and their reverses. For a comprehensive list of all trick names and their origins, see Chapter 8.

4.2 Fingerslots

A fingerslot or slot determines the possible range of positions of the pen at a certain instant. It's one of the most developed aspects of English notation.

4.2.1 Locators

We form slots by using **locators**, which represent every part of the hand:

A	Arm	**T**	Thumb
E	Elbow	**Tf**	Thumbflap
W	Wrist	**1**	Index finger
H	Hand	**2**	Middle finger
B	Back of the hand	**3**	Ring finger
P	Palm of the hand	**4**	Pinky finger

When combining them to form a slot we need to follow a certain **hierarchy**:

$$A > E > W > H > B > P > T > Tf > 1 > 2 > 3 > 4$$

This means that 23 is a correct slot while 32 is incorrectly ordered.

To specify a position within a finger, we write the finger followed by either the phalanx/joint, face, or both, in that order. This way, locators can be **more or less precise**. For example, in an indexaround the pen goes around 1, but we don't know around which phalanx in particular.

Finger		**Phalanx/joint**		**Face**	
		w	Metacarpal		
		x	Proximal phalanx		
T	Thumb	**y**	Middle phalanx	**b**	Dorsal face
1	Index	**z**	Distal phalanx	**p**	Palmar face
2	Middle	**t**	Tip of the finger	**s**	Lateral faces (any)
3	Ring	**k**	Finger joint (any)	**s$_p$**	Pinky-side lat. face
4	Pinky	**wx**	Knuckle	**s$_t$**	Thumb-side lat. face
		xy	1$^{\text{st}}$ interph. joint		
		yz	2$^{\text{nd}}$ interph. joint		

While it's sometimes good to be precise, using more broad locators allows us to communicate more easily, avoiding irrelevant information. E.g.:

T	Anywhere on the thumb
Tx	Proximal phalanx of the thumb
Txb	Dorsal side of the proximal phalanx of the thumb

Using the incorrect order (for example: xT or y1) could lead to confusion. Without consistent order, for instance, what does 1x2 mean? Does x refer to the index or middle finger?

The locator s can be ambiguous since fingers have two lateral faces. The trick and position of the hand clarify which side we're referring to almost all the time, but if you want to specify, you can do so with s_p and s_t for pinky side and thumb side respectively. Another notation that is sometimes used is ps and ts.

Notice that **not all combinations are possible**! The thumb has no middle phalanx. In the middle and ring fingers, you cannot place the mod on the side of its metacarpal without piercing your hand, nor can you talk about the faces of the end of a finger (for example, 1tb is incorrect).

4.2.2 Changes in the position of the pen

Changes in the position of the pen within one trick are specified with a **hyphen**. Most of the time, for each trick, the **initial and final slots** are written. If there is no change in the pen position, only one slot is written and if the slots are obvious in that context, they may be omitted.

- **Hyphen**   Used to connect various slots of one trick.

Sometimes we want to be more specific and also lay out the **trajectory of one particular trick**, in which case we can use multiple hyphens:

$$\text{sonic 23-12} = \text{sonic 23-12.3-13-1.23-12}$$

4.2.3 Same-trick sequence shortening

At times, within a breakdown, we want to write the same trick multiple times. If the tricks are done one after the other, exactly the same in terms of modifiers but with different slots, we can **shorten those same-trick sequences** by connecting the slots **using >**.

> **Trick connector**   Connects slots to shorten same-trick sequences.

Notice that `pass 12-23-34-23` would't make sense, as you would have to go through all those positions in just 0.5 revolutions (only one `pass`).

`pass 12-23 > pass 23-34 > pass 34-23` ⟹ `pass 12-23>34>23`

This improvement came up in a conversation I had with Fel2Fram, and while it's well accepted within the notation community, it's not uncommon to see other spinners shortening same-trick sequences with hyphens.

4.2.4 Finger prefixes in arounds and spins

Although the syntax is more akin to that of modifiers, the concept of finger prefixes is closely related to what we have seen just now. In some tricks, particularly arounds, a prefix for each finger around which the pen rotates is added: `thumb`, `index`, `middle`, `ring` & `pinky`. Names are usually **shortened forming acronyms**. For example, a `thumbaround` is shortened as `TA`.

When going **around more than one finger**, the order in which you write the prefixes is important. The first finger the pen goes around is written first, and so on. For example, a `MIA 23-23` is the around with 1.0 revolutions that goes first around the middle and then around the index, while an `IMA`

`T1-T1` would be the opposite of that. Notice that **there is only one around**. If we go around the index finger, catch the pen, and then go around the middle finger, that would be `IA > MA` (2.0 revolutions).

Prefixes are only written once. However, we see how in a `MIA 23-23` the pen goes around the middle, index and then middle finger again, thus being a different trick from a `MIA 23-12`. Most of the time, slots can clear up any confusions like this, but that isn't always the case. Consider an `around 1.0` starting from `34` and ending in `34`. In the first half, it goes around ring, middle and index. Before the pen starts falling back, the middle finger is straightened, so it only goes around the index and ring fingers. To distinguish this peculiar trick from the usual `RMIA 34-34`, we should write the finger prefixes as many times as they're needed. Thus, `RMIMRA 34-34` would be the usual trick, and `RMIRA 34-34` the one that we just described.

Finger prefixes are also used in **spins**. They don't specify on which part of the finger the pen must rotate. For example, an `indexspin` could rotate on its palm side (the most common case) but also on its back. If multiple prefixes are used, like in `thumbindexspin`, then it spins in all of those places simultaneously.

4.2.5   Unstable slots (asterisk locator)

| 1* | 1b2s* | 1b2b* |

> | ***** | **Air/gravity** | The mod is over some fingers or suspended in the air.

The asterisk locator `*` represents the air or gravity, and is used to describe slots where the mod is **over some fingers** rather than between them. Using *** by itself** means that the pen is **suspended in the air**. This was developed in FPSB under the name of "invisible finger". The following examples are to ilustrate its usage; they're usually not written so explicitly.

$$\text{aerial sonic} = \text{sonic } 23\text{-}13\text{-}*\text{-}13\text{-}12$$
$$\text{IA } 12\text{-}12 = \text{IA } 12\text{-}1*\text{-}12$$

Various possibilities exist for each slot. For example, 1* could be palm down, on the index back (1b*); palm side on the index side (1s*) etc. Additionally, slots like 12* do make sense! Multiple possibilities also exist, like 1b2s*, 1b2b* etc. Most of the time, the trick and/or hand position clarifies on which side the pen is placed, so there may be no need to use b, s,...

4.2.6   Dot notation

Originally proposed by Fel2Fram in 2011, dot notation uses a dot to represent the mod.

| . | **Dot** | Used to denote the fingers' positions with respect to the mod. |

The usual fingerslots can only describe the position of the mod in relation to the fingers, but with dot notation we can also describe the opposite: the fingers with respect to the mod. These images show two slots which would usually be written as 1234. In addition to that, in both examples 1 and 3 are on one side while 2 and 4 are on the other. However, thanks to the dot and a particular locator order we can distinguish them!

13.42   31.24

To write these positions with dot notation, start from the side of the mod that contains the first finger by the usual hierarchy (T>1>2>3>4). Write each locator clockwise if it's the right hand and anticlockwise if it's the left hand, while adding a dot for the mod. In this way, the left picture would be 13.42 and the one on the right would be 31.24.

As Freeman pointed out when dot notation was proposed, this is useful for explaining the trajectories of some tricks:

```
Flush sonic    23 - 21.34 - 14 - 13.42 - 23
Swuck          23 - 2P.3 - P3
Sonic          23 - 12.3 - 13 - 1.23 - 12
Inverse sonic  23 - 21.3 - 13 - 1.32 - 12
```

4.2.7 Fingercrossings

The usual way to notate crossed fingers is with a square bracket after the fingerslots. It doesn't specify when those fingers cross/uncross.

> `[fc ___]` **Fingercrossing**   Some fingers are crossed

In informal notation, the crossed fingers are written inside the bracket following the usual locator order. For example, if we cross the index and middle fingers it would be written as `[fc 12]`.

The first improvement to this notation was made by Freeman and Kurotsuki (SPSC) in mid 2009. **Meaning is given to the locator order**: while looking from the same points of view used to determine the direction of rotation, the fingers above are written first, followed by those below. Thus, we distinguish `[fc 12]` (1 over 2) from `[fc 21]` (2 over 1). So a middlearound pushed via a fingercrossing would be:

$$\text{MA 12-12 [fc 21]}$$

However, this doesn't account for all crossings! This can be seen by adding the locators of the back (`b`) and palm (`p`) sides of a finger and then checking for all of the possible combinations. Around 2013, I defined the x-type and o-type fingercrossings and their notation. This classification only applies to the case in which just two fingers from the same hand are involved.

X-type fingercrossings   One finger is **above** another. It is enough to order the locators correctly; there is no need to specify further with `b` and `p`. These fingercrossings are the most common type.

$$\text{[fc 21] = [fc 2b1p]} \qquad \text{[fc 12] = [fc 1b2p]}$$

O-type fingercrossings   One finger is **outside** another. A new symbol ("outside of") is used, and the locators for the back (`b`) and palm (`p`) sides of the finger also have to be specified to distinguish all types.

> `>` **Outside of**   Finger outside > finger inside

For example, one o-type fingercrossing involving T and 1 in which the thumb is outside the index finger is `[fc Tp>1b]`.

On the next page you can see a table with several examples of fingercrossings between T, 1 and 2. Check that you understand how everything has been notated and why locators were ordered that way.

Fingercrossings involving the thumb

T1 [fc Tb>1b]

T1 [fc Tp>1b]

T1 [fc T1]

T1 [fc 1p>Tp]

T1 [fc 1p>Tb]

T1 [fc 1T]

Fingercrossings involving non-opposable fingers

12 [fc 1b>2b]

12 [fc 1p>2p]

12 [fc 12]

12 [fc 2b>1b]

12 [fc 2p>1p]

12 [fc 21]

In addition to those twelve there are eight more, which probably can't be done without hurting yourself. Notice how the combinations that we are able to do change depending on if we consider opposable (T and 1) or non-opposable (1 and 2) fingers.

```
[fc Tp>1p]      [fc Tb>1p]      [fc 1b>Tb]      [fc 1b>Tp]
[fc 1p>2b]      [fc 1b>2p]      [fc 2b>1p]      [fc 2p>1b]
```

Although not mandatory, we can also notate the **end of a crossing**. In this case, there's no need to repeat which fingers uncross if it's obvious.

`[/fc]`   **End of a crossing**   The previous fingercrossing is undone

4.2.8   Special positions & fc shorthands

While we can use the [fc ___] bracket to determine crossed positions of the fingers, we can use the same concepts and ideas without the fc keyword to determine **non-crossed, special finger positions**.

`[  ]`   **Special position**   Half fingercrossing or special finger position

For that, the following symbols can be useful:

| = | **In contact** | For a finger in contact with or near another |
| ≠ | **Not in contact** | For a finger not in contact or away from another |

There is another way of notating some of the special positions of 1, 2, 3 and 4, which has been widely adopted and is more easily understood:

| **in** | **Hyper-extension** | A finger is hyper-extended |
| **out** | **Flexion** | A finger is flexed |

[14≠P; 23=P]   [2≠P; 3=P]   T1 [Tb=1b]
   or [23 in]   *or* [2 out 3 in]

There is one **shorthand form** for the fc and special position bracket which we can use in the case that the locators in the slot and inside the bracket are exactly the same, proposed by Tchus in 2021. For example:

```
12 [12] ⇒ [12]
123 [fc 312] ⇒ [312]
```

Let's see both the shorthand form and the special position bracket in action with an example: `wiper 12`. Depending on how we decide to position the fingers, the plane of rotation of the wiper will change. This change of plane of rotation isn't described otherwise in the breakdown of the trick, but can be expressed with special positions. There are eight basic possibilities. Let's assume palm side position, with ourselves looking towards the palm:

Moving up	**Moving down**	**Moving away**	**Coming near**
`wiper [12]`	`wiper [21]`	`wiper 12`	`wiper rev 12`
`wiper rev [21]`	`wiper rev [12]`	`wiper rev [fc 21]`	`wiper [fc 12]`

4.3   Modifiers

Modifiers are words which provide extra information about aspects of a trick, like where and how it is executed. By using modifiers instead of new trick names we give **information in a descriptive manner**, thus reducing the number of arbitrary names and conventions that need to be memorized. For each trick, modifiers are written in the following order:

Hand orientation	Prefix	Name	Suffix	Nº of spins	Slots

4.3.1   Hand orientation

Hand orientation determines the position of your hand with respect to the reference frame of the table/ground. Although many intermediate positions exist and are commonly used while spinning, in breakdowns they are simplified to the following **four main positions**:

PU	**Palm up**	The palm facing upwards.
PS	**Palm side**	The hand is sideways, pinky lower than thumb.
PD	**Palm down**	The palm facing downwards.
BS	**Back side**	The hand is sideways, pinky higher than thumb.

Some people like to write this in different styles. All of the following are equivalent and accepted notations of a `palm down` TA:

`PD TA`	`(PD) TA`	`[PD] TA`	`(PD):TA`

It is commonly understood that if nothing is stated, the trick is done in (PS). If hand orientation is stated in a combo breakdown, all subsequent tricks are done in that hand orientation unless a new one is written. If the orientation changes in the middle of a trick, we can write it using dashes:

<div align="center">

`(PD-PS) twisted sonic`

</div>

The exact moment of the orientation change isn't specified. If you need more precision, you can divide the trick into smaller ones and indicate the orientation in each of them.

<div align="center">

`(PD) charge 23 ~> (PS) pass 23-12`

</div>

When writing long combos it can be useful to divide the breakdown into rows, so that the hand position is the same in each one. This comes down to personal preference, but this is how I like to write them:

```
(PD) twisted sonic 23-12 > charge 12-T1 ~> IA T1-12 > midbak >
(PS) IA 23-12 ~> powerpass 12-34 >
(PU) palmspin > double TA
```

4.3.2   Prefixes and suffixes

The so-called **prefix modifiers** are words that we put before the name of the trick, and the **suffix modifiers** are the ones that go after it. These modifiers change the trick itself. They allow us to neatly classify tricks in a descriptive manner.

Prefixes		Suffixes	
inverse	continuous	normal	rise
mirrored	double	reverse	fall
fingerless	triple ...	harmonic	bust
tipped	* curled	riser	double bust ...
counter	* side	release	* cardioid
aerial	* palm	still	* pop
isolated	* backhand		
moonwalk		* Defined after the v3 NC	

In this table, most commonly used modifiers are shown. Those marked with an asterisk have been added recently and won't be found in old notation guides. `Moonwalk` and `still` were deprecated, but it's now commonly accepted that their usage is correct when no slots are written.

Counter The original concept was invented by Zombo, from UPSB, around 2005. The idea is to perform a trick as normal, then interrupt it halfway through with its reverse, usually via a fingerless push. This brings the pen back to the starting position, resulting in a hybrid.

```
bak T12-T12 ~> bak rev 0.5 1*-T12 = Counter bak
```

Nowadays, the word `counter` is used in a more general sense to refer to abrupt (not hidden) changes of direction. For example, the PSO/WC "taps and counters" category uses this definition.

Continuous Abbreviated `cont`: when a trick is executed repeatedly.

```
TA > TA  . . . = Cont TA
```

If nothing is specified, the trick is executed an indefinite amount of times. An example of this usage would be in the phrase: *"The world record for **cont TA > Spider spin** is currently held by Kake."* A particular number of repetitions can also be specified as follows:

```
TA > TA > TA = Cont TA x3
```

This can be applied to sequences of tricks with the help of parentheses.

```
TA > IA > TA > IA = Cont (TA > IA) x2
```

Harmonic Abbreviated `harmo`. In English, it originally meant when the `nor` variant of a trick was done followed by the `rev` just once.

```
TA nor > TA rev = TA Harmonic
```

Nowadays, it's understood by many as a continuous change of direction:

```
TA nor > TA rev > TA nor . . . = Cont (TA nor > TA rev) = TA Harmonic
```

This is probably due to video tutorials for `harmonic` tricks repeating the sequence over and over without stopping in between, in order to show how it's done. Hideaki, who coined this word in 1997, also did it continuously in his videos.

Double, triple, quadruple... Another way to write continuous tricks

```
TA > TA > TA = Cont TA x3 = Triple TA
```

Mirrored Imagine a plane perpendicular to the palm of your hand but parallel to your fingers. Mirroring a sequence means that you do the same tricks, but the slots and direction of rotation are reflected over that mirroring plane. It is mainly used for powerpasses, since it's one of the only tricks which its `mirrored` can't be notated with simpler modifiers.

Where do we place that mirroring plane, though? Take `tw sonic 23-12` for example and notice the differences when the plane is in 23 vs in 2:

```
Mirrored tw sonic 23-12 [plane in 23] = tw sonic rev 23-34
 Mirrored tw sonic 23-12 [plane in 2] = tw sonic rev 12-23
```

The 23 plane is always used for the powerpasses and that has led to people thinking that that is always the case, but in reality the plane should be placed so that the fingers involved remain the same. In the case of the `tw sonic 23-12`, the plane should be placed in 2. For a more complex sequence, the logic is the same:

```
        Tw sonic bust = Tw Sonic 23-12 ~> Bak rev 12-12
Mirrored tw sonic bust = Tw Sonic rev 12-23 ~> Ringbak 23-23
```

Keep in mind that the use of `mirrored` can overlap with other simpler modifiers! In that case, it's better to use the most intuitive one.

```
        Mirrored flush sonic = inverse flush sonic rev
```

Moonwalk `Moonwalk` means that a trick is done in the normal direction of rotation, but with the slots of its reverse. It was deprecated by the NC, but nowadays its usage is considered correct when no slots are written. It originated in Japanese notation, where that's always the case. For example, in the case of `moonwalk inverse side sonic` we are referring to all of the tricks that follow this slot pattern without specifying any particular one.

```
            Sonic = Sonic nor 23-12
       Moonwalk sonic = Sonic nor 12-23
            Sonic rev = Sonic rev 12-23
     Moonwalk sonic rev = Sonic rev 23-12
```

Fingerless Abbreviated `fl`, when the impulse of that trick does not come from the movement of the fingers but rather from the movement of the wrist or arm. A more in-depth explanation of fingerless and other pushes can be found in section 4.3.6.

Inverse Abbreviated `inv`. When in the original trick the mod passes "behind...", in the inverse it passes "in front of..." and vice versa. For example, a `sonic nor` passes behind the middle finger, so its inverse is exactly the same but passes in front of it.

In powerpasses, `inverse` is often used incorrectly (See the entry for `powerpass` in chapter 8). In that case, the usage of `palm` and `backhand` is recommended.

Palm, backhand `Palm` and `backhand` are modifiers which consist of executing a trick on either the palm side or the backhand side of the fingers, but while keeping the same direction of rotation and push in both variants. This is currently only used in powerpasses, as explained in the trick dictionary (Chapter 8). `Powerpass` and `inverse powerpass` have opposite directions of rotation (counterclockwise and clockwise respectively) and opposite pushes (finger retraction and stretching respectively) while `(backhand) powerpass` and `palm powerpass` have the same direction of rotation (counterclockwise) and same push (finger retraction). For powerpasses, `backhand` is usually omitted.

Bust, Double bust, ... A `bust` consists of adding a `Fl backaround reverse` at the end of a trick. For example:

```
Sonic bust = sonic > Fl backaround rev
Tw sonic bust = Tw sonic > Fl backaround rev
```

Keep in mind that, for historical reasons, `TA` `bust` is never said, but rather `extended TA` instead. In case more than one `Fl backaround reverse` is added, the modifiers `double bust`, `triple bust` etc can be added:

```
Extended TA = TA > Fl backaround rev
Tw sonic double bust = Tw sonic > Fl backaround rev x2
```

The initial meaning of `bust` was slightly different, always implying that a change of direction was smoothed out when adding the `Fl backaround reverse` (See the `sonic bust` entry in Chapter 8). Nowadays, `bust` is used as a trick name by itself, meaning `Fl backaround reverse`.

By the way, you should be aware of the difference between `continuous tw sonic bust` and `multiple bust`! One repeats the whole trick while the other just repeats the busts.

```
Cont tw sonic bust = Tw sonic > bust > tw sonic > bust > tw sonic . . .
Tw sonic multiple bust = Tw sonic > bust > bust > bust > bust . . .
```

Curled Used when one or more fingers are curled and the pen spins in the proximal interphalangeal joint (`xy`). Initially popularized by i.suk in `baks` and `busts` as a way to increase their difficulty.

Tipped Abbreviated as `tp`, this modifier is used to remove the conical movement from the trick. While the usage is simple, there is a technical subtlety with `tipped`, `nor` and `rev` that we shall point out. Sometimes, the tipped versions of the `nor` and `rev` variants of a trick are the same.

```
Charge nor  →  Tipped charge  =  Tipped charge  ←  Charge rev
```

However, that isn't always the case. Take `sonic` for example. While their breakdowns may seem the same, those tricks aren't.

```
Sonic nor  →  Tipped sonic  ≠  Tipped sonic  ←  Sonic rev
```

The problem in the above reasoning is that the slots are being left out. When added, the apparent inconsistency is solved.

```
Sonic 23-12 → Tp sonic 23-12 ≠ Tp sonic 12-23 ← Sonic rev 12-23
Sonic 23-12 → Tp sonic 23-12 = Tp sonic 23-12 ← Sonic rev 23-12
```

Isolated Popularized by the French spinner Fratleym and coming from other manipulation arts, this modifier changes the way the trick is performed visually. An `isolated` trick is intended to create the optical illusion that one end of the mod is "anchored" to the air.

<div align="center">Isolated triangle pass</div>

Side Whether `side` is a modifier or not is somewhat disputed, and `side sonic` could be correctly classified as an individual trick by now. It's used when a trick has one finger on one side of the pen and you move it to the other with an in-out or out-in motion, from closer to the palm to further and vice versa. It is mainly used with `sonics` and `charges`.

Side sonic 23-12	2 moves in-out.
Side flush sonic 23-23	3 moves in-out while 2 moves out-in.
Side charge 13	2 either moves in-out or out-in.

There is some ambiguity in the case of `side charge` 13, which is sometimes the problem of `side`. It should be clear in context which one you mean. One could argue that `side charge` 13 should actually be called `side sonic` 13-13, since in the formal sense the slots are changing:

```
Side charge 13   ⟹   Side sonic 13(2 out)-13(2 in)
       or                Side sonic 13(2 in)-13(2 out)
```

Release One of the two types of aerial pushes. The mod is thrown in the air immediately after the initial push. Therefore, the mod can't turn on top of the hand until after finishing the aerial spin.

Riser The second type of aerial pushes. The mod rotates somewhere in the hand after its initial push and then is thrown to the air. After the aerial spin, the pen is caught without any additional rotations on the hand.

Pop `Pop` is one type of catch in which the mod does 0.5 revolutions on top of the hand after an aerial spin. Its initial meaning was different (see: Elbow pop), its current meaning was standarized by Fel2Fram in 2010. It can be used in conjunction with either `riser`, `release`, as well as by itself.

Aerial Used to say that while performing the trick, the mod has been thrown to the air. Neither how nor when is said, so it could be a `release` or `riser`.

Rise Used to abbreviate sequences of the same trick, starting at 34 and ending at 12, mainly with `sonics` and simple `arounds`. Don't confuse `rise` with `riser`.

```
Sonic rise = sonic 34-23 > sonic 23-12
Bak rise = pinkybak > ringbak > midbak > indexbak
```

Fall The opposite of `rise`, starting at 12 and ending at 34. The `bak fall` has been used so much that name and modifier have fused into `bakfall`.

```
Sonic fall = sonic 12-23 > sonic 23-34
Bakfall = indexbak > midbak > ringbak > pinkybak
```

Still Used to say that a trick starts and ends in the same slot, mainly used in `shadow still`. It should only be used when no slots are written down.

```
Shadow still 12 = Shadow 12-12
```

Cardioid Originally used to refer to the trick `TA > wiper rev T1`, it was adopted as a concept for any around-wiper trick and later used as a modifier. It consists of adding a `wiper` after the `around` in question, in the same slots and without changing direction. So, for example:

```
pinkybust cardioid = (PD) pinkybust > wiper 34
pinkybak cardioid = (PD) pinkybak > wiper rev 34
```

4.3.3   Number of revolutions

This modifier gives information about the number of rotations that the mod makes when doing a trick. Some examples are `TA 1.0`, `sonic 1.0` or `thumbspin 1.5`. It is mandatory to put a point between integers and decimals, even when the number of revolutions is an integer. Otherwise, it could be confused with some types of slots. This modifier is mainly used for spins.

4.3.4 Direction of rotation

The two directions of rotation are called **normal**, abbreviated `nor`, and **reverse**, abbreviated `rev`. For us to specify the direction of a trick, it must have some kind of continuous rotation, to determine if it goes clockwise or not. Thus, it isn't appropiate for tricks like `tipped charge` or `stall`.

There is no general rule to determine the relationship between clockwise and `normal` for all tricks. In general, similar tricks or tricks of the same family will follow similar criteria (e.g. `sonic` and `flush sonic`). Handedness needs to be considered, as it is opposite for left and right handed spinners. The criteria under which we call a trick `nor` or `rev` is summarized in the following table. We need to look at the hand from the following points of view, depending on how the pen rotates.

Clockwise is normal (Right hand)
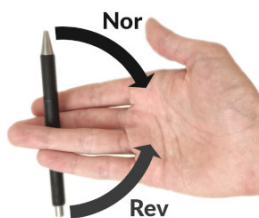
Charge, `sonic` &
variations, `wipers` with
T (`wiper T1`)
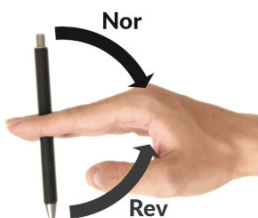
Wipers without T
(`wiper 12`), backarounds
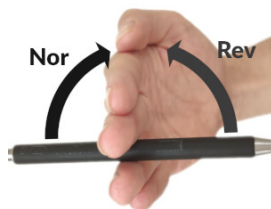
Passes, basketball
spin

Counterclockwise is normal (Right hand)

Spins in both the front
face (`palmspin`,
`sidespin`) and in the
back face (`shadow`)

Arounds (`TA`, `bust`),
spins over T or Tf,
charges with T or Tf
(`charge T1`)

Arounds (`IA`,
`powerpass`), spreads,
dual pass, triangle
pass

4.3.5 PSC notation (push-spin-catch)

This was initially developed in 2007 in the UPSB research department together with the hybrid trick notation. After that, Freeman applied it to all kinds of names in the descriptions of his trick tutorials. Nowadays, this is better known as **PSC notation**.

The **initial concept** doesn't correspond with our current understanding, but there is value in explaning it. Every complete (non hybrid) trick is said to be composed of a push, spin and catch, represented by three brackets, which are written at the end of the trick:

[p slot revolutions]   [s slot revolutions]   [c slot revolutions]

A slot is written in each bracket. For `[p]`, it's the finger that does the push, for `[s]`, it's where the pen spins, and for `[c]`, where it's caught. Additionally, the number of revolutions which correspond to each part of the trick is specified. For example, a `thumbaround` is[1]:

```
TA T2-T1 [p T2 0.25] [s T 0.5] [c T1 0.25]
```

There is no need to specify the slot and revolutions all the time. For example, `TA T2-T1 [p] [s] [c]`. This kind of thing would be useful when breaking down a hybrid, where we should see how some of the brackets are dropped. For example, a `twisted sonic` is:

```
charge [p] [s 0.5] ~> pass [p] [s 0.5] [c] >~ charge [s 0.5] [c]
```

The `charge`, which is usually `1.0`, isn't finished and thus the `[c]` isn't written. It's then interrupted by a complete `pass`. Finally, another half `charge` finishes the trick.

Modern PSC

You may have noticed a problem. For the `charge`, the whole extent of the motion is a push and there is no spin. Furthermore, a trick like `bakfall` or `powerpass` contains multiple pushes. In the end, only some tricks have a push-spin-catch structure, so a **more general understanding** was needed. Most of this was developed by me in 2014.

---

[1]I won't write `T*` in the spin bracket since it's a historical explanation of PSC notation, which predates the asterisk locator!

[p ___]	**Push**	The fingers or movement that push the trick
[s ___]	**Spin**	Where and how much it spins, only unstable slots
[c ___]	**Catch**	Where it is caught after a spin

For `[p]`, not only fingers can be specified but also movements or other tricks can be used. A spin is only considered when the pen is in an ustable slot, so not all tricks will have `[s]`. In the same way, `[c]` is written only when there has been a spin prior. Some examples:

```
Charge 23 = charge [p 23 1.0]
Tw sonic = charge [p 23 0.5] ~ charge+pass [p 23-12 0.5]
                ~ charge [p 12 0.5]
Bakfall = bakfall [p][s 1*][c][p][s 2*][c][p][s 3*][c][p][s 4*][c]
```

For the first three the pen is pushed continuously, so only `[p]` is written. A `bakfall` is comprised of 4 arounds, so it also makes sense that it has 4 pushes, 4 spins and 4 catches. This was just to show the conceptual difference, as writing down all brackets for such a long trick is unnecessary.

PSC and aerials

We can use PSC to see the difference between `riser` and `release`. A riser does some spin in the hand before being thrown to the air, differing in `[s]`.

```
TA riser = TA T2-T*-*-T*-T1 = TA [p T2] [s T*-*-T*] [c T1]
  TA release = TA T2-*-T*-T1 = TA [p T2] [s *-T*] [c T1]
```

PSC and fingercrossings

We can combine the use of the PSC brackets with the `[fc]` and `[/fc]` brackets from before to specify when a fingercrossing or other special position starts and finishes. In a) and b), `fc` is inside `[p]`, which means that the crossing is the cause of the push itself. In c) and d), `[fc]` is at the beginning, which means that before the push, the crossing was already there. In a) and c) there is no `[/fc]` so the fingers remain crossed at least until the beginning of the next trick. In b) and d) there is a `[/fc]`, which means that the fingers are uncrossed between `[s]` and `[c]`.

```
a)  MIA 12-23 [fc 21]  =  MIA 12-23 [p fc 21][s][c]
b)   MA 12-12 [fc 21]  =   MA 12-12 [p fc 21][s][/fc][c]
c)  MIA 23-23 [fc 21]  =  MIA 23-23 [fc 21][p][s][c]
d)   MA 23-12 [fc 21]  =   MA 23-12 [fc 21][p][s][/fc][c]
```

4.3.6 Pushes and relative movement

From all of the parts of a trick, the push is one of the most interesting to describe, as catches and spins can often be fully determined just by using some slots. If you have ever wondered how many types of pushes can be done, it's really a daunting task. Here I show a list of what I consider the most important pushes in 1p1h, as well as some examples of each:

1. **Finger pushed**

    a) **Bending**. One finger bends towards the palm (`powerpass`)

    b) **Extending**. One finger extends away from P (`powerpass rev`)

    c) **Reciprocal**. One finger bends towards P while the other extends away from P (`tipped charge`)

    d) **Charge**. Reciprocal, but instead of a tipped motion it's a circular motion (`twisted sonic`)

    e) **Uniting**. Two fingers mutually get closer laterally, the distance to the palm is constant (1st half of `Leon's dual pass`)

    f) **Distancing**. Two fingers mutually distance themselves laterally, the distance to P is constant (2nd half of `Leon's dual pass`)

    g) **Crossing**. Some fingers cross (`MA 12-12 [fc 21]`)

    h) **Uncrossing**. Some fingers uncross (`IA 12[fc 21]-12`)

2. **Fingerless**

    a) **Wrist rotation**. Hand rotates by the wrist (`baktap`)

    b) **Hand displacement**. Hand is moved due to the elbow or other joint (`Fl TA`, done by thusting the hand forward)

    c) **Gravity**. The hand doesn't move. (`slide`)

Charge, crossing and uncrossing are not really separate types of pushes, but a variation of either bending, extending or reciprocal. However, since they're very distinct it can simplify things to notate them in a different way.

The **push information** is often non-descriptively **ingrained in the trick name**. For example, a `twisted sonic` and a `pass` are the same trick but with a different push, so we could consider a more general trick without any push information, which I'll call `gpass` to distinguish it from the usual one, just for this explanation. In this way:

```
            pass 12-23   =   bend-pushed gpass
        pass rev 12-23   =   extension-pushed gpass
   twisted sonic 12-23   =   charge-pushed gpass
twisted sonic rev 12-23  =   charge rev-pushed gpass
```

Despite not having those "generalized tricks", we could still use the modifiers. Aside from that, we could **use the [p] bracket** from PSC, with the help of new symbols and taking the liberty not to write the [s] and [c] brackets. This way of using the notation began in the Naming Committee in 2008, but was very limited, so I expanded it:

→P	Bend	When a finger is **moving towards** the palm
←P	Extension	When a finger is **moving away from** the palm
→←	Uniting	When two fingers get closer mutually & laterally
←→	Distancing	When two fingers move apart mutually & laterally

Thus, we could break down the previous examples the following way:

```
        powerpass = around 0.5 fall [p f→P]
    powerpass rev = around rev 0.5 rise [p f←P]
  tp charge harmo = cont (tp charge [p 1→P 2←P 0.5][p 2→P 1←P 0.5])
     twisted sonic = twisted sonic [p charge 23]
 Leon's dual pass = PD cont (spin 12* [p 1→←2 0.25][p 1←→2 0.25])
 MA 12-12 [fc 21] = MA 12-12 [p fc 21]
   IA 12[fc 21]-12 = IA 12-12 [p /fc 21]
           baktap = PD tap rev 12*-12* [p wrist rotation]
Fl TA (special push) = Fl TA [p hand displacement]
             slide = slide [p *]
```

While some end up considerably shorter, like the powerpasses (in which f has been taken as an abbreviation for any finger from 1 to 4), others like the tipped charge or Leon's dual pass are incredibly long. They're also very precise, so they have utility. For fingerless pushes, using the fingerless prefix should be enough most of the time.

In reality, pushes aren't usually pure but a **combination of various types**. Tchus proposed a scale that goes from **fingerless** to **finger-pushed**, so a particular trick execution can exist anywhere in between:

| Fingerless | | Finger-pushed |

A mostly fingerless TA
with some finger motion

A thumbaround
with some wrist motion
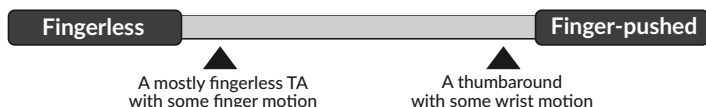
4.3.7 Planes of reflection and non-modifiers

Thinking about the available reflection symmetries on your hand, one can not only define `inverse` and `mirrored` but also `antipodal`, as a new modifier, thus obtaining a complete set. In addition, similar to how `normal` exists as an indicator that `reverse` isn't applied, it can be interesting to think about equivalent non-modifiers for the three rotation symmetries. This was developed by Tache and Tchus. In the figure below you can see each of the three possible planes of reflection. One has to take into account that the `mirrored` plane changes depending on the trick in order to keep the same set of locators, as we already explained in the modifier list.

Inverse plane   Mirrored plane   Antipodal plane
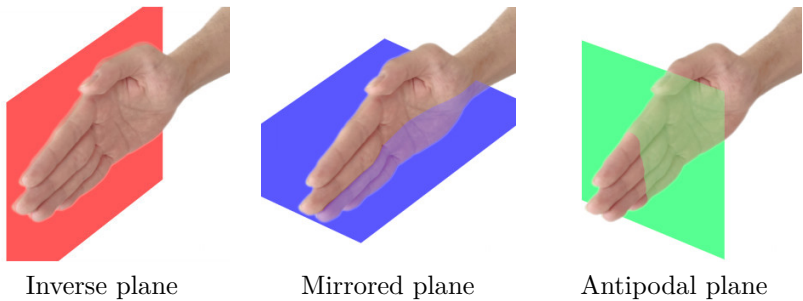
Their **usage often overlaps**. For example, for a `charge` done in the middle of the mod and middle phalanx of the fingers, none of them are needed, since we can always use `normal`/`reverse`.

```
 inverse charge    =    charge
mirrored charge    =    charge reverse
antipodal charge   =    charge reverse
```

For `flush sonic`, either `inverse` or `mirrored` is enough.

```
  inverse flush sonic   =   mirrored flush sonic reverse
antipodal flush sonic   =   flush sonic reverse
```

In the following case, the usage of `antipodal` overlaps with `reverse`, in addition to changing the slots. This is very common. In the end, `antipodal` is mostly a theoretical tool rather than a practical one.

```
antipodal charge 1x2x   =   charge rev 1z2z
```

The aforementioned **non-modifiers** are:

Modifier	Reverse	Inverse	Mirrored	Antipodal
Non-modifier	Normal	Classic	Standard	Analogous

4.3.8   Wiper-in and wiper-out

In many tricks, which don't have to necessarily be wipers, the mod is taken by its end and not its center. While we can torture dot notation to represent this, for example by calling .z the end of the mod and .c its center (as the readers of the 1st edition of this book will know), that is a very unintuitive solution that I came up with years ago and I don't recommend it anymore. A more natural and unambiguous way of notating them can be obtained by using two new modifiers: **wiper-in** and **wiper-out**, which were proposed by Tchus.

Zone for wiper-in tricks   Zone for wiper-out tricks

As an example of its usage, let's see how it works with a `sonic 23-12`:

Wiper-in sonic
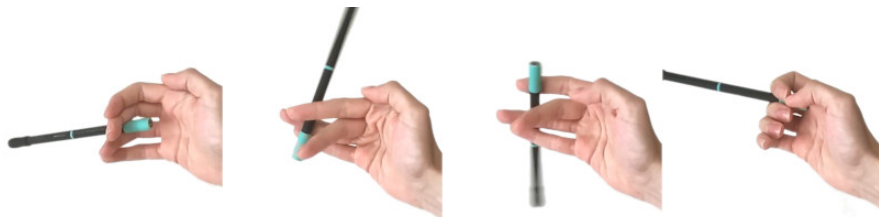
Wiper-out sonic

Let's see other examples. A regular `wiper` can be divided in two:

```
wiper 12 = wiper-in wiped charge 12
              > wiper-out wiped charge 12
wiper rev 12 = wiper-out wiped charge rev 12
                > wiper-in wiped charge rev 12
```

This is written with `wiped charge` instead of `wiper` since the pen doesn't pass through the fingers. That happens exactly at their union (`>`). Here I have omitted the number of revolutions in each `wiped charge`, which usually is `0.25` for each of the halves of a `wiper`, but could be up to `0.5`.

A "`half-slide`" (holding the pen by the middle, it slides to one of its tips) can be written with `wiper-in` and `wiper-out` too, depending on which way it slides. We could consider `normal` to indicate sliding away from the middle, and `reverse` to indicate the other way.

4.3.9   Compound tricks and modifier order

In formal notation it's very common to encode **information in the order** in which things are written. We saw it with dot notation, fingercrossings, and special positions, and now it's time to see what happens when we have various modifiers and tricks made of other, smaller ones. We read from left to right, so each suffix modifier is understood as something that changes everything written prior, and each prefix as changing what comes afterwards:

```
backaround fall rev = (backaround fall) rev = bust rise
backaround rev fall = (backaround rev) fall = bust fall
```

These two are not the same! In the first case, we had to reverse the whole `backaround fall`, which not only changed the direction of rotation but also the order of the arounds, now starting from the pinky instead of the index. In the second case, we're applying `fall` to the trick `backaround rev`. Here's another example in which changing the order changes the trick:

```
pinkybak cardioid rev = (pinkybak > wiper rev) rev = wiper > pinkybust
         pinkybak rev cardioid = pinkybust > wiper
```

It doesn't always have to be the case, though. For example, the plane reflections `inverse`, `mirrored` or `antipodal` always commute. For readers who like math: this happens because their normal vectors are perpendicular.

```
mirrored inverse sonic = inverse mirrored sonic
```

For compound tricks, a problem arises when notating its revolutions. For example, when writing it in the standard order:

```
powerpass = around fall 0.5 [p f→P]
```

We are uncertain if what's `0.5` is each of the individual arounds or the whole trick. In this case, we can use an **out-of-order number of revolutions** modifier in order to write more clearly. This idea was first proposed by me in the second edition of the book (2020) and completed in 2021 after discussing it with the other Naming Committee Discord members:

- When written as the **first modifier**, it refers to the revolutions of each of the individual tricks. Similar, in a way, to how we use `half tipped charge` or `half around`.

- When written as the **last modifier**, it refers to the revolutions of the whole trick. Similar, in a way, to the intentions of the usual syntax.

Some examples of its usage are the following:

```
powerpass = 0.5 around fall [p f->p]
          = around fall [p f->p] 1.5
triangle pass T12 = 0.166 pass 12*-T1*>T2*>12*
                  = pass 12*-T1*>T2*>12* 0.5
```

There is nuance in using either of those options. When notating the number of revolutions of the whole trick, we don't specify how they're divided among its parts, while notating the number of revolutions of each part means that it's divided equally among them. For example, in a `triangle pass 123`, the total revolution count is `0.5`, but it's not divided equally.

4.3.10   Omission and intent

A lot can be said about a trick, even within our very simplified framework. And this is without even considering aspects like the angle with which each finger is bent, intermediate hand positions, pen rotation angles, speed, pen length... When expressing trick information through text we should be clear, concise and omit all information that isn't strictly needed to **understand the spinner's intent**.

When a spinner plans a combo, special focus is put into particular aspects. Maybe some tricks over their linkages, a particular change of speed or a trick with an unusual plane of rotation. Thus, a combo breakdown made by the spinner shows not only the "bare" tricks, but also information about what

was considered important. In the same way, a combo breakdown made by a viewer will contain information about what the spinner was able to convey, or what ended up being more impactful.

4.4 Linking symbols

Linking symbols (which shouldn't be confused with linkages) are used to separate different tricks in the breakdown of a combo, as well as to specify if the tricks are executed completely, partially (hybrid), or simultaneously.

>	**Non-hybrid**	Both tricks are completed.
~	**Hybrid**	Both tricks are incomplete.
~>	**Partially hybrid**	The previous trick is incomplete.
>~	**Partially hybrid**	The following trick is incomplete.
+	**Simultaneous**	Both tricks are simultaneous.

If we do a `twisted sonic` followed by a `TA`, that would be written as

<div align="center">

`twisted sonic > TA`

</div>

4.5 Multiple pens and hands

xpxh is a term used to refer to the use of multiple pens or hands. As there are many variables to take into account, xpxh notation is notoriously difficult to design neatly. Most of the ideas I will present were developed in the FPSB laboratoire in mid-2009 by Lindor, but some others are mine.

4.5.1 Fingerslots

Locators in the non-dominant hand are written with an apostrophe to their right. This was called handedness modifier and was developed in 2009 by the NC:

'	**Non-dominant hand locator**

For example, holding a pen with both index fingers would form the slot `11'` and a `thumbaround` in the non-dominant hand would be written as `TA`

11'

`T'1'-T'1'`. The locator order is modified slightly, with non-dominant locators

written after the dominant ones. Thus, 12, 1'2', 1'2 and 12' are all correct, but 2'2 is in the wrong order (it should be written as 22'). If we wanted to write a **third hand**, we could use two apostrophes: 1"2" and so on.

```
pass T1-1'2' > I'A 1'2'-1'2' > pass 1'2'-T"1" > T"A T"1"-1"2"
```

Another thing we may want to write down is a **second or third pen**. For that, we can extend the apostrophe idea to dot notation:

.'	Second pen
."	Third pen

E.g., the slot in which we have one pen in 12 and another in 23 is:

$$1.2; \ 2.'3$$

The semicolon is used only to separate both parts. In the case that each mod is doing a different trick it may not be necessary to notate both, but only what's relevant to that trick.

Using apostrophes here can make notation hard to read, so another option would be to use a different symbol (preferably one resembling a dot) for the second pen, for example:

º	Second pen

Thus, the slot that we described before could also be written as

$$1.2; \ 2º3$$

There is no well established xpxh notation, so this is a matter of personal preference.

In the case of completely independent 2p2h (one mod in the left hand and another in the right with no exchanges) the easiest thing is not to use any apostrophes but rather to write each breakdown in separate lines:

```
MIA 23-12 > PS-PU Fl inv shadow ~> Fl TA > PU-PD IA ~ inv sonic rev
MIA rev 23-T1 > PS-PD sonic T1-T3>34
```

To give information about the simultaneity of each trick, a table could also be used.

```
L │  MIA 23-12   > PS-PU Fl inv shadow ~> Fl TA > PU-PD IA ~ inv sonic rev
R │ MIA rev 23-T1 >      PS-PD sonic T1-T3       >        sonic T3-34
```

4.5.2 Hand orientation

When spinning with two hands, the usual hand positions are not sufficient. For that, Lindor proposed various symbols to be written between two of PD, PU, PS and BS, one for the left and another for the right hand:

||	**Parallel**	Hands pointing to the same direction
><	**Opposite**	Hands pointing in opposite directions
!	**Perpendicular**	Left hand perpendicular to right hand

Some examples would be the following:

PU><PD   PS!PS

4.5.3 Fingercrossings

Following the usual points of view of the hand to determine the writing order in fingercrossings, no new notation needs to be made. Specifying the relative hand position can be useful, but not necessary.

[fc 1'1]   [fc 11']   PU!PD [fc 14'23']

The rightmost example was written from the reference system of the right hand, although it could also be written from that of the left:

PU!PD [fc 3'24'1]

However, we need to know from which reference system it was written (i.e. if the spinner is left or right handed) because PU!PD [fc 14'23'] (right hand reference sys.) is different from PU!PD [fc 3'24'1] (also from the right hand reference sys.).

5 Notation for analysis

When using notation as a language there is a limit to its complexity, as it quickly becomes more efficient to forgo it and communicate via videos. However, some discussions and studies require **tools more advanced than plain words**. In this way, notation can be used for in-depth analysis of pen spinning, as **a tool for understanding** the particularities of different movements. Understanding and developing to this level of abstraction is useful even if you don't use the notation explicitly, as it can provide new ways of thinking about pen spinning.

This chapter is one that is currently in development, as more spinners find interest in these topics. I recommend the reader also check Sunrise's notation (2010), which is the Japanese equivalent of formal notation and Laku's visual notation (2020), a graphic representation of pen trajectories. Furthermore, Aimo's mechanical notation started to be developed but couldn't be finished. Tchus is currently developing his own elementary notation.

5.1 Formal trick names

In formal notation it's important to be precise with terminology. Non-descriptive names like `symmetrical backaround` or `pun new` are discouraged. Names can be imprecise because of historical reasons too, which can lead to confusion. For example, `powerpasses` aren't `passes` and `twisted sonic` isn't a `sonic`. For this reason, names like `powerarounds` or `charged pass` may be preferred.

In this section I want to mention three trick names which were first used for analysis purposes in Hexbinmos' elementary notation, but that are now sometimes used in other contexts too: `fingerswitch`, `tipped charge` and `wiped charge`.

5.1.1 Fingerswitch

The `fingerswitch` is a trick in which the pen changes slots without any revolutions. It can appear as a trick by itself (for example, in a spinless sequence) but in the formal context it's mostly used to describe slot changes in

conjunction with other tricks. In the following example, the dashes represent fingerswitches. Thus, a `sonic` could be written as:

```
Sonic 23-13-12  =  (some tricks) + fingerswitch 23-13-12
```

5.1.2   Tipped charge

This trick was once called `half tipped charge`, but it's less ambiguous to call each of the 0.5 revolution movements a `tipped charge` and the usual trick, `tipped charge harmonic`. As you can see in the picture sequence, a `tipped charge normal` consists of 0.5 clockwise revolutions perpendicular to the fingers.

Tipped charge normal 23

5.1.3   Wiped charge

What we usually call `wiper` is a trick where the pen is held by one of its ends, thus passing through two or more fingers. The name `wiped charge` can always refer to a `wiper` but is also more general: it also refers to tricks in which the pen is held by the middle and no end passes through two or more fingers. It's analogous to `tipped charge` but rotating in a different plane. The name was proposed by Tchus.

Wiped charge normal 23

In a similar fashion to `tipped charge`, this trick usually consists of 0.5 revolutions, with no change of motion, where its `nor` goes clockwise and its `rev`, counterclockwise.

5.2 Hexbinmos' elementary notation

Developed by Hexbinmos and Fel2Fram (FPSB), this math-inspired system aims to break tricks down into their fundamental components. Here I will explain it as originally proposed for historic purposes, but note that the **grammar is extremely convoluted**. The simplified, but equally powerful version explained in the next section is the one I recommend.

α	**Fingerswitch**	A spinless change of slot
β	**Half-tipped charge**	Tipped charge-like motion, CW is normal
γ	**Wiper**	Wiper-like motion, CW is normal
δ	**Roll**	Idealized roll with no slot change
ε	**Slide**	Idealized slide with no slot change
ζ	**Stall half-release**	Aerial throw (nor) and catch (rev)

Six tricks are considered, each assigned a greek letter. A breakdown consists of 3 parts:

Tricks	(connectors)	(slots)

Part I consists of the greek letters for all of the elementary movements present in the combo. For example: $\alpha\beta\alpha$.

Part II consists of the connectors ($>$, $\sim$ and $+$) in parentheses. Between them, a comma is added if the trick is normal and a semicolon if it's reverse. For example: $(,>;>,)$

Part III consists of the slots, written in parentheses and separated by colons, with the number of revolutions. For example: $((\text{T.21-T2-T*} [0.0]):$ $(\text{T*} [1.0]): (\text{T*-T1} [0.0]))$

According to Hexbinmos, a TA would be written in the following way:

$\alpha\beta\alpha$ $(,>;>,)$ $((\text{T.21-T2-T*} [0.0]): (\text{T*} [1.0]): (\text{T*-T1} [0.0]))$

A complete example (which, honestly, I haven't bothered deciphering) is the following:

$\alpha\beta\gamma\delta\varepsilon\gamma\alpha\beta\beta\delta\varepsilon\gamma\varepsilon$ $(;>;>,>,\sim;>,\sim;\sim,>,>,+;+,>,)$ $((\text{12-T*} [1.0]):(\text{34-2*}$ $[0.5]):(\text{14-4*} [0.25]):(\text{34-2*}):(\text{14-4*}[1.5]):(\text{42-1*} [0.25]):(\text{12-12} [0.5]):(\text{23-32}$ $[0.5]):(\text{41-31} [1.0]):(\text{14-32} [0.25]):(\text{31-31} [1.0]):(\text{14-24} [0.25]))$

5.3   Simplified elementary notation

I made a simplified version shortly after the release of the original by Hexbinmos and Fel2fram in FPSB. The original syntax is unnatural, as it separates terms which are actually related, so the simplified version uses the usual English notation syntax but with the new movement list. Greek letters are hard to type for most people so I used Roman letters for the movement names instead.

a	Fingerswitch	A spinless change of slot
b	Tipped charge	Tipped charge-like motion, CW is normal
c	Wiped charge	Wiper-like motion, CW is normal
d	Roll	Idealized roll with no slot change
e	Slide	Idealized slide with no slot change

It was after this version of elementary notation that the formal redefinition of tipped charge was done and the name wiped charge was coined. In this notation, stall half-release isn't included, as aerial throws and catches can be written as a fingerswitch to or from *.
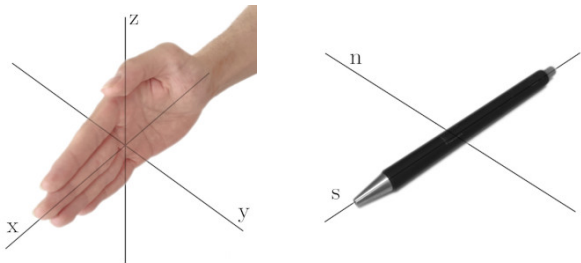
We can consider a set of **reference axes** for both the hand and the mod. In the mod there are only two due to its symmetry (all perpendicular ones are equivalent to n). The movements can be thought in terms of these axes:

a	1) Slot change: $\longrightarrow$ example: a T1-12
	2) Frame of reference rotation: $\longrightarrow$ example: (PD-PU) a
	3) Change of axis' shape: $\longrightarrow$ example: a 12[12≠P]-12[12=P]
	(i.e. 12 is straightened)
b	Mod rotation along x.
c	Mod rotation along y or z.
d	Mod rotation along s.
e	Particular case of a.

The theory by itself can be a bit difficult to grasp, so I believe that the best way to understand this elementary notation is through some **examples**.

Example I - Pass

```
Pass 12-23 = a+b 0.25 12-13.2>23
```

The mod rotates perpendicular to the fingers and also changes slots, so it is logical that a `pass` is made up of `fingerswitches` and `tipped charge`. The mod rotates clockwise, so the `tipped charge` is `normal`.

Example II - Charge

```
charge =  b+c 0.25 > b rev+c 0.25 > b rev+c rev 0.25 > b+c rev 0.25
charge rev = b rev+c 0.25 > b+c 0.25 > b+c rev 0.25 > b rev+c rev 0.25
```

There are no `fingerswitches` because the mod doesn't change slots, but there are `tipped charge` and `wiped charge`, which alternate between `normal` and `reverse`, giving rise to the conical movement.
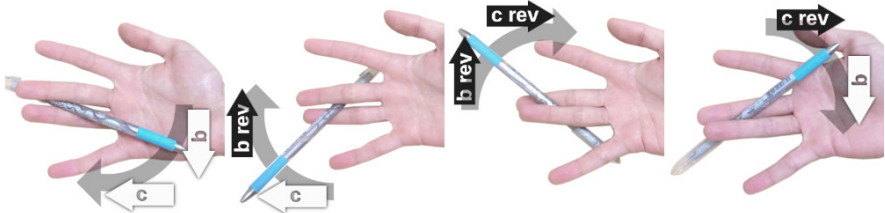
With the help of the figure above, try to understand how a `charge` is written. For that, do a `charge` while facing the palm of your hand. The circular motion done by the tip of the mod can be decomposed into two parts: horizontal, which corresponds to the `wiped charge`; and vertical, which is the `tipped charge`. Each quarter rotation has a different combination of `b`, `b rev`, `c` and `c rev`.

In elementary notation, whenever `b+c`, `b rev+c`, `b+c rev` or `b rev+c rev` appear, it corresponds to some part of either `charge nor` or `charge rev`, and therefore we know that the pen rotates obliquely with respect to the fingers. Although it may seem that any trick that contains part of a charge will be conical, that is not the case. The movement will be conical only if it contains all four quarters of either `charge` or `charge rev`. If it contains a single half repeated two or more times, the rotation will be oblique but not conical, like in a `bakfall` or `twisted sonic 34-23>12`.

Example III - Sonic

The elementary notation of a `sonic` is easily deduced once we know the notation of a `charge`, as the only thing left to do is adding the `fingerswitch`.

```
sonic = b+c 0.25 23 > a+b rev+c 0.25 23-13 > a+b rev+c rev 0.25 13-12
                        > b+c rev 0.25 12
sonic rev = b rev+c 0.25 23 > a+b+c 0.25 23-13 > a+b+c rev 0.25 13-12
                        > b rev+c rev 0.25 12
```

Example IV - Around

```
IA 12-12 = a+b rev 12-1*>12
```

In an indexaround, the pen rotates perpendicularly to the fingers while also changing slots, so it is composed of both `fingerswitches` and `tipped charges`. An IA rotates counterclockwise, so the `b` is `reverse`.

We should notice that `passes` and some `arounds` are, in some sense, the same trick: both are `a+b`. We should also notice that not all `arounds` are `a+b` and vice versa. A `backaround` isn't `a+b`, and a `pass`, which is `a+b`, isn't an `around`.

The reason why `backaround` and other similar tricks (`bust`, `hai tua`...) are different is because they rotate obliquely to the fingers, and from what we deduced before we know that there has to be `b+c` somewhere in the structure of the trick.

```
TA T1-T1 = a+b rev+c rev T1-T*>T1
backaround 12-12 = (PD) Fl a+b+c 12-1*>12
```

With the popularization of powertricks, a trick called `inverse bust` emerged. It was said for quite some time that this name was incorrect, because there is no inverse of an around (more precisely, it was said that it's the same as it's `reverse`). But with the elementary notation we can better understand what an `inverse bust` is and why it's a different trick.

```
Bust = (PD) Fl a+b rev+c rev 12-1*>12
Inverse bust = Fl a+b rev+c 12-1*>12
```

The difference between one and the other is the direction of the `wiped charge`. Both turn obliquely to the index finger, but one opposite the other. Furthermore, we could write the reverse versions of the two previous tricks and none of them would coincide; they would be four different tricks.

Example V - Spin

```
palmspin = (PU) c rev P*
```

A `spin` is a `continuous wiped charge`. We can deduce this from the definition previously given for `wiped charge`: rotation of the mod with respect to the `y` or `z` axis.

Although we could distinguish rotations along those two axes, it isn't convenient. We want the notation to be well behaved, i.e. for a trick to have the same elementary breakdown regardless of minor changes in how it is done. For tricks like `wiped charge` or `wiper`, the plane of rotation will change depending on the position of the fingers, and for tricks like `spin` it will depend on the slot. Thus, all of the examples in the above figure would be notated by `c`, and any ambiguity in regards to the plane of rotation can be clarified with special positions for the slots (Section 4.2.8).

5.3.1 Choosing a set of rotation axes

There are many ways of describing rotations in 3D space. Rotations can classified in two categories: **global**, if the axis of rotation is fixed in space, or **local**, if the axis is attached to the rotating object. The axis choice that I used until now (which I will call the **standard** choice from now on) is a mix of both: `roll` was defined locally while `tipped` and `wiped charge`, globally. It's a choice that's easy to visualize and gives well behaved results most of the time, but the definition of `wiped charge` is ambiguous. Then, what about other choices? Can we do better?

Choosing **three global** rotations would be useful for accurately counting revolutions around each axis. If we call them `x`, `y` and `z` respectively, then:

```
            IA = x rev 1.0 12-1*-12
            TA = z rev 1.0 T1-T*-T1
      pass 23-12 = x 0.5 23-31.2-12
         charge 23 = y 1.0 23
tw sonic 23-12 = y 0.5 23 > x rev 0.5 + y 0.5 23-13.2-12 > y 0.5 12
```

However, we quickly notice two big issues: the starting angle for the pen isn't specified and can't be deducted from context. If the pen doesn't start angled, then `y 1.0 23` is not a `charge`. In addition to that, compositions of two rotations can be written in many different ways.

Choosing **three local** rotations (i.e. quaternions) is an option that is quickly discarded, as doing a `roll` would rotate the other two axes, making the resulting notation incredibly inconsistent. Using **Euler angles** instead allows us to solve this problem. A **gimbal** is an object, usually drawn as a ring, that rotates around an axis everything inside it. Let's consider a set of three gimbals, one mounted on the other with orthogonal pivot axes. Gimbals rotate everything that is inside of them, but not what is outside, so if we set `roll` as the inner one it won't affect the other two rotations.
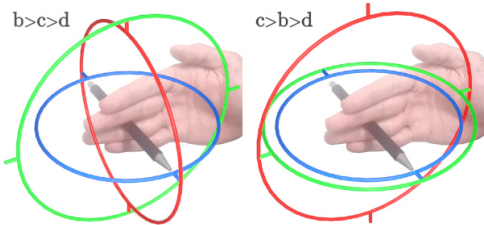
The two gimbal arrangements. b, c *and* d *are black, grey and white respectively.*

The two other possible arrangements are shown in the figure. In both choices, conical tricks like `charge` and `twisted sonic` are notated as the usual combinations of `b+c`. In the b>c>d choice, angled arounds are also a combination of `b+c`, while in the c>b>d choice, arounds are always `b`.
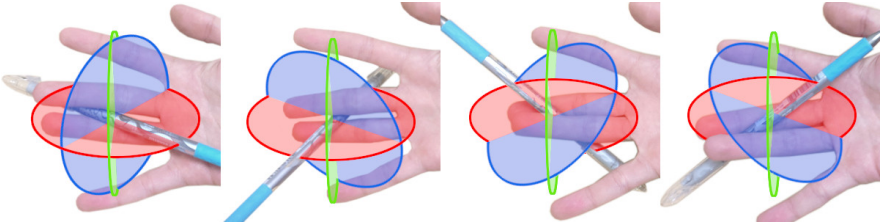
Planes of rotation for b>c>d during a `charge`. b, c, d *are black, grey and white respectively.*

The diagrams with the three rings are useful for understanding how the system is set up, but for visualizing the motion of the pen, it's better to show the planes of rotation. Hopefully the above diagram is enough to understand that a `charge` is still notated in the standard way:

```
charge = {b>c>d} b+c > b rev+c > b rev+c rev > b+c rev
```

One thing to be aware about this system is that, when the middle gimbal rotates 180º, the criteria for `nor` and `rev` will change with respect to the standard choice. For example:

```
tw sonic = {standard} b+c > b rev + c > a + b rev + c rev
                  > a + b rev + c > b rev + c rev > b + c rev
  tw sonic = {b>c>d} b+c > b rev + c > a + b rev + c rev
                  > a + b rev + c rev > b rev + c > b + c
```

In these systems the rings won't always be perpendicular to each other. We can reach a point in which the outer and inner axes align and we lose one degree of freedom (**gimbal lock**). In the b>c>d choice, this is reached when the pen is parallel to the fingers, while in the c>b>d choice this happens when the pen is pointing downwards. V01D, who first proposed using Euler angles, also suggested that we could define a set of **anchor points** (reference angles that are reset to favorable states when the pen reaches certain positions) to avoid issues like the change of criteria in rotations.

5.4 Pitch-Yaw-Roll

In 2021, V01D developed a new version of elementary notation, implementing the knowledge that had been acquired over the years. There are three key ideas. First, the information of `fingerswitch` and `slide` can just be collapsed into the **path** of the pen, here represented by the usual fingerslots. Second, `tipped charge`, `wiped charge` and `roll` can be collapsed into a single trick with six directions, **rotate**. Thus, those three movements would all be given the same symbols but with an order: b → c → d, and instead of having to type `rev` you could incorporate the direction into the symbols:

+ Normal	- Reverse	. None

Rolls are not very common, so you can even omit the dot at the end most of the time and assume it instead. He argued that with a reduced number of symbols and better grammar, the readability of elementary notation improves. As an example of its usage, let's look at a `sonic 23-12`.

```
sonic 23-12 = ++ .25 23 > -+ .25 23-13 > -- .25 13-12 > +- .25 12
```

If formatted as a list, the time evolution of the trick is even more clear:

```
sonic = ++ .25 23 >
        -+ .25 23-13 >
        -- .25 13-12 >
        +- .25 12
```

5.5   Tablature notation

The tablature notation was devised in 2012 by Hexbinmos as a visual way to break down combos. It was explained originally in a video, which has been lost. However, some photos were conserved by Tchus, upon which this explanation is built.
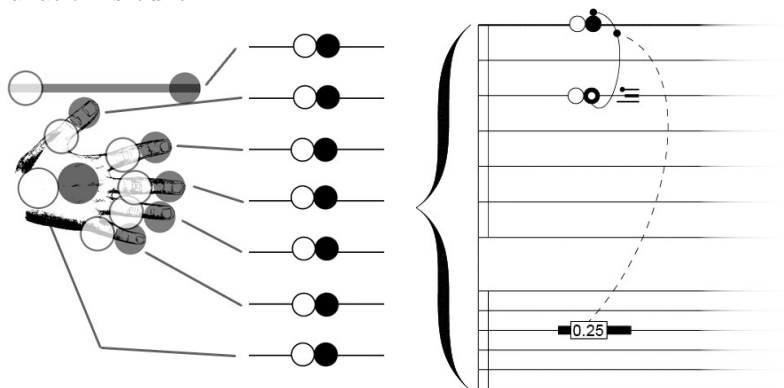
The tablature consists of two sections. The **top section** has 1 line for the mod, 5 for the fingers and 1 for the palm/backhand. A white and a black dot represent the beginning and end of the corresponding location, as seen in the left picture. Three additional lines were added for the fingers, to indicate the angles at which the phalanges are bent, as seen in the right picture. A solid black line connecting them represents a contact. There are two types of contacts:

Lateral contact points: The pen is in contact with one of the lateral sides of the finger.
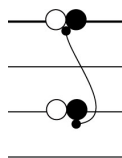
Non-lateral contact points: The pen is in contact with either the palm side or the back side of the finger.
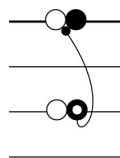
The **bottom section** is used to indicate the movements of the pen. The first three lines are for rotations and the last three, for translations. The number of revolutions is indicated for rotations. The movements are then connected with the pen position with a dashed line.

As you can see, it's a very interesting proposal. There are many details missing from this explanation, which have been lost to time, but the main idea is here. In 2021, Hexbinmos said that he wanted to do an upgraded version of this notation.

6 | Japanese notation

Japanese notation originated at the beginning of the century on Hideaki Kondo's website "My history of Pen Spinning" and its bulletin board, "Pen Spinning Laboratory". In the very beginning, only new trick names were introduced, but it quickly became centered around the creation and application of new modifiers. It received great contributions until about 2010; ever since it has remained almost unchanged.

Although there are several commonalities between English and Japanese notation, their origins and development are quite different. For an English-speaking person, the interest in learning this notation is mainly to understand pen spinning tricks from a new perspective. Although both systems are similar in terms of their focus on modifiers, there is a **fundamental difference** between English notation's fingerslots and Japanese notation's **axis fingers**, which should be enough to make its study interesting to the reader.

The Japanese writing system is composed of kanji (漢字, Chinese characters), hiragana (ひらがな, syllabary for Japanese words) and katakana (カタカナ, syllabary for foreign words). In order to make this section and the following ones **readable for people who don't know Japanese**, I have added romanizations of all trick names *in italics*, next to their English equivalents in monospace. Japanese as a language has a heavy tendency to make long words by agglutination, and then shorten them. While I have tried to write down the most common shortenings, I recommend any interested readers spend a few days studying katakana so they can also understand how and why these words are shortened.

6.1 Syntax

In Japanese notation, tricks are formed by agglutination of various words without spaces, following this structure:

軸指 *(Axis fingers)*	–	接頭語 *(Prefixes)*	技名 *(Trick name)*	接尾語 *(Suffixes)*

For example: シメトリカルスキップガンマンリバース (*symmetrical skip gunman reverse*). The modifiers are ordered following no hard rules other than what sounds better or more natural.

6.2   Axis finger

1	親指	Thumb
2	人差し指	Index finger
3	中指	Middle finger
4	薬指	Ring finger
5	小指	Pinky finger

The numbers corresponding to each finger are different from the ones used in English. As you can see, 12345 is used instead of T1234. Sometimes, to write the slots of a trick, a notation like the English one is used, with no particular locator hierarchy:

ガンマン43-32   *gunman 43-32*   `MA rev 23-12`

However, these 接尾指番号*(Suffix numbers)* aren't the most common way to determine where a trick is done. Instead, the 接頭指番号*(Prefix numbers)* are often used, which indicate the 軸指*(Axis finger)*. The **axis finger** is somewhat similar to the prefixes `thumb, index... pinky` used in English for arounds, but in Japanese notation these are more versatile, being used in passes, sonics and other tricks too. Their syntax is:

Number #1 , Number #2 , ... , Number #n –

Multiple axis fingers are separated with commas and then attached to the trick name with a dash. Axis finger notation in many trick families can be surprising to some readers, so let's look at some examples:

1,2-ノーマル	*1,2-normal*	`ext TA`
2-ガンマンリバース	*2-gunman reverse*	`IA 12-12`
3-パス	*3-pass*	`pass 23-12`
4-パス	*4-pass*	`pass 34-23`
3-ソニック	*3-sonic*	`sonic 23-12`
4-ソニック	*4-sonic*	`sonic 34-23`
1-ハーフウィンドミル	*1-half windmill*	`wiper rev T1`
1,2-フルーエントハーフウィンドミル	*1,2-fluent half windmill*	`infinity`

`Infinity` is also called インフィニティ*(infinity)* but here I wrote it in a longer way in order to show how the axis fingers are used. The axis finger and the western-style slots can be used simultaneously:

3,2-スキップガンマン43-32   *3,2-skip gunman 43-32*   `MIA rev 23-12`

But I stress that the use of western-style slots is unusual.

6.3 Modifiers

As we previously mentioned, Japanese notation is also heavily focused on modifiers. Some are unique to Japanese, like スリップト (*slipped*), フルーエント (*fluent*) or 変形(*different form*), while others have either been adopted from English or vice versa.

Although many modifiers exist, and while most are understood even by new spinners, not all of them are commonly used. Without worrying about their frequencies in modern speech, let us look at the following modifier list:

修飾語/修飾辞 Modifiers			
接頭語 *(Prefixes)*		接尾語 *(Suffixes)*	
接頭指番号	*Axis fingers*	接尾指番号	*Slots*
回転数	*# of rev.*	回転数(海外)	*English-style rev.*
コンティニュアス	*Continuous*	ノーマル	*Normal*
ハーモニカル	*Harmonical*	バース	*Reverse*
カウンター	*Counter*	ライズ	*Rise*
フルーエント	*Fluent*	フォール	*Fall*
フェイクト	*Faked*	バスト	*Bust*
シメトリカル	*Symmetrical*	フィンガーレス	*Fingerless*
スキップ	*Skip*	横式	*PD*
スリップト	*Slipped*	縦式	*PS*
ムーンウォーク	*Moonwalk*		
パームサイド	*Palm side*		
フィンガーレス	*Fingerless*		
変形	*Different form*		
スプレッド	*Spread*		
スクエア	*Square*		
キューブ	*Cube*		

The three modifiers at the end (*spread*, *square* and *cube*) are, more often than not, considered standalone tricks nowadays. フィンガーレス (*fingerless*) is usually a prefix but it could be suffix, especially for continuous tricks.

6.3.1 Number of revolutions

The 回転数*(number of revolutions)* may be written in the Japanese way as a prefix or in the English way as a suffix (that is: writing 1.5 or 2.0 after the trick name). The prefixes for the number of revolutions are the following:

回転数 Number of revolutions		
ハーフ	*half*	0.5 rotations
シングル	*single*	1.0 rotations
シングルアクセル	*single axel*	1.5 rotations
ダブル	*double*	2.0 rotations
ダブルアクセル	*double axel*	2.5 rotations
トリプル	*triple*	3.0 rotations
クアドラブル	*quadruple*	4.0 rotations
マルチプル	*multiple*	?.? rotations

シングル *(single)* is used for 1.0 rotations but just like in English, it's mostly omitted when obvious. Some examples of their usage:

シングルアクセルソニック	*single axel sonic*	shadow 1.5
シングルアクセルカージオイド	*single axel cardioid*	thumbspin 1.5 > wiper rev T1

They can also be a suffix, especially when dealing with spreads:

1,1-スプレッドダブル   *1,1-spread double*   TA > Fl TA

By the way, for those who are curious, アクセル(*axel*) comes from Axel Paulsen, a Norwegian ice skater who invented the 1.5 spin jump.

6.3.2 Prefix modifiers

コンティニュアス (*Continuous*)   The same as "continuous" in English. The trick will be repeated two, three or an indefinite amount of times. It can be applied to a sequence:

コンティニュアス(3-ソニックひねり⇒1-ハーフウィンドミル)
continuous(3-twisted sonic ⇒ 1-half windmill)
continuous (twisted sonic 23-12 > wiper T1)

ハーモニカル (*Harmonical*)   Sometimes shortened as Hr. The same as "harmonic" in English notation. The normal and reverse directions of a trick

are performed consecutively, in a continuous way or just once.

  ハモニカル インフィニティ *harmonical infinity* `infinity harmonic`

  As an exception, ハーモニカル ノーマル(*harmonical normal*) is never written; just ハーモニカル(*harmonical*) is enough.

カウンター (*Counter*) A term adopted from English after the concept and technique were devised by Zombo (UPSB). The normal of a trick is interrupted by its reverse. When preceding *normal*, it's just *counter*.

  カウンター= カウンター ノーマル *counter = counter normal*

フルーエント (*Fluent*) It means to repeat the same trick while traveling from one slot to another, to do a trick continuously while changing the axis finger. It contains rise, fall, and other cases.

  フルーエント ソニック   *fluent sonic*   `sonic rise/fall`
  フルーエント ソニックひねり *fluent twisted sonic* `twisted sonic rise/fall`

  In those it's equivalent to rise/fall, but in the following it isn't the same:

  1,2-フルーエント ハーフウィンドミル *1,2-fluent half windmill* `infinity`

フェイクト (*Faked*) When the pen spins without changing fingers. Similar to still in English, but for フェイクト(*Faked*) not only the initial and final fingers, but also the intermediate ones have to be the same. While it can be represented with western-style fingerslots, that isn't common, as フェイクト(*Faked*) is very commonly used. It's also used in the name of the charge.

    フェイクト ソニック   *faked sonic*   `charge`
   ハーフフェイクト ノーマル *half faked normal* `halftap T1`
    フェイクト ノーマル   *faked normal* `fulltap T1`
   フェイクト インフィニティ *faked infinity* `figure 8`

シメトリカル (*Symmetrical*) Sometimes shortened to シメ(*sime*) or St. Its usage isn't 100% consistent: for a sonic, it means `inverse`; for a gunman, it means `mirrored`. Both pass and pass reverse are done on the back side of the hand, while symmetrical passes are done on the palm side.

  3-シメトリカルパス   *3-symmetrical pass* `pass rev 23-12`
  3-シメトリカルパスリバース *3-symmetrical pass reverse* `pass 12-23`

| シメトリカルソニック | *symmetrical sonic* | `inverse sonic` |
| 3-シメトリカルガンマン | *3-symmetrical gunman* | `(PS) MA 12-12` |

スキップ (*Skip*) This modifier is used when there is more than one axis finger, but the number of revolutions doesn't increase. Since this is never indicated in western notation, it is best to see some examples:

スキップソニック	*skip sonic*	`sonic 34-12`
3,2-スキップガンマン	*3,2-skip gunman*	`(PS) MIA rev`
スキップシングルアクセルソニック	*skip single axel sonic*	`shadow 1.5 34-12`

Think about why skip was used in the gunman example. Otherwise:

| 3,2-ガンマン | *3,2-gunman* | `(PS) MA rev > IA rev` |

スリップト (*Slipped*) It's used to indicate extra charges inside a trick, like in a `sonic clip`. Remember that *single axel sonic* is a `shadow 1.5`!

スリップトソニック	*slipped sonic*	`sonic clip`
スリップトインフィニティ	*slipped infinity*	`cont (charge 12 > wiper`
		`rev 12 > wiper rev T1)`
4,3-スリップトフルーエント ソニック	*4,3-slipped fluent sonic*	`sonic 34-23 > charge 23`
		`> sonic 23-12`

ムーンウォーク (*Moonwalk*) This term was adopted into western notation, then deprecated by the Naming Committee. It means that the direction of rotation is same as usual, but the slots change in the opposite way. In Japanese its usage makes sense since slots aren't written.

| ムーンウォークソニック | *moonwalk sonic* | `sonic 12-23` |
| ムーンウォーク | *moonwalk fluent sonic* | `sonic 12-23 > sonic 23-34` |

手の向き (*Hand orientation*) This is written in several ways. When written in kanji, it's usually added after the trick name as a suffix.

横式 (Done horizontally)   縦式 (Done vertically)

When written in katakana, like パームサイド (*palm side*), it's usually a prefix. For example:

| パームサイドパワーパス | *palm side powerpass* | `(PS) powerpass` |

フィンガーレス (*Fingerless*) Imported from English notation:

フィンガーレスノーマル *fingerless normal* `Fl TA`

スプレッド (*Spread*) *Spread* can act as a modifier, although it's mainly used as a trick. It is used to represent both busts (midbust, etc ...) and spreads (in its English meaning). A very common term is:

スプレッド122 = 1,2,2-スプレッド *spread122 = 1,2,2-spread*

Which means `TA > bust x2`. When *spread* is used to refer to spreads in their English meaning, it's often written as 縦スプレッド *(vertical spread)*.

スクエア (*Square*) It means `double`. Nowadays mainly used as a trick:

スクエア= 1,1-スプレッド ダブル
square = 1,1-spread double
`TA > Fl TA`

One example of square acting as a modifier is the following:

スクエア ダブル= ダブル ≫ ダブル *square double = double ≫ double*

キューブ (*Cube*) It means `triple`. Nowadays mainly used as a trick:

キューブ= 1,1,1-スプレッド トリプル
spread = 1,1,1-spread triple
`TA > Fl TA x2`

変形 (*Henkei/Different form*) Introduced by Hideaki, this is a very abstract modifier. There is no general rule for all 変形. It means that either the push is different, the way in which it spins is different, and so on (e.g. an oblique plane of rotation...)

6.3.3 Suffix modifiers

ノーマル (*Normal*) & リバース (*Reverse*) The same as normal and reverse in English. They can also be used standalone, meaning `thumbaround` and `thumbaround reverse` respectively. As we have already seen, *normal* is often omitted if it means `thumbaround` and there are other modifiers.

ノーマル *normal* `TA`
ダブル= ダブル ノーマル *double = double normal* `TA x2`

リバース	*reverse*	`TA rev`
ガンマンリバース	*gunman reverse*	`Fingeraround`
ハーフガンマンリバース	*half gunman reverse*	`Fingeraround 0.5`

ライズ (*Rise*) & **フォール (*Fall*)** These terms were adopted from English notation. Sometimes also written as ライザー(riser), with the same meaning (nothing to do with the aerial modifier). The original Japanese way of referring to them was フルーエント(*Fluent*).

ガンマンライズ	*gunman rise*	`around rev rise`
ガンマンフォール	*gunman fall*	`around fall`

バスト (*Bust*) As you may expect, this was introduced from Thai notation. It is also often used as a trick itself, meaning `backaround reverse`.

ソニックバスト	*sonic bust*	`sonic bust`

6.4 Linking symbols

A breakdown can be created by joining various tricks. For this, we use:

⟹	**Complete linkage**	Between two complete tricks
≫	**Interrupted linkage**	When a trick gets interrupted

4-ソニック⟹3-ソニック
4-sonic ⟹3-sonic
`sonic 34-23 > sonic 23-12 (sonic rise)`

4-ソニック≫3-シメトリカルソニック
4-sonic ≫3-symmetrical sonic
`sonic 34-23 ~> inv sonic 23-12`

3-ソニックひねり≫2-フェイクトシングルアクセルソニック
3-twisted sonic ≫2-faked single axel sonic
`twisted sonic 23-12 ~ shadow 12-12`

ノーマル≫2-シメトリカルガンマン
normal ≫2-symmetrical gunman
`TA ~ Fl IA`

7 Korean notation

Korean notation originated around 2002, together with the first Korean pen spinning forum. At the beginning, names were created exclusively on the board as they were needed, helped in 2005 by a great linguistic reform article called the **NX lecture** [4]. In this article, spinners like 원빈택MA and zlzlzb, among others, standarized the notation, substituted several old names for new ones, and created what is now known as **ABCD notation**. In the following years, Korean notation started to be more influenced by trick names used overseas, which were directly transcribed into hangul [5]. In 2020 and 2021, FLow initiated another linguistic reform, developing many new names and modifiers, which were popularized through the KIPS YouTube channel [8][9].

The only effort that was previously made to explain Korean notation in English was a 2007 UPSB v3 article by Joshy [10]. To account for this, I have talked extensively with FLow so that the information here is as accurate as possible. Direct translations of Korean words are written in *italics* and their English equivalents are written in `monospace`. In this chapter, we will explain the **syntax** (slots and modifiers) in its current form (that is, after FLow's reform). More than 200 trick names from all periods have been included in the trick dictionary (Chapter 8).

7.1 Slots

The following names for the fingers are sometimes used as prefixes. For example, 검지 휘감기 *(index winding)* is the name for both an `IA` and a `bust`.

엄지	T	Thumb
검지	1	Index finger
중지	2	Middle finger
약지	3	Ring finger
소지	4	Pinky finger

When used as prefixes, you may see the finger names in abbreviated forms. For example, a `thumbaround`, usually written as 엄지돌리기 *(thumb rotation)*, is often abbreviated as 엄돌 (1st and 3rd characters of 엄지돌리기).

엄	T	Thumb (abbreviation of 엄지손가락)
검	1	Index finger (abbreviation of 검지손가락)
중	2	Middle finger (abbreviation of 중지손가락)
약	3	Ring finger (abbreviation of 약지손가락)
새	4	Pinky finger (abbreviation of 새끼손가락)

The most popular way of writing **slots** is the so-called **ABCD notation**. In this system, only four slots exist; a, b, c and d. If the tricks are in their basic form, only the initial slots are written for the normal direction, and only the final ones for their reverse.

a	34	The slot between the pinky and ring fingers.
b	23	The slot between the ring and middle fingers.
c	12	The slot between the middle and index fingers.
d	T1	The slot between the index finger and the thumb.

One simple example of their usage would be the following:

| 계단a | *stairs a* | sonic 34-23 |
| 역계단a | *reverse stairs a* | sonic rev 23-34 |

FLow devised various **improvements** to notate more complex slots:

| : | **Fix (고정)** | For positions other than the ones in abcd. |
| > | **Move (이동)** | The pen moves from one slot to another. |

First, slots outside of the ones in ABCD notation can be written with a : between the usual T1234. For example, 2:4 would be what in English is just written as 24. In case that the spinner also wants to write final or intermediate positions, those can be connected with a >. For example:

| 내계단b>2:4 | *inner stairs b>2:4* | inverse sonic 23-24 |

There are two more symbols used when notating slots

| * | **Air (공중)** | The pen is suspended in the air |
| & | **Fc (손가락교차)** | Two fingers are crossed. |

Borrowed from English notation, the symbol * is also used here for aerials. As for fingercrossings, they can be notated with the & symbol between the usual T1234. For example, 2&3 would be equivalent to [fc 23] in English.

7.2 Linking symbols

There are two symbols for linking tricks:

-	**Connect (연결)**
~	**Continuous (연속)**

Used to link non-hybrid tricks.

Used to link hybrid tricks.

Non-hybrid tricks can be linked together with a -, which would be equivalent to the > symbol in English notation. For example:

계단a–계단b   *stairs a – stairs b*   sonic rise

The ~ symbol is also used to connect hybrids, just like in English.

내계단b>2:4 ~ 역내패스2:4>a
inverse stairs b>2:4 ~ inverse vertical 2:4>a
inverse sonic 23-24 ~ pass 24-12

7.3 Roots and modifiers

Certain words are commonly used as roots (suffixes) for name formation.

휘감기	**Wind around**
역휘감기	**Reverse winding**
배감기	**Multiple winding**
계단	**Stairs**

For the around trick family.

For around reverse and backaround.

For continuous arounds.

Sonic trick family.

We have already seen an example of 휘감기 being used, in 검지 휘감기 *(index winding)*. The 배감기 *(multiple winding)* suffix is used instead when the around is repeated twice or more. For example, two indexarounds would be written as 검지배감기. In the case of a backaround it would be the same, thus multiple backarounds written as 역검지배감기.

As for 계단 *(stairs)*, it's often included in names of the tricks from the sonic family. Just like we say flush sonic and moonwalk sonic, in Korean the names 꽃계단 *(flower stairs)* or 문워크계단 *(moonwalk stairs)* are used.

The prefixes equivalent to the reverse and inverse modifiers were standarized in Korean during the NX lectures:

역	**Reverse**
내	**Inside**

Equivalent to the English reverse modifier.

Equivalent to the English inverse modifier.

For example, 계단 *(stairs)* is `sonic`, 역계단 is `sonic reverse`, 내계단 is `inverse sonic` and 역내계단 is `inverse sonic reverse`.

Although they aren't commonly used, FLow coined the following words for their corresponding non-modifiers:

정	**Normal**	The non-modifier of 역 *(reverse)* (i.e. `normal`).
외	**Outside**	The non-modifier of 내 *(inside)* (i.e. `classical`).

The **hand orientation** can be written down in four different ways. All of the following are used as prefixes:

English equivalent	Prefix (1)	Prefix (2)	Transliteration	Symbol
PD (palm down)	백	아래	팜다운	\
PS (palm side)	사이드	옆	팜사이드	|
PU (palm up)	팜	위	팜업	/

The transliteration was the first one to be used, but it's now deprecated. Notably, for wipers, only the ones in the prefix (1) column are used. Other than that, it's up to the spinner to choose in which way they want to write. E.g. 아래윈드밀, 백윈드밀 and \윈드밀 all mean `(PD) tw sonic`.

Some other prefix modifiers are the following:

일회전	**One revolve**	Adding an around at the end.
무한	**Infinite**	Equivalent to `continuous`.
점핑	**Jumping**	Equivalent to `aerial`.
캔슬	**Cancel**	Indicates that a trick is incomplete.
짭 / 짝	**Faked**	Old prefixes meaning `faked`.
이오리	**Iori**	Equivalent to `pop spin` (deprecated).

Let's see some usage examples. 일회전 *(one revolve)* consists of adding one `around normal` at the end of the trick. The most iconic example would be `sonic bust`, which in Korean is written as 계단일회전 *(stair one revolve)*.

For 무한 *(infinite)*, we can mention 무한 윈드밀 *(infinite windmill)*, meaning `double charge`. 점핑역검휘 *(aerial reverse winding)* is equivalent to the `bakriser`. 캔슬 *(cancel)* is used as either a prefix or a suffix to indicate a hybrid trick, equivalent to `~` in English.

There are other modifiers which are comparatively newer. Some of these are still not widespread, or their usage is currently being discussed by the members of KIPS:

제자리	Place	Equivalent to `still`.
스냅	Snap	Equivalent to `fingerless`.
무회전	No rotation	Equivalent to `tipped`.
카운터	Counter	Equivalent to `counter`.
핑거크로스	Fingercrossing	Equivalent to `fingercrossing`.
아이솔레이션	Isolation	Equivalent to `isolation`.
에어	Air	Equivalent to `aerial`.
팝	Pop	Equivalent to `pop spin`.

제자리 *(place)* is a new prefix meaning that the slots don't change. For example, 제자리계단 (stairs in place) is a `pseudo sonic`. 팝 *(pop)* is a new suffix replacing 이오리 *(iori)* and it means `pop spin`. An example would be 손목팝 *(wrist pop)*.

8 Trick dictionary

Trick names have been classified into 12 categories:

Passes	**Perpendicular arounds**	**Oblique arounds**
Conical	**Spins**	**Wipers**
Rolls	**Slides**	**Rotationless stable**
Equilibrium	**Throws & catches**	**Historical**

The last category, **historical**, refers to those hybrids and combos that were given a name before hybrid notation was developed, and that can be easily described with it. In the dictionary, and especially in that category, many **obsolete** names can be found. The intent of this dictionary is to also explain those names, which doesn't imply that they should be used nowadays.

In order to capture how well known each trick name is, a survey was conducted within the Naming Committee Discord server and shared on Twitter. In total, about 40 spinners gave **scores to each name**, which can be found in the header of each entry accompanied of the following keywords:

10	9	7	5	3	1	0
Well-known	*Frequent*	*Common*	*Infrequent*	*Rare*	*Very rare*	

Also in the header, the **direction of rotation** for a right-handed spinner and the `normal` version of the trick can be found. The convention for this is the same as the one explained in Ch. 4, with the exception of sometimes using backhand directions for clarity. Note that backhand clockwise would be counterclockwise if checked via the standard palm angle! Trick names which are used mostly in Japanese or Korean are also marked as so.

There are various sections within each entry. The **image** shows four snapshots of the trick, to be read left-to-right for the `normal` direction. After that, a **description** of the trick is provided. The **etymology** and origin of the trick, if known, are written as well. The **names** of the trick in various languages are given (with a dark grey bar on their left), as well as some **obsolete names** if any (marked with a light grey bar). The year of creation of the trick name, or an upper bound, and the trick name **creator** is written, if known, only next the original versions of the name (not its translations). The entries follow an **order** such that similar tricks are found near each other. For an alphabetic ordering, you can consult the index.

8.1 Passes

| **Fingerpass** | *Fundamental* | ↻ *Clockwise* | *Well-known (9.8/10)* |

A minicombo that consists entirely of `passes`, going through all the fingers except for the thumb. `Fingerpass` is one of the only tricks that has had a serious history of speed records. Novy achieved 99 fingerpasses in one minute on August 1st, 2010. [183]

Etymology The name `fingerpass` comes from Kam, with both `normal` and `reverse` variations added to Pentix in February 2001. Kam listed `fingerpass` as the fundamental trick instead of `pass` because at that time, `pass` wasn't considered a trick by itself (see: Pass).

Japanese Hideaki listed the trick as `drummer` in 1998, during one of the first updates of his website, but later `drummer` would acquire a new meaning (see: Drummer). For this trick, the English name フィンガーパス *(fingerpass)* would go on to be used.

Notation Traditionally, both start from 12. This was relevant especially during the early days when the names `first/second half fingerpass` and `first/second/third/fourth quarter of fingerpass` were used.

```
   nor ⇒ pass 12-23 > pass 23-34 > pass 34-23 > pass 23-12
rev ⇒ pass rev 12-23 > pass rev 23-34 > pass rev 34-23 > pass rev 23-12
```

These can also be written in a much shorter way:

```
        fingerpass nor = pass 12-23>34>23>12
        fingerpass rev = pass rev 12-23>34>23>12
```

🏴 Fingerpass [Kam[42], 2000]; FP [abbr.]

● フィンガーパス *(fingerpass)*

☯ 핑거패스 *(fingerpass)*

🏴 Classic finger twirl [Wrenn[40], 1999]

● ドラマー *(drummer)* [Hideaki[60], 1998]

Pass   ↻ *Clockwise* | *Well-known (10/10)*
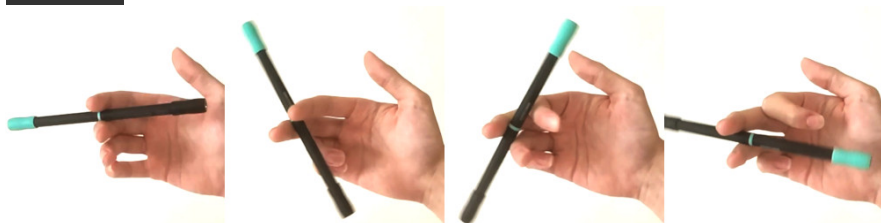
Pass 12-23

A `pass` consists of passing the pen from one pair of fingers to another. The pen must move perpendicular to the fingers. If it moves obliquely or with some kind of conical motion then it's called a `twisted sonic`.

Etymology   The trick existed for a long time, but it remained unnamed. Hideaki didn't list it as a *trick* at first, as he considered it a *movement* instead. Tohlz from PenstudioZ named each `pass` as `first quarter of fingerpass`, `second quarter of fingerpass`, etc. The name `pass` is attributed to Kam, as he was the first to use it in 2001, when describing the `fingerpass`:

"*The Finger Pass family consists of tricks that "roll" the pen through many fingers. At any time, the pen is always been held by at least two fingers, and each "Pass" (which is a definite step for Finger Pass tricks) will only cause the pen to rotate 180 degrees (half rotation).*" (Kam[42], 2001)

He continued to use the term later on to describe the parts of a `double charge` as *"basically a combination of two Charges and two Passes (passes are parts of a FingerPass)"* (Kam[42], 2002) and in December 2003 he included it as one of the various "spin types". However, it wasn't considered a standalone trick and thus included in trick lists until at least 2004 [172].

Japanese   In Japan, the term *half gunman* was used to describe both the `pass` and the `passaround`. During the years 2006 and 2007, there were various debates among JEB members which concluded that those were different tricks due to the different ways in how the pen is held during the movement. From that point onwards, パス *(pass)* began to be used.

🏴 Pass [Kam[42], 2001]
- パス *(pass)*, シメパス *(symmetrical pass)* [for backhand/palm resp.]

🏴 First / second / third / fourth quarter of fingerpass [Tohlz[46], 2003]
- ハーフガンマン *(half gunman)*; 裏パス *(rear pass)* [for シメパス]

Half fingerpass   ↻ *Clockwise* | *Rare (2.1/10)*

A `half fingerpass` is each of the two halves of the minicombo, either the one going from `12` to `34`, or vice versa.

Etymology Pentix mentioned `half fingerpass` in 2002, in its trick learning order [169], but it couldn't be found in his video tutorials nor other trick lists. The name was also used in PenstudioZ at times. In Korea, since the birth of pen spinning, the `pass` as a trick hasn't been used, but rather the four combinations of `half fingerpass normal` and `reverse`.

Korean The `pass 34-23>12` used to be called 수직 올리기 *(perpendicular raise)*, which in the 2005 NX lecture was renamed to 수직 올리기 *(perpendicular)* and in 2021, FLow renamed it to 패스 *(pass)*. As for its reverse, it used to be called 수직 내리기 *(perpendicular fall)*. In the NX lecture, the 역 *(reverse)* modifier was created and the trick was renamed to 역수직 *(perpendicular reverse)*. In 2021, it was renamed to 역패스 *(pass reverse)*.

English equivalent	Deprecated *(Until 2005)*	Deprecated *(2005 to 2021)*	New expressions *(Since 2021, FLow)*
Pass 34-23>12	수직 올리기	수직	패스
Pass rev 12-23>34	수직 내리기	역수직	역패스
Pass rev 34-23>12	역수직 올리기	내수직	내패스
Pass 12-23>34	역수직 내리기	역내수직	역내패스

▌ 🇬🇧 Half fingerpass [Kam[42], ≤2002]

◉ *(See the previous table)*

▌ 🇬🇧 1st/2nd 1/2 of fingerpass [Tohlz[46], 2003]

Twisted sonic   ↻ *Clockwise* | *Well-known (9.9/10)*

Twisted sonic 23-12

A hybrid trick between a `charge` and a `pass`. In other words, what you get when you put conical motion to a `pass`. Its basic variation starts with a `charge 23`, which then is interrupted by a `pass rev 23-12`.

Etymology The name was first given by Hideaki in 1997, being one of the initial tricks in his website. It was then directly translated into English by Kam, as ひねり *(hineri)* basically means *twisted*.

Controversy The name has been controversial since its inception: Kam said in 2001 that it was *"Not really a Sonic, but since it looks like the Sonic and I can't find anywhere to put this technique, I'll leave it here"*. Two years later, Tohlz from PenstudioZ also said that `twisted sonic` is *"A nice trick which is not really Sonic"*. Despite all of this, the name `twisted sonic` is now so ingrained in our culture that it's impossible to change. Lately, in FPSB they've started using `twisted pass`, as a more accurate way of naming it.

Notation If we think about the different possible combinations of charge and pass on the slots 23 and 12 we can come up with eight variations ($8 = 2^3$ since we have three modifiers: `reverse`, `inverse` and slot permutation). The first four are usually covered under the name `twisted sonic`. The last four are usually named `warped sonic`, although they can be notated with `twisted sonic`, making the name `warped sonic` unnecessary:

```
         twisted sonic = charge 23 ~ pass rev 23-12
     twisted sonic rev = charge rev 12 ~ pass rev 12-23
           inv tw sonic = charge 23 ~ pass 23-12
       inv tw sonic rev = charge rev 12 ~ pass rev 12-23
          warped sonic = charge 12 ~ pass 12-23 = tw sonic 12-23
warped sonic rev = charge rev 23 ~ pass rev 23-12 = tw sonic rev 23-12
  inv warped s. = charge 12 ~ pass rev 12-23 = inv tw sonic 12-23
inv warped s. rev = charge rev 23 ~ pass 23-12 = inv tw sonic rev 23-12
```

Notice how some funny things happen with the directions of the passes: `tw sonic 23-12` has a `pass rev` but `tw sonic 12-23` has a `pass nor`. This is because we think about `classic` (`inverse`) `twisted sonic` as the trick that happens on the palm side (back side) while `pass normal` (`reverse`) as the trick that happens clockwise (counterclockwise).

● ソニックひねり *(sonic hineri)* [Hideaki[60], 1997]; ソニひね *(sonihine)* [abbr.]
🏴 Twisted sonic [Kam[42], 2001]; Tw sonic [abbr.]; tws [abbr.]; Twisted pass [originated & used mostly in FPSB]
◉ 윈드밀 *(windmill)*

Warped sonic ↻ *Clockwise* | *Frequent (8.1/10)*
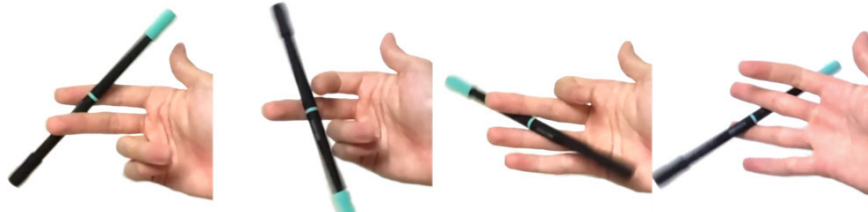
Warped sonic 12-23

A `twisted sonic` but with different slots. Its basic variation is in `12-23` (see: Twisted sonic).

❘ ▓ Warped sonic [ChucKo[91], 2006]

Inverse twisted sonic ↻ *Clockwise* | *Common (5.8/10)*

A `twisted sonic` in which the pass is done in the back of the hand (see: Twisted sonic).

▓ Inverse twisted sonic; Inv tw sonic [abbr.]

● シメトリカルソニックひねり *(symmetrical   sonic   hineri)*; シメソニひね *(simesonihine)* [abbr.]; AiMoパス *(AiMo pass)* [for (PD) `inverse twisted sonic rev`, 2020]

◉ 외윈드밀 *(outside windmill)* [2004]; 곤류윈드밀 *(Gon-type windmill)* [2004]

East sonic ↻ *Clockwise* | *Common (5.5/10)*
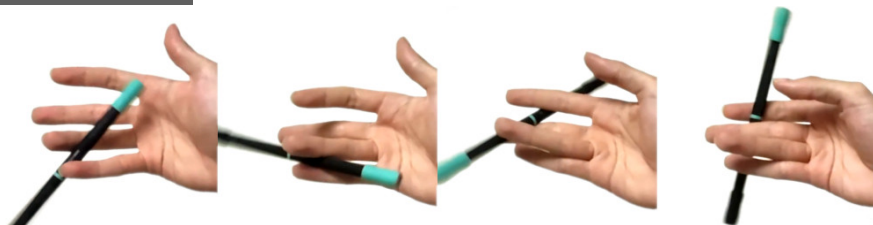
A `twisted sonic` starting in 34 and finishing in 12 in which the pen goes on the back of 3 and on the front of 2.

Etymology While it had been done for a long time before, it was first

named `east sonic` by the French spinner Chronos in 2007. It was named that way because, when the motion of the ring finger is exaggerated, the finger positioning is reminiscent of the East Coast gang symbol.

Notation If we think about all the possible `twisted sonics` between 34 and 12, there are four possibilities. Dot notation is very useful here to write down the exact way in which the pen passes through the fingers:

```
    Tw sonic 34-12  =  tw sonic 34-14.32-12
Inv tw sonic 34-12  =  tw sonic 34-41.23-12
       East sonic  =  tw sonic 34-13.42-12  =  inv west sonic
       West sonic  =  tw sonic 34-31.24-12  =  inv east sonic
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 East sonic [Chronos[90], 2007]

● イーストソニック *(east sonic)*

◉ 스위스트 *(swist)*, 역스위스트 *(swist reverse)* [for `tipped east sonic` `normal` and `reverse` respectively]

West sonic   ↻ *Clockwise* | *Common (5.5/10)*

A `twisted sonic` starting in 34 and finishing in 12 in which the pen goes on the front of 3 and on the back of 2 (see: East sonic).

Etymology While we know that the name `east sonic` was made in 2007, and that `west sonic` originated later for its inverse, it's unknown exactly when that happened. For example, in [173] there is `east sonic` but no `west sonic`. Instead, `inverse east sonic` is listed. In Japanese trick lists, only イーストソニック *(east sonic)* appears.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 West sonic

◉ 내스위스트 *(inverse swist)*, 역내스위스트 *(inverse swist reverse)* [for `tipped west sonic normal` and `reverse` respectively, FLow[9]]

Double charge   ↻ *Clockwise* | *Well-known (9.6/10)*

A minicombo involving `twisted sonic`:

```
double charge 23-12 = cont (twisted sonic 23-12 > warped sonic 12-23)
```

This could also be written the following way:

```
double charge 23-12 = cont twisted sonic 23-12>23
```

Etymology The first record that we have of the trick is in November 2002, when it was listed in Pentix, in its "Combos" section. Although it isn't known for sure, it's highly probable that it was named by Kam.

🇬🇧 Double charge [Kam[42], 2002]
● ダブルチャージ *(double charge)*
◉ 무한 윈드밀 *(infinite windmill)*
◉ 더블 원그리기 *(double circle drawing)* [until 2005]

Triple charge   ↻ *Clockwise* | *Infrequent (4.3/10)*

A minicombo involving `twisted sonic`. We can write it in multiple equivalent ways:

```
triple charge = cont (twisted sonic 34-23>12 > warped sonic 12-23>34)
        triple charge = cont twisted sonic 34-23>12>23>34
  triple charge = cont (twisted sonic rise > twisted sonic fall)
```

Etymology The `triple charge` wasn't present in Pentix nor Pentrix, unlike `double charge`. It isn't known for certain who or when it was created: the earliest instance that remains today is a UCPSB thread from 2006 [177].

🇬🇧 Triple charge [≤2006];
● トリプルチャージ *(triple charge)*; ウェーブ *(wave)*
◉ 더블윈드밀 *(double windmill)*

Japanese motion   ↻ *Backhand CCW* | *Common (6.7/10)*

Japanese motion usually refers to the following trick:

```
japanese motion = (PS) pass rev 12-23 ~> (PD) twisted sonic
```

The change in the position of the hand from palm side to palm down allows the spinner to remove the intermediate charge between both tricks.

Etymology Although the aforementioned trick had already been commonly used in Japanese and Korean combos for several years, the name and the more general concept was explained by Fel2Fram in a 2013 video [106]. He defined "Japanese motion" as the concept of removing charges from a hybrid, usually (but not necessarily) thanks to a hand position change. In the original video, several other examples were shown.

▨ Japanese motion [Fel2Fram[106], 2013]; Jp motion [abbr.]
● ジャパニーズモーション *(Japanese motion)*; ジャパモ *(japamo)* [abbr.]
◉ 제페니즈모션 *(Japanese motion)*

◉ 숏 *(short)*

| **Flush pass** | ↻ *Clockwise* | *Rare (2.5/10)* |

A `flush pass` is a `cont pass 23-14>23`. To do the trick, the fingers 2 and 3 have to exchange positions, just like in a `side flush sonic`. However, notice that it's different from a `tipped side flush sonic`, as a `flush pass` has 0.5 more revolutions.

▨ Flush pass
● フラッシュパス *(flush pass)*

| **Two finger twirl** | ↻ *Counterclockwise* | *Rare (2.9/10)* |

Two finger twirl 11'

A trick that involves using both hands. In this movement the pen goes around one finger of each hand in a continuous way. It can be done with other finger combinations, like 22', 13', etc.

Etymology In recorded pen spinning history, the trick was first invented and named by Chris from Microjuggling in 1999. In Japan it was discovered independently and named ソー *(sew)* as the trick's execution is similar to an old person sewing sweaters.

Notation The traditional way to break it down is as a simultaneous around, as seen in the NC articles for simultaneous trick notation:

```
two finger twirl 11' = Cont (Indexaround 1 + Index'around 1')
```

However, this isn't true, as for it to be an around it would need to be in an unstable slot at some point, which doesn't happen. Thus, it would be better broken down as a pass, which is also the reason it's classified here as such.

```
two finger twirl 11' = Cont pass 1b1p'-1p1b'>1b1p'
```

⊞ Two finger twirl [Wrenn[40], 1999]

● ソー *(sew)*

⊞ Twirl [Kam[42], ≤2002]

| Twirl | ↺ *Counterclockwise* | *Infrequent (4.8/10)* |

Twirl T1

This trick is usually done with the thumb, as it's the only opposable finger. It comes from trying to do a two finger twirl with only the fingers of one hand, as explained in the original video "1p1h twirls" by Fel2fram.

Notation It's basically a 1p1h two finger twirl, so the same argument about its nature as a type of pass also applies here (see: Two finger twirl).

$$\text{Twirl T1} = \text{pass Tp1s}_t\text{-Tb1s}_p$$

⊞ Twirl [Fel2Fram[104], 2012]

In-out/Out-in charge   ↻ *Clockwise* | *Infrequent (4.9/10)*

In-out charge rev T1

An in-out (or out-in) charge is very similar to a 1p1h twirl (see: Twirl), except that the pen is held by the middle, and in its non-tipped version, like the one shown in the figure above, there is circular motion.

Notation We could break it down in a similar way to a twirl, except that it's now simultaneous with a charge:

$$\text{in-out charge T1} = \text{charge T1} + \text{pass T1p-T1b}$$

▌ 🇬🇧 In-out charge [Fel2Fram[105], 2013]; Out-in charge [Fel2Fram[105], 2013]

Tipped sonic   *Frequent (7.9/10)*

Tipped sonic T1-12

A tipped sonic is a sonic that rotates without conical motion, always perpendicular to the fingers.

Etymology The trick itself was first done by korean spinners in PDS. It was first named in UCPSB in 2006, in a thread where a member named Leviathan was asking if it had any name in English. FallenSeraph proposed the name Korean sonic, although he was worried about it creating another annoying dichotomy like the one regarding Weis/Korean backaround. The user grsbmd said that:

"*Technically, this spin type has no circular motion. It's just tipping up, then tipping back down. And it also doesn't need to use the thumb. If you use other fingers, though, it starts looking a lot like a sonic.*" (grsbmd, 2006)

Thus, he generalized the concept for when the thumb isn't involved, and proposed the name `tipped sonic`. He also gave other examples (such as `tipped charge`) of how the new modifier could be used.

Tipped sonic [grsbmd[113], 2006]
 ● ラ ダー *(ladder)*
 무회전계단 *(non-revolve sonic)* [FLow[9], 2021]

Korean sonic [FallenSeraph[102], 2006]
 수직일회전응용기 *(extended perpendicular one revolution)* [until 2021]

8.2 Perpendicular arounds

(Finger)around ↺ *Counterclockwise* | *Well-known (9.9/10)*

Indexaround 12-12

The term `(finger)around` is used when the mod rotates perpendicular to the fingers. When some kind of oblique motion is present, names like `backaround`, `bust` or `spread` are more appropiate. Arounds involving the thumb are usually classified separately since in those, the pen spins oblique to the fingers. For an explanation on how the finger prefixes are used (like in `middleindexaround`, shortened as `MIA`), see (Section 4.2.4).

Etymology Although it's a debate that is no longer active, the difference between an around and a spin was heavily discussed back at the beginning of the century. The first name in English notation for one of these tricks was `indexspin`, by Kam in 2000. It's uncertain who started this change, but as early as in 2003 we can see the name `indexaround` for this very same trick in penstudioz, although `indexspin` was still cited as the main name. In 2004, the Naming Committee released an article called "Around vs Spin" in which the difference between both trick names was established: `around` for 1.0 revolutions and `spin` for 1.5 and higher.

However, the actual first name for one of these tricks comes from Japan, as the Korokoro comic (1990) had ガンマンロール *(gunman roll)* as the name for the `IA rev 12-T12`. Hideaki then simplified the name to ガンマン *(gunman)* and extended its meaning to all fingeraround reverse.

Japanese ガンマン *(gunman)* is used for `fingeraround reverse`. The modifier シメトリカル *(symmetrical)* is usually equivalent to `inverse`, but in this case it's more similar to `mirrored`. A シメトリカルガンマン *(symmetrical gunman)* would be, for example, `MA 12-12`.

Korean Originally, `(finger)arounds` were written as 역수직 일회전 *(perpendicular reverse one revolution)* but in the 2005 NX lectures, the term

휘감기 *(winding)* was created. This is used as a suffix together with finger prefixes, in a similar way as in English. We should notice that in Korean notation, the same term is used for both bust and indexaround, thus ignoring how angled the trajectory may be.

⊞ Indexaround, Middlearound, (...) [≤2003] ; IA, MA, (...) [abbr.]

● ガンマン *(gunman)* [Hideaki[60], for (finger)around reverse, 1998]

◉ 휘감기 *(winding)*; 검지 휘감기 *(index winding)* [for both bust and IA]; 역검지 휘감기 *(index winding reverse)* [for both backaround and IA rev]

⊞ Index Spin [Kam[42], for indexaround, 2000]

● ガンマンロール *(gunman roll)* [Korokoro[2], for IA rev 12-T12, 1990]; アンダーガンマン *(under gunman)* [for シメトリカルガンマンリバース *(symmetrical gunman reverse)*, Crasher[92], ≤2001]

◉ 역수직 일회전 *(perpendicular reverse one revolution)* [until 2005]

Neosonic   ↻ *Clockwise | Well-known (9.6/10)*

Neosonic 12-Tf

A (finger)around rev that finishes in either Tf

$$neosonic = IA\ rev\ 1.0\ 12\text{-}Tf$$

or is caught between T and a finger

$$neosonic = IA\ rev\ 0.5\ 12\text{-}T1$$

Etymology The name neosonic was coined by Kam as a reference to beginners failing to understand the movement of sonic and doing this trick instead. The original neosonic was a MA rev 23-Tf, which is the trick that Kam had described in Pentix and that Szeto had explained in Iluvitar some years prior, but since then, IA rev 12-Tf has become the de-facto neosonic when no slots are specified.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Neo-sonic [Kam[42], 2000]

● ネオソニック *(neosonic)*

� 수직 일회전 *(perpendicular one revolve)* [for `neosonic 23-T1`]

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Vertical spin [Wrenn[40], 1999]; Straight Up Flip [for `MA rev 23-Tf`, Szeto[44], 2000]

| **Passaround** | ↺ *Counterclockwise* | *Infrequent (4.3/10)* |

Passaround 23-12

A `(finger)around 0.5`. Unlike `neosonic`, `passaround` is especially used for ones that don't end in `Tf`. The direction of the trick is counterclockwise, like `arounds`. One example would be the following:

$$\text{passaround 23-12 = around 0.5 23-12}$$

Etymology In 2004, kensai named the following combo `passaround`:

```
IA > pass rev 12-23 > MA > pass rev 23-34 > RA > pass rev 34-23 >
        MA > pass rev 23-12 > IA > pass rev 12-T1 > TA
```

He named it that way because it's a mix between `passes` and `arounds`. For each step, he thought, there's a `pass` and an `around` so this would be a `540º passaround`. If the around was just caught one position down from the original (e.g. starting in `12` but catching it in `23`) then that would be a `180º passaround`, which is the meaning commonly known nowadays. The name was then deprecated in 2008 by the NC, but people kept using it.

Japanese *Half gunman* was used to describe both `pass` and `passaround` (see: Pass). The foreign term パスアラウンド *(passaround)* is also used.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Passaround [kensai[126], 2004]

● ハーフガンマン *(half gunman)*; パスアラウンド *(passaround)*

☷ 회전오르기 *(spin up)* [2004]

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Snap pass [for `MA 31.2-12`, Larry[53], 2003]

Iteza trick   ↻ *Clockwise | Infrequent (4.8/10)*

The `Iteza trick` is `cont (IA rev 12-T1 > pass T1-12)`.

⊞ Iteza trick
● Itezaトリック *(Iteza trick)*
◉ 이태자트릭 *(Iteza trick)*

Neo around   ↻ *Backhand clockwise | Infrequent (3.5/10)*

also known as   **Pseudo around**   *Infrequent (3.3/10)*
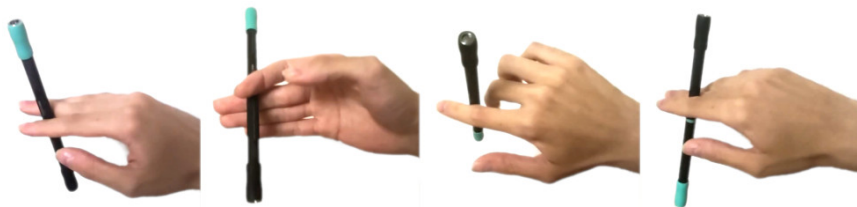
Neo around 12-12

A `neo around` usually starts palm down by doing an `around`, which is interrupted by a fingerswitch and followed by another `around 0.25`.

Etymology In 2008, Lindor named a similar trick `straight sonic`, which was executed palm side. In 2013, I rediscovered the trick and made a tutorial, where I gave it the name `pseudo around`. `Neo around` may be the oldest name of all three, and it's nowadays the most popular one. The origin is uncertain but the analogy with a `neobackaround` is easily seen.

Notation We can simply notate it as `(PD) MA 0.25 ~ IA 0.25`, or we can also specify the slots and the fingerswitch in a more formal manner:

`Neo around 12 = (PD) MA 0.25 12-2* > fingerswitch 2*-1* > IA 0.25 1*-12`

⊞ Neo around [≤2013]

⊞ Pseudo around [RPD[151], 2013]; Straight sonic [Lindor[130], 2008]

8.3 Oblique arounds

Thumbaround   *Fundamental* | ↺ *CCW* | *Well-known (10/10)*

One of the four fundamental tricks. In its usual variation, `Thumbaround T2-T12`, a small push of 2 while holding the pen with an offset center of gravity makes it turn around the thumb, after which it's caught.

Etymology It is probably the first trick to be discovered. The first names that we have records of are those from the special feature in Korokoro comic: *big roll* for TA and *reverse roll* for TA rev. Around 1997, Hideaki coined the term *normal* and adapted *reverse* from the Korokoro Comic name. Later, after creating the names for the spin number modifiers (*half*, *single*, *single axel* etc) he also used *single* as another name for the `thumbaround`. When Kam made Pentix, he started calling the trick `360 Degree Normal/Reverse`, using *normal* and *reverse* like Hideaki. The name was then changed by either Kam or nhk_9 in late 2003, but the topic where that was discussed has been lost. In March 10th, 2004, in Pentrix, Kam listed the trick as `thumbaround normal/reverse`, which is the only name used in English nowadays.

There are also many Chinese names. The first one comes from the Taiwanese sula_la. The tricks in his website are all named after "The Eighteen Palms", which were popular at the time. In particular, 亢龍有悔 means *the proud dragon repents*. 亢龍有悔 is the most well known sula_la name, especially by older spinners. In Chinese common vocabulary, the trick is referred as 繞大拇指的 and in Taiwan and Mainland, 正轉 is another common name. However, among experienced spinners, just calling it `TA` is common.

❖ Thumbaround [either Kam or nhk_9, 2003]; TA [abbr.]

● ノーマル *(normal)* [Hideaki[60], 1997]

❖ 엄지돌리기 *(thumb rotation)*; 엄돌 *(thumb rotation)* [abbr.]

❖ ❖ 正轉 *(forward spin)*; 繞大拇指的 *(something rotating on the thumb)* [used by beginners]

❊ Forward single [Weis[39], 1998]; 360 degree normal [Kam[42], 2000]; Simple thumb spin [Szeto[44], 2000]; 360; Thumb spin; Forward; Helicopter

❀ 亢龍有悔 [sula_la[78], 2003]

● ビッグロール *(big roll)* [Korokoro[2], 1990]; シングル *(single)*

Thumbaround reverse　　↻ *CW* | *Well-known (9.9/10)*
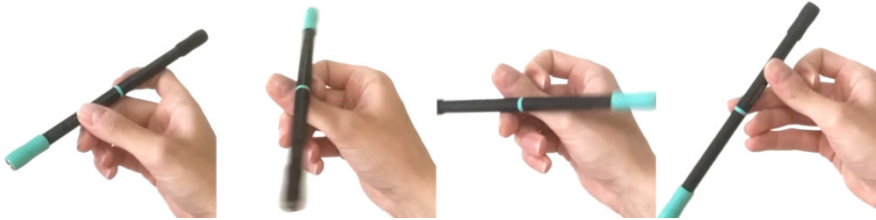
Thumbaround reverse T1-T2

In its usual variation, thumbaround reverse T12-T2, the mod is held by T2, with an offset center of gravity in the opposite way of a TA. After being pushed by the tip of the index finger, the mod rotates around the thumb, after which it's caught.

Etymology　Most websites always had both TA and TA rev, so their etymologies are very similar (see: Thumbaround). As explained there, this is the origin of the reverse modifier.

As for the Chinese names, we also have 見龍在田 from sula_la, meaning *the dragon soars in the sky.* 反轉 is the most common hanzi name nowadays in TWPS and PSH, although experienced spinners mostly call it TAR. Interestingly, this abbreviation isn't used in other English communities, which usually abbreviate it as TA rev.

❊ Thumbaround reverse [either Kam or nhk_9, 2003]; TA rev [abbr.]

● リバース *(reverse)* [Hideaki[60], 1997]

✸ 역엄지돌리기 *(reverse thumb rotation)*

⚑ ▦ 反轉 *(reverse spin)*; TAR [abbr.]

● リバースロール *(reverse roll)* [Korokoro[2], 1990]

❊ 360 degree reverse [Kam[42], 2000]; Reverse thumb spin [Szeto[44], 2000]

❀ 見龍在田 [sula_la[78], 2003]

TA Harmonic ↻↺ *CCW-CW* | *Well-known (9.9/10)*

A `thumbaround` followed by a `thumbaround reverse`. This sequence is either done once or continuously.

<div align="center">TA Harmonic = TA > TA rev</div>

Etymology The name ハーモニック *(harmonic)* was given by Hideaki, and it was among the first set of names that appeared on his website. It was then translated and adapted to `thumbaround harmonic` by Kam. This trick is where the `harmonic` modifier originated. Hideaki already used it as such in 1997, as in ソニックハーモニック *(sonic harmonic)*.

● ハーモニック *(harmonic)* [Hideaki[60], 1997]

☒ Thumbaround harmonic [Kam[42], 2000]; TA harmonic, TA harmo [abbr.]

◉ 똑딱이 *(ticking)*

● シャトルロール *(shuttle roll)* [Korokoro[2], 1990]

✿ 見龍在田跟亢龍有悔的連續 [sula_la[78], 2003]

Counter thumbaround ↻↺ *CCW-CW* | *Common (5.4/10)*

A `counter thumbaround` is a `TA` interrupted halfway by a `TA rev`, with a fingerless push.

<div align="center">counter TA = TA ~ Fl TA rev</div>

The counter concept of tricks was invented by Zombo of UPSB. The idea was to perform a trick as normal, then interrupt that trick halfway through

with a reverse motion (usually a fingerless push) to bring the pen back to the starting position. This results in a hybrid of a trick in one direction plus another trick in the opposite direction. The aim of counters is to look as though you are performing a full single trick as normal, but then abruptly interrupting it by moving the pen in the opposite direction.

Etymology The exact date at which Zombo created this is unknown, but the original videos from Zombo were reuploaded to PenstudioZ on March 2005. As for counter TA in particular, nhk from The Troposphere invented it independently and named it Thumb-Tap. After being told about counters, he corrected future versions of his website and videos.

🏴 Counter TA [Zombo, ≤2005]
● カウンター *(counter)*
🏴 Thumb-Tap [nhk_9[142], 2003]

Fingerless TA ↺ *Counterclockwise* | *Well-known (9.4/10)*

A fingerless TA consists of doing a thumbaround, but pushed just by the movement of the hand and/or wrist, not the fingers. It's sometimes (but not always) an aerial trick, usually when done continuously.

Etymology The concept and name comes from Kam. It was added to Pentrix on November 2004, although the date of creation may be even earlier since Pentrix updates were slow at times. This is the origin of the fingerless modifier. Both the modifier and the trick were later used in Japanese notation.

🏴 Fingerless Thumbaround [Kam[42], ≤2004]; Fl Thumbaround, Fl TA [abbr.]
● フィンガーレスノーマル *(fingerless normal)*
◉ 엄지휘감기 *(thumb winding)*; 엄지배감기 *(thumb rewind)* [for cont Fl TA]
◉ 더블 덤프 어라운드 *(double thumbaround)* [for cont Fl TA, until 2005]

Flick TA   ↺ *Counterclockwise* | *Infrequent (4.0/10)*

Flick TA reverse

In a `flick TA rev`, with the mod held in T2, the middle finger is extended and the pen goes around T, counterclockwise. This is in contrast to a normal `TA rev` in which the push comes from the index finger.

Flick TA

Since many spinners confuse both, let's also explain its `normal` variation. In a `flick TA`, the pen is held over 2 while touching the back of 1 and with a sudden extension of 1, the pen goes around T.

Etymology   The name `flick TA` comes from Zoda and Lindor, who in 2008 proposed it as a new trick in the FPSB laboratory. While `flick TA` was probably new, `flick TA rev` had already been done multiple times, being a trick that characterized Bonkura's style. As for the origin of the word `flick`, it was coined by Eso (see: Flick). In 2007, sketching proposed in the NC to add `tapped` and `flicked` as modifiers, although the idea didn't stick.

Notation   Although quite formal, we can break down the different pushes of a `TA` and a `flick TA`:

TA = TA [p 2→P]   flick TA = TA [p 1←P]

🎌 Flick TA [Zoda[167] & Lindor, 2008]

◉ 역엄지수평돌리기 *(thumb horizontality reverse)*, 역엄수 *(thumb horizontality reverse)* [abbr.], 역엄수 돌리기 *(thumb horizontality reverse)* [all three names are for `Flick TA rev`]

◉ 역수평 내리기 *(horizontality fall reverse)* [for `Flick TA rev`, until 2005]

TA riser ↺ *Counterclockwise* | *Rare (2.5/10)*

In a `TA` `riser`, the pen is thrown to the air after 0.5 revolutions of the `TA`, when the pen is on top of the thumb. It's one of the first tricks to use the `riser` modifier, although its origin is probably the `bak riser`.

🏴 TA riser
● ノマライザー *(normal riser / normalizer)*

TA release ↺ *Counterclockwise* | *Frequent (7.1/10)*

In a `TA` `release`, the pen is thrown to the air immediately after the push. It's one of the first tricks to use the `release` modifier, although its origin is probably the `infinity release`.

🏴 TA release
● TA リリース *(TA release)*
◉ 릴리즈 *(release)* [FLow[9]]

Extended TA ↺ *Counterclockwise* | *Well-known (9.7/10)*

also known as **Tornado** *Frequent (7.1/10)*

An `extended` `thumbaround` consists of doing a `thumbaround` starting in palm side position, and while the pen is rotating over the thumb, the hand turns palm down and a `bust` (`backaround reverse`) is done.

$$\text{Extended TA} = (\text{PS>PD}) \text{ TA} \sim> \text{bust}$$

Etymology The first name was given by kam in 2001: `extended 360 degree normal`, with `360 degree normal` being the name that he had given for a `thumbaround` at the time. After the name change to `thumbaround`, he also changed the name of this trick. In Japanese, the term *tornado* was being used to describe `fake double` [114], but then its meaning changed to describe this trick as well. `Tornado` is understood in English as `cont ext TA`.

▓ ▦ Extended thumbaround [Kam[51], 2004]; Ext TA [abbr.]; Tornado

● トルネード *(tornado)*

◉ 인지 휘감기 *(index winding)*

▓ ▦ Extended 360 degree normal [Kam[42], 2001]

◉ 검지 휘감기 *(index winding)*

Fake double　　↺ *Counterclockwise | Frequent (8.6/10)*

A `fake double` consists of doing a `thumbaround` and then an `indexaround`, while on palm side during the whole motion of the trick.

$$\texttt{fake double = (PS) TA \textasciitilde> Fl IA}$$

Etymology　In English, Kam called the trick `720 degree normal` in one of the first versions of Pentix. The origin of the name `fake double` is uncertain, but it is thought that it was given by Kam, as both `fake double` and `fake triple` appear in his recommended trick learning chart (2002), and `fake triple` is known to be his creation.

Japanese　Hideaki initially called this trick トルネード *(tornado)* but nowadays, that means `extended TA`, both in English and Japanese (see: Extended thumbaround). In 2001, Hideaki changed it to スプレッド ダブル *(spread double)*, which is the most common name nowadays.

Controversy　Although the definitions of `ext TA`, `fake double` and `thumbindexaround` are clear nowadays, the debate was intense back in the day. The UPSB v2 thread for those tricks was infamously long and convoluted, although it has been lost.

● スプレッド ダブル *(spread double)* [Hideaki[60], 2001]

▓ ▦ Fake double [Kam[42], 2002]

◉ 페이크더블 *(fake double)*

● トルネード *(tornado)* [Hideaki[60], 1997]

▓ ▦ 720 degree normal [Kam[42], 2001]

Backaround   ↻ *Backhand clockwise | Well-known (9.8/10)*

Index backaround

A `backaround` is a `fingerless fingeraround reverse`, usually palm down, which rotates obliquely to the finger. In an `index backaround`, the pen starts by being held in `12` with an offset center of gravity. With either a hand motion or a wrist motion, the pen starts to rotate around the index finger, after which it's caught in `12` or `Tf12`, like in the picture above.

Etymology   The trick itself, the `backaround` name and the `bak` abbreviation come from David Weis. Afterwards, other words were coined to describe different styles of executing the trick: `Weis backaround` and `Korean backaround`. The abbreviation `bak` has been somewhat controversial, as many spinners don't like that it drops the c. For this reason, many prefer to use `back` instead. On the other hand, some spinners call the trick `bakaround`, although that is not as common.

Korean   In Korean, there is no distinction between `indexaround reverse` (perpendicular) and `backaround` (oblique), both called 역검지휘감기 *(index winding reverse)*. Sometimes, the name can be more precise and refer to `IA rev` by calling it 수직식 역검지휘감기 *(palm side index winding reverse)*, where 수직식 is a prefix meaning palmside. Both styles of execution (Weis and Korean) also have their own names, which are sometimes used.

🇬🇧 Backaround [Weis[39], 1998]; Bak [abbr., Weis[39], 1998]

● バックアラウンド *(backaround)*; バクアラ *(bakuara)* [abbr.]

◉ 역검지휘감기 *(index winding reverse)* [for both `bak` and `IA rev`];

Korean backaround ↻ *Clockwise* | *Frequent (7.1/10)*

Korean backaround

One way of executing a backaround, which was popular during early PDS. It consists of doing the trick on the tips of the fingers:

```
korean bak = bak 1z2z
```

Korean The name 북파식 역휘감기 means 북파-*style reverse winding.* 북파러브레터지기 was part of the 2003 PDS staff, and those are the first two letters of his name. Recently, FLow named it 끝휘감기 *(Outside winding).*

⊞ Korean backaround; Korean bak [abbr.]
◉ 북파식 역휘감기 *(북파-style reverse winding)*; 끝휘감기 *(Outside winding)* [FLow[9], 2021]

Weis backaround ↻ *Clockwise* | *Common (6.3/10)*
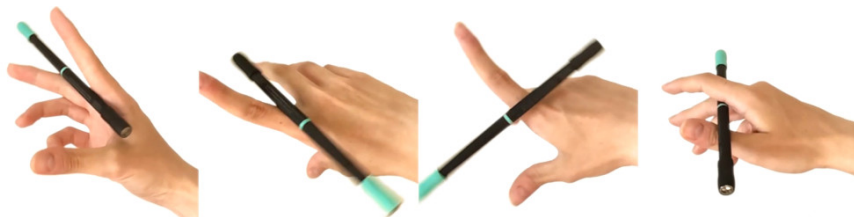
Weis backaround

Another one way of executing a backaround, done by David Weis. It consists of doing the trick at the base of the fingers:

```
weis bak = bak 1x2x
```

⊞ Weis backaround; Weisian backaround; Weis bak [abbr.]
◉ 데이비드식 역휘감기 *(David Weis reverse winding)*; 안휘감기 *(Inside winding)* [FLow[9], 2021]

Raimo backaround   ↻ *Backhand clockwise* | *Frequent (7/10)*

A `Raimo backaround` is a hybrid between a `backaround` and a `pass rev`. The trick was characteristic of the Japanese spinner Raimo.

```
raimo bak = bak ~ pass rev 12-23
```

🇬🇧 Raimo backaround [≤2010]

◉ 라이모백 *(Raimo bak)*

🇬🇧 Neo under backaround [used in FPSB, ≤2010]

Bakfall   ↻ *Clockwise* | *Well-known (9.3/10)*

A `backaround fall`, or `bakfall`, consists of doing four `backarounds`, starting with the index finger and finishing with the pinky.

```
bakfall = bak 12-12 > midbak 12-23 > ringbak 23-34 > pinkybak 34-34
```

Etymology   The name `bakfall` is just an abbreviation of `backaround fall`. During the UPSB v2 era, Kam, David Weis and nhk_9 discussed how a true `backaround fall` would be done, but ended up coming up with a `neobak fall` [206]. When and who came up with its current version is unknown, but in 2007 it was already an established trick: On the topic of the `rise` and `fall` modifiers, Sketching said that "*If you're not doing one of the standard Rise/Fall combos (Sonic, Backaround, Neobak), I would suggest just writing out the individual tricks that you do*" (Sketching[207], 2007).

Japanese   In Japanese, the trick is called シャフィーボ *(shafibo)*. Some spinners argued that the trick looked like a 遮機 *(shadanki*, railway gate), so they called it 遮機フィニッシュコンボ (**sha***danki* **fi***nish com***bo**).

🇬🇧 Backaround fall; Bakfall [abbr.]

● シャフィーボ *(shafibo)*

◉ 사지찰 *(four finger friction)*;

◉ 짝네오백 *(fake neobak)* [until 2021]; 짝네오백4단 / 7단 / 10단 *(vertical pair neobak 4/7/10 layer)* [until 2021]

Bakriser ↻ *Clockwise* | *Common (6.4/10)*

Halfway through a `backaround`, while the pen is spinning on the back of the finger, the pen is thrown to the air and then caught.

Etymology The name comes from nhk_9, as he used it in the Troposphere in 2003. This is most probably the trick that originated the usage of `riser` as a modifier.

⬛ BackRiser [nhk_9[54], 2003]; Bak riser

⬤ バクライザー *(back riser)*

◉ 점핑역검휘 *(aerial reverse winding)*

Continuous backaround 1.5 ↻ *Clockwise* | *Frequent (8.7/10)*

In a `continuous backaround 1.5`, after the first `backaround` and before the catch, 0.5 extra revolutions are done, which puts the pen to be in a position that eases doing another `backaround`.

In the original version by David Weis, which he called "*Continues Reverse-to-BackAround*", he started with a `fake reverse`. He then continued with an `index backaround` and the 0.5 extra revolutions were on T1, for which he changed from palm down to palm side. Nowadays it's also common to do it on other fingers, and mostly palm down. For example: `cont midbak 1.5`.

About its relevance, Darren wrote on the Troposphere:

"*This combo is a landmark combo for Pen Spinning, as the Conservation-of-Momentum notion is not present in Pen Spinning prior to the invention of this combo*" (nhk_9, 2003)

⬛ Continuous backaround 1.5 [David Weis[96], 2001]

NeoSA   ↻ *Clockwise* | *Mainly Japanese* | *Frequent (7.1/10)*

The `NeoSA`, or `NeoSA223`, is a popular finishing sequence. It consists of the following tricks:

```
NeoSA223 = (PD) neobak 12-12 ~> midbak 1.5 ~> midbak
```

Note how the last `midbak` starts while the pen is over 12.

Etymology   The origin of the trick and its name is interesting, as they went hand in hand. The first trick was the `233`, popularized after the Japanese spinner aaaa did it in Japen 1st, which consisted of

```
233 = bak > midbak x2
```

Afterwards, a variation emerged, which was sometimes called `Neo233`:

```
Neo233 = neobak 12-12 ~> midbak x2
```

And after that, `SA233`, SA standing for *Single Axel* (the Japanese term for extra 0.5 revolutions), notably done by G-Ryzer in PSN 2nd:

```
SA233 = bak > midbak 1.5 ~> midbak
```

In the end, by combining both, `NeoSA223` was coined. Even in Japanese, it's written in roman letters most of the time, although sometimes it's written as ネオサ *(NeoSA)*. The scope of the name has grown, for example, into tricks like `NeoSA334` or `NeoSA4555`. Recently the name has gained popularity overseas. Some overseas spinners call it `neossa`, but this spelling is incorrect.

Korean   There are three terms that refer to similar tricks, so let's see them one by one. The first one is 네오백 *(neobak)*:

```
네오백 = neobak 12-12 ~> midbak
```

Notice that the `midbak` isn't 1.5. The 네오백배감기 *(neobak rewind)* is:

```
네오백배감기 = neobak 12-12 ~> midbak ~> midbak
```

Where the `midbak` still isn't 1.5. Finally, there is the NX식네오백배감기 *(NX-NeoSA)*, which equals the usual `NeoSA233`:

```
NX식네오백배감기 = neobak 12-12 ~> midbak 1.5 ~> midbak
```

- ● NeoSA233; NeoSA; ネオサ *(NeoSA)*
- ⚑ NeoSA
- ◉ NX식네오백배감기 *(NX-NeoSA)*

| Palmaround | ↻ *Clockwise* | *Infrequent (3.3/10)* |

also known as **Palmbackaround** *Rare (1.9/10)*

Holding the mod between P and T, an around reverse is done on the palm (not the fingers). Palmbackaround is also a name used and is more correct due to the direction of rotation of the trick.

- ⚑ Palmaround [≤2005]; Palmbackaround [≤2008]
- ● パームアラウンド *(palmaround)*

| Bust | ↻ *Backhand counterclockwise* | *Well-known (9.9/10)* |

A bust is a backaround reverse. Rotating oblique to the fingers, and starting in 12, the pen is pushed so that it goes around 1. The push of the trick is fingerless most of the time, although if only one bust is done, the push could also be finger-pushed, like in the picture above. Other names like midbust, ringbust, pinkybust and handbust are also common.

$$bust = backaround\ reverse$$

Etymology The first instance of the word bust is in 2002, with the creation by Kam of the trick sonic bust (see: Sonic bust). His objective with that trick was to link two tricks that in principle have different directions of rotation: the sonic (CW) and the indexaround (CCW). This was the first definition of bust: an indexaround attached to a trick which, in principle, had a different direction of rotation.

The name was used widely during UPSB v2 and in 2006, there were three well known tricks with the bust modifier attached to them: `sonic bust`, `twisted sonic bust` and `demon sonic bust` [205]. Years later, Thai powertrickers popularized its continuous usage. At that point, the initial definition was lost, and `bust` not only began to mean attaching a `backaround reverse` to any trick regardless of its direction of rotation, but it started to be used as a standalone trick as well.

Japanese This trick is mostly notated with スプレッド *(spread)* (see: Spread), although the name バスト *(bust)* can also be seen at times, especially among powertrickers and newer generations.

⚓ Bust [Kam[42], 2002]

● バスト *(bust)*

◉ 검지 휘감기 *(index winding)* [for both `bust` and IA]

For its **continuous** version:

⚓ Continuous bust; Cont. bust [abbr.]

● コントバスト *(cont. bust)*

◉ 검지배감기 *(indexfinger winding more than one)*

Twisted sonic bust   ↻ *Backhand CCW | Well-known (9.0/10)*

A `twisted sonic bust` is a `(PD) twisted sonic > backaround reverse`.

Etymology The precise moment when this name was coined is unknown, but in 2006 it was already a well established trick (see: Bust).

⚓ Twisted sonic bust [≤2006]

◉ 풍차검지휘감기 *(windmill indexfinger winding)*; 풍검휘 *(windmill indexfinger winding)* [abbr.]

Raimo (finger)bust   ↻ *Backhand CCW | Infrequent (3.7/10)*

A `Raimo bust` is a hybrid between a `bust` and a `pass`:

```
Raimo pinkybust = pinkybust ~ pass 34-23
```

Etymology The trick isn't actually made by Raimo, and the name is much more recent than `Raimo backaround`. It's just applying the same idea, but to `busts` instead of `backarounds` (see: Raimo backaround).

⚓ Raimo pinkybust

Spread ↺ *Counterclockwise* | *Well-known (9.6/10)*

Pinkyspread

A `fingerless fingeraround release`, usually palm side or slightly palm up. The rotation of the pen is oblique to the fingers. Finger prefixes are used to determine around which finger it rotates.

$$pinkyspread = (PS) \text{ Fl PA release 34-34}$$

Japanese *Spread* is used for all kinds of `fingerless arounds`. For example, `TA > bust x2` is written as *spread 122*. When referring to `spreads` as we know them in English, it's sometimes written as *vertical spread.*

Etymology The term `spread` originates in Japanese notation. There was some confusion regarding this trick name from various videos on youtube. Jamie Enns explained in the UPSB v3 how in Japan it's used for two different kinds of tricks, and that since English notation has enough names for palm down fl arounds (`bak`, `bust`, `fl around`) we should only use it for the other type. [178] In Korean, 스프레드 *(Spread)* has the same meaning as in English.

⊞ Spread
● 縦スプレッド *(vertical spread)*
☯ 스프레드 *(Spread)*

Fxxk ↺ *Clockwise* | *Common (6/10)*

Mid fxxk

The `fxxk` is a variation of the `spread`, usually done with the fingers more or less straight and palm up, with the pen rolling on the back of the fingers before being thrown to the air. The most common variation is `middle fxxk`. It's from that finger positioning that the name comes from.

```
fxxk = (PU) Fl midbust release
```

▌ 🇬🇧 Fxxk

Symmetrical backaround   ↺ *CCW | Common (5.7/10)*

Symmetrical backaround

A `symmetrical backaround` is a `pinkybust` followed by a `fingerless thumbaround`. If correctly executed, the pen should transition by staying as little in the air as possible.

```
symmetrical backaround =  (PD) pinkybust ~ (PS) Fl TA
```

Etymology The trick was made and named by key3, further popularized by VicGotGame around 2010. Since key3 deleted all of his Youtube videos, the original creation date is unknown.

▌ 🇬🇧 Symmetrical backaround [Key3[127], ≤2008]

Hai tua   ↺ *Backhand counterclockwise | Well-known (9.3/10)*

Note: There are various variations of arounds on the hand, so to better explain their differences, the number of rotations done at each step is indicated in the top right corner of each image.

A `Hai Tua` is done as follows: (PS) 1.0 spin on the thumb, (PD) 1.0 spin on the back of the fingers/hand, aerial push with the pinky side of the hand, 0.5 aerial spin, (PS) optional TA for the catch (0.5 revolutions). In total: 1 aerial push, 2.5 revolutions continuous, 3.0 revolutions if done just once.

Etymology Both discovered and named by Spinnerpeem. In Thai, hai tua means vanishing or teleportation. The original name is นินจาหายตัว *(ninja hai tua)*, "ninja" being used because the pen goes from the pinky immediately to the thumb. There used to be other "ninja" tricks back then too, created by other THPSC members, although all others have been forgotten.

▬ นินจาหายตัว *(ninja hai tua)*, หายตัว *(hai tua)* [Peem[156], ≤2008]
🏴 Hai tua; Ninja hai tua
⬤ ハイツア *(hai tua)*
◉ 하이투아 *(hai tua)*

Aerial hai tua   ↻ *Backhand counterclockwise | Frequent (7.4/10)*

While `aerial hai tua` is most of the time understood as a `hai tua riser`, it can technically be a `release` too and some spinners use it that way. So for that, both variations will be described here:

Hai tua riser

Riser case (PS) Thumbaround (1.0 rev.), aerial push with the index finger, 0.5 aerial spin, (PD) 0.5 spin on the back of the fingers/hand, (PD) aerial push with the pinky side of the hand, 0.5 aerial spin, (PS) optional TA for the catch (0.5 revolutions). In total: 2 aerial pushes, 3.0 revolutions if done continuously, 3.5 if done just once.

Hai tua release

Release case (PS-PD) TA release, 1.0 aerial spin, (PD) 0.5 spin on the back of the fingers/hand, (PD) aerial push with the pinky side of the hand, 0.5 aerial spin, (PS) optional TA for the catch (0.5 revolutions). In total: 2 aerial pushes, 2.0 revolutions if done continuously, 2.5 if done just once.

Aerial hai tua; Hai tua riser; Hai tua release

Hand bust   ↺ *Backhand counterclockwise* | *Common (6.5/10)*

(PD) aerial push with the pinky side of the hand, 1.0 aerial spin going around the whole hand. In total: 1 aerial push, 1.0 revolutions.

Hand bust
● ハンドバスト *(hand bust)*

Handaround   ↺ *Backhand counterclockwise* | *Common (5.2/10)*

While technically `handaround` could also be used for any of the previous variations, it's used especially for the following trick: `(PS) thumbaround` (1.0 revolutions) followed by `(PS) IndexMiddleRingPinkyAround` (1.0 revolutions). In total: no aerial pushes, 2.0 revolutions.

▮ ⊞ Handaround

Ayatori trick   ↺ *Backhand counterclockwise | Common (5.1/10)*

The `Ayatori trick` consists of the following

    Ayatori trick = Hai Tua ~> charge rev release Tf ~ bust

In the initial `Hai Tua`, the last `TA` isn't done. Instead, the pen is directly caught on `Tf` to do the `charge rev`.

▮ ⊞ Ayatori trick [≤2009]
▮ ● Ayatoriトリック *(ayatori trick)*
▮ ◉ 아야토리 트릭 *(ayatori trick)*

Rex trick   ↺ *Backhand clockwise | Common (6.8/10)*

Do a `fingerless TA reverse`. Before finally catching the pen, let the pen do a small `fingerless charge Tf` and change the position of the hand from palm side to palm down. Then, while palm down, the mod does a 0.5 spin and is caught in the same slots that the trick started. It can be done continuously. It is named after Rex, a member of TWPS.

Rex trick = Fl TA rev ~> (PS-PD) charge rev Tf ~ spin 0.5 Tf-1wp*-Tf

▮ ⊞ Rex trick
▮ ● レックストリック *(rex trick)*
▮ ◉ 렉스트릭 *(Rex trick)*

Punkan ↺ *Counterclockwise* | *Frequent (8.6/10)*

A `punkan` is an arm around. Starting from a `TA release`, it goes around the forearm, entering in contact with it for about 0.25 rev., after which it is thrown again into the air. The catch is usually another `TA`.

Etymology The trick was first done by Pyralux, a French spinner, in 2008. At that time it was called `armaround`. Peem rediscovered the trick and named it `punkan`, as pun means "to wind around" and kan means "arm". After the rise of Peem, the name `punkan` got more popular. While `arm bust` can be seen from time to time, it's not that common since here the distinction analogous to the one between `Hai Tua` and `Hand Bust` doesn't exist.

▦ Armaround [Pyralux[150], 2008]; Punkan; Arm bust
▬ พันแขน *(pun kan)* [Peem]
⬤ プンカン *(punkan)*
◉ 암스핀 *(arm spin)*; 팔휘감기 *(wrist winding)* [FLow[9], 2021]
◉ 암스핀투아 *(arm spin tua)* [until 2012]; 팔목휘감기 *(wrist winding)*

Muscle around ↺ *Counterclockwise* | *Rare (2.9/10)*

The `muscle around` is similar to the `punkan`, but instead of going around the forearm it turns around the upper arm.

▦ Muscle around [≤2011]

Antigravity ↺ *Backhand clockwise* | *Infrequent (4.6/10)*

It's a `(PD) Fl TA rev`, sometimes also around other fingers.

▦ Antigravity [≤2006]

Comet ↺ *Clockwise* | *Mainly Japanese* | *Very rare (0.7/10)*

This trick is a (PD-PS-PD) `middlethumbaround riser`. As the pen is over T, the hand is turned to either palm side or palm up (Drowsy is able to accentuate this hand motion much more than what I did in the picture above) and the pen is thrown to the air, where it does 0.5 revolutions and is finally caught back in 23.

```
comet = (PD-PS-PD) middlethumbaround riser reverse 23-23
```

▌● 彗星 *(comet)* [Drowsy[97], 2019]

The trick starts with a `comet`, but instead of being caught in 23, the hand is moved so the pen does an `pinkybust riser`, slanted in the opposite way than usual. The pen is then thrown to the air again, and the trick is finished with a `bust`, again slanted in the opposite way than usual. All of this is done in palm down.

```
NGO = (PD) Comet ~ inverse pinkybust ~ bust
```

Etymology The trick was first done by Drowsy for his submission to the collab "Dance Above the Floor". During that time, it was common for bots to comment on Youtube videos −even those that hadn't premiered yet, like DAtF− with a random timestamp and some NSFW URL. A bot called Paul Roberts commented "*0:17 naughty-girls.online*", which made waves on PS twitter. Drowsy named the trick after that event.

▌● ナウティーガールズオンライン *(naughty girls online)* [Drowsy[98], 2020]; NGO [Drowsy[98], 2020]

8.3.1   Powerpasses

Powerpasses are sequences of `fingeraround 0.5`. There are many variations, and since the history of their development is common to all of them, I will explain this at the beginning of this section and then show images and breakdowns for several important `powerpasses`.

Etymology The first variant to be found was `palm powerpass`, which was commonly done by JEB mx spinners, although it remained unnamed. Afterwards, Gollumsk8 did part of a `backhand powerpass` in a video, but not the whole trick. In 2008, Jamie Enns was able to do the following sequence:

```
palm powerpass normal > backhand powerpass normal
```

and gave the name `powerpass` to the whole trick. In 2010, he uploaded this trick x2 to his YouTube channel, which popularized the trick. [116]

In 2010, Fel2Fram uploaded a tutorial to the FPSB Youtube channel, titled "Powerpass", in which he did just the backhand part. Within the video, he specified "Powerpass (upper part)", but this was the start of a new meaning of the name. 5 months later, he uploaded "The 8 main powerpasses" to his main youtube channel, in which 4 backhand and 4 palm variations were done and named for the first time [103]. Around this time, Supawit was also practicing the trick, and released the tutorial of the `switch spread`.

Jamie Enns, when asked about this change, answered:

"*My naming scheme never worked out. Its crazy anyone calls anything a 'powerpass' 7 years after I first said it. Between supawit and fel2fram the name got mixed up. BUT thats not what it's about! It's about trying things that haven't been done before and sharing with the community your discoveries and ideas!*" (Jamie Enns[208], 2015)

It is known that Fel2Fram had found 128 variations in total by applying different combinations of modifiers. However, many of them weren't physically possible, and many uninteresting, thus the main 8 as his focus. However, in 2017, Leftfinger uploaded a video called "Powerpass Show" where the concept of a powerpass itself is deconstructed and many new variations are shown [182]. In 2020, Beck uploaded a video called "Overlapping powerpasses" [88], popularizing a variant that Leftfinger had shown on his video.

Nowadays, `powerpass` is also used for each individual around 0.5, e.g.:
$$\texttt{powerpass 12-23 = middlearound 0.5 12-23 [p 2}{\rightarrow}\texttt{P]}$$

Notation To describe the main eight, we need 3 modifiers, since $2^3 = 8$. The most common ones are `reverse`, `inverse` and `mirrored`. However, how most people use `inverse` is incorrect! In his video, Fel2Fram didn't use `inverse`, he used `palm` (& `backhand` as its corresponding non-modifier).

Notice how they aren't interchangeable:
$$\texttt{inverse powerpass = palm powerpass reverse}$$
$$\texttt{inverse powerpass reverse = palm powerpass}$$
To avoid confusion, since `palm` conserves the around direction and is more intuitive than `inverse` in this case, we **strongly recommend the use of `palm`** instead of `inverse`.

Powerpass ↺ *Counterclockwise* | *Well-known (9.6/10)*

An around 0.5 fall [p f→P].

⊞ Powerpass [Jamie Enns, 2008; meaning change by Fel2Fram[103], 2011];
Backhand powerpass [Fel2Fram[103], 2011]

● パワーパス *(powerpass)*; パワパ *(pawapa)* [abbr.]

◉ 스위치 *(switch)*; 외회전내리기 *(outside revolving fall)* [FLow[9], 2021]

Powerpass reverse ↻ *Clockwise* | *Frequent (7.7/10)*
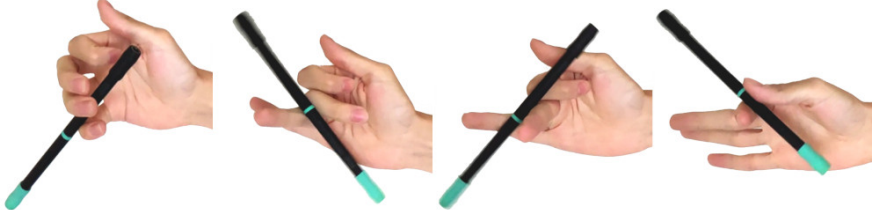
An around rev 0.5 rise [p f←P].

⊞ Powerpass reverse, Backhand powerpass reverse [Fel2Fram[103], 2011]

● パワーパスリバース *(powerpass reverse)*

◉ 외회전오르기 *(outside revolving rise)* [FLow[9], 2021]

Mirrored powerpass ↻ *Clockwise* | *Frequent (7.7/10)*

An around rev 0.5 rise [p f→P].

⊞ Mirrored powerpass [Fel2Fram[103], 2011]

● ミラードパワーパス *(mirrored powerpass)*

◉ 대칭외회전오르기 *(mirrored outside revolving rise)* [FLow[9], 2021]

Mirrored powerpass reverse   ↻ *CCW* | *Frequent (7.1/10)*

also known as   **MPR**   *Common (5.2/10)*

An `around 0.5 fall [p f←P]`. It's sometimes called `MPR`, which is an acronym of `mirrored powerpass reverse`. Both `backhand` and `palm` variations are popular among modern powertrickers.

⊞ Mirrored powerpass rev. [Fel2Fram[103], 2011]; MPR [abbr., i.suk, 2018]
● ミラードパワーパスリバース *(mirrored powerpass reverse)*
◉ 대칭외회전내리기 *(mirrored outside revolving fall)* [FLow[9], 2021]

Palm powerpass   ↻ *Counterclockwise* | *Rare (2.7/10)*

An `around 0.5 rise [p f→P]`. This trick was commonly done by Korean spinners, which triggered the development of the other `powerpasses`.

Japanese It was named 昇りガンリバ *(rising gunman rev)*, about a year after discussing the difference between `pass` and `passaround` (see: Pass).

⊞ Palm powerpass [Fel2Fram[103], 2011]
● パームサイドパワーパス *(palm side powerpass)*; 昇りガンリバ *(rising gunman reverse)* [∼2008]
◉ 내회전오르기 *(inverse revolving rise)* [FLow[9], 2021]

Palm powerpass reverse ↻ *Clockwise* | *Rare (2.5/10)*

An around rev 0.5 fall [p f←P].

▓ Palm powerpass reverse [Fel2Fram[103], 2011]

● パームサイドパワーパスリバース *(palm side powerpass reverse)*

◉ 내회전내리기 *(inverse revolving fall)* [FLow[9], 2021]

Palm mirrored powerpass ↻ *Clockwise* | *Rare (2.5/10)*

An around rev 0.5 fall [p f→P].

▓ Palm mirrored powerpass [Fel2Fram[103], 2011]

● パームサイドミラードパワーパス *(palm side mirrored powerpass)*

◉ 대칭내회전내리기 *(mirrored inverse revolving fall)* [FLow[9], 2021]

Palm mirrored powerpass reverse ↻ *CCW* | *Rare (2.5/10)*

also known as **Palm MPR**   *Rare (2.3/10)*
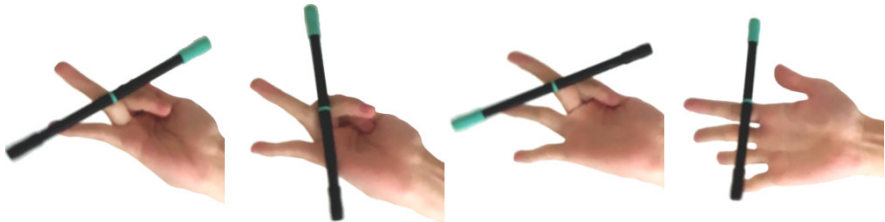
An around 0.5 rise [p f←P].

⚉ Palm mirrored powerpass reverse [Fel2Fram[103], 2011]; Palm MPR [abbr., i.suk, 2018]

● パームサイドミラードパワーパスリバース *(palm side mirrored power-pass reverse)*

⚉ 대칭내회전오르기 *(mirrored inverse revolving rise)* [FLow[9], 2021]

Knuckle powerpass ↻ *Clockwise* | *Common (6.7/10)*

The trick is usually started from a `charge T1` from which, assisted by the thumb, the pen is placed over 12. The hand is slightly palm up and all fingers are bent. With a bit of movement, the pen is passed from 12 to 23 and finally 34. In the original video, it's followed by a `pinkybak`.

Etymology In 2017, Menowa* discovered and popularized the trick. The first time a trick of this kind was done was in 2013, by Ponkotu, although it wasn't exactly the same (it's some sort of `inverse knuckle powerpass reverse`), which he called `zipower pass`/`compression powerpass`.

Notation The actual mechanics of the trick are, in a way, more similar to a `pass` than to an `around`, although the slots are unstable.

```
knuckle powerpass = (PU) pass rev 1b2b*-2b3b*>3b4b*
```

It's hard to determine if it's a `pass normal` or `reverse`. However, if the fingers could be straight while doing the trick, which is the standard position, we would see the pen moving counterclockwise. As for the locators, either `b`, `k` or `yz` could be used to determine the position of the pen. In the above breakdown I opted for `b` as it's the shortest and most well known.

● 関節パワーパス *(joint powerpass)*; ナックルパワパ *(knuckle powerpass)*

⚉ Knuckle powerpass; Menowa* powerpass

● Zipower pass, Compression powerpass [Ponkotu[148], 2013]

Overlapping powerpasses   ↺ *Counterclockwise* | *Rare (1.9/10)*

A variation in which two backhand powerpasses are done at the same time, thus adding 0.5 extra revolutions to each of the individual parts. They were first done by Leftfinger, and further popularized by Beck.

```
overlapping powerpass rise = powerpass rev + mirrored powerpass
overlapping powerpass fall = powerpass + mirrored powerpass rev
```

Overlapping powerpasses [Beck[88], 2020]; Alternate powerpass [Leftfinger[182], 2017]

Switch spread   ↺ *Counterclockwise* | *Infrequent (3.2/10)*

The `switch spread` is a powerpass and spread minicombo. In the trick presentation video, Supawit did the following:

```
powerpass T1-12 > midspread > powerpass 12-23
> ringspread > powerpass 23-34 > pinkyspread
```

However, nowadays, the name is used loosely to refer to any sequence that has a `powerpass` followed by a `spread`.

Switch spread [Supawit[158], 2010]
● スイッチスプレッド *(switch spread)*
스위치 스프레드 *(switch spread)*

Switch fingerpass   ↺ *CCW* | *Mainly Korean* | *Rare (1.0/10)*

A Korean name referring to the following minicombo

```
cont (powerpass > pass 34-23-12)
```

스위치 핑거패스 *(switch fingerpass)* [≤2012]

Switch pun new   ↺ *CCW* | *Mainly Korean* | *Very rare (0.8/10)*

A Korean name referring to the following minicombo

```
(PU) cont (IA 0.5 ~> MA 0.5 ~> palmspin 0.5)
```

In other words, the first two arounds of a `powerpass` are done, after which some sort of `pun new` is done, pushed by the middle finger and caught with the index, continuing the motion.

스위치펀뉴 *(switch pun new)*

8.4   Conical

Charge   *Fundamental | ↻ Clockwise | Well-known (9.9/10)*

Charge 12

One of the four fundamental tricks. In a `charge`, the pen spins without changing fingers, with a conical movement. To do a `charge`, the two fingers move relative to each other to achieve the desired circular motion. The pen is usually, but not necessarily, held by its center of gravity.

Etymology The name `charge` was given by Kam. The earliest record that we have of that name is from 2001, where it appeared on Pentix, although it may have been given even earlier. Prior to Kam, this trick was independently discovered and named by at least 3 other spinners: Szeto, Wrenn and Hideaki.

Japanese Hideaki called the trick フェイクトソニック *(faked sonic)* in 1998, and this name is still used today. However, sometimes the direct translation, チャージ *(charge)*, is also used.

🏴 Charge [Kam[42], ≤2001]

● フェイクトソニック *(faked sonic)* [Hideaki[60], 1998]; チャージ *(charge)*; フェイソニ *(feisoni)* [abbr.]

◉ 원 그리기 *(circle drawing)*

🏴 Gyrating twirl [Szeto[44], 2000]; Drumstick Twirl [Wrenn[40], 1999]

Sonic   *Fundamental | ↻ Clockwise | Well-known (9.9/10)*

Sonic 23-12

One of the four fundamental tricks. A `sonic` is a hybrid between a `charge` and a `fingerswitch`, as it follows a conical motion while changing slots.

Etymology The name ソニック *(sonic)* was given by Hideaki. Then, Kam added its translation to Pentix. The trick was also discovered independently by others, like sula_la (his name, 雙龍取水, means *the twin dragons fetch water*) and Szeto, who gave names to three slot combinations.

Korean The Korean name, 계단 *(stairs)*, originated independently from the rest. Names for `sonic` and its basic variations were used since the beginning of the board. But it wasn't until the 2005 NX lecture when they were standarized into using the 역 *(reverse)* and 내 *(inverse)* modifiers.

English equivalent	Deprecated *(Until 2005)*	New expressions *(Since 2005, NX lecture)*
Sonic	계단 올리기	계단
Sonic reverse	계단 내리기	역계단
Inverse sonic	역계단 올리기	내계단
Inverse sonic reverse	역계단 내리기	역내계단

● ソニック *(sonic)* [Hideaki[60], 1997]

🏳 Sonic [Kam[42], 2000]

◉ 계단 *(stairs) (see the table above)*

🏳 Three-Two Jump, Four-Three Jump, Two-Thumb Jump [for `sonic 23-12`, `sonic 34-23` and `sonic 12-T1` respectively, Szeto[44], 2000]; Sonic jump [for `sonic 34-12`, ≤2003]

● クラシカルソニック *(classical sonic)* [for `sonic 23-12`]; 裏ソニック *(rear sonic)* [for `inverse sonic`, Hideaki[60], 2001]

✿ 雙龍取水 [sula_la[78], 2003]; 履霜冰至 [for `sonic rev`, sula_la, 2003]

Inverse sonic   ↻ *Clockwise* | *Well-known (9.0/10)*

An `inverse sonic` is like a `sonic`, but the fingerswitch happens while the pen is in front of the middle finger instead of on its back.

Etymology The trick seems to have been discovered independently by Kam and Hideaki, as both gave it different names. This is the origin of the `inverse` modifier in English and the *symmetrical* modifier in Japanese.

🏴 Inverse sonic [Kam[42], 2001]

⚫ シメトリカルソニック *(symmetrical sonic)* [Hideaki[60], 2001]

Moonwalk sonic   ↻ *Clockwise | Frequent (7.0/10)*

Moonwalk sonic 12-23

A `moonwalk sonic` is a `sonic` with the usual direction of rotation, but with the order of the slots inverted. That is:

```
moonwalk sonic = sonic 12-23
```

The name comes from Japanese notation, although it's unknown who named it. In English, the usage of `moonwalk` is discouraged whenever the fingerslots can be written. For this reason, the Naming Committee deprecated the trick name in 2008, although it's still used nowadays.

⚫ ムーンウォークソニック *(moonwalk sonic)* [MITSU, 2001]

🏴 Moonwalk sonic

☯ 문워크계단 *(moonwalk stairs)*

Sonic clip   ↻ *Clockwise | Frequent (7.4/10)*

Sonic clip 23-12

A `sonic clip` is a hybrid between `sonic` and `charge`. For example, in a `sonic clip 23-12` (shown in the figure above), while the pen is being held by 13, the middle finger is bent completely and a `charge 13` is done. This adds at least 1 revolution, but it could add many more.

```
sonic clip 23-12 = sonic 23-13 ~> charge 13 > sonic 13-12
```

Etymology The first time that the name `sonic clip` is seen is in November 2003, in PenstudioZ. It doesn't appear on the Pentix trick names table, so it originated some time between 2001 and 2003, but the creator is unknown. The Japanese term スリップトソニック *(slipped sonic)* may be younger, as it doesn't appear in any of the trick lists from Crasher (2001)

Korean There are various names for this trick. 원계단 *(circle stairs)* is used as a general name for all variations. `Sonic clip 34-12` (this is, with a `charge 14`) is a particularly popular variation, and it was named 초난강 *(cho nan gang)* by Sound, as it reminded him to a typical hand gesture from 草彅剛, a Japanese comedian. This trick was then renamed by FLow to 더블원계단 *(double circle stairs)*.

⠿ Sonic clip [≤2003]

● スリップトソニック *(slipped sonic)*

⠿ 원계단 *(circle stairs)* [2007]; 더블원계단 *(double circle stairs)* [for `sonic clip 34-12`, FLow[9], 2021]

⠿ 하이퍼소닉 *(hyper sonic)* [until 2007]; 초난강 *(cho nan gang)* [for `sonic clip 34-12`, Sound, until 2021]

Pseudo sonic	↻ *Clockwise* | *Common (6.1/10)*
also known as **Sonic still**	*Rare (2.5/10)*

It's a `sonic` that finishes in the same slots as where it starts. E.g.:

```
pseudo sonic 23 = sonic still 23 = sonic 23-13-23
```

Etymology A spinner named Tomohiro Yamada discovered the trick in 2001, who sent a video to Hideaki. He provisionally named it `pseudo sonic`, and the name stuck. After some time, in English, the direct translation `pseudo sonic` became the most popular name for the trick.

However, other names were also given. nhk_9 saw MITSU, a Japanese spinner, doing this trick, and thus called it `Mitsuki's fake sonic`, although that name didn't become popular. After the development of `shadow still` by Kangandgeon (see: Shadow), the `still` modifier was also applied here, thus creating `sonic still`.

● スードウソニック *(pseudo sonic)* [Hideaki[60], 2001]

🇬🇧 Pseudo sonic; Sonic still

🇰🇷 제자리계단 *(stairs in place)* [FLow[9], 2021]

🇬🇧 Mitsuki's fake sonic [nhk_9[54], 2003]

🇰🇷 캔슬계단 *(cancel stair)* [FLow[9], until 2021]

Side sonic   ↻ *Clockwise | Frequent (7.7/10)*
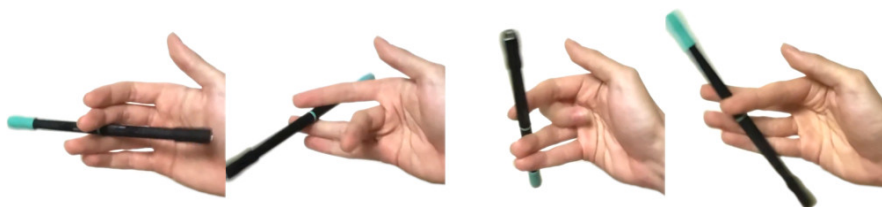
Side sonic 23-12

To do a `side sonic 23-12`, start with a `sonic 23-12` and when the pen is in 13, pass the middle finger between the index and ring, finishing the movement with an `inverse sonic 23-12`.

Etymology The first spinner who recorded the trick was Flip. Shortly after, Fratleym also recorded it and gave it the name `side sonic`. [180]

Notation Since it can be somewhat confusing, here we show how the `reverse` and `inverse` modifiers apply to a `side sonic`:

```
    side sonic nor 23-12 = sonic 23-12 ~ inv sonic 23-12
    side sonic rev 12-23 = inv sonic 12-23 ~ sonic 12-23
inv side sonic nor 23-12 = inv sonic 23-12 ~ sonic 23-12
inv side sonic rev 12-23 = sonic 12-23 ~ inv sonic 12-23
```

⊞ Side sonic [Fratleym[109], 2007]

● サイドソニック *(side sonic)*

⊛ 전환계단 *(conversion stairs)* [FLow[9]]

MISS   ↻ *Clockwise* | *Infrequent (3.2/10)*

MISS 23-24-23

A variation of the `side sonic`. In a correctly executed `MISS`, the wrist shouldn't turn and the moving finger (in the case of the image above, the ring finger) should stay straight during the first part of the trick and then clearly move to the other side of the hand.

Etymology `MISS` is the acronym for `moonwalk inverse side sonic`. It was first done and named by i.suk in mid-late 2018, who then popularized it as a staple of technical spinning.

⊞ Moonwalk inverse side sonic [i.suk, 2018]; MISS [abbr., i.suk, 2018]

Transparent sonic   ↻ *Clockwise* | *Infrequent (3.9/10)*

Transparent sonic 23-12

A hybrid between a `sonic` and a `spin`. It has 1.5 revolutions, 0.5 more than a `sonic`. It could be formally notated the following way:

```
transparent sonic 23-12 = sonic 23-13 ~ spin 0.5 2* >~ switch 2*-12
```

⊞ Transparent sonic [≤2007]

Flush sonic   ↻ *Clockwise* | *Frequent (8.2/10)*

To do a `flush sonic` in its basic variation, we start in 23 with the movement of a `charge`. After that, the middle finger is moved outwards, the ring finger inwards and the pen is caught in 14. Without changing the direction of motion, a `pass 14-23` is done.

Etymology   It was first done and named by Key3 (JEB) and further popularized by Fratleym (FPSB). The precise year of its discovery is unknown, since Key3 deleted all of his Youtube videos.

Notation   The traditional way of breaking down the trick is:

```
flush sonic = inv sonic 23-12 ~ sonic 13-14 ~> pass 14-23
```

Which successfully explains in simple terms the position of each finger during the trick. However, it's also a bit awkward since the `sonic 13-14` is almost instantaneous. We could solve this with special positions:

```
flush sonic = sonic 23-14 [2←P; 3→P] ~> pass 14-23
flush sonic = sonic 23-14 [2 out 3 in] ~> pass 14-23
```

Or we could do it with dot notation:

```
flush sonic = sonic 23-14 ~> pass 14-13.42-23
```

Although it may not be immediately obvious, putting the slot with the dot on the pass also fully specifies the trick. Its `inverse` would be:

```
inv flush sonic = sonic 23-14 [2→P; 3←P] ~> pass rev 14-23
inv flush sonic = sonic 23-14 [2 in 3 out] ~> pass rev 14-23
inv flush sonic = sonic 23-14 ~> pass rev 14-12.43-23
```

Notice that the direction of rotation of the `pass` changes for its `inverse`.

● フラッシュソニック *(flush sonic)* [Key3[128], ≤2007]

🇬🇧 Flush sonic

◉ 플러쉬계단 *(flush stair)* [FLow[9], 2021]

◉ 꽃계단 *(flower stairs)* [until 2021]

Side flush sonic ↻ *Clockwise* | *Common (5.3/10)*

A variation which combines both `flush sonic` and `side sonic`. When doing a `flush sonic`, and when the mod is in 14, exchange the positions of the middle and ring fingers. That is, the one that is near the palm should go outside it and vice versa.

Notation The most clear way of breaking down this trick may be with special positions:

side flush sonic = sonic 23-14[2←P; 3→P]-14[2→P; 3←P] > pass 14-23

The reason why dot notation is unfit for this breakdown is because the dot notation of the 14 slot on this sonic is undefined, and it's at that point when the fingers change positions. Because of this, when breaking down `flush sonic` (see: Flush sonic), the dot notation was used on the `pass` and not on the `sonic`.

🏴 Side flush sonic
● サイドフラッシュソニック *(side flush sonic)*

Cthulhu Sonic ↻ *Clockwise* | *Rare (2.7/10)*
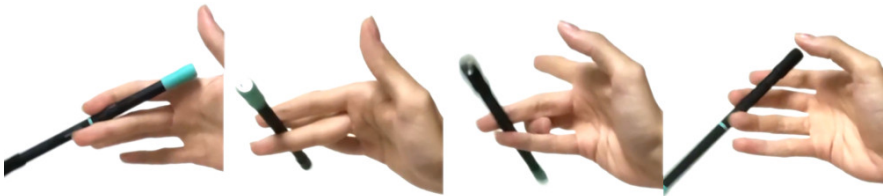
A (PS) inverse tw sonic 12-24 >~ MISS 24-23. When correctly executed, the wrist motion should be minimal.

🏴 Cthulhu Sonic [Monheim, 2019]

Bending finger charge   ↻ *Clockwise* | *Rare (2.3/10)*

During a `bending finger charge`, the two fingers involved in the movement bend alternatingly, each once per rotation.

Etymology   This trick was first done by ayaNo in Japen 14th. He made a tutorial shortly after, where he coined both English and Japanese names.

- 指曲げチャージ *(finger bend charge)* [ayaNo[87], 2019]
- Bending finger charge [ayaNo[87], 2019]

Co sonic   ↻ *Clockwise* | *Very rare (0.8/10)*

In the basic variation of a `co sonic`, a `charge 23` is done, partially pushed by bending the index finger, once per rotation.

Etymology   It was first done by some spinner from Sendai (Japan), who called it コミュ障ソニック *(comunication disability sonic)*. It was just a meme name, only known by other spinners from the area. Malimo discovered independently the `charge 23` countered by the thumb and then taught it to Mesi, who developed new variations and showed them in his 2018 solo [188]. Inspired by this, Siva made and compiled eight possible variations, which he then uploaded in 2019 under the censored name `co...sonic` [152].

Notation   Although it's very naive to think that the push of this trick is done solely by the index finger, we could write it as:

$$\text{co sonic = charge 23 [p 1]}$$

- co...sonic [Siva[152], 2019]; co sonic
- コミュ障ソニック *(comunication disability sonic)* [≤2014]

Fishing   ↻ *Counterclockwise* | *Common (6.3/10)*

`Fishing` is an general term for `continuous fingerless charges` in unstable slots. When done on the thumb, it's usually called `thumb fishing`. Although the notation of these tricks is poorly defined, they usually follow the same criteria as arounds (counterclockwise is `normal`).

Etymology   The name comes from Ian Jenson, from PSH, who was the first spinner to implement this concept from contact staff, another manipulation art, into pen spinning.

▨ ▣ 魚尾 *(fishtail)* [Ian Juggler[115], 2017]
🏁 Fishing [Ian Juggler[115], 2017]; Thumb fishing, Index fishing...
● 釣り *(tsuri)*; フィッシング *(fishing)*; サムフィッシング *(thumb fishing)*
◉ 피싱 *(fishing)*

Fishtail   ↻ *Counterclockwise* | *Common (6/10)*

`Fishtail` is the name given to one particular kind of `fishing`. With all the fingers straight, starting from a palm side position, the pen does a `fingerless charge rev` over the index finger. The hand and wrist motion alone keeps the pen spinning over 1.

$$\text{fishtail = Fl charge rev 1*}$$

Etymology   This trick was devised after Ian Juggler had already made his videos, where he showed other kinds of fishings but not this one. It was Menowa* who thought of the trick, Kay who named it `fishtail`, and Iteza who first captured it on video and uploaded it, on February 23, 2018 [108]. The history of this name is interesting, because in contact staff the broad term for these tricks is fishtail and not fishing.

● フィッシュテール *(fishtail)* [Kay, 2018]
🏁 Fishtail

Bust fishing   ↻ *Backhand counterclockwise* | *Infrequent (4.9/10)*

One particular kind of fishing. It can be done just on the index finger, or with the whole hand (`fist bust fishing`).

🏁 Bust fishing; Fist bust fishing

Drowsy motion   ↻ *Clockwise* | *Rare (1.3/10)*
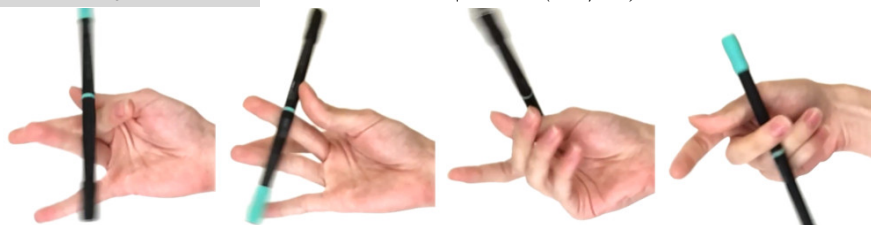
It consists of the following. The `TA` rotates vertically:

`(PS) MA rev 0.5 23-T2 > charge 0.5 T2 > TA ~ thumb fishing ~ TA rev T*-23`

- ● 大嵐 *(big storm)* [Drowsy[99], 2020]
- ✠ Drowsy motion [2020]

Lever trick   ↻ *Counterclockwise* | *Frequent (7.1/10)*

Index lever

It consists of doing a palm side `backaround`, after which there are an extra 0.5 revolutions in which the pen rolls around the middle finger.

Etymology The trick was discovered and named by A13X, who popularized it by using it during his WT13 run.

Notation The hardest part when breaking down this trick is to interpret the last 0.5 revolutions. We could see them as a `middlearound 0.5`:

`index lever trick = (PS) backaround ~ MA 0.5 1*-12`

but it could also be interpreted more abstractly as half of an `inv sonic`:

`index lever trick = (PS) backaround ~ inverse sonic rev 1*-12*-12`

- ✠ Lever trick [A13X[85], 2013]; Lever
- ● レバートリック *(lever trick)*
- ◉ 레버트릭 *(lever trick)*

Thumb lever ↺ *Counterclockwise* | *Common (6.4/10)*

The correct `thumb lever` is obtained when applying the same concept of a `lever trick` to the thumb.

Controversy A13X was the first to use this name, and during his first videos (for example, his WT13 R3) the final 0.5 revolutions weren't added, making the trick just a `(PU) Fl TA rev`. Whether this inconsistency should be kept or not was discussed extensively. Nowadays, most people think that for consistency, a correctly executed `thumb lever` should also have the final 0.5 revolutions, as it was done in the image above.

❊ Thumb lever
● サムレバー *(thumb lever)*

PU Fl TA reverse ↺ *Counterclockwise* | *Infrequent (4.2/10)*

The `palm up fingerless thumbaround reverse` is a very common trick in modern pen spinning, popularized by A13X and often confused with the `thumb lever` (see: Thumb lever).

❊ PU Fl TA reverse
● アレ リバ *(alex reverse)*
❊ Thumb lever [A13X, 2013]

| **Swivel** | ↺ *Backhand counterclockwise* | *Frequent (7.5/10)* |

In a `swivel`, we start by holding the mod while palm down. By doing a sudden wrist movement, the pen rolls on top of the hand, doing 1.0 revolutions, after which it hits the index finger and is then caught in `12`.

Etymology   The name `swivel` was given by Lindor in 2009. Originally, he used the `index, ..., pinky` prefixes to indicate in which finger it started, thus the basic variation being a `pinkyswivel`.

However, Lindor wasn't the first to do this trick. `Twisted cobra bite` predates `swivel` and is a `pinkyswivel rev`. Even prior to that, the Japanese spinner Coulomb did a `pinkyswivel bust` in one of his videos, which was then called `Coulomb combo` (see: Coulomb combo).

In Taiwan, the name 水蛇 *(water snake)* is very commonly used, and it's the only trick name that is more often written in hanzi than in roman letters by experienced spinners. In PSH's last set of tutorials, done in 2013, the trick was called `swirl`.

Notation The fact that this trick is a `fingerless sonic` was first pointed out by Jamie Enns and disputed at the time [209].

<div align="center">

`pinkyswivel = (PD) fingerless sonic P4-12`

</div>

Thus, we could write it like that. The initial slot can be interpreted as `44`, if we think that it's held just by the pinky; or as `P4`, if we think that it's held between the pinky and palm of the hand.

米 Swivel, Pinkyswivel, ... [Lindor[133], 2009]

◉ 역손목휘감기 *(reverse wrist winding)* [FLow[9]]

▓ ▇ 水蛇 *(water snake)*

▓ Swirl [≤2013]

◉ 슉슉이 *(swoosh)*

Swuck   ↻↺ *CW-CCW* | *Infrequent (4.1/10)*

Swuck 23-P3

In a `swuck` the pen goes from being held between two fingers (in the original version, 23) to being held between those fingers and the palm, with a `charge rev` motion. Afterwards, there is a direction change and the mod changes fingers again, now going to `Tf`.

Etymology The trick was popularized by Fratleym, who did it twice in his combo for the first round of WT09. Afterwards, a discussion thread was opened in the FPSB laboratory. There, Fratleym named it `swuck`, a word formed as a combination of switch + stuck (fingerswitch and fingerstuck). This was a bit controversial, as fingerstuck was used when two fingers remained together during an extended period of a combo and Lindor argued that there was no fingerstuck in a `swuck`.

Notation We can break down `swuck` formally the following way. The last slot, `P3`, could also be written as `33`, depending on how we interpret it (whether the pen is between the palm and the ring finger, or between two phalanges of the ring finger):

`swuck 23-P3 = (PS) charge rev 23 ~> (PD-PS) fingerswitch 23-P3`

In the original video, Fratleym also did a trick which he called `swuck around`, which consisted of the following:

`swuck around 12-12 = swuck 12-P2 > IA P2-12`

Another trick in that video was the `palm swuck`

`palm swuck 23-34 = swuck 23-P3 > palmspin 0.25 P3-34`

Korean The trick is called 좀보 *(Zombo)*, due to its similarity to that trick (see: Zombo trick).

🏴 Swuck [Fratleym[110], 2010]

◉ 좀보 *(Zombo)*

Twisted cobra bite   ↻ *Backhand clockwise* | *Common (5.4/10)*

Twisted cobra bite

In a `twisted sobra bite`, starting from a `neobak 12`, the pen then rolls over the back of the hand, after which it's caught with all of the fingers.

Etymology In 2007, the French spinner Skatox created and named both the `cobra bite` and the `twisted cobra bite`, the latter being the version with conical rotation of the former (see: Cobra bite). The name was inspired by the `cobra stall` .

Notation It's a `(PD) fingerless sonic reverse` (see: Swivel).

    twisted cobra bite = (PD) fingerless sonic rev 12-44

❖ Twisted cobra bite [Skatox[154], 2007]
● 손목휘감기 *(wrist winding)*

8.5   Spins

(Finger)spin   ↺ *Counterclockwise | Well-known (9.7/10)*

Thumbindexspin

In a `spin` the mod rotates counterclockwise on some part of the hand.

Notation Where the pen spins is indicated by using finger prefixes. For example, during a `thumbspin`, the pen spins over the thumb. In the case that the pen spins over multiple fingers at once, we can use various prefixes, like `thumbindexspin`. If it rotates first on the thumb and then on the index, then we would write it as `thumbspin ~ indexspin` (Section 4.2.4).

These prefixes don't specify on which part of the finger it rotates. For example, an `indexspin` could rotate on the palm side, the most common case, but also on the back side of the index finger (see: Indexspin).

Etymology   The evolution of spin notation has been quite complex, particularly in English. For this reason, instead of just listing all names as usual, let us organize them like this:

<u>Hideaki, 1998:</u> シングルアクセル *(single axel)*, ダブル *(double)*, ダブルアクセル *(double axel)*, ...
シングルアクセルリバース *(single axel reverse)*, ダブルリバース *(double reverse)*, ダブルアクセルリバース *(double axel reverse)*, ...

<u>Weis, 1998:</u> Forward 1&1/2, Forward double, Forward 2&1/2, ...
Reverse 1&1/2, Reverse double, Reverse 2&1/2, ...

<u>Kam, 2000:</u> Forward 1.5, Forward 2.0, Forward 2.5, ...
Reverse 1.5, Reverse 2.0, Reverse 2.5, ...

<u>Weis, 2002:</u> Thumbspin 1.5, Thumbspin 2.0, Thumbspin 2.5, ...
Thumbspin reverse 1.5, Thumbspin reverse 2.0, Thumbspin reverse 2.5, ...

<u>Kam, 2002:</u> Indexspin

Indexspin   ↺ *Counterclockwise* | *Frequent (7.1/10)*

During an `indexspin` the pen could spin in the palm side, lateral side or back side of the index finger (see: (Finger)spin). However, the most common one is spinning on the palm side, usually pushed by a `twisted sonic`:

(PD) twisted sonic 23-12 ~> (PU) indexspin

If the pen spins on the lateral side, it usually receives different names. In English, `indexsidespin` (see: Sidespin). In Japanese, 変形インデックススピン *(different form indexspin)* and in Korean, 수평 돌리기 *(horizontality rotation)*, one of their names for `halftap` [189].

▦ Indexspin [Kam[42], 2002]
● インデックススピン *(indexspin)*
▣ 인덱스스핀 *(indexspin)*

Sidespin   ↺ *Counterclockwise* | *Frequent (7.7/10)*

In a `sidespin`, the pen spins on the side of a finger. If no finger is specified, then it refers to the trick in which the pen spins below the thumb (see picture above). If it's used with finger prefixes, like `thumbsidespin` or `indexsidespin`, then it means that the pen spins on the side of that in particular finger.

▦ Sidespin [≤2003]
● サイドスピン *(sidespin)*
▣ 사이드스핀 *(sidespin)*

Shadow   ↺ *Backhand counterclockwise* | *Well-known (9.8/10)*

Shadow 23-12

The pen spins on the back side of some fingers, usually while palm down. It can either go up some fingers (e.g. `shadow 23-12`, stay in the same slot (e.g. `shadow 23-23`, aka `shadow still 23`) or go down slots (e.g. `shadow 23-34`).

Etymology The trick was discovered by Hideaki Kondo in 2001, who called it シングルアクセルソニック *(single axel sonic)*, with *single axel* being the modifier he used for 1.5 revolutions. In 2002, kangandgeon published on his website the first video of this trick starting and finishing in the same slots, and coined the terms `shadow` and `shadow still`. For the next few years, in UPSB v2, both tricks were considered different:

"*It's a Shadow if the pen stays in the same slot (23-23) or moves down the hand (23-34). Sonic 1.5 moves up the hand (23-12).*" (Sketching[204], 2005)

In October 2006, the Naming Committee published an article in the UPSB wiki unifying both concepts, which is how we understand them today.

"*There is no longer a single direction specified that a Shadow must follow. Shadows Normal and Shadows Reverse can each now travel up the hand, down the hand or stay in the same place.*" (Naming Committee, 2006)

In Japan, the name *single axel sonic* has fallen out of favor, with the direct translation シャドウ *(shadow)* being preferred by most spinners.

In 2003, sula_la showed on his page a `shadow 12-T1`, which he called 飛龍在天 *(The Dragon Soars in the Sky)*. Another name from Hong Kong, albeit more recent, is `script spin`, which is sometimes used to describe a `shadow 12-12` executed palm up, with bent fingers.

Notation During a `shadow`, as defined by the NC, the push and catch are the same as in a `sonic`, 0.5 revolutions each. The spin in the middle has to have at least 0.5 revolutions. Thus, one possible breakdown is:

```
shadow 23-12 = (PD) charge 0.5 23 ~ spin 2b ~ charge 0.5 12
```

✳ Shadow [Kangandgeon[117], 2002]; Shadow still [when initial and final slots are the same, Kangandgeon[117], 2002]

● シングルアクセルソニック *(single axel sonic)* [for `shadow 1.5`, Hideaki[60], 2001]; シャドウ *(shadow)*

◉ 백스핀 *(back spin)* [FLow[9], 2021]; 손등d *(backhand-d)* [for `shadow 12-T1`]

✦ Script spin [for `(PU) shadow 12-12` (with bent fingers)]

✿ 飛龍在天 [sula_la[78], for `shadow 12-T1`, 2003]

◉ 손등돌리기 *(backhand turning)* [until 2021]

Inverse shadow   ↻ *Clockwise | Common (6.5/10)*

During an `inverse shadow`, the pen spins over the palm side of the fingers, with the hand in palm up position. Just like in a `shadow`, the pen can travel up, stay still or go down slots.

Notation Both push and catch are the same as in an `inverse sonic`, thus a notation example could be:

`inv shadow 23-12 = (PU) charge 0.5 23 ~ spin 0.5 2p ~ charge 0.5 12`

✳ Inverse shadow

● シメトリカルシャドウ *(symmetrical shadow)*; シメシャ *(simesha)* [abbr.]; 手伏せシメシャ *(hand turned over simesha)* [for `(PD) inverse shadow`, ≤2013]; 伏せシメシャ *(turned over simesha)* [for `(PD) inverse shadow`]

◉ 팜스핀 *(palm spin)* [FLow[9], 2021]

Neobackaround   ↻ *Backhand clockwise | Well-known (9.3/10)*

Neobackaround 12

A `neobackaround` is a `fingerless shadow rev`.

`neobak 12-12 = Fl shadow rev 12-12`

✳ Neo-BackAround [Weis[39], 2003]; NeoBak [Weis[39], 2003]; Neobackaround

● ネオバックアラウンド *(neobackaround)*

Palmspin   ↺ *Counterclockwise* | *Well-known (9.0/10)*

Palmspin

In a `palmspin`, the pen rotates counterclockwise on the palm of the hand. It is frequently, but not always, done after a `thumbaround`. When done continuously, it's considered a different trick (see: Palmspin [powertrick]).

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Palm Spin [Kam[42], ≤2002]

● パームスピン *(palmspin)*

☯ 팜스핀 *(palm rotation)* [2021]

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Palm rotation [Wrenn[40], 1999]

☯ 손바닥 돌리기 *(palm rotation)* [until 2021]

Palmspin [powertrick]   ↺ *Counterclockwise* | *Well-known (9.4/10)*

also known as   **Peemspin**   *Rare (2.4/10)*

also known as   **Rarka trick**   *Mainly in Poland* | *Very rare (0.6/10)*

Cont (Fl TA ~> palmspin)

A `palmspin` [powertrick] is `cont (Fl TA ~> palmspin 0.5)`.

Etymology   The Polish spinner Rarka is said to be the first one to achieve this trick. The Thai spinner Spinnerpeem mastered it and popularized it. Because of this, in PPP everyone calls it `Rarka trick` and in other communities, some prefer to call it `Peemspin`.

▦ Fl TA ~> palmspin; Palmspin; Peemspin; Rarka trick [used in PPP]
● コンティニュアスパームスピン *(continuous palmspin)*; コンパム *(kon-pamu)* [abbr.]
◉ 팜스핀(파워트릭) *(palmspin (powertrick))* [2021]

Pun new   ↻ *Counterclockwise | Frequent (8/10)*

Index pun new

The pun new is cont (Fl IA ~> palmspin 0.5).

Etymology The trick was discovered and named by Spinnerpeem. "Pun" means "winding around" and "new" means "finger".

▬ พันนิ้ว *(pun new)* [Peem[157], 2010]
▦ Pun new; Fl IA ~> palmspin
● プンニュー *(pun new)*
◉ 펀뉴 *(pun new)*

Spider spin   ↻ *Counterclockwise | Frequent (7.9/10)*

Spider spin

While palm up, the mod spins over flexed 2 and 3. It is frequently, but not always, done after a thumbaround. When done continuously, it's considered a different trick (see: Spider spin [(powertrick)]).

Etymology The trick was created by Kam, first published in Pentix, November 20, 2002. Inspired by the movie "Spider-Man", released just a few months prior, his idea was to make a pen spinning trick using his iconic web shooting finger positioning.

Notation There are two main ways of breaking down the trick. In the first one, we just focus on the fact that the hand is palm up and the pen rotates on the back of 23, which implies that 23 are bent, but says nothing about 14. In the second version, the position of all fingers is specified.

$$\text{spider spin 23 = (PU) spin 2b3b*}$$
$$\text{spider spin 23 = (PU) spin 23* [14}\neq\text{P; 23=P]}$$

⊞ Spider spin [Kam[42], 2002]

● スパイダースピン *(spider spin)*

Spider spin ^(powertrick)   ↺ *Counterclockwise | Well-known (9/10)*

Cont (Fl TA ~> spider spin)

Nowadays, the term spider spin is used to refer to the power sequence cont (Fl TA ~> spider spin), but also used occasionally for the family of powertricks involving around + spin, in a general sense. This is thanks to spinners who have greatly developed the concept beyond its basic definition, like i.suk, who made a series of 4 videos classifying dozens of spiderspin variations according to their difficulty [194]. The SS abreviation is also said to come from i.suk.

⊞ Fl TA > Spider spin; Spider spin; SS [abbr., i.suk]

● 蜘蛛旋転 *(spider rotation)*; コンティニュアススパイダースピン *(continuous spider spin)*

◉ 스파이더스핀 *(spider spin)*

▦ 蜘蛛迴旋 *(spider spin)*; 蜘蛛轉 *(spider spin)*

Advanced spider spin ↺ *Counterclockwise* | *Common (5.7/10)*

In the case of a `TA ~> spider spin` over just one finger instead of the usual two, it's called `advanced spider spin`.

Etymology Menowa* made a video in 2011 doing the trick where he coined both English and Japanese names. Shortly afterwards, other spinners spotted the funny acronym and started using it as well.

Notation The original variation was done over the ring, so if no finger prefixes are specified, it refers to that one:

```
       advanced spider spin = (PU) cont (Fl TA ~> spin 0.5 3*)
middle advanced spider spin = (PU) cont (Fl TA ~> spin 0.5 2*)
```

- ● 蜘蛛旋転改 *(spider rotation revised)* [Menowa*[138], 2011]
- ▓ Advanced spider spin [Menowa*[138], 2011]; ASS [abbr., 2011]
- ◈ 어드밴스드스파이더스핀 *(advanced spider spin)*

Knuckle spin ↺ *Counterclockwise* | *Infrequent (4.4/10)*

also known as **Fist spin** *Rare (1.2/10)*

While palm up, with all of the fingers bent, the pen spins on top of the index and middle fingers. It's frequently, but not always, done after a `TA`.

Notation We could break it down as `(PU) spin 1y2y*`.

- ▓ Knuckle spin
- ● ナックルスピン *(knuckle spin)*
- ▓ Fist spin [Lindor[132], 2008]
- ▪ Butterfly spin
- ◈ 스파이더스핀 *(spider spin)* [until 2007, now it only means `spider spin`]

Fl IA ~> SS   ↺ *Counterclockwise | Frequent (7.4/10)*

also known as   **Spider pun new**   *Mnly. Jp | Infrequent (4.4/10)*

Like the cont (Fl TA ~> palmspin 0.5) but being pushed by a Fl IA instead. It's sometimes written as Fl IA - SS or Fl IA SS because YouTube doesnt allow users to write the character ">". Spider pun new is the direct translation of the Japanese name.

🏴 Fl IA ~> SS [abbr.]; Spider pun new
● 蜘蛛プンニュー *(spider pun new)*; スパイダープンニュー *(spider pun new)*

Scissor spin   ↺ *Counterclockwise | Frequent (8.9/10)*

Scissor spin

A scissor spin is a spin on Tf. It is sometimes done after the push of a (PD) charge 12. If pushed by a twisted sonic, then it's called corkscrew (see: Corkscrew).

$$\text{scissor spin} = \text{spin Tf } 0.5$$

🏴 Scissor spin [Weis[39], 2003]
● シザースピン *(scissor spin)*
◉ 바운드 *(bound)*
◉ 넘기기 *(pass over)* [until 2005]

Corkscrew   ↺ *Counterclockwise* | *Common (6.2/10)*

A `corkscrew` is a (PD) `twisted sonic > scissor spin`.

Etymology Conor Jacobs published this trick in his website, Larry's Pen Spinning Site, during the same year that David Weis published `scissor spin`. It's uncertain who was first, but what's clear is that Conor's original intentions with the trick weren't to link a `tw sonic` with a `scissor spin`:

"*This is essentially a Twisted Sonic into a Half Tap with the push made near the end of the Twisted Sonic. As the pen is rotating after one spin, lightly tap the pen horizontally with the index finger. The motion is awkward, but with enough accuracy, the pen will have enough momentum to do a half spin horizontally.*" (Larry[53], 2003)

🏴 Corkscrew [Larry[53], 2003]
● コークスクリュー *(corkscrew)*
◉ 옆윈드밀 *(side windmill)*

🏴 Corkscrew wide [for a `corkscrew` done on the tip of the mod, Larry[53], 2003]

Scissor spin ~> Fl TA   ↺ *Counterclockwise* | *Common (6.9/10)*

The trick `scissor spin ~> Fl TA` is a common finisher in combos from all comunities. The reason it's listed as a different trick is because in Korean it has its own name, 레이스 *(lace)*.

🏴 Scissor spin ~> Fl TA
◉ 레이스 *(lace)*

Basketball spin   ↻ *Clockwise* | *Common (5.7/10)*

In a basketball spin, the mod spins clockwise on the tip of a finger. This is opposite to all other spins, which are counterclockwise.

```
basketball spin = spin rev 12-2t*-23
```

The traditional `basketball spin` starts by holding the pen in 12, with the pen parallel to the fingers, similar to a `TA rev` position. By quickly extending the fingers, the pen starts spinning on top of the tip of the middle finger, after which it's caught in 23. Zombo also did other variations, like the `basketball spin double transfer`, where it started spinning over the middle finger, to then spin on top of the ring and finally be caught in 34 [191].

Etymology The trick was devised and popularized by Zombo. The earliest record that we have of the trick is in 2004, when Zombo's `basketball spin 2.0` with a green RSVP mx was uploaded to PenstudioZ

Controversy The trick was heavily criticised. For example:

"*This trick is one of those totally useless tricks only known because it was proposed by a famous person. This trick is not only very difficult and a result of pure luck, but it is also very hard to fit in a combo. Its interest is limited, so I never practiced it...*" (Fratleym[210], 2006, translated)

Zombo made a short tutorial for the trick, but since he offered almost no tips on how to do it and lasted only 19 seconds, it was massively downvoted. A French spinner called aaa practiced it since his friend s777 was very bad at it. He filmed the world record multiple times, up to a 5.0 in 2008, while spinning a s777 mx [193]. Nowadays, the stigma against this trick has disappeared and its inclusion within combos isn't thought to be impossible. Spinners like JNK have been exploring new variations [192].

Basketball spin [Zombo, 2004]; BBS [abbr.]

● バスケットボールスピン *(basketball spin)*

베스킷볼스핀 *(basketball spin)* [until 2007]; 스크류백 *(screwback)* [for `basketball spin T1-1*-12`, until 2007]

Copter spin ↻ *Backhand counterclockwise | Rare (1.8/10)*

In a `copter spin`/`wrist spin`, the pen spins over a bent wrist, palm down. It's usually pushed by the other hand.

```
copter spin = Wrist spin = (PD) spin W
```

Copter spin [≤2007]; Wrist spin

Dual pass[(i)] ↻ *Backhand counterclockwise | Infrequent (3.5/10)*

Dual pass 12

In this kind of `dual pass`, the pen spins over the backside of two fingers, originally over 12. The pen is pushed by those fingers doing a scissoring motion, by opening and closing.

Etymology The trick was invented and named by Le0n, from GPC, together with a few more tricks in his video "New PenSpinning Trick-Concepts" [129]. While this is the first instance of a `dual pass`, it has remained mostly unused. Fel2fram called this kind of trick `linear spin` while the other kinds of `dual pass`, he called `linear spun pass`.

Notation We can write it with push notation without going into the details of how this push is really done.

$$\text{dual pass} = \text{(PD) cont spin 1b2b [p 12]}$$

There aren't too many ways of pushing this kind of spin with 12, but if we want to be even more precise, we could write:

$$\text{dual pass} = \text{(PD) cont spin 1b2b [p 1}\twoheadrightarrow\leftarrow\text{2 0.5][p 1}\leftarrow\rightarrow\text{2 0.5]}$$

▌ 🏴 Dual Pass [Le0n[129], 2008]; Linear spin [Fel2Fram, ≤2013]

Dual pass[(ii)]	↻ *Counterclockwise* | *Common (5.6/10)*
also known as	**Continuous powerpass** *Infrequent (4.4/10)*
also known as	**Powerpass still** *Infrequent (3.2/10)*

Dual pass 23

While palm side, the pen spins over the backside of one finger (e.g. 2) while pushed by one of the fingers below it (e.g. 3).

$$\text{continuous powerpass 23} = \text{(PS) cont. spin 2b* [p 3]}$$

Etymology This trick was first created and named by Fire@fox as `cont. powerpass`, but for some time the trick remained unused. It was first used within a combo by Van, three years later. He described it as `2 fingered inverse T-pass 23` but, together with other UPSB shoutbox members, finally

named the trick `dual pass`. After being used by smile in 2012 and Sutomo in WT13 the trick became way more popular, and received other names like `powerpass still` and `linear spun pass`. [200]

● コントパワーパス *(continuous powerpass)* [Fire@fox, 2009]; コンパワ *(conpawa)* [abbr.]

Continuous powerpass [Fire@fox, 2009]; Dual Pass [Van, 2012]; Powerpass still [Blue, ≤2013]; Linear spun pass [Fel2fram, ≤2013]

| **Dual pass**[(iii)] | ↺ *Counterclockwise* │ *Common (6/10)* |

Dual pass T2

It's a trick similar to a `triangle pass`, but using only two fingers, one of them usually being the thumb. There are only two points of contact, so it is harder to balance the mod on the fingertips. The mod is pushed by a pinching motion of the fingertips.

Etymology The trick was both conceived and named by the French spinner A13x, who first used it in his WT13 R3 combo.

Notation Similar to a `triangle pass`, the trick could be further broken down into either passes or fingerswitches.

```
dual pass T2 = cont pass rev 12*-12* 0.5
dual pass T2 = cont fingerswitch 12*-12* 0.5
```

However, this has an obvious problem: we need to write the same initial and final slots for those! This awkwardness can be solved by writing it as a spin over the tip of a finger:

```
dual pass T2 = (PU) cont spin 2t [p Tt]
```

Dual pass [A13X[86], 2013]; Linear spun pass [Fel2fram, ≤2013]
● デュアルパス *(dual pass)*

Triangle pass   ↺ *Counterclockwise* | *Well-known (9.1/10)*

Triangle pass T12

This trick consists of passing the pen between three fingertips. In a correctly executed `triangle pass`, the mod rests on top of the fingertips and it's not held between them. Because of this reason, it could be considered a spin instead of a pass, and early names reflect that. The simplest one is considered to be the one over `T12`.

Etymology The first known appearance of this trick is in Szeto's website, where he actually had a variety of similar ones listed. He called them fingertip spins, the easiest one being the `six fingertip spin`, which is a `triangle pass` assisted by the corresponding three fingers of the nondominant hand. After that, `four fingertip spin`, assisted just by the index finger and finally, `three fingertip spin`. Later on, Kam called the trick `triangle spin` on Pentix. Who originated the change from spin to pass is yet unknown.

Notation Each individual `triangle pass` has 0.5 revolutions, which consist of three movements, each of ~ 0.166 revolutions. Those movements can either be notated as `pass rev` or `fingerswitch`. A `pass` is usually 0.5 revolutions and `fingerswitch`, 0.0, so no option is perfectly suited.

```
    triangle pass T12 = cont pass rev 12*-T1*>T2*>12* 0.5
  triangle pass T12 = cont fingerswitch 12*-T1*>T2*>12* 0.5
```

The 0.5 revolutions aren't spread out evenly among the three movements for all variations (e.g. `triangle pass 123`), but sometimes they are. If we want to stress that fact, we could do it the following way:

```
    triangle pass T12 = cont 0.166 pass rev 12*-T1*>T2*>12*
  triangle pass T12 = cont 0.166 fingerswitch 12*-T1*>T2*>12*
```

Notice how in both cases, the number of revolutions has been written out of the usual order for the sake of clarity, as explained in (Section 4.3.9).

🏴 Triangle pass [Kam[42], 2002]; T-pass [abbr.]; TP [abbr.]; Triangle spun pass [Fel2fram, ≤2013]

● トライアングルパス *(triangle pass)*; トラパ *(torapa)* [abbr.]

🇰🇷 삼각패스 *(triangle pass)* [FLow[9], 2021]

🏴 Three fingertip spin [Wrenn[40], 1999]; Triangle spin [Kam[42], 2000]

🇰🇷 삼각돌리기 *(triangle rotation)* [until 2021]

| **Inverse triangle pass** | ↺ *Counterclockwise* | *Infrequent (3.8/10)* |

Inverse triangle pass 123

Most commonly done with three of the non-thumb fingers, it consists of a `triangle pass` done on their back side.

Notation Here, the use of `inverse` is quite different from its formal meaning. In a regular `triangle pass`, the pen doesn't really spin on the palm side but rather on the tips of the fingers. In addition to that, in the so called `inverse triangle pass`, the pen is sometimes pushed by the palm side (and not the back side) of one of the fingers. We can just notate the slots in a more detailed manner, which doesn't require stretching the meaning of `inverse`. Fel2fram also sometimes notated it like this:

```
inverse triangle pass 123 = triangle pass 12b3
```

🏴 Inverse triangle pass; Inverse triangle spun pass [Fel2fram, ≤2013]

| **Quadrangle pass** | ↺ *Counterclockwise* | *Rare (2.3/10)* |

A `quadrangle pass` is done when we extend the same idea of a `triangle pass` to four fingers. Its basic variation is in T123.

Notation Following a discussion analogous to the one held with `triangle pass`, it can be broken down into combinations of either `fingerswitch` or `pass rev`.

```
quadrangle pass T123 = cont pass rev T2*-13*>T2* 0.5
quadrangle pass T123 = cont fingerswitch T2*-13*>T2* 0.5
```

▌ 🏴 Quadrangle pass [NooBenjy[139], 2008]

Square pass ↺ *Counterclockwise* | *Common (6.6/10)*

Three similar tricks exist: the original by Fire@Fox (i), a similar one done by 3ternity and Enzo (ii) and the most common today, done by i.suk and PPM (iii). In (i) and (ii) the middle finger is always bent while in (iii) it's not. All are 1.0 revolutions for each repetition. i.suk also popularized the fingercrossed version, originally made by Zarne (JEB). [202] The (iii) variation is considered oversimplified, since it's just a `flush pass rev`.

Notation The breakdowns for each of the versions have been made so that the differences between each can be seen more easily.

```
square pass (i) = cont pass rev 23-23*-14>23*-23
 square pass (ii) = cont pass rev 23-23*-14>23
   square pass (iii) = cont pass rev 23-14>23
 fc square pass = cont pass rev 23-14[fc 32]>23
```

▌ 🏴 Square pass [Fire@Fox[202], 2010]
▌ ⬤ スクエアパス (*square pass*)
▌ ◉ 스퀘어패스 (*square pass*)

Tap ↺ *Counterclockwise* | *Frequent (8.3/10)*

A `tap` as a term used to describe several, similar tricks. It could be fingerless, pushed by a wrist rotation (e.g. `backtap`); or finger-pushed, moving just one finger (e.g. halftap/palmtap). A pen usually doesn't change slots during its spin and is usually 0.5 revolutions, but could be more. When using this term, the emphasis is on how the push is done.

Korean FLow has divided 탭 *(tap)* as a concept into three different categories: 백탭 *(backtap)*, 사이드탭 *(sidetap)* and 팜탭 *(palmtap)*.

🏴 Tap
◉ 탭 *(tap)* [FLow[9]]

Halftap ↺ *Counterclockwise* | *Frequent (8.1/10)*

Halftap is a `tap 0.5` which is pushed by the index finger.

Etymology The original name is `continues half-taps`, by David Weis in 1998. Kam listed the trick in Pentrix as `half taps` and for some years, `taps` was the preferred term over `tap`.

Korean The difference between 수평 and 옆수평 is which finger is used. In 수평, the middle finger is used to push the pen, while in 옆수평 it's pushed by the index finger.

🏴 Half-tap [Weis[39], 1998]; Halftap
● ハーフフェイクトノーマル *(half faked normal)*
◉ 사이드탭 *(sidetap)*

🏴 Half spin [Szeto[44], 2000]; Faked 180 [Larry[53], ≤2003]
◉ 수평 돌리기 *(horizontality rotation)* [until 2021]; 수평 *(horizontality)* [abbr., until 2021]; 옆수평 돌리기 *(side horizontality rotation)* [until 2005]; 옆수평 *(side horizontality)* [abbr., until 2005]; 옆검지 돌리기 *(side indexfinger rotation)* [until 2005]

Fulltap   ↺ *Counterclockwise* | *Common (6.2/10)*

also known as   **Faked normal**   *Mainly Japanese* | *Rare (2.3/10)*

It's a `tap 1.0` which is pushed by the index finger.

Etymology The original English name is `full-tap` and the Japanese name, フェイク ノーマル *(faked normal)*. However, the direct translation `faked normal` can be seen in some English sources like the UPSB trick book from 2007, and is more or less widely understood.

⊞ Full-tap [Weis[39], 2003]; Fulltap
● フェイク ノーマル *(faked normal)* [Hideaki[60], 2001]
⊞ Faked 360 [Larry[53], ≤2003]

TA 0.5   ↺ *Counterclockwise* | *Infrequent (3.5/10)*

In a `TA 0.5`, the push is the same as in a `TA` but after 0.5 revolutions, the pen falls back to the initial position, without completing the around.

Notation The official name for this trick is uncertain. `TA 0.5` is the simplest, but some could argue that `TA 0.5 ~ fingerswitch`, `thumbsidespin 0.5` or even `Neo TA` (see: Neo around) are more accurate.

⊞ TA 0.5; ThumbSideSpin 0.5; Neo TA
◉ 옆엄지 돌리기 *(side thumb rotation)*

Flick   ↻ *Clockwise* | *Common (5.2/10)*

The mod starts by being held in `T2`. By extending the middle finger, the pen is pushed so that it then rotates 0.5 revolutions clockwise on top of `Tf`.

Etymology   The trick had been done for some years, usually lumped together with the slightly different `semi reverse` (see: Semi reverse). In 2007, Eso made a tutorial and called it `flick`, which has then been used for tricks with a similar push (see: Flick TA).

🇬🇧 Flick [Eso[100], 2007]
🇰🇷 딱밤 *(finger snap)* [FLow[9]]
🇰🇷 역수평 *(reverse horizontality)*

Fl TA rev 0.5   ↻ *CW* | *Rare (2.9/10)*

Starting with the push of a `fingerless thumbaround reverse`, the pen spins 0.5 revolutions clockwise on top of the thumb, after which it falls back to the initial position without completing the around.

🇬🇧 Fl TA rev 0.5
🇰🇷 올려치기 *(upperhit)* [until 2005]

Semi reverse	↻ *CW │ Mainly Japanese │ Rare (1.2/10)*

With the same push as a `TA rev` (that is, pushed by the index finger), the pen spins 0.5 revolutions clockwise on top of the thumb, after which it falls back to the initial position.

Etymology   The first name for this trick is *semi reverse*. Although Hideaki changed it to *half faked reverse* in 2001, nowadays *semi reverse* is still more common, even in English. The official English name would be `TA rev 0.5`.

● セミリバース *(semi reverse)* [Hideaki[60], 1997]; ハフフェイク トリバース *(half faked reverse)* [Hideaki[60], 2001]

▦ TA rev 0.5; Semi reverse

Fake reverse	↻ *Clockwise │ Mainly Japanese │ Rare (2.7/10)*

With the same push as a `TA rev` (that is, pushed by the index finger), the pen spins 1.0 revolutions clockwise on top of the thumb, after which it falls back to the initial position.

Etymology   In 2001, Hideaki changed the name from *double semi reverse* to `fake reverse`, which became the most used one. The name was also used in English since at least 2006, as it appears in trick books from that year. However, the official English name would be `thumbspin rev 1.0`.

● フェイクトリバース *(fake reverse)* [Hideaki[60], 2001]

▦ Thumbspin rev 1.0; Fake reverse [≤2003]; Flick 1.0

◉ 리버스 *(reverse)*

● ダブルセミリバース *(double semi reverse)* [Hideaki[60], 1998]

Baktap ↻ *Backhand counterclockwise* | *Common (5.9/10)*

Baktap 12

A `tap 0.5` done on the back of the fingers. For example, in a `baktap 12`, the pen is parallel to the fingers, on top of 1 and 2, in palm down position. With a sudden wrist movement, the pen starts spinning counterclockwise, usually 0.5 revolutions.

$$baktap = (PD)\ tap\ 12*-12*$$

🎌 Baktap [Weis, 2003]

● バックタップ *(baktap)*

◉ 백탭 *(baktap)*

Palmtap ↻ *Clockwise* | *Infrequent (4.2/10)*

In palm up position, the pen spins clockwise after being pushed by the base of the index finger, which remains straight throughout the movement. It's sometimes said that a `palmtap` is an `inverse baktap` but this is incorrect, as the pushes are different.

Etymology While the name `palmtap` comes from Le0n, the actual trick was almost certainly already done before.

🎌 Palmtap [Le0n[129], 2008]

● パームタップ *(palmtap)*

◉ 팜탭 *(palmtap)* [FLow[9]]

Darren tap   ○○ *CW-CCW* | *Rare (1.3/10)*

Darren tap is an old name for bak ~> baktap.

Etymology It was named after Darren Chan (nhk_9).

🏴 Darren tap
● ダーレンタップ *(Darren tap)*

DArKT trick   ○○ *CW-CCW* | *Rare (2.0/10)*

This trick usually refers to the following:

$$\text{DArKT trick = (PD) wiper 34 > baktap 34}$$

with the wiper 34 done so that the pen moves vertically and upwards. However, other sequences are also understood as DArKT trick.

🏴 DArKT trick

Hook   ○ *CCW* | *Mainly Japanese* | *Very rare (0.7/10)*

In a hook, the pen is just held by the index finger, which moves so that the pen rotates 1.0 revolutions counterclockwise on top of the side of the index finger. Although the normal version was found first by Kazuhi, who sent the video to Hideaki in 2001, the hook rev is the easiest to implement in a combo, and thus the most used one.

Notation It's a spin mostly over 1 with a special finger position, so it could be formally notated as follows:

$$\text{hook = spin 1s* [1x=1z] [p 1s]}$$

This indicates that the proximal and distal phalages of 1 are in contact during the trick, and that it's pushed by the side of the index finger.

● フック *(hook)* [Kazuhi[124], 2001]
🏴 Hook

Bend tap   ↻↺ *CW-CCW* | *Very rare (0.7/10)*

A `bend tap` consists of `pass 23-12 ~> halftap`.

🇬🇧 Bend tap [Smile[155], 2008]

Soft tap   ↺ *Counterclockwise* | *Very rare (0.8/10)*

Soft tap 12

To do a `soft tap`, start in palm side position, with the mod over the lateral side of 2 and next to the back side of 1. The index finger is then bent and moved backwards, so that the pen spins over 2. It is finally stopped by the palm side of 1. The trick has 0.5 revolutions.

Notation We could break down the trick as:

soft tap 12 = (PS) tap 1b2s-1p2s 0.5 [p 1b]

We could also write it as

soft tap 12 = (PS) tap 1b2s-1p2s

By omitting `0.5 [p 1b]`, as there aren't that many other options available for a tap in those slots, but it may be better to write them down for clarity.

🇬🇧 Soft tap [Lindor[134], 2008]

Fist tap　　　↺ *Clockwise*　|　*Very rare (0.7/10)*

The pen starts in `fist stall` position. From there, 4 is slightly straightened and the pen starts spinning clockwise over the fingers, after which it's caught by 4.

▌❄ Fist tap [Lindor[132], 2008]

Spider tap　　　↺ *Clockwise*　|　*Very rare (0.8/10)*

The pen starts in `spider stall` position. From there, 1 is bent and the pen starts spinning clockwise over 23, after which it's caught by 4. In the original video, in `spider tap reverse`, the pen is pushed by 4, spins counterclockwise and is then caught by 1.

▌❄ Spider tap [for 0.5 revolutions, Lindor[131], 2008]; Spider fulltap [for 1.0 revolutions, Lindor[131], 2008]

8.6 Wipers

Wiper ↻ *Clockwise* | *Well-known (10/10)*

Wiper T1

In a `wiper`, the mod follows a sweeping motion while held by its tip, which is pushed by either the fingers, the hand, or helped by gravity.

Etymology Although tricks from the `wiper` family like the `infinity` had been known since the year 2000, it was in November of 2002 when Tohlz from PenstudioZ named `wiper` and its reverse:

"*Wiper got its name from the idea of the car screen wiper (the thing which wipe the car screen when raining). The trick looks similar to a car screen wiper and can be link to other tricks. A very nice and simple trick for beginners to learn.*" (Tohlz[46], 2002)

Japanese The name ハーフウィンドミル *(half windmill)* originated sometime around 2002-2003, although its exact origin isn't known. The direction of rotation of the Japanese *half windmill* is opposite that of a `wiper`. It was in none of the early web pages; its origin is in the bulletin boards. One of the earliest instances of the trick is from 2003, in a Shitaraba thread [195].

One theory is that someone gave the name "windmill" to `figure 8` so a single `wiper` became "half windmill". Some spinners remember that use, and it's also written down in Aysh's wiki [197]. Another theory is that the trick "windmill" was listed at some point in Hideaki's website, so people speculated what half a windmill would be. However, there's no trace on the archived version of the website of that ever happening. Another theory is that the mysterious "windmill" trick was a direct translation of the Korean 윈드밀 *(windmill)*, which is a `twisted sonic`. This is unlikely since there are no other pen spinning loanwords from Korean in Japanese.

Korean Originally there were two tricks for wiper, done with the thumb and index fingers: 엄지 올리기 *(thumb raise)* and 엄지 내리기 *(thumb fall)*. After the 2005 NX lecture, 올리기 *(raise)* and 내리기 *(fall)* began to be used with other slots as well. Nowadays, FLow always specifies the hand position in which they're done:

	Palm down	Palm side	Palm up
Wiper normal	백올리기	사이드올리기	팜올리기
Wiper reverse	백내리기	사이드내리기	팜내리기

🏴 Wiper [Tohlz[46], 2002]

● ハーフウィンドミル *(half windmill)* [for `wiper reverse`]

◉ 올리기 *(raise)*, 내리기 *(fall)* [for `wiper` and `wiper rev` respectively, 2005]

◉ 엄지 올리기 *(thumb raise)*, 엄지 내리기 *(thumb fall)* [for `wiper T1` and `wiper rev T1` respectively, until 2005]; 와이퍼 *(wiper)* [for `cont (wiper > wiper rev)` while changing direction quicky]

Figure 8   ↻ *Clockwise* | *Well-known (9.3/10)*

Figure 8 T1

`Figure 8` consists on `cont (PD wiper T1 > PS wiper rev T1)`.

Etymology The trick was created by Tohlz in 2003. In PenstudioZ, he explains how he found it while doing `wiper harmonic`. He gave it that name since it looked like a horizontal 8 when done correctly, and `infinity` was already taken.

Korean Wiper tricks aren't very popular, so this trick doesn't have its own name. In Korea, it's often said that `figure 8` is just a badly done 인피니티 *(infinity)*.

🏴 Figure 8 [Tohlz[46], 2003]

● フェイクインフィニティ *(faked infinity)*

Infinity   ↺ *Counterclockwise* | *Well-known (9.8/10)*

Infinity T1-12-T1

An `infinity` is the following minicombo:

```
infinity = wiper rev T1 + pass T1-12 > wiper rev 12 + pass rev 12-T1
```

Etymology It's the first `wiper` minicombo to ever be found. The first person to record the trick was Szeto, who called it `infinity loop`. Kam then listed the trick on Pentix as `infinity`, which is the name that has stuck. Kam considered including it among the fundamentals, but didn't do so in the end. However, modern trick guides like Megas' trick learning order do include it as a fundamental.

In Japan and Korea, *infinity style* is used to refer to the spinning style that consists mainly of wipers (what in English would be called *wipers*).

🇬🇧 Infinity [Kam[42], 2002]
● インフィニティ *(infinity)*
🇰🇷 인피니티 *(infinity)*
🇬🇧 Infinity loop [Szeto[44], 2000]; Single infinity
🇰🇷 휘젓기 *(stir)* [until 2005]

Double infinity   ↺ *Counterclockwise* | *Well-known (9/10)*

The `double infinity` is a `wiper` minicombo created by Kam:

```
double infinity = wiper rev T1 + pass T1-12 > wiper rev 12 + pass 12-23
        > wiper rev 23 + pass rev 23-12 > wiper rev 12 + pass rev 12-T1
```

🇬🇧 Double infinity [Kam[42], 2002]
● ダブルインフィニティ *(double infinity)*

Triple infinity   ↺ *Counterclockwise* | *Frequent (8.2/10)*

The `triple infinity` is a `wiper` minicombo created by Kam:

```
triple infinity = wiper rev T1 + pass T1-12 > wiper rev 12 + pass 12-23
         > wiper rev 23 + pass 23-34 > wiper rev 34 + pass rev 34-23
        > wiper rev 23 + pass rev 23-12 > wiper rev 12 + pass rev 12-T1
```

▨ Triple infinity [Kam[42], 2002]
● トリプルインフィニティ *(triple infinity)*

Quadruple infinity   ↺ *Counterclockwise* | *Frequent (7.4/10)*

The `quadruple infinity` is a `wiper` minicombo created by nhk_9, unlike the previous three, which were made by Kam.

```
quad. infinity = wiper rev T1 + pass T1-12 > wiper rev 12 + pass 12-23
          > wiper rev 23 + pass 23-34 > wiper rev 34 + pass 34-T4
        > wiper T4 + pass rev T4-34 > wiper rev 34 + pass rev 34-23
      > wiper rev 23 + pass rev 23-12 > wiper rev 12 + pass rev 12-T1
```

▨ Quadruple infinity [nhk_9[54], 2005]
● クアドラブルインフィニティ *(quadruple infinity)*

Extended infinity   ↺ *Counterclockwise* | *Common (6.8/10)*

An `extended infinity` is an `infinity` with extra `charges` in between:

```
extended infinity = wiper rev T1 + pass T1-12 > charge 12
                        > wiper rev 12 + pass rev 12-T1
```

The same logic has been applied to the other minicombos, e.g.:

```
extended double infinity = wiper rev T1 + pass T1-12 > charge 12 >
         wiper rev 12 + pass 12-23 > charge 23 > wiper rev 23 +
       pass 23-12 > charge 12 > wiper rev 12 + pass rev 12-T1
```

Etymology The trick was created by sula_la in 2003 under the name 神龍擺尾 *(The Divine Dragon Swishes its Tail)*, which was translated to English as `extended infinity` by nhk_9 the same year.

▨ Extended infinity [nhk_9[143], 2003]
✿ 神龍擺尾 [sula_la[78], 2003]

Triangle wiper   ↺ *Counterclockwise* | *Rare (2.5/10)*

Triangle wiper T12

`Triangle wiper` is a `wiper` minicombo:

<div align="center">

`triangle wiper = wiper rev 12>T1>T2`

</div>

Etymology The trick was made by Tchus but named by Blue, originally `triangle pass en wiper` and shortened as `TPW`. Shortly after, they changed its name to the nowadays more commonly known `triangle wiper`.

Notation Although `wiper rev 12>T1>T2` is correct, the fingerswitches could be specified if someone wanted to be very precise:

```
triangle wiper = wiper rev 12 > switch 12-T1 > wiper rev T1
                              > switch T1-T2 > wiper rev T2
```

🏴 Triangle pass en wiper [Tchus & Blue[162], 2014]; Triangle wiper [Tchus, 2014]; TPW [abbr., Tchus, 2014]

Triangle infinity   ↺ *Backhand counterclockwise* | *Rare (2.9/10)*

Triangle infinity T12

`Triangle infinity` is a `wiper` minicombo:

`triangle infinity = wiper rev 12 > wiper T2 > switch T2-T1-12`

🏴 Triangle infinity [LMnet[136], 2007]

Palmwiper   ↻ *Clockwise | Infrequent (3.3/10)*

Palmwiper P.23

Palmwiper is a wiper done while holding the pen between some fingers and the palm. In the example image above, we show a palmwiper P.23 but it could be done in other slots with P as well. For example, wiper P.1.

▌🏴󠁧󠁢󠁥󠁮󠁧󠁿 Palmwiper; Palm wiper

Cardioid   ↻ *Counterclockwise | Frequent (8.7/10)*

Cardioid T1

Cardioid is the following around and wiper sequence:

$$\text{cardioid} = \text{(PS) cont (TA > wiper rev T1)}$$

Etymology   The name カージオイド *(cardioid)* was given by Hideaki in 1997, as it was one of the initial tricks in his website. It was named that way since the trajectory of the pen tip resembles the cardioid shape (a heart). Although we can suppose that Kam knew about it, the trick doesn't appear in Pentix nor Pentrix, nor on Phya's 2004 trick list [172]. The earliest appearance of the name is in PenstudioZ, as a part of the breakdown of "*1st Year Anniversary Celebration Final Strike*" combo (2003).

● カージオイド *(cardioid)* [Hideaki[60], 1997]
🏴󠁧󠁢󠁥󠁮󠁧󠁿 Cardioid
◉ 와이퍼휘감기 *(wiper winding)* [FLow[9]]

Pinkybak cardioid   ↻ *Backhand CCW* | *Common (5.0/10)*

also known as   **Kanonier trick**   *Rare (2.1/10)*

`Cardioid` is nowadays used as a modifier to indicate doing a `wiper` or a `wiper rev` after an `around` or `around rev` respectively:

```
pinkybak cardioid = (PD) pinkybak > wiper rev 34 = Kanonier trick
        pinkybust cardioid = (PD) pinkybust > wiper 34
```

Etymology The abstraction that a `cardioid` (see: Cardioid) could also be done with other arounds other than `TA` most probably comes from the Polish spinner Kanonier, in 2010 [118]. He did a `pinkybak cardioid` for the tournament MP '10 and Smile, who was a judge, was impressed by it and named it `Kanonier trick`. Smile popularized it in French meetings: his friend Kinger used it in FPSB 5th and aaytowi2 was the first to do it twice. They tried to do its reverse, but Menowa* was able to pull it out first, during his WT15 run. The `reverse Kanonier trick` was presented to neir'da and i.suk as one of the hardest tricks. i.suk managed to master it and popularised it. Similar `cardioid baks` were discovered, most probably independently, by other JEB spinners: Beige, ctionist, Menowa*, and Yuera, among others.

▌ ❊ Kanonier trick [done by Kanonier[118], named by Smile, 2010]; (Finger)bak cardioid; (Finger)bust cardioid

Key3 trick   ↻ *Clockwise* | *Infrequent (3.5/10)*

also known as   **Helix**[1]   *Very rare (0.4/10)*

The mod is held between the tips of both index fingers, and it then spins by moving the arms. It's a two handed `cont wiper`.

```
Key3 trick = helix¹ 11' = cont wiper 11'
```

▌ ❊ Key3 trick
▌ ● Key3トリック *(key3 trick)*
▌ ❊ Helix

8.7   Rolls

Roll   *Infrequent (4/10)*

`Roll` is a general term for any trick in which the mod rolls over a part of the hand or any other surface.

⬛ 🇬🇧 Roll

Blaze ring   *Rare (1.9/10)*

Blaze ring (just a roll)

The `blaze ring` is a trick in which, with the thumb and index making an O shape, the pen rolls on its inside, pushed by the movement of the hand. There are various versions. In the first version, which comes from neoknux_009, the pen rolls perpendicular to the ring made by T1.

Blaze ring (roll + charge)

In the second version, which was first done by Lindor, the pen rotates oblique to the O-ring, thus being a combination of `roll + charge`. Ponkotu also discovered the trick independently and almost at the same time. This version with charge was done by Menowa* with both hands, making an O shape both thumbs and index fingers, in a video called "*kaleidoscope*", thus the 2-hands version is often called like that. [199]

⬛ 🇬🇧 Blaze ring [neoknux_009, Lindor, Ponkotu, 2011]; Kaleidoscope [for the 1p2h version, Menowa*, 2016]; Fukrou's trick

Backhand tracer *Rare (1.3/10)*

Backhand tracer

Backhand tracer is a palm down roll over the back of the hand, pushed by the movement of the fingers and not by tilting the hand.

backhand tracer = (PD) roll 12-23>34

Etymology Although it's sometimes attributed to Kam, Kam mentions in Pentix how the trick was discovered by a spinner called Alexander Koo. It was first posted to Pentix in April 2002.

🇬🇧 Backhand tracer [Alexander Koo, 2002]

● バックハンドトラッカー *(backhand tracker)*

Drill *Mainly Japanese | Rare (1.7/10)*

With the mod perpendicular to the table, put the tip of your index finger on the upper tip of the pen. Then, assisted by the other fingers, make it roll in place.

● ドリル *(drill)*

🇬🇧 Drill

Freedom drill *Mainly Japanese | Rare (1.3/10)*

A drill that continues spinning when you take your hand out (like a spinning top) is called a freedom drill.

● フリーダムドリル *(freedom drill)*

🇬🇧 Freedom drill

8.8 Slides

Seasick   *Common (6.9/10)*

also known as   **Slide**   *Rare (1.5/10)*

Seasick T1

To do a seasick, you let the mod slide between your fingers, pushed either by gravity, a hand movement, finger movement or the pen inertia.

🏴 Seasick; Slide
● アップ *(up)*; ダウン *(down)*
◉ 슬라이드 *(slide)* [FLow[9]]

Sliding pass   *Mainly Japanese | Rare (1.2/10)*

A sliding pass is a pass either done simultaneously or hybridized with a slide, changing the grip from one side of the mod to its opposite.

<div align="center">

sliding pass = pass + slide   *or*   pass ~ slide

</div>

● 滑らしパス *(sliding pass)*
🏴 Sliding pass; Seasick pass [OhYeah![144], 2017]

Arc   *Very rare (0.4/10)*

also known as   **Twisted lever**   *Very rare (0.6/10)*

The arc is a swing that, instead of being caught as the pen falls, it's interrupted by a slide, thus having no change of direction.

<div align="center">

arc = swing ~> slide

</div>

Etymology The trick was found and named by Lindor. Just like lever was renamed to swing, twisted lever was renamed to arc, but this name is even less known (see: Swing).

🏴 Arc [Lindor[135], 2009]; Twisted lever [Lindor[135], 2009]

8.9 Rotationless stable

| **Fingerswitch** | × *Spinless* | *Common (6.1/10)* |

also known as **Switch** *Infrequent (4.4/10)*

A `fingerswitch`, also called `switch`, is a trick in which the pen just changes slots without any revolutions. However, sometimes the name is used in a looser way to refer to the trick in which the pen changes slots with a small amount of revolutions (see: Triangle pass).

Etymology The exact origin of the name is uncertain, although what popularized both `fingerswitch` and `switch` was Hexbinmos' and Fel2Fram's elementary notation, as well as its usage in Fel2Fram's videos. There have been other names for these movements: `InvisiblePass` is used in [173] when notating a `bakfall`. One type of `fingerswitch` is Lindor's `go round tricks` or Eso's `magical reset`.

❘ 🏴 Fingerswitch [≤2010]; Switch [≤2010]
❘ 🏴 InvisiblePass [≤2006]

| **Magical reset** | × *Spinless* | *Rare (1.7/10)* |

Magical reset 34-23

`Magical reset` is a `fingerswitch` between some pair of fingers, Tf and finally another pair of fingers, without doing any revolutions. While the pen is held in `Tf`, the fingers are moved somewhat like a wave.

$$\text{magical reset} = \text{fingerswitch 34-Tf-23}$$

❘ 🏴 Magical reset [Eso, ≤2008]

(Finger)hold   × *Spinless* | *Very rare (0.8/10)*

During a (finger)hold, the pen is hold steady just by one finger, in a position that usually requires unusual flexibility. For example, in a middlehold (the trick shown in the figure) the pen is held between 2z and 2y, while locking the 1st interphalangeal joint (2xy). This is usually done in palm side or palm down to emphasize the fact that the pen is actually held by the finger and it's not just balanced over it.

<div align="center">middlehold = (PS) hold 2y2z</div>

Although it's not its original meaning, hold is also used to denote tricks in which the pen is held still in a certain, non-unstable slot. For example, if the pen is in 12, we could call that hold 12 (see: Stall).

Etymology   It's probable that other double-jointed spinners did the trick before, but Challenges (SPSC) recorded himself doing a middlehold in 2008, which led Freeman to make a video. Shortly after, the middlehold name was given by Shadowserpant in the UPSB NC.

▎🏴 Middlehold [Challenges, Freeman, Shadowserpant[111], 2008]

Palmhold   × *Spinless* | *Very rare (0.8/10)*

The trick was first done by Freeman and shortly after named by Shadowserpant (see: (Finger)hold).

<div align="center">palmhold = (PS) hold P.P</div>

▎🏴 Palmhold [Freeman, Shadowserpant[111], 2008]

8.10 Equilibrium

(Finger)stall   × *Spinless* | *Frequent (7.8/10)*

A `stall` is done by keeping the mod still, in a certain slot, without movement. The vast majority of the times, that slot is an unstable slot (i.e. the pen is over some fingers rather than between them), while `hold` is used otherwise (see: (Finger)hold).

The notation `(finger)stall` is used to indicate where it sits still, for example: `index stall`. The pen can be placed either horizontally or vertically on the fingers, the latter requiring more skill and effort to maintain the pen balanced. Thus, the name `horizontal stall` and `vertical stall` have been used lately to distinguish them.

Etymology Chris was the first to name these kinds of tricks, in 1999, which were caled `balancing`. Tohlz created the term `stall` in 2003 in contrast to that.

"*Stall means to stop or to delay something and Balance means to get into a steady position, without falling to one side or the other.*" (Tohlz[46], 2003)

However, as I have explained before, the meaning has shifted and `stall` is nowadays used mostly for the unsteady ones while `hold` is used for the steady ones.

🏴 Stall [Tohlz[46], 2003]; Horizontal stall

🏴 Balancing [Wrenn[40], 1999]

Cobra   × *Spinless* | *Infrequent (3.8/10)*

A `cobra` is a `stall` over the middle finger:

    cobra = (PD) middle stall

Etymology The name was used since around 2003. It's said to have originated from De'vo cobra cut, an XCM move. Although in English it's only used for this particular trick, in Japanese it's used for any `horizontal stall` over one finger.

🏴 Cobra stall, cobra [De'vo[179], ≤2003]

● コブラ *(cobra)*

Cobra bite × *Spinless* | *Infrequent (4.3/10)*

The cobra bite consists of, while palm down with the pen over your fingers, moving back your hand very fast so the pen falls, then moving the hand forward so that the pen is caught with your full hand.

Cobra bite [Skatox[154], 2007]

Fuck you × *Spinless* | *Infrequent (3/10)*

The Fuck you was invented by Kam to laugh at whoever ridiculed XCM, pen spinning etc.

```
fuck you = (PU) stall 13.2*
```

Fuck you [Kam[42], ≤2008]

Offering × *Spinless* | *Very rare (0.2/10)*

An offering consists of holding the pen steady over the palm of the hand. Since in the original video and in Freeman's tutorial, inverse shadow ~> offering was shown was an example, some people misunderstood the trick as being a palmspin rev.

```
offering = (PU) stall P*
```

Offering [Phya, ≤2006]; Hand stall [Tohlz[46], 2003]

Devil's stall × *Spinless* | *Rare (1.5/10)*

The pen sits on the tip of an extended index finger.

```
devil's stall = (PU) stall 1t*
```

Devil's stall [≤2008]

Devil's horns   × *Spinless* | *Rare (1.4/10)*

While palm down, with 2 and 3 bent, the pen sits on top of the back of 1 and 4.

```
devil's horns = (PD) stall 1b4b*
```

⊠ Devil's horns [≤2008]; Horns stall [≤2005]

Fist stall   × *Spinless* | *Rare (2.2/10)*

With all fingers bent, palm up, the pen sits over 1234, perpendicular to the fingers.

```
fist stall = (PU) stall 1234*
```

⊠ Fist stall [Lindor[132], 2008]

Spider stall   × *Spinless* | *Rare (1.7/10)*

With 2 and 3 bent, 1 and 4 straight, in PU, the pen sits still over 23, perpendicular to the fingers.

```
spider stall = (PU) stall 23*
```

⊠ Spider stall [Lindor[131], 2008]

Noel stall   × *Spinless* | *Rare (1.7/10)*

Noel was the first to do the trick in 2019. In 2020, Menowa* popularized it with his submission for the collab Styl.

```
Noel stall = stall Tb4b.1xb
```

⊠ Noel stall [2019]; Menowa stall [2020]

Copper stall   × *Spinless* | *Very rare (0.4/10)*

It's the following `stall`:

```
copper stall = (PD) stall B1k2k*
```

⊠ Copper stall [Pierre[147], 2007]

Vertical stall   × *Spinless | Frequent (7.4/10)*

The pen is in equilibrium on one of its tips.

Notation The trick is usually done on the palm side of the hand. If it's done in its back side, in Japanese notation it's called シメトリカルペン立て *(symmetrical pen stand)*.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Vertical stall

● ペン立て *(pen stand)*

Metronome   *Rare (2.1/10)*

In a metronome, the pen keeps changing direction due to the push of the thumb. Between pushes, it's suspended on one of its tips on the palm.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Metronome

Pesp ladder   *Mainly Japanese | Very rare (0.8/10)*

Pesp ladder 12-23

To do a Pesp ladder, do a palm side IA rev with the center of gravity of the pen offset in the opposite way from a regular IA rev. Because of this, while the mod is over 1, it changes direction and ends up in 23. Both of the following ways could be considered for breaking down this trick:

```
Pesp ladder = (PS) IA rev 12-1* ~ Fl IMA 1*-23
     Pesp ladder = (PS) tipped sonic 12-1*-23
```

● Pespラダー *(Pesp ladder)*

Windshield wiper   × *Spinless* | *Rare (1.2/10)*

Unrelated to wipers, the pen goes from the back to the front of the hand by changing the hand position from palm down to palm up.

```
Windshield wiper = cont (PU-PD-PU) fingerswitch P*-B*-P*
```

❖ Windshield wiper [≤2006]

Swing   *Rare (1.5/10)*

also known as   **Lever**   *Rare (2.7/10)*

To do a swing/lever, while palm down, hold the pen between two fingers. Now, either extend your fingers or do a sudden wrist movement so that the upper tip of the pen touches the back of your hand, and the rest of the pen becomes suspended. Due to gravity the pen falls back to your fingers, where it's caught. Not to be confused with the lever trick.

Etymology The initial name was Lever and even though it was quickly changed to Swing by Lindor, Lever still stuck because of its usage on Lindor's video title, related UPSB threads, and the first tutorial made by Freeman. In 2010, Freeman did a new tutorial with the name "Swing" in the title and explained the confusion in the description.

❖ Swing [Lindor[135], 2009]; Lever [Lindor[135], 2009]
❖ 스윙 *(swing)*

8.11 Throws and catches

| Starburst stream | *Infrequent (4/10)* |
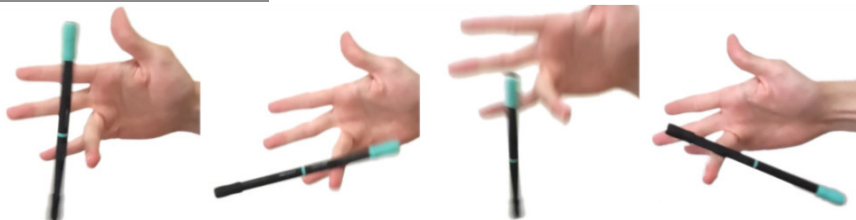
With the hand in palm side and a finger extended, the pen is hit alternately by its palm and back sides. In the original version, the push was done with 3, but it can be any finger.

```
Starbust stream = cont (RA release 0.5 1b* > RA release rev 0.5 1b*)
```

Etymology The trick was named by the Japanese spinner Ctionist in 2014. Starburst stream is the name of one of the techniques used by Kirito in the manga, anime, and games franchise "Sword Art Online". A very similar trick was already done by Ponkotu in 2009, in his 3 year solo video. [181]

● スターバーストストリーム *(starburst stream)* [Ctionist[93], 2014]
� Starburst stream
✷ 스타버스트 스트림 *(starburst stream)*

| Izumi reflect | *Mainly Japanese | Rare (2.4/10)* |

While palm down, the pen is thrown to the air via a `pinkybak release`. After hitting the middle finger, the direction of rotation changes and it goes around the middle finger, after which the pen is caught. It was first used by Sutomo in his WT13 R4 combo.

```
Izumi reflect = (PD) pinkybak release ~ Fl MA release 2*-13.2
```

● 和泉リフレクト *(Izumi reflect)* [Sutomo[159], 2013]

Stop and go   ↻ *Backhand clockwise* | *Rare (2.5/10)*

The trick starts by the pen being thrown into the air, for example with an `IA release`. It then hits a finger (in our example, the index), the pen stops mid-air and the hand is moved to the other side of the pen, hitting it again and continuing the around.

Etymology "*Stop and go*" is both a trick and a trick name from devil sticks. The first spinner to do it was Menowa*, in his JC18 Semifinals combo. Kay first used the name `Stop&go` in the context of pen spinning in 2019, and further popularized it in 2020 with a tutorial.

● ストップ&ゴー *(Stop&go)* [Kay[123], 2019]

🇬🇧 Stop and go

Bounce   *Infrequent (4.3/10)*

A general term for all tricks in which the pen bounces somewhere.

🇬🇧 Bounce

Backhand bounce   *Rare (2.7/10)*

The `backhand bounce` consists of the pen bouncing on the back of the hand. It's the first `bounce` to have received a name.

🇬🇧 Backhand bounce [≤2007]

Mafibo   *Mainly Japanese* | *Rare (1.8/10)*

After a trick, originally a `twisted sonic`, the mod is thrown to the air and then caught between the hand and the table, wall or other part of the spinning environment, perpendicular to it.

Etymology Short for マミフィニッシュコンボ (**ma**mi's **fi**nish com**bo**).

● マフィーボ *(mafibo)*

🇬🇧 Mafibo

Stall flip   *Infrequent (4.3/10)*

Forward stall flip

While doing a `vertical stall`, throw the pen into the air so it does at least 0.5 revolutions, after which the `vertical stall` continues. The prefixes `frontwards`, `backwards` or `sideways` are used occassionally.

⊞ Stall flip; Pen stand flip
● ペン立てフリップ *(pen stand flip)*; バランスフリップ *(balance flip)*

Stable jump   × *Spinless* | *Rare (2.8/10)*

It consists of throwing the pen into the air while in a `vertical stall`. It has no revolutions.

⊞ Stable jump [DArKT[95], ≤2020]
● 無回転ペン立てフリップ *(no rotation stall flip)*

Upside down flip   *Rare (2.8/10)*

An `upside down flip` is a `sideways stall flip` that goes under the hand. The trick has 1.5 revolutions.

⊞ Upside down flip [Taber[161], 2020]

Airspin   ↻ *Clockwise* | *Mainly Japanese* | *Rare (1.8/10)*

The pen (which, for this trick, is usually an unmodded or a short mod) is held in T12. The index and middle fingers push the pen so that it rotates in place (thus the length of the pen, otherwise it can't pass comfortably next to Tf, which is the problem in the picture above), after which it's caught.

Etymology The trick was first named `air spinning` by Hideaki in 2001. The abbreviated form `airspin` ended up being more well known and more widely used. However, both `air spinning` and `airspin` also became widely used for describing a general aerial throw and catch of the pen, so in tutorials like the one made by the JPSF, the longer but more precise `half faked gunman` has been used.

● エアースピニング *(air spinning)* [Hideaki[60], 2001]; エアスピ *(airspin)* [abbr.]; ハーフフェイクトガンマン *(half faked gunman)*
🇬🇧 Airspin
🇰🇷 덤블링 *(tumbling)*

Helicopter   *Rare (1.3/10)*

While palm down, the pen is held with T1 and with a quick upwards movement of the hand, the pen does 0.5 revolutions after which it's caught again in T1. It is usually done continuously.

🇬🇧 Helicopter [Lunatik[137], 2008]

Snap flip   *Rare (1/10)*

A `snap flip` starts with the pen over T and touching the side of 1. With a fast upwards motion of the thumb, the pen is thrown to the air, where it does 1.0 revolutions and is caught.

🏴 Snap flip [Weis[39], 1998]
● スナップフリップ *(snapflip)*
☷ 스냅플립 *(snapflip)*

BakFlip   *Very rare (0.8/10)*

While beginning a `neobak`, just as the pen lands between 12, flick 1 so that it's thrown into the air, where it does 0.5 revolutions.

Etymology   The trick is mostly known because of David Weis, who used to do it in his combos and also showed it when filming for the "Book of Cool". However, around the same time that David Weis discovered it (2003), nhk also did so independently, naming the trick `Air baktap`.

🏴 BakFlip [Weis[39], 2003]; Backflip; Neo-bak flip [2004]
● バックフリップ *(backflip)*
☷ 백플립 *(backflip)*
🏴 Air baktap [nhk_9[141], 2003]

Thumb snap   *Rare (1.6/10)*
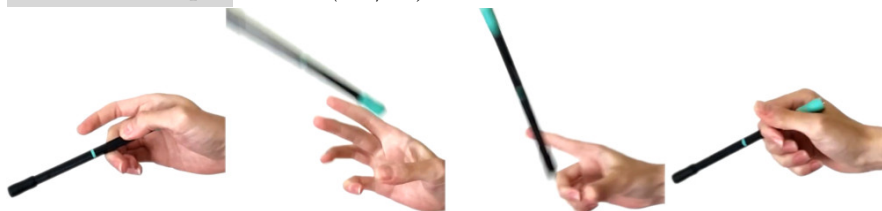
The pen is held in T2, with its tip resting on Tf. By applying pressure downwards with the thumb and upwards with 2 the pen goes flying, after which it's caught.

Etymology The trick was made and named thumb snap by Patrick Szeto in 2000. The trick was listed in Pentix in 2002, which greatly popularized it. David Weis did a snap flip for the "Book of Cool" and mistakingly called it thumb snap.

🏴 Thumb snap [Szeto[44], 2000]
● サムスナップ *(thumb snap)*

Mid-air flip   *Mainly Japanese | Rare (1.0/10)*

With the hand palm up and the mod perpendicular to the fingers, the mod is thrown to the air, without rotating. During its fall, the middle, ring and pinky fingers are flexed and the pen bounces on the index finger, doing 0.5 rotations and then being caught with the whole hand.

● ミッドエアーフリップ *(mid-air flip)*
🏴 Mid-air flip

Levitator   ↺ *Counterclockwise* | *Very rare (0.6/10)*

also known as   **Horizontal thumb snap**   *Very rare (0.2/10)*

In a `levitator`, the pen is held with the thumb below it and the index above it. Pressure is applied with T so that when the index finger is removed, the pen rotates over the hand, after which it's caught.

Etymology   First done by Brandon Pannabecker, who sent the trick to Kam in 2001. He said that "*It's a combination of the Thumb Snap from Patrick Szeto and the Single Reverse. The pen is snapped into the air while making a counterclockwise spin.*" Later, David Weis created and named the `levitator`. Although the execution of both tricks is slightly different, in 2004, the NC member Phya considered them the same trick [172].

Horizontal thumb snap [Brandon Pannabecker, 2001]; Levitator [Weis[39], 2003]; Forward levitator [Weis[39], 2003]

Letterman toss   *Very rare (0.2/10)*

Like a `thumb snap`, but while the pen isn't resting on Tf.

Etymology   The trick was done by Dave Letterman on "The Letterman Show" fairly regularly. It was then named by Chris from Microjuggling.

Letterman toss [Wrenn[40], 1999]

P-rial *Very rare (0.1/10)*

P-rial 23-23

While the pen is held by 23, fingers are bent and then quickly straightened, letting the pen rotate in the air, after which it's caught.

▐ ❈ P-rial [Picool[146], 2006]

Kamehameha *Rare (2.4/10)*

The pen is held in `13.2` in our dominant hand, with our nondominant hand positioned next to it. The fingers of both hands are bent, then suddenly straightened, throwing the pen forward, after which it's not caught.

Etymology It was done in 2005 by Kelvinchan, for the 7th battle "*Aerial tricks*". Both the name and movement are inspired by the anime "*Dragon Ball*". In the original combo, it was preceded by a `double charge`, which is how it's shown in many tutorials.

▐ ❈ Kamehameha [Kelvinchan[125], 2005]

Elbow catch/elbow pop × *Spinless* | *Infrequent (3.8/10)*

The `elbow catch` consists of catching the pen with the elbow after an aerial trick. The `elbow pop` consists of throwing the pen from the elbow to the air by quickly extending the arm.

▐ ❈ Elbow catch [≤2005]; Elbow pop [≤2005]

Leigun   ↺ *Counterclockwise | Rare (2.4/10)*

Start from the same position as in a `half tap`, holding the pen with the thumb and middle finger, lightly resting over the index finger. The pen is locked between the middle finger and the thumb's distal phalanx, and by applying pressure, the pen is thrown to the air.

Etymology   The trick was created and named by Kam in 2004. He was inspired by a move called レイガン *(ray gun)*, showed in an Japanese anime called YuYu Hakusho. In Kam's original concept, the trick didn't necessarily have to be caught by the other hand, but it was done that way in the video for illustrative purposes. The trick became a very popular finisher back in the day and it was almost always caught with the other hand.

"*A deadly weapon. Used in an open field, this trick can shoot the pen over the a room's length with minimal hand movement. The video only shows the pen traveling a short distance, but you can see the basic technique in action (note: in real life, the pen does not need to be caught). There are actually three variations of this trick: shooting forward, shooting backward, and in place. Never use this trick against a living target.*" (Kam, 2004)

▓ Leigun [Kam[121], 2003]
● レイガン *(leigun)*
◉ 레이건 *(leigun)*

Air clap   *Very rare (0.8/10)*

In an `air clap`, the pen is held between the palms of both hands. With a wrist motion, it's thrown into the air where it does 0.5 revolutions to then be caught again with both hands. It can be done continuously.

▓ Air clap [Freeman[112], 2010]

Fist snap   × *Spinless | Very rare (0.0/10)*

In palm up position, with all fingers bent, the pen sits over the fingernails and the palm (`P1234*`). With a sudden movement, all fingers are straightened and the pen flies away, and it's caught with the other hand.

▓ Fist snap [Lindor[132], 2008]

Spider snap   × *Spinless | Very rare (0.3/10)*

The trick is similar to `fist snap`, but instead of all fingers being bent, 1 and 4 are straight. The pen sits over the fingernails and the palm (`P23*`). With a sudden movement, 2 and 3 are straightened and the pen flies away, where it's caught with the other hand.

❘ 🇬🇧 Spider snap [Lindor[132], 2008]

Spider gun   *Very rare (0.2/10)*

The hand is in palm up position, 2 and 3 bent, 1 and 4 straight, the pen sits between and over 23 (note that this is different from spider stall!). 23 are quickly straightened, so the pen flies to the other hand.

❘ 🇬🇧 Spider gun [Lindor[131], 2008]

8.12   Historical

Drummer   ↻ *Clockwise* | *Infrequent (4.2/10)*

`Drummer` is a `pass` minicombo. It starts with the second half of a `fingerpass`, and then finishes with a `neosonic`.

$$\text{drummer = (PS) pass 34-23>12 > neosonic}$$

Etymology Hideaki had listed a trick as `drummer` back in 1998, but that was just a `fingerpass`. For now unknown reasons, he decided to remove the trick from his website and then list it again, now with a video representing what we understand as `drummer` nowadays. The earliest appearance of `drummer` in English that we know is in PenstudioZ, as it was listed there in January 2003.

- ドラマー *(drummer)* [Hideaki[60], 2001]
- 🏴 Drummer [≤2003]

Reversible drummer   ↻ *Clockwise* | *Rare (1.0/10)*

It's a minicombo involving the following tricks:

$$\text{reversible drummer = pass 12-23>34>23>12 > neosonic}$$

- リバーシブルドラマー *(reversible drummer)*

RevToBak   ↻ *Counterclockwise* | *Rare (2.1/10)*

First done by David Weis, it used to be both a very popular trick and name. There are three versions of the trick, as its meaning evolved over time. The original trick by Weis is:

$$\text{RevToBak (Weis) = fake reverse ~> backaround}$$

that is, the pen does 1.0 revolutions on top of the thumb, after which a `backaround` is done. The second version was the one uploaded by Kam, in which he did only 0.5 revolutions on the thumb:

$$\text{RevToBak (Kam) = semi reverse ~> backaround}$$

The last one, which is the most widely known in both Korea and Japan, is:

$$\text{RevToBak (KR/JP) = thumbaround reverse ~> backaround}$$

This probably originated since, in Japanese, *reverse* means `TA rev`.

Speaking about a video by Weis (circa 2001) in which he did a `fake reverse` followed by three `backaround 1.5`, Zombo said that:

"*This combo superceded kam's 4 loop-combo as the hardest combo of all times back in the days.*" (Zombo[203], 2007)

🏁 Reverse-to-BackAround [Weis[39], 1998]; RevToBak [abbr.]
● リバーストゥバック *(reverse to bak)*
🇰🇷 리버스백 *(reverse bak)*

Square ↺ *Counterclockwise | Mainly Japanese | Rare (2.6/10)*

$$\text{square} = \text{(PS) TA > Fl TA}$$

● スクエア *(square)* [≤2004]

Cube ↺ *Counterclockwise | Mainly Japanese | Rare (1.9/10)*

$$\text{cube} = \text{(PS) TA > Fl TA x2}$$

● キューブ *(cube)* [≤2004]

Fake triple ↺ *Counterclockwise | Infrequent (3.7/10)*

$$\text{fake triple} = \text{fake double > TA}$$

🏁 Fake triple [Kam[42], 2002]
🇰🇷 페이크트리플 *(fake triple)*

Faked index spin ↺ *Counterclockwise | Very rare (0.6/10)*

In a `faked index spin`, the pen starts in T1, with the thumb slightly

bent. By pushing with both fingers, the pen goes around the index finger, finally being caught in 12.

```
faked index spin = IA 0.5 T1-12
```

Etymology Although who made up this name is uncertain, it was widely used in battles during the UPSB v2 era, when breakdowns for each video were usually mandatory. Back in the day, an `IA` was called `index spin`, thus this variation was called `faked`. However, when asked, Kam didn't recognize it as an official trick:

"*Definitions like "Fake" for example, have not been determined, and even the most knowledgeable pen spinners could have different answers depending on where they got the meaning of Fake from.* " (Kam[211], 2005)

Korean Although the origins are completely different, there is an equivalent Korean trick, thus both are shown together here. It was called 검지내리기 until the 2005 NX lecture, where it was renamed to 검지수평돌리기, sometimes shortened as 검수돌리기. Although understood by experienced spinners, it isn't used anymore.

🇰🇷 검지수평돌리기 *(indexfinger horizontality rotation)*; 검수돌리기 *(indexfinger horizontality rotation)* [abbr.]

🇬🇧 Faked index spin [≤2003]
🇰🇷 검지내리기 *(indexfinger fall)* [until 2005]

Flick T12-12 ↻ *Clockwise*

The trick `flick T2-12`, although considered just a variation in English, had its own name in Korean in the early days. To do it, first start by doing a `flick`, and while the pen is spinning on the thumb, bend your index finger slightly so that the pen rolls behind it, finally being caught in 12.

🇰🇷 역검지수평돌리기 *(indexfinger horizontality rotation reverse)*; 역검수돌리기 *(indexfinger horizontality rotation reverse)* [abbr.]

Fake reverse T12-12   ↻ *Clockwise*

The trick `fake reverse T12-12`, although considered just a variation in English, had its own name in Korean in the early days. To do it, first start by doing a `fake reverse`, and while the pen is spinning on the thumb, bend your index finger slightly so that the pen rolls behind it, finally being caught in 12.

◉ 검버돌리기 *(indexfinger reverse)*; 검지리버스 *(indexfinger reverse)*

◉ 리버스 내리기 *(reverse fall)* [until 2005]

Zombo trick   ↻ *Clockwise* | *Mainly Korean*

An `indexaround rev` which starts in 12, and is then caught just by the index finger.

$$\text{좀보트릭 (Zombo trick)} = \text{IA rev 0.75 12-11}$$

Etymology The earliest we can see Zombo talking about this trick, or about its reverse, is in his interview with Aaron Robertson in PS3K:

"I tried to create some new tricks too, but it is very hard to create something completely original. I only came up with a rather weak reverse neo-sonic (laugh) and a basketball-inspired spin." (Zombo[21], circa 2003)

Surprisingly, the trick became popular among Korean spinners, who called it 좀보트릭 *(Zombo trick)*. It may have gotten popular since then, or maybe

from his videos showing counter tricks, as this is just the first half of a `counter indexaround reverse`.

▌ ☢ 좀보트릭 *(Zombo trick)*; 좀보 *(Zombo)* [abbr.]

▌ ☢ 수직잡기 *(Perpendicular holding)* [until 2007]

| **Zombo continuous combo** | ↻ *Clockwise* | *Rare (2.4/10)* |

```
ZCC = continuous extended thumbaround reverse
```

▌ ✸ Zombo continuous combo; ZCC [abbr.]

| **Tossed normal** | ↻↻ *CW-CCW* | *Mnly. Jp* | *Rare (1.1/10)* |

The pen is held by 23, with the fingers slightly bent. By straightening the fingers, the pen moves 0.25 revolutions away from the thumb, after which a `thumbaround` is done.

```
tossed normal = tipped charge 0.25 23 > TA
```

Etymology Although this trick is mainly used in Japanese notation, its origin could be from an English site. Circa 2004, the trick `Tossed Thumbspin` was uploaded to Larry's Pen Spinning Site, which was very similar to the aforementioned *tossed normal*.

▌ ● トスィド ノーマル *(tossed normal)*

| **ps-728 pass** | ↻ *CCW* | *Mainly Japanese* | *Rare (1.1/10)* |

The `ps-728 pass` is the following continuous sequence:

```
ps-728 pass = cont pass rev 12-23-12
```

Etymology It was named by the Japanese spinner ps-728 in his blog in 2006. In Japanese, it's called 浪花パス *(naniwa pass)*, as it's his nickname (7=**na**na, 2=**ni**, 8=**ha**chi $\implies$ naniwa, ha is sometimes read as wa)

▌ ● 浪花パス *(naniwa pass)* [ps-728[149], 2006]

Passless   ↻↻ *CCW-CW* | *Very rare (0.0/10)*


```
passless = IA 12-T1 0.5 > TA rev
```

▌ ❊ Passless, Pass»less [mainly used in FPSB v2]

Cancel   ↻ *CCW* | *Mainly Japanese* | *Very rare (0.8/10)*

A `cancel` is a TA which is stopped by the index finger halfway through:

$$\text{cancel = TA 0.5 T1-[fc Tb<1p]}$$

▌ ● キャンセル *(cancel)*

Floating passaround   ↻ *CCW* | *Very rare (0.4/10)*

A `floating passaround` is a `passaround` pushed with a wrist rotation instead of with the fingers.

▌ ❊ Floating passaround [≤2007]

Gravity backaround   ↻ *CW* | *Very rare (0.7/10)*

A `backaround` whose push is just gravity, not any finger motion nor hand motion. The pen is held almost completely vertical in 12. After slightly tilting the hand backwards, the pen falls due to gravity, is caught, and the trick is completed.

Etymology The trick was made by Phya, an UPSB v2 moderator, as a part of the video "*Evolution*":

"*The story of Evolution begins in February 2005. In response to number of people voicing the opinion that "pen spinning is dead" Phya decided that a video featuring rare and new tricks would spice things up. On February 25 2005 Phya posted a thread in The Vault calling for people to submit videos under the working title "Rare Tricks Compilation Vid." However, despite the widespread approval of the video the deadline (March 12) for videos passed with absolutely zero submissions. Not willing to see the project die, Phya completed the video by himself over the next two weeks.*" (Phya[196], 2005)

▌🏴 Gravity backaround [Phya[196], 2005]

Cheat around   ↺ *Counterclockwise* | *Very rare (0.7/10)*

A `cheat around` starts as a regular `IA`, but instead of completing a full revolution, you make it 0.5 by turning your wrist and catching the pen. After that, go back to the starting hand and finger position.

▌🏴 Cheat around [Pain Spleener[145], 2014]

Super harmonic   ↺↺ *CCW-CW* | *Mnly. Jp* | *Very rare (0.5/10)*

It's a `TA 1.5 harmonic`. In other words:

```
super harmonic = TA 1.5 > TA reverse 1.5
```

Etymology This was a name that Hideaki used to have in his website, but eventually removed, although some old-school Japanese spinners continued using it. The correct name nowadays is シングルアクセルハーモニック *(single axel harmonic)* but the modifier for 1.5 revolutions, *single axel*, was created a year later, in 1998.

▌● スーパーハーモニック *(super harmonic)* [Hideaki[60], 1997]

Gatling   ↻ *Clockwise | Mainly Japanese | Rare (1.2/10)*

```
gatling = continuous fake double rev
```

● ガトリング *(gatling)*

Charge gatling   ↻ *Clockwise | Mainly Japanese*

The trick consists of adding an extra `charge Tf` in the middle of a `fake double red` (`gatling` in Japanese). Thus, it's a:

```
charge gatling = neosonic 12 ~> charge Tf > Fl TA rev
```

● チャージガトリング *(charge gatling)*

Korean pass   ↻ *Clockwise | Rare (1.5/10)*

```
korean pass = TA rev > pass 23-12 > backaround > Fl TA rev
```

Etymology   The exact origin of this trick is unknown. We know that it wasn't used during UPSB v2 and that Fratleym's 2007 tutorial greatly popularized it [185].

▨ Korean pass [≤2007]

Korean extended thumbaround   ↻ *CCW | Rare (1.0/10)*

An `extended thumbaround` in which the index finger is straight at all times.

Etymology   The exact origin of this trick is unknown. We know that it wasn't used during UPSB v2 and that Fratleym's 2007 tutorial greatly popularized it [186].

Korean It used to be called 엄검휘, which is an abbreviation of 엄지검지휘감기. Nowadays, the name has changed to 스냅인지휘감기.

▨ Korean extended thumbaround [≤2008]; Korean ext ta [abbr.]
◉ 스냅인지휘감기 *(snap indexfinger winding)*

◉ 엄검휘 *(thumb index winding)* [until 2021]

Charge rev TA rev T1   ↻ *Clockwise* | *Mainly Korean*

It's a Korean name for a (PS) charge T1 > FL TA rev.

Korean The name 역원역엄휘d is an abbreviation of 역원그리기역엄지휘감기 d. Remember that, in ABCD notation, d equals the T1 slot.

▍◉ 역원역엄휘d *(charge rev TA rev T1)*

Turn   ↻ *Counterclockwise* | *Mainly Korean*

It's a Korean name for a ThumbMiddleAround T2-23.

▍◉ 턴 *(turn)*

Turn rewind   ↻ *Counterclockwise* | *Mainly Korean*

It's a Korean name for a ThumbMiddleAround T2-23 > TA.

▍◉ 턴배감기 *(turn rewind)*

Faked turn rewind   ↻ *Counterclockwise* | *Mainly Korean*

It's a Korean name for a ThumbMiddleAround T2-23 > pass rev 23-34 > TA, with the last TA being pushed by the ring finger. 짭 is a prefix that means faked.

▍◉ 짭턴배감기 *(faked turn rewind)*

Shafibo typhoon   ↻ *CW* | *Mnly. Jp* | *Very rare (0.8/10)*

It's a Japanese name for a cont (bakfall > bakrise).

▍● シャフィーボタイフーン *(shafibo typhoon)*

Rishabo   ↻ *Clockwise* | *Mainly Japanese* | *Very rare (0.8/10)*

It's a Japanese name for a `TA rev > bak > midbak`.

Etymology An abbreviation of リトルシャフィーボ (*little shafibo*).

● リシャーボ *(rishabo)*

Bofibo   ↻ *Clockwise* | *Mainly Japanese* | *Very rare (0.6/10)*

It's a Japanese name for a `cont midindexbak 12`.

Etymology Short for ボンクラフィニッシュコンボ (***Bo**nkura **fi**nish com**bo***).

● ボフィーボ *(bofibo)*

Cyclone   ↺ *Counterclockwise* | *Mainly Japanese* | *Rare (2.5/10)*

The `cyclone` consists of a `fake double` and afterwards, one `Fl TA`. It's almost not aerial, just very slightly before the last `Fl TA`.

$$\text{cyclone} = \text{(PS) TA} \sim> \text{Fl IA} \sim> \text{Fl TA}$$

● サイクロン *(cyclone)* [Crasher[92], 2001]

Hurricane   ↺ *Counterclockwise* | *Mainly Japanese* | *Rare (2.1/10)*

The `hurricane` consists of a `fake double` and afterwards, the pen is thrown slightly to the air and one `middle spread` is done.

$$\text{hurricane} = \text{(PS) TA} \sim> \text{index spread} \sim> \text{middle spread}$$

● ハリケーン *(hurricane)* [Crasher[92], 2001]

Storm   ↺ *Counterclockwise* | *Mainly Japanese* | *Rare (1.5/10)*

It consists of a `hurricane` and afterwards, catching the pen with a `Fl TA`.

$$\text{storm} = \text{(PS) TA} \sim> \text{index spread} \sim> \text{middle spread} \sim> \text{Fl TA}$$

● ストーム *(storm)* [Crasher[92], 2001]

Ora ora   ↺ *CCW* | *Mainly Japanese* | *Very rare (0.4/10)*

Usually done continuously, the trick consists of:

```
ora ora = (PS) neobak ~ inverse neobak
```

● オラオラ *(ora ora)* [Drowsy[99], 2020]

Geji geji   ↺ *Backhand clockwise* | *Very rare (0.4/10)*

It's a Japanese name for a `cont tap rev B [p 4b]`.

● ゲジゲジ *(geji geji)* [Drowsy[99], 2020]

Waterfall   ↺ *Counterclockwise* | *Very rare (0.4/10)*

It consists of multiple `two finger twirls`.

```
waterfall = two finger twirl 11'>22'>33'>44'
```

Etymology Eso thought about calling each `two finger twirl` "water", and decided that a combo full of "waters" would be called `Waterfall` if the pen goes down the hand.

🏴 Waterfall [Eso[101], ≤2007]

Side around ↺ *Counterclockwise* | *Very rare (0.4/10)*

In a `side around` we start in a slot like 13. Then we do an `indexaround` and while the pen is over the index finger, we change the position of the middle finger from being outside the hand to inside, just like in a `side sonic`.

▌ ❊ Side around, Totoro impulse [Darkou[94], 2008]

Snaparound ↺ *Counterclockwise* | *Very rare (0.9/10)*

`Snaparound` is a `TA` in which thumb and index also do a snap, making a sound. There's no aerial push, just `TA` + sound.

▌ ❊ Snaparound

Around the world ↺ *Counterclockwise* | *Very rare (0.8/10)*

An aerial trick in which, while doing a `thumbaround riser`, the hand is very quickly moved from below the pen, to above it, to then below again, tracing a circle, where it's caught. The name comes from the football trick *around the world*.

▌ ❊ Around the world [kasra12321[122], 2007]

Sonic bust ↻↺ *CW-CCW* | *Infrequent (4.6/10)*

`Sonic bust` is a `(PS) sonic 23-12 > (PD) bust`.

Etymology The `sonic bust` is the first trick in which the `bust` word was ever used.

"*You would think that linking a Sonic Normal with an Index Spin Normal would make the pen change direction. Well, after experimenting with the idea and forcing the pen to stay in the same direction, I got something that looks like a double Sonic (a sonic that does two rotations).*" (Kam[42], 2002)

Remember that, before the standarization of `around` and `spin`, an `IA` was called `index spin`.

▌ ❊ Sonic bust [Kam[42], 2002]
▌ ● ソニックバスト *(sonic bust)*
▌ ◉ 계단일회전 *(stair one revolve)* [2005]
▌ ◉ 소닉버스트 *(sonic bust)* [until 2005]

Invisible sonic ↻ *Clockwise* | *Infrequent (3.8/10)*

During a `sonic`, while the mod is in `13`, the mod is left static behind the hand for a moment, after which the `sonic` is continued.

Bonkura made a popular variation of this trick in which, while the mod was hidden behind the hand, he spread out his fingers to enhance the illusion of the pen having disappeared (see: Bonkura's invisible sonic)

Etymology The name was given by Kam, and first shown in Pentix, in March 2002. He says that it was his background in magic which inspired to create this trick.

🏴 Invisible sonic [Kam[42], 2002]; iSonic [abbr., Kam[42], 2002]; i-sonic

● アイソニック *(i-sonic)*

🇰🇷 아이소닉 *(i-sonic)*

Bonkura's invisible sonic ↻ *Clockwise*

A mix between a pen spinning trick and a magic trick. Bonkura's variation of `iSonic` (see: Invisible sonic). During a `sonic`, while the mod is in `13`, the mod is left static behind the hand for a moment. While the mod is hidden behind the hand, the fingers are spread out so that the viewer gets the illusion of the pen having disappeared. Then, coming back to the initial position, the pen reappears and the trick is finished.

Etymology It was called アイソニックを超えるアイソニック *(iSonic beyond iSonic)* jokingly by Bonkura, but the name was used even a year and a half after that. Since Bonkura attended Kyoto University, it was also called 京大式アイソニック *(Kyoto University-style iSonic)*. Another name was 真パーフェクト・アイ *(true perfect I)*, which later was simplified to the current most popular name, パーフェクトアイ *(perfect I)* [176].

● パーフェクトアイ *(perfect I)*

🏴 Bonkura's invisible sonic

● アイソニックを超えるアイソニック *(iSonic beyond iSonic)* [Bonkura]; 真パーフェクト・アイ *(true perfect I)*; 京大式アイソニック *(Kyoto University-style iSonic)*

Sonic transfer   ↺ *Counterclockwise* | *Rare (1.5/10)*

Start with a `sonic rev` in your dominant hand. Before finally stopping the pen, bring your nondominant hand closer and grab the pen between the middle and ring fingers. Finally, do a `sonic` with your nondominant hand.

`sonic transfer = sonic rev 12-23 > switch 23-2'3' > sonic 2'3'-1'2'`

⊞ Sonic transfer [Kam[42], 2002]
● ソニックトランスファー *(sonic transfer)*

In-out sonic   ↻ *Clockwise* | *Common (5.5/10)*

In-out sonic is an `inv sonic 34-23 ~ sonic 23-12`.

⊞ In-out sonic [Tohlz[46], 2003]
● インアウトソニック *(in-out sonic)*
◉ 네티스트 *(netist)*

Out-in sonic   ↺ *Clockwise* | *Common (5.5/10)*

Out-in sonic is a `sonic 34-23 ~ inv sonic 23-12`.

Etymology `Out-in sonic` wasn't named by Tohlz, but coined years later for an `inverse in-out sonic`. Many tutorials got the trick wrong afterwards (Rarka, Freeman, PSH), confusing it with `west sonic` [201].

⊞ Out-in sonic
● アウトインソニック *(out-in sonic)*
◉ 다니스트 *(danist)*

Rising fans   ↻ *Clockwise* | *Rare (2.1/10)*

A name for a `sonic clip` minicombo.

```
rising Fans = charge 34 > sonic clip 34-23 > charge 23
                       > sonic clip 23-12 > charge 12
```

Etymology The `rising fans` is a combo created by Tohlz. He explained it in his website, and he included it inside his signature move `HyperSonic 2`.

⊞ Rising fans [Tohlz[46], 2004]
● ライジングファンス *(rising fans)*

Falling fans   ↺ *Counterclockwise* | *Rare (1.5/10)*

Falling fans is a rising fans reverse.

```
falling fans = charge rev 12 > sonic clip rev 12-23 > charge rev 23
                > sonic clip rev 23-34 > charge rev 34
```

Etymology Unlike rising fans, this one wasn't created by Tohlz (or at least it wasn't listed in PenstudioZ), but rather by somebody else between 2004 and 2006, inspired by the aforementioned combo.

⊞ Falling fans [between 2004 and 2006]
● フォーリングファンス *(falling fans)*

Trigger sonic   ↻ *Clockwise* | *Mainly Japanese* | *Rare (1.2/10)*

Depending on the hand position, it's either of these:

```
trigger sonic = (PS) sonic 12-T1
trigger sonic = (PD) shadow 12-T1
```

Keep in mind that in Japanese, a shadow is also written as *sonic*.

● トリガーソニック *(trigger sonic)* [≤2004]

Toshiko sonic   ↻ *CW* | *Mainly Japanese* | *Very rare (0.0/10)*

A pseudo sonic 12. That is, a sonic 12-T2-12. It was created in 2001, which is the same year the pseudo sonic was developed (see: Pseudo sonic). In [187], the trick is executed palm down.

Etymology Toshiko is probably a woman's name.

● トシコソニック *(toshiko sonic)* [2001]

Spiral sonic   ↻ *Backhand CCW* | *Mnly. Jp* | *Rare (1.4/10)*

A minicombo which consists of the following tricks:

```
spiral sonic = (PD) sonic rise > trigger sonic
```

Which depending on the hand position could be written as either of these:

```
spiral sonic = (PD) sonic rise > shadow 12-T1
spiral sonic = (PS) sonic rise > sonic 12-T1
```

Etymology It was first named `super sonic 1` but then renamed to `spiral sonic` in order to avoid the name clash with `super sonic 2`.

● スパイラルソニック *(spiral sonic)* [Hideaki[60], 2000]

Spiral sonic

● スーパーソニック１ *(super sonic 1)* [Hideaki[60], 1997]

Total sonic rise [Le0n[129], 2008]

Summersalt sonic   ↻ *Clockwise | Mnly. Jp | Rare (1.2/10)*

This trick was first named `super sonic 2`. The first meaning of the trick was just a `sonic` followed by a `neosonic`

$$\text{super sonic 2 = (PS) sonic > neosonic}$$

It was then renamed to `summersalt sonic` in order to avoid the name clash with `super sonic 1`. After the name change, Hideaki also sometimes changed the trick at the beginning from `sonic` to `sonic rise`.

Nowadays, the trick is understood as having these two meanings:

$$\text{summersalt sonic = (PS) sonic rise > neosonic}$$
$$\text{summersalt sonic = (PS) sonic rise > IA rev 12-12}$$

● サマーソルトソニック *(summersalt sonic)* [Hideaki[60], 2000]

● スーパーソニック２ *(super sonic 2)* [Hideaki[60], 1997]

Moonsalt sonic   ↻↻ *CCW-CW | Mnly. Jp | Rare (1.0/10)*

It's a name for the following minicombo. Notice that there's a change of direction between the `sonic rev` to the `pinkyaround rev`.

`moonsalt sonic = (PS) sonic rev 12-23>34 > (PS) pinkyaround rev 34-34`

● ムーンサルトソニック *(moonsalt sonic)* [Crasher[92], ≤2001]

Skyhigh sonic   ↻ *CW | Mainly Japanese | Very rare (0.8/10)*

It's a Japanese name for `sonic rise > TA`.

● スカイハイソニック *(skyhigh sonic)* [≤2001]

Trick sonic   ↻ *Clockwise* | *Mnly. Jp* | *Very rare (0.4/10)*

This minicombo consists of the following tricks

```
trick sonic = sonic 34-23 > pseudo sonic > sonic
```

Which can also be written as:

```
trick sonic = sonic 34-23>23>12
```

● トリックソニック *(trick sonic)* [≤2001]

Pseudo inverse sonic   ↻ *Clockwise* | *Infrequent (3.9/10)*

```
pseudo inverse sonic = inverse sonic 23-12 ~ sonic 12-23
```

⌗ Pseudo inverse sonic [≤2007]

Pseudo twisted sonic   ↻ *Clockwise* | *Infrequent (3.3/10)*

```
pseudo twisted sonic = twisted sonic 23-12 ~ sonic 12-23
```

⌗ Pseudo twisted sonic [≤2007]

Hexagon sonic   ↻ *CW* | *Mainly Japanese* | *Very rare (0.4/10)*

```
hexagon sonic = sonic 23-13 ~> flush sonic 13-T4-12
```

● ヘキサゴンソニック *(hexagon sonic)* [Fire@fox[107], 2014]

Coulomb combo   ↻ *Backhand CCW* | *Mnly. Jp* | *Rare (1/10)*

`Coulomb combo` is a `pinkyswivel bust`, although `Coulomb combo` is an earlier name than `swivel` (see: Swivel).

● クーロンコンボ *(coulomb combo)*
⌗ Coulomb combo

Bonkura trick   ↻ *Clockwise* | *Rare (2.7/10)*

```
Bonkura trick = TA rev > palmbackaround ~> charge W* > ext TA rev
```

⌗ Bonkura trick

Crystal   ↻ *CCW* | *Mainly Japanese* | *Very rare (0.8/10)*

It's a Japanese name for a `twisted sonic bust ~ palmspin`.

● クリスタル *(crystal)*

Shade   ↻ *Backhand CCW* | *Mnly. Jp* | *Very rare (0.4/10)*

It's a Japanese name for a `(PD) tw sonic 23-12>23>12 ~ shadow 12-23`.

● シエイド *(shade)*

Dragonaround   ↺↻ *Backhand CW-CCW* | *Very rare (0.8/10)*

`dragonaround = neobak 12 > baktap > shadow 12-P4 > swivel P4-12`

🎌 Dragonaround

Infinity return   ↻ *Counterclockwise* | *Very rare (0.4/10)*

The `infinity return` is a `wiper` minicombo created by $weety:

```
infinity return = wiper rev T1 + pass T1-12 > wiper rev 12
                > wiper 12 > wiper rev 12 + pass rev 12-T1
```

This trick is easily confused with the `double infinity`. Notice how here the 23 slot isn't used at all.

🎌 Infinity return [$weety[160], 2008]

Beige trick   ↻ *Clockwise* | *Rare (2.1/10)*

A `figure 8`, but the `wiper rev` part is done palm up so that the pen goes upwards instead of sideways.

```
Beige trick = (PD) wiper T1 > (PU) wiper rev T1
```

Sometimes, `Beige trick` is also understood as `cont ringpinkybak cardioid`, as it's one of the tricks that the spinner frequently does.

🎌 Beige trick [made by Beige, named by Sirapob[89], 2017]

Twisted pass   ↺ *Counterclockwise* | *Very rare (0.5/10)*

A name for the following minicombo:

```
twisted pass = (PS) wiper rev T1 > (PD) pass T1-12 > charge 12 >
                        (PS) pass rev 12-23>T2 > wiper rev T2
```

Etymology While the name and concept seem to be from 2003, it wasn't until 2004 that nhk_9 was able to master the trick and record it on video.

❚ 🇬🇧 Twisted pass [nhk_9[143], 2003]

Helix²   ↺ *Counterclockwise* | *Very rare (0.4/10)*

It's very similar to Helix[1], but the mod is instead held by its center. Assisted by the other fingers of the hand, it spins. It's a two handed `continuous wiper rev`.

$$\text{helix}^2 \text{ 11' = cont wiper rev 11'}$$

❚ 🇬🇧 Helix

Helix³   ↺ *Counterclockwise* | *Mnly. Jp* | *Very rare (0.2/10)*

It's the second half of an `infinity`. This trick can be seen in HAL's "Penspinning minor & old tricks video" [198].

$$\text{helix}^3 \text{ = wiper rev 12 + pass rev 12-T1}$$

❚ ● ヘリックス *(helix)*

Angmaramyon-style infinity   ↺ *CCW* | *Mainly Korean*

FLow has called this trick 앙마라몬식 인피 in the past because the spinner 앙마라몬a *(Angmaramyon a)* used to do this trick. The name is used for both `sonic 23-13 ~> wiper rev 13` and `inverse sonic 23-13 ~> wiper rev 13`.

❚ ◉ 확장인피니티 *(extended infinity)* [FLow[9], until 2021]; 앙마라몬식 인피 *(Angmaramyon-style infinity)* [FLow[9]]

OC Fingerpass   *Very rare (0.2/10)*

It's a trick that Tohlz made in 2003. In OC tricks you first uncap the pen (in his case, a Pentel RSVP) with the spinning hand, then perform the trick (in this case, a `fingerpass`) and then put the cap on back again without any help of the non-spinning hand.

"*OC meaning Open and Closing Technique. A small example of using OC Technique to open and close your pen. Combining pen spinning moves into opening the cap of the pen. In this case, the OC is the Fingerpass*" (Tohlz[46], 2003)

OC Fingerpass [Tohlz[46], 2003]

OC Forward 1.5   *Very rare (0.2/10)*

In this OC trick (see: OC Fingerpass), Tohlz first uncapped the pen, then did a `TA 1.5` and then put the cap back on again, without the help of the non-spinning hand.

OC Forward 1.5 [Tohlz[46], 2003]

L spin   *Very rare (0.6/10)*

The trick consists on spinning an L-shaped object (like a toothbrush) with just one finger. This is not a common geometry used in pen spinning, so both the trick and the name are rare to come across.

L spin [Kam[42], ≤2002]; One Finger Spin [Wrenn[40], 1999]

8.12.1   Devil's, demon's and angel's

Angel sonic   ↻ *Clockwise* | *Frequent (7.5/10)*

```
angel sonic = twisted sonic 34-13 >~ sonic 13-12
```

Angel sonic [≤2007]
● エンジェルソニック *(angel sonic)*
● 윈드스트 *(twisted sonic twist)*

Devil's around ↺ *Backhand counterclockwise* | *Common (6.5/10)*

also known as **Devil's spin** *Infrequent (3.8/10)*

```
devil's spin = (PD) tw sonic 23-12 > devil's shadow
```

Devil's spin [Kam[42], 2001]; Devil's around
● デビル ズ スピン *(devil's spin)*

Devil's sonic ↺ *Backhand counterclockwise* | *Frequent (8.1/10)*

```
devil's sonic = (PD) tw sonic 23-12 > shadow 12-12
```

Etymology Although nhk_9 claimed that this was his own trick and name, Penstudioz [175] and Pen Spin Sector [57] attribute it to Kam.

Devil's sonic [Kam[42], ≤2002]
● デビル ズ ソニック *(devil's sonic)*
아래위돌리기 *(turn up and down)* [2005]
아래위로 돌리기 *(turn up and down)* [until 2005]

Devil's sonic bust ↺ *Backhand CCW* | *Infrequent (3.7/10)*

```
devil's sonic bust = (PD) tw sonic 23-12 > shadow 12-12 ~ bust
```

Devil's sonic bust; Snake around [Skahars[153], 2008]
아래위휘감기 *(down and up winding)*

Demon's sonic ↻ *Clockwise* | *Frequent (8.8/10)*

```
demon's sonic = sonic 34-23 ~> twisted sonic 24-12
```

Demon's sonic [nhk_9[54], between 2004 and 2005]
● デーモン ズ ソニック *(demon's sonic)*
트위스트 *(twist)*

Demon's spin ↺ *Backhand counterclockwise* | *Infrequent (3.5/10)*

```
demon's sonic = (PD) sonic 34-23 ~> tw sonic 24-12 ~ shadow 12-23
```

Demon's spin [nhk_9[54], between 2004 and 2005]
● デモン ズ スピン *(demon's spin)*

Devil's shadow ↻ *Backhand counterclockwise* | *Common (6.3/10)*

```
devil's shadow = (PD) shadow 12-23 > pass rev 23-12
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Devil's shadow [Princeconda, between 2004 and 2005]

Devil's demon's sonic ↻ *Backhand CCW* | *Infrequent (3.9/10)*

```
devil's demon's sonic = (PD) sonic 34-23 ~> tw sonic 24-12 ~ shadow 12-12
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Devil's demon's sonic, Demon's devil's sonic [nhk_9[54], between 2004 and 2005]

Devil's infinity ↻ *Counterclockwise* | *Rare (2/10)*

```
devil's infinity = wiper rev T1 + pass T1-12 > shadow 12-12
                         > wiper rev 12 + pass rev 12-T1
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Devil's infinity

Devil's conversion ↻ *Counterclockwise* | *Rare (1.5/10)*

The trick consists of doing a `devil's sonic`, and while the pen is spinning over 12, change from palm down to palm up while bending the fingers and continue doing a knuckle spin, without any additional impulse (just the inertia of the pen).

```
devil's conversion = (PD) devil's sonic ~> (PU) knuckle spin
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Devil's conversion [Le0n[129], 2008]

Reconversion ↻ *Clockwise* | *Very rare (0.0/10)*

In the original video by Le0n, it is written that `reconversion` is `devil's conversion rev`, although the trick that he does isn't that, he did `PU knuckle spin rev ~ PD shadow rev` without finishing the `devil's sonic rev`.

🏴󠁧󠁢󠁥󠁮󠁧󠁿 Reconversion [Le0n[129], 2008]

True devil's around ↻ *Backhand CCW* | *Very rare (0.7/10)*

```
true devil's around = devil's around ~> fuck you
```

🏴󠁧󠁢󠁥󠁮󠁧󠁿 True devil's around

Devil's windshield wiper $\times$ *Spinless* | *Very rare (0.5/10)*

The trick consists of doing a windshield wiper, but instead of all fingers being straight, 2 and 3 are bent.

```
devil's windshield wiper = windshield wiper [23=P]
```

▌ ❖ Devil's windshield wiper [Lindor[132], 2008]

Twisted demon's sonic $\circlearrowleft$ *Backhand CCW* | *Rare (1.9/10)*

```
twisted demon's sonic = tw sonic 34-23 > sonic 23-24 > tw sonic 24-12
```

▌ ❖ Twisted demon's sonic [≤2006]

8.12.2   Combos

Kam's 4 loop combo $\circlearrowleft$ *Backhand CCW* | *Common (6.0/10)*

A minicombo made by Kam, usually shortened as K4LC.

```
K4LC = (PD) sonic 34-23 ~> tw sonic 24-12 > (PS) TA 1.5
```

Etymology   During the early days of pen spinning, long combos were rare and Kam explained in 2001 that he had been working on K4LC for years. After K4LC, other names with the same structure emerged. However, only K4LC has remained popular as a name. Nowadays, it's usually recommended as a beginner minicombo.

"*This is the first combo ever created that used a tilt of the hand (palm down -> palm vertical) as part of the combo. [...] The first K4LC video was posted on 22th Febuary 2002 by Kam, the webmaster of Pentix. When the video was first created it impressed many influencial pen spinners such as tohlz and Hideaki Kondoh. [...] K4LC later becomes Kam's signature move. [...] To give recognition to the famous tilt-of-the-hand combo, K4LC, a "Variations of Kam's 4 Loop Combo" based theme was set as the UPSB Official Battle #3 in September 2004.*" (Tohlz, Phya[212], 2005)

▌ ❖ Kam's 4 loop combo [Kam[42], 2001]; K4LC [abbr.]

Kam's 4 Loop Combo light   *Rare (2.9/10)*

The combo consists of the following tricks:

```
K4LC = sonic 34-23 > tw sonic 23-12 > pass 12-T2 > TA T2-T1
```

🏴 Kam's 4 loop combo light; K4LC light [2002]

Kam's 3 loop combo   *Infrequent (3.1/10)*

The K3LC is the K4LC without the initial sonic.

```
               K3LC = tw sonic 24-12 > TA 1.5
```

"*In January 2003, the Superhandz Pen Spinning Showcase was released. The showcase made by Kam also featured a variation of K4LC, which was called Kam's 3 loop combo (K3LC).*" (Kam[120], 2003)

🏴 Kam's 3 loop combo [Kam[120], 2003]; K3LC [abbr.]

Kam's neobak combo   *Very rare (0.2/10)*

The combo consists of the following tricks:

```
fake reverse T12-T12 > neobak ~> midbak > halftap T23-T12
```

🏴 Kam's neobak combo

Kam's 7 loop combo   *Very rare (0.2/10)*

The combo consists of the following tricks:

```
sonic 34-23 > tw sonic 23-T12 > thumbspin 1.5 > passaround T1-12
                > pass rev 12-23>34>T3 > TA
```

🏴 Kam's 7 loop combo; K7LC

Tohlz's 6 link combo   *Very rare (0.4/10)*

The combo consists of the following tricks:

```
sidespin 0.5 > thumbspin 1.5 > TA rev > sonic 23-12 > ext TA rev
```

🏴 Tohlz's 6 link combo [Tohlz[46], 2002]

Tohlz's 7 loop combo   *Very rare (0.2/10)*

The combo consists of the following tricks:

```
TA > TA rev > TA > (PD) charge > pass > charge > (PD-PU) indexspin
```

In the original breakdown he didn't specify the fingers in which the charges and pass are done. The video is lost, so the exact breakdown is unknown.

❚ 🇬🇧 Tohlz's 7 loop combo [Tohlz[46], 2003]

NHK's 3-loop combo   *Very rare (0.4/10)*

It's nhk_9's first original combo.

```
N3LC = fake reverse 2.0 > backriser 2.0 > tw sonic > bak 1.5
```

❚ 🇬🇧 NHK's 3-loop combo [nhk_9[54], ≤2005]; N3LC [abbr.]

NHK's 7-loop combo   *Very rare (0.4/10)*

A minicombo made by nhk_9, which he did at the very end of the first promotional video of The Troposphere.

```
N7LC = fake reverse 2.0 > backriser 2.0 > tw sonic > bak 1.5
```

"*This combo features one of the tricks that I invented, the BackRiser. This is an advanced combo, since the transition from the BackRiser to the Twisted Sonic is rather difficult.*" (nhk_9[140], 2003)

❚ 🇬🇧 NHK's 7-loop combo [nhk_9[140], 2003]; N7LC [abbr.]

Phya's 9-loop wiper-based combo   *Very rare (0.4/10)*

According to its creator, the last two tricks are optional:

```
infinity > wiper rev T1 > tw sonic 23-12 > wiper rev T1 > Sonic 34-23
 > tw sonic 23-12 > wiper rev T1 > sonic 23-12 > (TA > halftap)
```

❚ 🇬🇧 Phya's 9 loop wiper-based combo [≤2007]

Leon's 4 loop combo   *Very rare (0.4/10)*

```
shadow 12-23 > tw sonic 23-T12 > TA
```

❚ 🇬🇧 Leon's 4 loop combo [≤2007]

Masaki's 4 loop combo   *Very rare (0.2/10)*

```
sonic rise > charge 12 > TA
```

▌☒ Masaki's 4 loop combo [2003]

Zombo's 5 loop combo   *Very rare (0.6/10)*

The combo consists of the following tricks:

```
sonic 34-23 > wiper rev 23 > pass rev 23-12 > wiper rev 12
    > pass rev 12-T1 > wiper rev T1 > thumbspin 1.5
```

Funnily enough, Zombo said that he didn't remember creating this nor any other 5 loop combo, so its origin is uncertain.

▌☒ Zombo's 5 loop combo

Electric fan   ↻ *Clockwise* | *Mainly Japanese* | *Very rare (0.6/10)*

It's a minicombo created by Drowsy

```
electric fan = cont (PS Drowsy motion 23-23 > PD swing 23-34 >
                 PS west sonic ~ charge 1* ~ IMA rev 1*-23)
```

▌● 扇風機 *(electric fan)* [in Japanese, Drowsy[99], 2020]

Swing combo   *Mainly Korean*

The 스윙콤보 *(swing combo)* is the following:

```
(PD) Twisted sonic 23-12 > (PS) Twisted sonic rev 12-23
               > (PD) Sonic 23-12 > TA
```

▌◉ 스윙콤보 *(swing combo)*

Butterfly   *Very rare (0.6/10)*

Made by Kam, inspired by butterfly knife tricks.

```
wiper 12 > pass rev 12-23 > pass rev 23-12 > wiper rev 12
> pass 12-23 > wiper rev 23 > slide (with arm movement)
```

▌☒ Butterfly [Kam[119], 2001]

HyperSonic   *Very rare (0.0/10)*

Tohlz released `HyperSonic` in August 25, 2002. It was one of the first few combos in PenstudioZ and later became his signature move. A different, more complex version was shown on May 28, 2004.

```
HyperSonic v1 = sonic 34-23>12 > pass rev 12-23>34 > sonic 34-23>12
                            > (pass rev 12-23 > sonic 23-12) x2
HyperSonic v2 = shadow 2.0 34-12 > pass rev 12-23>34 > rising fans > TA
```

▓ HyperSonic v1 [Tohlz[164], 2002]; HyperSonic v2 [Tohlz[164], 2004]
● ハイパーソニック *(hypersonic)*

Teleporter   *Very rare (0.0/10)*

The `teleporter` is a trick made by Tohlz. The exact breakdown of the trick has been lost, and no videos remain. Even Tohlz said that he didn't remember when asked about it in UCPSB, in 2006. The only thing that remains is this quote:

"So i filmed a mini combo which I call it a Teleporter. Its basically a backhand tracer incoporated with an example of hand movement and quick wrist motion techniques. I guess it may be a little hard to see due to the colour of the grip used. " (Tohlz[165]. Jun 19, 2004)

▓ Teleporter [Tohlz[165], 2004]

Chaos   *Very rare (0.0/10)*

`Chaos` refers to the following combo:

```
 inv sonic 23-12 > sonic rev 12-23 > neosonic 23-T1 > Fl TA T1-T1
```

"This combo is an example of how you can link Neo Sonic and Fingerless Thumbspin into a combo. Doing this combo at the right pace can easily amaze the audience. The crucial part in this combo is to link the Neo Sonic to Fingerless Thumbspin. After doing the Neo Sonic, you must immediately jerk your hand so that the Fingerless Thumbspin can be executed without a break or pause in the combo. The pen looks like spinning all over the place and this is why the combo is named Chaos." (Tohlz[163], 2004)

▓ Chaos [Tohlz[163], 2004]

A List of notation articles

A list of **most notation articles** linking to their **archived** version is presented together with their context (shadowed boxes). As you can see, the highest activity period for notation development was **2006 to 2012**. The decline of the activity of spinners like Fel2Fram, Hexbinmos, Lindor, and Freeman, as well as the closure of the RD and NC led to a clear decrease in new proposals. The improvements made in this book aren't listed.

For NC articles I list the key contributors and use the syntax (Proposal date → Article release date), using ∅ if unreleased and ? when the proposal date is unknown. For all other articles, the date is that of the first post. For some events the day/month is unknown, so it hasn't been indicated. Some notes are added in *italics*.

1990

1st published pen spinning guide by Korokoro comic

Korokoro comic - Big roll, reverse roll, gunman roll, shuttle roll, double roll, thunder roll

 - archive.org/details/korokoro_ronin

1997

"My History with Pen Spinning" by Hideaki (Dec 1)

Hideaki - Normal, reverse, harmonic, twisted sonic, gunman, tornado, sonic, cardioid, double, semi reverse, super harmonic, ...

1998

"Pencil Spinning" by David Weis
English version of Hideaki's "My History with Pen Spinning" (1$^{\text{st}}$ half 1998)

Hideaki - Drummer, faked sonic, single axel, ...
Weis - Invention and naming of Backaround/Bak, RevToBak, Thumbspin, Half-tap, Baktap and Snap flip, among others.

1999

278

"Microjuggling" by Chris (1st half 1999)

Chris - Invention and naming of the two finger twirl

2000

"Pentix" by Kam (Jan)   "Iluvitar" by Patrick Szeto (Feb 27)

Kam - Fingerpass, twirl, index spin, neo-sonic, l-spin, charge
Patrick Szeto - Creation of the name for infinity

2001

Pencil Turning Cafe (May 31)   Pentix board/UPSB v1 (Nov 15)

Kam - Extended, inverse, devil's spin
Hideaki - Spread double, symmetrical, henkei, skipped, pseudo sonic, faked...

2002

"SuperhandZ" by De'vo   "PenstudioZ" by Tohlz (Aug)

Kam - Last update to Pentix' glossary (May 31)
 - archive.org/details/2002-05-31-kam-glossary
Kam - Last update to Pentix' trick names table (Jun 18)
 - archive.org/details/2002-06-18-kam-trick-names-table
(Speculated) Creation of the Japanese name "half windmill"

2003

"Pentrix" by Kam   Pendolsa creation
PenDolSa 1st   "The Troposphere" by nhk_9 (Aug)
Troposphere (solo) (Dec 18)   RD creation (Dec)
"降龍十八轉" by sula_la

NC|Kam - Spin types (?→Dec 27) *(Trick family classification)*
 - archive.org/details/2003-12-27-kam-spin-types
Weis - Updated "Pencil Spinning" with trick names like Scissor Spin and Neo-BackAround/NeoBak.
sula_la - 亢龍有悔(TA) 見龍在田(TA rev) 雙龍取水(sonic) 履霜冰至(sonic rev) 飛龍在天(shadow 12-T1) 神龍擺尾(extended infinity) (Aug 15)

2004

UPSB v2 release (Jan 11)   KiT-KaT release (KiT, Dec 13)

Kam - New names for thumbaround and thumbaround reverse

NC|nhk_9 - BackAround Reverse-FrontAround Difference (May 8→∅)
 - www.pentrix.com:80/upsb2/viewtopic.php?t=1722
NC|Niffe - Around vs Spin (?→Jun 18)
 - archive.org/details/2004-06-18-niffe-around-versus-spin

2005	
"PenSpinningWiki" by Aysh (Mar 18)	FPSB v1 creation (Feb 8)
Penzone creation (2kin, Sing, 1ˢᵗ half 2005)	JEB v1 creation (Aug 29)
PSH creation (Solar flares, 3+7, Sept 3)	GPC creation (Robert, Nov 20)
UCPSB v1 creation (Nigel, Dec 1)	

Pendolsa - NX lectures *(Korean abcd notation)*

2006	
UCPSB v2 release (Jan 7)	JapEn 1st collab. (Mar 24)
Swespin (Ceedgee Apr 18)	PPP (Dante, Kmibar Apr 28)
THPSC (Mr.CsPSer May 19)	UPSB + PDS collab. (Oct 30)

UCPSB|Nigel, Rob - Trick book (Jan 07)
 - archive.org/details/2006-01-07-nigel-rob-trick-book
UCPSB NC - Sonic/shadow definitions (?→Oct 16) *(Discussion triggered because of its usage in Japan. Conclusion: shadow is a topspin, sonic only 1.0.)*
 - archive.org/details/2006-10-16-sonic-shadow-definitions
UCPSB NC - Shortened trick/combo names (?→Oct 16) *(Acronyms)*
 - archive.org/details/2006-10-16-shortened-trick-combo-names
UCPSB NC - Trick naming convention (?→Oct 20) *(Modifier order/structure)*
 - archive.org/details/2006-10-20-trick-naming-convention

2007		
WT07 (KTH wins)	TWPS creation (x1213)	UPSB v3 release (Sept 8)

NC|Zombo, Strat - Interrupted tricks (?→May 6) *(Hybrid ~ and [p][s][c])*
 - archive.org/details/2007-05-06-nc-interrupted-trick-notation
NC|Sketching - Renaming Multiple Backarounds (Jun 16→∅) *(The proposal was to rename bak 1.5 to backspin, following the around vs spin discussion.)*
 - upsb-v3.spin-archive.org/topic/153
NC|Sketching - Mirrors (Jun 16→∅) *(Definition or deprecation of mirrored)*
 - upsb-v3.spin-archive.org/topic/148

 - `upsb-v3.spin-archive.org/topic/24645`
UPSB|Da Zogger, Useless, Essence Of Life - Trick books (Jun 23)
 - `archive.org/details/2007-06-23-upsb-trick-books`
UCPSB|Skatox - Cobra bite and twisted cobra bite *(Also in UPSB NC too)*
 - `z15.invisionfree.com/UCPSB/index.php?showtopic=6433`
 - `upsb-v3.spin-archive.org/topic/155`
NC|Mats - Redefining Incorrectly Named Tricks (Sep 10→∅) *(Flicked and tapped)*
 - `upsb-v3.spin-archive.org/topic/533`

2008

SPSC v2 creation (May 20)	SPSC's "Departamento de Investigación" creation
WC08 (JEB wins)	JEB v2 release (Feb 3)

NC|Mats - Passaround (Jan 31→Feb 16) *(Deprecation)*
 - `archive.org/details/2008-02-16-nc-passaround`
 - `upsb-v3.spin-archive.org/topic/3666`
 - `upsb-v3.spin-archive.org/topic/3857`
NC|Sketching, Mats - Antigravity (Feb 9→∅) *(Deprecation proposal)*
 - `upsb-v3.spin-archive.org/topic/3856`
NC|Fratleym, Sketching - Expanded trick notation (Feb 17→Feb 23) *(while [p][s][c] is older, here the standalone use of [p] is proposed)*
 - `archive.org/details/2008-02-23-nc-expanded-trick-notation`
 - `upsb-v3.spin-archive.org/topic/4020`
NC|Eburt, Freeman - Expanded hand notation (Apr 9→Apr 27) *(Eburt proposed P and B, Freeman proposed A, E and W)*
 - `archive.org/details/2008-04-27-nc-expanded-hand-notation`
 - `upsb-v3.spin-archive.org/topic/147`
 - `upsb-v3.spin-archive.org/topic/5326`
 - `upsb-v3.spin-archive.org/topic/18528`
FPSB|Scouto - À propos du Moonwalk Sonic (May 24)
 - `archive.org/details/2008-05-24-scouto-a-propos-du-moonwalk-sonic`
FPSB|Fratleym - Les linkages en block (May 29)
 - `archive.org/details/2008-05-29-fratleym-les-linkages-en-block`
FPSB|gollumsk8 - Korean/Wessian bust (June 06)
 - `archive.org/details/2008-06-06-gollumsk8-korean-wessian-bust`
NC|Sketching, Mats - Release and Riser (May 6→Jun 15)
 - `archive.org/details/2008-06-15-nc-release-and-riser-definitions`
 - `upsb-v3.spin-archive.org/topic/147`

NC|Shadowserpant - Tipped Sonic (Jun 24→∅) *(Normal and reverse)*
 - upsb-v3.spin-archive.org/topic/7824
FPSB|Kirgo - Reverses/Mirror/Inverses des hybrid (June 25)
 - archive.org/details/2008-06-25-kirgo-reverses-mirror-inverse-des-hybrid
NC|? - Moonwalk sonic (?→Jun 27) *(Deprecation)*
 - archive.org/details/2008-06-27-nc-moonwalk-sonic-deprecation
 - z15.invisionfree.com/UCPSB/index.php?showtopic=3351
FPSB|Zoda - Flick TA (Oct 12) *(New trick)*
 - archive.org/details/2008-10-12-zoda-flick-ta
FPSB|Fratleym - Fingercrossing (Oct 19) *(New trick + unused notation)*
 - archive.org/details/2008-10-19-fratleym-fingercrossing
FPSB|Smile - Bend tap (Nov 8) *(New trick)*
 - archive.org/details/2008-11-08-smile-bend-tap
FPSB|Lindor - Nomenclature pour les tricks en 1p1h (Nov 9)
 - archive.org/details/2008-11-09-lindor-nomenclature-pour-les-tricks-en-1p1h

2009

UPSB 1st (Aug 9)	WT09 (Peem wins)

FPSB|Lindor - Swivel (Feb 4) *(New trick, Jamie Enns first to say it's a Fl Sonic)*
 - thefpsb.penspinning.fr/viewtopic.php?f=73&t=2006
 - upsb-v3.spin-archive.org/topic/19321
FPSB|Synspin - Morphing (Feb 21)
 - archive.org/details/2009-02-21-synyspin-morphing
NC|Jamie Enns - Spreads (Mar 20→∅) *(Discussion to standarize its notation)*
 - upsb-v3.spin-archive.org/topic/18578
NC|Zombo - Spinner identification modifier (Mar 18→∅)
 - upsb-v3.spin-archive.org/topic/18528
FPSB|Phlogistique - Étendre la notation des fingerslots (Apr 19)
 - archive.org/details/2009-04-19-phlogistique-etendre-la-notation-des-fingerslots
FPSB|Lindor - Nomenclature 1p2h (May 3)
 - archive.org/details/2009-05-03-lindor-nomenclature-1-p-2-h
FPSB|T - Nomenclature des phalanges (May 23) *(Introduction of x, y and z)*
 - archive.org/details/2009-05-23-t-nomenclature-des-phalanges
SPSC|Freeman, Kurotsuki - Notación de fingercrossings (Jul 6) *(it was first discussed in SPSC and later posted in the NC)*
 - archive.org/details/2009-07-06-freeman-kurotsuki-notacion-de-fingercrossing
 - upsb-v3.spin-archive.org/topic/19913

SPSC|Freeman - Tipped Sonic (Aug 1) *(More nor/rev discussion)*
 - archive.org/details/2009-08-01-freeman-tipped-sonic
JEB|Aphsamoth - Pen Spinning Trick Directory
 - sites.google.com/site/penspinningtrickdirectory/
JEB|Aphsamoth - Japanese Nomenclature of Pen Spinning Tricks (Aug 31)
 - archive.org/details/2009-08-31-aphs-japanese-nomenclature-of-pen-spinning-tricks
NC|Freeman - Neosonic deprecation (?→Jul 19)
 - archive.org/details/2009-07-19-nc-neosonic-deprecation
NC|Freeman - Continuous sequences (Dec 3→∅) *(Modifier and parentheses)*
 - upsb-v3.spin-archive.org/topic/22639
NC|Freeman - Neobackaround (Dec 7→∅) *(Deprecation proposal)*
 - upsb-v3.spin-archive.org/topic/22731
NC|Zombo - Handedness modifier (Mar 7→Dec 14) *(' became the official non-dominant hand modifier, but Y5678 was proposed as well)*
 - archive.org/details/2009-10-14-nc-handedness-modifier
 - upsb-v3.spin-archive.org/topic/18137

2010

WC10 (THPSC wins)   UPSB v4 creation (Jun 23)

FPSB|Skatox - Comprendre une grammaire formelle (Jan 3) *(Also on the NC)*
 - thefpsb.penspinning.fr/viewtopic.php?f=67&t=6587
 - upsb-v3.spin-archive.org/topic/23435
NC|Freeman - Taps (Apr 8→∅) *(Classification and notation)*
 - upsb-v3.spin-archive.org/topic/25343
NC|Zombo - Asynchronous two handed spinning (?→Apr 19)
 - archive.org/details/2010-04-19-nc-asynchronous-two-handed-spinning
NC|Freeman - 1P2H tricks spin direction (Apr 24→∅)
 - upsb-v3.spin-archive.org/topic/25650
JEB|Sunrise - Sunrise's notation (Aug 5)
 - archive.org/details/2010-08-05-sunrise-notation

2011

WT11 (s777 wins)

SPSC|Freeman - Powertricks y notación oficial (May 4) *(Descriptive names)*
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UPSB|NC - Simultaneous tricks (?→May 19) *(The + linking symbol)*

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FPSB|Fel2fram - Notation des fingerslots, le retour (Jul 18) *(Dot notation)*

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FPSB|Hexbinmos, Phlogistique - Proposition de nomenclature 2p1h (Aug 18)

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FPSB|Fel2fram - The 8 main Powerpasses (Oct 31) *(New variations and notation)*

- youtu.be/zyRBHBjvygU

FPSB|Skatox - Systeme de breakdown bas niveau (Nov 28)

- archive.org/details/2011-11-28-skatox-systeme-de-breakdown-bas-niveau

FPSB|Lindor - Un language informatique descriptif des combos (Dec 12)

- archive.org/details/2011-12-12-lindor-un-language-informatique-descriptif-des-combos

2012

WC12 (FPSB wins)

FPSB|Hexbinmos, Fel2fram - Recherche de notation élémentaire (Jul 31)

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FPSB|Hexbinmos - Notation tablature (Nov 9)

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SPSC|Freeman - Artículos en SpinAlong

- archive.org/details/2012-freeman-articulos-en-spin-along

2013

WT13 (Sutomo wins)

FPSB|Fel2fram - Japanese motion (Apr 13) *(Name and concept definition)*

- youtu.be/x8TGw_oKwDs

FPSB|Fel2fram - In-out charges (Apr 12) *(New tricks)*

- thefpsb.1fr1.net/t1470-in-out-charges-et-bien-plus-encore

FPSB|Fel2fram - Mirrored quoi qu'est-ce (Jul 3) *(Variable plane of mirroring)*

- thefpsb.1fr1.net/t1747-mirrored-quoi-qu-est-ce

2014

| WC14 (JEB wins) | RD & NC closure | UPSB v5 release (Dec 20) |

2015

WT15 (Menowa* wins)

2016

JEB v3 release (Aug 10)

FPSB|Tchus - Le cardioid (Jul 3)
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FPSB|Tache - Nouvelle notation des Pass (Nov 20) *(Inverse pass)*
 - thefpsb.1fr1.net/t3707-nouvelle-notation-des-pass

2017

PWT (Beige wins)   WT17 (Sirapob wins)

FPSB|Tchus - Proposition de nomenclature des taps (Jan 26)
 - thefpsb.1fr1.net/t3843-notation-proposition-de-nomenclature-des-taps
JEB|Mesi - Some notes about the current notation (Sept 2) *(Jp. not. review)*
 - archive.org/details/2017-09-02-mesi-some-notes-about-current-notation

2018

TWC18 (The Front Row wins)   PSO18   UPSB closes indefinitely (Oct 1)

2019

WT19 (i.suk wins)   The workshop opens (Mar 29)

2020

WC20 (FPSB wins)   PSO20   Covid pandemic

JEB|Drowsy - Introduction to a new theory about symmetries (May 11)
 - drowsignal.hatenablog.com/entry/2020/05/11/053858
JEB|AiMo - Aimo's mechanical notation *(work in progress)* (Jun 23 onwards)
 - aimof.blog.fc2.com
JEB|Laku, AiMo - Laku's visual notation (Dec 10)
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[v3:####]	`https://upsb-v3.spin-archive.org/topic/####`
[v4:####]	`https://upsb-v4.spin-archive.org/thread/####`
[spsc:####]	`https://www.penspinning.es/viewtopic.php?t=####`
[thpsc:####]	`https://thaispinner.forumth.com/####`
[wayback:#1], #2	`https://web.archive.org/web/#1/http://#2`

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Enzo, 20111030, youtu.be/EF2yJjj0InI;
PPM (taught by i.suk), 20161126, youtu.be/dIL9ObD2aCo;
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[205] Dongza on "Bust", 20061112,
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[211] Kam on the definition of Faked, 20050112,
www.pentrix.com/upsb2/viewtopic.php?t=1887

[212] Tohlz and Phya on K4LC, 20050424,
www.pentrix.com/upsb2/viewtopic.php?t=4478

International tournaments

[213] **WT07** - World Tournament 2007
Rules archive.org/details/ps-rulebooks-wt07
Videos & pairings [spsc:3641]
All pairings [thpsc:t177-wt07-world-tournament-2007]
Official site www.alexsimpsononline.com/worldtournament07.html
Participants and rounds
www.penspinning.info/wiki/wiki.cgi?page=World+Tournament+2007

[214] **TST** - Team Spinning Tournament
Rules archive.org/details/ps-rulebooks-tst

[215] **WC08** - World Cup 2008
Rules archive.org/details/ps-rulebooks-wc08
All pairings [thpsc:t178-wc08-world-cup-2008]
WC rulebook proposal [v3:97]
WC idea proposal [v3:96][v3:1991]
Official site www.alexsimpsononline.com
Draw [v3:2139]
R1 [v3:3394] R2 [v3:4228] R3 [v3:4901] R4 [v3:5867]
Final videos youtu.be/pzjVea2-jaI Prizes [v3:7081]
Results www.upsb.info/wiki/index.php/World_Cup

[216] **AC08** - Asian Cup 2008
Rules archive.org/details/ps-rulebooks-ac08
All pairings [thpsc:t184-ac08-asian-cup-2008]
waza.penspinning.jp/2018/05/24/asian-cup-2008/
w.atwiki.jp/penspinorder/pages/913.html

[217] **WT09** - World Tournament 2009
Rules *The rulebook hasn't been recovered yet.*
All pairings [thpsc:t179-wt09-world-tournament-2009]
Pairings & videos [spsc:1353] Info [v3:14143]
Official site www.alexsimpsononline.com/rounds.html
R1 [v3:16825][v3:16201][v3:15665]
R2 [v3:17987][v3:17445][v3:16826]
R3 [v3:18673][v3:18374][v3:17988]
R4 [v3:19361][v3:19045][v3:18696]
R5 [v3:20098][v3:19824][v3:19368]
R6 [v3:20492][v3:20735][v3:20146]
Discussion [v3:20754]

[218] **WC10** - World Cup 2010
Rules archive.org/details/ps-rulebooks-wc10 [v3:21561]
All pairings [thpsc:t180-wc10-world-cup-2010][spsc:2482]
Official site worldpenspinning.com/wc10/
Brainstorm [v3:21074] Rosters [v3:22888]
Qualifications [v3:21560][v3:22628]
R1 [v3:23545] R2 [v3:24087] R3 [v3:24764]
R4 [v3:25184] R5 [v3:25678] Discussion [v3:26330]

[219] **WT11** - World Tournament 2011
Rules archive.org/details/ps-rulebooks-wt11 [v4:632]
All pairings [thpsc:t181-wt11-world-tournament-2011]
Official site www.worldpenspinning.com/?p=607
Lineups [v4:2872] Discussion [v4:5830]

R1 [v4:3488][v4:3935] R2 [v4:3936][v4:4297]
R3 [v4:4302][v4:4673] R4 [v4:4674][v4:5064]
R5 [v4:5065][v4:5441] R6 [v4:5442][v4:5829]
s777 quits [v4:7531]

[220] **WC12** - World Cup 2012
Rules archive.org/details/ps-rulebooks-wc12 [v4:6586]
All pairings [thpsc:t182-wc12-world-cup-2012]
Official site worldps.org/wc12
Groups [v4:9343] Discussion [v3:5662]
R1 [v4:9470][v4:9699]   R2 [v4:9700][v4:9998]
R3 [v4:10001][v4:10300] R4 [v4:10302][v4:10648]
R5 [v4:10651][v4:11019] R6 [v4:11020][v4:11410]
Sly youtu.be/yMpie2vQfTg Minwoo youtu.be/wK72anrRzLE

[221] **WT13** - World Tournament 2013
Rules archive.org/details/ps-rulebooks-wt13
All pairings [thpsc:t183-wt13-world-tournament-2013] [v3:13894]
Official site worldps.org/wt13 YT channels [v4:13929]
Info [v4:12783][v4:12963][spsc:5313][spsc:4882]
R1 [v4:13946][v4:14076][v4:14206][spsc:5312][spsc:5328]
R2 [v4:14208][v4:14353][v4:14414][spsc:5329]
R3 [v4:14416][v4:14550][v4:14611][spsc:5345]
R4 [v4:14625][v4:14746][v4:14787][spsc:5360]
R5 [v4:14799][v4:14909][v4:14947][spsc:5372]
R6 [v4:15032][v4:14949][spsc:5383]
Judging complaint [v4:14215]

[222] **WC14** - World Cup 2014
Rules *The rulebook hasn't been recovered yet.* [v4:15786]
All pairings [thpsc:t190-wc14-world-cup-2014]
Official site worldps.org/wc14
Qualification [v4:16189][v4:16294][spsc:5791]
worldps.org/wc14/?p=11
Rosters worldps.org/wc14/?p=24
Group stage info [spsc:5901] worldps.org/wc14/?p=26
R1 [v4:16349][v4:16382][v4:16435][v4:16472][spsc:5902]
worldps.org/wc14/?p=28
R2 [v4:16473][v4:16563][spsc:5945]
worldps.org/wc14/?p=46
R3 [v4:16597][v4:16659][v4:16718][v4:16738][spsc:5971]
worldps.org/wc14/?p=58
R4 [v4:16739][v4:16821][v4:16856][spsc:5978]
worldps.org/wc14/?p=72

R5 [v4:16857][v4:16891][v4:16934][v4:16971]
worldps.org/wc14/?p=83
Final announcement worldps.org/wc14/?p=93

[223] **WT15** - World Tournament
Rules archive.org/details/ps-rulebooks-wt15
All pairings [thpsc:t189-wt15-world-tournament-2015]
Participants [spsc:6081] worldps.org/wt15/?page_id=45
R1 [spsc:6082] worldps.org/wt15/?p=73
R2 [spsc:6093] worldps.org/wt15/?p=101
R3 [spsc:6098] worldps.org/wt15/?p=114
R4 [spsc:6115] worldps.org/wt15/?p=128
R5 [spsc:6116] worldps.org/wt15/?p=143
R6 [spsc:6123] worldps.org/wt15/?p=155

[224] **PWT** - Pendolsa World Tournament
Official site doobugi77.wixsite.com/worldtournament
Participants [spsc:6653]
doobugi77.wixsite.com/worldtournament/appliying-community
Twitter twitter.com/official_pwt
Schedule doobugi77.wixsite.com/worldtournament/schedule
YT channel www.youtube.com/channel/UCEzkHvKXEojyl1qEwxxa80A
Qualifications [spsc:6672]
R1 [spsc:6684] R2 [spsc:6695] R3 [spsc:6696]

[225] **WT17** - World Tournament 2017
Rules archive.org/details/ps-rulebooks-wt17 worldps.org/rules
Official site worldps.org
Participants worldps.org/participants
R1 [spsc:6708] worldps.org/2017/07/30/groups
R2 [spsc:6710] worldps.org/2017/08/28/round-2-matchups-out
R3 [spsc:6711] worldps.org/2017/09/19/round-3-matchups-out
R4 [spsc:6728] worldps.org/2017/10/10/round-4-matchups-out
R5 [spsc:6730] worldps.org/2017/10/30/round-5-matchups-out
R6 [spsc:6735] worldps.org/2017/11/20/round-6-matchups-out

[226] **TWC18** - Team World Cup 2018
Rules archive.org/details/ps-rulebooks-twc18
Official site teamworldcup.wordpress.com
Twitter twitter.com/teamworldcup_ps
Lineups teamworldcup.wordpress.com/2018/10/04/the-teams/

[227] **PSO18** - Pen Spinning Olympics 2018
Rules archive.org/details/ps-rulebooks-pso18
Official site penspinningolympics.wordpress.com

[228] **WT19** - World Tournament 2019
Rules archive.org/details/2019-wt-19-rules
Official site pen-spinning.com/wt19
Judges pen-spinning.com/wt19/judges.php
All participants [spsc:8684]
A side pen-spinning.com/wt19/wta.php
R1 [spsc:8685] R2 [spsc:8686] R3 [spsc:8687]
R4 [spsc:8688] R5 [spsc:8689] R6 [spsc:8690]
B side pen-spinning.com/wt19/wtb.php
R1 [spsc:8691] R2 [spsc:8692] R3 [spsc:8693]
R4 [spsc:8694] R5 [spsc:8695] R6 [spsc:8696]

[229] **WC20** - World Cup 2020
Rules archive.org/details/ps-rulebooks-wc20
Twitter twitter.com/worldcup_ps
Official site pen-spinning.com/wc20
Tie twitter.com/worldcup_ps/status/1266790726022684673
SPSC [spsc:8677]

[230] **PSO20** - Pen Spinning Olympics 2020
Rules archive.org/details/ps-rulebooks-pso20
Twitter twitter.com/PSOlympics2020
Official site pen-spinning.com/pso20

[231] **WT21** - World Tournament 21
Rules archive.org/details/2021-wt-21-rules
Twitter twitter.com/PenSpinning_WT
Official site wt21.worldps.org/
Youtube www.youtube.com/channel/UC1R5RY4f8f4mumwQsbWnDww/

Boards and related sites

[232] **UPSB** - Universal Pen Spinning Board (English-speaking countries)
Pentix board "UPSB v1" pub11.ezboard.com/bpentix
(New domain) www.pentrix.com/upsb/
SuperhandZ forum p210.ezboard.com/fsuperhandzfrm124
UPSB v2 www.pentrix.com/upsb2/
UPSB v3 1st www.upsb.info/forums/portal.php
UPSB v3 2nd www.upsb.info/forum/index.php
v3 archive upsb-v3.spin-archive.org
UPSB v4 forum.upsb.info
v4 archive upsb-v4.spin-archive.org
UPSB Wiki www.upsb.info/wiki/
UPSB v5 www.upsb.info/xforum/index.php

[233] **UCPSB** - UCPSB: the Collective Pen Spinning Board (English)
UCPSB v1 `ucpsb.forumup.com/index.php`
UCPSB v2 `z15.invisionfree.com/UCPSB/index.php`
(New domain/archive) `www.tapatalk.com/groups/ucpsb/`

[234] **Official UPSB Battles Archive**
`brc.hollosite.com`
`upsb.coolinc.info`
`mwahaha91.rbhscsf.org/UPSB/`

[235] **Pen spinning research room**
`www.tcup5.com/511/konhide.html`
`bbs.nazca.co.jp/10/konhide/`
`ybbs.nazca.co.jp/1/konhide/`
`jbbs.livedoor.jp/sports/7481/`
`jbbs.shitaraba.net/sports/7481/`

[236] **JEB** - JapEn Board (Japan)
JEB v1 `penspinning.jp.land.to/phpBB2/index.php`
JEB v2 `jeb.s3.zmx.jp`
JEB v3 `japenboard.org`

[237] **FPSB** - French Pen Spinning Board (French-speaking countries)
Cubeforum `cubeforum.c9radio.com`
FPSB v1 `la3e2.free.fr/FPSB/`
FPSB v2 `thefpsb.free.fr`
v2 archive `thefpsbv2.penspinning.fr`
FPSB v3 `thefpsb.penspinning.fr`
FPSB v4 `www.thefpsb.com`
FPSB v5 `forum.penspinning-france.fr`

[238] **연필돌리기까페** - Pencil Turning Cafe (Korea)
`cafe.daum.net/panspin`

[239] **펜돌사** - PenDolSa (Korea)
`cafe.naver.com/no1penspiners`

[240] **Naver펜돌사** - Naver PenDolSa (Korea),
also known as **KPDS** - Korean PenDolSa
`cafe.daum.net/990701`

[241] **UKPS** - United Korea Pen Spinning (Korea)
`cafe.daum.net/PDSKIN`

[242] **KPSA** - new Korean Pen Spinning Association (Korea)
`cafe.daum.net/Kpsa`

[243] **KIPS** - Korean Institute for Pen Spinning (Korea)
cafe.naver.com/penspinningkips

[244] **PSTB** - Pen Spinning Tieba (Mainland China)
tieba.baidu.com/f

[245] **PSH** - PSerHome (Mainland China)
pserhome.chinadance.cn
www.pserhome.com

[246] **Yahoo groups**
Troposphere English group
groups.yahoo.com/groups/PenSpin_Troposphere1
Troposphere Chinese group
hk.groups.yahoo.com/group/PenSpin_Troposphere
Troposphere Japanese group www.egroups.co.jp/group/penmawashi
Taiwan Pen Spinning tw.club.yahoo.com/clubs/pens
Pentrix Yahoo group tw.club.yahoo.com/clubs/pentrix

[247] **KCF** - KiT-CaT Pen Spinning Forum (Hong Kong)
kitcat.hkjzone.com
www.kitcat-tricks.net

[248] **PZ** - Penzone (Hong Kong)
www.penzone.org

[249] **HKPSA** - Hong Kong Pen Spinning Association (Hong Kong)
Created when KiT-CaT and Penzone merged on July 2008.
www.hkpsa.com

[250] **TWPS** - TaiWanese Pen Spinning forum (Taiwan)
penspin.net

[251] **VPC** - Vietnam Pen spinning Council (Vietnam)
vpcenter.freeforums.org

[252] **VNPSB** - VietNam Pen Spinning Board (Vietnam)
vnpsb.net/index.php

[253] **PPSC** - Pinoy Pen Spinning Community (Philippines)
ppsc.darkbb.com

[254] **PHPS** - PHilippines Pen Spinning (Philippines) *(Facebook group)*

[255] **SPSC** - Spanish Pen Spinning Community (Spanish-speaking cs.)
Penspinning-latino (SPSC v1) www.foros.net/penmexico.html
SPSC v2 spsc.es
(New domain) penspinning.es

[256] **FLPS** - Foro Latino de Pen Spinning (Spanish-speaking countries)
penspin.notlong.com

[257] **LSPSC** - Latin-Spanish Pen Spinning Community (Spanish-speaking countries) *Closed whatsapp group, now merged with SPSC.*

[258] **RPSC** - Russian Pen Spinning Community (Russia)
ru-penspinning.ru
penspinning.clan.su
penspinning.org

[259] **SPSB** - Soviet Pen Spinning Board (Russia)
penspinning.su

[260] **KzPSC/KPSC** - Kazakhstan Pen Spinning Board (Russia)
www.penspin.ucoz.kz
penspinning.kz/forum/

[261] **Pen Spinning Club (Russia)**
vk.com/pen_spinning_club

[262] **THPSC** - ThaiSpinner (Thailand)
www.thaispinner.com
thaispinner.forumth.com

[263] **BPSC** - Belgian Pen Spinning Community (Belgium)
www.penspinning-be.com

[264] **GPC** - German Pen spinning Community (Germany)
www.penspinning.de

[265] **BRPSB** - Brasil Pen Spinning Board (Brazil)
forum.brpsb.com.br

[266] **PPP** - Polish Pen spinning Portal (Poland)
penspinning.pl

[267] **MyPSC** - Malaysian Pen Spinning Community (Malaysia)
mypsc.30.forumer.com

[268] **SGPSC** - Singapore Pen Spinning Community (Singapore)
sgpsc.forum.st

[269] **PUPSC** - Pulau Ubin Pen Spinning Community (Singapore)
Closed whatsapp/telegram groups.

[270] **IPSB** - Indonesian Pen Spinning Board (Indonesian)
www.indopenspin.com/forum

[271] **LPSA** - Liechestein Pen Spinning Association

Not for Liechestein but a private, invite only board.
psws-blog.de/board/index.php

[272] **SweSpin** (Sweden)
www.swespin.se

[273] **PSUK** - Pen Spinning United Kingdom (United Kingdom)
www.penspin.co.uk
penspinuk.freeforums.org/portal.php

[274] **NLPSB** - Netherlands Pen Spinning Community (Netherlands)
nlpsc.actieforum.com

[275] **QPSB** - Quebec Pen Spinning Board (Quebec)
quebecpenspinning.forumactif.net

[276] **DPSB** - Danish Pen Spinning Board (Denmark)
dpsb.forumup.dk

[277] **SPC** - Swiss Pen spinning Community (Switzerland)
www.penspinning.ch

[278] **ITPSB** - ITalian Pen Spinning Board (Italy)
www.penspinning.eu/itpsb/index.php
www.penspinning.it

[279] **APC** - Austrian Pen spinning Community (Austria)
www.psaustria.gnx.at

[280] **CLPSA** - ChiLean Pen Spinning Association
www.penspinning.cl

[281] **TPC** - Turkish Pen spinning Community (Turkey)
penspinning-tr.com

[282] **AusPSA** - Australian Pen Spinning Association (Australia)
s1.zetaboards.com/GWSC/index/

[283] **EuRaPen**, European board for those who didn't like UCPSB, by Fratleym and Tourneffaceur
eurapen.free.fr/index.php

[284] **IPSC** - International Pen Spinning Community
www.facebook.com/groups/internationalPenSpinningCommunity

[285] **Pen spinning subreddit**
old.reddit.com/r/penspinning/

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