User Guide

2018 / 2019

Table of Contents

Standard Features

Comprehensive Ratios / Speeds

Every SpinOlution wheel can spin a range of yarns from fine to bulky. Although ratio is important, it is not the only factor to consider when spinning yarn. Your treadling speed, the amount & type of fiber you're drafting, and ratio speed all work together to spin the weight of yarn you desire.

Open / Bypassable Hook Orifice

You will never be trapped in or limited by a hook orifice. Spinners who enjoy spinning bulky (art yarns, locks, tailspinning) find an open orifice necessary for frustration-free spinning. For fine spinning and auto-wrapping, many spinners use the tube orifice accessory.

Magnetic Bobbins & Orifice Bar

Change your bobbin in seconds. No need to disassemble your flyer or remove your drive band when you are ready for a new bobbin. Just remove the orifice bar, remove the bobbin, put an empty bobbin on, and put the orifice bar back on.

Easy Adjust Tension (Uptake)

With tiny adjustments, you can find the perfect tension for every weight of yarn you want to spin.

Whisper Quiet Operation

With our multi-bearing system, our wheels are virtually silent. If you end up having a squealing, chirping, or knocking noise - turn to the troubleshooting section of this guide for a quick fix!

Ergonomic Treadle System

Many spinners who suffer from pain in their ankles, knees, or arthritis can spin painlessly on SpinOlution spinning wheels for hours because the effort to maintain treadle momentum is minimal and gentle on the joints.

Small Footprint with Floor Grips

Our wheels don't take up much room in your home or studio, and they won't run away from you when you're spinning.

Portability

Portability is a requirement for all our wheel designs. Carry the Pollywog by the kate. Carry the Hopper, Echo, Firefly, and Bees by the handle. The Bees also fold to fit in carry-on luggage for longer trips. Purchase the straps and wheels accessory for your MACH III to roll it around your next fiber festival.

Baltic Birch

Our wheels are made from **sustainably grown** & **harvested** Baltic birch.

Baltic Birch plywood is more durable than hardwood with superior strength and resistance to warping, splitting, and shattering. We ship wheels all over the world - and it's important to us that they function for a lifetime in all climates and humidity levels.

We've been shipping Baltic birch wheels around the world for over a decade - and we've never had a wheel warp. When you purchase a SpinOlution wheel, your wheel is guaranteed not to warp.

Return Policy

If you change your mind on your purchase, for any reason, within 30 days of product receipt - you can return your wheel to us for a full refund minus shipping costs. Shipping back to SpinOlution is your responsibility. To facilitate a return on your purchase, please contact your dealer.

Warranty

Our warranty on spinning wheels and parts is 1 year from date of product receipt and does not cover wear parts. For more information visit **spinolution.com/warranty.**

Your Spinning Wheel

Treadles

Treadling moves the drive wheel, which turns the flyer. If the wheel or the flyer is not moving, check that the drive band is in a pulley groove on the flyer whorl, not resting on the flyer spindle behind the grooves.

The treadling is very light on the lowest ratios; it will take hardly any effort at all to keep the wheel going. You may be able to keep the wheel spinning with only the toes of one foot treadling on one treadle. **The amount of effort needed increases on the higher ratios**, though still less effort than that used on traditional treadled wheels.

The drive wheel is stopped by holding your feet still on the treadles. If both feet exert slight downward pressure at the same time, then the drive wheel cannot rotate, so it halts, halting the flyer. The bobbin may continue to spin just briefly, as its braking system is separate from the treadling system. **As with all wheels, practice treadling your wheel until you can start it going the direction you desire.**

Drive / Flywheel

The drive wheel turns when you treadle. Knowing where your drive wheel is can help you determine what ratio you are on when you are spinning.

Monarch / Echo / Bullfrog / Pollywog - The drive wheel is the large wheel below the flyer.

Hopper - The drive wheel is wheel on the back of the head driven by the thick drive band.

Bee - The lower left wheel is the drive wheel. The lower right wheel is the flywheel.

Firefly - This model does not have a drive wheel since it is driven by a motor.

Accelerator

The Accelerator is powered by the drive wheel. It provides a larger ratio range and faster speeds for spinners who want to spin fine yarns from short staple length fibers. Most SpinOlution wheels either come with an accelerator built in, or available as an upgrade / accessory.

Monarch / Echo / Firefly: Spinners who spin short staple fibers like cotton will enjoy the 4 oz Accelerated (4A) upgrade accessory on their wheel.

Pollywog: Purchase an accelerator accessory to attach between the drive wheel and head. This accelerator works with both the 4 oz and 12 oz - and gives you 10 additional faster ratios.

Hopper: The Hopper has a built in accelerator (largest whorl) on the back of the head that gives you a higher range of ratios / faster speeds.

Bee: When you open your Bee you will see two wheels at the bottom. The wheel on the left is the drive wheel, and the wheel on the right is an accelerated flywheel.

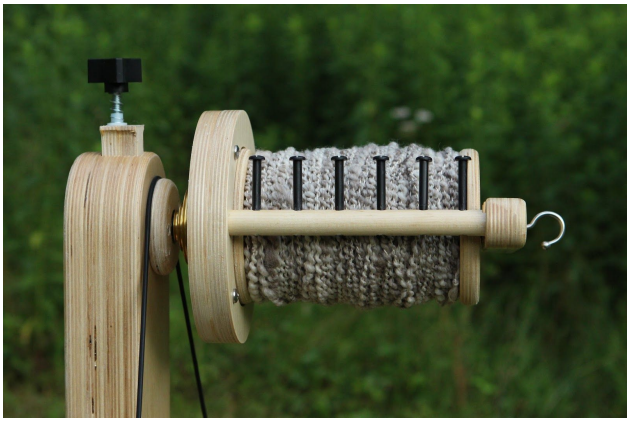
Flyer Head

The head of your spinning wheel is a detachable mother-of-all with flyer, bobbin, and tension hardware. When purchasing a new head, we refer to it as an upgrade. *The Bees do not have interchangeable heads.*

A Flyer Head Includes:

Flyer Bars - Each flyer has two wooden bars with black nylon pegs. The flyer bars are key-cut to snap onto the orifice bar right-side-up every time. There are magnets at the end of the flyer bars that attach to the orifice bar.

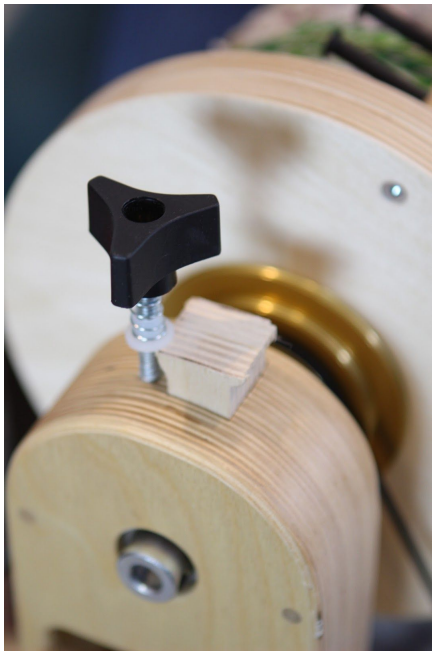
Flyer Pegs - We use black nylon pegs on our flyer bars. **These pegs are offset to fill the bobbin evenly.** Pegs gently guide your yarn onto the bobbin without snagging or catching the yarn or fiber. Pegs are easy to replace. Unscrew the peg with a screwdriver, and screw a new flyer peg in its place.



Flyer Rod - The bobbin slides onto this metal rod and secures to the back of the flyer with a magnet. The skein winder also slides onto the rod for winding the yarn off your bobbins. If you purchase replacement bobbins or a skein winder for a wheel made before 2018 - you may need a narrower rod size. Send a picture of your flyer rod to your dealer to confirm the rod size before ordering replacement parts for older wheels.

Orifice Bar - Our wheels come standard with a bypassable hook orifice bar. This magnetic bar easily snaps on and off of the flyer rod when you need to change your bobbin. You can purchase a tube orifice bar from your dealer if you prefer a closed orifice.

Bobbin - Bobbin Size is estimated based on how much worsted weight medium wool single will fit on a bobbin. However, this will vary based on the yarn and fiber you are spinning. One spinner fit 8 ounces of silk thread on a 4 oz bobbin. Bulky yarns fill bobbins up quickly (estimate about 16 oz of tailspun on a 32 oz bobbin).



Tension

Clockwise rotation of the knob increases the tension, and counterclockwise rotation decreases it. Very minor adjustments are needed to fine-tune the tension - so only use partial rotations for the initial adjustment.

How it works: The brake knob screws onto a threaded rod; it pushes on a spring, which pushes on a nylon flange, which pushes on a wooden block. The wooden block goes into the head; on the curved inside edge there is a piece of felt. The block pushes on the rod that the bobbin rides on.

Tension Blocks are Reversible! If your wheel starts squealing, rotate the block to silence the squeal before replacing the felt.

Different spinners prefer different amounts of tension. Spinners who spin super-fine yarns and short staple fibers may remove the tension block completely.

Spinners who spin fine to worsted only need a small amount of tension to get the uptake they need. Spinners who spin chunky, bulky, or art yarn need a lot of tension.

If you have never spun before - it may take some time to find that “sweet spot” of tension that feels and works best for you. Check out the Tension Tips on page 15.

Drive Band

Our drive bands are easy to change to a different ratio whorl in seconds. It is normal for the band to rub off some black residue as you spin. You can remove this residue with a cloth. **Keep your drive band out of the sun, as it will become brittle.** We recommend always keeping a backup drive band on hand. Drive bands are not covered by warranty. You can purchase replacement drive bands on our website www.spinolution.com/parts

Wheel Assembly

SpinOlution assembly is minimal, which makes our wheels a great choice for spinners who would prefer to skip hours of assembly and start spinning within minutes of receiving their new wheel. To assemble your wheel, you may need a phillips head screwdriver.

Remove all contents from box, carefully checking the packaging for small parts. Drive band(s) and screws will be located in a red bag.

If anything has arrived broken, contact your dealer immediately.

Keep the box & packing materials! Your 30-day money back guarantee begins the day you receive your wheel. If you decide that SpinOlution isn't a good fit for you - you'll need packaging to ship your wheel back. Contact your dealer to return within 30 days.

Monarch (MACH III) / Echo (10 minutes)

Screw the feet to the base using 4 screws (2 for each foot). Set the wheel upright and place the head into the base. Secure the head to the base with the black screw. Install the drive band (see link below) and start spinning.

Pollywog / Bullfrog (5 Minutes)

Set the base upright and secure the head to the base with the black screw. *If you are using a Pollywog accelerator, secure the accelerator to the base first, then secure the head above the accelerator.* Install the drive band(s) (see link below) and start spinning.

Firefly (5 Minutes)

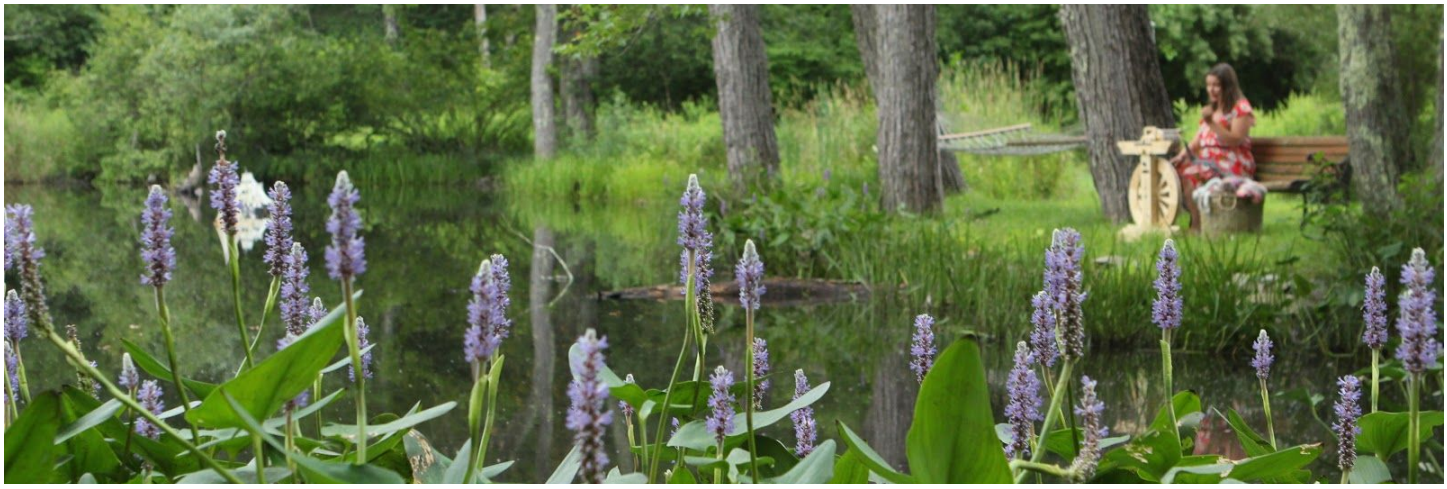
Loop the drive band over the head so it hangs between the whorl and neck. Place the head into the top of the base. Secure the head to the base with the black screw. Install drive bands (see video link below). Flip the blue switch to “Spin” and the power switch to “on” and turn the speed dial to the right to make sure the drive band is aligned. Your Firefly will have some charge, so you can begin spinning right away. After charging overnight, your firefly battery will last over 14 hours.

BEE (None)

Pull the dark wooden knob toward you and open the wheel by holding onto the flyer and lifting it up to the right. When the wheel is fully open, gently let go of the knob and listen for a “click” to make sure the wheel is locked into the upright position. Install the drive bands (see video link below) and start spinning.

HOPPER (5 Minutes)

Open the wheel by placing the U-shaped stand on the floor so the wheel sits upright. Place the head into the hole on top of the base, lifting the treadles to open the oval hub behind the head so you can slide the bearings on the head into the hub. Secure the head to the base with the black screw. Install the drive bands (see video link below) and start spinning.



Setting up your wheel

Putting on the Drive Band

For videos on removing drive bands, please visit our YouTube channel.

Monarch - Pull the peg out from the center hub of the drive wheel. This will release the treadle from the drive wheel. Take the drive band and loop it behind the arm. Resecure the treadle arm to the drive wheel with the peg pin. Loop the drive band over the flyer, and under the drive wheel - then stretch it upward to place on a flyer whorl.

Echo / Pollywog - Lift up the treadles to open the treadle hub. Bring the drive band thru the treadle hub so it can be placed along the bottom of the drive wheel. Close the treadle hub. Bring the band up and around the flyer. Place it on the smallest whorl. Then stretch the band and place it around the drive wheel. If this is difficult, place the band around the drive wheel first, then stretch it to place on a whorl.

Hopper - Place the thin drive band around the head and around the flywheel. Place the thick band around the metal whorl behind the treadles and on the groove behind the handle. For high ratios, move the thick drive band to the large whorl behind the handle.

Bee - These wheels ship with drive bands installed and ready to spin. For removing / replacing the bands, please visit our YouTube channel for video tutorials.

Firefly - Drape the band around the head of the Firefly before screwing it into the base so that is hangs behind the whorl. Screw the head into the base. Using your fingers or a crochet hook, loop the band around the shiny metal groove in the motor. Place the band on one of the middle whorls. You do not need to adjust ratios when you are spinning on the Firefly, since it is driven by a motor and the speeds are variable.

Putting a Leader Thread on the Bobbin

SpinOlution bobbins have leader clips to make it easy to add leader thread. Simply cut a 3 foot length of thread or yarn to use as a leader (if you are a beginner, cotton crochet thread works great) and tie it in a loop. Stick the knot of that loop under a clip. You can lead from the back clip or front clip - whichever you prefer. Bring the loop of thread around the left pegs for spinning (right pegs for plying) and thru the orifice.

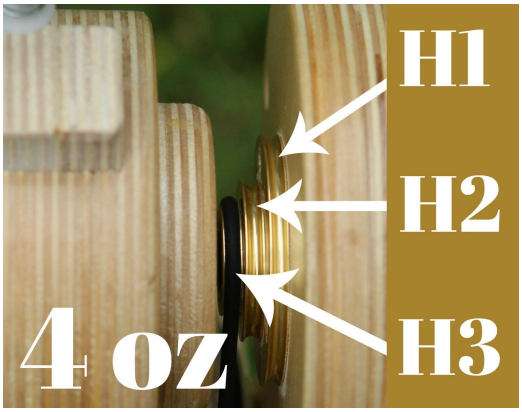
Putting the Bobbin & Orifice on the Flyer

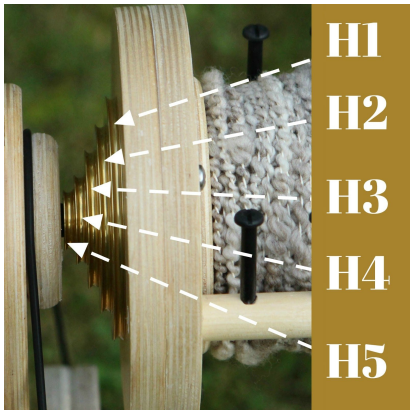
Slide the bobbin onto the flyer rod until you hear a “click” of the magnet. If you do not hear this click, rotate the bobbin slightly to align until you hear a “click”. Your bobbin connection may be tight to start, and will loosen over time. This is normal. Pull gently on the bobbin to make sure the magnet is engaged. Then place the orifice bar on the flyer rod until you feel the magnet engage with a “click”. If the orifice bar does not “click” onto the flyer, make sure the flyer arms are aligned. If not, gently rotate them to the left or right to align with the bar. This is normal.

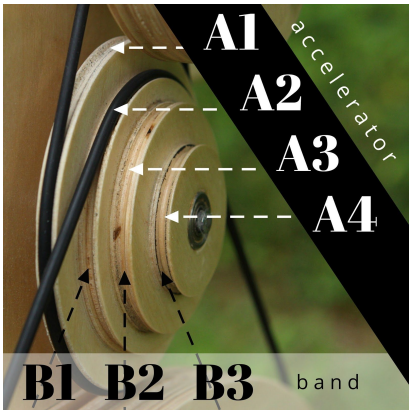
Finding Your Preferred Ratio

Every spinner has a different preference regarding their favorite ratios - which work in harmony with their treadling cadence and fiber type - to spin the weight of yarn they desire. Some spinners treadle slowly, and need higher ratios to spin a fine yarn. Other spinners treadle quickly, and can spin fine yarn on a lower ratio.

Short staple fibers like cotton need extra-high ratios to create enough twist to secure the fiber. Spinning locks from fleece or tailspinning need extra-low ratios so that the yarn doesn’t knot up around the orifice. **If you are a beginner, we recommend starting on the lowest ratio (H1) and working up from there.**







Golden Whorl Ratio Spectrum

We have included the lowest, highest, and number of speeds on each wheel model. Complete Ratio maps are in each wheel's ratio guide. Download at www.spinolution.com/user-guides.

	4S Lowest Highest # Speeds	4A Lowest Highest # Speeds	8 oz Lowest Highest # Speeds	12(A) oz Lowest Highest # Speeds	16 oz Lowest Highest # Speeds	32 oz Lowest Highest # Speeds
Monarch	---	1:12 1:52 9	1:6 1:22.5 5	---	1:6 1:22.5 5	1:6 1:22.5 5
Echo	1:3.5 1:18 4	1:9.5 1:40 10	1:6 1:22.5 5	---	1:6 1:22.5 5	1:6 1:22.5 5
Pollywog	1:2.5 1:14 4	1:8 1:33 12	---	1:4.5 (1:8) 1:14 (1:33) 3 (12)	---	---
Hopper (not Golden Whorl)	---	---	1:1.5 1:15 8	---	1:2 1:16 8	1:1 1:11 8
Worker Bee	---	---	---	---	1:4 1:18.5 12	---
King Bee	---	---	1:4 1:34 12	---	---	---
Queen Bee	1:4 1:44 15	---	---	---	---	---
Bullfrog	---	---	---	---	1:6 1:22.5 *5*	---

Firefly ratios are variable. Older models have different ratios.

Dimensions

	weight	height	depth	orifice height	drive wheel diameter	folded dimension
Monarch	25 lb	32 in	12 in	27 in	20 in	---
Echo	14 lb	28.5 in	12 in	25 in	16 in	---
Pollywog	8.5 lb	20.75 in	9 in	19.25 in	12 in	---
Hopper	13 lb	20.5 in	16 in	21 in	9 in	---
Worker Bee	14 lb	30 in	13 in	27 in	9 in	12h 19w 9d
King Bee	14 lb	30 in	13 in	27 in	9 in	12h 19w 9d
Queen Bee	14 lb	30 in	13 in	27 in	9 in	12h 19w 9d
Firefly	13 lb	12 in	10 in	variable	motor	---
Bullfrog	14 lb	28 in	11 in	24 in	16 in	21h 18 w 11d

Flyer Head Options

	4A oz	8 oz	12 oz	16 oz	32 oz	64 oz
Pollywog	---	---	$409	---	---	---
Echo	$549	$549	---	$549	$549	---
Monarch	$549	$549	---	$549	$549	$799
Firefly	$549	$549	---	$549	$549	$799
Hopper	---	$489	---	$489	$489	---

**Subject to change. Contact your local dealer for current pricing including shipping costs.*

Accessories

Lazy Kate - $189

The SpinOlution Lazy Kate fits all bobbin sizes except the 64 oz. It can be placed on the floor for easy plying next to all of our wheels, or attached to the MACH III, Echo, Hopper, and Firefly. **The lazy kate is included in the Echo, Hopper, Firefly, and MACH III Package Deals.** The lazy kate legs fold flat and the bars are held on by magnets for easy storage.

Skein Winder - $129

The SpinOlution skein winder can wind **both 1 & 2 yard skeins**. It can be placed onto a **8 oz, 16 oz, or 32 oz flyer**. The skein winder will lock into place on the 8 oz flyer - as it is the same size as an 8 oz bobbin. **The skein winder is included in the Echo, Hopper, Firefly, and MACH III Package Deals.** The skein winder comes apart and lays flat for easy storage.

Niddy-Noddy - $59

The niddy noddy can wind **both 1 & 2 yard skeins**. The size is best for unwinding skeins from our **4 oz** & **8 oz** bobbins. *For larger skeins (16 oz & 32 oz bobbins) we recommend the skein winder accessory.* Our niddy noddy is portable, with easy carrying handles, and made from baltic birch. **The niddy noddy is not included in Package Deals.** The niddy noddy comes apart and lays flat for easy storage.

Orifice Bar - $29 / $44

Bobbins - $29 / $49 / $79

Studio Chair - $299

Flower & Butterfly Engraving

Ask your Dealer about getting your ECHO wheel engraved with Wildflowers, or your MONARCH wheel engraved with our Butterfly design! In the future we hope to add engraving options to all of our wheels.

Accessories do not include shipping costs. Contact your dealer for a price including shipping costs.

Routine Maintenance

DO NOT OIL, SERIOUSLY. NO OIL.

- Once a month remove the tension block to rotate - inspect/replace the felt.
- Dust the wheel with furniture polish when necessary.
- Change your drive band when necessary.
- Remove drive band residue with a rag and furniture polish when necessary.
- Move drive band to smallest ratio when not spinning.
- Remove drive band from wheel when stored for prolonged period.
- Check magnet on flyer shaft. If loose, apply superglue to secure.

Helpful Tips

Tension Tips

➔ **To set:** Start by twisting the knob until there is no pressure on the spring resting on it, so that any more clockwise twisting of the knob would cause the spring to start to compress.

➔ Hold the leader straight from the orifice hook toward you, not at an angle. Always go along all the pegs from the first one you come to, to the front of the flyer arm.

➔ Hold the yarn you are making in a line from the center of the orifice hook to you. You may find you need to increase tension slightly – only a quarter turn at a time – as the bobbin approaches full.

➔ The fuller the bobbin is, the more it can overcome the braking pressure. This is true of any Scotch tension based flyer system.

➔ On large bobbins, the weight of yarn on the bobbin will make treadling under high tension difficult. Remove some tension and allow the weight of the yarn to function as momentum based tension while you finish filling the bobbin.

➔ To spin ultrafine or short staple fibers, try completely removing the tension block.

Treadling Tips

- ➔ Place your feet on the treadles and, with *even pressure* from each foot, gently press down one foot at a time to turn the drive wheel which (if connected by your drive band) will turn the flyer and twist your fiber into yarn.
- ➔ We recommend trying different chairs to find the most comfortable height for your body.
- ➔ Depress one treadle fully, and then the other.
- ➔ Your heels rest on the floor / heel rests in front of the treadles, only your toes need to go up and down.
- ➔ If you try to push down a treadle with one foot before the other treadle has gone completely down, you will find the treadle difficult to push. With a little practice, you will soon find where each side is completely depressed and adapt your rhythm to the upswing of the other treadle.

Ratio Tips

- ➔ If you are just getting started spinning, we recommend **starting on the slowest ratio** and working up to faster ratios from there.
- ➔ **We recommend moving the drive band to the highest (smallest) ratio at the end of each spinning session**, so that the band can “recover” from being stretched. This maintains its elasticity so it will be ready for you, when you are ready for spinning at the higher ratios.

Spinning Tips

- ➔ **When spinning clockwise, it's best to start on the right-side pegs; counter-clockwise, start on the left-side pegs.** That way the yarn will stay against the pegs as you spin.
- ➔ You will need to stop and change pegs from time to time so that the little hills of yarn that build up don't collapse into messes on the bobbin.
- ➔ For even weight distribution, fill from the front to the back, and toward the front again.
- ➔ **The last peg before the orifice hook is important:** it prevents the yarn from rubbing against the edge of the bobbin: be sure to be outside the final peg.

Troubleshooting

Yarn is not taking up on the bobbin

- Increase the tension by ¼ turns clockwise until yarn takes up.
- Make sure the bobbin is locked into the magnet at the back of the flyer.
- Make sure the orifice bar is locked to the magnets on the flyer bars.
- As the bobbin fills, you will find draw-in decreases – this is standard behavior in scotch tension wheels; increase the brake tension and continue filling your bobbin.
- Check if your yarn has jumped off the pegs, it could wrap around the flyer spindle between the bobbin and orifice arm. Remove the orifice arm, unwrap this yarn, and then restart spinning.
- Check if your fiber is wrapped around the hook or pegs.

Drive Wheel is Rubbing / Wobbling

All drive wheels are balanced in quality control before being test driven. However, during shipping the drive wheel may become unbalanced. It is common for a drive wheel to arrive unbalanced after shipping. This does not mean your wheel is warped. It just needs one easy adjustment.

- If your drive wheel has a slight wobble, you may not need to balance it. A small amount of wobble is fine. **You only need to adjust the wheel if the wobble causes the drive wheel to rub against the back of the wheel, or if it causes your drive band to pop off during use.**
- You will need a phillips head screwdriver.
- Behind the drive wheel in the back of the hub there are three screws. You will need to loosen the screws to rebalance the wheel.
- Line the screwdriver up with each screw behind the hub. You will need to put the screwdriver between the holes in the drive wheel to reach the screws behind the hub.
- Using your thumb as a gauge, you can straighten the wheel to align it so that it spins straight.
- Spin the drive wheel, and press on it, using your thumb as a gauge, until it runs true.
- Tighten the three screws (they are set into steel so you can tighten them firmly) to secure the drive wheel into a “true” balanced position.
- Place the screwdriver thru the holes in the Monarch / Echo

Take up is too strong

- Decrease the tension by small increments. Minor adjustments can have a large effect.
- For very fine spinning, start with a half full bobbin and/or lace the yarn across the flyer arms to decrease the drag-in of the yarn. A half-full bobbin is the same as one lacing across the flyer arm, and 2-3 lacings will reduce the draw in enough for very fine spinning.

Yarn is thumping as you spin

- Be sure your yarn is coming from the center of the orifice hook toward your body in a fairly straight horizontal line. A slight angle is possible, but don't put the yarn at a 45 degree angle up, down, or sideways from the center of the orifice hook.
- Switch to an **tube orifice bar** if your spinning style is naturally to one side.

Drive band is popping off

- **BEES**: Make sure you are on a functional ratio. You may have your band on a whorl combination that cannot be spun on. Use the Bee Ratio Map to make sure your bands are correctly placed.
- **FIREFLY**: You do not need to use different whorls on the Firefly since it is electric and the speed is variable based on the motor. We recommend using the middle Golden Whorl on all Firefly head sizes. If your band pops off, it may be stretched, just move it to a larger groove.
    - If your band continues to pop off, it is possible the motor of your Firefly got dislodged in shipping. Please contact your dealer to troubleshoot.
- Increase speed slowly, over 5-10 treadlings, from nothing to the speed you want to spin, to minimize or avoid drive band slippage. Going from zero to top speed on the very first down stroke will almost always make the drive band slip.
- The band may slip more in the highest ratio position if you often use it at the low ratio settings. Store your drive band in the highest ratio groove or even on the rod behind the grooves between spinning sessions to help it regain its high ratio size.
- If you have overstretched the drive band, you may find it will recover elasticity by removing it for a few days. New drive bands can be purchased on our website.

Squealing / Chirping Noise

DO NOT OIL, SERIOUSLY. NO OIL.

- This will happen during the lifetime of your wheel and is considered routine maintenance. It means the Tension block needs to be rotated or fresh felt to absorb friction and silence the noise of it pressing on the flyer.
- To rotate: spin the block around 180 degrees and insert it back into the head.
- To change the felt: Scrape the felt off. Apply rubber cement to the block and apply fresh felt to the cement. Wait to dry completely and then place back in the head secured by properly aligned tension hardware.

Bobbin is Rattling

- Make sure the flyer rod still has the magnet attached. If the magnet is missing, it may be stuck in the back of one of your bobbins. Remove the magnet and secure it to the back of your flyer rod with a drop of super glue. If you lose your magnet, you can purchase a replacement at www.spinolution.com/parts
- Make sure the bobbin is secured to the magnet on the flyer rod. A loose bobbin will rattle.
- Make sure the orifice bar is secured to the flyer arms. A loose orifice bar will also cause a rattle.
- Make sure you are filling up your bobbin evenly. If you only fill the front or back of your bobbin it can cause a temporary rattle noise on the flyer rod until it becomes balanced with more yarn.

Tension is Erratic

- Remove the tension block, inspect the felt for wear, replace the felt if worn or smooth.
- Rotate the tension block 180 degrees.
- Sand the sides of the tension block if it is not sliding smoothly into the head.
- Make sure your bobbin is secured to the magnet at the back of the flyer rod.
- Make sure your orifice bar is secured to the magnets on the flyer arms.
- Make sure your yarn / fiber is not wrapped around the hook or caught on a peg.
- Try drafting yarn closer to the orifice instead of spinning a long length of yarn and letting it wind onto the bobbin all at once. Twisting long lengths of fiber and then pushing the yardage onto the bobbin can wrap around the hook and cause tension issues.
- Make sure you are spinning in front of the orifice, and not at an angle.

Treadling is Difficult

- Reduce the tension.
- Check if something has gotten under the treadles, jamming them.
- Check if something is pressing against the drive wheel.
- Check if the drive band is out of the grooves on the flyer.
- Sit closer to the wheel or try a higher / lower chair (especially if you're on a Hopper)
- Check that the drive band is in one of the grooves on the back of the flyer, and not on the metal rod behind them.
- On accelerated wheels like the Bee, Pollywog, and 4A Flyer - the smallest ratio requires the most effort.
- if you are on the highest ratio, try switching to the lowest ratio for a few minutes to stretch the band just a bit, and then returning to the highest ratio
- If you are trying to start fast, start with a slower first few treadles, increasing speed gradually over the first few treadlings.
- If you are on the highest ratio, use silicone-based lubricant on the shaft & bearings behind the flyer to loosen the bearings. Treadle without spinning to allow the lubricant to cover the bearings (*non-golden whorl models only*)

Knocking when treadling

- The knocking is due to the oval treadle hub opening up and hitting the bearings instead of staying closed around the bearings. It is most commonly caused by the spinner having an uneven treadling cadence (pressing harder on one treadle than the other) causing the oval treadle to open and knock against the bearings.
- Fix: Put a rubber band around the outside of the treadle to keep it from opening or add several layers of painters tape to the inside of the treadle (hidden), and gently close the treadle over the layers of tape to secure.

Black Residue from Drive Band

- It is normal for black residue to wear off the band. Use a damp cloth to wipe this residue from your wheel and off the band.

Online Resources & Social Media

Ravelry Group

www.ravelry.com/groups/spinolution

Facebook Group

www.facebook.com/groups/spinolution

FAQ

www.spinolution.com/faq

Replacement Parts

www.spinolution.com/parts

Find a Dealer

www.spinolution.com/dealermap

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