

# Electric Eel Wheel 6.0

## User Manual

December 6, 2020



**Thanks for joining the EEW community!** The EEW 6.0 is a portable, affordable, and thoughtfully designed e-Spinner. This guide will help you get started with your new spinning wheel.

## Safety

This product has moving parts, and injury can result if used improperly. Before you plug in the wheel, set the speed control to zero by turning the dial counterclockwise as far as it can go. Be mindful of your surroundings and don't let any objects touch the spinning parts on the product while it is running. This product is not a toy and is not suitable for children under 14 years of age.

To reduce the risk of fire, electrical shock, or product damage, do not expose this to rain or other liquids. Do not use this product near flammable materials. Ensure that the wheel and the power supply are well ventilated.

The power supply has a 5.5×2.1 mm barrel jack and runs at 12 VDC at 5 Amps. When the power adapter is connected to power, it is in a standby condition and the circuit is considered live.

## Parts List

### Base

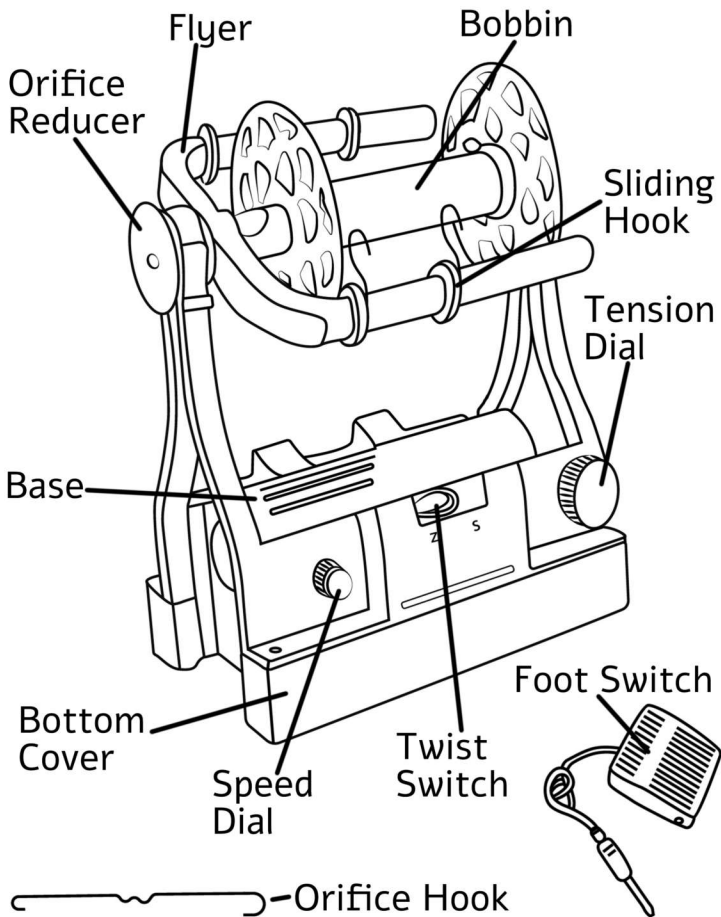
- 1 base
- 1 flyer
- 1 bottom cover
- 1 power supply
- 1 foot switch

### Bobbins

- 6 bobbin tubes
- 6 flat bobbin disks
- 6 pulley bobbin disks
- 12 metal bearings

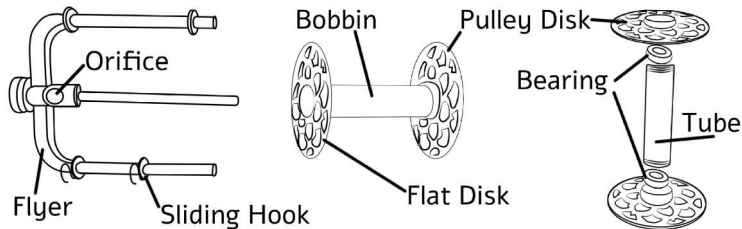
### Parts

- 1 orifice reducer
- 1 bobbin release dial
- 2 orifice hooks
- 2 drive belts
- 3 metal bearings:  
1 flyer, 2 spare
- 1 spin card
- 1 share card
- 1 hex wrench for pulley



## Initial Setup

When you receive the EEW, you need to spend a few minutes putting together some parts. No tools are required for this assembly.



First, assemble the bobbins. There are two types of bobbin disks one has a pulley (extra ridges) and the other is flat. Put a metal bearing into the end of each type of bobbin disk. Then take each of those disks and screw them onto a bobbin tube.

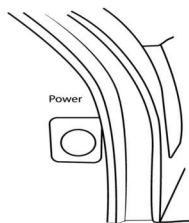
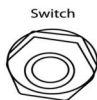
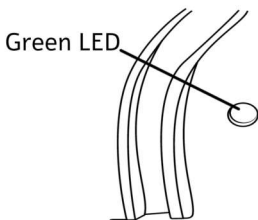
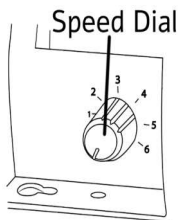
Next, slide a bobbin onto the flyer with the flat end at the orifice and the pulley end at the back. Put a metal bearing onto the back of the flyer and slot the whole flyer assembly into the base.

Finally, put the black drive belt on the motor pulley, and then wrap it around the flyer in the drive belt groove. Slide the tension string into the bobbin pulley. When you start spinning, you can adjust the tension dial; see the "Adjusting Uptake" section below.

If you want to attach the bottom cover (optional), slide its screws into the slots in the base. The bottom cover can hold a battery so you can spin without plugging the EEW into a wall outlet. Check [www.dreamingrobots.com/eew-60](http://www.dreamingrobots.com/eew-60) for more information about battery packs that work well with the EEW.

## Starting Procedure

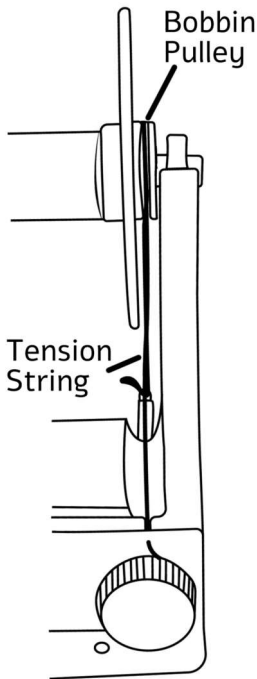
- 1) If you want to use the foot switch, insert its plug into the back of the base, in the port marked "switch."
- 2) Turn the speed dial on the side all the way counterclockwise to make sure the speed starts at zero (as shown in the picture to the right).
- 3) Plug the power supply into the wall. You will see a little power light on the power supply light up. If you're using a battery pack, turn it on now.
- 4) Plug the power supply or battery pack into the back of the EEW. A green light on the back of the EEW will blink three times to indicate that the EEW has power.
- 5) Slowly turn the speed dial clockwise to increase the speed of the flyer.
- 6) Press the foot pedal to start and stop spinning. The twist switch can also stop/start the wheel. The twist switch only reverses direction after you set the speed to zero.



## Adjusting Uptake

Uptake pulls the yarn you are spinning onto the bobbin. With too little uptake, the yarn will not feed onto the bobbin. With too much uptake, the wheel will pull the yarn out of your hands too soon, and your yarn will be under-twisted and prone to breaking. Set the tension as light as you can while getting enough uptake because that is easier on the motor.

To set the uptake, first adjust the dial so the string goes around the bobbin pulley with no tension. Then turn the tension dial clockwise slightly until the string has just a small amount of tension on the spring. To increase uptake, turn the dial clockwise. To decrease uptake, turn the dial counterclockwise.



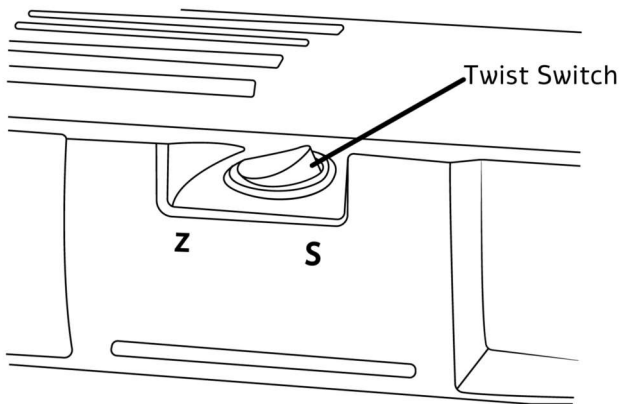
Tension Dial	Effect on Tension String	Effect on Uptake	Effect on Yarn Twist
Clockwise	Tightens string	More uptake	Fewer twists
Counter-clockwise	Loosens string	Less uptake	More twists

## Z and S Twist

The twist switch sets the direction of the twist added to the yarn as it is spun or plied. Usually spinners use Z for spinning singles and S for plying. To do this, set the twist switch into Z position and make your singles. When you're ready to ply, change the speed to zero or turn off the motor, then set the twist switch into S position. You can only reverse twist direction when the motor is not running.

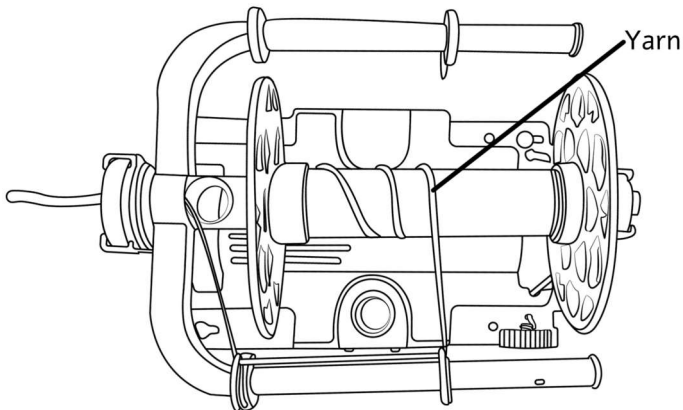
Twist must go in the opposite direction when you're plying. If you don't change the twist direction, your plied yarn will not form correctly. Your EEW includes a spin card that shows how to determine if the yarn has Z or S twist.

The twist switch can stop/start your spinning. It only reverses the direction if you set your EEW's speed to zero using the speed dial or the foot switch.



## Threading the Flyer

Tie a piece of yarn onto your bobbin disk as shown below so it can't slip. You will use this yarn as a leader for your roving. Thread this lead yarn through the hooks on the flyer arms. Then use the orifice hook to pull the leader out to the front of the wheel. Attach your spinning fiber to the lead yarn and you are ready to spin.

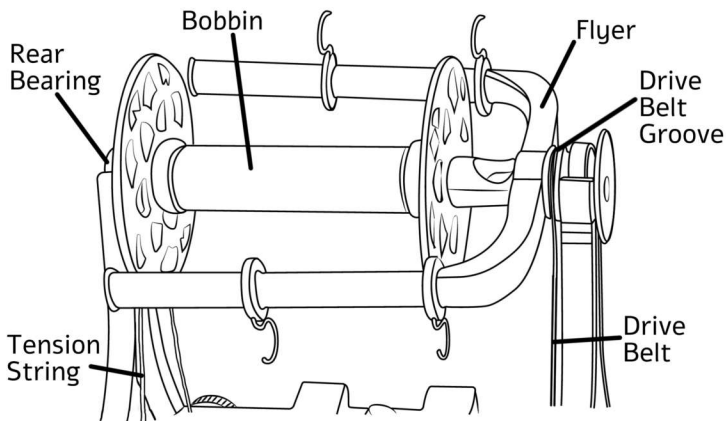


## Adjusting the Flyer Hooks

When you have spun enough yarn to form a bump on the bobbin, it is time to slide the flyer hooks. Stop the EEW from spinning by using the foot switch, speed control, or twist switch. Once the flyer has stopped moving, adjust the back sliding hook to a new position so the bobbin fills evenly. You don't need to move the front sliding hook. If the flyer vibrates at higher speeds, position the back flyer hooks evenly so the flyer is balanced (see the FAQ for more details).



## Changing Bobbins



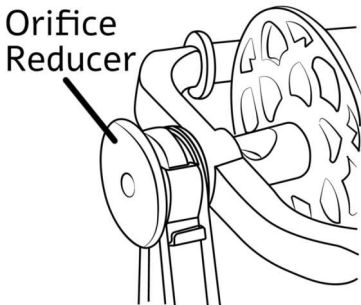
To remove a bobbin:

- 1) Remove the bobbin release dial, if you are using it.
- 2) Remove the tension string from the bobbin.
- 3) Remove the drive belt from the drive belt groove on the flyer.
- 4) Lift off the flyer and remove its rear bearing.
- 5) Slide the bobbin off the flyer.

Install a new bobbin by reversing these steps.

## Orifice Reducer

An orifice reducer is installed on the front of your flyer. When you spin thinner yarn, leave it in place to reduce the yarn's wobble as moves through the orifice. For thicker yarn, remove it by sliding it out of the orifice.

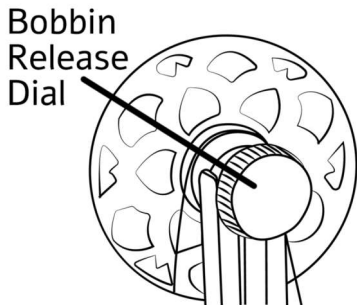


## Bobbin Release Dial

The bobbin release is an optional component that is added to the back of the flyer. It increases or decreases tension directly on the bobbin, to give you more control over how the EEW feels while spinning.

For new spinners, it is recommended you do not install it. Most people don't need to use this feature and it was included more as an experiment.

To use it, twist it on until you just start to feel it tighten. If you tighten it too much, the EEW will not spin. Adjusting it tighter will require more uptake. Experiment with different settings to see if you like the feel of this when spinning.



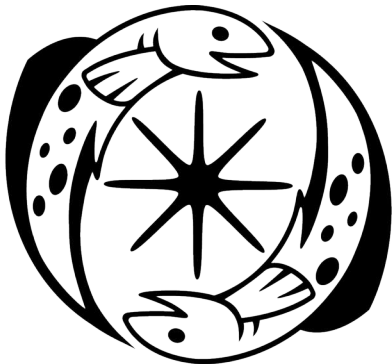
## Other Resources

- [www.dreamingrobots.com/eew-60](http://www.dreamingrobots.com/eew-60) has updated instructions and videos for the EEW 6.0. There is also an FAQ that will help answer common questions.
- [www.ravelry.com/groups/electric-eel-wheel](http://www.ravelry.com/groups/electric-eel-wheel) is a great online community for the EEW.
- [www.facebook.com/groups/ElectricEelWheel](https://www.facebook.com/groups/ElectricEelWheel) is the official Facebook group for the EEW.

## Troubleshooting

Why does my EEW vibrate at higher speeds?

- The most common cause is your flyer isn't balanced. To fix this make sure the two sliding hooks you aren't using are directly across from the two you are using. Also make sure that one set of hooks are facing upwards and one set facing downwards so the weight is distributed evenly on the flyer. This only matters at higher speeds.



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