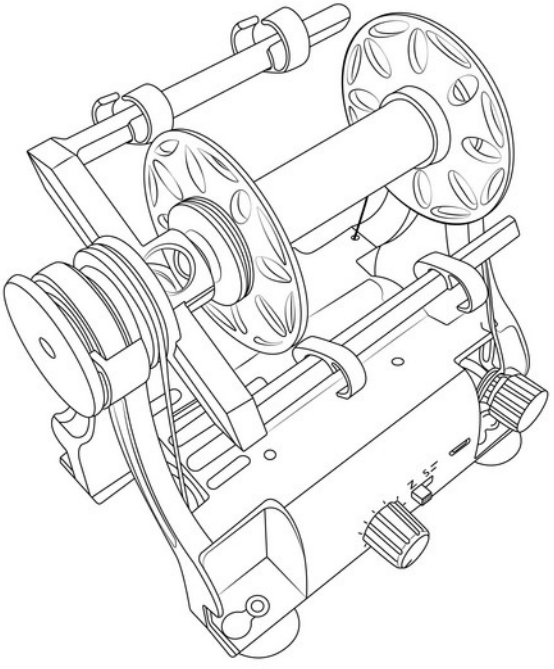
Electric Eel Wheel Nano 2
User Manual
February 7, 2022



Thanks for joining the EEW community! The EEW Nano 2 is an ultra portable and affordable 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 unsupervised 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 is a USB Micro 5VDC 2A power supply. When the power adapter is connected to power, it is in a standby condition and the circuit is considered live.

Parts List

Base

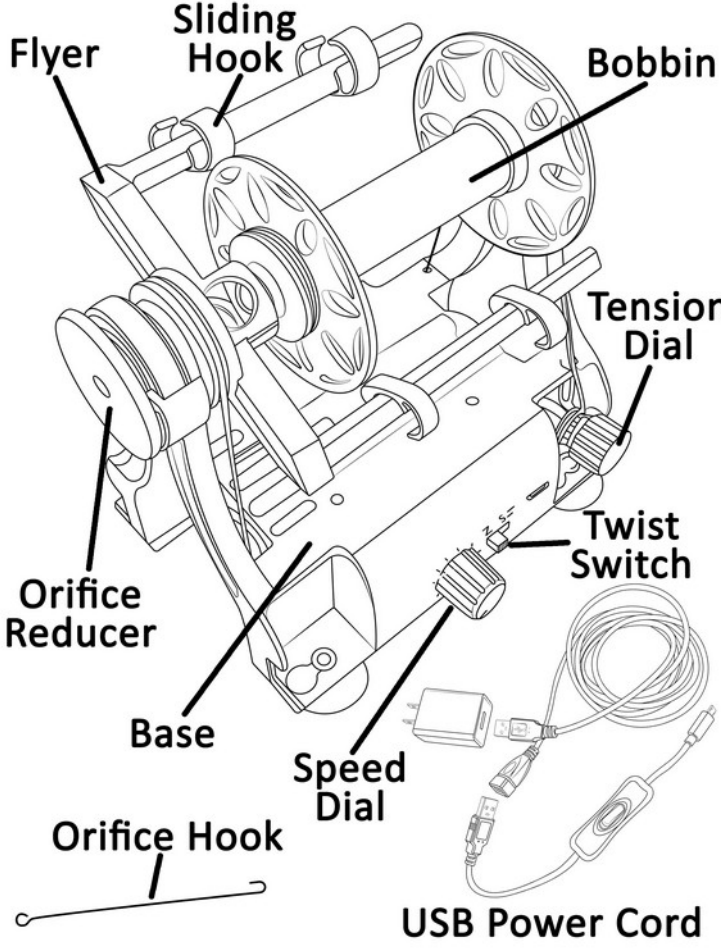
- 1 base
- 1 flyer
- 1 USB power cord

Bobbins

- 3 bobbin tubes
- 6 bobbin disks

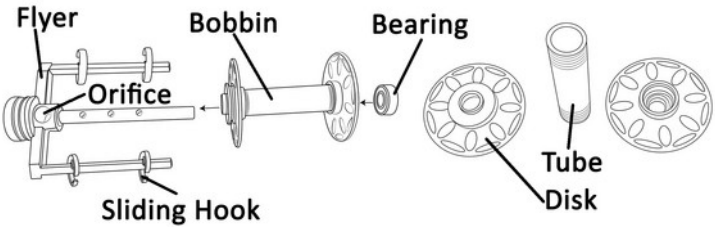
Parts

- 1 orifice reducer
- 1 orifice hook
- 1 drive belt
- 1 spin card


Flyer
Sliding Hook
Bobbin
Tension Dial
Twist Switch
Orifice Reducer
Base
Speed Dial
Orifice Hook
USB Power Cord

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. Screw the bobbin disks onto a bobbin tube.

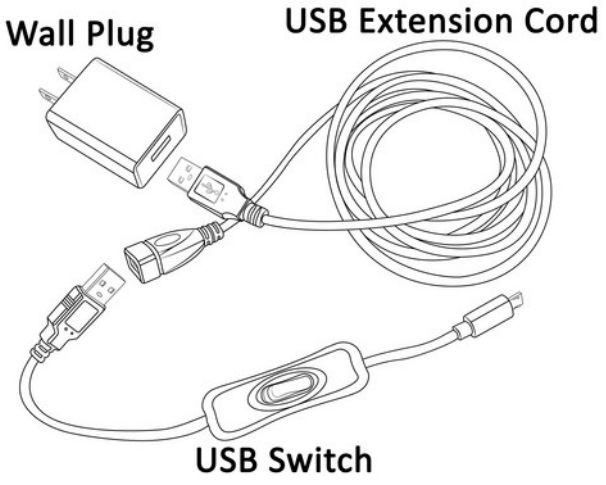
Next, slide a bobbin onto the flyer. Put a metal bearing onto the back of the flyer and slot the whole flyer assembly into the base.

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.

Starting Procedure

1) Turn the speed dial on the side all the way counterclockwise to make sure the speed starts at zero.

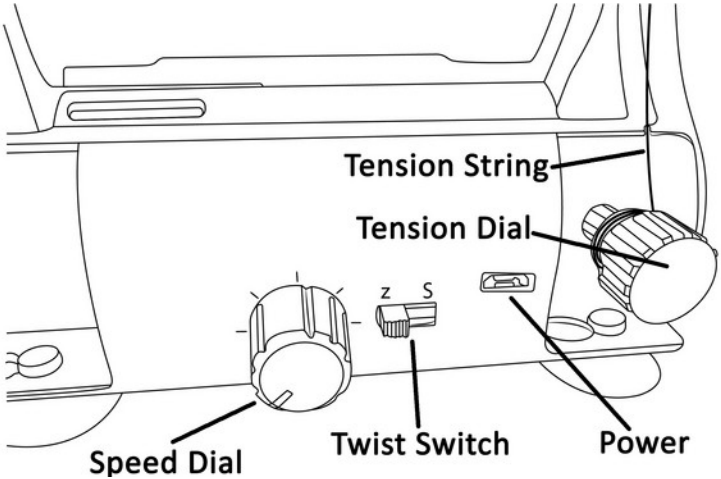
2) Plug the USB extension cord into the wall plug or into any 2A USB port and the other end of the USB extension cord gets plugged into the USB switch.



3) Plug the other end of the USB switch into the EEW Nano 2's power plug.

4) Plug the power supply into the wall, or if you're using a battery pack turn it on now.

5) Slowly turn the speed dial clockwise to increase the speed of the flyer. If it doesn't start spinning then flip the USB switch to the other position. This switch can be used to start/stop spinning.



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 tension 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. 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 tension string	More uptake	Fewer twists
Counter-clockwise	Loosens tension string	Less uptake	More twists

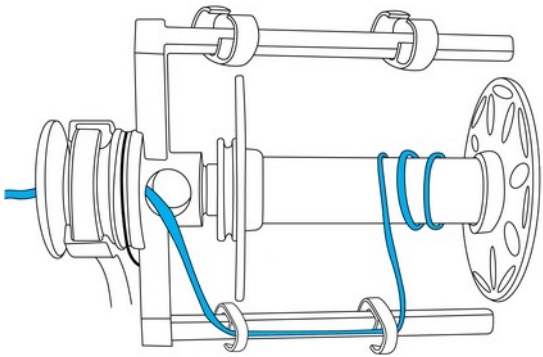
Z and S Twist

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.

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.

Threading the Flyer

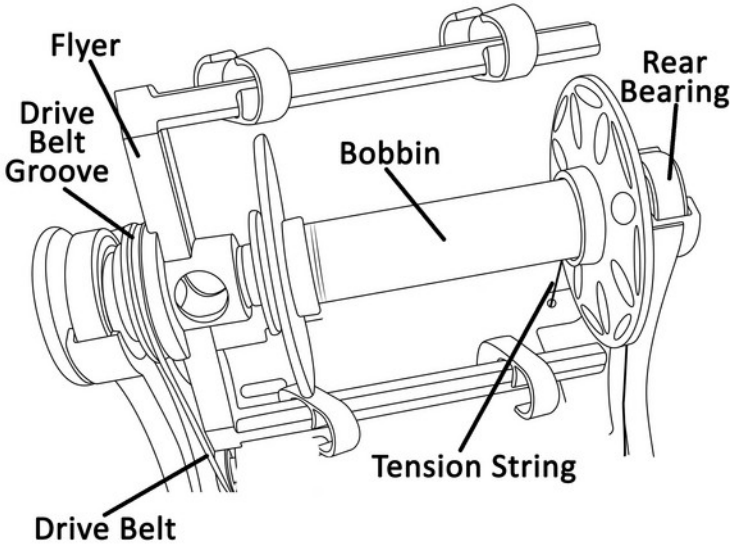
Tie a piece of yarn onto your bobbin disk as shown below so it can't slip. You will use this yarn as a leader for your roving. Thread this lead yarn through the hooks on the flyer arms. Then use the orifice hook to pull the leader out to the front of the wheel. Attach your spinning fiber to the lead 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 speed control or USB switch. Once the flyer has stopped moving, adjust the 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



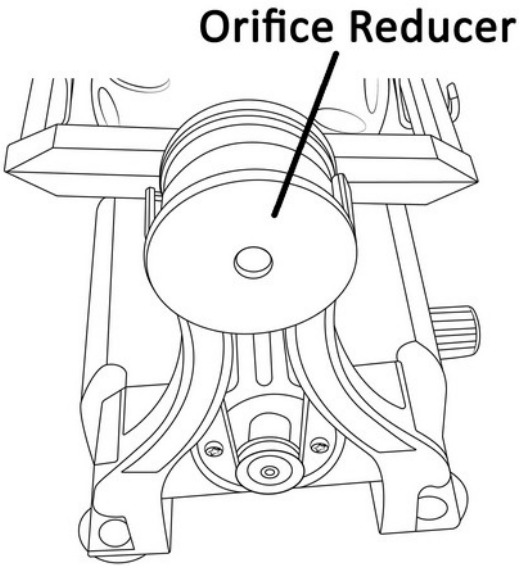
To remove a bobbin:

1) Remove the tension string from the bobbin.
2) Remove the drive belt from the drive belt groove on the flyer.
3) Lift off the flyer and remove its rear bearing.
4) 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 it moves through the orifice. For thicker yarn, remove it by sliding it out of the orifice.



Other Resources

- www.dreamingrobots.com/eew-battery-power has USB battery options if you want to spin without a wall plug.
- www.dreamingrobots.com/eew-nano has updated instructions and videos for the EEW Nano 2. There is also an FAQ that will help answer common questions.
- www.ravelry.com/groups/electric-eel-wheel is a great online community for the EEW.
- 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 is facing upwards and one set facing downwards so the weight is distributed evenly on the flyer. This only matters at higher speeds.

Why won't my EEW start?

- First try flipping the USB switch and see if that helps. If not try removing it completely since it is optional and then double check all the connections.

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www.dreamingrobots.com/eew-nano

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