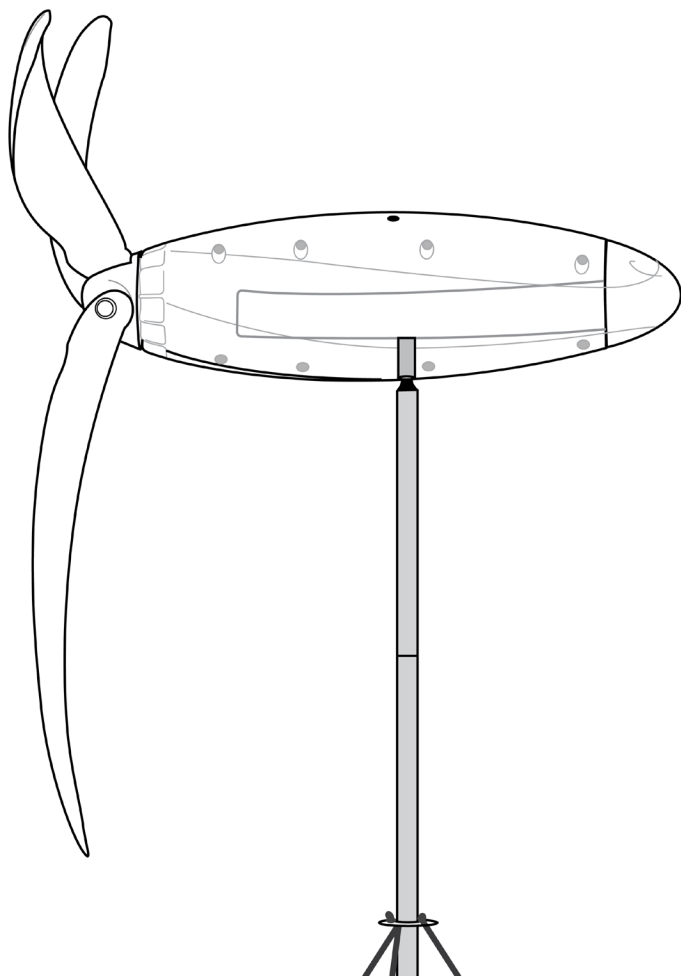




Welcome to Shine

READ USER MANUAL BEFORE OPERATING

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Congratulations on your Shine Turbine and welcome to the world of wind power!

Whether you're camping, van living, spending time off-grid, hanging at a cottage, or preparing for an emergency, the Shine Turbine provides renewable energy to power your handheld electronics - any time of day, almost anywhere the wind blows.



Caution

This is not a toy. Carefully read and understand the user manual and all safety instructions before using the product.

Never operate in winds forecasted, measured, or otherwise understood to be greater than 28mph/45kmph/24 knots. Always stand at least 10 feet upwind from the product while in operation and never obstruct spinning blades.

Failure to correctly follow the product instructions could result in personal injury or damage to the product.

Head to **shineturbine.com/warranty** to register your warranty.

Put this manual in a safe place for future reference.

An online version is available at **shineturbine.com/usermanual**



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4	Safety
6	Get to know your Shine Turbine
10	Operating conditions
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13	Accessories
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Safety



Please read all instructions before operating

The Shine Turbine is designed to operate outdoors on natural soft ground such as dirt, grass, and sand. This product should only be used with mounting systems made by Aurea Technologies and should never be left unattended while operating. Shine is not designed to be mounted to any object, building, or mode of transportation. Any attempt to do so will void the product warranty and could result in damage, injury, or death.

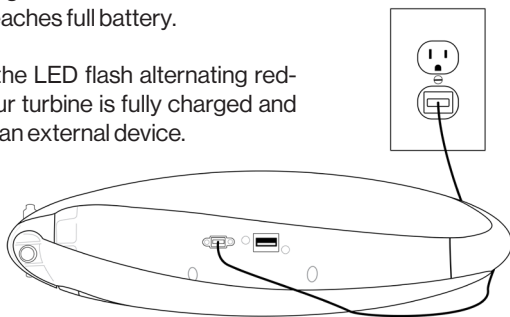
The Shine Turbine is not a toy and should not be used by anyone under the age of 12. Users must comply with all instructions and warnings. This product should never be used while under the influence of drugs or alcohol. If users cannot understand these instructions, they should not use this product.



Pre-charge Shine before first use

Before operating, plug your Shine Turbine into the wall using a USB Micro-B cable. Pre-charge until it reaches full battery.

Once you see the LED flash alternating red-purple-blue, your turbine is fully charged and ready to power an external device.





Mechanical Hazard

Shine's rotating blades pose a risk of injury if users are not cautious. Always approach the turbine with caution and never put any body parts, hair, or objects within the rotation of the blades.

When setting up Shine, avoid crowded locations where people walk, children play, or pets are at risk. To stop the turbine's blades from spinning, follow the Take Down instructions on page 22.

Always wait until blades have come to a complete stop before taking down the turbine or plugging in a charging cable.



Electrical Hazard

Shine contains lithium-ion batteries that could present a risk of fire, explosion, leakage, or chemical burn if not handled properly. Do not expose Shine to excessive shock, pressure, or vibration. Keep the turbine away from heat sources above 40°C/104°F and never submerge the product underwater. Never leave Shine unattended when charging its internal batteries. When not in use, store Shine in a climate controlled environment between 10°C - 26°C / 50°F - 80°F.

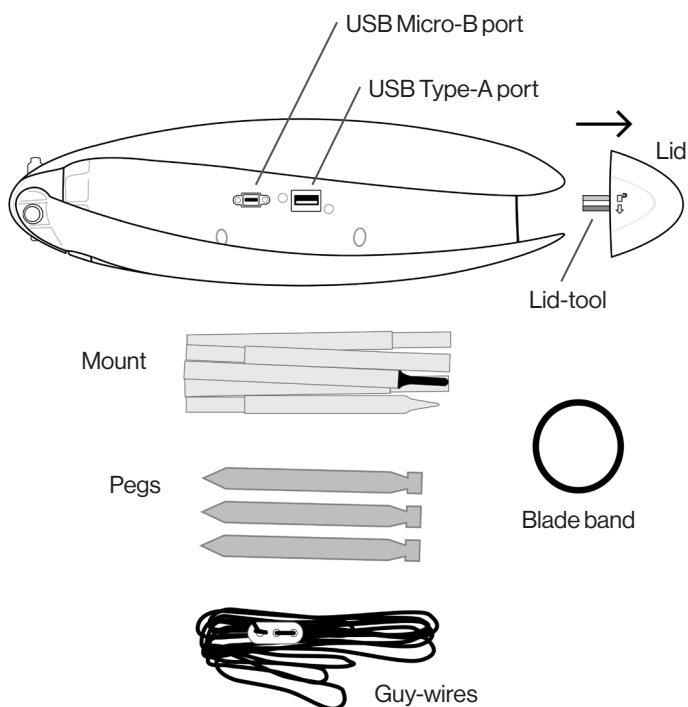
If batteries fail to recharge, contact Aurea Technologies at **support@shineturbine.com**.

Never attempt to change batteries yourself.

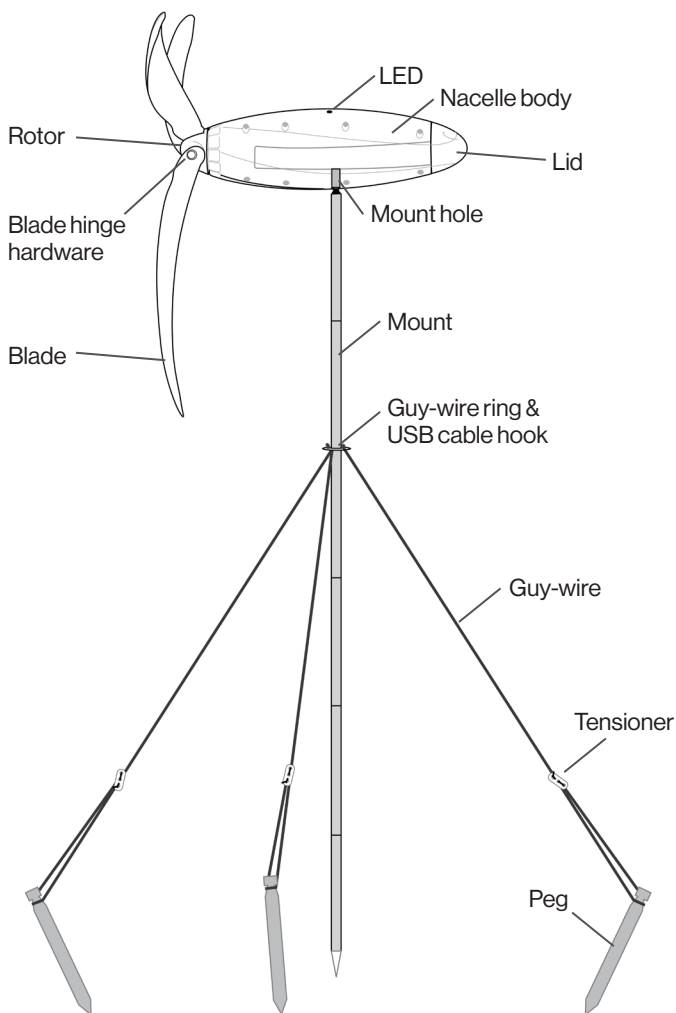


Get to know your Shine Turbine

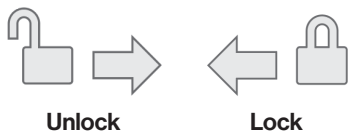
Unpacking Your Shine Turbine



Shine Operating



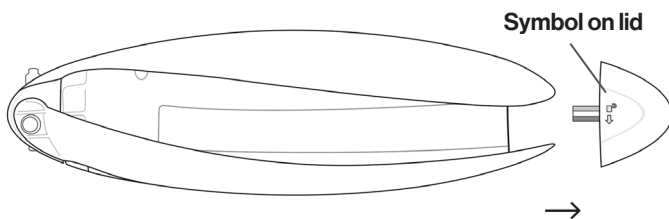
Symbols



The lock and unlock symbol on Shine's lid indicates which direction to turn the lid-tool when loosening or tightening Shine's blade hinge hardware when opening or closing blades.

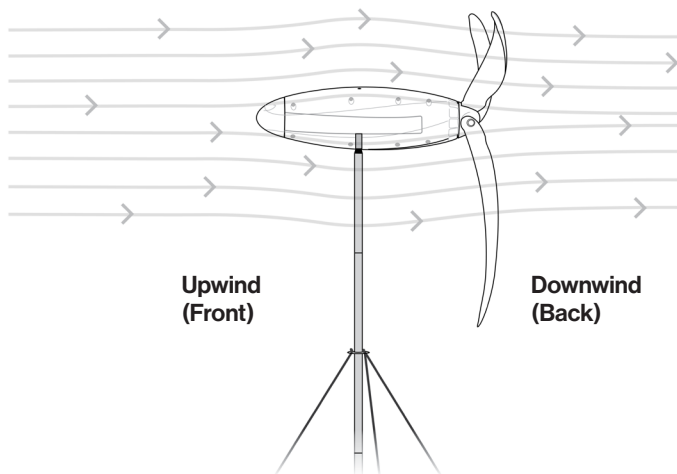
Do not excessively loosen or tighten blade hinge hardware.

Over tightening can cause parts to wear more quickly and eventually break. Under tightening can cause a risk of blades becoming loose and being damaged.



Wind Direction

Wind →



Shine is a downwind turbine

This means that the rotor and blades encounter the wind last. In other words, wind flows from Shine's lid to its blades.

Always approach the turbine from the front.



Caution: For your safety, always stand at least 10 feet upwind from the product while in operation.



Operating Conditions



Wind

8 - 28 mph

13 - 45 kph



Temperature

0 - 40 °C

32 - 104 °F

Always check the weather and wind forecast before using Shine.

A handheld anemometer can be useful for measuring wind speed and direction.



Caution: Do not use Shine in conditions outside of stated specifications.

Never operate the product in winds, forecasted, measured, or otherwise understood to be greater than 28mph/45kmph/24 knots.



Never use this product in extreme heat, extreme cold, snow, or storms which includes hurricanes, lightning, typhoons, tornados, tropical storms, and more.

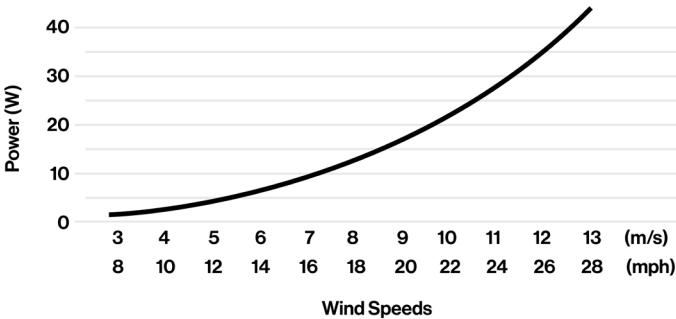
Shine is dust-resistant and water-resistant according to IP54 standards. The product can operate in the rain, however, it can not operate underwater and should never be submerged in water.

Never set up Shine in locations where wind or gusts (forecasted or measured) exceed 28 mph/45 kph and always monitor the turbine while operating.

Turbulent winds or rapid changes in wind speed may reduce guy-wire tension and lift pegs which could put the turbine at risk of damage. As a result, re-tighten guy wires on the turbine's mount whenever necessary.

Power Curve

Below is the power Shine generates at different wind speeds. The more laminar and constant the wind flow, the more consistent power the turbine will generate. Highly shifty or gusty wind conditions will reduce the amount of power the turbine can effectively produce.



Where to set up Shine?

Shine can be set up outdoors almost anywhere the wind blows, including by coasts, in mountains, on grassy plains, or wide open spaces!

Shine can not be mounted on any object or hard surfaces such as rock, pavement, or cement.

When identifying a setup location, look for soft natural ground like grass, dirt, and sand that Shine's mount and pegs can stake into. Never set Shine up at the edge of a cliff.

For maximum power generation avoid setting up by obstacles



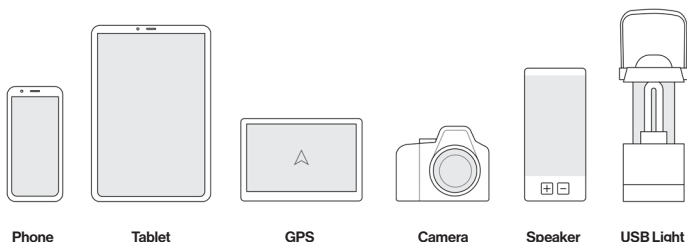
* drawing not to scale

To optimize Shine's power generation, avoid setting Shine up by obstacles that can create turbulence and block wind flow like trees, tents, physical structures, or a ridge.



What can Shine power?

Use Shine to charge just about any handheld electronic including:



Never use this product to power safety-critical applications or medical devices where a failure of the product could cause personal injury or death.

Accessories

Below are accessories that can be used with your Shine Turbine:

- 10 ft + USB Type-A cable
- USB-C adaptor
- USB Micro-B cable
- USB-A to USB-C cable
- 12v trickle charge adaptor(s)
- Shine sand anchors
- Shine mount level
- Anemometer

Accessories are available at shineturbine.com/accessories

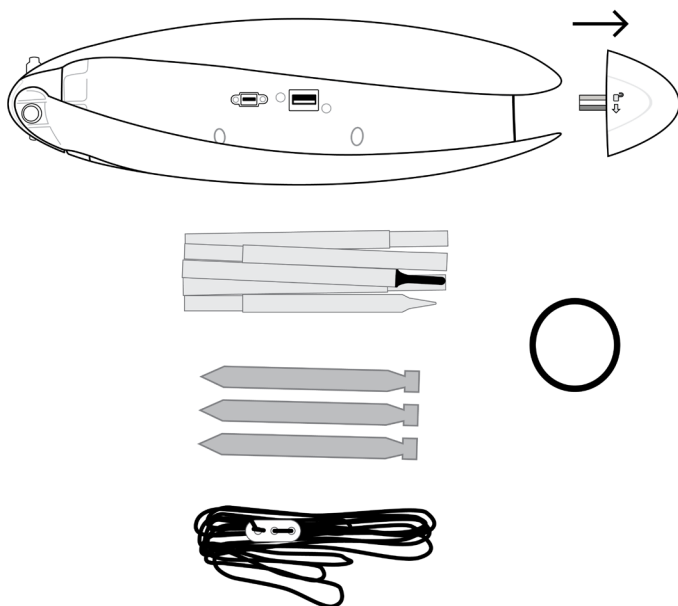
If you need assistance, please email support@shineturbine.com



Setting up Shine

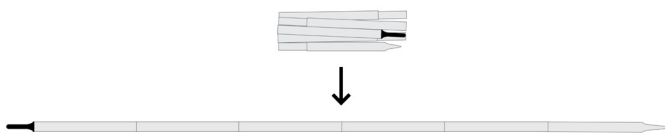
1 Set up - remove parts

Take off Shine's blade band and lid, then remove the mount, pegs, and guy-wires stored inside. Once removed, put the blade band in a safe place, such as inside the turbine's internal compartment, and then place the lid back on Shine.

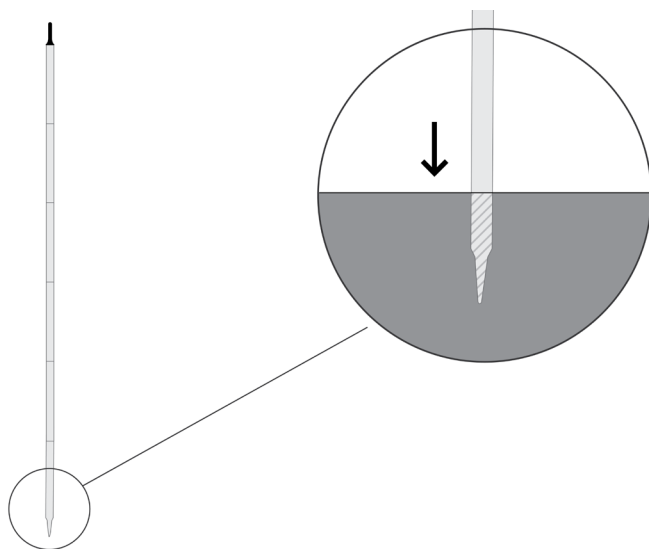


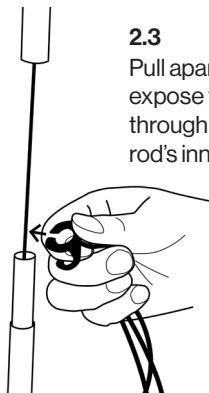
2 Set up - assemble & secure mount

2.1 Assemble the mount by slotting the support rods together.



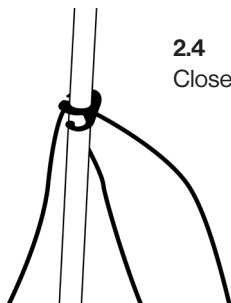
2.2 Insert the **spiked** mount end **vertically** into soft ground.





2.3

Pull apart the **top 2nd and 3rd mount rods** to expose the bungee cord. Hook the guy wire ring through the bungee and slide the ring over the rod's inner tube.

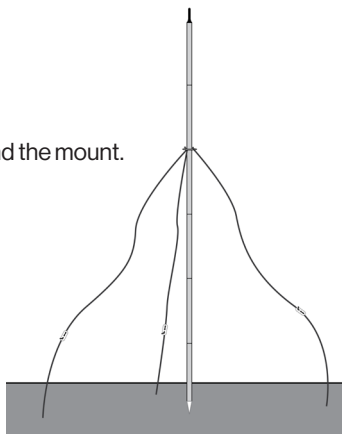


2.4

Close the rods over the guy-wire ring.

2.5

Evenly distribute guy-wires around the mount.

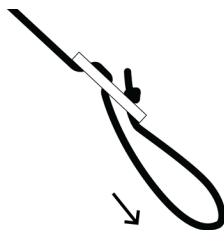


2.6

Open the bottom loop on the guy-wire tensioner and hook each peg through the loop.

Note

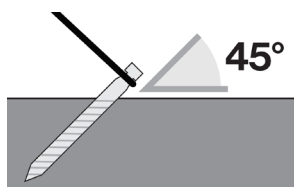
If setting up on loose dry sand, skip to page 21 for sand anchor instructions.



2.7

Stake each peg into the ground at a 45° angle.

Ensure pegs have been fully inserted and secured into the ground.



2.8

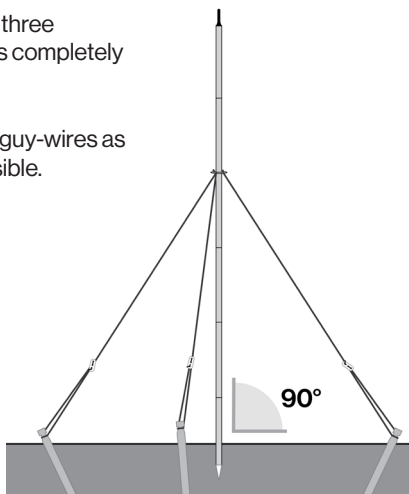
Increase the tension on all three guy-wires until the mount is completely **vertical and secure**.

To ensure stability, extend guy-wires as far from the mount as possible.



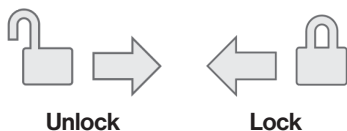
Caution:

Failure to set up the mount vertically and securely could cause the entire system to fall over.



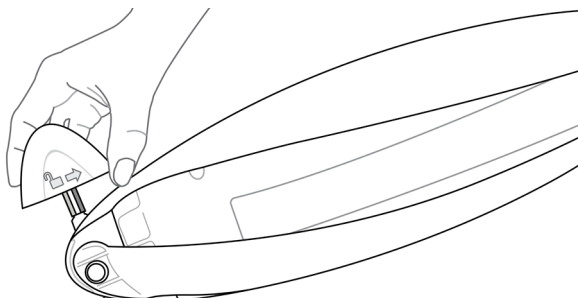
3 Set up - open blades

To open and secure Shine's blades into place, follow the unlock/lock symbols on the lid-tool.



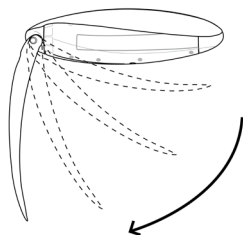
3.1

To begin, remove the lid from Shine and attach the lid-tool to Shine's blade hinge. **Slowly** turn the tool counterclockwise towards the unlock direction until you feel tension and it come to a stop. This will be after approx. **3 full rotations**. The blade hinge is now loose and ready to open.



Caution: Over-tightening or under-tightening of the hinge hardware can damage the blades and hardware.





3.2

Open the blade into place at 90° to create a right angle between the blade and the body.

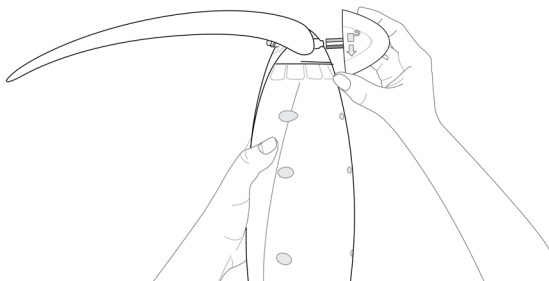


The blade will slot into the appropriate groove when at 90°

3.3

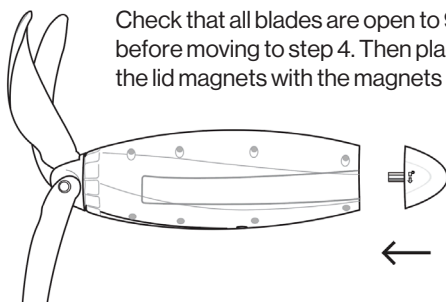
Attach the lid-tool to Shine's blade hinge and **slowly** turn the lid-tool clockwise towards the lock direction until you feel tension and it come to a stop. This will be after approx. **3 full rotations**. The blade is now locked in place.

Repeat steps 3.1, 3.2, and 3.3 for all blades.

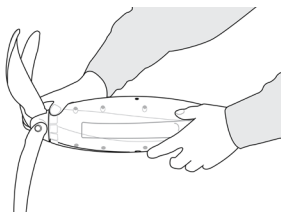


3.4

Check that all blades are open to 90° and locked in place before moving to step 4. Then place the lid on by lining up the lid magnets with the magnets on the turbine.

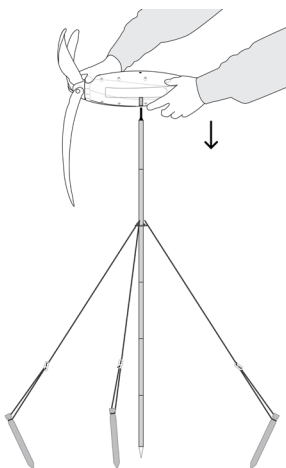


4 Set up - mount Shine



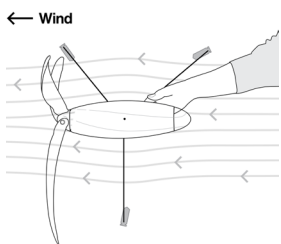
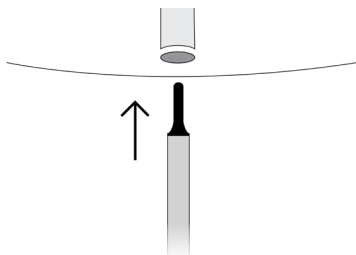
4.1

Once blades are open to 90° and securely locked into place, hold the front and back (rotor) of the turbine to prevent the wind from rotating the blades.



4.2

Place the turbine on the vertically secured mount by inserting the rounded mount top into Shine's mount hole.



4.3

With your body positioned next to Shine's lid, place one hand on the lid and turn the turbine into the wind. Carefully step away.



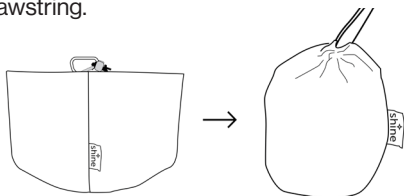
Setting up Shine with sand anchors

Sand anchors are highly recommended when setting Shine up on loose dry sand that pegs can not securely stake into.

These are available at shineturbine.com/sandanchors.

1

Fill each anchor bag with sand. Once full, close each bag using the drawstring.

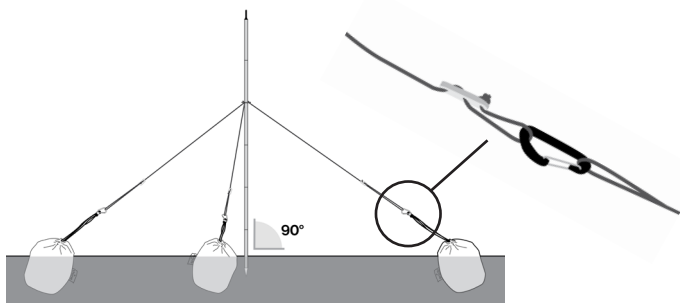


2

Follow steps 1 and 2.1 - 2.5 under Setting Up Shine on pages 14-16.

3

Attach the sand anchor carabiner to the bottom guy-wire loop.



4

Increase guy-wire tension and adjust sand anchors as needed until the mount is vertically secured. For extra stability, bury sand anchors under the sand.

5

To mount the turbine, complete steps 3 and 4 under Setting Up Shine on pages 18-20.



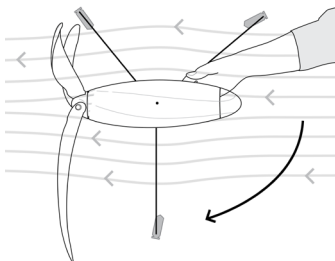
Taking down Shine

**Caution:**

Always approach rotating blades with caution.

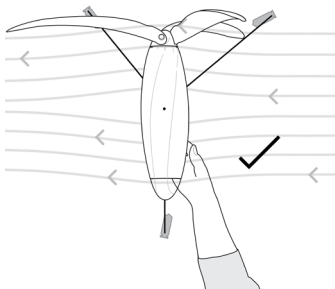
1 Take down - dismount turbine

← Wind

**1.1**

Carefully approach the lid (front) of Shine while avoiding the rotation of the blades (back).

← Wind

**1.2**

To stop blades from spinning, place one hand on the lid then turn Shine's nacelle body perpendicular to the direction of the wind.





Caution: Do not rest Shine on its blades.

Always close all blades before setting it down.

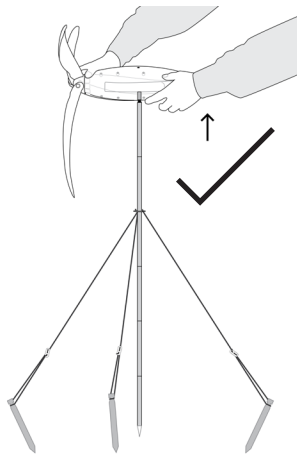
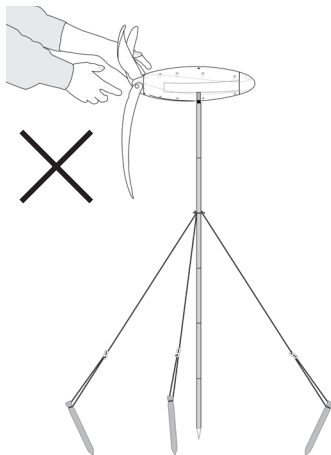
1.3

Once blades stop spinning, place hands on the front and back of the turbine. Then, carefully lift Shine's body upward to remove it from the mount.



Caution: Always approach Shine from its lid. When

lifting up the turbine, stand on the opposite side of the rotor and blades.

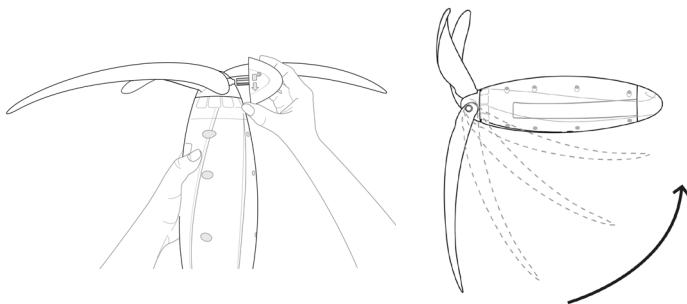


2 Take down - close blades

2.1

Remove Shine's lid then proceed to close its blades by attaching the lid-tool to one of the blade hinges. **Slowly** turn the lid-tool counter-clockwise in the unlock direction until you feel tension and it come to a stop. After approx. **3 full rotations** the blade hinge is now loose and the blade is ready to close.

Fold the blade onto the turbine body, making sure the blade lines up in the appropriate groove.



2.2

Once the blade is folded onto the body, attach the lid-tool to Shine's blade hinge and **slowly** turn the lid-tool clockwise towards the lock direction until you feel tension and it come to a stop.

After approx. **3 full rotations** the blade hinge is now locked in place.

2.3

Repeat steps **2.1** and **2.2** until each blade is closed on the turbine body and locked in place.

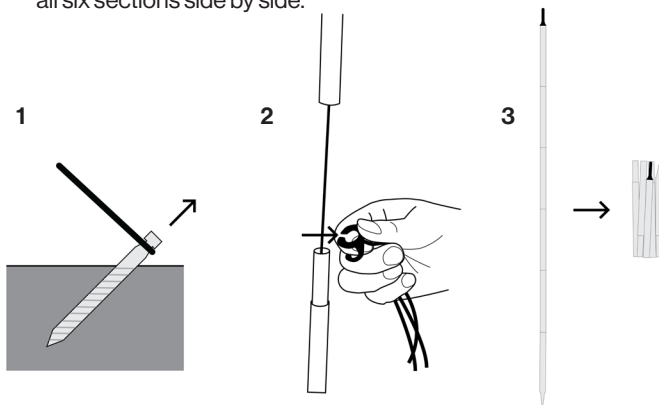


3 Take down - stow mount parts

3.1

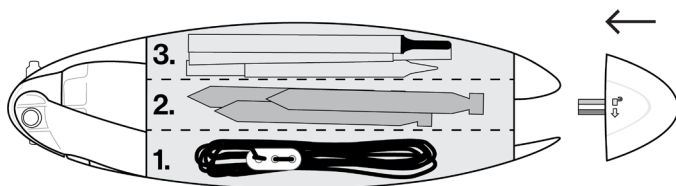
Disassemble the mounting system in the following order:

- (1) Remove the pegs from the ground.
- (2) Pull apart the 2nd and 3rd mount rods and slide the guy-wire ring over the inner rod and through the exposed bungee to disconnect the guy wires from the mount.
- (3) Disassemble the mount by disconnecting and folding all six sections side by side.



3.2

Neatly insert parts into Shine starting with the (1) guy-wires, (2) pegs, and (3) mount. When storing the mount sections, both pointed ends should face towards the lid. Then place the lid and blade band back on the turbine.



Charging

To charge a handheld device from Shine while the turbine is operating, a 15ft+ USB-A cable is required. This cable does *not* come with the Shine Turbine.

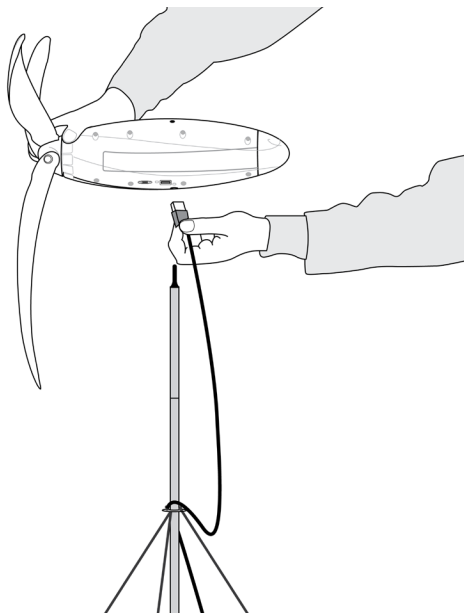


Caution: To safely approach Shine while operating, refer to 1.1 and 1.2 on page 22.

1 Charging - while operating

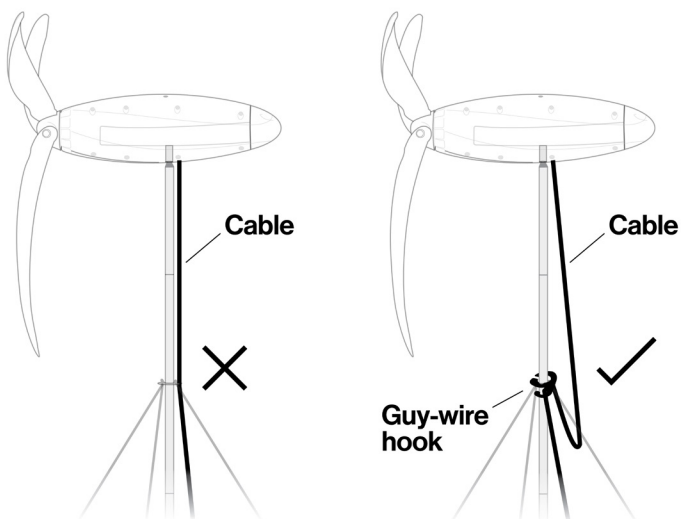
1.1

To charge while operating, hold the lid (front) of Shine and turn the nacelle body perpendicular to the direction of the wind so its blades stop spinning. While holding the blades, remove the turbine from the mount and proceed to plug your USB cable into the USB-A port.

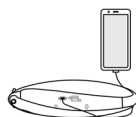


1.2

Attach the cable to the guy-wire ring's USB hook then gently place Shine back on the mount. **Do not let the USB cable interfere with the rotating blades.** When a USB cable is plugged into Shine and looped through the guy-wire hook, make sure there is just enough slack on the cable to allow the turbine to rotate freely.

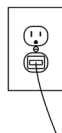


Charging



Charging while stowed

Plug a USB cable into Shine's USB-A port and the other end of the cable into your device.



Pre-charging Shine from wall outlet

Plug a USB Micro-B cable into the USB Micro-B port on Shine and the other end into a standard wall outlet.



Pre-charging Shine from the car

Plug a USB Micro-B into Shine and depending on the make and model of your vehicle, plug the other end into a 12v adaptor or USB port.

Trickle-charging

With the right adaptor(s) connected to its USB-A port, the Shine Turbine can trickle charge some 12 V devices.

Always check with the manufacturers of these 12 V products to ensure compatibility. **Note that trickle charging is not intended to charge any large batteries quickly.**



LED Communication & Warnings

Please take the time to understand Shine's LED and warning indications before operating.

Battery State

When the turbine's rotor isn't spinning, the red, purple, and blue LEDs indicate Shine internal battery state.

Blinking Pattern	Percentage Charged
● 1 red blink	0 - 10%
● ● 2 red blinks	10 - 20%
● ● ● 3 red blinks	20 - 30%
● 1 purple blink	30 - 40%
● ● 2 purple blinks	40 - 50%
● ● ● 3 purple blinks	50 - 60%
● 1 blue blink	60 - 70%
● ● 2 blue blinks	70 - 80%
● ● ● 3 blue blinks	80 - 90%
● ● ● Alternating red-purple-blue blinks ½ a second apart.	90 - 100%

Power Generated

When the turbine is spinning, the red, purple, and blue LED indicate the amount of power being generated.

Blinking Pattern	*Wind Speed	**Watts
Long red flashes	0 - 20 kph / 0 - 12 mph	0 - 3 W
Long purple flashes	20 - 35 kph / 12 - 22 mph	3 - 15 W
Long blue flashes	35 - 45 kph / 22 - 28 mph	15 - 40 W

*Approximate wind speeds

**Approximate power generated from the rotor



LED Communication & Warnings

Warnings

Your Shine Turbine has a brake, buzzer, and LED as built-in protections to indicate if operating conditions could be harmful to the product. Follow the action required if you notice any of the following warnings.

Temperature

Shine is unable to charge its internal batteries due to being too hot or too cold.

Blinking Pattern	Action Required
Bursts of 8 rapid red blinks, 1/2 second apart	STOP ALL USE and move the turbine to a warmer or cooler location.

Brakes

Shine's brakes are engaged due to high winds.

Blinking Pattern	Action Required
Bursts of 8 rapid purple blinks, 1/2 second apart.	Keep a close eye on the turbine and take it down if the buzzer sounds.



Unsafe to operate

Brakes cannot be used due to temperature or wind speed being too high

Blinking Pattern

Action Required



Slow red and blue pulses.

STOP ALL USE and take down the turbine. The buzzer will stop when the blades stop spinning.



If the turbine is operating a buzzer will also sound.

Internal Error

Shine has an internal error and will shut down after indicating this condition for 10 seconds.

Blinking Pattern

Action Required



Slow red and purple pulses.

STOP ALL USE and take down the turbine.

If the turbine is operating a buzzer will also sound.

The buzzer will stop when the blades stop spinning. Contact our customer support team at support@shineturbine.com.



Technical Specifications

Folded Length:	35 cm (13 3/4 in)
Folded Width:	10 cm (4 in)
Rotor Diameter:	60 cm (23 5/8 in)
Mount Height:	91.4 cm (3 ft)
Total Weight:	3 lbs (1.3 kg)
Power Rating:	40 W
Internal Battery:	3.7 V, 12,000 mAh
Connector:	Regulated 5 V DC, 2.6 A
Charge Ports:	USB Standard-A, USB Micro-B
Management System:	MPPT controller*
LED Indicator:	Battery, brakes, and warnings
Operating Temperature:	0-40 ° C (32-104 ° F)
Discharging Temperature:	-10-45 ° C (14-113 ° F)
Weather Resistance:	IP54
Maximum Noise:	50 dB
Certifications:	UL 2056, CSA-C22.2 No. 62368-1
Compliances:	FCC-47 CFR Part 15 Subpart B, ICES-003
Operating Wind Speeds:	8-28 mph (13-45 kph)
Cut-in speed:	8 mph (3.5 m/s)
Battery Cell Type:	Lithium - ion
Limited Warranty:	12 months
Chainable:	No
Protections:	Over-voltage, under-voltage, under-temperature, over-temperature, overload, & transient

* Shine's internal Maximum Power Point Tracker (MPPT) allows it to always generate the highest amount of power available from the wind.



Care & Maintenance

Cleaning

Wiping Shine's blades and body with a dry or damp non-abrasive cloth will help prevent any buildup of dust, sand, or dirt which can impact the efficiency of spinning blades. Never use abrasive or corrosive cleaners on Shine.

Maintenance

Shine's performance and durability will be enhanced if you periodically inspect the system. Review the following maintenance procedures and implement every few uses:

- Inspect blades for damage
- Listen to your turbine for any odd mechanical noise
- Check guy-wire knots for loosening or fraying
- Check the hardware on the blade hinges for damage
- Check the mount top and bottom for damage
- Wipe any excess dirt build-up from the blades and body
- Remove any dirt from the mount hole
- Check USB ports to make sure they are free of dirt
- Inspect mount's bungee cord for loosening or fraying

The balance and efficiency of the turbine rely on all three blades operating in tandem. If any of the blades or any other part of Shine is damaged, do not use the turbine. Instead, contact **support@shineturbine.com**.

Storage

Store Shine in a climate-controlled environment between 10°C - 26°C / 50°F - 80°F. If storing for an extended period of time, make sure Shine's battery is at least 50-60% charged. This will prolong the longevity of your turbine battery. Do not store Shine in a hot vehicle. Temperatures above 60°C can cause the battery to degrade.



Troubleshooting

Follow the below to troubleshoot your Shine Turbine. If you are still experiencing issues, please email support@shineturbine.com.

Never attempt to repair or modify the Shine Turbine yourself.

Doing so will void the product warranty and could result in injury or death.

Shine is not indicating it's charging from the wind or a power source

Possible Cause

1. It may take a few seconds to acknowledge charge
2. There is not enough wind for Shine to charge

Possible Solution

1. Wait at least 60 seconds
2. Check the wind forecast to see if wind is within 8-28 mph or 13-45 kph

Device is not charging from Shine

Possible Cause

1. Shine's battery is dead
2. Charge cable may be faulty
3. Shine is charging from a power source and the battery is below 5%

Possible Solution

1. Read pages 26-28 on how to charge Shine and connected devices
2. Try a different cable with your device
3. Let Shine charge from a power source for at least 15 minutes and try again



Blades won't spin

Possible Cause

1. Wind speeds are below operating conditions
2. There are obstacles nearby obstructing wind flow
3. The turbine is not set up properly
4. Something is obstructing the blades from spinning

Possible Solution

1. Check the wind forecast to make sure the wind is within 8-28 mph or 13-45 kph
2. Relocate Shine away from obstacles obstructing wind flow
3. Ensure the mount is set up 100% vertically
4. Ensure blades can spin freely

Turbine is not turning itself into the wind

Possible Cause

1. The mount is not vertical.
2. The connected USB cable does not have enough slack

Possible Solution

1. Ensure the mount is set up 100% vertically
2. Add extra slack to the USB cable if charging while operating

Mount is not secure

Possible Cause

1. Pegs are not properly staked into the ground
2. Guy-wires are not evenly distributed around mount
3. Guy-wires have too much slack

Possible Solution

1. Ensure pegs are staked deep into the ground at a 45-degree angle. If using sand anchors ensure that each bag is full of sand
2. Evenly distribute the guy-wires. Read step 2.5 on page 16
3. Use fasteners to increase guy-wire tension



FAQ

Can I fly with Shine?

Yes, but always check airline and airport security protocols prior to travel. To prevent losing any parts, it's recommended that you transport Shine's mount and pegs in checked luggage, and Shine's body (containing batteries) as carry-on.

Can Shine be left up overnight?

Shine can be used at night but should never be left up unattended. Wind and weather can be unpredictable, making it difficult to guarantee the safety of your turbine over such an extended period of time.

How do I dispose of the Shine Turbine?

Contact your local waste management center to find an electronics waste recycling program that can properly dispose of the Shine Turbine when it reaches end of life. **Never put this product in the trash.**



Warranty

Shine Turbine Warranty

Aurea Technologies Inc. (“we”/“us”/“our”) offers a limited one-year warranty for the Product (as defined below) from the point of shipment if the Product is defective. The Product is considered defective if it is not working correctly for any reason other than (a) normal wear and tear of the Product; (b) accidental damage of the Product; (c) you have used the Product in a manner that does not comply with this User Manual; (d) where you have made any adjustment, modification, alteration or repair that is not authorized by us; and (e) you have misused, abused or neglected the Product. We reserve the right to decide at our discretion whether a Product is defective. For clarity, where we determine that the Product is defective within one year from the point of shipment you will receive a replacement Product.

What is covered

The Shine Turbine has many components. All components of the Shine Turbine other than the rotor, blades, and blade hinges (the “Product”) are covered by this warranty.

Who is covered

Our limited one-year warranty for the Product is non-transferable and applies only to the original purchaser of the Product. An original or copy of a sales receipt is required as proof of purchase to seek coverage for the Product under this warranty.



Warranty

How to make a warranty claim

Warranty claims must be made directly to us. All Products must be returned within one year from the point of shipment of the Product.

To make a warranty claim, please contact support@shineturbine.com. Please note that we do not reimburse you for shipping the Product.

Contact

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