400 Watt Windmill

Bluetooth 12V

User's Manual

Version: 2024.V.1

Table of Content

1. SAFETY

Your wind turbine is designed with your safety as the priority. However, there are still some inherent dangers involved with any electrical and/or mechanical equipment. Safety must be the primary concern as you plan the location, installation, and operation of the turbine.
Please carefully read the following:

Important Safety Instructions

Carefully go through this manual before initiating the wind turbine installation.

(1) Keep this instruction manual safely for future reference.

(2) Wait for a sunny day to install or for maintenance work on your wind turbine with the activation of the manual stop switch.

(3) Listen to your wind turbine if you hear any mechanical noise, maintenance may be required, please contact the Products Customer Service.

(4) After installation, double-check all the screws and bolts to make sure they are tightened.

(5) Adhere to proper grounding techniques as established by the National Electrical Code (NEC).

(6) Your wind turbine must be installed as per this user manual and the local and national building code of your region. Incorrect installation may void your warranty.

(7) Wind turbine blades spin at a potentially dangerous speed, this must be respected. Never approach near to the turbine when it is in motion.

(8) Note wire size (gauge chart included) before wiring. Any under-sizing of wire can be potentially dangerous.

1.1 Mechanical Hazard

Rotating blades present the most serious mechanical hazard. The rotor blades are made of very strong glass fiber & polypropylene and the blades may reach velocities over 15 m/s. At this speed, the tip of the blades are nearly invisible and can cause serious injury. Under no circumstances the turbine should be installed in locations where a person could come in contact with its moving rotor blades.

1.2 Electrical Hazard

The wind turbine is equipped with sophisticated electronics designed to protect from electrical dangers. Please note that the inherent personal dangers from electrical current still exist, therefore caution should always be taken while connecting this and other electrical devices. Heat in a wiring system is often a result of excessive current flowing through an undersized wire or a weak/damaged connection. Please consult the wire guide table below.

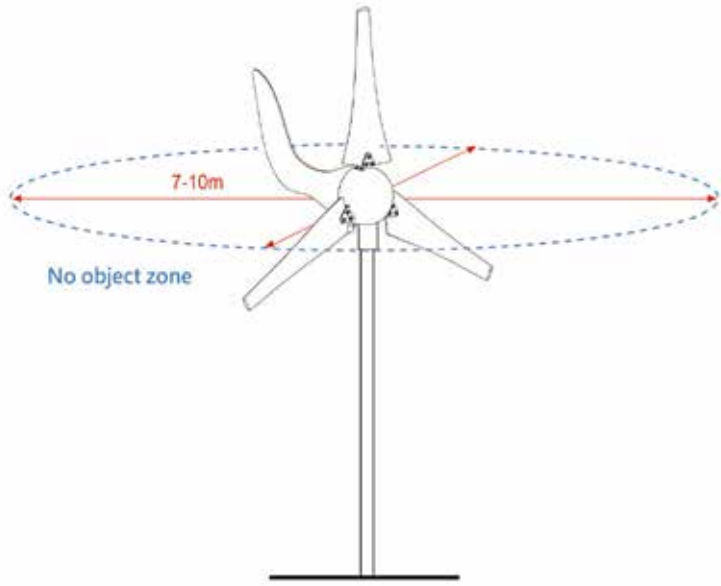
Batteries can deliver a dangerous amount of current. If any short circuit occurs in the wiring from the batteries, can result in a fire break-out. To avoid this threat, a properly sized fuse or circuit breaker is required in the lines connecting to the battery.

Choosing your wind turbine's location

Before the installation of your wind turbine, you must carefully consider a location. Things to consider when selecting your wind turbine location.

(A) Height and Distance from obstacles like buildings, trees:

- Install the wind turbine in open and windy sites so, the turbine will be exposed to winds properly and the benefit can be maximized. A distance of 7-10m should be maintained.
- The minimum recommended tower height is 22 ft (7 m) to 33 ft (10 m). The wind speed below 22 ft (7 m) constrained by the terrain is low and chaotic.



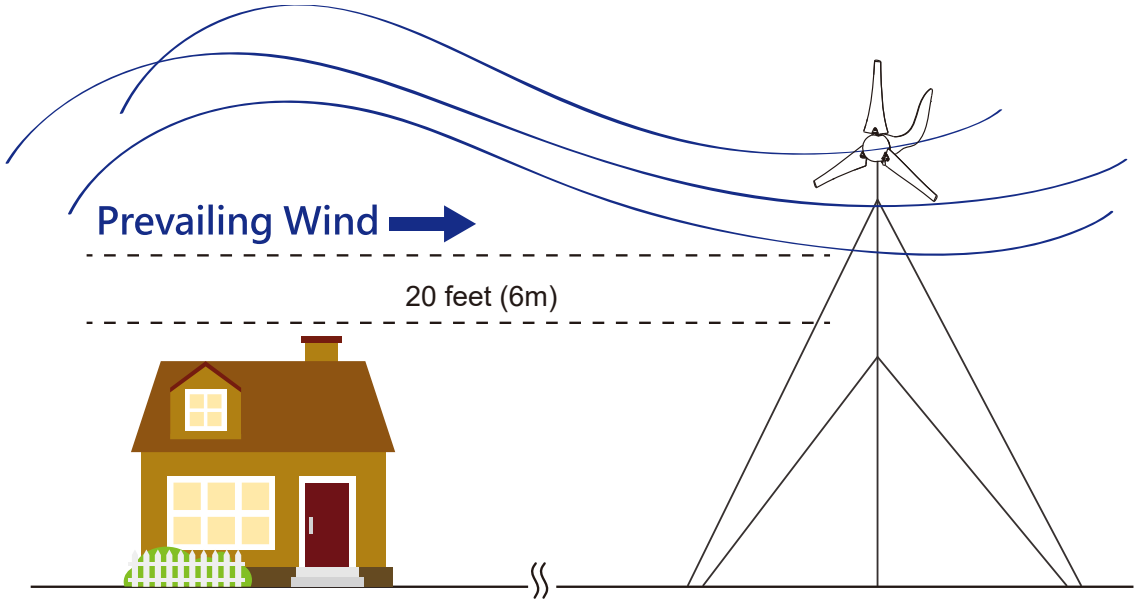
B) Distance from human habitat.

- Install your turbine with some distance from the human activity areas as not to disturb your neighbors and animals around. The noise and vibration element cannot be got rid of even if this wind turbine offers the lowest noise than any others on the market. The better location of your turbine requires avoiding personnel or animal activities within a 33 ft (10 m) radius, and human habitation and wildlife within a 66 ft (20 m) radius.
- The rooftop may not be the best place for your turbine. Here are three reasons.
  a. The flow is more turbulent above the rooftop and leads to low wind power availability.
  b. The stress the pole kit sustains varies in rooftop constructions. Evaluation and stability cannot be guaranteed.
  c. The slight noise and vibration still affect sleep for some sensitive people and animals.

C) Distance between the wind turbine and battery bank.

D) Any local zoning restrictions.

E) Clearance of power lines or any overhead connection.



2. SYSTEM SPECIFICATION

2.1 Specification

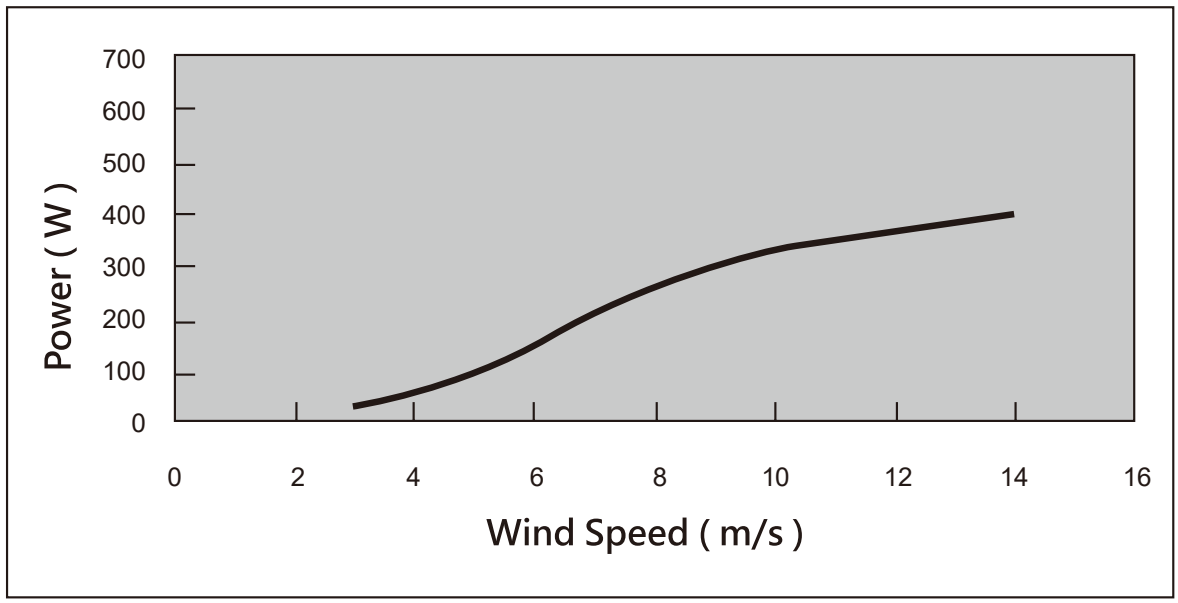
Wind Turbine	Model	400 Watt Turbine
	Rated speed	28 mph / 12.5 m/s
	Rated power	400 watts
	Output Voltage	0-15V
	Cut-in wind speed	6.7 mph / 3 m/s
	Survival wind speed	112 mph / 50 m/s
	Rotor diameter	4 ft / 1.22 m
	Number of Blades	3
	Blade material	Plastic steel
	Suggested battery capacity	>100 Ah

* The Manual stop switch should be activated when the wind speed upwards of 30mph (13 m/s).
* Survival wind speed means that the wind turbine will survive at 112 mph (50 m/s), when the Manual stop switch is turned on. Exceeding this will result in wind turbine failure and collapse.

2.2 Performance

The following power curve shows the performance you should expect from your wind turbine. During smooth, steady wind speed, you can expect to see output resembling the curve illustrated below. To convert between power and current use the following formula:

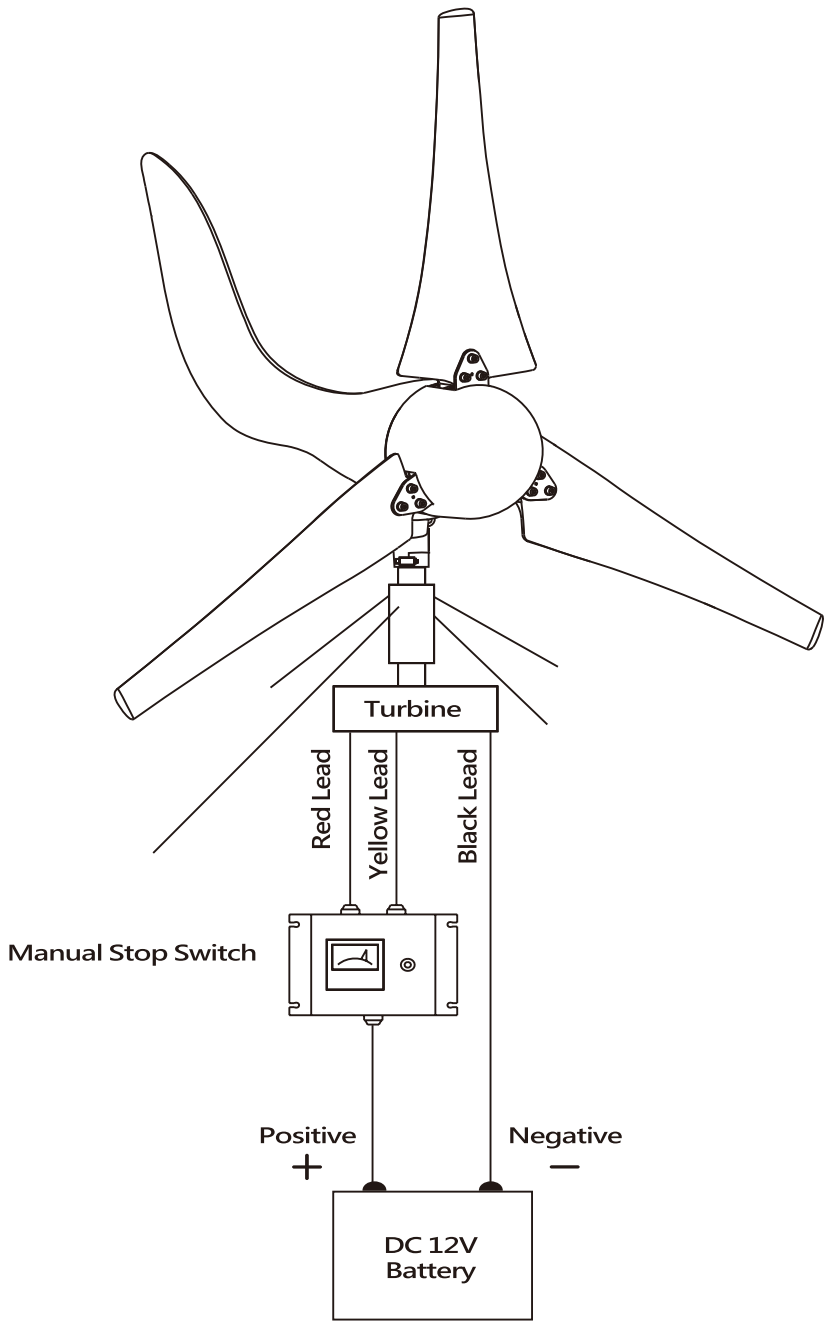
POWER=VOLTAGE x AMPS



2.3 Wiring Requirements

12V Volt System, AWG / Metric Wire Size mm^2

Distance between Turbine and Battery Bank	0 - 30 ft. (0- 9 m)	0 - 70 ft. (0- 21 m)
Wire Gauge	10/6 mm^2	8/10 mm^2



Please refer to the recommended wire gauge table and select the appropriate wire size for your system.

Caution 1: Any usage of under-sized wire can be potentially dangerous; our warranty does not cover damages caused by using an incorrect wire gauge. Distance between turbine and the battery pack should be kept as low as possible and should not exceed more than 30 meters for safety reasons (Be sure to include the height of the turbine).

Caution 2: Please review the above wire gauge table to install the correct wires. We recommend these as the minimum wire sizes for the distance between the wind turbine and the battery pack for optimal performance. Always use the largest gauge wires that are practical and affordable. Local, state, and/or national electrical codes take precedence over these general recommendations.

3. SYSTEM PROTECTION

3.1 Digital-controlled MPPT

Your turbine comes equipped with state of the art overcharge protection. When the temperature of the turbine exceeds 80°C (176°F) your turbine will automatically shut down and apply the braking system to your wind turbine to prevent damage.

High battery voltage protection	14.8V
Overcharging current protection	20A
Over-speed protection	≤1200 rpm
Overheat protection for the generator	≤900 rpm and 70 sec.

3.2 Manual Stop Switch

The wind turbine has a built-in controller with braking device protection. Further to this protection, we have incorporated a secondary level of safety and convenience with a manual brake.

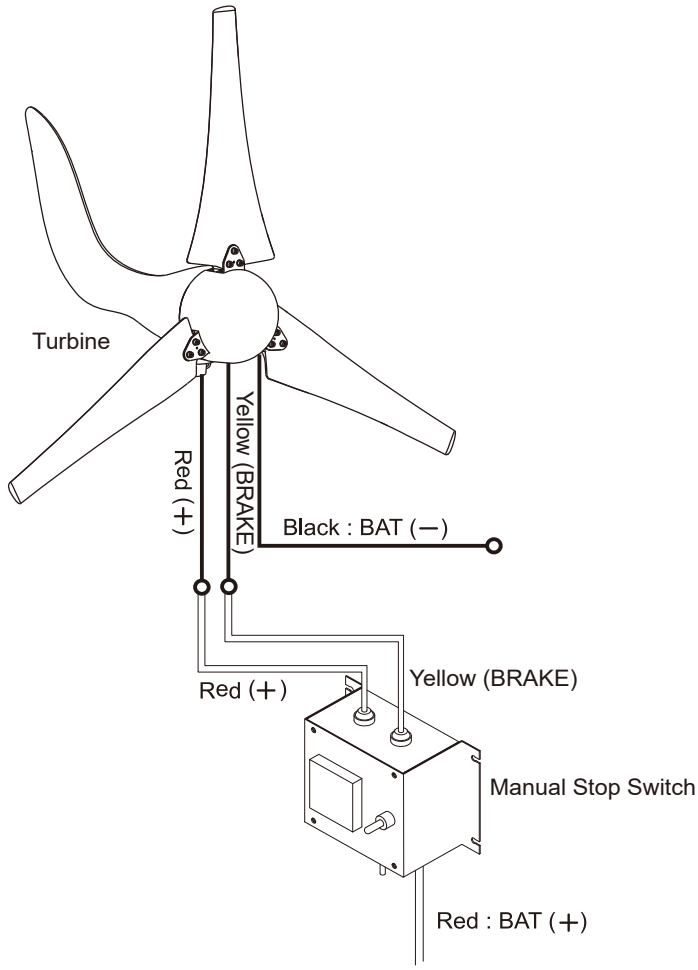
During periods of high winds (upwards of 30 mph, 13 m/s) it is strongly advised to utilize your manual stop switch. The use of your manual stop switch will not affect the voltage of your battery.

We strongly advise the activation of the manual stop switch during any maintenance of or around your wind turbine. This will prevent the blades from spinning and voltage to be transferred.
Likewise during initial installation please activate the manual brake. After the installation of the turbine manual stop switch should be released.

The manual stop switch is pre-wired for your convenience with 8 AWG wire and battery terminal connections. The wire configuration is explained in the diagram below (page 9). Connect the corresponding wires of the manual stop switch to the turbine. The red (+) wire of the stop switch should match with the red wire of the turbine. The yellow wire (BRAKE) of the stop switch should match with the yellow wire of the turbine. They should match the correct wires from your turbine. This provides a parallel connection.

Test the connection of your manual stop switch at the point of initial installation. Push the brake “ON”. You should see the turbine stop its rotation. Continue to apply this brake during the remainder of your installation.

Should the turbine continue to spin, check your terminal connections. Do not approach the turbine without activation of this manual stop switch under any circumstance!



NOTES

• It is strongly advised to test the manual stop switch periodically.

• Your manual stop switch is pre-wired with 8 AWG wire, this should not be altered.

• The manual stop switch should be placed close to your turbine in a dry ventilated environment.

• For multiple turbine applications please use one manual stop switch for each wind turbine.

• This manual stop switch has been designed specifically for your wind turbine; it should not be incorporated into other models.

Incorrect connections can damage your wind turbine and cause dangers.

4. PACKAGE CONTENTS

Check the parts listed with the contents of the box and make sure that you have everything needed for assembly.

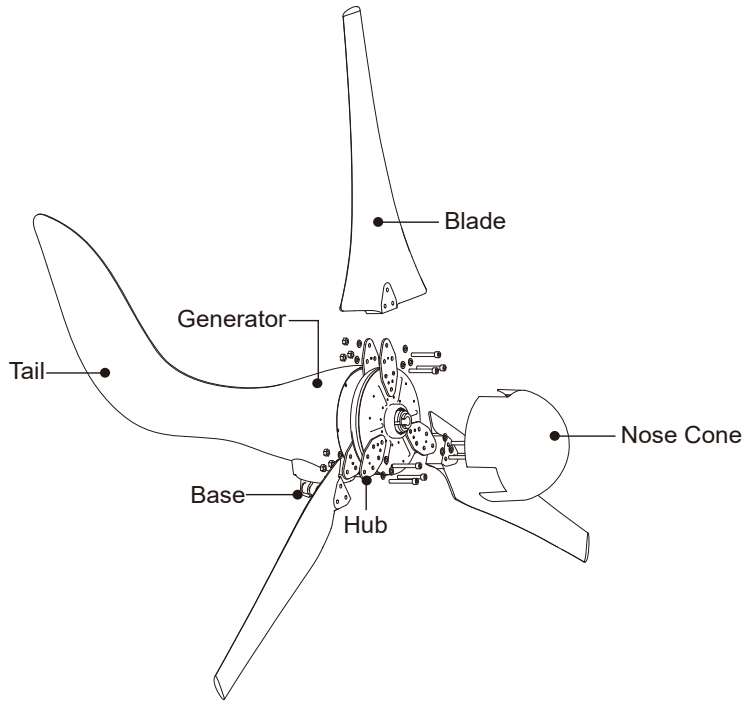
Caution: The edges of the blades are sharp. Please handle it with care.

Parts List

Parts Name		Quantity
Generator (integrated with Tail and Hub)		1
Blade		3
Nose Cone		1
Accessory Pack	Hex Screw (M6XL45)	9
	Nut (M6)	11
	Washer (M6)	20
	Hex Screw (M6XL30)	2
	Hex Key No.5	1

5. INSTALLATION PROCEDURE

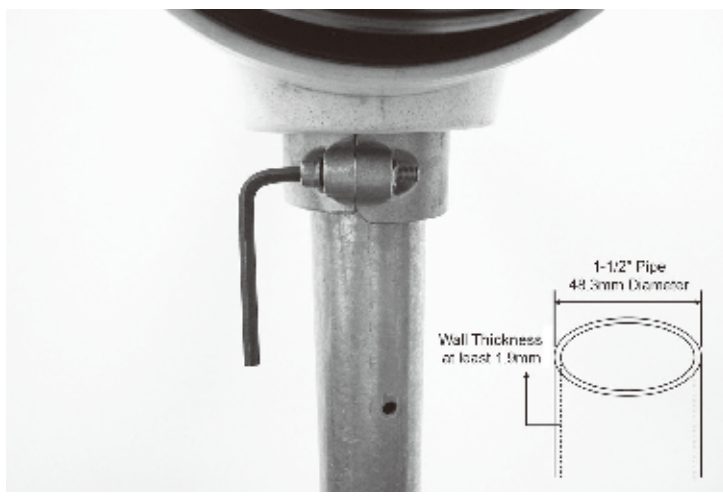
Step 1 : Open box and ensure all parts are present.



Step 2: Carefully observe windmill layer for easy and quick installation.

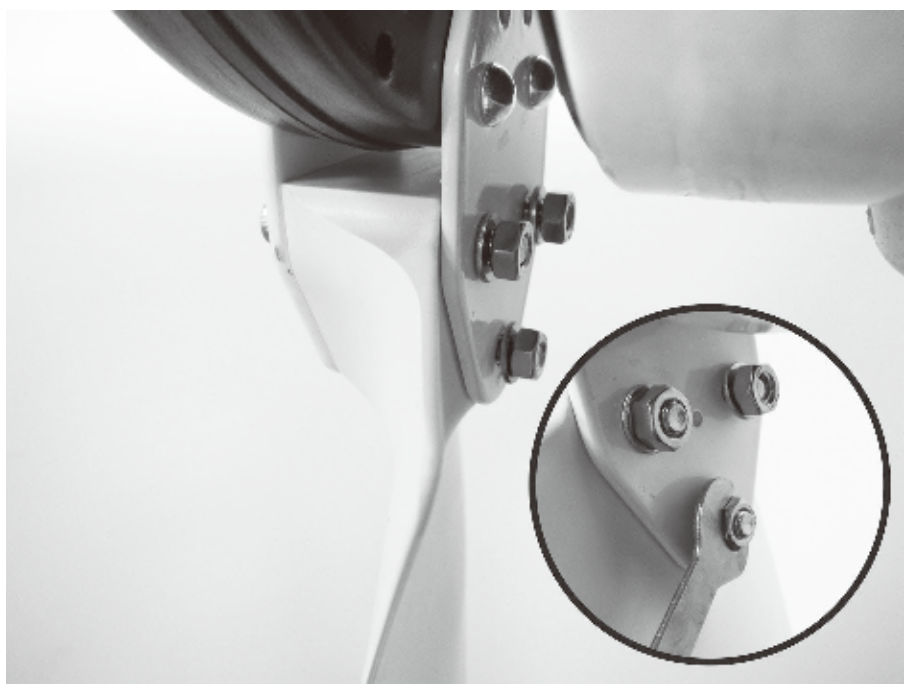
Step 3: Install the wind turbine to your chosen tower and fasten the bolt securely by using the hex key (The Yaw Shaft includes a rubber spacer to ensure the connection is secure).

How to select your tower: The outside diameter of the iron pipe should be 48.3 mm, the thickness of the iron pipe should be at least 1.9 mm.

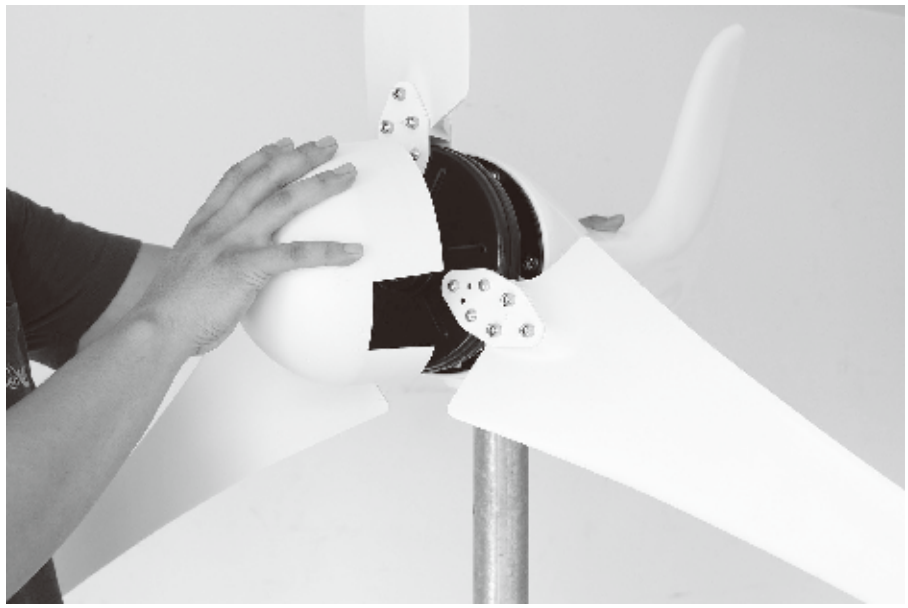


Caution: Ensure that rubber spacer is attached to the tower pole prior to turbine installation, otherwise the turbine will be too loose and unable to sustain vibrations.

Step 4 : Fasten the blades on the hub with nuts by using the hex key and unilateral open wrench. (Make sure that all of the bolts are secured with nuts.)



Step 5 : Fit the nose cone onto the hub by applying a gentle pressure to ensure a secure fit.

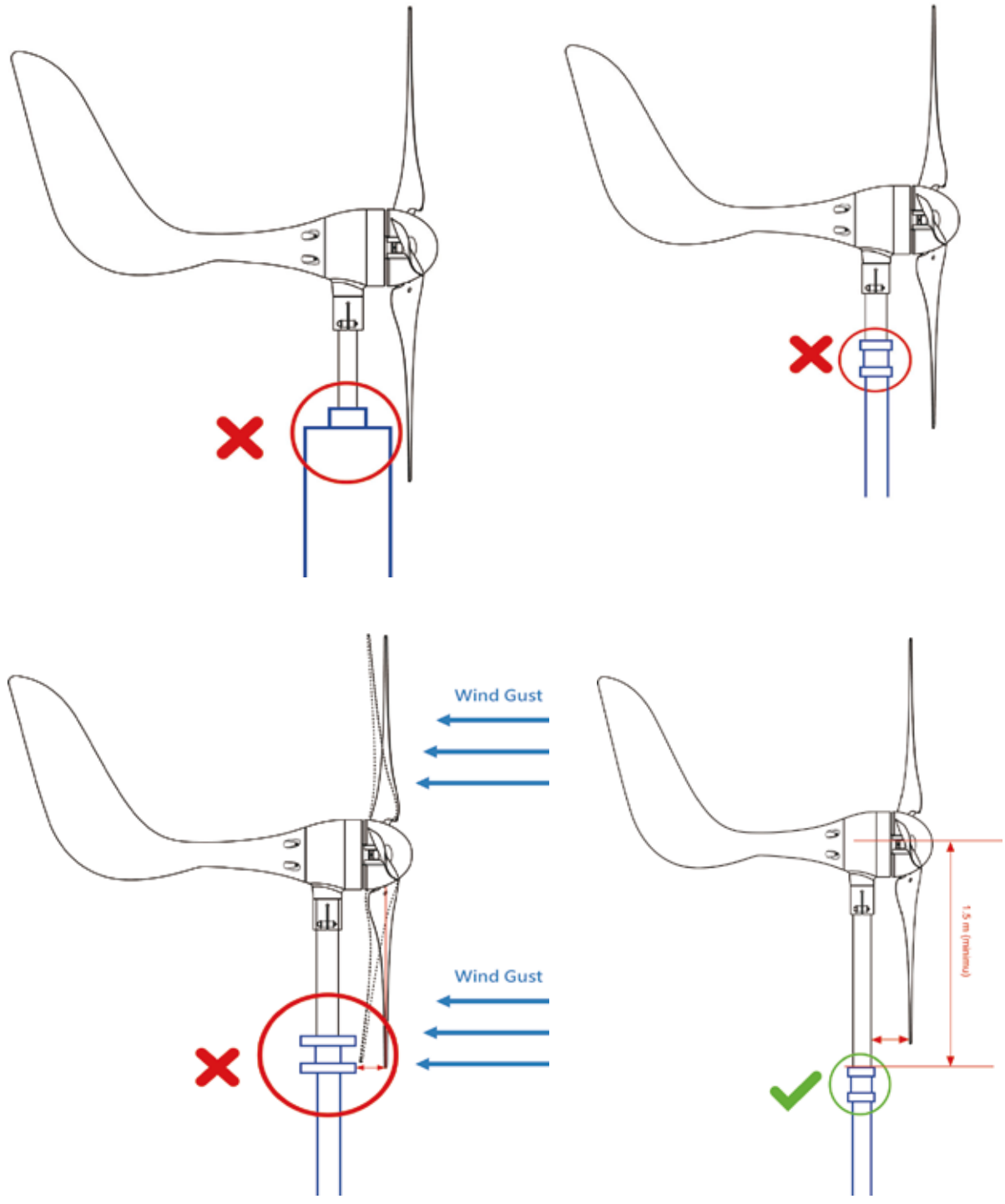


Step 6 : Final product diagram.

Note : The wind turbine pole kit is not included with the unit.

Caution:

After installing, check and make sure that there is no flange/ coupler/ support cable ring lies within 1.7 m from the wind turbine center/ hub. Cylindrical shape poles are recommended for installing the turbine and there should be sufficient free space/ gap between the pole and the wind turbine blades as, during the wind gust, blades bend a little towards the inside. Refer the image below for a better understanding.



6. AUTOMAXX BLUETOOTH APP

You can control and monitor your wind turbine by using our App. You can download the App by scanning the barcode.

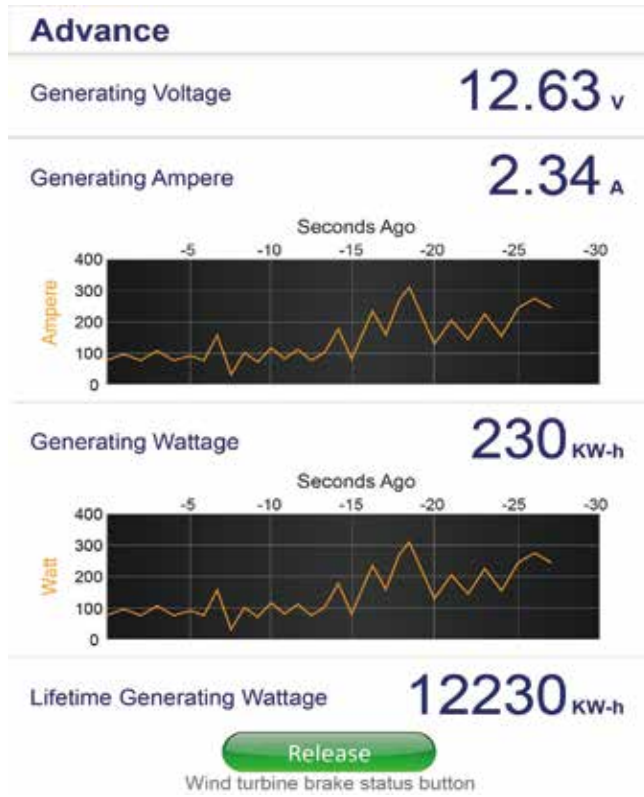
You can also download our App by visiting our website, https://automaxxwindmill.com/support/

Introduction to the App

First turn ON the phone/ device's Bluetooth. (No need to enter the device Bluetooth setting for pairing the wind turbine).

- Open the wind turbine App and the wind turbine in the range will show.
- Tap on the wind turbine to connect.
- Once the app is connected with the wind turbine you will reach the home page of the App, which will look like the below picture.

- On top of the home page, the total power generated from the turbine will be displayed.
- The bottom section will provide you information such as the wind blowing, manual brake status, and battery status (Full / Charging / Low).
- Swipe towards the right-side, the graph will provide the real-time voltage available, current, and power generation by the turbine.
- On the bottom of the page, there is a switch to apply/ release the manual brake to the turbine. This switch can be used to protect the wind turbine in bad weather without being physically present at the manual brake to apply.



7. MAINTENANCE

Your wind turbine has been designed to run for long periods. The performance will be enhanced if you periodically inspect your system. Review the following simple maintenance procedures and implement them every six months.

Caution :
Do not go near the wind turbine during operation.
The blades are sharp. Please handle with care.

- Check blades for superficial damage, replace the blades if damaged. It is important to not use blades that are damaged, as you will lose overall balance, resulting in a declined performance. Should you notice damage to the blades you must replace all 3, these blades are balanced as sets.
- Check the blade bolts and the hub nut for tightness.
- Check nose-cone for cracks and tighten nuts.
- Wipe any excess dirt build-up from the blades.
- Check all electrical connections to make sure they are tight and free from corrosion.
- Check the voltage of your battery bank with a Multi-meter and clean the terminals.

Note:
Apply the Manual Brake to safeguard your unit in themention below situation.

- Bad weather and strong wind
- Maintenance & replacement work
- MPPT failure/ no sign
- Free spinning
- Battery pack disconnected
- Broken Blades
- Mechanical noise
- Notice anything abnormal

8. FAQS

(1) How does the wind turbine control power and RPM in high winds?
Your Turbine's operation will be halted to reduce the risk of damage due to overcharge and over-spin of the rotor blades. This process of braking is handled internally through the in-built MPPT charge controller.

(2) What is the maximum wind speed the wind turbine will survive and do I need to take it down in a storm?
Your wind turbine is designed to operate in most climatic conditions. Should you expect or experience winds of 110 MPH upwards, please manually activate the brake. Once the Turbine has stopped it is possible to lay down the Tower to offer further protection.

(3) How long will the bearings or other wearing parts last?
According to engineering calculations, the bearings should have a 10 year life span in 12 mph (6 m/s) average wind speed sites. Bearing life will vary from one application to another; however, you should expect at least a five-year performance in adverse conditions and 10 years in normal conditions.

(4) Can the wind turbine be connected in reverse-polarity to the battery without causing any damage?
Reverse polarity will cause damage to your battery if not quickly remedied. Always double check any wiring to reduce the risk of reverse polarity. Your turbine is equipped with polarity protection to reduce the risk of damage, but it is still possible to degrade your wiring and cause damage to the overall system.

(5) Will, it hurt my wind turbine to short-circuit the output?
No, the wind turbine is designed to be short-circuited as a normal shutdown procedure by a fuse. The function of the stop switch is to disconnect the turbine from the batteries as well as short-circuit the output of the turbine.

(6) Where can I locate tubing to make a tower?
Your wind turbine is designed to make mounting as simple and straightforward as possible. Should you not wish to purchase the custom tower kit feel free to utilize schedule 48.3 mm steel tubing. This should be available through your local hardware outlet.

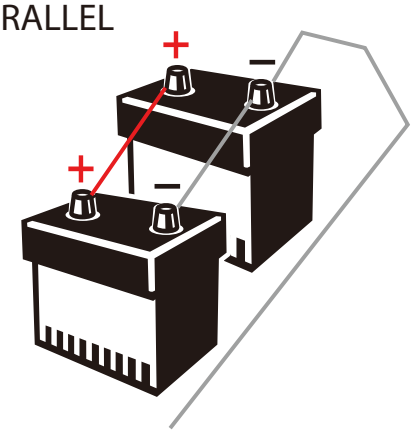
(7) What is the difference between copper and aluminum wire?
Generally, aluminum wire is less conductive, so it must be bigger for the same amp load and resistive losses as copper. The wind turbine uses copper or tinned copper for the yoke wires.

(8) What battery should I choose for my wind turbine?
There are multiple battery options in today's market– flooded lead-acid, absorbed glass mat (AGM), gel cell, and NiCad. There is no definitive choice for your alternative energy needs. Normally the choice of battery is determined by availability and pricing. Should you have questions regarding batteries please consult a local battery supplier. Or view: www. batterycouncil.org. The capacity of your battery bank is determined by your use. Below is a good guideline.

12-volt systems – 100 Amp-Hrs

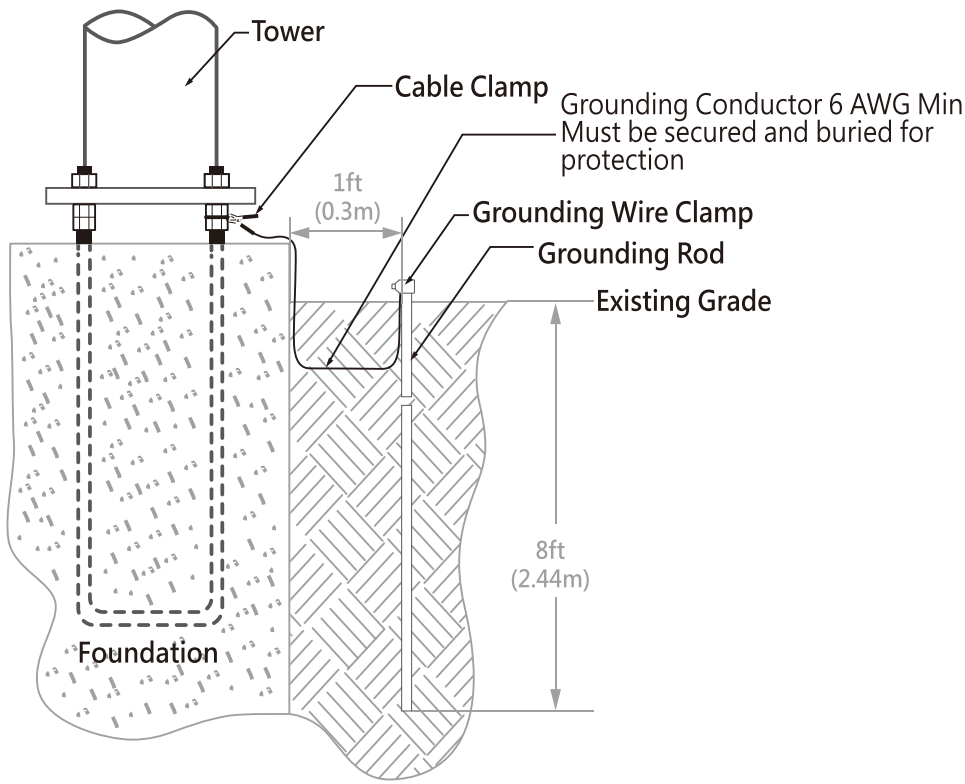
Possible Battery Configurations (suggested)

12V VOLT BATTERIES IN PARALLEL



(9) Is lightning protection necessary?

You should ground your wind turbine. Proper grounding (illustrated below) protects individuals to individuals and equipment by eliminating the possibility of dangerous voltage. Remember a steel tower is a conduit for lightning. Every wind turbine and turbine tower needs to be grounded at the tower base even though the system may be grounded at the battery bank. Grounding the tower at its base may help prevent shocks to persons touching the tower due to lightning or electrical faults. Please take the time to review the National Electrical Code (NEC) and local building and zoning regulations for complete requirements. Even in "Off-Grid Systems" there are multiple ways for tower grounding, the most common method is a copper-clad steel electrode(s) driven into the soil. Please view the following grounding diagram.



(10) What effect does radio interference have on my wind turbine?

The internal circuitry of the wind turbine is shielded and filtered to prevent radio interference and has been tested to ensure electromagnetic compatibility.

For more latest FAQ's, checkout our website: https://automaxxwindmill.com/faq/ or Scan the QR Code:

9.TROUBLESHOOTING

You may require an extra person to assist with these tests.

We strongly advise the activation of the manual stop switch during any maintenance of or around your turbine. This will prevent the blades from spinning and voltage to be transferred.

(1) Remove the blade/hub from the turbine. Replace the rotor hub nut on the rotor shaft.

(2) Quickly spin the rotor shaft manually with your fingers while connecting and disconnecting the red and black wires (the turbine must not be connected to batteries).

(3) With the red and black wires connected, the shaft should be more difficult to turn. When the wires are disconnected it should spin freely. Should this not be true please contact the supplier or manufacturer.

(4) With your wind turbine connected to your battery bank, use an electric hand drill to spin the rotor shaft.

(5) Below 500 RPM, the rotor should spin freely without friction.

(6) At 300 RPM and above, the wind turbine should be charging the battery. You should feel resistance on the rotor shaft if the shaft is not rotating; contact your turbine dealer or manufacturer. Be aware your battery banks needs to be

AUTOMAXX WARRANTY POLICY

In the unlikely event that anything goes wrong with your purchase. Don't worry, we've got you covered! You're protected by our **1-Year Manufacturer's Warranty Policy.**

General

We warrant your product to be free from defects in material and/or workmanship for 1 year from the original date of purchase.

Warranty coverage is extended only to the customer (Special case/ request decided before the sale of the unit or reward). If the product proves defective during the warranty period, Automaxx option will be:

1. Replace wind turbines with a new or refurbished product.
2. Repair or replace the defective part.

The customer's warranty continues to be valid on repaired or replaced products from the original warranty date.

Warranty Period

The Automaxx warranty valid for the period of one year (365 days) after the date of first purchase. If proof of purchase cannot be provided, the manufacturer date as recorded by Automaxx will be deemed to be the start of the Warranty Period.

What is covered and what's not?

All Automaxx products and accessories that are purchased from Automaxx website/Authorized partners are covered for one year.

The warranty covers defects in manufacturing discovered while using the product as recommended by the manufacturer. The warranty does not apply to:

1. Product, equipment, or accessories that not purchased from the Automaxx / Authorized Partners.
2. Product that has been tampered with, repaired, modified or altered other than by manufacturer or without prior manufacturer's approval.

3. Damage to the Product caused by windstorms (upwards of Beaufort Wind Scale 7), lightning and Hail damage.
4. Damage to the Product caused by improper installation, negligence, accidents damage, misuse, or abuse.
5. The serial number of the Product, components or accessories has been altered or removed.
6. The Warranty seals have been broken or altered.
7. Fraud, theft, unexplained disappearance, or damages / detrimental circumstances caused by a willful act of the customer.
8. All acts of God

Any service identified in the above list or product is found not to have any defect in manufacturers' workmanship or materials the customer will be responsible for the costs of all repairs and expenses incurred by the manufacturer.

If the Product is under Warranty, You hereby agree to transfer the ownership of replaced defective parts/ accessories and such parts shall automatically become the property of Automaxx and returned to Automaxx for inspection.

Customer Responsibility When using the Product

1. Read the user manual first and use the product according to the user manual.
2. Please check the manual and the Automaxx website for troubleshooting solutions, if you notice something abnormal/ unusual with the product, contact the local supplier / distributor or contact Automaxx customer service.
3. Keep the original packaging. In case the Product needs to be returned for repair/ replacement, original packaging provides a better protection for the Product during transportation.
4. Contacting Automaxx customer service, Fill the investigation form and describe the problem clearly.

Initiating a Return

Simply fill the investigation form and contact your local supplier or our customer service support at https://automaxxwindmill.com/contact/.

You will be given an RMA (Return Merchandise Authorization) number which is required to process your return.

1. Send all the parts, spare parts, accessories & documents that were originally available with the unit.
2. Just keep in mind that returned products must be in usable and resellable condition with all the accessories. We cannot accept items damaged due to accident, misuse, abuse or negligence.

Shipping Your Return/ Replacement to Automaxx

1. Simply fill the investigation form and sent our Customer Care Center at https://automaxxwindmill.com/contact/.
2. A RMA number will be provided to you, write your RMA number on the outside of the package.
3. RMA numbers make it easy for us to identify your package and process your return. Packages sent without an invoice or RMA number cannot be processed. Please include the printout of the investigation form, Purchase Invoice with your return.
4. We recommend adding tracking and insurance to your return shipment. We can't be responsible for packages lost by your shipping carrier, so make sure you're covered. It's cheap and worth it.
5. You are responsible for the cost of shipping the product back to us.
6. Automaxx have no liability for the loss, damage or destruction of items within the package during shipment.

Refund Amount and Processing Time

We refund you the product price, which is your total order amount minus shipping costs. Please allow 5 business days from the time we receive your return to process your refund. We will issue your refund back to the PayPal you used at the time of purchase. If we have your email address on file, we will send you an email confirmation when we receive your return and when we refund your order.

Out Of Warranty Cases

Sending the Product to Automaxx repair center does not automatically mean that it will be repaired free of charge. Upon receiving your product, Automaxx reserves the right to check the validity of your warranty and your request for warranty service. If the warranty period has lapsed or if any of the exclusions previously mentioned, your request will be deemed out of warranty ("OOW"). If your service request is OOW, a service charge list with an offer for repair will be provided to you, which you may accept or reject. If you accept, repair we will provide you with an invoice for the repair labor, spare parts and other costs stated in the Service Charge List. You must pay the invoice within 4 weeks of the invoice's date of issue. The repair will only be completed after the invoice is settled.

International Warranty

Warranty only applies in the country of purchase only.

Abandoned Property

After your product has been repaired / replaced, or if you do not agree to the repair offer, Automaxx will return your repaired / replacement product via post. In case of failed delivery attempt due to wrong address/ unavailability of attendee/ other, Automaxx will send you an email provided at the point of service request. If you still fail to pick up the product within a period of 15 days from sending the notice. Automaxx reserves the right to claim damages from you, including the cost of storage; to dispose of product in accordance with the applicable laws and regulations; and any statutory right of lien for unpaid charges.

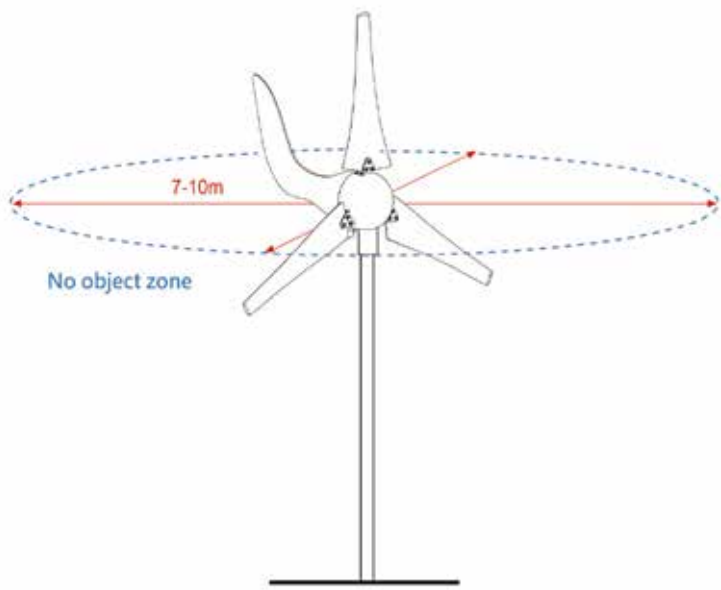
Disclaimer

Under no circumstances Automaxx will be liable or responsible for any loss of use, interruption of business, lost profits, lost data, incidental or consequential damages of any kind regardless of form, resulting from the defect, repair, replacement, shipment.

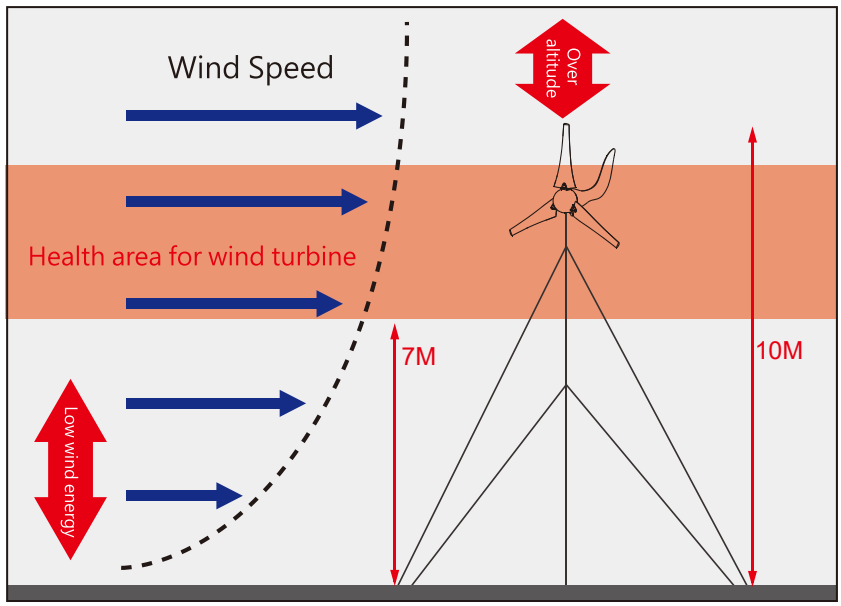
APPENDIX A IMPORTANT SAFETY INSTRUCTIONS

Read these instructions below before installing your wind turbine to ensure people and property against accidents. Please also make sure it is set up under environmental and operating conditions.

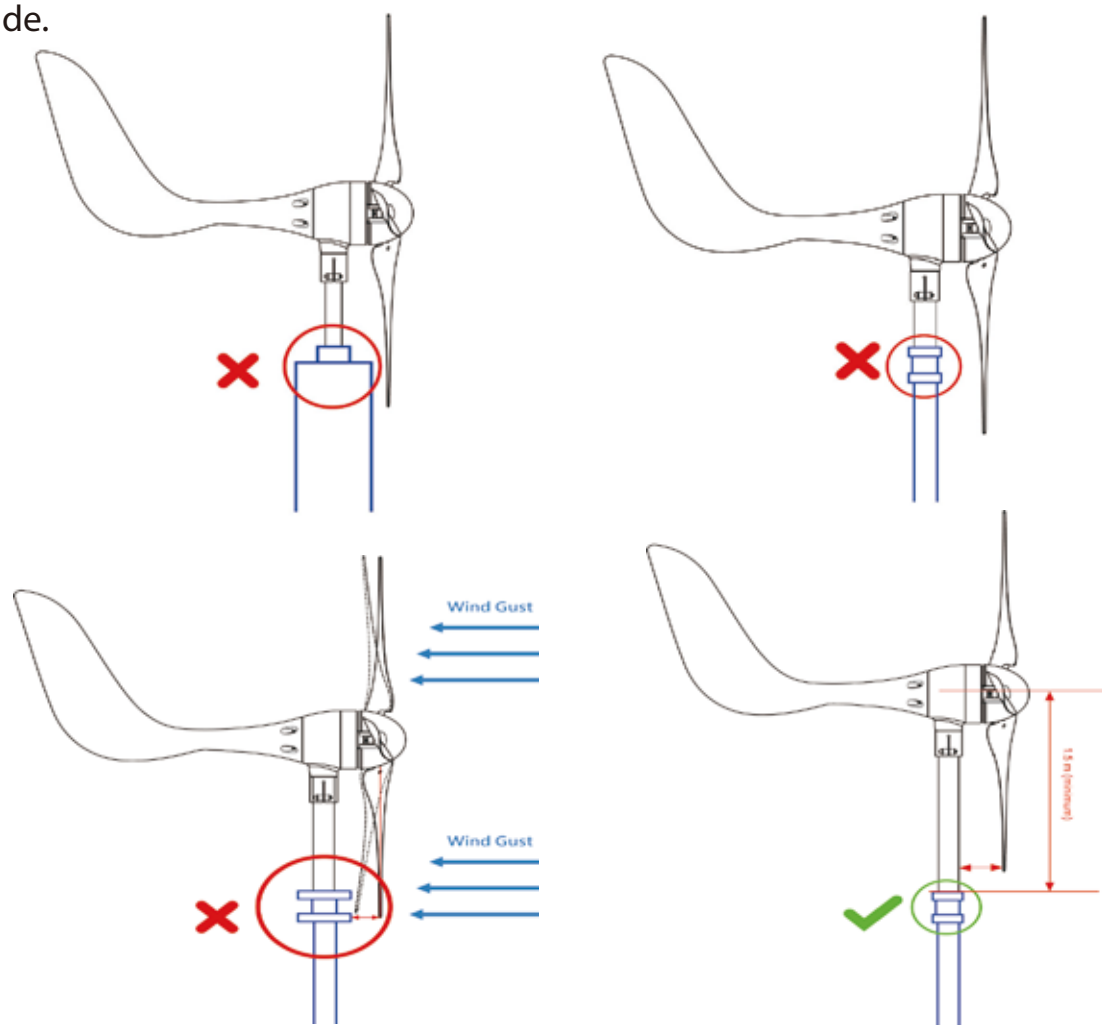
1. Install the wind turbine in open and windy sites. So, the turbine will be exposed to winds properly and the benefit can be maximized. A distance of 7-10m should be maintained.
   The noise and vibration element cannot be got rid of even if wind turbine offers the lowest noise than any others on the market. The better location of your wind turbine requires avoiding personnel or animal activities within a 33 ft (10 m) radius, and human habitation and wildlife within a 66 ft (20 m) radius.



2. The height of installation should be 22 ft (7 m) to 33 ft (10 m). The wind speed below 22 ft (7 m) constrained by the terrain is low and chaotic. For example: If winds in your area are more than 30 mph (13 m/s), a height of 7 m is recommended. The higher the wind turbine stands (more than 10 m), the more stress your pole kit will sustain. Also, the wind turbine possibly brakes in extreme weather conditions.



Warning: Make sure that there is no flange/ coupler/ support cable ring within 1.7 m from the wind turbine center/ hub. Cylindrical shape poles are recommended and there should be sufficient free space between the pole and the blades as, during the wind gust, blades bend a little towards the inside.



Operating Environment:

A. Operating Temperature: -4°F (-20°C) ~ 122°F (50°C)

B. Operating Humidity: < 80%

C. Average Wind Speed: < 30MPH (<13 m/s or <54KMH)

D. Max. Peak Wind Speed: < 45MPH (<20m/s or <70KMH)

E. Elevation: < 1000m

F. Applicable Installation Height: 8.85ft~33ft (2.7m~10m)

It is subject to IEC 61400-2 safety standards. If the operating temperature and wind speed exceed the above-mentioned limits, turn on the manual brake in the proper way to shut off the turbine.

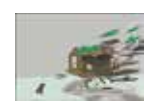
3. The rooftop may not be the best place for your wind turbine.
   Here are three reasons.
   a. The flow is more turbulent above the rooftop and leads to low wind power availability.
   b. The stress the pole kit sustains varies in rooftop constructions. Evaluation and stability cannot be guaranteed.
   c. The slight noise and vibration still affect sleep for some sensitive people and animals.

4. Check the battery health periodically. The abnormal battery and improper connection will cause over-spin issues. The wind turbine's operation should be halted to reduce the risk of damage due to over-spin of the rotor blades.

5. Survival wind speed means that the wind turbine will survive 112 mph (50 m/s) when the brake is manually activated. Exceeding this stated wind speed will result in wind turbine failure and collapse.

6. Reverse polarity will cause damage to your battery if not quickly remedied. Your turbine is equipped with polarity protection (a beeper) to reduce the risk of damage. Please check the wiring for polarity if you hear a beep sound after installation.

APPENDIX B BEAUFORT WIND SCALE

Beaufort No.	Description Calm	Avg. Wind Speed (knot/h)	Avg. Wind Speed (km/h)	Avg. Wind Speed (m/s)	Avg. Wind Speed (mi/h)	image
0	Clam	<1	<2	<0.55	< 1.24	
1	Light air	1 – 3	2 - 6	0.55~1.66	1.24~3.73	
2	Light breeze	4 – 6	7 – 12	1.95~3.33	4.35~7.46	
3	Gentle breeze	7 – 10	13 – 19	3.61~5.27	8.08~11.81	
4	Moderate breeze	11 – 16	20 – 30	5.55-8.33	12.43~18.64	
5	Fresh breeze	17 – 21	31 – 40	8.61-11.11	19.26~24.85	
6	Strong breeze	22 – 27	41 – 51	11.38~14.16	25.48~31.69	
7	Moderate gale	28 – 33	52 – 62	14.45~17.22	32.31~38.53	
8	Fresh gale	34 – 40	63 – 75	17.5~20.83	39.15~46.60	
9	Strong gale	41 – 47	76 – 87	21.11~24.16	47.22~54.06	
10	Storm	48 – 55	88 – 103	24.44~28.61	54.68~64.00	
11	Violent storm	56 – 63	104 – 117	28.88~32.5	64.62~72.70	
12	Hurricane	≥ 64	≥ 118	>32.77	> 73.32	

* It is strongly advised to manually activate the brake during periods of high winds (upwards of Beaufort Wind Scale 7). Please refer to 3.2 System Wiring Diagrams for detailed information.

Investigation Form

RMA No.

Purchase Details

Name:	Purchase Date:
Email:	Phone No.:
Order ID:	Model/ Product:
Event Date:	Location:

Please fill out the following questions for further investigation.

1. The wire length between the wind turbine and the MPPT _____m/ ft,
   MPPT and the battery _____ m/ ft.
2. Wire Gauge (AWG) or metric wire size used _____mm2
3. Connected battery (Lead Acid/ AGM/ Gel/ LiFePO4) capacity _____ Ah
4. Average wind speed _____Mph/ m/s
5. The tower height: _____ ft or _____ m
6. Suspect Components to be damage or faulty (MPPT/ Wind Turbine/ Manual Brake)
7. Issues Type (Low power/ Heating/ Mechanical Noise/ MPPT Protection)
8. With loads connected: Yes or No. Which load you are using? _____.
9. Issues Details

10. Incident Photos/ Videos / Other supporting materials