This manual is intended for the use of a Licensed Contractor. If you are a licensed and insured Contractor who would like to become a WindTronics Authorized Installer, please download our application from www.windtronics.com.
Thank You!

Thank you for your purchase of this award winning turbine, and welcome to the Age of Renewable Energy.

Thank you for your purchase of the Honeywell Wind Turbine. It is one of the most advanced wind turbine systems in the world. We are proud to offer a cost effective renewable energy technology that will provide you with many years of electric generation from an available and abundant resource; the wind. Our technology has received the prestigious Gold Edison Award in 2010 and the Breakthrough Technology Award for 2009 from Popular Mechanics. By purchasing and installing this product you have demonstrated your desire to reduce carbon dioxide emission and play a role in energy conservation.

Please take a moment to complete and return to us the Warranty Registration Card which comes with the product. You may also register on our website at www.windtronics.com.

Be sure to copy the serial number of the turbine before installing.

Serial Number ________________________________

Please note that the warranty depends on the proper installation of the Honeywell Wind Turbine. Please read this Owner’s Manual carefully and always use WindTronics Authorized Installers or other licensed contractors for proper installation.

The Honeywell Wind Turbine is manufactured by WindTronics, Inc.
Please contact WindTronics, Inc. at:

621 Sprucewood Avenue
Windsor, Ontario N9C 0B3
Canada

Tel: 877-946-3898
# Table of Contents

**Safety Instructions** ................................................................. IV

**1. Introduction**
Product Description .................................................................... 2
Shipping Contents ..................................................................... 2
Before Installing the Honeywell Wind Turbine ..................... 3
Transportation and Storage ....................................................... 3
Lift Point .................................................................................. 4
Turbine ON/OFF Switch ............................................................ 4

**2. Specifications**
Technical Specifications .......................................................... 7

**3. Turbine Installation**
Turbine Mounting:
Introduction ............................................................................. 9
Site Selection ............................................................................ 10
Turbine Spacing ........................................................................ 11
Mounting Options ...................................................................... 12
   Pole Mount ........................................................................... 13
   **QUADPOD** Mount .......................................................... 13
   **ROOFBOX** Mount .......................................................... 14
   Ballast Mount ....................................................................... 14
Junction Box ............................................................................. 15
Deflectors Assembly .............................................................. 16

Turbine Wiring:
Wiring ....................................................................................... 17
Grounding ................................................................................ 17
Operation .................................................................................. 18

**4. Warranty Information** .......................................................... 19

**5. Appendix**
Pole Mount Drawing ............................................................... 24
Pole Top Mount Assembly ....................................................... 25
**ROOFBOX** with **QUADPOD** Mount Drawing .................. 26
**ROOFBOX** Mount Drawing .................................................. 27
Ballast Mount Drawing ........................................................... 28
EC Declaration of Conformity ................................................. 29
Safety Instructions

PLEASE READ THESE INSTRUCTIONS AND THE ENTIRE MANUAL PRIOR TO INSTALLATION. INSTALLATION OF THIS WIND TURBINE CAN ONLY BE PERFORMED BY A WINDTRONICS AUTHORIZED INSTALLER OR OTHER LICENSED CONTRACTOR.

Safety Icons

The following symbols identify dangers associated with the installation, use or ownership of the Honeywell Wind Turbine. When you see the symbols be aware of the protocol for personal injury or property damage.

- **WARNING** indicates a hazard that could result in death, personal injury or property damage.

- **CAUTION** indicates a hazard that could result in property damage.

---

**IMPORTANT:** PLEASE TAKE NOTE

**PROFESSIONAL INSTALLATION:** REQUIRED

**TIP:** HELPFUL INFORMATION TO EASE THE INSTALLATION

---

Important Safety Instructions

1. This Owner’s Manual contains important instructions for the Honeywell Wind Turbine installation and maintenance. Please save it.

2. Read the entire Owner’s Manual prior to installation and follow all warnings and cautions included in the Owner’s Manual and/or attached to the Honeywell Wind Turbine.

3. Improper installation, adjustment, alteration, service maintenance, or use can cause fire, electrical shock, or other conditions which may cause death, personal injury or property damage.

4. The use of a WindTronics Authorized Installer or other licensed contractor is required for the installation and maintenance of the Honeywell Wind Turbine.

5. Choose a very calm, nearly no wind, day for the installation.

6. Follow the installation procedures contained within this Owner’s Manual and all safety codes. Follow your National Electric Code (NEC) and your local building and zoning codes.
7. The Honeywell Wind Turbine can only be moved and lifted by WindTronics Authorized Installers or other licensed contractors using standard hoists and hydraulic lifts such as a crane or bucket truck.

8. Appropriate protective personal equipment such as hard hat, work gloves, safety glasses, and closed toe work shoes should be worn when installing the Honeywell Wind Turbine.

9. Only WindTronics Authorized Installers or other licensed contractors can perform the following installation and maintenance functions on this Honeywell Wind Turbine:
   - Open and work on the junction box at the turbine
   - Apply any torque to any of the turbine’s fasteners

10. The installation directions include recommendations of a variety of options. Installation must be approved and certified by your local Professional Engineer (PE) and the installer must acquire all the necessary permits from the local authorities prior to installation.

11. Your installer must use only proper grounding methods as stipulated by your NEC.

12. The Honeywell Wind Turbine is an electric generator. Therefore high voltage is generated within the system. Be sure to use only WindTronics Authorized Installers or other licensed contractors to perform work on this turbine.

13. Failure to complete and mail in the registration card may affect the warranty.

14. Failure to use a WindTronics Authorized Installer or other licensed contractor or to follow local codes may void your warranty.

NOTE TO INSTALLER: This Owner’s Manual should be left with the owner of the Honeywell Wind Turbine.
Introduction

<table>
<thead>
<tr>
<th>For Information On:</th>
<th>See:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Description</td>
<td>2</td>
</tr>
<tr>
<td>Shipping Contents</td>
<td>2</td>
</tr>
<tr>
<td>Before Installing</td>
<td>3</td>
</tr>
<tr>
<td>Transportation and Storage</td>
<td>3</td>
</tr>
<tr>
<td>Lift Point</td>
<td>4</td>
</tr>
<tr>
<td>Turbine ON/OFF Switch</td>
<td>4</td>
</tr>
</tbody>
</table>
Introduction

Product Description

The Honeywell Wind Turbine is a novel electric generator (worldwide patents pending). It consists of a central wheel made up of an aluminum rim, stainless steel spokes, and an aluminum hub. Two ceramic bearings are used to attach this wheel to the center shaft of the turbine. Custom-shaped glass-filled nylon blades are attached to the spokes of this wheel. Permanent magnets are affixed to the tips of these blades at the rim of the wheel.

The wind flows through this wheel with ease and it interacts with the aerodynamically designed blades to induce a rotational motion in the wheel around its center hub. This rotational motion is THE indication that wind energy is being extracted from the flowing wind stream. The magnets travel at a much higher speed for any given wheel rotation because they are located at the rim of the wheel. This placement of the permanent magnets at the blade tips produces the needed high speed motion without the need of any gearing mechanism. The elimination of gears in this wind turbine technology enhances wind energy extraction efficiency and prolongs its operating life.

The permanent magnets at the blade tips and wheel rim travel at high speed within a novel and custom-built stator system. This stator system converts the motion of these magnets into electricity. A glass-filled nylon aerodynamically shaped shroud covers the stator system.

Shipping Contents

1. One (1) Honeywell Wind Turbine
2. Two (2) wind deflectors with four (4) brackets attached and eight (8) ¼”-20 S.S. locknuts
3. One (1) Warranty Registration Card
5. One (1) wind turbine inspection certification tag
6. One (1) junction box assembly including:
   - Wire harness connected to wind turbine which includes two (2) 14 AWG black wire and one (1) 12 AWG green wire
   - Turbine ON/OFF switch
   - Enclosed dump load for braking
   - Anemometer
Before Installing the Honeywell Wind Turbine:

![Important]

Please take note that the Honeywell Wind Turbine is a proprietary wind driven electric generator. It is designed to displace annual electric consumption by connecting it to the electric switch board in the proper procedures described in this Owner’s Manual. It may also be used as a stand-alone installation where connecting to a local electric grid is not possible. Its unique and highly efficient design enables it to begin generating electricity starting at 2 mph (0.9 m/s) and continue operating until 40 mph (17.9 m/s). A minimum average wind speed of 12 mph (5.4 m/s) is recommended for optimal wind turbine output performance. Please follow the Site Selection guidelines for optimal installation.

Please contact WindTronics’ Customer Service if there is any doubt or concern regarding this electric generator or its installation.

Transportation and Storage

It is recommended that movement of the wind turbine be minimized. It is recommended that the packaged wind turbine be transported and stored in its horizontal position on its 89”x 85” pallet. In this orientation, the maximum storage height is six units high. Packaged turbines may be stacked horizontally only two units high without their pallets.

**Note:** Due to the size of the pallet, long forks are required for lifting.

For transportation or storage in the vertical position, the packaged wind turbines must be stacked up against a wall and next to each other. To gain stability, multiple turbines may be stretch wrapped together. Do not stack turbines in this orientation.

![Warning]

The wind turbine must be opened and unpacked in its horizontal orientation. Failure to do so may result in death, serious injury and/or property damage.

Open the turbine in the horizontal orientation (refer to figure 1.1). After cutting the outside straps, refer to the unpacking instructions that can be found inside the packaging.

The wind turbine may be transported or stored within the following temperature range: -40 C to 60 C (-40 F to 140 F). The cardboard packaging must be protected from rain, snow and other moisture.

![Figure 1.1: Turbine in Horizontal Orientation]
Lift Point

Only WindTronics Authorized Installers or other licensed contractors can move and lift the Honeywell Wind Turbine. The turbine should only be moved using standard hoists and hydraulic lifts such as a crane or bucket truck.

The recommended lift point is shown below in figure 1.2:

![Figure 1.2: Proper Turbine Lift Point](image)

Turbine ON/OFF Switch

Only WindTronics Authorized Installers or other licensed contractors can perform installation and maintenance functions.

This switch has been provided for use during maintenance which should only be performed below wind speeds of 10 mph (4.5 m/s). After putting the Energy Management System in its Turbine STOP mode (if it has one), turn off the fused DC disconnect between the junction box and the Energy Management System. This switch can then be put in the OFF position to prevent any voltage from entering the junction box.

This ON/OFF switch also acts as a backup emergency shut-off. If the turbine is free spinning and cannot be stopped by the chosen Energy Management System, this switch can be used to stop the turbine.

![Figure 1.3: Turbine ON/OFF Switch](image)
Power shall be disconnected from the equipment before the junction box enclosure is opened and the enclosure shall be closed before the power is restored. Failure to do so may result in death, serious injury and/or property damage.

If any maintenance is to be done on the turbine, the turbine must be put in STOP mode, the fused DC disconnect between the junction box and the Energy Management System must be OFF, the turbine switch on the junction box must be in the “TURBINE OFF” position and the wheel must be tie-wrapped to prevent turning. Failure to do so may result in death, serious injury and/or property damage.
2 Specifications

<table>
<thead>
<tr>
<th>For Information On:</th>
<th>See:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Specifications</td>
<td>7</td>
</tr>
</tbody>
</table>
## Technical Specifications

<table>
<thead>
<tr>
<th>Model WT6500</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated Power Output</strong></td>
<td>1500 W at 31 mph (13.9 m/s)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Turbine: 225 lb. (102 kg), Directional Fins: 16 lb. (7.3 kg)</td>
</tr>
<tr>
<td><strong>Rotor Diameter</strong></td>
<td>6 ft. (1.82 m)</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Blade Tip Power System™</td>
</tr>
<tr>
<td><strong>Blades</strong></td>
<td>20 Glass Filled Nylon (10 short and 10 long)</td>
</tr>
<tr>
<td><strong>Shut Down Speed</strong></td>
<td>165 VDC or 40 mph (17.9 m/s)</td>
</tr>
<tr>
<td><strong>Generator</strong></td>
<td>Perimeter Tip Permanent Magnet/Stator System</td>
</tr>
<tr>
<td><strong>Grid Feeding</strong></td>
<td>Depends on Energy Management System chosen</td>
</tr>
<tr>
<td><strong>Braking System</strong></td>
<td>Electromagnetic</td>
</tr>
<tr>
<td><strong>Duty Type</strong></td>
<td>S1, Continuous Duty</td>
</tr>
<tr>
<td><strong>Cut-In Wind Speed</strong></td>
<td>2 mph (0.9 m/s)</td>
</tr>
<tr>
<td><strong>Rated Wind Speed</strong></td>
<td>31 mph (13.9 m/s)</td>
</tr>
<tr>
<td><strong>Survival Wind Speed</strong></td>
<td>140 mph (62.6 m/s)</td>
</tr>
<tr>
<td><strong>Recommended Minimum Average Wind Speed</strong></td>
<td>12 mph (5.4 m/s)</td>
</tr>
<tr>
<td><strong>Sound Power Level</strong></td>
<td>At 10 ft. (3 m) away, less than 35 dB at 30 mph (13.4 m/s)</td>
</tr>
<tr>
<td><strong>Temperature - Operating, Storage and Transportation</strong></td>
<td>-40 C to 60 C (-40 F to 140 F)</td>
</tr>
</tbody>
</table>

**DATA SUBJECT TO CHANGE WITHOUT NOTICE**
3

3 Turbine Installation

<table>
<thead>
<tr>
<th>For Information on:</th>
<th>See:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>9</td>
</tr>
<tr>
<td>Site Selection</td>
<td>10</td>
</tr>
<tr>
<td>Turbine Spacing</td>
<td>11</td>
</tr>
<tr>
<td>Mounting Options</td>
<td>12</td>
</tr>
<tr>
<td>Junction Box</td>
<td>15</td>
</tr>
<tr>
<td>Deflectors Assembly</td>
<td>16</td>
</tr>
<tr>
<td>Wiring</td>
<td>17</td>
</tr>
<tr>
<td>Grounding</td>
<td>17</td>
</tr>
<tr>
<td>Operation</td>
<td>18</td>
</tr>
</tbody>
</table>
Turbine Mounting

Introduction

Hazardous voltages, currents, or other conditions that could cause serious bodily injury or death exist in this equipment or may be associated with its use.

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**
The Honeywell Wind Turbine can only be connected to an Energy Management System approved by WindTronics. Failure to follow this warning may void the Honeywell Wind Turbine warranty and may result in death, personal injury or property damage (including damage to the Honeywell Wind Turbine).

**PROFESSIONAL INSTALLATION: REQUIRED**

After following the unpacking procedures included in the wind turbine package, it is required that only WindTronics Authorized Installers or other licensed contractors perform the installation and maintenance of the wind turbine.

In general, the installation consists of mounting the turbine on suitable and approved mounting hardware. The installation procedure includes recommendations for the mounting options. They must be approved and certified by your local PE and the WindTronics Authorized Installer or other licensed contractor must acquire all the necessary permits from the local authorities BEFORE to installation.

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**
Do not touch revolving turbine blades or insert objects, including sticks and screwdrivers, into revolving turbine blades. Failure to follow this warning may result in death, personal injury or property damage.

**CAUTION**

WHEN MOUNTING ON OR OVER A COMBUSTIBLE SURFACE, A FOOT PLATE OF AT LEAST 1.43 mm GALVANIZED OR 1.6 mm UNCOATED STEEL EXTENDED AT LEAST 150 mm BEYOND THE EQUIPMENT ON ALL SIDES MUST BE INSTALLED.

There are several options for the installation of the Honeywell Wind Turbine. The turbine may be installed using a pole, a QUADPOD Mount on a pitched roof with a ROOFBOX Mount, or a QUADPOD Mount on a flat roof with a ballast. These are described in the next section.

Building codes and installation requirements vary considerably between various townships, cities, states and countries. Make sure that all required local permits are obtained BEFORE beginning installation. In all cases installation must be conducted by a WindTronics Authorized Installer or other licensed contractor. In some locations the local electric utility may have strict regulations about renewable energy technologies such as this wind turbine and other interconnect agreements and therefore it is highly recommended that they are also contacted BEFORE installation.
Site Selection

The key objective of a site evaluation or study is to place the Honeywell Wind Turbine so energy generated from the wind is maximized while meeting the local zoning requirements. Key elements to focus on during the site evaluation include:

1. High average wind speeds. The turbine delivers its best energy performance in areas of high wind speeds. This can best be determined by using simple anemometers at the installation site. It is recommended that such wind speed data is recorded for as long a period as possible, and even better if several seasons are considered. When this is not possible, published wind data can give an estimate for the average local wind speeds. Published wind atlases may contain very useful comparative data for a region or a specific location. However, be very careful when relying only on this information as such data quite often tends to be measured at very high altitudes and may not be useful at lower and more practical heights.

2. As a general rule it is best to install the turbine at the highest permissible position and far removed in proximity to trees and other adjacent buildings or structures.

3. Always take into consideration all possible safety consequences of the turbine installation at the local site.

Figure 2.1: Wind Map for USA
Spacing - Multiple Turbines

- Turbines should be staggered at location.
- Maintain minimum spacing requirements.
- To increase potential energy extraction, place turbines at differing elevations.

**Figure 2.2:** Top View and Front View
Mounting Options

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**
Do not install the Honeywell Wind Turbine in a location that is accessible to children or pets. Failure to follow this warning may result in death, personal injury or property damage.

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**
The Honeywell Wind Turbine must be mounted by WindTronics Authorized Installers or other licensed contractors only, with the use of all appropriate hardware. Failure to follow this warning may void the Honeywell Wind Turbine warranty and may result in death, personal injury or property damage (including damage to the Honeywell Wind Turbine).

The schematic below shows the installation options available for the Honeywell Wind Turbine. Whichever mounting option is chosen must be approved by a local PE. All of the options listed have been rated by our PE and certified for WindTronics. Please refer to the following designs and their included specifications found in the Appendix of this manual.

**Pole**

*Material:*
- Concrete
- Steel
- Wood

**QUADPOD Mount**
- Residential
- Small commercial
- Flat or pitched

**Ballast**
**QUADPOD Mount**
- Weighed Down
- Commercial
- Flat Roof

*Figure 2.3: Mounting Options*
Failure to follow proper installation practices for any of the mounting options could result in death, personal injury and/or property damage.

The vertical axis of the turbine must be level when installed. Turbines installed with their vertical axis off-level will see significant impact on performance.

**IMPORTANT:** AS ROOF CONSTRUCTION AND ROOF LINES VARY, POLE MOUNTED INSTALLATIONS ARE RECOMMENDED FOR RESIDENTIAL ENVIRONMENTS FOR OPTIMAL COST, FLEXIBILITY AND PERFORMANCE.

### Pole Mount

**PROFESSIONAL INSTALLATION: REQUIRED**

The pole for the Honeywell Wind Turbine may be concrete, steel, or wood. Whichever pole design option is chosen, it must be approved by a local PE. All of the options listed have been rated by our PE and certified for WindTronics.

WindTronics also offers a Pole Top Mount which will fit on top of wood poles with 7.75” to 12.5” diameters.

![Figure 2.4: WindTronics™ Pole Top Mount](image)

See page 25 in the Appendix for design and specifications (see website www.windtronics.com for the complete Pole Top Mount Assembly and Installation Manual).

### QUADPOD Mount

**PROFESSIONAL INSTALLATION: REQUIRED**

The QUADPOD wind turbine mounting system is a novel design in that it may be used on a flat roof area or most roof angles due to its strong, hinged design. The QUADPOD, when mounted according to its installation procedure, always ensures that the wind turbine is in a vertical stand at various roof angles. The QUADPOD installation on a roof must be approved by a local PE. All of the options listed have been rated by our PE and certified for WindTronics.
Figure 2.5: WindTronics™ Pole Top Mount - Wire Protection
When using the QUADPOD Mount, the wires connecting the turbine to the junction box must be protected from the rotating turbine. Figure 2.5 is an illustration of how this may be accomplished.

ROOFBOX Mount

PROFESSIONAL INSTALLATION: REQUIRED

The Honeywell Wind Turbine may be mounted on the QUADPOD which can be securely mounted onto a ROOFBOX. The ROOFBOX installation on a roof must be approved by a local PE. All of the options listed have been rated by our PE and certified for WindTronics.

IMPORTANT: THE ROOFBOX QUADPOD SYSTEM IS DESIGNED FOR PITCHED OR FLAT ROOF TOPS.

See page 26-27 in the Appendix for design and specifications (see website www.windtronics.com for the complete QuadPod Assembly and Installation Manual).

Ballast Mount

PROFESSIONAL INSTALLATION: REQUIRED

The QUADPOD Ballast Mount is for use on a flat roof. If the roof is sloped, a level surface must be constructed to ensure the turbine will be level. The Ballast Mount is weighed down by concrete blocks as specified, which negates the need for penetration into roof/building structures. The QUADPOD Ballast Mount installation on a roof must be approved by a local PE. All of the options listed have been rated by our PE and certified for WindTronics.

See page 28 in the Appendix for design and specifications.
Junction Box

Purpose: The junction box is the interface between the turbine and the Energy Management System which houses the safety braking circuitry to limit the maximum turbine speed. The turbine will brake if voltage generated exceeds 165 VDC. The cylinder attached to the junction box houses the resistor used to brake the turbine and dissipate excess energy as heat. The anemometer sends wind speed data to the Energy Management System. The turbine will also brake if wind speeds exceed 40 mph (18 m/s). The brake will be released when the wind speed is 38 mph (17 m/s) or lower.

Mounting: The junction box comes hard wired to the turbine. It should be mounted to ensure the anemometer will be able to function through all seasons (i.e. will not be covered with snow in the winter). The junction box can be mounted through two pre-drilled holes tapped for 5/16-18 bolts in the black mounting bars on the back of the junction box. The QUADPOD Mount and Pole Top Mount have pre-drilled holes for mounting of the junction box. Mounting hardware is supplied by the Installer.

Figure 2.6: Turbine Junction Box - Inside and Out
Deflectors Assembly

**Figure 2.7:**
Remove deflector from packaging. Ensure six (6) nuts are fully tightened.

**Figure 2.8:**
Guide the top bracket holes over the top mounting studs.

**Figure 2.9:**
Ensure the deflector is behind the end block.

**Figure 2.10:**
Guide the left hole on the bottom bracket over the bottom left mounting stud.

**Figure 2.11:**
Push up on the end of the bottom bracket and guide the bottom right bracket hole over the bottom right mounting stud.

**Figure 2.12:**
Fasten top bracket to mounting studs via provided nuts.

**Figure 2.13:**
Fasten bottom bracket to mounting studs via provided nuts.

Repeat steps for second deflector.
Turbine Wiring

Wiring

**ELECTRIC SHOCK HAZARD**
Disconnect turbine and any battery circuits before wiring. Turn off all power before wiring. Failure to follow safety warning could result in serious injury and/or death.

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**
Connecting the Honeywell Wind Turbine to any Energy Management System other than a WindTronics approved Energy Management System may void the Honeywell Wind Turbine warranty and may result in death, personal injury or property damage (including damage to the Honeywell Wind Turbine).

Installations must meet all local electrical codes. Installations of the equipment must only be performed by WindTronics Authorized Installers or other licensed contractors.

A licensed electrician must perform all electrical connections. All electrical systems must be grounded in accordance to your National Electric Code (NEC) and local standards. Please refer to the Energy Management System Manual for full details on wiring, connecting and commissioning of the Honeywell Wind Turbine.

**REVERSE POLARITY DAMAGE**
Before making the final DC connection or closing the DC breaker or disconnect, check cable polarity at all connections. Positive (+) must be connected to positive (+). Negative (-) must be connected to negative (-).

Grounding

**PROFESSIONAL INSTALLATION:** A LICENSED ELECTRICIAN MUST INSTALL AND COMMISSION THIS TURBINE USING YOUR NATIONAL ELECTRIC CODE AND IN COMPLIANCE TO THE LOCAL PERMITTING AND ZONING CODES.

**SHOCK HAZARD**
Disconnect wind turbine and any battery circuits before removing the grounding connections or before removing or installing any fuses. Wait at least five minutes for the internal circuitry to discharge before servicing the unit. Failure to follow this warning may result in death, personal injury or property damage.

Even though the wind turbine is grounded at the junction box, it must also be grounded at the base of the mounting pole, QUADPOD Mount, or custom mount. Grounding at these mounts may prevent electric shock and voltage surges. Proper mount grounding may also minimize damage due to lightning strikes.

Grounding information is available from the National Electric Code (NEC) USA 2005 as well as...
the International Electrotechnical Commission (IEC) standard 60364-5-54 section Erection of Electrical Equipment: Earthing Arrangements, Protective Conductors and Protective Bonding Conductors. Please reference the NEC and IEC standards regarding full details of grounding this wind turbine. Please also refer to 205 NEC article 250.53 (G) regarding the grounding electrode installation. Also refer to 2005 NEC article 250.66 (A) regarding conductor size where it stipulates that where a grounding electrode conductor is connected to a rod, pipe or plate electrode, that portion of the conductor that is the sole connection to the grounding electrode shall be a minimum of 6 AWG copper wire or 4 AWG aluminum wire.

**Operation**

**PERSONAL INJURY AND PROPERTY DAMAGE HAZARD**

Do not touch revolving turbine blades or insert objects, including sticks and screwdrivers, into revolving turbine blades. Failure to follow this may result in death, personal injury or property damage.

**PROFESSIONAL INSTALLATION:** A LICENSED ELECTRICIAN MUST INSTALL AND COMMISSION THIS TURBINE USING YOUR NATIONAL ELECTRIC CODE AND IN COMPLIANCE TO THE LOCAL PERMITTING AND ZONING CODES.

Follow the electrical connections and commissioning procedures in the Energy Management System manual for the wind turbine start up, operations, and maintenance. The label below is provided for turbines used with inverters to indicate the location of the AC POWER disconnect switch. Please cut out and place near the Energy Management System where a licensed electrician and service personnel can easily see it.

**ATTENTION**

To Disable Wind Turbine
Disconnect AC Power

Note: AC Power Disconnect Box is located at:

Disconnect & Lock - Out AC Power per NFPA 70E and OSHA Requirements before servicing and/or maintance.

**Windtronics, Inc**
621 Sprucewood Avenue
Windsor, ON N9C0B3
Canada

There are no parts in the Honeywell Wind Turbine that require lubrication or scheduled maintenance. Please follow the manufacturer guidelines of any batteries used for their installation, operation and maintenance. Please contact WindTronics' Customer Service with any questions.

If noise or vibration is detected or if the turbine’s blades rotate very slowly under extremely windy conditions turn turbine off and please contact WindTronics’ Customer Service.
4 Warranty Information
5-Year Limited Warranty

Limited Warranty:

Subject to the terms below, WindTronics, Inc. ("WindTronics") warrants its products against defects in materials or workmanship under normal use consistent with product instructions for a period of five (5) years from the date the original purchaser (the "Purchaser") purchases the product. This warranty extends only to the Purchaser and cannot be assigned to any other party. If warranted products contain defects covered under this warranty, WindTronics’ obligation shall be limited to, in WindTronics’ sole and absolute discretion, repairing or replacing the defective parts. Repaired or replaced parts are warranted for the remainder of the original warranty period.

Warranty Claims:

No rights may be exercised under this warranty unless the Purchaser registers the product for warranty coverage within sixty (60) days after purchase or provides proof of purchase. Purchaser can register the product for warranty coverage online at www.windtronics.com or by completing and returning the warranty registration card included with the product, in which case the product will be considered registered as of the postmark date on the warranty registration card. Notice of any defect covered under this warranty must be given within thirty (30) days of the date the defect is discovered. Notice shall be in writing or by telephone. Notices by telephone shall be made by calling Customer Service at 877-946-3898 and written notices shall be sent to:

WindTronics, Inc.
380 W. Western Ave - Suite 301
Muskegon, MI
49440
Attn.: Customer Service – Warranties

The Purchaser must provide WindTronics the following: (1) the date the defect was discovered; (2) evidence of the defect, including, without limitation, photographs and a verbal/written description of the defect; (3) the serial number of the product; (4) the original purchase date of the product; (5) the location of the product; and (6) the name, address, and phone number of the party making the warranty claim.

We reserve the right to an on-site inspection by an authorized service representative. The Purchaser is required to provide adequate access to the product for any such repair or inspection. Subject to the terms and conditions contained in this document, a Factory Authorized Dealer/Service Center will repair the product. There will be no charge for parts, labor or the freight costs for parts necessary to repair the product. If it becomes necessary for the product to be shipped to the Factory Authorized Dealer/Service Center, the Purchaser shall be responsible for transporting the product to and from the Factory Authorized Dealer/Service Center. Additionally, reasonable travel charges of the repair person may be assessed in cases where the product is in a remote location. In the event the Purchaser is unable to obtain satisfactory service from a Factory Authorized Dealer/Service Center, the Purchaser should notify the WindTronics Customer Service Department.

If we determine that repairs are not feasible due to functional defect, we reserve the right to provide a replacement part or product in lieu of repair. We will replace with a part of value equal to the original purchase. In such event, reasonable costs for removal of the defective product and delivery and installation of the replacement product will be the responsibility of the Purchaser. All replaced parts and products shall become the property of WindTronics on the date the part or product is replaced.
Limitations and Exclusions on Limited Warranty:

This limited warranty will not apply under any of the following circumstances:

1. If any part of the product has been altered or modified by anyone other than an authorized representative of WindTronics;
2. If any part of the product has not been installed, operated, repaired, or maintained in accordance with the product’s instructions;
3. If any part of the product has been the subject of misuse, misapplication, improper maintenance or repair, damage caused by the fault or negligence of anyone other than an authorized representative of WindTronics, damage caused by severe weather or acts of God, or any other act or event beyond the control of WindTronics; and
4. If the product has been exposed to winds exceeding 140 mph (62.6 m/s) or has been subjected to abnormal physical, thermal or electrical stress.

Warranty Registration:

The Purchaser must maintain proof of purchase or register the product for warranty coverage within sixty (60) days after purchase. Purchaser can register the product for warranty coverage online at www.windtronics.com or by completing and returning the warranty registration card included with the product. All warranty claims made on a product that has not been registered will be denied unless proof of purchase can be provided.

Disclaimers Applicable to all Warranties:

EXCEPT FOR THE EXPRESS LIMITED WARRANTY SET FORTH ABOVE, WINDTRONICS EXPRESSLY DISCLAIMS AND EXCLUDES ALL OTHER EXPRESS WARRANTIES. ADDITIONALLY, TO THE EXTENT PERMITTED BY APPLICABLE LAW, EACH AND EVERY IMPLIED WARRANTY THAT MAY APPLY TO THE PRODUCT (INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND FREEDOM FROM ENCUMBRANCES) ARE LIMITED IN DURATION TO THE FIVE-YEAR LIMITED WARRANTY PERIOD. WINDTRONICS EXPRESSLY DISCLAIMS ALL LIABILITY FOR BODILY INJURY OR DEATH THAT MAY OCCUR, DIRECTLY OR INDIRECTLY, BY USE OF THE PRODUCT.

Limitation of Liability:

IN NO EVENT SHALL WINDTRONICS BE LIABLE FOR ANY DAMAGES RESULTING FROM LOSS OF CONFIDENTIAL OR OTHER INFORMATION OR BUSINESS INTERRUPTION OR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFITS), REGARDLESS OF THE FORM OF ACTION, WHETHER IN TORT, STRICT LIABILITY, CONTRACT OR OTHERWISE, ARISING OUT OF OR IN ANY WAY RELATED TO THE DEFECT, REPAIR, REPLACEMENT OR SHIPMENT OF THE PRODUCT, EVEN IF WINDTRONICS KNOWS OF, OR SHOULD HAVE KNOWN OF, THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING LIMITATIONS, EXCLUSIONS AND DISCLAIMERS SHALL APPLY TO THE maximum extent permitted by applicable law. IN NO EVENT SHALL WINDTRONICS’ AGGREGATE LIABILITY EXCEED THE AMOUNT ACTUALLY RECEIVED BY WINDTRONICS FROM THE PURCHASER FOR THE PURCHASE OF THE PRODUCT.

Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. No agent, dealer, Service Company, or other party is authorized to change, modify, or extend the terms of this
warranty in any manner whatsoever.

Legal Remedies:

This warranty gives you specific legal rights, and you may have other rights which vary from state to state or province to province.

Changes to this Limited Warranty:

WindTronics may change this warranty from time to time. When WindTronics makes changes to the warranty, it will post them at www.windtronics.com. The warranty that shall apply to a product shall be the warranty posted at the website at the time the product is purchased. It is the Purchaser’s responsibility to check the website to see if the warranty posted there is different than the warranty stated herein.

Governing Law:

If the Purchaser purchases the product in the United States of America, this warranty is governed by the laws of the State of Michigan and the applicable federal laws of the United States. If the Purchaser purchases the product in Canada, this warranty is governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein. In either case, the application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded.
### Appendix

<table>
<thead>
<tr>
<th>For Information on:</th>
<th>See:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pole Mount</td>
<td>24</td>
</tr>
<tr>
<td>Pole Top Mount Assembly</td>
<td>25</td>
</tr>
<tr>
<td><strong>ROOFBOX with QUADPOD Mounting</strong></td>
<td>26</td>
</tr>
<tr>
<td>ROOFBOX Mount</td>
<td>27</td>
</tr>
<tr>
<td>Ballast Mount</td>
<td>28</td>
</tr>
<tr>
<td>EC Declaration of Conformity</td>
<td>29</td>
</tr>
</tbody>
</table>
Pole Mount
Instructions for Pole Top Mount Assembly

Step 1:
- Position Leg Weldment #WTM001 to bottom of #WTM002 Coupler Weldment.
- Bolt together using fastener #'s: 70210, 70714, 71021, 71071 as shown.
- Repeat pattern in three additional locations.

Step 2:
- Position Mounting Bracket #WTM003 to top of #WTM002 Coupler Weldment.
- Bolt together using fastener #'s: 70210, 70714, 71021, 71071 as shown.

Note:
Be sure both pole and pole coupler are installed level. Failure to install them level will impact turbine performance and may impact warranty coverage.

Be sure the inner surface of the Mounting Leg Weldment is flush against the pole prior to bolting the fasteners. Choose the bolt hole in the base of the Pole Mount Turbine Coupler Weldment that aligns with the slot in the Mounting Leg Weldment.

Pole Top Mount Assembly #WTMASSY001

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WTM001</td>
<td>Mounting Leg Weldment</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>WTM002</td>
<td>Pole Mount Turbine Coupler Weldment</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>WTM003</td>
<td>Pole Mount Junction Box Mounting Bracket</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Fastenal #70210</td>
<td>Hex Cap Screw, 1/2-13 x 1.75&quot; Ig Full Thread 18-8 S/S</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Fastenal #71071</td>
<td>Flat Washer - 1/2&quot;, Medium Split, 18-8 Stainless Steel</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Fastenal #71021</td>
<td>Flat Washer - 1/2&quot;, Small O.D., 18-8 Stainless Steel</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>Fastenal #70714</td>
<td>Hex Nut - 1/2-13 - 18-8 Stainless Steel</td>
<td>9</td>
</tr>
</tbody>
</table>
ROOFBOX with QUADPOD Mounting

"EXTENDED QUAD POD" @ 63.4° ON 6/12 "ROOF BOX"

MAST IS SET VERTICAL
DIAGONAL LEG PARALLEL TO ROOF

"ROOF BOX" MATERIALS:
- SHINGLES TO MATCH EXISTING
- ICE & WATERSHED (FULL COVERAGE)
- 1/2" OSB SHEATHING
- 2x4 RAFTERS (SFR) 2' o.c.
- 2x4 TREATED W.D. FURRING
- 1/4" x 5' LVL
- B4 RIDGE BD.
- L-40's ATTACHING RAFTERS TO FURRING
- ATTACH FURRING TO TRUSSES w/ 2 - 1/4"x4" GRK'S PER TRUSS
- L-40's ATTACHING RAFTERS TO LVL's

THE 124# LOAD IS DEVELOPED FROM THE FULL EXPOSURE
OF THE TURBINE (221.56') @ A 140mph / 3 SECOND 65% OF WIND

THE 140mph 3 SECOND 65% DO NOT OCCUR IN WINTER
*: SNOW LOAD, 4 TURBINE LOAD DO NOT NEED
TO BE CONSIDERED CUMULATIVE

ROOF BOX TO BE 6'-4"L, (PLACED OVER 4 TRUSSES)
LOAD:
- 2565# LOAD IS PARALLEL TO TOP CHORD
- LOADED ONTO 4 TRUSSES = 641#/TRUSS
- 1150# VERT. LOAD/4 TRUSS = 288# TO EACH TRUSS
- 6#/SF VERTICAL LOAD TO ROOF @ ROOF BOX
## ROOFBOX Mounting

![Diagram of ROOFBOX Mounting](image)

**ROOF BOX ISOMETRIC**

6°-12 Pitch Roof Shown

**ROOF BOX SIZE:**

6'-4" (OVER 4 TRUSSES)
3'-0" (HORIZ.) FROM PEAK TO LVL

**"ROOF BOX" MATERIALS:**

- SHingles to Match Existing
- ICE & WATERSHIELD (FULL COVERAGE)
- 1/2" OSB SHEATHING
- 2x4 RAFTERS (SFI) 2oz.
- 2x4 TREATED KID Furring
- 1-3/4" x 5" LVL
- 1x4 RIDGE BD.
- L-40s Attaching Rafters to Furring
- Attach Furring to Trusses w/ 2 - 1/4"x4" GRK's PER TRUSS
- L-40s Attaching Rafters to LVL's
Ballast Mounting

EXTENDED QUADPOD w/ PIXEL VANES
ROOF LOAD CALCULATIONS
@ 140mph WIND & 60'HT.

ITM2 HORSE LOAD CREATES 39893 VERT LOAD

39893 VERT LOAD

PLAN
SCALE 1" = 1'-0"

ITM2 AMP LOAD

ITM2 HORSE LOAD

ROOF AREA UNDER PADS = 1168'L2
INT OF TURBINE = QUAD POD + 800'
INT OF CONG BALLAST = 100' x 4 = 400'
TOTAL LOAD TO ROOF = 4424 + 800 = 5224'
LOAD PER SF OF ROOF AREA = 5224/649 = 8.03'M/'

NOTE: VERT LOAD TO ROOF AREA HAS -X COMPONENT IF THERE IS A DOWNWARD COMPONENT THERE IS AN EQUAL UPWARD COMPONENT AT THE OPPOSITE CORNER IN THE 8x12' ROOF AREA OF THE TURBINE FOOTPRINT

EXTENDED QUADPOD w/ PIXEL VANES
REQUIRES APPROXIMATELY 31#SF LOADING @ ROOF
EC Declaration of Conformity
In accordance with EN ISO 17050-1:2004

We, WindTronics, Inc.
of 621 Sprucewood Ave, Windsor, Ontario N9C 0B3

in accordance with the following Directive(s):

IEC 61439-1  Low-Voltage Directive
CENELEC EN 61000-6-2 EMC Directive
CENELEC EN 61000-6-4 EMC Directive
IEC 60034-1  Rotating Electrical Machines Directive
IEC 60204-1  Safety of Machinery Electrical Equipment Directive

hereby declare that:

Equipment Honeywell Wind Turbine and WindTronics Wind Turbine
Model numbers WT6500 and BTPS6500

is in conformity with the applicable requirements of the following documents:

Ref. No. Title                                                                 Edition/Date
IEC 61439-1 Low-Voltage Switchgear and Controlgear Assemblies – Part 1: General Rules 1.0/2009-01-22
CENELEC EN 61000-6-2 Electromagnetic Compatibility (EMC) – Part 6-2: Generic Standards – Immunity for Industrial Environments 1999-01-01
CENELEC EN 61000-6-4 Electromagnetic Compatibility (EMC) – Part 6-4: Generic Standards – Emission Standard for Industrial Environments 2007-01-01

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

Signed:

Name: Imad Mahawili
Position: Chief Technical Officer
On: May 20th, 2011

Document Ref. No. ECDOC110520TCRev1.0