

HOW TO POWER UP THE WIND ON YOUR RV



Introduction



**Rob Finch, Engineer and
truck driver**



RULES OF RV FULL TIME LIVING

By

David and Susanna McCarron

1. **Maximum miles per day = 350 Miles**
2. **Do not start the engine until the Navi-goddess knows where you are going and how to get there**
3. **NO in and out. You must stay at least 2 nights.**
4. **You must arrive so as to completely set up BEFORE it is dark.**
5. **Drinks for 6. Dinner for 4. Sleeps 2. +dog/cat**
6. **If you find yourself covered in snow you screwed up**

Objectives

- The objectives of this session are to **give you** conceptual understanding of how to design and install a wind-turbine system on your RV and what it will **really do** ...and techniques on how to do it!

Who uses a turbine?

- **Works well in WINDY areas such as desert or coastal areas.**
- **RV lots**

HOW USEFUL IS A WIND TURBINE?

- About equal to adding another solar panel
- *with a difference*
- Works well at night and on those windy days when you stay inside

Where to mount it:

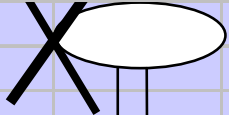
- Every RV is unique:
 - Roof Mount
 - Ladder Mount
 - Ground Mount
 - HDT

HOW DID I MOUNT MINE?



LADDER MOUNT





2" electrical metal pipe



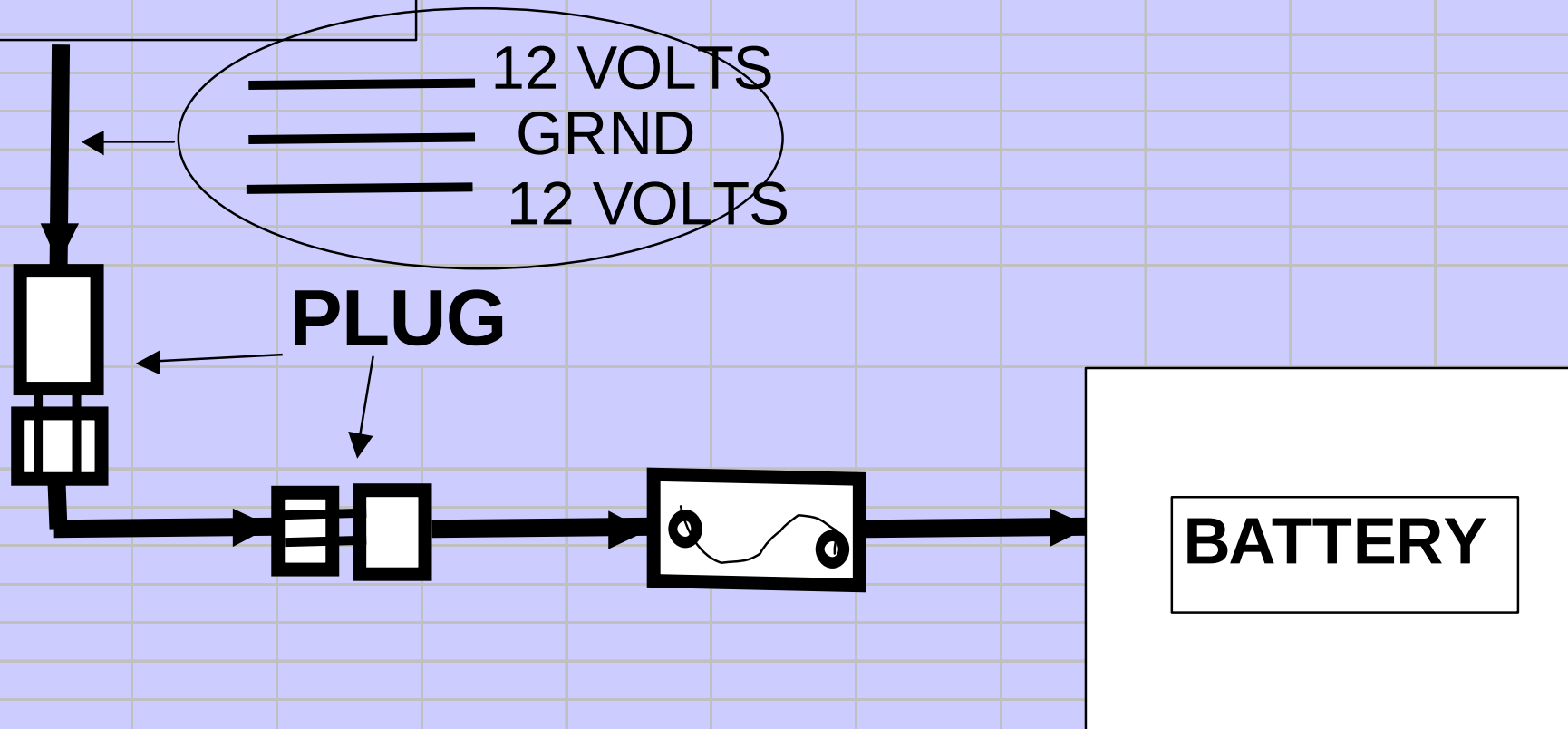
PLASTIC BUSHING FOR EMT



1.5" electrical metal pipe



WINDTURBINE



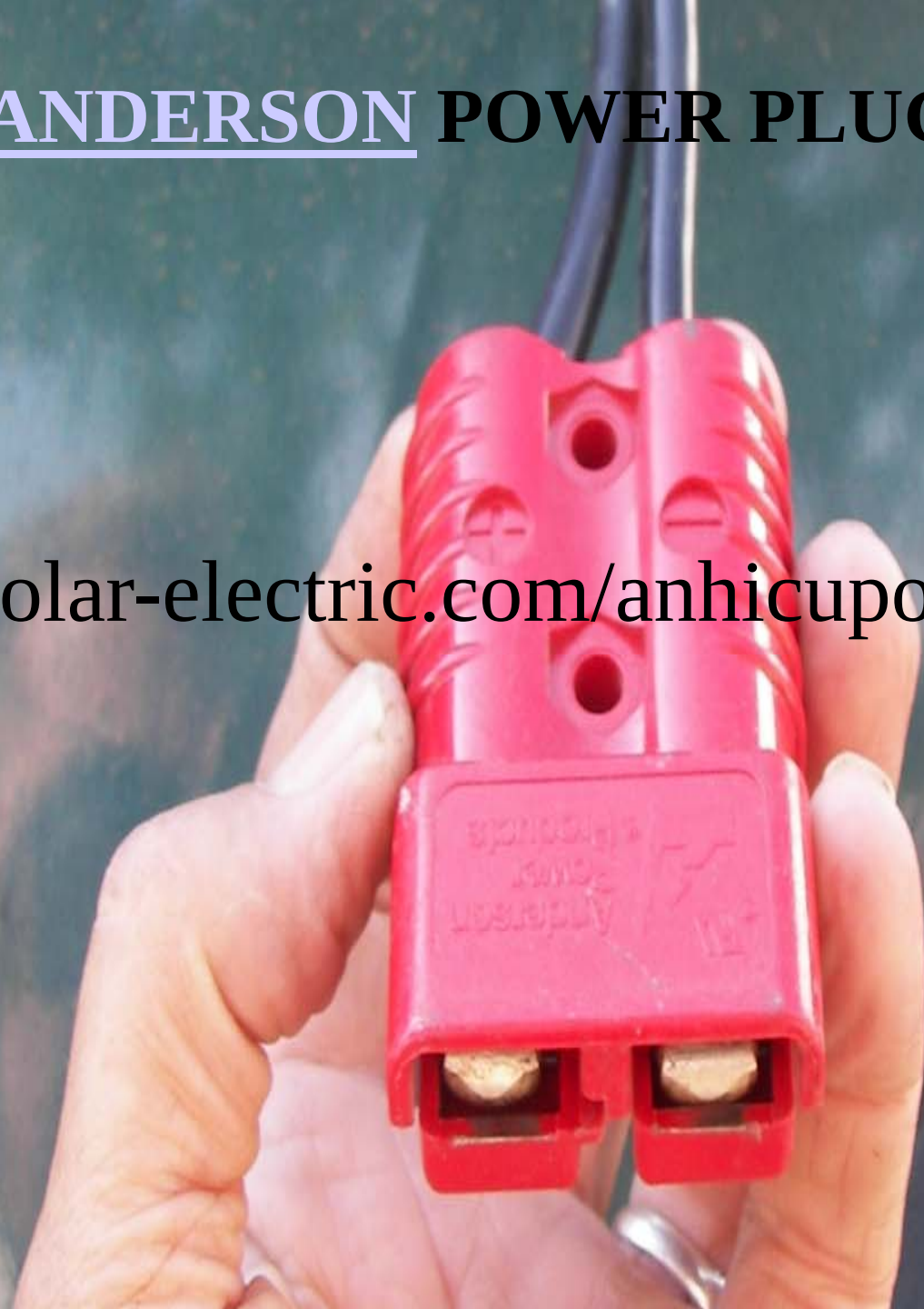
MR1250M23
30A 250V

SALE PRICE

\$1.00

ANDERSON POWER PLUG

[Http://store.solar-electric.com/anhicupoco.html](http://store.solar-electric.com/anhicupoco.html)







VIBRATION MOUNT



Useful Websites:

American Wind Energy Association

www.awea.org/smallwind/smsyslst.html

Home of Small Windturbines

<http://www.allsmallwindturbines.com/>

Southwest Wind Power

www.windenergy.com

aiR BREEZE

SMALL WIND. BIG ENERGY.



—LAND—



—MARINE—

Technical Specifications

Rated Capacity 200 watts at 28 mph (12.5 m/s)

Rotor Diameter 46 in (1.17 m)

Weight 13 lb (5.9 kg)

Shipping Dimensions 27 x 12.5 x 9 in (686 x 318 x 229 mm) 17 lb (7.7 kg)

Mount 1.5 in schedule 40 1.9 in (48 mm) OD pipe

Start-Up Wind Speed 6 mph (2.68 m/s)²

Voltage 12, 24 and 48 VDC

Turbine Controller

Microprocessor-based smart
internal regulator with peak
power tracking

Body Cast aluminum

(Marine is powder coated for
corrosion protection)

Blades (3) Injection-molded
composite

Overspeed Protection

Electronic torque control

Kilowatt Hours per Month 38
kWh/mo at 12 mph (5.4 m/s)

Survival Wind Speed 110
mph (49.2 m/s)

Air X

Remote Power Solutions

The Air X brings versatility, efficiency and durability to remote wind power. With more than 90,000 units sold, Air X is the best-selling small wind generator in the world. Ideal for battery-charging applications, Air X is often used for remote homes, telecommunication towers, monitoring stations, and in areas of the developing world without electrical service.



Technical Specifications

Rotor Diameter 46 in (1.15 m)

Weight 13 lb (5.85 kg)

Shipping Dimensions 27 x 15 x
9 in (686 x 38 x 228 mm)

17 lb (7.7 kg)

Mount 1.5 in schedule 40 pipe

1.9 in (48.26 mm) OD

Start-Up Wind Speed 8 mph
(3.58 m/s)

Voltage 12, 24, and 48 VDC

Rated Power 400 watts at 28
mph (12.5 m/s)

Turbine Controller

400 WATTS = 12-14 VOLTS x ~30 AMPS

regulator with peak power
tracking

Body Cast aluminum (Marine is
powder

coated for corrosion protection)

Blades 3-Carbon fiber
composite

Overspeed Protection Electronic
torque control



Technical Specifications

Rotor Diameter	46 in (1.15 m)
Weight	13 lb (5.85 kg)
Shipping Dimensions	27 x 15 x 9 in (686 x 38 x 228 mm) 17 lb (7.7 kg)

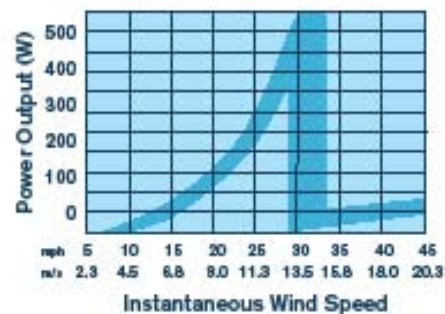
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Body	Cast aluminum (Marine is powder coated for corrosion protection)
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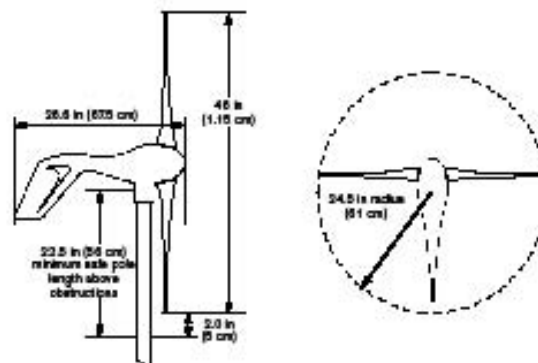
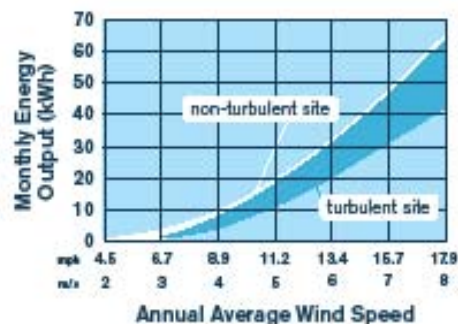
Blades	3-Carbon fiber composite
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Green and Protection

POWER



MONTHLY ENERGY



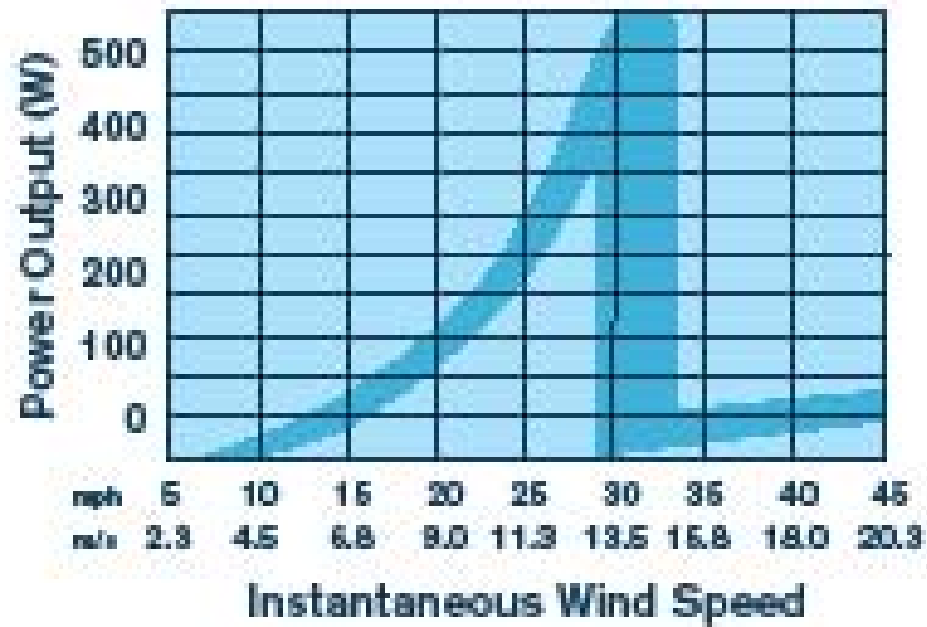
Southwest Windpower

1801 W. Route 66
Flagstaff, AZ 86001 USA

928.779.9463
www.windenergy.com



POWER



MONTHLY ENERGY



<http://www.allsmallwindturbines.com/>



The New 400 watt turbine!

Owner's Manual

Wind Turbine Serial Number _____



EZ Tower

29 ft (8.8 m) guyed tower for AIR small wind generators

Towers have never been so easy

Installing small wind systems just doesn't get any easier than this. The EZ Tower comes with all the parts needed with the exception of the power wire.

Installs in less than two hours*

- No Concrete.
- No Gin Pole.
- No Winching.
- Fully engineered to 110 mph (49 m/s) winds.
- Galvanized tubing, cable and hardware.
- Ships via UPS anywhere. Ships in one 74 inch (1.9 m) box. Weight: 80 lb (36 kg).
- All materials included - even pipe!



Arrowhead anchors ease installation.



Designed for use with
Air Breeze, Air X and Air 403

Southwest Windpower

1801 W. Route 66
Flagstaff, AZ 86001 USA

928.779.9463
www.airbreeze.com

Makers of Skystream 3.7* / AIR / Whisper

* Installation times may vary depending on experience and soil conditions.

Please recycle

Review



- Do YOU still want a windturbine?
- Do you have a conceptual understanding of design and use?

Questions?