

# Service Tips

WIT Club News – June 2002

## DIMENSIONS POWER INVERTER

In recent years Winnebago Industries has utilized several models of power inverters in our coaches. In this article we are providing information that will cover the "Dimensions Unlimited, Inc." 130 and 300 watt units.

### General

Dimensions inverters have been designed and manufactured for many user applications and long life. They utilize rugged construction parts and circuitry.

The inverters have been listed by Underwriters Laboratories for land vehicles and comply with Article 551 of the National Electrical Code (N.E.C.). They are also Canadian U.L. listed for use in Canada. The inverters should be used in applications where the equipment, appliance or tool is connected directly to the AC outlet on the inverter.

### Description

The inverters convert 12 VDC to 120 VAC, 60 HZ, having a quasi-sine wave form. The inverters' continuous output rating is: 130 watts (120 VAC at 1.1Amps). The inverters have internal protection against output short circuit, output overload and high temperature conditions. They are designed to operate almost any 120 VAC, 60 HZ, single phase appliance, equipment or tool within their power ratings.

### 120 VAC Output

The output of the inverter is from the AC receptacle on the inverter. The output of the inverter has ground fault current interrupt protection. The interrupt unit should be checked per the manufacturer's instructions enclosed with the inverter.

When external 120 VAC is supplied, the internal transfer switch is automatically activated and the inverter is turned off. The green "Inverter" light will also turn

**DIMENSIONS  
UNLIMITED, INC.**

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**RV**

**130 - 300 Watts**

Case A



DUI-12/130  
DUI-24/100

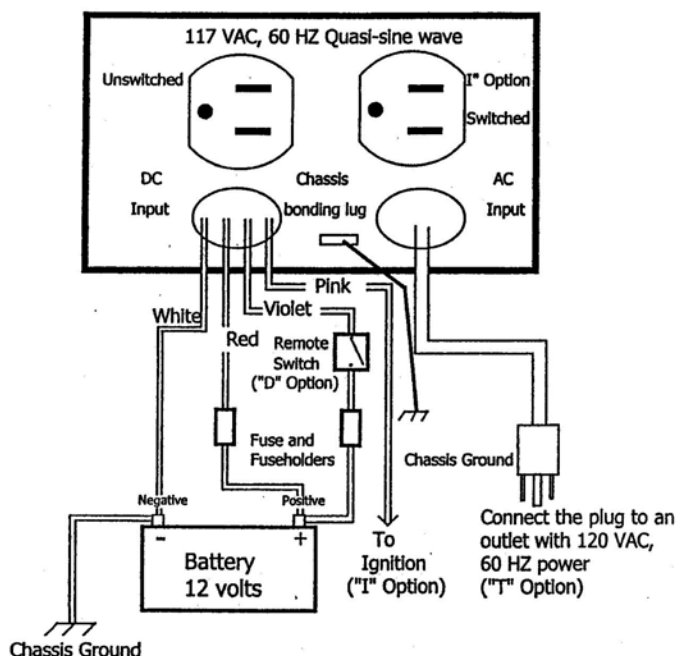
Case C



DUI-12/300

## DIMENSIONS INVERTER

### REAR VIEW



The Inverter must be connected to the 12 volt battery with the correct polarity. The red wire is "POSITIVE +", and the white wire is "NEGATIVE -".

off. The inverter cannot be turned on when the transfer switch is activated.

### Operation

Push the slide switch on the front of the inverter to the "On"

position. The green LED on the inverter will light. The inverter should be turned "Off" when not in use. The red "Low Battery" lamp will glow when the battery drops below approximately 10.5 Volts.

## Customer

### Service/Troubleshooting

Dimensions Unlimited, Inc. offers free phone consultation (no collect calls) concerning installation and troubleshooting. Call the Customer Service Department at 651-653-7000 during normal business hours.

If the inverter fails to operate, use the following troubleshooting procedure:

- Connect a 60 watt light bulb to the inverter's output.
- Make sure the inverter is turned on, and the circuit breaker is reset. If the low battery indicator is lit, turn inverter "Off" for three seconds, then turn "On" again.
- Make sure the battery voltage at the input and remote switch terminals is greater than 11 volts. In the event of low input voltage, check battery wiring, battery voltage and line fuses.
- Check the connection to the remote switch (if used).
- If the above steps are completed and the inverter still will not operate satisfactorily, call Dimensions for a return material authorization number.

<b>OUTPUT VOLTAGE:</b>	120 VAC RMS regulated (110 to 127 VAC)
<b>OUTPUT FREQUENCY:</b>	60 Hz $\pm 1\%$
<b>OUTPUT WAVEFORM:</b>	Quasi-sine wave
<b>INPUT VOLTAGE: (VDC)</b>	11 to 14 for 12V models; 22 to 28 for 24V models
<b>EFFICIENCY:</b>	Up to 90%
<b>OPERATING TEMPERATURE:</b>	-20° to 40° C (0° to 104° F)
<b>UNIT PROTECTION:</b>	Automatic electronic short circuit/overload protection Automatic over temperature shutdown Output circuit breaker
<b>BATTERY PROTECTION:</b>	Automatic low battery shutdown at 10.5 VDC for 12VDC models; 21 VDC for 24V models (with in-rush delay)
<b>OTHER DESIGN FEATURES:</b>	U.L. and CUL Listed for land vehicle use Remote ON/OFF switch hookup GFCI outlet protection LED indication of Inverter Power and Low Input Voltage LED indication of External Power (300 Watt only) AC output hardwire compartment (300 Watt only)
<b>WARRANTY:</b>	Full year parts and labor
<b>USAGE:</b>	Any 120 VAC, 60 Hz, single phase equipment within the inverter's power rating, unless specifically designed for a pure sine waveform
<b>"I" OPTION:</b>	Ignition activated cutoff of one AC outlet

## Case Size Footprint

ALL DIMENSIONS IN INCHES

