Title: **Interim Installation Information for 48V Power Converter**
Product: **48V Power Converter Assembly**
Date: **March 5, 1999**

Issue:

Installation information is needed for the 48V Power Converter on an interim basis until the technical manual is released in final format.

Solution:

The 48V Power Converter is a rack-mounted, power inverter designed to convert 48VDC to 115VAC for use with PESA routing switchers and other ancillary equipment. It contains two independent sine wave inverters, each of which is capable of providing 1100 watts of filtered power.

Installation:
The 48V Power Converter is designed to be mounted in a standard 19-inch equipment rack. To minimize voltage drop on the input wiring, it should be located as close as possible to the 48V power source.

Input Wiring:
Each 48V Power Converter Assembly contains two (2) separate inverters. Each of these inverters should have a separate input power cable. If the length of the input power cables between the 48V Power Converter and the 48V source is 15 feet or less, a minimum wire size of 10 gauge should be used. For installations requiring input power cables in excess of 15 feet in length, please consult with the PESA Customer Service Department for guidance in choosing a minimum wire size.

The input power connector on the 48V Power Converter has 4 screw terminals, and an adjacent ground terminal on the printed circuit board. Attach the ground terminal to ground, positive wires to the terminals marked "+", and negative wires to the terminals marked "-". The pair of terminals on the left is for the left inverter, and the pair of terminals on the right is for the right inverter.

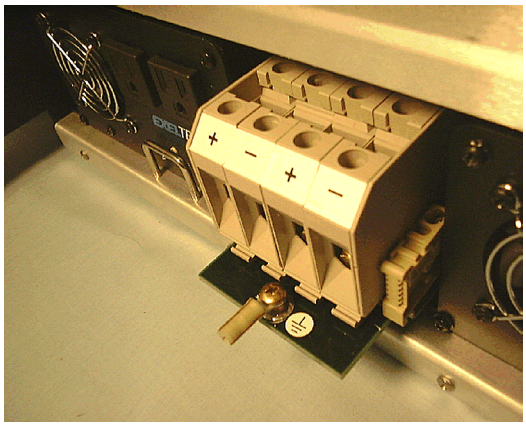

Figure 1 Power Input Connector and Ground Terminal

Output Wiring:
Two standard NEMA-15 receptacles are provided on the back of each inverter, for a total of four receptacles for each 48V Power Converter Assembly. PESA routing switchers, or other ancillary equipment, should be plugged directly into these receptacles.

Operation:
After the input power cables have been installed and energized, the power switches on the inverters (located at the rear of the 48V Power Converter) may be switched to the "ON" position. At this time, the green LED on each inverter will illuminate and power will be available at the NEMA-15 receptacles.

Each inverter has the following protection features:

Low Battery Voltage - If the input voltage at the inverter drops below 38.4VDC, an audible alarm will activate and the inverter will automatically shut off. When the input voltage increases to 45.6VDC, the inverter will restart.

High Battery Voltage - If the input voltage rises above 57.6VDC, the inverter will also automatically shut off. When the input voltage drops below 57.6VDC, the inverter will restart.

Excessive Temperature - The inverter will sound an audible alarm if the internal temperature reaches 100°C, and automatically shut off if the temperature reaches 105°C. After cooling, the inverter will automatically turn back on.

Excessive Load - Once the maximum power rating of the inverter has been reached, the output voltage will be lowered to maintain a constant maximum power output of 1100W.