

ARCS PROCEDURE:	UPS TROUBLESHOOTING HINTS	PRO(UPS)-001.000
Author: M. Ivey	NAURU	March 28, 2000 Page 1 of 2

## UPS Troubleshooting Hints

### I. Purpose:

The purpose of this procedure is to provide various methods to troubleshoot the UPS at Nauru. This procedure checks the function of modules within the Uninterruptible Power Supply (UPS) and isolates problems to individual modules. Batteries, another component of the UPS, are also checked.

### II. Cautions and Hazards:

None.

### III. Requirements:

- Use 5 kVA CLARY with external auxiliary battery banks. The external batteries can be switched out of the circuit via a breaker on the back of the battery enclosure.
- Clary Manual (page numbers refer to this manual)

### IV. Procedure:

#### A. Troubleshooting the UPS:

1. Before troubleshooting the I-van UPS, try shutting down the instruments and switching the input power to the UPS on and off several times to see if the UPS stumbles. The symptom seems to be a momentary loss of inverter that initiates the starting sequence.
2. Check that the bypass jumper is installed.
  - Bypass inhibit jumpers are installed (pp. 48) to prevent 50 Hz power from appearing on the output during startup.
3. Check the input power to see if it is configured for 240 VAC (pp. 63, Jumper 6-to-4 should be installed but check to ensure that it has).
4. Switch off breaker on external battery box and check batteries.
  - Visually inspect for electrolyte leakage.
  - If time permits, isolate the 8-battery strings and check individual battery levels -- these should be at 12.5 +/- about .5 volts with charger off.
5. Check system-test points given on pages 38-39.
6. If time permits, perform the battery operations check described on page 44.

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- You will have to devise a constant load -- a string of lights would be fine. We don't have a baseline value for this test, so you'd be getting a number for later use.
7. If the battery and system checks look OK, the inverter is probably the culprit and must be replaced.
- Make sure to double-check that all power is removed including batteries when you change the inverter.
  - See {Inverter Replacement Procedure}

#### V. References:

None. [Delete one of these choices.

1. Clary User's Manual

#### VI. Attachments:

None.