

PART II - PRIMARY SYSTEMS INFORMATION

V. Basic Intrusion Detection Systems (IDS)

1. Operation

b. Startup and Shutdown Procedures:

RTU POWER-UP

Prior to connecting and/or applying any form of supply power to the RTU, visually inspect the entire RTU enclosure to ensure that all power connections are in the correct positions, securely terminated with no stray wire strands hanging out of the connector, and that no wires have been left unterminated or dangling where damage may result from inadvertent contact to a power wire.

1) AC POWER & BATTERY CONNECTIONS

Connect and verify RTU system power and batteries by performing the following steps:

a) Disconnect the ribbon cable from connector J2 of the 175C Processor Board (Figure 3-20).

b) Pull in a 2-conductor, minimum 22 A WG cable and connect to terminals TB1-1 and TB1-2 of the TELCO board (See Figure 3-4). Connect the other end of the cable to the 10 V AC, 16 VA transformer to be used for powering the RTU. Ensure proper length of the cable allowing a service loop in the cable.

c) Plug in the 10 V AC transformer into the non-switched AC receptacle. With a multimeter, verify that there is 10 to 12 Volts AC across the TELCO board terminals TB1-1 and TB1-2. Check for 6.5 to 7.2 Volts DC on terminals TBI-6 and TBI-7 of the TELCO board.

d) Place the batteries into the enclosure and connect the battery cables. The battery cables provided attach to the battery with push-on connectors. The negative terminal connector has two (2) wires connected to it and has a black mark on it. The positive connector has only one (1) wire and not marks on it. Install the required number of batteries as determined by the Power Consumption Worksheet in Appendix "C."

2) FINAL CONNECTIONS AND TESTS

a) After connecting to the batteries, connect the battery cables to JB 1, JB2, and/or JB3 of the TELCO Board. ENSURE PROPER ALIGNMENT ON THE 3-PIN CONNECTOR AS IMPROPER ALIGNMENT ONTO THE CONNECTOR (miss a pin or one pin off) WILL RESULT IN BURNED TRACES ON THE TELCO BOARD.

b) With a multimeter, check for 6.5 to 6.8 Volts DC on terminals TBI-6 and TBI-7 of the TELCO board.

c) Connect the Ribbon cable to J2 of the Processor board, press the reset button. Verify that the "AC ON" LED indicator on the front of the RTU enclosure is illuminated, and that the "FAULT" LED is off.

ACT POWER-UP

1) The ACT-4 must be connected to a supply capable of delivering a minimum of 625 milliwatts for either AC or DC power.

If DC power is used, great care should be taken to properly wire the DC power connections so that the plus terminal from the transformer power supply is connected to the ACT-4's plus terminal, and likewise that the minus terminals are also properly connected. Failure to properly connect these terminals may result in great damage to the ACT-4.

Note that the ACT-4 can be powered from the Four-wire Interface Module (FIM) in the RTU. If the ACT-4 is powered from the RTU, care must be taken so that the RTU maximum current level is not exceeded, and that the RTU has the proper number of batteries for backup power.

2) Battery Charging

The ACT-4 contains a battery to back up the internal RAM and to provide backlighting for the display. The battery has been charged in the factory, but it is recommended that the unit be connected to the electrical power source for 24 hours prior to use to insure the maximum charge.

ACU POWER-UP

1) The ACU-6 requires an input voltage of 6-12 VDC. A primary source of power is directly from the TELCO Board within the RTU enclosure. The 6 VDC output from TBI-5 and TBI-6 of the TELCO Board is connected to the FW board, or to the AIM board (depending on which interface is used), which then provides the current limited 6 VDC output to the ACU-6, which connects at TB 1 terminals 1 & 2. A separate external 6 or 12 VDC power supply

may also be used to power the ACU-6; however, it MUST be connected with a floating ground. (For U.L. Certified sites, external power must be U.L. Listed, Class 2 supply.)

2) When all of the connections and jumper settings are completed and verified, and the unit mounting is complete, the ACU-6 should be ready for power-up. Always verify your input voltage from the power source with a multimeter prior to connecting and applying power to the ACU-6. When power is first applied to the ACU-6, the initial LCD screen display should be as shown. This screen may only appear for a short time (1-3 seconds), as the screen will change when communication is established with the RTU.