ABLE TO CONNECT TO THE HEAD BUT NOT THE HOST (RCON CARD STARTUP FAILED DUE TO TIME OUT)

Applies to | When to use this procedure | How to test voltages

Applies to

- Lotem™ Quantum
- Trendsetter® NEWS
- any other device using a Thermal 2 head

Required Tools and Related Documents

- DC voltmeter
- TH2: How to Measure Voltages, available from: **TechPlanet** > **Output** > **Heads** > **Thermal 2** > **Troubleshooting** (http://techplanet.creo.com/output/heads/thermal_2/content/docs/th2_measure_volts.pdf)

When to use this procedure

Use this procedure:

- when you can communicate with the host but not with the head (via MCE or MPE)
- on a Lotem Quantum, when you see the error `Rcon card startup failed due to time out`
- in cases where you suspect problems with the safety interlocks
- in cases where you suspect power supply problems

Description

The TH2 head has two 48 Volt(V) DC sources:

- One is called **48V DC unswitched**. This voltage is converted to many other voltages (40V, +5V, -5V, etc) for communication to the head and other functions.
- The other power source is called **48V DC switched**. This voltage is used mainly for the write laser. It is called *switched* because all safety conditions have to be met for this source to be activated. The device controls this power supply.

The head also needs some **safety interlock signals**. These signals have to provide 24V DC to the head. These signals are required to allow the focus laser driver and shutter to work

How to test voltages:

- when there is no communication with the head
- when the error `Rcon card startup failed due to time out` appears (for Lotem Quantums)

If you can talk to the host (MPE, MCE) but not to the head, use this procedure to determine the source of the failure.

1. (Lotem Quantum) Open the rear panel using the workstation GUI.

   (Trendsetter NEWS) Open the power box.

2. (Lotem Quantum, Trendsetter NEWS) Turn off the power to the device.

   (Trendsetter NEWS) Remove the black top cover and reinstall all the covers that have interlock switches.

CAUTION: Wear a static strap for the next step.

3. Remove both military connectors from the head.

4. Turn on the power to the device.

CAUTION: Avoid short circuiting the leads. This may permanently damage the power supplies.

5. To measure the DC voltage, hold the large military connector in your hand, facing towards you. Using a voltmeter (DC voltage), insert the voltmeter leads at the following points (refer to Figure 1):

   - **A** (positive lead) and **L** (negative lead): **should read 48 Volts DC**
   - **B** (positive lead) and **M** (negative lead): **should read 48 Volts DC**

   For more information on measuring voltages, refer to the procedure *How to Measure Voltages* (refer to the Related Documents section for details).



Figure 1: Testing the large military connector

6. Verify that you are reading 48 Volts DC from the unswitched power supply.
    - **If the measured value is not 48 Volts DC**, check the power supply (make sure you are testing the right pins, and that you have the proper test probes. Also check that the power is turned on).
    - **If the measured value is 48 Volts DC**, turn off the machine and reconnect the military connectors to the head.
7. Turn on the power and measure the voltage on the power supply. Touch the voltmeter leads to the heads of the two screws as shown in Figure 2, red lead to blue (top screw) and black lead to yellow (bottom screw).

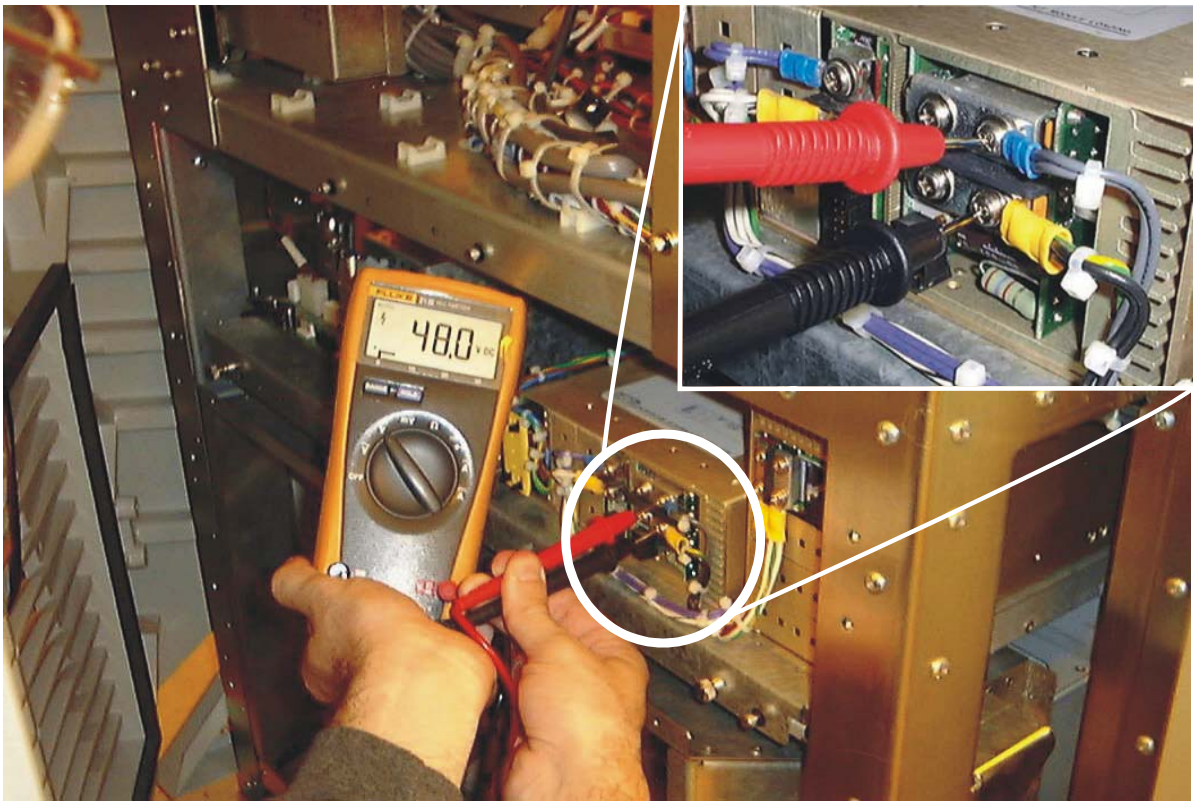


Figure 2: Touch the voltmeter leads to the heads of the two screws as shown (Lotem Quantum view).

- **If the measured value is not 48 Volts DC in the power supply** when the head is connected to the large military connector, first check that you measured the correct power supply (refer to Figure 2). If the voltage measured at the power supply is low or zero, replace the head.

Note: Before you can replace the head, make sure that you have completed steps 1 to 7 of this procedure.

- **If the measured value is 48 Volts DC in the power supply** but you are still not able to communicate with the head, check and replace (if necessary) the cables leading to both military connectors of the head (power (large connector) and control (small connector)).

See also: Measuring Voltages in a TH2 Head (available from the Procedures page of the Thermal 2 TechPlanet site).