



## EST3 - 3-PPS Battery Fault and Rail Voltage Messages

### Introduction

Power supply trouble messages should always be investigated and resolved. Two previous bulletins suggested possible causes of “Rail Voltage Out of Spec” and “Battery Trouble” messages. These are:

- 010801 EST3 - Rail Voltage Out of Spec Trouble Event
- 07014 EST3 - False Battery Trouble Event Messages with v3.6 Firmware

Bulletin 010801 notes that the Rail Voltage Out of Spec message means the rail modules are being powered by the standby batteries. To quote:

“If you have a control panel displaying the Rail Voltage Out of Spec trouble event, go to the site—immediately—and replace the 3-PPS/M Primary Power Supply module (heat sink assembly and monitor card).”

Bulletin 07014 describes a timing problem that gives rise to false Battery Trouble messages. It shows how to determine whether your power supply is affected, and how to replace the firmware chip if required.

The current bulletin gives you additional information on troubleshooting these faults.

### Issue

EST3 systems can display these two power-related trouble messages:

- Batt Trbl
- Rail Voltage Out of Spec

Batt Trbl (battery trouble) comes from pseudo point 0615. Rail Voltage Out of Spec comes from pseudo point 0610.

## Solution

### Battery Trouble

To troubleshoot the 0615 “Batt Trbl” message, start by making sure that the monitor module has version 3.61 firmware installed. This version resolved issues that resulted in false Battery Trouble messages.

If the firmware is correct, install a test jumper between the battery positive terminal of TB2 on the power supply and one of the positive terminals of TB1 on the monitor module.

If the trouble clears, the power supply and monitor module are good, but the battery is suspect. Replace the battery.

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**Caution:** Before you remove or install a module, make sure to power down the cabinet. Never install or remove a module while power is applied to the cabinet.

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If the trouble does not clear (with the test jumper in place) replace only the monitor module. The replacement monitor module must have a date code greater than 09030. The date code can be found on the small, white, rectangular label on the module.

If this fails to clear the trouble, replace heat sink assembly as well.

Remember to perform any system testing required by NFPA 72 when changing a power supply.

### Rail Voltage Out of Spec

To troubleshoot the 0610 “Rail Voltage Out of Spec” message, follow these steps to isolate the source of the fault.

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**Caution:** Before you remove or install a module, make sure to power down the cabinet. Never install or remove a module while power is applied to the cabinet.

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1. Power down the panel, removing both battery and AC power.
2. Replace only the monitor module. The replacement monitor module must have a date code greater than 09030. The date code can be found on the small, white, rectangular label on the module.
3. Connect the AC power and battery. Wait 3 minutes for the system to normalize.

If the trouble clears, the monitor module you replaced is suspect. Leave the new monitor module in place and continue testing the heat sink assembly by skipping to step 5.

If the trouble does not clear, the monitor module you replaced was good. If the date code of the module you replaced is greater than 09030, you can put it back in, and then power the panel back up (both AC and battery). Continue with step 4 to isolate the fault.

4. Remove the rail modules one at a time until only the 3-CPU and the 3-PPS/M are connected.

When the trouble clears, the module you just removed is suspect. Replace the module.

Even if the trouble clears, continue with step 5 to ensure that the heat sink assembly is good.

5. Remove AC power, wait 15 seconds, and then reapply AC power. An AC trouble may appear in the system but should restore after you reapply the AC power.
6. Remove battery power. The system should remain on AC power and a Battery Fault message should display within 90 seconds.

If the system continues to operate on AC power, the heat sink assembly is good.

If the system does not continue to operate with just the AC power applied, the heat sink assembly must also be replaced.

7. Reconnect battery power. The system should restore within 90 seconds.

If you are still experiencing Battery Trouble or Rail Voltage Out of Spec messages please contact Technical Support for a resolution.

Remember to perform any system testing required by NFPA 72 when changing a power supply or other system components.

Whether you need to replace an entire power supply or just the monitor module, you can request an RMA for using the standard RMA Warranty Replacement process. Contact Customer Service if you have any questions or need guidance.

## Contacting support

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