

**Product: MMU1600-2**

Release Date: August 26, 2008

Scope: This bulletin applies only to the dash 2 version of the MMU-1600.

The way to determine if an MMU-1600 is a dash 2 version:

If the RESET button is near the top of the program card slot (about 1 inch down), the monitor is a dash 2 version.

Issue: Program Card settings not reported correctly at times over the SDLC communications link in frame 131.

Symptom: When the monitor is reset or is recovering from a non-latched fault, the program card jumpers may be reported as no jumpers installed.

Root Cause: The firmware routine that transitions from the flash operation to normal operation inadvertently cleared the image of the program card used for frame 131.

Operational Issues: The controller may report incompatible jumper settings or just show that no jumpers are installed. The monitor will still continue to operate with the correct jumper settings. **This issue will not cause an actual fault to be missed.**

Corrective Action: Upgrade to Firmware version 01.07.06 or greater.

Issue: Short Yellow fault when Walk turns off when the monitor is operating in the Type 12 mode.

Symptom: When the monitor is operating in the Type 12 (12 Channel) mode, if a Walk terminates a Short Yellow fault is detected.

Root Cause: Modifications to support Flashing Yellow Arrow displays incorrectly changed a timer label used for Short Yellow detection for Walk indications.

Operational Issues: The monitor would detect a Short Yellow fault any time a Walk was terminated while operating in the Type 12 mode. **This issue will not cause an actual fault to be missed.**

Corrective Action: Upgrade to Firmware version 01.07.06 or greater.

**Issue: Intermittent communications errors.**

Symptom: When communicating with the monitor through the Com Port or the Ethernet Port, intermittent communications errors may be reported.

Root Cause: The calculation for the amount of memory left in the transmit buffer for either port, calculated incorrectly during buffer rollover causing the monitor to believe that there was not room in the transmit buffer for the requested data thus discarding the request.

Operational Issues: Communications with the monitor may be slower than normal. All data transferred will be correct. **This issue will not cause an actual fault to be missed.**

Corrective Action: Upgrade to Firmware version 01.07.06 or greater.

Feature 1: Added Program Card Change Display

Purpose: When a program card with different configuration than the one currently stored in the monitor is inserted, the monitor will require that the user select whether it is to use the configuration data on the program card or the configuration data in the monitor.

User Interface: When a program card with different configuration than the one currently stored in the monitor is inserted, the monitor will require that the user select whether it is to use the configuration data on the program card or the configuration data in the monitor.

Tap the **RESET** pushbutton or any of the arrow pushbuttons to toggle the selection between Program Card and MMU. Press the **ENTER** pushbutton or press and hold the **RESET** pushbutton for 5 seconds. Five quick confirmation beeps will confirm that the selection has been accepted. All user information (Ethernet settings, Location, Location ID, and Agency ID) as well as fault monitoring settings are copied.

The text on the field status LEDs is provided to create a consistent user interface with other Reno A&E monitors.

This feature allows a monitor to be replaced without the need for a laptop even if the replacement monitor is another Reno A&E monitor but not the same model (MMU1600 or MMU1600D).

Interactions: Data stored in program cards used in monitors prior to version 01.07.07 firmware are incompatible and will be upgraded to the new format. The new format is not backwards compatible with previous versions of firmware. The User Option "Use Prog Card



EEPROM" has been removed in firmware versions 01.07.07 and greater.

Implemented: MMU1600-2 Firmware version 01.07.07

Feature 6: Added DIP Switch Change Display (MMU1600D only)

Purpose: When a DIP switch does not match the current configuration, the monitor will display to the user, via the field status LEDs, which DIP switches differ from the current configuration.

User Interface: For the Field Check / Dual Enables switches, the field status will alternate between showing the text "FC" and the state of the 16 switches on the Red LEDs. For the Options switches, the field status will alternate between showing the text "OPT" and the state of the 12 option switches on the Green LEDs. The channels flashing at a rate of 5 Hz denotes which switches must be toggled to match the current configuration in the monitor (Ch 1 on Red LEDs flashing means Field Check / Dual Enables switch 1 must be toggled). If both the Field Check / Dual Enables and Options switch settings do not match the current configuration, the field status will alternate between the two displays.

The user must either accept the new configuration by holding the **RESET** pushbutton for greater than 5 seconds (confirmed by 5 quick beeps) or toggling the appropriate DIP switches to match the current configuration.

Interactions: None

Implemented: MMU1600-2 Firmware version 01.07.07