

**SERVICE BULLETIN - OPTIONAL**

Part No.: G13000, G13000(S), G13160

Description: <b>Digital Audio System Router</b>	
Service Manual: <b>P139-HD</b>	Service Bulletin No.: <b>P139-HD-603-0001</b>
ECO No.: <b>ECO1228</b>	Subject: <b>MMC to SD Card Upgrade</b>

Prepared By:	Checked By:	Approved By:
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**1. Planning Information**

**1.1 Applicability**

This Service Bulletin is applicable to all G13000, G13000(S) and G13160 existing units in the field that are not marked as being SD and MMC card capable.

New AEM factory units will have a marking label on the front plate identifying the unit as being SD and MMC card capable already (Ref. Sec. 2.2 herein).

**1.2 Reason**

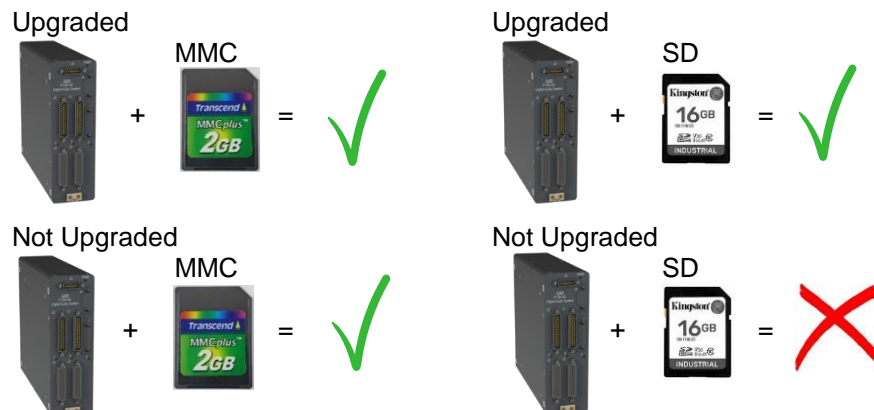
The MMC card used for storing the Digital Audio Router configuration has gone obsolete and is no longer available.

**1.3 Description**

This modification consists of upgrading the Digital Audio Router firmware to accept both MMC and SD configuration memory cards.

This Bulletin provides the information required to upgrade the Digital Audio Router firmware to be able to utilize SD/SDHC cards (herein referred to as SD) for storing the configuration information.

AEM will begin to ship units, factory upgraded with an SD card. This SD card will only work on upgraded units. If inserted into a unit that is not upgraded, the unit will not read the card configuration and will revert to the last saved configuration in its internal memory. Only AEM sourced SD cards have been tested for compatibility, contact AEM Technical Support for compliant card(s).





Customers attempting to use mission specific MMC cards in multiple Digital Audio Routers, while introducing the newly upgraded SD card units into their fleet, will need to be diligent on tracking which cards can go into which Digital Audio Router, or upgrade all units.

#### 1.4 Compliance

Customer option. Anodyne Electronics Manufacturing Corp. recommends this change be accomplished on all affected units.

#### 1.5 Costing

This modification incorporates an optional improvement and does not constitute changes to correct a malfunction. The modification is therefore not subject to warranty consideration.

##### 1.5.1 Parts and Labour

One (1) hour estimated. Includes required test time. Please contact AEM Technical Support for parts.

#### 1.6 Special Equipment Required

Quantity	Description	Part Number
1	MMC card loaded with upgrade files	P139-HD-MMC-SD
1	Label, SD/MMC Card Enabled (Optional)	143-39-025

**Note:** A memory card loaded with the intended configuration and supporting files for the Digital Audio Router being upgraded must be available for post upgrade operation. This could either be the original MMC card supplied with or installed in the Digital Audio Router or an SD card loaded with the intended configuration and supporting files.

#### 1.7 Weight and Balance

Not affected.

#### 1.8 Electrical Load Data

Not affected.

## 2. Procedure Instructions

### 2.1 Modification Procedure

- 2.1.1 Ensure unit power is turned off and the Ethernet cable is not connected.
- 2.1.2 Remove the cover plate adjacent to the J7 marking on the front plate for the G13000(S) and G13000 units or J9 on the G13160 unit. Retain the cover plate and screws.
- 2.1.3 If installed, remove the MMC card from the unit. If there is no MMC card installed, ensure the original MMC loaded with the proper configuration files is available.
- 2.1.4 Insert the P139-HD-MMC-SD upgrade card into the unit. Ensure the card is inserted correctly per the orientation label on the front panel.

**CAUTION**

During step 2.1.5 following, ensure that once power is applied to the unit, that it is NOT interrupted until the process is complete. Failure to do so can result in firmware corruption and the unit will need to be returned to AEM for re-programming.

- 2.1.5 Power up the unit and observe the LED A indicator.  
After the initial power up sequence (LED A illuminated green then red), the LED A indicator should alternate between green and red for **three cycles** and should then extinguish.

**Note:** One cycle is defined by the LED A illuminating green then red.  
The three cycles indicates that the firmware upgrade has been completed

If LED A does not cycle green and red for three cycles, but instead flashes green continuously, it's likely that the upgrade firmware was not run, and the previous firmware is running.

If LED A does not illuminate at all, does not extinguish, or cycles more than seven cycles, a firmware corruption may have occurred, and the unit may need to be returned to AEM for re-programming. Also refer to the P139-HD User Guide for LED A status indications.

Check that:

- No Ethernet Cable is connected
- The card being used is labelled as P139-HD-MMC-SD and is an MMC card, not an SD card
- Contact AEM Technical support to verify the correct files are loaded onto the P139-HD-MMC-SD card

- 2.1.6 Power cycle the unit (remove and then re-apply +28V IN) and again observe the LED A indicator.  
After the initial power up sequence (LED A illuminated green then red), the LED A indicator should alternate between green and red for **six cycles** and should then extinguish.

**Note:** The six cycles indicates that the upgrade procedure has already been done and this is the verification of it being completed.

If LED A does not illuminate at all, does not extinguish, or cycles more than seven cycles (one during initial and six for upgrade), a firmware corruption may have occurred, and the unit may need to be returned to AEM for re-programming. Also refer to the P139-HD User Guide for LED A status indications.

- 2.1.7 Power down the unit.

- 2.1.8 Remove the P139-HD-MMC-SD card.

- 2.1.9 Install an MMC or SD memory card loaded with the intended configuration and supporting files.

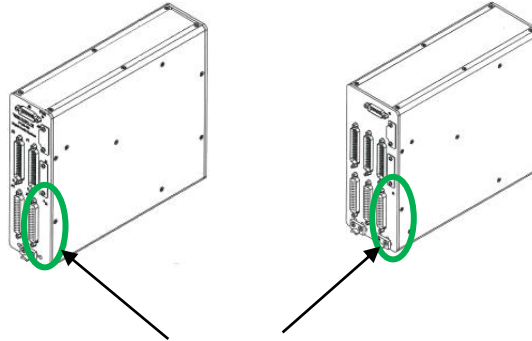
- 2.1.10 Power up the unit. The LED A indicator should illuminate green, then red, then continuously flash green signifying normal operation.

- 2.1.11 Power down the unit. The firmware upgrade procedure is completed.

- 2.1.12 Re-install the cover plate and screws.

## 2.2 Marking

- 2.2.1 Once the firmware upgrade is completed, the unit shall be marked to indicate such.
- 2.2.2 Adjacent to the J3 connector on the G13000 and G13000(S) units and J6 on the G13160 unit, apply a label, indicating that the unit has been Memory Card upgraded.



Front Plate Label Location

This label can either be added by the customer (similar to below) or can be optionally supplied by AEM.

AEM label (PN 143-39-025):



End of Service Bulletin