



Passionate About Sound

Title: **DCM monitor loudspeaker mute or silent**
Bulletin #: DCM0004 Issue Date: December 9, 2008
Models Affected: DCM-10, DCM-10D, DCM-30, DCM-30D
Bulletin Revision: A
Production Range: All before December 2008 (serial number 1108xxxxx and earlier)

Description

In some units in the DCM-10, DCM-10D, DCM-30, and DCM-30D Digital Cinema Monitor product line, the monitor loudspeaker on the front panel has stopped working. If an external loudspeaker is connected via the terminals on the rear panel, it also will mute. Nevertheless, the DCM unit will still function properly in every other way; all the screen and surround channels will operate as expected. The only failure is in a small MOSFET that controls the power amplifier driving the monitor loudspeaker.

This bulletin does not address any other DCM problems or symptoms. If a DCM unit exhibits any other problems or malfunctions, you should correct them first.

Corrective action

QSC recommends replacing the circuit board on the front panel of the DCM unit. This involves removing it from the equipment rack, opening the bottom cover, and swapping the circuit board. The circuit board itself is fastened with eight screws and has a detachable ribbon cable connecting it to the main board. Aside from removing the DCM from the rack and re-installing it, the circuit board replacement should take only about five minutes when performed by a technician who has done the task at least once or twice. The replacement boards provided by QSC will have an improved MOSFET to prevent recurrence of this failure.

NOTE: *Replacing the front panel circuit board does not affect the configurations and parameters loaded into the DCM unit, so no reprogramming or uploading is necessary. However, on DCM units subject to the DCM0003 service bulletin, QSC recommends firmware upgrades as prescribed in the bulletin; check their serial numbers and upgrade history with the bulletin.*

An alternative remedy is to replace the DCM unit with a new one; however, this would involve a much lengthier procedure because of the need to download the old DCM unit's configuration settings, note the bypass crossover mode and levels, and then upload and perform these setups and configurations on the new one. This procedure would require a personal computer running the latest DCM Manager application software, and may be expected to take about 30–60 minutes, aside from removing the DCM from the rack and re-installing it.

Urgency

The failure does not affect the audio in the cinema but does affect the projection staff's ability to check and verify the audio signals in the system. Therefore, give priority to servicing DCM units that exhibit the problem. If any DCM units covered under bulletin DCM0003 have not had their firmware updated yet, this would be an ideal opportunity to address those also.

Instructions: Replacing the front panel circuit board

Tools and materials required

- Philips (cross) screwdriver
- New circuit board
DCM-10 and DCM-10D: QSC part number WP-010005-00
DCM-30 and DCM-30D: QSC part number WP-030002-00

Procedure

1. Disconnect the power cord from the DCM unit's IEC connector on the rear panel, along with the DataPort connections and others, after first making sure the cables are labeled to indicate where they should go.
2. Remove the DCM from the equipment rack and set it upside-down on your work surface.
3. Remove the bottom cover of the DCM chassis.

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4. The front panel circuit board (see Figure 1) connects to the main board via a ribbon cable. On the main circuit board, open the locking levers on the ribbon cable header and detach the cable.
5. Remove the eight screws that attach the board to the front panel, and then remove the board.
6. Pass the ribbon cable of the new front panel circuit board under the twisted-pair loudspeaker wire and plug the cable into the header on the main board. The header and the cable housing are keyed so they will mate only one way. Press the housing down onto the header and lock it in place with the levers.
7. Orient the front panel circuit board correctly and attach it to the chassis using all eight screws.
8. Re-install the bottom cover.
9. Re-install the DCM unit in the rack and re-attach all the cables in their original positions. Re-attach the power cord. The DCM unit will reboot.

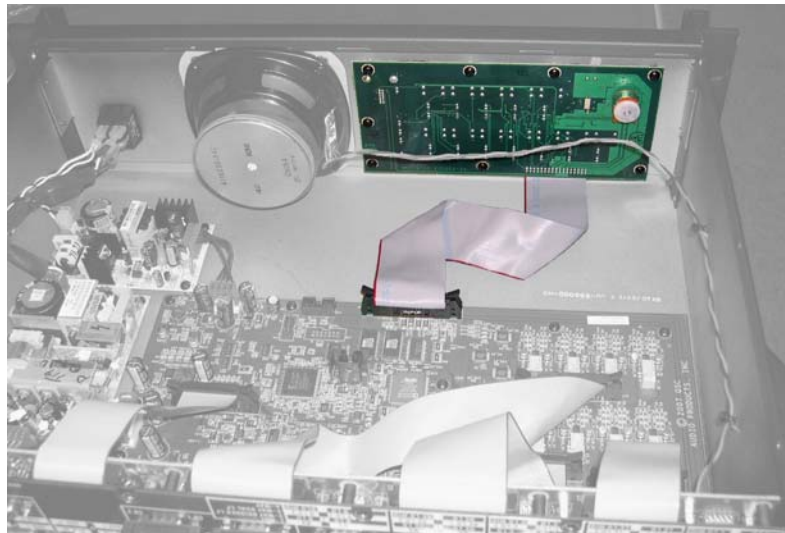


Figure 1. The front panel circuit board and its ribbon cable (in color).

Quality review

10. Run audio from the cinema processor (film soundtrack, intermission music, et al) into the DCM unit. Verify that the front panel monitor loudspeaker works. Check all the audio channels.
11. Check the DCM's serial number and firmware version to see if it should be upgraded as instructed in bulletin DCM0003.

Instructions: Replacing the DCM unit

Tools and materials required

- Philips (cross) screwdriver
- Personal computer with Windows XP or Vista operating system
- DCM Manager 2007 Version 1.10.7 software (or latest version)
- USB Type A to Type B serial data cable (see Figure 2)

Procedure

1. On the rear panel of the DCM unit, note the bypass crossover mode and gain settings; you will need to duplicate these later on the new DCM unit.
2. Open the DCM Manager application.
3. Connect the computer to the DCM via the USB cable. After the DCM Manager application recognizes the DCM unit, download and save the DCM's configuration settings. You will need these settings later for the new DCM.

NOTE: If the firmware in the DCM unit is old and incompatible with the current version of DCM Manager, a popup window will appear, prompting you to upgrade it. You must upgrade the DCM firmware as directed by DCM Manager before downloading the configuration. This will not erase or change the configuration stored in the DCM unit.

4. Disconnect the power cord from the DCM unit's IEC connector on the rear panel, along with the DataPort connections and others. Make sure the cables are labeled to indicate where they should go.
5. Remove the DCM from the equipment rack.
6. Install the new DCM in the equipment rack. Re-attach all the cables. Set the bypass crossover (mode and gain) as it was on the old DCM. When the DCM unit is connected to AC power, it will boot up.

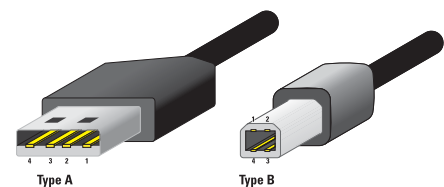


Figure 2. USB Type A and Type B plugs.

7. Connect the computer to the new DCM via the USB cable. After the DCM Manager application recognizes the DCM unit, upload the configuration settings saved from the old DCM. When it is done, disconnect the USB cable from the DCM.

NOTE: If the firmware in the DCM unit is old and incompatible with the current version of DCM Manager, a popup window will appear, prompting you to upgrade it. You must upgrade the DCM firmware as directed by DCM Manager before uploading the configuration saved from the old DCM.

Quality review

8. Run audio from the cinema processor (film soundtrack, intermission music, et al) into the DCM unit. Verify that the front panel monitor loudspeaker works. Check all the audio channels.

Contact information

If you need any further information regarding this service procedure, please contact QSC Technical Services at the addresses or numbers below.

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