



# Service Bulletin

Title: **CM16a Audio Board Fasteners Update**  
Bulletin #: CM160003 Issue Date: July 01, 2002  
Models Affected: CM16a Bulletin Revision: A  
Production Range: 05/2000–05/2002 (serial # 0500xxxxx–0502xxxxx)

## Description

A CM16a Amplifier Network Monitor contains two printed circuit board (PCB) assemblies: the processor board and the audio board. This bulletin addresses a mechanical tolerance issue on the audio printed circuit board. The audio PCB has seven mounting holes where it is fastened to the chassis by #6 screws. The mounting holes are oversized for the #6 screws used, and there is little clearance between the hole and the conductive inner layers of the PCB. This sometimes results in the internal tooth lock washers on the screws chafing the inner traces of the PCB, especially during installing or removing the screws. Nylon and zinc plated flat washers will be added to prevent the lock washers from abrading the oversized openings.

## Symptoms

The CM16a Amplifier Network Monitor will not start up, go through initial diagnostics, or exhibit normal LED behavior when turned on. The voltage between the 3.3 volt supply and chassis ground will be approximately zero, indicating a short circuit.

## Instructions

### Tools and materials required:

- #1 Phillips screwdriver
- General purpose tweezers
- One #6 zinc plated flat washer, 0.312" outside diameter, 0.047" thickness (QSC part number: NW-062010-FW)
- Five #6 nylon flat washers, 0.312" outside diameter, 0.031" thickness (Refer to this bulletin if you order parts from QSC)

**CAUTION: Take appropriate anti-static precautions to guard against electrostatic discharge (ESD).**

## Procedure: Installing flat washers on the audio board

1. Turn the CM16a off and disconnect it from AC. Also remove any audio input, DataPort, Ethernet and/or contact closure connections.
2. Open the top of the unit by removing the thirteen 6-32 x 1/4" black Phillips screws that secure the top cover to the chassis.
3. Locate the audio board ; it is the larger board at the back of the chassis. Remove each screw at locations shown in Figure 1.
4. Place a #6 nylon washer on top of the PCB at each mounting hole in locations 1 through 5 in Figure 1. A pair of tweezers is helpful for positioning the washers.
5. Place the #6 zinc washer at the mounting hole in the center of the board (Figure 1).
6. Re-fasten the board to the chassis using the screws removed in step 3.
7. Re-attach the top cover with the thirteen screws removed in step 2.
8. Connect AC to the CM16a, turn it on, and watch for normal start-up functions. If the CM16a starts up correctly, it can be returned to use. If the unit still malfunctions, it requires further servicing. Please contact QSC Technical Services for repair instructions.

#6 NYLON WASHERS  
(LOCATIONS 1 - 5)

#6 FLAT WASHER  
(NW-062010-FW)

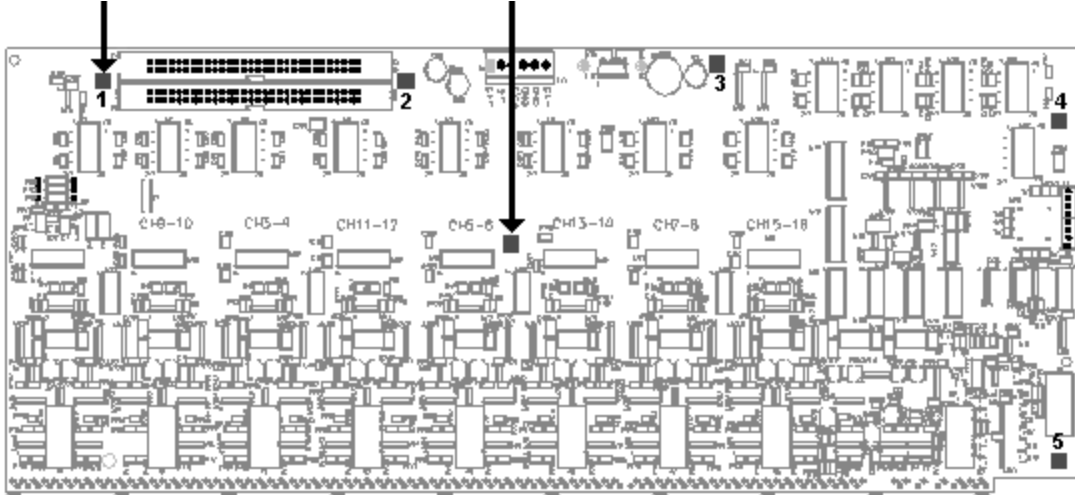


Figure 1. Location of mounting holes that require flat washers.

## Contact information

If you need any further information regarding this service procedure, please contact QSC Technical Services at the addresses or numbers below. You can also order parts; to expedite processing please use the correct part number when ordering.

Telephone: 1-800-772-2834 (within USA only)  
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Web Site: [www.qscaudio.com](http://www.qscaudio.com) (product info/support)  
[www.qscstore.com](http://www.qscstore.com) (on-line accessory and replacement component sales)

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