

Title: **Updating Flash Firmware in a DCM**
 Bulletin #: DCM0002 Issue Date: November 5, 2002
 Models Affected: DCM-1, DCM-2 and DCM-3 Bulletin Revision: A

Description:

The DCM series was designed to support bug fixes and feature improvements or additions throughout the life of the product. Depending on the nature of the bug fix or added feature, an update often requires reprogramming the flash with new firmware. This bulletin describes a method for updating the flash firmware in your DCM. Please contact QSC Technical Services for the most current version of firmware.

Tools and materials required:

- RS-232 serial cable
- PC with MS-DOS or Command Prompt and DCM Commander or DCM Manager software
- Current firmware file* for flash device (this file has an **.s19** extension)
- MS-DOS flash utility* for writing firmware to flash (typically named **dosflash.exe**)

*Available via download from www.qscaudio.com, or on electronic medium (such as CD-ROM) from QSC Technical Services (see contact information at the end of this document).

Procedure:

Note: Programming the flash will erase the configuration stored in the DCM. Make sure you have a .dcm file that represents the configuration you have currently stored in the DCM. If you don't, read the configuration using the DCM software and save it to the computer's local drive or a floppy disk.

1. Turn on the PC and DCM. Connect the DCM via a serial cable to an available COM port on the PC (as is normally done to communicate with the DCM). Start the DCM software (DCM Commander or DCM Manager) and bring the DCM online (DCM Commander will show "Status: Connected"). Check the firmware version by clicking Help on the menu bar and clicking DCM Information... if you are using DCM Commander (Figure 1) or by clicking Help on the menu bar and clicking About DCM Manager... if you are using DCM Manager (Figure 2). If the firmware version shown is the most current version, no update is necessary; do not complete this bulletin. Otherwise, proceed to step 2.
2. Copy the firmware file and the MS-DOS flash utility to the hard drive of the computer you will be using to connect to the DCM.
3. Close all Windows programs, especially the DCM software since DCM Commander and DCM Manager will not release the COM port unless they are closed.

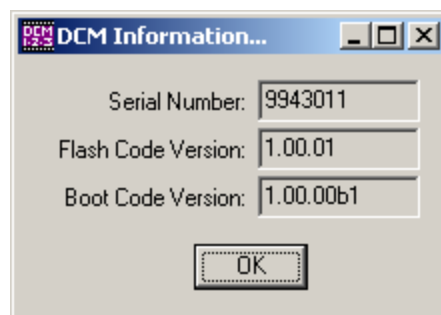


Figure 1. Checking Flash Code Version using DCM Commander.



Figure 2. Checking DCM Firmware Version using DCM.

- Start an instance of MS-DOS. To do this, click Start, point to Programs, then Accessories and click Command Prompt or click Start then Run... and type command. You should see a window like that in Figure 3.

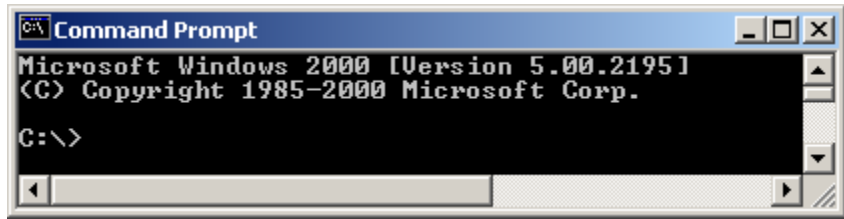


Figure 3. Command Prompt.

- Using Command Prompt, change the directory to the folder that contains the two files you copied in step 2. For example, if the files were saved to C:\Temp folder, the command line should be typed as follows:

C:\>cd c:\temp

To verify that the files are in this folder, type **dir** or **dir/p** (to view one page at a time) and look for the two file names.

- Check that the DCM is connected to the COM port on the computer. Make sure the DCM is turned off.
- Type the following command at the MS-DOS prompt, and press Enter:

dosflash com1 firmwarefile

where **dosflash** is the name of the flash utility and **firmwarefile** is the name of the firmware file. In the example shown in Figure 4, the utility is **dosflash** and the name of the firmware file is **sio_ship.s19**.

If the DCM is connected to COM2, then substitute "com2" for "com1" in the command above. If the program does not run, check that steps 2 and 5 were done correctly.

- When you see the message, "Waiting for DCM Connect Ready Message..." or "Waiting for DCM to boot...", turn on the DCM.
- Observe that the %-complete indicator is counting up toward 100%. If you do not see this counter, press ESC to cancel the operation; the problem could be one of the following:

- You have not selected the correct COM port. Verify your COM port settings.
- You have a bad, or misconnected serial cable.
- You are running in an MS-DOS window operating in the Windows environment and Windows is not releasing the COM port. If your operating system is Windows 95 or Windows 98, shut down Windows, start the computer in MS-DOS mode and try again. If you are using any other Windows operating system, restart Windows, exit any programs or utilities that use the COM port and may have automatically started when the computer was restarted (such as HotSync for Palm Pilots) and try again.

- The DCM was already turned on when you typed the command in step 7. Go back to step 6.

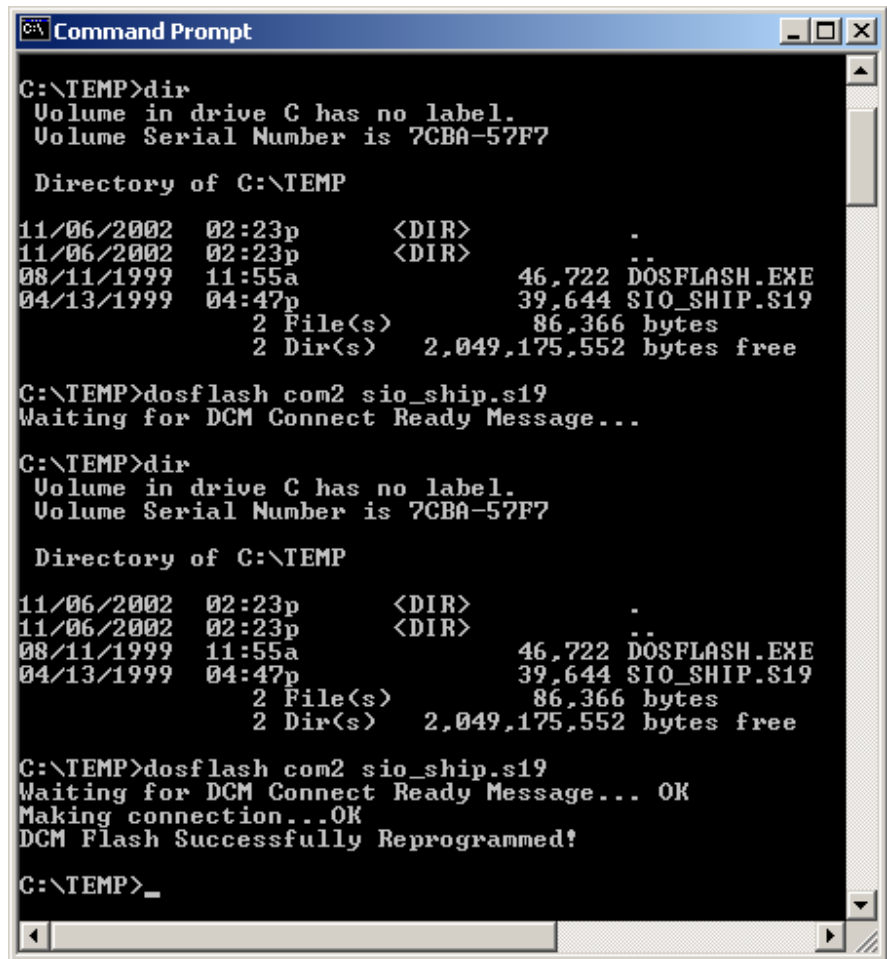


Figure 4. Programming the Flash.

10. Flashing is complete. Turn off the DCM and close the Command Prompt window (this will release the COM port allocated by MS-DOS) or restart Windows if running in MS-DOS mode.
11. Turn on the DCM. Start the DCM software and bring the DCM online (DCM Commander will show "Status: Connected").
12. Verify the correct firmware version as described in step 1.

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 CM16 parts; to expedite processing please use the correct part number when ordering.

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