UPDATING THE DM-24 FIRMWARE VIA MIDI

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The DM-24's firmware can be upgraded by replacing the internal EPROM chips or by a MIDI transfer. EPROMs must be installed by a TASCAM service center, while MIDI upgrades can safely be performed by the end user. If you have a good understanding of Microsoft Widows or Mac OS and a good understanding of MIDI, you should have no problem with this proceedure. If these subjects are new to you, TASCAM highly recommends that you take your DM-24 to a TASCAM service center to be upgraded. If these procedures are not followed accurately there is a good chance that your DM-24 will no not boot up and will have to be taken to a service center for repair.

Upgrading the DM-24 via MIDI consists of playing seven standard MIDI files into the DM-24 from a capable MIDI device. TASCAM recommends ONLY these two ways of upgrading via MIDI:

1. Using a standard PC running Widnows 98SE, ME, 2000 or XP.
You must use a PC with at least an 800mhz processor and 128MB of RAM.
The ONLY windows application that TASCAM supports for upgrading the
DM-24 via MIDI is Microsoft's Windows Media Player version 7.1.
Windows Media Player can be downloaded from the Microsoft website:
http://www.microsoft.com/windows/windowsmedia/software/playerv7.asp

2. Using an Apple Macintosh computer running Mac OS 8.6 or higher (OS X is not supported.)
The ONLY Mac application TASCAM supports for upgrading the
DM-24 via MIDI is MIDIGraphy 1.4.3. This application is sharware and can be downloaded from the TONTATA website.
http://member.nifty.ne.jp/mmaeda/e/macos.html#mg

If you choose to try using other applications you do so at your own risk. TASCAM cannot help you trouble shoot MIDI upgrade problems with any other applications.

DOWN LOADING

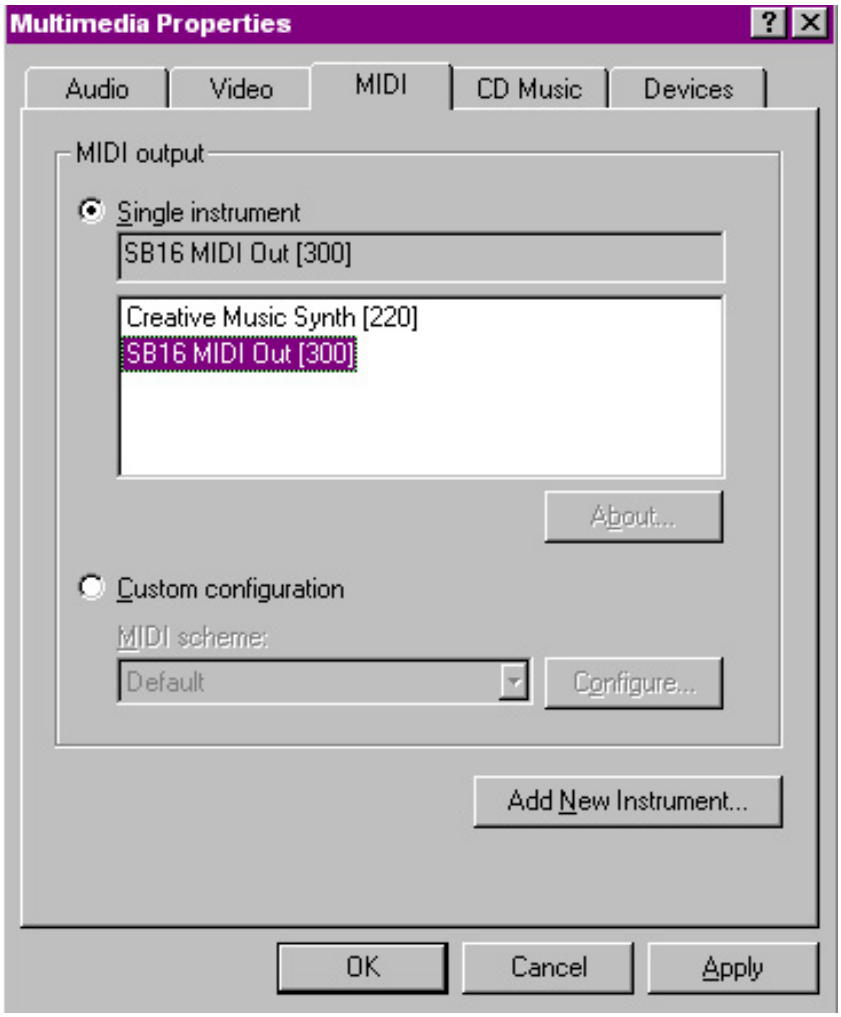
The standard MIDI files needed for upgrading the DM-24 can be downloaded from the DM-24 profile page of the TASCAM website. These files are zipped.
http://www.tascam.com/products/digital_mixers/dm24/index.php
Create a new folder on your desktop called “DM updates.”
Download the standard MIDI files and extract them into this folder.

UPGRADING WITH WINDOWS

This procedure takes approximately 45 minutes. You will need a MIDI interface with a MIDI cable coming from the interface’s MIDI output to the DM-24’s MIDI input. If you do not have a MIDI interface, most PCs have a standard sound card built in. These cards will have a joystick port, mic input, line input and speaker output. An adapter cable can be plugged into the joystick port, which will give you a MIDI in and MIDI out. TASCAM makes such a cable called the CU/SCMM12 for $37.50. You can get this cable from your local TASCAM dealer.
Make sure no other MIDI information is being sent to the DM-24 during the upgrade process. Double check your MIDI settings for your MIDI interface. You may want to disconnect the MIDI cable coming from the DM-24 MIDI output as feedback loops have been known to occur from accidental improper settings.

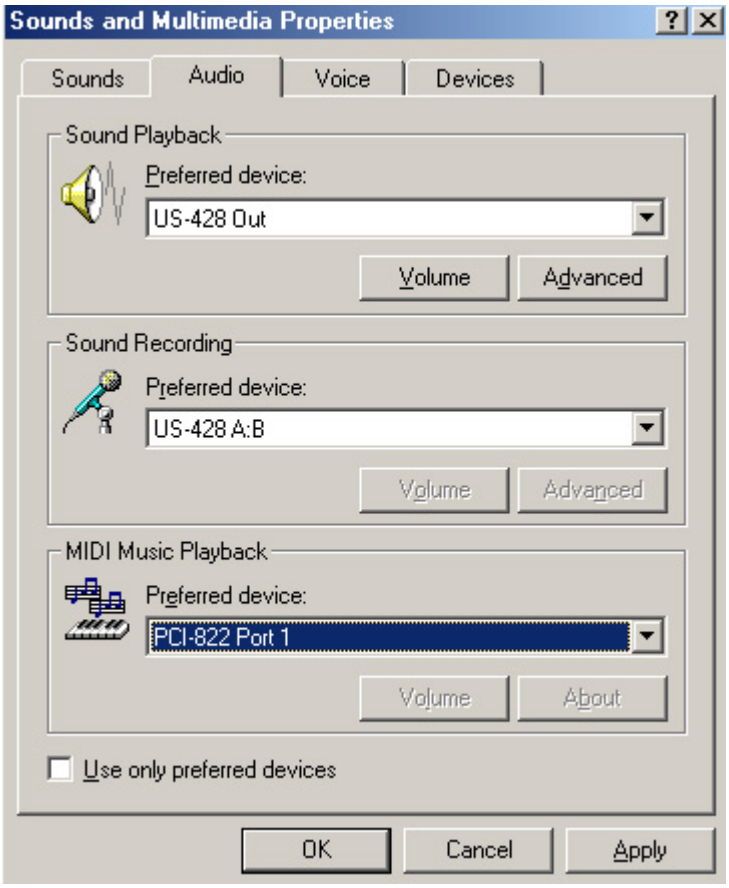
There are a few settings to make on your PC and the DM-24 to make this work:

1. On your PC go to CONTROL PANEL.
    A. On Window 98SE Find MULTIMEDIA and double click.
        a. Click the MIDI tab.



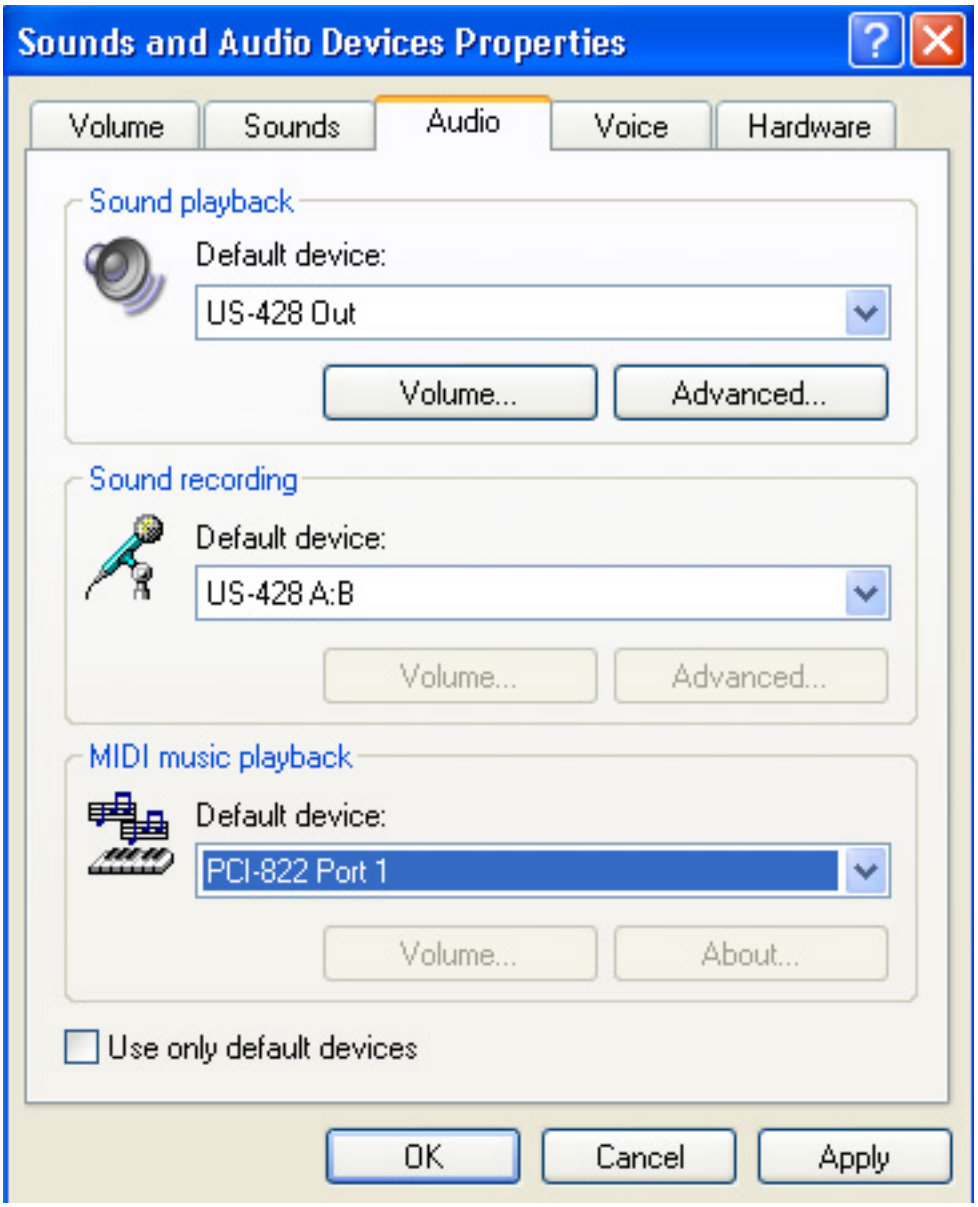
b. You should see a window similar to the above example. Change your settings to match this example as closely as you can. If you have a MIDI interface, choose the MIDI port you want to use instead.

c. Click APPLY and then OK.



B. On Windows ME and 2000, find Sounds and Multi Media.
   a. Click on the AUDIO tab.
   b. You should see a window similar to the above example. Change your MIDI MUSIC PLAYBACK PERFERED DEVICE to SB MIDI OUTPUT

   (or similar.) If you have a MIDI interface, choose the MIDI port you want to use instead (as above.)
   c. Click Apply, then OK.



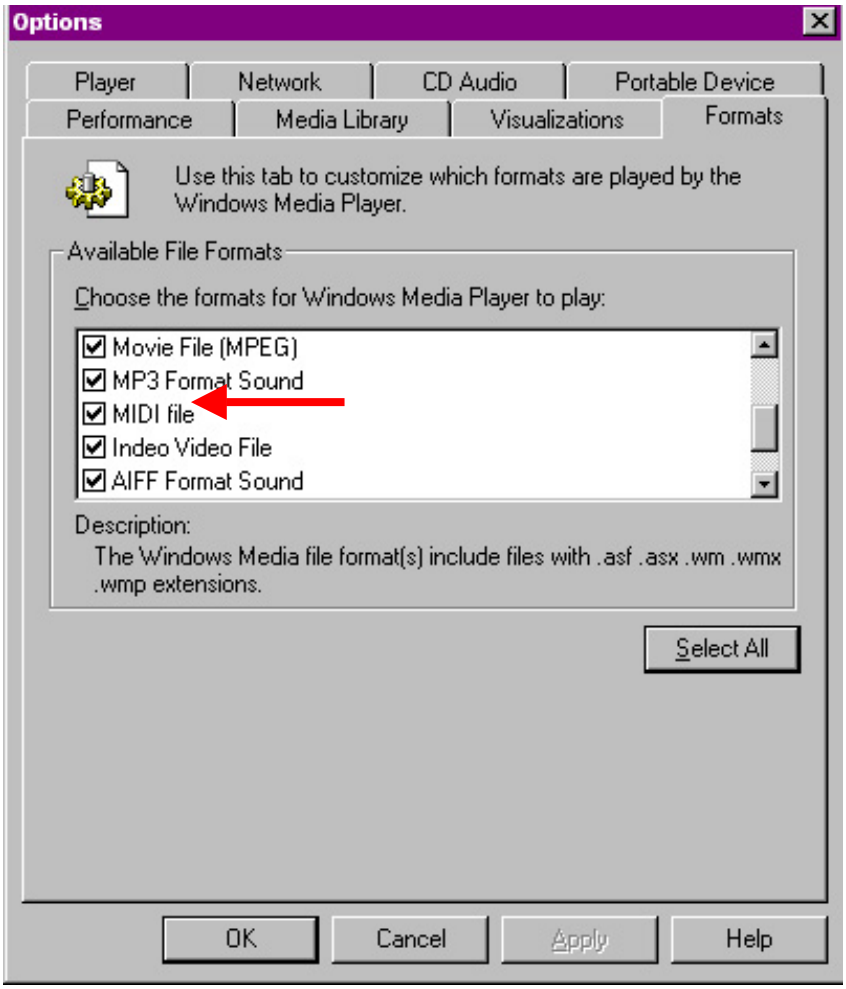
C. On Windows XP find Sounds and Audio Devices.

a. Click on the AUDIO tab.

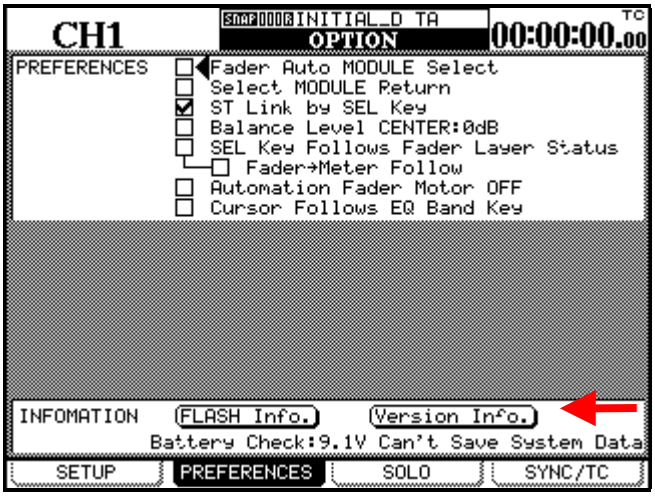
b. You should see a window similar to the above example. Change your MIDI MUSIC PLAYBACK PERFERED DEVICE to SB MIDI OUTPUT

(or similar.) If you have a MIDI interface, choose the MIDI port you want to use instead (as above.)

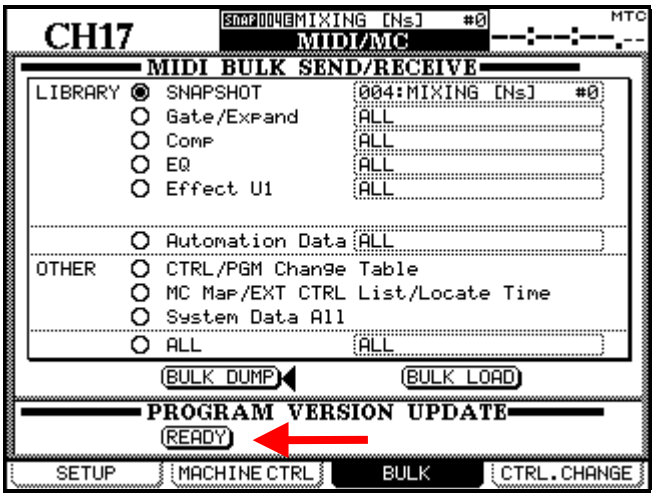
c. Click Apply, then OK.



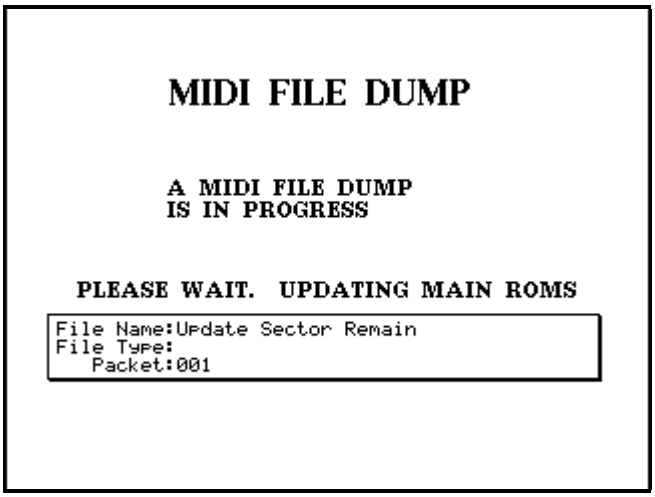
2. Open WINDOWS MEDIA PLAYER and go to TOOLS-OPTIONS-FORMATS.
3. You should see the screen in the example above. Make sure MIDI file is checked and click OK.
4. On the DM-24 press SHIFT+OPTIONS
5. Press the soft key below where you see PREFERENCES on the LCD.



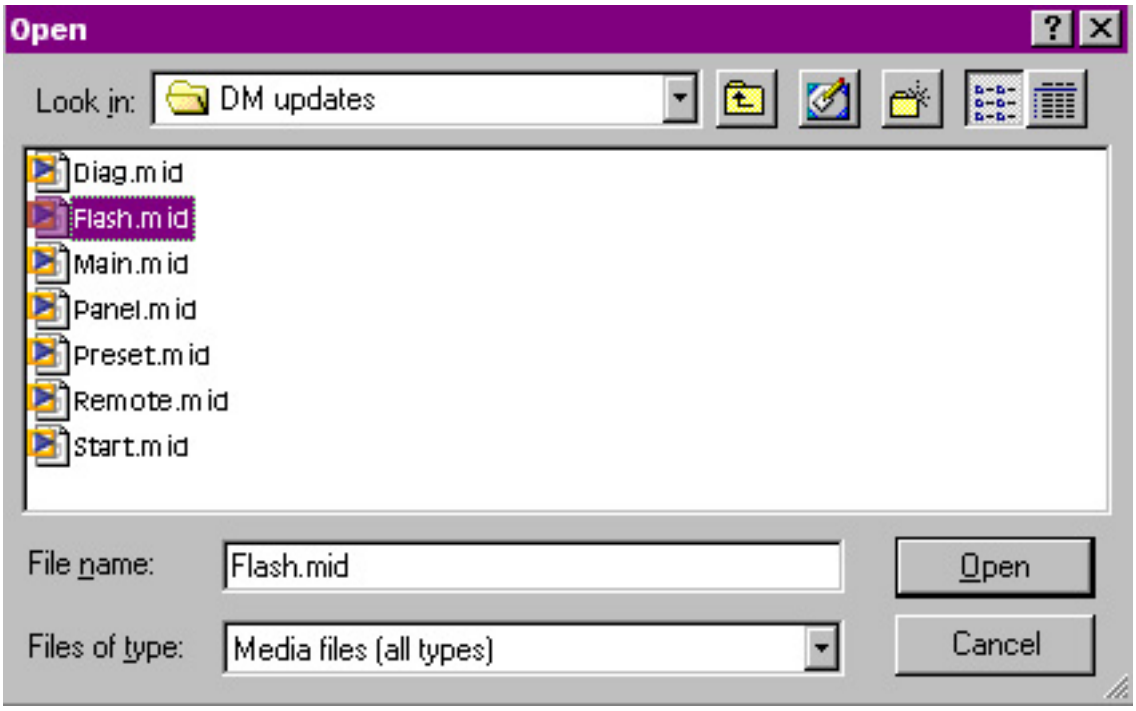
6. Use the cursor keys to point to VERSION INFO and press ENTER. You will see a list of different files. Make note of the current version shown.
7. On the DM-24 press SHIFT+MIDI/MC then press the soft key below where you see BULK on the LCD.



8. Use the cursor keys to move the pointer to Program Version Update-READY and press ENTER.



9. You should see a screen similar to this one. The DM-24 is now waiting to see the incoming MIDI file.
10. In Windows Media Player click FILE-OPEN.

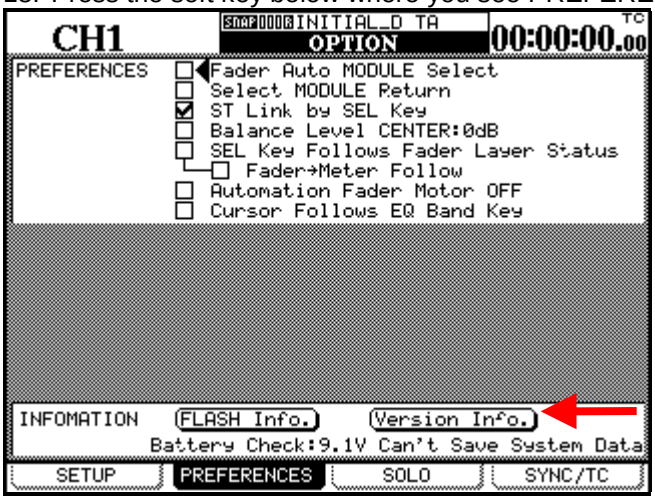


11. The files you need are in the “DM updates” folder on your desktop.
12. The files must be loaded one at a time in a specific order. The first file you want to load is “Flash.mid.” Double click on it or click OPEN. Widows Media Player will immediately start playing the file.

13. The DM-24 MIDI FILE DUMP screen should now show you the name of the file it is receiving and the packet column should show data movement.
14. When the file transfer is complete, the DM-24 screen will show “SOFTWARE DATA RECEIVE COMPLETE! DO YOU EXECUTE ROM WRITE? PRESS ENTER TO CONFIRM, OR A CURSOR KEY TO CANCLE.”
15. Press ENTER on the DM-24. The DM-24 will think for a moment and then reboot back to the BULK screen again.
16. Now repeat these steps to load the next six files. Some files will take 30 seconds to load while others will take 15 minutes. These files must be loaded in the following order or damage will be done to your DM-24’s EPROMs and the DM-24 will be unusable.

2. remote.mid
3. main.mid
4. preset.mid
5. diag.mid
6. start.mid
7. panel.mid

17. Once these files have been loaded, press SHIFT+OPTION on the DM-24.
18. Press the soft key below where you see PREFERENCES on the LCD.



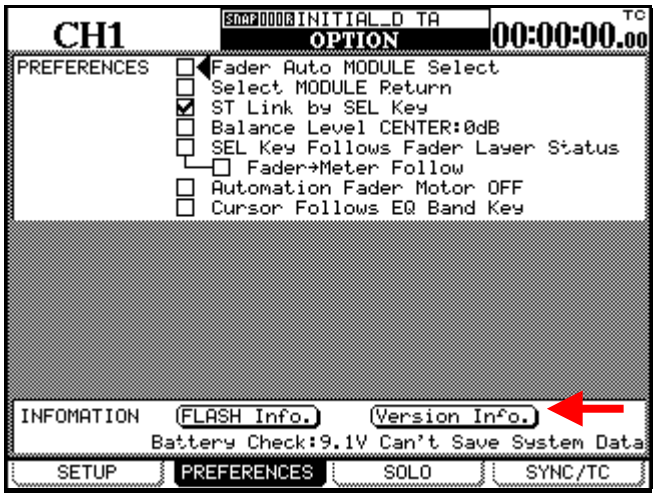
19. Use the cursor keys to point to VERSION INFO and press ENTER. You will see a list of different files. All of them should be labeled with the upgraded version you just loaded. If not, you will need go through the procedure again.
20. Once finished, you will need to initialize your DM-24. Please see the end of this document for that procedure.

UPGRADING WITH Mac OS

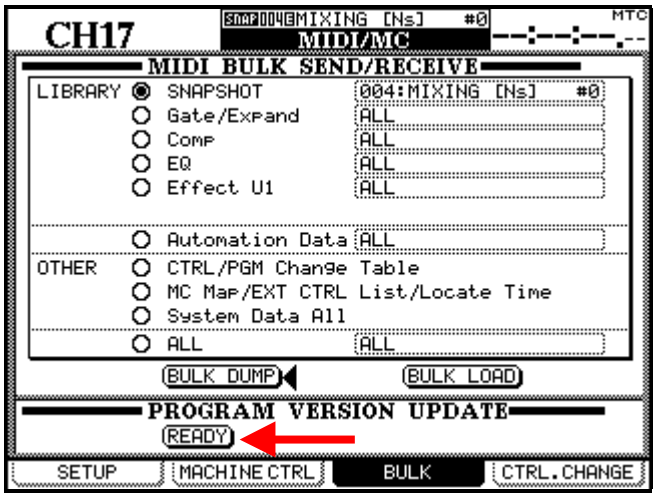
This process will take approximately 45 minutes. You will need a MIDI interface with a MIDI cable coming from the interface’s MIDI output to the DM-24’s MIDI input. You can use printer, modem, or USB ports.

1. Once you’ve downloaded MIDIGraphy, launch the application. The first thing it will ask you for is your MIDI interface information. If you use OMS, check the “Use OMS” box and the ports from your OMS setup will be available in the IN and OUT pull down menus. You will need to download OMS and use it if you have a MIDI interface that connects via USB.
http://www.opcode.com/downloads/
If your MIDI interface is connected to your PRINTER or MODEM port, choose that port. Once you have made these settings, click OK.

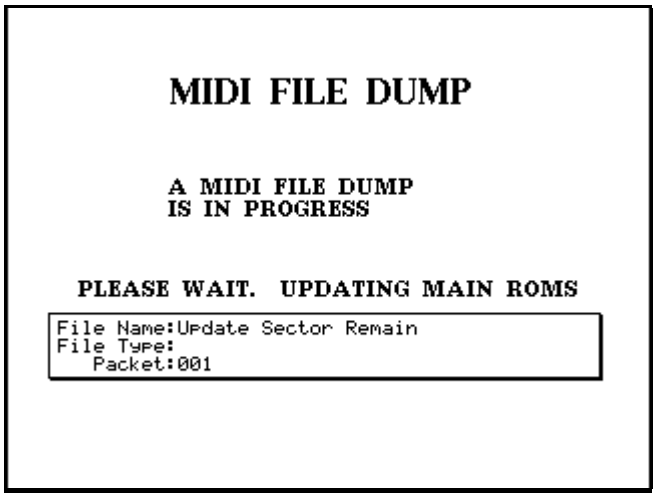
2. On the DM-24 press SHIFT+OPTIONS
3. Press the soft key below where you see PREFERENCES on the LCD.



4. Use the cursor keys to point to VERSION INFO. You will see a list of different files. Make note of the current version shown.
5. On the DM-24 press SHIFT+MIDI/MC then press the soft key below where you see BULK on the LCD.



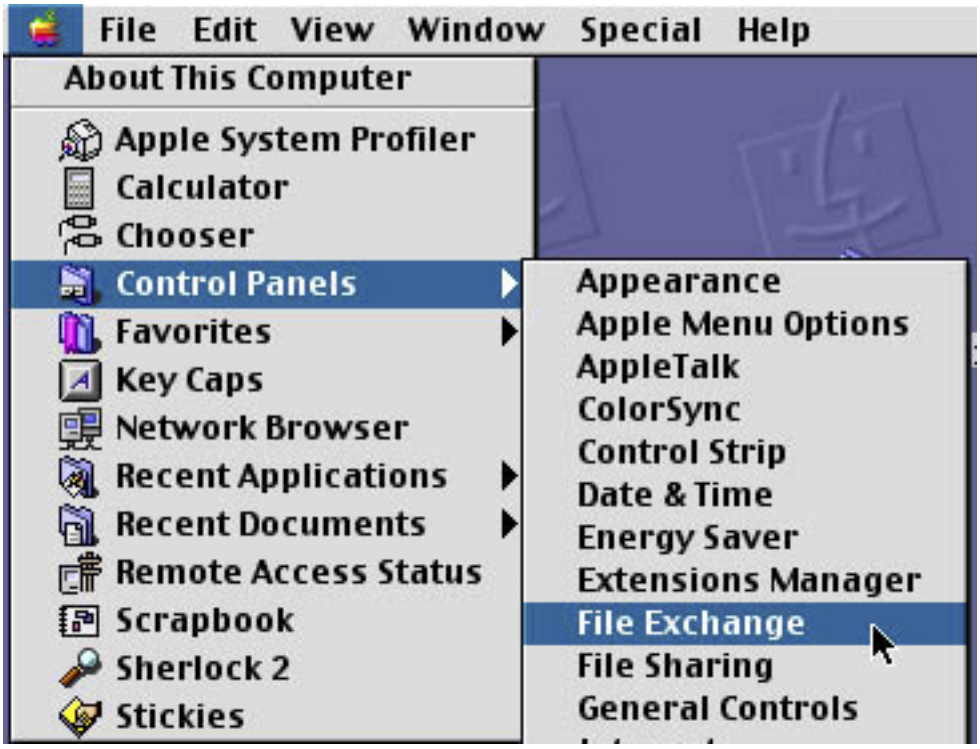
6. Use the cursor keys to move the pointer to PROGRAM VERSION UPDATE-READY and press ENTER.



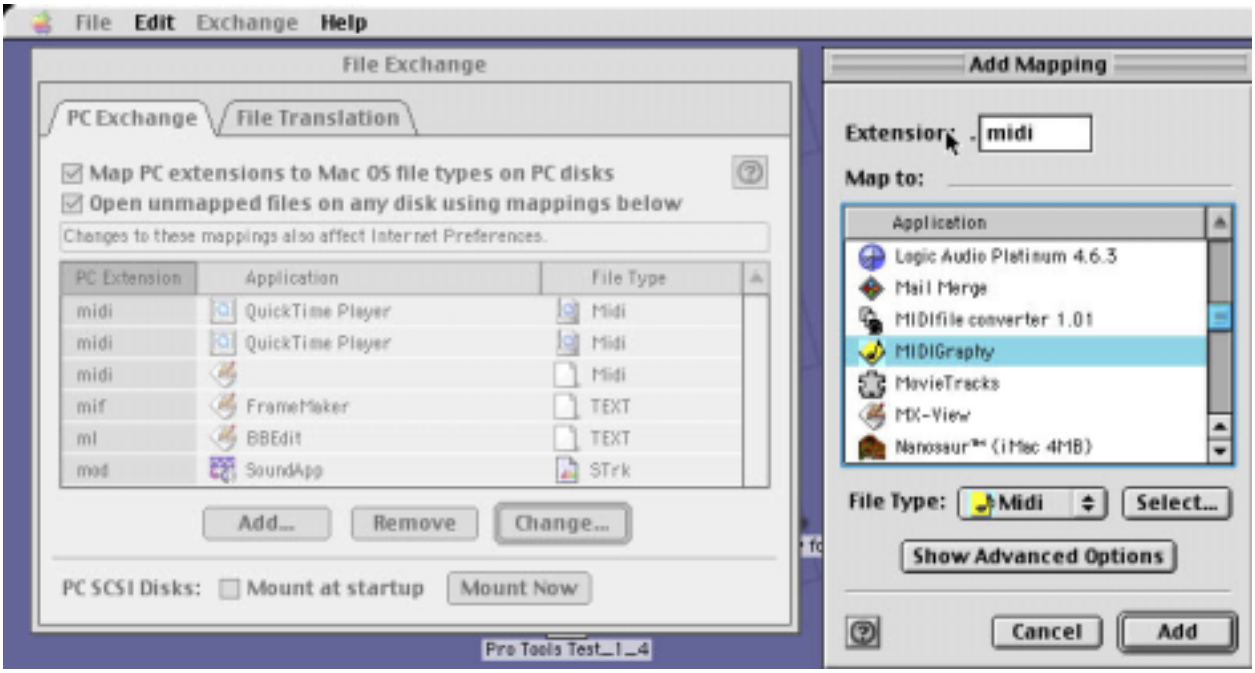
7. You should see a screen similar to this one. The DM-24 is now waiting to see the incoming MIDI file.
8. With MIDIGraphy open, go to FILE-OPEN. Locate your DM UPDATES folder on the desktop and open the FLASH file.

    A. If MIDIGraphy does not see the MIDI files:

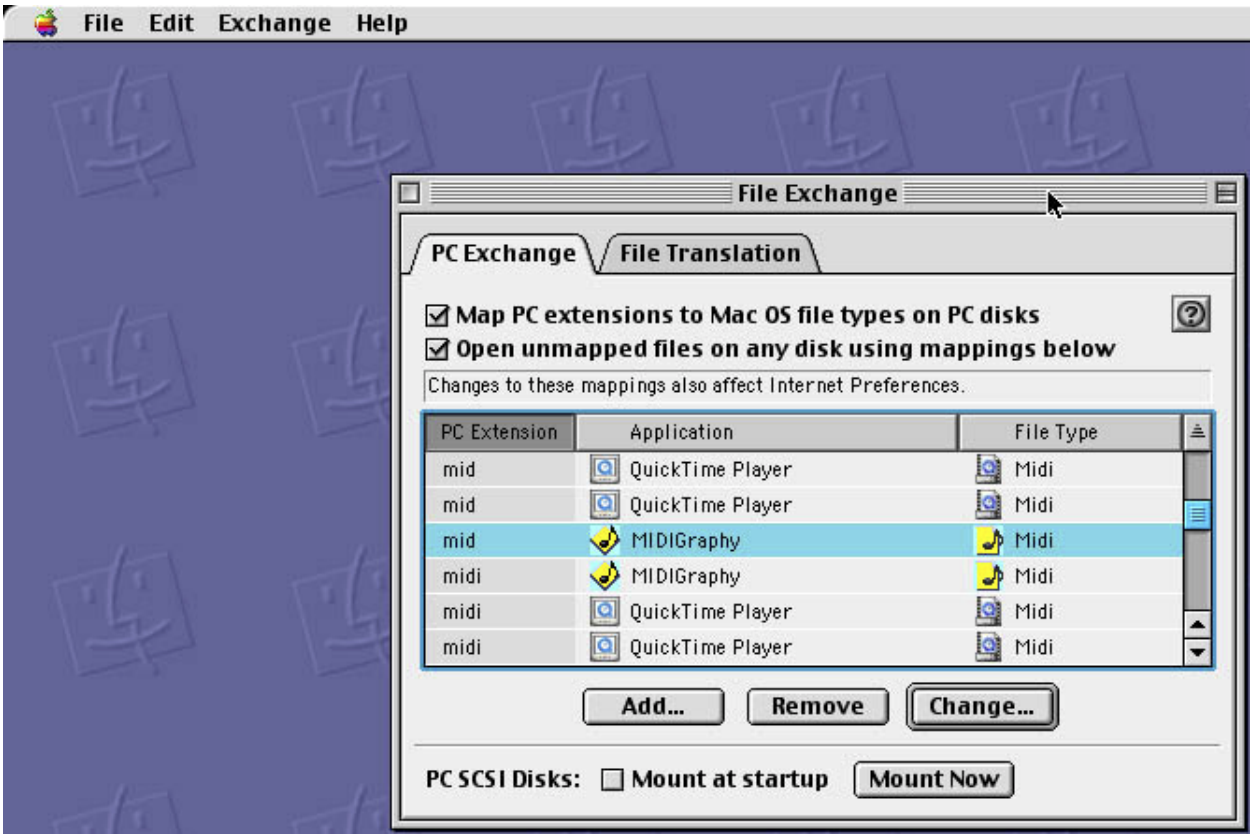
Go to APPLE MENU-CONTROL PANNELS-FILE EXCHANGE

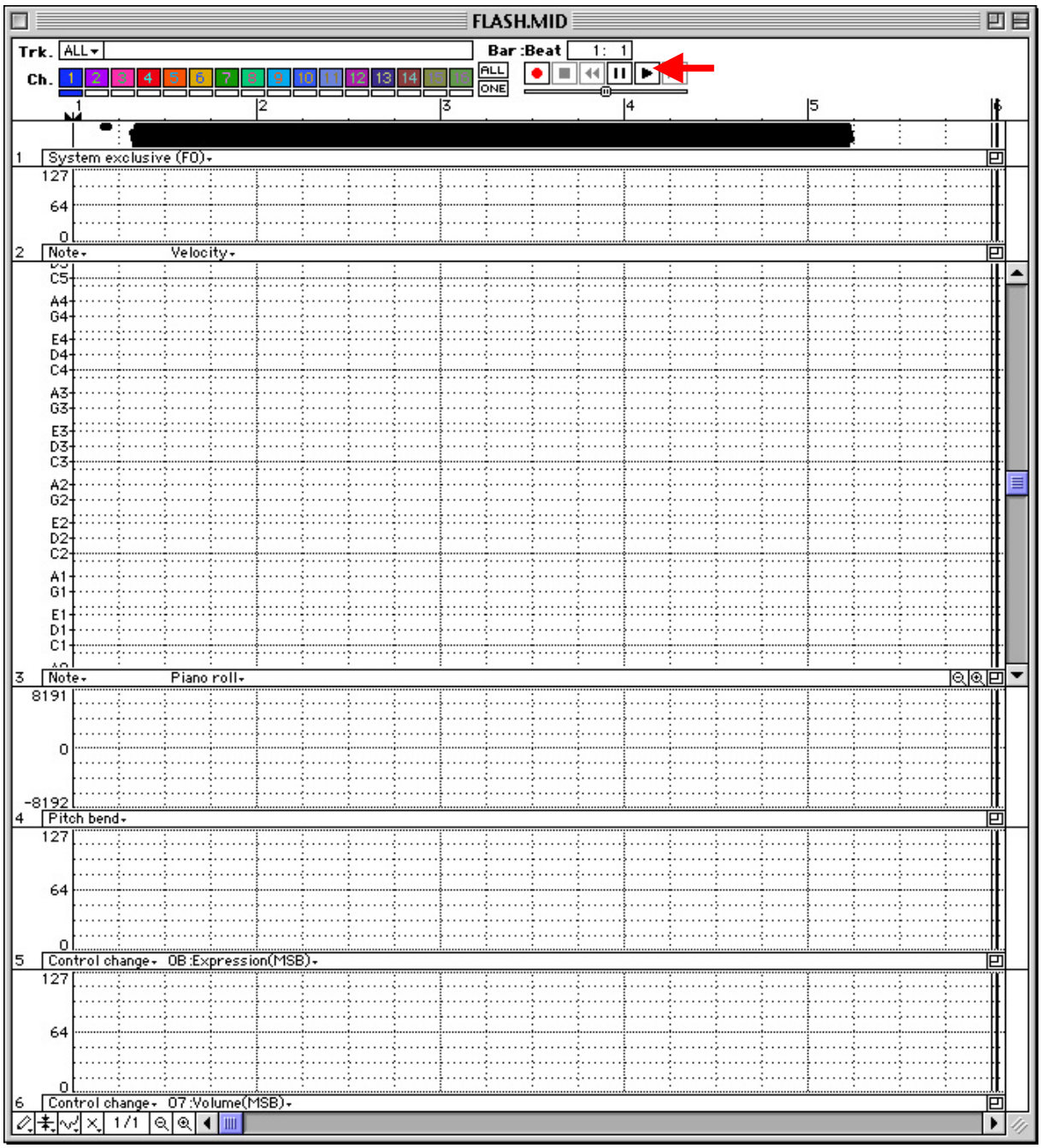


Choose PC EXCHANGE-ADD.
EXTENSION=MID
FILE TYPE=MIDI
Choose MIDIGraphy under MAP TO:
Click ADD.



Now MIDI files can be opened in MIDIGraphy.


File Edit Exchange Help
File Exchange
PC Exchange
File Translation
Map PC extensions to Mac OS file types on PC disks
Open unmapped files on any disk using mappings below
Changes to these mappings also affect Internet Preferences.
PC Extension
Application
File Type
mid QuickTime Player Midi
mid QuickTime Player Midi
mid MIDIGraphy Midi
midi MIDIGraphy Midi
midi QuickTime Player Midi
midi QuickTime Player Midi
Add...
Remove
Change...
PC SCSI Disks:
Mount at startup
Mount Now

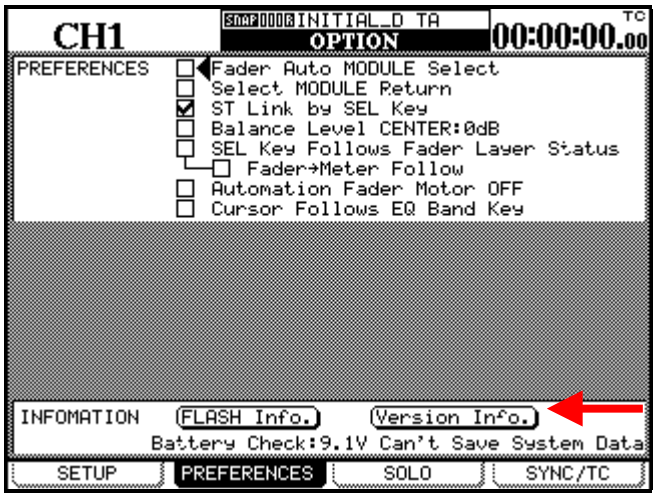


9. Now use your mouse to press PLAY in MIDIGraphy
10. The DM-24 MIDI FILE DUMP screen should now show you the name of the file it is receiving and the packet column should show data movement.
11. When the file transfer is complete, the DM-24 screen will show “SOFTWARE DATA RECEIVE COMPLETE! DO YOU EXECUTE ROM WRITE? PRESS ENTER TO CONFIRM, OR A CURSOR KEY TO CANCLE.” Press ENTER on the DM-24. The DM-24 will think for a moment and then reboot back to the BULK screen again.

12. Now repeat these steps to load the next six files. These files must be loaded in the following order or damage will be done to your DM-24's EPROMs and the DM-24 will be unusable:

2. remote.mid (Remote Program Data)
3. main.mid (Main CPU Program Data)
4. preset.mid (Preset Library Data) *
5. diag.mid (Diagnostics Program Data) *
6. start.mid (Main CPU StartUp Program Data) *
7. panel.mid (Panel CPU Program Data)

13. Once these files have been loaded, press SHIFT+OPTION on the DM-24.
14. Press the soft key below where you see PREFERENCES on the LCD.



15. Use the cursor keys to point to VERSION INFO. You will see a list of different files. All of them should be labeled with the upgraded version you just loaded.
16. Once finished, you will need to initialize your DM-24. Please see the end of this document for that procedure.

INITIALIZATION PROCESS

1. With the power OFF hold down the 2nd F button (far left of the board), the HIGH button (just above in the EQ section) and the – button (just to the right in the LIBRARY section) while you turn the power ON.
2. The DM-24 will boot to DIAGNOSTIC MODE. As soon as you see DIAGNOSTIC MODE on the display you may release the 2nd F, HIGH and – buttons.
3. Use the "Down cursor key" to move the indicator to SRAM INIT (NOT SRAM INIT for factory TEST) and press ENTER.
4. Press ENTER again to confirm when prompted. A check mark will appear in the box next to SRAM INIT on the display.
5. Use the "Down cursor key" to move the indicator to FLASH INFORMATION CLEAR and press ENTER.
6. Press ENTER again to confirm when prompted. A check mark will appear in the box next to FLASH INFORMATION CLEAR on the display.
7. Use the "Down cursor key" to move the indicator to EXIT and press ENTER. This will reset the DM-24 back to the original factory settings and the DM-24 will reboot.