DMC1000 STEREO
PROJECT MANAGER
(V4.0ST)

Computer Application for
YAMAHA DMC1000 Digital Mixer

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DMC1000 Project Manager

Note about this Manual: Throughout this manual, the symbol **M>** is used to indicate information that is only relevant to users of multiple-DMC1000 systems. Users of single-DMC1000 systems can ignore these sections.

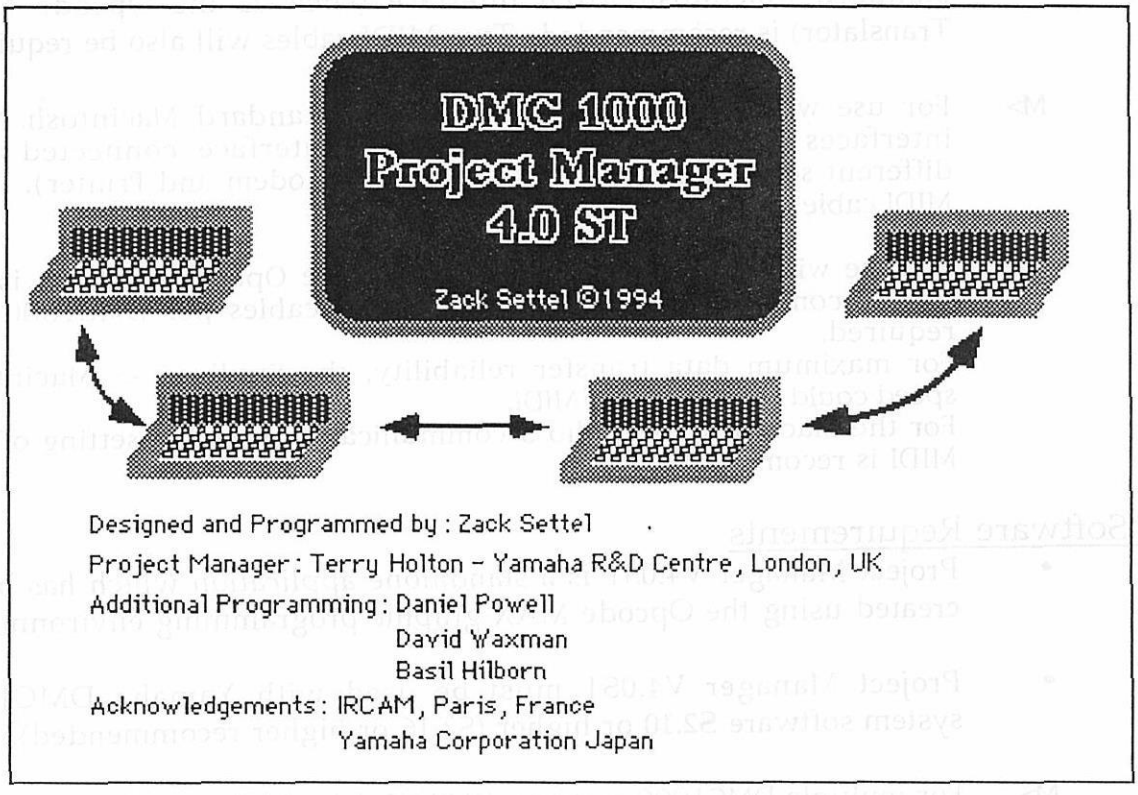
Table of Contents

Introduction

The Project Manager software has been developed to allow control and editing of the DMC1000's parameters from an Apple Macintosh computer, while also offering the advantages of a larger display and easier access to information.

The following extensions to the DMC1000's capabilities and functions are also provided:

- A comprehensive Effects Editor and Librarian.
- 4 Additional Fader Groups.
- 4 Additional Channel Parameter Links
- Project management, allowing all files relating to a specific project to be managed and stored within the Macintosh's disk drives.
- Integrated control of multiple-DMC1000 systems.
- Control of the DMC1000's disk-drive from the Macintosh.
- Control of automation system 'transport' and editing functions.
- EQ Snapshot and Librarian facility.
- Graphic display of EQ curves.
- Channel Delay Editor and librarian tool with snapshot capabilities.
- Channel Page for control and display of all channel parameters.
- Error and Status Reporting displayed on the Macintosh monitor.



System Requirements

1.1 Macintosh Requirements

- For use with a single DMC1000, the Apple Macintosh computer should be an LC III or higher model and should have at least 5 MB of available RAM and Macintosh System 6.0.7 or higher. (Refer to 2.2 for further details about RAM requirements.) Certain aspects of system performance will be related to the speed of the Macintosh computer being used. For example, screen redrawing speed and data transfer rates will vary according to the specifications of computer system.
- Approximately 4MB of hard disk space is also required.
- Project Manager V4.0ST can be used with black and white, gray-scale or color monitors. When gray-scale or color monitors are used, select 256 greys or colors. Do not use 4 or 16 grays or colors. Screen redrawing (particularly of EQ graphic displays) will normally be much faster when using black and white mode.

M> For use with a multiple-DMC1000 system, an LC475 or higher model is recommended, with at least 5MB of available RAM and Macintosh System 6.0.7 or higher.

1.2 MIDI Hardware Requirements

- For use with a single DMC1000 with no additional MIDI devices, a standard Macintosh/MIDI interface (such as the Opcode MIDI Translator) is recommended. Two MIDI cables will also be required.

M> For use with two DMC1000s, a pair of standard Macintosh/MIDI interfaces is recommended, with each interface connected to a different serial port of the Macintosh (ie. Modem and Printer). Two MIDI cables per DMC1000 are required.

M> For use with three or more DMC1000s, the Opcode Studio 5 is the only recommended interface. Two MIDI cables per DMC1000 are required.
For maximum data transfer reliability, the Studio 5 -> Macintosh speed could be set to 1.2 X MIDI.
For the Macintosh -> Studio 5 communication speed, a setting of 2 X MIDI is recommended.

1.3 Software Requirements

- Project Manager V4.0ST is a standalone application which has been created using the Opcode MAX graphic programming environment.

- Project Manager V4.0ST must be used with Yamaha DMC1000 system software **S2.10** or higher (S2.16 or higher recommended).

M> For multiple-DMC1000 systems, OMS V1.2 (or higher) software is also required. Refer to 2.5 for details.

Installation Guide

2.1 DMC1000 Project Manager V4.0ST Installation

(1) Insert the DMC1000 Project Manager V4 disk into the Mac's floppy-disk drive.

(3) Double-click on **Project Manager V4.0ST - 1.sea** (the 1 indicates that this version is for use with a single DMC1000).

M> Users of multiple-DMC1000 systems should install a Project Manager version which has been designed to control the total number of DMC1000s in your system.

(4) Open a suitable folder on your Mac's hard-disk drive.

(5) Click on **Extract**. This will cause the Project Manager program and related files to be decompressed and saved onto your hard disk.

2.2 Memory Allocation

Before beginning to use Project Manager, the application must be allocated sufficient memory. The main Project Manager V4.0ST program requires a recommended minimum of 5000K of RAM, and additional memory must be allocated if any of the DMC Tools are to be used. Additional memory allocation requirements for the DMC Tools are approximately as follows (the first number indicates the amount of memory which must be available to allow the tool to open; the second number indicates the actual amount of memory the tool will occupy once it has opened):

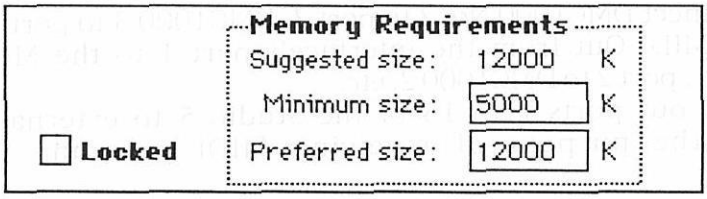
- **EQ Snapshots** V4.0 ST requires an additional 2700K / 2300K
- **EQ Overviews** V4.0 ST requires 2000K / 1520K
- **Channel Page** V4.0 ST requires 3850K / 3050K
- **Delay Editor** V4.0 ST requires 1200K / 850K
- **Faders & Cuts** V4.0 ST requires 550K / 400K
- **Cascade Pad Editor** V4.0 ST requires 90K
- **Automation Browser** V4.0 ST requires 40K

Note: The memory allocations listed above may be slightly higher than are actually required when multiple DMC Tools are being used simultaneously.

Use the following procedure to allocate memory for Project Manager:

(1) Click once on the **Project Manager V4.0ST** program icon. Then select **Get Info** from the **File** menu (<**Command I**>).

The Info window will appear:



(2) Change the Application Memory Size according to your anticipated requirements.
(3) Close the Info window.

Note: Memory requirements may vary slightly from one computer to another. If Project Manager fails to launch properly, adjust the Application Memory Size and relaunch the program.

2.3 Connecting the DMC1000 to the Macintosh Computer

A Macintosh/MIDI interface is required to allow data communications between the DMC1000 and the computer.

Example 1 - a basic setup containing one DMC1000, a Macintosh computer and an external effects device:

(1) Connect the MIDI interface to one of the serial ports (the Modem port is recommended) on the Macintosh. A simple interface like the Opcode MIDI Translator is ideal for this configuration.
(2) Connect the MIDI Out of the DMC1000 to the MIDI In of the interface.
(3) Connect one MIDI Out of the interface to the MIDI In of the DMC1000.
(4) Connect another MIDI Out of the interface to the MIDI In of the external effects device. External effects devices should be set to receive program changes in Omni mode.

M▷ Example 2 - a system consisting of two DMC1000s, external effects devices, and a Macintosh computer:

(1) Connect a MIDI interface to each of the Macintosh's serial ports (Printer and Modem).
(2) Use the Modem port for DMC1000 number 1 and the Printer port for DMC1000 number 2. Connect the MIDI Outs of the DMC1000s to the MIDI Ins of the interfaces.
(3) Connect the interfaces' MIDI Outs to the MIDI Ins of the DMC1000s.
(4) Connect any external effects devices to the MIDI Outs of the interface which is connected to the Mac's Modem port.

M▷ Example 3 - a system consisting of three or more DMC1000s, external effects devices and a Macintosh computer:

(1) Connect an Opcode Studio 5 interface to each of the Macintosh's serial ports (Printer and Modem).
(2) Connect the MIDI Out of DMC1000 number 1 to MIDI In port 1 of the interface. Connect DMC1000 No. 2 to port 2, DMC1000 3 to port 3, etc.
(3) Connect the MIDI Out from the interface's port 1 to the MIDI In of DMC1000 No. 1, port 2 to DMC1000 2, etc.
(4) Connect MIDI out ports 7 to 15 of the Studio 5 to external effects devices for the purpose of receiving MIDI program changes.

2.4 Installing System Software in the Yamaha DMC1000

In order to use Project Manager V4.0ST software, the DMC1000 must have S2.10 system software (or later) installed.

To change the DMC1000's system software, use the following procedure:

(1) Back-up the following data to a floppy disk:
- Internal Memory
- Set-up Memory

(2) Boot the system software using either Method A or B.

Method A

(i) Turn off the power to the DMC1000.
(ii) Insert the Yamaha DMC1000 system software disk into the DMC1000's internal disk drive.
(iii) Turn on the power to the DMC1000 and the system software will automatically be loaded from the floppy disk.

or Method B

(i) Insert the Yamaha DMC1000 system software disk into the DMC1000's internal disk drive.
(ii) Use the LCD Control section on the DMC1000 to open the **Boot** page.
(iii) Using the Parameter Select keys, move the cursor to [**Execute**].
(iv) Press the Parameter Adjust [**+1/ON**] key. An *Are You Sure?* prompt will appear in the LCD. Press [**+1/ON**] again and the System Software will be loaded from the floppy disk.

(3) Go to the **Sys.Init** page and perform a System Initialization.
(4) Re-load the DMC1000 data (Internal Memory and Set-up Memory Data) from the back-up floppy disk.

2.5 Installing OMS

Before beginning to use DMC1000 Project Manager, the Opcode MIDI System (OMS) should be installed in the Macintosh. OMS V1.2 or higher is required. If OMS is already installed on your Macintosh, there is no need to re-install it.

OMS Installation instructions:

(1) Insert the OMS disk into the Macintosh and double-click on **OMS 1.2.3 installer.**

Note: If the Macintosh crashes while installing OMS, remove any virus-checking extensions from the System folder, restart the Mac, and run the Installer again.

(2) The *Welcome to the OMS Installer* dialog box will appear. Click **Continue.**
(3) The next screen contains basic installation instructions for OMS.

After reading these instructions, click **Continue**.

(4) A dialog box will appear asking whether you have an Opcode Studio 4 or 5 in your system. Click YES or NO accordingly.

(5) In the next screen, click **Install** to install OMS on your Mac's hard disk.

(6) After installation has been completed, a dialog box will appear instructing you to restart your Macintosh in order for OMS to be activated. Click **Restart**.

OMS installation is now complete.

2.5.1 Selecting an OMS File

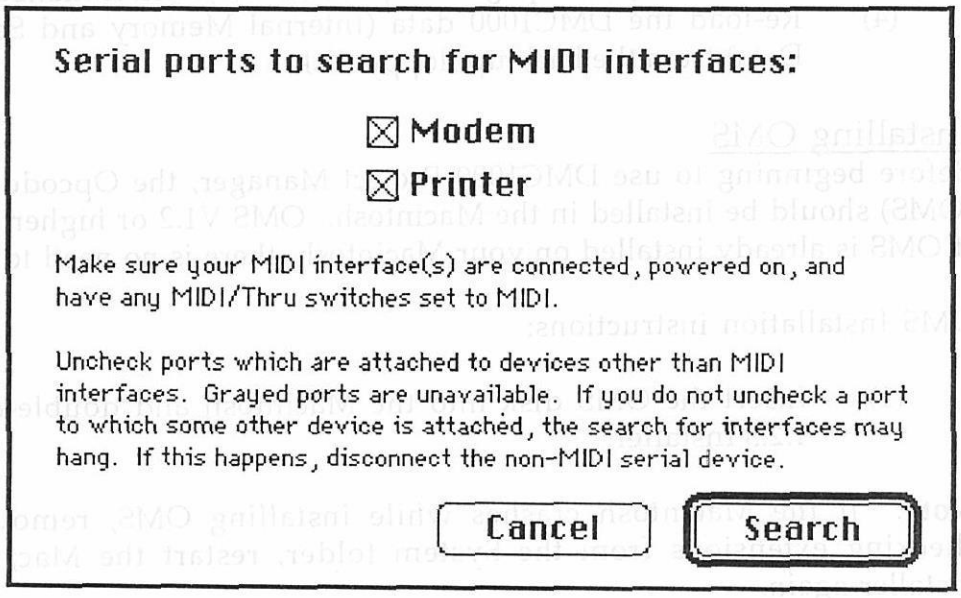
Inside the **DMC1000 Project Manager** folder, a folder named **OMS Files** can be found. Open this folder and double-click on the appropriate file to suit your DMC1000 configuration. For example, the file **STD Interfaces - 2 DMCs** is for use in a system consisting of 2 standard interfaces (ie. Opcode MIDI Translators) and 2 DMC1000s. An external effects device (receiving program changes) could also be included in this configuration.

After opening an appropriate OMS file, execute the following procedures:

(1) From the **File** menu, select **Make Current**.

(2) From the **Studio** menu, select **Interfaces**. This allows OMS to check the interfaces that are connected to the Macintosh. Click **Update Setup**.

(3) If you have interfaces connected to both of the Mac's serial ports, make sure **Modem** and **Printer** are both checked. Then click **Search**.



(3) From the **Studio** menu, select **Test Studio**. With MIDI Control Tx turned On in each DMC1000, you will be able to verify the interface connections by simply moving any controls (faders, etc.) on the

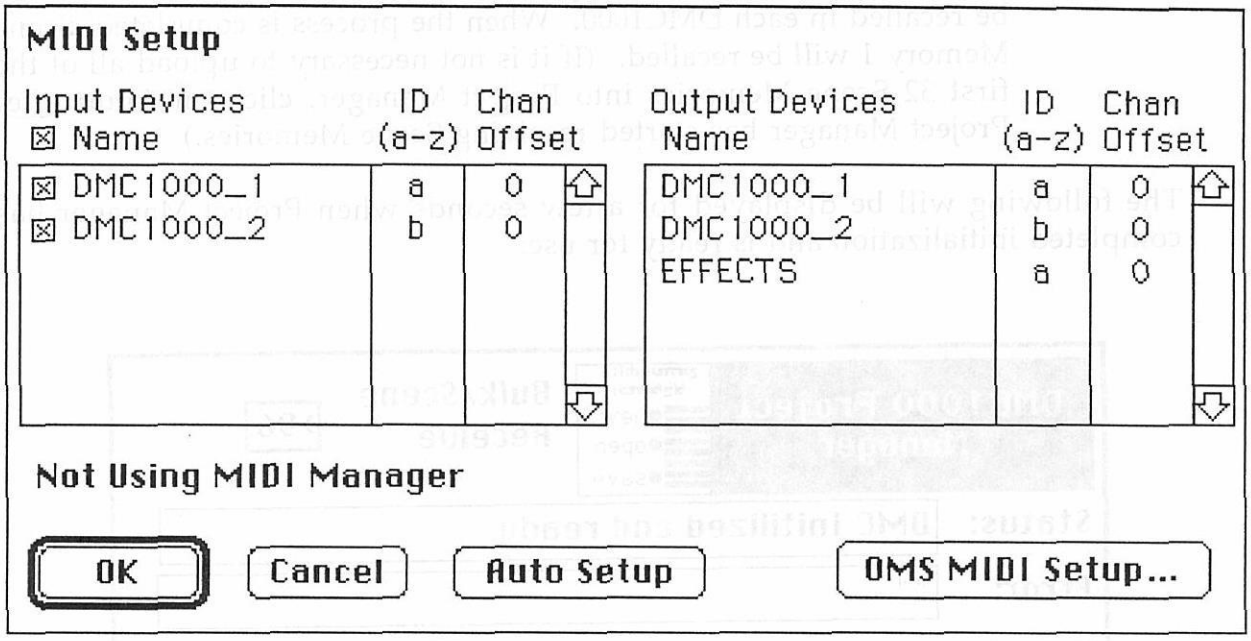
DMC1000s. A voice in the Macintosh will confirm that MIDI is being received. Test each DMC1000 in the system, then turn **Test Studio** Off.

(4) From the **Edit** menu, select **OMS MIDI Setup**. Under Compatibility, select **Only OMS Applications**. Then click **OK**.

(5) From the **File** menu, select **Quit**. A dialog box will ask if you wish to save changes which have been made to the OMS Setup document. Click **Save**.

2.5.2 MIDI Communications Problems

If communications problems occur after Project Manager has been launched, select **MIDI Setup** from the **File** menu. The following diagram shows the correct setup for a 2-DMC1000 system with an external effects device also connected to the first interface (Modem Port). In the ID column, DMC1000_1 should be identified as **a**, DMC1000_2 as **b**, etc..



Note: Provided your DMC1000 configuration does not change, it should only be necessary to execute the procedures in section 2.5 the first time you setup your Project Manager system.

2.5.3 Testing MIDI Connections

MIDI connections between the DMC1000 and the Macintosh can be tested by selecting **MIDI Test** from **Project Manager** in the menu bar. The I/O test will be executed as the I/O Test window opens. The test can be repeated by clicking on **Test Again**. In multiple-DMC1000 systems, use Display/Edit to select the DMC1000 to be tested.

2.6 Launching DMC1000 Project Manager V4.0ST

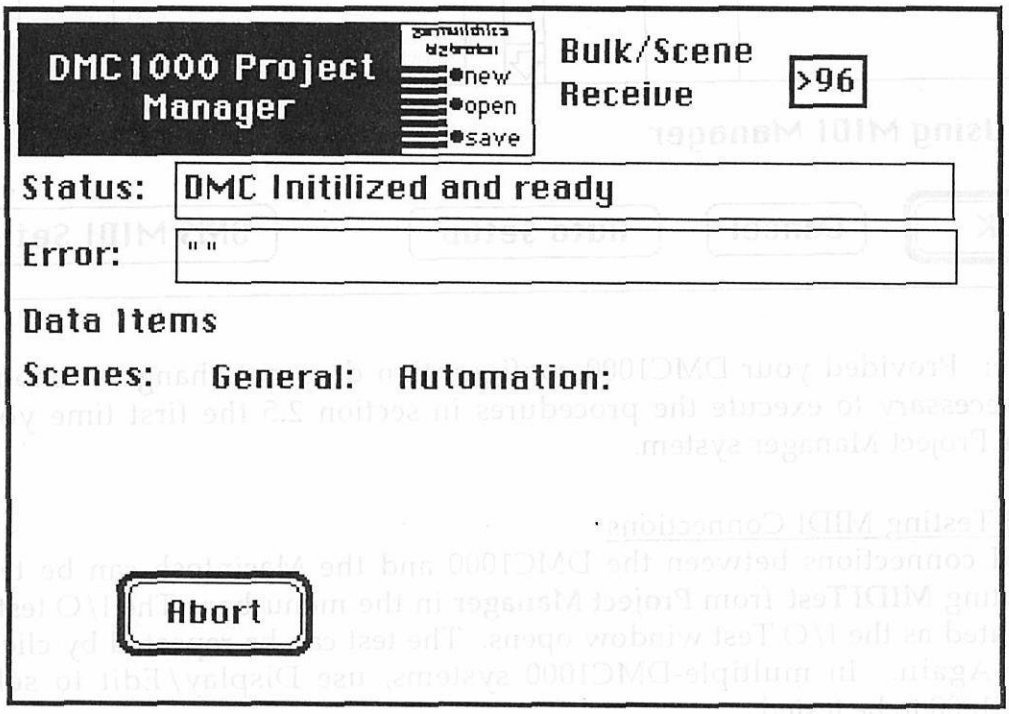
(1) Before launching Project Manager, power-up the DMC1000.

(2) Open the DMC1000 Project Manager folder and double-click on the **Project Manager V4.0ST** icon to launch the application. (This icon will have a different appearance in Macintosh System 6.)

Project Manager V4.0 - 1

(3) When DMC1000 Project Manager is first launched, certain parameters in the DMC1000 are initialized and an I/O test is conducted. After the **DMCMain** page appears, all data from Scene Memories 1-32 will be loaded from each DMC1000 into the Macintosh. At the beginning of this process, Scene Memory 0 will be recalled in each DMC1000. When the process is completed, Scene Memory 1 will be recalled. (If it is not necessary to upload all of the first 32 Scene Memories into Project Manager, click on **Abort** after Project Manager has started receiving Scene Memories.)

The following will be displayed for a few seconds when Project Manager has completed initialization and is ready for use:



Using Project Manager

Warning: Do not use the **Overdrive** option while Project Manager is being used. Also, **AppleTalk** should not be active.

3.1 Start-Up Defaults

As Project Manager is launched (refer to 2.6 for procedure), certain parameters on the DMC1000 are automatically set. (Refer to **Appendix A**).

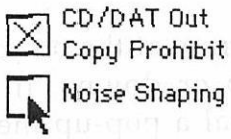
The current Setup state of the DMC1000, the current Edit buffer (containing all mixing console parameters), and Scene Memories 1-32 will automatically be loaded from the DMC1000 to Project Manager during the start-up process. (See **Appendix B** for details about which parameters are contained in Setup Data).

Project Manager is designed to be used with the initialized Control Change and Program Change assignments. If either of these assignment tables has been altered, Project Manager may not function properly. If the Installation procedure (described in section 2) has been followed, the DMC1000 should contain the initialized assignment tables for use with Project Manager. These default files are also located in the **User Files** folder. If necessary, these files can be loaded into the DMC1000 using the **Open Bulk** procedure in the **Project** page (refer to 5.6.9 for details).

3.2 Selecting and Editing Parameters

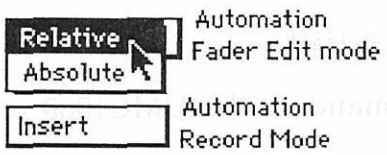
There are several different ways of selecting and editing parameters within the Project Manager application.

a) Changing a parameter by marking or removing an X from a box:



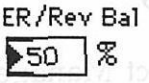
Point the tip of the cursor arrow at the box and click.

b) Pop-up (Pull-down) menus:



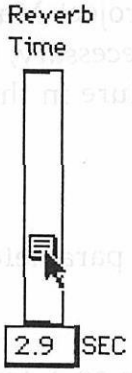
Point at the menu item, then click and hold with the mouse button. Drag the mouse up or down until it is pointing at the appropriate selection, then release the button. If you simply want to view the menu choices without making a selection; move the mouse outside of the menu box before releasing. Some pop-up menus may contain 30 or more possible selections.

c) Number Boxes:



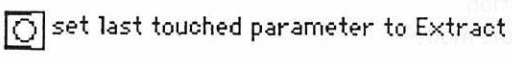
Boxes which contain triangles on the left side allow numerical values to be directly entered from the Mac keyboard. Click on the box first to highlight the triangle (with black and white monitor systems, the triangle will appear dark - however, with gray-scale systems the triangle with appear lighter when selected; on color monitors, the triangle will turn yellow). Then type in a value from the Mac and press <**Enter**>, <**Return**>, or click outside the box. Values in Number Boxes can also be changed by dragging the mouse up or down, or (in the case of many number boxes) by using the up and down arrows on the Mac keyboard.
In some windows (such as EQ Snapshots), there are boxes which do not allow values to be entered directly from the Mac's numeric keys, but do allow values to be scrolled.

d) On-screen sliders:



In the example shown above, point the cursor arrow at the on-screen slider and while pressing the button, drag the mouse up or down. In this particular example, clicking on the number itself will reveal a pop-up menu from which an exact value can be selected.

e) Buttons:



Clicking a button will execute a command in the DMC1000 or open another window in Project Manager.

3.3 Macintosh Keyboard Commands

Keyboard commands can also be used to execute certain procedures or to access Project Manager windows:

C = open Channel Page main window
D = open Delay Editor main window
E = open EQ Overviews main window
F = open Faders and Cuts main window
S = open EQ Snapshots main window

M = Menu selection only for Channel Page and EQ Snapshots
T = Touch channel-select for Channel Page and EQ Snapshots

[= Display Left channels in the EQ Overview tool
] = Display Right channels in the EQ Overview tool

Shift D = open Disk Manager

CTRL A = Automation Undo
CTRL U = Undo latest Scene Memory Store or Recall

CTRL K = Keep Touch On mode
CTRL N = Normal Touch mode

Command M = Open Status window

Escape = update Project Manager displays
Double-click Escape = request Setup and Scene edit buffer data from the DMC1000

M▷ Extended Keyboards Only

F5 = Display DMC no. 1
F6 = Display DMC no. 2
F7 = Display DMC no. 3
F8 = Display DMC no. 4
F9 = Display DMC no. 5
F10 = Display DMC no. 6

F11 = Edit Display DMC only
F12 = Edit All DMC1000s

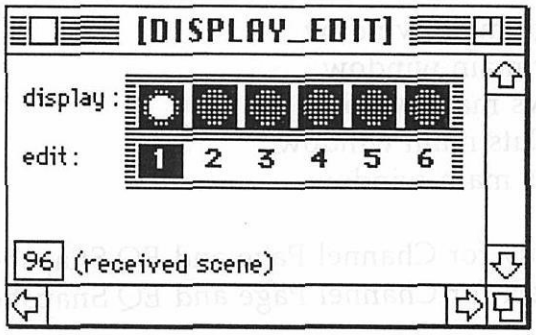
Transport Commands

The following Transport Commands will affect the automation systems in all DMC1000s linked in the system. These commands will only function if **transport command keys on** is selected (refer to 12.5.3).

Enter = Automation Record
Spacebar = Automation Play
Return = Automation Stop

3.4 Display/Edit

The Display/Edit window can be brought to the top level by selecting Show Display/Edit in the Project Manager menu.



Project Manager V4.0ST allows control of up to 6 DMC1000s simultaneously. The display of parameter settings and values on the Macintosh monitor relates to only a single DMC1000 at any given time. The Display/Edit window indicates which DMC1000 is currently represented in the Project Manager display windows. This is indicated by a red "LED" in the display row.
Although only one DMC1000 has its parameters displayed at any given time, parameter changes can be sent to more than one DMC1000 simultaneously. If a DMC1000 is selected in the edit row, any parameter changes made in Project Manager will be sent to that console. Click in any box 1-6 to select a DMC1000 to receive parameter changes. The display DMC1000 will always be selected to receive edits. Clicking on the word edit will toggle between a single DMC1000 selected and all DMC1000s selected to receive edits.

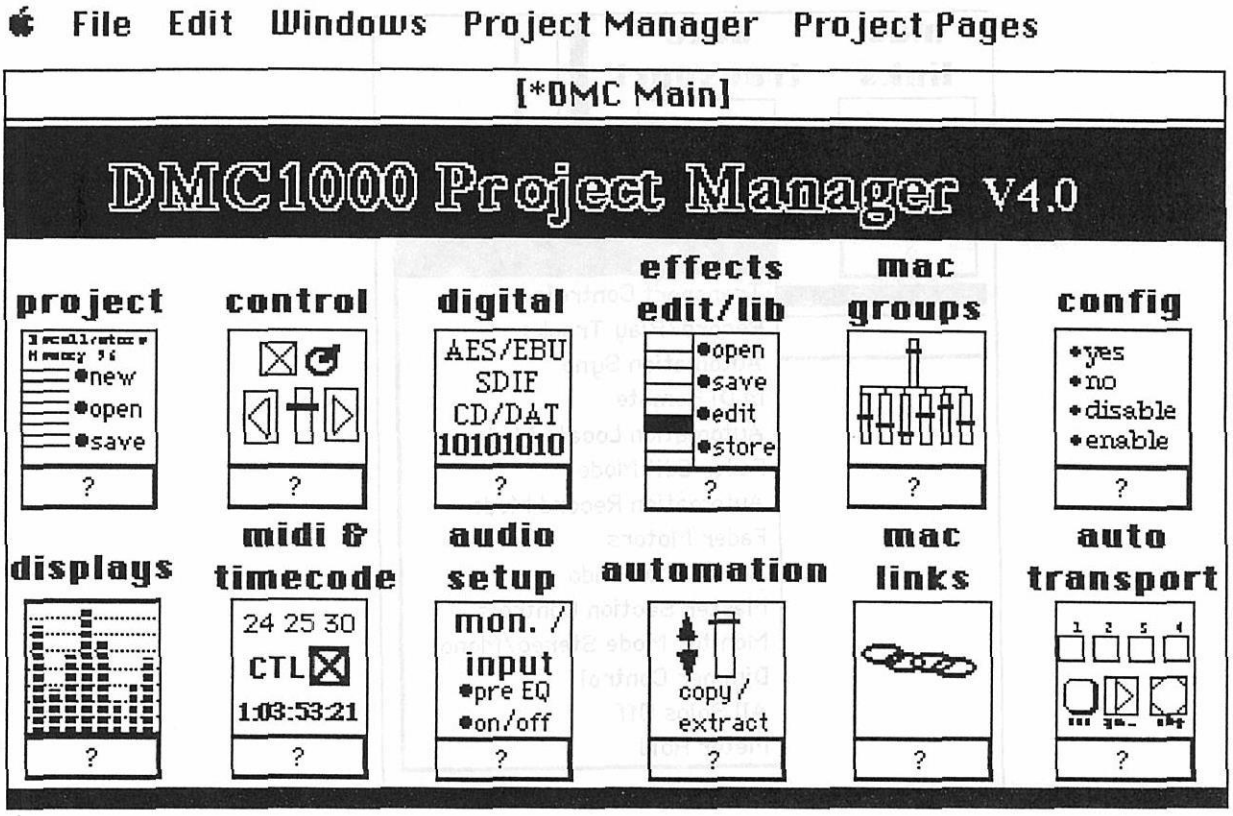
On extended keyboards, functions keys F5-F10 can be used to select DMC1000s 1-6 as the display console. F11 can be used to select only the display console to receive edits and F12 is used to select all DMC1000s to receive edits. Also, the SEL keys on the DMC1000 control surfaces can be used to select the console for display by double-clicking (refer to 4.3.3).

The received scene box in the lower left corner will display the currently received scene number as they are being sent to Project Manager.

Note: This window cannot be closed. If it is not needed, hide it behind the *DMC Main window.

DMC1000 Project Manager - Main Page

This is the main window which appears on screen as the Project Manager application is launched.



When DMC1000 Project Manager is first launched, certain parameters in the DMC1000 are initialized and an I/O test is conducted. After the **DMC Main** window appears, the current Edit buffer, the Setup state, and Scene Memories 1-32 will be loaded from each DMC1000 into the Macintosh. The progress of the Scene Memory data transfer can be monitored in the Project Manager **Status Display** window. Scene Memory 0 will be recalled in each DMC1000 at the beginning of this process and Memory 1 will be recalled when this process is complete. Project Manager is then ready for use.

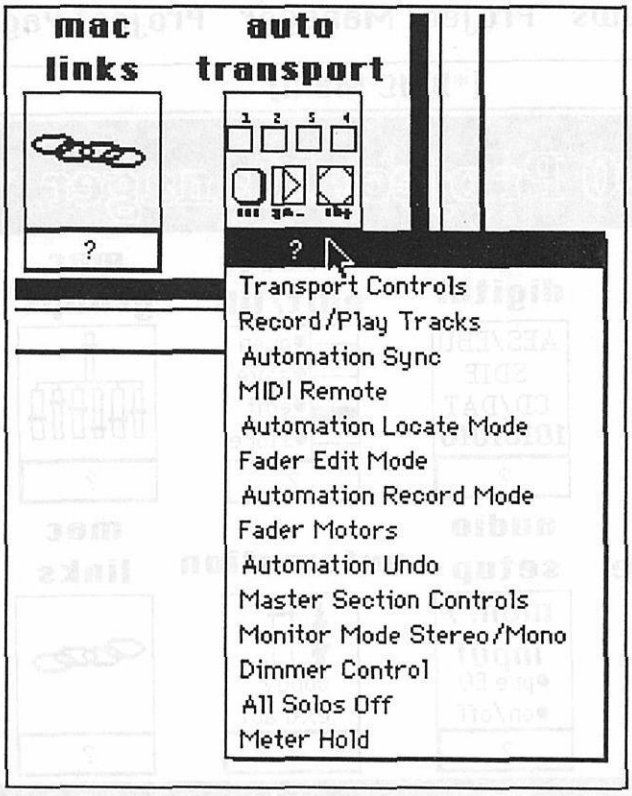
4.1 Project Manager Program Structure

Project Manager V4.0ST is structured such that certain essential elements are opened during the initial launch of the main program. These items are contained in various pages which can be accessed by clicking on the icons displayed in the **DMC Main** window shown above. These pages can also be opened by selecting them from the **Project Pages** menu at the top of the screen.

Other useful utilities are contained in the **DMC Tools** folder, and can be opened individually by the user when required. Refer to Section 18 for details about DMC Tools.

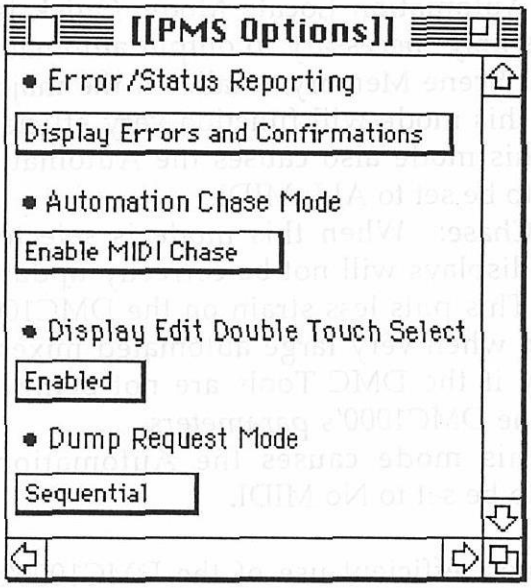
4.2 Help ?

Information about the parameters contained in each page can be displayed by pointing at the ? under the page's icon. Click and hold the mouse button to reveal a list of items contained in that page. Releasing the mouse button when any of these items is highlighted will cause the appropriate page to open.



4.3 Options

Several user-definable options are available. Select **Options** from **Project Manager** in the menu-bar.



4.3.1 Error/Status Reporting

Error, warning, and confirmation messages from the DMC1000 can be displayed in the Status window in Project Manager. Users can choose whether or not they want errors which occur in the DMC1000 and other status and confirmation messages to be displayed on the Macintosh monitor.

a) **Display Errors and Confirmations**: When this is selected, the Status window will pop open to display various warning messages, indicate that errors have occurred, and confirm the execution of commands.

b) **No Error Reporting**: No errors, warnings or confirmations will be displayed on the Macintosh monitor.

4.3.2 Automation Chase Mode

When an automated mix is played from anywhere other than the beginning, Project Manager needs to receive data from the DMC1000 in order to update its parameter displays. Three Automation Chase Mode options are available:

a) **MIDI Chase Bulk Out**: When this option is selected, Project Manager will request an Edit Buffer bulk dump from the DMC1000 as soon as the DMC1000 has updated its state (ie. when playing automation from the middle of an automated mix). This method will function most efficiently when a mix contains a very large amount of automation data. This is the default mode selected when Project Manager is initialized.
Selecting this mode also causes the Automation Play -> MIDI Out parameter to be set to ALL MIDI. This means that MIDI data for all

parameters will be output by the DMC1000's automation system during playback (refer to 13.7.1 for further details).

b) **Enable MIDI Chase:** In this mode, the DMC1000 will output MIDI data relating to all automation parameter changes at a very high speed. If Automation Locate Mode: Quick is being used (refer to 12.1.1), it is only necessary to output automation data from after the most recent Scene Memory recall. In the majority of typical mixing situations, this mode will function very efficiently.
Selecting this mode also causes the Automation Play -> MIDI Out parameter to be set to ALL MIDI.

c) **No MIDI Chase:** When this mode is selected, Project Manager's parameter displays will not be correctly updated during automation playback. This puts less strain on the DMC1000's CPU and may be appropriate when very large automated mixes are being replayed - particularly if the DMC Tools are not being used for display and control of the DMC1000's parameters.
Selecting this mode causes the Automation Play -> MIDI Out parameter to be set to No MIDI.

Note: To make the most efficient use of the DMC1000's automation system, and to maximize Project Manager's performance, it is recommended that automated mixes contain Scene Memory recalls at reasonably frequent intervals. Automation Locate Mode: Quick should be used whenever possible.

M▷ 4.3.3 Display/Edit Double Touch Select
When this option is Enabled, a DMC1000 can be selected as the display console by double-clicking on any of the SEL keys on the DMC1000's control surface. If Fader Touch Sense Select mode is On, a DMC1000 will also be selected as the display console if a fader is tapped twice quickly.

M▷ 4.3.4 Dump Request Mode
This selection determines how bulk dump data (Scene Memories, etc.) will be transferred from the DMC1000s to the Macintosh.

a) Sequential: Scene Memory data will be transferred from the DMC1000s to the Macintosh in a sequential manner - one DMC1000 after another. This is the most reliable method to use, but may not always be the fastest method.

b) Parallel: This mode allows data to be transferred from more than one DMC1000 to the Macintosh simultaneously. Although data transfer rates will potentially be improved using this mode, reliability will depend on several factors (ie. number of DMC1000s in the system, type of interface, processor speed of the computer, etc.).

4.4 Re-initialize Program

If any fault occurs which disrupts communications between the DMC1000 and Project Manager, it can be useful to re-initialize the program. Select **Re-Init Program** from the **Project Manager** menu. This will reset default parameters in the DMC1000s and then request Setup data, Edit Buffer data (current state of mixing console's parameters), and Scene Memories 1-32 from each DMC1000.

M> 4.5 Re-initialize Current DMC1000

The current display DMC1000 will be re-initialized when this is selected.

4.6 Abort

To immediately stop any data transfer process (such as transferring of Scene Memory data), select **Abort** from the **Project Manager** menu.

4.7 Refreshing Displays and Updating State

The **<escape>** key on the Macintosh can be used to refresh and update Project Manager in the following ways:

a) Pressing the **<esc>** key on the Macintosh keyboard once will refresh all Project Manager displays based on the data contained in the Mac's own internal memory.

b) Pressing the **<esc>** key on the Macintosh keyboard twice quickly will cause Project Manager to refresh its displays (and update its internal state) by requesting the current Setup data and Edit Buffer data from the display DMC1000. Under normal circumstances, this procedure should not be necessary. However, if communications between Project Manager and the DMC1000 were to be temporarily interrupted, this procedure might be necessary.

M> In multiple-DMC1000 systems, Setup and Edit Buffer data from the display DMC1000 will be transmitted to Project Manager when the <esc> key is pressed twice quickly.