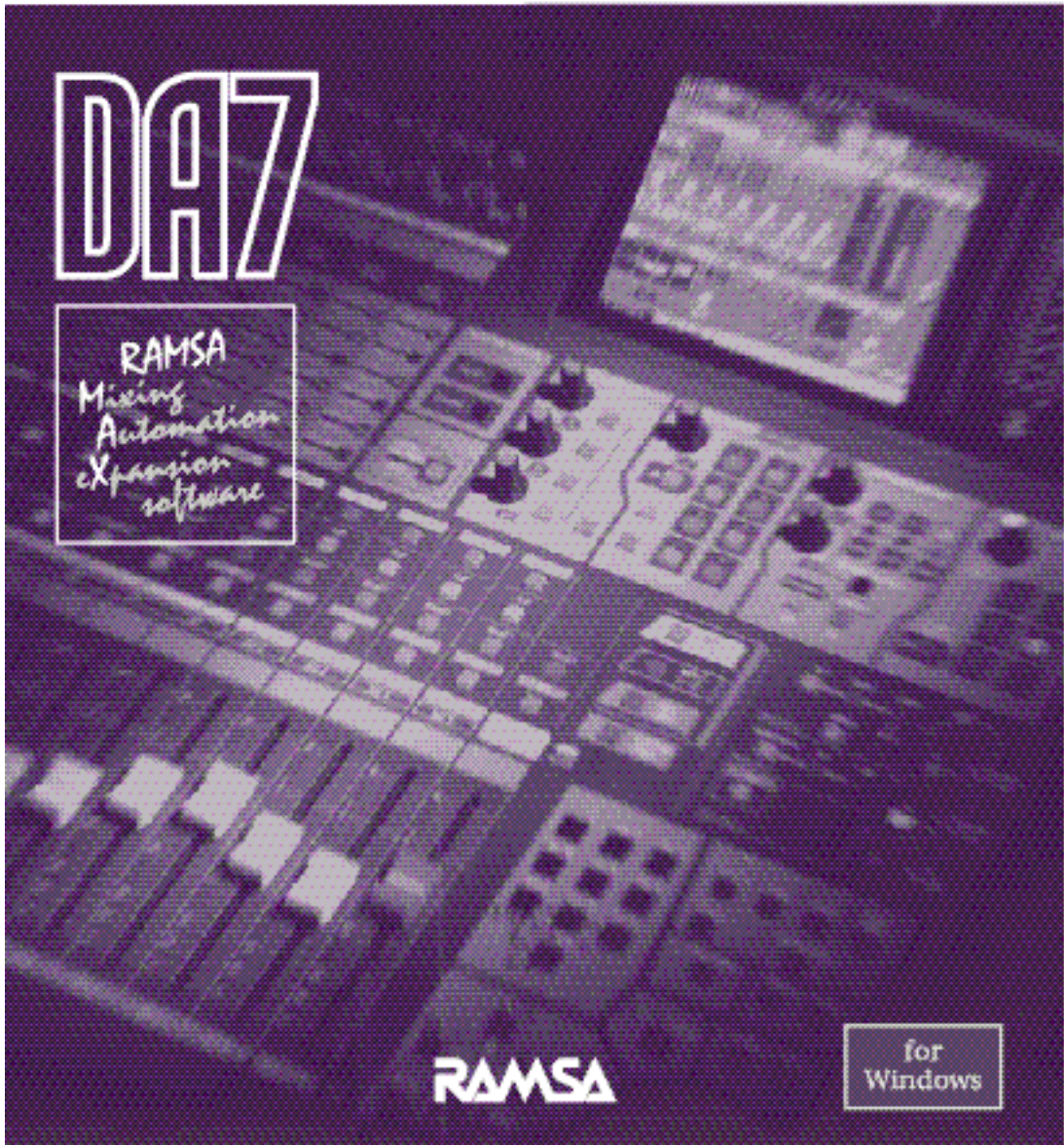


# Panasonic

## Users' Guide Mixing Automation Expansion Software

Model WR-RC/W



The product name, RAMSA MAX is the property of Matsushita Communication Industrial Co., Ltd..  
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Part number for this manual: YWA8QA5341AN

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This product is remote control software package, herein refer to as M.A.X. ("Product") for use with a Digital Recording Mixer, Panasonic model WR-DA7 ("Unit"). This Agreement constitutes the complete agreement between you and MATSUSHITA COMMUNICATION INDUSTRIAL CO., LTD. ("LICENSOR") about this Product.

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# READ THIS FIRST!

The Panasonic WR-DA7 Mixer be  
“Version 1.10” or higher  
to operate with MAX.

You can find out what version your DA7 is by looking at the display screen on the mixer. When the DA7 is powered up, it displays the current version of software in the lower right-hand corner of the display. If you see a V 1.10 displayed, your software is compatible. If any version displayed is lower, such as V 1.01 or V1.02, you must upgrade your DA7 operating system in order for MAX to operate.

If your mixer is not Version 1.10 or higher,  
it will not work with MAX.

If you need assistance to upgrade the operating system in your DA7, please contact Panasonic Pro Audio Technical Support for information, or visit our web site at:  
[www.panasonic.com/proaudio](http://www.panasonic.com/proaudio).

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# PANASONIC TECHNICAL SUPPORT

(In the USA)

If you need to contact Technical Support for this or  
any other Pro Audio product,  
please call 323 436-3620 Monday through Friday  
from 9am to 5pm Pacific time.

For other Panasonic Broadcast products,  
please call 800-524-1448 Monday through Friday  
9am to 5pm Eastern time.

Panasonic Broadcast & Television Systems Company  
Professional Audio Division  
3330 Cahuenga Boulevard  
Los Angeles CA, 90068  
Telephone: 323-436-3500

# OVERVIEW

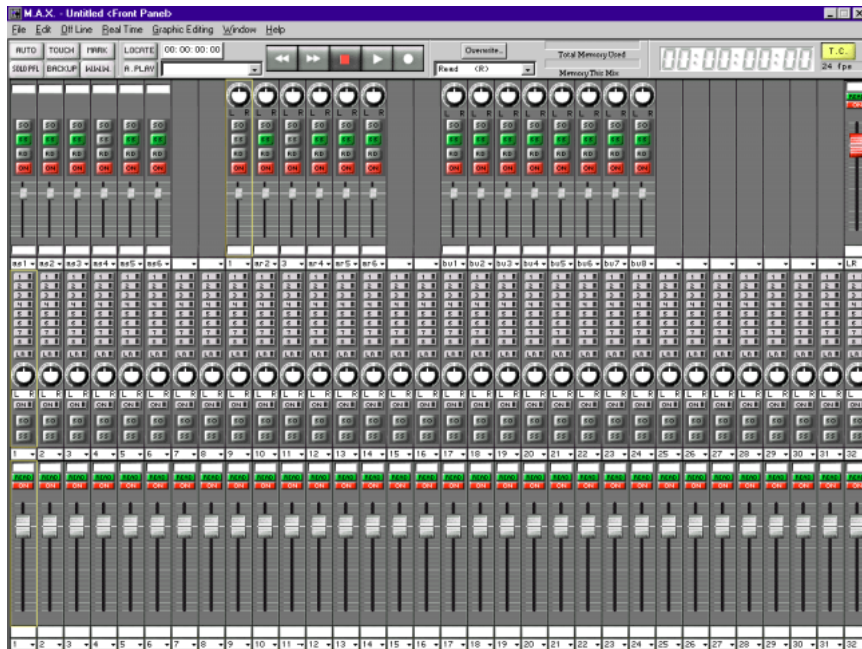
MAX is a sophisticated software package engineered to automate your Panasonic DA7 Digital Mixer in conjunction with a personal computer.

MAX provides time code-synchronized record and playback of all automatable mixer features, including automated moving faders, surround panning, channel on/off's, aux send levels, EQ, dynamics on/off's, and routing.

Even though your DA7 already has automation, using MAX gives you easier and more precise mix editing. Mixes can be longer and can be saved to disk. You can even connect two mixers to a single personal computer creating a larger digital console treated as a single, integrated automation system.

MAX features multiple user-designable "Custom Views", a feature-packed Cue List, and easy to use Graphic Editing.

The Custom View shows the positions of the faders, knobs, and switches. You see and edit the mix as it happens by moving the mixer's faders. You can edit by punching in and out of fader moves, or modify existing fader moves without replacing them.

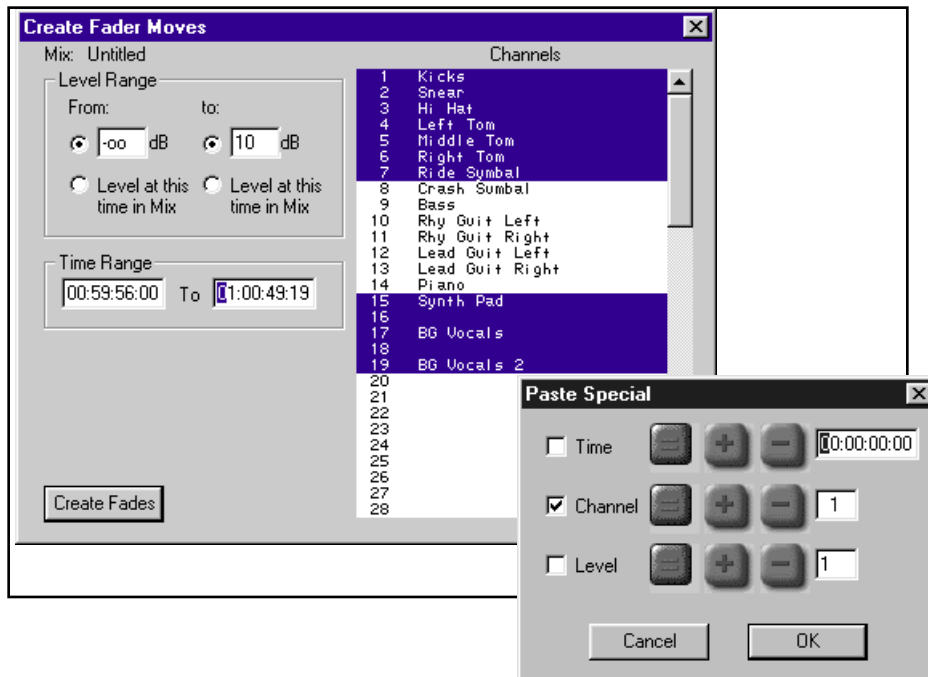


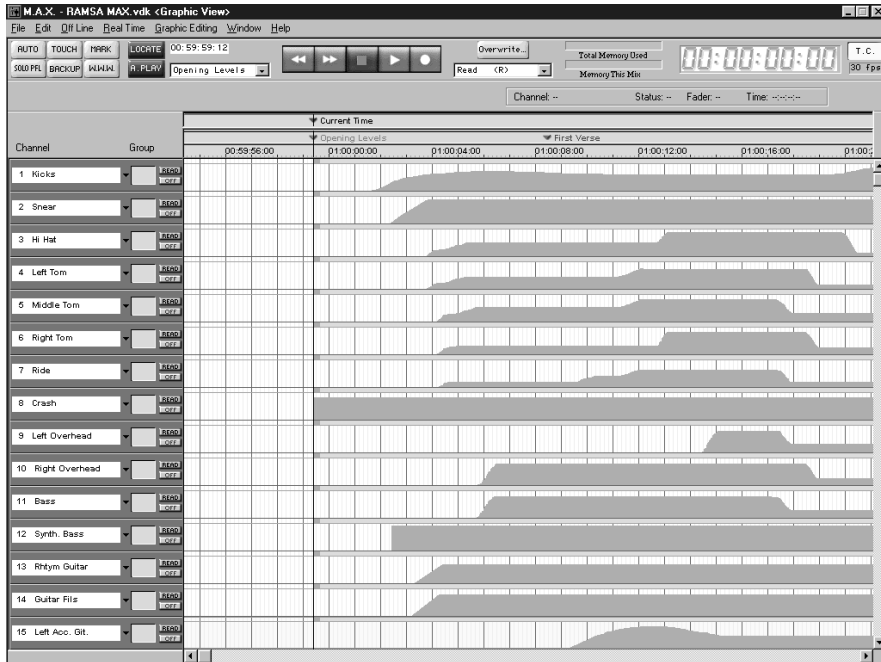
RAMSA MAX.vdk <Cue List>							
Start Time	Event	Channel	Fader	Level	Switch	End Time	
00:59:59:12	Snapshot	Opening Levels					
+ 01:00:01:12	Kicks	1	Start	000	End 189 Events	048	01:00:05:15
+ 01:00:02:09	Snear	2	Start	000	End 230 Events	044	01:00:03:25
+ 01:00:02:13	Synth. Bass	12	Start	238	End 238 Events	001	01:00:02:13
+ 01:00:03:05	Guitar Fils	14	Start	000	End 205 Events	034	01:00:04:08
+ 01:00:03:08	Rhtym Guitar	13	Start	000	End 179 Events	035	01:00:04:12
+ 01:00:03:20	Crash	8	Start	209	End 209 Events	001	01:00:03:20
+ 01:00:03:23	Hi Hat	3	Start	006	End 131 Events	034	01:00:05:10
+ 01:00:03:23	Left Tom	4	Start	004	End 116 Events	034	01:00:05:08
+ 01:00:04:05	Middle Tom	5	Start	004	End 137 Events	031	01:00:05:20
+ 01:00:04:05	Right Tom	6	Start	002	End 080 Events	016	01:00:04:28
+ 01:00:04:05	Ride	7	Start	002	End 050 Events	013	01:00:04:18
+ 01:00:05:21	Right Overhead	10	Start	002	End 203 Events	026	01:00:06:14
+ 01:00:05:21	Bass	11	Start	004	End 201 Events	024	01:00:06:12
+ 01:00:07:05	Kicks	1	Start	184	End 156 Events	010	01:00:10:21
+ 01:00:08:14	Marker	First Verse					
+ 01:00:09:06	Left Acc. Git.	15	Start	000	End 213 Events	058	01:00:12:02

The Cue List shows each automation move as an event occurring at a specific SMPTE time. You see and edit the mix as a sequence of events.

Individual fader moves or whole sections of a mix can be copied, cut, pasted, and modified.

You can even create precision fade-outs by simply typing the start and end times into the computer.





The Graphic Editing view displays the mix as curves on a time line. You can see multiple channels at the same time, and easily see what moves are coming up. You edit the mix by drawing fader curves.

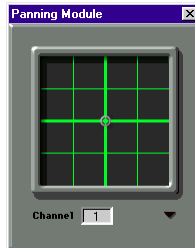
What's more, you can freely change the way you view the mix, with the Custom View, Cue List, or Graphic window, even while the mix is playing. And you can have multiple mixes open at the same time, allowing you to instantly compare two different mixes. You can even freely copy from one mix and paste into another mix!

A clear indication of channel names, edit modes, grouping, and channel on/off status, combined with a large, easy to read time code display make mixing fast and easy.

MAX software also adds to your mixer up to 15 groups called "SoftGroups". Any fader on the mixer can be turned into a SoftGroup Master, in addition to the mixer's groups and Stereo Master. When two mixer's are connected, faders on one mixer can be a group master to faders on the other mixer.

Your mixer faders become a virtual Control Surface, to control and automate signal processors and digital audio workstations.

MAX provides a clear graphic display of automated Surround Panning positions. It also allows panning of either individual channels or the grouped multiple channels.



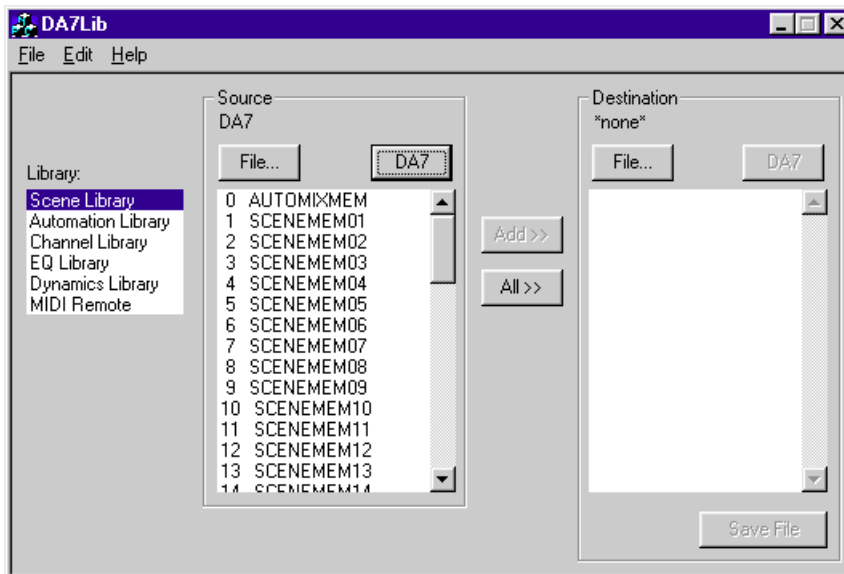
Mixes reside in the PC's "RAM". You can save the mixes to a disk, either manually or automatically using the Auto Backup feature.

MAX allows you to quickly create different mixes, listen to them, compare them, save them, retrieve and modify them.

MAX also allows you to customize the software to your personal style of mixing. You can label each fader, re-arrange the order of the faders, turn certain features on and off, etc. This customization is saved as part of a Preference file. Multiple Preferences files are supported, so different engineers can each have their own preferences.

This introduction has just scratched the surface of the power of MAX. The following list highlights many of MAX's key features.

The DA7 Librarian Software allows you to edit and save multiple DA7 libraries to disk.



# Features

## ***MAX for Panasonic DA7 Key Features***

- Capture “Snapshots” in Real Time.
- Snapshots can be Individually Named
- Auto Transition Between Snapshots
- Dynamic Memory Meters Display Available Memory
- On-Screen Display of Time code Frame Rate
- Multiple Preference Files for Each Engineer or Project Type
- Single Key Access to Frequently Used Items
- Mixer Faders Can Become MIDI Control Surface
- Real Time MIDI Recording
- Enhanced MMC
- Large Screen Support with 1024 x 768 resolution
- Automates Auxiliary MIDI Equipment like Signal Processors
- Supports MIDI Machine Control (MMC)
- Assignable Automated On-Screen Surround Panning
- Groups Control Surround Panning

### MAX Graphic Editing Features

- Freely Draw Fader Levels
- Simple Free Hand or Straight Line Editing
- Copy, Paste, Clear, Moves
- Movable Current Time Indicator
- Create/Edit Markers in the Time Line
- Fader Curves Smoothly Scroll in Real Time
- Graphic Indication of Channel On/Offs
- User can Reposition Markers and Snapshots in the Time Line
- Moved Regions Snap to Markers

## ***MAX Cue List Features***

- Powerful Cue List EDL Style Editing for Precision Control
- Cut, Copy, and Paste Mix Editing

- Offset, Scale, Crop, and Smooth Fader Moves
- Interpolate Moves, During Scale - Stretch Editing Operations
- Plus + marks Expand to reveal Microscope View of Fader Moves
- View Filter Displays Channels, Range of Time, Type of Event
- Ability to Create Events Off-Line
- Undo and Redo on All Editing Operations
- Moving Time Line With Markers
- Revert Command
- Find Command
- Merge Mixes
- Convert Markers into Fader Moves, Channel Ons or Snapshots
- Off-Line Editing in dB or Fader Value
- Print Cue List, Markers or Track Sheet
- Ability to Type “Comment” Text that is Saved with the Mix
- Ability to Create Fades by Typing the Start and End Times

### ***DA7 Librarian Features***

- Ability to upload the libraries stored in DA7 to Librarian software
- Editing Library names
- Download libraries to disk or DA7



# GETTING STARTED

## ***Computer Skills Required***

This manual assumes that the user already possesses computer-operating skills, particularly a familiarity with the mouse (pointing, clicking, dragging), menus, dialogue boxes, and other basic Windows concepts.

If you have just purchased your first Computer for the purposes of automating your mixer, we recommend that you first read the introductory manuals that came with your computer before starting to use the automation system.

## ***Computer Requirements***

MAX software runs on personal computers with a 17" minimum XGA monitor.

The minimum configuration required to install and run MAX is a personal computer with a Pentium processor, Windows 95 or 98 and usable memory space at least 16 megabytes of RAM and 10 megabytes of HDD.

The minimum recommended Operating System version is Windows 95. The Windows 3.1 and Windows NT are not supported.

Display settings are essential to 1 024 x 768 and High-Color (16 bit).

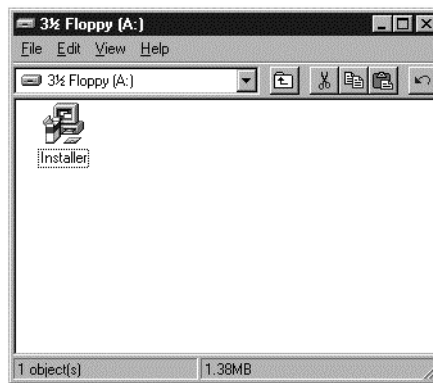
This software needs the Direct X ver 6.2 or higher available from Microsoft's home page ([www.microsoft.com/directx/](http://www.microsoft.com/directx/)) for free .

To find out what version System you have, click on MY COMPUTER in the CONTROL PANEL and then open SYSTEM.

## *Software Installation*

For installation, follow the steps shown below. RAMSA MAX software and DA7 Librarian are contained in the provided disks labeled “**Mixing Automation eXpansion Software (1)**” and “**(2)**”. DA7 Librarian software will be discussed later in Chapter 16.

- 1 Insert the **Mixing Automation eXpansion Software (1)** disk and open Drive A. Installer icon appears.



- 2 Double-click on the Installer icon to expand MAX.



- 3 The **Welcome** window will appear. Click on the Next> button.

- 4 The **Choose Destination Location** window appears. Follow the on-screen directions. If you want a new location, select a destination folder then click on the Next> button. If you do not, simply click on the Next>.



- 5 The **Select Program Manager Group** window appears. Follow the on-screen directions. If you want a new name, type in it from the keyboard then click on the Next> button. If you do not, simply click on the Next>.



- 6 The **Start Installation** window appears. Follow the on-screen directions. Click on the Next> button to start installations.



- 7 The **Password** window will appear. Enter the password and click on the OK button. Please find the password indicated in an attached label on the rear cover page. The password IS case sensitive, please type all text in capital letters.



If a wrong password is entered, a warning will appear. Clicking OK will let you attempt to enter the password again.

- 8 The **Installing** window will appear.



- 9 The **Insert New Disk** window appears. Insert the disk labeled **Mixing Automation eXpansion Software (2)** and then click on the OK button.



- 10 The **Installation Complete** window will appear upon successful completion of the installation of the MAX and DA7 Librarian programs. Click on the Finish> button.

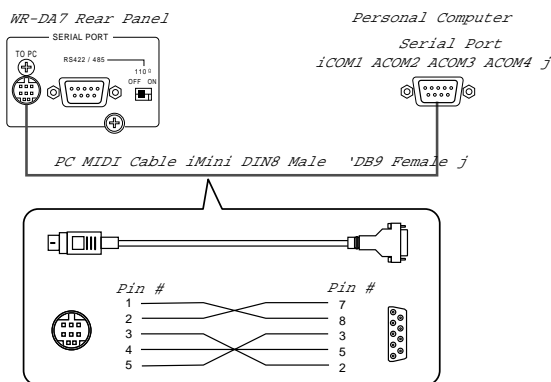


*Note: Remove the disk from your PC and then shut down, if the Installer requires.*

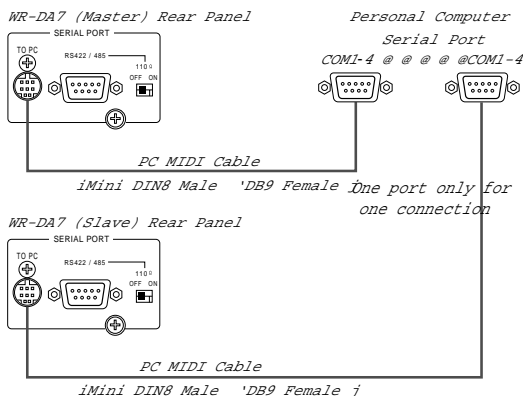
# CONNECTING THE SYSTEM

## ***MIXER AND COMPUTER COMMUNICATION HOOKUP***

If you are connecting one DA7 to your Windows computer, you will need a cable (which is not provided) that connects the DA7's TO PC port connector to your PC's serial port.



If you are connecting two Panasonic DA7s, connect the first mixer as described above, and the second mixer's TO PC port to the PC's another serial port.



MAX Software communicates with the mixer at a very high data speed, (also referred to as Baud Rate) using MIDI protocol. Because Max uses this high MIDI rate, you cannot use standard MIDI at the same time on the DA7 mixer.

### ***TIME-CODE SYNC HOOKUP***

The MAX System is SMPTE Time Code-driven. This means that it requires SMPTE time code in the form of a longitudinal time code source. If your system does not use SMPTE time code, or you would prefer to use MIDI time code (MTC), skip down to the section on Using MTC.

The DA7 has an optional SMPTE time code reader available. If you did not purchase this option with your mixer, contact your DA7 dealer.

The cable carrying the SMPTE time code signal from the device that you will syncing to will connect directly to the SMPTE Input on the optional SMPTE / V-SYNC card.

The SMPTE time code can come from one of several possible sources:

One track of your tape source may be pre-striped with SMPTE.

Most modern modular digital multitrack tape machines and certain hard disk recorders can also generate SMPTE from a "sub code" track.

If two mixers are connected, send the time code into the mixer which is connected to the slave DA7's serial port.

### ***USING MTC***

If MIDI Device is installed in the Windows, MAX can also sync to MIDI Time Code (MTC.) This can be selected in the Port Setup Preferences.

**Note:** Before using MTC you need to set Other CMD from THRU to OFF in the <MIDI, SETUP> window on the DA7.

### ***MIDI HOOKUP***

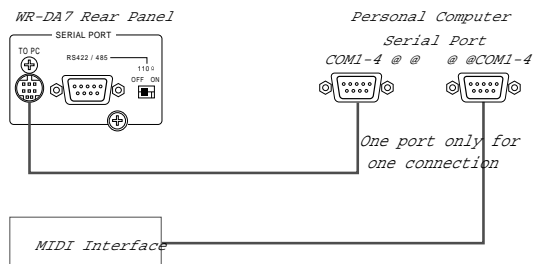
The MAX Software allows the mixer console to be a MIDI Controller.

MAX also features a built-in MIDI Machine Control locator.

To use this feature, connect a MIDI Interface to the available serial port on the PC.

MAX communicates with MIDI devices through printer port and MIDI port on the sound card, beside the PC's serial port. If you are connecting only one mixer, use the other available port for the MIDI interface.

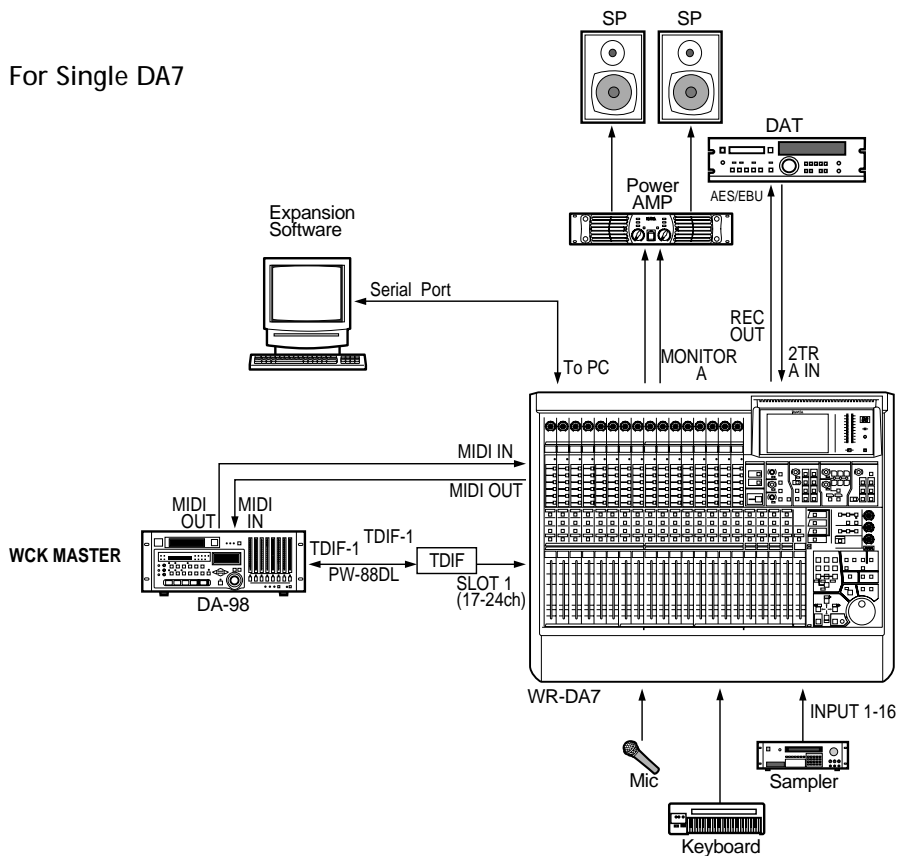
Remember, you CANNOT use the DA7 MIDI port for this purpose because it is being utilized for MAX.



If you are connecting two mixers, see next page, System Connection Examples, for Tandem Operation.

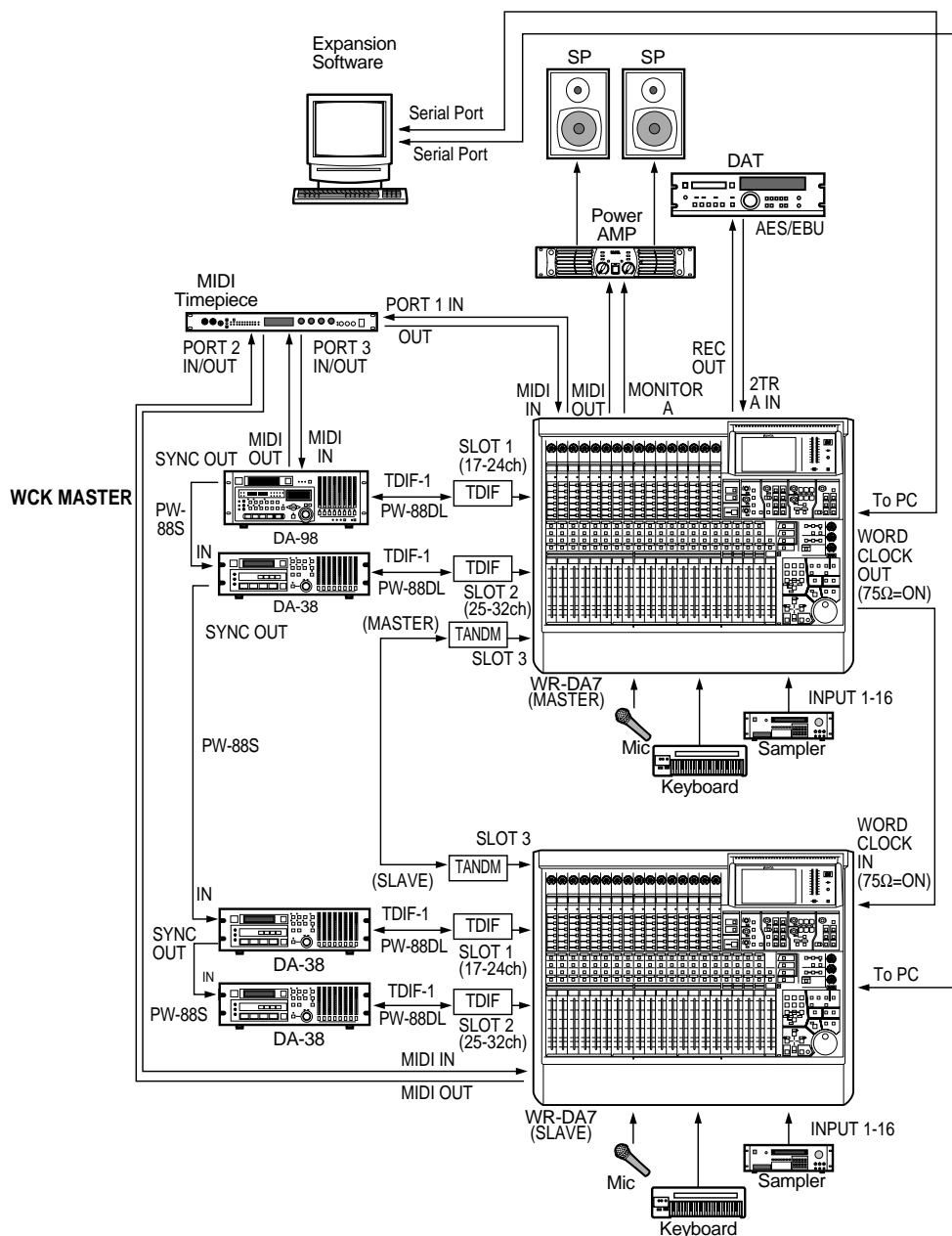
### SYSTEM CONNECTION EXAMPLES

For Single DA7





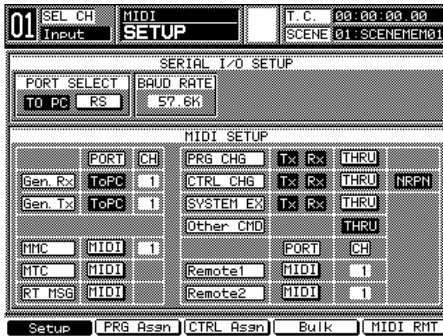
### For TANDEM Operation



## SETTING UP THE SYSTEM

### Mixer Setup

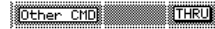
The DA7 communicates with MAX via the mixer's "TO PC" port, using a special high-speed protocol. To enable this communication, it is essential that several things be setup correctly in the mixer's MIDI Setup Screen.



For Master DA7



For Slave DA7



- Press the MIDI Button on mixer until the Setup Screen is displayed.
- Set Port Select to "TO PC", and CH to "1".
- Set Gen RX and Gen TX to "TO PC".
- Enable TX and RX for PRG CHG, CTRL CHG, and SYSTEM EX.
- Set Other CMD to ON when MAX is synchronized to DA7.
- Set Other CMD to OFF when MAX is synchronized to MTC.
- Enable NRPN.
- Set MMC to MIDI.
- Set MTC to MIDI.
- Set the Mixer's BAUD RATE to 57.6K.
- To receive time code at the mixer, connect a source of SMPTE (on the optional SMPTE / V-SYNC board) or MTC into the mixer's MIDI In.
- Go to the Automation Setup Screen and select SMPTE or MTC as the "time base."

### Launching Software to Verify Connections

- Turn on the PC first.
- Before launching the MAX software, be sure the mixer is turned on.
- To Launch the software, select PROGRAM in the START menu, then select RAMSA MAX and select RAMSA MAX.
- Moving a fader on the mixer should cause a fader to move on the computer monitor.
- Moving a fader with the mouse should cause a fader to move on the mixer.

***REQUIRED SETUP FOR TWO MIXERS***

If you are automating two Panasonic WR-DA7 Digital Mixers using MAX:

First connect the two mixers and install the software according to the instructions in the previous chapters.

After launching the software, select Preferences from the Edit menu. Under General Preferences, look at the setting

“Number of consoles”.

Check whether one or two mixers are connected to the Windows serial ports.

Be sure to check two when two mixers are connected.

# MAX CONTROL BAR

Common to all three main windows is the Control Bar.

It appears at the top of the Custom Views, the Cue List, and the Graphic View.

The Control Bar displays some frequently used buttons, controls and displays.



## Auto

Turns on Auto Punch In.

Click to turn on, (the button is yellow when on).

Auto Punch in means that a selected fader in Write mode will not actually start writing new moves until you physically moves the fader knob (up or down) until the fader position matches the current level, called the Null point.

## Touch

Turns on SoftTouch.

Click to turn on, (the button is yellow when on).

SoftTouch means that a fader will automatically become selected when you physically moves the fader knob. It is not necessary to press a Select button. When the fader is selected, it switches to the current Edit Mode. In other words, if the fader is currently in Read mode, and the Edit Mode menu is set to Write, moving a fader will automatically switch the fader from Read into Write mode.

## Mark

Click to create a Marker.

If time code is running at the time, an untitled text Marker is inserted into the mix when you click. (It can be edited later, by renaming it, moving it, or turning it into another kind of automation event such as a snapshot.)

If time code is not running, the Create Marker dialogue appears, allowing you to create a marker and specify a name and a time. Markers can be viewed in the Cue List and Graphic Editing windows.



### Solo PFL

Lights to indicate a channel is soloed.

Click to select Solo PFL, AFL, or Solo In Place.

### Back Up

Click to turn on automatic Back Up feature.

Back Up automatically saves the mix to disk every time that time code is stopped, (if a change has been made).

Mixes are automatically re-named with an upcounting extension number, for example, mix.1, mix.2, mix.3, etc.

### WWW

This button is a shortcut to launch your web browser. The first time you click it a dialogue box opens to allow you to select your web browser. This is useful to go to our web page to check for updates, operating tips, contacting technical support and other helpful information.

### Locate

Sends an MMC Locate command to machines that respond to MMC. The Locate Time is entered in the Locate Time field to the left of the Locate button.

Alternately, a Locate time can be selected from the Locate Snapshots and Markers Menu, which automatically lists all the snapshots and markers within the mix.

Locates can be automatically adjusted with a Pre Roll time specified by you in the Machine Control Preferences.

### A. Play

When turned on, causes machines controlled by MIDI Machine Control to automatically go into play after they have arrived at a locate point.

(Important: For MMC autolocation to work correctly, both the MIDI In and the MIDI Out of the machine must be connected to your Windows MIDI interface. Remember, your DA7 MIDI interface is in use by MAX, so it is inoperative for this purpose.)

### Locate Time Field

Enter a locate time here. It is sent via MIDI Machine Control the next time your click on Locate.

### Locate (Snapshots and Markers) Menu

Allows you to quickly locate and initiate playback from specific points within the mix. This pop up menu contains a list of all the snapshots and markers in the current mix.

Selecting a snapshot or marker from this menu causes its time to appear in the Locate Point field.

Click on the Locate button to send the locate.

### Transports

MIDI Machine Control Rewind, Fast Forward, Stop, Play, and Record.



Click on the Transport Buttons send MMC to a connected MIDI interface.

### Overwrite...

Opens the Overwrite dialogue box. This dialogue box is similar to the mixer's Automation Setup Overwrite section. It allows you to select which parameters within the mixer can be edited in real time during the next



When Trim has been selected in the Real Time Edit Mode menu (below), only Faders and Channel Ons can be selected in the Overwrite dialogue box. The other parameters are dimmed.

### Real Time Edit Mode

Select the Edit Mode, either Write, Trim, Read, Manual.

An Edit Mode is chosen prior to selecting individual channels for editing.

Selected channels switch from their current mode (usually Read) into the Edit Mode.

### Memory Meters

The top Memory Meter is called "Total Memory Used". It shows how much of the application's available memory is being used by the open mixes, undo buffers, and the clipboard.

The bottom Memory Meter is called "Memory This Mix".

It shows how much of the available memory is being used by the currently active mix, the mix in the front most window.

### SMPTE Time Code Display

Displays currently received time code in hours, minutes, seconds, and frames.



When time code reception stops, the SMPTE Time Code display holds the value of the last time code received, in dim numbers.

#### T.C.

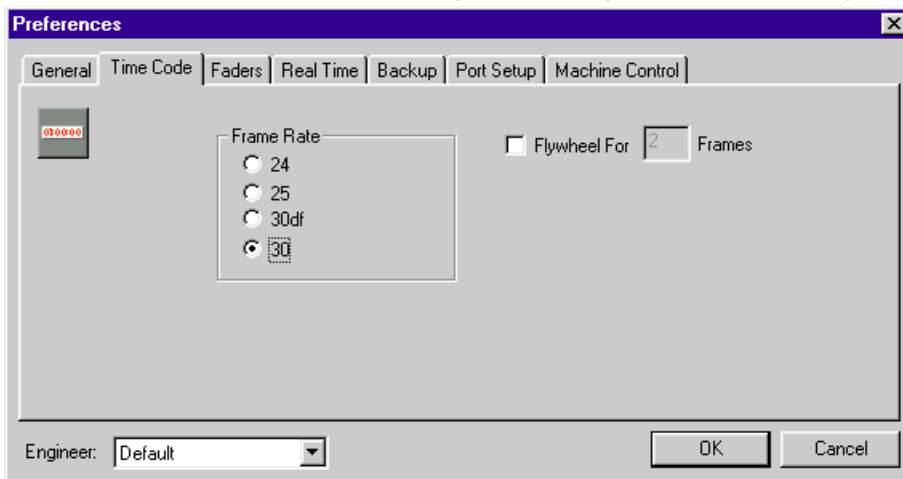
Click to turn on. Button is yellow when on.

Enables Time Code reception. Time code reception must be turned on for an automated mix to play back. Turn time code reception off when you do not want incoming time code to cause a mix to play back.

### Frame Rate

Displays the frame rate of the currently received time code.

It is important to manually set the frame rate. Select Preferences in the Edit Menu to open the Preferences dialogue box. Click to select the Time Code tab. Click to select the frame rate that you are using for the current project.



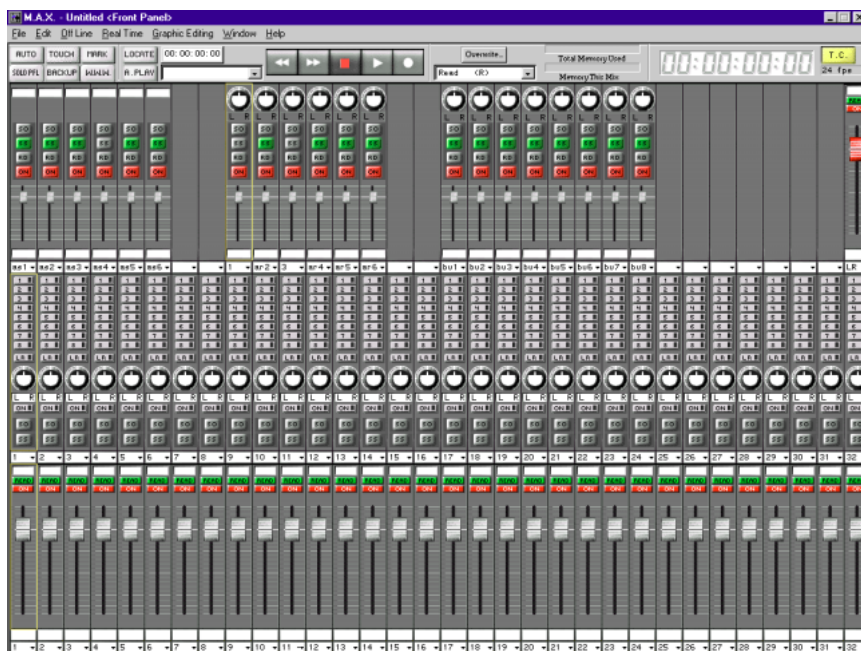
If you select an incorrect time code (or one that doesn't match the incoming time code), MAX may not function properly. This could result in automated moves occurring at the wrong time, or even the loss of data. Please check this setting before each new mix.

# Custom Views

When you launch the application, you will see on your Windows what is called the Custom View screen. The Custom View is MAX's most important viewing screen. It contains all the key information you need about the currently selected automated mix, including fader and knob positions, channel on/off's, time code, and more.

The Custom View screen can display up to 96 modules. These can be fader modules, EQ modules, etc. This screen can accommodate any combination of modules that you wish to view for the mix you are working on.

The modules are arranged in 3 rows of up to 32 modules each.

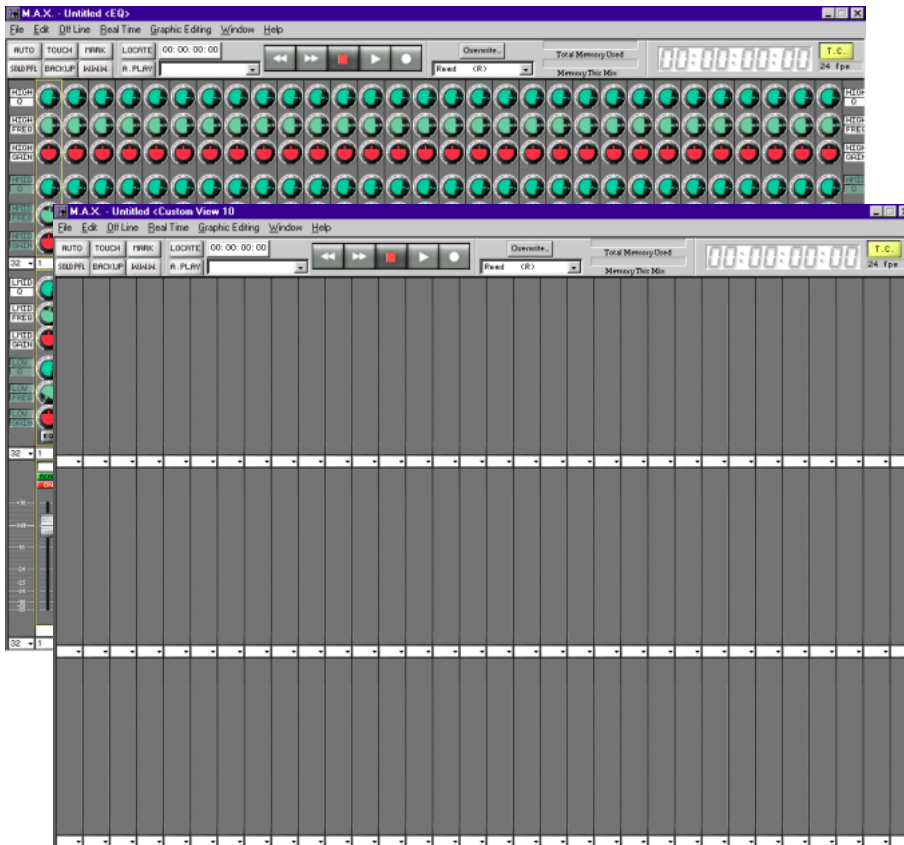


The Custom View screens are important because they allow you to decide what modules are visible at any given time, and permits you to arrange the position of modules in any manner.

Custom View 1 shows Channels numbered 1 through 32, Aux Send 1 through 6, Aux Return 1 through 6, Bus 1 through 8, and Master LR.

When two mixers are connected, Custom View 1 shows inputs 1 through 64, Aux Send 1 through 6, Aux Return 1 through 12, Bus 1 through 8, and Master LR.

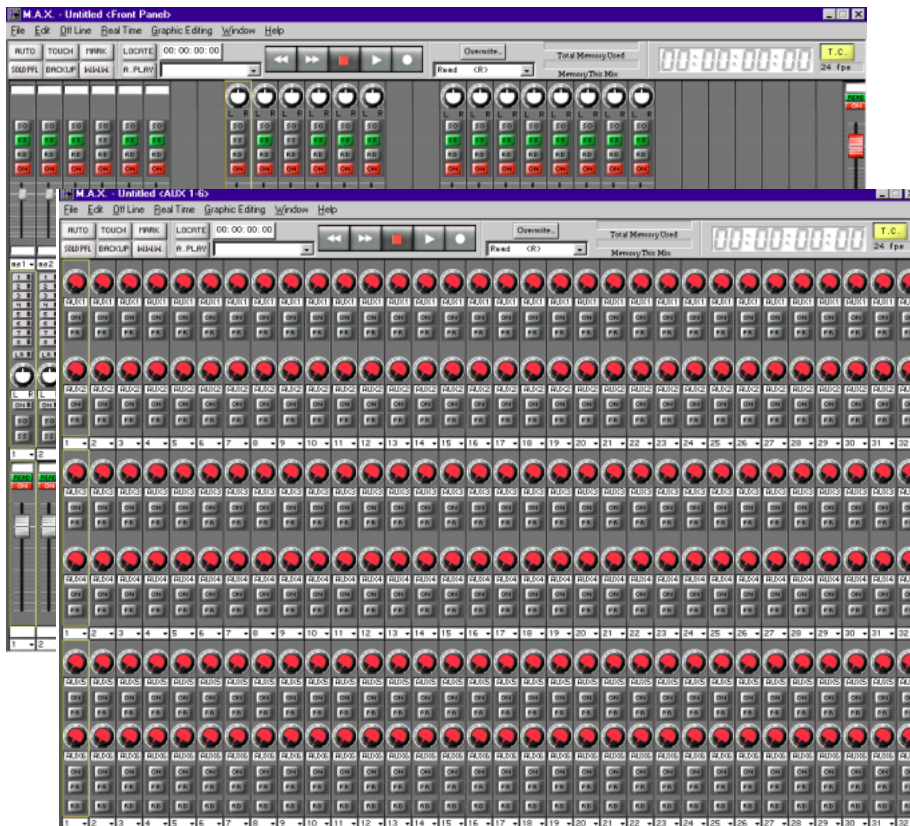




Some Custom Views have been purposefully left blank for you to design. There are a total of 10 different Custom Views to work with. Look through them by pressing the left and right arrows on the Windows keyboard to quickly change to the next or previous view.

Alternately, select the Custom View screens from the Windows menu, or you can use their Ctrl key equivalents.

Though there are 10 different Custom View screens, there is really only one window per mix. That window can display any one of 10 different Custom Views, or the Graphic View, or the Cue List.



You may open more than one mix at a time.

Each mix has its own window.

When more than one mix is open, only the mix in the top most window will play back when time code is received.

When a Custom View is in the background, the faders, knobs, and time code will not be displayed.

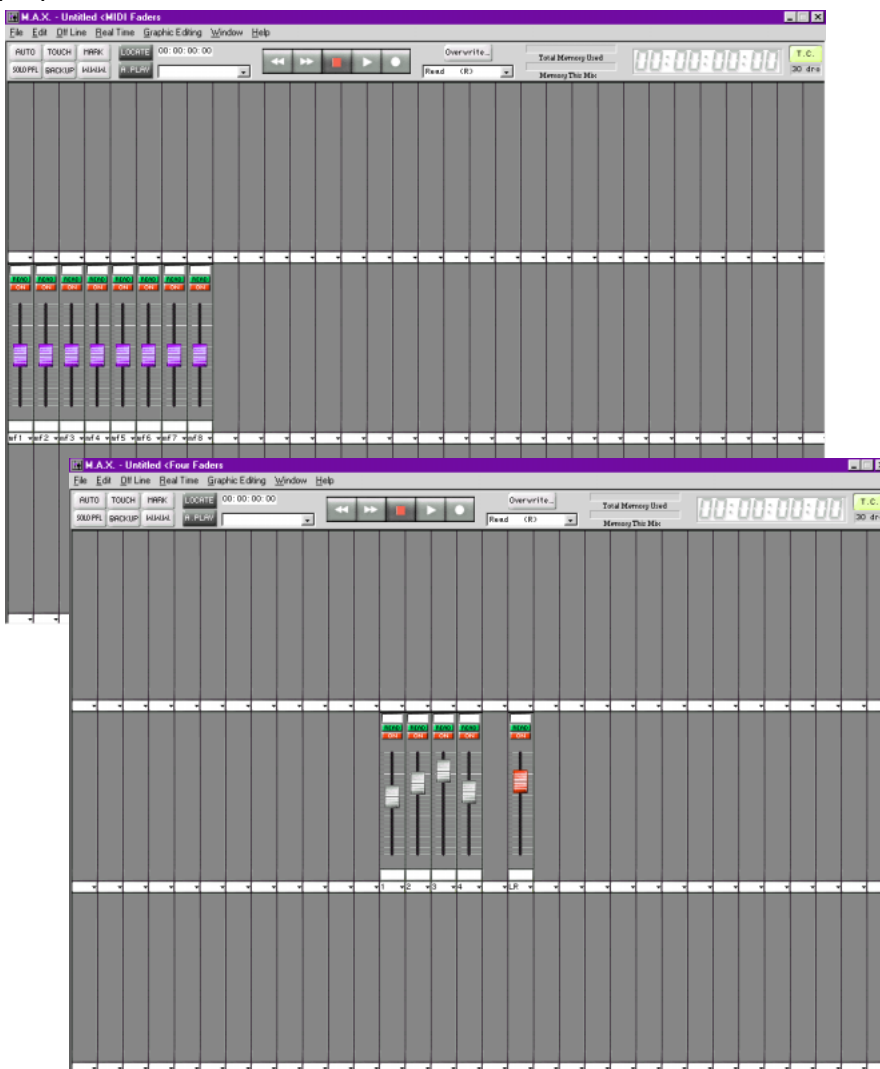
Many of the Custom Views are already setup, to give you a useful representation of the various automatable parameters of your mixer. It is advised that you familiarize yourself with the existing Custom Views, before beginning to edit them.

## ***EDITING THE CUSTOM VIEWS***

Editing the Custom Views may help make certain projects easier to work with. You can make the view display as little or as much information as you need.

You might be working on a post production project with only four channels of audio. You could create a Custom View with only four channels. This is easy to look at and work with.

You could be using MAX to turn your mixer into a control surface for a hard disk recorder. You could create a Custom View with only 8 faders for that purpose.



Before editing the Custom Views, it is recommended that you consider the feature as an aid to simplifying the mixing process.

This is especially true if you begin to explore the potential of the Edit Module begin creating new modules.

It is better to approach the design of Custom Views and Modules with the intent of making views with less information, or rather, only information needed for the mix. It is possible to use these editing features to add unneeded complexity to the software's user interface.

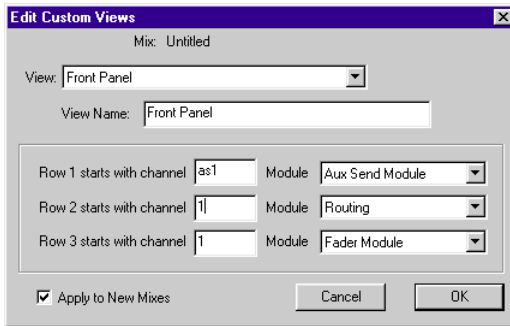
### **There are two ways to edit a Custom View.**

To quickly change a Custom View, on a row by row basis, use the **Edit Custom Views** dialogue in the Edit menu.

To change the Custom View on a module per module basis, use the **Selection Pop-up Menu** accessed by clicking on the lower right of each module.

These are described on the following pages.

## ***ABOUT THE EDIT CUSTOM VIEWS DIALOGUE***



This dialogue box allows you to name your Custom Views and arrange them by row.

The View menu is used to select the Custom View.

The View Name allows you to name the View. Changes made to the View Name appear in the View Menu, in the Windows menu, and also in the title bar of the view.

A Custom View has 3 rows of modules.

For each row of modules you may pick the starting channel number, that is, the left most channel.

You may also select the module type for that row.

(You may later, within the Custom View itself, select the module type on a per module basis.)

Checking “Apply to New Mixes” saves this configuration as a Preference. Future New mixes will use the current settings in the Custom View.

If “Apply to New Mixes” is not checked, then the current settings in the Custom View will apply to only the mix are you editing. New mixes will open with the default original views.

***SELECTION POP-UP MENU***

MAX allows you to redefine the arrangement and function of the modules in the Custom View. There is a little triangle pointing down under each module. Clicking on this triangle opens the Selection pop-up menu.

**Channel**

Select Channel to change the channel of the module occupying this position. Channel Names (entered and edited in the Names and Labels dialogue in the Edit Menu) are displayed in the Channel Selection sub menu.

Channel ▶	1 Kicks	22	ar5
Group Master ▶	2 Snear	23	ar6
Master LR	3 Hi Hat	24	bu1
MIDI ▶	4 Left Tom	25	bu2
Module ▶	5 Middle Tom	26	bu3
	6 Right Tom	27	bu4
Comment...	7 Ride	28	bu5
Solo Safe	8 Crash	29	bu6
	9 Left Overhead	30	bu7
	10 Right Overhead	31	bu8
	11 Bass	32	
	12 Synth. Bass	as1	
	13 Rhythm Guitar	as2	
	14 Guitar Fils	as3	
	15 Left Acc. Git.	as4	
	16	as5	
	17	as6	
	18	ar1	
	19	ar2	
	20	ar3	
	21	ar4	

**Group Master**

If any channels have been turned into SoftGroup masters, they can also be selected in this pop-up menu and placed within the Custom View.

Channel ▶	
Group Master ▶	G1
Master LR	G9
MIDI ▶	G14
Module ▶	G-
	G-
Comment...	G-
Solo Safe	G-
	G-
	G-
	G-
	G-
	G-
	G-
	G-
	G-
	G-

**Master LR**

Select Grand Master to make the mixer’s Master LR appear.

## MIDI

Audio faders can be turned into MIDI faders by selecting MIDI and a Controller number from the sub menu.

If MIDI faders already exist, they can be selected and placed within the Custom View.

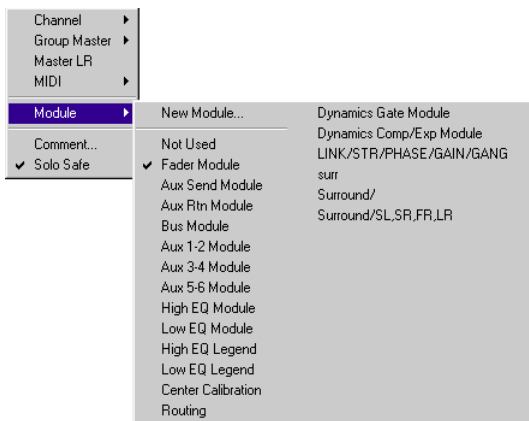
## Module

Select Module to change the module currently occupying the position in the Custom View.

Selecting New Module opens the Edit Module dialogue, discussed in a later chapter.

Not used makes the module go away and inserts a “blank panel” in the Custom View.

***Hint: You can also make a blank module appear by single clicking to highlight the channel number below the module, and typing delete and then enter.***



Between the two dividing lines are pre-defined modules that comprise MAX's “Module Library”.

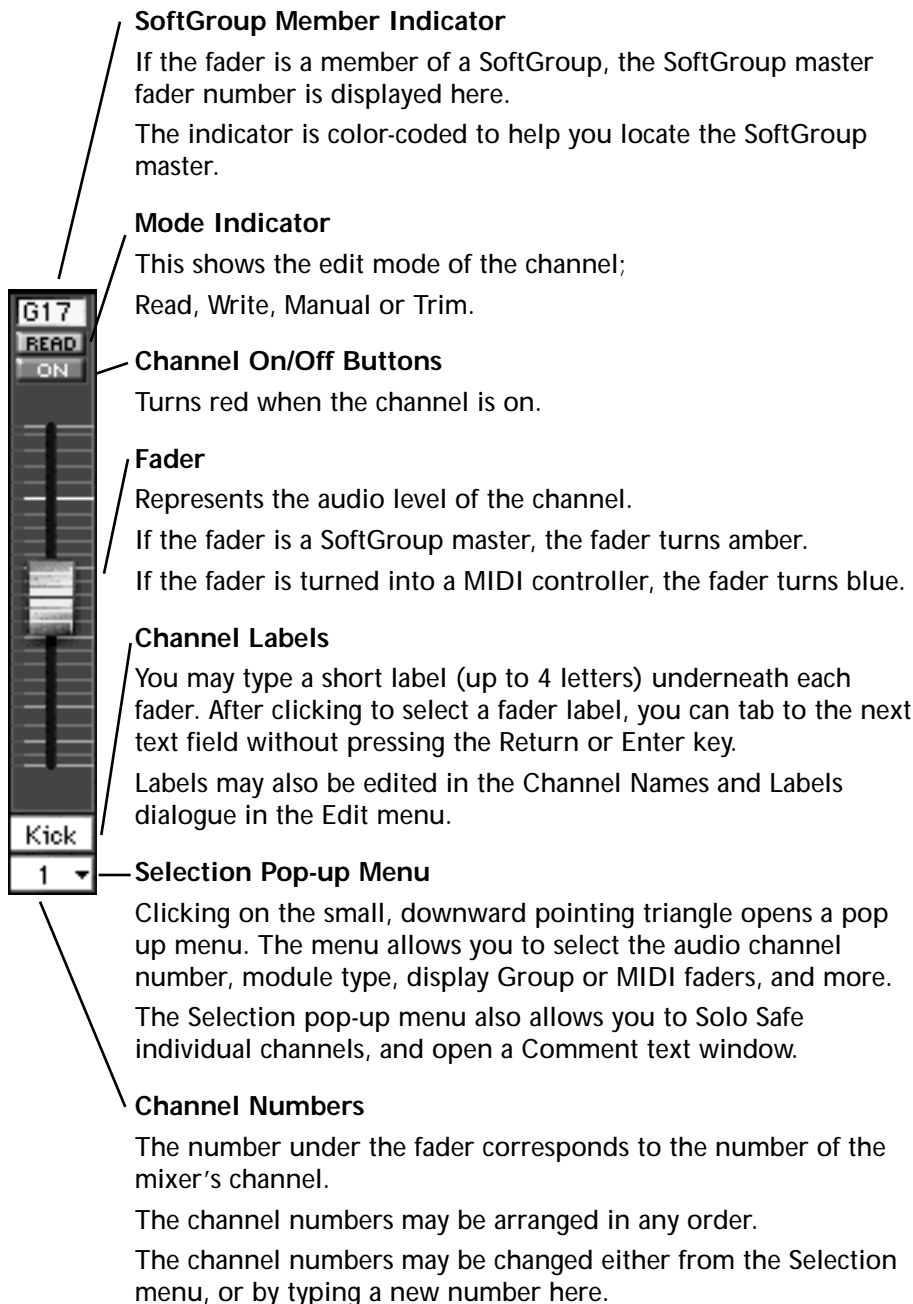
Below the dividing line is a list of any modules that the user may have created or edited.

## Comment

Each channel may have a comment. Open the comment window by selecting comment from the selection menu.

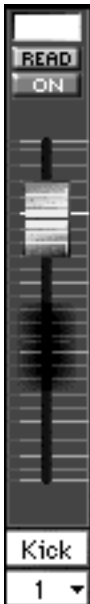
## Solo Safe

When you Solo a channel, any number of “Solo Safe” channels will also go into solo at the same time automatically. When the channel is un-soloed, the Solo Safe channels will also un-solo. Channel is Solo Safed when this item is checked.

***STANDARD FADER MODULE DESCRIPTION***



## ***More About Faders***



The basic audio fader module has certain special characteristics, which you should become familiar with. When a long or short throw fader is controlling audio (and not MIDI), there may be one or two fader “knobs” shown for each channel.

### **Level Fader**

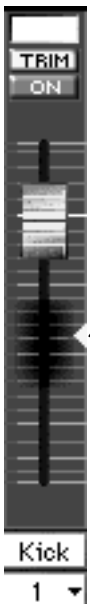
This shows the true audio level of a channel at any moment. This is the fader that automatically moves during playback.

### **Phantom Fader**

When time code is being received, and the mix is playing back, the Phantom fader shows the position of the real, “hardware” fader on the mixer.

The Phantom appears when the position of the fader on the mixer is different than the true audio level. When the two are in agreement, the Phantom is concealed and the fader is said to be “nulled”.

When performing an Auto Punch Out, the Phantom indicates the level of the channel on the previous pass.



### **Trim Reference Point**

When in Trim mode, this small yellow arrow indicates the starting position of the hardware fader. When the Phantom Fader is raised above this point, level is added to the original fader moves.

When the Phantom Fader is lowered below this point, level is subtracted from the original fader moves. When the Phantom Fader lines up with this point, there is no modification of the original moves.

### ***GETTING INFO ABOUT A CONTROL***

It is sometimes helpful to find out specific information about a control displayed in the Custom View.

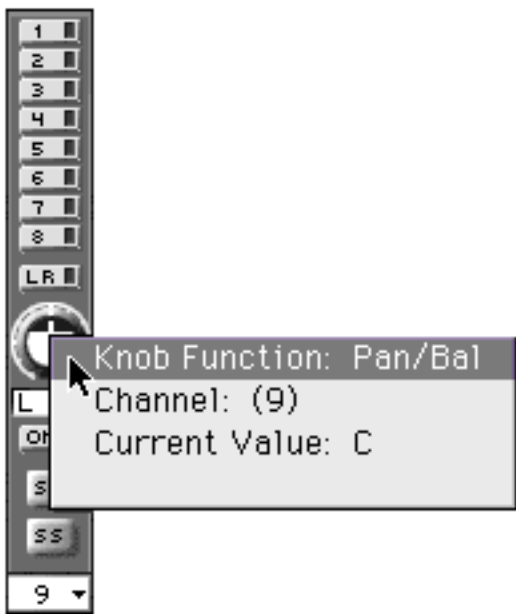
For example, you may wish to know a control's exact value.

In addition, if you have designed or edited the module yourself using the module editor, you may wish to confirm that the control is assigned to the intended mixer function.

To get info about a control, position the pointer over the control. Hold down the Windows Ctrl and Alt key while clicking on the control.

A small pop-up window will display the control's function, channel, and current value.

The pop-up window will also show if the control is not connected to the mixer.



# INTRODUCTION TO AUTOMATED MIXING IN REAL TIME

This section introduces important concepts relating to writing and editing fader moves, channel on/off's, and other automated mix events in Real Time (that is, while the program material is playing, and time code is being received.) This is the most natural way to mix, because you are mixing while actually listening to the program material (that is, the music or dialogue).

Later sections of this manual discuss mixing and editing "Off Line". The term Off Line is used, as opposed to Real Time, because neither program material nor time code has to be present in order to mix.

Real Time mixing is primarily done using the Custom Views.

Off Line mixing is primarily done using either the Cue List or the Graphic View.

## ***BUILDING A MIX IN MANY "PASSES"***

This brief section is for those who are not that familiar with how mix automation is generally used.

Those familiar with mix automation can simply skip this section and proceed to the section entitled, "Preparing to Write an Automated Mix".

The first immediate need for an automated mixing system becomes apparent as soon as a mix becomes complicated from a technical standpoint.

For example, suppose you need to bring up two faders, and at the same time rotate a pan pot located several feet from the faders.

Those who are familiar with automated mixing know that this is very easy to do.

You simply play the program material. (That is, whatever you are mixing; tape, disk, song, soundtrack, etc.)

Move the mixer's faders, and the automation system records the fact that the faders were moved. Rewind the program material. Play the program material again, and turn the pan pot.

The automation system records the fact that the knob was turned. Rewind the program material. The next time you play the program material, the fader levels and pan position change together. You performed the mix, but the computer helped you do more than you could by yourself.

The important concept to be aware of is that the mix is built in several "passes":

Rewinding, playing, mixing and editing the mix, rewinding, etc., until you have perfected your mix.

By the time you are finishing the mix, the computer is able to change more things on the mixer simultaneously and more accurately than you could do by yourself.

(In addition, automated mixing provides the obvious advantage of using a computer to save the mix data to disk, edit the mixes, and more.)

***Note:***

When using MAX, certain functions of the DA7 become redundant or not applicable. Therefore, MAX mix data will not be affected if you perform any of the following operations.

- MAX will not save changes made using the Multi-Channel View function on the DA7 mixer.
- Recalling a Scene memory or a Library on the DA7 mixer
- Using the "UNDO" key on the DA7 mixer

To match the relationship between the DA7 mixer and the MAX screen, execute Update Configuration in the Real Time menu of the MAX.

Unmatched status may occur after the following operations.

- Any of Surround Mode, the function of Dynamics or the filter type of Equalizer is changed.
- UNDO is operated on the DA7.
- Data settings are copied from one channel to another while displaying Multi Channel View on the DA7.
- A Scene memory or a Library is recalled on the DA7.

### ***PREPARING TO WRITE AN AUTOMATED MIX***

When preparing to write an automated mix, (that is to say, perform a mix “pass”), you first need to decide three things:

**(1) What kind of mix parameters do you wish to be written during this pass?**

For example, you might decide to write and edit only faders, or channel on/off's only, or EQ only.

Or you might decide you want every change you make to the mix to be written.

**(2) What kind of edit are you going to perform?**

For example, suppose you have already written some fader “moves”. On the next pass, you may want to edit those fader moves.

You can edit them in “Write Mode”. This means that the new fader moves will erase and replace the previously written fader moves.

Or you can edit them in “Trim Mode”. This means that the new fader moves will not erase but rather modify the previously written fader moves. While much more will be explained in a following section about the various edit modes, including Write and Trim, suffice it to say for now that you can choose for each pass what kind of edit to perform.

**(3) Which audio channels do you wish to be written during this pass?**

For example, you might decide to write only faders 1 and 12 on one pass. On another pass, you might want to be able to write all the faders.

### ***SETTING WHICH PARAMETERS ARE OVERWRITE ENABLED***

In a given pass, you may decide to edit some parameters and not others.

The mixer allows automation of Faders, Channel On/Off, EQ, Aux, Pan, Dynamics On/Off, and Routing.

These parameters must be individually Overwrite Enabled prior to writing an automated mix.

Click on the Overwrite button in the Control Bar.

Or, select Overwrite... from the Real Time menu.

This opens the Overwrite dialogue box.



Enable each parameter that you intend to edit in the next pass.

Parameter that are not enabled will be “read only” in the next pass. That is, they will play back any previously written moves, but will ignore new moves.

### ***CHOOSING THE EDIT MODE***

There are four edit modes, Write, Trim, Read and Manual.

The software features a Edit Mode menu in the Control Bar.

Select the Edit Mode from the menu, or type w, t, r, or m.

After selecting the Edit Mode, use the individual Select buttons above the fader on each mixer channel to set the mode on a channel per channel basis.

Always take note of your current Edit Mode Menu choice.

When a channel is selected, it will go into the Edit Mode shown in the Edit Mode menu.

When not selected, a channel will be in Read mode.

### ***EDIT MODES (READ, WRITE, MANUAL, & TRIM) DEFINED***

Generally speaking, getting MAX to remember your automated mix is called “**Writing**” an automated mix.

When MAX is playing back the automated mix it is called “**Reading**” the mix.

Its possible to play the program material and mix without having the computer remember your moves. This is called “**Manual**” mixing.

After an automated fader or channel on/off has been written, there are two main ways to edit them while the mix is playing. The fader or channel on/off can be edited by Writing it again.

Or, the already written move can be changed or “**trimmed**”.

Write Mode means you simply write them again, which erases and replaces any previously written moves on that channel.

Trim Mode does not erase and replace automation moves, rather it modifies the moves previously made. For example, a fader in trim will play back previously written moves, while you are allowed to shift those moves up or down.

While more will be said about these modes shortly, the main point of this discussion is to say that an audio channel can be in one of four different modes: Write, Trim, Read, or Manual.



**Write Mode**

When the Edit Mode menu indicates WRITE, selecting channels puts them into Write mode.

Channels in Write are “armed” and ready to write automation moves.

Select Write Mode from the Edit Mode menu by typing “w”.

**Trim Mode**

When the Edit Mode menu indicates TRIM, selecting channels puts them into Trim mode.

Channels in Trim are “armed” and ready to Trim automation moves.

In Trim mode, fader moves that you have previously written will not be replaced.

The moves will be left intact but the overall level will be relatively “offset”.

For example, say that you have made some very complicated fader moves while riding a vocal track, on a fader in Write mode.

You roll back the program material to hear what you’ve done, and you like the results, but you just wish that the whole track were a bit softer.

Trim mode allows you to shift up or down the level by adding or subtracting from the fader moves already entered, without having to re-write all the moves.

Trim mode is also used for editing channel on/offs and other switch events.

When a switch is pressed while the channel is in Trim mode, additional switch events are only added to the previous events, without replacing previously written events.

Select Trim Mode from the Edit Mode menu by typing “t”.

**Read Mode**

When the Edit Mode menu indicates READ, selecting channels puts them into Read mode.

Channels in Read only play back previously written moves.

Select Read Mode from the Edit Mode menu by typing “R”.

This also de-selects all channels as if you drag down the Disable All in the Real Time Menu. For more information see page 203, Enable All/ Disable All.

**Manual Mode**

When the Edit Mode menu indicates MANUAL, selecting channels puts them into Manual mode.

Moving the faders will change the sound of the mix, but the changes will not



be written or saved.

De-selected channels go into Read. At the moment they are de-selected, they will snap to their last automated level, and then play back any previously written fader moves.

To de-select a channel, press the select button above each individual fader that you want to return to read.

Select Manual Mode from the Edit Mode menu by typing “m”.

This also selects all channels as if you drag down the Enable All in the Real Time Menu. For more information see page 203, Enable All/ Disable All.

### ***SELECTING THE MIXER CHANNELS YOU WANT TO EDIT***

After choosing the Edit Mode from the software’s Edit Mode menu, there are three different ways to select a channel.



Press the Select Button above the fader.



- or -

Use the mouse to click on the Mode indicator in the fader module within the Custom View.



- or -

Turn SoftTouch™ on.

When SoftTouch is on, the fader is automatically selected when it is moved.

#### **Hint**

You can select the channels directly on the DA7 mixer, or on MAX while you are using the Edit Mode.

- First, press the MMC/CURSOR key so that the DA7 enters the MMC mode (“MMC” appears in the lower right hand corner of the screen located on the DA7).
- Then, press the SELECT LED button of the channels you want to edit, while holding down “0” key of the 10 KeyPad.

# MAX REAL TIME OPERATION

## ***OVERVIEW OF FIRST AUTOMATION PASS***

These are very basic instructions for starting a new mix session.

- ▶ Turn Receive Time Code Off.
- ▶ Play the program material. Decide how you want the faders and channel on/off's to be initially set.
- ▶ Turn Receive Time Code On.
- ▶ Enable Fader and Channel On Overwrite.
- ▶ Set Edit Mode menu to Write.
- ▶ Clear Memory.
- ▶ Play program material.
- ▶ Select the Channels that you wish to Write.
- ▶ Perform a mix, then stop the program material.
- ▶ Save the mix.
- ▶ Rewind the program material.
- ▶ Listen to the mix, determine what additional edits need to be done.

The following pages provide more details.

## ***FIRST AUTOMATION PASS IN DETAIL***

### ***Preparing to Mix***

#### **► Turn Receive Time Code Off.**

Receive Time Code is turned on and off by clicking on the T.C. button in the Control Bar.

This allows you to freely move faders and listen to the mix. The MAX will neither write nor read moves.

When beginning a new session, turning Receive Time Code Off is easier than using Manual mode, because it makes the Edit Mode irrelevant. Also, when no time code is being received, you can more freely explore the software, label tracks, etc.

#### **► Play the program material and decide how you want the faders and channel on/off's to be initially set.**

For example, say that the program material begins with a few bars of an all-percussion intro on tracks 1 through 7. You may want the mix to begin the remaining tracks off. Move faders 1 through 7 to balance the percussion tracks. Turn off the remaining tracks using the mixer's Channel On/Off buttons.

As long as Receive Time Code is Off, no moves have been written yet.

Once you have found a comfortable starting condition for the mix, stop the program material and rewind it to a point a little before the beginning of the song or score.

We are rewinding the program material for the sake of making a simple example.

Actually, MAX lets you start and end an automation pass anywhere in the song.

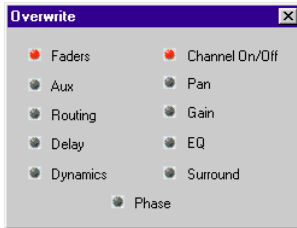
Only the very first pass in a mix should start at the beginning.

You'll never have to specify start and end times, you may construct the mix in as many passes as you please, and you are never required to let the song play all the way through on any pass.



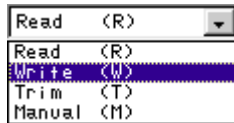
### ► Turn Receive Time Code On.

Receive Time Code is turned on and off by clicking on the T.C. button in the Control Bar.



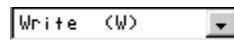
### ► Enable Fader and Channel On Overwrite.

Click on the Overwrite button to confirm settings.

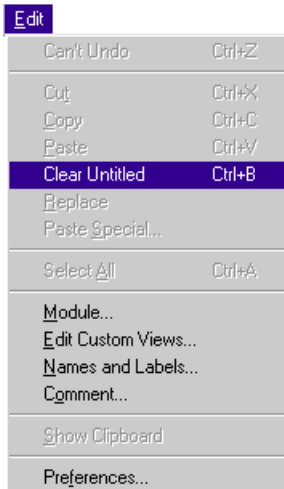


Fader and Channel On are already automatically pre-selected on your first pass of a new mix.

### ► Set Edit Mode menu to Write.



If the Edit Mode menu does not already indicate Write, type the letter "w".



### ► Clear Memory.

Select Clear [Untitled] from the Edit menu.

Obviously if you have just launched MAX, (or selected New from the File menu), there is nothing written yet and nothing to Clear.

It is still a good practice to Clear when you start a new mix, just in case while experimenting with the system you have accidentally or intentionally written some meaningless fader moves.

After selecting Clear you are ready to start a new mix.

***Clearing Memory Arms MAX to Capture One Initial “Snapshot”.***

***The MAX is a “dynamic” automation system, meaning that fader movements are written only when a fader is moved, and that these movements are recorded with respect to time code.***

MAX also automatically captures one “snapshot”.

A snapshot is a picture stored in the automation memory.

It contains the starting position of all the faders, and the on / off condition of all the channels, and all other automated mixer parameters.

On the first pass of a new mix, after a Clear, MAX scans the mixer, capturing the initial conditions into the mix memory as a snapshot.

That way, whenever you rewind the program material and restart it from the beginning, MAX can quickly restore the correct initial conditions before the song begins.

You can edit this snapshot later on. The important point here is that this one snapshot is captured automatically on the first pass. The snapshot is taken at the moment the first fader move is made, when time code is received after you have cleared the memory.

**► Play the Program material.**

***Note: Take at least 3 seconds of margin from starting the timecode to the first fader move. MAX will not be operable right after receiving the first timecode.***

## ***Select the Channels that you wish to write.***

As stated previously, you can select channels with the mixer's Select button. Or, you can use the mouse to click on the Mode indicator.



If you are writing faders, you may also use SoftTouch to automatically select the channels.



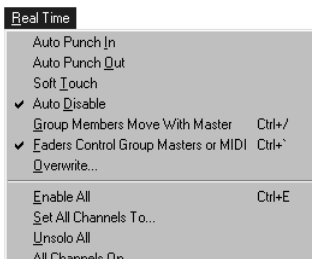
When writing faders, multiple channels can be selected.

You can write as many faders as you wish in a given pass, when you are writing faders only, or faders and channel ons only.

Type Ctrl E (Enable all) to select all faders and put them into write mode.

This "Selects" or arms all the faders at once.

Selecting all the faders at once is usually only done on the first few passes.



When writing channel ons, it is actually not necessary to Select a channel.

Using the DA7's On buttons, Channel Ons can be written on any channel.

When writing any other parameters, (pan, routing, surround, dynamics, EQ, etc.), you can select only one channel at a time.

## ***Perform a mix.***

You may write fader moves or channel on/off's in any order, and in as many "passes" as you wish, but for sake of simplicity we suggest laying down channel on/off's on the first pass. It is not necessary to let the whole song play through on any pass.

## ***Writing Channel On/Offs***

Perform your channel on/off's on the mixer using the channel on/off buttons.



Stop the program material at the end of the pass. If you have more channel on/off moves to make on other channels, rewind and restart the program material to add more channel on/off.

### ***Writing Faders***

Move the mixer's faders. In a previous step we Selected all the faders. As long as time code is being received and the mode indicator above each fader says Write, fader moves are being written.



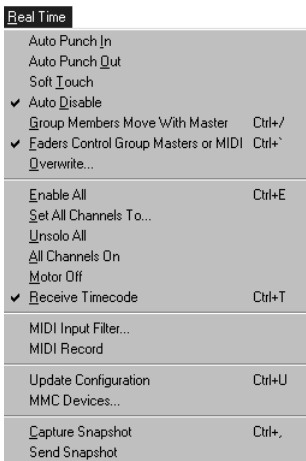
Stop the program material at any time.  
Save the mix. Type Command S and give the mix a name.



Rewind the program material, play it and listen.

### ***Writing Additional Snapshots***

To capture additional Snapshots in real time, Capture Snapshot (Command ,) while time code is being received.



## ***More About Snapshots***

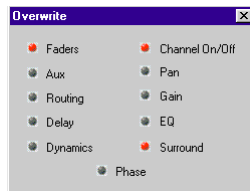
MAX automatically takes one snapshot on the first pass after clearing memory. The snapshot time is equal to the first time code received. The snapshot is only taken if some new move is made. Do not write moves before the first snapshots, since MAX will reset the mixer to the recorded snapshot settings once it passes the start time-code location.

## ***Writing Routing***

Routing is accessed on the mixer by pressing Routing in the Configuration section.

(Surround panning is also accessed by pressing Routing, however, this is covered in more details in a later section of the manual.)

First click on the Overwrite button (or select Overwrite from the Real Time menu), and enable Routing editing by clicking on the button next to the word Routing.



When starting a new mix (that is, the memory has been cleared), the current routing condition will be automatically saved in a "Snapshot" when the first pass is written.

Select Write from the Edit Mode menu.

Write Enable the individual channel, using the mixer's Select buttons.

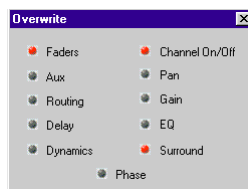
Start the program material or other source of time code, and use the mixer to turn on and off the desired bus, or Master LR assignments.

(If you later wish to edit routing Off Line, changes to routing will appear as "bus assign" on and off events in the Cue List. New routings are created using the Create Switch Events dialogue box.)

## ***Writing Aux Sends***

Aux Sends are accessed on the mixer by pressing any of the 6 Aux buttons in the Mixing section.

First click on the Overwrite button (or select Overwrite from the Real Time menu), and enable Aux editing by clicking on the button next to the word Aux.





When starting a new mix (that is, the memory has been cleared), the current Aux send levels and pre/post selections will be automatically saved in a "Snapshot" when the first pass is written.

Select Write from the Edit Mode menu. Write Enable the individual channel, using the mixer's Select buttons.

Start the program material or other source of time code, and use the mixer to adjust Send Levels and change the Pre/Post switches if desired.

(If you later wish to edit the Aux Sends Off Line, changes to the Aux Send Levels may be made using the Create Parameter Change dialogue box.

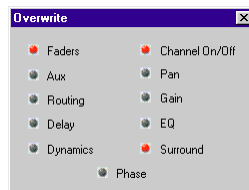
Changes to the state of the Pre/Post switches are made using the Create Switch Events dialogue box.)

***Note: Switching AUX Send On/Offs automatically creates an event in the Cue List, but this event will not affect the mix data.***

## ***Writing Pans***

Pan control is accessed on the mixer by pressing Pan in the Configuration section.

Click on the Overwrite button (or select Overwrite from the Real Time menu), and enable Pan editing by clicking on the button next to the word Pan.



When starting a new mix (that is, the memory has been cleared), the current Pan positions will be automatically saved in a "Snapshot" when the first pass is written.

Select Write from the Edit Mode menu. Write Enable the individual channel, using the mixer's Select buttons (Enable both channels if these are engaged in a "GANG").

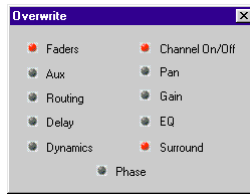
Start the program material or other source of time code, and use the mixer to adjust the Pans.

(If you later wish to edit the Pans Off Line, changes to the Pans may be made using the Create Parameter Change dialogue box.)

## ***Writing EQ***

EQ adjust is accessed on the mixer by pressing EQ in the Configuration section.

Click on the Overwrite button (or select Overwrite from the Real Time menu), and enable EQ editing by clicking on the button next to the word EQ.



When starting a new mix (that is, the memory has been cleared), the current EQ settings will be automatically saved in a “Snapshot” when the first pass is written.

Select Write from the Edit Mode menu.

Write Enable the individual channel, using the mixer’s Select buttons.

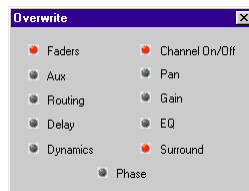
Start the program material or other source of time code, and use the mixer to adjust the EQ section.

(If you later wish to edit the EQ Off Line, changes to the EQ knobs (such as frequency, gain, etc. may be made using the Create Parameter Change dialogue box. Changes to the state of the EQ in/out switches are made using the Create Switch Events dialogue box.)

### ***Writing Gain and Phase***

Gain is accessed on the mixer by pressing Gain in the Configuration section.

Click on the Overwrite button (or select Overwrite from the Real Time menu), and enable gain editing by clicking on the button next to the word Gain .



When starting a new mix (that is, the memory has been cleared), the current gain settings will be automatically saved in a “Snapshot” when the first pass is written.

Select Write from the Edit Mode menu.

Write Enable the individual channel, using the mixer’s Select buttons.

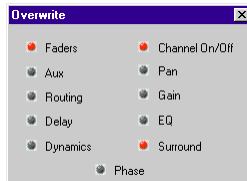
Start the program material or other source of time code, and use the mixer to adjust gain and phase.

(If you later wish to edit the gain and phase, changes to the gain may be made using the Create Parameter Change dialogue box. Changes to the state phase switches are made using the Create Switch Events dialogue box.)

## ***Writing Delay***

Delay is accessed on the mixer by pressing Delay in the Configuration section.

Click on the Overwrite button (or select Overwrite from the Real Time menu), and enable Delay editing by clicking on the button next to the word Delay.



When starting a new mix (that is, the memory has been cleared), the current Delay settings will be automatically saved in a "Snapshot" when the first pass is written.

Select Write from the Edit Mode menu.

Write Enable the individual channel, using the mixer's Select buttons.

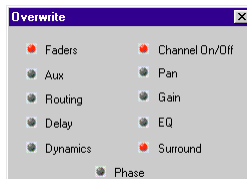
Start the program material or other source of time code, and use the mixer to adjust the Delay settings.

(If you later wish to edit Delay Off Line, changes to the Delay Time may be made using the Create Parameter Change dialogue box. Changes to the state of the Delay on/off switches are made using the Create Switch Events dialogue box.)

## ***Writing Dynamics***

Dynamics are accessed on the mixer by pressing Dynamics in the Configuration section.

Click on the Overwrite button (or select Overwrite from the Real Time menu), and enable Dynamics editing by clicking on the button next to the word Dynamics.



When starting a new mix (that is, the memory has been cleared), the current Dynamics settings will be automatically saved in a "Snapshot" when the first pass is written.

Select Write from the Edit Mode menu. Write Enable the individual channel, using the mixer's Select buttons.

Start the program material or other source of time code, and use the mixer to adjust the Dynamics settings.

(If you later wish to edit Dynamics Off Line, changes to all of the variable Dynamics parameters (knee, threshold, etc.) may be made using the Create Parameter Change dialogue box. Changes to the state of the Delay on/off switches are made using the Create Switch Events dialogue box.)

Note: Before writing Dynamics in a mix, you need first to create Dynamics Libraries into DA7's memory with such parameters as threshold, etc.

Second, start a new mix as described this section.

Third, open "Create Library Events" window from Off Line menu to select a library previously stored and to set the time that the Library Event starts.

Also you can change assignments for Start Time, Event, etc., in the "Cue List" window if stored beforehand.

## ***FADER EDITING***

You now know how to write a first pass of fader moves and see them play back.

After your first pass, there are a few more things to consider in creating a good automated mix.

Since you will be constructing your mix in multiple passes, starting and stopping anywhere in the song, it is important to take advantage of MAX's ability to allow seamless fader edits.

This section introduces important concepts relating to editing fader moves and channel on/off's in Real Time (that is, while time code is being received.)

### ***Notes:***

- On the mixer, do not operate faders and the JogDial at the same time.
- On the MAX window of your Windows, channel faders assigned in Stereo may move inaccurately at times. Even if this occurs, the stored mix data will be unaffected.

## *The Phantom Faders*

When MAX is locked to time code and automating the mixer, every fader move that you made in Write Mode is being “played back”.

If the “MOTORS” button is turned off, the physical faders on the mixer will not move, but the audio levels are changing nonetheless because the faders on the Windows monitor are moving. The real faders on the mixer are simply resting in the last position that you left them at.



As an example, while playing back an automated mix, MAX may have been programmed to turn the audio level down on a certain channel. But the real fader on the mixer has been left “full on” from a previous pass.

Suppose that you were to put the channel into Write mode now, to do a re-write of the fader move. As soon as you moved the fader on the mixer a little bit, the gain of the channel would “jump up” to meet the fader.

If the mixer motors are turned off (with MAX’s “Motors” button), much of the time during mixing, the physical position of a fader will have no relationship to the actual level of the channel, which will continually vary according to the mix you have written.

In addition, even if the motors are on, there are times when you can be manually moving a fader to a position other than the actual automated audio level.

“Phantom Faders” are provided to assist you in keeping track of the real position of the faders on the mixer, with respect to the position of the moving, automated fader. Phantom Faders on the computer indicate the position of the real (hardware) faders on the mixer.

In addition, even if the motors are on, there are times when you can be manually moving a fader to a position other than the actual automated audio level.

Note: Phantom faders are operative only from the DA7 mixer.

### ***What is a Null Point?***

When MAX is receiving time code, and an automated mix is playing back, the faders on the computer monitor are moving. As stated previously, there can be times when the position of the fader on the mixer is different than the actual audio level as indicated on the computer.

To move a fader to its “null point” means to manually move a fader on the mixer until it matches (that is, lines up with) the position of the fader on the computer.

### ***Manually Nulling a Fader***

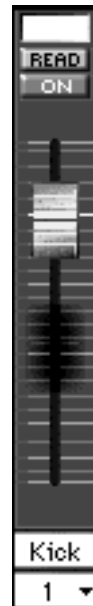
When the mixer is receiving time code, slide the fader (down or up) just to the position where the Phantom Fader lies under the Level Fader. When the two faders are superimposed, the fader is said to be “at its null point”, or simply “the fader is nulled”.

You can now put the fader into Write mode to re-write the fader moves, without any jump in level.

When the fader is writing, the Phantom disappears.

When time code is not being received (because either the program material is stopped or Receive Time Code menu item is unchecked), the faders are always “live”, and no Phantoms are seen.

Phantom Faders appear as you move the faders when time code is being received. The Phantoms will automatically disappear after about 8 seconds if you are not moving the faders.



Example  
Fader 1 on the mixer must be moved up to null the fader.

## ***Manually Punching In Fader Moves***

In Write Mode you may selectively rewrite (that is, replace) any fader moves in any part of the mix.

Simply fast wind the program material to a place a few seconds before the fader moves that you wish to replace.

Make sure that faders are Overwrite Enabled.

Check that the Edit Mode is set to Write.

Start the program material, and use the Select button to toggle the fader from Read to Write.

If motors are turned off (using the Motors button), use the Phantom Faders to help you find what the actual channel level is at that point in the mix.

Slide the fader down or up just until the two faders are nulled. Now the position of the fader accurately reflects the level of the channel. Then put any number of faders into Write mode by Selecting them, and make the new moves.

## ***Two Ways to Manually Write Enable a Fader***

Normally, a fader is put into Write by using its Select button.

The fader move is not written until fader is moved.

Alternately, you can put the fader into Write with the mouse by clicking on the Mode indicator in the fader module.

This action immediately writes the current fader position, without having to move the fader.

**Note:** When recording fader moves of a Link group, make sure to set the individual channel mode to WRITE for both channels assigned to the group.

## ***Auto Punch In and Auto Punch Out***

Auto Punch In and Out make editing easier by automatically switching any selected fader from Read into Write mode when the fader is moved across its null point.

Auto Punch In lets you arm the fader before writing fader moves. You do not have to bother about null points or jumps in level. The fader will not actually start writing moves until you move it to its null point, the level of the channel from the previous pass.

Likewise, Auto Punch Out lets you arm the fader in advance of switching to read. You do not have to bother about null points or jumps in level. The fader will not stop writing moves until you move it to its null point, the level of the channel on the previous pass.

Thus smooth and seamless fader edits may be made without any jumps in level.

Turn on Auto Punch In by selecting it from the Real Time menu.



(Clicking on the AUTO button in the Control Bar turns on both Auto Punch In and Auto Punch Out. To keep things simple, for now just turn on only Auto Punch In from the Real Time menu. That way you have the opportunity to learn how they work separately.)



## ***Using Auto Punch In and Write Mode***

Check that the Edit Mode menu is set to "Write".

The individual channel mode indicators above each fader should say READ. To re-write only specific channels, press the individual channel's SEL Buttons. The individual channel mode indicators flash from Read to Write, alerting you that the track is armed for writing.



Slowly move the fader. This fader movement is not written into memory yet. The channel status will automatically "Punch In", changing from a flashing condition to WRITE as the fader is moved slowly across its null point. The Phantom will disappear.

Some engineers prefer to think of it as reaching with the Phantom to "grab" the level fader.

The fader will only Punch In if it is moved slowly.

The software behaves this way to avoid an unintentional Punch In, should you accidentally bump a fader.

The fader is now in Write mode and the move is being written into memory, replacing any previous moves during this time period.

To manually "Punch Out", that is, to return the fader to Read, press the channel's SEL Buttons.

When the fader returns to Read, it will begin playing back any previously written fader moves.

### ***Using Auto Punch In and Read Mode***

Auto Punch In and Read Mode may be used together to “rehearse” a fader move.

Remember that in Read, the mix is playing back.

Selecting a fader in Read switches the fader into Manual. That means that the fader is affecting the audio level, but the fader moves are not being written.

In this scenario, the Edit Mode menu says Read, and most of the faders are in Read.

But a few faders have been Selected and are in Manual. This means that you listen to the mix play back, while moving a few faders in Manual.

In essence you are rehearsing fader moves, since you can hear what the fader moves would sound like with respect to the whole mix, though you are not writing any new fader moves yet.

The procedure for rehearsing a fader move is given on the following page.

### ***How to Rehearse a Fader Move***

Check that the Edit Mode menu is set to Read.

The individual channel mode indicators above each fader should say READ.

To rehearse channels, press the individual channel's SEL Buttons. The individual channel mode indicators flash from Read to Manual, altering you that the track is armed for manual mixing.



Slowly move the fader. This fader movement will not affect the level yet. The channel status will automatically “Punch In”, changing from a flashing condition to Manual as the fader is moved slowly across its null point. The Phantom will disappear.

The fader will only Punch In if it is moved slowly.

The software behaves this way to avoid an unintentional Punch In, should you accidentally bump a fader.

The fader is now in Manual mode, allowing you to listen to the move. No new moves are written into memory.

To manually “Punch Out”, that is, to return the fader to Read, press the channel's SEL Buttons. When the fader returns to Read, it will begin playing back any previously written fader moves.

### ***Using Auto Punch Out***

When Auto Punch Out is turned on, first write your fader moves as described above.

When you are ready to punch out, press the channel's SEL Buttons again. The fader will not instantly return to Read.

Instead, a Phantom fader appears. This Phantom fader represents the level of the fader from the previous pass, so it may be a moving Phantom fader.

(This is the only circumstance when a Phantom does not represent the physical position of a hardware fader.)

Slowly move the fader on the mixer. As the fader is moved across its original null point, the fader will automatically "Punch Out", changing from Write to Read mode.



As soon as the fader's individual channel mode indicator says Read, Phantom Fader will once again indicate the position of the physical fader. The level fader will continue to play back any previously written fader moves.

This results in a seamless punch-out.

***Important Notes About Auto Punch In and Out*** : Auto Punch Out Does Not Operate with SoftTouch

Auto Punch Out does not operate in conjunction with SoftTouch (next section.) This is because SoftTouch continues to write fader moves as long as you are moving the fader, so the punch out occurs when you stop moving the fader.

If SoftTouch is turned off, clicking on the AUTO button turns both Auto Punch In and Auto Punch In on or off.

If SoftTouch is turned on, clicking on the AUTO button will only turn Auto Punch In on or off.

If AUTO is clicked first, turning on both Auto Punch In and Auto Punch Out, the TOUCH button will be dimmed.

Auto Punch In and Out are De-selected on First Pass

Auto Punch In and Auto Punch out are special editing modes that are used after some fader moves have already been written.

To make the MAX software easier to use, Auto Punch In and Out are temporarily de-selected on the first pass, that is, whenever the memory has been cleared.

Both Auto Punch In and Auto Punch out require that some fader moves are already in the mix.

So, even if you have turned on Auto Punch In and Out, on the first pass, when a fader is Selected, it will immediately go into Write, without flashing an armed condition.

## ***SoftTouch™***

When SoftTouch is turned on, faders on the mixer behave as if they were touch sensitive, similar to moving fader systems. When the Edit Mode menu says Write or Trim, simply moving any fader selects it, without pushing a button.

There will be no jump in level if Auto Punch In is also turned on, because the move will not be written until the null point is crossed.

In Write mode, with both Auto Punch In and SoftTouch turned on, when a fader is moved the channel mode indicator will flash Read-Write.

The Phantom Fader will appear. Since Auto Punch In is on, the fader move will not be written until you move the fader to the null point.

The fader will return to Read mode if it is not moved for a certain period of time. This time period is user-set in the Preferences dialogue box. It is entered in seconds.

Turn SoftTouch On by clicking on the TOUCH button in the Control Bar.

## ***SoftTouch Time Out***

Open the Preference dialogue box in the Edit menu. Select Faders.



SoftTouch Time Out sets how long it takes after you stop moving the fader for it return automatically to Read mode.

## ***SoftTouch In Read Mode***

When the Edit Mode menu says Read, if SoftTouch is turned on, moving a fader puts that fader into Manual. Previously written moves will not play back on that fader, and you have manual control over the fader. The level will jump to match the position of the fader.

If Auto Punch In is also turned on, there will be no jump in level. Moving the fader will cause the mode indicator to flash Read-Manual. The fader will go into Manual when it is moved to the Null point.

## ***Important Notes About SoftTouch***

### **A Fader May Occasionally Arm Itself**

Since the fader is being “digitized”, that is, its position is being turned into a number, occasionally the fader will be “resting” between two numbers. This means that a slight vibration of the fader will be detected as a fader move, and arm the fader.

This is because the software is designed to make the faders very responsive to the engineer’s touch. The MAX System’s software, however, does detect and reject such minute changes in fader position, but it is possible for one to occasionally get through.

Even so, if a fader does arm itself, it should not cause any problem if Auto Punch In is on. That fader cannot actually write moves to the mix unless the null point is crossed.

### **SoftTouch Should be Turned Off During Mixdown**

Since SoftTouch selects faders when they are moved, turn SoftTouch off before mix down.

Otherwise, any fader accidentally moved while in Read will automatically switch to Manual mode. If Auto Punch In is turned off, the fader will immediately become manual and stop playing back previously written fader moves.

Likewise, any fader accidentally moved while the Edit Mode menu says Write will automatically switch to Write mode. If Auto Punch In is turned off, the fader will immediately begin writing and stop playing back previously written fader moves.

### **Auto Punch Out Does Not Operate with SoftTouch**

Auto Punch Out does not operate in conjunction with SoftTouch (next section.) This is because SoftTouch continues to Write fader moves as long as you are moving the fader, so punch out occurs when you stop moving the fader.

### **If SoftTouch is turned on,**

clicking on the AUTO button will only turn Auto Punch In on or off.

### **If AUTO is clicked first,**

turning on both Auto Punch In and Auto Punch Out, the TOUCH button will be dimmed.

### ***Trimming Fader Moves in Trim Mode***

Trim Mode is used for relatively “offsetting” fader moves without actually replacing them. Any moves made in Trim Mode will be “added to” or “subtracted from” previously written moves. Thus the subtle nuances of the original fader move are preserved, only the overall level of the track is raised or lowered.

***(Trim Mode is also used for editing Channel Ons and other switch events, this is discussed in the following chapter.)***

You can Trim the entire mix without playing the program material all the way. When doing a Trim, if you do not return the Phantom fader to the reference point, and stop the program material, you have the option of Trimming the track for the entire mix.

To Trim a channel, once again cue the program material to some place in the song before the intended edit.

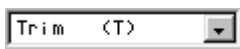
Determine what the nature of the Trim will be, whether you intend to scale the level up or down in level.

If you plan on boosting the level, you may want to start with the fader(s) below center position. This assures that you have enough “throw” to move the fader upward.

Likewise, if you plan on scaling the track down, you may want to move the fader(s) above center position.

If you are not sure, then just move the faders to approximately center position.





Set the Edit Mode menu to Trim, by typing t on the Windows keyboard.



Press the SEL Buttons to set individual channels into Trim mode.

Start the program material.

The Level Fader will play back any previously written moves.

The Phantom Fader will not go away as it did in Write Mode, rather it will still indicate the position of the physical fader.

A Trim Reference point will appear for each Selected channel in Trim Mode. This will help you keep track of the starting position of the physical fader.

When the Phantom Fader is above the Trim Reference point, you are increasing the level of previously written moves.

**When the Phantom Fader is below the Trim Reference point, you are decreasing the level of the previously written moves.**

**When the Trim has been completed, move the fader to align the Phantom with the Trim Reference point.**

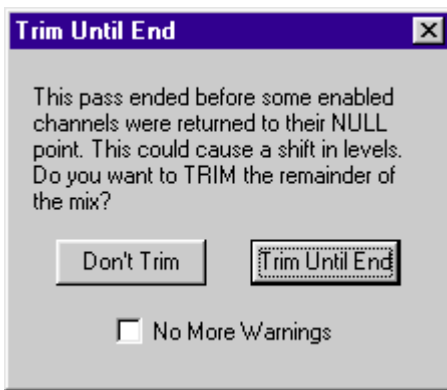
To stop Trimming, selecting Read Mode from the Edit Mode menu. Then, on the individual selected channels, press the SEL Buttons. Or you may simply stop the program material.

## ***Trim Until End***

Suppose that while you are Trimming a track, you moved the fader up above the reference point, to add gain to the track. Then suppose you stopped the program material, without returning the fader to the reference point.

You may choose whether the Trim will affect that track for the rest of the song, or whether the track will “snap back” to its previous level.

A dialogue box will automatically appear whenever you stop the program material without having returned the fader to the reference point. The dialogue box gives you the option of either Trim Until End or Don't Trim.



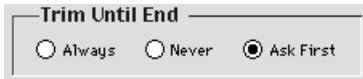
Select Trim Until End to Trim the track all the way to the end of the song.

Select Don't Trim and the levels of the tracks will snap back to their previous levels at the end of the Trim.

Whatever is chosen, if No More Warnings is checked, then the current Trim to End setting will be saved in the Preferences and the dialogue box will not appear again.

## ***Trim Until End Preferences***

In the Preferences Dialogue box in the Edit Menu, under “Trim Until End”, check either Always, Never, or Ask First.



When Always is selected, the Trim Until End dialogue box will not appear at the end of the pass. The software Trims the track for the entire mix.

When Never is selected, the Trim Until End dialogue box will not appear at the end of the pass. For every pass where a Trim is performed, the Trimmed tracks snap back to their original levels after the Trim.

(You always have the option of course of turning the Trim dialogue box back on again by clicking Ask First in the Preferences dialogue box .)

When Ask First is selected, the Trim Until End dialogue box will appear at the end of the pass as just described, giving you the option with each pass to either Trim Until End or Don't Trim.

## ***Auto Disable***

When Auto Disable is checked, Selected faders automatically switch to Read when the program material is stopped.

This prevents accidental writing of fader moves on the playback of the next pass.

Auto Disable defaults to On (checked).



There are some circumstances where it might be desirable to turn Auto Disable off.

For example, say that you have chosen to select the faders using the SEL Buttons. Suppose also that you are looping the program material and continually re-writing the mix.

With Auto Disable On, every time the program material stops, the faders revert to Read. If you are looping, this would require that you to re-select each fader with each pass.

Under these circumstances, it would be more convenient to leave Auto Disable Off. That way, Selected faders remain Selected with every pass.

Keep in mind, however, that if a fader stays Selected, you have no opportunity to null the fader.

When Auto Disable is off, under some circumstances you can “get away with” editing in Write mode. If the tracks you are editing are silent at the start of the loop, any jumps in fader level would not be heard.

Generally speaking, editing in Trim would be a better practice than editing in Write mode, should you choose to turn Auto Disable off.

### ***CHANNEL ON/OFFS AND SWITCH EDITING***

In addition to the Channel On buttons, other mixer switches can be automated. These include:

- Aux Send 1 through 8 Pre/Post
- Aux Send 1 through 8 On/Off
- Bus Assign 1 through 8
- Master Assign 1 through 8
- Direct Out 1 through 8
- Gang Select On/Off
- Phase
- Delay On/Off
- EQ On/Off
- Dynamics On/Off

Like faders, channel on/offers and other switches may be edited in either Write or Trim mode.

#### **Write**

Replaces previously written channel on/offers or other switches.

#### **Trim**

Adds additional Channel On/Offs or other Switch Events.

#### **Examples**

Suppose channel 1 is turned on and off every other second, for a whole song. Save this mix as "Channel On/Off demo 1". Rewind song to beginning.

**Writing Channel On/Offs**

Open "Channel On/Off demo 1"

In Write Mode, start time code.

Press channel 1 on button at 00:00:05:15.

Stop time code at 10 seconds.

The resultant mix will have channel 1 turn on and off every second up to five seconds.

At 00:00:05:15, the channel will turn on and stay on.

It will turn off again at 11 seconds.

After 11 seconds, the on and off every second will resume.

**Trimming Channel On/Offs**

Open "Channel On/Off demo 1"

In Trim Mode, start time code.

Press channel 1 on button at 00:00:05:15.

Stop time code at 10 seconds.

The resultant mix will be nearly identical to the original mix "Channel On/Off demo 1".

The only difference is that channel 1 will turn on a half second earlier than 00:00:06:00.

(That is, the channel will stay on a half second longer.)

### ***PAN, AUX SENDS, EQ, GAIN AND DELAY EDITING***

Pan, Aux Sends, EQ, Gain and Delay are generally controlled by the mixer's "rotary encoders".

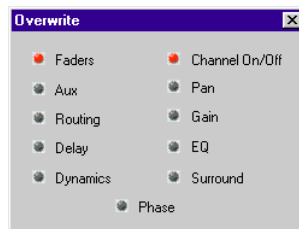
(Though the aux send levels can also be controlled by the faders, there is no special benefit to doing this as far as the automation is concerned. Aux send levels are only written on channel at a time.)

Parameters controlled by rotary encoders are very easy to edit, because the rotary encoders are designed to be "self-nulling". When you edit a level with a rotary encoder, rotating the encoder always causes the level change to start from the current level. This means that the mixer prevents unwanted jumps in level when the knob is turned.

Pan position, Aux Send levels, EQ settings, Gains and Delay times are edited in Write mode only, not in Trim like faders and switches.

The procedure for editing (that is, re-writing) these parameters is the same as the procedure for writing them.

First open the Overwrite dialogue to select the desired parameter or parameters.



Then, select Write mode from the Edit Mode menu.

Cue up the program material to the place just prior to the edit. Start the program material.

Then, select the one channel that you wish to edit. Only one channel may be selected at a time.

Use either the mixer's Select buttons, or click on the mode indicator with the mouse.

Rotate the appropriate encoder on the mixer to make the edit.

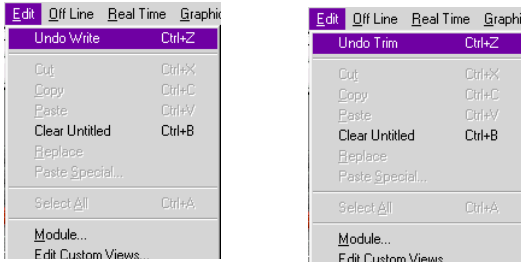
Stop the program material at any time. Rewind and listen to determine if further editing is necessary.

## ***UNDO A PASS AND ABORTING A PASS***

### **Undo (Command Z)**

As you build a mix, each successive pass becomes part of the mix that is held in the computer's RAM and may also be saved to disk.

If you do not wish to keep the last pass, you may Undo the pass by typing Command Z, or selecting Undo from the Edit Menu.



The Edit Menu will indicate Undo Write at the end of a pass in Write Mode.

The Edit Menu will indicate Undo Trim at the end of a pass in Trim mode.

If you decide that you want to keep the pass after performing Undo, type Command Z to Redo the pass.

If Auto Backup was turned on, then the last pass was automatically saved to disk. Selecting Undo does not affect any files saved to disk. To Undo the pass and prevent the pass from being saved to disk, use the Abort feature, described next.

### **Abort**

Abort throws away all moves made during the last pass.

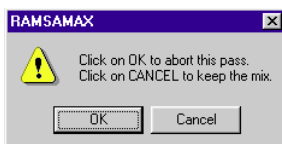
Normally, if you have turned on Auto Backup, MAX automatically saves each pass onto the disk. Aborting a pass also prevents the pass from being automatically saved to disk.

To Abort, press the escape key on the Windows keyboard a little before stopping the program material.

The Abort dialogue gives you the option to either Abort or Keep the last pass.

Click OK to abort the pass.

Click Cancel to keep the pass.

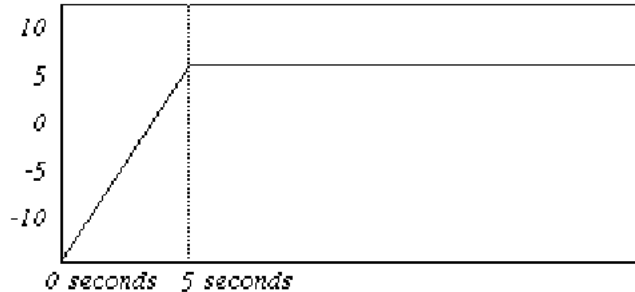




## ***SNAPBACK***

Snapback automatically inserts a fader move event at the end of the pass.

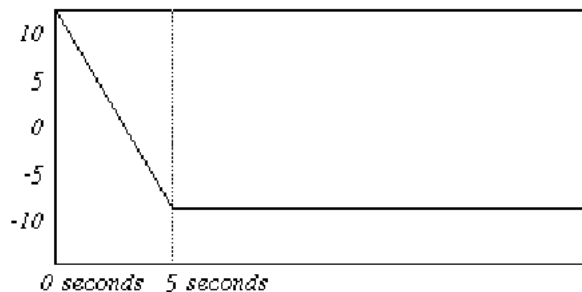
To turn Snapback on or off, open the Preferences dialogue (Edit menu) and select Real Time.



To understand why this might be useful, let's first look at an example of what normally happens, without Snap Back. Suppose that you wrote a fader move and then stopped the tape after, say, 5 seconds. Refer to the figure.

Notice the level at the end of the pass, which is around +5.

Now suppose that on the next pass, you write a different fader move on the same channel. This time the fader is moved down. The tape is again stopped at 5 seconds. Refer to the figure.

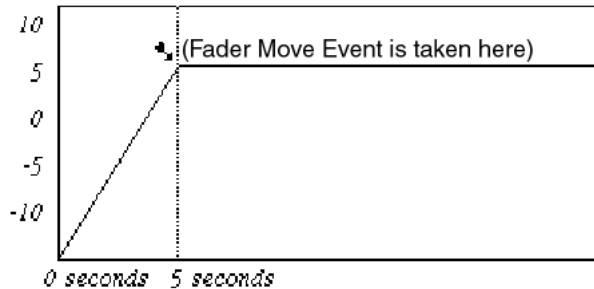


Notice the level at 5 seconds, which is around -8. This level would remain constant for the remainder of the song, until a new fader move is written. But we might have wanted the level to return to +5, after all, we are only trimming the first few seconds of the mix. Why should this fader move have any impact whatsoever on the mix after the first 5 seconds?

Snap Back prevents this from occurring by automatically inserting a fader move event at the end of the pass.

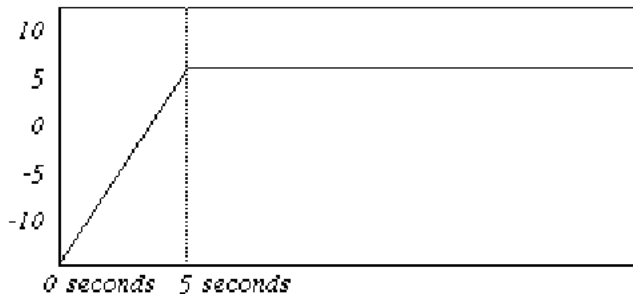
Suppose that Snap Back is checked (on).

Now we will clear memory, and make the first fader move again. Refer to the figure.



This time, when the tape is stopped, a fader move event is taken.

Once again, we write a different fader move on the same channel, and stop the tape.



Now, because there is a fader move event in memory from the previous pass, the original level (around +5) is restored at 5 seconds.

The fader level "Snaps Back" to the position that it had at the frame where the previous pass ended.

## ***Solo Mode***

MAX's Solo mode allows you to hear selected tracks in isolation from the other tracks.

MAX's Solo mode is "destructive" to the mix but "non-destructive" to the mix file.

That is to say, when a track is soloed, all other tracks are turned off. The channel offs, however, are not written into memory, nor are they displayed.

Thus Solo is used while building a mix, but not used during mix down.

### **To Solo Tracks**

First, to select channels you wish to make solo'ed, press SOLO LED button(s) on the DA7 panel, or click SOLO button(s) on the MAX's window.

Then, use the SEL to solo the track or tracks.

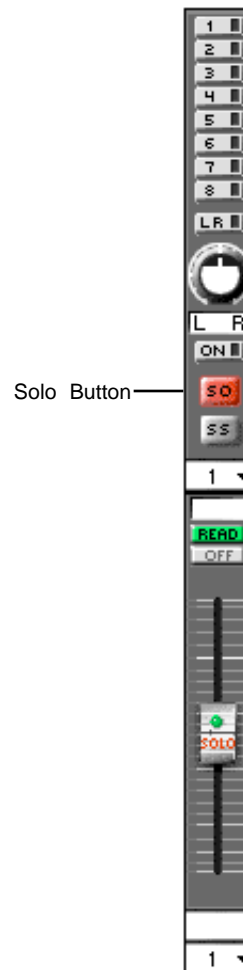
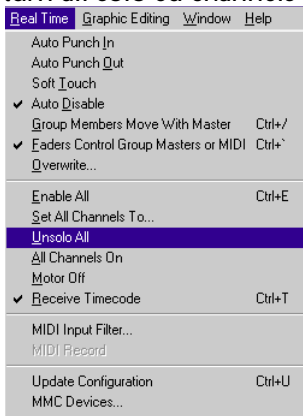
The word "Solo" and a green "LED" will appear on the fader knob of every channel in solo.

All other channels are audibly turned off, though the channel offs are not displayed on the software, nor are they written into memory.

This allows you to write fader moves on one or a few channels, without having to listen to the remaining channels.

### **Unsolo All**

Clicking on the SOLO LED when lit will turn off any solos one by one. Unsolo All command allows you to turn all solo'ed channels off at once.



### **Solo Groups**

Whenever a SoftGroup master is put into solo mode, the members of the group are also put into solo. When the master is unsoloed, the members are unsoloed too.

### **Solo Safe Mode**

When you Solo a channel, any number of “Solo Safe” channels will also go into solo at the same time automatically. When the channel is un-soloed, the Solo Safe channels will also un-solo.

This is used, for example, when you want to solo a vocal and want the effects return channels to also solo at the same time. By setting the effects returns to Solo Safe, the vocal will never be soloed dry because the effects will automatically solo at the same time that the vocal is soloed.

To Solo Safe a channel, click on the Selection menu (the small triangle in the lower right corner of any module in the Custom View). Solo Safe is selected when Solo Safe is checked. Repeat clicking on the “SOLO PFL” button in the Control Bar until it turns to “SOLO IP” (in place).

You can temporarily disable solo safe. If the first channel put into Solo is itself a Solo Safe channel, Solo Safe is disabled. Only that one channel will go into solo. Other channels may then be soloed individually. This allows you to, for example, solo an effects return without having to listen to the vocal being sent to the effect.

Solo Safe applies to individual channels only. You cannot “Solo Safe” a MIDI Fader, SoftGroup, or Grand Master Fader. Solo Safe is dimmed as a menu selection if the fader is not a Channel fader.

## ***CAPTURING MARKERS IN REAL TIME***

Most of the information in this manual up to this point has related to mixing in Real Time, that is, moving faders while time code is being received by MAX. Later in the manual,

MAX's Cue List and Off Line editing will be introduced.

MAX's Markers serve as not only a powerful production tool, but also may be considered an important link between the concepts of Real Time and Off Line mixing.

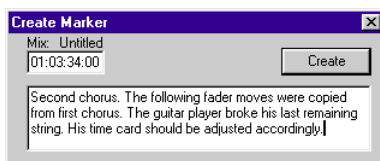
Simply put, a Marker is a location point with text (words) that is inserted into the mix. Markers do not change the way the mix sounds or plays back. Markers are rather like chapter headings, and are invaluable during Cue List mix editing to help you navigate through the Cue List. The Markers make the Cue List easier to comprehend, transforming a list of raw "data" into meaningful information about the mix.

In the Custom View window, if time code is being received, click the MARK button at any time to capture a Marker.



Markers may also be captured by typing Ctrl ;

If time code is not being received, clicking on the MARK button (or typing Ctrl ;) opens the Create Marker dialogue. With the dialogue open, you can type in any text you want and also specify the time that you want it to appear at in the Cue List.



The Marker is automatically added to the Locate Markers and Snapshots menu. It can be quickly selected from the menu, and used as a MIDI Machine Control Locate point.



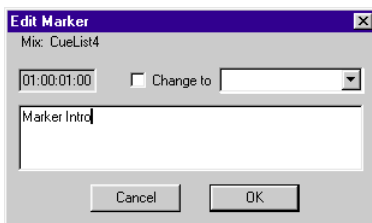
When a Marker is captured in real time, the word "Marker" will appear in the Locate menu (and in the Cue List), along with the exact SMPTE time code corresponding to when you clicked MARK.

You can later change the word "Marker" to any other text, such as "First Verse" or "Second Chorus" or "Scene Change".

Markers may be used as notes to remind you of important edits that may need to be made to the mix later, such as, "Vocal Overdub Needs Pitch Shift Here", or, "Scene Changes to Train Station, remember to insert a Program Change to the digital delay unit which is inserted on the dialogue tracks. Which Effect sounds best?"

Thus you have a means of marking all the important sections or transitions that occur within the mix. This can be used to assist in Cue List editing. These Markers can also simply be printed out (by selecting Print when the Cue List window is opened), and used as a permanent record of the mix or as a reference for program material editing.

Markers may later have their text added to or edited by the Edit Marker dialogue. To edit a Marker in the Cue List, double click on it to open the Edit Marker dialogue.



You may edit the Markers text, or you may convert the Marker into some other kind of automation event, either a Snapshot, Fader move, Channel On/Off, or MIDI Event. This procedure will be described in more detail in this manual in the sections on Cue List editing.

# SOFTGROUPS™

MAX “SoftGroups” feature allows any fader to be a group master.

This immediately expands the power and flexibility of the mixer, by providing an additional 15 groups.

For example, moving fader 2 could simultaneously control the level of channels 2, 4, 5, 6, 19, etc. Group member channels will also follow the group master’s status, if Channel On/Offs, Solo and Panning are changed.

SoftGroups are assigned by **double-clicking on the fader that you want to be the master.**

Then **single click on the faders that you want to assign to the SoftGroup.**

Then press Enter.

Channels assigned to SoftGroups are color-coded for easy recognition.

When a SoftGroup (or the mixer’s Stereo Master fader) is moved, you can chose whether the group members also move along with the master.

To make the SoftGroup members move along with the master, check **“Group Members Move with Master”** in the Real Time menu.

***Notes:***

- Make sure to include both channels, when you assign Stereo channels into a SoftGroup.
- Stereo Linking should be performed on the MAX window, not on the DA7 mixer window, for Stereo Link channels in a SoftGroup.
- For a group master, channels assigned to Stereo or Link can not be selected.

### ***EXAMPLE OF A SOFTGROUP ASSIGNMENT***

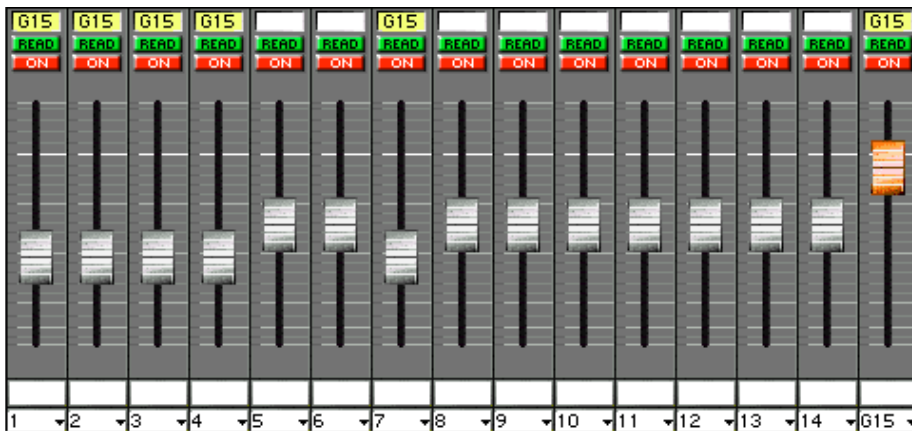
Suppose that you have percussion recorded on tracks 1, 2, 3, 4, and 7, with an overdub on track 15. Say that you want fader 15 to control all the percussion tracks.

(a) Double-click on fader 15. The fader's outline flashes.

(b) Single-click on faders 1 through 4, and 7.

(c) Press Enter

Notice the colored group indicators, G-15, above the channels assigned to SoftGroup 15.



***Note:*** After opening a mix that includes events of SoftGroups, you need to only re-assign the group. Fader level offsets for opening are memorized in MAX.



### ***RE-ARRANGING SOFTGROUPS IN THE CUSTOM VIEW***

In the Custom View, faders may be re-arranged in any order. You may create a screen which displays a SoftGroup master along with all the faders that are a part of the group.

By clicking on the Selection menu in the lower right corner of the module, the pop up menu allows you to change the fader channel number. If any SoftGroups have been created, they appear in a sub menu.

Here is an example, using the same SoftGroup assignments shown in the previous example.

First change the Custom View to a higher screen number, using the Mac's up arrow key, until you reach a blank screen.

Click in the lower right of any blank module.

Select Fader Module from the sub menu.

Select G 15 from the sub menu.

Then click on an adjacent Section menu in an adjacent module.

Select Fader Module.

Select channel 7.

Repeat the process for channels 1 through 4.



MAX provides the ability to see these alternative views of the mix, so that at any given time you are only looking at the information you want to look at, relevant to what you are working on.

## ***REMOVING SOFTGROUP ASSIGNMENTS***

### **Removing a SoftGroup**

Double click on the master fader for the channel that you want to un-assign. Press the Delete key on the Windows keyboard to remove the assignment.

### **Removing members from a SoftGroup**

Double click on the master fader.

Click on the member's fader that you want to remove from the assignments.

## ***IMPORTANT NOTES ABOUT SOFTGROUPS***

Keep in mind that if a SoftGroup fader is at its minimum position, then the level of any channels that are members of the group will also be at minimum.

When a fader is turned into a SoftGroup Master, that fader is automatically part of the group.

In other words, suppose you make channel 2 a SoftGroup master, and assign channel 1 to be part of the group. Moving fader 2 will control both 1 and 2.

The master, 2, is part of the group.

When a fader is turned into a SoftGroup Master, the moves previously made on that fader are preserved.

In other words, say that you wrote a fade-in on fader 2.

Then you turn fader 2 into a SoftGroup Master.

When the mix is playing back, the fade-in will still occur, and it will affect channel 2 only. But any other moves written on SoftGroup Master 2 will affect the overall level of channel 2 and any other faders assigned to the group.

When a fader is turned into a SoftGroup Master, the moves previously made on that fader are displayed independently of the SoftGroup fader moves.

In the moves previously made on that fader are displayed independently of the SoftGroup fader moves.

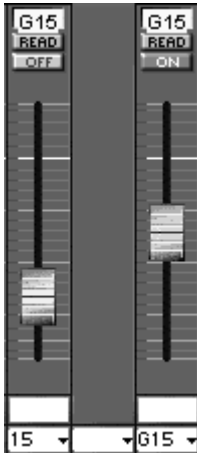
In the Custom View, you may display and edit both the SoftGroup Master fader and the Channel Fader.

Normally, Selecting a Fader with the SEL button enables the individual channel only.

To make the select button enable the SoftGroup master, select "Faders Control SoftGroups or MIDI" in the Real Time Menu.

Shown here is an example of how you would write moves to either the SoftGroup or Channel.

These faders were arranged in the Custom View side by side.



In this example (remember that we were using 15 as a SoftGroup), click on the Selection menu for Channel 16. Change Channel 16 into G15. That allows you to view Channel 15 to the left of SoftGroup 15.

(Since you have removed Channel 16 from one screen of the Custom View, you may want to go to place Channel 16 on another screen of the Custom View. Use the up arrow key to advance to a higher screen, and place Channel 16 anywhere you want it.)

(1) Check "Faders Control SoftGroups or MIDI".

Then use the SEL button to select the fader before writing moves to SoftGroup 15. Fader moves made on fader 15 will affect all channels that are members of the group.

**Note:** Operating parameters on the DA7 other than Faders or Channel On/Offs will not affect, when checked.

(2) Un-check "Faders Control SoftGroups or MIDI".

Then use the SEL button to select channel 15.

Fader moves made on fader 15 will affect channel 15 only.

# SURROUND PANNER

MAX can automate the Panasonic DA7 Digital Mixer's surround panning. You can automate surround panning either in real time or off line.

## ***SURROUND PANNING IN REAL TIME***

To use the mixer's built-in panning patterns, write the moves in real time from the mixer by rotating the encoder wheel.

If you want to write the moves "free hand", in any direction, use the mouse to position the sound in MAX's Panning window.

First, become familiar with the DA7's instructions regarding the use and applications of the surround panning feature. These instructions are located in the DA7 manual.

Prior to writing Surround Panning "moves", you must first setup 3 things within MAX:

First, click on the Overwrite... button to open the Overwrite dialogue box.

Enable Surround.



Next, set the Edit Mode to Write. (type w or use the menu.)

Finally, select the desired audio channel for editing, using the SEL buttons on the mixer, or clicking on the mode buttons with the mouse.

At the start of this chapter we said that there were two ways to enter the panning moves, either from the mixer or from the MAX software.

To enter the moves from the mixer, follow the instructions from the DA7 manual. Position the cursor over the desired pattern in the mixer display, and rotate the encoder.

To enter moves from the software, go to the Windows menu, and open a Panning Module. Use the mouse to position the audio within the Panning Module.

The Panning window features a Channel selection pop up menu. Select the desired channel. You can open multiple Panning modules.

To write the moves, simply start the program material and write the moves by dragging the mouse or rotating the encoder.

### ***STEREO LINK***

If you are using DA7's Stereo Link feature, MAX will recognize the link, and automatically pan the adjacent channel to the channel you are currently mixing.

Only odd number channels are operable on MAX.

If you are writing Surround moves to an odd number channel while Stereo Linked, MAX will automatically also write moves to the channel to the right(even) of the one you are currently writing.

MAX will also recognize your selection of a complimentary panning pattern for the two channels that comprise the Stereo Link.

In the Cue List window, only odd number channels will be displayed for events of the Stereo channels.

### ***PANNING AND SOFTGROUPS***

MAX's Surround Panning automation respects any SoftGroup assignments you have made. Surround Panning moves made to the SoftGroup master will automatically be applied to the member channels.

For example, say that you have turned channel 12 into a SoftGroup Master for channels 1 through 11. To do this, double click on the audio fader in channel 12 in the Custom View.

Then single click on the faders 1 through 11. Press Enter.

From the Windows menu, open the Panning Window.

Select Channel 12.

On the Panasonic DA7 Digital Mixer, observe the Panning Display.

Select channel 12 and the display will automatically show the first 16 channels.

Use the mouse to move the panner. Look at the mixer and notice that channels 1 through 12 are all responding with the same panning moves.

See the previous chapter for more information about SoftGroups.

#### Notes:

- If you desire to use the DA7 to create surround sound panning moves, do it on the DA7 mixer first, before writing or changing the moves on MAX's window.
- If you desire to use MAX to create surround panning moves, first locate the yellow outline that identifies which channel will be selected for panning. It is useful to do this, especially in Tandem operation where it is easier for you not to notice which channel is selected.
- Using MMC buttons in the Custom View or the Graphic View will have the Panning module disappear. If you desire to keep on displaying the Panning module, open the MMC Devices dialogue from the Real Time menu (see page 204) to operate MIDI machines.

# DISK AND FILE OPERATIONS

Mixes may be saved on your hard disk either manually or automatically using Auto-Backup.

To manually save the mix, select Save from the file menu to save the currently active mix to disk.

Select Save as... to save the mix in a different folder, or on a different drive, or with a new name,.

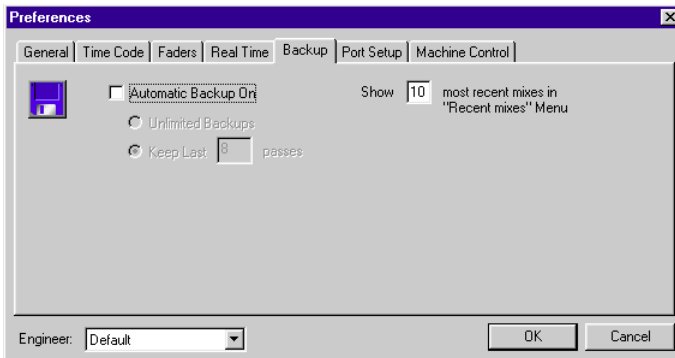
## ***AUTO-BACKUP***

MAX's Auto-Backup feature automatically saves your mix to disk every time MAX stops detecting incoming time code.

Backup may be turned on and off from the Backup button in the Control Bar. You may also turn it on or off in the Preferences dialogue box.



Select the number of "passes to keep" by opening Preferences... from the Edit menu. Select Backup.



Click on either Unlimited Backups, or a number from 1 to 99.

**Choosing Unlimited vs a Fixed Number of Passes**

The number of passes to keep should be selected keeping in mind the amount of available hard disk free space.

Though mix files may vary in size, suppose a small mix file is 100 K. If Auto-Backup is on, and you have chosen to keep "Unlimited", then every time you make any fader move and stop the program material, a 100 K file be saved to hard disk. Do 10 passes and you've consumed 1 meg of hard disk space.

This might not be a concern if you have a 1 Gig free on your drive. But if you only have a 40 Megs free, the disk may become full rather quickly.

**Setting a High Number of Backups**

Setting Unlimited, or a high number such as 99, will give you the advantage of having more versions of your mix available.

Having older versions available from various earlier stages of constructing the mix may be very useful, especially if you like to experiment and try different things.

You may decide to go back and retrace your steps, doing a significant amount of re-mixing. However, if you set Unlimited or a high number, keep in mind the rate at which the hard disk space is being consumed.

**Setting a Lower Number of Backups**

Setting a lower number, such as 8, will assure that a given mix will never occupy too much disk space. Select a low number if disk space is at a premium.

Keep in mind that if a low number is set, you will have less opportunity to retreat to an earlier version of the mix. (You'll have fewer opportunities to say, "Let's re-open the mix as it stood around 2 AM yesterday, I liked the direction we were heading".)

If your disk becomes full, a warning dialogue box will appear informing you that "the mix cannot be saved because the disk is full". The mix, including the last pass, is still in the Windows RAM. You may manually save the mix by inserting a floppy and selecting Save As. Saving to floppies takes longer, but at least you can finish the mix.



## ***AUTO-BACKUP***

### ***Auto Backup Numbering***

Backups are numbered sequentially, that is

[name of mix].1

[name of mix].2

[name of mix].3

[name of mix].4

and so on.

The Auto Backup feature appends an incrementing number to the end of the name of the mix.

MAX will never change the name of any mix.

If you have included a number in the mix name,

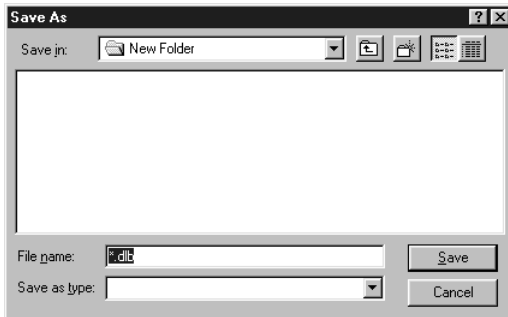
MAX will ignore it.

That is, if you named a mix "my song.1", and then turned on Auto Backup, MAX will save the next pass naming the mix "my song.1.1".

## *Auto Backup Example*

Say you set MAX's Preferences to keep the last 3 passes. Suppose the mix is currently Untitled.

At the end of the first pass, a Save As dialogue box will automatically appear, allowing you to name the mix.



Type a name and press Enter.



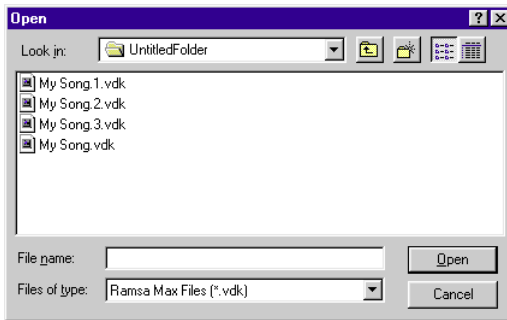
MAX saves the mix automatically appending ".1", as observable in the window's title.

**M.A.X. - my song.1.vdk <Front Panel>**

On the next pass, make some fader or channel on/off moves, stop the program material. The mix is renamed with ".2" and saved.

**M.A.X. - my song.2.vdk <Front Panel>**

Select **Open...** from the File Menu, and observe the names of the mixes that have been saved.



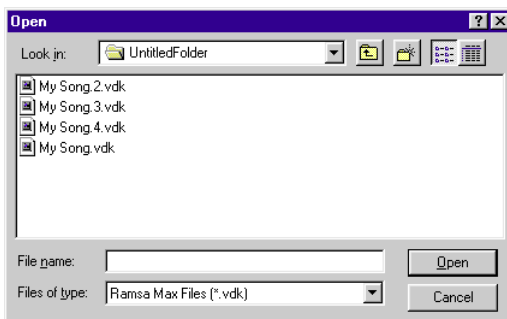
Cancel to exit the Open Dialogue box for now. Likewise, on the third pass, again observe the names of the mixes that you can Open.



But notice what happens on the fourth pass. Again the mix is automatically re-numbered and saved.



Select Open and observe the names of the mixes.



You had set the Preferences to keep the last 3 passes. The mixes have not been re-numbered.

"my song.1" was simply deleted. Likewise on the fifth pass, the mix is automatically saved as my song. 5. "my song.2" will be deleted.

Setting the Preferences to keep a certain number of passes causes MAX to automatically delete older mixes.

### ***MIX BACKUP TREES***

As stated earlier, MAX's Auto Backup feature automatically performs a Save As at the end of each pass, each time renaming the mix with an incrementing number.

MAX's Auto Backup feature starts its numbering over again from .1 after you **Open** a previously saved mix, or manually select **Save As**.

Simply put, suppose you Open a mix already called "Mix.1". Auto Backup is turned on.

The first pass will be saved as Mix.1.1, not Mix.2.

That way, if a mix called Mix.2 already exists, it will not be deleted. The following pass will be saved as Mix.1.2.

In a similar manner, suppose you have a mix named Mix.2. Perform a **Save As**. If you do not change the name of the mix, the standard Windows dialogue box will appear and ask, Replace Existing "Mix.2"?

The next pass will be saved as Mix.2.1, not Mix.3.

That way, if a mix called Mix.3 already exists, it will not be deleted. Then the following pass will be saved as Mix.2.2.

So, performing either a manual "Save As", or Opening a previously saved mix, re-starts the automatic backup numbering over again.

This feature allows you to create mix "Backup Trees".

Starting with a known good mix, you can "branch off" and make as many changes as you want. You can always return to the good version of the mix, without good mixes being deleted. An example follows.

## ***Mix Backup Tree Example***

Suppose Auto Backup is turned on, and set to keep the last 5 passes. Say you've reached a point where you have a good mix of channel on/off's only. Let's call it "mix.7".

Now you make a few more passes, writing fader moves.

Currently on the hard disk are the last 5 passes, say mix.5 through mix.9.

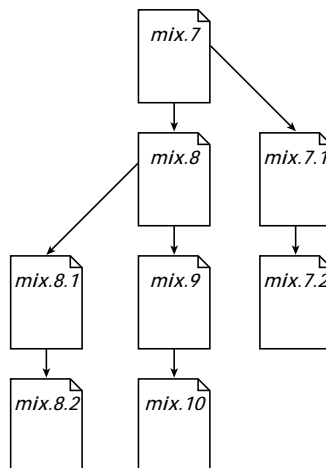
If you continue mixing, in a few more passes mix.7 will be deleted. You want the option of being able to preserve mix.7, that is, the last known good mix of channel on/off's only.

Open mix.7. Do a "Save as" mix.7. You will be prompted, "Replace Existing Mix.7?" Click Replace.

The next backup operation will produce a mix called mix.7.1, then mix.7.2, then mix.7.3, etc.

By performing a manual "Save As" at critical times while you are building a mix, you are free to experiment with different approaches to the mix. You can always retreat to a known, good version of the mix, and start building on it again.

The different versions of the mix can be thought of as a "Tree", with branches consisting of related versions of the mix.

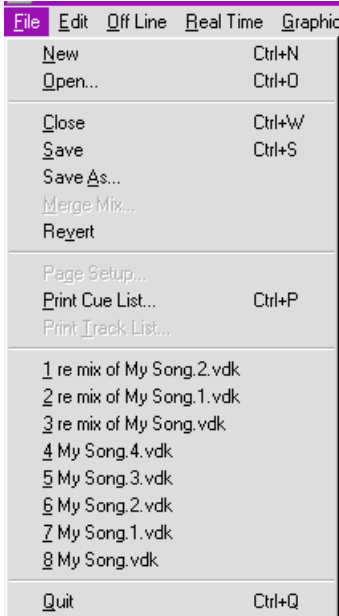


## ***RECENT MIXES***

The Recent Mixes are located under the Print Track List in the File menu.

The names of recently saved mixes are displayed here.

Select a recent mix to open it.



In the Preferences dialogue box (Edit Menu), you can set how many recent mixes will appear in the menu.

To do this, open the Preferences dialogue box, click on the "Backup" folder tab.



Enter the number in the number field, "Show [#] most recent mixes in Recent Mixes menu."

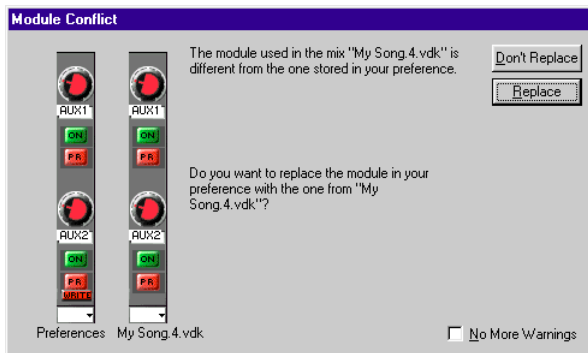
### ***OPENING MIXES WITH DIFFERENT MODULES***

MAX allows the user to edit the appearance and functionality of its modules. (Refer to page 161 regarding editing modules.)

Suppose you have Saved a mix. Then suppose you later edit the appearance or functionality of a module, for example, you have added an extra switch.

Then you Open the mix that was saved prior to editing the module.

A warning dialogue box will appear as the mix is opening.



This dialogue box lets you know that the mix you are opening has a module which, though it has the same name as a module in your current mix, it has a different appearance or different features.

The dialogue box shows you two modules:

On the left is the current appearance of the module, as it is stored in the MAX preference file.

On the right is a picture of what the older module looks like within the mix that you are opening.

The dialogue box is alerting you of this difference, and giving you the opportunity to use the older module or the newer module.

**Don't Replace**

If you click, "Don't Replace", the mix file will be opened normally, and no change will be made to the library of modules or to your preference file.

**Replace**

If you click "Replace", the older module within the mix you are opening will replace the module of the same name in your library of modules stored in the MAX preference file.

This dialogue box will repeatedly reappear for each individual module that has the same name but a different appearance or functionality.

If every module is different, that means that this dialogue box can appear dozens of times.

**No More Warnings**

If you want to Replace or Don't Replace all the modules at once, without having to look at the dialogue box for each module, check "No More Warnings" prior to clicking OK.

The dialogue box will not appear again, until the next time you Open a mix file which has modules different than your current library of modules.



# MAX GRAPHIC VIEW

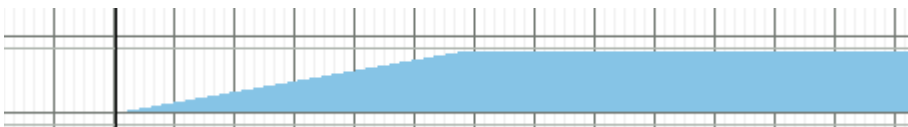
The Graphic View displays the mix as curves on a time line.

This allows you to easily see important information about the mix, which would otherwise not be obvious.

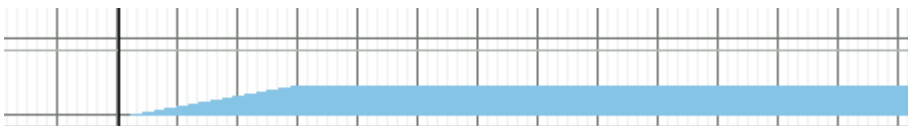
Unlike the Custom View, you can see fader moves “before they happen”, the fader moves that are coming up later in the mix. You can also look at fader moves that have already occurred.

Unlike the Cue List, it is very easy to see how quickly the fader is going to move, and to detect and correct small irregularities in the mix.

A fader moving up looks like this:



The “height” of the curve, how far up it goes, represents the fader position. For example, a fader that has been moved only about half way up looks like this:

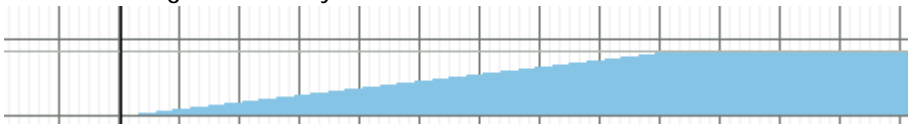


The “slope” of the curve, how steep or gradual it is, represents how fast the fader is moving.

A fader moving up quickly looks like this:



A fader moving more slowly looks like this:



The Graphic View window is intended mainly for viewing and editing a mix that has already been written, and not for writing fader moves while time code is being received.

### **Two Key Features of the Graphic View**

Most graphics-oriented software requires you to select a drawing tool from a “tool box” or “palette” prior to editing. MAX does not require this cumbersome extra step, it is “smart” enough to know when to change the pointer into the appropriate tool, automatically.

Most software with a “time line” displays some sort of time indicator moving across the screen from left to right. When the time indicator gets to the extreme right side of the screen, the whole screen re-draws, and you have to wait. MAX does not work this way.

Instead, the current time indicator is a stationary vertical line, and all the mix graphics move in a smoothly scrolling roll, underneath the stationary time indicator. The effect looks like a chart recorder. This means that you do not have to wait for the screen to redraw.

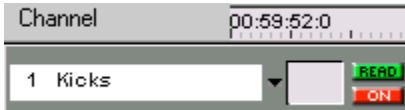
The time indicator can be re-positioned by you. This allows you to select how much of the upcoming mix is visible at any time.

#### ***Notes:***

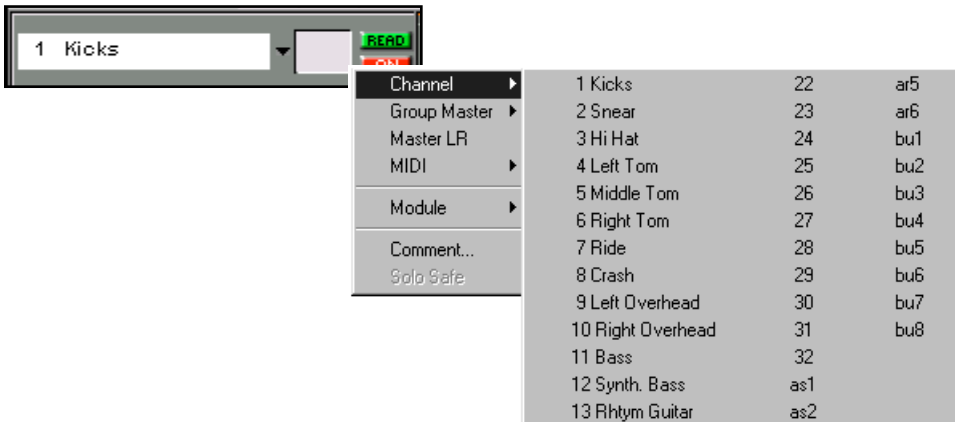
- For fader curves of Stereo, only odd number channels represent and are displayed.
- When inserting an event, for instance Fader moves and Channel On/Offs, right after the Snapshot Events, you need to take a space of 3 seconds to enter the new event. Sending Snapshot to the DA7 mixer will take time.

## ***DESCRIPTION OF THE GRAPHIC VIEW***

On the left side are the numbers and names of the channels.



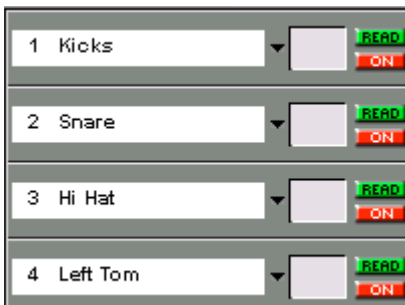
A pop-up menu for each channel allows you to re-arrange the order of the channels.



Use the scroll bar on the extreme right hand side of the window to scroll up or down reveal other channels as necessary.

To the right of the channel name is a SoftGroup member indicator.

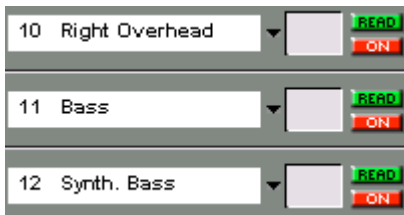
If the channel is part of a SoftGroup, the group master number and color are indicated. Otherwise, if the channel is not part of a SoftGroup, this area is gray.



In this illustration, channels 1 through 3 are part of a SoftGroup. The Soft Group master is channel 1.

Channel 4 is not part of a group.

To the right of the SoftGroup member indicator is the Fader Edit Mode Indicator. This tells you if a given channel is in read, write, trim, or manual.



Notice in this illustration channels 10 and 11 are in trim.

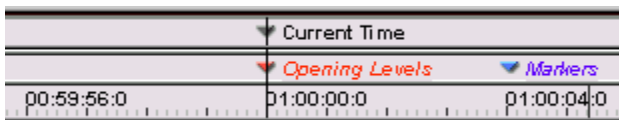
Under the Fader Edit Mode indicator is a Channel On/Off Indicator. This tells you if the state of the channel is on or off. For Stereo channels, only the status of odd number channel is displayed.



In this illustration, channel 13 is off, while channel 14 is on.

The mix information for each channel is displayed horizontally, like a chart recorder.

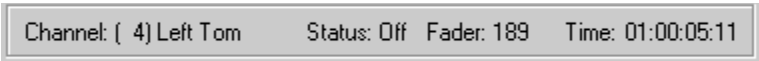
On top is a time line, and there is a user-reposition able current time indicator.



Above the time line there may be user-reposition able Snapshots (red triangles) or Markers (blue triangles.)

Above the Snapshot and Marker area is a rectangular info box. As the pointer is moved over the graphic view, information about the mix events under the pointer is displayed in this area.

The info box shows Channel Number, Name, Status, that is, Channel On/Off or In, Fader Level, and Time.



Channel: [ 4] Left Tom      Status: Off    Fader: 189    Time: 01:00:05:11

The Fader level may be displayed in either numerical data value (as shown here) or dB.

Fader moves are displayed for each channel as blue curves.

Channel On/Off states are represented by horizontal green bars.

### ***CREATING A FADER MOVE***

Use the mouse to position the pointer anywhere within the horizontal region that corresponds to the desired channel. Click once to highlight (select) the channel.

Position the pointer at the desired time within the selected channel. Click and drag the mouse to draw a fader move. When finished, unclick the mouse.

If you wish to redraw a section of the fader move, simply click and redraw the move.

Note: Do not create a fader move on a Linked channel, since faders' offset may be broken.

### ***CREATING A CHANNEL ON/OFF***

For each channel, above the region where fader moves are displayed, is a narrow strip for indicating Channel On/Offs.

Drag to draw a Channel On/Off of the desired duration.

### ***CREATING A NEW MARKER***

Click in area directly above timeline to open dialogue box to create a new marker.

Once in the dialogue box, you may type characters. You may also edit the marker time.

### ***MOVING A SNAPSHOT OR MARKER***

Snapshots (red triangles) or Markers (blue triangles) may be simply dragged to a different time.

***SHOW OR HIDE MARKER AND SNAPSHOT NAMES***

To show or hide marker names, click on the blue triangles.

To show or hide snapshot names, click on the red triangles.

Show or hide can also be selected from the Graphic Editing menu.

***SHOW OR HIDE MARKER AND SNAPSHOT LINES***

To show or hide the vertical lines that extend downward from the markers and snapshots, select Show Lines or Hide Lines from the Graphic Editing menu.

***SNAP TO MARKER***

Snap to Marker, when checked in the Graphic Editing menu, makes it easier to align events to markers in the Graphic view.

When dragging a selected region of fader moves near a marker, the region will snap to (align with) the marker.

When extending or moving a Channel On/Off, the start or end of the Channel On/Off will align to the marker.

## ***GRAPHIC EDITING OF FADER MOVES***

### **Redrawing Fader Moves: Auto Nulling Feature**

When the pointer is anywhere within the horizontal region where channel moves are displayed, a small circle appears on the fader curve. The circle “rides” the channel’s level.

When you move the pointer horizontally, this circle traces the top of the fader curve.

When you click the mouse, and you can begin drawing a fader move. While drawing the fader move, the arrow pointer goes away.

This special feature allows you to freely draw new fader moves without worrying about introducing accidental jumps in level. The pointer doesn’t even have to be lined up with the previously written curve. Clicking the mouse always makes the crosshair automatically start drawing from the level of the previously written curve.

This is a graphic version of auto nulling. Fader moves can be drawn and re-drawn freely at any time, the MAX software automatically takes care of lining up the levels of the new moves with the level of the previously written moves.

### **Smoothing Fader Moves: Auto Smoothing Feature**

As fader moves are drawn, the software smoothes out any small irregularities. It does this automatically when you release the mouse.



**Moving Fader Moves**

You can move a selected region of a fader move to an earlier or later time. First, select a region by Command clicking and dragging on a fader move.

**Drawing Free Hand vs Constrained with Option and Shift.**

Normally, fader drawing is “free hand”, you can draw in any direction with the crosshair.

Hold the Ctrl and Alt keys to set an anchor point.

Continue holding the Ctrl and Alt keys, and drag it with the mouse. This allows you to draw a straight line in any direction. Finish dragging for the end point of the line.

Hold the Shift, Ctrl and Alt keys to set an anchor point.

Continue holding Shift, Ctrl and Alt keys, and drag it with the mouse. This allows you to draw a straight line constrained to multiples of 90°. Finish dragging for the end point of the line.

**Copying and Pasting Fader Moves**

You can copy and paste a selected region of a fader move to an earlier or later time, and/or to a different channel.

First, select a region by Command clicking and dragging on a fader move.

Then Copy the move (Command C.)

Then position the pointer to the position where you want to paste the move, either on the same channel, or on a different channel.

Command Click to produce a flashing I-beam.

Then Paste (Command V) the region.

## ***GRAPHIC EDITING OF A CHANNEL ON/OFF***

### **Moving Channel On/Off**

To move a Channel On/Off, move the mouse pointer over the Channel On/Off bar, anywhere other than the ends.

The pointer is used to drag the whole move.

This makes the Channel On/Off start and end earlier or later, without changing its duration.

### **Lengthening or Shortening Channel On/Offs**

To lengthen or shorten a Channel On/Off, move the pointer over either the very Start or End of the Channel On/Off bar.

The ends of the bar have shaded handles for changing their length. The pointer is used to drag the start and end handles of a Channel On/Off, making it shorter or longer in duration.

### **Splitting Channel On/Offs**

To Split a Channel On/Off into two separate moves, position the pointer over the Channel On/Off bar and Alt Click.

The Pointer splits the Channel On/Off into two or more separate events. New shaded handles appear for each split.

These new individual Channel On/Offs may then be moved, lengthened or shortened as described above.

# MAX OFF LINE OPERATION

## ***CUE LIST EDITING INTRODUCTION***

MAX's Cue List allows very extensive and precise "Off Line" mix editing. The term Off Line is used, as opposed to Real Time, because the time code does not have to be present in order to make these edits.

Automation events that have been written in Real Time are displayed numerically on the Cue List. Individual fader moves and channel on/off's, library events, EQ, pan, aux sends and inserts, dynamics and masters, may be added, deleted, copied, pasted and modified. Whole mixes or sections of a mix can also be manipulated in a similar manner. A whole Cue List can be constructed entirely Off Line, for precision applications such as timed fades for post production.

It is strongly recommended that you first familiarize yourself with various Cue List operations before attempting to apply these operations to a real mix. Though all operations are "un-do-able", you should Save frequently under different file names so that you always have the option, (in the event that confusion develops) of retracing your steps back to a working version of the mix.

It is important that you verify your Frame Rate selection (Edit menu, Preferences, Time Code) so that any moves that you create Off Line will have real frame numbers. For example, suppose you are working with film at 24 frames per second. Setting the Frame Rate to 24 frames per second will make sure that you do not accidentally create events in the Cue List that happen during frames 25 through 29, which do not exist in 24 frames per second.

## ***ABOUT THE OFF LINE MENU***

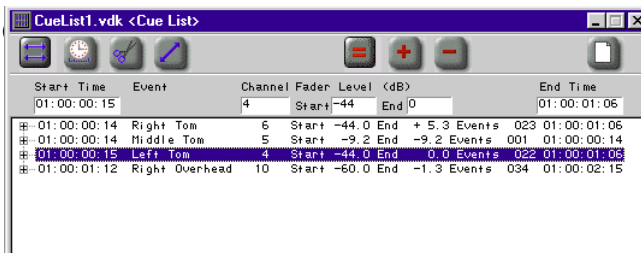
The Off Line Menu relates mainly to the Cue List. Most of the items in this menu are for opening dialogues that allow you to create automation events in the Cue List. When the Cue List is not opened, most of the items in this menu are dimmed.

## ***THE CUE LIST AND A SINGLE FADER MOVE***

Before working with the Cue List for the first time, do the following: Start with a new clear mix, either select Clear from the Edit Menu, or select New from the File menu to open a new Untitled mix.

Start the time code, put a fader into WRITE mode.

(In brief, Open the Overwrite dialogue box and select Faders, then set Edit Mode menu to Write, and then select the Fader with the SEL button.) Move the fader a little in one direction, and then stop the time code.



In the Cue List you should see at least two events.

The first event is a Snapshot, which will be discussed later. The second event is the fader move that you just made.

Look at the detailed information about the fader move:

### **Start Time**

When you started to write the fader move.

### **Event**

What you did, in this case, "Fader Move". If you have previously named your tracks using the Names and Labels dialogue box, the name appears here.

### **Channel**

This is the channel number of the fader move.

### **Fader Level**

The range of the fader level is from  $-\infty$  dB to + 10 dB.

If you have chosen (in the Preferences dialogue box) not to work in dB, the range of faders will be displayed as number from 0 to 255.

The Start Level is where the fader was as you began to move it.

The End level is where it was at the end of the move.

The “Events =” is the number of small “sub events” that comprise the fader move and represent small level changes with respect to frames.

### **Channel On/Off**

If you turn a channel on or off, it is indicated here.

### **End Time**

The time that you stopped writing the fader move.

**Note:** When inserting an event, for instance Fader moves and Channel On/Offs, right after the Snapshot Events, you need to take a space of 3 seconds to enter the new event. Sending Snapshot to the DA7 mixer will take time.

## ***SCROLLING THE CUE LIST***

A mix will usually have so many events that they can not be displayed within the size of the window. Click in the scroll bar on the right of the Cue List to reveal more of the mix.

Clicking on the arrows at the end of the scroll bar shifts the display about 1 event line at a time.

Clicking in the region above or below the scroll box shifts the display by about a third of the visible display, depending on the size of the window.

## CLIPBOARD EDITING

You can already start editing in the Cue List using standard Windows clipboard-style editing.

## SELECTING EVENTS

Click to select (highlight) the event.

#	01:00:13:23	Hi Hat	3	Start	-70.5	End	-13.5	Events	035	01:00:15:10
#	01:00:13:23	Left Tom	4	Start	-80.0	End	-16.4	Events	035	01:00:15:08
#	01:00:13:24	Kicks	1	Start	-70.5	End	-48.0	Events	002	01:00:13:25
#	01:00:13:24	Middle Tom	5	Start	-80.0	End	-12.3	Events	031	01:00:15:09
#	01:00:13:24	Right Tom	6	Start	-90.0	End	-23.2	Events	017	01:00:14:17

Shift-click to select multiple sequential events.

The selection range will be from the first event selected, up to and including the event that is shift-clicked on.

#	01:00:03:05	Guitar Fils	14	Start	-oo	End	+ 0.6	Events	034	01:00:04:08
#	01:00:03:08	Rhythm Guitar	13	Start	-oo	End	-4.0	Events	035	01:00:04:12
#	01:00:03:20	Crash	8	Start	+ 1.3	End	+ 1.3	Events	001	01:00:03:20
#	01:00:03:23	Hi Hat	3	Start	-70.5	End	-13.5	Events	034	01:00:05:10
#	01:00:03:23	Left Tom	4	Start	-80.0	End	-16.4	Events	034	01:00:05:08
#	01:00:04:05	Middle Tom	5	Start	-80.0	End	-12.3	Events	031	01:00:05:20
#	01:00:04:05	Right Tom	6	Start	-90.0	End	-23.2	Events	016	01:00:04:28
#	01:00:04:05	Ride	7	Start	-90.0	End	-28.8	Events	013	01:00:04:18
#	01:00:05:21	Right Overhead	10	Start	-90.0	End	+ 0.3	Events	026	01:00:06:14
#	01:00:05:21	Bass	11	Start	-80.0	End	0.0	Events	024	01:00:06:12
#	01:00:07:05	Kicks	1	Start	-2.8	End	-8.4	Events	010	01:00:10:21

Ctrl-click to pick off discontinuous events.

#	01:00:08:20	Crash	8	Start	+ 1.3	End	+ 1.3	Events	001	01:00:08:20
#	01:00:13:23	Kicks	1	Start	-80.0	End	-60.0	Events	002	01:00:13:24
#	01:00:13:23	Hi Hat	3	Start	-70.5	End	-13.5	Events	035	01:00:15:10
#	01:00:13:23	Left Tom	4	Start	-80.0	End	-16.4	Events	035	01:00:15:08
#	01:00:13:24	Kicks	1	Start	-70.5	End	-48.0	Events	002	01:00:13:25

Type Ctrl A to select all events.

## DE-SELECTING EVENTS

When multiple events are already selected:

Click on any event to select it and de-select the other events.

CCtrl-click to de-select any single event.

To de-select all events, click in any blank area of the Cue List, such as the gray area to the left of the "equals" button.

Once events are selected, use the Edit menu to

Clear, Cut, Copy, Paste, or Replace the events.

**Clear**

Deletes selected events from the Cue List.

Used to remove any event from the mix.

**Copy**

Copies selected events to the Clipboard.

Performed prior to Paste.

**Cut**

Deletes selected events from Cue List, and Copies selected events to Clipboard. Performed prior to Paste.

**Paste**

Pastes contents of Clipboard.

If no event is currently selected, the events in the Clipboard are pasted into the Cue List preserving their original times.

For example, you may copy the fader moves from the first chorus of a mix. Open a new mix, and paste into the new mix an exact copy of the fader moves from the first chorus of the mix.

If any events are currently selected, the time of the first event selected is used as an offset time. Events in the Clipboard are pasted into the Cue List with an offset applied.

For example, you may copy the first chorus of a mix, and paste in an exact copy of the first chorus of the mix into the second chorus of the mix.

**Replace**

Deletes currently selected events and pastes contents of clipboard.



### Paste Special...

Opens the Paste Special dialogue box. Permits you to paste the Clipboard with a manually entered offset of the time, channel, and level.

As an example, say you have channel 3 turn on at a certain time.

01:07:03:00	Channel On/Off	3	On
-------------	----------------	---	----

You want channel 4 to turn on at the exact same time.

Select the channel off event on channel 3. Copy.

Select Paste Special...



Check Channel, + 1, Click OK. Observe the results.

01:07:03:00	Channel On/Off	3	On
01:07:03:00	Channel On/Off	4	On

Select the Custom View window, play the program material or other source of time code, and notice that channels 3 and 4 turn on at exactly the same time.

### Paste Special, Absolute (=) or Offsets (+/-)

MAX lets you work either in absolute values or offset values.

In the previous example, you entered an "offset" of "+1".

(Channel 3+1= Channel 4)

You could have obtained the same result by clicking on "=" and typing a "4".

When applications call for editing in terms of absolute values, click on the equals sign. For example, when you need to Paste Special at a specific time, that is, "This move must happen at one hour."

When applications call for editing in terms of offsets, click on the plus or minus sign. For example, "This move must happen one frame later."

### ***EDIT BAR***

At the top of the Cue List is the Edit Bar.

The Edit Bar contains tool icons and edit fields.



## *Edit Fields*

When you select an event in the Cue List, its parameters are transferred into the edit fields in the Edit Bar. Events may then be edited by typing in new values in the edit fields.

When more than one event has been selected, parameters held in common appear in the edit fields. Parameters with differing values are blanked.

Example of a single fader move selected.

Start Time	Event	Channel	Fader	Level (dB)	End Time
00:00:00:00		3	Start	0	00:00:04:00
00:00:00:00	Fader Move	3	Start	0.0 End +5.0 Events	01600:00:04:00
00:00:00:00	Fader Move	1	Start	-70.5 End +5.0 Events	113 00:00:05:00
00:00:00:00	Channel On/Off	2		On	

Example of a fader move and a channel on selected.

Start Time	Event	Channel	Fader	Level (dB)	End Time
00:00:00:00			Start	End 5	--:--:--:--
00:00:00:00	Fader Move	3	Start	0.0 End +5.0 Events	01600:00:04:00
00:00:00:00	Fader Move	1	Start	-70.5 End +5.0 Events	113 00:00:05:00
00:00:00:00	Channel On/Off	2		On	

Example of two fader moves and a channel on selected.

Start Time	Event	Channel	Fader	Level (dB)	End Time
00:00:00:00			Start	End 5	--:--:--:--
00:00:00:00	Fader Move	3	Start	0.0 End +5.0 Events	01600:00:04:00
00:00:00:00	Fader Move	1	Start	-70.5 End +5.0 Events	113 00:00:05:00
00:00:00:00	Channel On/Off	2		On	

**More About the Edit Fields**

When an event is selected in the Cue List, its parameters appear in the Edit Fields. A cursor automatically appears on the first digit of the time.

To edit a time, type the time in the time field.

Numbers are entered from left to right.

Click or use the arrow keys to move around to different digits within any number field.

Type Backspace to backspace over an entry.

Re-type to correct an entry.

Pressing Enter applies the edit.

The Cue List is re-drawn with the edited values.

Tabbing also applies the edit, and moves the cursor to the next Edit Field.

## ***FADER TOOLS***



The four icons at the top left of the Edit Bar are tools called Move, Scale, Crop, Smooth. After selecting an event in the Cue List, click to select one of these tools before editing a time or level.

A tool icon may be selected “one time”, by single clicking on it. After the edit is performed, Move is automatically re-selected.

A tool icon may be locked in place by double-clicking on it. After the edit is performed, you may continue to make more edits using the same Tool. Double-click on it again to unlock it.

Scale, Crop, and Smooth only affect fader moves.



### **Move**

Say we change the start time of the fader move. Does this mean that you want the whole fader move to start and end later? If the answer is yes, you would have first selected the Move tool. When the Move tool is selected, any change made to the start of the fader move is also automatically applied as an offset to the end time. Likewise, any change to the end time will automatically be applied as an offset to the start time.

So the net effect is that the fader move stays the same length. It just takes place earlier or later.

Move is always selected by default.

Move applies to any kind of event, such as faders, channel on/offs, parameter changes, markers, snapshots, and MIDI events.

If you edit only the start time, the end time is automatically changed the same amount.

If you edit only the end time, the start time is automatically changed the same amount.

If you edit only the start level, the end level is automatically changed the same amount.

If you edit only the end level, the start level is automatically changed the same amount.

**Scale**

Suppose you make a fader move shorter by editing the end time, that is, making the fader move end sooner. But you want the move to start at the same time, and you want to preserve any timing subtleties in the move.

When Scale is selected, MAX can intelligently “squeeze” or “stretch” a fader move, preserving all of the nuances of the move.

If the move was a slow fade in, making the end time earlier with Scale selected turns the move into a quicker fade in.

If you edit the start time, the end time stays the same.

If you edit the end time, the start time stays the same.

If you edit the start level, the end level stays the same.

If you edit the end level, the start level stays the same.

The dynamics of fader move are compressed or expanded.

**Crop**

Crop allows you to shorten the move. If you change end time, making it earlier, the move simply ends sooner.

Suppose that you just want to make a fader move stop at some point. When Crop is selected, when you change the start or end time, the software simply throws away the rest of the move.

For example, if the move is a slow fade in from minus infinity up to 0, making the end time earlier would result in a fade in that stops at some point before reaching 0.

**Smooth**

Smooth causes a straight line to be drawn between the start and end of the move.

If the fader move is erratic, selecting smooth will cause extra steps of resolution to be inserted into the fader move to make the move smoother.

This can be used to smooth an erratic move, even if you are not changing the start or end time. Simply select the move in the Cue List, and choose Smooth Now from the menu.

## OFFSET BUTTONS



Sometimes it is desirable to perform Cue List edits using absolute times, for example, "make this channel on/off occur at 01:02:34:12". Other times it might be desirable to perform Cue List edits in terms of offsets, for example, "make all these channel on/off's happen 2 frames earlier."

The Offset Buttons affect whether the numbers you type in to edit an event will be used as absolute times or offsets.

Equals is selected by default. Equals allows you to enter absolute times. That means any number you enter (level or time) will replace the previous number (level or time.)

Click + and the number that you enter will be used as a positive offset.

Click - and the number that you enter will be used as a negative offset.

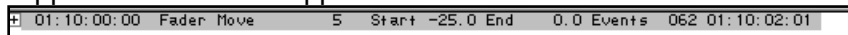
Alternately, typing +, -, or = will select the buttons.

The buttons automatically reset to = after the edit takes place.

If you want to continue to work with offsets, you may lock the button down by double-clicking on it. A locked button will unlock if you single click on it or any other button.

## Example of Move with Offset Buttons

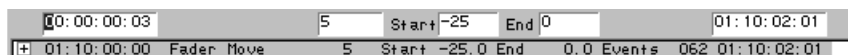
Suppose a fader move happens at 1 hour and 10 minutes.



To make the same fader move happen 3 frames later, type in the Start Time field: 00 00 00 03. Then click on +.



Press Enter.



## VIEW “DOCUMENT” ICON



View Events allows you to shorten the Cue List by displaying only selected prior to editing or printing.

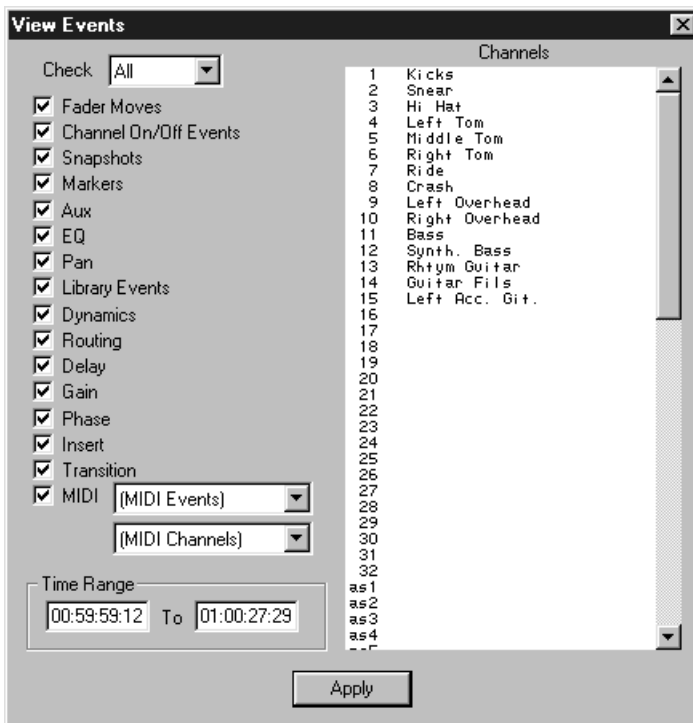
Clicking on the document icon in the upper right of the Cue List toggles you from viewing a filtered or unfiltered display, depending on the settings in the View Events dialogue box.



If the View Events dialogue hasn't been opened yet, that is, if no View Events criteria have been set by the user for this particular mix, then clicking here opens the View Events dialogue box.

## VIEW EVENTS DIALOGUE

This dialogue box is normally opened by selecting View... from the Off Line



The dialogue makes the Cue List easier to read by letting you specify which events in the Cue List may be viewed. Events not viewed are still part of the mix, but are “filtered” out of the Cue List so that they may not be seen or selected.

(Before going any further, it may be helpful to point out that the channel names that appear in these pictures were entered in the Names and Labels dialogue box in the Edit menu.



## Example of View Events

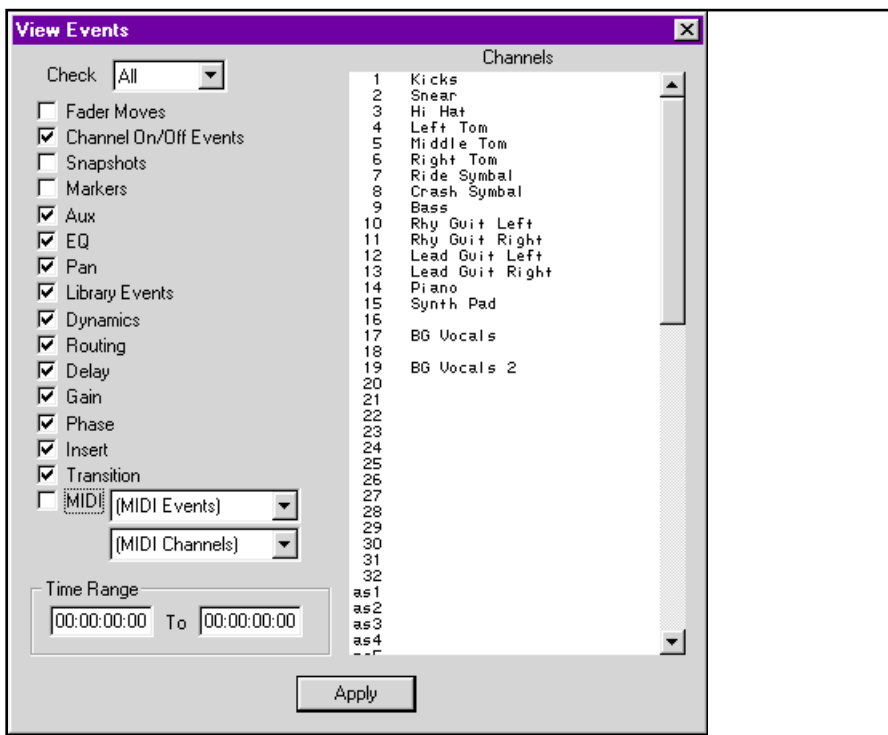
Say that you have a long mix consisting of thousands of events.



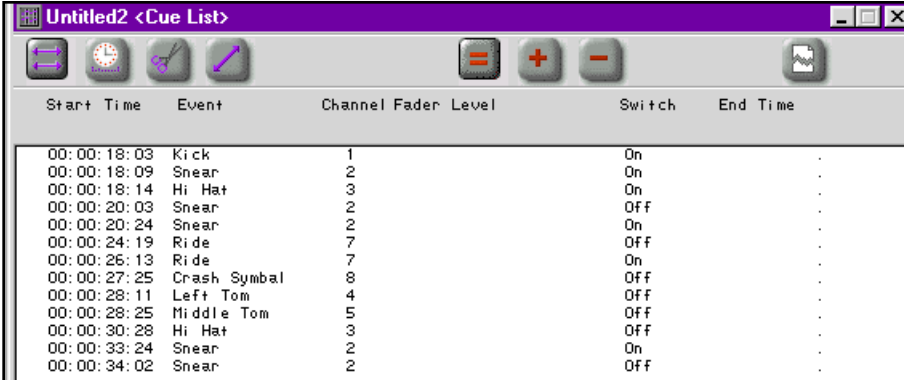
Say that you want to look at only the channel on/off's.

Open the View Events dialogue.

Uncheck Fader Moves, Snapshots, Markers and MIDI. Click Apply.



Observe that the Cue List now only shows channel on/off.

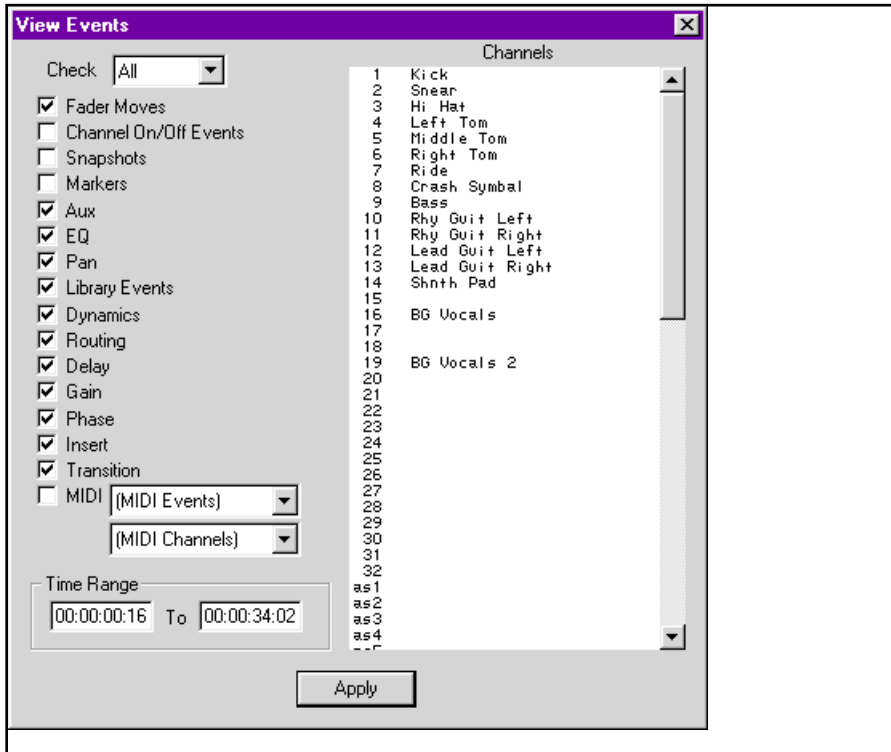


Start Time	Event	Channel	Fader	Level	Switch	End Time
00:00:18:03	Kick	1			On	.
00:00:18:09	Snear	2			On	.
00:00:18:14	Hi Hat	3			On	.
00:00:20:03	Snear	2			Off	.
00:00:20:24	Snear	2			On	.
00:00:24:19	Ride	7			Off	.
00:00:26:13	Ride	7			On	.
00:00:27:25	Crash Symbal	8			Off	.
00:00:28:11	Left Tom	4			Off	.
00:00:28:25	Middle Tom	5			Off	.
00:00:30:28	Hi Hat	3			Off	.
00:00:33:24	Snear	2			On	.
00:00:34:02	Snear	2			Off	.

The rest of the mix is still there, it just is not displayed.

Now say that you want to really remove all the fader moves from the mix but keep the channel on/off.

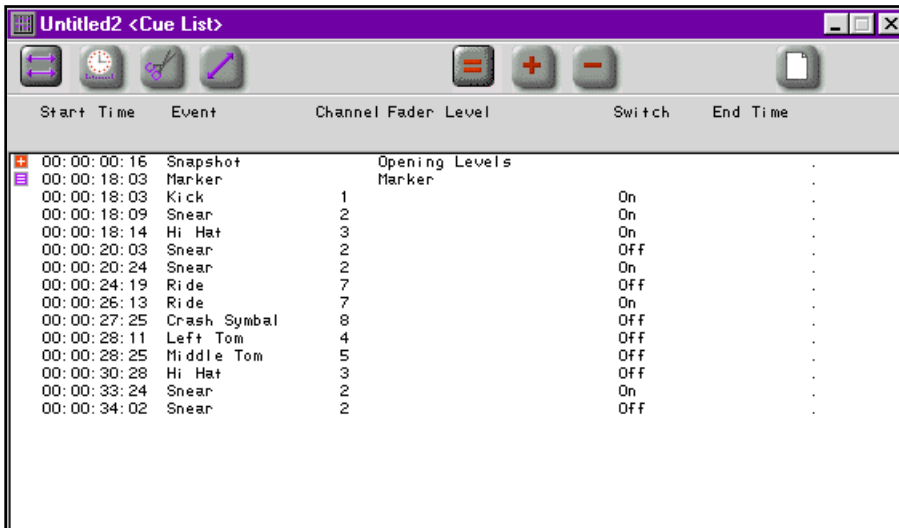
Check Fader Moves and uncheck Channel On/Offs.



Click Apply.

To remove all the fader moves, select Clear.

Click the View document icon to see all the events in the mix, which now has no fader moves in it.



Start Time	Event	Channel Fader Level	Switch	End Time
00:00:00:16	Snapshot	Opening Levels		.
00:00:18:03	Marker	Marker		.
00:00:18:03	Kick	1	On	.
00:00:18:09	Snear	2	On	.
00:00:18:14	Hi Hat	3	On	.
00:00:20:03	Snear	2	Off	.
00:00:20:24	Snear	2	On	.
00:00:24:19	Ride	7	Off	.
00:00:26:13	Ride	7	On	.
00:00:27:25	Crash Symbal	8	Off	.
00:00:28:11	Left Tom	4	Off	.
00:00:28:25	Middle Tom	5	Off	.
00:00:30:28	Hi Hat	3	Off	.
00:00:33:24	Snear	2	On	.
00:00:34:02	Snear	2	Off	.

View Events may also be used to assist in finding and selecting a single channel or a few channels prior to editing.

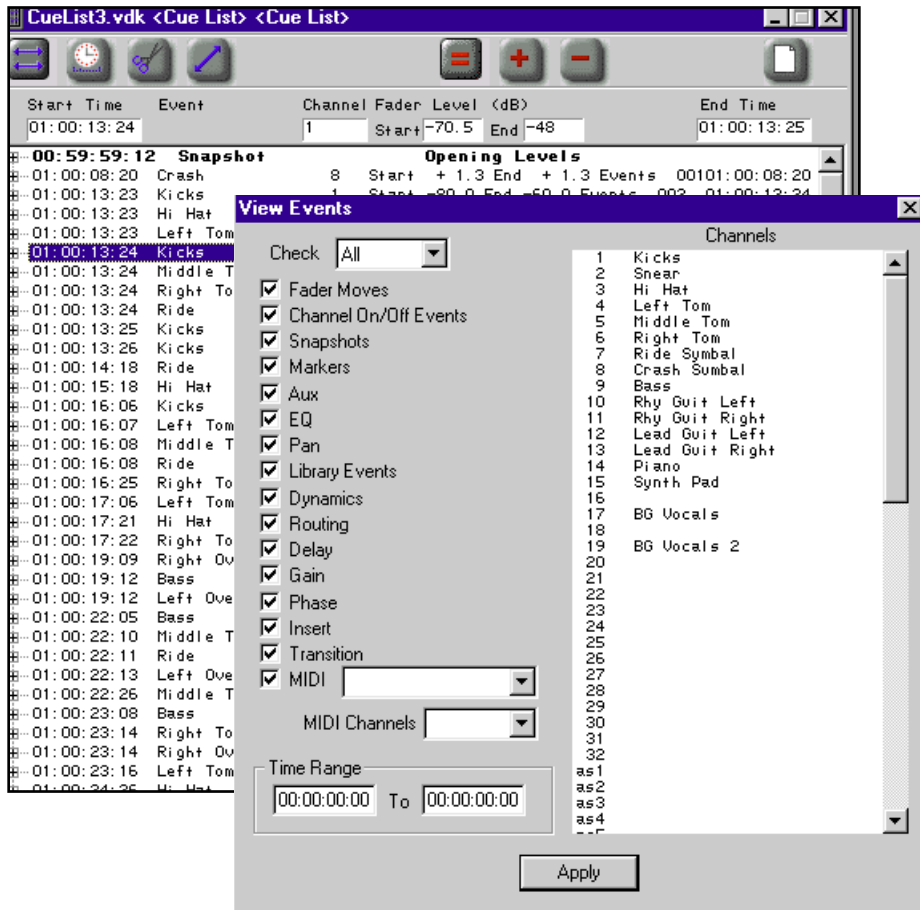
For example, say that you want to edit a fade out on channel 1 only.

Open View Events, and click to select Channel 1 only.

Then select a time range that the fade falls between.

Click Apply.

## About the View Events Dialogue



### Check All

If the desired view of the Cue List has only a few events filtered out, first Check All, then proceed to filter out the unwanted events.

### Check None

If the desired view of the Cue List has most events filtered out, first Check None, then proceed to add back in the events that you want to view.

**Check Which Event Type you Want to View:**

- Fader Moves
- Channel On/Offs
- Snapshots
- Markers
- MIDI (Select the Command and MIDI Channel)

**Select a Range of Time.**

Type the start and end time of the region of the mix that you wish to view.

**Select Channels**

Click to select specific channels.

Shift-click to select a sequential range of channels.

Ctrl-click to select or de-select any combination of channels.

Scroll to reveal more channels.

Channels are listed first, followed by MIDI faders, SoftGroups, and the Stereo Master.

## ***PERFORMING CUE LIST EDITS WITH EDIT BAR***

Here is a brief summary of the procedures involved in editing a mix in the Cue List using the Edit Bar.

### **Select Events**

Click, Shift-click, or Ctrl-click to select the event or events that you want to edit.

The View Events dialogue may be used to shorten the Cue List and assist in selecting specific events.

### **Select a Tool and Offset Button**

By default, Move is selected.

By default, Equals is selected.

### **Edit the Event**

Click on an edit field.

Type to change the time, level, or channel.

### **Apply the Edit**

The edit takes place when you press Enter, or when you tab away to the next field, or when you click on another event, or when you select the [Move, Scale, Crop, Smooth] Now from the Off Line menu.

### **To Undo the Edit**

Select Undo from the Edit menu, or type Ctrl Z.

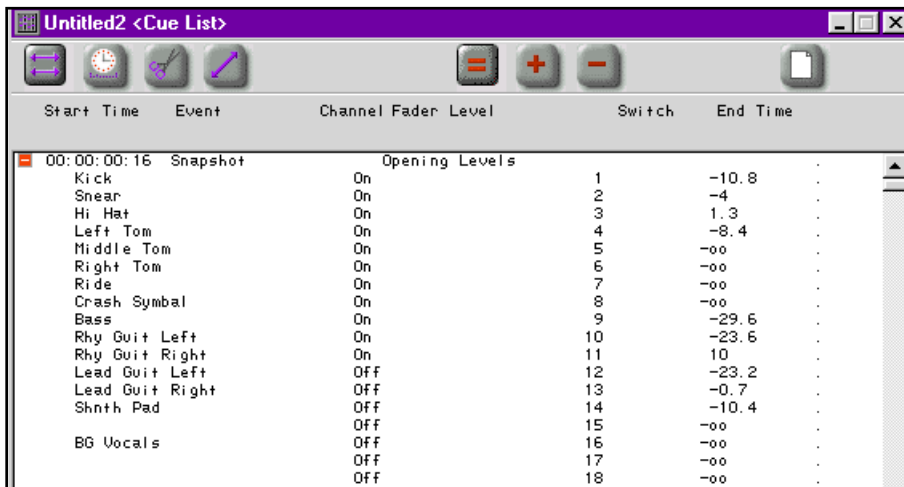
After an edit, Move and Equals are automatically re-selected, unless you first "lock-down" one of the other buttons down by double-clicking on it.

A locked button will unlock if you single click on it or any other button.

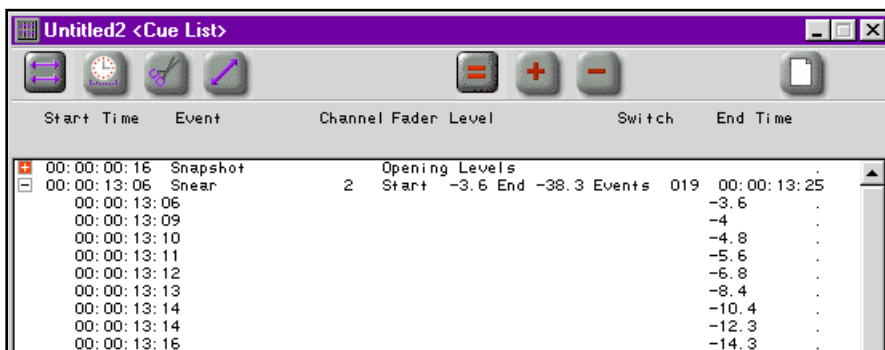
## OUTLINE VIEW “PLUS + MARK”

Clicking on the + mark reveals the sub events.

Snapshot sub events may not be selected and edited in the edit fields.



Fader sub events are dimmed, since they can be observed only and are non editable.



## ***CREATING AND EDITING MARKERS OFF LINE***

A Marker is simply text that you type, inserted into the Cue List at a selected time.

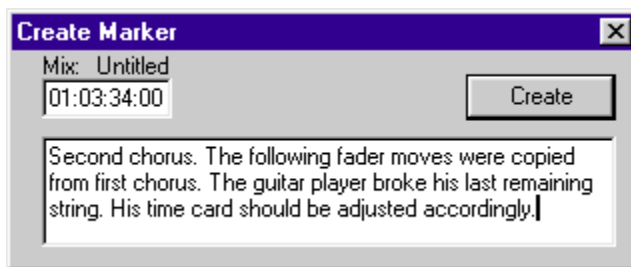
In the “Real Time” section of this manual it was shown how Markers can be captured on the fly and inserted into the Cue List while time code is being received.

Markers are useful for marking significant sections of the mix, such as, ‘First Chorus’, “Third Verse”.

Markers may also be used as notes to remind you of important edits that may need to be made to the mix later, such as, “Vocal Overdub Needs Pitch Shift Here”, or, “Scene Changes to Train Station, remember to insert a Program Change to the digital delay unit which is inserted on the dialogue tracks. Which Effect sounds best?”

Open the Create Marker dialogue box by selecting Create Marker from the Off Line menu.

Alternately, you may type Ctrl-; or click the MARK button in the Control Bar.



In the Create Marker dialogue box, you type in the desired text and specify a time. Press Enter or click Create to insert the Marker into the Cue List.



Markers in the Cue List that have been “captured” in Real Time are simply called Marker.

They do not have any special text associated with them yet.

When a Marker is selected in the Cue List, only part of its text is displayed in the edit field.

Markers may have their text added or edited by the Edit Marker dialogue box. To edit a Marker in the Cue List, double click on it to open the Edit Marker dialogue box. Then you can simply text-edit the Marker, by typing or deleting text.

You may also convert the Marker into some other kind of automation event, either a Snapshot, Fader move, Channel On/Off.

If a Marker is changed into a fader move or channel on/off, it loses its associated text.

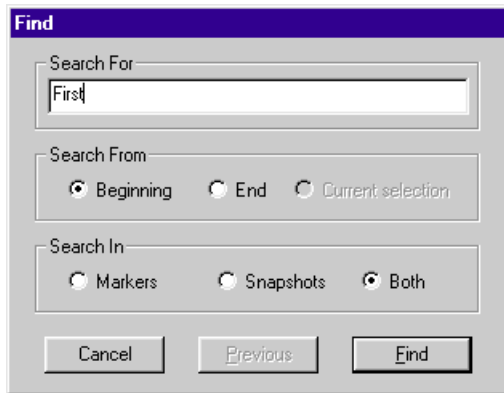
Markers may be found quickly by using the Find and Find Again ctrls in the Off Line menu.

## ***FINDING MARKERS***

Markers help you quickly locate a specific section of the Cue List without having to manually scroll.

You can find Markers using the Find Dialogue.

Type Ctrl F to open the Find dialogue.



You need not type the whole word.

Just type enough of the first letters to distinguish the text.

For example, if there is only one Marker that begins with the letter F (such as First Verse), simply typing the letter "F" and the Enter key is enough to find the marker.

The Find dialogue box permits search from beginning of Cue List, from the end of the Cue List, or within the current selection.

A search may be made of Markers, Snapshots, or both.

Clicking Previous searches back in Cue List for the previous occurrence of text.

Type Ctrl G to search for the next occurrence of the text which had previously been selected using Find. This is a shortcut method for searching in that it does not open the Find dialogue box again.

## ***CREATING AUTOMATION EVENTS OFF LINE***

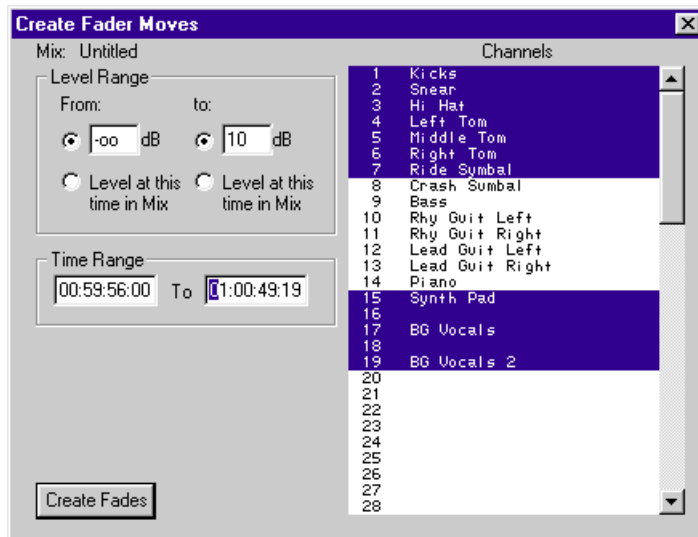
The Create dialogues in the Off Line menu allows you to insert new events into the Cue List.

This is very useful in post production, because it allows you to create precision fade-ins and fade-outs simply by specifying a start and end time, (just as you would specify an “In point” and an “Out point” in an Edit Decision List).

In the Create dialogues, the current mix name is displayed. If you have multiple mixes open, this will help you keep track of which Cue List will receive created events.

In the Create dialogues, when selecting a Channel from a scrolling list, the channel names and numbers will appear if names have been previously entered in the Names and Labels dialogue box.

## Create Fader Moves



### *Level Range*

Specifies the starting and ending levels for the fader move.

Fader levels may be entered either in dB or a number from 0 to 255.

To edit in dB, open the Preferences dialogue box (in Edit menu.) Click to select Faders.

Check the box "Edit Fader Positions in dB."

When you enter a dB value, the closest actual allowable value will be substituted.

To enter the minimum level in dB mode, enter "-100", which is the  $\infty$  sign.

Click on "At this time" for the start level of the move, and

MAX will automatically find the level of the fader at the specified time and use it as the level at the start of the move.

Click on "At this time" for the end level of the move, and

MAX will automatically find the level of the fader at the specified time and use it as the level at the end of the move.

***Time Range***

Enter the times when the fade starts and ends.

***Select Channels***

To the right of the dialogue box is the channel selection list.

Click to select which channels will have fader moves created. Shift-click to select a continuous range of channels. Ctrl click to select or de-select multiple discontinuous channels.

Press Enter or click Create to create the Fades.

**Example**

To create an 8 second fade-out on channels 1 through 16, except channel 3: Click on channel 1. Scroll down to reveal channel 16. Shift-click on channel 16.

This selects channels 1 through 16.

Ctrl click on channel 3 to de-select it.

Enter the start and end times of the fade.

For the start level, Click on "At this time".

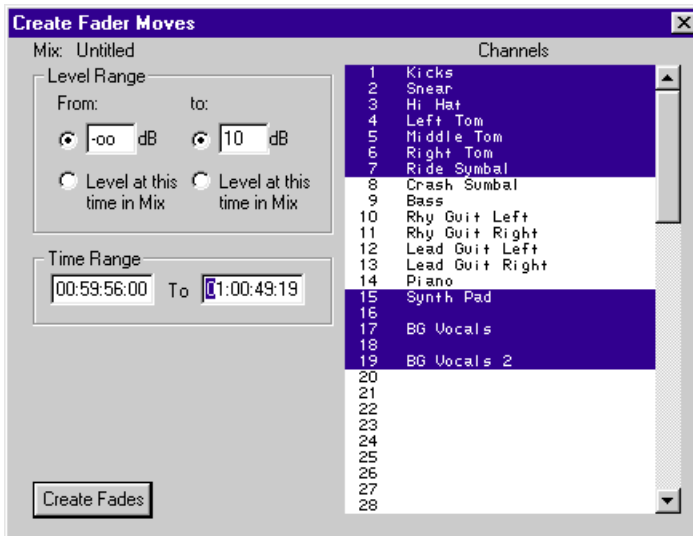
For the end level, type 0 if working in numbers 0-255.

For the end level, type  $\infty$  (-100) if working in dB.

Press Enter or click Create to create the Fades. Observe the created fades in the Cue List.

## *Create Channel On/Off Events*

### Select Channel On or Off



### *Time*

Enter the time that the Channel On/Off or In occurs.

Channel On/Offs are entered in Hours, Minutes, Seconds, and Frames.

### *Select Channels*

To the right of the dialogue box is the channel selection list.

Click to select which channels will have Channel On/Offs created.

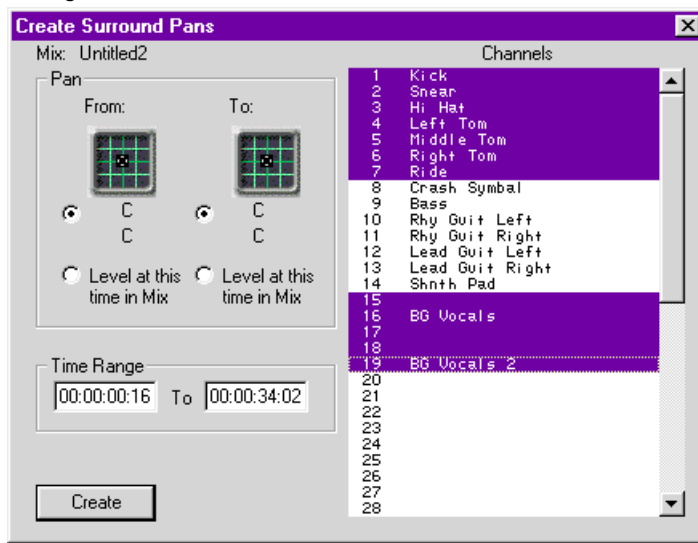
Shift-click to select a continuous range of channels.

Ctrl click to select or de-select multiple discontinuous channels.

Press Enter or click Create to create the Channel On/Offs.

## Create Surround Pan Events

To create Surround Pan events, open the Create Surround Pan Events dialogue box.



### Pan Position

Specifies the starting and ending position for the pan move.

Use the mouse to set the starting and ending positions.

These are also displayed numerically, using the same convention that the mixer uses, namely:

Left 16 through 1, C for Center, Right 1 through 16.

Rear 16 through 1, C for Center, Front 1 through 16.

Click on "At this time" for the start position of the move, and MAX will automatically find the position of the channel at the specified time and use it as the start of the move.

Click on "At this time" for the end position of the move, and MAX will automatically find the position of the channel at the specified time and use it as the end of the move.

***Time Range***

Enter the times when the pan starts and ends.

***Select Channels***

To the right of the dialogue box is the channel selection list.

Click to select which channels will have surround pan moves created. Shift-click to select a continuous range of channels. Ctrl click to select or de-select multiple discontinuous channels.

Press Enter or click Create to create the pans.

Notice how the Pans events appear in the Cue List.

They can be cut, copied, pasted, paste special, and moves.

Like the fader moves, they have a small Plus + mark. Click on the Plus + mark to expand the observe the sub events that comprise the move. (The sub-events are dimmed because they are not editable.)



## Create Parameter Change

Parameter Changes include such things as Aux Send levels, Pan, EQ settings, and Dynamics settings.

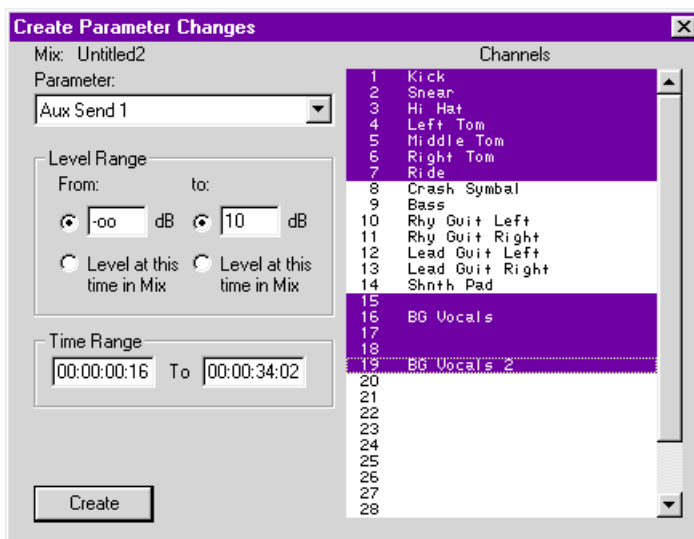
A Parameter Change means a continuous change.

In the Create Parameter Change dialogue box, you can create the equivalent of an automated knob.

For example, you can cause the EQ settings for a given channel to gradually change their frequency with respect to time.

(If you want to create a Switch event, such as EQ on and off, use the Create Switch Events dialogue, discussed in the next section.)

To create a Parameter Change, after opening the dialogue box, select the desired Parameter from the Parameter menu.



Enter a starting and ending value for the parameter.

Send levels are entered either in dB or a number from 0 to 255.

To edit in dB, open the Preferences dialogue box (in Edit menu.) Click to select Faders. Check the box "Edit Fader Positions in dB." When you enter a dB value, the closest actual allowable value will be substituted.

To enter the minimum level in dB mode, type “-100”, which is the  $\infty$  sign.

Click on “At this time” for the start level of the move, and MAX will automatically find the level of the send at the specified time and use it as the level at the start of the move.

Click on “At this time” for the end level of the move, and MAX will automatically find the level of the send at the specified time and use it as the level at the end of the move.

### ***Time Range***

Enter the times when the change starts and ends.

### ***Select Channels***

To the right of the dialogue box is the channel selection list.

Click to select which channels will have switch events created.

Shift-click to select a continuous range of channels.

Ctrl click to select or de-select multiple discontinuous channels.

Press Enter or click Create to create the events and insert them into the Cue List.

## Create Switch Events

Switch Events include such things as EQ on/off, Aux Send Pre/Post, etc.

In the Create Switch Events dialogue box, you can create the equivalent of an automated switch, not a knob.

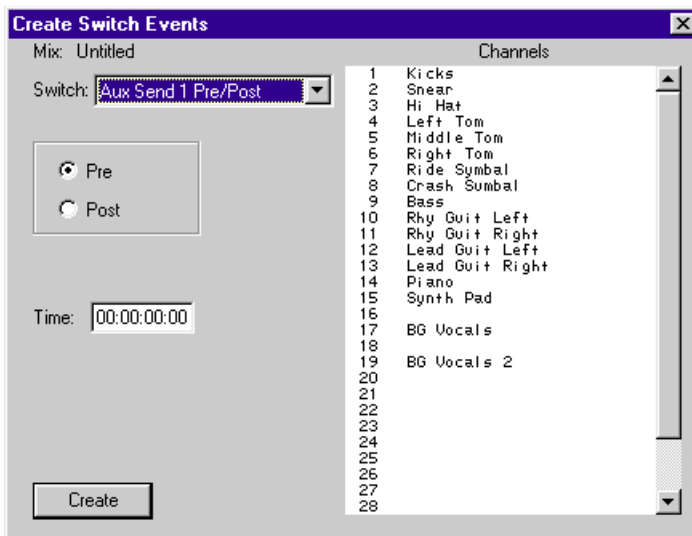
For example, you can cause the EQ to turn on or off for a given channel at a specific time.

(If you want to create a continuous event, equivalent to turning a knob, such as a changing EQ frequency setting, use the Create Parameter Change dialogue box, discussed in the previous section.)

Switch Events are created just like Channel On/Off events.

(In fact, Channel On/Off events are Switch Events.)

After opening the dialogue box, select the desired type of switch event from the switch event menu. Select On or Off.



***Time***

Enter the time that the Switch Event occurs.

Times are entered in Hours, Minutes, Seconds, and Frames.

***Select Channels***

To the right of the dialogue box is the channel selection list.

Click to select which channels will have switch events created.

Shift-click to select a continuous range of channels.

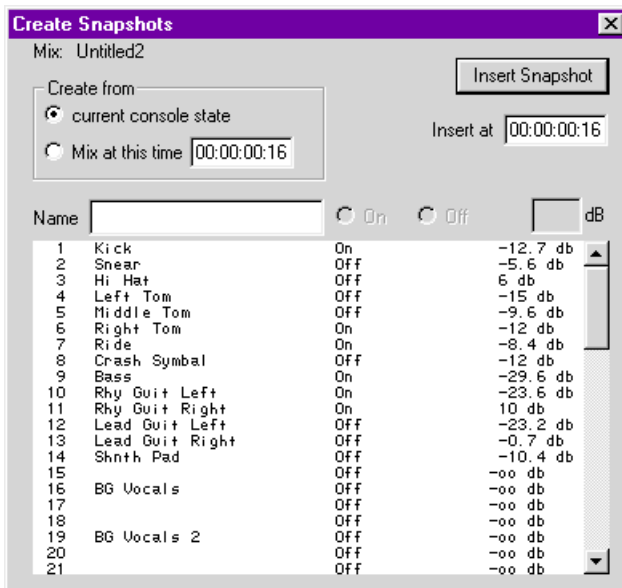
Ctrl click to select or de-select multiple discontinuous channels.

Press Enter or click Create to create the events and insert them into the Cue List.

## Create Snapshots

MAX's snapshot dialogue will either capture the current state of the mixer, or, the state of the automation at some point in time of the mix.

The fader values and channel on/off's displayed will change in real time: move a fader on the mixer and the number in the dialogue box changes.



Click on a channel to edit the values for that channel.

You may type a name for the Snapshot. Later, you can Find the name using the Find dialogue.

Type a time and press Enter or click Insert Snapshot to create the snapshot.

### **More About Snapshots**

MAX automatically takes one snapshot on the first pass after clearing memory.

The snapshot time is equal to the first time code received.

For example, clear the mix from the edit menu. Start the time code source at 0. Turn a channel off at 5 seconds. Stop the time code. Look at the Cue List.

There will be two events in the Cue List.

There is a Snapshot at 0, and a Channel Off at 5 seconds.

The snapshot is only taken if a move is made.

For example, clear the mix from the edit menu. Start the time code source at 0. Do not make any fader moves or channel on/off moves. Stop the time code. Look at the Cue List. There will be no events in the Cue List.

The mix must begin with a snapshot. You can confirm this by looking in the Cue List, the very first event will be a snapshot. Do not write moves before the first snapshot.

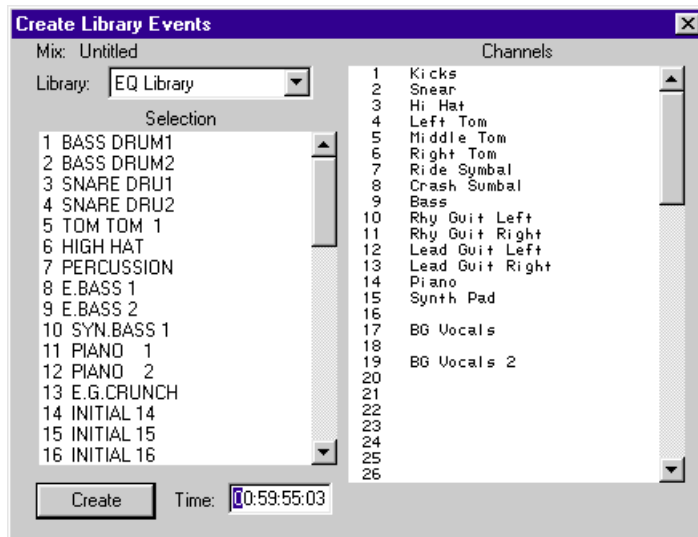
You may edit this snapshot in the Cue List. Click on the "Plus + mark" to view and edit the level and on/off state of each channel. If you delete the first snapshot, be sure to replace it using the Create Snapshot dialogue box.

## ***Create Library Events (Dynamics, EQ, and Effects)***

The Panasonic WR-DA7 Digital Mixer features extensive Libraries of Channels, Dynamics, and EQ settings.

“Library Events” may be created in the Cue List. These cause

MAX to send ctrls to the mixer, at user-specified times, causing the mixer to automatically recall and apply the desired Library setting.



After opening the dialogue box, first select from the Library menu.

The names of the Library entries are displayed in the left column. Click to select the desired Library name.

Then click to select the channel or channels which will be affected by the Library event. Shift-click to select a contiguous range of channels, ctrl-click to select any combination of channels.

Type the time that you want the event to occur, and click Create to create the events and insert them into the Cue List.

## Create MIDI Events

**Create MIDI Events**

Mix: \_\_\_\_\_

Type: **Notes**

Instrument: **MTPAV: Out 1**

**Create**

**Notes**

Note Name: **C**

Octave: **3**

Note #: **60**

"C3"

Velocity: **100**

On Time: **00:00:00:00**

Off Time: **00:00:00:00**

**MIDI Channels**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16

Select MIDI Channel

MIDI Channels range from 1 to 16.

Select Type of MIDI Event

Select Notes, Poly After Touch, Control Change, Program Change, Mono Aftertouch, Pitch Bend, Song Select, or Real Time.

Enter Event Parameters

The parameters depend on the type of command, such as Note Name and Octave, Pitch Bend Amount, etc.

Enter Time

Some MIDI commands have just a Time (such as a Program Change).

Other MIDI commands have both an On Time and an Off Time (such as Notes).



## ***TRANSITION BETWEEN SNAPSHOTS***

A “Transition Event” may be inserted between two Snapshots.

A Transition Event consists of fader moves, that Transition or “dissolve” between the audio channel levels in each Snapshot.

To create a Transition Event, first select two Snapshots in the Cue List. Then select Transition Between Snapshots from the Off Line menu. This inserts the Transition Event. The actual fader moves that comprise the event may be viewed by clicking on the Plus + mark to the left of the event.

The time that the transition starts is prior to the second Snapshot. The time may be user set in the Preferences dialogue box. To change the time, select Preferences from the Edit menu. Then click on the Faders tab. Type the time in the Transitions Between Snapshots field. The time is entered in frames.

For example, if your current frame rate is 30 frames per second, then 30 frames is the same as 1 second, 60 frames is 2 seconds, etc.

Suppose your second Snapshot starts at 00:01:00:00. If you want the transition to start at 2 seconds before the second Snapshot, enter 60 frames in the Preference.

For example, if your current frame rate is 24 frames per second, then 24 frames is the same as 1 second, 48 frames is 2 seconds, etc.

**Note:** Any fader events should not exist between the two Snapshots where you try to insert a Transition Event.

## ***MERGE MIX***

Merge Mix allows you to combine a previously saved mix with the current mix. The previously saved mix is “merged” into the Cue List of the mix you are currently working on.

In other words, Merge Mix is a short cut which combines all the following operations:

Open, opens a previously saved mix,

Select All, selects every event in its Cue List,

Copy, copies every event,

Paste, pastes the previously saved mix into the Cue List of the mix you are currently working on.

Merge Mix is found in the file menu. It is only available when viewing the Cue List. Merge Mix is dimmed when viewing the Custom View.

This feature allows you to save different parts of a mix as different files, and later re-combine them to suit the needs of differently edited versions of a song.

Merge mixing may also be used to create separate Fader and Channel On/Off Cue Lists, and later combine them.

For various versions of a dance mix, for example, you could first use View Events to isolate the channel on/off.

Select All, Copy, and Paste the Channel On/Offs into a New mix.

Save. Re do the channel on/off in the old mix, and again,

Select All, Copy, and Paste the channel on/off into a New mix.

Repeat this process to create several different mix files of Channel On/Offs only. These files can later be merged into the file of fader moves, allowing a client to pick the most effective dance re-mix.

***Note:*** Click on the View Filter to turn it off, before you start Merge Mix.

## ***Merge Mix Example***

Suppose the Cue List is showing events that take place between, say, 00:00:00:00 and 00:07:00:00.

Suppose a previously saved mix file has events that take place between 00:03:00:00 and 00:07:00:00.

If this mix file is merged, the moves from the merged file will be “dropped in”, that is, inserted into the Cue List around moves that are already in the current Cue List.

After the merge is complete, the events from the merged file will remain selected (highlighted). This permits you to immediately perform an edit (such as an offset) on the merged events.

### ***Avoid Merging Mixes with Conflicting Moves.***

If a particular fader is moving during a certain time, and a mix is merged with the same fader moving at that same time, a real mess will result.

The individual discrete events that comprise the fader move may become “interleaved”, resulting in a fader that rapidly dances up and down on playback.

This situation may be identified and corrected as follows.

Remember that, after merging, the merged file will appear as selected (highlighted) events in the Cue List. If you see a “zebra stripped” pattern in the Cue List, with identical fader moves at similar times, you may have created overlapping moves.

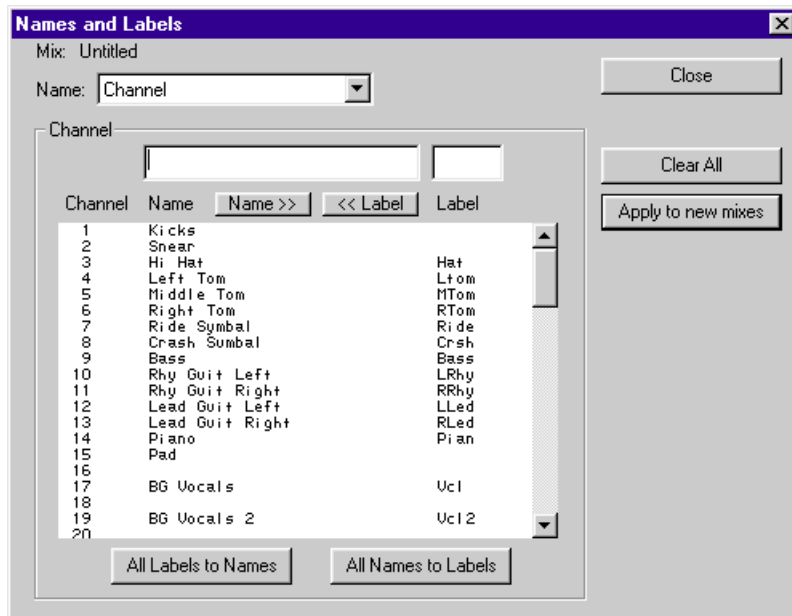
You will want to edit this further (by removing the overlapping region) before playing back the mix.

#	01:00:00:00	Kicks	1	Start	0.0	End	+ 5.0	Events	01601:00:04:00
#	01:00:00:00	Kicks	1	Start	0.0	End	+ 5.0	Events	01601:00:04:00
#	01:00:00:12	Snear	2	Start	-44.0	End	+ 5.3	Events	023 01:00:01:04
#	01:00:00:12	Snear	2	Start	-44.0	End	+ 5.3	Events	023 01:00:01:04
#	01:00:00:15	Hi Hat	3	Start	-9.2	End	-9.2	Events	001 01:00:00:15
#	01:00:00:15	Hi Hat	3	Start	-9.2	End	-9.2	Events	001 01:00:00:15
#	01:00:00:18	Left Tom	4	Start	-44.0	End	0.0	Events	022 01:00:01:09
#	01:00:00:18	Left Tom	4	Start	-44.0	End	0.0	Events	022 01:00:01:09

## ***CHANNEL NAMES AND LABELS DIALOGUE***

Each audio channel can be named. Names appear in the Cue List, and also in every list of channels, such as the View dialogue and the Create dialogues.

Labels are the short text fields that are seen under each fader in the Custom View.



Click to select a channel number, then type in the name and or the label. The label appears under the fader in the Custom View. The name is what appears in the Cue List for every event on that channel.

Press either Tab or Enter to validate the entry.

The Names and Labels dialogue shows the name of the file you are working on, that is, Mix: "[mix name]".

Clicking Clear All clears out all the Names and Labels.

Checking "Also apply to new mixes" saves the Names and Labels as a part of the Preference file. Any new mixes opened will automatically have the names and labels applied.

## ***Channel Labels***

Channel Labels are shown under the fader within the standard fader module.

They can also appear in any module created or edited with the Edit Module dialogue.

(Labels may also be entered directly on the Custom View, much like a write strip on mixer. Simply click in the text field under the fader, and type the name, such as "kick", "hat", etc. Tab advances to the next text field.)

Names may be converted into labels automatically by clicking .NAME

This takes the first four characters of the name and turns it into a label.

For example, if the channel is named "guitar", clicking NAME will create a label in the Custom View under the fader that says "guit".

This is a time saving shortcut. There are some instances where it will not be effective to use.

For example, if the Channel is named, "Lead Guitar", then clicking NAME would create a label in the Custom View that says "Lead", which may be unclear.

Labels may be converted to Names automatically by clicking LABEL. This copies the label into the Names table.

For example, if the channel is labeled "guit", clicking LABEL. will create a name in the Cue List for all events on that channel, indicated by "guit" in the Cue List.

This is a time saving shortcut. There are some instances where it will not be effective to use. The Cue List is capable of displaying a longer name, and the labels may be too cryptic.

***PRINTING THE CUE LIST OR TRACK LIST***

Print Cue List... prints the Cue List as it appears.

Be aware that this might be really long! It would be a good practice to scroll to the bottom of the Cue List and observe the number of pages before printing.

To shorten the Cue List, use the View Events dialogue prior to printing. It may be useful, for example, to print only Markers.

A printout of markers may assist in tape editing.

If a Comment has been entered in the Comment window, it is also printed at the top of the Cue List.

Print Track List... prints a list of all the Channel Names, along with the Comment.

Selecting either Print Cue List or Print Track List from the File menu opens the Windows's printer dialogue. The dialogue will depend on the printer drivers installed in the Windows.

# MAX EDIT MODULE DIALOGUE

The topic of editing Modules is related to Custom Views and the Edit Custom View Dialogue. It is recommended that you be first familiar with the sections of the manual relating to Custom View, prior to attempting module editing. Custom Views consist of an arrangement of some number of Modules. Changes to the Custom Views are cosmetic in nature. They do not affect the sound of the mix, nor the functionality of MAX.

Individual modules may be pre-defined and taken from a library, or they may be edited library modules, or they may be created from scratch, using the Edit Module dialogue. Extensive editing of modules, and creation of new modules, will affect the functionality of MAX, at least by making it easier or more complicated to operate.

## ***ABOUT MODULES***

MAX's Custom View window allows the simultaneous display of up to 96 "modules". These modules represent the automated mixing console's modules.

The modules feature faders and knobs that move, and switches with LEDs that turn on and off.

MAX has a library of modules that represent the modules found on the real, hardware version of the DA7.

MAX also allows a module's appearance and function to be edited. Entirely new modules may be designed by the user. These modules can be designed to represent automated or non-automated modules, as described below.

## ***Automated Custom Modules***

Modules may also be designed by the user to make a particular mix session easier to manage.

For example, suppose the current mix session involves mixing audio channels using a fader, a pan knob, and only two Aux sends. A custom module may be designed that features only these controls, and not the others. A whole row of these custom modules may be displayed. That way MAX lets you see only the information you want, without having to look at every control all the time, making it much easier to concentrate on the mix.

## ***Non-Automated Modules***

Even within the most sophisticated mixing consoles, there may still be some sections that are not automated. For example, the input gain knob.

MAX allows you to create modules that resemble the look of non automated sections of the mixer.

Once the module is placed in a Custom View, knob and fader positions can be set with the mouse.

This allows an engineer to save a picture of the settings related to a particular session, facilitating set up before a re mix.

This feature is known “recall” on many automation systems.

## ***Automated Virtual Modules***

In addition to automating a digital mixing console, MAX can also automate additional equipment, using MIDI. For example, MAX can automate signal processors, tone modules, samplers, external MIDI-controlled mixers, or digital audio workstations.

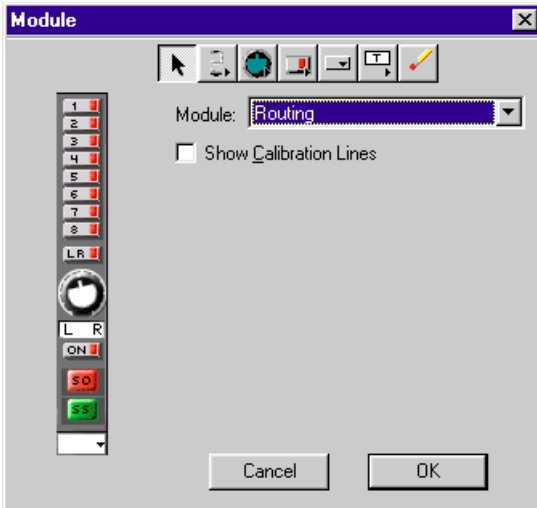
You can design virtual MIDI modules, which are controlled by the faders on your digital mixing console. MIDI fader moves can be recorded, edited, and played back. MIDI faders can automatically move on screen independently of the audio level faders that are controlling your mix.



### ***ABOUT THE EDIT MODULE DIALOGUE***

The Edit Module Dialogue box is used to create a new module, or edit an existing module.

To open the dialogue box, select Module from the Edit Menu.



To create a new module, select New Module from the Module: menu within the dialogue box.

#### ***Shortcut:***

In the Custom View, notice that each module has a small triangle in the lower right corner. Clicking here opens a pop up menu for selecting channel number, module type, etc. Click on the small triangle to reveal the menu, and drag down to select Module. Then drag to select New Module from the sub menu. You will be prompted to give the new module a name. The default name is "Untitled Module." Click OK to open the Edit Module dialogue box.

To edit an existing module, select the module from the Module: menu within the dialogue box. Then select Duplicate from the Module: menu.

#### ***Shortcut:***

In the Custom View, to edit an existing module, simply option-click on any fader, knob, switch, or label. You will be prompted to give the new module a name. The default name will be the same as the original name, plus the word "Copy". Click OK to open the Edit Module dialogue box.

Click on the Module: pop up menu.

Notice above the upper dividing line;

New Module, Duplicate Module, and Delete Module.

Between the dividing lines are pre-defined modules for your digital mixing console.

Below the dividing line are where the user-editable modules appear.

Please note that you cannot Edit or Delete the pre-defined modules.

You may, however, Duplicate them, and then edit the duplicated module.

### ***ELEMENTS OF THE EDIT MODULE DIALOGUE***

On the left side of the dialogue box is the module that you are creating or editing.

For a new module, it starts out as a blank panel.

At the top of the dialogue box is a tool bar for selecting the various tools for placing, moving, and erasing the various controls, labels, and lines.

In the region to the right of the module, various edit fields of information can appear, dependent upon the kind of things that are currently being edited.

***PROCEDURE FOR EDITING MODULES***

Select a fader, knob, switch, popup menu, label, or line from the tool bar.

Click to place it in the module.

If necessary, drag it to the desired location within the module.

Use the eraser to remove it.

Faders, knobs, switches, and popup menus representing automated controls on the digital mixer must be connected to the mixer using the Connect To: menu.

If the fader, knob, switch or popup menu is not connected to the mixer, it will simply exist as a graphic element (that is, a picture.) It is still useful for recall purposes, that is, it can still display a level and have a name, but it will not actually affect the mixer in any way.

Once a module has been edited, you may if you wish proceed to edit additional modules. To exit the dialogue box and keep the edits that you've made, click OK.

If you wish to discard any edits you have made since the dialogue box was opened, click Cancel.

The previous steps have simply created or edited the module, and inserted it into the library of available modules. To actually use the newly edited module, it must first be placed within one of the Custom View windows.

To do this, in brief, notice in the Custom View that each module has a small triangle in the lower right corner. Clicking here opens a pop up menu for selecting channel number, module type, etc. Click on the small triangle to reveal the menu, and drag down to select Module. Then drag to select the module from the sub menu.

This has just been an overview of editing modules.

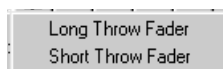
Following are more detailed instructions.

## *To Place an Item*

Click on one of the items in the tool bar, either a fader, knob, switch, popup menu, label, or line.



Clicking on Faders and right-clicking opens a sub menu for selecting a long throw fader, or a short throw fader.



Click on Add Popup Menu prior to placing a popup menu.

Move the pointer over to the left, into the module area, and click to place a popup menu.

Click to place a fader.

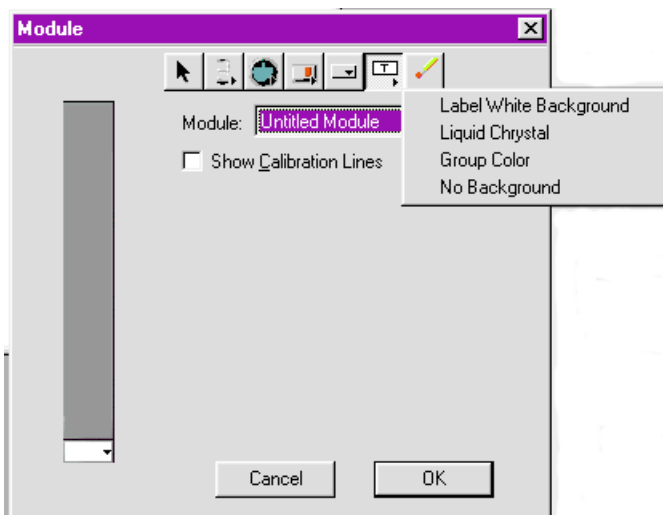
In a similar manner, clicking on the Knob in the tool bar to select Knobs.

Move the pointer over to the left, into the module area, and click to place a Knob.

Clicking on Switches and right-clicking opens a sub menu for selecting a from a variety of switch types. Move the pointer over to the left, into the module area, and click to place a Switch.

Popup menus, unlike knobs or switches, are used to set and indicate the state of certain mixer functions which have three or four possible states.

Clicking on Labels and right-clicking opens a sub menu for selecting a from a variety of label types. Move the pointer over to the left, into the module area, and click to place a Label.



### ***To Move an Item***

Once an item has been placed, it can be moved to some extent, depending upon the size of the item, and the position of adjacent items. Click the Selection pointer in the tool bar.

Use the pointer to select and move items within the module area.

### ***To Erase an Item***

Once an item has been placed, it can be removed. Click the eraser in the tool bar. Use the eraser to remove items from the module.

Be aware that the pre-defined modules are not editable, so you cannot accidentally erase necessary control.

### ***To Connect an Item***

Faders, knobs, switches, and popup menus intended to represent an automated control on the digital mixing console must be connected to the console using the Connect To: menu.

If the fader, knob, switch, or popup menu is not connected to the console, it will simply exist as a graphic element (that is, a picture.) It is still useful for recall purposes, that is, it can still display a level and have a name, but it will not actually affect the mixer in any way.

If the fader, knob, switch, or popup menu is not already selected, first select it by clicking on it once.

The Connect To: menu appears.

A popup menu can be connect to any one of the following mixer functions:

- Dynamics On/Off and Function,
- Dynamic Stereo Link,
- Surround Enable and Mode,
- Link/Stereo

If you do not want to connect the control, the menu should be set to " \* \* \* ".

For example, a fader set Connect To: \* \* \* will simply exist as a picture of a fader.

In the Custom View, moving such a fader with a mouse will not affect the mixer or the mix in any way.

Otherwise, use the menu to connect the control to a real control within the mixing console.

For example, a knob set Connect To: Pan means that in the Custom View the knob will act as a real pan pot that can be automated and will affect the actual mix.

## ***Label Switch Controls***

When you click on Switch, a Label field appears.

Switches can be labeled. The label is text that appears to be part of the switch.

There is a special kind of switch, called a Mode Switch.

The Mode Switch is used to change an individual channel from Read to Write, for example.

When editing a module that has a Mode Switch, you can choose to name it like any other switch. In addition, when naming a mode switch, you have the option of checking a box.

## ***Connecting Labels***

When a Label is selected, you can use the Connect To: menu to make the Label automatically change.

Select " \* \* \* " if you want the label to simply be text that doesn't change.

Example: A label that says simply "L R", that is under a Pan knob.

Select "Channel Label" if you want the Label to automatically take on the channel labels used in the Custom View.

Example: In the Custom View, the abbreviated names of the actual audio tracks may be typed at the bottom of each module. For example, "KICK" for a track with a kick drum, "VOC" for a track with a vocalist. Selecting "Channel Label" means that later, when you actually place your newly edited module into the Custom View and assign it an audio Channel number, the Label can be used as a field to display the channel label.

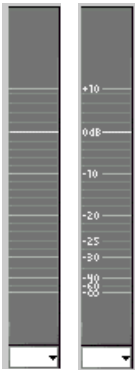
Select "Knob Value" if you want the label to automatically take on the value of a knob.

Example: The Label will automatically and in real time display the value of the knob.

Select "Group Number" if you want the label to automatically indicate if the channel is part of a group.

Example: If the channel is part of a group, the group number will automatically be shown in this label.

## ***Calibration Lines and Calibration Labels***



Calibration lines are the lines on the module that show the position of a fader.

You can chose to show or hide these lines.

To show calibration lines, check “Show Calibration Lines”.

☒ Show Calibration Lines

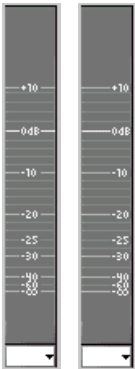
To hide calibration lines, uncheck “Show Calibration Lines”.

☐ Show Calibration Lines

A module could consist of only calibration lines.

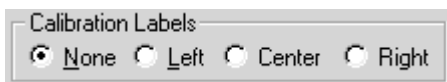
Such a module would be useful if positioned along side a fader module in the Custom View.

Usually, however, calibration lines are used in conjunction with a fader.

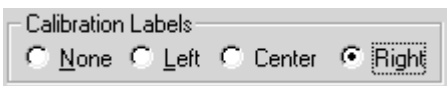




The calibration labels (that is, the dB marks) can be turned off or on by the user.



They can also be positioned on the left, center, or right of the module.

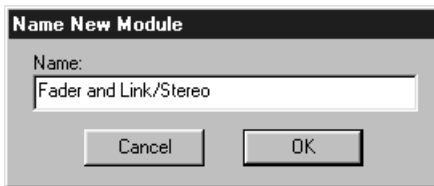


## ***Example***

In the following an example, we will show how to create an automated module with a fader and Link/Stereo module.

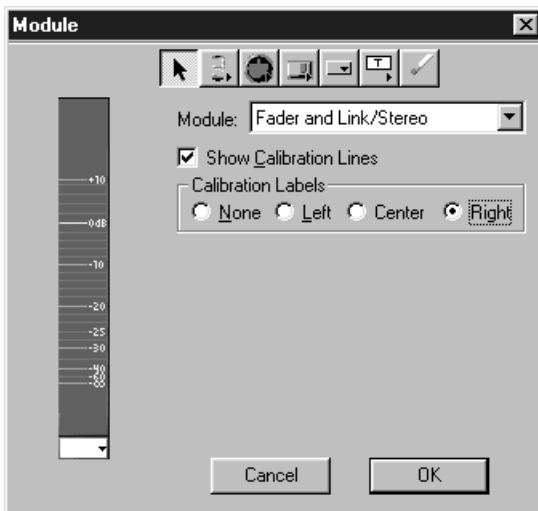
### ***Creating an Automated Module with a Fader and Pan***

In the Edit Module dialogue box, Select New from the Module menu. Name the module “Fader and Link/Stereo”. Click OK.



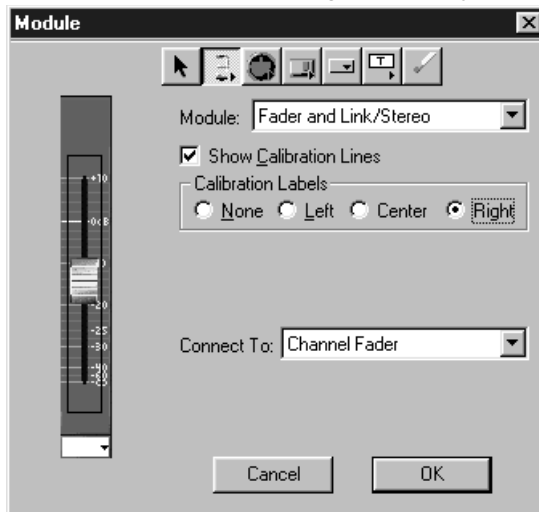
Check Show Calibration Lines.

Check Calibration Labels Right.



Select the fader tool. Click to place the fader in the module.

Connect the fader to mixing console by selecting Connect To: Channel Fader.

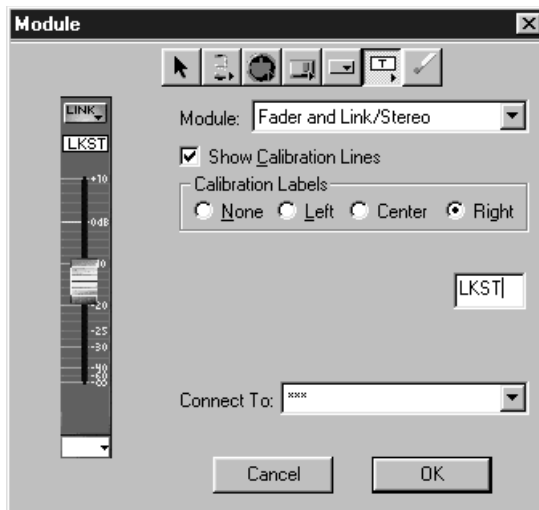


Select the pop-up tool. Click to place the knob in the module, above the fader. Connect the pop-up to mixing console by selecting Connect To: Link/Stereo.

Select the label tool. Click to place a label under the pop-up.

Type "L KST". Do not connect the label.

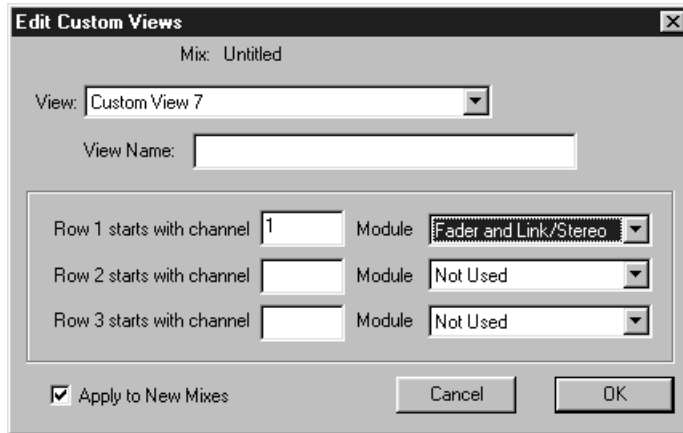
The menu should indicate Connect To: " \* \* \* ".



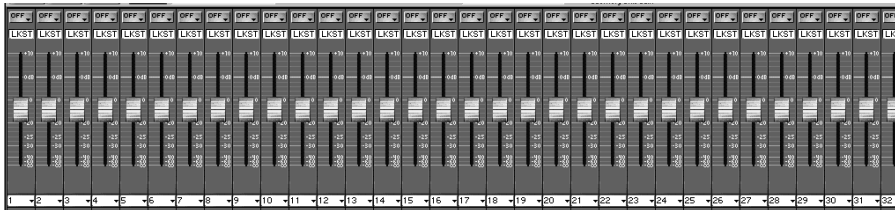
Click OK to keep your work and exit the Edit Module dialogue box.

If you are not already viewing a Custom View, select a Custom View from the windows menu. To create a whole row consisting of your new module, select Edit Custom Views from the Edit menu.

Enter Row 1 starts with channel 1.



Select Module: Fader and Pan. The results will look like this.

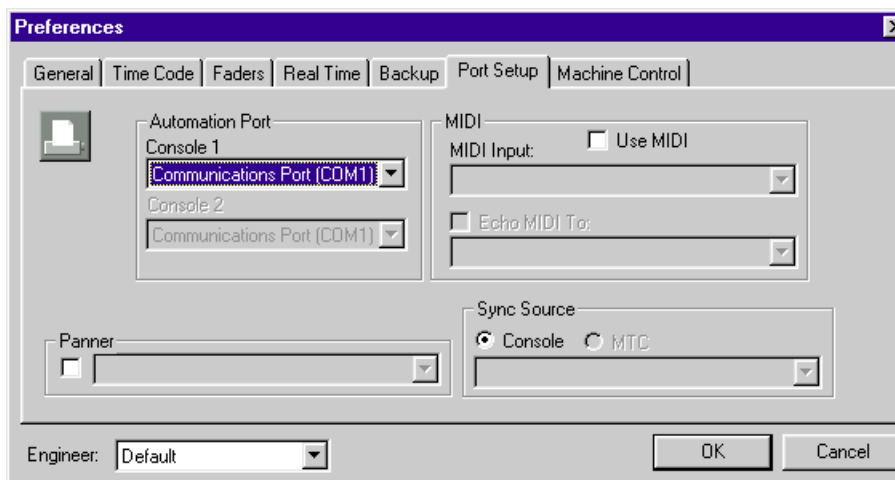


# MAX AUXILIARY MIDI CONTROL

## *Port Setup*

You can control and automate MIDI equipment by connecting a MIDI Interface the unused serial port.

Select Port Setup from the Preferences dialogue box in the Edit menu.



The “Automation Port” is the port that the mixer is connected to.

If Echo MIDI is checked, any MIDI data that comes into the MIDI interface will be “echoed” back out of the MIDI interface.

The Sync Source defaults to the mixer’s time code input.

To sync MAX to MIDI Time Code, select MTC and the name of the source device.

## ***MIDI MACHINE CONTROL***

MAX software features an MMC Control Panel, to provide basic transport control of Digital Multitracks and other MMC-compatible equipment.



Basic transport control is provided, in addition to locates.

To send a locate, type the locate time and click the locate button in the control bar.

Snapshots and Markers are automatically converted into locate points. To locate to a Snapshot or marker time, select the Snapshot or Marker from the locate menu. Then click Locate.

The MMC Control Panel transport buttons are selected by clicking on them.

Under the Control bar more detailed settings are available.



Click on the On line button to enable MMC so the button turns to green.

Click on any Track buttons you desire to enable recording so the buttons turn to red.

### ***REAL TIME MIDI AUTOMATION***

Along with mixer automation, MAX software can act as a controller of virtually any MIDI compatible equipment such as digital signal processors, samplers and hard disk based digital audio workstations.

You may re-assign up to sixteen of your mixer's faders to be MIDI controllers.

You can do this "on the fly" during the course of a mix.

Thus you can perform an automation pass of signal processor control, and then do another pass of audio channel fader moves, using the same faders.

When you re-assign your mixer's faders to be MIDI controllers, you have not lost the use of them for audio mixing.

MAX will independently play back both audio channel automation moves and MIDI moves at the same time.

MAX software will also record MIDI in real time, from an external controller such as a keyboard.

## CREATING MIDI FADERS

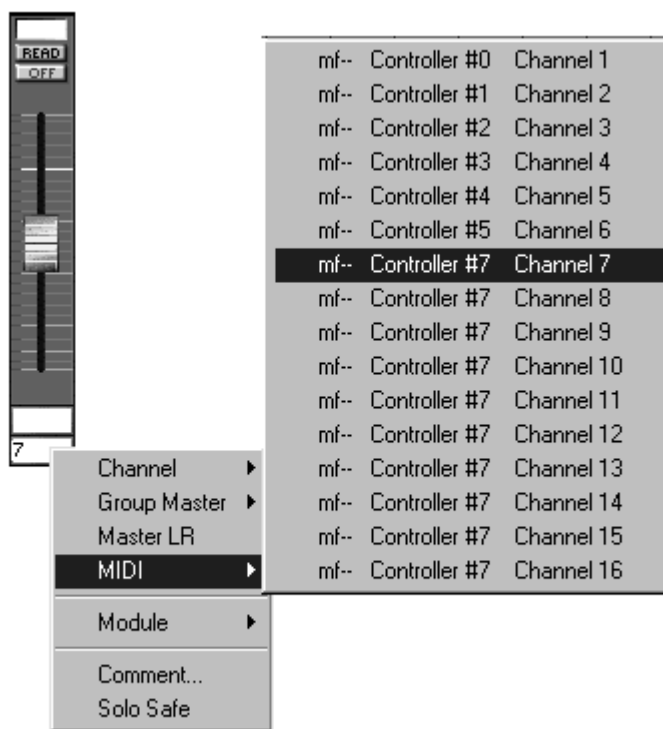
Faders are turned into MIDI Faders in the Custom View, by clicking on Selection pop up menu, in the lower right of each module. Select MIDI. Select a controller number.

The fader knob turns blue.

For example, make fader 7 into a MIDI fader that sends MIDI Controller number 0 on MIDI channel 1.

Moving this fader will now result in MIDI Controller commands being sent out of the Windows MIDI interface.

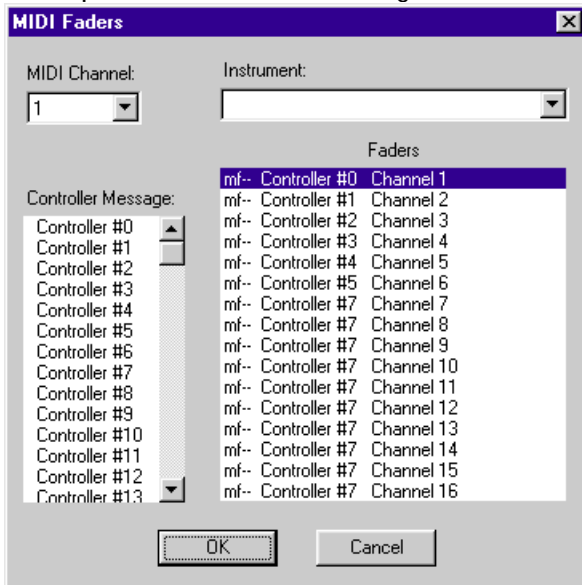
The MIDI Controller number and channel may be changed in the MIDI Faders dialogue box, discussed next.





## ***MIDI FADERS DIALOGUE***

After creating MIDI faders in the Custom View, you may change the MIDI Channel and Controller number of the faders in the MIDI Faders dialogue box. Open the MIDI Faders Dialogue box from the Off Line menu.



You may create up to 16 MIDI faders within one mix file.

The dialogue always shows the 16 possible MIDI faders, designated “mf-”, whether or not you’ve created any MIDI faders.

As MIDI faders are created in the Custom View, they appear in the MIDI Fader dialogue with their actual fader number.

For example, if fader 7 is turned into a MIDI fader, it appears in the MIDI faders dialogue as “mf7”.

### **To change the MIDI Channel or Controller number:**

Select one of the MIDI Faders from the Faders list on the right of the dialogue box. Select the Controller number from the menu.

Select the MIDI Channel, 1 through 16.

Usually each device being controlled has its own unique MIDI Channel number.

Example, to control and automate a signal processor, say that you want to use 8 faders of the mixer. Create 8 MIDI faders in the Custom View. Open the MIDI Faders dialogue box.

Click on each MIDI fader, and set the MIDI channel of the MIDI fader to match the MIDI channel of the signal processor. Click OK to exit the dialogue box.

### ***WRITING AND EDITING MIDI FADER MOVES***

You may write and edit MIDI fader moves in real time exactly the same way that you write and edit channel fader moves.

The fader is put into Write or Trim. The fader is Selected manually with the SEL button, or automatically with SoftTouch.

In Read mode, these MIDI faders will be automated, they will move on the Custom View as MIDI data is sent out, allowing you to automate signal processors and other MIDI devices as part of the mix.

### **Mixing with both MIDI Faders and Channel Faders**

The same fader on the mixer may be used for writing both MIDI fader moves and audio Channel moves.

MIDI fader and the audio Channel can have completely different moves. For example, the MIDI fader #3 fades up while the audio fader #3 fades down.

You can view these moves in the Custom View.

### ***Important!***

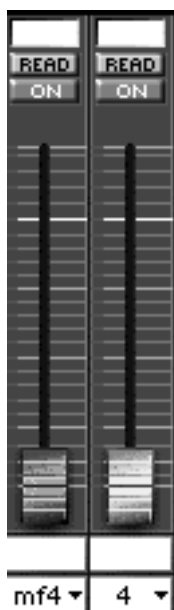
Once you have turned a fader into a MIDI fader, the mixer's fader can control either the MIDI fader or the audio channel.

Check "Faders Control SoftGroups or MIDI" in the Real Time menu to make the mixer's fader control the MIDI fader.

**Note:** Operating parameters on the DA7 other than Faders or Channel On/Offs will not affect, when checked.

Uncheck "Faders Control SoftGroups or MIDI" in the Real Time menu to make the mixer's fader control the audio channel.

## Example



Suppose that you want to use fader #4 on the mixer to write both MIDI fader moves and channel (audio level) moves.

First, make fader #4 into a MIDI fader by selecting MIDI from the Selection pop-up menu in the lower right corner of any module.

For clarity, we will place audio channel #4 and MIDI fader #4, side by side, on a blank Custom View.

Both faders can be controlled by the mixer's fader #4.

Select an unused Custom View from the Windows menu.

Click on any Selection menu and select MIDI fader 4.

Click on an adjacent Selection menu and select channel 4.

Move fader #4 on the mixer.

Notice that if "Faders Control SoftGroups or MIDI" is checked in the Real Time menu, the mixer's fader only moves the MIDI fader.

Notice that if "Faders Control SoftGroups or MIDI" is not checked, the mixer's fader only moves the channel fader.

Now you can use one fader on the mixer to write two different kinds of fader moves. Simply check or uncheck "Faders Control SoftGroups or MIDI" prior to selecting the fader in Write mode.

Check the Overwrite dialogue prior to the pass, and make sure that "Faders" are Overwrite enabled.

## ***REAL TIME MIDI RECORDING***

MAX can record MIDI data that originates from an external MIDI Controller, such as a keyboard or a fader controller (e.g. JLCoooper FaderMaster Pro.)

### ***To Select Real Time MIDI Recording***

Check MIDI Record from the Real Time menu. While MIDI recording is on, any MIDI information coming into the Windows MIDI interface (while SMPTE is coming into the mixer) will be recorded.

Turn off MIDI Record when not in use, to prevent the accidental recording of undesired MIDI data, which could use up valuable memory space.

### ***MIDI Record (Real Time Menu)***

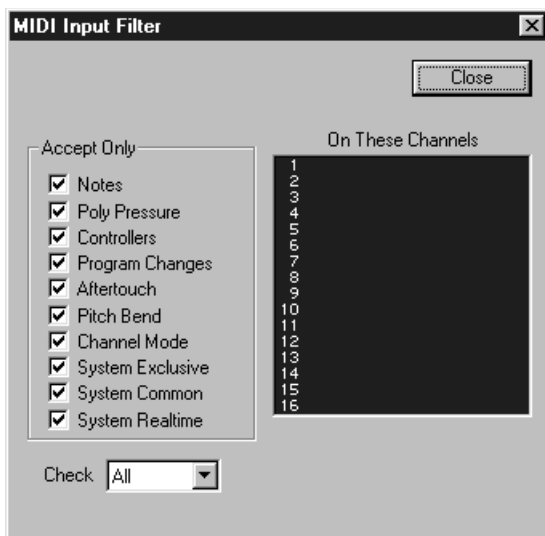
Turns MIDI Record On or Off.

When MIDI Record is On, and time code is received, the software can record MIDI commands received on a MIDI interface connected to one serial port of the Windows. The serial port is chosen in the Port Setup dialogue box.

The MIDI Record menu item is dimmed (not available) until MIDI is checked in the Port Setup dialogue box.

## ***MIDI Input Filter***

When using the MIDI Record feature, setting the MIDI Input Filter allows selective filtering out of specific MIDI events, by channel and kind. This helps save memory by avoiding the recording of unwanted MIDI data.



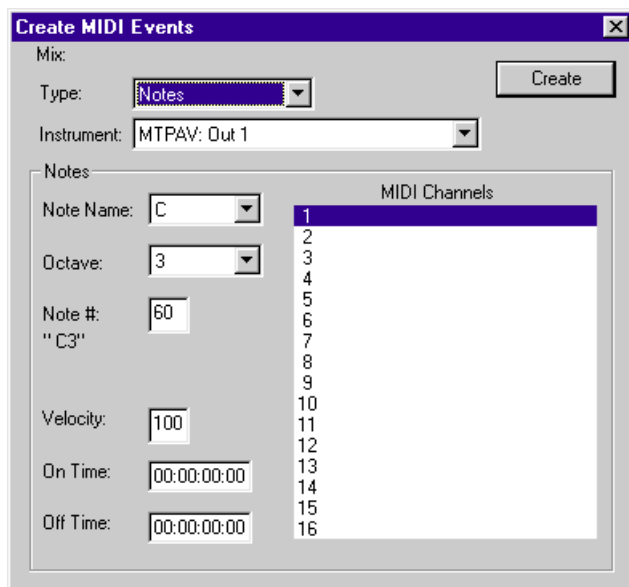
You may choose to filter out Notes, Poly After Touch, Controllers, Program Changes, Mono Aftertouch, Pitch Bend, Channel Mode commands, System Exclusive, System Common, and Real Time. The MIDI message called "Active Sensing" is always filtered.

For example, you may wish to filter out the MIDI command "Aftertouch", which is often sent out of a keyboard in large volumes. It may not be needed, and would only consume memory if not filtered out.

Check all or none to immediately select all filters or no filter.

## ***CREATING MIDI EVENTS OFF LINE***

The Create MIDI Events dialogues in the Off Line menu allows you to insert new MIDI events into the Cue List.



This is very useful in post production, because it allows you to create precision signal processor changes occurring at an exact points in time code. For example, at 01:30:21:00, the scene change requires that the signal processor / delay unit changes from a “Large Hall” audio effect to a “Small Room” effect. (Or the sound of a cave full of Bulgarian fruit bats.)

Create MIDI Events accomplishes this by allowing a MIDI Program Change to be inserted at a certain point in time.

The current mix name is displayed. If you have multiple mixes open, this will help you keep track of which Cue List will receive created events.

In the Create Dialogues, when selecting a Channel or MIDI Event from a scrolling list, the channel names and numbers will appear if names have been previously entered in the Names and Labels dialogue box.

## ***Select MIDI Channel***

MIDI Channels range from 1 to 16.

Since MIDI supports 16 different channels, up to 16 different devices may be automated simultaneously

## ***Select Type of MIDI Event***

### ***Program Change***

The most versatile MIDI command for automation purposes.

At a specific Time Code, MAX sends a MIDI Program Change to an outboard signal processor, such as a rack-mount MIDI controlled equalizer or multi-effects processor. The reception of a Program Change causes the signal processor to recall a new preset of parameter settings from memory. Program Changes also range from 0 to 127. Be aware however that some MIDI devices respond to Program Changes 0 through 127 as if they were numbered 1 through 128.

### ***Notes***

MIDI Note Commands can trigger Samplers, Synthesizers, Tone Modules, and Drum Machines. Also certain signal processors respond to Note Commands, changing, for example, their interval of pitch-shift. Outboard MIDI controlled VCAs will also usually respond to Note commands.

The specific Note is selectable, as is its Velocity Value. Click on the Note to open menu to select the desired note. The Velocity usually, but not always, determines the loudness or brightness of the Note.

The Pitch of the note is given in terms of a name and an octave, like D2. C3 is middle C on most keyboards. Note Velocity values range from 0 to 127.

### ***Pitch Bend***

Pitch Bend Commands may be sent along with Note Commands to “bend” the Note up or down.

Pitch Bend Commands may also be merged with sequencer data to cause a MIDI sequence to play transposed by some interval. MIDI merging requires a dedicated piece of hardware.

### ***Aftertouch***

Aftertouch commands may be sent along with Notes to modify the sound of the note. Most tone modules are programmed such that they add some amount of amplitude or frequency modulation upon reception of these MIDI commands.

### ***Controllers***

MIDI Controllers are recognized by nearly every make and model of signal processors. A series of Controller Messages may be used to smoothly sweep EQ or change any effect parameter, including Room Size, Delay Time, Flange Speed, Etc.

A particular MIDI Controller, #7, is called MIDI Volume. This is recognized by nearly all MIDI devices. A tone module, signal processor, or synthesizer will change its audio output level in response to this command.

Controller Commands may also be sent out along with Notes to modify the sound of the Note. A particular MIDI Controller, #1, is called MIDI Modulation.

Controller values range from 0 to 127.

### ***Song Select***

Recognized by some sequencers. Sent prior to a start command to select which song will play.

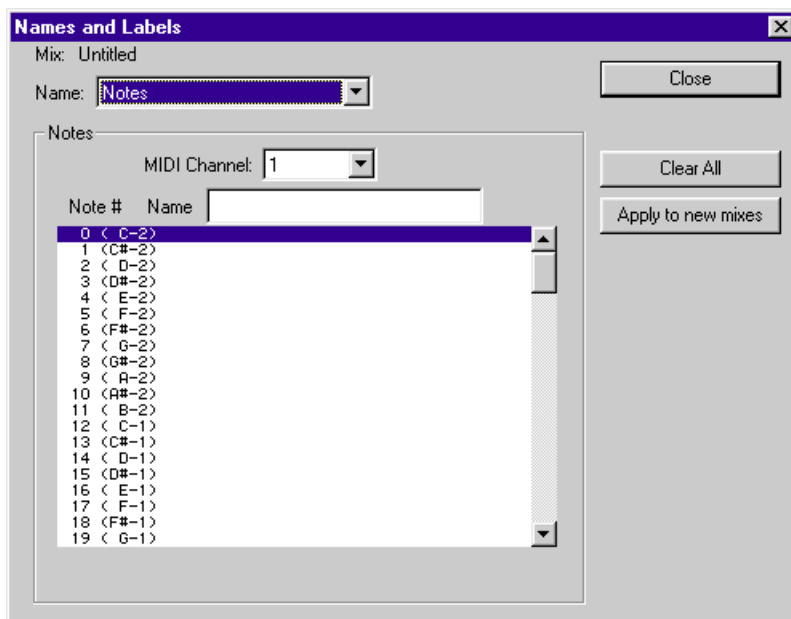
### ***System Real Time***

Sequence Start and Stop will start and stop a MIDI sequencer or drum machine that has been set to Internal Clock. If synchronization of a hardware sequencer or drum machine is required for the project, use an external synchronizer to accomplish the conversion from SMPTE time code to MIDI Clock.

Sending the MIDI commands Start and Stop might be useful to trigger a drum pattern for a sound track.



### ***THE MIDI NAMES AND LABELS DIALOGUE***



#### **Select MIDI Channel .**

Each MIDI device under control will have a unique channel number. Click to select a channel.

#### **Select Notes from the Name menu.**

Select a Note number and MIDI channel. Type in the name of a specific sound or sample.

#### **Select Program Change.**

Type in the name of a specific effect within a signal processor.  
Press either Tab or Enter to validate the entry.

## ***MIDI APPLICATIONS***

MIDI-compatible signal processors including equalizers delay units may have their settings changed via Program Changes or Controller Numbers.

Use the faders on your mixer to “ride” pitch transposition, room size changes, delay times, etc.

MIDI Events that have been recorded in Real Time can be viewed and edited using the Cue List. New MIDI Events can also be created with the Cue List.

### **What Not to Do with Real Time MIDI Recording**

We should note here that the MIDI Recording feature should not be confused with a MIDI sequencer. There is no concept of tempo, only of frame numbers. A MIDI note can only occur on a given frame. Since SMPTE only has 24 to 30 frames per second, the resolution of SMPTE isn’t adequate for “musical” applications.

# MAX PREFERENCES (EDIT MENU)

MAX remembers certain basic user settings, such as fader labels and names, Auto Backup, Real Time menu selections, etc. These are automatically saved in a Windows Registry.

(As with other Windows applications, the Preference files reside within the Preference folder which is inside the Windows System folder.)

The Windows Registry automatically opens when you launch the MAX software.

MAX permits multiple, user-selected Preference files.

That means, for example, if you use different Preferences on different kinds of mixing projects, you can create a different Windows Registry for each kind of project.

Alternately, if more than one engineer uses the automation system, each engineer can have their own Windows Registry.

Open the Preferences dialogue from the Edit Menu.

The Engineer pop up menu in the upper right allows you to select, create, and delete Preference files.

The Preferences are arranged in a “Folder Tab” form.

Click on a tab to select the Preference you wish to edit.

***Note:***

Prefs listed below will be affected by changing the entry of engineer.

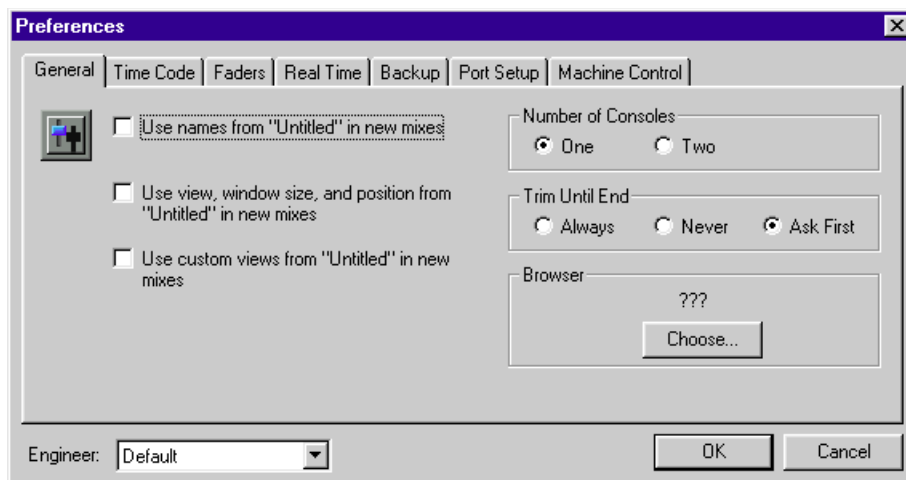
- General Tab: Trim until end

- Time Code Tab: Frame Rate

- Fader Tab: All prefs in this tab

- Real Time Tab: All prefs in this tab

- Back Up Tab: Automatic Backup On

**GENERAL****Use names from "..." in new mixes**

Checking this box copies the names and labels from the current mix and saves them in the Windows Registry. All subsequently opened new mixes will have the same names and labels already present.

**Use View, Window Size, and Position from "..." in new mixes**

Checking this box saves the currently displayed view, window size and position in the Windows Registry. All subsequently opened new mixes will open to the same view.

For example, if Custom View #5 is currently displayed, subsequently created New mixes will also open to Custom View #5.

**Use Custom Views from "..." in new mixes**

Checking this box copies the Custom Views and saves them in the Windows Registry. All subsequently opened new mixes will have available the same set of Custom Views.

### **Number of mixers**

Check whether one or two mixers are connected to the Windows serial ports.

### **Trim Until End**

In Trim mode, fader moves are offset or Trimmed.

For example, you can make a certain vocal track “a little louder overall”, bringing it out in the mix, without erasing the fader moves for the track.

Trimming a fader always involves setting the fader to some arbitrary position, and then going into Trim mode. Then the track is Trimmed by moving the fader a little bit up or down. Then, when you are finished Trimming the fader, you generally return the fader to the position where it was at the beginning of the Trim. This is done by lining up the fader with a small yellow arrow called the Trim Reference Point.

“Trim Until End” determines what the MAX software will do if you do not return the fader to its where it was at the beginning of the Trim.

### **Always**

Click here to have the software automatically apply the Trim to the end of the mix.

In other words, say you have a vocal track. You want it louder. You put MAX into Trim mode. You select the fader with the SEL Buttons. You start the program material, then nudge the fader up a little. Then you stop the program material.

Because you clicked “Always”, the software makes the vocal track louder for the whole song, even though you stopped the program material.

**Never**

Click here to never have the software automatically apply the Trim to the end of the mix.

In other words, say you have a vocal track. You want it louder, but for just a short section. You put MAX into Trim mode. You select the fader with the SEL Buttons. You start the program material, then nudge the fader up a little. Then you stop the program material.

Because you clicked “Never”, the software makes the vocal track jump back down to its original level for the rest of the song.

**Ask First**

Click here to have the software always ask you if you want to apply the Trim to the end of the mix.

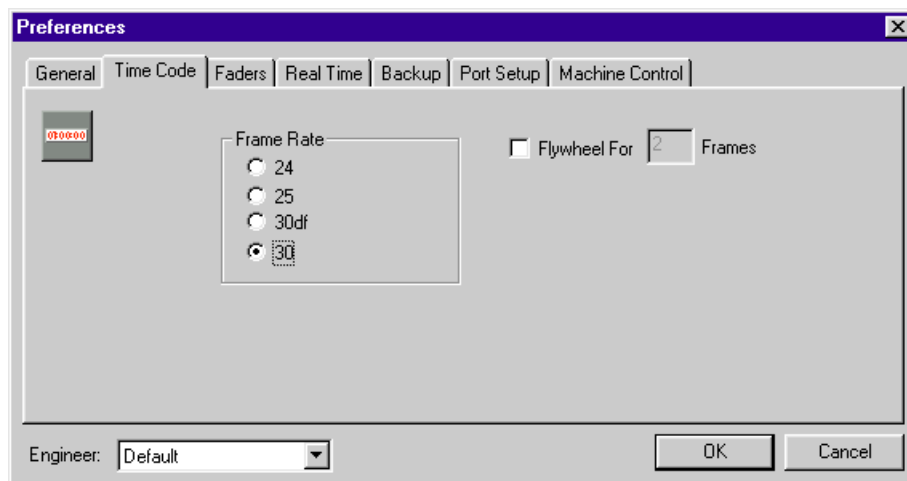
In other words, say you some number of vocal tracks and instrumental tracks. You want the vocal tracks louder, but for just a short section. You want the instruments louder for the whole song.

You put the mixer into Trim mode. You select the fader on the vocal track with the SEL Buttons. You start the program material, then nudge the fader up a little. Then you stop the program material.

You do another pass, again with the mixer into Trim mode. You select the fader with the SEL Buttons. You start the program material, then nudge the fader up a little. Then you stop the program material.

Because you clicked “Ask First”, each time you stop the program material, the software gave you the option (by means of a dialogue) whether or not you wanted the Trim applied all the way to the end of the mix.

## TIME CODE



### Frame Rate

If you intend to do Off Line editing prior to running time code, select the desired frame rate of the time code first.

Normally, the system will automatically detect the frame rate and set itself accordingly. But if you do Off Line editing first, before running time code, manually setting the frame rate here in the Preferences dialogue will assure that no events occur at invalid frame numbers.

Chose either:

24 for film.

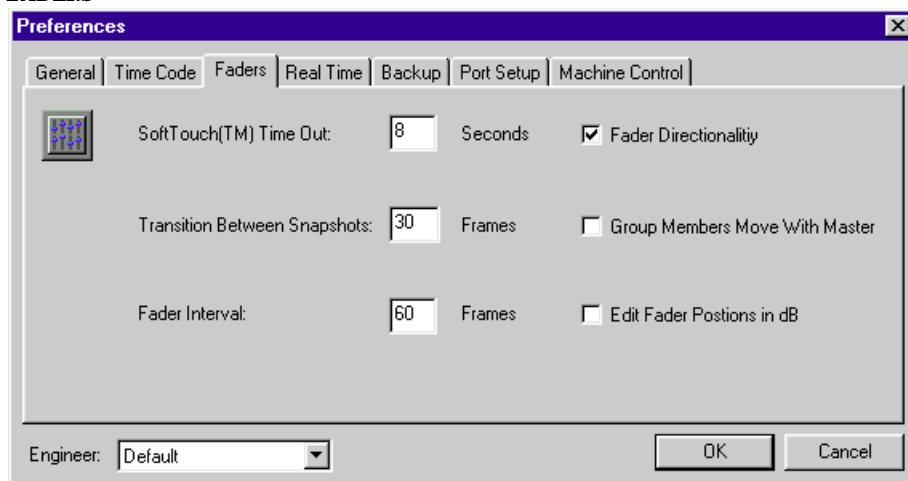
25 for European video.

30 df will work with both 30 df and 29.97 df for U.S. video.

30 will work for both 30 and 29.97 for general audio use without video.

**Flywheel** allows the automated mix to continue to run for a very brief period, even after time code is no longer received.

This allows, for example, the mix to continue to play when the time code is intermittent. The amount of flywheel is entered in frames, either 8, 16, or 32 frames. This corresponds approximately to 1/4, 1/2, and 1 second.

***FADERS*****SoftTouch Time Out**

The SoftTouch feature is turned on or off from the Real Time menu, or by clicking the TOUCH button in the Control Bar.

When the feature is turned on, a fader will go immediately into Write or Trim when you move it, so you don't have to press any SEL Buttons.

This Preference item sets how long it takes after you stop moving the fader for the fader to automatically return to Read mode. You may enter 1 through 31 seconds in whole second intervals.

**Transitions Between Snapshots**

A Snapshot is an automation event representing the state of all the mixer's automatable parameters.

It is possible to create a "dissolve" between two snapshots.

This is done in the Cue List, by selecting two Snapshots. Then, in the Off Line menu, select Transition Between Snapshots.

A new event will be created in the Cue List, which will consist of the dynamic moves required to perform a smooth transition over time of all continuous parameters (such as level changes.)

Switched parameters such as Channel On/Offs will switch at the time of the second Snapshot.

This Preference item allows you to set the default Transition Time for Transition Events that are created in the Cue List.



### **Fader Interval and Directionality**

These items do not affect the way a mix sounds.

They only affect the way the mix looks in the Cue List, by providing a logical and easier to read view of the mix.

Fader Interval and Directionality allow you to display more events, (allowing more precision in editing) or fewer events (allowing an easier to read Cue List.)

#### **Directionality (Check on or off)**

When checked, moving a fader up and down is displayed as two events in the Cue List. When not checked, moving a fader up and down is displayed as one event in the Cue List.

#### **Fader Interval (a time, in terms of frames)**

When you move a fader, pause, and then continue to move the same fader, this can be displayed as one or two events in the Cue List.

The Fader Interval is the amount of “pause” time that determines whether the fader move is displayed as one or two events in the Cue List.

The Fader Interval is a time, entered in terms of frames. The default setting is 60 frames, that is 2 seconds at 30 frames per second.

That means that if you write a fader move, and then pause, and then wait more than 2 seconds, you get two separate events indicated in the Cue List.

Selecting a smaller number results in a longer Cue List. Selecting a larger number results in fader moves being grouped together and a shorter Cue List.

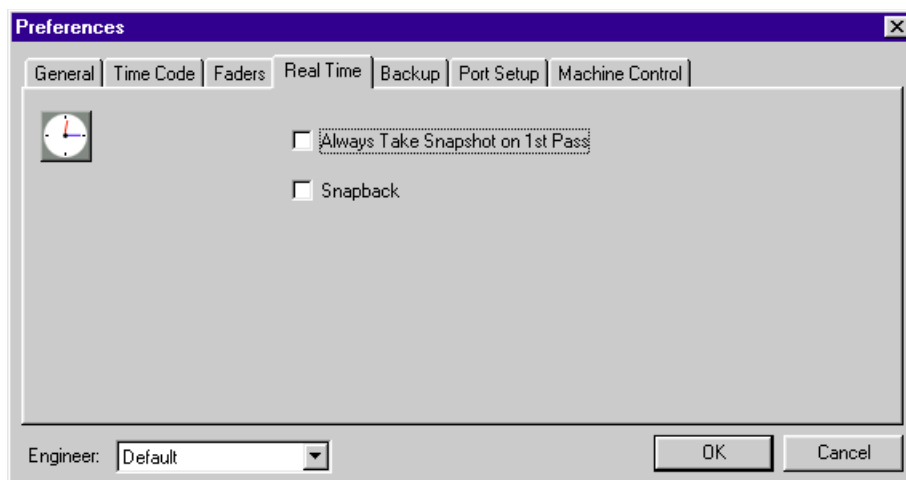
#### **Group Members Move with Master**

When checked, moving a SoftGroup master or the stereo grand master will cause all the members of the group to also move.

#### **Edit Fader Positions in dB**

When checked, fader positions are expressed and edited in the Cue List using dB values. When unchecked, fader positions are expressed and edited in their decimal data values, typically ranging from 0 to 255.

## ***REAL TIME***



### **Always Take Snapshot on 1st Pass**

Check to turn on. When checked, a snapshot is automatically inserted into the mix on the first pass after clearing memory, regardless of whether or not anything else is written.

Normally, this feature is turned off. The snapshot is not kept unless an actual move is written, such as a fader move or channel on event. That way, if you simply start and stop the time code, without writing a fader, knob, or switch, the mix is still “clear” with nothing having been written.

The possible advantage to turning on “Always Take Snapshot on 1st Pass” is that it makes it possible to do a pass which just writes a single snapshot. You set up your initial mix, clear memory, and start the program material, and the snapshot is written.

### **Snapback**

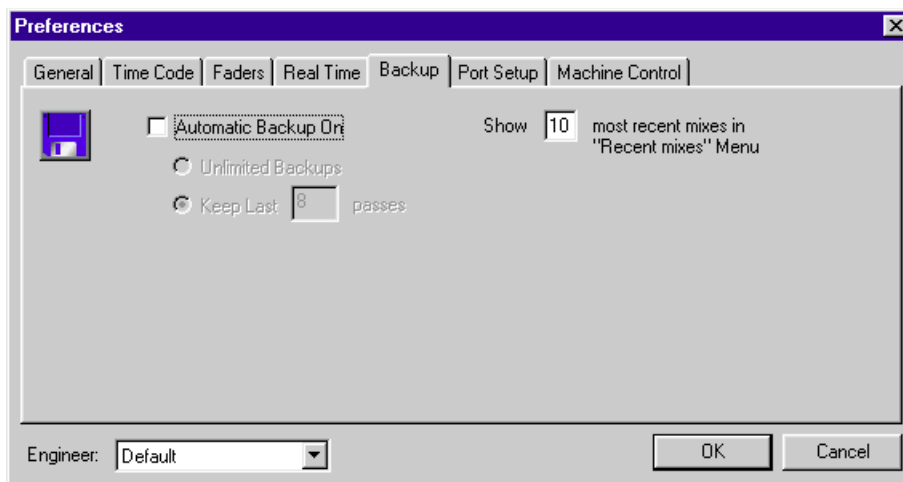
Check to turn on. Snapback automatically inserts a fader move or a channel on/off at the end of every pass.

These extra events in the mix assure that any real time edits made toward the beginning of a mix will not have an impact on the rest of the mix. The levels will always “snapback” after the edit.

Turning snapback on, however, results in multiple fader moves or channel on/off's in the mix, which may make Cue List editing more complicated.

## ***BACKUP***

This is a very brief description of Auto Backup, please refer to the chapter about Auto Backup for more information.



Auto Backup is the MAX feature that automatically saves the mix to disk. At the end of each pass, if new moves have been made, the mix is saved with a number appended to it.

Auto Backup may be turned on or off either in the Preferences dialogue or with the BACKUP button in the Control Bar.

Select Unlimited Backups and every pass will be saved as a separate mix file, limited only by the space available on the hard disk.

Select Keep last [#] passes, and type in a number. MAX will keep that number passes. When the selected number is exceeded, MAX will begin to delete older versions of the mix.

Show [#] most recent mixes in Recent Mixes menu

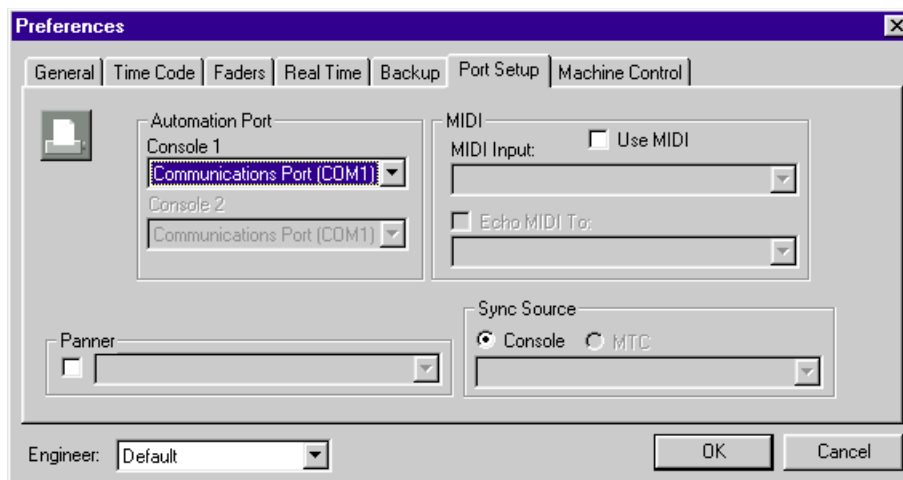
The Recent Mixes sub menu is located in the File menu.

The names of recently saved mixes are displayed here.

Select a recent mix to open it.

This Preference item selects how many recent mixes are displayed in the Recent Mixes menu.

## ***PORT SETUP***



Select the Automation Port, that is, the Port connected to the mixer.  
By default the COM 1 port is selected.

### **MIDI**

Check to use MIDI.

MIDI device names will automatically be imported and displayed in the Device menu.

Check Echo MIDI to: MIDI Device if you want incoming MIDI data to be “echoed”, that is, re-transmitted, back out of the MIDI output.

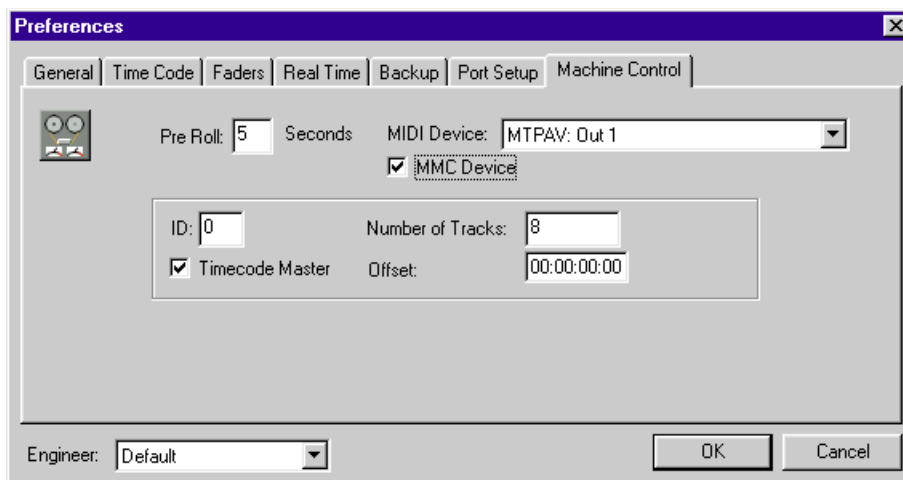
### **Sync Source**

Select the mixers time code reader. If two mixers are connected, time code is read by the mixer connected to the serial port that connects to the Master DA7.

Alternately, if MIDI Device is installed, you can select MIDI Time Code as a Sync Source.

***Note: Set OTHER CMD to OFF in the MIDI Setup Window on the DA7 if you use MTC.***

## ***MACHINE CONTROL***



Pre Roll is a time in seconds that is automatically subtracted from locate commands sent from MAX.

It is usually a non-critical amount of time intended to allow multiple synchronized machines to chase and lock.

For example, suppose you use the Locate pop up menu, and Click Locate in the control bar, to make the program source (tape recorder) start at a particular verse of a song. If you have several digital multitracks, it will take a certain amount of time before all machines become synchronized and begin to play back music that you can listen to and mix. By the time that all the machines are synchronized, you may be well past the part of the music you wanted to listen to.

If the time it takes for them to synchronize is, say 5, seconds, then enter 5 seconds as your Pre Roll time.

The next time that you issue a locate to a particular verse, the locate time sent will be 5 seconds before the verse begins. Then, by the time the verse begins, all the machines will be synchronized and you can begin mixing.

**ID**

Enter an MMC ID number.

**Number of Tracks**

Enter the number of tracks for each MMC machine.

**Time Code Master**

Check if the selected Machine is the Time Code Master.

Do not check if the selected Machine is a slave to another machine, synchronizer, or sync card.

**Offset**

Allows entering an MMC Offset for each machine, other than the time code master.\*\*

# MAX SOFTWARE MENUS

## *Help Menu*

Contains the "About M.A.X." box.  
Displays version of MAX Software.



## *File Menu*

### **New**

Opens New, Untitled mix. MAX permits you to have multiple mixes opened at the same time. The one that's checked in the Windows menu is the one that plays back. This allows you to quickly compare mixes and make cut / copy / paste / edits from one mix to another. New mixes are numbered "Untitled-1", "Untitled-2", etc., until you save and name them.

### **Open**

Opens previously saved mix.

### **Close**

Closes currently select mix, does not quit application.

Gives you dialogue "Don't save, cancel, and close"

### **Save**

Standard Windows dialogue box.

Saves currently open mix to disk.

### **Save As...**

Standard Windows dialogue box. Saves currently open mix to disk, under a new name or to a different folder.



**Merge Mix**

When the Cue List is open, Merge Mix opens a previously saved mix and merges it into the currently opened mix.

**Revert**

Closes currently selected mix without saving. Opens last saved version of mix with same name. The net effect is a massive “undo” that loses all changes to the mix since you’ve last saved.

**Page Setup**

Standard Windows dialogue box. Opens installed Windows printer driver setup. Allows you to set options such as page orientation, size, etc.

**Print Cue List**

Prints Cue List, allows you to limit page numbers printed. The appearance of the printed Cue List may be changed by a number of factors, including the View dialogue box (Edit menu), and certain things in the Preferences dialogue box.

**Print Track List**

Prints list of all channel names and numbers.

**Recent Mixes**

Displays recently saved mixes.

The number of recent mixes displayed may be set in the Preferences dialogue box.

To change the number of recent mixes that appear in the Recent Mixes menu, select Preferences from the Edit menu. Then select Backup. Then tab and type the number of recent mixes.

**Quit**

Exits application with options to Don’t Save Changes, Cancel, and Save.



***EDIT MENU*****Undo [last operation]**

Standard Windows interface Ctrl Z, which permits you to undo the last operation.

Typing Ctrl Z a second time Redoes the last operation.

**Cut**

Cuts selected events from Cue List and pastes them on the Clipboard. Also cuts text.

**Copy**

Copies selected events from Cue List and pastes them on the Clipboard. Also copies text.

**Paste**

Pastes Clipboard into Cue List.

If no event is selected in the Cue List, Clipboard events are pasted preserving their original times.

If any event or events are selected in the Cue List prior to pasting, the events are pasted offset in time, starting at the time of the first selected event.

Paste also pastes text.

**Clear**

Clears entire mix or selected events, or clears text.

**Replace**

Replaces selected events with contents of the Clipboard.

**Paste Special...**

Opens dialogue that permits changing the clipboard data before pasting.

**Select All**

Selects all Viewed events in Cue List.

Selects all text in a given text field.

Edit	
Undo Cut	Ctrl+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Clear	Ctrl+B
Replace	
Paste Special...	
Select All	Ctrl+A
Module...	
Edit Custom Views...	
Names and Labels...	
Comment...	
Show Clipboard	
Preferences...	

**Module**

Opens the Edit Module dialogue box. Allows user to design custom modules, by placing faders, knobs, switches, and labels. These modules can then be placed anywhere in a Custom View.

**Edit Custom Views**

Allows you to name the Custom Views, edit the Custom Views one row at a time, and also restore the original Custom Views.

**Names and Labels...**

Opens Names and Labels dialogue box. Names (text) may be applied to each channel of automation events. Names appear in the Cue List, and also in every list of channels, the View dialogue box, all the Create dialogues, etc. Channel labels are the short text fields that are seen under each fader in the Custom View.

**Mix Comment**

A text field may be entered for each mix. The comment is also printed at the top of the Cue List when Print Cue List is selected.

**Show Clipboard**

Displays the current contents of the Clipboard, the most recently Cut or Copied text or Events. (Close it after you look.)

**Preferences**

Opens the Preference dialogue box that allows user to custom configure certain MAX features.

Users can create and select from multiple Preference files, so different Preference files can be saved for different engineers or different kinds of projects.

## ***OFF LINE MENU***

The Off Line menu contains items relating to the Cue List.

View the Cue List by selecting Cue List (Ctrl 0) from the Windows menu.

If the Cue List is not opened, most of the Off Line items are dimmed (not available).

### **[Move] Now**

or Scale Now, Smooth Now, Crop Now

Has the same effect as the Enter key.

Applies an Edit to selected fader moves.

### **Tools**

Select one of these tools before editing a fader move. The tools are Move, Scale, Crop, and Smooth.

You select them either of two ways:

From the Tools sub menu, or clicking on one of the 4 buttons on the top left side of the Cue List

### **Move**

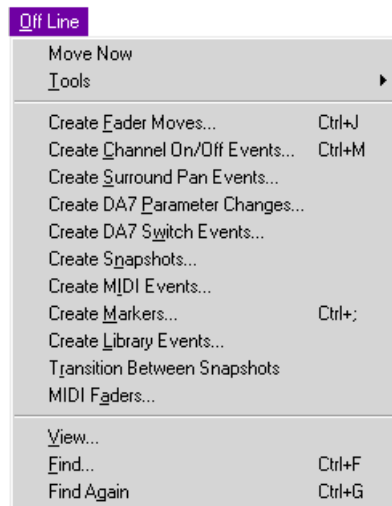
Change applied to start time affects end time, and vice versa. Change applied to start level affects end level, and vice versa.

### **Scale**

Change applied to start or end time squeezes or stretches move. Change applied to start or end level expands or compresses move.

### **Crop**

A change to the time or level simply shortens the move.



**Smooth**

The software automatically smoothes the move by changing the level on a frame by frame basis, and eliminating any irregularities.

**Create [event]**

Automation events may be manually created Off Line, by simply choosing the channels and typing the start and end times. This is especially useful for post production work where exact start and end points in terms of SMPTE have been provided for a project, such as a spot for a motion picture or other commercial jingle.

**Create Fader Moves... (Ctrl J)**

Opens a dialogue to allow off line creation of fader moves in the Cue List. Enter the Level Range. The fader level is entered either as a dB value or as a numerical value from 0 to 255. (dB or numerical entries are selected in the Preferences dialogue box.) Enter the Start and End times. Select the channel numbers that the fader moves will appear on. To the right of the dialogue is the channel selection list. Click to select which channels will have fader moves created. Shift-click to select a continuous range of channels. Ctrl -click to select or de-select multiple discontinuous channels.

Click on "At this time" for the start level of the move, and MAX automatically finds the level of the channels at the time entered.

Click on "At this time" for the end level of the move, and

MAX automatically finds the level of the channels at the time entered.

**Create Channel On/Off Events... (Ctrl M)**

Opens a dialogue box to allow off line creation of Channel On/Offs in the Cue List.

In the Create Channel On/Off Events dialogue box, the current mix name is displayed.

Select Channel On or Off

Enter the time that the Channel On or Off or In occurs. Channel On/Offs are entered in of Hours, Minutes, Seconds and Frames.

Select Channels

To the right of the dialogue is the channel selection list. Click to select which channels will have Channel On/Offs created. Shift-click to select a continuous range of channels.

Ctrl-click to select or de-select multiple discontinuous channels.

## Create Surround Pan Events

Opens a dialogue box to allow off line creation of Surround Pan events in the Cue List.

The current mix name is displayed.

### Select Channels

In the right of the dialogue is the channel selection list. Click to select which channels will have Surround Events created. Shift-click to select a continuous range of channels.

Ctrl-click to select or de-select multiple discontinuous channels.

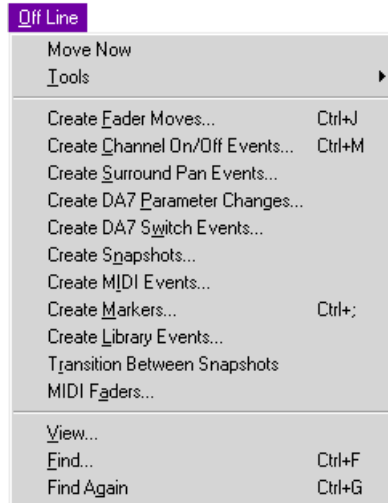
Enter the Start and End times.

### Select Position (From and To)

You can set the pan position either manually or automatically.

To select the position manually, use the mouse to set the starting and ending pan positions using the graphical interface.

To set the pan position automatically, click "Position at this time in mix" and MAX will calculate the pan position at the selected time in the mix.



**Create DA7 Parameter Changes...**

Opens a dialogue box to allow off line creation of other parameters in the Cue List, such as Pan and Aux send levels.

Enter the Level Range. The Send levels are entered either as a dB value or as a numerical value from 0 to 255. (dB or numerical entries are selected in the Preferences dialogue box.) Enter the Start and End times. Select the channel numbers that the moves will appear on. To the right of the dialogue is the channel selection list. Click to select which channels will have moves created. Shift-click to select a continuous range of channels. Ctrl -click to select or de-select multiple discontinuous channels.

Click on "At this time" for the start level of the move, and MAX automatically finds the level of the channels at the time entered.

Click on "At this time" for the end level of the move, and MAX automatically finds the level of the channels at the time entered.

**Create DA7 Switch Events...**

Opens a dialogue box to allow off line creation of other Switch events, such as EQ On and Pre/Post.

Select the event.

Select On or Off

Time Enter the time that the switch on or off occurs. On and off times are entered in of Hours, Minutes, and Frames.

Select Channels

To the right of the dialogue is the channel selection list. Click to select which channels will have switch events created. Shift-click to select a continuous range of channels.

Ctrl-click to select or de-select multiple discontinuous channels.

**Create Snapshots...]**

Opens a dialogue box to allow off line creation of a Snapshot in the Cue List. The Snapshot dialogue will either capture the current state of the mixer, or, the state of the automation at some point in time of the mix. The fader values displayed will change in real time: move a fader on the mixer and the number in the dialogue changes. Likewise for channel on/off's.

### Create MIDI Events...

Opens a dialogue box to allow off line creation of MIDI Events in the Cue List. Select the type of MIDI command, the MIDI channel, the Start time, and any other parameter related to the MIDI event, such as Controllers, Program Changes, etc.

### Create Markers... (Ctrl ;)

Opens the Create Marker dialogue.

(Click the MARK button in Custom View, or type Ctrl ;).

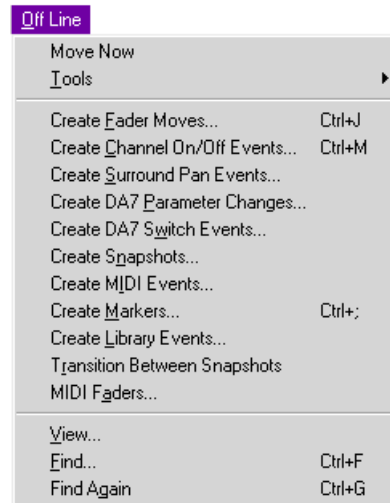
Markers are simply text inserted into the Cue List at a specific SMPTE time.

Markers help you to locate and edit significant places within the mix, such as verse, chorus, and scene changes.

Markers may be "Captured" in Real Time, that is, click on the MARK button while mixer is receiving time code. Markers that are captured in this way do not have text associated with them yet.

Markers may have their text added or edited by the Edit Marker dialogue box. To edit a Marker in the Cue List, double click on it to open the Edit Marker dialogue box. You may edit the Marker's text, or you may convert the Marker into some other kind of automation event, either a Snapshot, Fader move, Channel On/Off.

Markers may be found quickly by using the Find and Find Again commands in the Off Line menu (see below).



**Create Library Events...**

Opens a dialogue box to allow off line creation of Library Events in the Cue List. After opening the dialogue box, first select from the Library menu either EQ, Dynamics, or Effects.

The names of the Library entries are displayed in the left column. Click to select the desired Library name.

Then click to select the channel or channels which will be affected by the Library event. Shift-click to select a contiguous range of channels, Ctrl -click to select any combination of channels.

Type the time that you want the event to occur, and click Create to create the events and insert them into the Cue List.

**Transition Between Snapshots**

A "Transition Event" may be inserted between two Snapshots.

A Transition Event consists of fader moves, that Transition or "dissolve" between the audio channel levels in each Snapshot.

To create a Transition Event, first select two Snapshots in the Cue List. Then select Transition Between Snapshots from the Off Line menu. This inserts the Transition Event. The actual fader moves that comprise the event may be viewed by clicking on the Plus + mark to the left of the event.

The time that the transition starts is prior to the second Snapshot. The time may be user set in the Preferences dialogue. To change the time, select Preferences from the Edit menu. Then click on the Faders tab. Type the time in the Transitions Between Snapshots field. The time is entered in frames.

**MIDI Faders...**

16 of the mixer's faders may become MIDI Faders. MIDI Faders send MIDI Controller data when they are moved. The MIDI Controller data may be used to control parameters and levels of signal processors, hard disk based digital audio workstations, etc.

(Faders are turned into MIDI Faders in the Custom View, by selecting MIDI from the Selection pop-up menu in the lower right corner of any module.)

If any MIDI Faders have been created in the Custom View of the mix, they may be "remapped", that is, have their Channel and Controller number changed, in the MIDI Faders dialogue box.



## View Events

Opens a dialogue box that lets you specify what events in the Cue List may be viewed. Events not viewed are still part of the mix, but are “filtered” out of the Cue: List so that they may not be seen or selected.

Useful for shortening the Cue List to include only certain events prior to printing or editing.

## Find (Ctrl F)

Opens Find dialogue. Searches for text in the Cue List. For example, you can find a Marker called, say, “Second Chorus”, by typing “Second” and the Return key.

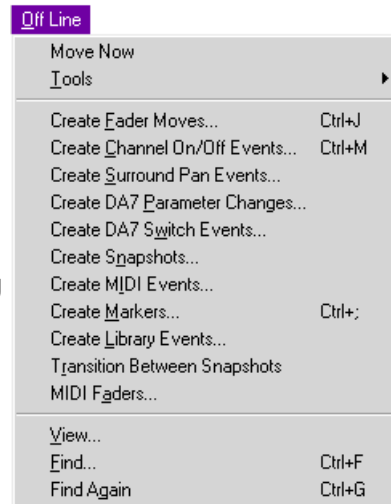
You need not type the whole word. Just type enough of the first letters to distinguish the text.

Search may be made of Markers, Snapshots, or both.

Clicking Previous searches back in Cue List for the previous occurrence of text.

## Find Again (Ctrl G)

Searches Markers or Snapshots for the next occurrence of the text which had previously been selected in the Find dialogue box. Does not open the Find dialogue box again.



## ***REAL TIME MENU***

This menu is for turning on and off special features, and for opening dialogues, that relate to Real Time operation.

Real Time operation means creating and editing a mix while time code is received.

(As distinguished from Off Line, which means creating and editing a mix from the Cue List, by numerically manipulating discreet automation events.)

### **Auto Punch In**

Auto Punch In makes Real Time mix editing easier by automatically switching any selected fader from Read into Write mode when the fader is moved across its null point.

### **Auto Punch Out**

Auto Punch Out makes Real Time mix editing easier by automatically switching any selected fader from Write into Read mode when the fader is moved across its null point. Auto Punch out must be pre-Selected, that is to say, you must push a button before you punch out.

### **SoftTouch**

When SoftTouch is turned on, faders on the mixer behave as if they were touch sensitive. When the Edit Mode is Write, simply moving any fader selects it, without pushing a button. There will be no jump in level if Auto Punch is turned on, because the move will not be written until the null point is crossed. The fader will return to read mode if it is not moved for a certain period of time. This time period user-set in the Preferences dialogue box. It is entered in seconds.

### **Auto Disable**

When Auto Disable is checked, faders automatically switch from Write to Read modes when the time code is stopped.

This prevents accidental writing of fader moves on the subsequent pass.

Auto Disable defaults to On (checked).

There are special circumstances where it might be desirable to turn it off. For example, if looping the program material and continually trimming the mix, it may be more convenient to leave Auto Disable off, so that the individual faders do not have to be "re-Selected" with every pass.

Real Time	
Auto Punch In	
Auto Punch Out	
Soft Touch	
✓ Auto Disable	
Group Members Move With Master	Ctrl+7
✓ Faders Control Group Masters or MIDI	Ctrl+`
Overwrite...	
Enable All	Ctrl+E
Set All Channels To...	
Unsolo All	
All Channels On	
Motor Off	
✓ Receive Timecode	Ctrl+T
MIDI Input Filter...	
MIDI Record	
Update Configuration	Ctrl+U
MMC Devices...	
Capture Snapshot	Ctrl+,
Send Snapshot	

**Group Members Move With Master**

When checked, group members move on screen when the group masters or stereo grand master is moved.

When not checked, the group members do not move with the master, but their levels change with the master. This feature only affects the display, and not how the mix sounds.

**Faders Control Group Masters or MIDI**

When checked, the mixer's faders will control either SoftGroup Masters, or MIDI faders.

To use this feature, it is necessary to first make a fader into either a SoftGroup Master or a MIDI fader.

**Overwrite**

This menu opens the Overwrite dialogue box. Enable each parameter that you intend to edit in the next pass. Parameters that are not enabled will be "read only" in the next pass.

**Enable All / Disable All (Ctrl E)**

This instantly selects all faders. If all channels are already Selected, this instantly de-selects faders, returning them to Read.

**Set All Channels To...**

Moves all the faders in the Custom View up to a user-specified level.

**Unsolo All**

Disengages all solos.

**All Channels On**

Turns audio on for every channel.

**Motor Off**

Turns mixer motors on and off. You can still perform an automated mix with the motors turned off.

The Panasonic WR-DA7 Digital Mixer actually controls signal levels using internal digital signal processors. The moving faders are simply a control input device and representation of what the internal digital signal processors are doing. No audio passes through the faders as it does in a traditional analogue console.

## Receive Timecode

Has the same effect as the T.C. button in the Control Bar. Turn Receive Time Code on to do an automated mix. Turn off to freely play the program material without an automated mix playing back, without a snapshot being taken, and without a message to bring a fader window to the front.

## MIDI Input Filter

When using the MIDI Record feature, setting the MIDI Input Filter allows selective filtering out of specific MIDI events, by channel and kind. Used to save memory and avoid recording unwanted MIDI data.

## MIDI Record

Turns MIDI Record On or Off. When MIDI Record is On, and time code is received, the software can record MIDI commands received on a MIDI interface connected to one serial port of the Windows. This may be used, for example, to record notes from a keyboard to fire sampled sound effects.

## Update Configuration

Makes the Custom View show the current position of the faders. Useful because at any point in the mix, if "Motors" are off, when you stop the program material the faders on the screen will not reflect the real position of the physical faders.

## MMC Devices...

Opens track arming window.

Enable buttons for each track. Number of tracks for each device is set in the Machine Control tab of the Prefs dialog box.

### Real Time

Auto Punch <u>I</u> n	
Auto Punch <u>O</u> ut	
Soft <u>T</u> ouch	
✓ Auto <u>D</u> isable	
<u>G</u> roup Members Move With Master	Ctrl+/'
✓ <u>F</u> aders Control Group Masters or MIDI	Ctrl+'`
<u>O</u> verwrite...	
<u>E</u> nable All	Ctrl+E
<u>S</u> et All Channels To...	
<u>U</u> nsolo All	
<u>A</u> ll Channels On	
<u>M</u> otor Off	
✓ <u>R</u> eceive Timecode	Ctrl+T
MIDI Input Filter...	
MIDI Record	
Update Configuration	Ctrl+U
MMC Devices...	
<u>C</u> apture Snapshot	Ctrl+,
Send Snapshot	

**Capture Snapshot**

A Snapshot is a kind of event which represents the state of all of the mixer's automated parameters.

A Snapshot which is inserted into the Cue List then becomes part of the mix, it can be edited, and it also becomes a locate point.

**Send Snapshot**

A Snapshot is a kind of event which represents the state of all of the mixer's automated parameters.

One Snapshot is written into the mix at the beginning automatically, more may be inserted or edited in the Cue List.

To use Send Snapshot, first select a Snapshot event in the Cue List by clicking on it once. Then select Send Snapshot.

This forces the mixer to immediately "Snap" to the state of the selected Snapshot. This is a means of instantly setting all of the channel on/off's and faders to some previously written state, all channels at the same time.

For example, clicking on a Snapshot in the Cue List, and selecting Send Snapshot, may be used for instantly turning off every channel on the mixer.

## ***GRAPHIC EDITING MENU***

### **Snap to Markers**

Snap to Marker, when checked in the Graphic Editing menu, makes it easier to align events to markers in the Graphic view.

When dragging a selected region of fader moves near a marker, the region will snap to (align with) the marker.

When extending or moving a Channel On/Off, the start or end of the Channel On/Off will align to the marker.

#### **Graphic Editing**

- ✓ Snap to Marker
- Hide Marker and Snapshot Names
- Show Marker and Snapshot Lines
- Autosmooth

### **Show or Hide Marker and Snapshot Names**

To show or hide marker names, click on the blue triangles.

To show or hide snapshot names, click on the red triangles.

Show or hide can also be selected from the Graphic Editing menu.

### **Show or Hide Marker and Snapshot Lines**

To show or hide the vertical lines that extend downward from the markers and snapshots, select Show Lines or Hide Lines from the Graphic Editing menu.

### **Autosmooth**

As fader moves are drawn, the software smoothes out any small irregularities.

It does this automatically when you release the mouse.

## ***WINDOWS MENU***

Selects how you are viewing the active mix in the front most window, Custom View 1 through 10, Cue List, or Graphic View.

Below the line are the names of your opened mixes. Select which mix you will be editing or playing back, that is to say, which is the active (front-most) window.

#### **Window**

- Custom View
- Cue List
- Graphic View
- Panning Module

Ctrl+0

- ✓ 1 Untitled <Front Panel>

# DA7 LIBRARIAN SOFTWARE

The DA7 Librarian Software allows you to edit and save multiple DA7 libraries to disk.

## ***INSTALLATION***

To install the software, please refer to “Software Installation” in Chapter 1.

## ***LAUNCHING LIBRARIAN SOFTWARE***

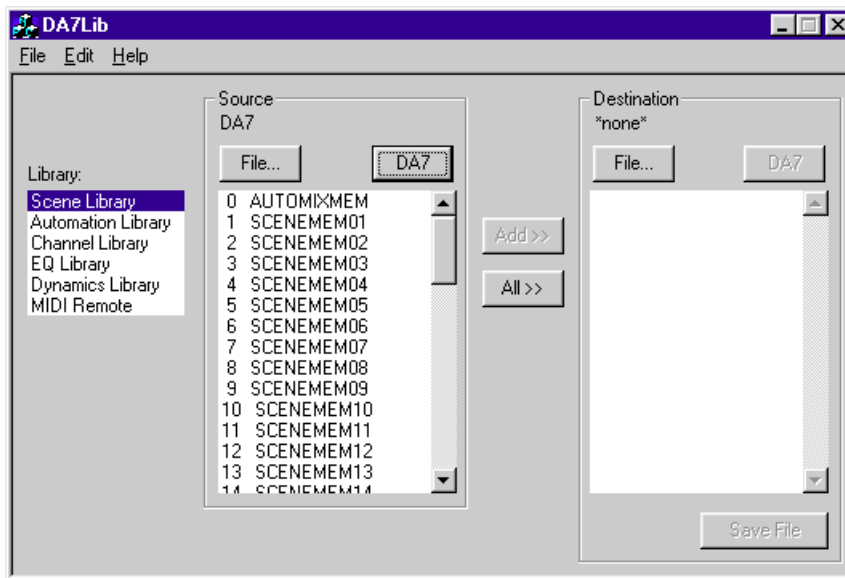
Click on the “Start” in the Windows’ task bar then select “programs”, select “RAMSA MAX” and finally “DA7 Librarian”. The application will automatically upload the current contents of the DA7 Libraries. This may take some time, due to the large amount of data that the DA7 can store.

## ***LIBRARIAN WINDOW***

A window opens showing a table of Library names, and “Source” and “Destination” tables. These tables have standard scroll bars to allow you to scroll down and view more library entries.

On the left is the list of DA7 libraries. You can select and view the contents of one library at a time. Select either Scene Library, Automation Library, Channel Library, EQ Library, Dynamics Library or MIDI Remote.

This only affects what you are viewing and editing. However, when you actually save a file to disk, or download it to the DA7, understand that all 6 libraries are saved or downloaded at the same time.



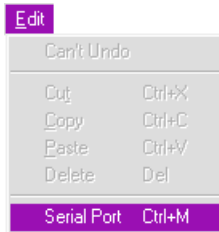
The DA7 can internally store has 51 Scene Libraries, 4 Automation Libraries, and 5 MIDI Remote Libraries.

The DA7 also internally stores 50 of each of the other Libraries.

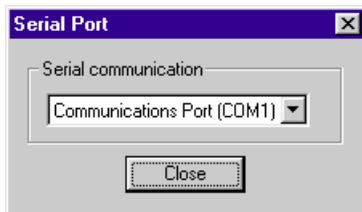


### ***SETTING THE PORT AND COMMUNICATION SPEED***

Drag down the EDIT from the menu bar to select the "Port Settings."



The Port Settings window appears.



Click on a button to select the Port - either Modem or Printer .

Click on a button to select the Speed - either 62.5 k or 125 k, so that it is identical to how the DA7 is set.

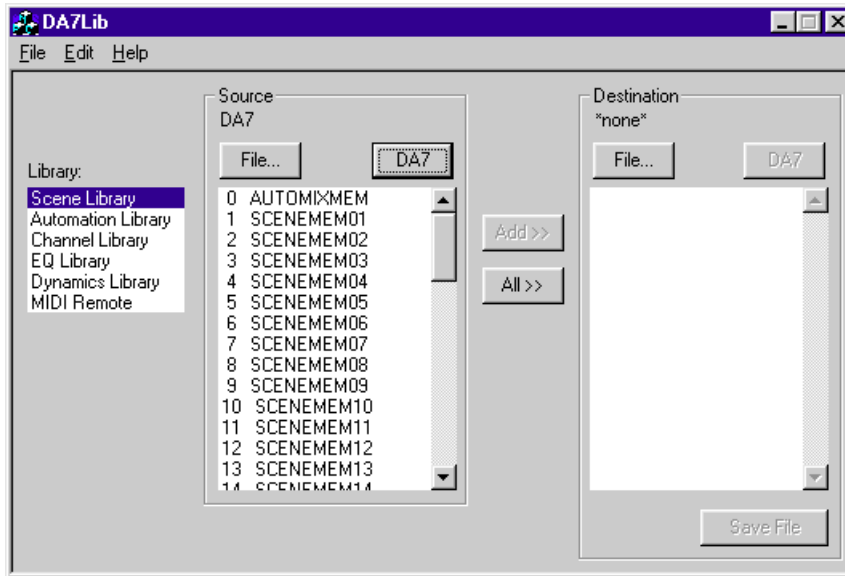
Click OK button.

Set the communication speed on the DA7 - either 62.5 k or 125 k, so that it is identical to how the Librarian is set.

For more information, see Chapter 11, MIDI of the DA7 Users' Guide.

## *To SELECT AND VIEW A LIBRARY*

To view a Library's contents, prior to Editing or Saving it, you must first select it under "Source". Click on either "File..." or "DA7".

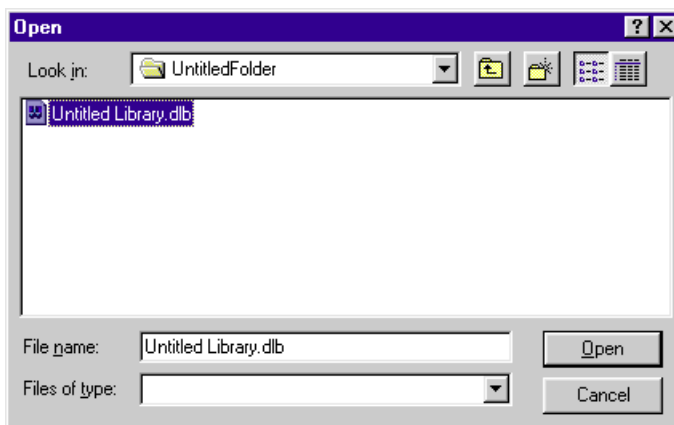


Click DA7 to select Libraries currently stored in the DA7 at the time the DA7 Librarian application was launched. (Clicking on DA7 causes the Destination "DA7" button to "dim", that is, become unavailable.)

Click File... if you wish to select Libraries previously saved in a file.

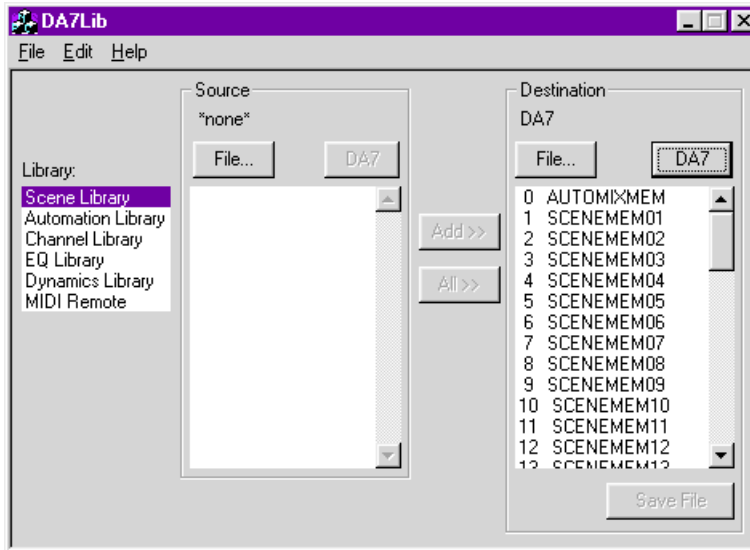
Clicking File... brings up the standard "Open" dialogue box for selecting and opening a previously saved Library.

Click to Select from the list of Libraries to choose the Library that you wish to view and possibly edit and save.



## *To EDIT AND SAVE*

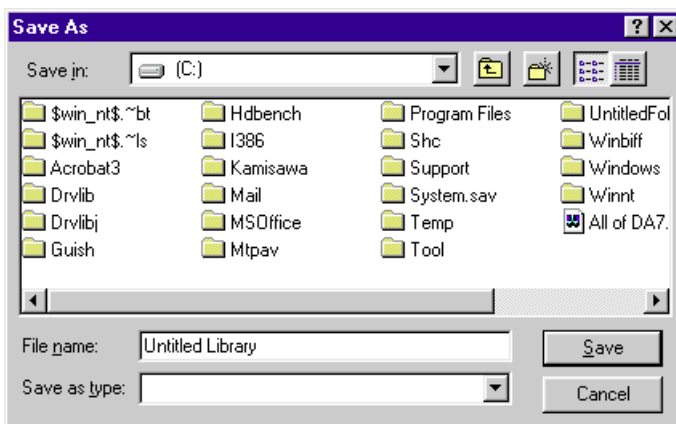
Prior to Editing and Saving, you must first select a "Destination". The Destination can be a File (that is, save to disk) or the DA7 .



Click DA7 to select the DA7. (Clicking on DA7 causes the Source "DA7" button to "dim", that is, become unavailable.)

Click File... if you wish to select the name of a file to save the Libraries to disk.

Clicking File... brings up a standard dialogue box to allow you to name the Destination file.



But this does not actually save anything to disk yet. You must click on the Save button at the bottom of the window to save to disk.  
(See warning on the next page)

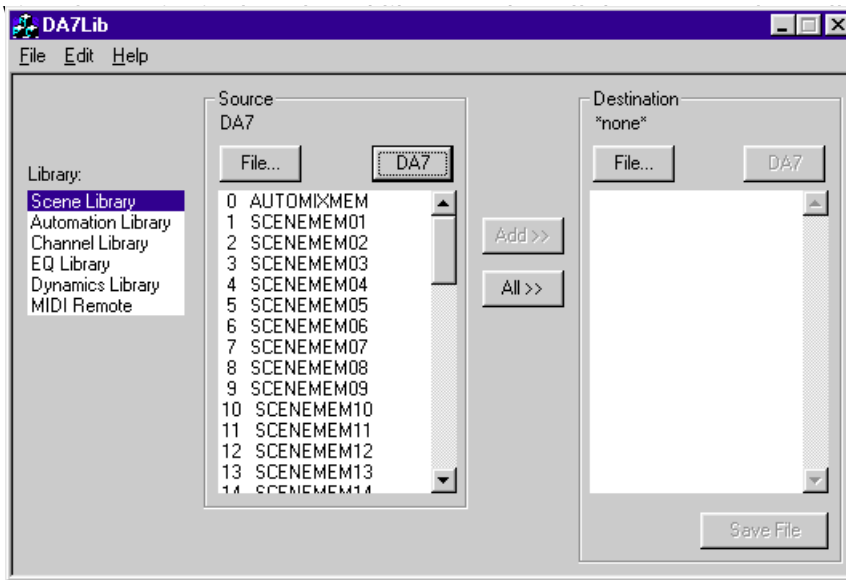
**Warning!**

The next time that you click on the Save button at the bottom of the window will result in a “Download”, that is, the current contents of the Destination table will be transferred into the DA7 mixer, overwriting and irrevocably erasing the previous Library contents!

***TO SELECT LIBRARY ENTRIES PRIOR TO EDITING OR SAVING***

First Select the Source as described above.

Then, click to select from the Library list on the left side of the window, as described above.



Select the entries that you wish to Edit or Save by clicking on them.

Clicking will select one entry, the last entry clicked.

Shift-Click to select a contiguous range of entries.

Ctrl- Click to select or de-select any combination of multiple entries.

Click “Add” to move a copy of those entries to the Destination side of the window.

You cannot click Add without first selecting a Destination (see above.)

Click “Add All” to move a copy of all entries to the Destination side, without having to select anything first.

Remember that if the Destination is "DA7", the number of entries on the Destination side is fixed by the capacity of the DA7. As mentioned earlier, the DA7 can internally store has 51 Scene Libraries, 4 Automation Libraries and 5 MIDI Remote Libraries.

The DA7 also internally stores 50 of each of the other Libraries.

If the Destination is a File, there is no practical limit to the number of entries that can be saved in a Library.

If nothing is selected in the Destination Side, then the Add or Add All button will cause the selected entries to replace the entries on the Destination side.

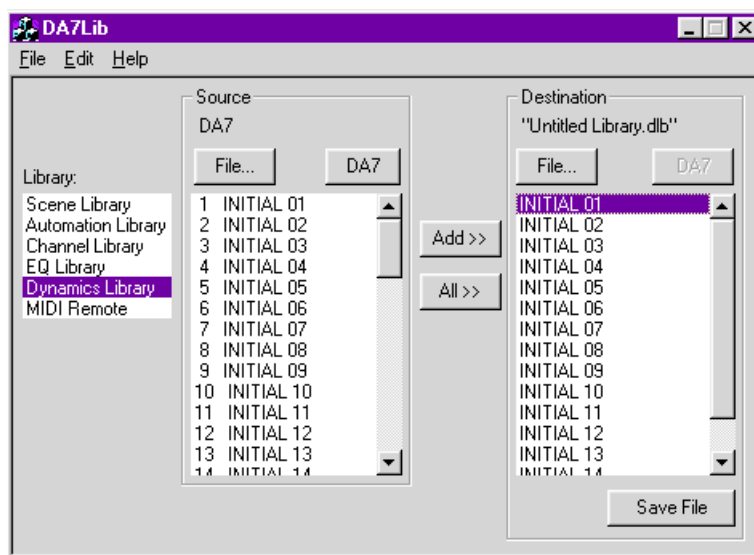
If DA7 is the Destination, you will never have more entries than the DA7 can hold displayed in the Destination side.

If any entries are selected on the Destination side, clicking Add or Add All will "replace" the selected "Source" entries starting at the first selected entry on the Destination side.

The Add operation will also Delete Destination entries as required, until as many as possible of the Source-selected items are added.

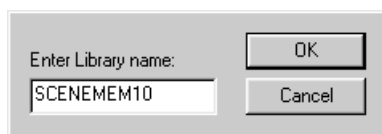
### ***CLIPBOARD EDITING OF “DESTINATION”***

If the destination is a File, you can use the standard clipboard operations, Cut, Copy, Paste, Clear and Undo, to facilitate the process of editing entries prior to saving to disk.



### ***TO CHANGE THE NAME OF A LIBRARY ENTRY***

Double Click on the Name of the Entry in the Destination side to open the Edit Name dialogue box.



Type up to 10 characters of the new name and press Enter.

***EXAMPLE OF PROCEDURE TO SAVE (BACKUP) DA7 LIBRARY CONTENTS TO DISK.***

Under Source, click to select DA7.

Under Destination, click to select File... and name the File, click OK to close the dialogue.

Click Save at the bottom of the window to save the DA7 libraries to disk.

***EXAMPLE OF PROCEDURE TO OPEN A PREVIOUSLY SAVED FILE AND DOWNLOAD IT TO THE DA7.***

Under Source, click to select File...

Select the File and click OK to close the dialogue box.

Under Destination, click to select DA7.

At this point, you may want to select individual entries on the Destination side, to replace entries using Add, starting at the selected entry.

Click Add or Add All to chose the entries that you want to send to the DA7.

At this point, you may edit them further, by editing names, or using the Clipboard, that is, Cut, Copy, Paste.

# APPENDIX

## ***KEYBOARD SHORT CUTS***

This is a comprehensive list of MAX's keyboard shortcuts.

The following shortcuts are “direct”, simply type the letter indicated below to access the desired mode of operation.

<b>Edit Mode Menu</b>	<b>Key</b>
Write	<i>W</i>
Read	<i>R</i>
Trim	<i>T</i>
Manual	<i>M</i>

To use the following shortcuts, press and hold down the Control Key [*Ctrl*] and while holding the Control key type the letter indicated.

<b>File Menu</b>	<b>Key</b>
New	<i>Ctrl N</i>
Open	<i>Ctrl O</i>
Close	<i>Ctrl W</i>
Save	<i>Ctrl S</i>
Print Cue List	<i>Ctrl P</i>
Quit	<i>Ctrl Q</i>

<b>Edit Menu</b>	
Undo (Redo)	<i>Ctrl Z</i>
Cut	<i>Ctrl X</i>
Copy	<i>Ctrl C</i>
Paste	<i>Ctrl V</i>



Clear *Ctrl B*

Select All *Ctrl A*

**Off Line Menu**

Move *Ctrl K*

Scale *Ctrl L*

Crop *Ctrl I*

Smooth *Ctrl Y*

Create Fades *Ctrl J*

Create Channel Ons *Ctrl M*

Create Marker *Ctrl ;*

Find *Ctrl F*

Find Again *Ctrl G*

**Real Time Menu**

Enable All (Disable All) *Ctrl E*

Receive Timecode *Ctrl T*

Update Configuration *Ctrl U*

Group Members Move with Master *Ctrl /*

Faders Control SoftGroups or MIDI *Ctrl `*

Capture Snapshot *Ctrl ,*

**Windows Menu**

Custom Views 1 - 9 *Ctrl 1 - Ctrl 9*

Cue List *Ctrl 0*

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