I.M.E.S.A.

Modular Editing System by **AKAI**

II

Operator's Manual

AKAI *professional*

AKAI DIGITAL

Contents

About MESA II

Modular Editing System by AKAI

MESA II is the computer based software system that provides the centralized control of hardware operation and data transfer in a wide range of AKAI Samplers and digital recorders, etc. from a single screen on the Macintosh. It currently supports S-series Samplers, S2800, S3000, S3200 and CD3000, and XL-series Samplers, S2000, S3000XL, S3200XL and CD3000XL, and DD1000.

Centralized control of various hardware devices and data transfer

Using a computer to control external hardware devices has a number of advantages. For instance, samples and programs can be loaded from any device into the Mac memory and manipulated, played, and stored on any device of the user's choosing.   The audio and parameter data can be backed-up, or saved, onto the Mac disks, and reloaded at later time.

Save time and gain finer level of control on a large screen with a top-notch Graphical User Interface

While those external devices like the Samplers can be operated from their own front panel, most of them offer only small screens for the cost reason and such. The power of MESA II lies in enabling access to the functions of such devices on a much larger screen via a graphical user interface: users use the mouse to select functions, set levels and parameter data via buttons, sliders, knobs and faders on the screen. Audio Editing, Sample Editing, Program Generation, Storage, and File Manipulation can all be controlled from the Mac. The convenience of a large screen graphical user interface not only saves time and effort but offers a finer level of control to manipulate sounds and programs.

Interface between incompatible machines

In addition, MESA II takes in the audio file formats of incompatible machines translating file formats into the general audio file formats such as AIFF and SD2, thus the data from various devices can now be manipulated as easy as working with a single machine.

Automate tasks such as batch updates, program generation or setup procedures

MESA II has been further expanded to be fully compatible with AppleScript in Mac OS7.5. AppleScript provides a facility to write scripts that control the look, feel and functionality of MESA II and the efficiency of operation can be improved.   For instance, scripts can be written to perform batch updates such as changing the settings of several programs with one click of the mouse, to integrate all version numbers or creation dates of a set of files, or to gather several programs into one. Some useful script sources are included to the MESA II, and the further scripts will be made available. "Power users" are encouraged to adapt these and write their own to suit their method of working.

Familiar, easy to operate and well written interface

MESA II has the familiar interfaces of Mac system such as drag and drop, interactive On-Line Help, etc.

MESA II is written as a modular system and it allows you to install only the necessary modules to the Mac, thereby saving Mac RAM memory.

Getting Started

How to install MESA II

Double click MESA II Installer icon.

Install program is booted, and MESA II will itself decompress and install files into the selected folder in your Mac hard disk.

File Configuration of MESA II

When the installation is completed, the folder "MESA II" that has been created on your hard disk contains the following folder and files:

 MESA II

This is the application body itself. Double clicking this icon will boot MESA II.

 MESA Pouch

Do not rename or move this folder as MESA II needs it to run

The "MESA Pouch" is a folder that contains an "Editor Folder" and a "PlugIns" Folder that the MESA II application needs to run. When you boot MESA II, it scans for the folder called "MESA Pouch" and loads the files. If it does not find this folder in the same location as the MESA II, MESA II will not be able to boot and the error message "Error: Could not find MESA Pouch Folder" will be displayed.

Before starting MESA II, you can move items in or out of the Pouch depending on your need and available Mac RAM memory.

 Editors Folder

Moving the unnecessary Editor from this folder increases the boot up speed and saves RAM memory.

This folder must be in the "MESA Pouch" folder. The Editor files that you will actually work have to be moved into this folder. MESA II will read the files in this folder and add them to the menu of Editors as you boot MESA II.

MESA II can be expanded by adding the new editor into this folder.

 PlugIns Folder

Unnecessary plug-in can be moved from this folder. Error message is shown when the plug-in is not compatible with your system

This folder must be in the "MESA Pouch" folder, and it contains various plug-in or program files to support particular functions of the Editors. In this folder, there are two folders ("Audio Filing" and "DSP"), and one or several separate communication files (SCSI or OMS) .

* "Audio Filing" folder contains the AIFF plug and SD2 plug to translate between different Audio files;
* "DSP" folder contains various Filters and general DSP plugs for Digital Processing;
* SCSI and/or OMS MIDI files enabling MESA II to communicate with external devices.

 Example Scripts

Example Scripts

This folder contains MESA II script source code written using AppleScript.

MESA II is fully compatible with AppleScript and some useful scripts are provided. Scripts do not have to be in "MESA Pouch" folder to run. However, you must first compile and save the scripts as applications. If your Mac is set up for AppleScript, this is very easy. See "AppleScript" Chapter in this manual.

 OMS MIDI Stuff

OMS MIDI Stuff

Move the unnecessary files into the MIDI stuff

In the "OMS (Open Music System) MIDI Stuff" folder, it contains the OMS plug-in to run MIDI with OMS and MIDI Keyboard Editor file to play MIDI Notes on the keyboard screen of the Mac. To install these into MESA II, move them into the Editors folder or PlugIns folder.

Note: To run MIDI with OMS, MESA II requires OMS v 2 or later (version 2.2 is recommended). For OMS availability, see "http://www.opcode.com" or contact your local dealer. To run MESA II with SCSI, your Sampler must have a SCSI board installed (if SCSI is an option).

Memory System Requirements and Set-Up

Without conforming to these requirements, MESA II may still boot but may cause unpredictable behavior as low in memory, call unsupported function, etc.

The following are required to run MESA II.
* Macintosh or Power Macintosh equipped with 68030/40 microprocessor
* Mac OS7. 1 or later (7.5 is recommended)
* 4MB (4000K) or more spare RAM memory (If no sample editing is being done, it could run with about 2500K.)
* Display with 256 or more colors.
* Sound Manager v 3 or later (version 3.2 is recommended)
* Drag and drop functions
* AppleScript (if you run the script)
* OMS v 2 or later (version 2.2 or later is recommended) (not needed if MESA II is used only with SCSI)

Deleting (or removing) unused PlugIns and Editors from "MESA Pouch" folder saves RAM memory.

MESA II may not work correctly when virtual memory is on. If you experience trouble while running MESA II with virtual memory turned on, turn it off. Turn RAM Doubler off likewise.

AKAI Samplers S2800, S3000, S3200, and CD3000 must have operating system version 2.0. The S2000, S3000XL, S3200XL, and CD3000XL must have operating system version 1.5. To use MESA II in a SCSI environment, the SCSI board is required for the system without SCSI board.

How to setup MESA II in a SCSI environment

Audio data transfer from Samplers to the MAC needs SCSI to run

SCSI (Small Computer System Interface) is a fast communication protocol designed primarily for the data transfer of computer. Because of its speed, it is the recommended environment to run MESA II in if you do a lot of sample data transfer. If you use the Sampler Editor, you must place the SCSI Plug file into the "PlugIns" folder.

Boot-up procedure is as follows;

*   Turn off your Macintosh and Samplers, and connect them with standard SCSI cables.

Faulty SCSI cables cause some trouble, use high quality cables

*   Turn on the Samplers.
*   Turn on the Macintosh after the Samplers are booted up fully.

All types of Macintosh support SCSI, but some of the Samplers offer SCSI board as an option. In this case, the SCSI board has to be installed in the Sampler.

Note on SCSI connection

While a total of 8 SCSI IDs from 0 to 7 are provided, Macintosh uses both 0 (for the built-in HD) and 7 (for Macintosh itself), leaving you 6 IDs for external devices. AKAI Sampler is usually set to ID 6. All other devices need their own individual SCSI IDs. If more than one device shares the same SCSI ID number, the system will freeze or malfunction (see "Troubleshooting" Chapter).

A further potential problem is incorrect SCSI termination. Ensure that you have terminated your SCSI system correctly. Most of system freezes are caused this way.

If you turn an external SCSI device on after the Macintosh is turned on, then you must wait for it to fully boot up before you do anything on the Macintosh. If you do not and the Macintosh tries to access SCSI during that time, then the Macintosh will freeze.

If virtual memory causes problems, turn it off

SCSI may also cause conflict with virtual memory, including RAM Doubler. If you must use virtual memory and experience problems, try using OMS MIDI instead of SCSI communication. However, because SCSI communication is much faster, an investment in more real RAM is recommended.

How to set up MESA II in an OMS Environment

For the installation of OMS, refer to OMS instruction manual.

MESA II is completely compatible with OMS v 2 (version 2.2 or later is recommended). The OMS (Open Music System) MIDI (Musical Instrument Digital Interface) Environment provides an alternative to SCSI if you do not perform large data transfer.

Set up procedure is as follows;

*   Install OMS in your Macintosh.
*   Connect your Macintosh and the Samplers with MIDI cables.

The MIDI conversion box is required to connect MIDI cable to the Macintosh.

OMS is now an Apple standard and replaces the Apple MIDI Manager (which MESA II does not support any longer). You can get OMS by downloading OMS from the OPCODE web site or buying it from music software dealers.

To use OMS, move the OMS Plug file into the "PlugIn" folder.

Advantages of OMS are a neat user interface and a more robust system than SCSI, i.e. once it is set up, it runs very stable.

Playing samples with the Keyboard Editor needs OMS MIDI.

If you need to run the MESA Keyboard Editor (which is a MIDI object), OMS is required. A disadvantage of using OMS is a lower speed as compared to SCSI. It is not very practical to transfer the sample data by OMS MIDI. Therefore, it is recommended that you install both OMS MIDI and SCSI and use each where most appropriate.

About MESA II developer team

MESA II has been developed by Andy Bull of Living Memory, London as part of a worldwide AKAI team of developers residing in Japan, Britain, and the USA.

Support

This software is bundled with the AKAI XL-series Samplers and is also available free of charge when it is downloaded from our web site (http://www.akai.com/akaipro). Therefore, we offer no guarantee for this software. Accordingly, the technical backup and support on this software are not available in principle. However, your comments and suggestions on this software are welcomed. Please forward them to the EMI Division of AKAI Electric Co., Ltd. or your local AKAI distributors.

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New Functions

MESA II is a major update from earlier versions of MESA. The interactivity of the program has been drastically enhanced, resulting in an easier-to-use interface for professional sound engineers while offering an extended set of sophisticated functions for the 'power user'.

Editors

MESA II is now based around the two main concepts of Editors and PlugIn files supporting the chosen Editors.

Editors, particularly the Audio Editor and Sampler Editor, are now the main access points in MESA II. Other Editors currently shipped include the DD1000 Transfer Module and the MIDI Keyboard. New Editors will be added in the near future.

Audio Editor

New Audio Editor Tools and functions included:

* 'Scratch' Loudspeaker Tool to playback the audio by "dragging" the mouse over it;
* Pencil Tool to edit the waveforms directly as rubbing out the noise with the mouse;

* Stereo sample waveforms of both left/right channels are shown.
* Editing/DSP on either L/R samples individually or both at the same time.
* Users can open multiple Audio Editor Windows (memory permitting) and place audio waves side to side.
* Users can drag and drop between different windows.

Sampler Editor

New functions include the facility to create a database (on the Mac) of references to the files on the Sampler HD. You can then rearrange this database into your own Finder hierarchy of folders and files, and load your Sampler files from there.

As a new function of Sampler Editor, Layout Files (e.g. MIDI Setup, Filters or LFOs) have been redesigned and are now all accessible by pull-down menus from a new "Super Layout" called the Control Center.

With the Quick Access Window, the key parameters of the programs and keygroups can be manipulated in a single screen.

PlugIns

PlugIns are a set of MESA II extensions handling such functions as Audio Format Translation between incompatible audio formats and Communication Protocols such as SCSI and OMS. While varieties of PlugIns are included in MESA II, you only install those functions you need by dragging them into "MESA Pouch" Folder before starting MESA II.

Dynamic Menu Bars

All menu bars are now dynamically interactive and display a specific set of menu options - dependent on where the user is within the program. For instance, if the Sampler Editor is chosen, the menu bar shows the specific menu options like Sampler and EB16.

Drag and Drop

Drag and drop function has been extended. For instance, sound samples can be played from the Mac Finder by dragging an AIFF sound file and dropping it into the MESA II icon. Within MESA II, drag and drop is enabled between individual windows. For example, dropping a sound file over the Audio Editor from the Finder or the Sampler Editor renders this file ready for audio editing.

Keygroup Batch Editing

A discontinuous set of keygroups can be selected and batch edited by using the Shift key in the Program Selector Window.

Clipboard Integration

Audio samples can now be copied and pasted to the Mac Clipboard as Mac standard 16 bit 'snd' format resource files. You can even click on a clipboard sound and play it over the Mac speakers.

Sampler Integration

MESA II now sends program changes to the Sampler in real time whenever the user selects a program to edit.

Finder Integration

The Sampler Editor now creates a full database of all Sampler files and folders on the Mac Finder. With this, you can organize files on the Finder.

On-Line Help

A 'Balloon'-type On-Line Help System has been implemented. By selecting "Mesa Help" under the Mac Help Menu icon at the top right corner of the screen, the cursor changes to a "?" question mark. When the user clicks either on MESA II Menus or on objects within a MESA II Window while the cursor is in question mark, their brief description will be displayed. Help is thereby fully integrated within MESA II obliterate the need for extra Help Files. Shortcut keys to the Help Menu are "Command + H" keys or "Help" key.

Scripting

With a dictionary of MESA II objects provided, writing AppleScript has been made easier to use scripting functions. Some useful scripts have been provided. As AppleScript must be integrated with the hardware and software setup of individual systems, these scripts are included in text format and must be compiled before they can be run. Refer to the MESA II "AppleScript" Chapter for further information.

'Power Users' will find writing AppleScript a lot more convenient

Tutorial

Application Made Easy to use

This simple Tutorial is written to provide a quick 'hands-on' overview of MESA II. It will take about half an hour to work through. This chapter, by the way, is described on the assumption of that the Macintosh and Sampler are connected without having any trouble, and MESA II has been installed properly. For the set up of MESA II, refer to "Getting Started" Chapter.

In particular, you will learn to

1. load MESA II;
2. connect to a Sampler;
3. load disk data into the memory of Sampler;
4. move sample data into your Mac;
5. edit a sample;
6. save a sample;
7. create a new program;
8. assign a single sample to a program;
9. create a more sophisticated program; and
10. save a program

Step 1: Starting MESA II

*   Double click on the MESA II icon.

MESA II title appears. After loading the Editors and PlugIns, one or several MESA windows will open up - MESA II opens up where it was Quit the last time.

You should see the menus File, Edit, Editors on the menu bar, and depending on which Editor happens to be selected, some further menus such as Sampler/Windows (Sampler Editor) or View/DSP (Audio Editor) will appear. For this tutorial, you need the following three Editors installed: Audio Editor, Keyboard, and Sampler Editor. Check that they are present under the Editors Menu.

Note that even when there are no windows open, one of the Editors will be active and marked with a tick under the Editors Menu. On the menu bar, the Menu for this Editor is shown.

Step 2: Connecting to a Sampler

*   Select the Sampler Editor from the Editors Menu, and select "Find Sampler..." from the Sampler Menu.

Depending on whether you use OMS or SCSI for communicating with your Sampler, one of the two message boxes will appear.

When SCSI is used;

*   Select your Sampler's SCSI ID (default 6) and click OK.

If you selected a wrong SCSI ID, hold down the keys "Command + .(Period)" to undo

the selection.

When OMS is used;

* Select the name of your Sampler and click OK.

* Select "Memory" (Command + 3) from the Windows Menu to open the Memory Window.

The AKAI Sampler contains the TEST PROGRAM and 4 sample data in default. Check if they are displayed on the Memory Window.
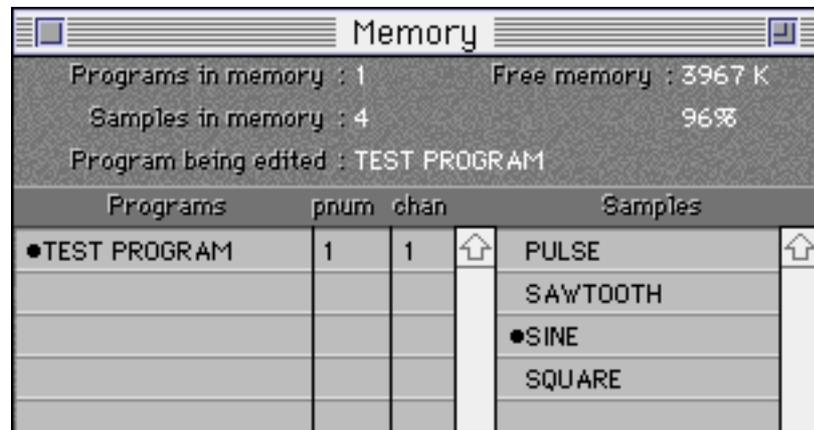
Step 3: Loading disk data into the memory of Sampler.

* Select "Disk" (Command + 4) from the Windows Menu, and the Disk Window will open up.

* Insert the sample floppy disk included with AKAI Sampler into your Sampler.

* Click the floppy disk icon shown at the left top of the Sampler Disk Window.

This accesses the Sampler's floppy disk, and the contents of disk will be shown on the Window. (If the diamond shaped icon is clicked, the SCSI devices (hard disk, CD-ROM drive, etc.) connected to your Sampler will be accessed.)

With an old Mac Os, drag and drop may not work. You can use the menu bar or double clicking instead

* Click the program or sample on the window to select the one you want to load.

The selected item will be shown reversed. If you want to select several items, click them while holding the Shift key pressed.

* Drag the selected items and drop them on the Memory Window.

If you can't hear a sample, play it directly from your Sampler

The selected items are now added to the Sampler's Memory. You may also load them by double clicking the selected item, or selecting "Load Selected Items..." from the File Menu (In this case, you can clear the old samples in the Sampler's Memory before loading the new samples). You can play the samples loaded in the Sampler's Memory by selecting samples one at a time and clicking the speaker icon at the top right hand corner in this window. They will be played through the audio output of the Sampler.

Step 4: Loading sample data into the computer memory

To load the sample data from your Sampler memory to your Mac memory;

* Select "Audio Editor" from the Editors Menu.

A large Audio Editor Window called "untitled" together with a Toolbox Window and an

empty Information Window will appear.
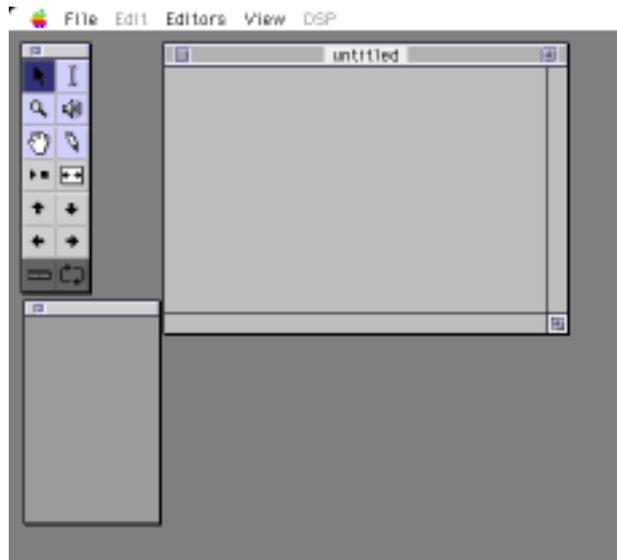
* Select a sample from the Memory Window and drag and drop it into the "untitled" Window. To load stereo samples, select both left and right samples and drop them.

The Audio Editor Window is now filled with the selected samples' wave form and the Information Window shows the information about the samples.

* Press the Spacebar.

The samples on the window will be played. To stop playing, press the Spacebar again. Since these samples are on the Mac memory, they will be played from the speaker built- in the Mac.

Step 5: Editing a sample

To use DSP functions, the DSP PlugIns has to be contained in the MESA Pouch

You can edit a sample using a DSP (Digital Sound Processing) function in Audio Editor. DSP functions work only on the selected part. Selecting the whole sample (Select All in Edit Menu) or selecting a part thereof renders the DSP Menu active, i.e. its color changes from gray to black.

* Select the Selection Tool (the "bar" icon in Toolbar Window, top right) of Audio Editor.

The shape of Cursor is changed to an "I" beam shape.

* Drag it on the wave form to select the part of a sample.
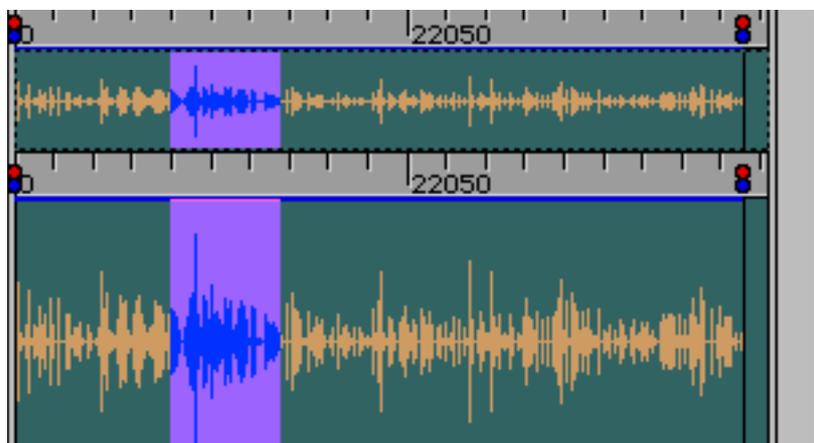
The selected part is displayed in reversed color, and only the selected part will be played when the Spacebar is pressed. To adjust the right and left margins of the se-

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lected part, the Shift key and Selection Tool are used. Click anywhere outside the selected part to deselect.

The Information Window shows the beginning and end locations of the selected part.

* Select "Reverse" from the DSP Menu.

The selected part is now reversed. Only the edited part will be played when the Spacebar is pressed.

* Select the Selection Tool, and click anywhere outside

the selected part of wave form in the Audio Editor Window.

Everything will be deselected, and pressing the Spacebar will play the whole sample.

Try the same steps for other selections and other DSP functions. If you want to use the Audio Editor more seriously, you will have to use Rulers, Markers, and other functions as described in the "Audio Editor" Chapter.

Step 6: Saving a sample

To save the sample edited by the Audio Editor to the Sampler Disk;

* Display the Memory Window on the Sampler Editor.

Keep the Memory Window visible even when the screen is changed over to the Audio Editor.

* Select the Drag Tool on the Audio Editor.

The Cursor is now changed to the shape of a hand.

* Drag the wave form on the Audio Editor Window, and drop it on the Memory Window.

Now the sample has been sent to the Sampler's Memory.

* Display the Sampler Disk Window on the Sampler Editor.

Check if there is a floppy disk to save in the Sampler.

* Drag and drop the sample from the Memory Window to the Disk Window.

Now the sample is saved on the Sampler disk.

You can also save a sample by selecting "Save" from the File Menu.

Next, to save the sample edited on the Audio Editor onto the hard disk of your Mac;

* Select "Save" from the Audio Editor File Menu.

You will be prompted to select the saving location and saving type as you save.

You may also drop the sample from the Audio Editor Window directly onto the Finder using the drag tool.

Furthermore, the sample on the Sampler can be saved directly to the Mac disk.

* Open the Memory Window on the Sampler Editor, and select "AIFF" or "Sd2f" in "Export Sample..." on the File Menu.
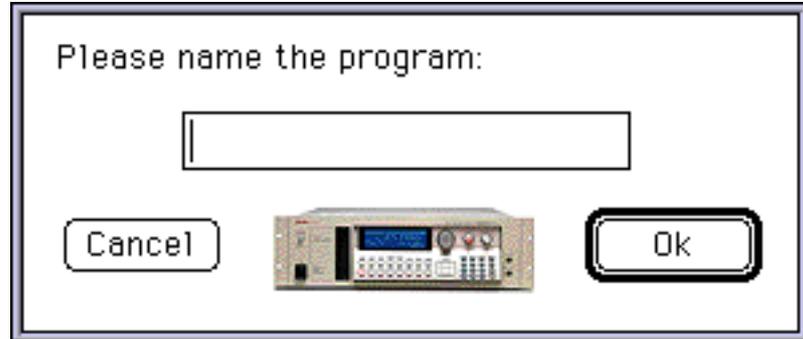
You will be prompted to specify the saving location as you save. You may also drag the sample you want to save and drop it directly onto the Finder.

Step 7: Creating a new program

To create a new (empty) program;

* Open the Memory Window on the Sampler Editor, and select "New Program" from the File Menu.

Input the name as a dialogue to allow you to name the new program appears.

* Input "TEST" and select OK.

Next, to set the MIDI channel of program to 2;

* While holding down the Option key, click the channel number and input "2" - the default MIDI channel number of the new program is set as "1".

We will next assign samples (each with a different key span) to this program, and play it in the Key Span Window.

Step 8: Assigning a single sample to a program

To assign a sample to the program "TEST" created in the previous section;

* Select the Sample Assign & Key Span (Command + 2) from the "Windows" Menus, and open the Sample Assign & Key Span Window.

* Select the sample "SINE" from the pull-down menu in the Velocity Zone 1.

To enable the function of the Keyboard Window, OMS has to be installed

There are other alternatives to assign samples to programs: you could use the Control Center Window, Sample Assign & Key Span Window, or the Quick Access Window. The quickest and most simple way to create a one-sample program is to use the Quick Access Window.

Try playing the program now.

* Click the Keyboard on the Sample Assign & Key Span Window with the mouse.

Move Keyboard file into the Editors Folder in the Pouch

If the control of a program assignment is made via MIDI, you can play the program in the MESA Keyboard Window as well if you have OMS installed. To display the Keyboard Window, select the "Keyboard" from the Editor Menu. You may directly play the Sampler with the external MIDI Keyboard connected to the Sampler.

Step 9: Creating more sophisticated programs

To create a more sophisticated program with several samples assigned in the Sampler memory, we need to add further keygroups containing further samples to our program.

Now open the Control Center Window by selecting the Control Center (Command + 1) from the Window Menu. This gives you full control over all program parameters. The Control Center Window is divided into several sections, each incorporating a pop-up selection menu on top, allowing you to set different parameter in each section. When the Control Center Window is opened, the Program Selector Window opens up automatically.

To add a keygroup to the "TEST" program which we have just created;

* Select the programs and keygroups in the Program Selector Window and click the + sign.

The keygroup 2 has been added. When editing only the keygroup 2, click the number 2 in the Program Selector Window.

* Select the sample "SQUARE" from the pop-up menu of Velocity Zone 1 Section on the Control Center Window.

Now the new sample is assigned in the keygroup 2. If you switch back to the keygroup 1, you will see the sample "SINE" in Velocity Zone 1.

If you now play the program, you will hear both samples playing together on all notes.

Next the samples are assigned to the specific ranges of the keyboard to create the Keyboard split;

* Open the Sample Assign & Key Span (Command + 2) Window.

2 keygroups are shown on the screen and the samples "SINE" and "SQUARE" are assigned on each Velocity Zone.
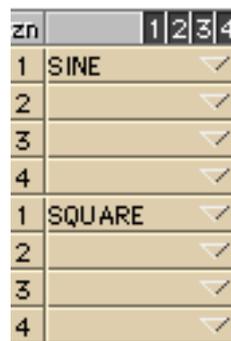
* Drag the left half of span bar of the keygroup 2 with the mouse, and slide it up to C4.

At the upper left of Window, the note number which has just dragged is shown.

* Drag the right half of span bar of the keygroup 1 with the mouse, and slide it down to B3.

Now the sample sound played will be changed over B3 and C4.
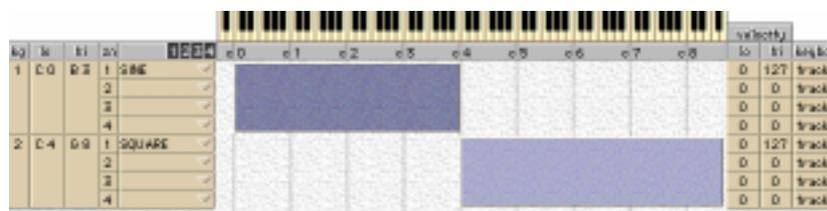
Now let's play this program. At the lower half of the Keyboard, "SINE" is played, and at the higher half of the Keyboard, "SQUARE" is played. With repeating this procedure, many more keygroups can be created in the Program Selector Window.

The whole program setting and the sample parameter control can be performed only in the Control Center Window. Here, we will make a wide spread stereo program using only one sample, "SAWTOOTH".

* Select the New Program from the File Menu.

* Name the program "STEREO" as the dialogue box prompts.

* Open the Control Center Window, and switch over to the MIDI Setup section by using the pop-up menu of the Output & Levels section.

* Set the MIDI Channel number to 3.

* Select the sample "SAWTOOTH" from the Sample pop-up menu of both Velocity Zone 1 and Velocity Zone 2.

* Set the pan to left channel (-50) in the Velocity Zone 1 section, and to right channel (50) in the Velocity Zone 2 section.

* Set the High Velocity Zones (Hi V) of both Velocity Zone 1 and Velocity Zone 2 to the maximum 127 and the Low Velocity Zones (Lo V) to 0.

* Set the Cent of Velocity Zone 2 section to 10.

* Now you can play the stereo program.

Step 10: Saving the program

To save the previously created program "TEST" to the Sampler disk;

* Select the program "TEST" in the Memory Window, and select "Save..." from the File Menu.

* You might be prompted with a dialogue box asking you to first select a Volume and Partition on the Sampler hard disk to save it to, before you save the program.

You will also be given the option to save the associated samples with the program.

Next, to save the last created program "STEREO" to your Mac disk;

* Select the program "STEREO" in the Memory Window, and select "Export Program..." from the File Menu. You will be prompted with a dialogue box to name.

* Input a file name, and then select where you want to save it to your Mac disk.

You can also save to your Mac by drag and drop from the Memory Window to the Finder.

Overview of MESA II Editors

About MESA II Editors

MESA II is operated in the scope of each Editor. Those Editors supported are, the Sampler Editor, Audio Editor, Keyboard Editor, and DD1000 Module. Several other Editors will be added in future versions. When you start MESA II, the editor files in the Editors Folder will be loaded in. The Editor is selected from the Editors Menu. A tick appears on the left of the active Editor.

Some Editors automatically open one or several (empty) editing windows for you. You can then load a sample or program in to these windows. By default, these windows are left open when you load to another Editor. You can therefore see the state of several Editors on the same screen. Clicking on any Editor Window activates the Editor related to that Window.

The menu bar of MESA II changes its display according to the Editor that is active. However, as the Editors Menu is shared by all Editors, you can activate any of the Editors installed from this Menu.

Overview of Sampler Editor

The Sampler Editor can control almost all the functions of the AKAI Sampler. Besides, it can perform the import/export of samples and programs between the Mac and other external devices connected to the Sampler.

The Sampler Editor provides the following windows;

Program Selector:	Programs and keygroups are selected.
Control Center:	From this Window, almost all program parameters such as output levels, filters or velocity zones are controlled.
Sample Assign & Key Span:	Sets samples and their key span for each keygroup in a program.
Memory:	Displays the programs and samples in memory in the Sampler connected.
Disk:	Displays the contents of disk connected to the Sampler.
Quick Access:	Provides the layout to make the quick setting of programs and their key span.
Multi Mode:	Sets Multi mode parameters.
Mute Groups:	Sets the Mute Groups in a program.
FX Routing & Selection:	Routes the Effect and selects the Effect Set.
Ring Mod/Distortion:	Sets the Ring Modulator and Distortion.
4 Band EQ:	Sets the 4 Band Equalizer.
Modulation:	Sets the Modulation.
Delay/Echo:	Sets the Delay/Echo.
Reverb:	Sets the Reverb.
FX Filing & Naming:	Copies the Effect Set and changes the Name.

Furthermore, the Sampler Editor can make the exchange of the file data with the Mac

Finder easy. The programs and samples created on the Sampler can be saved as the files on the Macintosh. Besides, a database of SCSI disk connected to the Sampler can be created on the Finder. If the disk contents of Sampler is changed, the database has to be recreated to reflect the changes.

Overview of Audio Editor

Use for editing samples

The Audio Editor lets you record, playback and manipulate individual Sound Samples. This Editor has the several editing functions such as DSP editing, Zoom view, and Loop Switch.

The Audio Editor provides following Windows;

Audio Editor: This is the main Window. This shows the wave form of samples loaded. The sample name becomes the Window title.

Toolbar: Selects several tools like a play button, a selection tool, or a zoom tool to work on your sample.

Information: Displays the information such as the sample rate, sample length, start/end points of loop, or sample name.

Record: Used when making the sampling on your Mac.

You can have several Audio Editor Windows open - while the Toolbar Window always stays the same, the Information Window will relate to the Audio Editor Window that is active (i.e. selected Window).

Overview of Keyboard Editor

With the Keyboard Editor, a simple Keyboard Window is displayed on the Mac screen and it provides a simple facility to play your program using the mouse. It is useful for testing your program when you have temporarily no access to a MIDI Keyboard. The OMS has to be installed when the Keyboard Editor is used.

Overview of DD1000 Transfer Module

The DD1000 Transfer Module provides Audio File Transfer between the DD1000 and MESA II via SCSI. You can use drag and drop to transfer audio files between the DD1000, the Mac itself and any hardware devices attached to the Mac via MESA II.

The Sampler Editor

In this chapter, the menu command and window of the Sampler Editor will be explained.

Selecting the Sampler Editor from MESA II Editors menu opens up one of the Sampler Editor Window.

File Menu

New

Depending on the currently active window, one of the following alternatives is presented.

> **New Program...**(normal operation with a single program)
>
> Creates a new program.
>
> **New Volume...**(Disk Window is active and SCSI disk is mounted)
>
> Creates a new volume on a Sampler hard disk. Due to the restriction of communications protocol, volumes cannot be renamed using MESA II. This can only be done from the Sampler's front panel.
>
> **New Multi File...** (Multi Window is active)
>
> Creates a new multi file.

Open...

This is not active. When the item is selected at Disk Window, it is replaced with "Load Selected Item..." and loads the selected item to the Sampler.

Close

Closes the current active window.

Save...

Saves the selected item, multi file, and effect file in the Memory Window to the currently selected partition and volume in the Disk Window.

Import Sample

Transfers the audio file (AIFF or SD2 format supported) saved in the Mac hard disk to the Sampler. It can also be done by drag and drop from the Finder to the Memory Window.

Export Sample

Saves the audio file on the Sampler to your Mac hard disk. Possible to export to the AIFF or SD2 formats with the current version. It can also be done by drag and drop from the Memory Window to the Finder.

Import Program.../Import FX File...

Transfers the program created on the Mac hard disk to the Sampler. The related samples can be transferred at the same time. This can also be done by drag and drop from the Finder to the Memory Window. When the Effect Window is open, the effect files can be transferred.

Export Program.../Export FX File...

Saves the selected program to your Mac hard disk. The sample can be exported at the same time in the AIFF format. It can also be exported to the Finder by drag and drop. When the Effect Window is open, the current effect files can be exported.

Rename current Program...

Renames the current program being edited.

Create Disk Database...

Creates a set of folders and files that reflects the contents of Sampler hard disk on the Mac hard disk. You can search the file on the Finder. Double clicking on a file or a folder will load the programs and samples into the Sampler.

Create Mac aliases to the files you often use - store them under the Apple Menu

Quit

Exits MESA II.

Edit Menu

Undo

Undoes the very last action whenever possible. Not supported with the current version.

Cut

Cuts the selected part, and copies it to the clipboard.

Copy

Copies the selected part to the clipboard.

Paste

Pastes the contents of the clipboard at the mouse selected point.

Clear

Displayed as Delete Selection in the Memory Window and Disk Window, and it deletes the selected item. It deletes the Part in the Multi Window.

Select All

Selects all selectable items in the active window.

Select None

Deselects all selected items in the active window.

Select All Programs

Selects all programs in the Memory Window.

Select All Samples

Selects all samples in the Memory Window.

Duplicate Program...

Duplicates the current program being edited.

Duplicate Keygroup(s)

Duplicated the current keygroups being edited.

Sample Menu

Use MIDI / Use SCSI

If possible use SCSI rather than OMS MIDI- it is much faster

Selects MIDI or SCSI for communicating with the external devices. If you are using MIDI, the menu will read "Use SCSI", and if you are using SCSI, it will indicate "Use MIDI".

To perform the MIDI communication, the OMS Plug file must be moved in the PlugIns Folder. See the chapter Getting Started.

Send Continuous Data

For "fast mode" de-select this item

Choosing this option, a tick appears beside the menu, sends the continuous data stream of changes to the Sampler in real time while you are altering controls in the Control Center Window. If this option is off, the data is only sent after you let go of the control.

Find Sampler...

Default SCSI ID is 6 You can also use

Connects to the externally connected Sampler of your choice. When the dialogue is displayed, input the SCSI ID of the Sampler you want. When MIDI is used, select the name of Sampler. To cancel, press Command + "."(period) keys.

Add Keygroup

keyboard shortcuts Command + "+" to add, or Command + "-" to delete

Appends a new keygroup to the current program being edited.

Delete Keygroup

Deletes the last keygroup from the current program being edited.

EB16 Menu

When the EB16 Effect board is installed in the Sampler as an option, you can open the Editor Windows of each effect. This Menu will be active when operating under the above mentioned Windows.

Edit FX1/Edit FX2

Selects the Effect set to edit. A tick mark appears on the selected Effect set.

Edit RV1/RV2/RV3/RV4

Selects the Reverb to edit.

Program Selector Window

The Program Selector Window lets you select the program and select, add and delete the keygroups, and the on/off control of Solo function.

Program: Selects the program to be edited. This program can be
                        edited on the other Windows.
Solo Button: Lets you play the selected program only.
Keygroups: "+" and "-" buttons let you add/delete the keygroups.
Keygroups to Edit: Selects the keygroup to be edited.

To select a set of dis-
continuous keygroups,
hold the shift key
down and click

When the "+" button is clicked, the new keygroup will be added to the end, and when the "-" button is clicked, the last keygroup will be deleted. However, you cannot delete keygroup 1. You can also add/delete keygroups from the Sampler Menu.

When ⚬⚬ mark is selected, all keygroups will be edited. If you want to edit the specific keygroup, click on the keygroup number to select.

Control Center Window

The main access Window to edit programs

The Control Center Window provides almost all controls that are used to create and edit a program from the front panel of Sampler.

The Control Center Window is divided into the several sections, and the pop-up menu at the top of each section lets you choose the section to edit. For example, the top left section can be used as either "Output & Levels" or "MIDI Setup". Also, "blank" selection in each pop-up menu lets you blank out the section not used. This increases the display speed.

For detailed information, select "Turn on MESA Help" under the "?" Menu and click buttons and menu controller. Shortcut is Command + H.

The layout of Control Center Window is always saved when closed or quit. When you reopen the Window or restart MESA II, the Control Center looks the same as when you used it the last time.

When the Control Center Window is opened, MESA II opens the Program Selector Window automatically.

Followings are the explanation for each section. Refer to the Operator's Manual of the Sampler for the function of each parameter.

Output & Levels

This section lets you set the parameters related to the output of the program.
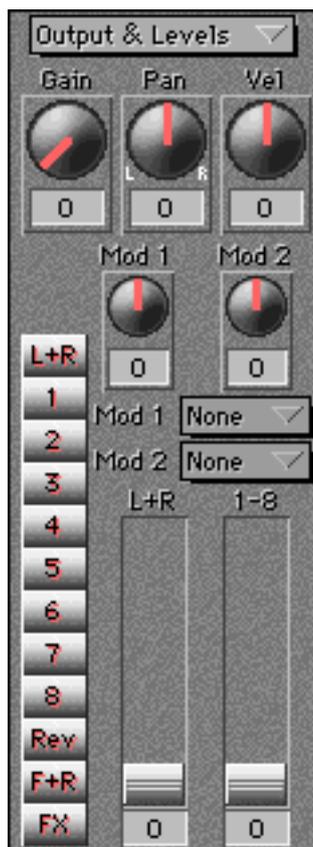
MIDI Setup

This section lets you set the MIDI related parameters of the program.

Tuning & Bend

This section lets you set the parameters related to the tuning and bend of the program.
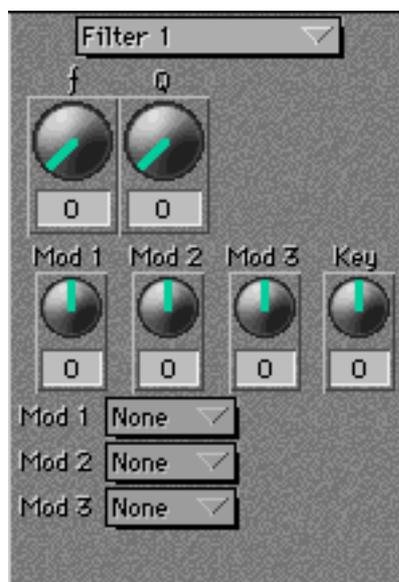

Portament

This section lets you set the parameters related to the portament of the program.
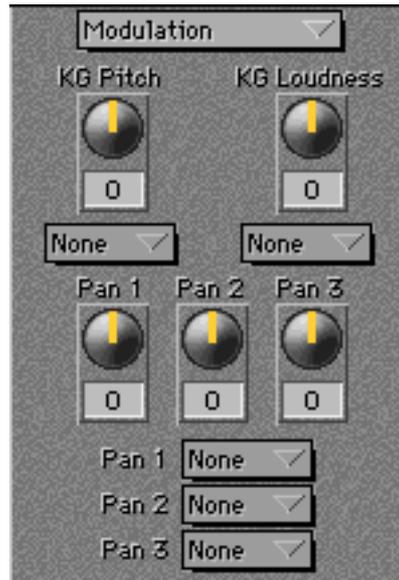

Filter 1

This section lets you set the parameters related to the Filter 1 of the program.

Modulation

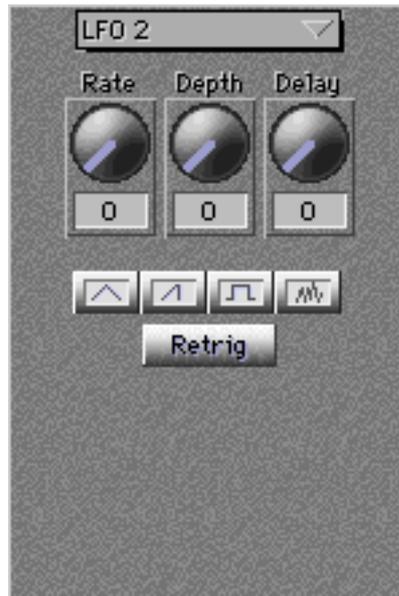This section lets you set the parameters related to the modulation of the program.

LFO 1

This section lets you set the parameters related to the LFO1 of the program.

LFO 2

This section lets you set the parameters related to the LFO2 of the program.

VerocityZone 1 (2, 3, 4)

This section lets you set the parameters related to the Velocity Zone of the program.

Envelope 1

This section lets you set the parameters related to the Envelope 1 of the program.
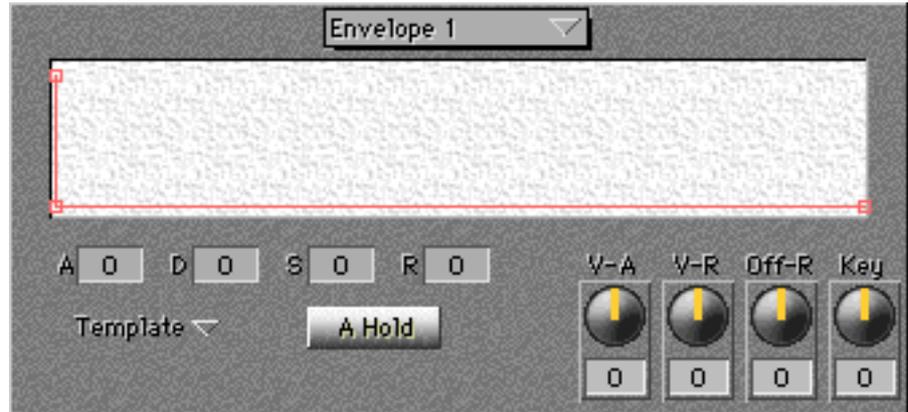
Envelope 2

This section lets you set the parameters related to the Envelope 2 of the program.

Temperament
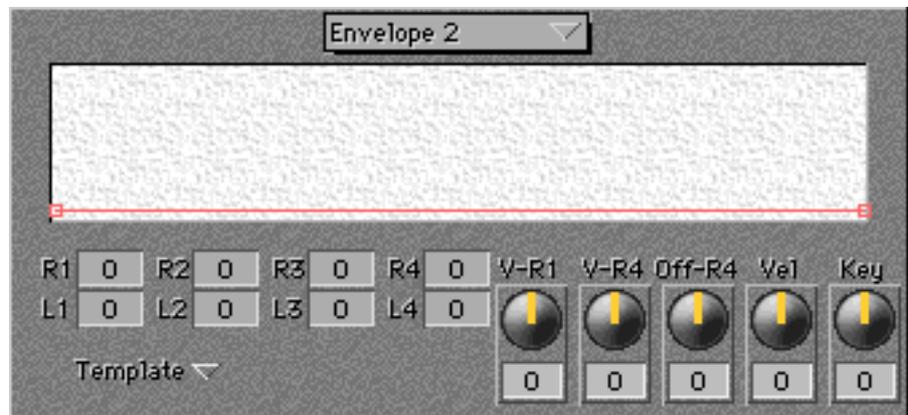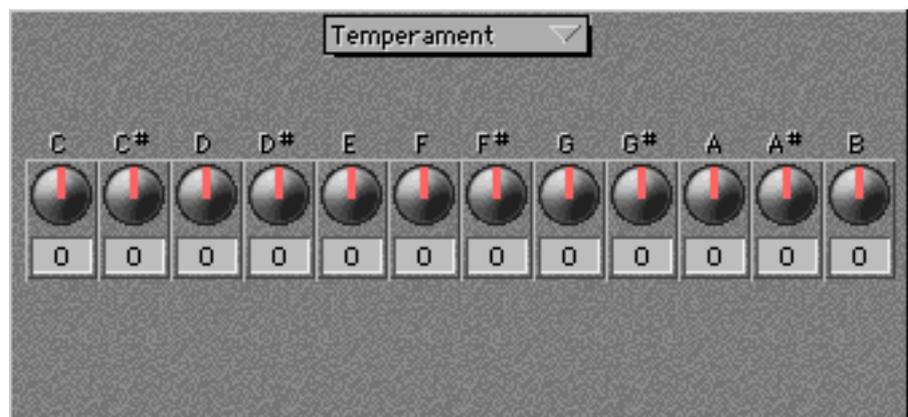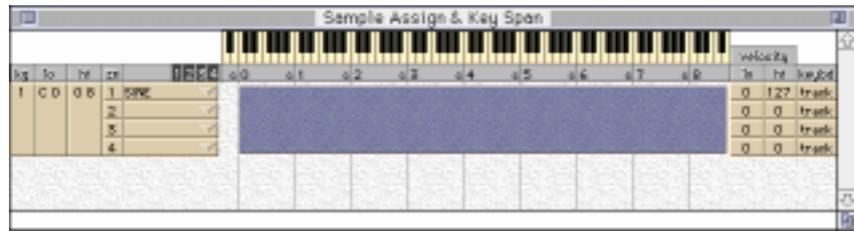
This section lets you set the parameters related to the tuning template of the program.

Filter 2, Envelope 3, and etc. can be set if 2'nd Filter IB-304F (an option for some types of Samplers) is installed on the Sampler.

Sample Assign & Key Span Window

This window is used to assign samples, their keyspan, and their velocity zone for each keygroup in a selected program.

Audition samples

On the keyboard at the top of Window, clicking a note key will play the sample.

The setting is performed on each keygroup. Setting items are as follows;

kg;	Keygroup number
lo(hi);	The key range can be typed from the keyboard or dragged with the mouse.

Select velocity zones

zn;	Assign the samples in the Velocity Zone 1 to 4. By clicking the upper number, the unnecessary zones can be hidden.

Assign key spans

Span bar;	Sets by dragging the key range with mouse. At the top left window, the current note is displayed.
velocity lo (hi);	Sets the velocity range of each Velocity Zone.
keybd;	Sets the pitch of sample play. Clicking the field with mouse will toggle the setting between constant pitch and tracking.

You can use the Tab key to tab you through the different text field; use the Enter key to turn off Tab.

Duplicate keygroups

To duplicate keygroups, select "Duplicate keygroup(s)" from the Edit Menu.

Memory Window

The Memory Window shows the programs and samples that are currently residing in the Sampler memory. It also shows you how much Sampler memory is free.

The upper part of the window shows;

Programs in memory: Number of programs in the Sampler memory.
Samples in memory: Number of samples in the Sampler memory.
Program being edited: Name of the current program being edited.
Free memory: Sampler's available memory

Check your Sampler's available memory

The lower part of the window is divided into the Program List on the left and the Sample List on the right.

Select programs

The Program List shows the programs in the Sampler memory and their program number and MIDI channel. If there are several programs in the list, "."(bullet point) appears to the left of the program being edited.

Set numbers and channels

If you click on the program name, the program number and MIDI channel while holding the Option key, you can rename the programs or set their value. You can also rename the program by double clicking on a program name (same as selecting "Rename Current Program..." from the File Menu).

Rename programs

The Sample List shows all samples currently in the Sampler memory. The samples used for the currently edited program are shown with "." bullet point to their left.

When the sample on the Memory Window is selected, the speaker icon appears at the upper right corner. Clicking on the speaker icon plays the selected sample through the Sampler.

Be careful before you save by drag and drop - check what exactly has been selected

Files can be saved directly to your Mac or Sampler disks by dragging and dropping the programs and samples from the Memory Window to the Finder or Disk Window.

The sample can be edited by dragging it to the Audio Editor Window. To edit stereo samples, select both left/right samples of the same length and drag and drop them both to the Audio Editor Window.

To select several items at the same time, click the items you want while holding Shift key down.

To delete a sample or a program from the Sampler Memory, select it and press Delete key or select "Clear" in the Edit Menu.

Disk Window

The Disk Window shows the contents of a floppy disk or the external SCSI devices connected to the Sampler.

The upper part of the window shows;

Floppy icon:	Clicking this icon accesses to the floppy disk.
SCSI icon:	Clicking this icon accesses to the SCSI devices connected to the Sampler.
Total in volume:	Total capacity of the currently selected volume.
Size of selection:	Size of the selected item

Check what's on the Sampler Disk

The lower part of this window shows three columns: the Program List on the left, the Sample List in the middle, and other miscellaneous files on the right.
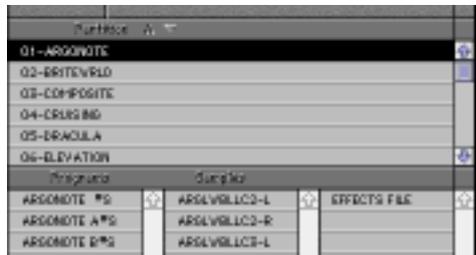
Select Sampler partitions and volumes

When you click the SCSI icon, the volume list in the current partition of Sampler HD (including CD-ROM, etc.) is displayed at the upper half of window. You can select the partitions from the pop-up menu. You can enlarge this area by dragging the mouse over the horizontal division bar.

Dragging and dropping the selected item from Disk Window to the Memory Window will load them to the Sampler.

Load selected items into memory

Note that drag and drop works only on the selected item and the associated samples to the program will not be loaded automatically. To load all the associated samples with the program automatically, select Load Selected Items using "Open..." from the File Menu, or double click the program on the Disk Window.

Due to limitations in the MIDI protocol, you cannot rename disk volumes using MESA II. If you want to do so, use the front panel of the Sampler and update Disk Window.

Quick Access Window

The Quick Access Window provides an easy access to the key parameters in all programs and keygroups in the Sampler.

All the programs in the Sampler are shown in the Program Field. Click on a little arrow mark beside the program name, or select the program name and press Enter key; the keygroup parameters will be shown.

The various parameters, such as program name, program number, MIDI channel, L/R stereo volume and balance, individual output volumes, output assignment and tuning can be changed here.

You can navigate around these parameter fields either by mouse, Cursor keys or Tab key. If your keyboard doesn't have the Cursor keys, press the Caps Lock down and use the number keyboard pad instead.

To change individual parameter values, use the mouse to drag the control or use the Enter key to type in the value directly. You can also press + and - keys to nudge the values stepwise up or down.

Mute Groups Window

The Mute Groups Window lets you set the Mute Groups in a program.
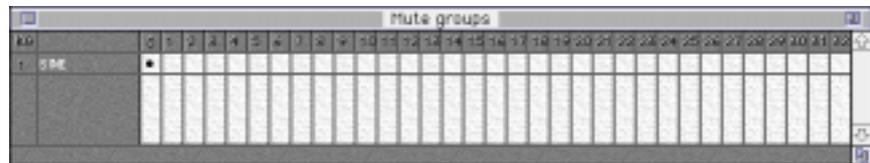
The keygroups in a program are grouped into 32 Mute Groups. Those keygroups grouped in the same Mute Group number mute each another. This function is mainly used for special effects or drum kits.

With the program that plays several sounds simultaneously, you sometimes want to override the polyphonic function and play only one sample. For instance, if you want to follow an open high hat with closed one, you might want to stop the first as soon as the second one plays. To do this, just assign both samples to the same mute groups, other than 0. This makes the group monophonic and the open high hat will stop playing as soon as the closed high hat, i.e. another sample in the same mute group, is played.

Multi Window

The Multi Window sets the multi mode parameters of the Sampler.

The manipulation of this window is the same as that of Quick Access Window.

FX Routing/Selection Window

The FX Routing/Selection Window sets the input/output parameters of 4 Effect buses. It is also used to set the Effect and its routing to the current program.

Mute:	Switches On/Off the bus output.
External Input:	Selects the bus connection of Left/Right sampling input. Enables you to use the EB16 as an Effect unit for external sound sources.
Output:	Sets the output of Effect (output connector on the Sampler's rear panel).
Program FX bus:	Sets the Effect bus routing and its level for the current program.
Keygroup FX bus:	Sets the Effect bus routing and its level for the current keygroup. The setting here has the priority over "Program FX bus" setting. If "PRG" is selected, the "Program FX bus" setting is used.
Effect/Reverb pop-up menus:	From this pop-up menu, you select the Effect and Reverb sets to assign to each Effect bus. If you change the FX1 or FX2 set, RV1 and RV2 may be changed automatically. It is because RV1 and RV2 are linked together with FX1 and FX2.
Level and Pan section:	Sets the Output Level and Pan of various modules of the EB16.
FX Routing dial:	Sets the bus control of Effect. A negative value sets the level of signal from the Reverb passed onto Modulation/Echo section. A positive value sets the level of signal from the Modulation/Echo passed onto Reverb section. If the value of 0 is set, the Modulation/Echo and Reverb become independent and they are used in parallel connection.
Dir Signal:	Switches on/off of the direct (dry) sound.

Ring Mod/Distortion Window

The Distortion simulates the distortion as if the input signal is overloaded.

The Ring Modulator is an Effect of the input signal being modulated by the internal oscillator. Experiment the sound without any metallic sound.

The Ring Mod/Distortion Window sets the Ring Modulator and Distortion parameters.

Freq: Sets the modulation frequency
Depth: Set the depth of Ring Mod Effect
Distort: Sets the amount of Distortion
Output: Sets the output level of Distortion
Bypass: Bypasses this module.

4 Band EQ Window

Made with the high range high-cut filter, mid-range band-pass filters, and low range low-cut filter.

The modulation is conducted in the middle range filter, and you can originate the "auto-wah" Effect.

The 4 Band EQ Window sets the Equalizer parameters.
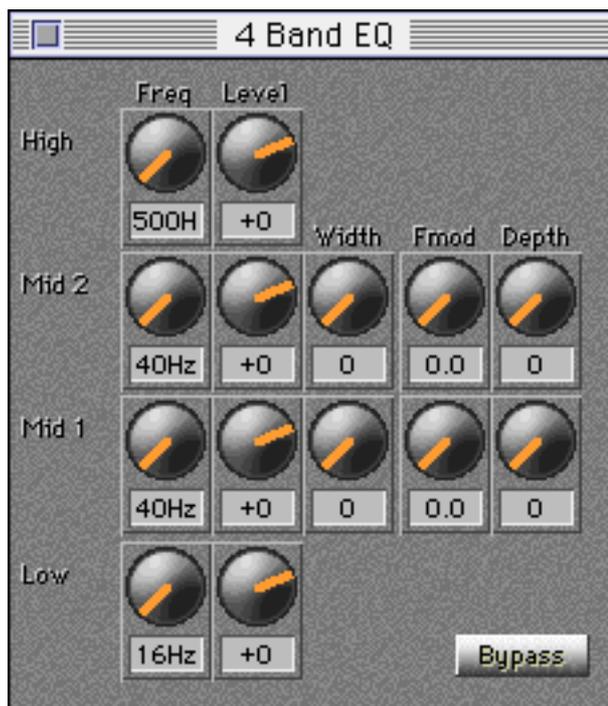
Freq: Sets the EQ frequency
Level: Sets the EQ level
Width: Adjusts the Q of filter
Fmod: Sets the modulation frequency
Depth: Adjusts the amount of sweep.
Bypass: Bypasses this module.

Modulation Window

The Modulation Window sets the modulation parameters.

There are 5 types of modulation functions available: one can be used selecting from the "Function" pop-up menu.

Phase/Flange/Chorus

The Phaser brings the sound with so called "swooshing" Effect. The Flanger also gives the sound with the "swooshing" Effect, but brings more deep sound. The Chorus gives the effect like the several music instruments are simultaneously played.
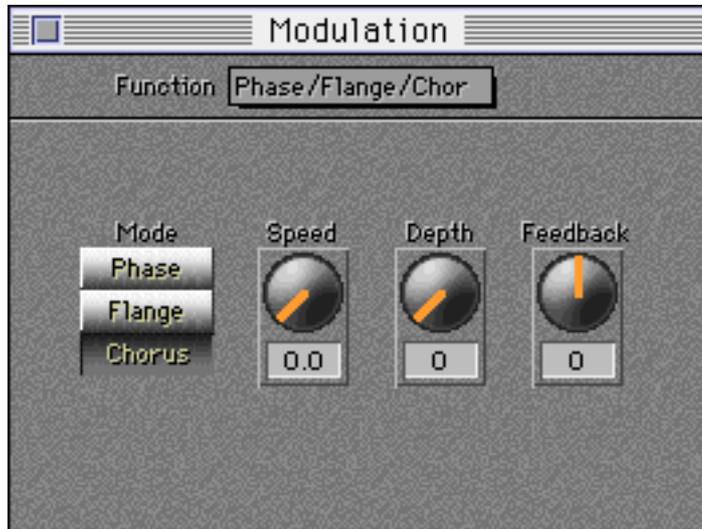
Mode:	There are 3 types; the Phaser, Flanger, and Chorus
Speed:	Adjusts the speed of phase Effect
Depth:	Sets the amount of Effect
Feedback:	Adjusts the amount of feedback from the Effect output to input

Rotary Speakers

Simulates the sound of Rotary Speaker
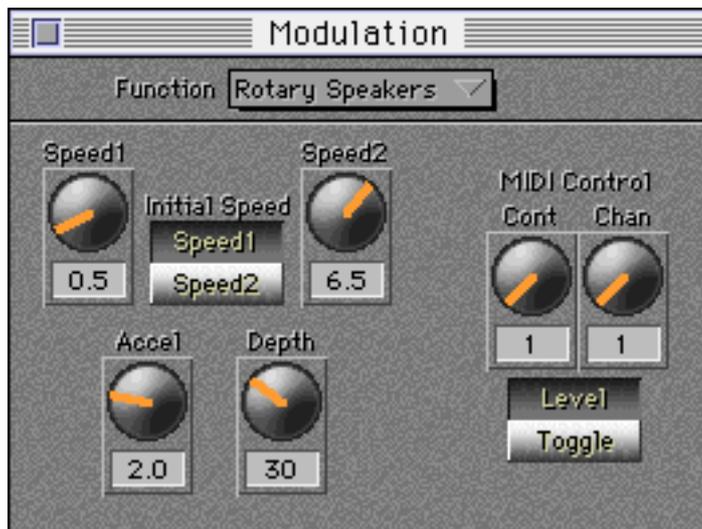
Speed1/2:	Sets the rotation speed of Rotary Speaker
Initial Speed:	Sets the initial speed of Rotary Speaker effect: Speed 1 or 2.
Accel:	Sets the time to take to switch between Speed 1 and Speed 2.
Depth:	Sets the amount of Effect
MIDI Control:	Sets the MIDI channel and MIDI Controller to allow switching the rotation speed via MIDI.

Freq Mod/Auto Pan

<FMod>

Speed:	Adjusts the modulation frequency
Depth:	Adjusts the amount of Effect
Feedback:	Adjust the feedback amount

<Auto Pan>

Speed:	Adjusts the panning speed between the left and right
Depth:	Adjusts the width of pan Effect
Mode:	Sets the type of Effect

Pitch Shift

Semi:	Sets the amount of shift in semi-tone step
Cent:	Sets the amount of shift in cent (1/100 of semi-tone) step

Pitch Shift + Fdbk

*Adds the delay effect
on the pitch shift*

Semi:	Sets the amount of shift in semi-tone step
Cent:	Sets the amount of shift in cent (1/100 of semi-tone) step
Delay:	Sets the delay time
Feedback:	Sets the feedback amount

Bypass

Bypasses this module.

Delay/Echo Window

Widens the sound by overlapping the delayed sound to the original sound

The Delay/Echo Window sets the Delay/Echo parameters.

There are 4 types of Delay/Echo functions available, Mono L, Mono L+R, Crossover L+R, and Stereo: one can be used selecting from the "Mode" pop-up menu.

Delay:	Adjusts the delay time
Feedback:	Adjusts the feedback amount
HF Damp:	Sets the filter frequency to filter out the high frequency component contained in the feedback signal
Offset:	Sets the amount of offset for the feedback signal
Output:	Switches the module output: Pre/Post

To bypass this module, select Bypass from the pop-up menu.

Reverb Window

Adds reverb to the original sound

The Reverb Window sets the Reverb parameters.

There are several types of Reverb functions available: one can be used selecting from the "Type" pop-up menu.

Time:	Adjusts the time it takes to diminish the reverb signal
Pre-Delay:	Adjusts the delay time of the reverb signal referenced to input signal
Diffuse:	Sets the amount of diffusion in the reflected sound
Near:	Adjusts the distance from the original sound source
LF Damp:	Cuts out the low frequency component of the reverb sound
HF Damp:	Cuts out the high frequency component of the reverb sound

FX Filing and Naming Window

Controls the Effect file

This window will let you rename the Effect and Reverb names, and copy, save and load the files.
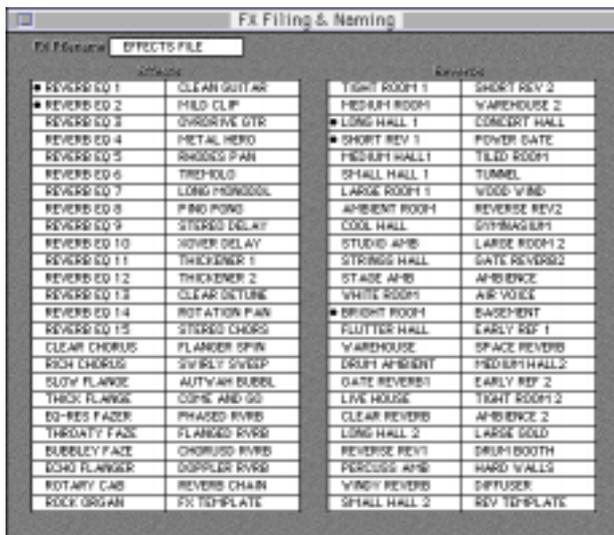
Note that only one Effect file can be saved to one disk volume in the Sampler disk

FX Filename: Name of Effect file. Click it with mouse to rename it.

Effects List: List of Effect set

Reverb List: List of Reverb set

When saving the entire Effect file to a Sampler disk, select "Save..." from the File Menu.

When saving the Effect files to the Mac, you can save either the entire Effect file, a single Effect set, or a single Reverb set.

To save the entire Effect files, select "Export FX File..." from the File Menu.

To save a single Effect set or Reverb set, drag and drop the set from their list to the Finder.

To transfer the entire Effect file back to the Sampler from your Mac, select "Import FX File..." from the File Menu, or double click the file icon. You may also drag and drop the file icon directly to the FX Filing and Naming Window or Memory Window.

To transfer an individual Effect set or Reverb set as a file on your Mac to the Sampler, drag and drop the icon to the appropriate list of FX Filing and Naming Window.

To copy the Effect sets or Reverb sets, drag and drop them to the position where you want them to copied to in the FX Filing and Naming Window.

Note that only one Effect file can exist in any one volume in the Sampler disk.

Loading files takes a few seconds as MESA II transfers the new data to the Sampler.

Audio Editor

In this chapter, the Menu Commands and Windows regarding the Audio Editor will be explained.

Selecting the "Audio Editor" from MESA II Editor Menu changes to the Audio Editor.

File Menu

New Audio Editor

Creates a new Audio Editor Window.

Open...

Opens a Audio file saved in your Mac. Acceptable file types depend on the "Audio Filing" folder in the PlugIns .

Close

Closes the active Window. When all the Windows are closed, the Audio Editor itself will close.

Save

Saves an Audio file in the current active Audio Editor Window to the Mac. The file with the same name will be overwritten.

Save As...

Saves an Audio file in the current active Audio Editor Window to the Mac with a different name.

Save Selection...

Saves the audio data of the current selection to a new file on your Mac disk.

Record...

Opens the Record Window to enable you to record either from the microphone jack or CD in the Mac. Refer to the Record Window described later in detail.

Quit

Exits MESA II.

Edit Menu

Undo

Allows you to undo the last edit operation.

Cut

Not enabled.

Copy

Copies selected 16 bit audio data to the clipboard ('snd' format)

Paste

Pastes 16 bit audio copied from the clipboard into the same Audio Editor Window, another Audio Editor Window or any other Mac applications. The start of Pasted is the insertion point of the Cursor.

Paste + Merge

Pastes 16 bit audio copied from the clipboard into the selected area of the Audio Editor Window, and merges (mixes with present audio data) it.

Clear

Clears the selected audio to silence.

Select all

Selects the entire audio in the active Audio Editor.

Select None

Deselects the current selected audio.

Add Channel

Add a Right channel to mono audio. The existing mono audio becomes the Left channel.

Merge To Mono

Merges both sides of a stereo sample into a mono sample.

Cut Outside

Removes the audio before the start and after the end of the selected audio.

Left Channel Only

Disables the Right channel of a stereo sound. Copy/Paste/DSP etc. will only affect the Left channel.

Right Channel Only

Disables the Left channel of a stereo sound. Copy/Paste/DSP etc. will only affect the Right channel.

Both Channels

Enables both Left/Right channels of a stereo sound.

View Menu

The View Menu sets the parameters of Audio Editor display.

Tool Bar

Opens the Tool Bar Window. It contains the editing tools for working in an Audio Editor Window. See the Tool Bar Window section for a detailed description.

Info Bar

Opens the Info Bar Window. It contains information about the audio in the active Audio Editor Window. See the Information Bar Window section for a detailed description.

Sample Points

Set you Ruler Style

Sets the time display style to Sample Points for the Ruler.

Seconds

Sets the time display style to Second (S) for the Ruler.

mS

Sets the time display style to milli Second (mS) for the Ruler.

Sample Colour...

Choose your colours

Allows you to set the sample colour for the wave form shown in Audio Editor Window.

Background Colour...

Allows you to set the background colour for the wave form display.

Default Colours

Sets the colours of Audio Editor Window to the default colours.

Fit

Fits the selected audio into the Edit Area of the Audio Editor Window.

DSP Menu

Select the editing part and channel first, then use this DSP functions.

The DSP Menu contains various Digital Signal Processing functions. The options in the DSP Menu corresponds to the DSP PlugIns that are present in the MESA Pouch/PlugIns/DSP folder.

First select the editing part and channel, then use DSP.

DSP options currently include functions such as the Sound Increase/decrease by 3dB, Audio Analysis, Filters for EQ, High/Low Pass and Fade, Noise Creation, Level Normalization, Audio Reversal and Inversion, and Time Stretch.

Note that DSP functions are only performed on the selected part of the Audio Editor Window. If you want to use DSP on the whole sample, you must select the whole sample. Use the Edit Menu "Select All", "Select None", "Left Channel Only", "Right Channel Only" and "Both Channels" to do so.

Each function is described as below:

+3dB / -3dB

Increases or decreases the level of wave form.

Analyse...

Shows the results of a fast Fourier Frequency Analysis.
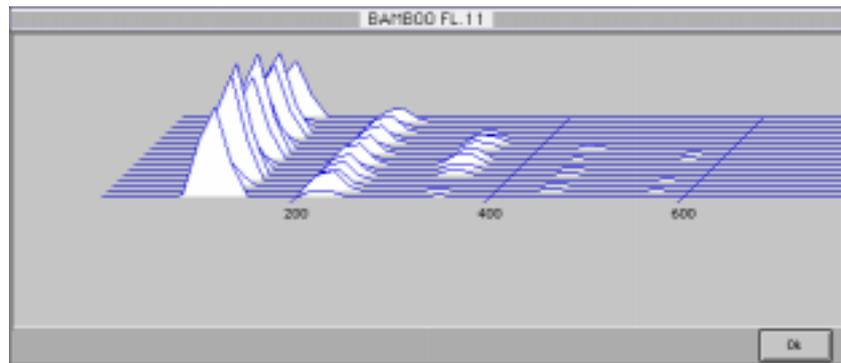
EQ Filter...

7 band graphic equalizers. Use the mouse to adjust the individual filter.
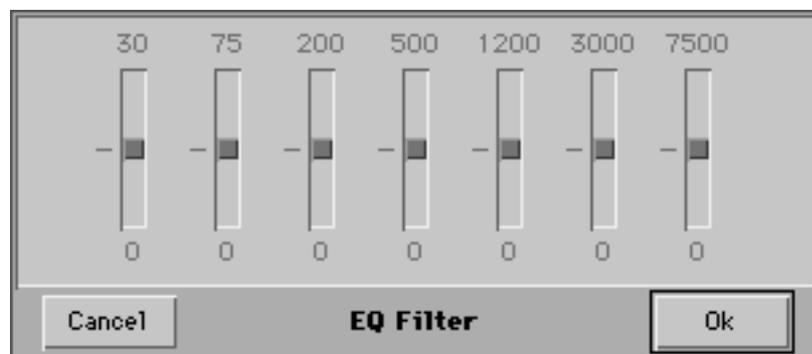
Fade...

Allows you to fade in/fade out in either logarithmic (Log) or linear (Lin) form.
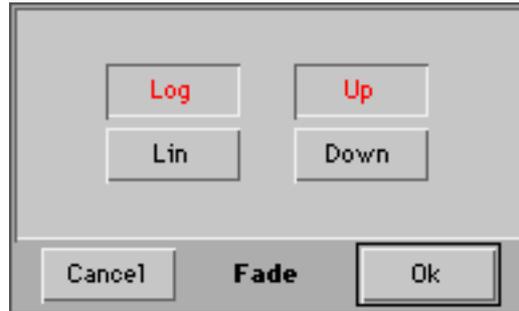
High Pass Filter...

Sets the cutoff frequency to cut the lower frequency component of sound. Select the filter slope: 6dB/Oct or 12dB/Oct, and adjust the gain.

Invert

Inverts the wave form up side down.

Low Pass Filter...

Sets the cutoff frequency to cut the higher frequency component of sound. Select the filter slope: 6dB/Oct or 12dB/Oct, and adjust the gain.
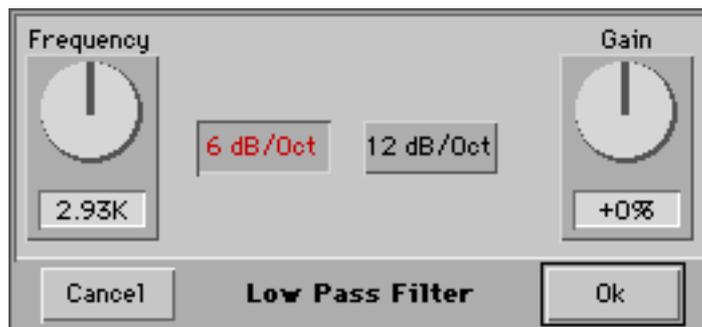
Noise

Creates a random noise.

Normalise

Optimizes the amplitude of wave form. Maximizes the highest amplitude wave form.

Quick Filter...

Integrates the High Pass and Low Pass Filters into the one window. Select either one of them.

Reverse

Reverses the wave form front side back.

Time Stretch...

Extends or shortens the time axis without changing the musical tone.
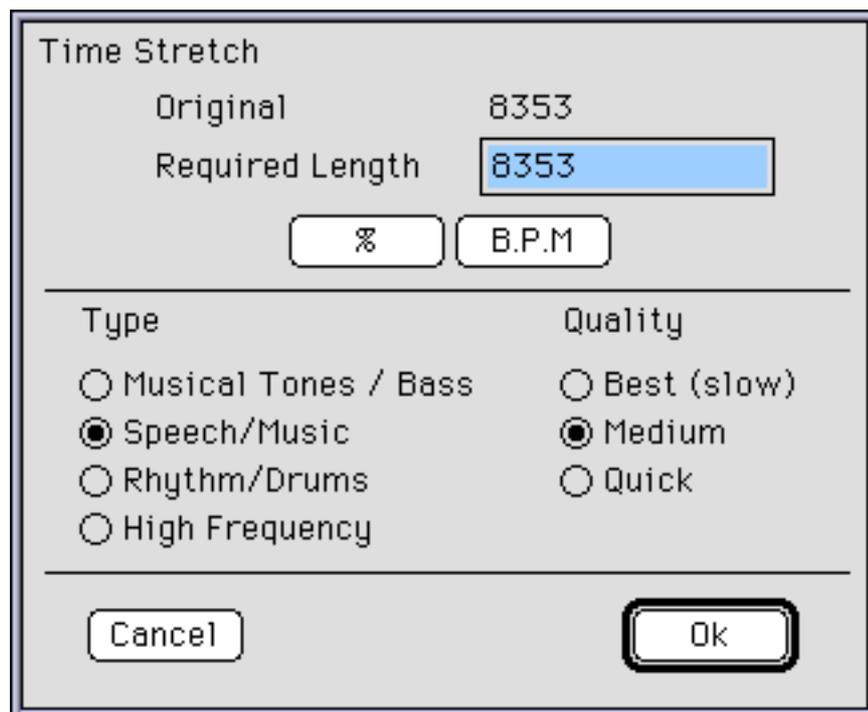
Original: Sample Points (Sample Length) of original sample.
Required Length: Sample Length after performing the Time Stretch.
Type: Selects the type of sound source.
Quality: Selects the quality of Time Stretch. It will take a longer time at Best selection. It takes less time in Quick mode, but the quality of sound is not as good as that of Best.

Instead of specifying the number of Sample Points directly, you can press "%" button to specify the ratio to the original sample. With the B.P.M button, you can specify the Sample Length by specifying the number of beat (tempo) per minute and the number of beat in one measure.

Audio Editor Window

The main access window for editing samples

Start Marker   Loop Start Marker   Title Bar   Ruler   Loop End Marker   End Marker

Overview Area

Edit Area

Selected Area
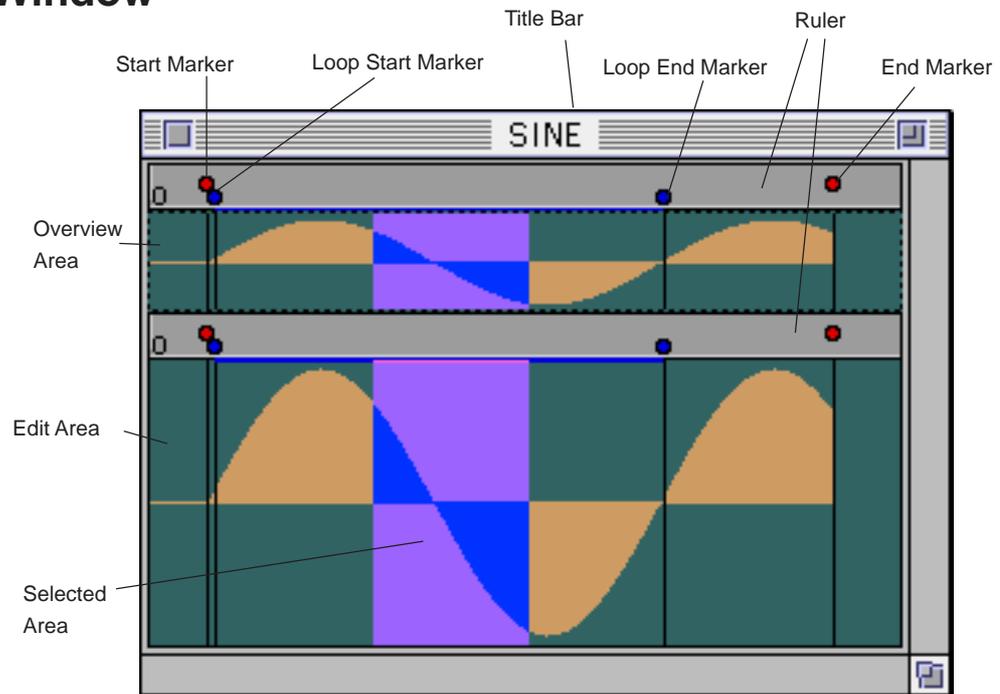
Title Bar:	Displays the sample name.
Ruler:	Shows the location in the unit specified in the View Menu.
Overview Area:	Shows the whole sample wave form. The area shown in the Edit Area appears by surrounded dotted line.
Edit Area:	Shows the sample wave form for editing. Possible to enlarge/scale down the display. When a stereo sample is edited, the Left channel is shown in the upper area while the Right channel is shown in the lower.
Start Marker:	Shows the start point of sample play.
End Marker:	Shows the end point of sample play.
Loop Start Marker:	Shows the start point of loop.
Loop End Marker:	Shows the turning point of loop.

Selecting the Audio Editor automatically opens up an empty Audio Editor Window called "untitled".

You can open the wave form by drag and drop either the Audio file (AIFF) on your Mac or the file name on the Memory Window of the Sampler Editor. You can also open the file using "Open..." in the File Menu.

When the sample file is opened, the Audio Editor Window shows the sample wave form and the name of sample in the title bar. The information on this sample will be shown in the Info Bar Window at the same time.

The Audio Editor Window is split into two sections: the Overview Area on top and the Editor Area below. You can turn the Ruler display on/off using the Ruler Switch.

Moving the Red Marker sets the start and end point of sample.

Moving the Blue Marker sets the start and end point of loop.

Load mono or stereo samples

For a stereo sample, the left channel is shown on top and right channel is shown below in one Audio Editor Window. When a stereo AIFF file on your Mac is opened, it opens as one stereo file. A stereo sample in the Sampler is divided into left and right sample files. When you drag and drop the 2 mono files of the same length to the Audio Editor Window at the same time, they are automatically taken as a stereo file. Alternatively, load a mono file, and using the "Add Channel" from the Edit Menu, you can paste

another mono sample of the same length copied from other Audio Editor Window to an empty right channel to make a stereo file.

If a stereo sample is saved to your Mac from the Audio Editor Window, it will be saved as one stereo AIFF file. If you drag and drop a stereo sample to the Memory Window of the Sampler Editor, it will be saved as two separate mono files.

Tools are described in the Toolbar Window section below

You can either click the Play/Stop button or press the Spacebar to play the selected audio.

To make it visually more apparent what you are editing, use the Zoom Tool to expand or shrink the visual display of the sample you selected. Using the View Menu, you can even change the colour scheme of sample and background. Note the Info Bar Window - it tells you the length of sample, the selected part, and the loop. You can even set your parameters from there.

You can use the Ruler Switch to help you navigate, and if you want to restore the window to a broader overview, use the Fit Tool.
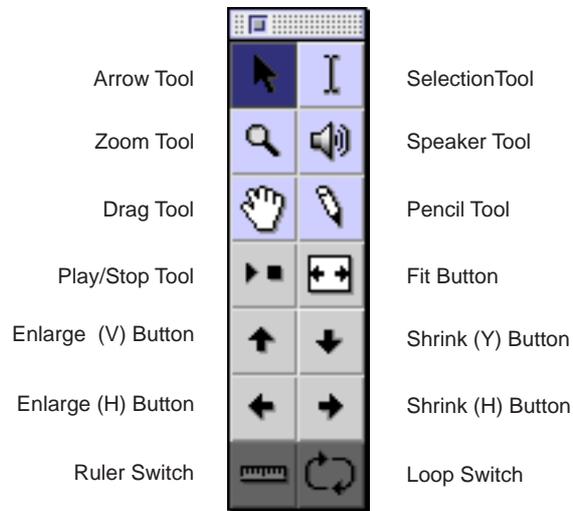
You can now manipulate the selected part using the Pencil Tool for wave form drawing (e.g. editing out noise) or make up the sample to meet your purpose using DSP functions.

Tool Bar Window

The Tool Bar Window provides tools and transport controllers to edit samples. If the Tool Bar Window is not open, select "Tool Bar" from the View Menu.

The drawing of the Tool Bar Window are;

Arrow Tool		SelectionTool
Zoom Tool		Speaker Tool
Drag Tool		Pencil Tool
Play/Stop Tool		Fit Button
Enlarge (V) Button		Shrink (Y) Button
Enlarge (H) Button		Shrink (H) Button
Ruler Switch		Loop Switch

Note that the top six blue icons are the Tool buttons. The Cursor will change its shape, as the same as the tool buttons while the Cursor is within the Audio Editor Window, when you select one of them. The eight lower icons in the Tool Bar Window are the control buttons.

The following tool are available.

Arrow Tool

Sets the start and end markers (red markers) of samples or of the loop (blue markers). Also moves the area where is surrounded with dotted lines in the Overview Area. This tool is available whenever you press the Command key.

Selection Tool

Use this tool to select a part of sample. To deselect, use the selection tool and click on anywhere in the window. DSP functions, editing, etc. are effective only to the selected part.

Zoom Tool

You can zoom in (drag the part you zoom in) or zoom out (click while holding SHIFT key). This tool is available whenever you press the Option key.

Speaker Tool

Plays from any part of the sample with this tool. Click and hold the mouse or drag it to play. This tool is available whenever you press the Control key.

Drag Tool

You can drag the wave form from the Audio Editor Window and drop it to the Finder or to the Memory Window in the Sampler Editor to save.

Pencil Tool

Enables you to draw wave form freely. You can remove the noise, etc. by actually drawing the wave form.

▶■ Play/Stop Button

One click plays the sample and the second one stops it playing. If the Loop is not set, the play stops at the end point of play. If the part of sample is selected, it will play only that part. Same goes for the Spacebar.

Fit Button

Fits the selected part of sample with the Selection Tool to the Edit Area. If no part is selected, the whole sample will be fitted.

↑ Vertical Zoom Enlarge Button

Enlarges the wave form in the Edit Area vertically.

↓ Vertical Zoom Shrink Button

Shrinks the wave form in the Edit Area vertically.

← Horizontal Zoom Enlarge Button

Enlarges the wave form in the Edit Area horizontally.

→ Horizontal Zoom Shrink Button

Shrinks the wave form in the Edit Area horizontally.

Ruler Switch

Switches the ruler display on and off on both the Overview and Edit Area. When the Ruler is On, its icon is highlighted. The unit of ruler changes between Sample Points, Seconds and mS via the View Menu.

Loop Switch

Turns the looping mode on and off. The sample is played repeatedly between the loop markers. While the loop mode is set to on, the loop markers are shown in blue and its icon is highlighted.

Info Bar Window

The Info Bar Window shows the information about the sample in the Audio Editor Window.

Displays the information about the sample being edited

Rename the Sample directly in the Title bar

Change the display unit selecting from the View Menu
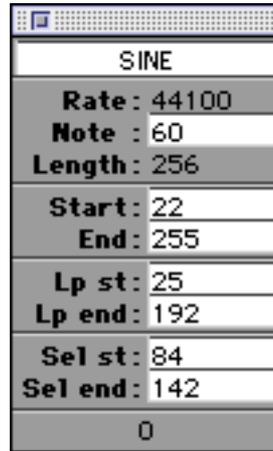
To open the Info Bar Window, select Info Bar from the View Menu.

If several Audio Editors are open, the information shown is for the currently active Audio Editor.

Title Bar:	Shows the sample name
Rate:	Shows the sampling frequency
Note:	Shows the basic MIDI Note
Length:	Shows the sample length
Start:	Shows the start point of sample play
End:	Shows the end point of sample play
Lp st:	Shows the start point of Loop
Lp end:	Shows the end point of Loop
Sel st:	Shows the start of selected part
Sel end:	Shows the end of selected part
Cursor Point:	Shows the Cursor location in the Audio Editor Window

Clicking on the field (white field) of the Info Bar Window, you can directly enter the parameter values from the keyboard.

The Loop point and Selection point will not be shown in the Info Bar Window, unless they are set accordingly.

Record Window

The Record Window opens up when "Record..." is selected from the File Menu. In this Window, the sample will be recorded on your Mac, but not recorded on the Sampler.

Sampling Rate   Record Mode   Record Time Field   Sample Name Field

Auto Gain   Indicator   Record Button   Stop Button   Input Select Button
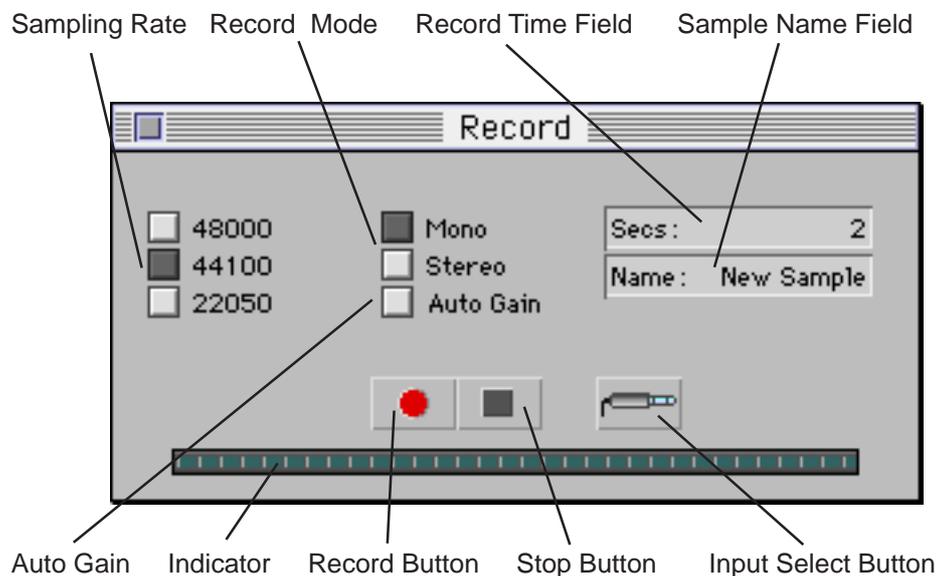
Sampling Rate:	Selects the sampling frequency
Record Mode:	Selects either mono or stereo recording.
Auto Gain:	When this is set, the gain of input signal is adjusted automatically.
Record Time Field:	Sets the recording time
Sample Name Field:	Names the sample
Record Button:	Starts recording
Stop Button:	Stops recording
Input Select Button:	Opens the Selection Window for the recording source
Indicator:	Indicates the recording level

To make a recording, after setting the sampling frequency, record mode, record time, and sample name, as well as selecting the input source, click on the Record Button.

MESA II warns if you select the sampling rate which is not supported by your Mac.

Turn the Auto Gain on as necessary.

The recording is stopped when it passes the record time or when the Stop Button is clicked - the new Audio Editor Window will appear.

MIDI Keyboard

MIDI Keyboard Editor provides a very basic Mac interface to let you play MIDI Notes with the little keyboard on the screen to the Sampler over MIDI. For this communication, OMS MIDI must be installed on your Mac.

You can play simple MIDI notes without using an external MIDI keyboard.
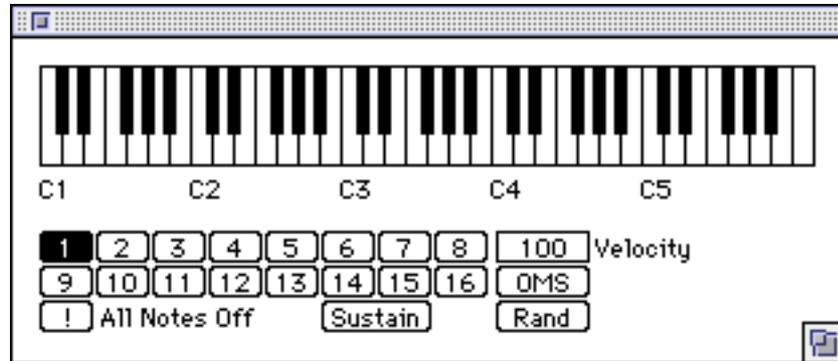
Keyboard:	Clicking mouse sends MIDI Note
MIDI Channel 1 to 16:	Selects MIDI Channel
Velocity:	Sets the velocity value of MIDI Note
OMS:	Sets the output ports
All Notes Off:	Sends "All Notes Off" message
Sustain:	Switches the Sustain pedal on/off
Rand:	Sends the MIDI Note at random

To display the Keyboard Window, select "MIDI Keyboard" from the Editors Menu and then select "Open Keyboard Window" from the File Menu.

To run the MIDI Keyboard, the file Keyboard must be placed in the "Editors" Folder and the OMS PlugIn file must be present in the "PlugIns" Folder.

DD1000 Transfer Module

The DD1000 Transfer Module provides the connection between MESA II and DD1000.
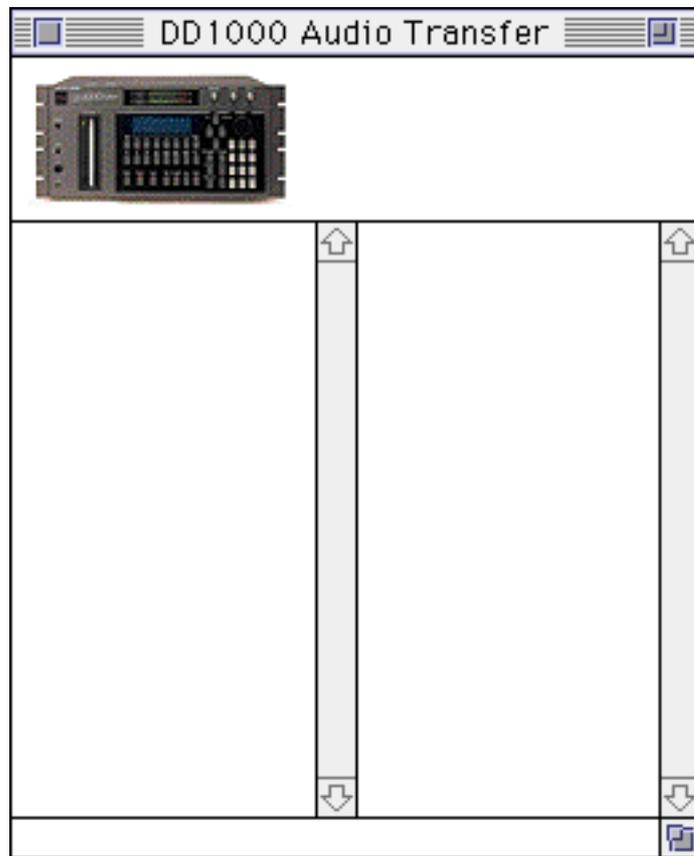
In this window, a list of "Takes" (i.e. the recordings on the DD1000) is shown on the left and the list of Cuts for the selected Take on the right.

To load Cuts from the DD1000 for editing, drag and drop them to the Audio Editor Window.

To save Cuts form the DD1000 to your Mac hard disk, drag and drop them to the Finder, or select "Save Selected Cuts" from the File Menu.

To save Cuts from the DD1000 to the Sampler hard disk, drag and drop them to the Memory Window in the Sampler Editor.

To save any audio file as a Take from MESA II to the DD1000, drag and drop the file into the DD1000.

MESA II AppleScript

Use AppleScript to extend the function-ality of MESA II and to improve your work efficiency

AppleScript is available to Mac user as part of the Mac OS (version 7.5 or later), and is a very simple programming language that can be used as very powerful method to perform "batch" operations automatically on the data in an application.

MESA II is fully compatible with AppleScript. Scripts can therefore be written to perform a wide variety of useful "powerful functions": for instance, a script "Set individual Levels" included with MESA II (compile it and save it as an application first) allows you to set the individual outputs of all selected programs by a simple click with the mouse.

Scripts must be saved as applications

For reasons of variations in individual Mac hardware, software, and OS setups, the scripts included with MESA II are test files that first need to be compiled on your computer to run. To compile these scripts, you must start the AppleScript Editor program which is an application included in the Mac OS. Load the script source code into the editor and compile it. Those several lines after "?", "comment" commands in the source code explain the purpose of scripts. Before saving, check if the script runs appropriately within MESA II by clicking the "Run" button, then save it as an application. Then you simply click its icon in the Finder to run it.

MESA II comes with a useful suite of scripts

The scripts provided with MESA II include functions that allow you to;

* set selected programs to incremental program numbers (Renumber Programs)
* replace all programs in the sampler with 8 new programs (8 New Programs) whose
  -- MIDI channels are set from 1 to 8,
  -- individual outputs are set from 1 to 8,
  -- stereo levels are set to zero,
  -- individual levels are set to 90
* create a stereo program containing the 2 selected samples in the Memory Window (Make Stereo Chromatic Program)
* set MIDI channels of all selected programs incrementally from 1 to 16 (Incremental Channels)
* set the individual outputs of all selected programs incrementally from 1 to 8, turns off stereo output and set the individual output levels to 90 (Incremental Outputs)
* create programs containing a sample for each sample selected in the Memory Window (Mono Programs from Samples)
* set the key span of each keygroup in the selected program in the Memory Window to a single note in a chromatic scale, and one note is set as the one keygroup (Chromatic Keyspan)
* set each keygroup in the selected program in the Memory Window to the constant pitch (All KG to constant pitch)
* add a user specified number of keygroups to the selected program in the Memory Window (Add keygroups to program)

Notes in Writing AppleScript

Troubleshooting in AppleScript

Some of the scripts included with MESA II depend on the actual configuration of your system. For instance, some of the example scripts refer to system objects such as

"Display Dialogue" ("Display"). If these scripts do not work on your system, either remove the references files of the offending objects or try to recover the missing objects. In your extensions folder in the system folder, there should be the system script objects stored in a folder called "Scripting Additions".

You will definitely need the following objects to be present for MESA II scripting:

- Display Dialogue "display"
- File Commands "file command"
- New File "new file"
- Read/Write Commands "read/write commands"

Explanation of terms in MESA II Script

Write your own Apple Script

Every scriptable application like MESA II has a "Dictionary" for all commands and parameters that can be set in your script. To see if an application is scriptable you simply drop it onto the "Script Editor" application in the Finder. By examining the dictionary of a scriptable application, you will be able to see which commands and parameters of MESA II you can manipulate with AppleScript.

MESA II provides a subset of the 'core' Apple Event Suite which is called MESA Suite. Some editors provides extensions to the MESA Suite. For example, the Sampler Editor provides the Sampler Suite. These extensions may provide extra parameters ("properties", "elements", or (also called "objects") and "events") (also called as "commands") for the MESA II applications such as "sampler" element in the Sampler Suite. These extra elements can then be accessed via the "application" element in the MESA Suite.

Save the scripts you like as applications and store them in a new folder in the Apple Menu Folder - run the scripts selecting from the Apple Menu.

For example the script command

```
get sampler 1 in application "MESA II"
```

will return a reference to the sampler element in the Sampler Suite. You can then use that reference to get at the elements and properties in the Sampler.

Here is a simple example of script that sets the name of the first program in the AKAI sampler that is connected to MESA II

```
tell application "MESA II"

    set name in program 1 in sampler 1 to "PROGRAM 1"

end tell
```

Of course, most scripts are far more complex than the above example.

You should look at some of the example scripts provided in the "Example Scripts" folder included with MESA II.

Find out more about AppleScript

To find out more about how to write scripts using AppleScript, you should read the documents called AppleScript Language Guide and Scripting Additions Guide which should come on your AppleScript installation disks. There are also some good books on the subject which you should be able to find in the computer section of any good book store or Mac computer dealer.

Troubleshooting

Symptoms	Suspected Cause	Troubleshooting
MESA II does not boot	The file is not in the correct location.	Check that the Editors and PlugIns that you want to use are in the "MESA Pouch" Folder, and this Folder resides in the same directory (location) as the MESA II application.
	Necessary extensions are not installed.	If you run an older Mac System OS than v 7.5, check whether you have the necessary extensions installed. Details are given in the Memory, Systems Requirements and Set-Up sections in this manual. If you do not have these extensions, you will have to upgrade your Mac Operation System.
	Preference file of MESA II is corrupted.	Delete the "MESA Preference" Folder from the Preference Folder in the System Folder. If you boot MESA II, a new "MESA Preference" Folder will be automatically created.
	The file is corrupted.	Reinstall MESA II.
The Mac freezes	Several devices use the same SCSI ID.	Set the unique SCSI ID numbers to each device connected via SCSI.
	The Mac and Sampler booted simultaneously.	The conflicts (collision) in SCSI in initial routines are caused because both the Mac and Samplers are equally SCSI targets and SCSI initiators when they are turned on at the same time. To avoid the conflicts between multiple SCSI devices, you should turn on the external SCSI devices like the Sampler first and let them settle before turning on your Mac.
	SCSI termination problem	You might need to remove the terminator of a built-in hard disk as there is a terminator on the SCSI card in the Sampler.
	Old version Sampler	If you use S2800 , S3000, S3200 and CD3000, you must have at least v1.68 or later version system softwares.
No access to external devices	The cable is not connected	If you use SCSI, check if the SCSI cables are connected securely.
		If you use OMS MIDI, check if the OMS setup has been set correctly, and if the MIDI cables are connected properly.
	The virtual memory is on.	When the SCSI is used, turn off the virtual memory, including RAM doubler, in the Memory Control Panel.
	SCSI ID setup problem	Check if the boot-up routines and SCSI setups are appropriate. Be sure to set the correct SCSI IDs.

No AppleScript functions	AppleScript has not been installed correctly.	Reinstall AppleScript.
		If you are running Mac OS v 7.5, you can rectify this easily as it comes with a complete AppleScript Setup Installation. If you use System 7.1 or earlier, you will need to install both AppleScript and a scripting Finder available for scripting. If you still experience problems, contact the Apple dealer how to get the AppleScript.
Large samples not loaded	Allocated memory size is not enough.	Select MESA II icon from the Finder, and select "Get Info..." from the "File" Menu to change the memory allocation.