



**Front Panel Editor
for Peavey DPM-SP
& Macintosh**

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SP-ReMoTe :: *Users Guide*

Introduction

SP-REMOTE is front panel editing software for the Peavey DPM-SP Sample Playback Synthesizer. SP-REMOTE brings nearly all of the SP front panel controls to your Macintosh screen for easy graphic editing and nearly “hands-off” remote-control of the SP.

Specific features include:

- MIDI transfer Bank data to the Mac for a printable Overview of an entire Bank in the SP memory.
- Realtime graphic editing of Multi, Preset, Map, Tone and Wave data (although you can edit loop points, you cannot however, do visual sample-editing with SP-REMOTE).
- Powerful Global editing functions for editing multiple items simultaneously.
- Intelligent **AutoMake** functions automatically generate full Presets, Maps and/or Tones. You can turn raw sampled waves into mapped Presets in a few seconds with a few clicks of your mouse.
- The **Akai S1000/S1100 Convertor Utility** brings translations of Akai sample libraries into mapped SP Presets into the realm of being an actual accomplishment in a single lifetime!

Getting Started

We assume you are familiar with standard Macintosh operation (i.e. using the mouse, using folders & files, copy / paste, etc). We assume you are also familiar with the basic operation of the SP itself. Use this User’s Guide in conjunction with your SP Owner’s Manual for operational procedures and specific parameter details.

Please read and understand the following section before proceeding with running SP-REMOTE! If you purchased your before March, 1993 you will certainly have to install the new

ROMs (included in this package) in your SP in order to do anything with this software!

SP ROM version

SP-REMOTE works with version 1.3 or later SP Operating System (OS). This internal SP software which enables MIDI System Exclusive (SysEx) messages and editor data to go back and forth to the computer. If you have v1.2 or lower in your SP, you will need to upgrade the ROM chips inside the SP, since these versions are not capable of SysEx messages. An easy way to tell if you have v1.3 or higher ROMS:

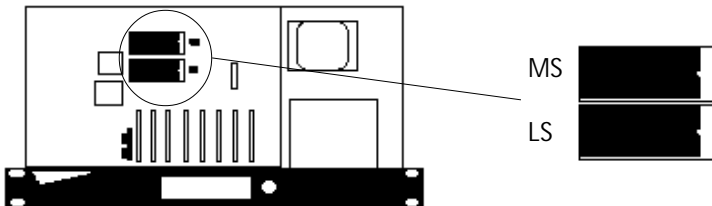
- hit the **GLOBL** button on the SP front panel
- with the **+/INC** key, scroll up thru:
 - omni/poly channel
 - midi rcv mode
 - midi notes play:
 - pgm change response ← *new in v1.3*
 - edit multi setup

Techno-types who have a SCSI connection to their Macs can use **SCSI Probe** on the Mac to view the SP version.

If you have v1.3 or higher in your SP, there is no need to install the new ROMS.

Directions for upgrading early (v1.0-1.25) ROMS:

1. TURN OFF SP, unplug the AC mains cable, open the lid
2. MAKE A CAREFUL NOTE of how the old ROMS are oriented: notice they are “too small” for the sockets and they have a little notch at one end facing in a *very important direction*.



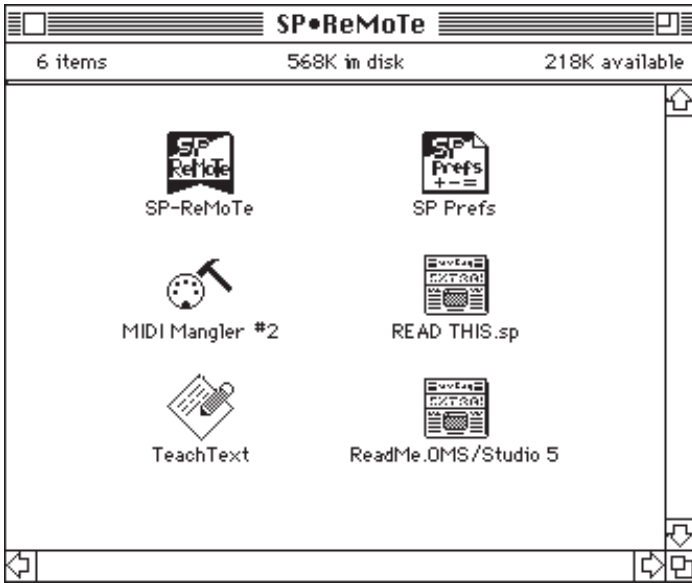
3. UNPLUG old ROMs by carefully prying them out of the sockets with a flat-blade screwdriver or IC puller (don't break the pins!)

4. PLUG IN new ROMs—you MUST get it right or you will FRY the new ROMs when you power on. Note the orientation of the notch on each chip and the fact that the chips are actually smaller than the socket they plug into. Be careful not to let the pins bend under the IC.

5. RETURN the old ROMs (in a box, please, so they don't get crushed) to Peavey Customer Service 711A St. Meridian MS 39302.

About the Master Disk

On your Master Disk you will find the following files:



Be sure to check out any **READ ME...** files on your Master Disk for any late-breaking news.

To Install SP-REMOTE on your Hard-Drive:

Simply drag the SP-ReMoTe application to the desired destination folder on your hard disk. That's all!

SP-ReMoTe will automatically create its SP Prefs file when you first run SP-ReMoTe.

SP Prefs File

When you run SP-REMOTE, information such as window placement, default patch templates, and other preferences are loaded from the **SP Prefs** file which lives on the *root level* in your System folder. SP-REMOTE will use this "prefs file" to store information about how you are using SP-REMOTE so that next time you run SP-REMOTE, it remembers window positions, and how you have SP-REMOTE set-up.

SP Prefs also stores default patches for each of the Multi, Preset, Map, Tone and Wave editors. You can copy the SP Prefs file from your Master Disk to the root level of your System Folder before running SP-REMOTE. If you are using System 7, the SP Prefs file should be outside any other folder and just in the System Folder.

If SP-REMOTE can't find the SP Prefs file, one is automatically created. If for some reason you are running SP-REMOTE on a small-screen Mac which was previously run on a large-screen, and window positions are "off the edge" of the small-screen, you can delete the SP Prefs file from the System Folder and re-run SP-REMOTE. A new **SP Prefs** file is created from the master prefs in SP-REMOTE itself. These prefs have window positions which will fit on a small-screen.

Mac Requirements

SP-REMOTE runs on a Mac Plus or higher with System 6.0.7 or higher. SP-REMOTE is compatible with 32-bit mode in System 7.0 thru 7.1 and needs at least 900K to run, more if you want more than one bank open simultaneously. A hard drive and at least 2 megs of memory is recommended. Virtual Memory is not recommended. Screen redraws are vast, so faster Macs can update the screen much quicker than 8Mhz 68000 (Mac Plus, SE, Classic). If you are using Quadra or other 68040-based machine,

check out any READ ME files for late-breaking inforegarding cache requirements.

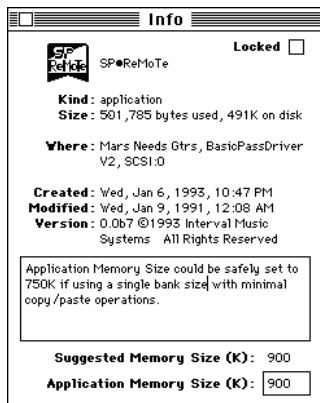
Approximate memory requirements (memory installed in your Mac) are:

- **System 6.0.7 or higher** (Finder only): **2 mB**
- **System 6.0.7 or higher** (MultiFinder): **2.5 mB**
- **System 7.0 or higher:** **4 mB**

You must have the Geneva font in 10, 12, and 14 pt sizes (these are required System fonts so they should already be installed on your Mac).

You must have a printer (any printer) selected in the Chooser for correct serial port initialization.

These requirements can change depending on how many fonts, INITs, etc. you have installed in your System. If you experience intermittent crashes on the Mac with MultiFinder or System 7, try allocating more memory to SP-REMOTE (add another 100K or so). You must do this from the desktop by highlighting the SP-REMOTE application and doing a **Get Info...** (**CMD I**).



Tab down to **Application Memory Size** and type in a new value (1200). You can open multiple Bank documents (limited by memory), but you must allocate more memory for SP-REMOTE, add 100K for each additional bank document you open.

Connecting to the Mac & Talking to the SP

SP-REMOTE talks to the SP over MIDI and supports all standard 1 Mhz MIDI interfaces as well as Mark of the Unicorn's MIDI Time Piece & MIDI Time Piece II. You should also be able to use OpCode's Studio 5 in standard and MTP Emulation modes. SP-REMOTE does not support OpCode's OMS, although you can run SP-REMOTE along side OMS (in allow non-OMS programs mode) or connect thru the OMS MIDI Driver when using MIDI Manager.

If you are not using Apple's MIDI Manager (see below), you can use SP-REMOTE's built-in Midi Drivers. You can enable MIDI In/Out on either modem or printer port. If you do choose to use MIDI Manager, you can use both modem and printer ports and patch them as desired into SP-REMOTE using Apple's **PatchBay** application (or D/A if you are using System 6).

If you are using multiple MIDI applications under MultiFinder/ System 7 be sure that all applications are using either their own MIDI drivers or they are all using MIDI Manager. Do not mix MIDI Manager apps with non-MIDI Manager apps at the same time since you can run into serial port problems. Each app will "step on" the other apps serial connection and you will lose MIDI communication.

Two-Way vs. One-Way Communication

You will need two-way communication between the Mac & the SP when doing any kind of data transfers. If you plan to use an external keyboard/controller, you will need some merging capability to merge your keyboard/controller with the output of the SP into the Mac. This is easily accomplished with a merging MIDI interface such as the MIDI Time Piece or Studio 5.

If you use Apple's MIDI Manager and you have two standard interfaces, you can use both modem and printer ports to merge into SP-REMOTE. You must patch this using Apple's **PatchBay** program (or D/A). You can then **Store Patchbay** (under **MIDI** menu) to save the connections in the Preferences file.

You can also merge the output of the Mac with the output of your keyboard/controller to the MIDI In of the SP, but without your keyboard/controller sending to the MIDI In of the Mac,

you will not be able to take advantage of some of SP-REMOTE's remote editing capabilities, or the fact that you can merge your keyboard/controller thru the Mac with your mouse edits.

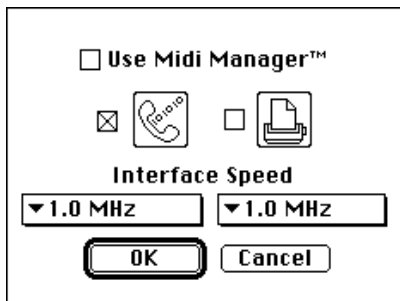
You can also use an external programmable MIDI patchbay and use SP-REMOTE's AutoPatch functions to send Program Changes to tell it to switch back and forth from your keyboard/controller to Mac, but this adds time to SP-REMOTE's realtime editing controls and things can get a little more clunky during edits. See the **AutoPatch** section below.

Merging and MIDI Thru Echo

If you are merging the SP's output with the output of your keyboard/controller, you can play MIDI notes thru the Mac with MIDI Thru Echo = ON. Be careful not to play during data dumps from the SP, since you will mix MIDI notes with System Exclusive messages!

SP-REMOTE's MIDI Setup

Call the **MIDI Setup...** dialog box (under the **MIDI** menu). You can choose **MIDI Manager** (SP-REMOTE's driver options dim, you control everything with Apple's **PatchBay** program) or **SP-REMOTE's MIDI Driver** (serial port options enabled). Most standard MIDI interfaces operate at 1Mhz. You can choose Fast Mode for MOTU MIDI Time Piece (or OpCode's Studio 5 in MTP emulation mode)

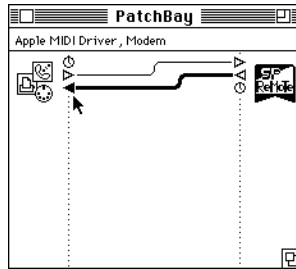


It is possible that the MTP fast mode setting may be too fast for some slower models of Mac, resulting in many MIDI errors or not working at all. If this is your case, you may have to switch

SP-REMOTE and your MTP/Studio 5 to 1Mhz mode.

Connecting with Apple's MIDI Manager

SP-REMOTE supports Apple's **MIDI Manger**. When you first run SP-REMOTE you can connect SP-REMOTE modem and printer ports however you want (using Apple's PatchBay). The example below shows only the modem port enabled from the PatchBay. You can click on the Apple MIDI Driver icon to open a window to set the serial ports.



You can use SP-REMOTE's **Store PatchBay** menu command (under **MIDI** menu) to remember this patch. Next time you run SP-REMOTE this patch will be remembered.

Testing your MIDI Connection

After you have everything set, call SP-REMOTE's on-screen keyboard (CMD K) and play a few notes with the mouse. If your MIDI interface has LED's they should light indicating the Mac is sending MIDI data out. If the SP is set to one of its appropriate screens, you will see the little sixteenth-note characters on the SP's front panel. This is good, it means the SP is getting a connection from the Mac.

If you are not getting any indication that the SP is receiving MIDI data, it means there is a breakdown somewhere between SP-REMOTE software, the Mac's serial ports, your MIDI interface, or the SP. You may ask yourself: How do I work this? Check out your MIDI interface. Do any LED's light on the MIDI interface? This means data is getting at least to the interface. From here you can further determine where the problem is.

1> Data is not getting out of the Mac's serial port

- try resetting SP-REMOTE's **MIDI Setup...** dialog
- if you are using OMS, be sure OMS is set to allow non-OMS applications

2> Data is not getting from the Mac to your MIDI interface

- check you cable from the Mac to your interface
- use the Mac's modem port if possible; if you are using the Printer port be sure AppleTalk is turned OFF (via **Chooser**) BEFORE you run SP-REMOTE
- If using MTP fast Mode, be sure both the interface and SP-REMOTE's **MIDI Setup...** dialog are set to Fast Mode

3> Data is not getting from your MIDI interface to your SP

- check you MIDI cables to the SP
- if using cable-ize mode, check the cable number or turn cable-ize off

You may have to quit and re-boot. You may have to use any software that came with your MIDI interface to be certain the interface is properly configured. Be sure AppleTalk is turned off if you plan on using the Printer port. Be sure any modem or fax software is turned off. Be sure anything which may be using the serial ports is turned off. You may have to temporarily remove any INITs such as OMS from your System Folder to eliminate the possibility of that being the problem, or just to verify that MIDI is happening on its own.

Once you establish that you are indeed getting MIDI data out of the computer, you are ready to try to get something from the SP. Try loading a disk into the SP and do a **Get Everything** (CMD E). If all is well, you get a spinning mouse cursor and after a few seconds a catalog of the contents of the SP's memory listed in SP-REMOTE's **Bank Window**.

Remember: If you get error alert(s), re-check your MIDI cables and the above procedure. Remember: Don't mix MIDI Manager and non-MIDI Manager applications. If using Opcode's OMS, be sure to tell it to allow non-OMS applications. If you are using a MIDI interface which does merging (Mark of the Unicorn's MIDI Time Piece/ MTP II, Opcode's Studio 4/5, etc.) be sure you don't have some sort of MIDI feedback loop happening. If you are cable-izing, be sure the cables are set properly in SP-REMOTE's **MIDI Routing...** dialog.

MIDI Routing...

This dialog enables you to set the MTP Cable numbers and the AutoPatch MIDI PatchBay program change numbers. You can also send a RESET message to the MTP to set it to its default patch.

MIDI Patchbay Switching	_MIDI Time Piece™ Cable_
<input type="checkbox"/> AutoPatch Mode ON	<input type="checkbox"/> Cable-ize Mode ON
KB->Mac->SP Prg#: <input type="text" value="2"/>	SP Cable#: <input type="text" value="3"/>
Mac<=>SP Prg#: <input type="text" value="3"/>	Akai Cable#: <input type="text" value="0"/>
Patchbay MIDI Ch: <input type="text" value="16"/>	<input type="button" value="Reset MTP"/>
Delay Time: <input type="text" value="3"/>	<input type="button" value="OK"/>
Akai Prog # _____	
Mac<=>Akai: <input type="text" value="3"/>	

About AutoPatch

If you are not using a merging MIDI interface and have a MIDI patchbay which can respond to Program Changes, you can use the AutoPatch function to automate switching the patchbay from your keyboard controller to a two-way patch need for communicating with the SP. You can create two patches in your patchbay:

Patch #1: patches your keyboard controller into the Mac, Mac out to the SP. With MIDI Thru Echo enabled, your playing will be passed thru the Mac back out to the SP. You could also create a patch which would patch your controller directly to the SP. Then when you make a move on SP-REMOTE, the AutoPatch function will switch to patch#2

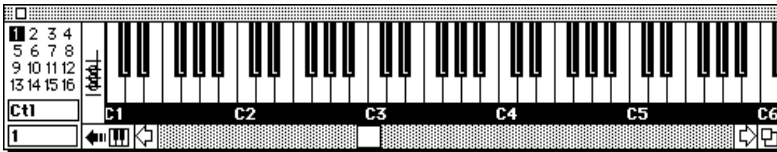
Patch #2: patches the Mac to and from the SP. You need 2-way communication so the SP can accept a request from the Mac and send data. When the transfer is finished, AutoPatch will switch you back to patch#1.

If you are not sure how to use AutoPatch or cable-ize mode, leave them off.

On-Screen Keyboard

You can call SP-REMOTE's on-screen keyboard for playing MIDI notes out to the SP and for setting key ranges in the Map Editor. This also very useful for testing MIDI connections to the SP—you can see if you are getting MIDI out at least.

The keyboard is velocity-sensitive and can send out user-defined controller messages: pressure, mod wheel, pitch-bend, etc. You can select the MIDI channel on which to transmit notes and you can select which controller type from the pop-up menu. If you have selected a controller, you can type the controller number in the box below the pop-up menu. (Call the **MIDI Edit...** dialog from the **MIDI** menu to get a list of controller numbers and their names.)



Sending Velocity and Controllers

If you click near the top of a key you will get higher velocity values, and near the bottom of a key will send lower velocities. If you hold the mouse and 'scrub' up and down on the key, you can send controller info (provided you have defined your controller in the area to the left of the keyboard. You can expand the keyboard slightly by clicking on the little expansion icon under the chord icon.

Playing Chords

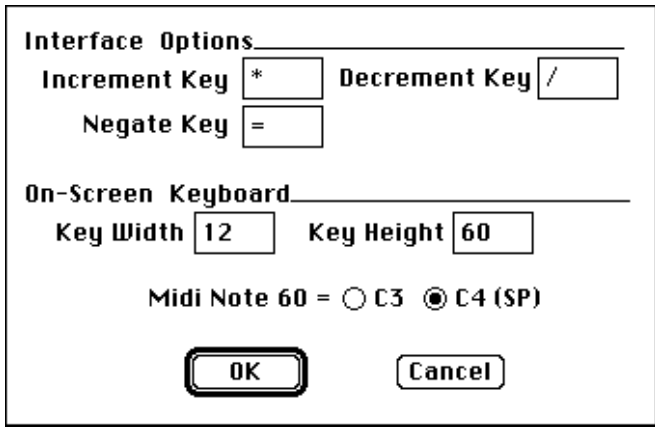
You can input an up-to-ten-note chord and play it in parallel with the mouse. In addition to making it easy to violate all the rules of parallel harmony in Counterpoint 101, you can do quick torture-testing of a MIDI devices' response to lots of MIDI notes—kind of like the Spanish Inquisition of MIDI timing tests.

With the **Chord Icon** at the left end of the keyboard off (not highlighted), hold SHIFT and select the notes of your favorite chord, up to ten, one for each finger. While continuing to hold

SHIFT, click on the **Chord Icon**, then let go of all buttons. Now you can explore the wonders of your own private parallel universe, I mean harmony. Toggling the **Chord Icon** toggles chord mode on and off.

Setting Keyboard Prefs

You can size the keyboard and place it anywhere on the Mac screen. You can set the maximum keysize in the **Preferences...** dialog box (under **File** menu).



SP-REMOTE Overview

SP-REMOTE has one catalog/bank window, four editing windows and a handful of dialogs and menu commands. The main window in SP-REMOTE is the **Bank Window**. This is the Grand Central Station of SP-REMOTE—you can get to any of the individual editor windows from here by double-clicking on an items' cell. You can also 'zoom' into deeper levels from one editor window to another by CMD-clicking on the name assignment in the parent editor.

Preset	Map	Tone	Wave
0 Vocal Drums	0 Vocal Drums	0 Vox Gate Kick	0 Vox Gate Kick
1 Record Scratch	1 Record Scratch	1 Vox Kik 2	1 Vox Kik 2
2 KeyLng VocDrms	2 Drums&Scratchs1	2 Vox Kik 1	2 Vox Kik 1
3 KeyLng Scratch	3 Drums&Scratchs2	3 Vox Power Kick	3 Vox Power Kick
4 Drums&Scratchs1	4 Drums&Scratchs3	4 Vox Snr 2	4 Vox Snr 2
5 Drums&Scratchs2	5 KeyLng VocDrms	5 Vox Snare 1	5 Vox Snare 1
6 Drums&Scratchs3	6 KeyLng Scratch	6 Vox Rim	6 Vox Rim
		7 Vox Tik Hat	7 Vox Tik Hat
		8 Vox L Hat	8 Vox L Hat
		9 Vox Chest Tom	9 Vox Chest Tom
		10 Vox Tom 1	10 Vox Tom 1
		11 Vox Simm	11 Vox Simm
		12 Vox Tama	12 Vox Tama
		13 Vox Ride	13 Vox Ride
		14 Vox Crash	14 Vox Crash
		15 Vox Steam Cymb	15 Vox Steam Cymb
		16 Vox Water Cymb	16 Vox Water Cymb
		17 Vox W Crash	17 Vox W Crash
		18 Vox Cowbel 2	18 Vox Cowbel 2
		19 Vox Eko Bell	19 Vox Eko Bell
		20 Vox Juice Bell	20 Vox Juice Bell

The Bank Window lists the contents of the SP's memory in columns for each of the SP's data types: **Multi - Preset - Map - Tone - Wave**, with the **item cells** for each data type listed below. The Bank Window represents the voice hierarchy of the SP, from highest (Multi/Preset) to lowest (Wave).

Note: Even though the SP can have arbitrarily numbered items in its memory, SP-REMOTE cannot. For optimal use, avoid numbering your items such that large blank cells are created. Try to group all of your items together at the beginning of each column to avoid gaps—blank cells still take memory in SP-REMOTE even if they are unused.

If there are 'blank' items in between existing items in the SP, SP-REMOTE will create empty default items in its list and tag them as blank. Subsequent SENDS to the SP will automatically skip over these empty item cells. When you do a PASTE operation on any blank cell, it becomes active and will then SEND to the SP.

Navigating the Bank Window

From the Bank Window you can use the mouse to select items in each column and call up the various editor windows.

Voc Drm+Scrctch			
Preset	Map	Tone	Wave
0	Vocal Drums	0	Vox Gate Kick
1	Record Scratch	1	Vox Kik 2
2	KeyLng VocDrms	2	Vox Kik 1
3	KeyLng Scratch	3	Vox Power Kick
4	Drums&Scrctchs1	4	Vox Snr 2
5	Drums&Scrctchs2	5	Vox Snare 1
6	Drums&Scrctchs3	6	Vox Rim
		7	Vox Tik Hat
		8	Vox L Hat
		9	Vox Chest Tom
		10	Vox Tom 1
		11	Vox Simm
		12	Vox Tama
		13	Vox Ride
		14	Vox Crash
		15	Vox Steam Cymb
		16	Vox Water Cymb
		17	Vox W Crash
		18	Vox Cowbel 2
		19	Vox Eko Bell
		20	Vox Juice Bell

- **SINGLE-Click** on a column title (Preset, Map, Tone, etc) to select it that column. Changing columns will send a remote button-push to the SP (if **SP Follow** is enabled from the MIDI menu).
- **SINGLE-Click** on an item cell in a column to select it and call up that item on the SP (with **SP Follow & Remote Edit** enabled). With **Remote Edit** on, each time you select an item cell, that item's data is sent to the SP, effectively switching the SP to that item.
- **DOUBLE-Click** on an item cell to activate that item's editor window.
- **CMD-Click** shows the hierarchy of a Preset, Map or Tone by highlighting the related items in the next lower column.
Example: CMD-Click on a Map to show all of the Tones assigned to the zones in the Map. This shows the parent/child object relations. You can also use this function to select related items for global editing.
- **SHIFT-Click** to select an item for copying/pasting or for adding to a list of selected items to be globally edited.
- Hold the **OPTION** key to display the selected order of items in a column. This is useful to see what order you clicked on say, Waves when you are doing an AutoMake operation.
- **Click-Drag** to select arrange of items (also in conjunc-

tion with **Shift-Click**)

- The **Up and Down Arrow** keys on your Mac keyboard will scroll up and down the list of items. If an editor window is open it will also update to show the new patch.

Show Hierarchy

You can quickly show the hierarchy of related items (i.e. what Tones are used in a Map, etc.) by **CMD-Clicking** on a cell in the Bank Window:

Preset	Map	Tone	Wave
0 Vocal Drums	0 Vocal Drums	0 Vox Gate Kick	0 Vox Gate Kick
1 Record Scratch	1 Record Scratch	1 Vox Kik 2	1 Vox Kik 2
2 KeyLng VocDrms	2 Drums&Scratches1	2 Vox Kik 1	2 Vox Kik 1
3 KeyLng Scratch	3 Drums&Scratches2	3 Vox Power Kick	3 Vox Power Kick
4 Drums&Scratches1	4 Drums&Scratches3	4 Vox Snr 2	4 Vox Snr 2
5 Drums&Scratches2	5 KeyLng VocDrms	5 Vox Snare 1	5 Vox Snare 1
6 Drums&Scratches3	6 KeyLng Scratch	6 Vox Rim	6 Vox Rim
		7 Vox Tik Hat	7 Vox Tik Hat
		8 Vox L Hat	8 Vox L Hat
		9 Vox Chest Tom	9 Vox Chest Tom
		10 Vox Tom 1	10 Vox Tom 1
		11 Vox Simm	11 Vox Simm
		12 Vox Tama	12 Vox Tama
		13 Vox Ride	13 Vox Ride
		14 Vox Crash	14 Vox Crash
		15 Vox Steam Cymb	15 Vox Steam Cymb
		16 Vox Water Cymb	16 Vox Water Cymb
		17 Vox V Crash	17 Vox V Crash
		18 Vox Cowbel 2	18 Vox Cowbel 2
		19 Vox Eko Bell	19 Vox Eko Bell
		20 Vox Juice Bell	20 Vox Juice Bell

Since this doesn't automatically scroll the window to the highlighted cells, you may have to do it yourself if the cells are past the bottom of the window.

Select All

You can select all the items in a column by clicking on the columns' title and doing a **Select All** (CMD A). All of the items' cells will highlight. You can globally edit all of your selected items by calling up its editor window.

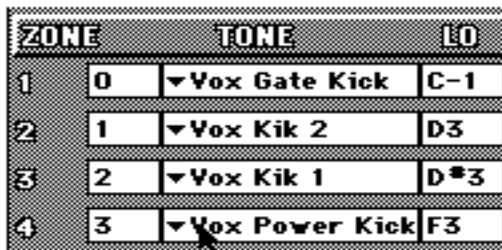
Zooming

You can zoom into deeper editing levels by CMD-Clicking on the assigned names on each edit window. This makes it easy to track what items are assigned where: you can start from a Preset and zoom all the way to the Wave level. Let's try it:

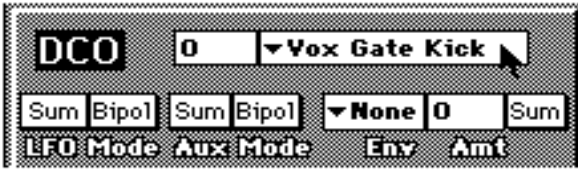
- **From the Bank Window**, Double-Click on a Preset to call up that Preset.
- **From the Preset Window**, CMD-Click on one of the Map assignments in Layer A—this will open the Map Window for that Map:



- **From the Map Window**, CMD-Click on a zones' Tone assignment this will activate the Tone Window:



- **Finally from the Tone Window**, CMD-Click on the DCO wave assignment, this activates the Wave Window:



Creating New Item Cells in a Column

With the SP connected, you can do an **INSERT (CMD-I)** to create a new Multi, Preset, Map or Tone item into the Bank Window columns. You cannot create new Waves by inserting them. New items are inserted to the end of the list and (if Remote edit is enabled) a command is sent to the SP telling it to create that item in the SP.

You can also copy/paste in the usual Mac fashion. If you click on a column heading (thereby deselecting all the items in the column), you can paste a new item to the end of the list.

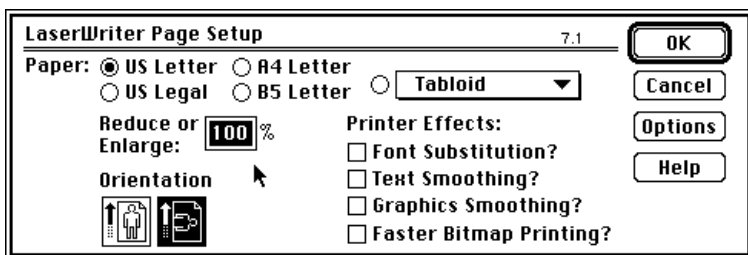
You will be alerted to any sort of errors:

- **MIDI communication-** either the newly created item didn't get sent to the SP, or SP-REMOTE didn't get an "OK" back from the SP, or both.
- The SP did not have enough memory to create the new item.

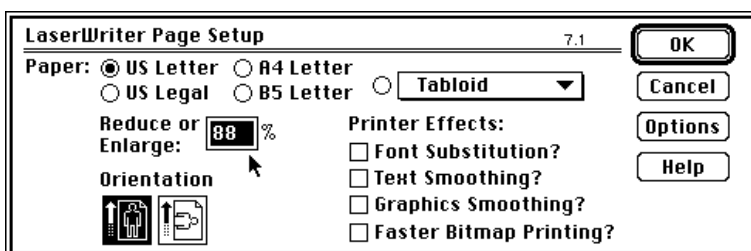
You will normally use the Bank Window to get to & from different items in the different editor windows, and to see the hierarchy of related items.

Printing the Bank

You can print the Bank Window for hardcopy reference by using the **Print...** command under the File menu). You must first select a printer output device from **Chooser** (in the Apple menu). Be aware that your printer cannot be using the same serial output as your MIDI interface. You can print a listing of Multis, Presets, Maps, Tones and Waves. The width of these columns is too large to print on an 8.5 x 11" sheet (unless you use **Page Setup...** to specify wide printing).



You can reduce the printing scale via **Page Setup...** (under **FILE**) to 88%. This will fit all the columns on a single page.



If you want to print out parameters, do a screen dump [**Shift-CMD-3**]. Do several for Maps in order to get all of the zones and edit them with a paint program. You can edit you screen dumps and print them with just about any paint program.

Editor Windows

Each of the editor windows can show one item at a time. You can scroll up & down the list with the Mac arrow keys, or double-click on a cell in the **Bank Window** to call up the editor for that item. If you have multiple items selected in a column, you can simultaneously edit all of those items in the corresponding edit window. When **Remote Edit** is enabled (from **MIDI** menu), all edits, inserts, etc. are send in realtime to the SP.

Basic Editing

The editor windows are comprised of groups of controllers such as graphic buttons, faders, knobs, etc. as well as param-

eter number/note boxes. Some of the more important parameters have both a graphic element and number/note box. You can edit these important parameters with either control. If you play your keyboard at the same instant you edit a parameter you may get an error alert on the computer. This is because SP-REMOTE checks for an "Ack" (an OK message) from the SP each time an edit is sent to the SP. If you MIDI notes "get in the way", SP-REMOTE will misinterpret the MIDI notes and a wrong Ack message and give an alert. Try not to play notes at the same instant you are editing a value.

Remember: "Remote Edit" (under MIDI menu) must be ON for realtime edits to control the SP.

Name Boxes

You can re-name any item from its' editor window (you cannot edit names from SP-REMOTE's Bank Window). Click on the **Name Box** (at the upper-left corner of each editor window) to select it. You can type a new name from the Mac keyboard. Try to stick with standard 0-9 and A-Z characters since the SP will not recognize the full range of Mac characters.



Pop-up Menus

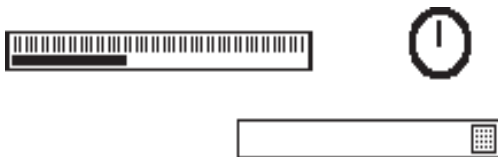
All pop-up menus are distinguished by an inverted triangle next to the name or number in the pop-up. Click on a pop-up menu and select the item in the usual Mac fashion.



The Tone and Wave pop-up menu selects are divided into two halves, each half showing 100 items. Unused items are blanked out.

Graphic Controllers

These include faders, knobs, envelope segments, and keyranges.



- **Click and Drag** with the mouse. The edit is sent to the SP when you let up on the mouse.

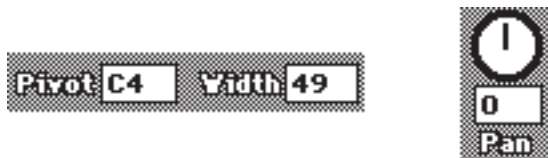
- **SHIFT-Click** the graphic controller to select it for a copy function or to enable that controller to be controlled by an external MIDI control source such as a Mod Wheel or other controller you have selected in the **MIDI Edit...** menu (see below). You can also use your **increment** and **decrement** keys to change the value of graphic control for fine-tuning (very useful for single stepping small faders).

- **CONTROL-Click** to quickly zero a graphic controller (fader or knob).

- **OPTION-Click** to select all related parameters (ex: all Volumes in a Map).

Number and Note Boxes

These are simple parameter boxes with a number or note value. You may find a number/note box associated with a volume fader or other graphic controller.



To Edit:

- **Click** on the number/note box to select it, it highlights:
 - Type a number value from the Mac keyboard. You can type a value preceded by the "-" key to input negative values.
 - Use your inc/dec keys to single step thru the param-

eter range. (The inc/dec keys are user-defineable from the **Preferences...** dialog box under **File** menu).

- Hit **[Return]** or click outside a pane (anywhere in the window) to deselect a parameter box.
- **SHIFT-Click** to select the number/note box for a copy function.
- If the parameter is a note box, you can play a key from your external MIDI keyboard/controller to set the value. You can also use the on-screen keyboard to “play” a value.
- With a number/note box selected (popped-out) you can **MIDI Edit** with your external controller—no need to SHIFT-Click a number/note box as with a graphic controller.
- Hit **[Return]** or click outside a pane (anywhere in the window) to deselect a parameter box.

You can **[Tab]** thru parameter boxes. This is especially useful on the **Map Editor**—you can tab thru the Note ranges, playing the Low and High notes from your external keyboard.

MIDI Edit

You can choose an external control source such as a Mod Wheel or other continuous controller to act as a controller for remote editing. The **MIDI Edit...** menu command (under **MIDI** menu) calls a dialog box for setting the controller from a pop-up list.



You can SHIFT-Click on any number of controllers and edit them simultaneously with your Mod Wheel. Offsets are relative to existing values, provided you don't go to minimum or maximum values. This will turn your edits into absolute values since you have maxed them out.

Since SP-REMOTE looks at your Mod Wheel, sends a data dump to the SP, checks the OK “Ack” reply from the SP for each increment from your Mod Wheel (and echoing or ignoring MIDI notes coming into the Mac), there is lot going on! You can over-

do it with this function pretty easily so you have to go slow. Don't expect to use **MIDI Edit** on say, a Map with a lot of zones, there is just too much data to deal with.

Keyboard Input

There are a few parameters which respond to Midi Notes from either the on-screen keyboard, or an external MIDI keyboard. These include:

- Map Low & High Note keyranges
- Wave Original Pitch parameter
- Preset tracking split point

When these parameters are selected, you can play a note to set them.

Global Editing

SP-REMOTE has some powerful global editing functions which make it much easier to manage edits of related items. Although there are many global editing functions at the Preset level (Volume, filter cut-off, velocity, etc), SP-REMOTE's global editing can address virtually any data-type at any level. Since SP-REMOTE will do relative offsets, you keep the existing relationships between the items you are editing. In other words, when you globally edit an item's parameter (say a Map zone's Volume), all the other parameters move by the same amount instead of all jumping to the same value.

Global Edit Example #1: *Editing multiple items in a column*

Say you have a Preset consisting of a single multi-sampled synth (using 12 tones). Now you want to add just a little more attack to all of the tones in the map.

- From the Bank Window CMD-Click on the Map containing your multi-sampled synth—all of the Tones assigned to this Map will highlight.

Doc Drm+Scratch			
Preset	Map	Tone	Wave
0 Vocal Drums	0 Vocal Drums	0 Vox Gate Kick	0 Vox Gate Kick
1 Record Scratch	1 Record Scratch	1 Vox Kik 2	1 Vox Kik 2
2 KeyLng VocDrms	2 Drums&Scratchs1	2 Vox Kik 1	2 Vox Kik 1
3 KeyLng Scratch	3 Drums&Scratchs2	3 Vox Power Kick	3 Vox Power Kick
4 Drums&Scratchs1	4 Drums&Scratchs3	4 Vox Snr 2	4 Vox Snr 2
5 Drums&Scratchs2	5 KeyLng VocDrms	5 Vox Snare 1	5 Vox Snare 1
6 Drums&Scratchs3	6 KeyLng Scratch	6 Vox Rim	6 Vox Rim
		7 Vox Tik Hat	7 Vox Tik Hat
		8 Vox L Hat	8 Vox L Hat
		9 Vox Chest Tom	9 Vox Chest Tom
		10 Vox Tom 1	10 Vox Tom 1
		11 Vox Simm	11 Vox Simm
		12 Vox Tama	12 Vox Tama

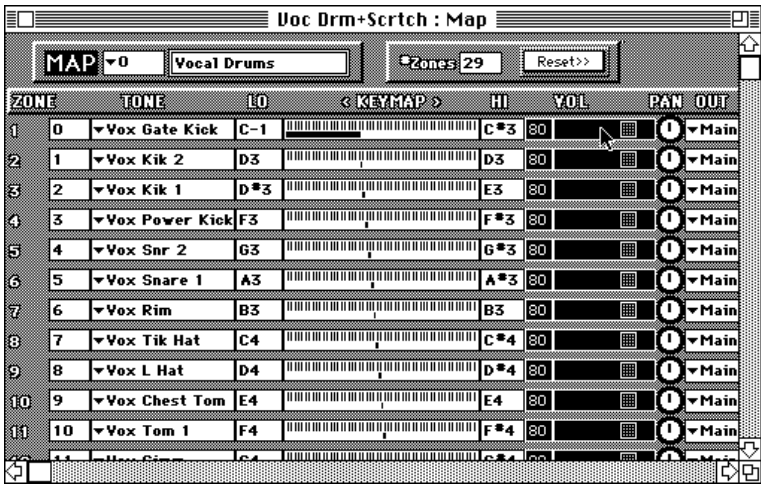
- From the **Windows** menu, call up the Tone editor window
- With all of your Tones still highlighted in the Bank window, proceed with your edit (the hypothetical attack value). All of the highlighted Tones will have their attack values changed, and if Remote edit is on your edits will be sent to the SP.

You can also manually select items in the Bank Window for global editing by SHIFT-Clicking on those cells (or dragging in the standard Mac fashion). Remember, any edit you make will affect ALL of the highlighted items in the Bank Window

Global Edit Example #2: *Editing similar parameters in an item*

The most obvious example here is to edit say, all of the zone volumes in a Map.

- From the Map window, OPTION-Click on Volume fader. All of the Volume faders will highlight:

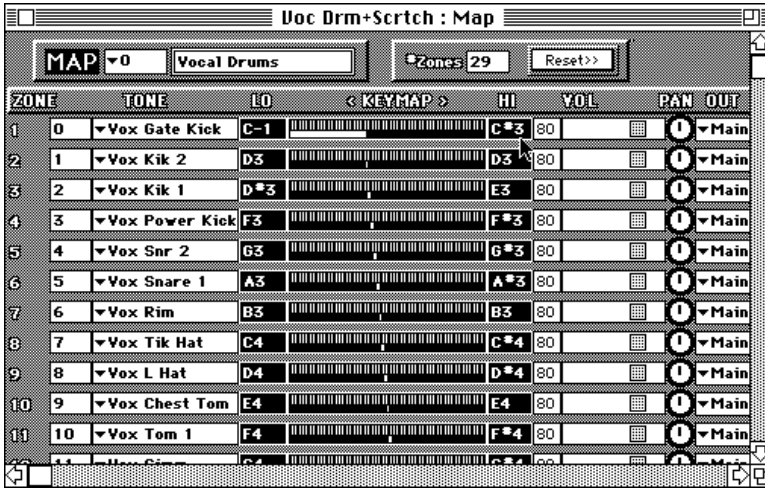


- Proceed with your edit, all Volumes edits will follow.
- Hit **[Return]** or click on the blank area at the top of the Map Window to deselect the highlighted Volume faders.

This technique works for Map keyranges, pan positions as well as for related parameters in each Layer A and Layer B on the Preset Window.

Transposing Map KeyRanges

You can use this edit method to offset all split points in a Map:



- OPTION-Click on any Low-Note box
- OPTION-Click on a High-Note box
- Use your Inc/Dec keys to move all of the note ranges

up or down

Note: If you select only Low or High ranges it is possible to fool SP-REMOTE's range-checking and get into illegal map overlaps. The SP won't accept these overlaps.

Global Edit Example #3: Editing multiple parameters in an item

You can also simultaneously edit multiple parameters in an edit window.

- From the Tone window, SHIFT-Click on a few parameters.
- Proceed with your edit, all parameters will follow
- Hit **[Return]** or click on the blank area at the top of the Window to deselect the highlighted parameters.

Parameter Copy/Paste

You can copy/paste individual parameters or groups of parameters from one item to another:

- From the source item SHIFT-Click on the desired parameters and do a COPY (Cmd C).

- Select the destination item and do a PASTE (CMD V). All of your previously copied parameters will be pasted to their corresponding parameters, no need to actually select the parameters to be pasted. SP-REMOTE remembers the parameters that were copied and pastes into those same spots.

Remote Edit & SP Follow

When you send edits from the computer the edit is going directly into SP memory (except for Multi edits which go to a Multi-only editbuffer). When you re-save the Bank, all of edits are saved to SP disk. If, during the course of editing a Bank in the SP, you load a new Bank into the SP from its disk, you will overwrite any previous edits.

During the course of editing you can specify how the SP will interact with your editing. There are times when you may want the SP to exactly follow your every move going from one data type to another (say Map to Tone). There are other times when you may want to fine-tune a parameter at the Tone level while staying in the Preset/Map you are working on.

- The **Remote Edit** menu command, when enabled, will automatically send your edit moves to the SP as you make them. SP-REMOTE checks every edit sent to the SP by looking for an "ACK" coming back from the SP. This ensures proper MIDI communication and prevents the Mac from sending data too fast to the SP. Remote Edit needs to be enabled when you do any AutoMake functions.

You can tell the SP how to follow your edit moves with a combination of the **SP Follow** menu command and the **SP Play Mode** menu commands.

- **SP Follow** calls up the corresponding editor (Multi, Preset, Map, Tone, or Wave) on the SP's front panel (essentially the same as pressing one of the SP's front panel buttons), and AutoSends the patch to the SP. Enabling SP Follow also sends a **Follow Display** (see below) command to the SP.

- **SP Play Mode** puts the SP into one of its play modes:
Normal Rcv: stays in the current Multi or Preset, no matter what.

Follow Display: SP switches to the actual patch you are editing.

Current Preset: stays in the current Preset

Current Map: stays in the current Map

Current Tone: stays in the current Tone

To remote-control the SP to follow your actions, from SP-REMOTE's **MIDI** menu:

- enable **Remote edit** (causes SP to switch to specific items via realtime edits)
- enable **SP Follow** (enables remote front panel button-pushes from SP-REMOTE and sends a **Follow Display** message (tells the SP to not stay on the current Preset, etc.).)

When you click on a column's cell in the **Bank Window** SP-REMOTE will send a button-push for that column, then autosend the new patch, this effectively tells the SP will switch to that item.

You can use combinations to quickly find a particular tone or wave in a Preset or Map. With SP Follow enabled, call the **SP Play Mode** menu and click on

Current Preset: stays in the current Preset

Current Map: stays in the current Map

Current Tone: stays in the current Tone

Now play click on the column of the item (say Tone or Wave) you want. The SP will switch to Tone or Wave on its front panel. Now play the note you want—that Tone or Wave will switch in the SP's display and you can see the Tone or Wave number. Now go back to SP-REMOTE and call up that item from the Bank Window.

Bank Info (Name, Tune and MIDI) Dialog

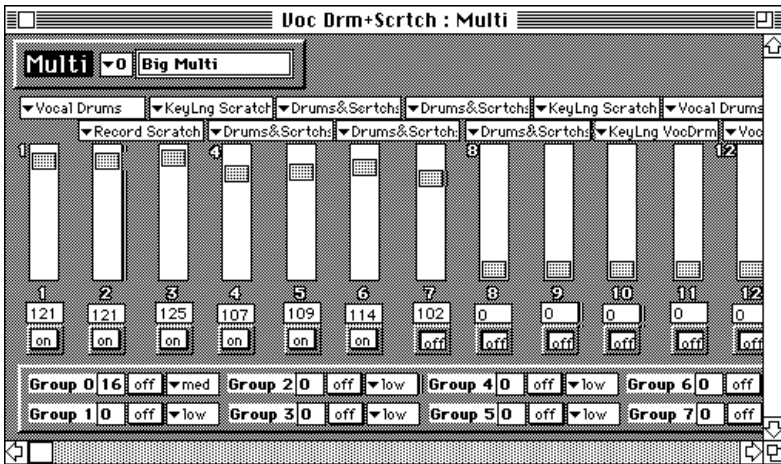
This call a dialog where you can set some of the global SP parameters. When you exit, the new parameters are AutoSent to the SP.

Bank Name _____	<input type="button" value="OK"/>
<input type="text" value="Doc Drm+Scratch"/>	
14 chars max	
Master Tune: <input type="text" value="0"/>	cents (+/-12000)
MIDI Modes _____	
Omni/Poly Chan: <input type="text" value="1"/>	<input checked="" type="checkbox"/> Prg Chg
Omni/Poly Vol: <input type="text" value="127"/>	<input checked="" type="radio"/> Omni
SP SysEx Chan: <input type="text" value="0"/>	<input type="radio"/> Poly
	<input type="radio"/> Multi

There is a master **Prg Chg** on/off switch for Program Change. When enabled, the SP will respond to MIDI Program Changes normally. When off the SP will ignore any Program Changes. If you are using SP-REMOTE's AutoPatch function, you may want to turn **Prg Chg = OFF** so that the Program Change messages from SP=REMOTE do not interfere with the SP.

A Closer Look at the Multi Editor

This edit window is pretty straightforward. It is set-up like a mixing console with Group controls at the bottom of the screen. When you are using the SP, you are always using its editbuffer. You don't really access the internal Multi memory positions. The interaction of this editor window and the Multi functions in the SP have been simplified and optimized for remote editing. Instead of having to call up a Multi patch into the SP's editbuffer, then saving the edited Multi, SP-REMOTE treats all 16 Multi's as active Multi's—there is no separate editbuffer.



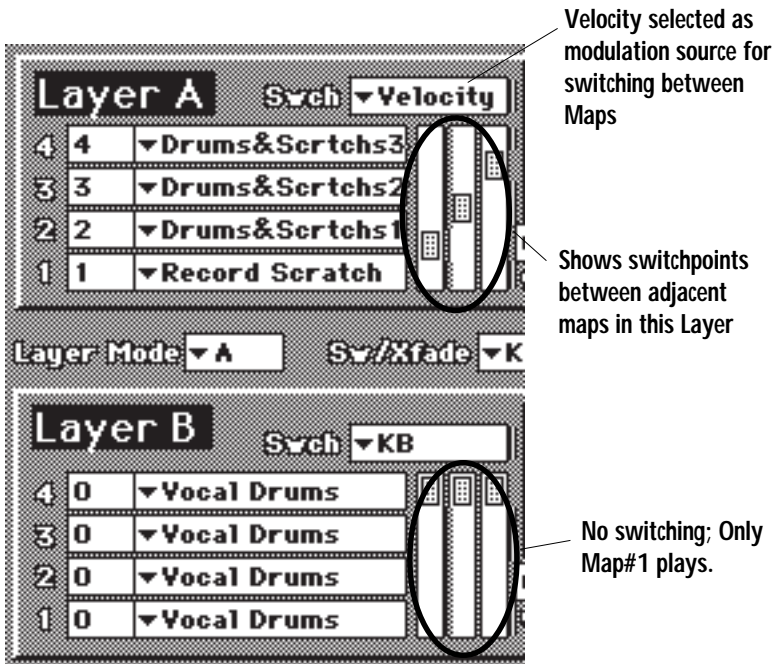
When you edit any of the Multis, those edits are AutoSent to the SP's Multi editbuffer as you make them. This way you can monitor what is going on as you edit. When you do a **Send xxx** from SP-REMOTE's **Transfer** menu, each Multi is sent to its position in the SP's internal memory. The only drawback to this way of doing things is that you cannot **Get xxx** the Multi editbuffer by itself. You must store it to an internal Multi first. But since you are editing from the computer its really a moot point. If you INSERT a new Multi into the column, that newly created Multi will be sent to the SP's memory as well as its editbuffer.

A Closer Look at the Preset Editor

The heart of the Preset Editor Window is the **Layer A & B** Map assignments. You can pick a Map by clicking on the name and choosing a new Map from the pop-up menu. You can zoom into a Map by CMD-Clicking on the Map name—this activates the Map Editor Window.

Lets take a closer look at how Map switching in each Layer is accomplished with SP-REMOTE. The vertical faders control the points at which the Layer switches from one Map assignment to another. You can SHIFT-Click on a fader to control it from your external Mod Wheel (see **MIDI Edit...** above). This makes it very easy to "feel" the switchpoints. When you move a fader, the

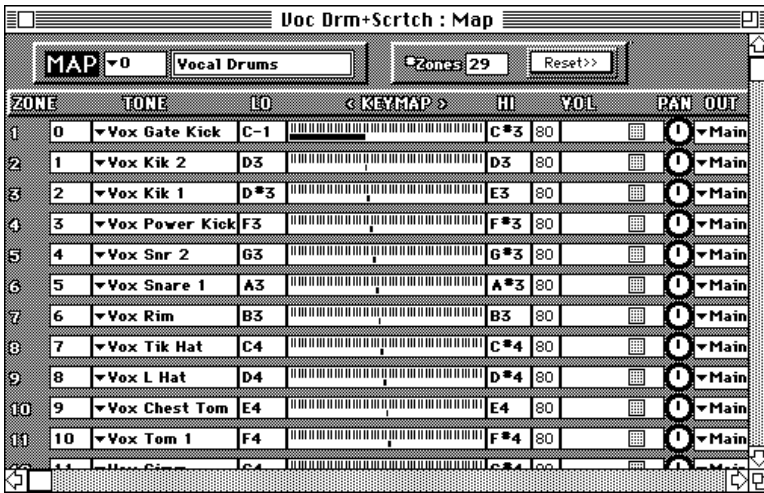
other faders will get “pushed along” as necessary since there are limits to each parameters’ value in relation to the others.



The only odd thing about the Preset Editor is the way the Aux Controls are assigned. You can assign any controller 0-127 by clicking in each Aux parameter box and typing the corresponding number (you can reference Controller numbers by looking at the **MIDI Edit...** dialog box). To turn an Aux Control off, input a -1.

A Closer Look at the Map Editor

An SP Map is a collection of Tones which are laid out across the keyboard in Zones. You specify how many Zones you want in your Map, assign the desired Tone to each Zone, and set the low and high note range across the keyboard for each zone.



You can control the volume, panning, and transposition of each Zone. You can also turn off key tracking so that each Zone plays at a single pitch. You can assign each Zone to an Group which, at the Preset level, can determine the maximum polyphony (how many voices the Group can play), how the Group overflows to another SP, and how great a priority that Groups has when lots of voices are played.

The Map Editor graphically displays zones and their keyranges, along with the volumes, pans, transpose amounts, etc. You can get a pretty good visual representation of your keyranges and you can scroll up and down thru the zones to see them all. You can save and load individual maps to and from disk. This is useful for storing templates of some of your commonly used maps.

Setting Up a New Map

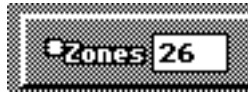
When building a new Map, you have several options for getting started:

- You can build the Map manually by inserting it into the Map column on the Bank Window, then calling the Map Editor and manually setting up your Zones.
- You can edit an existing Map, or Copy and Paste and existing Map to create a new one.

- You can Load a pre-defined Map from disk, then assign Tones and fine-tune any other parameters.
- You can use SP-REMOTE's **AutoMake** function to instantly create a Map with Tones already assigned and ballpark-mapped across the keyboard.

Setting Zones in a Map

You can set the number of zones in a Map by clicking on the **#Zones** parameter box and typing in the desired number (1-127). A Map must have at least one Zone.



If you are adding zones to a Map with a number of zones already defined, make sure there is enough “room” at the top of the keyrange. SP-REMOTE cannot add more Zones if there is not enough space. Each new Zone added will take up one semitone. After you add the new Zones, you can go back and assign Tones to each Zone and edit the keyranges.

Keyranges

Obviously, keyranges are the basis of any SP Map. The basic rule is you must have an individual zone for each tone in your Map. The keyrange is determined by a low note and a high note. A zones' keyrange cannot overlap another zones' keyrange, and keyranges must be laid out from left-to-right across the keyboard (higher numbered zones cannot have keyranges below lower numbered zones).

Reset>>

This button resets all keyranges to the top end of the keyboard. It effectively scrunches all the ranges together so that you can go in and set ranges starting from the low end of the keyboard without having overlapping conflicts.



Setting Keyranges

There are several ways to set keyranges:

- Manually, by clicking on each Low note and High note parameter box and typing a value. You can [Tab] thru these ranges.

- Using SP-REMOTE’s on-screen keyboard to “play” a note into each Low and High note parameter box.

- Playing notes from an external MID keyboard.

- You can use the Mac’s [Tab] key to tab thru all of the Low and High note parameter boxes and set the note however you want. Start by clicking on Zone #1’s Low note. When you get to the last Zones’ High note, hit [Return] to pop the box into the screen.

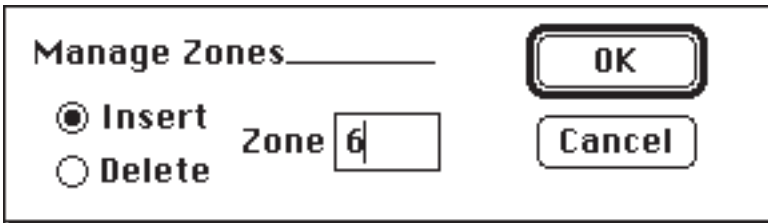
- Clicking directly on the zones’ miniature keyboard and editing ranges with the mouse:

ZONE	TO	LO	< KEYMAP >	HI	VOL	F
1	3	▼Vox Power Kick	F#-1	C2	80	
2	6	▼Vox Rim	C#2	C#2	80	
3	5	▼Vox Snare 1	D2	D2	80	

Remember: Keyranges cannot overlap. If you need to a sound with overlapping keyranges, setup two non-overlapping Maps and layer them at the Preset level.

Insert and Delete Zones

You can insert and delete individual zones from anywhere in the Map by calling the **Manage Zones** dialog box under the **Special** menu. If you are inserting a new Zone, be sure to first “make room” for that zone in the Map since keyranges cannot overlap.



Transposing Existing KeyRanges

You can edit keyranges en masse by OPTION-Clicking on any

Low note parameter box followed by any High note parameter box. All of the boxes in the Map will highlight. Now use your Inc/Dec keys to transpose the keyranges. Hit **[Return]** to deselect the highlighted boxes.

Zone Global Editing

You can OPTION-Click on any Zone parameter to select all of those parameters for simultaneous editing. All edits are relative to existing values. This makes it easy to say, lower or raise the volumes of all Zones without disturbing the relative values of each Zone. If you edit to one extreme then the other, you will effectively turn your edits into absolute values since the parameters have “maxed out”.

Editing Macros

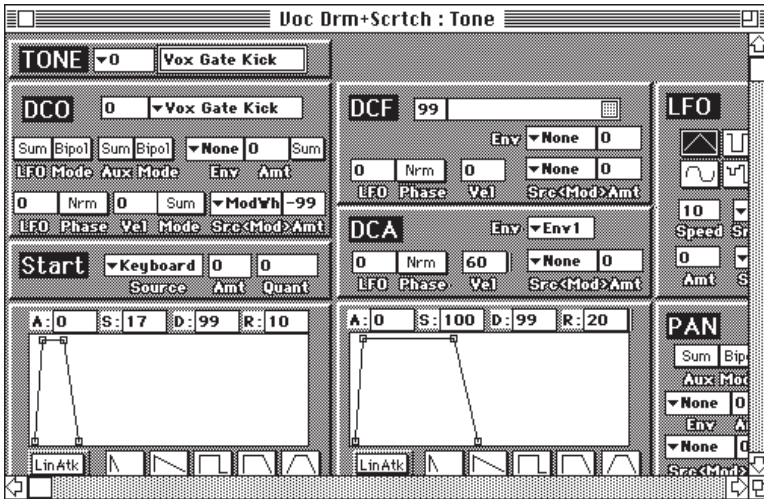
SP-REMOTE includes several useful macros for instantly modifying Zones in a Map. These are found under the **Special** menu and include functions for automatically panning and tuning Zones.

Save/Load Maps to Disk

You can save and load individual Map to and from disk. All of the information for that Map is saved, including Tone assignments. When you load a Map, it is placed at the end of the Map list on the Bank Window. If you load an individual Map into the Bank Window, be aware that the Tone assignments remain from the Bank that the Map was originally saved; the Tone assignments in the Map may not correspond to the Tones currently loaded in the SP. Do **Save and Load Map...** operations using the standard Macintosh file selector.

A Closer Look at the Tone Editor

The Tone editor is where you assign sampled Waves to the Tone, set envelope, filter and LFO parameters.



You can click on an envelope segment and drag that segment, or use the number parameter boxes. You have five envelope presets (Short and Long Attack, Organ Gate, Release, and Long Attack / Release) to quickly set the envelope to a basic shape.

You can [Tab] thru the parameter boxes. You must click on a graphic controller (faders, pop-up menus, etc) with the mouse.

SHIFT-Clicking any parameter/controller will enable it to be controlled via your **MIDI Edit...** selection (Mod Wheel, etc). You can also use your increment/decrement keys on a SHIFT-Clicked controller (fader, pan pot, etc). Although you can MIDI Edit more than one parameter at a time in a single tone, you cannot MIDI Edit more than one tone at a time.

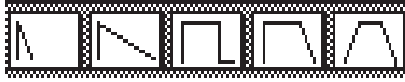
Copy/Paste Parameter

SHIFT-Clicking also selects multiple items for a copy operation. If you then do a paste, the copied items will “know” where to go—no need to select items for pasting. You can also copy the text out of a parameter box and paste it elsewhere.

If you have multiple Tones selected from the Bank Window, you will edit all of the select Tones.

Envelope Presets

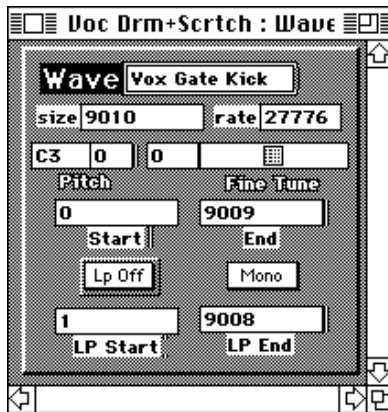
Below each envelope are five envelope preset icons, each representing a common envelope shape: **Fast Decay**, **Long Decay**, **Organ Gate**, **Sustain&Release**, and **Attack/Sustain&Release**.



Click on a preset and you will set the SP envelope's to that shape. Very useful for getting an envelope into the ballpark fast!

A Closer Look at the Wave Editor

The Wave Editor is the end of the line. It is the lowest level in the SP's voice hierarchy and consists of the raw sampled sound along with loop points, fine-tuning, and original pitch parameter.



While SP-EMOTE is not a visual sample editor, you do have access to fundamental looping controls. However, it is best to use these controls in conjunction with the loop find function on the SP itself.

Warning: If you do manual edits from the front panel of the SP (or use the SP's built-in loop find function) be sure to do a **Get This Patch** (from the **Transfer** menu) to update SP-REMOTE (otherwise you will lose your edits when SP-REMOTE autosends old values).

Special Menu

SP-REMOTE has some special commands to algorithmically create and modify patches. These are kinda sorta like pre-defined macros. They are fairly flexible and will save much time in creating the building blocks you need. You can go from a group of Waves to fully mapped and tuned Presets with just a few clicks of your mouse.

AutoMake Functions

SP-REMOTE has some powerful functions for automatically generating nearly-completed patches very quickly. Be sure **Remote Edit** is enabled for all parameters to be sent to the SP during these **AutoMake** functions.

Shift-Click on the items you want from the Bank Window and tell SP-REMOTE to **Make Preset/Map/Tone**. This will go to each column, adding, mapping and linking items as necessary. You can go from raw waves to a finished Preset in seconds with just a few clicks of your mouse.

The **AutoMake** menu options are enabled according to the column you are on in the Bank Window—you can't **Make Tones** if you've got items in the Map column selected.

- if you select Waves in the Wave column you can **Make Tones, Maps, and/or a Preset**
- if you select select Tones in the Tone column you can **Make Map and/or Preset**
- if you select select Maps in the Map column you can **Make Preset**

The appropriate PRESET, MAP, or TONE sections will be enabled depending on your menu selection.

Total Selected Waves: 13

PRESET _____

Create New PRESET:

- Layer A
- Layer B
- Layers A + B
- Del HFade @
- Del Switch
 - R: 1-4 B: 5-8
 - R: Odd B: Even

TONE _____

- Create New TONE
- Assign Wave n ->Tone n

MAP _____

- Create New MAP
- Add Zones to Map
 - Split at Note: every Semitones
 - Even Split Across 8 octaves
 - Even Split Across 5 octaves
 - Transpose Zone
 - Transpose Wave
 - Split @ Wave Pitch
 - Fixed Pitch

Let's try it. Let's put together a setup consisting of 6 hypothetical percussion instruments and we want those 6 samples mapped across each octave of our 5 octave keyboard.

- From the **Bank Window**, SHIFT-Click on the 6 percussion Waves.
- You can hold the OPTION to see your selected list (the numbering will change).
- Call **Make Preset** from the **Special** menu.
- Click **Create New Tone** to add new Tones at the end of our Tone list.
- Click **Create New Map** to create a new Map at the end of the Map list.
- **Split** at Note 36 (C2) every 12 semitones.
- **Tune Zone** (centers the wave in the middle of each octave).
- Click **Preset Layer A** to add the new **Map** to **Layer A**.

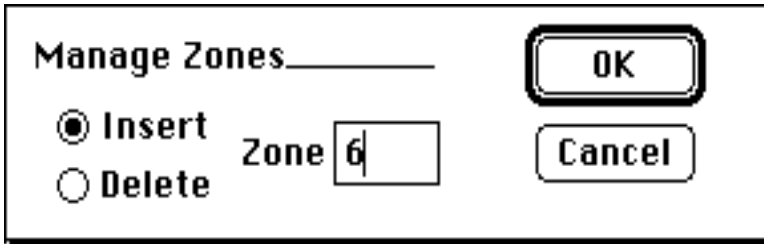
When you click OK, SP-REMOTE will create new Tones, assigning each Wave you clicked on. Then a new Map is created with 6 Zones. Split points, tone assignments and tuning offsets (based on the Wave's Original Pitch) are applied to each Zone. Finally a new Preset is created with the new Map assigned. You can go to any level you want from "just" creating new Tones or Maps to creating full Presets.

Split @ Wave Pitch

This Map tuning option looks at the Tones' Wave Original Pitch to determine where on the keyboard to place splitpoints. This function assumes that you have selected your Tones/Waves in ascending order from low-to-high. It won't work if your pitches are jumbled, or not in order, due to mapping limitations.

Manage Zones

This menu function call a dialog box where you can insert or delete a specific zone from a Map. You have to make "room" in the keyranges in order to insert the new zone (if not, you'll get an alert). If you delete a zone, all of the higher-numbered zones are "moved down".



Tune Zones

This menu command automatically tunes each zone by looking at the Original Pitch of the Wave (which is assigned to the Tone which is assigned to each Map Zone) and centering it in the middle of the keyrange for that zone.

Rand-o-Pan

This menu command uses a high-ordered algorithm for non-correlated localization of sound sources. In other words, it randomly pans each zone in the stereo field. It can get your Maps from mono to stereo real fast.

Pan-o-Rama

This menu command automatically creates a left-to-right stereo panorama of all zones in your Map. Visualize sweeping vistas of breathtaking depth and beauty. For you prototechno-types, just Visualize Industrial Collapse (collapsing from left-to-right, of course).

Tune Env1->Wave

This menu command goes thru all of the selected Tones (you must have at least one Tone selected for the menu command to even be enabled) and looks at the Sample Rate and Size of the Wave assigned to that Tone. If the Wave is non-looped, SP-REMOTE will set the Tones' **Env 1 Sustain Hold Time** to a value which will cutoff just after the Wave has finished playing. This effectively optimizes the voice allocation since the SP uses Env 1 to decide when a voice has finished playing. This only works on non-looped waves (it will skip looped waves) and is good only for the original pitch of the wave. If you have detuned the wave up or down, the calculated hold time may be too long or short.

Manage Tone...

This menu command enables you to copy a Tone (one at a time) from one selected position in the list to another, much like a standard copy/paste operation. In fact this function uses the Mac's clipboard so any Tone you may have copied to the clipboard will be overwritten.

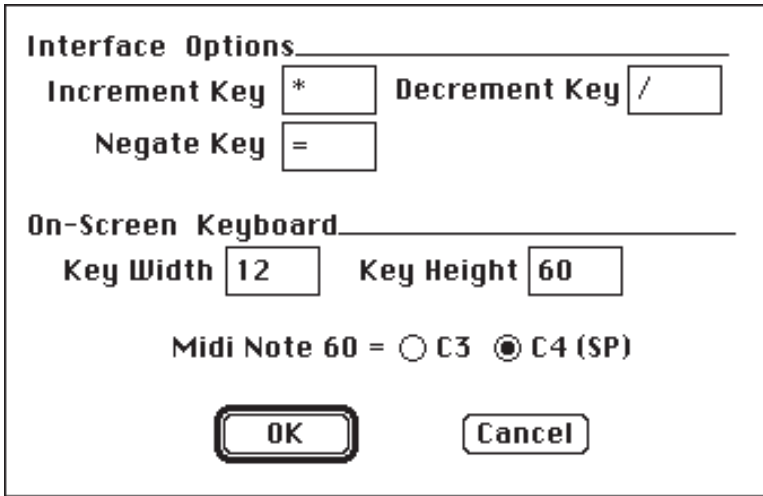


The difference with **Manage Tone...** is that you have the option

of automatically going thru all of your Maps and adjusting the old Tone position to the new one. This is very handy if you have Maps containing Tones which are spread out all over the Tone column and you want to condense them into some consecutive order. SP-REMOTE will automatically edit each Map's zone to correct the new Tone position.

Specifying Defaults & Preferences

You can set your own patch templates and set your own Mac keyboard definitions for Inc/Dec keys (normally you would use the "-" key to input negative parameter values. The negate key will change a positive value into a negative value and vice versa. These functions are called from menu commands found under the **FILE** menu.



Interface Options

Increment Key Decrement Key

Negate Key

On-Screen Keyboard

Key Width Key Height

Midi Note 60 = C3 C4 (SP)

Preferences

You can specify key commands and set the default size for the on-screen keyboard. When you quit SP-REMOTE, these settings, as well as the current window positions are stored in the **SP Prefs** file which resides in your System Folder. If you delete the **SP Prefs** file from your System Folder, a new one (with master preferences) will be created next time you run SP-

REMOTE.

MIDI Note 60 = C3 vs. C4

Some MIDI samplers (Akai S1000) go by C3 = Note 60. Others samplers (Peavey SP) use C4 = Note 60. You can decide for your self which standard you want to use. Call the **Preferences...** dialog box (under **File** menu) and select the one you want. C4 is probably less confusing (unless you are converting Akai samples which use C3 as standard). Be aware that some sample names have the original pitch as part of the name if you import new samples into the SP. The SP's original pitch will read an octave higher than the sample name may indicate (if that sample came from the C3 world).

Setting Patch Defaults

When new items are created in SP-REMOTE (either by inserting them, or by the AutoMake or S100 conversions), a default patch is used as a template. You can set your own with the **Save Default Patch** menu command. There is a default patch for each of the Multi, Preset, Map, and Tone columns.

- Select the patch you want to save from the **Bank Window**
- Click on **Save Default Patch**
- This patch is remembered and used as a template when you create new patches in SP-REMOTE.

When you quit SP-REMOTE, the default patches are saved in the **SP Prefs** file which resides in your System Folder. If you delete the SP Prefs file from your System Folder, a new one (with master preferences) will be created next time you run SP-REMOTE.

You can paste your default settings into an existing patch with the **Paste Default Patch** menu command:

- Select the patch you want to set from the Bank Window
- Click on **Paste Default Patch**
- Your patch will be overwritten with the new default patch

Akai S1000/S1100 Conversion

SP-REMOTE's Akai conversion utility will help you convert Akai S1000/S1100 Programs into mapped SP Presets. The conversion utility converts only the Akai's Program data—not actual sample data, you have to transfer samples manually ahead of time. So, you will have to do a little footwork, didn't think you'd get off *that easy hmmm?*

The basic procedure is:

- Transfer Akai Sample into the SP
- Make sure the SP Wave names match the Akai Sample names
- Merge both the Akai & SP to the Mac
- Use SP-REMOTE's **Convert Akai Program...** function to do the conversion and create a mapped Preset containing a new Map and Tones.

Here is a more detailed overview of the Akai -> SP conversion procedure.

- transfer Akai samples to SP Wave—either via Sample Dump from the Akai front panel or via sample editing software such as Passport's Alchemy. Try to keep the order of the waves consecutive (i.e. don't leave any blank spots in the list).

- Be sure the names in the SP match the names in the Akai. The characters must match—they can be either UPPER or lowercase. The actual positions in the list do not have to match. Also, if a sample is not used in the Akai Program you are converting, there is no need to have that sample residing in the SP. Be aware that sample names usually contain a reference to the original pitch from which they were sampled. Since the Akai defines MIDI note 60 as C3 and the SP uses C4, be aware of this when SP-REMOTE sets the original pitches of its Waves.

- If you are converting stereo Akai samples, you must manually (from the SP front panel) merge the **-L** and **-R** Waves into a stereo SP Wave, then delete the **-R** sample assigned in the Akai zone. SP-REMOTE will then look at just the **-L** Akai sample and use the matching (now stereo) SP Wave during the conversion—be sure the names exactly match!

- Connect the Akai and the SP so that both units are

merged to the Mac's MIDI In.

- Verify that the Akai Program you wish to convert has no overlapping keyranges (since the SP Maps cannot have overlapping ranges) and adjust them as necessary.
- Get all waves into SP-REMOTE: with the Wave column highlighted use the **Get Column** menu command; if there are existing Presets/Maps/Tones, do a **Get Everything** instead.
- Call SP-REMOTE's **Convert Akai Program** menu command and select a Program from the pop-up list. Be sure to enable the **Convert All Pitches...** option at least the first time you do a conversion.
- SP-REMOTE will create the Tones, Map and Preset necessary to duplicate the Akai Program.

SP-REMOTE will normalize envelope and LFO values as well as convert basic velocity and filter values. Since your patch defaults are used as a template when the new Tone, Map and Presets are created you can specify certain non-Akai parameters ahead of time.

Connections/ Merging MIDI In

Since there is a lot of back and forth activity during the conversion (in order to conserve Mac memory) you must have the SP and Akai MIDI outs merged together to the Mac MIDI In. See the discussion of **Two-Way vs. One-way Communication** near the beginning of this manual. Alternately you can use a programmable MIDI patchbay to automate the back and forth switching. You must set-up the patchbay switching parameters in the **MIDI Routing...** dialog box.

Manual Sample Dumps

Manual dumps from the Akai to the SP have the advantages that it is cheap (no expensive sample editing software necessary), easy (you just need two MIDI cables), loop information is transferred flawlessly, and the Akai tends to compensate for any tuning offsets automatically inside the sample dump.

The disadvantages are that it is time consuming (slow and tedious) and you don't automatically get the sample names transferred (you have to go in with SP-REMOTE and type them in so they exactly match the Akai).

To do a manual sample dump from the Akai:

- be sure you have 2-way MIDI communication between Akai & SP
- hit **MIDI & EXCL** buttons to get to the correct screen:

```
MIDI EXCLUSIVE channel: 1 (tran & rec)
type of transmission: SINGLE SAMPLE
sample protocol: STANDARD
single program: TEST PROGRAM
single sample: MY SAMPLE
sample number override: 1
CHAN FILT PPMs RCVE TRAN EXCL SCS SEND
```

Scroll to each parameter and set each one as follows:

- **type of transmission:** SINGLE SAMPLE
- **sample protocol:** STANDARD
- **single sample:** the sample you want to send
- **sample number override:** this must be the chronological destination sample in the SP, start with #0 and work your way up. The samples do not have to be in the same order as in the Akai, nor do you have to transfer samples which will not be used.

- hit **SEND**, then wait until the dump is complete
- repeat for all the samples you will need, do them consecutively
- You must re-name new SP waves to match the Akai sample names (do a **Get Column** (Waves) to get them into SP-REMOTE & type in the new names). You can type upper or lower case names (the Akai uses only upper case), but the spaces must exactly match.

- When you select an Akai Program to convert, be sure to check the **Convert All Pitches...** option. This will go thru the list of SP waves and set them to the same Original Pitch as in the Akai. Sample Dumps do not include the Original Pitch parameter (nor the Sample Names for that matter).

SCSI /SMDI Sample Transfers with TransferStation™

You can expedite sample transfers by using Interval Music System's **TransferStation** software (on the web at www.imuse.com). You must have a SCSI card installed in your Akai sampler and be able to properly connect the Akai, the SP and the Mac together on the SCSI bus. Since the Akai has its SCSI connector permanently terminated (and so does the Mac if it has an internal hard drive), you may have to un-terminate the SP and place it in the middle of the SCSI chain.

Be aware that SCSI, unlike MIDI, is a relatively fragile, and potentially dangerous, high-speed data protocol. If you are not careful, your transfers attempts will glitch or fail. If you ignore common-sense procedures (like making all your SCSI connections with the power turned off to all devices), you can actually damage your equipment.

Keep in mind:

- make all SCSI connections with the power turned off.
- properly terminate your SCSI devices (see your

Chapter 9 in your SP Owner's Manual)

- keep your SCSI cables as short as possible, go for high-quality cables, avoid excessive adapters, extensions, etc.

- Be sure all your SCSI devices have their own unique

ID

- the Mac is always ID #7
- the Mac's internal hard-drive is always ID #0
- the Akai is usually ID#6
- the Akai's internal hard-drive is usually ID #5
- the SP should then be set to ID #1-#4. You can set the

SP from under the GLOBL button: scsi device id: x

- the SP's hard-drive (if used) should have its own ID.
- Power the samplers on first, then the Mac.
- You will need MIDI IN/OUT to the Akai in addition

to a SCSI connection, but it is not necessary to have MIDI connections the SP

- **IMPORTANT!** Before you transfer, go to each Akai sample (**EDIT SAMPLE, ED.1**) and make sure the end point is set to the actual end of sample data. Otherwise, Alchemy may incorrectly calculate the Akai loop points and send these incorrect loops to the SP. It also helps to set the Akai Start point to the actual start—this is typically not the case in the Akai.

Stereo Waves

The Akai treats stereo samples as independent Left and Right 'mono' samples, both of which are assigned to a keyrange. The SP can have 'only' a single wave assigned to its keyrange, however, this single wave can be a stereo wave.

In order for SP-REMOTE to duplicate mapped stereo samples, you must:

- manually transfer the Akai stereo samples, L & R one at a time into the SP, then from the SP's front panel, merge them into a stereo wave.
- use Alchemy in which case Alchemy can automatically merge the stereo samples into a stereo SP wave.

When SP-REMOTE does the conversion only Akai **Zone1** and/or **Zone 3** are compared. You must be sure to delete the (no longer needed) **-R** samples from the Akai's **Zone 2** and/or **Zone 4** before doing the conversion. You can do this by creating a dummy sample and naming it " " (nothing). Then use the Akai's SMP 1 page to assign the " " sample to the old "xxxx -R" positions in Zone 2/4. You can do this by creating a dummy sample and naming it " " (nothing). Then use the Akai's SMP 1 page to assign the " " sample to the old "xxxx -R" positions in Zone 2/4. Otherwise, you will get an error when SP-REMOTE tries to find the **-R** samples.

Conversion Notes: What went Wrong?

The process of converting Akai Programs to SP Presets will save you much time no matter how you look at it. However, the process is not always 100% glitch-free, especially in the Wave department if you are using Alchemy to transfer sample data. Some common problems are listed below all are easily fixed by using SP-REMOTE to go through each Wave and tighten up any loose ends:

- the Original Pitch is not intact
- Loop points out-of-range
- Wave Names don't match Akai Sample Names
- the first character of the Akai sample name has mysteriously changed
- too many empty cells in Wave column

SP-REMOTE Error Messages

You will probably encounter error messages from time to time. It is the computer way of life. We can explain most of the common ones, should you encounter them.

Memory Errors

- System Errors
- Out of Memory (-108)
- Couldn't perform this because a resource is missing (-192).

These are most likely due to a memory shortage. Try increasing the memory partition in SP-REMOTE (Quit and do a **Get Info** from the desktop a add several hundred k).

MIDI Communication Errors

- No response from the SP
- Unexpected response from the SP

These are basic MIDI communication errors. If you are getting MIDI out (from the on-screen keyboard), then the problem is MIDI In to the computer.

If you are not getting any MIDI out of the Mac, then the problem could be more serious, like the program is not even connected to the Mac's serial ports, or to the wrong serial port. Check the **MIDI Setup...** box first, to make sure the interface is set-up. Try switching to the Mac Desktop (so that SP-REMOTE internally disconnects from the serial ports), then back into SP-REMOTE (which causes SP-REMOTE to reconnect).

Sometimes other the serial ports get connected to software, then don't disconnect. There are many reasons why: the program may be designed to stay connected even if you page out under MultiFinder/System 7 (some telecom programs are this way). Something may have crashed somewhere, but didn't free up its connections to the serial port. There are many reasons.

MIDI Mangler #2

This is a handy INIT written by (and given permission to use by) Nigel Redmon of **HyperMIDI** fame. Put this into your System folder and reboot. When called up under your Control Panels, it will show the status of the serial ports. You can even manually free the port if you want. To be safest, do this from the Finder (not from within a program). But be aware that you may

be disconnecting another program which was designed to stay connected. Then re-run SP-REMOTE which can then use the now-free serial ports.

SP Front Panel Errors

It is possible for illegal values to slip into some parameters, especially SP Waves when you are doing sample dumps, or using Alchemy. Its hard to pin down exactly how and why since most of the time these data glitches are extremely intermittent. If you see the SP display a message such as “**illegal val, offset 0000028h**”, the SP is saying it got a value it didn't like, probably because the value is out-of-range. If you get this message on the SP LCD:

1> Do a **Send Column** for each of the Multi, Preset, Map, Tone and Wave columns to see which column triggers the message.

2> With **SP Follow** on, (**Remote Edit** should already be on), do a **Send Column** and watch the SP front panel to see which item (Map, Tone, Wave. etc.) is causing the problem.

3> Call up that item's edit window and scan it to see if you can find the bad value. You may be able to edit it to a valid value.

4> For Waves, check the start, end and loop points for valid values.

5> If all else fails you can do a **Get This Patch** for the offending item, this may fill SP-REMOTE with a valid value. Although we have seen on rare occasions where the bad parameter is still being sent from the SP.

Troubleshooting Q & A:

Q: I boot up and get a “Printing options are not available until you have selected a device in Chooser” message.

A: SP-REMOTE is just reminding you that you can't print until you tell your Mac (via Chooser) to select a printer device.

Q: I can't get any MIDI happening.

A: Check SP-REMOTE's **MIDI Setup...** menu to make sure it matches you MIDI interface. Turn off all options in **MIDI Routing...** dialog. Turn off **SP Follow**, turn off **Remote Edit**. Be sure you are connected to the correct serial port. Try Restarting

your Mac. Be sure AppleTalk is turned off if you are using the Printer port. Once booted, call SP-REMOTE's on-screen keyboard to see if you are getting notes to the SP. If you are, it means that MIDI is working thru the serial ports and to your MIDI interface.

Q: I'm getting notes from SP-REMOTE to the SP, but nothing else.

A: Check the MIDI connection from the SP MIDI out to your interface and to the computer. Also, check the SP's SysEx ID (under the Global button) to make sure it is set to "0" or "127".

Q: I make a change on SP-REMOTE but nothing happens on the SP.

A: Assuming you have a proper MIDI connection and the SysEx ID is correct, make sure Remote Edit is enabled.

Q: I get an error alert when I make an edit.

A: Make sure there is not a MIDI feedback loop in a merging MIDI interface. Make sure you are not interrupting SP-REMOTE's checking the SP's "OK" Ack message by playing while the edit is sending to the SP. SP-REMOTE may misinterpret any MIDI notes for an SP Ack message.

Q: The SP is jumping around from Presets to Maps, etc. when I make a change on the computer screen. I just want it to stay in the Preset/Map etc.

A: You have **SP Follow** turned on. You can turn it off and send a message to the SP telling to stay in its current Preset/Map etc by using the **SP Play Mode** menu command (under MIDI).

Q: I get lots of error alerts when I try to use MIDI Edit.

A: Be sure your controller data is not interrupting SP-REMOTE's checking the SP's "OK" Ack message by playing while the edit is sending to the SP. SP-REMOTE may misinterpret any MIDI notes or controller data for an SP Ack message. Be aware that there is a lot of MIDI data slamming around when you use this function. It can have a very jerky response since there is a lot of data that needs to be sent every time you make a small change.

Q: MIDI Edit works OK, but I'm getting vibrato when I use it.

A: You are probably using your Mod Wheel as your controller source and the SP Tones are responding to Mod Wheel changes. Temporarily set your Mod Wheel modulation sources to "0" while you use MIDI Edit.

Q: I get a "SP did not recognize the last message (Error=3)" message when I create a new item or use the AutoMake functions. I narrowed it down to one of the Preset/Map/Tone columns.

A: Check your **Default Patch**. This is the patch that is used when a new item is created in SP-REMOTE. You can define this patch (one each for Presets, Map and Tones). A good starting place is to use an empty SP (nothing loaded), and from the SP front panel, create new items in the SP. Then GET these into SP-REMOTE. Go to each item and Save as Default Patch (under File menu). These will become the templates next time you create new items in SP-REMOTE.

SCSI Tips

If you are using your SP on the same SCSI bus as your Mac, here are a couple of tips which can make things run a little smoother. Read **Chapter 9** in your SP Manual for additional information.

General SCSI Info

SCSI (Small Computer Systems Interface) is a high-speed parallel data bus. Like MIDI, it is used to send data from one device to another. MIDI operates at 31K bits-per-second and is a serial bus (one bit at a time). Basic SCSI operates in the 500K-2 Meg rate sending eight bits at a time and, unlike MIDI, is a relatively fragile electrical connection. You can't just go around plugging in SCSI cables anywhich way (like you can pretty much do with MIDI). You have to pay attention and be careful. You can actually damage your devices if you are not!

The SCSI Must-Do's are:

- Always plug in SCSI cables with the power turned off to all devices.
- Always set each SCSI device to its own unique ID (The Mac is always at ID# 7, its internal hard drive is ID# 0)

- Always use the shortest possible cables.
- Avoid adapters, extension cables—use single cables.
- Always terminate your SCSI devices properly.
- Turn on the Mac last.

How do I terminate? Why do I need to terminate?

Since SCSI operates at high speeds, a phenomena occurs which, during SCSI activity on the SCSI cables, resembles electrical waves reflecting back along the cable from the destination to the source. When you are using long SCSI cables these reflections can actually bounce back nearly out-of-phase with the original wave and can cause the data to be corrupted, kind of like crosstalk on a telephone line. If you are using shorter cables, the reflections are less out-of-phase and therefore less likely to cause problems.

Termination is the black art of reducing these reflections by using terminators at each end of the SCSI bus. Terminators are really just resistor-packs and provide impedance matching which has the effect of absorbing the reflections. The black art of termination has evolved to a high degree lately. You can get passive terminators (resistors) or, for those hard-to-solve SCSI problems, active terminators (voltage regulators and resistors). IBM has developed ultra-terminators which basically work magic that nobody can figure out, but you won't need these (they are not commonly available anyway).

The SP has its terminators inside on the circuit board. The Mac has terminators inside on its internal hard drive as well. Most external hard-drives have switchable terminators (you can turn them on or off via a switch). Some devices do not accessible terminators, you either have to take them apart to get to the resistors or use these devices as the last device in the chain.

The basic premise is to have devices terminated at each end of the SCSI chain. You can get away with more than two devices terminated (meaning a device in the middle also terminated), but you want to avoid having too many terminators on the SCSI bus. You can damage the SCSI chips if they have to provide too much current to all of the terminators. It is not inconceivable to have to terminate a device in the middle of the chain to get it to work.

Chapter 9 of your SP Manual has more info on SP terminators and how to remove them from your SP.

SP SCSI Error Messages

The SP functions as a generic SCSI device and treats other devices on the SCSI bus as standard, well-behaved SCSI devices. The Mac, in addition to behaving somewhat like a nosey neighbor, has some other unique characteristics. One of which is not fully taking into account the presence of the full range of different SCSI device; like the SP for instance. When you see the SP display “**err - no reply pend**”, it is really more of an alert rather than an error. It just means the Mac is out scoping the SCSI bus, there is no cause for alarm.

Mac SCSI Error Messages

The only problem you might run into is the Mac wanting to mount the SP hard disk (or SyQuest, etc.), but isn't able to since it is not a Mac-formatted volume (disk). You'll get a “**This is not a Macintosh Volume. Do You want to initialize?**” ALWAYS HIT EJECT! Do not initialize. This will erase your SP disk. When you hit eject, the Mac will ignore the disk for awhile. If you try to save to a SyQuest, the Mac may jump in on the (thereby making it difficult to do a SP Save). You can distract the Mac long enough by clicking and holding the mouse button down on a menu.

Using SP and Mac on the same SCSI bus

Another thing to be aware of when using say, the SP with its own hard-drive and the Mac with its own hard-drive (both connected on the same SCSI bus), is that the Mac will have a tendency to behave as if it is the boss, all of the time. This is especially true if you are using System 6. If you do a load or save operation on the SP, wait until it is finished before you do any file operations on the Mac. You can get into trouble since the Mac will tend to just “jump in” without first checking (or waiting) that the SP is completely finished. Result? Corrupted files on your SP and /or Mac hard-drives.

Tips with SyQuest™ drives and cartridges

Using a SyQuest drive with removeable cartridges is an efficient way to access data with both your Mac and your SP. Both devices can reside on the same SCSI bus and share the same drive, you can change carts as necessary. Additionally, you can spin down the drive after you are finished loading to reduce the noise in your studio.

If you use a SyQuest, you probably have installed a 'removeable INIT' into your Mac's System Folder. This enables the Mac to automatically mount a new cartridge onto the desktop. Another way is to remove the INIT from your System Folder and install SCSI Probe instead. SCSI Probe is very useful, you can use it 'see' all of the devices on your SCSI bus and you can use it to manually mount new carts (you can assign command keys like **CMD-space bar**).

One problem with the Mac in general and using non-Mac SCSI gadgetry (like using a SyQuest drive with an SP formatted cart), is the Mac tends to act like a very forgetful, very nosey neighbor. Always getting into somebody else's business (the SP's in this case). When both the Mac and the SP are sharing a SyQuest drive and you spin up an SP formatted cart, the Mac will assume it is a Mac cart and give the message "**This is not a Mac Volume... Do you want to EJECT or INITIALIZE ?**" Whatever you do, DO NOT INITIALIZE! This will erase your SP data, just click on EJECT and the Mac will, for the time being, ignore the SP cart.

When you go to save a bank from the SP you may get the same problem. The Mac assumes the cart is a Mac cart and you get the Eject/Initialize message at the same time the SP tries to do a save, the SP gets confused and won't save. An easy way to distract the Mac during SP saves is to click in the Mac's menu bar and hold the mouse down, then do your save from the SP.

SP Internal Expansion & Jumpering

You can easily expand the internal memory of your SP as well as set a hard-wired SCSI ID address (so you don't have to keep setting it from the SP front panel).

Memory Expansion & Jumpering

The standard SP comes with 1 megaword (2 megabytes) of sample memory in the form of a pair of 1 meg x 8 **SIMMs (single inline memory modules)**. These are of the standard Macintosh variety - not IBM (x9) or Macintosh IIfx types. the SP's sample memory can easily be expanded by simply buying and installing more standard Macintosh SIMMs. they must be 100 nsec or faster, and must be added in **matched pairs of the same size**.

The SP has a total of four pairs of SIMM sockets, thus a stock SP can accept up to three additional pairs of 1 meg SIMMs. a pair of jumpers near the SIMM sockets can be switched to set up the SP to use 4 meg x 8 SIMMs instead of the 1 meg x 8 parts. When power is turned on, the SP automatically senses how much memory is installed. With versions of SP software older than version 1.3, the 1 meg SIMMs which came with the unit could not be used in combination with 4 meg SIMMs. With SP version 1.3 and later versions, it is possible to combine the two SIMM sizes, so if you buy fewer than four pairs of 4 meg SIMMs, you can still use 1 meg SIMMs to fill some of the empty sockets. You cannot, however, use three 1 meg pairs with one 4 meg pair.

Here are the Rules for Upgrading SP Sample Memory:

For ALL SIMM types:

As mentioned above, SIMMs must be 1 meg x 8 or 4 meg x 8 standard Macintosh SIMMs with a speed of 100 nsec or faster (e.g., 80 nsec).

SIMMs must be installed in **matching pairs** according to size, plugged into paired SIMM sockets in the SP. That is, you must use **two 1 meg** SIMMs or **two 4 meg** SIMMs in any given pair of sockets (the speeds of the parts do not need to be matched, as long as both are 100 nsec or better).

Splitting them up into sockets which are not part of a pair, mixing two different types in the same pair of sockets, or filling only one of a pair of sockets will do you no good. Socket pairs are easily identified, as the sockets in each pair are physically attached to one another.

In the instructions which follow, “left” and “right” assume you are looking into the SP from the front of the unit.

When you are done with the installation, you should turn on the SP and use the “**wave memory status:**” function “**space avail:**” selection (with no samples loaded) to display the amount of memory the SP thinks it has installed and make sure it matches your expectations:

- A pair of 1 meg SIMMs counts for 1 megaword.
- A pair of 4 meg SIMMs counts for 4 megawords.

Add up the parts you have installed, and check this table:

if you have installed....	the “space avail” should be:
1 megaword	1024kw
2 megawords	2048kw
3 megawords	3072kw
4 megawords	4096kw
5 megawords	5120kw
6 megawords	6144kw
8 megawords	8192kw
9 megawords	9216kw
10 megawords	10240kw
12 megawords	12288kw
13 megawords	13312kw
14 megawords	14336kw
16 megawords	16384kw

If the SP says your installed memory amount is something other than what you expected, recheck your arithmetic and/or your installation until things jive correctly, especially if your SP software is earlier than version 1.3. use of the SP with an invalid memory configuration can cause unpredictable, probably undesirable results.

Note that defective SIMMs can cause installed memory to appear not to be present. Also note that if you calculated your installed sample memory as being 7, 11 or 15 megawords, then there is definitely a problem in your math or your installation, as there is no legitimate way to arrive at these numbers.

If you are using only 1 Meg SIMMs:

The jumpers near the SIMM sockets (labelled **P1001** and **P1002** in very small white letters on the circuit board) should both be set in the position which is towards the back of the unit. The unit comes from the factory with the jumpers already in this position.

If you have a total of two pairs of 1 meg SIMMs:

Install them in the two leftmost socket pairs, or the two rightmost socket pairs, or the two outermost socket pairs (leaving the two middle socket pairs empty). If you're adding one pair to a stock unit, just put the SIMMs into the two empty sockets which are next to the ones that already have SIMMs in them.

If you have a total of three pairs of 1 meg SIMMs:

Install them so that one or the other of the middle socket pairs remains empty. If you install all of them in consecutive socket pairs, leaving only the leftmost or rightmost socket pair empty, the SP will fail to see some of the installed memory.

And of course, if you have four pairs, just fill all of the sockets.

If you are using only 4 Meg SIMMs:

The jumpers near the SIMM sockets (labelled **P1001** and **P1002** in very small white letters on the circuit board) should both be set in the position which is towards the front of the unit. The unit comes from the factory with the jumpers in the opposite position.

With two pairs of 4 meg SIMMs:

Use the two leftmost socket pairs, the two rightmost socket pairs, or the two middle socket pairs - it doesn't matter which, as long as they're not separated.

With three pairs of 4 meg SIMMs:

Either the leftmost or the rightmost socket pair should wind up empty. If any other arrangement is used, the SP will fail to see some of the installed memory.

And of course, if you have four pairs (lucky you!), just fill all of

the sockets.

If you are mixing 1 Meg SIMMs with 4 Meg SIMMs:

The software (roms) in your SP must be version 1.3 or higher.

The jumpers near the SIMM sockets (labelled **P1001** and **P1002** in very small white letters on the circuit board) should both be set in the position which is towards the front of the unit. The unit comes from the factory with the jumpers in the opposite position.

To use **one pair** of 1 meg SIMMs with **one, two or three pairs** of 4 meg SIMMs, group your 4 meg SIMMs into any set of adjacent socket pairs, and place the 1 meg SIMMs in another socket pair right next to them.

To use **two pairs** of 1 meg SIMMs with **one or two pairs** of 4 meg SIMMs, place the 4 meg SIMMs into one or both of the middle socket pairs, and then place one pair of 1 meg SIMMs on either side of the 4 meg SIMMs, with no gaps between them, so that the 4 meg SIMM pairs are sandwiched between the 1 meg SIMM pairs.

The following will not work correctly:

two or more pairs of 1 meg SIMMs in **consecutive** socket pairs (if mixed with 4 meg SIMMs).

pairs of 1 meg SIMMs **sandwiched** between **pairs** of 4 meg SIMMs.

three pairs of 1 meg SIMMs in combination with **one pair** of 4 meg SIMMs (sorry).

Installing SIMM Memory Modules

Actually installing the memory modules is fairly straightforward, it doesn't take a rocket scientist. You "just" plug them into the sockets. Here are some guidelines:

Try to work in a reasonably static-free environment. If every doorknob you touch gives you a spark, you should seek another venue.

Work in a well-lighted area with the SP's AC mains power cord disconnected. The waitress station in a dark club 30 minutes before your set is probably not your best choice.

After carefully reading the preceding section and fully understanding where you want to plug the SIMMs, select your target sockets in the SP. SIMM modules plug in much easier than they take out, so try to do this only once.

Carefully and lightly, "seat" the "fingered" edge of the module in the socket, keeping the module fairly vertical. Once you are satisfied that the module is positioned correctly, firmly push it to the side so that the socket grips the module on each edge and pops into place.

When you are done with the installation, you should turn on the SP and use the "**wave memory status:**" function "**space avail:**" selection (with no samples loaded) to display the amount of memory the SP thinks it has installed and make sure it matches your expectations (see above table).

Removing SIMM Memory Modules

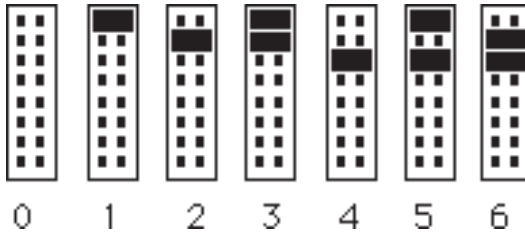
In the same well-lighted, static-free environment described above, you can remove a SIMM module. Gently pushing the socket grips on each edge of the SIMM module so that the socket "releases" its grip on the module and you can remove it from the socket. You may want to release one edge of the SIMM at a time. You may also want to use a small flatblade screwdriver to push the socket grips, one at a time. The sockets can be all plastic (in which case you need to be especially careful, since the grips can easily break), or may be made of metal (which gives you a little more leeway).

SCSI Default Jumpering

While you've got the lid open, you can set the default SCSI ID for the SP by hardwiring a jumper. You'll need 1 or 2 jumpers depending on the ID you want. Jumpers are commonly available—try a Radio Shack. Also, if you have your SP manual, you can get detailed information on this procedure. One thing you don't want to do is jumper the SP so that its ID conflicts with the Mac or the Mac's internal hard-drive. The Mac itself is

permanently wired to ID #7. The internal hard-drive is factory-set to ID#0. The SP should be set to ID#1-ID#6. Unlike MIDI, you do not want to have device on the "same channel". SCSI devices must each have their own unique ID.

The 16-pin header is found at **HD1201** (on the main PCB under the floppy drive ribbon cable, pretty much in the middle of the SP chassis).



- front of SP -