

Tetra 4 Voice SoundEditor User Guide

Mac/PC Edition



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INSTRUMENTS

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1. Introduction

Welcome to SoundEditor, a full-featured Editor and Sound Development tool for the Dave Smith Instruments (DSI) Tetra synthesizer.

SoundEditor provides the ultimate editing and sound development experience by displaying all Tetra Program parameters in a single, intuitive graphical interface. The interface allows you to view the complete details of any Program at a glance and edit any parameter using the mouse or computer keyboard. It allows you to see how the factory Programs are put together, or to freely experiment to see what you can create. Programs can be auditioned from SoundEditor at any time over the full range of notes (C0 - C8) without the need for a separate MIDI controller.

SoundEditor is available in two versions: a Light Edition (free), and a Pro Edition. Both versions offer the full Program editing capabilities described above, with the Pro Edition offering these additional features:

- A Librarian that allows you to compile, organize and save Programs in Libraries for easy storage and retrieval. An unlimited number of Library files can be created.
- A Program Genetics function, where you can create entire banks of new sounds from any two source Programs.
- A Morpher function, allowing you to smoothly transition (morph) between any two Programs as you audition the sound in real time.
- Phantom Program Banks, which allow you to have up to 16 virtual Program banks available at any time.
- A Snapshots function that allows you to configure multiple UNDO points while editing a Program.
- Enhanced Sequencer functionality that allows you to create, modify, and store an unlimited number of Sequencer files that can be applied to any Tetra Program.

This manual describes the functions and features found in both the Light and Pro Editions. To get the most from SoundEditor, please read this User Guide carefully.

We hope you enjoy using SoundEditor for your Tetra synthesizer!

1.1 Support

Online support for this product is available at:
<http://www.soundtower.com/Tetra>

1.2 About this Manual

Throughout the manual, screen shots of the SoundEditor application are shown for illustrative purposes. These views are based on SoundEditor for the Macintosh, although similar views will be observed if you are using SoundEditor on a PC. When any significant variation in the appearance or operation of SoundEditor occurs between the Mac and PC platforms, the differences will be described.

Throughout this document you will see icons that provide additional information:



- This icon indicates an important note concerning the operation of the SoundEditor program.



- This icon indicates a helpful or productive tip.

1.3 Installation/Requirements

No special software installation is required. SoundEditor is a standalone program designed to run on Windows XP or Vista, or a Macintosh (OSX 10.3 or higher).

The SoundEditor application requires:

- 20 MB Hard Drive space
- 256 MB RAM (min.)
- 1024 x 768 minimum screen resolution (1400 x 900 recommended)
- a MIDI interface or USB connection

1.4 Before You Begin

To get the most out of this program you should be familiar with the operation of the DSI Tetra. The Tetra is complex musical instrument with an amazing array of programmable features. The *Tetra Operation Manual* is the essential source for descriptions of the instrument and its operation, and is recommended reading for all users. Although SoundEditor can be an invaluable resource to aid in understanding the operation of the Tetra synthesizer, it is not a substitute for reading the Tetra documentation.

1.5 Overview

This User Guide will take you through the steps to configure SoundEditor to work with your DSI Tetra. The *Starting Up* section should be followed first to get the hardware properly connected and running with the SoundEditor application. From there you can freely explore, audition and edit the hundreds of Programs that Tetra offers, create new Programs, organize and rearrange Programs to suit your needs, etc.

Have fun!

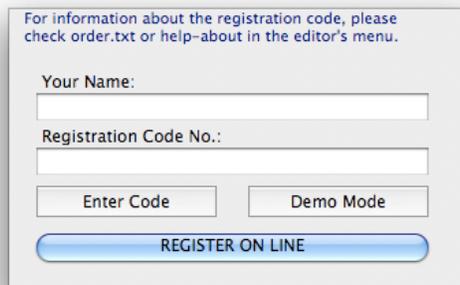
2. Starting Up

This chapter describes the steps to connect and configure SoundEditor on your computer.

2.1 Getting Connected

Once you have downloaded and installed Tetra LE or Tetra Pro software, open the Tetra folder and launch the application by double clicking on the program icon.

Upon opening the Pro version for the first time, you will be presented with the dialog box as shown below.



The registration screen offers two options: Demo Mode and Register Online.

Selecting Demo Mode will put the program into demo mode (unregistered), limiting file and SysEx operations, but still allowing you to get an idea of what the Pro Edition offers.

Demo mode gives you unlimited time to explore all of SoundEditor's features with the following limitations:

- Real-time editing from the Controls Window (disabled)
- Loading and Saving all files (disabled)
- Writing presets to the Tetra (disabled)
- Some Librarian features, Program Genetics and Morpher auditioning (disabled)
- Snapshots features (disabled)

When you re-run the program, you'll need to select Demo Mode again. This will continue until the program has a valid registration. There is no limit to the number of times the program can be run in demo mode.

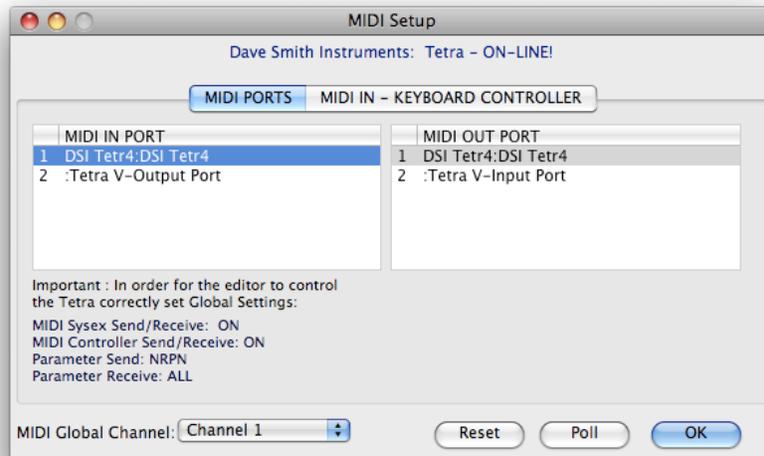
If you click on the REGISTER ON LINE button, SoundEditor will attempt to launch your browser and connect you to the Dave Smith Instruments online store, where you can purchase a registration code to unlock the software. You will need a working internet connection to complete this operation. Once purchased, registration codes are issued via email, and you may experience a few hours delay in receiving it.

Once you have received your registration code, enter the information exactly as it appears, and click the Enter Code button.

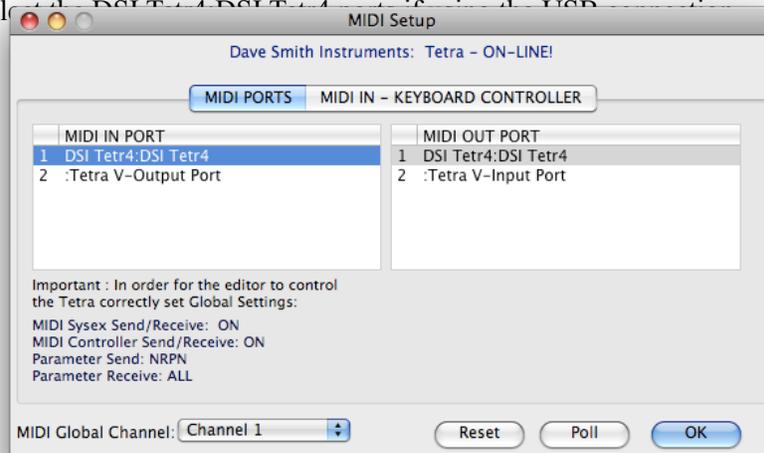
2.3 Midi Setup

In order for the Tetra SoundEditor software to communicate with the Tetra hardware, the hardware must be connected to both the MIDI In and MIDI Out connections of your computer's MIDI interface or through the USB port. If these connections are not already in place, shut down the computer (always a good idea before connecting/disconnecting anything!) and connect the interface, the MIDI In and MIDI Out cables or the USB cable to the hardware.

With the proper connections between the Tetra and the MIDI interface or USB cable in place, reboot and launch the SoundEditor program. Click on the MIDI menu and select MIDI Setup. You'll see the following window (your window may show different port information):



Select the Midi Port Connections tab. Highlight the ports that your Tetra is connected to the hardware. Select the DSI Tetr4:DSI Tetr4 port for the MIDI IN connection.

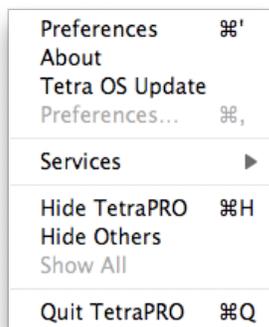


Select the Midi In - Keyboard Controller to set the parameters for the Midi In port.

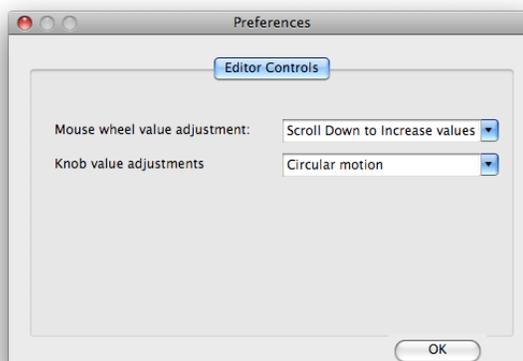
3. SoundEditor Menus

Here's a quick tour of the menus in the Main window: (PC menus are similar)
Please note that some items will not appear on Tetra LE as noted

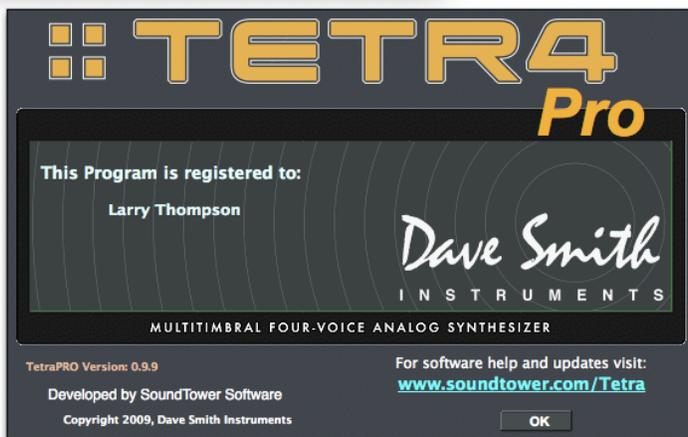
3.1.1 TetraPro/TeraLE Menu



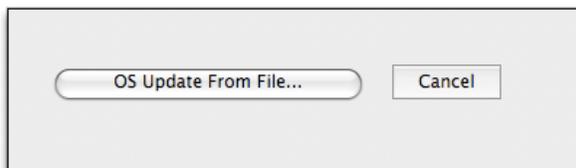
Preferences offers this dialog box that allows you to adjust Scroll wheel and Knob value adjustments with the dropdown menus.



Selecting About reveals this image, showing various specifics about the Tetra SoundEditor Software. Click OK to close this window



Tetra OS Update will reveal this dialog box. Occasionally check for Tetra software updates at <http://www.davesmithinstruments.com>. If you have downloaded a new update, click OS Update From File, navigate to the new OS file and click OK



3.1.2 FILE Menu:

This menu will contain different items depending on whether the Tetra is in Program or Combo mode and between Editor or Program/Combo list windows. Depending upon the mode, the File Menu contains various commands to Load and Save single Program or Combo files to and from the computer, Load and Save all Tetra data to and from the computer, opening Program and Combo bank windows, accessing Bank Manager and Librarian functions, Phantom banks and to load Factory Presets.

Load Single Program	⌘O
Save Single Program	⌘S
Program Banks	⌘B
Tetra Bank Manager/Librarian	⌘L
Phantom Banks	⌘H

Load Single Combo	⌘O
Save Single Combo	⌘S
Combo Bank	⌘B
Tetra Bank Manager/Librarian	⌘L
Phantom Banks	⌘H

Editor-Program Mode

Editor- Combo Mode

Load All Tetra Data	⌘O
Save All Tetra Data	⌘S
Tetra Bank Manager/Librarian	⌘L
Phantom Program Banks	⌘H
Load Factory Presets	▶
Close	⌘W

Load All Tetra Data	⌘O
Save All Tetra Data	⌘S
Tetra Bank Manager/Librarian	⌘L
Phantom Combo Banks	⌘H
Load Factory Presets	▶
Close	⌘W

Program Bank

Combo Bank

Tetra Bank Manager/Librarian (TetraPro only) will be discussed in a later chapter.

Phantom Banks (TetraPro only) will be discussed in a later chapter.

3.1.3 Edit Menu:

Like the File menu, the Edit menu contains different command depending on the mode that the SoundEditor is in.

Controls Sequencer	⌘C ⌘S
Copy Paste Write	⌘C ⌘V ⌘W
Rename Initialize	⌘N ⌘I

Copy Program Paste/Write Program	⌘C ⌘V
Rename Program	⌘N

Copy Combo Paste/Write Combo	⌘C ⌘V
Rename Combo	⌘N

Program List

Combo List

Program/Combo Edit

The three menus shown above will be available when the mode listed below each example is active.

3.1.4 MIDI Menu:

The MIDI menu provides access to the MIDI Setup and Global Settings windows, as well as the transfer commands of Tetra data (transmit/receive) and will have different options depending upon the mode that module is in.

Receive Current Program	⌘R
Transmit Current Program	⌘T
Global Settings	⌘G
MIDI Setup	⌘M

Receive Current Combo	⌘R
Transmit Current Combo	⌘T
Global Settings	⌘G
MIDI Setup	⌘M

Program Mode

Combo Mode

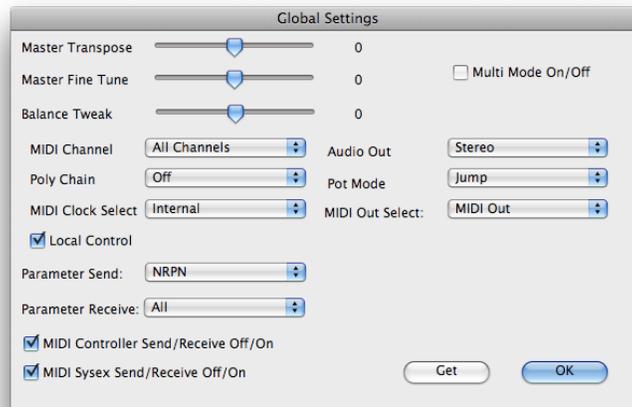
Receive All Data	⌘R
Transmit All Data	⌘T
Global Settings	⌘G
MIDI Setup	⌘M

Program/Combo Bank Mode

All three MIDI menus contain Global Settings and Midi Setup.

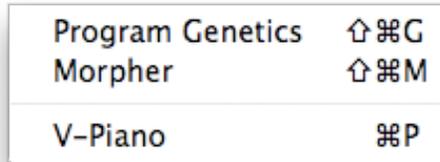
3.1.5 Global Settings

Clicking on Global Settings in the Midi menu will bring up this image. Refer to your Tetra owner's manual for details on these functions.

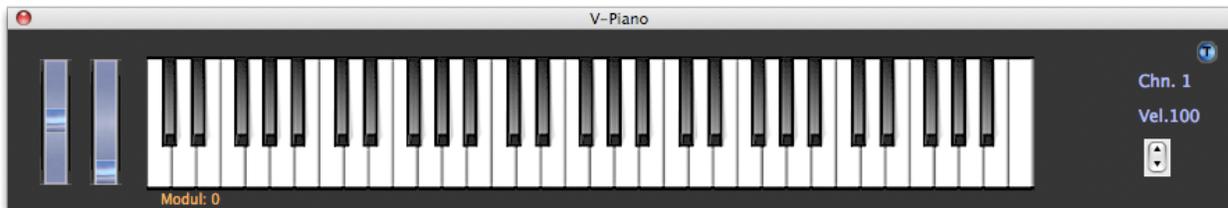


3.1.6 Options Menu:

The Options menu is available in all modes, however Program Genetics and Morpher are only available in Tetra Pro. These items will be described in a later chapter.



Selecting V-Piano brings up the following image:



This keyboard image provides a playing surface if you don't have a midi keyboard connected to the computer and you wish to work on your Tetra. Clicking on a key will send that note to the Tetra. The pitch and mod wheels will function as expected by clicking and dragging the wheels up and down. To the left, you can click on the Chn. box and a drop down box will allow you to select a midi channel (1-16), and the up and down arrows may be clicked to set a velocity value.

3.1.7 Snap Shots Menu:

The Snapshots menu is available in all modes



Snap Shots is a quick way to save out the current Program or Combo to a multi-file clipboard. Just select Add Snapshots and the current Program or Combo, depending on which mode you are working in, will be saved to the next available slot. The Programs or Combos saved to the Snap Shots list will only remain until you quit the Tetra SoundEditor. Once you restart the program, the Snap Shots list will be cleared.

3.1.8 Help Menu:

The Help menu is available in all modes



The Help menu allows you to connect to the Soundtower web site to get help, download updates etc. Of course, your computer will require an active connection to the internet for this feature to work for you. Just click on Help On Line.

3.1.9 Program and Combo Menus:

When either the Program or Combo list windows appear, an additional menu item will appear. These menu items will be described in later chapters.

4. Main Editor

When you start up the TetraPro or Tetra LE program, you will be presented with this overview of the Tetra controls.



There are only a few concepts required to be able to navigate through this feature rich page.

Please remember to review the Tetra Owner's Manual to gain a better understanding of the operation of the synth. We will touch upon a few of the features, but this guide is not intended to replace the Owner's Manual.

It can be seen that the editor page is laid out in blocks to address that address the standard functions found in most subtractive synths. There are also blocks of controls to address modulation routing, routing of standard performance controllers, Access to the built in sequencer, 4 programmable LFO's, Unison modes, and assignment of the 4 assignable front panel controls of the Tetra Module.

Let's look a few of the ways you can adjust the controls on this page.

4.1 Editing Parameters

Let's use the Oscillators block as an example



This image shows a collection of knobs, clickable “lights” and a dropdown box. Click and drag on the knobs in a circular or vertical (depending on the setting in the Preferences, shown in a previous chapter). Click on the red boxes to activate the function and turn on the “light”. Shown here are the two Keyboard lights (which are on and active) that cause the 2 oscillators to track the keyboard and the Sync 2->1 switch (which is currently inactive) that syncs Osc 2 to Osc 1.

The dropdown box that shows Glide Mode currently set to Fixed Rate can be changed by clicking on the box and making another choice from a dropdown menu that will appear.

All other blocks in the Editor that contains knobs, lights and dropdown boxes all function in the same manner for the functions they control.

There is another type of control area. Let's look at the Low Pass Filter.

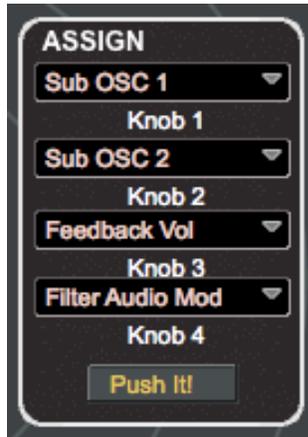


In the upper right corner is a graph that visually shows the time and sustain levels of a standard ADSR envelope generator. You can make these settings by adjusting the knobs, or you can click and drag the small points at the junctions of the various segments of the graph. The Tetra actually employs a DADSR which includes a Delay function at the beginning of the envelope, however there is not point on the graph to adjust this. Delay must be set with the rotary knob.

There are a couple of additional blocks we will look at to complete this section of the Editor.

To the right hand side of the editor is the this block.

When you click on the Assign Params button, you will see this image:



This block presents a window that allows you to set the Tetra parameters that the 4 assignable parameter knobs on the front panel of the module controls. Clicking on the Push It! button will flip the block back to the image shown above.



In the center section, the Layer B switch brings the second layer to allow modification of the sound. Sync Adj. assures that any parameter you adjust in one layer is duplicated on the other layer.

Stack A/B causes both layers to play at the same time. Selecting Split A/B allows you set a split point and the two layers will only play in the range they are assigned to. Clicking on the small keyboard will bring this image to the front:



Click at any point on this image and that will become the split point. Click anywhere else on the editor screen to close the keyboard image.

When in the Combo mode, the center block will appear like this:



You can select one of the 4 voices to show the editor settings by clicking on the buttons below the name screen. Additionally, you may select any combination of the Sync Adj. lights to allow common adjustment of parameters of those voices who's lights are lit.

4.2 Toolbar

The Toolbar is provided as a convenient way to access many of the Menu items.



Program - Selects Program mode and brings the directory of Program Banks to the front.

Combo - Selects Combo mode and brings the directory of Combos to the front

File Button

Program Mode - Load Single Program

Loads a Single Program previously saved to the computer

Save Single Program

Saves the current Program to the computer

Preferences

Opens the Preferences window

Combo Mode - Load Single Combo

Loads a Single Combo previously saved to the computer

Save Single Combo

Saves the current Combo to the computer

Preferences

Opens the Preferences window

Edit Button

Program Mode - Copy Layer

Copies the active layer of the selected Program to the clipboard

Import Layer

Pastes the Program layer that is on the clipboard to the active layer of the selected Program

Copy Program

Copies selected Program to the clipboard

Paste Program (Appears when a Program has been copied)

Pastes Program on clipboard to selected Program

Rename Program

Opens a dialog to allow the name of the selected Program to be changed

Initialize Program

Initializes the current Program

- Combo Mode - Copy Combo
Copies current Combo to the clipboard
- Copy Voice
Copies currently selected voice of a selected Combo to the clipboard
- Import Voice
Pastes the current voice on the clipboard to the selected voice of the selected Combo
- Paste Combo (Appears when a Combo has been copied)
Pastes Combo on clipboard to selected Combo
- Rename Combo
Opens a dialog to allow the name of the selected Combo to be renamed.
- Initialize Combo
Initializes current Combo

Receive Button

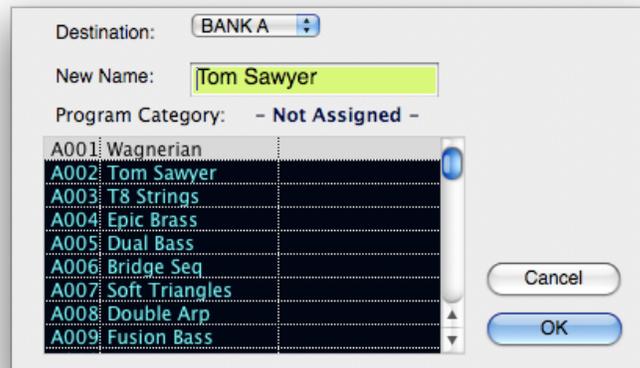
The **Receive** button receives the current program from the Tetra hardware, allowing you to refresh after making changes. This button resynchronizes SoundEditor with the Tetra if you have been editing a program offline using the Tetra controls.

Send Button

The Send button sends the current edited SoundEditor program to the Tetra hardware, allowing you to refresh after making edits. This button resynchronizes the Tetra with SoundEditor if you have been editing a program offline using SoundEditor.

Write Button

The Write button produces a window (shown below) allowing you to write the current Program or Combo to the Tetra hardware. In this window you can change the name of the Program or Combo, assign a category, and select the memory location where the Program will be written. The Write button duplicates the action of selecting 'Write Program' from the Edit menu



Midi Button

The **Midi** button allows you to select Midi Setup and Global Settings as previously described.

Genetics Button

The **Genetics** button opens the Program Genetics window. This button duplicates the action of selecting 'Program Genetics' in the Options menu. Program Genetics is covered in section 9.

Morpher Button

The **Morpher** button opens the Morpher window. This button duplicates the action of selecting 'Morpher' in the Options menu. Morpher functions are covered in section 10.

Piano Button

The **Piano** button opens the V-Piano

View Button

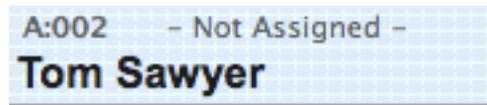
A simple reminder of two keyboard commands

Snap Button

The **Snap** button copies the current program to the Snapshots window. This button duplicates the action of selecting 'Add Snapshot' from the Snapshots menu. Snapshots are covered in section 11.

4.2 Program Name Display

The Program Name Display (shown below) shows the name of the currently selected Program ('Tom Sawyer'), the location of the Program (bank A, location 0o2), and the category of the Program is currently not assigned:



To change the Program name, double-click inside the Program Name Display. This will produce a window where you can enter a new name (up to 16 characters in length), and also select or change the Program Category, if desired:

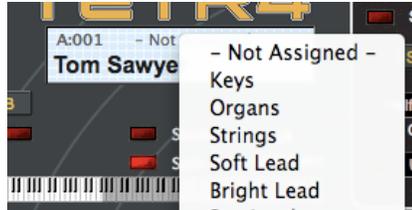


Clicking on the **OK** button will send the new name to SoundEditor and to the Tetra's edit buffer, but will not automatically store the name. To store the new name you must write the edited sound to the Tetra using the WRITE command.

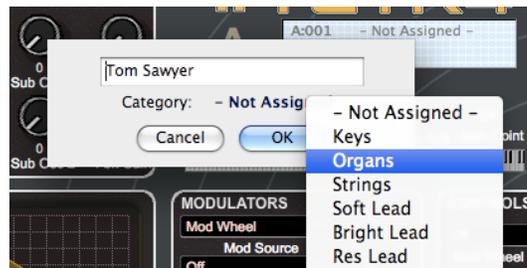
4.3 Assigning Program Categories

There are several ways to assign a category to a Program. This can be done from the Program Name Display, from the Program Naming window, or by right-clicking in the 'Category' column of the User Bank (part of the Bank Manager/Librarian).

To assign a category from the Program Name Display, click in the Category section of the display (the upper right part of the Name Display window). This will produce a contextual menu of categories to select from:

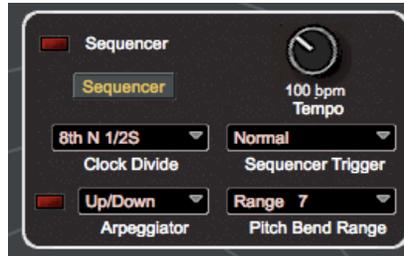


You can also select a category from the Program Naming window by clicking on the blue text in Program Category field. This will produce the same contextual menu as shown above:



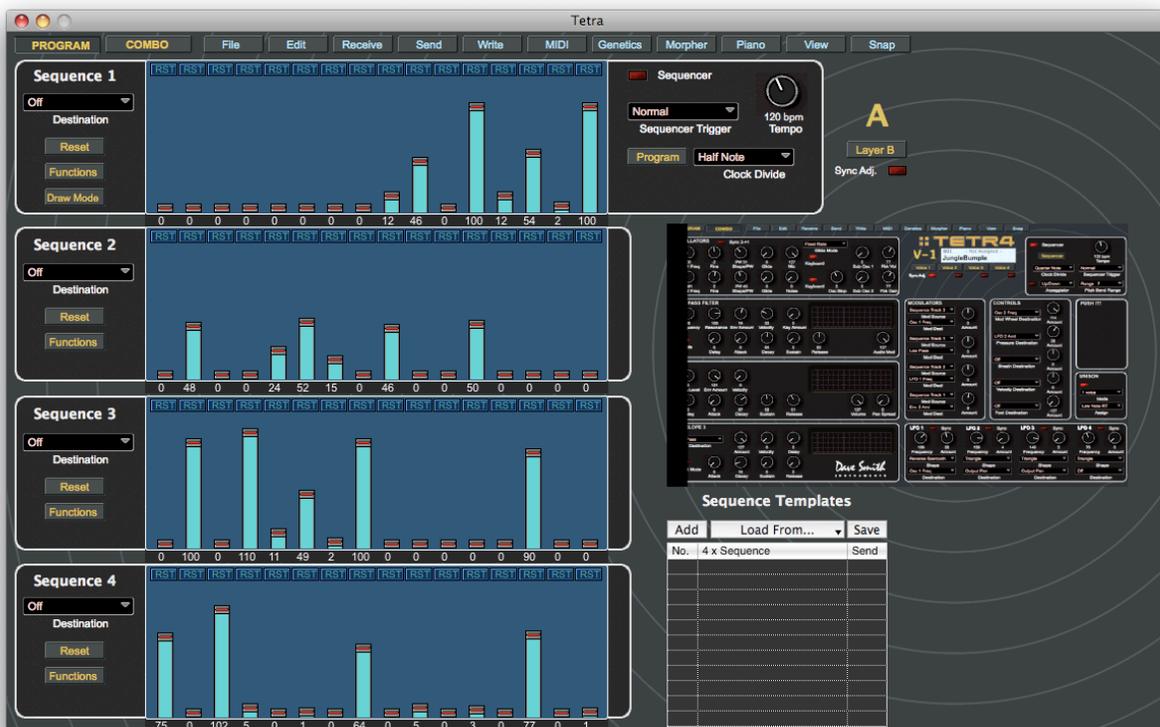
5. The Sequencer Window

The Tetra module contains a sequencer that can be programmed in the SoundEditor. Basic controls are found in the upper right block of the editor window.



To initiate the preprogrammed sequencer pattern associated with the Program or Combo you have selected, click the Sequencer light in the top left hand corner of this block.

If you wish to show greater detail and to program specific sequencer patterns, click the Sequencer button or by selecting “Sequencer” from the Edit menu. The Sequencer window is shown below.

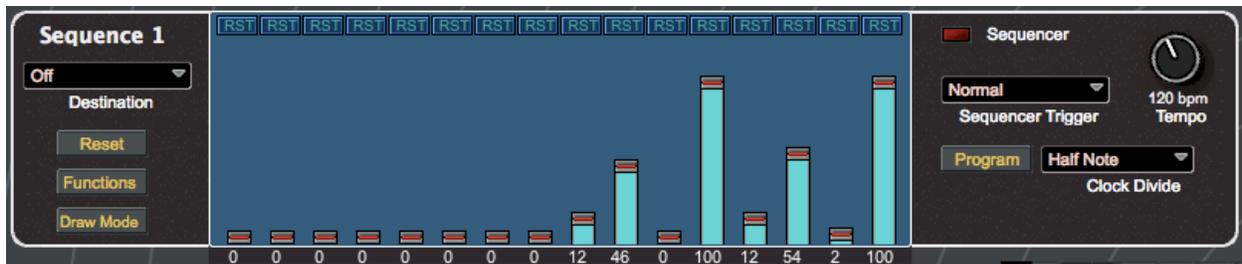


This image shows the sequencer window in Program mode. Combo mode is similar. To return to the editor control window, click on the image of the control window in the right hand middle third of the sequencer block, or click the Program button in the upper sequencer block.

The Sequencer window allows you to program/adjust the four Tetra sequences, select the modulation destination of each sequence, and set the overall tempo and clock divide parameters. Additionally, a Sequence Templates function allows you to copy sequences from other programs and apply them to any one or all four sequences, and a Sequence Functions drop-down panel allows you to adjust the length of each sequence, create pitched sequences from preloaded sequence data, and alter the sequence data in musically useful ways (Sequence Templates and Sequencer Functions are only available in the Pro Edition).

5.1 Sequencer Controls

This image shows the first block of the sequencer window. The remaining blocks have similar functions.



The dropdown box on the left determines the parameter that this sequence is going to control.

Typically it would be one of the Oscillator options to allow a pattern of notes to be played. In this case the value of the sliders will be shown in midi note numbers. Other selected destinations will show their value in simple numbers.

Clicking the **Reset** button will lower all sliders to their lowest position. Clicking reset again will turn all steps off (to a “rest” condition).

We will discuss the Function button in a moment.

Clicking the **Draw Mode** button allows you to determine the way the sliders react to the cursor. The mode set in this box will be common between all sequencer blocks.

In **Sliders** mode, changing the value of a slider requires to you to click and drag the slider handle up and down.

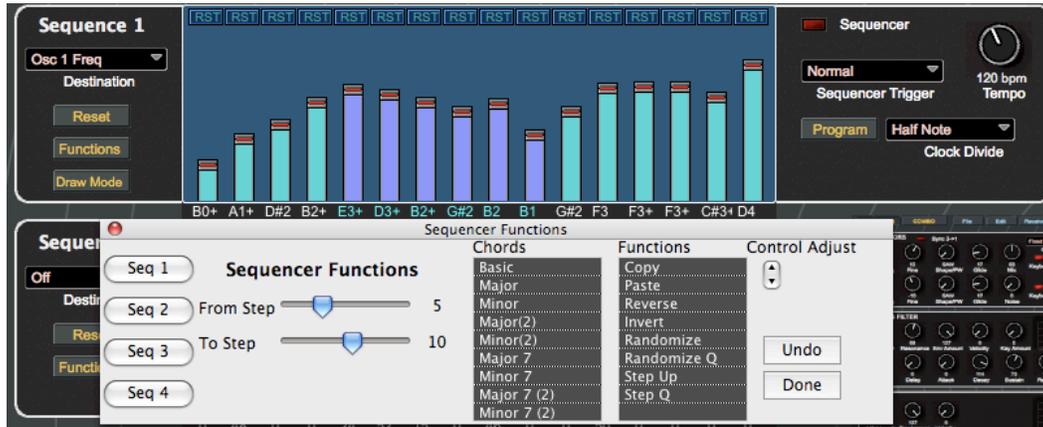
In **Pen** mode, simply click and drag inside the slider area and drag across the window to set the value of the individual steps.

Clicking on the value below any given slider will cause a window to appear where you can directly enter a value, or use the arrow button to reveal a dropdown window with a scroll bar to allow entry of value or note number in this manner.

Above each slider is a button that allows you to reset, rest, or return to the previously set value by repeated clicks of the mouse.

5.2 The Function Button

In the Sequencer Function panel, the Seq buttons that appear on the far left (Seq1 thru Seq4) are used to select the specific sequence that will be affected by the panel functions. The 'From Step' and 'To Step' sliders allow you to specify the range of steps that will be affected within the selected sequence. Clicking the **Function** button will reveal this window:



In the figure above, for example, Sequence 4 has been selected with a step range of 5 - 10. This means that any function chosen from either the Chords or Functions lists will only affect steps 5 thru 10 in Sequence 4, and no others. Also, note that the color of the selected step bars is different from the others - this provides a visual indication of the sequence steps that will be affected by the chosen functions.

The Chords list allows you to select from preloaded 'chord' data for major and minor chords, and several major and minor sevenths for each sequence. Selecting from the Chords list gives you a sequence of arpeggiated notes that makes up the chosen chord structure (from as few as two notes to as many as six). The selected note sequence will be repeated until the end of the sequence or until the end of the specified range is reached.

The root note of a chorded sequence is based on the first step of the selected sequence. For example, in the previous figure the first step (step 5) happened to be 'E', so a major chord based on a 'E' was generated. To get a chord sequence based on a different root, simply adjust the first sequence step to the desired note then click one of the Chord buttons.

Appearing on the far right of the panel are additional controls to modify the selected sequence. These include an executable Functions list, **UNDO** and **DONE** buttons, and a Control Adjust arrow too

The Functions list provides commands to copy, paste and modify the selected sequence. Commands include:

Copy: Copies the selected sequence.

Paste: Pastes to any selected sequence.

Reverse: Reverses the sequence order within the specified step range.

Invert: Inverts all values within the specified step range. Zero values become Resets and vice versa.

Randomize: Randomizes all values within the specified step range. Repeated selecting of the Randomize function creates a new series of random sequence values.

Randomize Q: Works like Randomize, but automatically adjusts step values up or down to real note values.

Step Up: Creates a sequence of incremental positive values based on the first value in the range. For example, if the first step value is 0, Step Up will create a series of values where the second step value will be 1, the third 2, etc. If the first step value is 45, then the second will be 46, the third 47, etc.

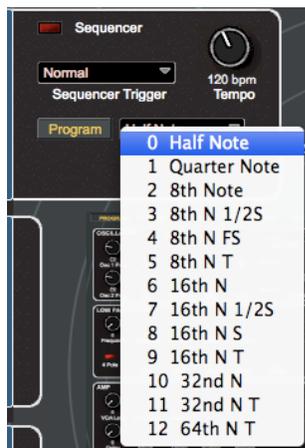
Step Q: Works like Step Up, but increases the step values by 2. If the first step value is 10, Step Q will create a series of values where the second step value will be 12, the third 14, etc.

The **Control Adjust** arrows raise or lower the selected sequence value by '1' for each click of the control. Holding the control button instead of clicking provides for rapid adjustment of the sequence values.

The **UNDO** button offers multiple levels of undo. You can undo any chord or function selection back to the point at which you started.

The **DONE** button closes the Function panel.

5.3 Tempo and Clock Divide



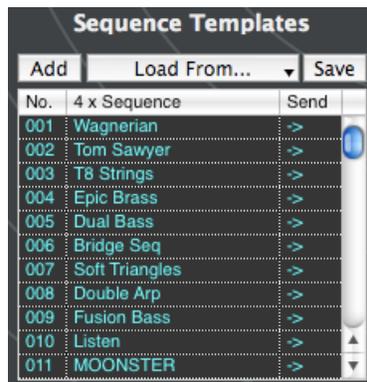
At the top right of the Sequencer Window are the Tempo and Clock Divide function controls. To make adjustments, simply click and rotate the control for Tempo, or click on the downward arrow in the Clock Divider field for a contextual menu of clock divider selections.

Tempo is continually adjustable from 30 to 250 BPM.

Clock Divide is adjustable in increments from Half Note through 64th Note Triplets.

The sequencer can be sync'd to an external Midi source through the Global Panel with the Midi Clock Select options.

5.4 Sequence Templates



Sequence Templates provide a way to copy and paste sequences from other Programs into the current Program, and load/save sequence files on your computer.

The operation of the Sequence Template function is managed with the three buttons at the top of the Sequence Template window:

The **Add** button adds the sequence from the current Program to the list.

The **Load From...** button produces a drop-down menu that allows you to load sequences from banks A, B or C, or from a File saved to your hard drive.. There is also a selection here to clear the list. Selecting Load From... A File produces a window that displays all the files on your computer. Only those files having an '.m_s' extension are valid template files that can be loaded - all other file types will be ignored.

The **Save** button produces a 'Save' window where you can name the Sequence Template and select the storage volume for the file. To load a Sequence Template to the current Program, simply select a Sequence from the list and click on the 'Send' arrow on the right. The four sequences that make up the selected Sequence Template are sent to the Tetra's Edit Buffer, and they also appear in the Sequence Window, where they can be edited using the sequence step bars, buttons and functions.

By default, Sequence Templates are sorted numerically, but they can also be sorted alphabetically (A–Z) by clicking on the '4 x Sequence' column header. A second click on that header will reverse the sort order (Z–A). Clicking on the 'No.' column header switches the sorting order back to the numerical listing (1, 2, 3...), and a second click on that header reverses the sorting order (... 3, 2, 1).

The sequencer has some additional considerations, depending whether in Program or Combo mode.

Program Mode



Combo Mode



As can be seen, you have the option in Program mode to flip between Layers when adjusting sequencer parameters with the ability to Sync the changes you make to both layers.

In Combo mode, you can select which voice you are setting the sequence for and also Sync any combination of voices to adjust simultaneously.

6. Program and Combo Modes

We have made mention of Program and Combo Modes, but have focused primarily on the Program Mode.

Simply stated, Program Mode plays single sound or a layered sound made up of two sounds that are Stacked (Played at the same time through the keyboard range) or Split (Layer A plays in one area of the keyboard, Layer B plays on the remaining keys. This Split point is easily set and is described above).

Combo mode plays 4 voices at once. These voices can be edited individually.

When you click Program at the top of the Editor screen, you will be presented with this window:



This window shows the 4 banks of 128 Programs. Clicking on a name will call up the sound on the Tetra module. This page interacts with the Editor in that clicking Layer A will bring the Editor screen up and ready to edit Layer A. If you clicked Layer B, it would have set to edit Layer B.

Don't forget, the Layering feature is only used on Programs that are using Split or Stacked control of two sounds.

6.1 Program Menu

In addition to bringing up this screen, when you are in Program mode, and additional Menu item called Program also appears in the menu bar. This menu contains the following commands:



Edit Program

This command will just assure that the Editor has the correct program loaded

Write Program

Whatever program is currently selected, stock or edited, can be saved back on top of itself or to a different location.



This screen will appear where you can select any location of any bank to to store this sound. This is one way of reordering patches, but perhaps not the most efficient way. More on that later.

Two things: Care must be taken to not overwrite Programs you may need. Also, understand that this is writing this Program and location to the Tetra memory, not simply to a place in the software.

Receive Bank

The hierarchal menu drops down to give you the choice of Bank, A, B, C, D or all all Banks. This transfers all the Banks from the Tetra into the software.

Transmit Bank

The hierarchal menu drops down to give you the choice of Bank, A, B, C, D or all all Banks. This transfers all the Banks from the software to the Tetra .

Load Program Bank to

The hierarchal menu drops down to give you the choice of Bank, A, B, C, or D.

Once you select a bank, you well be presented with a dialog that allows you to load a previously saved Bank from your computer.

Save Program Bank

The hierarchal menu drops down to give you the choice of Bank, A, B, C, or D. Once you select a bank, you will be presented with a dialog that allows you to save the selected bank you your computer.

Load Single Program

A dialog will appear that allow you to allow you to load a single program you have previously saved to your computer. Loading this Program will also load the Program into the Tetra edit buffer so you can hear the sound, but it has not been saved. Select Write Program from the Program menu, or click the Write button on the editor. You will be presented a dialog box that allows you to select where the Program will be saved on the Tetra and also to rename if you desire.

Save Single Program

A dialog will appear that will allow you to save the current program to your computer.

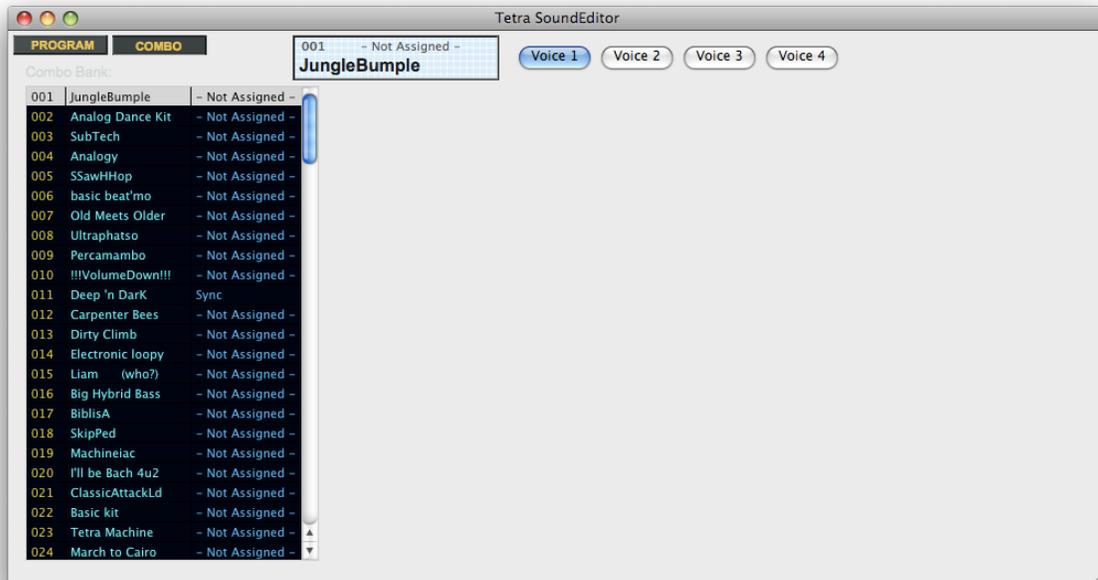
Initialize

The hierarchal menu drops down to give you the choice of Bank, A, B, C, or D.

Selecting one of these banks will initialize that bank. Note that this does not initialize the Tetra, but rather just the bank in the Editor. I you desired to initialize the bank in the Tetra, you would have to do this using the Transmit Bank described above.

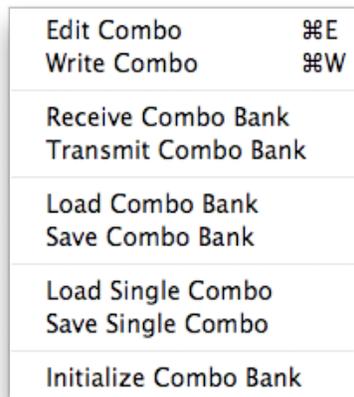
6.2 Combo Menu

When you click Combo on the Editor window, you will be presented with this screen:



This window shows a single bank of 128 Combos.

Additionally, a Combo item will appear in the menu bar and the following options will be available:



All of these commands function in a similar manner to the Program functions listed above but for Combo settings.

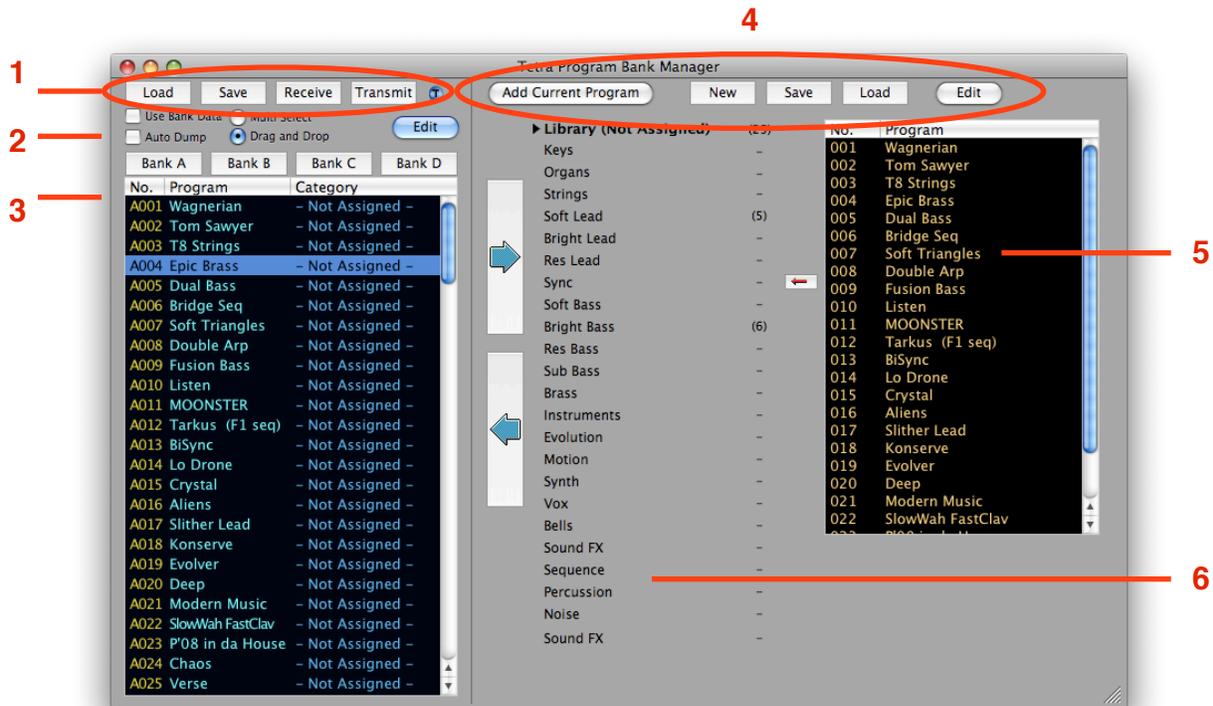
Very Important!!

When in Program or Combo mode, an additional item, Load Factory Presets, appears in the File menu. This will completely reset the data in the Editor that will appear at startup. Be careful using this feature as you could lose any custom Programs, Combos or Librarian features you have developed.

Save your work often!

7. Bank Manager/Librarian

The Bank Manager/Librarian is accessed by selecting the ‘Bank Manager/Librarian’ option in the File menu. The Bank Manager/Librarian lets you organize and store an unlimited number of Tetra Programs. You can also have as many Library files on your computer as you wish. The Librarian provides 24 sound categories to organize your Tetra sounds and have them available for immediate use. For convenience, these sound categories have already been defined, but all categories can easily be renamed according to your needs. A view of the Bank Manager/Librarian window is shown below.

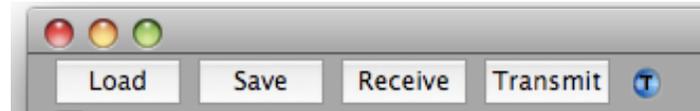


The main components of the Bank Manager/ Librarian include:

1. Toolbar buttons to access frequently-used functions and commands in the Bank Manager.
2. ‘Radio’ buttons and checkboxes to select operational modes in the Bank Manager.
3. User Bank and Bank buttons (Banks A, B, C,D)
4. Toolbar buttons to access frequently-used Librarian functions and commands.
5. List of categorized Library Programs
6. Predefined Library categories (24 total)

7.1 Bank Manager Toolbar

The Bank Manager Toolbar (shown below) provides convenient access to frequently- used Bank Management commands and functions. Descriptions of each Toolbar button follows.



The **Load** button allows you to load a bank of Programs into the User Bank. Selecting **Load** produces a 'Load Tetra Program Bank' window that allows you to locate and select Tetra Program Bank files to load. Only those files having an '.m_b' extension are valid Program files that can be loaded - all other file types will be ignored.

The **Save** button allows you to save the current User Program Bank. Selecting **Save** produces a 'Save As...' window where you can name the Program Bank and select the storage volume for the file.

The **Receive** button initiates the process to receive a bank of Programs from the Tetra hardware. Selecting **Receive** produces a 'Receive Program Banks' window. You will need to click on the **Start** button to begin the actual transfer process. The bank that is requested from the Tetra hardware will be the currently selected User Bank (A, B, C or D).

In other words, if the User Bank is displaying Bank A when you initiate the receive command, the Tetra hardware will transmit the first bank (Bank 1) to SoundEditor regardless of its current bank setting.

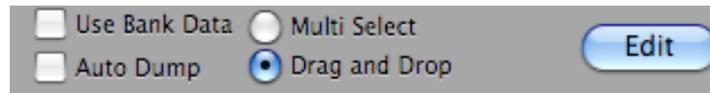
The **Transmit** button initiates the process to transmit a bank of Programs from the current User Bank (A, B, C or D) to Tetra hardware. Selecting **Transmit** produces a 'Transmit Program Banks' window. You will need to click on the **Start** button to begin the actual transfer process. The transmitted bank (A, B, C or D) will go into the corresponding bank (1, 2, or 3) on the Tetra hardware. In other words, if the User Bank is displaying Bank B when you initiate the transmit command, the Tetra hardware will receive that data into Bank 2 regardless of its current bank setting.

The **Load**, **Save**, **Receive** and **Transmit** button functions duplicate commands found in the menus.

Lastly, although not related to the controls described above, the **Transparency** button allows you to adjust the transparency of the Bank Manager/Librarian window.

7.2 'Radio' Buttons and Checkboxes

'Radio' buttons and checkboxes are used to select operational modes in the Bank Manager window. These controls appear just below the Toolbar in the upper left corner of the Bank Manager window:



Here's how the buttons and checkboxes function:

The **Use Bank Data** checkbox is part of the User Program Bank functions. When **Use Bank Data** is unchecked (disabled), selecting a preset from the User Program Bank switches the Tetra to the corresponding preset. This guarantees synchronization between the hardware and SoundEditor. When **Use Bank Data** is checked (enabled), the selected preset data from the User Program Bank is sent to the Tetra edit buffer for editing and audition. This feature helps to browse through presets in the User Program Bank without the need for dumping the entire bank to the hardware.



When Use Bank Data is enabled, Tempo and Clock Divide data is not sent with the program data. If a sequence is playing when you select a new program, you will hear the new program's sound, but it will be played at the tempo of the original program. This can be used to quickly audition new sounds/sequences at pre determined tempos.

Despite its location in the window, the **Auto Dump** checkbox is actually part of the Librarian function. When the **Auto Dump** checkbox is checked (enabled), a selected preset from the Librarian Program list is automatically sent to the Tetra edit buffer for editing/audition.

When **Auto Dump** is unchecked (disabled), no data is sent.

The **Multi Select** and **Drag and Drop** radio buttons are used to define the operation of the cursor in the Bank Manager/Librarian window. **Drag and Drop** permits conventional cursor operation, allowing you to freely drag and drop presets between the current User Bank and the Librarian. You can add the Shift and other modifier keys to make multiple preset selections, which can be groups of Programs, non-adjacent selections, or a combination of both. **Multi Select** mode locks the cursor into 'Select' mode, allowing you to select groups of Programs. This mode can be useful for large amounts of group moves because it restricts the operation of the cursor to just making selections, preventing accidental dragging of presets out of the User Bank or Librarian. In **Multi Select** mode, Programs are moved between the User Bank and Librarian using the large Copy buttons.

Lastly, although not part of the operational mode controls described above, the **Edit** button takes you to the Controls window, where you can edit the currently selected Program.

7.3 User Bank



The User Bank (and associated Bank Manager controls) allow you to load, save, transmit, receive, and edit banks of Tetra Programs. Program banks are loaded into the User Bank either from the Tetra, from a stored bank, or from one of the three factory banks built into SoundEditor. The User Bank has three banks, labeled A-D, corresponding to the three Program banks in the DSI Tetra. Programs in the User Bank be selected individually, as a group, or randomly (non-adjacent), to allow for convenient rearrangement and reorganization.

One thing to keep in mind while working in the User Bank is that the Bank buttons interact with the **Use Bank Data** checkbox, meaning that SoundEditor will switch to the Tetra bank/location and acquire the Program data from the Tetra (when **Use Bank Data** is unchecked), or send the selected Program data to the Tetra's current preset (when **Use Bank Data** is checked).

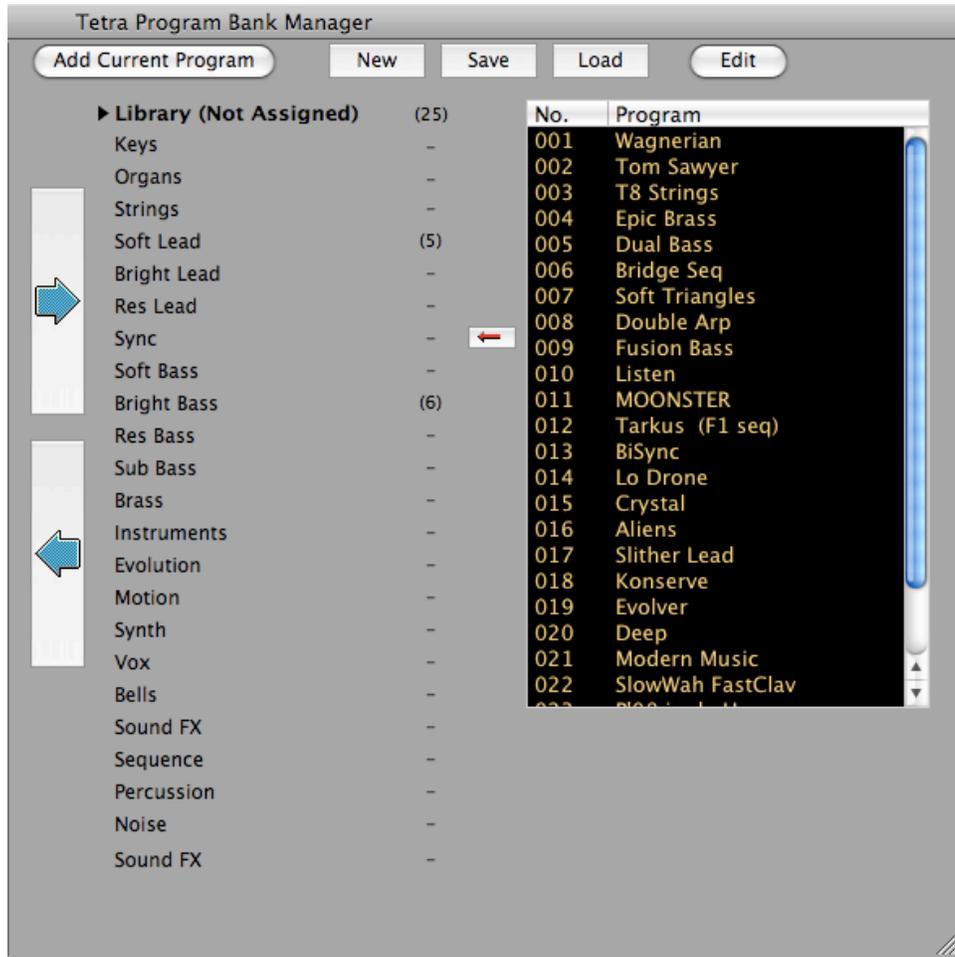
The User Bank list offers several options for sorting Programs. By default, Programs are sorted numerically as they appear in the bank, but Programs can also be sorted alphabetically or by Category. To sort alphabetically (A-Z), click on the 'Program' column header at the top of the listing, as shown. A second click on the 'Program' header will reverse the order (Z-A).

To sort Tetra Programs by Category (A-Z), click on the 'Category' column header. A second click on the 'Category' header will reverse the order (Z-A).

Clicking on the 'No.' column header switches the sorting order back to the numerical listing.

7.4 The Librarian Panel

The Librarian lets you store an unlimited number of Tetra Programs, and allows you organize them in any fashion. You can also have as many library files on your computer as you wish. The Librarian provides 24 sound categories to organize your Tetra sounds and have them available for immediate use. The categories are pre-defined, but any category can be renamed should you need to. A view of the Librarian panel is shown below. Sound categories are displayed on the left along with two large Copy buttons. A list of the Tetra Programs appears on the right, and buttons for library file functions are at the top.



The currently selected (active) sound category is indicated by boldface type and a triangle to the left of the name. In the figure above, Library (Not Assigned) is the active category, and contains 14 Programs; these Programs are listed in the window on the right.

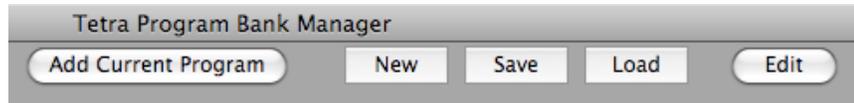
If the number of Programs exceed the amount that can be displayed within this window (about 22 Programs) SoundEditor will add a scroll bar to the window.

To switch to a different category, simply click on the desired category name:

Navigating a Librarian Category Program list is exactly like navigating any other list, using either the mouse or the keyboard. Options for changing the sort order of Programs is the same as for any other list

7.5 Librarian Toolbar

The Librarian Toolbar (below) provides convenient access to frequently-used Librarian commands and functions. Descriptions of each Toolbar button follows.



The **Add Current Program** button adds the current Program from the User Bank to the active sound category. Note that new entries are always added to the end of the list, so if you have a lot of Programs in a particular category, you may have to scroll down to see the new entry.

The **New** button allows you to create a new Library. After selecting **New**, you will get a message dialog box asking if you wish to save the existing library. To save the existing Library, clicking the **OK** button in the message box will present you with a 'Save As...' window where you can name and save the current Library file to the specified storage location. After the 'save' operation is complete, you will have an empty (new) Library. If you decline to save the existing Library, the contents of the existing library (all 32 categories) will be cleared, leaving an empty Library.

The **Save** button allows you to save the current Library. Selecting **Save** produces a 'Save As...' window where you can name the Library File and select the storage location for the file.

The **Load** button allows you to load a library file into the Librarian. Loading a library file is just like loading a bank file, but with a difference – library file names have the extension `.m_l`.



*You can load a new library into an existing library to combine the presets of each.
You can also combine presets from different banks using the 'Load from User Bank Data' command.*

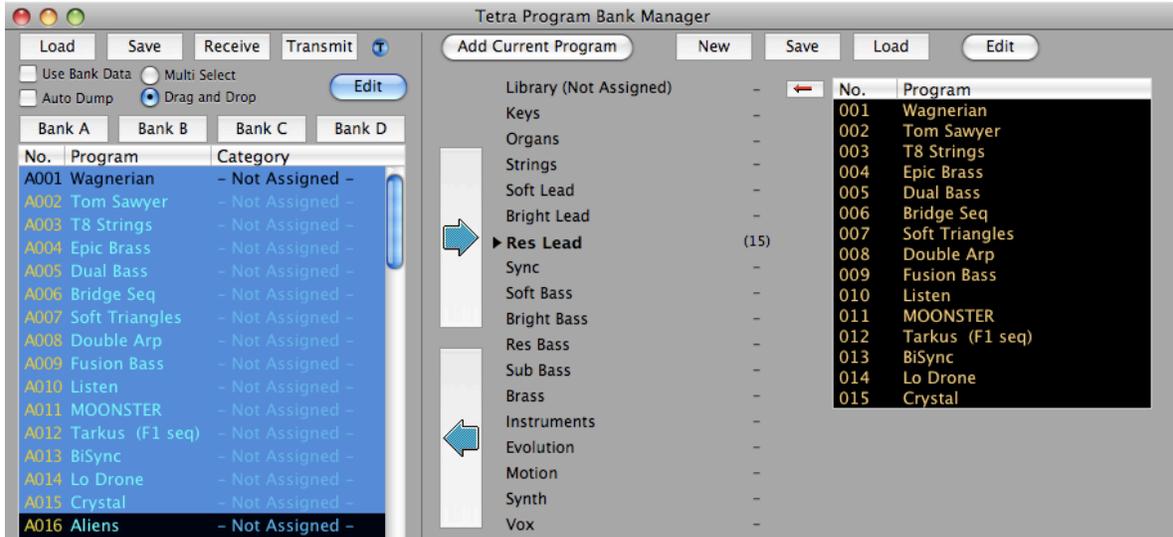
The **Add Current Program**, **New**, **Save** and **Load** buttons duplicate commands found in the menus.

Finally, although not part of the operational controls described above, the **Edit** button takes you to the Controls Window, where you can edit the Library's currently selected Program.

You can load a new library into an existing library to combine the presets of each. You can also combine presets from different banks using the 'Load from User Bank Data' command.

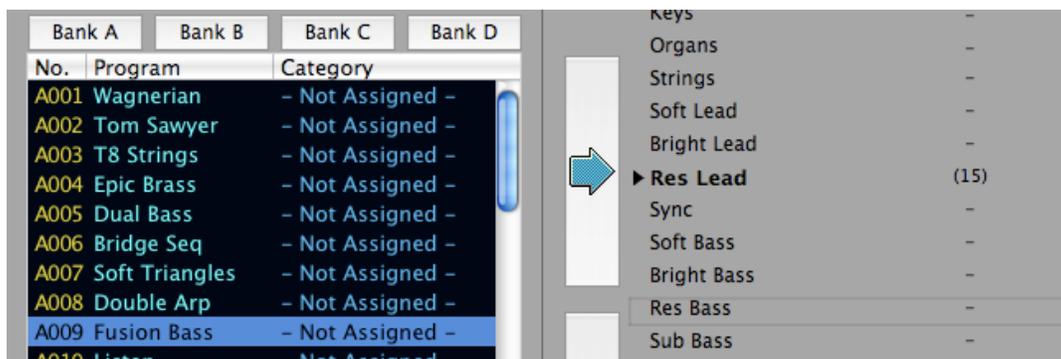
7.6 Adding Program to the Library

While the **Add Current Program** button is one way to add an entry into the Library, it only adds a single Program at a time to the currently selected Category. To copy groups of Programs from the User Bank into the Library, use the right-facing Copy button:



In the screen shot above, Programs A010 through A015 were selected from the User Bank. Clicking on the right facing Copy button added those six programs to the selected Library category (“Res Lead”).

Occasionally, you may wish to add single Programs or groups of Programs to multiple Library categories. In this case, selecting and dragging the Program(s) from the User Bank into the Library offers a direct and convenient alternative to using the Copy button:

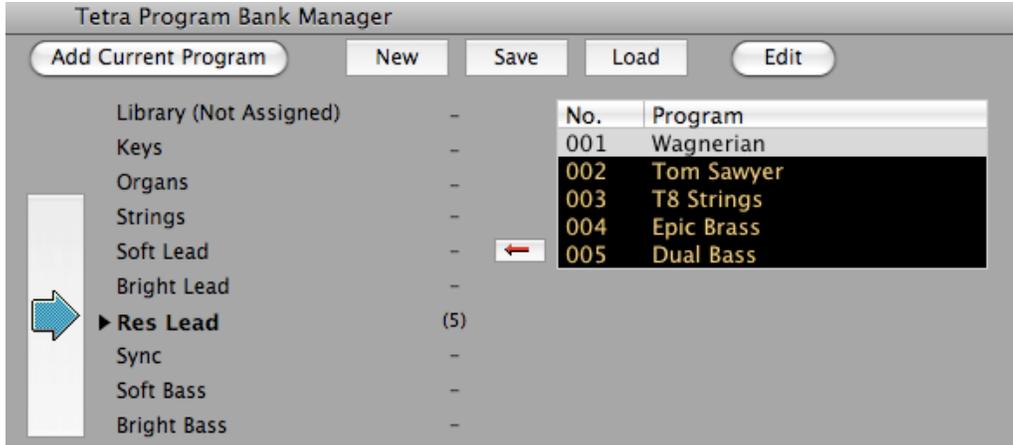


In the screen shot above, Program A009 was selected from the User Bank and is shown being dragged into the Library’s ‘Res Bass’ Category. When Programs are moved by dragging, only an outline box is displayed as they are being moved. Note that you can drag a Program (or group of Programs) into *any* Category by this method.

7.7 Moving Programs between Categories

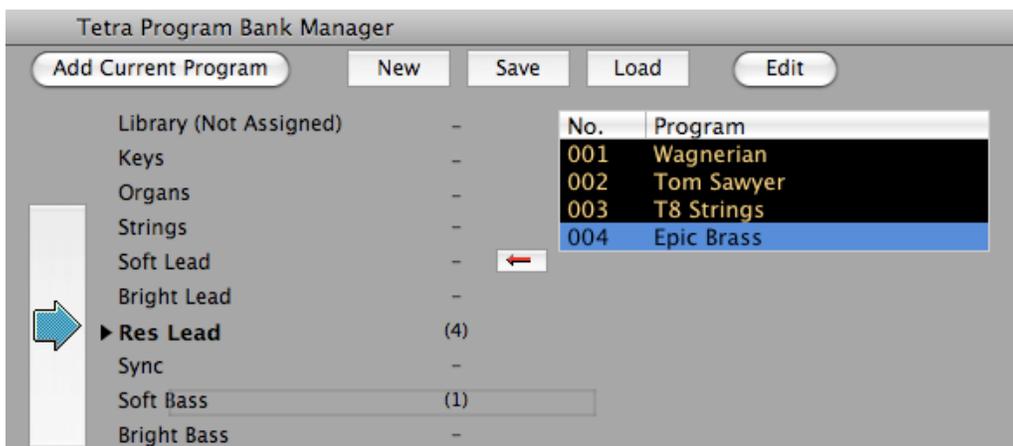
Tetra Programs can be moved between Categories using several transfer methods. The first method is to set the red Transfer Arrow (click in the Transfer Arrow column to set the arrow to point to the desired Category), select the desired Program and then click on the Arrow. The Program will transfer from the current Category to the new Category.

In the screen shot below, the Program 'Wagerian' is being transferred from the 'Res Lead' Category into the 'Soft Lead' Category:



The second method involves simply dragging the desired Program from the current Library Category into another Category.

In the screen shot below, the Program 'Epic Brass' is being dragged into the Library's 'Soft Bass' Category. As mentioned previously, when Programs are moved by dragging, only an outline box of the Program is displayed as it is being moved.

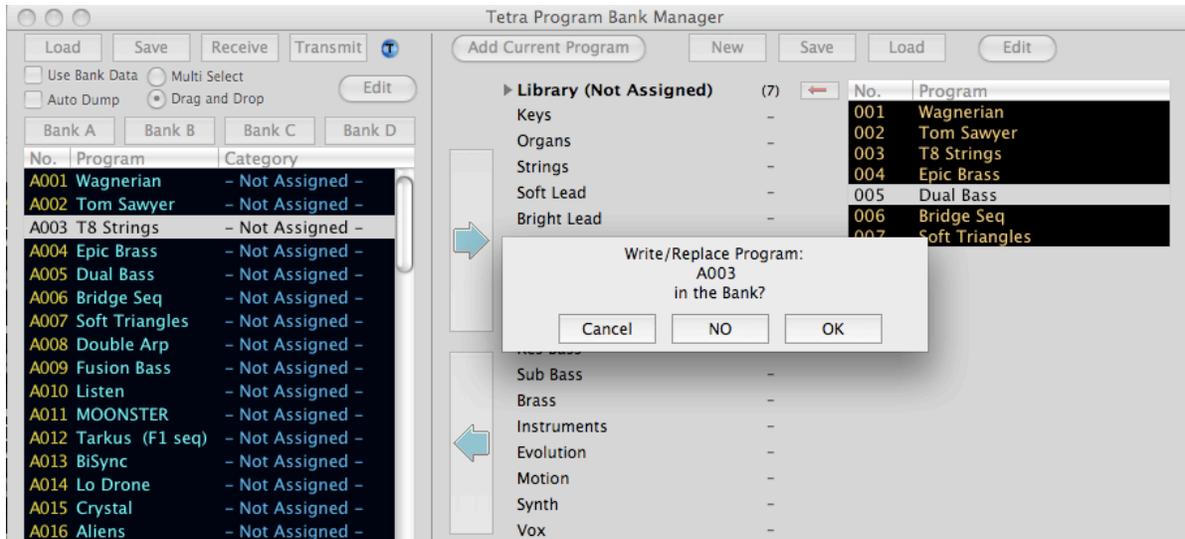


Either method can be used to move single Programs or groups of Programs.

7.8 Copying Programs to the User Bank

Copying Programs from the Library *to* the User Bank basically involves the same methods as copying Programs into the Library *from* the User Bank: you can either use the large Copy button, or you can simply drag the Program (or group of Programs) into the User Bank. Note, however, that either method requires that you first specify a location in the User Bank to copy the Program(s) to.

The screen shots below will illustrate the process. First, in the User Bank, we select location A03 as the ‘copy to’ location. Next, in the Librarian, we select ‘Dual Bass’ as the Program to be copied:



We then clicked the left facing arrow that brought up this dialog to confirm our actions. The message box offers three choices: **Cancel**, **NO** and **OK**.

If you are uncertain about proceeding at this point, you should select **Cancel** and the copy operation will be stopped. If you select **NO**, then the Program will be copied to the User Bank but it *will not* be sent to the Tetra. Programs in the User Bank but do not wish to affect the Programs in the Tetra.

Finally, if you select **OK**, then the full Copy/Write process will execute. The Program will be copied to the User Bank and written to the Tetra hardware.

Copying groups of Programs works in the same way, but this time the location you select in the User Bank establishes where the *first* Program in the group will be copied to. The Programs will fill the User Bank from that point. A message box will display the *range* of User Bank locations that will be affected by the copy operation, and request your confirmation before proceeding.



If the number of Programs to be copied exceeds the available space in a User Bank, the copy operation will be performed until the end is reached. For example, if you try to copy five Programs from the Library into the User Bank starting at location 127, only the first two Programs will be copied. These Programs will appear in locations 127 and 128; the other three Programs will be ignored.

All Bank Manager and Librarian menu items are shown on page [10](#).

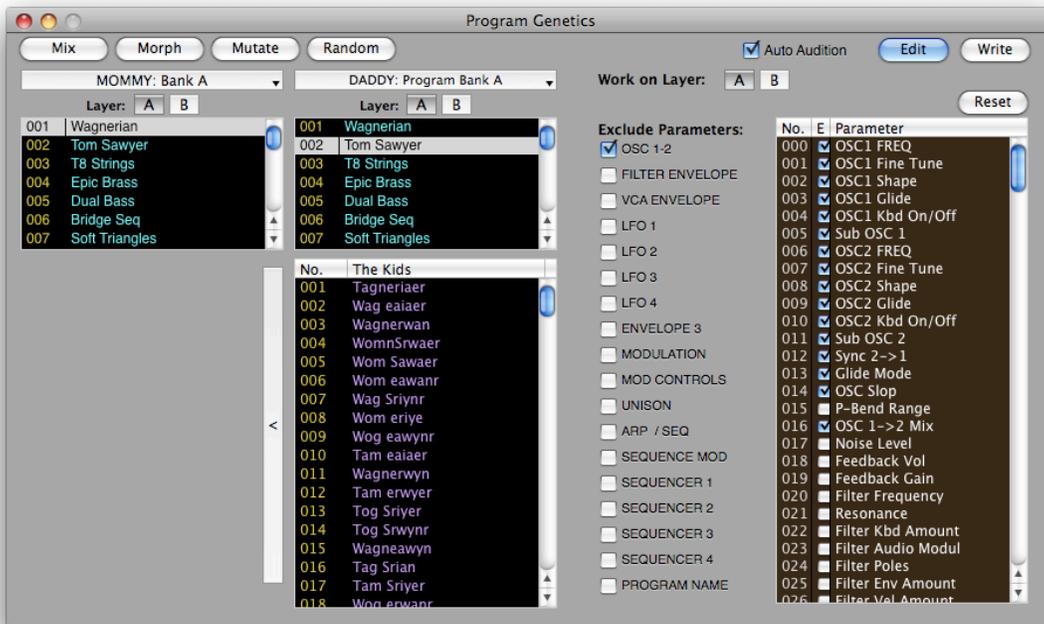
8. Program Genetics

The Program Genetics function allows you to quickly build new sounds from two existing ones in a similar fashion to breeding. The Genetics function is available in both Program and Combo modes. Parameters of each of the two sources (“Parents”) are combined using four different functions to generate a new bank of presets (“Kids”). Sources can be taken from Programs and individual voices of Combos and applied to either Programs or Combos.

The Program Genetics window is selected from the Options menu of the main page Program Genetics can also be accessed from the Bank Manager/Librarian Options menu selection as well.

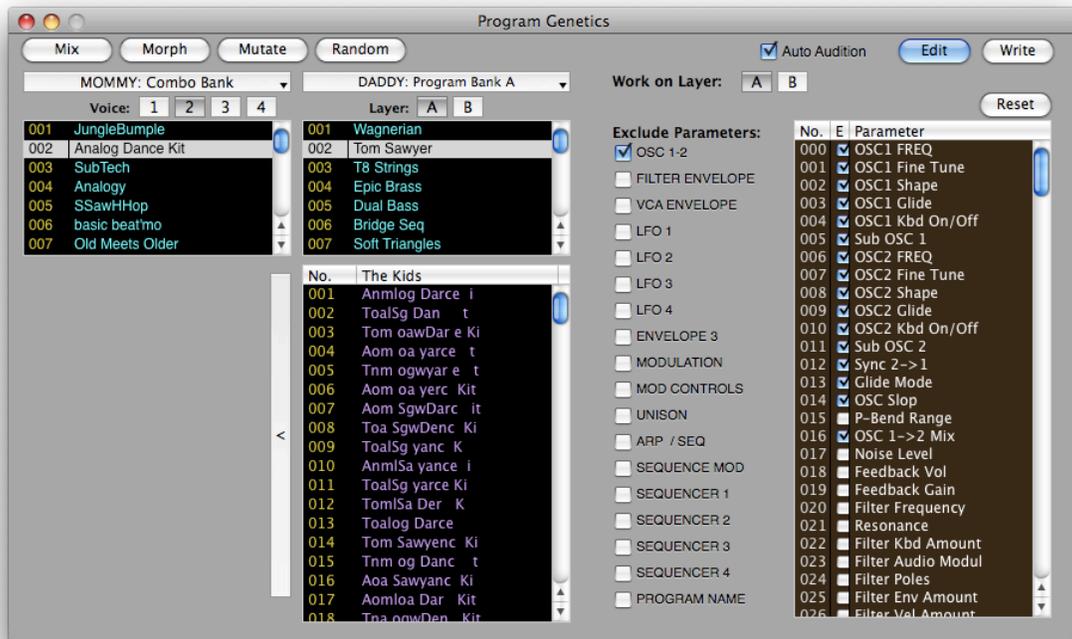
Program Mode

A view of the Preset Genetics window is shown below. The two source banks (called “Mommy” and “Daddy”) are located in the upper left, along with buttons for the four different Genetics functions. The generated bank (“Kids”) and the Top Offspring bank are located in the lower left. On the right are filters to exclude selected parameters from the Genetics function, and three buttons at the top for editing functions and resetting excluded parameters.



Any pair of Programs can be used for the Genetics functions (that’s one Program each from Mother and Father). The result of applying the user-selected Genetics functions creates a child bank of 128 new programs, and any ‘keepers’ auditioned from the child bank can then be moved into the Top Offspring bank.

Shown above is a collection of Kids generated from the A Layer of Wagerian from the Mommy Bank and the A Layer of Tom Sawyer from the Daddy bank. This has created a set of Programs that will be created for Layer A (as indicated in Work on Layer). Clicking on any of the names in the Kids list will send that Program to the A layer of the Tetra to audition.



In this example, Mommy Voice 2 of Analog Dance Kit from the Combo banks, Daddy is Layer A from Tom Sawyer and again clicking on the list will allow you to audition these sounds on the Tetra as they are applied to Layer A.

Here's what the four button functions do:



Mix: The parameters of each Child program are randomly chosen using parameters from either the Mother or Father. For example, if the Mother's cutoff frequency was 10 and the Father's was 88, the child's value would either be 10 or 88.

Morph: The value of each parameter is linearly interpolated from one parent to the other. This means that the first program in the 'Kids' bank is identical to the Mother while the last program is identical to the Father. All other Child programs are weighted towards a parent depending on their placement within the list. The middle Child Program (Program #64) is exactly 1/2 of the Mother and 1/2 of the Father Programs.

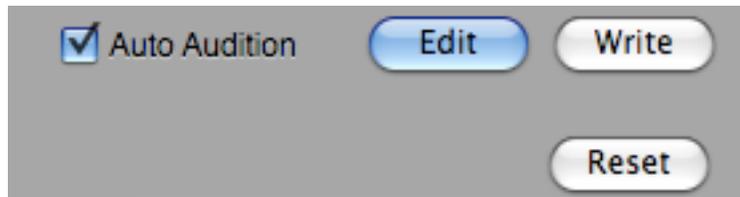
Mutate: The parameter values of each child Program are randomly chosen from within the range between each parent's parameter. For example, if the Mother's cutoff frequency was 10 and the Father's was 88, Child values would be anywhere between 10 and 88.

Random: A random value from within the min/max parameter range produces the value of each parameter for the Child. The four Program Genetics functions are selected by using the buttons at the top of the window.



Experimentation using vastly different parents or similar parents creates the most interesting results. You can also 'interbreed' the child patches too. In addition, you can set filters to excluded parameters that will not take a part in the generation of new offspring. Experiment and have fun!

Additional controls appear on the top right side of the Program Genetics window:



The **Auto Audition** checkbox enables the transfer of selected Programs from the Mother, Father, Kids or Top Offspring banks to the Tetra's edit buffer for auditioning. When the

Auto Audition checkbox is unchecked (disabled), no Programs are transmitted. The **Edit** button brings up the Editor window, permitting on-screen editing of a selected Program from the Parents, Kids or Top Offspring banks.

The **Write** button brings up the Write Program dialog box. The Write function works on the currently selected program, which can be from the Parents, Kids or Top Offspring banks.

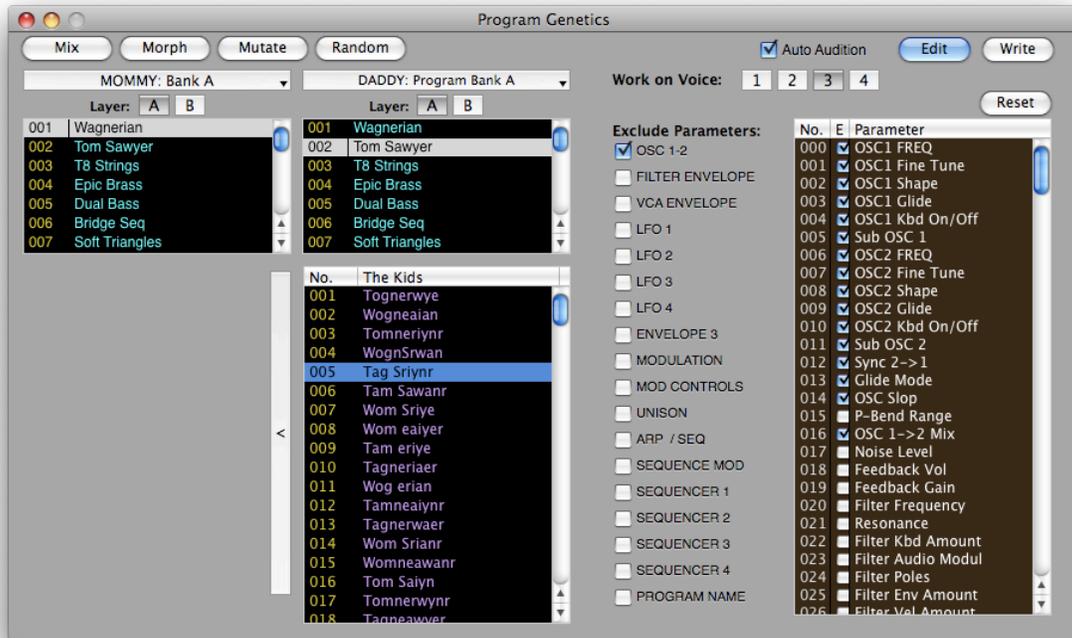
The **Reset** button resets all checkbox selections made under the 'Exclude Preset Parameters' section. When you click **Reset**, all checked parameters become unchecked.



The Auto Audition button must be checked for the Editor to correctly display the selected Program in the Genetics window.

Combo Mode

Combo mode is very similar to Program mode with a few differences.



In this example, while in Combo Mode, Mommy is Layer A of Wagerian, Daddy is Layer A of Tom Sawyer and the Kids that are generated will be sent to Voice 3 of the current Combo as indicated by the selection made in Work on Voice.

The following sections of relative to the Genetics feature of the Tetra SoundEditor will be shown in Program mode, but Combo mode is similar.

8.1 Selecting

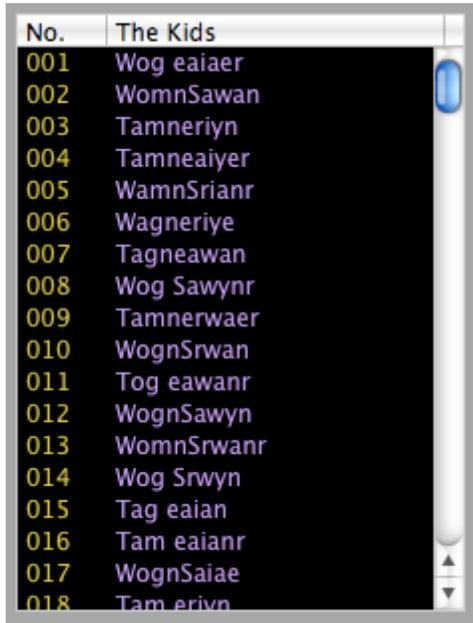
Both Parent banks use Programs from the 'A' bank by default, but any bank can be loaded into either parent by clicking on the list box masthead and selecting Bank A, B, C, D or Combo Bank:



Either Layer A or Layer B of any voice from any Program Bank or Voice 1-4 from any Combo may be selected for either parent.

8.2 Creating New Sounds

To create a bank of sounds you must first select a pair of 'seed' Programs, one each from the Mommy bank and Daddy bank. Use the scroll bars to scroll through the Parent bank lists and select the desired Programs. To quickly advance through a bank list, place the cursor onto the list and use the scroll wheel on the mouse.



With a pair of Programs chosen, selecting any one of the four Genetics functions (Mix, Morph, Mutate or Random) will create a bank of 128 programs in the Kids bank. Selecting function a second time will replace the previously generated Kids bank with a new bank of 128 programs.



Program names in the 'Kids' bank become scrambled or rearranged when you use the Genetics functions. This is normal.

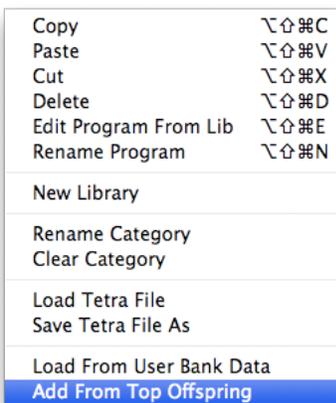
8.3 Selecting Top Offspring

As you audition Programs from the Kids bank, you will probably identify one or more Programs you wish to save or edit further. The Top Offspring bank provides a convenient place to ‘park’ these Programs.

To copy Programs to the Top Offspring bank, you can either drag the selected Program into the Top Offspring window, or click on the large Copy arrow as shown:



Programs in the Top Offspring bank can be edited directly (by selecting the **Edit** button) or loaded into the Librarian or Phantom Banks functions using the ‘load Top Offspring’ menu commands in those functions:



Also, when the Librarian and Program Genetics windows are both open, you can drag individual Programs from the Top Offspring list directly into any Librarian category.

9.4 Program Genetics Menus

Since most of the control needed for Program Genetics operations are contained within the PG window, only a few additional menus commands are required. These are shown below.

File:



The File menu allows you to quickly switch to the Bank Manager/Librarian function or to Phantom Program Banks. Selecting 'Close' closes the Program Genetics window and returns you to the Controls Window.

Edit:

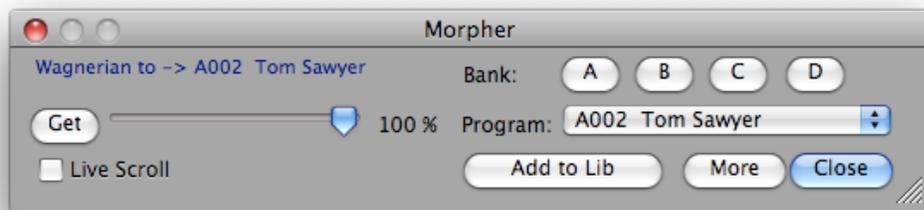


The Edit menu allow you to clear the Programs in the Top Offspring bank.

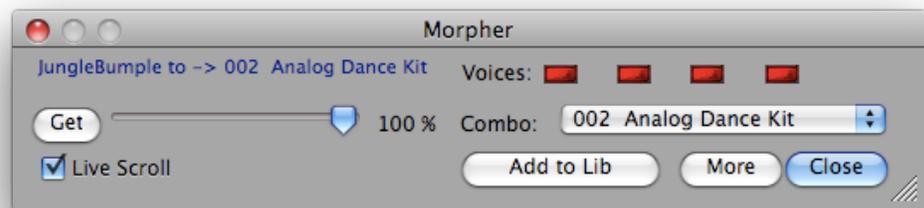
9. Morpher

The Morpher function allows you to blend or ‘morph’ any two Tetra Programs together to create a hybrid sound having the characteristics of both Programs. Functionally, Morpher is a subset of Program Genetics, but Morpher offers much more control over the morphing process.

The Morpher function is accessed by selecting ‘Morpher’ in the Options menu, or by clicking on the **Morpher** button in the main window. There are two different Morpher windows depending on if you are in Program or Combo mode. The two windows are shown below:



Program Mode



Combo Mode

The principles to Morpher are similar between the Program and Combo versions. When the Morphing function is accessed, the first Program defaults to the currently selected Program, while the second Program is chosen using the Bank buttons and menu on the right. The **Get** button is used to change the first Program should you select a different Program while the Morpher window is open.

The **Slider** is used to morph between the two Programs, and the resulting sound can be auditioned as you make adjustments in real time.



You should keep your speaker volume low when using the Morpher function, as some high gain characteristics can result from the Morphing process.

When the **Live Scroll** option is checked, SoundEditor's Control Window is continuously updated to show the parameter values as they change. You should also be aware that the Morphing process affects the Program name, so you'll see scrambled or rearranged names in the Program Name display and also on the Tetra hardware. This is normal.

Clicking on the **Add to Lib** button adds the currently morphed Program to the Librarian in the active Library Category.



The active Category defaults to 'Not Assigned' each time you launch SoundEditor and remains that way until you change it.

The **More** button allows you to select additional Morphing options

The checkboxes shown allow you to exclude certain parameters from the Morphing process. The term 'base' refers to the parameters in the first Program:

Preserve Base Sequencer - Checking this box preserves the step settings of all four Sequencers. Sequence Destinations are not preserved.

Preserve Freq/Tune - Checking this box preserves Oscillator 1 & 2 Pitch and Tuning settings. Other Oscillator parameters are not preserved.

Preserve Base Oscillators - Checking this box preserves Oscillator 1 & 2 Pitch, Tuning, Waveform and Glide settings. Oscillator Mix and Sub-oscillator settings are not preserved.

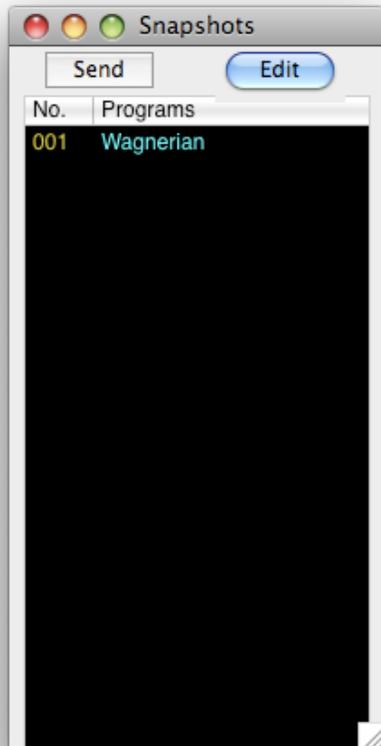
Preserve Base Mod Sources - Checking this box excludes all four Sequencers from the Morphing process. Sequence Destinations are not preserved, however.

Preserve Base Mod Destination - Checking this box preserves the four Modulation Destinations.

Preserve Base Controls - Checking this box preserves the destination and amount values of the five MIDI Control parameters.

There is also the option to specify a MIDI Controller to act as the Morpher slider. Checking the **Use Controller** checkbox enables the selected MIDI Controller to control the Morphing process on the selected MIDI Channel.

10. Snapshots



The Snapshots function allows you to quickly capture “Snapshots” of edited programs, providing multiple ‘undo’ points and allowing you to check your editing at various stages. It is a simple utility with a minimum of features, but it is invaluable in support of the editing/sound development process.

Snapshots is accessed by selecting the ‘View Snapshots’ option in the Snapshots menu. A view of the Snapshots window is shown at left.

To capture a Snapshot of the current Program, simply click on the Snap button in the main window, or use the ‘Add Snapshot’ option in the Snapshot menu. Each time you capture a Snapshot it will be added to the Snapshots window.

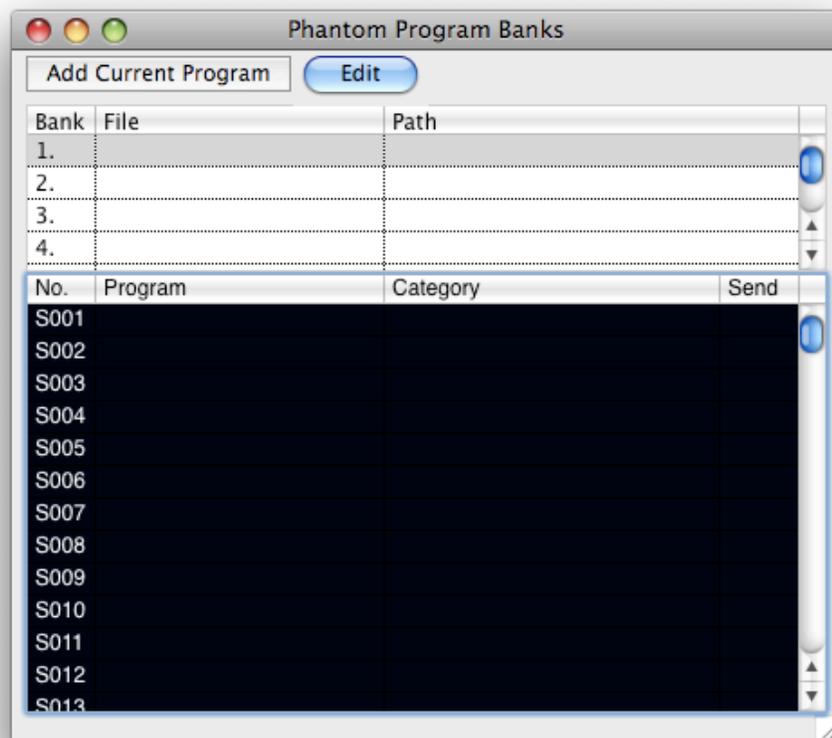
To send a Snapshot to the DSI Tetra, click the **Send** button. As you build a list of Snapshots you may wish to go back to one of interest and perform additional edits. This is done by clicking on one of the Snapshots and clicking the **Edit** button. The parameter settings in Controls Window will reset to the selected Snapshot, and the Tetra hardware will update with those parameters values.

11. Phantom Program/Combo Banks

The Phantom Program Banks function allows you to add virtual banks of Programs and Combos (called “Phantoms”) to your Tetra. Phantom Program and Combo Banks allows you to load up to 16 banks of Tetra Programs or Combos into SoundEditor, and have any Program in any bank immediately available for auditioning. This means you can have as many as 2048 Programs (16 x 128) at your disposal (or 2432 Programs when you include the three Tetra Program banks).

Banks of Programs can be loaded from SoundEditor’s Program Banks (A, B, C or D), or from the Top Offspring list in the Program Genetics window, from the equivalent banks of Combo’s when in Combo mode. or from any previously saved bank files. Banks can also be assembled by pasting or dragging single programs to this window.

Phantom Program Banks (PPB) is selected from the Editor’s File menu. The PPB window is shown below. The Phantom Combo Banks window is similar and will show in Combo mode.

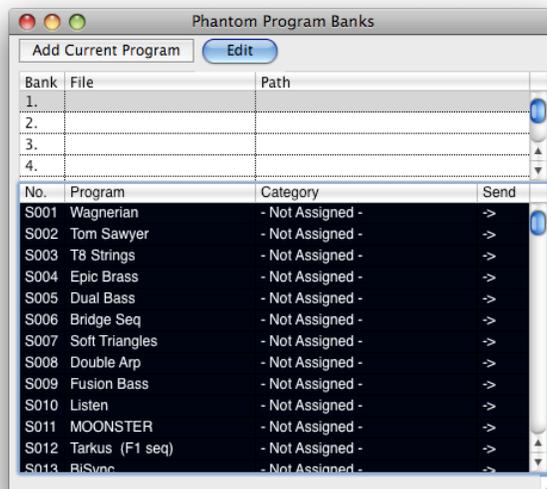


21.1 Window Operations

Other ‘hidden’ controls in the PPB window allow you to sort Program Banks in various ways. Program Banks can be sorted numerically, alphabetically or by category by clicking on ‘No.’, ‘Program’ or ‘Category’ headers. Finally, individual Programs can be sent to the Tetra hardware by selecting a Program and clicking on the Send arrow that appears in the far right column. The Phantom Program Banks window has relatively few controls compared to other windows in SoundEditor:

The **Add Current Program** button adds the current preset from the User Bank to the active Phantom Bank. Note that new entries are always added to the end of the list, so if you have a lot of presets in a Phantom Bank, you may have to scroll down to see the new entry. Note also that since a bank consists of 128 Programs, clicking the **Add Current Program** button will have no effect if the bank is already full.

The **Edit** button takes you to the Controls window, where you can edit the currently selected Program.



Other ‘hidden’ controls in the PPB window allow you to sort Program Banks in various ways.

Program Banks can be sorted numerically, alphabetically or by category by clicking on ‘No.’, ‘Program’ or ‘Category’ headers.

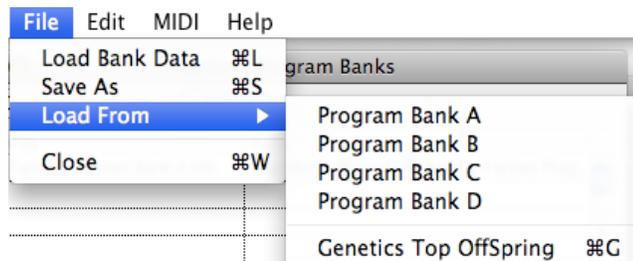
Finally, individual Programs can be sent to the Tetra hardware by selecting a Program and clicking on the Send arrow that appears in the far right column.

Remember that the Phantom Combo Banks functions are similar when in Combo Mode.

12.2 Phantom Program/Combo Banks Menu

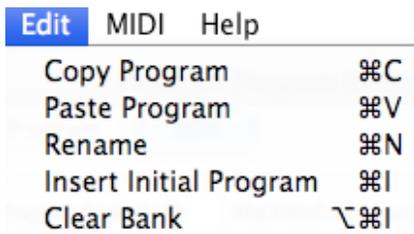
PPB menus allow you to load Tetra Programs from within other SoundEditor functions, elect file storage options, execute editing commands, and transfer Program banks. A description of the PPB menus appears below.

File:



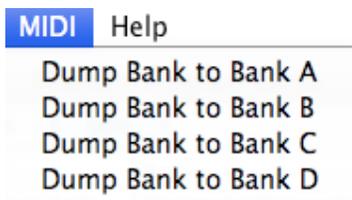
The File menu allows you to load Tetra Programs from multiple sources (Library files, User Bank files and Program Genetics Offspring), and save PPB Bank Library files.

Edit:



The Edit menu allows you to copy, paste, rename, and initialize individual Programs, as well as for clear the current Phantom Bank.

MIDI:

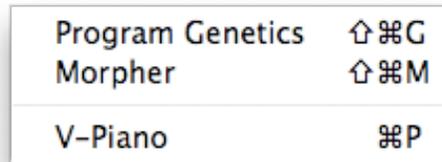


The MIDI menu allows you to transmit the current Phantom Bank to the selected Tetra Bank (A, B, C or D).

12. Additional Controls

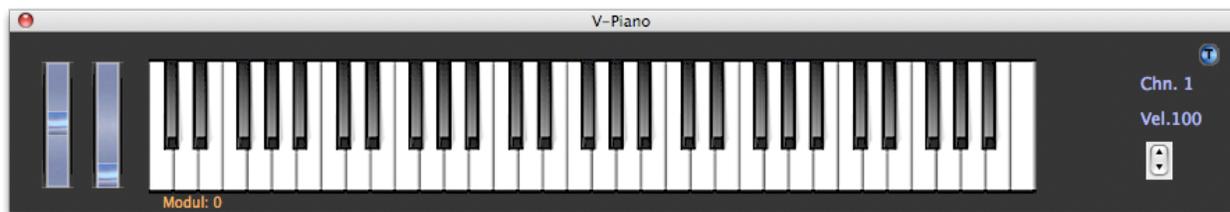
SoundEditor offers additional remote controllers functions for the Tetra: a Virtual Piano (V-Piano), and the ability to play the Tetra from the computer keyboard. These functions allow you to remotely play the Tetra from within SoundEditor (handy if the Tetra is located more than an arm's reach away from the computer).

These functions are located in the Options menu:



12.1 V-Piano

The V-Piano provides a way to play the Tetra remotely using the mouse. When you press a key on the virtual keyboard, the corresponding MIDI 'Note On' message will be sent to the Tetra. The note information will be displayed in red on the bottom left side of the keyboard, along with the MIDI channel and velocity information:

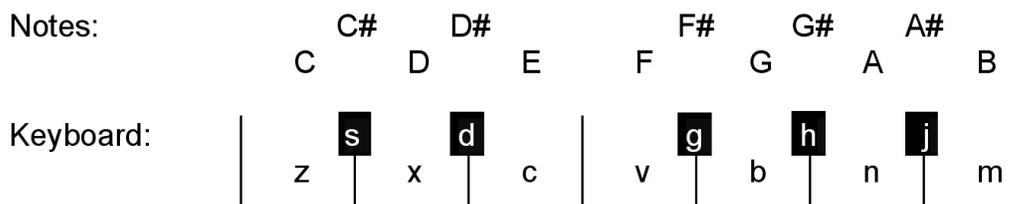


The 'Vel' Up/Down control on the far right of the V-Piano keyboard adjusts the note velocity (values from 1 to 127). The Midi channel is changed by clicking on the label just above the Velocity label and choosing from the popup contextual menu.

The virtual Pitch Bend and Mod Wheels can be used to control Pitch and Modulation functions as you play.

12.2 Playing from the Computer Keyboard

You can also play notes on the Tetra using the computer keyboard. The middle and bottom rows of computer keys act as a single octave of keys mapped like a piano keyboard. You can use these keys to remotely play notes on the Tetra. The computer key assignments are:



Each keyboard press generates a MIDI Note ON message corresponding to the note as specified. When the key is released, a MIDI Note OFF message is sent.

Two computer keys are programmed to adjust octaves (increment/decrement):

- “p” – Octave up (one octave for each key press)
- “o” – Octave down (one octave for each key press)

You can switch octaves over a range of -2 to +8 (ten octaves total). When the octave switching keys are pressed, a pop-up window briefly appears showing the change.



You can sustain a note by pressing down a “note” key and while it is depressed, press an “octave” key. A MIDI Note ON command will be sent without a corresponding MIDI Note OFF, causing a sustained, or ‘stuck’ note. To release the note, press the Space Bar. The Space Bar will send an ‘All Notes Off’ command that shuts off all MIDI notes.

Two computer keys are programmed to adjust note velocity (increment/decrement):

- “i” – Note velocity increases (+5 for each key press)
- “u” – Note velocity decrease (-5 for each key press)

Note velocities can be set from 0 to 125 in increments of 5. A note velocity of 0 is the equivalent of no note played. When the velocity switching keys are pressed, a pop-up window briefly appears showing the change.



Changing the velocity values using the computer keyboard is the same as changing ‘Piano Note Velocity’ in MIDI Setup Window.

The ability to play notes using the computer keyboard works in all SoundEditor windows, allowing you to audition sounds at anytime. Note, however, that the CAPS LOCK key must not be engaged (ON), as only the lower case letters will send MIDI note data.



You can use the CAPS LOCK key to temporarily turn off remote playing if desired.

13. Appendix A

File Extensions

SoundEditor uses the following file extensions to specify Tetra data:

```
"Single Tetra Combo" = ".t4_c"  
"Tetra Combo Bank" = ".t4cb"  
"Single Tetra Program" = ".t4cb"  
"Tetra Program Bank" = ".t4b "  
"Program Library" = ".t4l"  
"Combo Library" = ".t4cl"  
"Sequence Templates" = ".t4s"  
"Tetra Data" = ".tt4"
```

14. Appendix B

Sequencer Chord Structure

The Sequencer Function Panel in SoundEditor contains a number of preset ‘chords’ which are programmed as arpeggiated patterns of notes. These arpeggiated note patterns are shown below, grouped to show how the pattern repeats over the 16 sequence steps. All patterns are based on a starting note of C4, but the actual starting note is programmable, allowing you to create sequences in any key.

Basic (alternating major third):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	E4														

Major:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	E4	G4	C4												

Minor:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	Eb4	G4	C4												

Major (2):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	G4	C5	E5	G5	C4	G4	C5	E5	G5	C4	G4	C5	E5	G5	C4

Minor (2):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	G4	C5	Eb5	G5	C4	G4	C5	Eb5	G5	C4	G4	C5	Eb5	G5	C4

Major 7:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	E4	G4	Bb4												

Minor 7:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	Eb4	G4	Bb4												

Major 7 (2):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	G4	Bb4	C5	E5	G5	C4	G4	Bb4	C5	E5	G5	C4	G4	Bb4	C5

Minor 7 (2):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C4	G4	Bb4	C5	Eb5	G5	C4	G4	Bb4	C5	Eb5	G5	C4	G4	Bb4	C5

15. Appendix C

Sequencer Step Values

The following chart of step values is provided to assist in identifying and adjusting sequence pitches in SoundEditor. Step values are paired with the equivalent MIDI note.

Step Value	Note	Step Value	Note	Step Value	Note
0	C0	48	C2	96	C4
2	C#0	50	C#2	98	C#4
4	D0	52	D2	100	D4
6	D#0	54	D#2	102	D#4
8	E0	56	E2	104	E4
10	F0	58	F2	106	F4
12	F#0	60	F#2	108	F#4
14	G0	62	G2	110	G4
16	G#0	64	G#2	112	G#4
18	A0	66	A2	114	A4
20	A#0	68	A#2	116	A#4
22	B0	70	B2	118	B4
24	C1	72	C3	120	C5
26	C#1	74	C#3	122	C#5
28	D1	76	D3	124	D5
30	D#1	78	D#3	RST	Reset
32	E1	80	E3	OFF	Rest
34	F1	82	F3		
36	F#1	84	F#3		
38	G1	86	G3		
40	G#1	88	G#3		
42	A1	90	A3		
44	A#1	92	A#3		
46	B1	94	B3		

16. Appendix D

Midi Setup Options

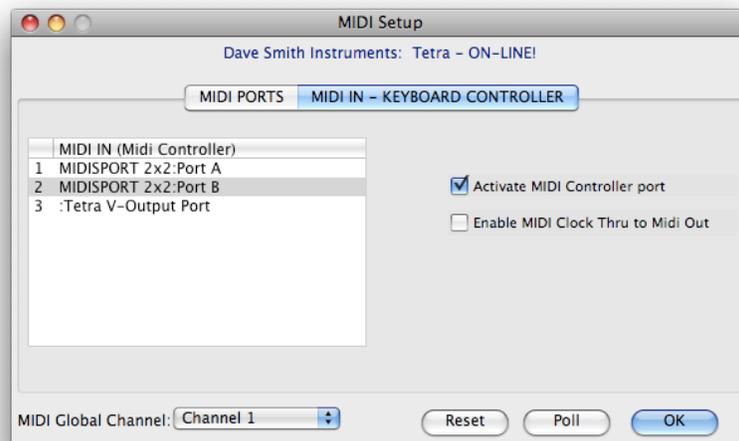
The MIDI Setup menu provides tabs for configuring the MIDI Port Connections and MIDI In Keyboard Controller options. MIDI Port Configurations are covered in the *MIDI Setup* section. This Appendix provides details on configuring and using the MIDI IN Keyboard Controller and Virtual MIDI Port functions (the Virtual MIDI Ports only appears in the Macintosh version of SoundEditor).

Midi In Keyboard Controller

The MIDI In Keyboard Controller function allows you to control the Tetra from another MIDI controller while SoundEditor is active. When enabled, the MIDI In Keyboard Controller function acts like a MIDI Merge utility, merging MIDI data from the controller device with editing data from SoundEditor.

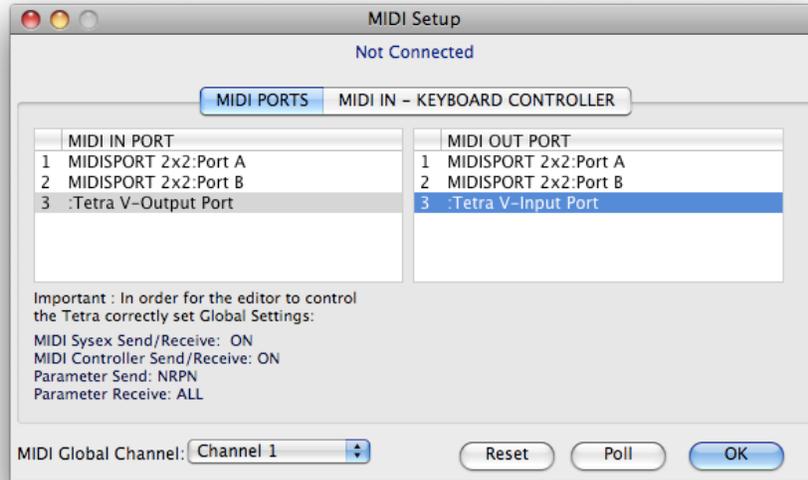
Only a few simple steps are required to configure the MIDI In Keyboard Controller function:

1. Select the MIDI port that the controller is connected to.
2. Make sure that the 'Activate MIDI Controller Port' checkbox is checked.
3. Set the MIDI Controller to the same MIDI channel as the Tetra.
4. Test the setup. If the controller can send MIDI Note On messages, you can test the setup by playing a few notes. Otherwise, try sending an easily discernible MIDI message, such as a Program Change command.



Virtual Midi Ports

The Macintosh version of SoundEditor includes a Virtual MIDI Interface that allows you to connect the SoundEditor application between your MIDI Sequencer (Logic, ProTools, Cubase, etc.) and the DSI Tetra. In the MIDI Setup window, you'll notice MIDI In Port and MIDI Out Ports labeled 'Tetra V- Output Port' and 'Tetra V- Input Port' respectively. These ports are established by SoundEditor to provide a virtual MIDI bridge between it, your MIDI Sequencer and the Tetra:



NOTE: Although they appear in the MIDI Setup list, the Virtual ports should never be selected. The Virtual ports are always active and are designed to be used exclusively by the MIDI applications that will be communicating with SoundEditor. You should select only the external (physical) ports that will be used for the connection between SoundEditor and the DSI Tetra.

The Virtual MIDI Port function allows SoundEditor to interact with the Tetra while continuing to pass MIDI data to your MIDI Sequencer.



To configure your sequencer for this setup, you need to select "Tetra V - Output Port" as your sequencer's MIDI Input port and "Tetra V - Input Port" as your sequencer's MIDI Output port. With this setup, the sequencer will receive MIDI data *from* the Virtual Output and transmit MIDI data *to* the Virtual Input.