



POWER USER

MUSIC PRODUCTION With the MOTIF ES

SQ01 v2/ Voice Editor/ Multi-Part Editor/ Remote Control & Your Windows Computer (USB)

...Getting it all to work together. Once you have all the software installed and running properly you are in for a treat. While no guide (not even this one) can answer all questions and guarantee success, we will attempt here to get you up and running. The purpose of this article is to get you familiar with what each component is and what it can do for you in an example setup. Once you understand the concept (the Theory of Operation) you should be able to begin to use these as creative tools. Until the concept is clear, working with any set of tools is a chore rather than a pleasure...the purpose here is to get to the point where you are comfortable.

SQ01 version 2 - A full featured Windows audio and MIDI sequencer that can run all of your Yamaha OPT compatible Editors (Voice Editor, Multi-Part Editor, Plug-in Board Editors, TWE).

Voice Editor for Motif ES (VEMOTES_) - This Editor lets you create Motif ES level Voices including the two User banks, the User Drum bank, and the PLG150 Plug-in Voice banks. The Voice Editor for Motif ES will work as a 'stand alone' Editor or within the SQ01 v2.0. The Voice Editor for Motif ES can open the following file formats:

- Motif ES Library File: ***.w7e**
- Motif Rack Library File: ***.w6e**
- Motif Library File: ***.w2e**
- Motif ES Multi-Part Editor File: ***.m2e**

Multi-Part Editor for Motif ES (MEMOTES_) - This Editor will give you access and control over Motif ES

MIXING setups that contain internal Motif Voices and can archive these setups on your computer and bulk them to your ES. The Multi-Part Editor for Motif ES will work as a stand alone Editor or within the SQ01 v2.0 (or any OPT compatible software). The function of the Multi-Part Editor is to archive the Mix setups storing not just the Voice selection but all the Mix parameters and effects. The Multi-Part Editor for Motif ES can open the following file formats:

- Motif ES Multi-Part Editor File: ***.m2e**
- Motif ES Library File: ***.w7e**

Remote Control - This allows you to use the front panel of the Motif ES to select and/or control the editor software and sequencing software.

Covered Subjects:

- MIDI SETUP: Motif ES
- SQ01v2 SETUP
- MIDI SETUP: Computer
- USB-MIDI PORTS
- VOICE EDITOR FOR MOTIF ES
- SQ01v2 TONE GENERATOR Definition
- MULTI-PART EDITOR FOR MOTIF ES
- REMOTE CONTROL
- Saving your Data

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Installation & Drivers

You will need your "TOOLS for Motif ES 6/7/8" CDROM. Install the following items from the CD:

- **SQ01v2.0** – install the SQ01 version 2.0
- **Tools** – in the Tools folder you will find the MEMOTES (Multi-part Editor for **Motif ES**), VEMOTES (Voice Editor for **Motif ES**). Install both of these.
- **USB Driver** – Open the folder and install the proper driver for your computer. Windows 2000 and XP use the "USBdrv2k_" folder; "USBdrv_" for the other Windows versions. From time to time there are important driver updates...Please be sure to check the following <http://www.yamahasyth.com/down/index.htm> for the latest version of the driver. As of this writing the latest USB driver is 2.0.9 (for XP/2000) and version 1.22 (for 98SE/ME)

I do not want to repeat any documentation here, so please refer to the TOOLS document that comes with your Motif ES for step-by-step installation instructions. When you have completed installation and rebooted your computer return to this document.

An Actual setup:

Motif ES7

Sony Vaio Notebook computer running Windows XP Professional

Yamaha SQ01 v2.0 Audio/MIDI sequencer (Win)

- Voice Editor for Motif ES 6/7/8
- Multi-Part Editor for Motif ES 6/7/8

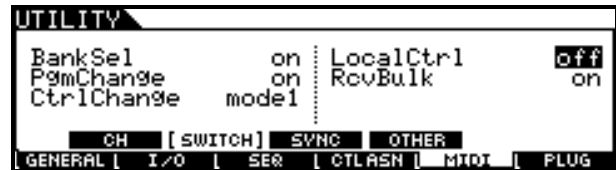
Cabling:

Motif ES7 is connected via a USB cable to the Sony Vaio Notebook. Audio is connected from the L&R Stereo main outputs of the Motif ES to a quality sound system.

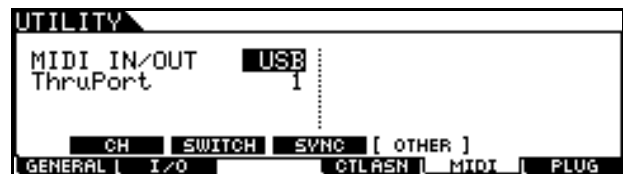
_MIDI Setup: Motif ES

Let's setup the Motif ES itself:

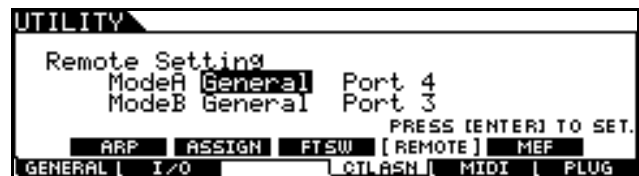
- Press [UTILITY]→ [F5] MIDI → [SF2] SWITCH. Shut the Local Ctrl switch OFF. This will allow you to select what sound you are playing by selecting a track in the software. Local Control disconnects the Motif ES keyboard from the Motif ES tone engine. The signal goes out via USB MIDI first, is routed by the software and sent back to the Motif ES USB MIDI IN directed to a specific PORT and specific PART. If you are not getting sound do not panic (you will **not** until you have assigned a track to send signal back to the Motif ES – by tracing the signal flow you will scientifically be able to troubleshoot the problem. Remember that all routing will take place in the connected software (SQ01v2).



- Press [SF3] SYNC. Set MIDI SYNC to MIDI. Set the Clock Out and SeqCtrl parameters to OFF. This will allow the Motif to run in synchronization with the software if, and when, we care to use the on board sequencer or arpeggiator of the Motif ES¹.
- Press [SF4] OTHER. Set the MIDI IN/OUT to USB



- Press [F4] CTL ASN/ [SF4] REMOTE
- Set MODE A **GENERAL** – PORT 4
- Set MODE B **GENERAL** – PORT 3



- Press ENTER to set these parameters
- Press STORE to lock in your UTILITY settings. Pressing STORE will write them to Flash ROM.
- Select a blank SONG or PATTERN.
- Press MIXING

SONG MIXING/PATTERN MIXING modes are the multi-timbral/multi-MIDI-channel modes on the Motif ES. In order to have it receive on multiple MIDI channel you must select one of the SEQUENCER modes.

SQ01 Version 2 (Windows only)

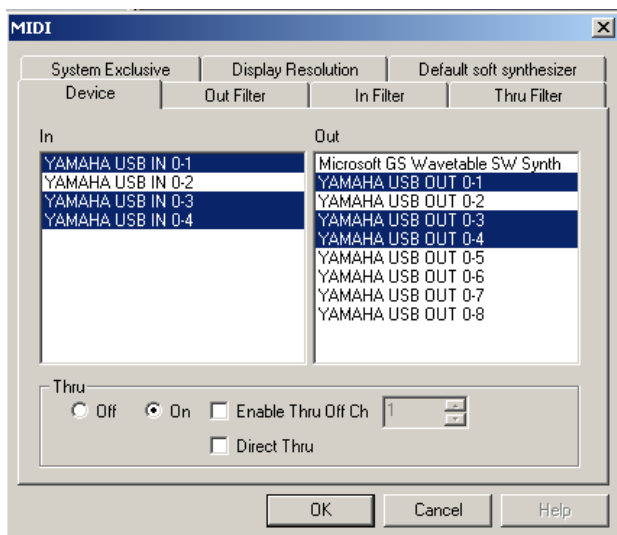
Let's get you up and running on the sequencer software. You will be communicating with the SQ01v2 via the USB-(MIDI) connection. The single USB cable takes care of both MIDI INPUT and OUTPUT and once configured you will be communicating with your computer via multiple PORTS (three ports simultaneously in this example). As we will learn more about in a minute, one port will be for the internal Parts, another port for the SQ01v2 Mixers to communicate, and yet another for the Multi-part Editor two-way communication of the Motif ES and

¹ See the Power User article called "Arpeggiator Tips" for details on how to record the output of the arpeggiator to an external sequencer.

the SONG/PATTERN Mix that you will be using. By using separate ports you ensure the integrity of the data. Port 1 will carry the 16 MIDI channels that playback the internal Parts and receive data from the Motif keyboard when recording to the software.

MIDI Setup: Computer

- Start the SQ01 V2: Choose [Programs] from the [Start] menu, then select [YAMAHA SQ01 Ver.2.0] → [SQ01].
- From the default Track View window, click the [Setup] menu, select [MIDI]→ [Device], to call up the "Device" page of the "MIDI" dialog (shown below).
- Select the appropriate output ports to use the USB connection with the MOTIF ES. In this case select and highlight OUT PORTS **0-1**, **0-3** and **0-4**.²
- Select the appropriate input ports (for example, "YAMAHA USB IN 0-1", "YAMAHA USB IN 0-3" and "YAMAHA USB OUT 0-4") in the [IN] box. Click and highlight PORTS **0-1**, **0-3** and **0-4**.



- Click the radio button for THRU = ON. This will allow us to operate the Motif ES with "Local Control" OFF – tracks will be echoed back to the tone generator from the software. With Local Control set to OFF in your Motif ES all data will travel out via USB-MIDI to the software where it will be routed back to the intended target PART. More on this in a moment.
- Click [OK] to close the dialog box.

Booting up the program while already connected via USB to the Motif ES will allow the drivers to

² Port 2 is not used in this setup – but could be used in a case where you have PLG150 boards installed in your Motif ES and wish to address them on a separate Port.

load and find the program. If you do not see the USB devices – check your Control Panel for the USB-MIDI icon. You will want to set your computer so that it will **not** go into a sleep cycle or hibernation during your session. Also defeat any screen savers as well, they can interrupt your session. (Too many different things happen and this can be the source of some very strange reactions by both your software and the Motif). Such control is typically found in CONTROL PANELS → Power Options area. Please check the documentation that comes with your computer and prepare it to be a dedicated music machine when you want to do music recording.

_USB PORTS – The USB connection allows you to address the Motif ES on *multiple* PORTS. The 5-pin DIN MIDI jack is a *single* PORT connector. Think of each PORT as a discreet MIDI connector, capable of communication to as many as 16 MIDI channels. In the scenario we will be setting up here we will be communicating via as many as 3 separate MIDI OUT PORTS within the USB cable.

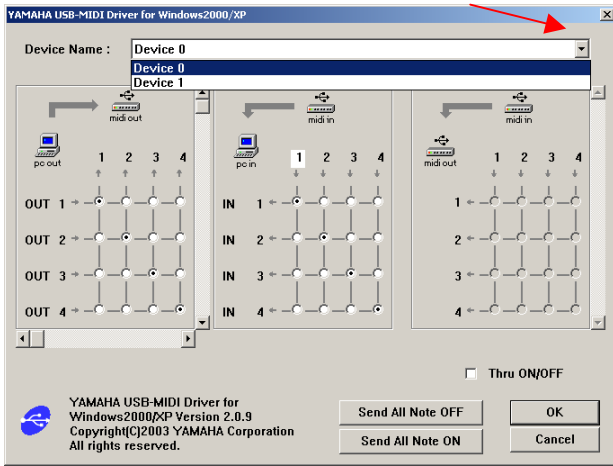
- **PORT 1** – the internal sounds of the Motif ES (fixed). This assignment cannot be changed when the USB (MIDI) interface of the Motif ES is being used.
- **PORT 3** – will be used for communication with the MULTI-PART EDITOR for Motif ES6/7/8; we will be sending and receiving data via this PORT, even remote controlling this software from the front panel of the Motif ES.
- **PORT 4** – will be used for communication to the SQ01 ver2.0 allowing us to remote control the AUDIO MIXER functions.

As we will see later, each track of the SQ01v2 software can be routed to a specific MIDI PORT and communication functions for the various Editors will use other specific PORTS.

In this example setup, we are using just one USB port on the computer. It feeds directly between the Motif ES and the computer. The screen shot below shows how the USB driver addresses DEVICE 0 (thus the 0-1, 0-2, etc.)

Device 0 is the Motif ES synth workstation

This screen shot is from the CONTROL PANEL folder of your Windows computer: Click on the USB-MIDI DRIVER icon. There is a panel for signal from the PC, to the PC and even one for daisy chaining multi-port systems. If you had a second USB device in your setup it might appear as USB Device 1 and would have driver addresses listed as 1-1, 1-2, etc.



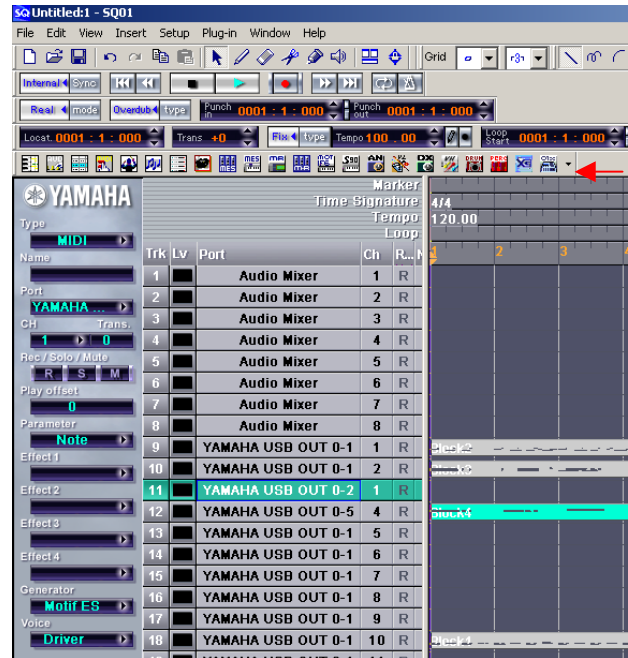
If you have multiple USB devices you could switch between the Devices by clicking on the small chevron to the right of the DEVICE NAME selection. Here we will keep it simple. Notice in the screen shot above the white box in the center panel that is surrounding the number 1. This flashing box indicates communication between the Motif ES and the computer. If you do not see the box flashing: press the SEND ALL NOTE ON box, followed by the SEND ALL NOTE OFF box to see if you can re-establish connection. If you still do not see the flashing indicator, recheck your connections and setting.

Voice Editor for Motif ES

The Voice Editor for Motif ES gives you a graphic user interface to the front panel of the Motif ES when you are in VOICE Mode. Every parameter in VOICE mode is shown. The Voice Editor can address and store all USER Voices including the Normal USER 1 & 2 bank, the Drum User kits, even the USER Plug-in Voices that you may have created for you PLG150 series boards. It acts as both an Editor and a Librarian because you have full access to all the sounds of the Motif ES – all the Preset Voices will also be shown. This not only allows you to see how they were programmed but makes it much easier to copy and paste Voices into your own unique Voice sets. You can even 'import' Voice data from other files while you have a file open...essential for combining Voices from multiple sets of data. We will jump ahead and set this up now so that you can intelligently use the Voice selection method...do not worry if you cannot play and hear your Motif ES at this point. That will happen when we actually select a track assigned to proper OUT PORT.

On the main SQ01v2 Track View screen you can place quick launch icons for the programs you will be using within SQ01v2. Click on the small chevron to the right of the icon row (indicated by the red arrow below) and select "VOICE EDITOR For Motif ES". Place any icons of programs that you want to use, i.e., MULTI-PART EDITOR For

MOTIF ES. On my Toolbar you see quick launch icons to launch various views and/or OPT Editors (Open Plug-in Technology):



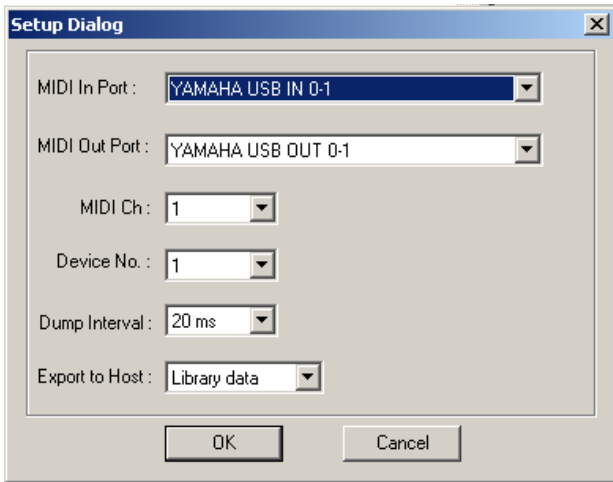
Left to right: Piano Roll view, Audio Mixer, List (event) view, MIDI Mixer, Master Track, Auto Arranger, Soft Synth Rack, TWE (wave editor), Multi-Part Editor Motif ES, Voice Editor Motif ES 6/7/8, Voice Editor for Motif Rack, Multi-Part Editor for Motif Rack, Voice Editor for Motif 6/7/8, Voice Editor for S90, AN Expert Editor, VL Visual Editor, DX Simulator, VH Effect Editor, Plug-in Board Editor for PLG150-DR, Plug-in Board Editor for PLG150-PC, XG Editor and Studio Manager for 01X.

By clicking on the small chevron on the right side of the toolbar you can open a dialog box and you can ADD and arrange icons on your toolbar. Click CLOSE when you are happy with your arrangement.

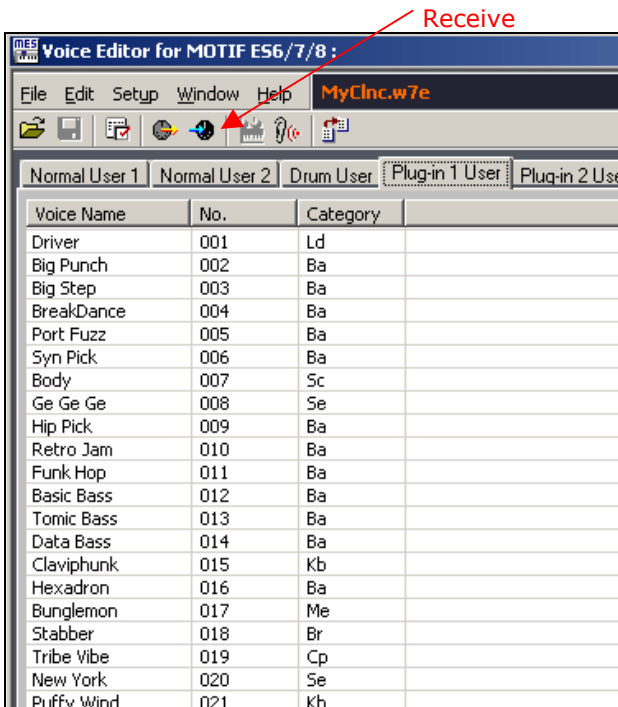
- Click on the Voice Editor for Motif ES icon and launch that application.

When launched "inside" of an OPT compatible software sequencer, you will not have the "floating" MIDI Setup Box that you see when you launch the Editor in stand alone mode. It simply uses the Device setup you made for the host software (in this case the SQ01v2.0).

- The Voice Editor will be communicating with internal Motif ES data it will use PORT 0-1
- Click "SETUP..." on the toolbar of the VOICE EDITOR window and set the MIDI IN PORT (0-1) and MIDI OUT PORT (0-1) as shown below:



If this is the very first time you have launched the "Voice Editor for Motif ES", it will ask that you let it load the Preset Voice data. You only have to do this once (the first time you use the program), thankfully, because it does take some time. Once the presets are loaded to the Editor, you will want to create a file that contains all of your current USER Bank Voice Names and data. Later we will see that the "Multi-Part Editor" will also act as a Librarian for the sounds that you use in each composition.



Click on the RECEIVE icon (it is found on the toolbar and is a MIDI cable with an arrow pointing inward). Select "NORMAL USER1+2+DRUM USER" as RECEIVE TYPE, and click START. This will extract all the Normal USER 1 and USER 2 Voices, the USER DRUM Kits. When the transfer is complete click on the CLOSE box. Then you should

name and save this file to a folder on your computer.

- Click on the disk icon and save the file

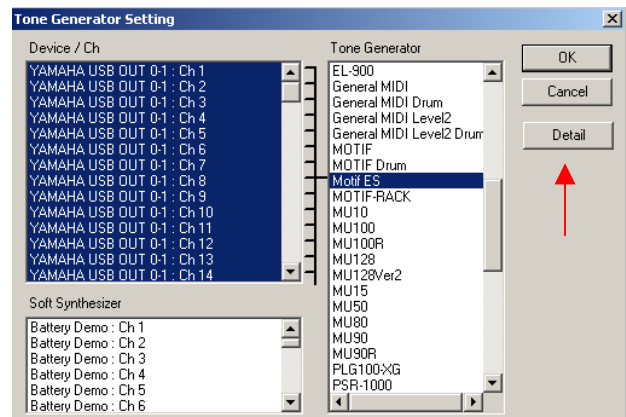
This will create a .w7e type file with all your USER VOICES³ – which can be loaded directly to the Motif ES when placed on a SmartMedia card or USB drive. This file also will be able to be IMPORTED into the Multi-Part Editor (more on this later). You will want to create Voice Editor (.w7e) files for all the various Motif ES Voices that you acquire because the Voice Editor works as a Librarian allowing you to easily IMPORT individual Voices from other files including: Motif ES files (.w7e), Motif 6/7/8 files (.w2e), Motif Rack files (.w6e), and Multi-Part Editor for Motif ES files (.m2e).

Before you experiment with the Voice Editor let's continue and get to a point where you will be able to play and hear your Motif ES. We needed to make a reference file so that you can intelligently select Voices for your MIX.

SQ01 Tone Generator Setup

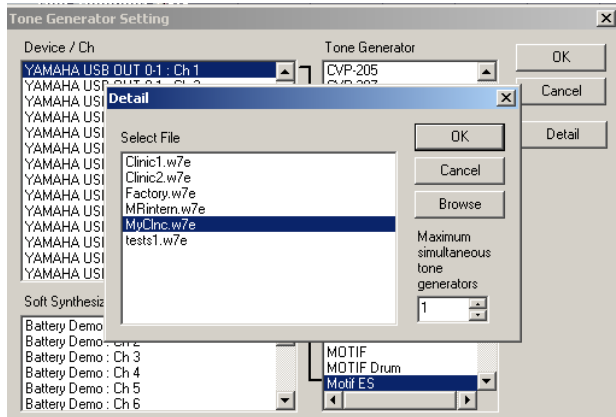
In the SQ01v2, on the Main TRACK VIEW screen, under the SETUP pull-down find the TONE GENERATOR... item. Here we will ready the software to select sounds by name in your Motif ES. In the Device/Ch box on the left, you will see your various MIDI Devices and Channels. We know that the internal Motif ES Voices will be PORT 1 (0-1). Highlight "Yamaha USB 0-1 Channel 1" through "Yamaha USB 0-1 Channel 16" and connect them to Motif ES in the Tone Generator box on the right. This will allow us to use the "Category Search" function from within the SQ01v2. (Shown below...)

- Click on the "DETAIL" button on the right.



³ The Voice Editor does not save samples nor does it save custom Board Elements.

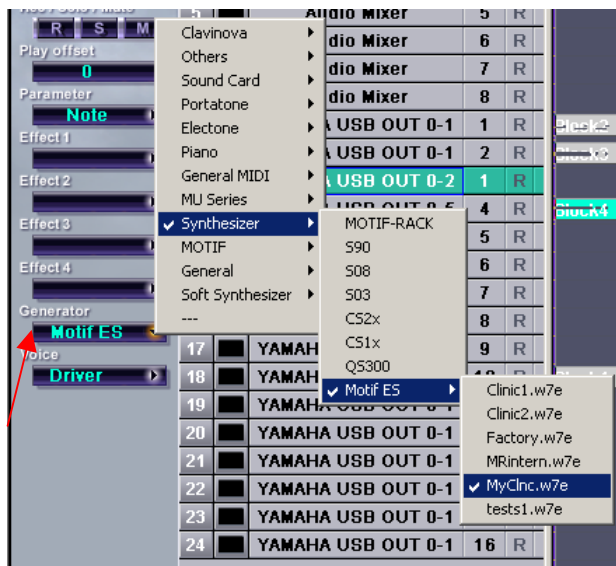
This will allow you to 'browse' and find on your computer the Motif ES Voice Editor file (.w7e) that represents the Voice data you are currently using.



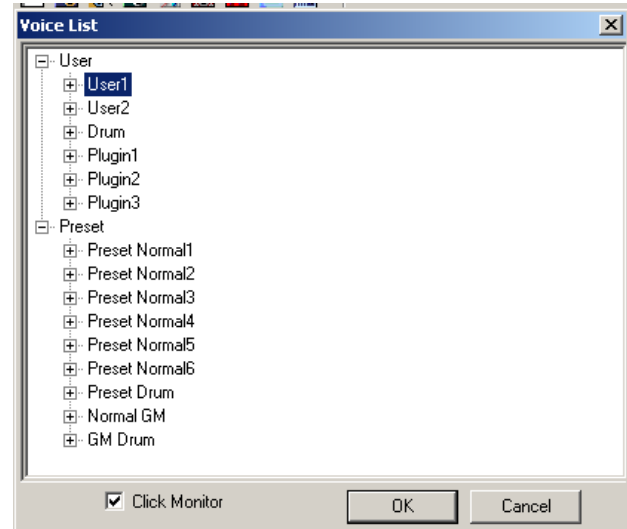
In the SQ01v2 you have both AUDIO tracks and MIDI tracks. Each track can be connected to a driver assignment. This is how the computer instructs the track where to look for information and where to send it. In the case of the Audio track the source will be your audio interface (we will deal with audio interfacing in separate Power User article), and in the case of a MIDI track you will be directing it to the, now familiar, PORT and Channel system.

- Click OK and close Tone Generator Settings

Now that you have set your Device and Ports, click on the NEW icon in the upper left corner of the top toolbar to open an entirely new track window. This will typically open a setup with the first 8 tracks set for AUDIO MIXER and track 9 and higher set for MIDI: YAMAHA USB OUT. Highlight that first YAMAHA USB OUT track (track 9) by clicking on the number 9 in the "TRK" column. You should now be able to play on your Motif ES keyboard and hear it.

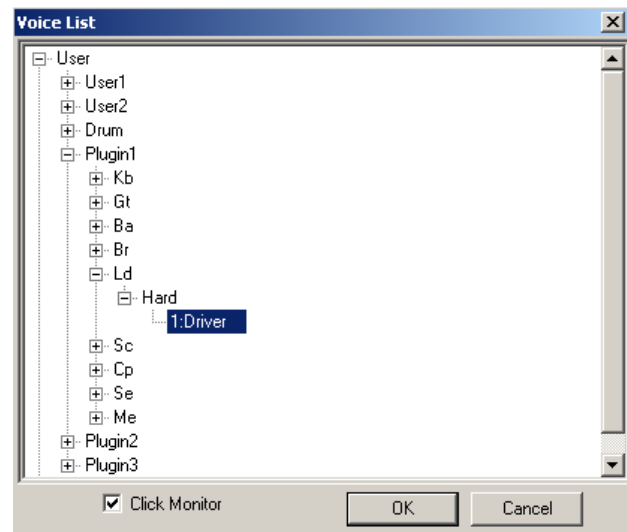


Click on GENERATOR (in the far left column) you will be able to designate the Motif ES as the "Synthesizer" you are using. And you will be able to designate the .w7e file you are currently using so that the Voices can be easily sorted by category and name. Above you see I am using a Motif ES file called "MyClnc.w7e". (This is my actual Clinic Voice set.)



When you click on VOICE (at the bottom of the control column just below "Generator") you will be able to see the Voices by the two-letter prefix under USER and PRESET headings.

By checking the CLICK MONITOR box you will hear an arpeggio play so you can audition a sound as you select it. This tree should be familiar to Windows computer users – simply click on the '+' sign to *open* a bank. They will be subdivided by category using the familiar Motif ES 2-letter prefix.



As you select a Voice from the List it will appear in the VOICE box in the left column of the Track View screen.

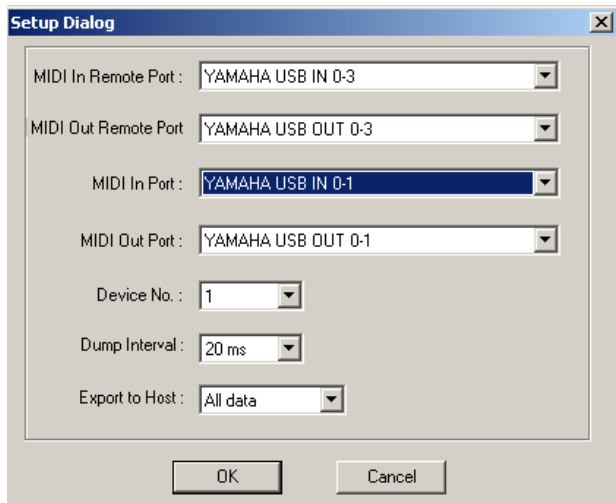
Try it out (now that we have sound). Set up a few Tracks using the GENERATOR/VOICE method. Highlight a track by clicking on its number, by selecting OUTS 1-16 and opening a NEW session we have automatically assigned 16 tracks for the Motif ES. Therefore all you need do is click on Voice and search your Voice Editor file for your selection.

MULTI-PART EDITOR

Selection of Voices via the Generator method is one thing it will ensure that the Voices that you use on tracks are recalled when you open this file. But that does not save all the parameters of a Motif ES Mix. In addition to *which* Voice is used on a track you will want to also save parameters like its *volume*, its *pan* position, its *Part EQ* settings, its polyphony mode, its *transposition*, its *filter* settings, its *effects* routing, etc., etc., etc. What about Master EQ and Master Effects and so on? So beyond the tone generator definitions are all the parameters of the MIX...where do you save these?

Up until now you have been saving them in the Motif ES when you store a mix. Wouldn't it be cool to save them with the sequence data in the computer? This way all your data for a song is all in one place...the Voices that you used, the song data, etc. Enter the **MULTI-PART EDITOR**...this is probably one of the biggest improvements over the original Motif...the ability to work with computer to do what it does best: organize!

Click on the **Multi-Part Editor** icon to launch the program. It takes the look (quite naturally) of a mixing console. It is after all MIXING mode of your Motif ES – just as the Voice Editor is Voice mode. You see a familiar mixer-type interface with a name strip at the top of each channel.



- Click on SETUP on the Multi-Part Editor's toolbar and set the REMOTE PORT to communicate on 0-3 IN and OUT. (Shown above...)
- Click OK to return to the main Multi-Part Editor screen.

When you click on the Bank or the Voice Name you will be able to select from all the various Voices in your setup. The Multi-Part Editor is able to request a bulk dump from the Motif ES. All your Voices (preset and user) will be available any time you open the Multi-Part Editor file, as well. It is necessary that the VOICE EDITOR and the MULTI-PART EDITOR are on the same set of Voice data. Therefore each Multi-Part Editor file will also save all VOICE data that is currently in the Motif ES and they will be linked to the current Song – this means when you save in SQ01v2 format all the Voices that were available in your Motif ES at the time you save will be saved as well. This way the session is always aware of the Voice data *currently* in your Motif ES and makes them all available from the Editor itself.

- Click on OPEN and set the dialog box to open your currently used Voice Editor (.w7e file).



By default the Editor looks for a (.m2e) file, which is the Multi-Part format, but you can change the "Type of File" to search your computer for .w7e. By browsing via VOICE EDITOR for MOTIF ES FILE type you will be pointing the Multi-Part Editor to the same file that you just created – so that both editors are dealing with the same file. (Alternatively, you can go to the SETUP menu item on the Multi-part Editor screen and select RECEIVE VOICE BULK... this will allow you to select, as you did earlier with the VOICE EDITOR, to grab the data in the Motif ES, currently).

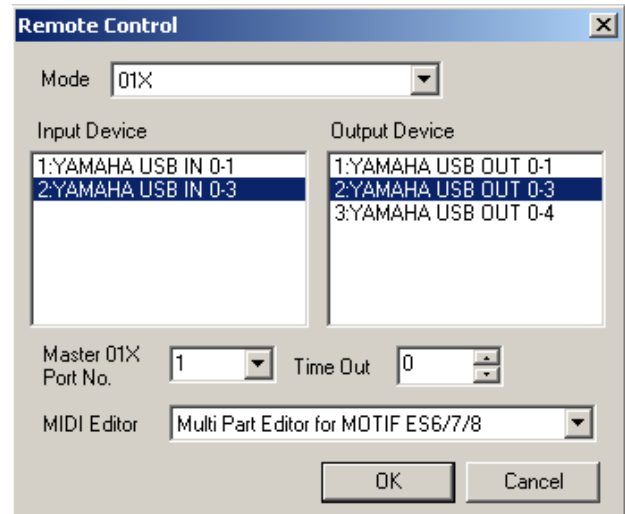
Later when you complete your setup for the song you will save a file in Multi-Part format and it will remain associated with your SQ01 ver2.0 file (.yws) – when you open your SQ01v2 file it will open both the Sequencer Track data and the MULTI-PART EDITOR file that will setup your Motif ES. You will click on the Transmit icon and send the Mix to your Motif ES prior to playing the sequence data. And if necessary you can send the USER Voices as well – because they will be duplicated automatically in the Multi-Part Editor.

REMOTE CONTROL

We mentioned that Port 4 and Port 3 will be used as the communication bus to Remote Control audio/MIDI sequencer software and the Multi-Part Editor, respectively. The Motif ES has protocol that allows it to address specifically SQ01v2, Steinberg Cubase SX/SL, Cakewalk's Sonar 2.0/Sonar 3, Multi-Part Editor for Motif Rack, Multi-Part Editor for Motif ES on the Windows side. And it can address specifically Emagic Logic 5.5 (or later), and MOTU Digital Performer 3.1 (or later) on the Macintosh side. The Owner's Manual is fairly complete and detailed on how to setup each of the different programs (page 147-149). Please refer to these pages for setup details.

Setup the Remote for the Multi-Part Editor:

- Click Setup on the toolbar of the main Track View window of the SQ01v2.
- Select REMOTE CONTROL...
- MODE = 01X. The front panel Motif ES buttons will be assigned to perform the same functions as panel buttons on the Yamaha 01X, for controlling various software. The parameters will be displayed in the Motif ES screen.
- Highlight PORT 0-3 as the INPUT and OUTPUT Device as shown below. The MIDI EDITOR will be: "Multi Part Editor for MOTIF ES6/7/8"



- Click OK
- Press the REMOTE ON/OFF button on the front panel of the Motif ES. Parameters should appear in the screen of the Motif. (If not, try holding F6 SHIFT + REMOTE ON/OFF)

Setup the Audio Mixer:

Although we will cover the AUDIO MIXER function in depth in another article, we will make mention of it here.

To select the Audio Mixer from the software you would click on VIEW in the toolbar and select AUDIO MIXER or you can use the computer's SHIFT + 7 quick keys to recall it. The Audio Mixer will control and allow you to automate the mix of the audio tracks you record.

- Click on SETUP... on the Audio Mixer toolbar
- Click on SETTINGS... set the number of audio tracks you wish to work with in this session – the default is 8. The number of simultaneous track will be determined by your computer hardware capability.
- Click OK
- Also under the SETUP... heading you want to set the REMOTE CONTROL... settings
- Set the INPUT PORT to Yamaha USB IN 0-4
- Click OK

You will also be able to recall this AUDIO MIXER by selecting AUDIO in the Motif ES Remote screens:

- While REMOTE CONTROL is active press the ARP FX button (selecting the third row of KNOB CONTROL FUNCTIONS
- Press F1 AUDIO – to launch the Audio Mixer
- Press F2 MIDI – to launch the Multi-Part Editor screen (if it is not already open it may take a few seconds to launch).
- You will be able to toggle back and forth between AUDIO MIXER and MIDI (Multi-Part) Mixers.

When selected function will be indicated by the color of the LED: "R-Audio" (RED) - the audio mixer is selected and "G-MIDI" (GREEN) when MIDI (Multi-Part Editor) is selected. Details of the Audio Mixer setup will be covered in a separate Power User article.

When the R-AUDIO/G-MIDI LED is green you will recall the Multi-Part Editor. Please review the parameters that are available in the DATA LIST booklet, page 58, and in the Motif ES Owner's Manual, pages 150-152.

Using the "Tile Vertically" function found on the toolbar under WINDOW, you can view both the Track View and the Multi-Part Editor at the same time, split-screen:



When setup properly you can use the front panel of the Motif ES as giant multi-purpose mouse and you can navigate your software with ease. You can, of course, operate the transport and recall various functions at the touch of a front panel button.

Saving a Session

Once you have completed your first song in the SQ01v2, your MIX setup is in the Multi-Part Editor. If you make changes on the front panel of the Motif ES, be sure to click on the RECEIVE icon in the Multi-Part Editor. This will update the data in the Editor. Changes made in the software are immediately represented in the hardware. Name and save the Multi-Part Editor data as a *safety*. Next save your SQ01v2 sequence data in its native format, **.yws**, or save as **.yws with Wave**, if you have recorded audio in the session. This will save both the sequence data and the Multi-Part Editor associated with this session.

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