RETROAKTIV

MPG-50 MKII

USER'S MANUAL AND REFERENCE GUIDE
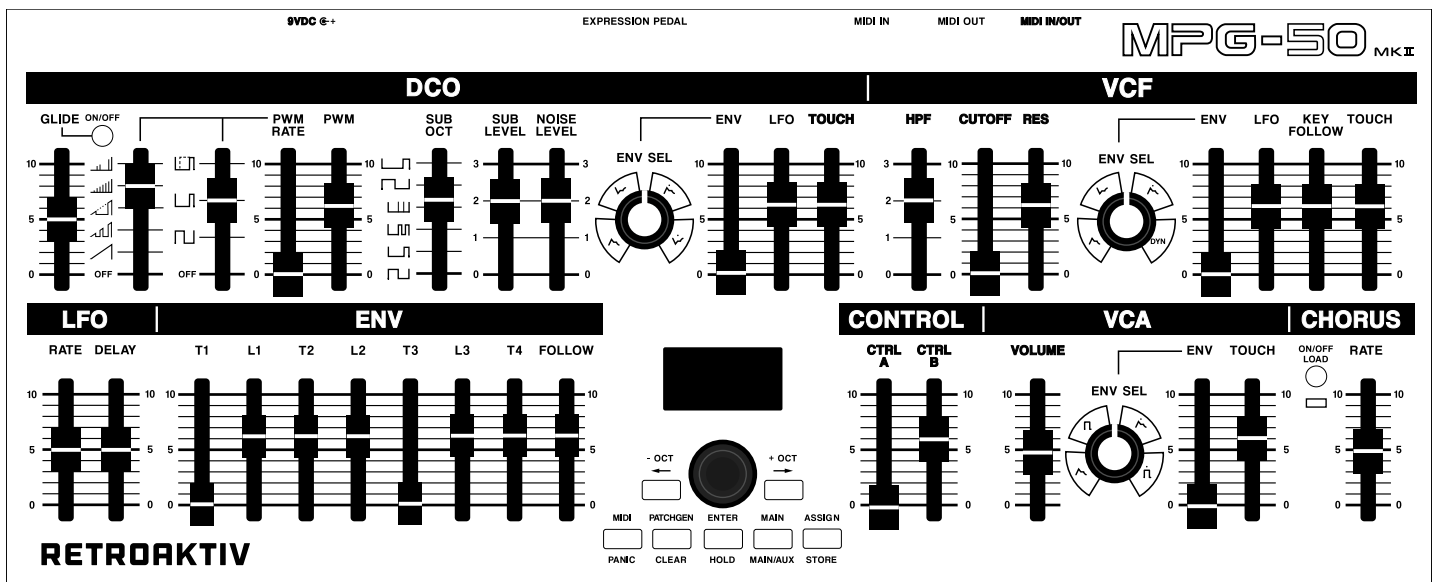
FEATURES

Independent control of any combination of 2 Alpha Juno or MKS-50 synthesizers.

Control 2 units independently, or as a single 12-voice polyphonic synthesizer, using Multi-Unit Poly Mode.

On-board 32k of memory for storing patches, MIDI matrices (ASSIGN), and setups on the controller. MKI units can be expanded to 128K of object storage. MKII units ship with 32K on-board, expandable to 160K.

Flexible MIDI matrix allows multiple parameters to be controlled independently in real-time, using aftertouch, mod wheel or any CC, an expression pedal, or the two ASSIGN sliders on the MPG-50 front panel.

Chord mode for playing any combination of notes using a single key. (This is different than AJ CHORD mode)

Store any PATCH with the push of a button. MPG-50 eliminates the "shared-tones" system of saving sounds on the MKS-50. Each MPG-50 PATCH is stored as one object.

Intelligent patch generator creates new tones and patches at the push of a button. Choose from Basses, pads, bells, strings and more.

CC to sysex translation allows for DAWs and sequencers to record and playback parameter changes on MPG-50 in realtime. Each of the 2 layers on the controller can be controlled independently by CCs.

Each ASSIGN, PATCH, and SETUP can be changed using program and bank change messages. Independent control of all layers.

MPG-50 allows users to store and name custom CC maps, allowing users to create their own custom control maps for other gear using the MPG-50 panel.

Receive or transmit banks, individual patches, or a full memory backup of all stored user objects. Sysex utility allows users to quickly load, store, and back up all of their favorite soundbanks.

MIDI bootloader allows users to use sysex files to update their MPG-50 allowing for more new features to be added in the future.

FRONT PANEL & JACKS
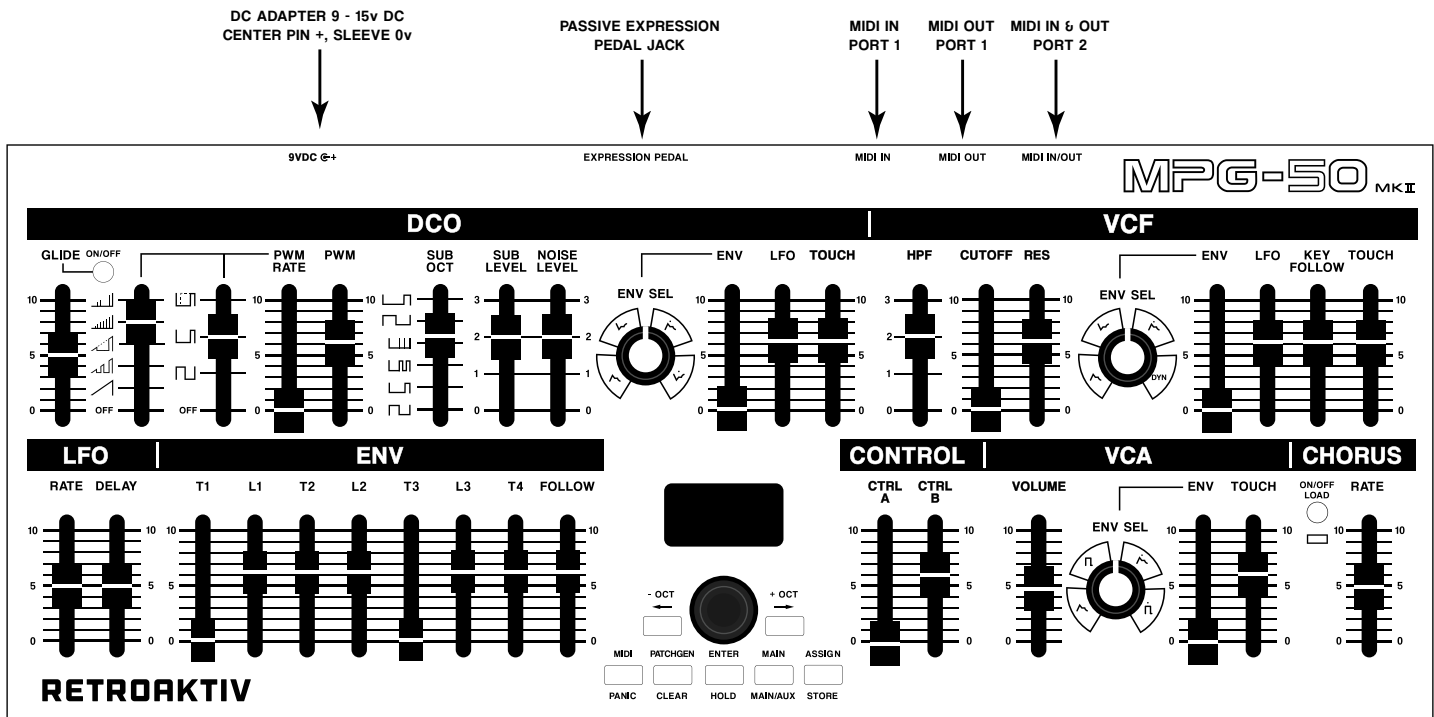
OLED DISPLAY

OLED display presents information about the operation being performed.

OBJECT STORAGE

Use SHIFT+ASSIGN (STORE) to select a location to store a PATCH, ASSIGN, or SETUP. Use SHIFT+CHORUS (LOAD) to load a stored object.

LAYER

Use the MAIN (MAIN/AUX) button to select the layer to be edited (MAIN/AUX/BOTH).

ENCODER/(SHIFT)

The black encoder knob located directly under the OLED is used to modify values of the currently selected parameter. If you hold down the encoder [SHIFT] and turn the encoder, parameter values will change by larger increments.

MENU NAVIGATION BUTTONS

The menu navigation buttons are used to select editor pages in the MPG-50. The [LEFT] and [RIGHT] buttons are used to move the cursor in the menu pages.
The [ENTER] button is used to execute a variety of operations within a menu.
[MIDI], [PATCHGEN], [MAIN], and [ASSIGN] buttons are used to navigate to their respective menu pages.
Special functions are accessed by pressing a button while holding [SHIFT].

JACKS & POWER

The power adapter jack and power switch are located on the left side of the back of the unit. Use only the adapter that came with the MPG-50.

MIDI IN = MIDI IN Port 1
MIDI OUT = MIDI OUT Port 1
MIDI IN/OUT = MIDI IN or MIDI OUT Port 2

Port 2 can function as either a MIDI IN or MIDI OUT, depending on the MIDI PORT 2 setting in the MIDI: Settings menu.

CONNECTIONS & GETTING STARTED

SINGLE UNIT OPERATION

To begin using your MPG-50 mkII, it's important to set up proper MIDI communication between the programmer and the synth. The most basic setup is to send the MIDI OUT from your DAW or MIDI controller, to MIDI IN Port 1 of the MPG-50. The MIDI OUT Port 1 of the MPG-50 mk II is connected to the MIDI IN of the AJ/MKS-50. The default state of the MPG-50 is for MIDI ECHO to be enabled. This means that MIDI data received by the 50 on its MIDI IN will be immediately processed and passed OUT to the AJ/MKS-50. The figure below shows a simple configuration of MPG-50
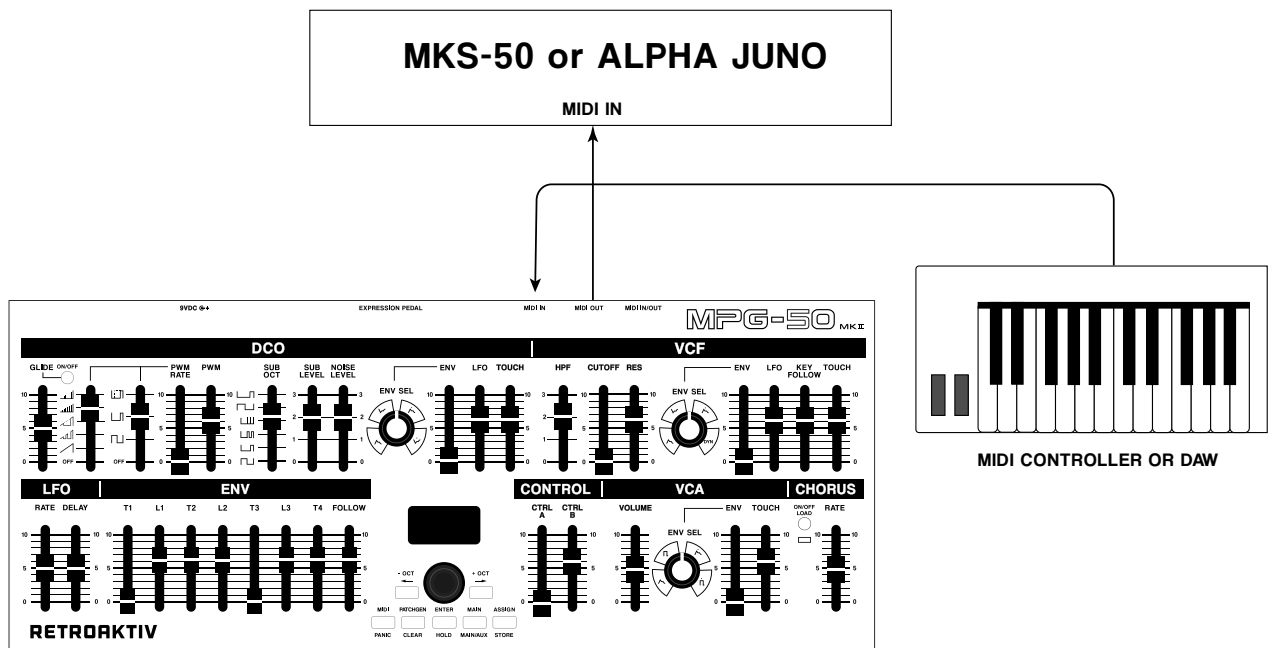
Basic MIDI configuration

To begin making sound, let's start by creating a basic setup. Press the [MIDI] button on MPG-50 and set the MPG-50 MIDI settings as shown below, and set the AJ/MKS-50 to receive on channel 1. Set Unit 1 to either JUNO or MKS-50, depending on which you're using. Enable EXCLUSIVE on the synth so it receives sysex from the controller. Set your MIDI controller to send on channel 1. The synth should be receiving data from the controller when a slider is moved, as well as when a key is pressed on your controller.


Basic MIDI menu settings on the MPG-50 mkII

Basic MIDI menu settings on the MPG-50 mkI

MULTI-UNIT OPERATION

MPG-50 can control 2 MKS/Juno units independently. Users can play the 2 Junos as a "STACK", where the two synths are layered, similar to the UPPER & LOWER tone architecture found on synths like MKS-80 and MKS-70/ Super JX. The two synths can also be daisy chained by using MPG-50's Multi-Unit Poly Mode, which turns the 2 synths into a single 12-voice synth, effectively doubling the polyphony of an Alpha Juno. The figure below shows the most basic connection scheme for multi-unit operation.
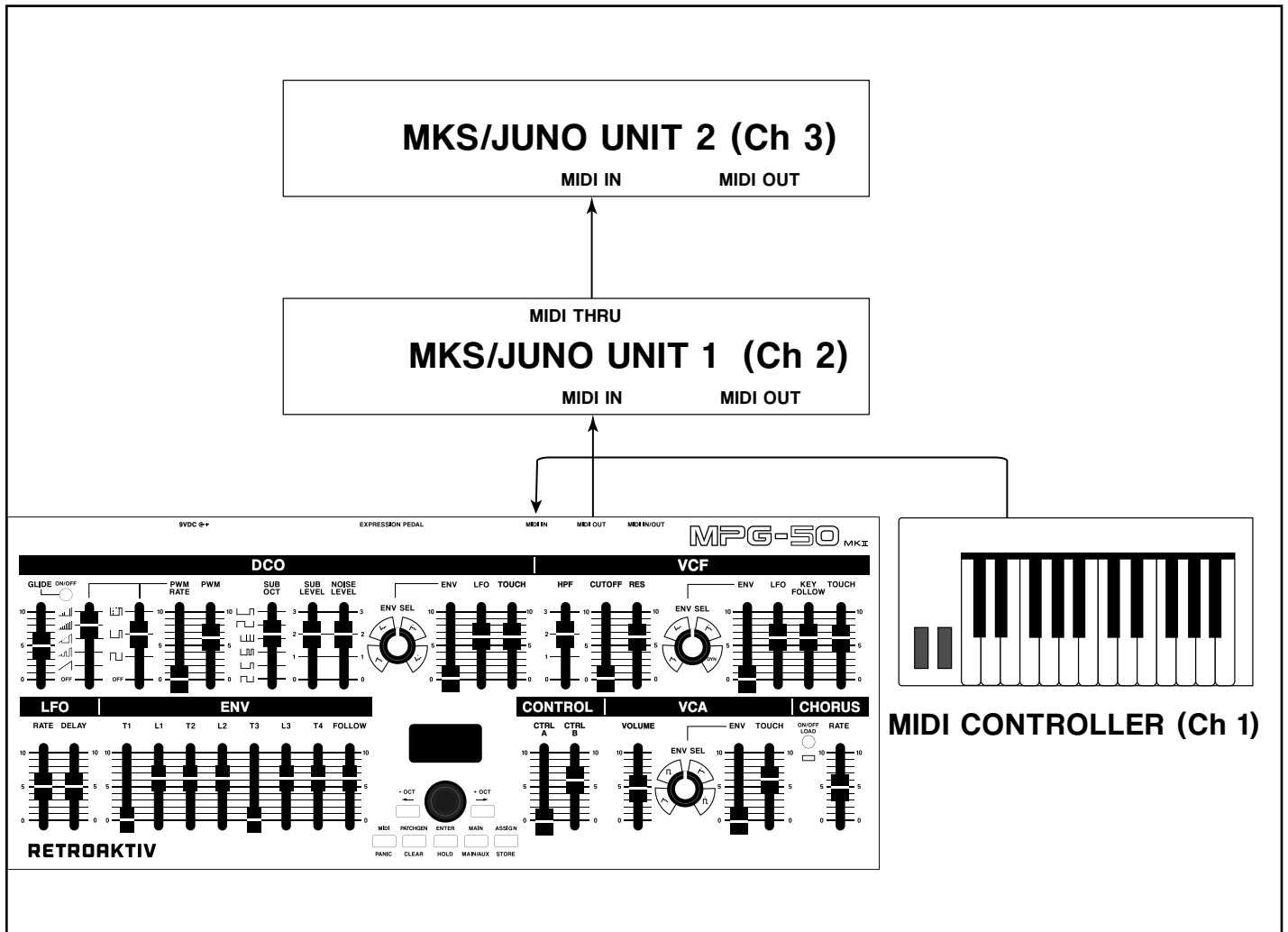
Basic MIDI configuration for 2 Unit Operation

USING TWO UNITS IN 'STACK' MODE

To begin playing the synths in STACK mode, MIDI: Settings pages should be set as follows.

MPG-50 MIDI: Settings Unit 1 - "Stack" Mode

MPG-50 MIDI: Settings Unit 2 - "Stack" Mode

MPG-50 MIDI: Global Settings - "Stack" Mode

Note that Unit 1 and Unit 2 Input Ch is set to channel 1 on both units. This means that the MPG-50 is listening for notes and control data on channel 1 on both units. It a note comes in on channel 1, then it will trigger a sound on both synths. Notice that the Output Ch on Unit 1 is set to channel 2, and the Output Ch on Unit 2 is set to channel 3. MKS/Juno Unit 1 is set to receive on channel 2, and MKS/Juno Unit 2 is set to receive on channel 3. When playing in STACK mode, the VOLUME slider can be used as a CROSSFADE slider. Be sure that OMNI is OFF on both units to use this. Go to MAIN screen and move the VOLUME slider to select it. Click the

SHIFT button once, and the screen will now display CROSSFADE. Moving the slider up and down will crossfade between unit 1 and 2.

USING TWO UNITS IN MULTI-UNIT POLY MODE

When in Multi-Unit Poly Mode, the 2 units become a single 12-voice synthesizer. This means rather than stacking two 6-voice synths over each other, we load the same sound onto both, and use them as a 12-voice synthesizer. The Unit 1 and Unit 2 MIDI: Settings are the same as in STACK mode. The only change is that MULTI-UNIT POLY MODE is set to ON.

MPG-50 MIDI: Settings Unit 2 - Multi-Unit Poly Mode

MENUS AND NAVIGATION

The MPG-50 will boot up and display the MAIN menu screen. The diagram below shows the contents displayed on the MAIN screen.
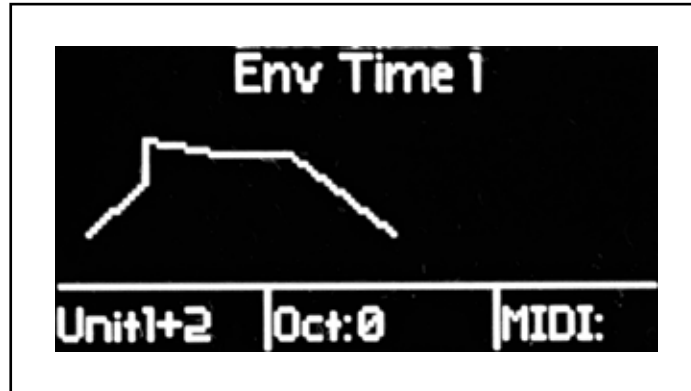

MPG-50 MAIN Screen

The MAIN screen displays the following information:

1 - Current active parameter name and value

2 - Unit: The box in the lower left corner of the screen displays the unit currently being controlled by the MPG.

3 - Oct: The center box on the bottom of the MAIN screen shows the current octave transposition setting.

4 - MIDI Input Monitor - Displays channel of incoming MIDI activity received at MPG-50 MIDI IN port.

To return to the MAIN screen at any time, press the [MAIN] button in the navigation console. Pressing MAIN repeatedly will cycle between editing the MAIN, AUX, or BOTH synths. SHIFT + MAIN will also toggle the layer.

The encoder and arrow buttons are used to navigate menus and change settings. The SHIFT function refers to the switch on the encoder knob. To engage the SHIFT function (used for double-button combos such as SHIFT+MIDI button = MIDI Panic), press and hold the encoder knob. To increment a value with the encoder, simply turn the encoder knob. To increment or decrement by 8, hold the SHIFT button in while turning the encoder.
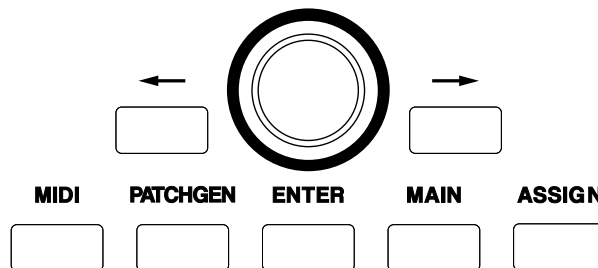
MPG-50 Navigation Console

Use the [MIDI], [PATCHGEN], [ASSIGN], and [MAIN] buttons to navigate to the different menu pages. To move the cursor on a menu page, use the [LEFT] and [RIGHT] buttons. To change the value of a highlighted menu setting, use the [ENCODER] dial.

VOLUME AND CROSSFADE FADER

The VOL & X-FADE slider on the front panel allows users to either set the master volume of the MKS-50 (When in volume mode) or it can crossfade between UNIT 1 and UNIT 2.   When used as a VOLUME slider, this will send CC#7 (Volume) messages to each MKS-50. If used as an X-FADE slider, the fader will crossfade between UNIT 1 and 2, with the volume level of each MKS-50 being equal when the fader is at 50%.   Both synths must have OMNI turned OFF for CROSSFADE to work.

To toggle the VOLUME/X-FADE mode: From MAIN screen, move VOLUME slider to select it. Click [SHIFT] to toggle between VOLUME and CROSSFADE.

IMPORTANT SHORTCUTS

It will be useful to memorize the following editing shortcuts.

TONE & PATCH SHORTCUTS
[SHIFT] + [GLIDE] = toggle KEY ASSIGN MODE (MONO/POLY/CHORD)
[SHIFT] + [LEFT] = TRANSPOSE OCTAVE DOWN
[SHIFT] + [RIGHT] = TRANSPOSE OCTAVE UP

PATCH GENERATOR SHORTCUTS
[SHIFT] + [PATCHGEN] = Generate a random tone
[PATCHGEN] = Mask all sections/Unmask all sections

MIDI
[SHIFT] + [MIDI] = MIDI panic

ASSIGN
[SHIFT] + [PATCHGEN] = Clear all assigns

STORAGE
[SHIFT] + [PATCHGEN] = Delete bank
[SHIFT] + [CHORUS] = Increment bank

USER CC
[SHIFT] + [PATCHGEN] = Delete current CC map
[SHIFT] + [CHORUS] = Load a new USER CC MAP
[SHIFT] + [ASSIGN] = Store a new USER CC MAP

FREEZE FUNCTION
Pressing ENTER from the MAIN screen will enable the "FREEZE" function on MPG-50. When FREEZE is enabled, a message will be displayed "Freeze : ENTER to send.". When FREEZE is on, moving a slider will not send a message. When ENTER is pressed, the new location of any slider moved during the FREEZE operation will be sent to the synth. This is an excellent way to send a large number of slider changes all at once, at the exact moment ENTER is pressed.

"PEEK" MODE

If you want to see that a slider value is currently set to, navigate to the desired layer, then hold SHIFT while moving the slider. The current value of the slider will be displayed on the screen, and it will not change when moved. This allows you to safely check the state of any control in a PATCH or TONE without changing the original value.

USING ENCODER TO SCROLL THROUGH PRESETS ON SYNTH

MPG-50 allows users to use the encoder to scroll through presets on the MKS/Juno. To do this, press MAIN button to return to the MAIN screen, and press the LEFT button once. This will navigate to the **MAIN: Preset Select** menu. Scrolling through the PRESET SELECT menu will allow you to scroll through the sounds on the MKS/Juno usit using the encoder on the MPG-50.

MANUAL MODE

To send the current slider and button settings on the front panel to the synth, go to the MAIN menu by pressing [MAIN]. Now press [SHIFT] + [ENTER]. A dialog box will pop up, reading "Sending all control positions".

PATCH MENU

The Alpha Juno and MKS-50 each have a PATCH MENU, which contains the settings for the synth which are not accessible from the front panel sliders. To navigate to the PATCH PARAMS menu, press MAIN to return to the MAIN screen, and press the RIGHT button. The PATCH PARAMS menu will be displayed based on which type of unit (MKS or JUNO) the currently selected layer is set to.

Alpha Juno PATCH PARAMS menu contains:

*   **Key Mode** - Mono/Poly/Chord (These can also be toggled using SHIFT+GLIDE)
*   **Bend Rng** - Sets Alpha Juno bend range

MKS-50 PATCH PARAMS menu contains:

*   **Key Mode** - Mono/Poly/Chord (These can also be toggled using SHIFT+GLIDE)
*   **Key Shift** - Transposes MKS-50 by half-steps
*   **Key Range Low** - Sets lowest note on MKS-50
*   **Key Range High** - Sets highest note on MKS-50
*   **Volume**- Sets MIDI volume of MKS-50
*   **Tune** - Fine tuning of MKS-50
*   **Mod Sens** - Sets mod wheel sensitivity
*   **Bend**- Sets pitch wheel sensitivity
*   **Chord Mem** - Selects the MKS-50 CHORD from MKS-50 memory
*   **Vol**- enables volume messages on MKS
*   **Port**- Enables GLIDE on MKS
*   **Mod** - Enables Mod Whl on MKS
*   **Hold** - Enables Sustain Ped on MKS
*   **Bend**- Enables Pitch Whl on MKS
*   **Aftertouch** - Enables aftertouch on MKS

MPG-50 MEMORY STORAGE

MPG-50 allows users to store a variety of different "objects" such as PATCH, ASSIGNS, or a SETUP.   MPG-50 has the following banks of objects available:
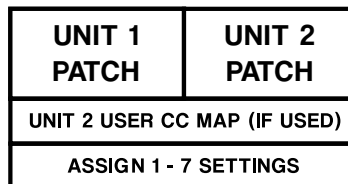
- 1 bank of 20 User CC Maps (Or 64 User CC Maps on expanded units)
- 1 bank of 20 ASSIGN objects (Or 2 banks of 64 ASSIGNs on expanded units)
- 1 bank of 20 SETUP objects (Or 2 banks of 64 SETUPs on expanded units)
- 4 banks of PATCH objects (Or 12 banks of 64 PATCH objects on expanded units)

It is important to understand what each object type is composed of. Below is a diagram showing what each object type in the MPG-50 consists of.

PATCH

PATCH

SETUP

UNIT 1 PATCH	UNIT 2 PATCH
UNIT 2 USER CC MAP (IF USED)	
ASSIGN 1 - 7 SETTINGS	

ASSIGN

ASSIGN A SLIDER	ASSIGN B SLIDER	EXPRESSION PEDAL	AFTERTOUCH	CC ASSIGN 1	CC ASSIGN 2	CC ASSIGN 3

SETUP STRUCTURE

A SETUP is a "snapshot" of all of the current settings on all layers in the controller.   A bank of 64 setups on the MPG-50 contains 128 patches and 7 assigns.   SETUP consists of the following:

- Unit 1 PATCH + PATCH settings
- Unit 2 PATCH + PATCH settings
- Any User CC MAP being used
- Current ASSIGN settings (Assign A, Assign B, Exp Pedal, Aftertouch, and CC Assigns 1-3)
- Vol & X-Fade Slider state

PATCH STRUCTURE

A PATCH is a "snapshot" of either the UNIT 1 or UNIT 2 LAYER in the controller.   In a typical MKS-50 bank, many tones are shared by multiple patches, which means if a tone is edited and saved, it affects all patches that share that tone. In the MPG-50, no tones are shared in a patch bank. A bank of 64 MPG-50 patches contains 64 individual tones, thus allowing us to store a patch on the MPG-50 with a single button press.

ASSIGN STRUCTURE

An ASSIGN is a "snapshot" of all of the ASSIGN menus. An ASSIGN consists of the following ASSIGN Sources:

- CTRL A Slider
- CTRL B Slider
- Expression Pedal
- Aftertouch
- CC Source 1
- CC Source 2
- CC Source 3

USER CC MAPS

A CC MAP consists of all sliders EXCEPT CTRL A & B, VOLUME, and the buttons. Each slider can be used in a CC MAP to transmit a specified CC. Users can create their own CC maps for controlling other equipment with MPG-50.

STORING AND RECALLING OBJECTS

To store and name an object:

- Press SHIFT + ASSIGN (STORE), and select thetype of object, and the location that it will be stored.
- Press ENTER, and the storage dialog will appear.
- Enter the new name of the object to be stored. When naming an object, [SHIFT]+ [RIGHT] will clear the current name. Tapping the encoder button will cycle through number, punctuation, upper and lower case characters quickly. (A - a - ! - 1)
- Press [STORE] or [ENTER]. A "Success!" message will be displayed, and the object is now stored in memory.
  .

To load an Object

- Press SHIFT+CHORUS (LOAD), and a select the object type to be loaded.
- Use the arrow keys or the encoder to navigate through the BANK. To advance BANK, press the SHIFT+CHORUS (LOAD) button again.
- Press ENTER to load the selected object.

THE MIDI MENUS AND FUNCTIONS

MIDI: UNIT 1 SETTINGS

The MIDI Settings menu contains all of the parameters that determine which MIDI channels the MPG-50 receives data on, and which channels outgoing data will be transmitted on. This page is also where we configure program change handling, as well as CC to sysex translation.

The MIDI:Settings Menu

Unit: This sets the type of synth being controlled by MPG-50. Use JUNO for Alpha Juno 1 & 2, and MKS-50 for an MKS-50 rackmount synthesizer.

Input Port: Sets the input ports that MPG-50 will listen for incoming note and controller data on. If port 2 is not set as an INPUT, then PORT 2 will appear in parentheses to indicate that PORT 2 is currently set as a MIDI OUT port. The **Chan:** for the input port determines which MIDI channel the MPG-50 will read incoming note and control data on for the current Unit. For example, if CHAN is set to 1, then incoming notes on channel 1 will be passed to Unit 1 on the Unit 1 OUT channel. (Which does not necessarily have to be channel 1)

Out Port: Sets the output ports that MPG-50 will transmit UNIT 1 controller data on. If port 2 is not set as an OUTPUT, then PORT 2 will appear in parentheses to indicate that PORT 2 is currently set as a MIDI IN port. The **Chan:** for the output port determines which MIDI channel the MPG-50 will transmit data received at the UNIT 1 IN PORT on, as well as any slider data on UNIT 1. For example, if MIDI INPUT PORT is set to CH1, and MIDI OUTPUT PORT is set to CH2, then incoming notes on CH1 will be transmitted out to UNIT 1 on CH2. The synth on UNIT 1 must be set to receive on CH2 for this to work. This scheme allows MPG-50 to prevent feedback loops by reading incoming data on one channel, but transmitting it on a different channel. When this data comes back to the MPG50, it is not passed through the unit again, because CH2 is not CH1. This effectively breaks any feedback loop when loop recording. This may be confusing at first, but please make an effort to make sense of this, as this is a powerful tool when recording slider movements and automating using CCs.

Sysex: To transmit sysex when a slider is moved, select SEND SYSEX. To translate incoming CC messages into sysex (for CC automation), set this to SEND/TRANSLATE CC. When in TRANSLATE CC mode, incoming CCs on the INPUT CH will be converted into sysex messages and sent to the synth on the OUT CH. See the CC table at the end of this manual for a reference.

MIDI Echo: Turn MIDI ECHO on to echo data received at the IN PORT on the OUT PORT. When turned on, this essentially allows the MPG-50 OUT to behave as a MIDI THRU for any valid data received at the MIDI IN PORT. Turn OFF to disable this function.

MIDI Filters:
- **Note** - Filters incoming note data. Set to ON to pass notes and BLOCK to block notes.
- **CC** - Filters incoming CC data.
- **Pitch** - Filters incoming pitch bend data.
- **Aftertouch** - Filters incoming aftertouch data.

NOTE: If using a mkI unit, the Port: setting will always be set to Port 1, as there is no Port 2 on mkI units.

MIDI: UNIT 2 SETTINGS

Unit 2 Midi: Settings page is nearly identical to the Unit 1 MIDI: Settings page, however, Unit 2 can be configured as a CC map, which allows the user to create a custom CC map on the MPG-50 control surface, allowing them to control other gear using CCs.

If Unit 2 is set to OFF, then the MPG-50 will not give users the option to choose which unit is being edited. If Unit 2 is set to MKS-50, Juno, or CC, then the user will have the option to choose which unit is being edited, by using the MAIN button (When on the MAIN screen), or by [SHIFT]+[MAIN] from any other screen.

If using a CC map for unit 2, please refer to the section in this manual called USER CC MAPS for information about creating, storing, and loading USER CC MAP objects.

MIDI: GLOBAL SETTINGS

This page contains global settings that affect how Unit 1 and Unit 2 will behave.

The MIDI: Global Settings Page

MIDI Port 2: This sets the direction of the MIDI IN/OUT jack, which we are calling PORT 2. If this setting is set to INPUT, then the IN/OUT jack will function as a second MIDI IN. If this is set to OUTPUT, then the IN/OUT jack will act as a second MIDI OUT. Port 2 allows for a lot of flexibility in setting up the MPG-50 in a rig. Users can choose which MIDI port Unit 1 and 2 will receive data on and send data on.

Multi-unit Poly Mode: When enabled, this function allows Unit 1 and Unit 2 MKS-50 to act as a single synthesizer, which doubles polyphony. **When enabled Note/CC/control data will be received on Unit 1 In Ch only (Unit 2 In Ch will be ignored), and the MPG-50 will send note data on the Unit1Ch and Unit2Ch. For this mode to work, Unit 1 Ch and Unit 2 Ch must be different channels.**

Multi-Unit Poly Mode mode is for setups that utilize two MKS-50 synthesizer modules. When enabled, this allows for a 12-voice Alpha Juno.

When Multi-Unit Poly Mode is enabled, the MPG-50 will consider the 2 connected Alpha Junos to be a single 12-voice polyphonic synth. For the 2 synths to act independently, they must each be set to receive on a different MIDI channel. The Unit 1 input channel will be the only active MIDI IN channel when Multi-Unit Poly Mode is enabled.

Chord Mode:
• **On/Off** - When enabled, playing a single note on the keyboard will play the selected chord.

The MPG-50 CHORD MODE function allows users to input a chord, and then play it by keying a note. The chord will be transposed anywhere on the keyboard where a new note is keyed. When enabled, a menu dialog will appear, showing the notes in the current CHORD. (ChordNt) Each of the notes in the chord can be entered manually, using the cursor and encoder, or the chord can be entered into the MPG-50 by holding SHIFT and playing a chord into the unit. To clear the current chord, press SHIFT to delete the current chord contents. Chord Mode will allow 8 notes to be on at one time. Depending on the size of the chord and how many notes being held, the MPG will not "steal" voices. It will instead play the chords with any available voices.

MIDI: Global Settings   U1
MIDI Port 2:Input
Multi-unit Poly Mode:Off
PrgChg.Mode:Echo

Chord Mode:Unit1
ChdNt: +0 +0 +0 +1 +1
Chd: SHIFT + play notes

Chord Mode Parameters

Program Change: MPG-50 can handle program change messages in a variety of ways. There are 4 different Program Change Modes on MPG-50:

• **Block** - When a program change is received, it will be blocked.
• **Echo** - When a program change is received, it will be passed on to the selected Output Port.
• **Echo + Int** - When a program change is received, it will be passed on to the selected Output Port, and MPG-50 objects will respond to program changes.
• **Internal** - When a program change is received, MPG-50 objects will respond to program changes.

When **Internal** program change is selected, **each type of MPG-8X object can be recalled using MIDI program changes**. Using this function, any tone, patch, assign or setup can be selected using MIDI program change and bank change messages. Each of the following object types can be recalled on MPG-50 using MIDI program change messages.

• **Patch U1**
• **Patch U2**
• **User CC Map**
• **Assign**
• **Setup**

The MPG-50 can accept program change messages from any channel, and each object type and unit can respond to them. When CHANNEL is set to OFF, this indicates that the object type will note be changed when a program change message is received.

MIDI: SYSEX MENU

The MIDI: SYSEX Menu is used to import and export sound banks, patches, and other object types.
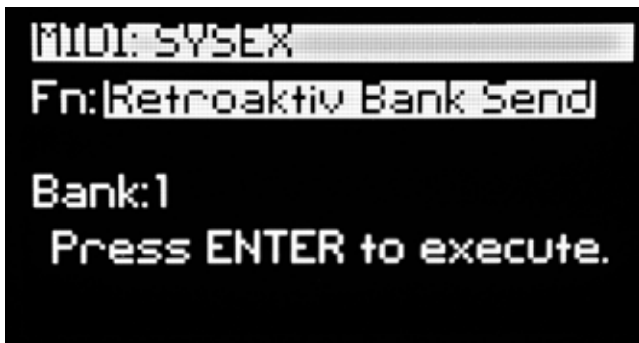

The MIDI:Sysex Menu

The following operations are possible using the SYSEX utility.

*   Send and receive a bank from MKS-50 or Alpha Juno 1 & 2
*   Send and receive Alpha Juno 1 & 2 or MKS-50 patch
*   Send and receive bank in Retroaktiv format
*   Send and receive any PATCH, USER CC, SETUP, or ASSIGN in Retroaktiv format
*   System backup of all stored object in internal and expansion memory

When importing objects from Alpha Juno 1 & 2, or MKS-50, bidirectional communication with the synth is required. The MPG-50 will give instructions based on which model of synth the MPG is importing from. Below is an example of bi-directional communication with the synth.
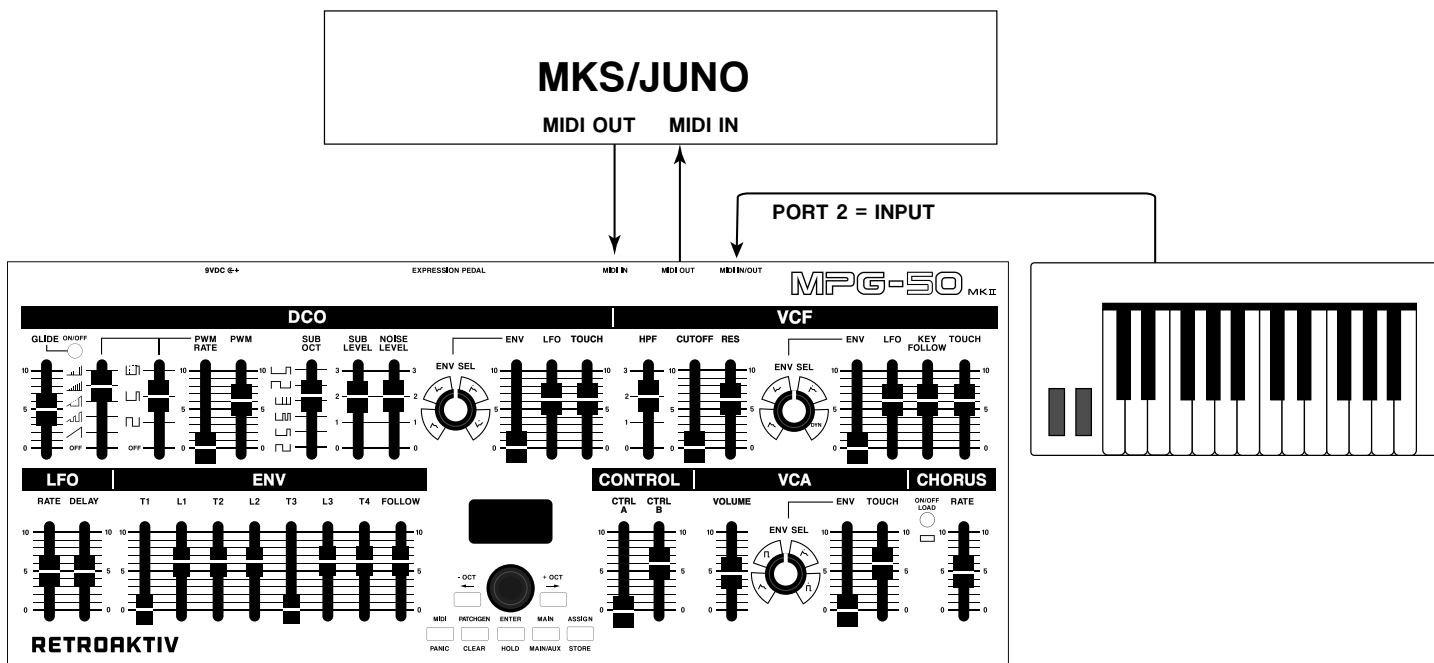
SETUP FOR IMPORTING OBJECTS FROM COMPUTER OR DAW
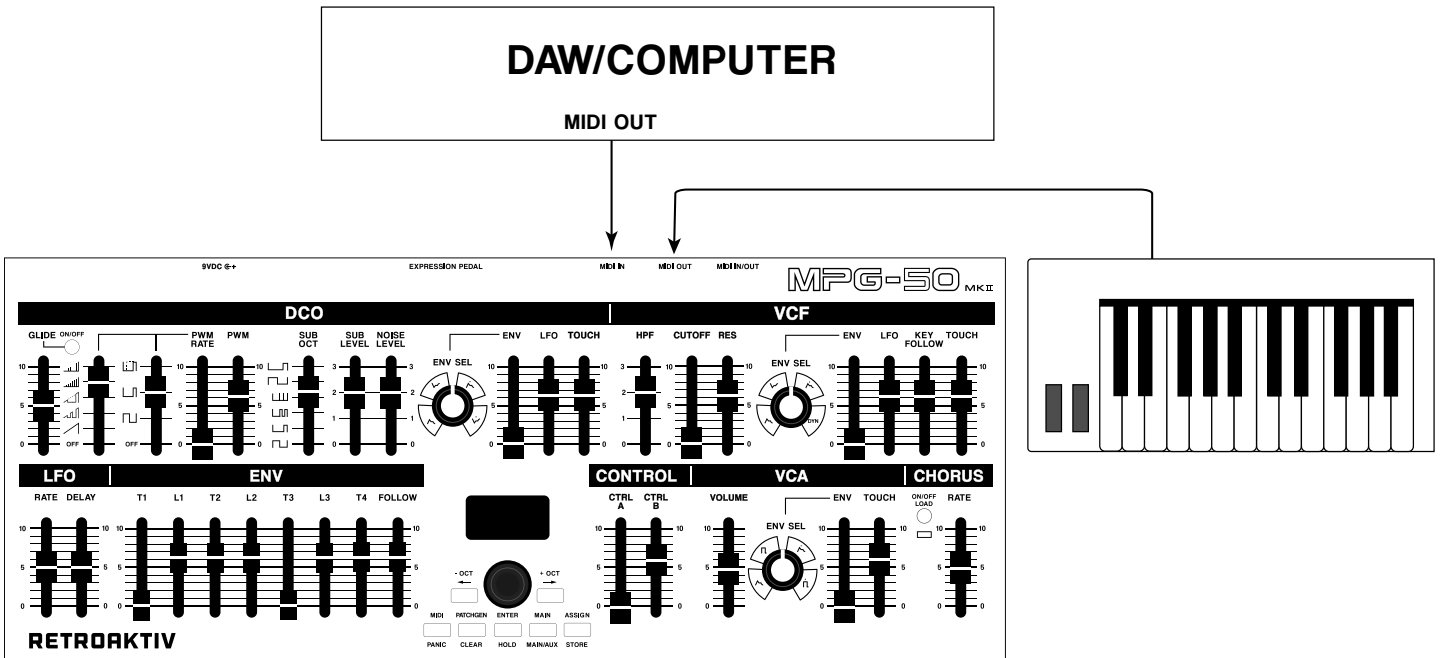
MPG-50 mkII can receive objects on both MIDI ports. , so users can connect the DAW to either one.

IMPORT BANK FROM ALPHA JUNO

Import a bank from Alpha Juno: To import a bank from an Alpha Juno, set up bi-directional communication with the Alpha Juno as shown in the figure on page 16. Navigate to **Fn: Receive Juno Bank** in the MIDI: SYSEX menu.
- **Bank** - This is the destination MPG-50 bank the Juno bank will be imported to.
- **Unit** - This is the Alpha Juno unit that the bank will be imported from.

To import bank from Alpha Juno:

- **Select the unit & destination** - Select which AJ unit to import from, and select the bank to import to.
- **Press ENTER to begin importing** - You will receive the prompt "On Juno: Hold DATA TRANFER and press '1' button. Do this and the MPG-50 will display "Receiving Sysex Data" message.
- **Success** - MPG-50 will display 'Success' message when the objects are imported into MPG-50 memory.

EXPORT A BANK TO ALPHA JUNO

Export a bank to Alpha Juno: To export a bank to an Alpha Juno, only the connection shown on page 17 is needed.   Navigate to **Fn: Send Juno Bank** in the MIDI: SYSEX menu.
- **Bank** - This is the MPG-50 bank to be exported to the Juno.
- **Unit** - This is the Alpha Juno unit that the bank will be exported to.

To export MPG-50 bank to Alpha Juno:

- **Prepare Juno to receive a bank** - Hold DATA TRANSFER and the number '2' (LOAD) on the Juno.
- **Press ENTER on MPG to begin exporting** - Data will begin transferring to Juno. Juno will display a success message and you will find the new objects in the MEMORY bank of the Juno.

IMPORT ALPHA JUNO BANK FROM COMPUTER

Follow the steps outlined in IMPROT BANK FROM ALPHA JUNO, but when you receive the prompt "On Juno: Hold DATA TRANFER and press '1' button, you will instead send the .SYX file from the computer to the MPG. Do this and the MPG-50 will display "Receiving Sysex Data" message. A 'Success' message will display on MPG-50 when the operation is complete.

IMPORT BANK FROM MKS-50

Import a bank from MKS-50: To import a bank from an MKS-50, set up bi-directional communication with the Alpha Juno as shown in the figure on page 16. Navigate to **Fn: Receive MKS-50 Bank** in the MIDI: SYSEX menu. If this option does not show up, be sure that the Unit is set for MKS-50 and not Juno operation. Because the MKS-50 uses the PATCH & TONE structure, there are 3 files that must be tranferred and parsed: TONE A, TONE B, and PATCH. MPG-50 will take these 3 object files and combine them into Retroaktiv PATCH format, which does not use the PATCH & TONE distinction.
- **Bank** - This is the destination in the MPG-50 the MKS-50 bank will be imported to.
- **Unit** - This is the MKS-50 unit that the bank will be imported from.
- **MKS-50 bank select:** - Select bank A or B to be imported.

To import bank fromMKS-50:

- **Select the unit & destination** - Select which MKS unit to import from, and select the bank to import to.
- **Step 1/3: Receive PATCH A or B** - You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Dump [P-A]' and press WRITE." Do this and the MPG-50 will display "Receiving Sysex Data" message.
- **Step 2/3: Receive Tone A**- You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Dump [T-a]' and press WRITE." Do this and the MPG-50 will display "Receiving Sysex Data" message.
- **Step 3/3: Receive Tone A**- You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Dump [T-b]' and press WRITE." Do this and the MPG-50 will display "Receiving Sysex Data" message.

The MKS-50 bank will now be stored in the MPG-50 memory in Retroaktiv format.

IMPORT MKS-50 BANK FROM COMPUTER

Only the connections in the figure on page 17 are needed for this operation. MKS-50 patch banks include 3 files: Patch file, Tone A file, and Tone B file. Follow the steps outlined in 'IMPORT BANK FROM MKS-50', but do the following when prompted:

- **Step 1/3: Receive PATCH A or B** - When you receive the prompt, dump the PATCH file from the PC.
- **Step 2/3: Receive Tone A**- When you receive the prompt, dump TONE A file from PC.
- **Step 3/3: Receive Tone B**- When you receive the prompt, dump TONE A file from PC.

The MKS-50 bank will now be stored in the MPG-50 memory in Retroaktiv format.

EXPORT A BANK TO MKS-50

Export a bank to MKS-50: To export a bank to an MKS-50, MPG-50 OUT needs to be connected to MKS MIDI IN. Navigate to **Fn: Send MKS-50 Bank** in the MIDI: SYSEX menu.
- **Bank** - This is the MPG-50 bank to be exported to the Juno.
- **Unit** - This is the Alpha Juno unit that the bank will be exported to.
- **MKS-50 bank select:** - Select bank A or B as the destination

To export MKS-50 bank from MPG-50:

- **Select the unit & destination** - Select which MKS unit to export to, and select the destination bank A or B.
- **Step 1/3: Receive PATCH A or B** - You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Load [P-A]' and press WRITE." Press ENTER on MPG and the MKS-50 will receive the PATCH data.
- **Step 2/3: Receive Tone A**- You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Load [T-a]' and press WRITE." Press ENTER on MPG and the MKS-50 will receive the TONE A data.
- **Step 3/3: Receive Tone A**- You will receive the prompt "On MKS-50: Press DATA TRANSFER. Select 'Bulk*Load [T-b]' and press WRITE." Press ENTER on MPG and the MKS-50 will receive the PATCH data.

The MPG-50 bank will now be stored in the MKS-50 memory in standard MKS-50 format.

RECEIVE AN MKS-50 OR ALPHA JUNO PATCH

To receive an MKS or Juno patch, simply navigate to **Fn: Receive MKS-50 Patch** or **Fn: Receive Juno Patch,** press ENTER on MPG, then do a program change on the MKS/Juno. The patch will be received by MPG-50 and will now be in the MPG-50 edit buffer. You will need to store the PATCH in MPG-50 memory using the normal STORE procedure.

SEND AN MKS-50 OR ALPHA JUNO PATCH

To send an MKS or Juno patch, simply navigate to **Fn: Send MKS-50 Patch** or **Fn: Send Juno Patch,** and press ENTER on the MPG. The patch will be sent to the synth, but will not be stored in the synth's memory. That must be done by the user.

RETROAKTIV OBJECT SEND & RECEIVE

The following object types can be sent in Retroaktiv format, for either sharing with other MPG-50 users, or backing up your data. Retroaktiv format objects can be imported or exported by any MPG-50 mki or mkii.

- **Any Retroaktiv bank of Patch, Setup, Assign or User CC**
- **Any individual Patch, Setup, Assign, or User CC**

To EXPORT: Select the object type to be exported, and when your DAW/PC is ready to receive the data, press ENTER on MPG-50. The data will be exported from MPG-50 to the destination device.

To IMPORT: Select the type of Retroaktiv object to be imported, press ENTER on MPG-50 so the unit is ready to receive the incoming data. Send the data from your device to the MPG. You will receive a 'Success' message when complete.

MPG-50 FULL MEMORY BACKUP & RESTORE

To backup MPG-50 memory contents, navigate to **Fn: Storage Backup.** Press ENTER on MPG-50 when your PC/DAW is ready to receive the backup data file. When the file is complete, MPG-50 will display a 'Completed' message.

To restore MPG-50 memory contents, navigate to **Fn: Storage Restore.** Press ENTER on MPG-50 so MPG is waiting to receive the backup file. Send the file to the MPG from your DAW/PC. A 'Success' message will be displayed when complete. **Storage Restore will overwrite all of your objects. Be sure you have backed up all of your memory before executing a restore.**

MIDI: USER CC MAPS

The MPG-50 allows users to create their own user CC maps, which allow the 8X's control surface to be programmed to transmit CCs from any slider, making it ideal for controlling external gear.

To navigate to the CC map page, press the [MIDI] button until USER CC Map is displayed in the menu bar.

The MIDI:CC Map Menu

Creating a User CC Map:

When on the Unit 2 MIDI: Settings page, select USER CC as the Unit 2 type. Now, moving any slider will display that slider's current CC# routing, as well as the MIDI channel that CC slider will transmit on. The encoder can then be used to enter which CC# each slider transmits on. **Each slider can transmit on any CC and any channel independently.**

Pressing [ENTER] when in the User CC Map menu will cycle through all sliders that have active CC routings, making it simple to see which sliders in a map are active.

The Default state of the User CC Map feature is OFF.   A User CC Map can only be used on the UNIT 2 layer of the MPG-50. To activate the User CC function, toggle the OFF setting so it reads UNIT 2.

Clearing a User CC Map:

To clear all slider routings in a User CC Map, press [SHIFT]+[PATCHGEN].

Storing and Loading User CC Maps:

MPG-50 internal memory can store 24 User CC Maps. To store or load a map, go to the User CC Map menu, and press the STORE or LOAD button once. A list of currently stored CC maps will be displayed. Select the desired slot to be loaded or stored, then press the [STORE] or [LOAD] button.   **A CC map can be stored with a SETUP.**

CC TO SYSEX TRANSLATE

MPG-50 allows users to record and translate button presses and fader movements with any DAW or sequencer, by allowing CC to sysex translation.

To enableCC to SYSEX translate mode, navigate to MIDI: Settings menu, and toggle the Sysex setting to Send/Tranlate CC.

When this mode is enabled, moving sliders and toggling button parameters will send a CC message from the MPG-50 instead of a sysex message.

When using the MPG-50 to translate CC messages into sysex messages for the MKS-50, each of the UNITs has its own MIDI channel. For example if the UNIT 1 IN channel is set to 1, and the UNIT 2 IN channel is set to 3,then incoming CCs on channel 1 would affect UNIT 1 patch parameters, CCs on ch 3 would affect UNIT 2 patch parameters. **This table shows the implementation of the MPG-50 MIDI CC to SYSEX translation.**

Saw Select : 15
Pulse Select : 14
PWM Rate : 26
PWM Depth : 25
Sub Osc Select : 16
Sub Osc Level : 18
Noise Level : 19
DCO Env Select : 11
VCF Env Select : 12
VCA Env Select : 13
DCO Env Amount : 23
DCO LFO Amount : 22
DCO Aftertouch : 24
Hi-Pass Filter Cutoff : 20
Lo-pass Filter Cutoff : 27
Resonance : 28
VCF Env Amount : 30
VCF LFO Amount : 29
VCF Aftertouch : 32
VCA Aftertouch : 34
VCF Key Follow : 31
LFO Delay : 36
LFO Rate : 35
Envelope Time 1 : 37
Envelope Time 2 : 39
Envelope Time 3 : 41
Envelope Time 4 : 43
Envelope Level 1 : 38
Envelope Level 2 : 40
Envelope Level 3 : 42
Envelope Key Follow : 44
VCA Env Amount : 33
Chorus Rate : 45

Chorus Enable : 21
DCO Range : 17
Bend Range : 46
Glide Time : 48
Tone Number : 49
Key Range Hi : 50
Mod Sens : 51
Key Shift : 52
Volume : 53
Detune : 54
Mono Bend Range : 56
Chord Memory : 57
Key Mode : 100

THE PATCH GENERATOR

The Patch Generator tool is a powerful feature that creates intelligently randomized tones, as well as preset "Init tones". (Scratch Tones") This tool provides an endless supply of new, musical tones, which can be created on any layer of an MPG-50 SETUP.   Here's how it all works:

The Patch Generator uses categories so users can tell it which type of sound to create. Below is a chart showing the various categories and subcategories, as well as a brief description of the types of sounds each will generate. Note that these category and subcategory names are being used as "musical adjectives" to describe characteristics of a sound.   For example, the harpsichord category in the patch generator doesn't create hyper-realistic harpsichord sounds, it creates synth sounds that have the same characteristics as a harpsichord. This common reference we all have allows us to easily categorize the types of sounds we want the patch generator to create.

The Patch Generator Menu

GENERATING A TONE

To generate a tone, select a category/sub-category, then select which synth layers the tone will be generated on.

Each section of the synth has its own ENABLE in the patch generator menu. Sections shown in the menu correspond to the sections labeled on the front panel. (DCO, Pitch Mod, VCF, Filter Mod, VCA, Amp Mod, LFO, Envelope Times, Envelope Levels, and Chorus) **Setting a section's ENABLE to OFF prevents the patch generator from randomizing any of the parameters in that section when a new tone is created.** To disable all sections, press PATCHGEN button. Pressing the PATCHGEN button again enables all sections.   This shortcut makes it simple to do something such as disable all sections, then set just one section to ON.

The tone generator does not randomize any patch settings (KEY SHIFT, KEY MODE, ASSIGN MODE, BEND etc), volume and balance settings (UP/LO BAL, VOL & X-FADE), aftertouch settings, or the VCA ENV AMT.   These settings can be set manually.

To generate a patch generator tone from any menu, press SHIFT+PATCHGEN.   The currently selected category and sub-category of tone will be generated when this operation is executed.

PATCH GENERATOR CATEGORIES

Random - Random- This generates completely randomized tones without any intelligent guidance.

Bass - Synth basses
- **All** - This sub-category generates a wide assortment of bass tones. Most do not have VCA ENV Release.
- **No Release** - Basses with no VCA ENV Release

- **Release** - Basses with VCA ENV Release
- **Rez Bass** - Resonant synth basses
- **Ac. Bass** - Acoustic type basses

Polysynth

- **All** - Randomly selects synths from any of the following sub-categories.
- **Gated Poly** - Synths with gated VCA
- **Vibrato Poly** - Synths utilizing pitch vibrato

Pads

- **All** - Randomly selects pads from any of the following sub-categories.
- **General Pad** - Pad algorithm #1
- **Vibrato Pad** - Pads utilizing pitch vibrato
- **VCF LFO Pad** - Pads utilizing VCF LFO modulation
- **Fast Pad** - Pads with quick attack and release
- **Motion Pad** - Pads with lots of PWM, chorus and LFO modulation

Percussion

- **All** - Randomly selects synths from any of the following sub-categories.
- **Drum** - Kicks, snares, tom
- **Cymbals/Metal** - Cymbals, hi-hats, etc

Dance

- **All** - Hoover and classic house patches

Piano

- **All** - Randomly selects pads from any of the following sub-categories.
- **Ac. Piano** - Bright pianos, synth pianos
- **El. Piano** - Tine EPs
- **Harpsi/Clav** - Harpsichord & clavinet types of sounds

String

- **All** - Randomly selects synths from any of the following sub-categories.
- **Ens. Strings** - String Ensembles
- **Solo Strings** - Solo cello, viola, violin

Brass

- **All** - General brass instruments

Bells

- **All** - General bell-like sounds

Init

- **All** - Basic Init patch

**Any Category** - Randomly selects a category and sub-category of tone.

ASSIGN

The ASSIGN functions on the MPG-50 are a powerful MIDI modulation matrix, which allows users to create complex modulation of multiple MKS-50 parameters using one control source, such as the ASSIGN sliders, an expression pedal, aftertouch, or any CC.

Each of the 7 assignable control sources can control up to 5 simultaneous parameters independently on any layer of either synth plugged into the MPG-50. This allows us to do something like sweep the filter cutoff up on the UPPER layer, while sweeping the cutoff down on the LOWER layer. Using the assigns and combinations of assigns, a sound can be animated in ways not possible on other controllers.

To access the ASSIGN menu, press the ASSIGN button once. The ASSIGN menu will be displayed on the OLED. This menu gives us access to all of the parameters contained in the assignable control matrix.
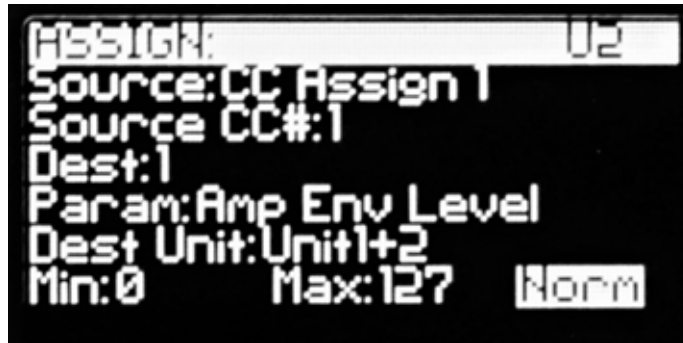
The Assign Menu

ASSIGN SOURCE

There are 7 different ASSIGNs (Control sources):

CTRL A Slider
CTRL B Slider
Expression Pedal Jack
Aftertouch
CC Source 1 (Any CC# 0-127)
CC Source 2 (Any CC# 0-127)
CC Source 3 (Any CC# 0-127)

The CTRL A and B sliders are located in the ASSIGN section of the MPG-50 front panel.

The Expression Pedal source is connected to the EXP PEDAL jack on the rear panel of the MPG-50.   Only use passive expression pedals with the MPG-50. **Do not use a powered expression pedal.** This can result in damage to the controller.

The Aftertouch ASSIGN responds to incoming aftertouch messages on the UNIT 1 and UNIT 2 MIDI IN channels.

CC Source 1-3 are controlled by incoming CC messages (CC#0 - CC#127) on the UNIT 1 and 2 MIDI IN channels. These ASSIGNs are a great way to create automated "lanes" using a DAW. **To automatically get the MPG-50 to route a CC ASSIGN to a CC, simply navigate to the desired CC ASSIGN, hold [SHIFT] and move the CC (Such as a mod wheel) and the MPG-50 will automatically route that CC to the ASSIGN.**

DESTINATIONS AND ROUTING

Each of the 7 ASSIGN sources has 5 available destinations (parameters on the MKS-50) it can control. Each parameter being controlled by an assign has its own range, polarity, UNIT destination (Unit 1, 2, or BOTH), and layer destination (UPPER/LOWER/BOTH)

- **Dest (1-5)**: Selects which destination is being edited in the ASSIGN menu.
- **PARAM**: Selects which parameter will be the current destination.
- **MIN**: sets the minimum value of the current assign destination.
- **MAX**: sets the maximum value of the current assign destination.
- **UNIT**: Selects which units the current destination will be routed to.
- **INVERT/NORMAL**: Sets the direction (up or down) this parameter value will move in when the SOURCE value is changed.

For example, if we use CTRL A as a SOURCE, then select Filter Cutoff as Destination 1, moving the CTRL A slider will affect the Filter Cutoff parameter. To set the range of the filter control, we select the MIN and MAX values. If MIN = 50 and MAX = 75, then moving the CTRL A slider from bottom to top of its travel, will sweep the Filter Cutoff between 50 and 75. If we want the response to be inverted, so moving the CTRL A slider up sweeps the Filter Cutoff down from 75 to 50, then INVERT can be selected.

All of the 5 destinations within each ASSIGN can be routed in this way to any parameters on the synth. This allows the user to create complex real-time modulations, which would normally require many hands or many overdubs to accomplish, in a single movement.

To deactivate an ASSIGN layer, simply select NONE as the destination in a layer, and the routing will be deactivated for that layer.

There are a few guidelines to follow to maximize the MIDI performance of the MPG-50 when using assigns. An ASSIGN has the potential to generate large amounts of MIDI data. If you're using an ASSIGN with 5 layers, which is routed to BOTH units, this will generate 10 MIDI sysex messages with each movement of the ASSIGN source. This amount of midi data can take many tens of milliseconds to transmit to the synthesizer. If using many large ASSIGNs at one time, it may even be possible to overflow the synth's MIDI buffer (Which holds incoming MIDI messages while the synth processes each one in the buffer).

ASSIGN Enable & Disable - Pressing the ASSIGN button will alternate between the ASSIGN menu and the ASSIGN Enable menu. Each of the 7 assigns has its own global enable, allowing you to turn the assigns on only when you wish to use them.

Clearing all ASSIGNs - To clear all ASSIGN data, navigate to the ASSIGN menu, then press [SHIFT]+[PATCHGEN].

INTUITIVE ENTRY OF ASSIGN LAYERS

While users can manually enter all of the necessary information into each ASSIGN layer, this can become tedious when creating many different routing destinations. To speed up the ASSIGN creation process, a shortcut can be used to quickly enter a destination's parameters.

Begin by navigating to the source and destination to be edited.

Hold down the [ENCODER](SHIFT) button and move the destination slider through the desired range and direction (Up = normal, down = inverted) and release the SHIFT button when finished. The PARAM, MIN, MAX, and INVERT information will all be automatically entered.

MPG-50 ACCESSORIES

MPG-50 MEMORY EXPANSION

The MPG-50 memory expansion card gives users an additional 128kb of on-board storage. This card can be installed by the user and requires no soldering or special tools. It is plug and play. When an expansion card is installed, the MPG-50 will detect it and will prompt the user to format the card. No user objects will be lost when doing this. When the memory card is successfully installed, the user will see "Memory Card OK" on bootup.

4U RACKMOUNT KIT

The 4U rackmount kit allows MPG-50 to be rackmounted in a 4U rack space.

ALPHA JUNO MOUNTING STAND

The AJ Mounting Stand kit fits onto the music stand mounting holes on the Alpha Juno, allowing users to place the controller onto the Alpha Juno.

TROUBLESHOOTING

Problem: Notes hanging when playing them through MPG-50

• This indicates that there is a midi feedback loop in your setup. A feedback loop happens when the MPG-50 receives its own output at one of the inputs, causing a doubling of every MIDI message. MPG-50 can deal with this problem easily, by simple having the Unit IN Channel set to a different channel than the Unit OUT Channel. For example, if MPG is receiving notes on channel 1, set the out channel on the MPG to channel 2, and set the MKS/Juno to receive on channel 2. When the MPG receives channel 2 data at the input, it will be rejected, because channel 2 does not match the input channel, thus breaking the feedback loop.

Problem: Only the VOLUME and GLIDE sliders work

• This indicates that the synth is not receiving sysex messages. VOLUME and GLIDE are both CC type messages, which is why those appear to work, but other sliders do not. To solve this, be sure that the SYSEX setting in the Unit 1 & 2 MIDI: Settings page is set to SYSEX, not Send/Translate CC. If using an Alpha Juno, be sure that the SYSEX parameter is set to ON in the MIDI page of the Juno.

Problem: Every other note is not playing

• This indicates that the synth is not receiving sysex messages. VOLUME and GLIDE are both CC type messages, which is why those appear to work, but other sliders do not. To solve this, be sure that the SYSEX setting in the Unit 1 & 2 MIDI: Settings page is set to SYSEX, not Send/Translate CC. If using an Alpha Juno, be sure that the SYSEX parameter is set to ON in the MIDI page of the Juno.

BOOTLOADER AND SYSTEM UPDATES

The MPG-50 has a MIDI bootloader that allows users to update their OS in the field using a MIDI sysex utility such as MIDI OX. New OS files are available from Retroaktiv when updates are issued. To obtain an OS file, contact Retroaktiv and request a copy of the latest SYSEX OS file.   To identify your MPG-50's firmware version, power the unit up and the firmware version will be shown at the bottom of the MPG-50 splash screen. Check on the Retroaktiv site for the latest firmware updates.

ENTERING BOOTLOADER

To load update, power up MPG-50 with GLIDE button held.   CHORUS LED will blink one time, to indicate that unit is now in bootloader mode. A sysex librarian such as MIDI-OX or Sysex Librarian is used to load the new firmware file into the MPG-50. Set the delay after F7 to 160ms or greater. (This is the delay between sysex strings from the computer) Setting this too short will overflow the MPG-50 MIDI buffer, and you will get a blinking error code.   The pause in between sysex packets allows the MPG-50 time to process each packet and write it to FLASH. When ready, send the file to the MIDI IN of the MPG-50. The CHORUS LED will blink once for each sysex packet. CHORUS LED will light solid when the OS has been loaded. When lit solidly, you can restart the unit and use the new OS.

In some cases, you will receive an error code instead of the 1 blink per MIDI data packet. When you observe a series of multiple blinks in sequence, this means that there was an error. The MPG-50 cannot be "bricked", meaning that if a firmware update fails, the memory in the unit can always be restored to an operating state with the successful load of a firmware update.   If you receive one of the following errors, cycle power, enter the bootloader and try again.

BOOTLOADER ERROR CODES

- **2 blinks**: Didn't receive 0xF0 at beginning of message. This indicates a fundamental problem with the .syx file or MIDI communication. This means that a non-sysex message was received, and the bootloader must be restarted. The bootloader expects to see an F0 command bookended by an F7. If your DAW sends out active sensing messages, this will cause the bootloader to reject the incoming file. Any stray MIDI data will cause the bootloader to abort and give an error message. This is the most common error code. It most likely means that the delay between sysex packets needs to be longer (This is often called Delay after F7 in sysex librarians). When the delay is set to less than 160 ms, the MPG-50 MIDI buffer will overflow, causing the 2 blink error. If you get the 2 blink error code before you even begin sending data to the MPG-50, this means that you have either ACTIVE SENSING messages turned on, or your system is sending MIDI realtime messages, which will both corrupt the firmware data. Turn these off. If using a USB to MIDI cable, be aware that these often have active sensing permanently turned on. Use a dedicated hardware interface to update if this is the case.

- **3 blinks**: There was a problem parsing the dummy packets used as a placeholder while the system is writing data to the EEPROM space.   This error should never be an issue on MPG-50, as it writes its own EEPROM data file.

- **4 blinks**: Wrong product ID. Expected if a sysex file intended for a product other than the connected programmer is used.   You will recevie this error if you do something like try to load an MPG-70 Firmware update onto an MPG-50.

- **5 blinks**: Error parsing sysex header. This is the most likely error to occur if the MIDI connection is not reliable and the system is receiving corrupted data.   Also check to make sure that you are loading the correct operating system into the controller. If this persists, contact Retroaktiv to make sure we didn't post the wrong firmware update.

- **6 blinks**: Checksum failure. There was an error in one or more of the bytes received during the sysex transfer.   Data was corrupted, either through an unstable connection, or a corrupted file. This could mean that your MIDI cable is intermittent, or that your firmware file is corrupt.

- **7 blinks**: Flash write failure. There was an error writing data to the flash memory in the microcontroller. This should never happen unless there is a hardware problem.

WEIGHT AND DIMENSIONS

The MPG-50 is 7 pounds and the enclosure measures 14.5" x 5.75" x 3.5".   The enclosure has 4 heavy-duty screw-on rubber feet for no-slip tabletop use.   The MPG-50 can also be rackmounted using optional rack ears, or the Alpha Juno Mounting Stand, both of which can be purchased at www.retroaktivsynthesizers.com.

THANK YOU!

Thanks for using these Retroaktiv synthesizer products. We are a small company and we appreciate the musicians and artists using this gear. If you have any questions or comments about this or other products, please contact us by visiting www.RetroaktivSynthesizers.com and using the CONTACT US link at the top of the page. We want to hear from you about your user experience and feature requests. Sincerely,

-Rob Currier
Founder of Retroaktiv LLC.