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SECTION 1.

Introduction:

Why and how do we use MIDI Controllers? What are Zones? Uses and Applications.

Congratulations on your new purchase of the SL-161/SL-61 Studio Logic Master Controller by FATAR. In this manual we will explain the concepts and techniques of using Master MIDI Controllers to greatly expand your flexibility, creativity, control and productivity in your live or studio keyboard setup. Whether you are using one multi-timbral sound module or a rack full of them, this Master Controller Keyboard and all the other Studio Logic Controllers by FATAR will greatly expand your professional and creative abilities.

The concept of a controller is to centralize your accessibility to your MIDI modules. It gives you a central point of control over your slave modules in a given setup.

Have you ever tried to line up patches in your sound modules so that when you selected a patch on your keyboard your other sound modules called up the right patch? Ever tried to locate a patch position to write over a sound that you hopefully won't need later? Tired of bending down to squint and see the display and program a module at the bottom of your rack? All of these scenarios are greatly reduced when using a Master Controller.

The concept of ZONES, SPLITS and LAYERS is as follows:

A ZONE consists of a specified range of keys on your keyboard. That range of notes is assigned parameter messages that are communicated to your slave module(s), this reduces the need to write and store patches on your module. These parameters may consist of the following information: patch number, volume setting, velocity curve, transposition value, pedal enable, wheels enable, etc.... When a patch is selected on your Master Controller all of this information is sent to your modules instantly. The Studio Logic SL-161/SL-61 Master Controller by FATAR has two (2) completely independent zones, meaning each zone can transmit all of its own information on any given MIDI channel. The range of notes in each zone can be setup to be adjacent to another ZONES range of notes (one ZONE ends, going up the keyboard, as another ZONE starts) or assigned to overlap each other or any part of each other's ranges. Thus we introduce the concept of LAYERS and SPLITS.

A SPLIT is when one ZONE'S range of notes ends and another ZONE'S begins. A simple example would be Bass in the left hand and Piano in the right hand. A ZONE'S range of notes can be any amount of consecutive notes regardless of where another ZONE'S notes begin. When two or more ZONE'S range of notes overlap we call this a LAYER.

LAYERS are the way we can build fat lush patches using the full potential of what your synths and modules have to offer. Let's say we have a big pop ballad that needs your special touch? We want to create a "Pad Piano" sound to cover the song. Assign each ZONE to cover the entire keyboard's range of notes. Using the two ZONES, assign each of them to play a different patch: (1) dark rich Electric Piano, (2) slow attack String Pad with the release rate up slightly. If one or more patches are not in the same octave as the others it's easy to fix. Go to that ZONE'S transpose feature and move it up or down 12 steps to line it up properly with the others. Something sounds a little mushy when playing Piano parts using the SUSTAIN PEDAL? Try going to the ZONE for the "non Piano" sound and experiment with disabling the SUSTAIN PEDAL for that zone. Within moments you should have a deep, rich, rather large and musically useful sounding patch to use on your ballad. Are you beginning to see the possibilities here? Please step inside the manual and we'll take you through the simple yet versatile features of the Studio Logic 610 Master Controller by FATAR.

SECTION 2.

Features:

A guided tour through the Studio Logic 161/61's Controls and Features,

THE KEYBOARD



The Studio Logic 161/61 has a 61 key FATAR semi-weighted piano action. It is a new, improved version of the classic FATAR action. It is an extremely musical feeling piano style action that has a very dynamic yet quick response to it. The velocity sensitive action can be modified with several VELOCITY CURVE response settings that will be discussed later in this manual. The 61 key action of the SL-161/SL-61 will transmit channel AFTERTOUCH on all ZONES.

THE WHEELS



The PITCH and MODULATION WHEELS are the standard style, however, they are made with a new rubberized texture. They have been designed to give the player a more solid tactile sensation during performing and programming for a more musical response.

THE ZONES



The SL-161/SL-61 has (2) two independent ZONES with each of them capable of being assigned to any range of keys across the SL-161/SL-61's keyboard. As discussed in the introduction to this manual, the ZONES are the heart of creating musically useful Layers and Splits. Each of the (2) ZONES consists of:

1. ZONE ENABLE/DISABLE BUTTON: Located on the front panel above the keyboard itself. These are used to turn the ZONES on and off in PERFORMANCE mode. Each switch functions independently of each other. In other words, you can have any combination of ZONES on or off at any point by accessing these ZONE switches.

While in EDIT mode, the ZONE BUTTONS are used to select the desired ZONE to be edited. While editing, only one ZONE at a time can be selected and the buttons now toggle on and off as you select each ZONE SWITCH for editing.

2. MIDI CHANNEL SELECT: While in EDIT mode each ZONE can be set to transmit on any of the 16 MIDI channels available. Only one MIDI channel can be transmitted at a time per ZONE.

3. BANK SELECT: After selecting a MIDI channel to transmit on, and while in EDIT mode, you can initiate or select BANK Changes. The commands are different depending on the external sound module you are accessing. More on BANK SELECT later in this manual.

4. PROGRAM CHANGE: Patch selection can be made for each ZONE while in the EDIT mode. Each ZONE can be set to select (send) patch changes 1 to 128 (some manufacturers use a numbering scheme 0 to 127, so you may need to add (1) to each patch to achieve the desired results).

5. SPLIT or KEY NOTE RANGE: This edit function allows you to select the range of active notes (keys) for each ZONE. The ZONES are completely independent of each other and their split points can overlap thus creating LAYERS.

6. TRANSPOSE: Each ZONE can be set to transpose its key range up or down 24 semitones. In other words, up or down 2 octaves from the synth module's original setting.

7. SUSTAIN PEDAL ENABLE / DISABLE SELECT: You can set each ZONE to respond or not respond to sustain pedal information. This is done in the EDIT mode for each ZONE.

8. WHEELS ENABLE / DISABLE SELECT: You can set each ZONE to respond or not respond to PITCH and MODULATION WHEEL information. This is done in the EDIT mode for each ZONE.

9. AFTERTOUCH ENABLE / DISABLE SELECT: You can set each ZONE to respond or not respond CHANNEL AFTERTOUCH information. This is done in the EDIT mode for each ZONE.

10. SHAPE: Velocity curve settings specific to each ZONE. These setting will alter the way velocity information from the keyboard will be transmitted to the receiving MIDI channel. There are 8 preset velocity curves to choose from that vary the dynamic response of the keyboard. Again, these settings are specific to each ZONE and are accessed while in the EDIT mode.

GLOBAL VELOCITY CURVE: This VELOCITY CURVE setting is a global one, meaning it affects the dynamic response of the entire keyboard across all (2) ZONES. There are 8 global settings to choose from. Again, these setting are accessed while in the EDIT mode.

SUSTAIN PEDAL: The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for a SUSTAIN PEDAL input. The VP-26 by Fatar is recommended.

VOLUME PEDAL: The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for a standard VOLUME PEDAL input.

POWER INPUT: The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for the supplied POWER SUPPLY input.

MEMORY STORAGE: The Studio Logic SL-161/SL-61 will remember all of your preset information when powered down. All programmed settings are transmitted when the unit is powered up. There is no need to store edited information, simply exiting the edit mode causes the information to be stored.

SECTIONS.

Rear Panel Connections and Features:

Powering up. Connecting Pedals and hooking up with your other gear.



POWER INPUT



The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for the AC POWER SUPPLY INPUT. The AC adapter POWER SUPPLY supplied with this unit is a positive tip 9V DC with a minimum current of 200 mA.

POWER SWITCH



The Studio Logic SL-161/SL-61 has its POWER SWITCH located on the back panel next to the POWER SUPPLY INPUT. There is also a red LED to indicate the unit is on. Upon powering up the keyboard all preset data is transmitted out through the MIDI OUT connections.

SUSTAIN PEDAL



The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for a SUSTAIN PEDAL input. This jack will function properly with either type of "normally closed" or "normally open" SUSTAIN PEDALS. Upon powering up the Studio Logic SL-161/SL-61 will recognize whichever type of pedal is presently connected to the keyboard, regardless of polarity (e.g. PS100 or VFP1). Note: SUSTAIN PEDAL must be plugged in prior to powering up to properly sense polarity.

VOLUME PEDAL

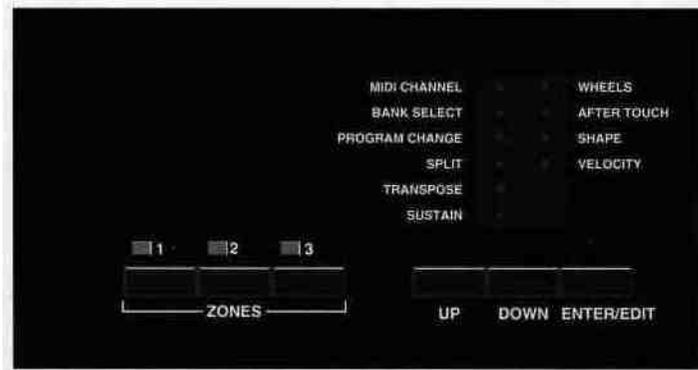


The Studio Logic SL-161/SL-61 has a connection jack on the rear panel for a standard VOLUME PEDAL input that uses a stereo or balanced jack (e.g. VP-26 by Fatar). This volume control will change the volume equally across all four ZONES simultaneously.

MIDI OUT CONNECTIONS



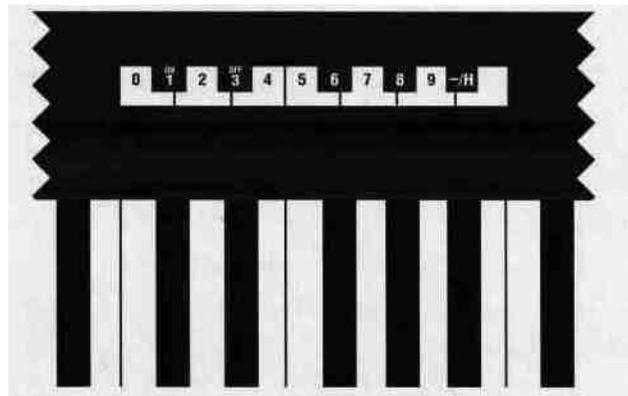
MIDI OUT Connections: The MIDI OUT jacks are where you connect your Studio Logic SL-161/SL-61 Master Controller to your various MIDI sound sources. Using a standard 5 pin DIN MIDI cable, connect the Studio Logic MIDI OUT to your MIDI input jack on your synthesizer, sound module or other MIDI equipped keyboard. You may use the THRU (daisy chain) feature on your MIDI gear to connect to other MIDI modules if you like. Avoid daisy chaining more than 2 modules, if possible, to reduce the possibility of MIDI log jam or timing delays. The Studio Logic SL-161/SL-61 conveniently is supplied with two parallel (identical) MIDI OUT jacks on the rear panel to help reduce the possibility of timing delays when connecting to multiple MIDI sound modules. When connecting multiple devices to your SL-161/SL-61 allocate them equally across the two MIDI OUT connections on this keyboard.



SECTION 4.

Description of Front Panel Controls and Features:

What are they, what do they do and how do I use them?



ZONE SELECT



Located on the top panel there are the (2) ZONE buttons for the (1) enabling and disabling of the three keyboard ZONES while in play mode and (2) selecting the ZONES while in EDIT MODE. The LED indicators will be lit up when its corresponding zone is active or selected for editing.

In PLAY mode any combination of ZONES may be on or off at any point in time. However, in EDIT mode the ZONE switches may only be used to select one ZONE at a time. Only one ZONE at a time may be edited and therefore only one ZONE light may be lit at a time while in EDIT mode. You are able to jump from ZONE to ZONE while in edit mode by depressing the corresponding ZONE BUTTONS.

Please note that you may only press a zone button and disable or enable a zone while no notes are depressed on the keyboard or while the sustain pedal is being depressed.

UP, DOWN, ENTER/EDIT



The UP and DOWN buttons are used to scroll through the FUNCTION selections while in edit mode.

Depressing the ENTER/EDIT button enters and exits the EDIT mode. While in edit mode a LED is **lit** next to the corresponding FUNCTION that is presently selected for editing.

Using the UP/DOWN buttons will cause the LED to scroll through the FUNCTION selections.

10 KEY PAD; (H) AND (-), (ON) AND (OFF)



This is the area where you enter desired parameters for selected FUNCTIONS being edited. The numerical keypad, (H) and (-), (on) and (off) are assigned to correspond to the keys of the central octave of the KEYBOARD.

While in EDIT MODE these keys now function as our data entry method and will not transmit note information.

In other words, while in EDIT MODE the entire keyboard is disabled and will not transmit note information until you exit the EDIT MODE.

MIDI CHANNEL



Used to select which MIDI channel each of the (2) ZONES will transmit its information on. To access this, parameter enter EDIT mode by selecting ENTER/EDIT.

Select desired ZONE for editing by depressing its corresponding ZONE switch. Use the UP/DOWN buttons to select MIDI CHANNEL function. You now enter a one or two digit value using the 10 key keypad to set the ZONE'S MIDI transmit channel. Exit the EDIT mode by depressing the EDIT/ENTER button. In exiting the EDIT mode you store the new information automatically in the SL-161/SL-61 Master Controller's memory and enable the keyboard ZONE to play and transmit information on the new selected MIDI channel. In order to play and transmit on a desired ZONE, select the corresponding ZONE switch while in play mode so that its LED is **lit**. The ZONE switch will toggle to turn ZONE on and off.

BANK SELECT



Used to transmit or initiate a BANK CHANGE message on a given zone. After selecting and assigning the MIDI CHANNEL, press DOWN button to switch to BANK SELECT. This mode allows you to change the sound bank of your synth module or external sound source.

The reception protocol for BANK SELECT depends on the type and make of the sound module you are transmitting to and can vary from manufacturer to manufacturer. If the synth module you are using requires only "Control 32" then you will have to only enter the bank number you wish to select. If your module requires a more complete protocol (Control 32+ Control 0) then you need to enter Control 32 and then press the key corresponding to the "H" (represents Higher part of Bank Change Byte) symbol (same as minus key). Then enter the desired number for Control 0. The key sequence would be as follows: enter 32, then the (-) minus key which also has the (H) symbol labeled above it, then the bank number to change to.

PROGRAM CHANGE



Used to select a PATCH NUMBER or PROGRAM CHANGE for a specific ZONE. To access this parameter you first turn on the desired ZONE by selecting and pressing its corresponding ZONE switch, then enter EDIT mode by selecting ENTER/EDIT.

Select desired ZONE for editing by depressing its corresponding ZONE switch. Now use the UP/DOWN buttons to select the PROGRAM CHANGE function. Enter the desired number of your patch selection on the keypad (MIDI Program change messages are from 1 to 128). Exit the EDIT mode by depressing the EDIT/ENTER button. In exiting the EDIT mode you store the new information in the SL-161/SL-61's Master Controllers memory, transmit the selected patch number and enable the keyboard to play the new selected PROGRAM CHANGE.

SPUn-



Used to select the range of keys to be active for a specific ZONE. To set the Key Range or SPLIT for a ZONE, enter the EDIT MODE by pressing ENTER/EDIT, toggle up or down **till** the light next to SPLIT is **lit**. Press the ZONE button for the ZONE you wish to set, now press the desired lowest key on the KEYBOARD and then the highest key on the KEYBOARD to define the range of keys to be active in that ZONE. Exiting the EDIT MODE stores the information and all other edit parameters that were changed. The ranges of keys can be any one note (by hitting the

same key twice) or the entire length of the KEYBOARD by hitting the lowest and then the highest key. The range can be any contiguous combination of notes in between the highest and lowest note on the keyboard and completely independent and different for each zone. You can overlap any amount of notes from ZONE to ZONE.

TRANSPOSE



Used to TRANSPOSE the range of keys on a ZONE up or down a specific amount of half steps from middle C. Normally the "4" ZONES have a TRANSPOSE value of "0". This means that the middle C corresponds to the central middle "C" on the Grand Staff, (providing the stored patch in your synthesizer module is set to the same value).

Let's say you want to transpose and raise the tone of **a ZONE by 4** semitones. Enter EDIT mode, select the desired ZONE to be edited, select the TRANSPOSE function using the UP/DOWN keys. Now hit 4 on the numerical keypad and exit the EDIT mode. Let's say you wanted to lower the tone by an octave. Follow the same procedure as above but instead of hitting (4) on the 10 key keypad, first hit the minus key then enter 12 and exit EDIT mode. You can TRANSPOSE a maximum of +/- 24 semitones (or two octaves) by entering a positive or negative number up to 24 (+ or -). Positive values are entered by depressing the desired number keys and negative values are entered by first hitting the (-) key then the desired number key(s).

SUSTAIN



This FUNCTION allows you to enable or disable the SUSTAIN PEDAL for each zone. For an example, if you want to disable the SUSTAIN PEDAL for ZONE 2: While in the EDIT MODE press UP/DOWN again to select the SUSTAIN function. Now that SUSTAIN is selected (LED switched on), press the ZONE #2 button to select ZONE 2 or editing and then OFF key which corresponds to "E flat" on the numerical keypad. After that, all the other ZONES will be affected by the SUSTAIN PEDAL, while ZONE no. 2 will be excluded. To regain SUSTAIN PEDAL control on the excluded ZONE, select EDIT, SUSTAIN and then press ON.

An obvious application for this FUNCTION would be to disable the Sustain Pedal on a ZONE set to the lower end of the KEYBOARD that is set to a Bass patch. In addition, now use the other ZONES to play a Piano or Pad/String sound layer leaving the SUSTAIN PEDAL functional for them.

Hopefully you are starting to see even more of the possibilities now becoming available to you using a Studio Logic Master Controller. With just a bit of creative thought on your part you should be coming up with interesting and useful patches for your own musical needs.

WHEELS



This FUNCTION allows the user to disable or enable the two WHEELS for each of the four ZONES. Again, as an example, if you wanted to disable the two WHEELS for ZONE 1: enter the EDIT mode, select ZONE 1 for editing (pressing ZONE 1 button), now use the UP/DOWN buttons to scroll to the WHEELS parameter selection (making sure its corresponding LED is lit,) then select the OFF key (corresponding to middle Eb on the keyboard.) Now exit the EDIT mode by depressing the ENTER/EDIT button. With this edit all the other ZONES will be affected by the WHEELS while ZONE 1 will be excluded. To reverse this edit follow the same instructions as above but instead select the ON button on the keyboard (corresponding to middle Db on the keyboard.)

A possible application for this feature would be to have a ZONE or ZONES assigned to the lower part of the keyboard set to sustaining or "Pad" sounds, with the top ends of these ZONES ending somewhere in the middle of the keyboard, leaving room for a split above it.

Perhaps you can transpose the lower ZONES up an octave so that you would play chords on the lower part of the keyboard but sounding in the middle range closer to middle "C". Leave the SUSTAIN PEDAL enabled but disable the WHEELS for this ZONE or ZONES.

Now use remaining ZONES to create a layer using the upper unused remaining notes on the keyboard. Assign this ZONE or ZONES to a lead patch or patches, disable the SUSTAIN PEDAL for these ZONES but leave the WHEELS enabled.

Now you can perform and hold down chords in the lower part of the keyboard using and holding down the SUSTAIN PEDAL to "latch" the sustained chords.

Now, using both hands to play lead over the top, using the right hand to play melody and the left to use the PITCH and MODULATION WHEELS, Release the SUSTAIN pedal to change chords then SUSTAIN and "latch" again on the next chord and continue playing two handed leads over the new chord.

AFTERTOUCH



This FUNCTION allows you to enable or disable the AFTERTOUCH for each ZONE. For an example, if you want to disable the AFTERTOUCH for zone 3: While in the EDIT mode select ZONE 3 for editing then press UP/DOWN buttons to scroll to and select the AFTERTOUCH function.. Then press OFF key which corresponds to E flat on the numerical keypad. After that, all the other ZONES will be affected by the AFTERTOUCH while ZONE no. 3 will be excluded. To regain AFTERTOUCH control on the excluded ZONE, select EDIT, AFTERTOUCH and then press ON.

An application for this might be as follows: Refer to the patch set up from the preceding example in the WHEELS section above. In your lead patch in the right hand you may be using AFTERTOUCH for volume swells or vibrato modulation. While doing this you may find that undesirable vibrato messages are being sent to your sustaining chords in the lower ZONES in this patch. Use the AFTERTOUCH disable feature in these lower ZONES to eliminate aftertouch messages from your lead performance being sent to your sustaining chords.

SHAPE



This function allows the user to change the dynamic curves which control the velocity responses for each of the four ZONES. This FUNCTION allows you to adapt your Master Keyboard Controller to the dynamic response of your expander or external MIDI device. It also allows you to adjust the keyboard's reaction to your specific touch. The Studio Logic SL-161/SL-61's SHAPE FUNCTION offers you 8 different preset curves to select from, 4 positive and 4 negative. Each ZONE can have its own SHAPE setting.

To select a specific SHAPE for a ZONE follow the normal EDIT operation. Enter EDIT mode, select a desired ZONE for editing by hitting its corresponding ZONE switch. Now select edit function SHAPE using the UP/DOWN buttons and finally select 1,2,3 or 4 for SHAPE selection. Selecting a (-) before hitting the number will select an inverted version or NEGATIVE SHAPE of that curve. By negative shape we mean that the curve has an opposite affect with respect to the touch. Therefore, a light touch brings about a high response and vice versa. This SHAPE FUNCTION is useful when you have two different curves (one + and one -) on two ZONES, as this results in a velocity crossfade effect. As one sound gets lower the other gets louder. SHAPE (-) 1 corresponds to the inverted SHAPE 1, and so on.

SHAPE no. 1 has a linear response, which is compatible with most of the MIDI devices present on the market. This is the default setting for each of the (2) ZONES..

SHAPE no. 2 has a less sensitive response, so it requires a stronger touch. This setting is useful to gain a wider dynamic response. Try this SHAPE on a Piano or Electric Piano while playing a ballad or softer piece of music for a more expressive feel to the keyboard. You may also like this setting while using the SL-161/SL-61 to program Hi Hats or Drums into a sequencer, it makes it easier to "pump" a part or vary the accents. It is also useful when the input MIDI device is too sensitive and you want to lower the relative velocities being transmitted.

SHAPE no. 3 has a more sensitive response than Shape no. 1. You will be able to transmit higher velocities with a lighter touch. This SHAPE may be useful to you if you are playing a Rock Piano or Honky-tonk Blues style and need to be heard over a loud band. This SHAPE scales the relative velocities up.

SHAPE no. 4 has an even more sensitive response than SHAPE no. 3. Useful for removing some or all of the dynamic response to the keyboard. Use it when you want to trigger Samples, Loops or Sound FX easily so that they play at their maximum volume without having to hit the key as hard.

VELOCITY



The VELOCITY is similar in function and application to the SHAPE feature in that they are both dynamic response settings for the keyboard and the MIDI velocity information that is transmitted. The difference is that the VELOCITY parameter is a GLOBAL setting. While in EDIT mode when you select VELOCITY, the LED's for all 3 ZONES light up simultaneously indicating you are changing a GLOBAL setting covering all three ZONES. While in the previous section you could select a dynamic curve for each ZONE, now you have 8 different curves that affect the response of the entire keyboard. This VELOCITY parameter can help adapt your Controller Keyboard to your MIDI modules and to your specific touch and feel preferences so as to give you the most expressive control available.

To select a VELOCITY curve enter the EDIT mode, use the UP/DOWN buttons to select VELOCITY, then chose 1 through 8 on the 10 key keypad to select your VELOCITY setting. Exit EDIT mode to play and audition each of these curves.

**10 KEYPAD,
(H) AND (-),
(ON) AND (OFF):**



As you have most likely figured out by this point the Studio Logic Master Controller SL-161/SL-61 uses the keyboard itself in EDIT mode as the 10 KEY KEYPAD and data entry source. The keys in the central octave, starting at the middle C, are assigned to specific functions for data entry in EDIT mode and are clearly labeled as indicated in the diagram below. While you are in the EDIT mode and using the numerical keypad the keyboard itself does not transmit MIDI notes and performance information. **You** must exit the EDIT mode to play notes from the keyboard.



SECTION 5.

Programming the Studio Logic SL-161/SL-61 Master Controller:

Creating musically useful Patches and how to do it.

Before we get into some programming examples and tips, the following information is **about** the design architecture and how the Studio Logic SL-161/SL-61 Master Controller operates.

DEFAULT SETTINGS



When your Master Controller is switched on for the first time it will transmit the following default settings: ^

ZONE #1 ON, Zones #2,#3 OFF. The three zones are set to transmit on MIDI channels 1 through 3 respectively, their SPLIT is set to the full extension of all 61 keys and all switchable commands are in the ON position.

All ZONES set to SHAPE #1, VELOCITY = 4, TRANSPOSE = 0.
VOLUME SETTINGS OF 127 if no VOLUME PEDAL is connected. If a VOLUME PEDAL is connected whatever position the pedal is in will be transmitted.
SUSTAIN OFF. (PEDAL is enabled but in the off position, CC 64 - 0)
PITCH BEND value = 0, MODULATION WHEEL value = 0

GENERAL RESET



To reset the unit to the above factory settings:

Power up the keyboard while holding down all three UP-DOWN-ENTER buttons, hold for a few seconds then release all three buttons, c

GENERAL PROGRAMMING INFORMATION



When the Master Controller is powered up it always transmits the contents of the program memory.

After programming any parameters, **the contents** of the memory is transmitted when exiting EDIT mode.

To transmit the contents of the memory while in play mode press the ENTER/EDIT button twice. Exiting the EDIT mode automatically stores the newly changed parameters, if any, into the memory.

When powering down the unit **all** information in memory is retained and then transmitted again upon power up.

You can not enter the EDIT MODE if you are holding down keys or pressing the sustain pedal. You must release all pedals and keys before entering into the edit mode.

When re-entering the EDIT MODE **it will** be on the parameter setting and ZONE selection as it was left when previously in the EDIT MODE.

When EDIT MODE is selected, the keyboard **does not sound**. To test the programmed variations and play the keyboard exit the EDIT MODE.

APPLICATIONS USES AND USERTIPS



These suggestions are designed as a starting point to help stimulate your own creative usage of these features for your own musical applications and needs.

THE ZONES



The ZONES are the heart of the SL-161/SL-61 Master Controller. Creative use of the ZONE'S parameters and the ZONES themselves gives the player new found flexibility and control over their sounds and modules. We've already discussed how to operate the ZONES.

Now we apply them to musical applications. You can use the three (2) ZONES in a number of different ways: Here are some options and possible applications using the features of this keyboard.

THE BIG LAYER



Set all three ZONES to the same range of notes and assign each of them to three similar String patches or three similar Piano patches. Try two piano patches and a string patch. Experiment with disabling some of the features on some of the ZONES such as, AFTERTOUCH or SUSTAIN. While playing one section of a song, leave some of the layers turned off and then switch them on during the "Chorus" by pressing their ZONE SWITCHES to build dynamics in the song. On your module try setting and storing your PIANO patches to not respond to MIDI volume (CC#7) then using a Volume Pedal on your Master Controller you can bring up the Strings behind the Piano when needed.

THE SPLIT



Set two ZONES in your left hand for an Electric Piano/Pad layer and set ZONE (2) in the right hand for a string or horn part. Use the TRANSPOSE feature to bring these ZONES into a useful range.

ANOTHER SPLIT?



Try a Bass patch using one ZONE in the lowest two octaves of the keyboard, disable the SUSTAIN PEDAL and TRANSPOSE up an octave or two to place it in the range of a bass guitar. Now create a SPLIT in the middle range with ZONE (2) set to a Breathy Synth or Comping patch, and the last ZONE for the top octave or so on a Brass patch with the SUSTAIN PEDAL disabled. You can play a bass line with your left hand, sustain chords you've played on the Pad sound using the Sustain Pedal and now play Horn stabs or lines above it with your right hand.

*Note On Splits: Always remember to use the TRANSPOSE feature to place your parts in proper performance range no matter where on the 61 keys you may place a ZONES upper and lower limits. Think of the whole keyboard as 61 keys or triggers available rather than the traditional note placement and tuning as on an Acoustic Piano.

**A FEW OTHER TIPS
INCLUDED FOR YOUR
CONSIDERATION:**



Live and Studio Applications.

Live application: Try using the different SHAPES in each ZONE to manipulate and balance the elements in your layers.

Studio application: Connect your MIDI out from your Master Controller to the MIDI in on your Sequencer and the MIDI out of your sequencer to your Modules. Set your sequencer input filter to Direct Echo or the appropriate setting to pass all information through (non channelize). If you come up with an interesting layered patch set your sequencer to multi-record and hit edit enter twice while your sequencer is recording to record your patch changes to the sequencer and then continue and play while recording a performance for all your layers. For another section of your track you can do the same with another patch and record and automate your patch changes along with your performance. Using the layers on the SL-161/SL-61 you may come up with patches and parts you might not have conceived programming the traditional one track at a time way.

Live application: Use the inverted or (-) SHAPES to experiment with velocity crossfades.

Live application: Set a ZONE to only one note. When editing SPLIT parameter in setting up ZONE hit the same note twice at either the lowest note or highest note on the keyboard to set a range of (1) one note for that ZONE. Assign that Zone to a MIDI channel that goes to your sampler to trigger a Loop or trigger a Sound FX. Use the TRANSPOSE feature to bring the sample up or down to a useful range for triggering. If the (+) or (-) 24 steps of transposition is not enough, assign the Sample trigger note to an appropriate one in the sampler and save it that way.

Live or Studio application: Using the BANK SELECT feature get to those often useful and alternate patches not stored in the first 127 patch positions on your synth.

Live application: Use the (2) ZONES to set up three different patches, use the ZONE SWITCHES to toggle and play one ZONE at a time for particular songs or sections of songs.

Live or Studio application: Use the TRANSPOSE feature to create intervals from layered ZONES in octaves or harmonies.

Studio application: Again, use multi-record on your sequencer but this time with a split patch set up on your SL-161/SL-61 record two or more parts at once. Bass and comp or chords and melody. The point is, get creative and innovative using all your new possibilities.

Studio, Scoring to Picture application: Perhaps your sequencer might be locked to video via SMPTE. Set up a split patch with all Orchestral elements on the SL-161/SL-61, perform and play in a more live sense while watching picture. Jump to another sound as the picture inspires you while recording all your performances simultaneously to the sequencer in multi-record. After recording you'll have each of your instruments parts recorded on it's own track, now you can go back and edit or elaborate on your improvisation to picture. If your sequencer doesn't record separate MIDI channels to separate tracks simultaneously you can always filter by channel parts after recording to separate your to individual tracks for editing.

SECTION 6.

Charts:
Useful Charts and Graphics

Included on the following two pages are 2 identical copies of a template for you to write down the settings for the patches you come up with. These are included so you can build a library of your favorite patches and settings. Carefully tear or cut out one of the copies and feel free to run it through a copy machine to make more blanks for yourself. If you require more copies call, in the USA, Music Industries Corp. at 1 (800) 431-6699.

PATCH PARAMETER CHART
 ModelSL-161/SL-61
 Studio Logic
 Master Controller

Patch Name: _____ Description: _____
 Comments: _____

"SPLIT NOTE" KEY RANGE FOR ZONE#1



LOW NOTE _____ HIGH NOTE _____

"SPLIT NOTE" KEY RANGE FOR ZONE#2



LOW NOTE _____ HIGH NOTE _____

	ZONE # 1	ZONE # 2	Comments or notes:
MIDI CHANEL:			
BANK SELECT:			
PATCH NUMBER:			
TRANPOSE:			
SUSTAIN PEDAL:			
WHEELS:			
AFTERTOUCH:			
SHAPE:			

GLOBAL SETTING VELOCITY CURVE: _____

PATCH PARAMETER CHART
 ModelSL-161/SL-61
 Studio Logic
 Master Controller

Patch Name: _____ Description: _____
 Comments: _____

"SPLIT NOTE" KEY RANGE FOR ZONE#1



LOW NOTE _____ HIGH NOTE _____

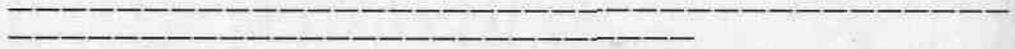
"SPLIT NOTE" KEY RANGE FOR

ZONE#2



LOW NOTE _____

HIGH NOTE _____



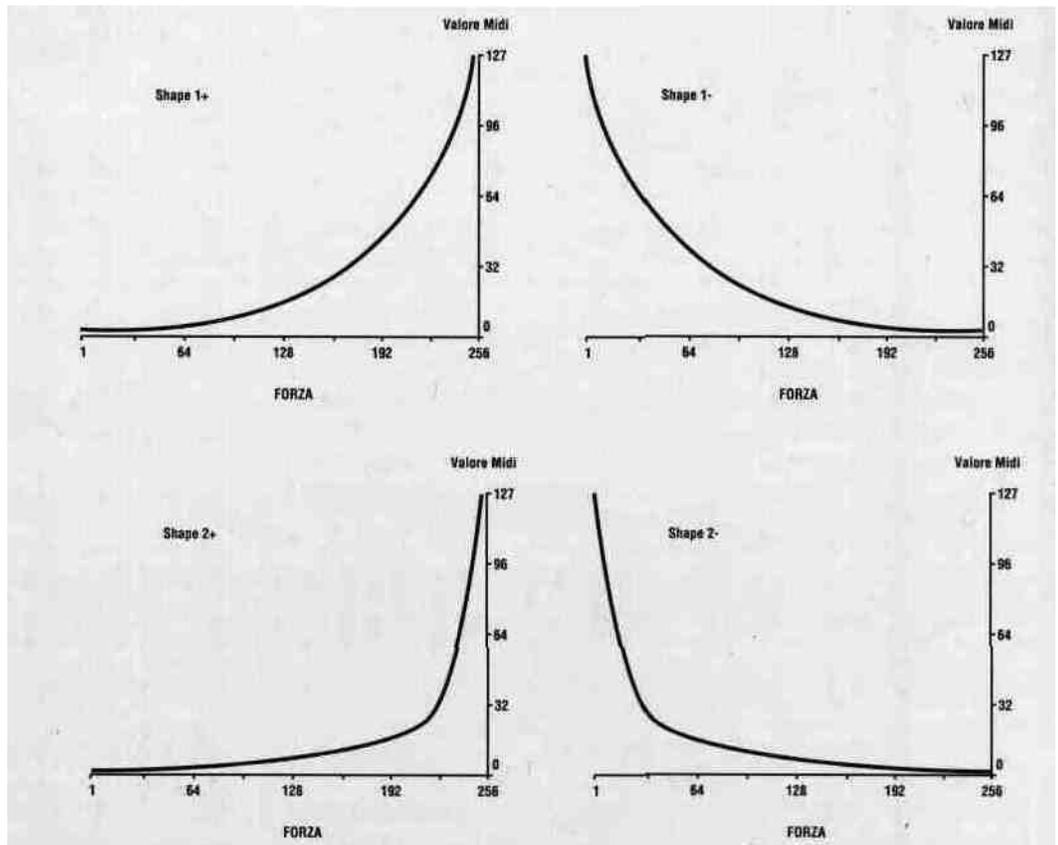
	ZONE # 1	ZONE # 2	Comments or notes:
MIDI CHANNEL:			
BANK SELECT:			
PATCH NUMBER:			
TRANSPOSE:			
SUSTAIN PEDAL:			
WHEELS:			
AFTERTOUCH:			
SHAPE:			

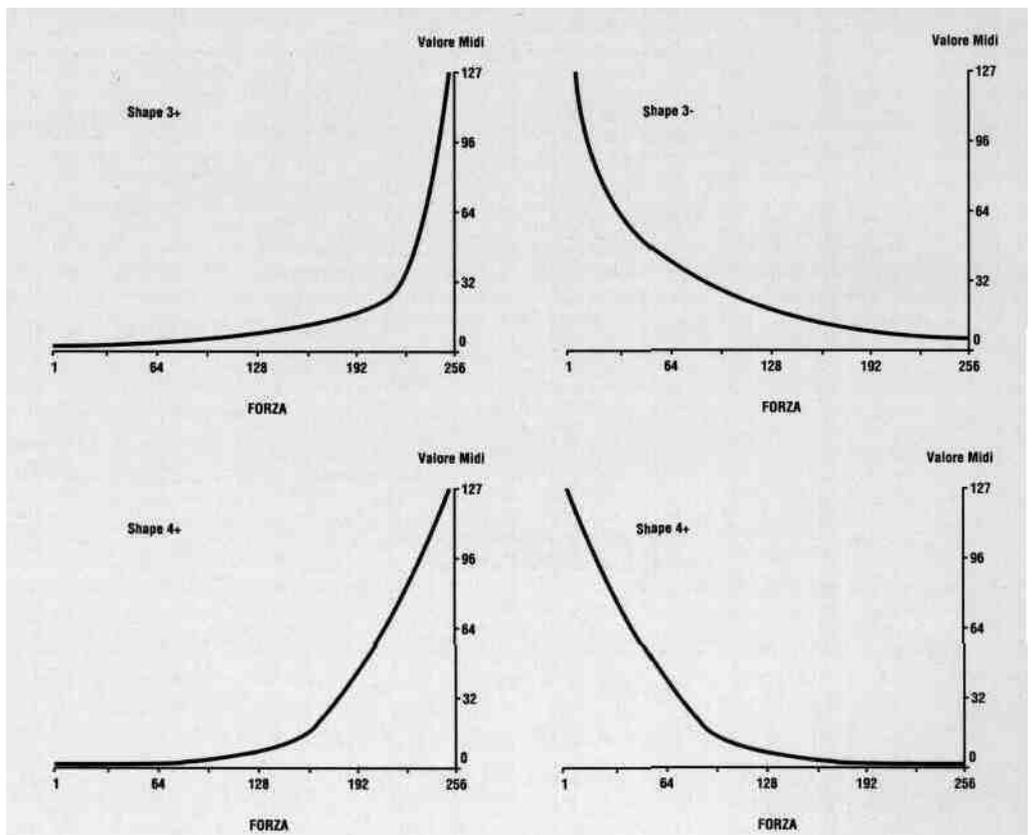
GLOBAL SETTING VELOCITY CURVE: _____

ZONE VELOCITY CURVES (SHAPE)



The following charts are graphic displays of the ZONE specific (SHAPE) velocity curves. They are here to help you conceptualize and understand how these CURVES affect the dynamic response of your ZONES.





GENERAL MIDI PATCH LIST



The following charts show the standard General MIDI patch locations. If you are using a General MIDI Module or Keyboard this will come in handy. When you are programming your ZONE'S PATCH CHANGES you can refer to this chart for entering numbers of desired Patches.

- | | | |
|----------------------|------------------------|------------------|
| 1. Piano 1 | 43. Cello | 86. Solo Vox |
| 2. Piano 2 | 44. Contra Bass | 87. Fifths |
| 3. Piano 3 | 45. Tremolo Strings | 88. Bass Lead |
| 4. Honky Tonk | 46. Pizzicato Strings | 89. Fantasia |
| 5. Electric Piano 1 | 47. Harp | 90. Warm Pad |
| 6. Electric Piano 2 | 48. Timpani | 91. Poly Synth |
| 7. Harpsichord | 49. Strings | 92. Space Vox |
| 8. Clavinet | 50. Slow Strings | 93. Bow Glass |
| 9. Celesta | 51. Synth Strings 1 | 94. Metal Pad |
| 10. Glockenspiel | 52. Synth Strings 2 | 95. Halo Pad |
| 11. Muic Box | 53. Choir Aahs | 96. Sweep Pad |
| 12. Vibraphone | 54. Voice Oohs | 97. Ice Rain |
| 13. Marimba | 55. Synth Voice | 98. Sound Track |
| 14. Xylophone | 56. Orchestra Hit | 99. Crystal |
| 15. Tubular Bell | 57. Trumpet | 100. Atmosphere |
| 16. Dulcimer | 58. Trombone | 101. Brightness |
| 17. Electric Organ 1 | 59. Tuba | 102. Goblin |
| 18. Electric Organ 2 | 60. Muted Trumpet | 103. Echo Drop |
| 19. Electric Organ 3 | 61. French Horn | 104. Star Theme |
| 20. Church Organ | 62. Brass Section | 105. Sitar |
| 21. Reed Organ | 63. Synth Brass 1 | 106. Banjo |
| 22. Accordion | 64. Synth Brass 2 | 107. Shamishen |
| 23. Harmonica | 65. Soprano Saxophone | 108. Koto |
| 24. Bandonion | 66. Alto Saxophone | 109. Kalimba |
| 25. Nylon Guitar | 67. Tenor Saxophone | 110. Bagpipe |
| 26. Steel Guitar | 68. Baritone Saxophone | 111. Fiddle |
| 27. Jazz Guitar | 69. Oboe | 112. Shanai |
| 28. Clean Guitar | 70. English Horn | 113. Tinkle Bell |
| 29. Muted Guitar | 71. Bassoon | 114. Agogo |
| 30. Drive Guitar | 72. Clarinet | 115. Steel Drum |

31. Lead Guitar	73. Piccolo	116. Wood Block
32. Harmonic Guitar	74. Flute	117. Taiko
33. Acoustic Bass	75. Recorder	118. Melody Tom
34. Finger Bass	76. Pan Flute	119. Synth Drum
35. Pick Bass	77. Bottle Blow	120. Reversed Cymbal
36. Fretless Bass	78. Shakuhachi	121. Guitar Noise
37. Slap Bass 1	79. Whistle	122. Key Click
38. Slap Bass 2	80. Ocarina	123. Seashore
39. Synth Bass 1	81. Square	124. Birds
40. Synth Bass 2	82. Sawtooth	125. Telephone
41. Violin	83. Calliope	126. Helicopter
42. Viola	84. Chiffer	127. Applause
	85. Charang	128. Gunshot

SECTION 7.

TROUBLE SHOOTING GUIDE



Appendix

- | | |
|---------------------------|---|
| PROBLEM | Keyboard does not power up? |
| POSSIBLE SOLUTIONS | <ul style="list-style-type: none"> • Make sure the power supply is connected to the wall outlet • Make sure the power supply is properly connected to the keyboard |
| PROBLEM | Keyboard does not seem to be sending MIDI notes to my modules |
| POSSIBLE SOLUTIONS | <p>Make sure you are not in the EDIT MODE.
 Make sure the ZONE switch of the ZONE you are trying to play is on.
 Make sure the MIDI channel you are playing on is enabled on your sound source.
 Make sure your sound modules audio outputs are connected properly to your mixer or amp.
 Make sure your mixer amp or sound system is on and the volume settings are up.</p> |
| PROBLEM | I have made changes in EDIT MODE but the changes do not seem to be present when I return to PLAY MODE? |
| POSSIBLE SOLUTION | <ul style="list-style-type: none"> • This can happen very easily. When you enter EDIT MODE make sure you are editing the ZONE that you were playing before hitting EDIT. When entering edit mode you will be on the ZONE you last edited not necessarily the ZONE you have on in PLAY MODE. |
| PROBLEM | I know I am sending MIDI to my module because I see the MIDI indicator light up when I play but I hear nothing? |
| POSSIBLE SOLUTIONS | <ul style="list-style-type: none"> • Make sure the VOLUME PEDAL is depressed forward to send full volume! • Make sure your sound modules audio outputs are connected properly to your mixer or amp. • Make sure your mixer amp or sound system is on and the volume settings are up. |
| PROBLEM | The SUSTAIN PEDAL does not seem to work? |
| POSSIBLE SOLUTIONS | <ul style="list-style-type: none"> • Make sure it is plugged in properly to the SUSTAIN PEDAL INPUT • Make sure the SUSTAIN PEDAL is enabled for the ZONE you are playing |
| PROBLEM | The SUSTAIN PEDAL seems to work in reverse? |
| POSSIBLE SOLUTION | <ul style="list-style-type: none"> • Power the keyboard down. With the SUSTAIN PEDAL plugged in to the SUSTAIN PEDAL INPUT power the keyboard up. This will cause the SL-161/SL-61 to sense the proper polarity setting for the type of pedal you are using and adjust properly. |
| PROBLEM | The WHEELS or AFTERTOUCH do not seem to work? |
| POSSIBLE SOLUTIONS | <ul style="list-style-type: none"> • Make sure they are enabled on the ZONE you are playing • Make sure they are enabled in the Patch in your module you are sending to. |
| PROBLEM | I am playing a ZONE that I know is on but nothing is happening? |
| POSSIBLE SOLUTIONS | <ul style="list-style-type: none"> • Make sure you are playing within the SPLIT range of notes set up for that ZONE • Make sure that the MIDI channel is set correctly. • Make sure the VOLUME PEDAL is depressed and all other volume setting are up. |