YAMAHA

# S80 Music Synthesizer Power User: Working with Performances and Master Keyboard Setups

Topics covered:

**Master Keyboard Splits**
**Master Keyboard Layers**
**Master Keyboard 4-Zone setups**
**Performance Layers as Splits/Layers**
**Activating the Arpeggiator in Perf.**
**Performance Multis for Sequencing**
**Advanced Applications**
**Working with a PLG100-XG**

How to use this document: It is provided so that you can get a bit more out of your S80. There are step-by-step tutorials on how to get a certain feature to work. Follow it as closely as you can the first time through, then experiment with your own creations. The examples here were structured to teach you something about how the S80 functions. Even if you think you know the machine pretty well you are sure to pick up a few pointers. It should be well worth your time. Please use this document when you are seated at your S80 to take full advantage of the examples.

**Special Note:** If you have a **PLG100-XG** board installed in slot 2 of your S80 you will want to set the Receive channel to OFF for Parts 17-32. This will let you play just your internal S80 sounds. (See end section)

**Definitions:**

**Performances** can be used as real time playable sounds, called Performance Layers. Or they can be setup to be used as multi-timbral arrangements for MIDI sequencing, called Performance Multis.

- Performance Layer – up to four S80 Voices can be communicated with on the LAYER CHANNEL. The Layer Channel can be set for each individual Performance. You can activate the Layer Switch on any Part (up to a maximum of 4) – each PLG slot can contribute one sound, if it contains a PLG150 series board. A Performance Layer can also contain setup data for the A/D Input Part which does not need (or have) a Layer Switch. In the [INT] bank of factory sounds the first 96 performances are Performance Layers (A01-F16). You access the individual Voices in a Performance Layer via [EDIT] mode. Once in edit you can select the PART by touching buttons [1] – [16], [PLG1], [PLG2] and [EXT].
- Performance Multi - used for sequencing; has Parts assigned to the 16 MIDI channels as required by your song. Parts 1 –16 will contribute AWM2 sounds, PLG 1 and PLG2 can contribute a single Part each if they contain a PLG150 series board. If a PLG100-XG board is in slot 2 it can contribute 16 additional sounds. XG sounds can be used exclusively or they can share or be replaced by internal S80 sounds. An A/D Input setup can also be contained in a MULTI arrangement. In the INT bank of factory sounds 97-127 are Performance Multis (G01-H15) - to hear the individual sounds you must access them as PARTS via Performance EDIT. Once in edit you can select the PART by touching buttons [1] – [16].

**Master Keyboard** setups function in conjunction with Performances. Each Performance can store a Master Keyboard setup. Master Keyboard mode is active when the LED is lit. There are 3 types: Split, Layer and 4-Zone. This document will give you some step-by-step examples as to how they can be used. They differ from Performances because they can communicate on either two MIDI channels (Split and Layer) or up to four MIDI channels (4-Zone), simultaneously. 4-Zone setups can send Bank Select and Program Change messages out via MIDI when they are recalled. INT 128 (H16) is an example of an Master Keyboard setup. Just activate the [MASTER KEYBOARD] button.

## Creating a Performance/Master Keyboard SPLIT: Piano and Acoustic Bass

Select and initialize a Performance.

- Press [JOB]
- Use the PAGE knob, if necessary, to select the "Initialize Current Performance" job
- Press [ENTER], then [INC/YES] to execute
- Press [EDIT] to enter Performance edit mode
- Press [MASTER KEYBOARD] (LED lights)

Navigate to the Common page that lets us select either a 4-Zone, Split or Layer. Here's how:

- Use Knob A to select COMMON (fully counterclockwise) and then the PAGE knob to select the GEN. M.Kbd (General Master Keyboard) page. It defaults to '4zone'
- Set the MODE parameter to SPLIT

| GEN M.Kbd) | Mode | Lower | Upper | Point |
|---|---|---|---|---|
| Common | **split** | ch02 | ch01 | C3 |

Fig: If the mode setting is in parenthesis (split) this means the Master Keyboard mode is not active. Press [MASTER KEYBOARD].

- For our example, set the LOWER to CH02 and set the UPPER as CH01. Hold [SHIFT] and touch a note on the keyboard to set the split point. Alternatively, you could use Knob **2** to set the split point.
- Select the 2 sounds. Use Knob A to select Part01 and Part02. (Be sure you are selecting Part**01** and not Part**P1 –** plug-in 1).
- To view the Voice selection page, turn the PAGE knob counterclockwise to "MIX Vce".
- For Part 01 call up a piano **PRE1: 001 [Pf:StereoGrnd]**
- For Part 02 call up the acoustic bass **PRE1: 059 [Ba:Upright]**

| ▼MIX Vce) | Memory | Number | Ctgry | Search |
|---|---|---|---|---|
| Part01 | PRE1:001(A01)[**Pf**▸StereoGrnd] | | | |

Fig: Move from one PART to the next by touching the Program buttons [1] and [2]

| ▼MIX Vce) | Memory | Number | Ctgry | Search |
|---|---|---|---|---|
| Part02 | PRE1:059(D11)[**Ba**▸Upright ] | | | |

Fig: You will see an inverse video "E" between MIX and Vce – this "E" denotes a Voice or Performance that has changed (**E**dited) since you last stored it. If you see a "C" **C**ompare, you will be locked out from any further edits while in compare.

You can further customize each PART, as necessary. Use the Program button [1] and [2] to directly select a Part for editing and use the PAGE knob to navigate through the various parameter screens. You may, for example, wish to remove Reverb from the Acoustic Bass (Part02), or you may wish to Note Shift the bass up an octave. Another common edit in this type of split would be to defeat the Sustain pedal on the bass.

- Name and Store your results. Use Knob A and the PAGE knob (counterclockwise) to return to the GEN Name screen. Alternatively, you can press [PRE 1] as a shortcut to the Common parameters.

One advantage of using the Master Keyboard mode to create this split is that you can at the press of a button go from a full 88-note piano sound instantly to a Piano/Bass split. The Master Keyboard setup acts as an 'overlay' to the Performance – each Performance can have a unique Master Keyboard setup. Notice that **after** you have stored the above setup, you can deactivate the Master keyboard mode (LED goes out) and you have a full 88-note piano. Try it! When you are ready for the split you can overlay the Master Keyboard setup. This is a concept that can be used by live musicians to instantly change from one setup to another. This will work from the "PLAY" screen – remember when you are in EDIT you are in touch with the Part that is on the screen – PERFORMANCE PLAY mode is where you know what was stored – the Piano is across the entire keyboard because its Layer Switch is ON.

## Creating a Performance Mode / Master Keyboard LAYER with Piano/Strings

Select and initialize a Performance.

- Press [JOB]
- Use the PAGE knob, if necessary, to select the "Initialize Current Performance" job
- Press [ENTER], then [INC/YES] to execute
- Press [EDIT] to enter Performance edit mode
- Press [MASTER KEYBOARD] (LED lights)

Navigate to the Common page that lets us select either a 4-Zone, Split or Layer. Here's how:

- Use Knob A to select COMMON (counterclockwise) and then PAGE knob to select the GEN. M.Kbd (General Master Keyboard) page.
- Set the MODE parameter to LAYER

| GEN M.Kbd) Mode | Lower | Upper |
|---|---|---|
| Common **layer** | ch01 | ch02 |

- Leave the LOWER set to CH01 and the UPPER as CH02.
- Select the 2 sounds. Use Knob A to select Part01 and Part02. (Be sure you are selecting Part01 and not Part**P**1, the PLG1).
- To view the Voice selection page "MIX Vce", turn the PAGE knob counterclockwise.
- For Part 01 call up a piano **PRE1: 001 Pf:StereoGrnd**
- For Part 02 call up a string sound **PRE1: 065 St:Background**
- You can further customize each PART, as necessary. Use the Program buttons [1] and [2] to directly select a Part for editing and use the PAGE knob to navigate through the various parameters.
- Name and Store your results. Use Knob A and the PAGE knob (counterclockwise) to return to the "GEN Name" screen. Alternatively, you can press [PRE 1] as a shortcut to the Common parameters

One advantage of using the Master Keyboard function to create this layer is that you can at the press of a button go from a full keyboard sound instantly to a layer. The Master Keyboard setup acts as an 'overlay' to the Performance – each Performance can have a unique Master Keyboard setup. Notice that **after** you have stored the above setup, you can deactivate the Master keyboard mode (LED goes out) and you have a full 88-note piano. When you are ready for the layer you can overlay the Master Keyboard setup. This is a concept that can be used by live musicians to instantly change from one set up to another.

You may notice that the COMMON parameters (Volume, Pan, Reverb Send, Chorus Send, etc.) effect only the piano. Actually, the Common parameters will effect either Voice or both Voices depending on whether the LAYER Switch is ON for that particular Part. When the Part Layer switch is activated you will be able to use the Quick Edit (QED) parameters for Volume, Pan, Reverb Send, Chorus Send, chorus phase, portamento, filter (cutoff and resonance), and AEG (attack, decay, sustain and release) for that Part(s).

The LAYER Switch determines what sound(s) are active on the keyboard when the Performance is initially recalled.

## Creating a 4-ZONE MASTER KEYBOARD Setup

Select and initialize a Performance.

- Press [JOB]
- Use the PAGE knob, if necessary, to select the "Initialize Current Performance" job
- Press [ENTER], then [INC/YES] to execute
- Press [EDIT] to enter Performance edit mode
- Press [MASTER KEYBOARD] (LED lights)

Navigate to the Common page that lets us select either a 4-Zone, Split or Layer. Here's how:

- Use Knob A to select COMMON (counterclockwise) and then PAGE knob to select the GEN. M.Kbd page.
- The default Master Keyboard setting is 4-Zone
- Select the 4 Voices. Select sounds for PART01 – PART04, use Knob A to select PART01 and so on.
- Use Knob A to select Zone 1 – Zone 4. Alternatively you can select each Zone directly via the [A], [B], [C], and [D] Program Bank buttons.
- Make appropriate settings for each zone: Use the PAGE knob to scroll down through the Zone setup screens. Set: Transmit Channel, whether the zone is to be active internally (TG) or externally (MIDI), the octave and transpose settings, note limits, etc.

| ⬍MKB Transmit) | TrnsCh | TG | MIDI |
|---|---|---|---|
| Zone 01 | 01 | on | on |

- Make appropriate Controller settings for each zone: PB, MW, Knobs A, B, C and 1, 2, FC, BC, AT etc.
- Make appropriate settings for transmitting Bank Select and Program Change information from each zone. This setting is if you are transmitting to external devices, [not internal].

| ⬍MKB TxPreset2) | BankMSB | Bank LSB | PC |
|---|---|---|---|
| Zone 01 | 127 | 127 | 1 |

- Make settings for Volume and Pan position (if your external device will receive it). These are for modules that do not store their own Volume and Pan positions in RAM.
- Assign an appropriate controller number for the Control Slider in each zone.

| ▲MKB Assign) CS |
|---|
| Zone01 07[Main Vol] |

Fig: "▲" denotes bottom of the list

- You can further customize each PART, as necessary. Use the Program buttons to directly select a Part for editing and use the PAGE knob to navigate down through the various parameters. You may, for example, wish to remove Reverb from a particular sound, or you may wish to Note Shift a sound up or down an octave.
- Name and Store your results. Use Knob A and PAGE knob (counterclockwise) to return to the "GEN Name" screen. Alternatively, you can press [PRE 1] as a shortcut to the Common parameters.

## S80 Performance Mode Splits and Layers <u>without</u> a Master Keyboard overlay

You can create an S80 Performance split/layer by communicating to four Parts on the same channel. This is accomplished by activating the LAYER SWITCH for each Part you want to include. A Part with the Layer Switch set to ON will be communicated with on that Performance's LAYER CHANNEL. You then can Note Limit and/or Velocity Limit the Parts, as necessary, to create splits and layers. As mentioned, the first 96 INT Performances are setup this way. Here's how:

Select and initialize a Performance.

- Press [JOB]
- Use the PAGE knob, if necessary, to select the "Initialize Current Performance" job
- Press [ENTER], then [INC/YES] to execute
- Press [EDIT] to enter Performance edit mode
- Select your sounds for the various Parts, as described above
- Set each Part that you wish to use: LAYER SWITCH = ON
- Set the Note Limits and Velocity Limits, as necessary, to create your desired sound.

Any sound from Part 1-16 (internal), PartP1 (Plug-in 1)* and PartP2* (Plug-in 2) can be activated for real time play by turning the LAYER switch ON for that part. *(PLG150 only)

| ◆LYR Mode) | Mode | Arp | Layer | RcvCh |
|---|---|---|---|---|
| PartP1 | poly | off | ▸**on** | 16 |

The LAYER SWITCH = ON overrides the MIDI channel assignment for a Part. MIDI channel setting of 16 above is ignored because the Layer switch is ON. Up to 4 Voices in a Performance can have the switch active at one time. If you attempt to activate a fifth Part it will appear in parenthesis: (on). This means it is unavailable. When the LAYER Switch is OFF for a PART, it will receive on the assigned MIDI channel number.

The Part(s) with the LAYER SWITCH ON will receive on the Layer Channel - which is programmable per Performance.

| GEN MIDI | Arp Out | ArpCh | **LayerCh** |
|---|---|---|---|
| Common | off | 1 | 1 |

Fig: **Each** Performance can store its own Layer Channel setting. Selection is 1-16, or Basic Channel. The Basic Channel is the overall Receive channel set in [UTILITY].

The two Plug-in board slots can be activated via the Layer Switch. Each PLG150 series board can contribute <u>one</u> Part. [The multi-part PLG100-XG parts **cannot** be activated via a Layer Switch.]

We caution you here to use common sense when layering sounds. In other words, know how many Elements are in each Voice before you create some kind of monstrous layer. This can preserve playability and save your speakers. A sound that is too thick does not blend well with other musicians or other tracks within a musical composition. Remember: some of the elements are stereo waveforms, four elements per Voice, four Voices per Performance…There is a point at which, if you layer too many sounds, the S80 response time will become sluggish. Most anything, *within reason*, will work.

It is possible to create layered Performances that include different technologies. If you have a PLG150-AN and PLG150-VL board mounted in your S80, for example, Performances can be used to split/layer both board technologies with AWM2 sampled Voices, simultaneously. Each PLG board can contribute one sound at a time. You can layer PLG150-DX sounds with AWM2 sounds, you SY77 and SY99 owner's remember how slick that can be.

## Activating the ARPEGGIATOR in Performance mode

To activate the arpeggiator in a Performance is a two-step process (send – receive).
1-In the COMMON edit area turn the Arpeggiator ON (Performance Edit > Common > ARP TYPE).
2-Connect it at the Part level to the Voice(s) you wish to arpeggiate.

| ARP Type) | Type | Tempo | Switch | Hold |
|---|---|---|---|---|
| Common | Orbit:Ph | 150 | **on** | off |

Fig: Activate it on the Common level

Each Performance can have one arpeggio type active (128 to choose from). You can arpeggiate up to 4 Parts simultaneously. This is accomplished by activating the ARP and LAYER switches on each Part, as desired. This appears in PART edit on the LYR Mode page. Once you have located the arpeggiator switch you can quickly move between Parts via the Program select buttons [1] – [16], [PLG1], [PLG2] on the right side of the S80. You can set a key range within which notes will trigger the arpeggiator.

| LYR Mode) | Mode | Arp | Layer | RcvCh |
|---|---|---|---|---|
| Part03 | poly | **on** | **on** | 3 |

Fig: Connect it to the Part(s) you want. ARP and LAYER = ON

**Troubleshooting:** If you are **not** getting the response you expect, check under the COMMON section (Knob A fully counter-clockwise). Make sure your "ArpCh" is set to the same as the Layer CH. "ArpCh" and "LayerCh" are on the Common GEN MIDI page. If your LayerCh = "Basic Channel" - this refers to the overall Receive channel as set in [UTILITY]. If you have this set to OFF because of XG select a Layer Channel for this Performance, Channel 1.

| GEN MIDI | Arp Out | ArpCh | **LayerCh** |
|---|---|---|---|
| Common | off | 1 | 1 |

Still having trouble?

- Make sure the arpeggiator Switch is ON. This is found on the ARP TYPE page.
- If multiple sounds are being used, make sure the Arp and Layer switch for that Part is ON.
- Check under [UTILITY] "MIDI System Other" page to make sure SYNC = INTERNAL clock.

The most misunderstood parameter is "ARP Key Mode". The Key Mode settings "sort", "thru" and "direct".

- **Sort** notes held are scanned in ascending order
- **Thru** plays back notes in the order they are pressed
- **Direct** sends control data (pan or filter cutoff), does not send notes. This is for use with Control (Ct) type arpeggios (see below).

The arpeggiator category type (Ct) Control is a non-conventional arpeggio type. It does not create note information, only controller information. It should be used in the 'direct' ARP Mode. For an example of this Control type arpeggio check out the Voice: **PRE2:065(E01) [Sq: Seal ]**
This Voice has the ARP Mode set to "direct' and the arpeggio type to (Ct). This creates the filter effect that gives the sound its movement. (Control change message 74 filter cutoff)

## Setting up a Performance Multi for Sequencing

Depending on your own preference, you can either use your sequencer's ability to setup multi-timbral arrangements or you can do it on the front panel of the S80 itself. Software packages often have instrument definitions, mixer maps or environments that allow you to recall the S80 Voices by name from the computer. Check the Yamaha website for such setups for your particular software. (There is no such map for XGworks Lite 3.0, at this time).

Before we dig in, let's take a closer look at the Performance Multis that are setup in your [INT] Performance bank. Performances 97-127 (G01-H15) are actually Performance Multis. You wouldn't know this because, typically, you **only** play one of the 16 sounds at a time in a Performance Multi. When accessing Performances from the PLAY mode, you will be unaware that there are several sounds set up on the different MIDI channels. The sound that plays when you initial call up the Performance would be the PART on the transmit channel of the S80. How do you hear/see what the programmer's setup on the other Parts? Press [EDIT]. That's right.

In order to view and access a multi-timbral setup in the S80 you must do it from Performance [EDIT]. (You PLG100-XG owner's have already learned this fact – it works the same way).

From the Performance Edit view, you can use the Program buttons [1] – [16] to instantly communicate with a Part. Make sense? Now you have 16 dedicated buttons that will let you instantly access the 16 Parts. If you have a PLG150 Series (Single PART) board in the [PLG1] and/or [PLG2] slots, those buttons can be used to access those parts. And get this, the [EXT] button accesses the A/D input Part (EXT, external, get it? External, like

from the 'outside' – a little operating system humor…). Okay, back to setting up our own.

Here we will deal with using the S80 front panel. When you "initialize" a Performance the S80 will create a Performance Multi. Each internal PART, 1-16, will be on a separate MIDI channel, the LAYER SWITCH is active on <u>just</u> Part01, the Layer Channel defaults to the Basic Receive Channel, and the PLG1 and PLG2 slots* will be set to MIDI channels 16 and 15, respectively. *If they contain a PLG150 series board.

Select and initialize a Performance.

- Press [JOB]
- Use the PAGE knob, if necessary, to select the "Initialize Current Performance" job
- Press [ENTER], then [INC/YES] to execute
- Press [EDIT] to enter Performance edit mode
- Select the sounds for the various Parts. Use the Program buttons to select the Parts directly. Use the PAGE knob fully counterclockwise to view the 'Mix Vce' screen when you are ready to select Voices. The default condition has Part 1 on MIDI channel 1, Part 2 on MIDI channel 2, and so on. Make any changes to each Part, as necessary, to meet the needs of your composition.

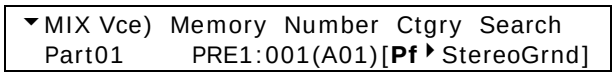


Fig: "▼" Denotes top screen of the list.

- From the 'MIX Vce' screen you can conduct a Voice **search**. This is cool…Knobs B, C, 1 and 2 are labeled MEMORY, NUMBER, CTGRY (category) and SEARCH. To begin a search **by category** use knob 1 (directly below CTGRY) to select the type of Voice you need. Pf = pianos, Cp = chromatic percussion, Or = organs, St = strings, Br = brass, Rd = reeds, Pi = pipe, etc. The two-letter prefix flashes.
- Use the Search knob (Knob 2), the DATA knob, or the [ENTER], [DEC/NO], [INC/YES] buttons to conduct the search for sounds of that category group. A Knob 2 (SEARCH) will search <u>only</u> the current Memory Bank, while the DATA knob and [DEC/NO], [INC/YES] buttons will search through all available Banks.
- Be sure to NAME and STORE your Performance Multi when you complete your edits. If you move to another Performance or another mode before you store your work your edits will be lost. You can recall your last edit, however, using the [JOB] "PFM Edit Recall" function.
- NOTE: When using a PLG100-XG board in the S80, it acts as Parts 17-32 (accessed by Knob A) but the XG setup is **not** stored in the S80 Performance. XG setup data is typically stored as part of the song data. You do not have access to the PLG100-XG board from Voice mode – this is why the PLG2 button doesn't work – its not a bug. The PLG100-XG is multi-timbral and like the internal S80, the mulit-timbral mode is **Performance**. The PLG100-XG is parts 17-32 – these parts do not have a Layer Switch. To activate a PLG100-XG sound in a Performance set its MIDI Receive channel appropriately. Use Knob A to access Parts 1-32. In order to use XG sounds it is best to use a sequencer to recall them.

When you select a Part for editing you are immediately in touch with that sound via the S80 keyboard (no special reassignment is necessary). This makes it quick and easy to hear what you are changing. This is a temporary communication. Remember: the sound that is active when you complete your editing and return to the main Play mode screen, is a function of the LAYER Switches that are ON **or**, if no Layer Switch is active, the current transmit channel of the S80. Just because you hear a sound while in edit mode does not guarantee that you will hear it when you store and return to PLAY mode. So what does guarantee this? The LAYER SWITCH being ON for the PARTS that you want playable from Performance Play mode. Or you can choose to not activate <u>any</u> LAYER Switches and simply transmit on the channel of the Part you wish to communicate with – this is easily done from the main PLAY mode screen by holding [SHIFT] + touch a button [1] – [16] to instantly select a channel. The Performance Multis INT 97-127 (G01-H15) are setup so no parts have the Layer Switch on. You can access each PART by changing the transmit channel.

Summary: When you are in Performance EDIT simply touching a Program button, 1-16, will **not** change the transmit channel going <u>out</u> via the MIDI jack – it lets you communicate instantly with that Part for editing purposes (directly, internally). You change transmit channels from the main Performance Play or main Voice Play screen by holding [SHIFT] + Program button [1] – [16]. This is why some times it seems that the S80 does one thing in Edit and when you come back, it is doing something else. We hear from people setting up a Performance and when they return to Common edit or to Play mode, and suddenly it

is different. If this has happened to you, then re-read the paragraph above, because here lies your solution.

If you have PLG150 series hardware synthesizer boards in your S80 you need to know that they default to MIDI channels 16 [PLG1] and 15 [PLG2]. In such a case you may hear both an AWM2 sample playing and a PLG Voice, simultaneously. If this is not the result you want, simply set the Layer Switch and Receive Channel to OFF for the Part you wish to silence.

| ▲▼LYR Mode) | Mode | Arp | Layer | RcvCh |
|---|---|---|---|---|
| Part01 | poly | off | ▶off | off |

## Advanced Applications with Performance / Master Keyboard setups.

Now that you have set up Performance Layers, Performance Multis, and Master Keyboard setups, let's use these skills to set up this configuration. We will use a Performance Multi to setup a number of sounds, then we will apply a Master Keyboard SPLIT so that these sounds can be instantly split with a bass sound in the lower end of the keyboard.

- Initialize a Performance
- Press [EDIT]
- Set up a Performance Multi as follows (use the category search to speed selection):

Part01 – Ba: Upright
Part02 – Pf: Stereo Grand sound
Part03 – Pf: 19 Roadz sound
Part04 – Or: Perc Organ sound
Part05 – Ld: Smooth Saw sound
Part06 – Rd: Soprano sax sound
Part07 – Pi: Flute sound
Part08 – Br: Fat Brazz sound
Etc.

You can choose any sounds you like, but the point is we can create many splits from this one Performance/Master Keyboard set.

What we will do now is set up a Master Keyboard SPLIT. Activate the Master Keyboard function and select SPLIT as the mode.

| GEN M.Kbd) | Mode | Lower | Upper | Point |
|---|---|---|---|---|
| Common | **split** | ch01 | ch02 | C3 |

Fig: this would split bass with acoustic piano. Use this screen to instantly recall transmit setups.

While viewing this Master Keyboard edit screen you can instantly select any two channels to transmit on. Here's how:

- Hold Program button [3] and touch [1] - you now are playing an electric piano with split bass.
- Hold Program button [4] and touch [1] – you are now playing an organ with split bass.
- Hold Program button [5] and touch [1] – you are now playing a synth lead with split bass.
- Hold Program button [6] and touch [1] – you are now playing a soprano with split bass.
- Hold Program button [7] and touch [1] – you are now playing a flute with split bass.
- Hold Program button [8] and touch [1] – you are now playing a synth brass with split bass.

Etc.

You can reverse this and hold Program button [1], touch [2] to reverse the split. The bass is now in the right hand and the acoustic piano is in the left.

- **Troubleshooting**: If the bass split sound disappears or is not there at all, check the following: If XG has turned your main Receive channel OFF, then set the Layer Channel of the Performance to Channel 1. This will communicate to the bass assigned to PART01 on its MIDI receive channel.

This same trick will work for setting up Master Keyboard Layer combinations, as well. Make combinations of sounds where the layers are 1/9, 2/10, 3/11, etc. Or setup combinations that are 1/2, 3/4, 5/6 etc., or any arrangement that works for you. Maybe your favorite eight bass sounds on Parts [1] – [8] and your eight favorite lead sounds on [9] – [16]. This way you can mix and match at will. If ever you cannot select a MIDI channel via this 'touch and go' method it means no MIDI channel is assigned to that Part or the Layer Switch is overriding the MIDI channel assignment on that Part.

Remember: the sound(s) that has the LAYER SWITCH set to ON will be the sound(s) that is recalled when you call up the Performance in Performance PLAY mode. When the Master Keyboard function is activated (LED lights) you are overriding the Layer Switch setting and your sound setup can be entirely different.

For example, you could have a Grand Piano layered with a Pad sound as your basic

Performance Layer. See below – they both have their Layer Switch ON. However, your Master Keyboard setup can transmit on any set of MIDI channels.

PART01 – Stereo Grand: Layer switch = ON
PART02 – Sweet Pad: Layer switch = ON
PART03 – B3 Organ: Receive ch3
PART04 – Moog Bass: Receive ch4
PART05 – Finger Bass; Receive ch5
Etc.

If you set up your Master Keyboard function to SPLIT where LOWER = ch03 and UPPER = ch04, when you activate the [MASTER KEYBOARD] button you are transmitting to the Moog Bass/Organ split. If you touch [3] + [5] while on the SPLIT page, you will get the Finger Bass/Organ split. When you deactivate the Master Keyboard button you are back to the Piano/Pad sound.

## Working with the PLG100-XG multi-part Plug-in Board:

You have probably noticed that the board causes your S80 to behave a bit differently. Here is what is happening and how to get control of it. When you want to "Play" (from the Performance PLAY screen) a Performance Layer and you do not want the XG sounds ghosting in the background, all you need to do is set the main Receive channel to OFF on the UTILITY page.

| ◆ MIDI Ch) | Recv | Trans | Local | DevNo |
|---|---|---|---|---|
| Sys | **off** | 1 | on | all |

Fig: An XG Reset command will turn the main Receive channel to OFF, as well – Therefore, when setting up your own Performance Layers make sure you set the LAYER CHANNEL for your Performance to something other than the BASIC CHANNEL. If you leave it set to the "Basic Channel", you will not be able to communicate with the Performance Layers that have their Layer Channel set to BasicCh.

From the PERFORMANCE PLAY screen you will only be in communication with Parts that have their LAYER Switch set to ON. This will work because the Voices with the LAYER SWITCH ON are communicated with on the LAYER CHANNEL. When you enter the EDIT mode as long as you are in communication with a PART with its Layer Switch ON you will not hear the PLG100-XG board (they don't have Layer switches). When in EDIT mode if you select a Part other than the Layer Switched Parts you will be communicating directly to the S80 Voice and to the XG sound on that MIDI channel – so the XG board will be heard along with the S80 sound. The only way to insure that the PLG100-XG parts are not heard when in EDIT mode is to set the individual MIDI Receive channels to OFF for Parts 17-32.

This is both a blessing and a curse because it does allow you to layer sounds but at some point you will want to separate them. Although the internal S80 sounds and their condition can be stored in a Performance, the XG board remains in the condition it was last left in (from the last song file you played). However, with XG you can automate anything. A short .mid file can be used to shut XG parts OFF. It is a one bar song file that you can keep on your SmartMedia card, in the root directory. (Get the file **XG_OFF.mid** included with this document). Open it in your favorite sequencer and copy and paste it to the very end of your song files before you move them over to your SmartMedia card. This way at the end of every song the XG sounds go away. To restore them simply send an XG reset command, which can be sent from XG Editor (or use **GMXGrset.mid** file also included with this document). All XG song files will naturally have the reset commands as the first and second event (track 1).

## Summary:

Performances in the S80 are multi-timbral. The only difference between a Layer (for live play) and a Multi (for sequencing), is that the Layer has up to 4 sounds on a single channel, the Layer Channel and the Multis have sounds on different channels for access from the sequencer. You select the sounds from Performance Edit mode. Layers have the LAYER SWITCH set to ON. Multis have the Receive channel active. (Layer Switch overrides Receive channel.) PLG150 series boards add a single part to the S80 (each can contribute one sound at a time). The PLG100-XG board can add 16 Parts (17-32) but these sounds either share or replace the internal sounds on the MIDI channel. Each Performance can store its own Master Keyboard setup that can be activated on demand. These setups can be SPLITS, LAYERS or 4-ZONE arrangements.

Phil Clendeninn
Product Marketing Specialist
Digital Musical Instruments