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POWER USER

Using the
PLG150-DR and PLG150-PC
Drum and Percussion
Plug-in Boards

for the
Modular Synthesis Plug-in System
Motif – S90

A Getting Started Guide

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Special Version Note for Motif users...

If you are using the PLG150-DR or PLG150-PC in a Motif you should upgrade to v1.7 to take advantage of the new operating system's functionality. If you are using an earlier OS you must load the preset VOICE data into the PLG_USER bank. This also is true for the S80, S30, CS6x and CS6R, which also can use these boards. Motif Version 1.7 places the PLGPRE1 Voice data in memory so that when a PLG150DR and/or PC board is detected at power up the Motif will automatically load the Preset Voice data. The S90 comes PLG150-DR/PC ready and will have the preset Voice data in the PLGPRE1 bank.

PLG150-DR and PLG150-PC

The PLG150-DR and PLG150-PC are single part boards based on AWM2 sample playback technology. Sounds can be accessed in VOICE mode, as a PART in multi-timbral setup (Song/Pattern Mix) or as one of the Voice PARTS of a Performance. There are some slight differences on how these boards work depending on which Modular Synthesis Plugin System (MSPS) product it is placed in. The boards can be used in the Motif 6/7/8 workstation synthesizers, the S90[1], the S80, the S30, the CS6x, CS6R. As with all PLG150 series boards it can be installed in any available expansion slot[2]. Even if you are familiar with one or more of the PLG series you will want to pay close attention to how *these* "Drum-kit Voice" boards work within the MSPS products.

Understanding how the board kits are configured will help you in understanding how you can use them most effectively. The different drum and percussion sounds are assembled into KITS. This is the first thing to understand. There are some 80 preset Kits and 8 User kits. You did not purchase a bunch of loose samples that you have to assemble into kits. This mapping procedure is already done – you paid for this voicing already. It is voiced so that when the board is placed in any compatible product you can recall the sounds in pre-assembled kits. There are 8 User kits that you can edit via the provided Windows/Mac Plug-in Board Editors. When you begin to appreciate how the sounds are arranged, you will realize that you need only find the kit that contains the sounds you want to use. Some of the Drum kits on the DR board are actually duplicates of internal S90 and Motif kits. This is so you can use them to expand the polyphony. And some of the kits are re-arrangements of the principal sounds in to composite kits. Each board has its own 32-note polyphony – when you assign a track to play the board's kit this saves you from using the internal engine's polyphony. Each board has its own on-board effects (Reverb and Insertion Effects) – that allows you to use the on board effects of the host for other purposes.

Checking Installation

Check to make sure your board is properly installed. Here's how:

On the S90/Motif: Press UTILITY/ F6 PLG/ SF1 Status. The board should appear in slot "x" (x = 1, 2, or 3) see Owner's Manual for installation

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[1] PLG series boards are also compatible with a host of XG products and they have the protocol built in to become a part of the open-ended XG system in addition to their role in the Modular Synthesis Plugin System. You can ignore the parts of the manual that refers to using these boards in XG products.

[2] There are slot restrictions for the PLG100 series boards.

info. You should come up with a slot scheme if you are planning on making and archiving your own sounds. Both the Motif and S90 will remember what slot your Voice data is intended for when you save it. You will have to remember what slot you used it in. Be consistent.
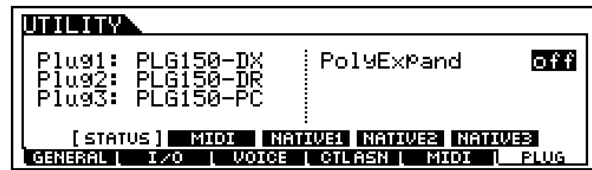
In the examples used for the screen shots in this article the PLG150-DR board is in Plugin Slot 2 and the PLG150-PC board is in Plugin Slot 3. (A PLG150-DX is in slot 1). *Note: PLG150 boards can go in any slot, no restrictions.

KITS EXPLANATION: A key to understanding and making use of the Drum kits (DR) and/or Percussion kits (PC) is found in the Owner's Manual **Voice List** (page 26) – near the back of the book. Spend a little time looking through this part of the manual. You will find kits that are composites of the main drum instruments. For example, the kits on the PLG150-DR board have been arranged by combining the kick, snare, hi-hat and toms of two principal kits. The Live Room A and Live Room B are these two kits. If you are new to drum Voices, then you need to understand that the *principal* sounds of a drum kit appear in the C1-B2 area of the keyboard. For example, the main kick drum is at C1, the main snare is at D1, a second snare is located at E1, the hi-hats occupy the 3 black notes F#1, G#1, and A#1 and the toms are located on the white keys between F1-D1. Above C#2 through B2 are your main ride, crash, china and other cymbals. Then mapped above C3 you have either basic percussion or some specific variety of drums. When looking at the Instrument Map charts (pg. 27-52) in the back of the booklet the columns are as follows:

A = Alternate group. Any two sounds in the same alternate group will mute the other (as in open and closed hi-hats).
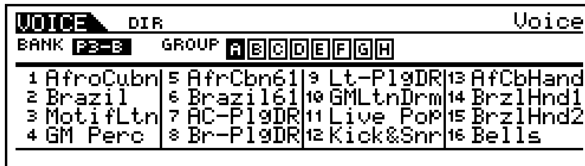**K** = Key off. This determines if the sound follows an envelope or toggles off when you let go.
I = Insertion effect. Each note (instrument sound) of a Kit can be connected to (or not) the kit's Insertion effect.

You can make these types of assignments in the User kits only, using the provided Plug-in Board Editor.

VOICE MODE

You can play the PLG150-DR/PC programs normally from VOICE mode. The Voice mode [PLGx] button will access the sounds via the Memory A-H buttons and the 1-16 program buttons, as normal.

```
VOICE    DIR                    Voice
BANK P2-U GROUP A B C D E F G H
  1 LiveRoom  5 RockSt1   9 SmallRoo 13 Rocky
  2 LiveRoom  6 RockSt2  10 SmallRoo 14 Trashed1
  3 PoweredS  7 DryKit A 11 HeavyKit 15 Trashed2
  4 DryStand  8 DryKit B 12 RingSnar 16 Trashed3
```

```
VOICE    DIR                    Voice
BANK P3-B GROUP A B C D E F G H
  1 AfroCubn  5 AfrCbn61  9 Lt-PlgDR 13 AfCbHand
  2 Brazil    6 Brazil61 10 GMLtnDrm 14 BrzlHnd1
  3 MotifLtn  7 AC-PlgDR 11 Live PoP 15 BrzlHnd2
  4 GM Perc   8 Br-PlgDR 12 Kick&Snr 16 Bells
```

You can also use the Voices as you would other PLG150 sounds, i.e., as one Part in a USER Performance. And, of course, you can access a board in a MIX as PART P1, P2 or P3 depending on the slot you have placed it. The host products own internal AWM2 sounds occupy Parts 1-16. The PLG150-DR/PC board occupies a single Part and can be assigned a MIDI channel 1-16. But, hey, so do the Internal AWM2 Parts. How do you **not** play both simultaneously if there are only 16 MIDI channels? Do I have to give up an internal Part for a Plugin Part? That is the purpose of this document.

SPECIAL NOTE for MOTIF owners:
If you have a Motif with a version prior to 1.7 you will have to assign the PLG150-DR/PC a MIDI channel when you are using it in a multi-timbral MIX. If you have version 1.7 or later (highly recommended) the PLG150 series boards will automatically be assigned a MIDI channel. Therefore, you will want to master how to turn OFF (un-assign) the internal sound on that MIDI channel and how to select Voices for the PLG Part in which you place your PLG board.

Using the PLG150-DR and PLG150-PC in a multi-timbral Mix
First, let's state something you already know. Normally, internal Voices occupy the 16 available Parts of a MIX. This, then, is your first skill in working with the PLG boards – assigning/un-assigning them to PARTS and MIDI channels.

In our example, we have the following 3 PLG boards installed:

```
UTILITY
 Plug1: PLG150-DX   PolyExpand        off
 Plug2: PLG150-DR
 Plug3: PLG150-PC

        [STATUS] MIDI NATIVE1 NATIVE2 NATIVE3
 GENERAL | I/O | VOICE | CTLASN | MIDI | PLUG
```

Of course, when you select a MIX an internal Part already resides in each PART. And each Part is assigned a MIDI channel, therefore you will have to un-assign one of the internal Parts. For example, if you decide to use the PLG150-DR on MIDI channel 10, you would need to go to internal Part number 10 and un-assign this PART, that is, make Receive Channel = OFF for the internal Part that defaults to Part 10.

How to use Kits in a MIX Step-by-Step:
• **MOTIF** - From Song or Pattern Mode press [MIXING] – LED lights up RED
• **S90 -** To select a MIX press the SEQ PLAY button followed by F6 MIX
• Press [F3] Voice to view the Voice select mixer.
• Press [F6] repeatedly, as necessary, to select a view of PARTS P1-P3 (the Plugin Slots). [F6] will toggle among your available Part views when you have PLG boards installed. The other views will show internal Parts 01-16, and Parts 17-32, if you have a PLG100-XG. The Plug-in [P1-P3] Parts should be in the screen.
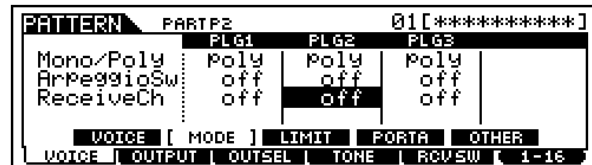
```
PATTERN  ■MIX           001[Dr:LiveRoom A]
  PART   P1 P2 P3
         RP DR DR
VOICE NUM  I  I  I
BANK MSB  63 63 63
BANK LSB  24 25 26
         Pu1 Pu2 Pu3
 VOL/PAN | AD | VOICE | EFSEND |TEMPLATE| 1-16
```

• Highlight the Bank MSB/LSB numbers and select the appropriate Bank for Board you are using.[3]
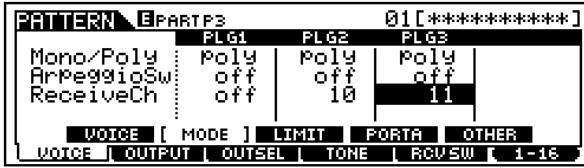
The possibilities are:
S90/Motif level Voices:
063/024 – this always refers to a PLG1USR Voice
063/025 – this always refers to a PLG2USR Voice
063/026 – this always refers to a PLG3USR Voice
063/070 – this is PLGPRE1 slot 1 preset bank
063/073 – this is PLGPRE1 slot 2 preset bank
063/076 – this is PLGPRE1 slot 3 preset bank
Drum Board direct:
047/000 – the PLG150-DR Custom bank (8)
079/000 – the 80 Preset Drum Board Kits
Percussion Board direct:
047/001 – the PLG150-PC Custom bank (8)
079/001 – the 80 Preset Percussion Board Kits

• Highlight the Voice Number and use the [INC/YES] buttons or the Data Wheel to select Kits. The Kit number and name will read out in the upper right-hand corner.
• To see the MIDI Channel assignment for each Part, press EDIT/ Touch the Part (track) button 1-16/ F1 VOICE/ SF2 MODE.

```
PATTERN  PART P2          01[**********]
               PLG1   PLG2   PLG3
 Mono/Poly     Poly   Poly   Poly
 ArpeggioSw    off    off    off
 ReceiveCh     off    off    off

        VOICE [ MODE ] LIMIT  PORTA  OTHER
 VOICE | OUTPUT | OUTSEL | TONE | RCVSW | 1-16
```
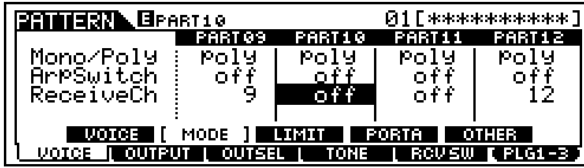
---

[3] MSB/LSB bank select numbers are used to define specific banks in the tone generator and on the plug-in board. The can be used in conjunction with a Program Change message to recall Voices within a MIX remotely from your sequencer.

- Select a MIDI channel on which to communicate with your boards (remember our example has the DR board in PLG2 and the PC board in PLG3; your setup may be different: for our example, we'll use 10 and 11

```
PATTERN  ▶PARTP3        01[**********]
              PLG1   PLG2   PLG3
Mono/Poly     Poly   Poly   Poly
ArpeggioSw    off    off    off
ReceiveCh     off    10     11
        VOICE [ MODE ] LIMIT  PORTA  OTHER
    VOICE | OUTPUT | OUTSEL | TONE | RCVSW [ 1-16
```
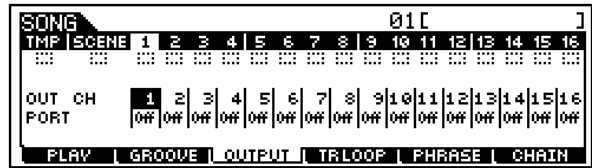
- Press F6 [1-16] to return to internal Parts. Un-assign the internal Parts for those MIDI channels. Touch the corresponding PART 10 and PART 11 and set the MIDI Receive Channel to OFF.

```
PATTERN  ▶PART10        01[**********]
            PART09 PART10 PART11 PART12
Mono/Poly    Poly   Poly   Poly   Poly
ArpSwitch    off    off    off    off
ReceiveCh    9      off    off    12
        VOICE [ MODE ] LIMIT  PORTA  OTHER
    VOICE | OUTPUT | OUTSEL | TONE | RCVSW [ PLG1-3
```

- **Motif**: STORE the MIX
- **S90**: PUT the MIX into a TEMPLATE

By default the boards (in Motif v1.7 and the S90) are assigned the MIDI channel that corresponds to the slot, i.e., slot 1 - MIDI channel 1, slot 2 - MIDI channel 2, etc. However, the initialized MIX will return all PARTS, including the PLG PARTS to MSB/LSB 63/0 Voice 1 (a SILENCE Voice for the PLG boards). So although the PLG parts will now be assigned a MIDI channel you will still need to select a VOICE as you would for any PART, when you want to hear them.

Learning curve: Get used to how this MIDI receive channel assignment works. Depending on how you have your system setup you may run into some routing problems here. If you are using the Motif or S90 alone you will need to select a MIDI channel to transmit on. This is determined by the selected TRACK – via the TRACK SELECT BUTTON. The PLG board PARTS must be assigned a MIDI channel and a track must be set to transmit on that MIDI channel for you to hear the boards. When you assign a PLUG-IN PART to a MIDI channel you may not immediately hear it, at least not until you return to the 1-16 Mixer view and select a track. The [1-16] view corresponds to tracks 1-16, initially. It is the track's MIDI channel assignment that determines what you hear. If the track is assigned to send MIDI channel 10 that is what determines which PART sounds from the keyboard. For example if you set track 1 to transmit on MIDI channel 10, the PART or PARTS set to receive MIDI channel 10 will respond, no matter if it is PART 1, PART 10 or a PLG PART.

```
SONG                       01[          ]
TMP SCENE 1  2  3  4 5  6  7  8 9  10 11 12 13 14 15 16

OUT CH    1  2  3  4  5  6  7  8 9 10 11 12 13 14 15 16
PORT     off off off off off off off off off off off off off off off off
        PLAV | GROOVE | OUTPUT | TRLOOP | PHRASE | CHAIN
```
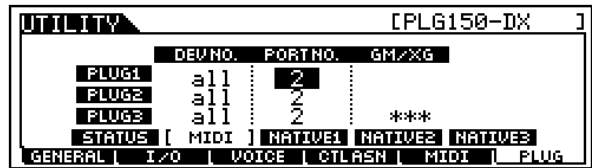
- From the main Song (or Pattern) mode screen press F3 OUTPUT.

The screen above shows the MIDI OUTPUT CHANNEL for the 16 Tracks. If you were to change track 1 to "OUT CH 10" then the information on that track and the keyboard will transmit on MIDI channel 10. And all PARTS, whether they are internal, external or plug-in Part, that are set to receive on Channel 10 will respond. If you leave the track transmit channels set to the defaults, then you must select the track assigned to the Part you wish to play. You must select Track 10 in the screen shot above in order to hear the PLG150-DR that we just assigned there. And to hear the PLG150-PC you would need to select Track 11.

Using an External Sequencer - USB(MIDI)
The PLG150 series boards can be addressed using the USB (MIDI) **multi-Port** connection from an external computer sequencer. In this scenario you can address the internal AWM2 sounds of the Motif/S90 on PORT 1 (MIDI ch. 1-16) and the PLG150 series boards on PORT 2.[4] This takes advantage of USB's ability to have multiple 16-channel MIDI connections on the same cable, simultaneously. Each Port is addressed, separately from an external sequencer – in your software sequencer you can assign tracks to PORTS and Channels on a track-by-track basis. This way you can take advantage of the full 16 on-board Motif/S90 Parts and address up to 3 of your PLG150 boards on a separate port[5].

```
UTILITY                       [PLG150-DX   ]
             DEVNO.  PORTNO.  GM/XG
    PLUG1     all      2
    PLUG2     all      2
    PLUG3     all      2        ***
    STATUS [ MIDI ] NATIVE1  NATIVE2  NATIVE3
 GENERAL |  I/O  | VOICE | CTLASN |  MIDI |  PLUG
```

This would allow you to break the 16-channel limit. You can select the Port assignment for each board in UTILITY/ F6 PLG/ SF2 MIDI. The host (Motif or S90) remains fixed at PORT 1 – you cannot change this assignment. Additionally, when using the USB Port in this fashion you can send an additional PORT out the MIDI OUT jack of the Motif/S90. Under the MIDI IN/OUT parameter where you select USB (UTILITY/ F5 MIDI/ SF4 Other) you will find the "ThruPort" parameter –

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[4] If you are not using the USB Port leave the PORT No. set to OFF.
[5] All three slots, if they contain PLG150 series boards, can be addressed via a single Port (Port 2 in our example above) because they are each a single PART and occupy a single MIDI channel at a time.

This parameter controls an additional Port of 16 MIDI channels that you can address from your external software sequencer. If, following the example above, you set ThruPort to Port 3, you could address 16 more MIDI channels to any device connected to the Motif/S90's MIDI <u>OUT</u> jack.

If you are using an external sequencer and are hearing more than one Part at a time you will want to turn either Local Control OFF in the Motif/S90 <u>or</u> defeat the "Echo" or "Thru" function in the software. If you are channelizing (directing traffic) using your software's ability to echo signal back to the keyboard, then you will select the Part that is sounding from within your software. When you select a track in your software that is assigned to Port 1 / MIDI channel 1 it will sound an internal Motif/S90 Part, if you select a track that is assigned to Port 2 you can address one of the PLG150 boards (you would set each on its own unique channel) and any track in your software that you assigned to Port 3 would sound the tone generator of the device connected to the MIDI OUT of the Motif/S90.

Navigating the Banks: There are several banks on the PLG150-DR and PLG150-PC. Here is what you need to know about them:
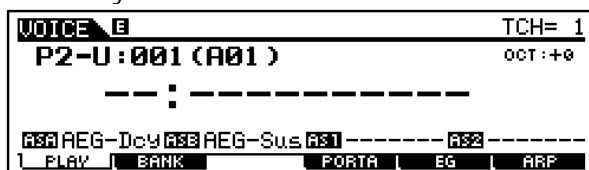
To select banks, press F2 Bank from the main PLG Voice screen. Use the Data Wheel to choose between banks.

<u>PLG150-DR</u> will have the following banks available: PLGxUSR, 047/000, 079/000 and PLGPRE1*.

<u>PLGxUSR</u> – this bank can hold 64 Drum Kits integrated with the Motif effects. "x" = the slot containing the PLG150-DR. This bank is blank, initially. *Note: The MSB/LSB bank number for the PLGxUSR bank is determined by which slot your board is in. The USR bank will always be associated with a slot as follows:
PLG1USR= 063/024
PLG2USR= 063/025
PLG3USR= 063/026.

Because the host product Voice data is stored in the host it needs to find the PLG150-DR in a specific slot. If your board is in slot 1 and you wish to recall the Voice data you must use bank 63/24 in your MIX.

```
VOICE  ⊟                      TCH= 1
 P2-U:001(A01)              OCT:+0
        __:_____

ASAAEG-DcYASBAEG-SusAS1--------AS2--------
 1 PLAY    BANK        PORTA    EG    ARP
```

Those of you with earlier versions of the Motif OS (or S80, CS) will need to load Voices from the

.mid file provided on the CDROM. You'll find 3 files – choose the appropriate one for the slot you have placed your board.

```
VOICE                         TCH= 1
 P2-U:001(A01)              OCT:+0

    Dr:LiveRoom A

ASAAEG-DcYASBAEG-SusAS1RevSendAS2    EfD/W
 1 PLAY    BANK        PORTA    EG    ARP
```

This bank remains in memory even after power down. The example above is in the PLUG-IN USER bank and the board is in slot 2.

<u>PLGPRE1</u> – With Version 1.7, the Motif will automatically load this same data into the PLGPRE1 bank when it detects the PLG150-DR on power up. The S90 does this without a version upgrade. The MSB/LSB of the PLGPRE bank will depend on the slot you have you board in:
Slot 1 063/070
Slot 2 063/073
Slot 3 063/076

<u>047/000</u> – this bank contains 8 locations for custom user Drum Kits. These Kits can be edited in the supplied PLUG-IN BOARD EDITOR for PLG150-DR...more on this in moment. When you power down they revert to the "LIVE ROOM A" kit, which acts like a placeholder. You can reload these 8 locations either from the PLUG-IN BOARD EDITOR or from a bulk file on SmartMedia or SCSI disk – if and when you develop your own customized kits.

<u>079/000</u> – this is the preset Board Voice bank...the "raw data" so to speak, on the PLG150 board. It is difficult to consider these 80 Kits as "raw" because they can have native effects already applied. They are voiced and "ready to use".

PLG150-PC will have the following banks available: PLGxUSR, 047/001, 079/001 and PLGPRE1.

<u>PLGxUSR</u> – this can hold 64 Drum Kits integrated with the Motif/S90 effects. "x" = the slot containing the PLG150-PC. These will remain even after power down. The MSB/LSB Bank Select number of the Plug-in User bank will be determined by the slot holding the board: 063/024, 063/025 or 063/026. Press INFORMATION to view the MSB/LSB numbers.

```
VOICE                         TCH= 1
 P3-U:001(A01)              OCT:+0

    Dr:AfroCuban

ASAAEG-DcYASBAEG-SusAS1RevSendAS2    EfD/W
 1 PLAY    BANK        PORTA    EG    ARP
```

In the example above, the Percussion board is in slot 3 and we are looking at the PLG3USR bank. Therefore the MSB/LSB would be 063/026.

047/001 – this bank contains 8 locations for custom percussion kits. These 'kits' can be made in the supplied PLUG-IN BOARD EDITOR for PLG150-PC. These locations are Board locations to which you can bulk custom kits. When you power down they revert to the "AfroCuban" Kit, but you can reload these 8 locations either from the PLUG-IN BOARD EDITOR or from a bulk file on SmartMedia or SCSI disk.

079/001 – this is the preset Percussion Board Voice bank…the 'raw data" so to speak, on the PLG150 board. These 80 Kits use the board's Reverb and Insertion effects.

PLGPRE1 – With Version 1.7, the Motif will automatically load this same data into the PLGPRE1 bank when it detects the PLG150-PC on power up. The S90 does this without a version upgrade. The MSB/LSB of the PLGPRE bank will depend on the slot you have you board in:
Slot 1 063/070
Slot 2 063/073
Slot 3 063/076

Loading the Voice data (Motif (v1.6 and earlier), S80/30, CS6)
You need to load the preset Voice data from a MIDI file to the PLGxUSR bank in the following products: Motif (if you do not have v1.7), S80, S30, CS6x, and CS6R. Included on the CDROM that accompanies the boards is a Folder called "VOICES" – inside this folder you will find 3 files: one for each slot that might contain your board. The files are identical, only the slot they are intended for is different. Remember the host product remembers what slot the board is in. You can use the FILE UTILITY to drag-and-drop the file from your computer's CDROM drive to the SmartMedia card in the host's slot. You can then play this file from the Motif/S80/S30/CS sequencer to load the Voice data to the PLGxUSR bank. The S90 and Motif v1.7 **does not** need to load the Voice data[6].

An obligatory word on this Voice data… It is only Voice parameters, and is meaningless without the PLG150 Board (which contains the samples) firmly secured in the *proper* slot for this Voice data. The board contains the actually waveforms that you hear. The Voice parameters alone make no sound.

Specification and Operation
The **PLG150-DR** and **PC** boards have 80 Kits each. The boards have their own Reverb and

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[6] Being a new product paralleling the introduction of the PLG150-DR and PC, the Voice data is burned in ROM of the S90 and will be recalled when the proper board is detected at power up. They will load into a bank in the S90 called PLGPRE1 – on detection the S90 will load the Voice data to the proper slot automatically.

Insertion processors. Take a look at the PRESET VOICE LIST for the PLG boards starting on page 26 in the back of the Owner's Manual. This chart will show you what Reverb and Insertion effect are applied to each of the 079/000 (DR) and 079/001 (PC) Kits. These decisions were made in programming the boards. You do not have complete user discretion as to what effect is used in a pre-programmed kit. That said, you do have choices about how it reacts via OFFSETS to the preset data. To get an idea of how this works: the programmers of the original data for the boards made some decisions about how the kits are setup. For example in the PLG150-DR Preset Voice List look at program number 28: KIT NAME – FLANGER. This kit has a ROOM3 Reverb and FLANGER1 as the Insertion. You cannot change the selection of the effect algorithm. (That is reserved for the 8 Custom user Kit created with the PLUG-IN BOARD EDITOR).

You have a set of what are called "Native" parameters – this refers to Native to the board. These are offsetting data to the preset data. You can select a specific note (instrument sound) and tune it, change its level, its pan position, work with Insertion effect key assignment, its Reverb send amount and you can work with various parameters of the INSERTION effect. Remember you cannot select the INSERTION effect but you can edit it via the supplied offset controls.
They may have panned a particular Tom hard left in a kit. You have control via an *offset.* You cannot pan it further to the left but you can offset it by moving it to the right. In other words, a setting for pan in the Native parameter of +0 on this tom is hard left – remember it is an offset. It will yield no result if you set it to –40 (it is already hard left) but a setting of +40 will start to move this more toward the center – by adding a +40 value to the stored value. A value of +127 will pan it hard right.

Native Board Parameters
Take a look at the NATIVE parameters available for the plug-in boards. These are found, *normally*, by pressing UTILITY/ F6 PLUG/ SFx Native. The "x" here will depend on what slot you have your board in. But you will notice that there are no Native parameters located here for these two boards (no, the buttons are not broken). Here's why: When a board is a DRUM or PERCUSSION board the NATIVE parameters are found within the VOICE. This is because with a Kit type Voice **each** note is autonomous, where with other PLG-synth boards the Native parameters were applied globally to all board Voices.

To find the Native parameters:
- Press EDIT/ touch the PART 1 button to select ELEMENT level editing/ F4 NATIVE.

You will see the following parameters listed under NATIVE – use the cursor arrows to see various pages:

Note Select – individual note number (you select 4 notes to edit via these Native offsets).
Note TUNE – offsets the pitch
Note LEVEL – offsets the volume
Note PAN – offsets the pan position
Note INSERT EFF – turn effect ON/OFF per key
Note Reverb Send – offset send amount
INS L.Freq – if available, low EQ frequency
INS L.Gain – if available, low gain
INS H.Freq – if available, high EQ frequency
INS H.Gain – if available, high gain
INS LFOFreq – if available, LFO frequency
INS LFODPT – if available, LFO Depth
INS DryWet – balance between Dry and effected
INS Drive – if available, Drive amount for insert

When you are looking at a Preset Board Voice (079/000=DR and 079/001=PC), the Insertion Effect and the Reverb algorithm are pre-determined. If a parameter is unavailable, then asterisks (****) will appear in the place of a value. The reason it may be unavailable is that only an effect with an EQ would have a LOW and HIGH Gain control, only an effect algorithm with a controllable LFO would require an offset for LFO Frequency and LFO Depth, etc. If you happen to select a Kit that has such a need, it will be available. If, for example, you select a kit with Reverb Room3 and a 2-band EQ, expect to find the high and low gain but not the LFO parameters. If on the other hand you select a kit with a Reverb Hall and a Flanger expect to find the LFO parameters but not the high and low gain.

CUSTOM USER KITS
On each board there is a User Board bank with 8 volatile locations for you to create a customized drum or percussion kit. Your kit will be based on one of the 80 template kits (these template kits are actually each a special ELEMENT) – remember the kits are actually different combinations of the principal sounds. From there you can edit each note (instrument), as necessary. In a Custom User Kit you can select which Insertion Effect from among the 35 algorithms, you can select which Reverb effect from among the 12 algorithms and you can edit each note, as necessary.

Supplied with your PLG Drum and/or Percussion board is a Plug-in Board Editor and instructions on how to use it within an OPT compatible sequencer and how to use it as part of the Voice Editor for Motif6/7/8. It also operates as a stand-alone editor. The S90 comes with a copy of Yamaha's Windows sequencer SQ01 – the Plug-in Editors can work within the SQ01 or within the Voice Editor for S90, or as a stand-alone.

Use the PLUG-IN BOARD EDITOR for PLG150-DR and the PLUG-IN BOARD EDITOR for PLG150-PC to access the full complement of editing parameters. Here is how it works:
- Select a template kit for the 80 preset board kits.[7]
- Select an Insertion Effect and Reverb for the kit
- As you select a key its signal routing (flow chart) and parameters are instantly recalled. Note that when you select a key for the INSERTION effect, by turning it ON, its REVERB Send will disappear. The signal is being routed through the Insertion effect first then there is a send to the reverb.
- You can set the attributes of each note as necessary. Including its note-on and note-off response, assigning it to an alternate group, etc.
- You can edit each keys Pitch, Filter (cutoff/resonance), Amplitude (Attack, Decay 1, Decay 2), and MIX (level/pan).

The important difference between these custom *user* Board Voices (047) and the *preset* Board Voices (079) is that the user Board Voice kits must be reloaded each time you power up. Of course, this can be either from the computer editor or a bulk file you can store on SmartMedia card. You can make an autoloader file that will automatically load your custom voice data on power up. This requires a SmartMedia card/SCSI drive. You store the data as a 'PluginAllBulk' type file for the slot that you place your PLG board.

Saving a "PluginAllBulk" file to SmartMedia card or SCSI removable drive
- Press the [CARD] button (S90) or the [FILE] button (Motif) to enter the Card File mode
- F1 Configure/ SF1 select to read from CARD/SCSI, as appropriate.
- Press F2 SAVE
- Set the TYPE to "PluginAllBulkX" x = slot #
- Name your file (8 characters).
- Press [ENTER]; and [YES] to execute
- If you name your file (literally): AUTOLD**1**.S2B for PLG1, or AUTOLD**2**.S2B for PLG2, or AUTOLD**3**.S2B for PLG3, the synthesizer will automatically load this file when you switch it ON. See the Owner's Manual for details. Of course, you can name them anything you wish if you just want to archive them.

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[7] You do not start from scratch by selecting individual drum/percussion instruments…you select a kit with the samples you need already in it. Learning to read and interpret the Voice List is essential.

Frequently Asked Questions

Motif: What is the difference between the Board Preset banks 079/000 (DR), 079/001 (PC) and the data that I loaded into the Motif PLGxUSR bank?

The 079/xxx bank contains the preset Board data – 80 different Kits. All these sounds are accessed directly from the PLG board itself. It has no Motif/S90 integration as to additional effects or controller setup. The data that is loaded into the PLGxUSR bank are 64 Kits that have been setup to respond to host effects and/or controllers. You would only need to create PLGxUSR Voices if you want to add host effects and control over those effects to your kits. Otherwise you can use the Preset (079) or your own kits (047) as necessary.

Can I route individual drums/percussion sounds from these boards to individual outputs on the AIEB2 or mLAN boards?

No. This would require an extremely complex busing scheme. The PLG150 Series boards are single Part boards and can be routed, as a whole, to the main stereo outputs, the assignable L&R outputs, or any of the assignable combination on the AIEB2 or mLAN boards. But individual drums cannot be routed to individual outputs

What is the difference between using the board's effects and using the host's effects?

When the signal of the PLG150-DR/PC arrives in the host you have the option of applying any of the Insertion and System effects to that Voice as with any of the PLG150 boards. These Voices get stored to the PLGxUSR bank and remain resident in the host even after power down. The only data that disappears at power down is any Custom drum kit data – this must be restored separately via a bulk file or bulked from the Editor. When you apply the Motif/S90 parameters to a kit and store it to the PLGxUSR bank the parameters will be applied globally to the Voice (this is true for all PLG150 boards). For example, if you were to add a host level effect to the Kit Voice it would apply to all drums. In your Board User kit (047) you have the ability to apply effects on a per note basis. And, yes a Board User Kit can be accessed via a PLGxUSR Voice.

Some parameters are not effective on the PLG150-DR/PC – which ones work and don't work?

When you are in PLG Voice EDIT mode and select Element level parameters (touch track 1), you can see:
F1 OSC – here you can assign kits to the HOST Voice.
F1/SF5 OTHER – here you can coarse tune the kit as a whole.
F2 PITCH – here you can apply an overall pitch envelope to the kit.

F3 FILTER – HPF (high pass filter) – inactive on these boards.
F4 NATIVE – here you access the board parameters. {The UTILITY mode, F6 PLUG, SF NATIVE buttons do not work when a board is a DRUM or PERCUSSION board.} The NATIVE parameters for these 2 boards are found with the VOICE. This is because with a Kit type Voice each note is autonomous, where with other synth boards the Native parameters were applied globally to all notes of the Voice.
F5 LFO – here you can apply a Low Frequency Oscillator to control pitch.
F6 EQ – Equalizer – inactive on these boards.

What is different about the PLG150-DR/PC from other PLG150 series boards?

These boards, needless to say, are in kits. A kit is a specialized Voice type where each note is autonomous when it comes to certain parameters. You can, for example, control the tuning of each note individually, the envelope of each note, and you even have a filter for each note, etc. Where a normal voice treats samples as a group, the drum voice treats samples as individuals. "There are musicians...and then there are drummers!" True individuals.

Does the PLUG-IN BOARD EDITOR for PLG150-DR and PLUG-IN BOARD EDITOR for PLG150-PC let me get at any parameters that are unavailable from the host's front panel?

Yes, they do. From the front panel of the Motif or S90 you can select only 4 Notes (four instrument sounds) by key, to edit via offsets to the stored data. You can also edit the INS effect via offsets. If you want to edit the kits, and select your own Insertion effect you need to do so from the Editor. Editing "from scratch" entails selecting one of 80 preset sample maps – from there you can select effects and edit each note individually.

How come the Insertion Bypass and System Bypass buttons don't work on the PLG150-DR/PC?

The front panel BYPASS buttons bypass the Motif/S90 effects (global), not the effects onboard the PLG board (per note). You have a DRY/WET balance offset control within the Kit's NATIVE Edit parameters. There is an important difference between how the Motif/S90 effects are routed and the way the effects onboard the PLG board are routed. For example, you can set the effects per note when you are addressing the effects of the PLG board, however, when you add effects of the Motif/S90 these are overall – applied to the entire Kit Voice as a whole.