DRUM INTELLIGENT TRIGGER INTERFACE

DITI is the world's most powerful Trigger to MIDI Interface from Alternate Mode.

With 24 Trigger inputs, a large drum set can be MIDI converted with ease. The DITI is the first interface of its kind to power and convert FSR drum triggers to MIDI. Products like our HybriHEAD™ and HybriPAD™ are designed to work right out of the box with the DITI for unprecedented dynamic range and control. Our new jamKAT, jamKAT'R and HybriKIT are multi-pad FSR pad configurations that are preprogrammed on the DITI, offering the most powerful drum controllers ever made.

The DITI will capture your playing dynamics unlike anything else. Each input can be TRAINED to play within your own personal performance style. Special Interaction Training ensures no false or double triggering, a problem plaguing other trigger to MIDI interfaces.

The DITI can convert piezo triggers, dual zone piezo triggers, membrane switch triggers, cymbal choking cymbals, and multi zone cymbals as well. The DITI can detect pad pressure on FSR pads allowing for dampening, and Continuous Control data being sent. The DITI also has a continuous controller input for hi hat. If all of this wasn't enough, the DITI incorporates many of the legendary features of the drumKAT, allowing for Alternate Note Modes, Velocity Shifts Modes , Note Shift Modes, Advanced Pad Linking, Transpositions and much more. There is also a special mode called SWITCHED BY, that alters the note on a pad if it detects pressure on another.

The DITI 3.0 features our GS Extended Sound Library built in. The GS Extended has an incredible amount of percussion samples from around the world, as well as acoustic

drums, chromatic percussion and more. With over 10,000 high quality samples, there is no limit on what you can create.

The DITI 3.0 comes preprogrammed with many percussion KITs designed for the jamKAT Percussion Controller. With a single cable you can just plug and play. Of course the DITI is fully customizable and can be programmed to your liking.

The DITI has built in KIT TYPES that can store THOUSANDS of programs from the most popular drum modules on the market. You simply call up your favorite sound, and all of the sound modules presets will be preloaded as Sound Patches. You can also create your own Kits and Sound Patches and even create your own CHAIN so that you can make your own Song List of Presets.

Perhaps the most interesting feature of the DITI is that the controller stores "profiles" of the various drum triggers on the market. Simply plug in the trigger, identify what you plugged in, call up one of the pre programmed Kits (for your favorite drum module or vst soft synth) and you're done.   But unlike a forced default, you can learn to tweak to the finest detail to get the DITI to respond to your every desire.

TABLE OF CONTENTS

DITI Start Up Guide
If you're not going to read the manual
(at least) **READ THIS**

We understand that you might not want to read the manual. We understand. It's also true that we've earned the reputation of having great products, but with a steep learning curve. No argument there either.

The DITI is different...kinda....It still has all of the complexity of our MIDI Controllers (and more), but we've made an attempt to greatly reduce the pain and suffering we have inflicted on our customers. How you might ask?

The DITI is about around three basic concepts, KIT TYPES, PAD TYPES and TRAINING. The KIT Type defines what drum module you are using; the PAD TYPE defines what you've plugged into each input. TRAINING is the process of teaching the DITI how you play on those pads and also learns and corrects false triggering.

KIT TYPES. Simply scroll through the list (up or down arrows) of the KIT TYPES on the top line of the display until you see the name of the Drum Module or Virtual Synth that you are using. When you see your favorite module, the DITI is ready to go. If you don't see your drum module, go to our website and download our ever growing list of KIT TYPES

https://www.alternatemode.com/altmode-info/diti-downloads.com

Here you will be able to download new KITs, Pad Types and All Memory Dumps.

On the second line of the screen, you will see the first 50 Kits in sequential order (called SOUND PATCHES) that are preprogrammed in the drum module that you just selected. Just use the Left and Right Arrows to scroll through the kits. It is possible to change the order of this list of Sound PATCHES and build up your own CHAINs to create your order of sounds.

PAD TYPES. A Pad Type is simply the name of the trigger pad that you are plugging into one of the DITI's inputs. After you plug in the trigger pad, you simply scroll through the list of Pad Types until you find the name of the product that you are using. The names can be very specific like onHEAD™ or inHEAD™ or altZONE, etc. They are

also generic names like " trigger zone", etc. When you tap on the ENTER key, the magic happens. The DITI loads in all kinds of critical information about the pad. The gain structure, threshold settings, masks time settings..... on and on. It even loads in a response curve designed for that trigger. By performing this one simple task, the DITI took the tech out of the instrument, because all of the parameters are set and ready to go. Of course you can edit and save each factory PAD TYPE or you can make your own User Pad Type as well so that you can fine tune the trigger's performance to your exact liking.

Because there can be so many PAD TYPES, it is possible to IMPORT PAD TYPES from our website, mentioned above

TRAINING

After you call up your drum module in the KIT TYPE and assign the proper PAD TYPE for each input, you have the opportunity to TRAIN your pads. Training teaches the DITI how you like to play. It asks you to play your softest, and then you hardest hit and figures out how to maximize the dynamics of the pad within this performance range. This feature alone has a tremendous impact on how the pad plays. This has been a staple feature on all of the KAT controller line since 1984! Every KIT TYPE can store the TRAINING results on every input. This means that you can have different feels and dynamic range on each and every KIT. There is also a default Training for every PAD TYPE so that the work can be automatically set for you. The choice is yours.

So let's review the concept and keywords with a bit more info….

PAD TYPE

When you call up a PAD TYPE, all of the settings relating to how the trigger will function are automatically loaded in. This includes settings for both the A and B input of that trigger input on the DITI. The PAD Type contains the INPUT TYPE which defines the function of the input… it tells the DITI what it expects to "see" on the input… FSR, piezo, membrane switches, etc.   It also loads in the gain, thresholds, mask time settings etc. There are Factory PAD TYPES and USER PAD TYPES with the same name. If you edit a Factory PAD Type and make a change and hit ENTER, the DITI copies that PAD type with your changes and puts a "U" in front of the PAD Type Name. Now you can go back and forth between the Factory PAD Type and your edited one to make comparisons. There are also User Types that you can create from scratch.

PAD TYPES are Global in nature. Once you create a PAD Type, they can be used in every Factory or User Kit. The selected Pad Type will have the same function with all of its parameters from Kit to Kit. This means that when you adjust a PAD TYPE, ALL Kits will that use this PAD Type will have the same changes automatically. This can save you lots of time because once you set up a PAD TYPE for a particular pad, it can be used on any trigger input or any KIT without further adjustments. You can restore a User PAD TYPE to its original Factory Setting simply by holding down the ENTER key for several seconds when the cursor is blinking on the U in the PAD Type Screen

KITS will share the same PAD TYPE settings for that particular drum trigger, and this also includes a dynamic training that's part of the PAD TYPE. Every pad in every KIT however can OVERRIDE the Training settings of the PAD TYPE and can store its own TRAINING for that Input. This gives you the maximum flexibility when creating your own setups.

KITs
A KIT is a collection of the PAD TYPES that are selected for each input. Every KIT on the DITI can have a different collection of PAD TYPES.

A KIT Type also stores the MIDI note numbers, MIDI channels, gate times, etc that are used for each of the inputs.   Kit Types also store other important pad functions such as a Program Change and KIT Name and much more. Kits are made to work with specific drum and sound modules, and the KIT names reflect what module they are designed to work with.

There are tons of PRESET KITs that are predefined for most of the drum modules on the market. These will have the name of the drum module as its name. As soon as you hit Enter, the DITI loads in the note numbers needed to access the drum module's sounds.

Because there are so many different sound modules on the market, we decided to have a database available on our website where you can instantly find the sound module you want, and download it to your computer. Then you can send a SYSEX file to the DITI (via SysEX Librarian - Mac or MIDOX -PC). The DITI will automatically overwrite the current active kit, even if it is a Factory Kit.
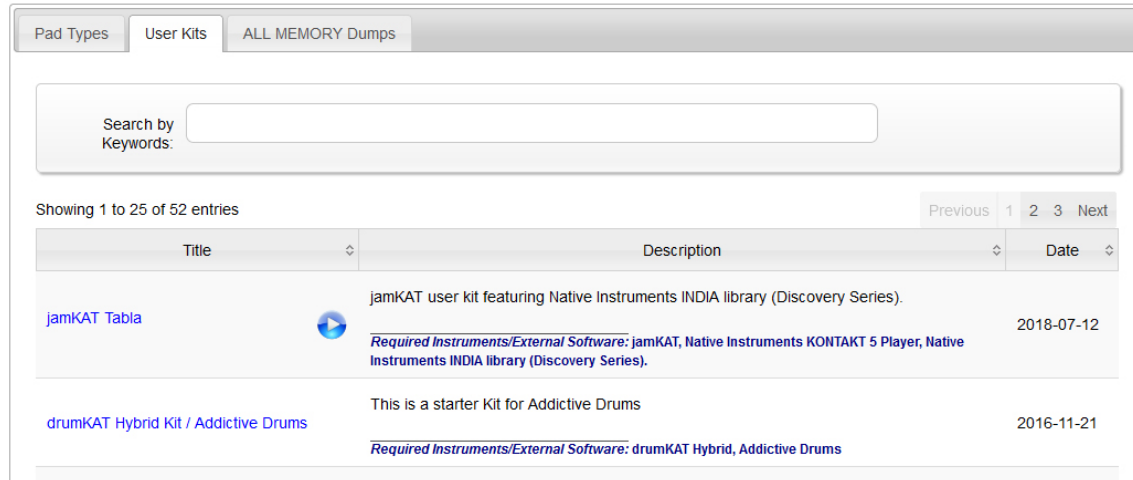
DITI SYSEX FILES

Pad Types: Used for adding a company-specific trigger, e-cymbal, or pad to the default list of "recognized" trigger sources in the DITI.

User Kits: These smaller SysEx files will configure and map a SINGLE DITI User Kit for use with a particular hardware/software setup.

ALL MEMORY Dumps: These will configure and map all available DITI User Kits for use with a particular hardware/software setup.

Don't see what you need here? Contact Us!

Pad Types	User Kits	ALL MEMORY Dumps

Search by Keywords:

Showing 1 to 25 of 52 entries   Previous 1 2 3 Next

Title		Description	Date
jamKAT Tabla	▶	jamKAT user kit featuring Native Instruments INDIA library (Discovery Series). *Required Instruments/External Software:* jamKAT, Native Instruments KONTAKT 5 Player, Native Instruments INDIA library (Discovery Series).	2018-07-12
drumKAT Hybrid Kit / Addictive Drums		This is a starter Kit for Addictive Drums *Required Instruments/External Software:* drumKAT Hybrid, Addictive Drums	2016-11-21

https://www.alternatemode.com/altmode-info/diti-downloads/

If you edit any of these settings, the DITI will automatically remember your changes. You will know that you are working on an Edited Factory KIT TYPE because there will be a (+) character after the KIT number on the far right of the first line of the display.

You can restore a KIT TYPE back to the original factory setting simply by holding the ENTER key for several seconds.

Most drum modules have many sound programs (kits) in them. You can access them simply by using the left or right arrows on the DITI. You will see the name of the Sound Programs on the DITI as well as the drum module.

When calling up each of these Sound Programs, the DITI sends out a program change to the drum module so that its kit name matches the DITI's screen. If you change the program number in the Kit, the DITI will also change the name of the sound patch. This gives you the ability to create your own CHAINS….. kits in the order you want. The DITI also sends out 8 ADDITIONAL (Auxiliary) Bank, Program and Volume Change Commands on any MIDI Channel when you first load in your KIT TYPE.
Each KIT also stores up to 16 Controller Number Settings. These settings give you lots of control for setting up a multi-channel Kit setup.
Note numbers assigned to the KIT TYPE do not change when changing the KIT Types Sound Programs (drum modules kits). One set of MIDI Channels, notes numbers, etc. for each KIT TYPE.

There are also 36 USER KIT TYPES, labeled 15 thru 50. You can create your own Kits from scratch.

USER KIT TYPES do not necessarily have pre assigned Sound Patches associated with them. The user needs to determine what the PAD TYPES and note numbers are for each of the DITI's inputs. User KIT TYPES still allow you to attach up to 50 Sound Patches by using the Left and Right Arrows.

IMPORTANT TIP
At Alternate Mode, we fill up all 50 User KITs with our favorite Kits to be used with the HybriKIT, jamKAT or jamKAT'R. The first 14 Kits (1-14) are in permanent memory. Kits 15-50 can be reinitialized to General MIDI by holding down the ENTER pad for several seconds.

KIT PAD TRAINING
Every KIT can store your TRAINING of Soft and Hard Hits for each input. The KIT stores your soft and hard hit settings, but not the envelope and interaction settings. These are Global.

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For some folks, that might be the extent of technology knowledge needed to get up and running on the DITI.

In reality however, there might be some tweaking that you would want to do. Now before you say, "here it comes", let me explain.

There are two really powerful features in the DITI that separates itself from all the other MIDI trigger converters on the market and from the normal tweaks that are in drum modules.

The DITI has the ability to LEARN how you play so that the full dynamics of the sound module are within your defined soft and hard hits. When you TRAIN a trigger pad, meaning when you "teach" the DITI what your soft and hard hits are, the DITI then takes the 127 levels of MIDI dynamics and spreads them inside this range of velocity. Cool yes? This important feature was first introduced by KAT INC back in 1984. It has been used ever since. The original "KAT Mallet Controller had only 8 levels of dynamics. The drumKAT and malletKAT have 256 levels of dynamics, The DITI…..1024 levels of Dynamics.

The other important DITI feature is its AUTOMATIC INTERACTION MATRIX. The DITI has the ability to examine each input individually when a pad is struck so that it can eliminate crosstalk with other triggers, and false triggering within itself. This is a very powerful feature.

Of course if you are not happy with how the DITI trained your pads or Interaction Matrix, you can go into the Global Screens and tweak to your heart's content!

Another thing to remember is that the DITI allows you to combine different trigger pads from different manufactures. No other interface allows you to combine FSR, Switch Pads, and Piezos all in one box and in any combination in any of the DITI's Kits.

So now that this is out of the way, below is a list of the bullets needed to perform the tasks necessary to do all that was explained above. Perhaps your manual reading ends here.....BUT....you might want to explore the real manual. The DITI can do so many amazing things. We'll list some of them AFTER this TO DO LIST. Enjoy!

THINGS TO KNOW
WITHOUT READING THE REAL MANUAL
This is our "MINI MANUAL"

- Start by using the Up or Down Arrows to find the name of the Sound Module (the KIT) that you plan to use. When you do this, the DITI loads in the note numbers and kits (sound programs) into Play Mode. The next thing to do is assign what triggers you are plugging into the unit. Remember every kit in the DITI can have its own arrangement of PAD TYPES, that is the name of the trigger product itself. So assign the KIT first, then the PAD TYPE.

- Once the trigger pad is plugged in, manually use the Left and Right Arrows to find the correct trigger input that is the PAD TYPE (the name of the trigger that you are using). Each jack has an A and B channel. There is an AUTOMATIC function on the DITI that will jump to the trigger pad (yes automatically) that you are editing, but this function works best after the basic training is performed. The Automatic Trigger detection function is designed to work when you are editing your KIT settings like channel and note numbers, etc.

- If you are using FSR Trigger Pads or Heads, after you plug it in and assign the PAD TYPE to the Trigger Input, press on the TRAIN button TWICE. The DITI quickly analyzes the threshold on the inputs and adjusts them automatically. This also happens every time you turn on the DITI. It reads the inputs and adjusts its thresholds.

- Use stereo 1/4" jacks (TRS) if you are using FSR trigger pads. If you use mono jacks, they will only work on piezo triggers, and you can only access the TIP of the signal (that's the A Input). You can purchase a stereo 1/4" male to 2 mono female adapter to access both Inputs on the input jack.

- Use stereo 1/4" jacks if you are using Membrane Switch pads. These are the dual zone variety of triggers that have a piezo in the center of the drum, and a membrane switch on the edge (rim), bell or both.

- Notice that the inputs on the DITI 3.0 are labeled #1- #12 with input 7 for the Hi Hat controller. You can plug whatever trigger you want into inputs 1-6, 8-12, and assign any MIDI note number to it.

- The Hi Hat Foot Controller must be plugged into pad number 7. It is a designated input for the foot pedal. You can use a mono 1/4" cable as the A input is reading the pedal variation.

- The Hi Hat trigger pad is usually plugged into Input 8 or Input 9. There are several Hi Hat Modes which include Controller Numbers, HATNOTEs modes or general MIDI Hi Hat. When you selected the sound module KIT, the correct Hi Hat setting was selected. If you are creating your own, you will need to decide which mode works for you.

- To Edit a Trigger Input, press the GLOBAL Button. Now match the input number (that you are editing) by using the Up or Down Arrow Keys. Hit Enter. You can also try striking the pad if the DITI is set to AUTOMATIC. If it doesn't jump to the input number, it's because the input PAD TYPE doesn't match. Go there manually.

- Use the RIGHT Arrow to jump to the PAD TYPE Screen. Then use the Up/ Down Arrows to find the name of the trigger pad you have. If you don't know, or if you are using your own DIY trigger, set it to "Trigger Zone". Hit Enter.

- Play for a while.................. Get used to the pads. You may notice that you are not entirely satisfied with the response of a trigger pad. Now it's time to TRAIN.

- Tap on the TRAIN Button. It will ask you to hit the pad you want to train. Do that. Then it will ask you to hit the pad hard...... don't kill it .... just play the pad with your normal hard hit. Each time you do that, the DITI will show you the MAXIMUM value it saw. When you feel good about that, hit ENTER.

- Now the DITI will ask you to hit the pad soft. After you do that, hit ENTER. Start playing again. Notice how much better it plays.

- If you notice that there is some interaction between pads, then it might be necessary to do the INTERACTION TRAIN. Press the Interaction Button, tap on the pad you are training. Hit the pad and WAIT two seconds.   Do it one more time, then press on the INTERACTION button again. Your interaction should be mitigated to satisfaction.

A Note Regarding FSR Trigger Pads

All FSR Trigger Pads need a stereo input. There are several different ways that they can be plugged into the DITI..

Aquarian sells the inHEAD and onHEAD FSR triggers with a TIP/Sleeve configuration. These triggers are designed to plug into the inBOX™, a device that converts the FSR into voltage, making these triggers compatible with the various drum modules on the market today.   If you already have one of these triggers, you can purchase a simple conversion cable available from Alternate Mode that converts the tip sleeve to tip ring making it ready for the DITI.

Alternate Mode sells its own versions of Aquarian's inHEAD™ and onHEAD™ called the HybriHEAD™ and HybriPAD™ as well as other FSR trigger pads such as the altZONE™. These can plug directly into the DITI without any conversion boxes (inBOX™).

This is the basic operation of the DITI. Below is a list of some of the features that the DITI can do. You might need to dig into the manual to learn how to do some of these things. In PDF format, just hit the search key and type in the name of the function you need.

CORE FEATURES of the DITI

The ability to power FSR pads like the inHEAD™, onHEAD™, HybriHEAD™, HybriPAD™, and altZONE™ <u>without</u> an inBOX™

Up to 24 triggers including combinations of membrane switches, dual zones, cymbals with switching and chokes, etc.

The ability to power multi zone and variable zone FSR pads such as the jamKAT™ and HybriKIT™.

The DITI can recognize pressure on an FSR pad and convert that into Continuous Controller Data. You can sustain notes simply by holding down on the pad.

Can send out "positional sensing" data on any trigger pad.

The DITI can recognize dampening and choking gestures. It can even simulate choking on ordinary piezo trigger pads.

Tweak-ability to the nth degree which includes the creation of personal dynamic curves, velocity ranges, gate times etc.

The ability to play up to 32 notes per pad using alternate note patterns, velocity shift modes, or chords. This includes the ability to control resets and note freezes on pads individually or globally. Each pad can be set to its own MIDI Channel and velocity range settings.

Special Gate modes such as LATCH for looping, ROLL Mode, INFINITE Mode and Velocity Gate Mode.

Special KAT FUNCTION MIDI NOTE NUMBERS that can transpose notes, freeze and reset alternate note patterns, send out sequence start commands and more.

The ability to link any pad to any pad in an unlimited fashion. One strike on one pad can send out whatever is assigned to any of those linked pads. You can turn on and off links Globally or Locally per kit and even control the velocity amount of each pad that you link.

You can assign pads to KIT ADVANCE/BACK or PROGRAM ADV/BACK so that you don't need to touch the DITI during a performance.

The ability to use a foot pedal (PMCP) in combination with a trigger pad to temporarily create a REMOTE EDITOR. Any trigger pad can be assigned to function as a button (Edit, Global, Up, Down, etc) when the pedal is depressed. Now you don't need to touch the DITI at all.

There are Bank and Program Changes per Kit (up to 8), 16 Controller Value Settings, plus the ability to name your own Kits. There are many Factory KIT TYPES that can also be edited and saved. These KIT TYPES store the presets of your favorite drum module. This means that there are THOUSANDS of Presets built right into the DITI with the names of these sound programs taken directly from the drum module.

You can change the order of these presets (by changing the Program Change Number) to create your own playing list. You can copy these KITS into the USER KITS to make your own CHAIN as well. You can assign a pad to scroll through the list or you can simply press on the arrow.

There are also 36 USER KITS. You can create your own KITs from scratch, or copy one of the Factory Kits into a User for easy setup. There are a total of 50 KITS on the DITI. Each Kit can send out 50 discrete bank and program changes. That means there are 2500 kits you can access.

Variable Hi Hat control options including Continuous Control, HatNote mode and GM note number standard.

Choice of Individual Dynamic Training per PAD per KIT or by PAD TYPE Stored Training.

Individual Interaction Matrix Training per pad.

Virtual Mixer / Controller- Ability to send out 16 Controller values each on their own MIDI Channel.

REMOTE EDITING. The DITI allows you to use any external trigger to replace the buttons on the DITI for Editing when assigning our PMCP foot switch to EDIT. Using this foot switch allows the trigger to act as a dual function, playing and editing.

DITI 3.0 SPECIFICATIONS

POWER CONNECTION: Use only supplied 9V DC 2.0A tip(+) with locking plug.

MIDI OUT: Sends MIDI data out to external device.

MIDI IN: Receives MIDI data from external device.

HD15 IN: Connects to Altermate Mode instruments.

AUDIO OUT: Stereo audio outputs.

AUDIO IN: Stereo audio inputs.

HEADPHONES: Headphone input.

VOLUME: Controls the volume of the headphones.

REVERB: Controls the level of reverb for the internal sounds.
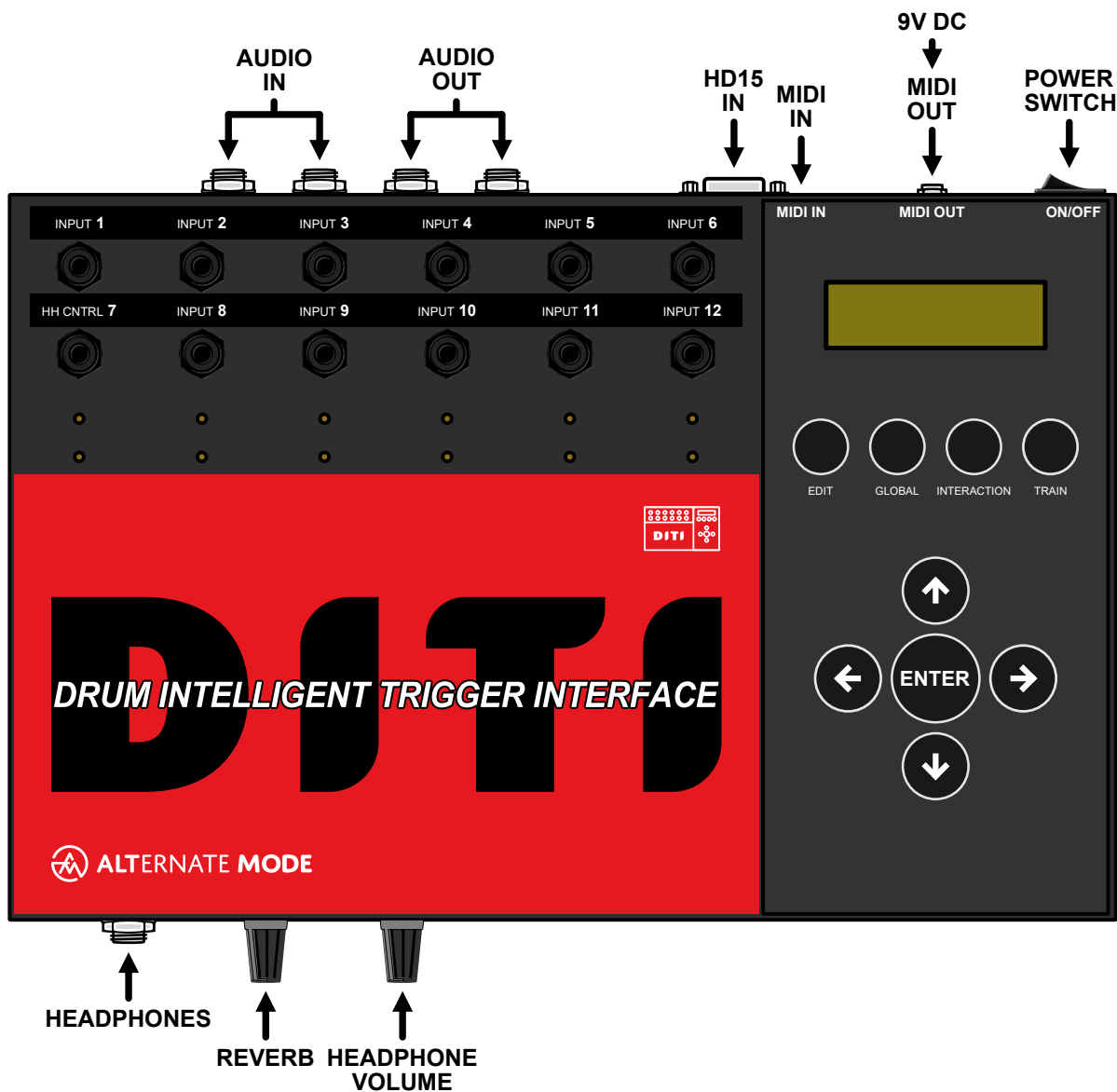
DITI 3.0 ORGANIZATION CHART

SOUNDS FUNCTIONS

| 1-4 SWITCH | 1-4 CrossFade | 1-4 Layer | Alternate Mode | 1-4 SIMULTANEOUS |

PAD CONTROL

| OFF | NOTE SHIFT | VELOCITY SHIFT | CONTROL PATHS | SLOT SHIFT |

GLOBAL EDIT FUNCTIONS

Select Edit Pad	Pad Type	Input Type	Gain	Threshold	Mask Time	Dynamic Curve	User Curve 1-5
Blend Duration	Switch Points	User Slot Reset A-C	Exclusive	Assign Edit Pad	Damp Ratio	Damp Lower	Damp Upper
Damp Count	Strip Rate	Controller Sensitivity	Program Change Channel	Bank Change	Copy Pad	Copy Pad Type	Copy Curve
Copy Current Kit	MIDI Merge	Enthreshold	Min Envelope	Env Duration	Interaction	Data Dump Kit	Dump All Kits
DataDump Global	Glb- Reinitialize	Instrument Lock	Display 0 or 1	Note Display	Scan Count	Min Dyn	MAX dYN

KIT
EDIT FUNCTIONS

MIDI CH	SLOTS 1-32	Min Velocity	Max Velocity	Gate	Gate Mode Roll VelGate	Sounds 1-4 Layer Alternate Modes	Pad Cntrol Note / Vel Shift Cntrl Paths /Slot Shift
LINK	Hi Hat Select	Chick Type	HIHAT CONTROLLER	Switch By	Dampen	Transpose Enable	Transpose Count
Equalizer	Edit Patch Name	Edit KIT Name	AUX Program Change 1-4	AUX Bank LSB	AUX Bank MSB	AUX Volume	AUX MIDI Channel
CONTROLLER MIXER 1-8	PATCH Volume	PATCH Program Change	PATCH BANK LSB	PATCH BANK MSB	PATCH PROG CHANGE	Train Override	ALL Notes Off

DITI SPECIAL
NOTE NUMBER
FUNCTIONS

OFF	sSTART	sCOUNT	sSTOP	aRST1	aRST2	aFREEZ	PC-ADV
PC-BCK	LTOG-G	LTOG-L	chk AFT	chkNTE	Transpose T-12--T+12 TF TO	PB UP	PB DWN
KT-adv	KT-bck	PC-rst	aREVERSE	Slot Link 1A--12B	aRST A-C	KT-rst	

SOUNDS
FUNCTIONS

1-4 SWITCH	1-4 CrossFade	1-4 Layer	Alternate Mode	1-4 SIMULTANEOUS

TRAIN

Pad Type Max Dyn	Pad Type Min Dyn	Override Max Dyn	Override Min Dyn

INTERACTION

TRAIN ENVELOPE

EDITING ON THE DITI

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TamborFUN      +01
               01
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THE INTERFACE

When you first turn on the DITI, the screen displays the current software version. Immediately after that, the DITI goes into PLAY MODE. Play mode is the normal operation of the DITI when you are playing, not editing.

On the top line of the display, you will see a KIT TYPE. A KIT TYPE is simply the name of the drum module or soft synth that you are using. Use the UP OR DOWN ARROWS to scroll through the list of KIT TYPES.

On the bottom line, when applicable, you will see the name of the Sound Patch. Use the LEFT or RIGHT arrows to scroll through the 50 Program Changes for the current KIT TYPE.

What is really happening here is that when you load in a KIT TYPE, you are calling up a Factory or User KIT. A KIT contains all of the MIDI information for each input including channel, note number, gate time, etc.

A KIT also contains the PAD TYPES that you assigned to each Input. Every KIT TYPE can have its own collection of PAD TYPES. A PAD TYPE is used to identify what type of trigger you are plugging into the KIT. So you must assign PAD TYPES to the inputs.

When you are scrolling through the Sound Patches and you make a change to the KIT, it affects ALL of the sound programs in that KIT TYPE. For example, if you change the snare drums MIDI note number to a different note number, then all of the Sound Patches in that KIT will reflect that.

This makes editing a KIT TYPE very fast and easy because it affects all 50 presets (sound patches) within that KIT TYPE.

There are some parameters that are unique to each of the 50 Sound Patches within the KIT TYPE. These are the Bank and Program Number and the KIT NAME. What this does is allow you to freely change the order of Sound Patches simply by changing the Program Number for that Sound Patch. You can therefore create your own CHAIN by arranging the sequence of program numbers as you scroll through the sounds using the LEFT or RIGHT Arrows. The Sound Patch will follow the drum modules sounds (kits) change UNLESS you decide to rename the Sound Program to another name of your liking. The modified name will be stored after you hit ENTER in the Kit Name screen.

You can assign a "special number function" that allows you to change the Sound Patch or Kit simply by hitting the pad.

EDITABLE FACTORY KITS AND REINITIALIZATION

You will also notice that a plus (+) sign is added to the FACTORY KIT Number whenever you make a change, letting you know that you've edited a Factory Kit. This means that Factory Kits are editable and savable.   If you want to restore the Factory Kit back its original settings, simply hold down the ENTER button for 2 seconds while you are in the Play Mode. The screen will give you verification that the Factory Kit has been reinitialized back to its original setting.

Besides the KIT TYPES, there are USER KIT TYPES. You can edit and store every parameter in the Edit Screens. You can create a collection of these as well by storing them in the order you want. You can scroll through these Kits by Using the Up and Down Arrows. You can Copy a Factory KIT to a USER KIT, (or vice versa) and have the ability to rename the KIT NAME.

User KIT TYPES also have 50 Sound Patches in each Kit. By default, each of these user sound programs increment the MIDI Program Number by one. You can also program each of these 50 Sound Patches with its own Bank, Program and Name.

If you plan on not using any bank or program numbers, then you can just use the KIT TYPE. When you call up your User Kit Type, it will automatically load in the first Sound Patch.

You can shut off the program number and rename the default Sound Patch to any name that you want. You can also use the special function MIDI note functions for Program Change Increment or Decrement.

Because there are many Factory Kit Types with names and 50 sounds programs in each and 50 User Types, the DITI can store 1000's of kits. If you can't find a drum module listed, you can download KITs directly from our website.

THE FOUR EDITING BUTTONS

There are Four Types of Editing on the DITI. Each Type gets its own BUTTON on the panel.
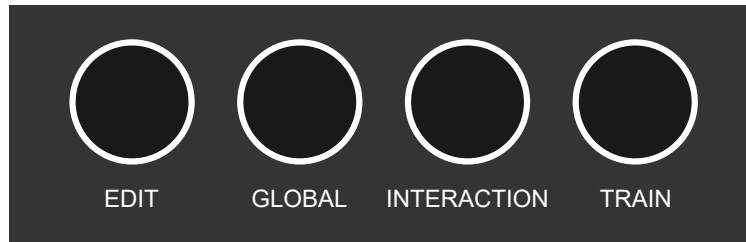
**EDIT
GLOBAL
INTERACTION
TRAIN**

When you press on any of these buttons, the screen displays one of the functions that are available within that Edit Type. When you press on the same button again, the display goes back to PLAY mode, the default setting for playing.

There can be many screens within each of the EDITING TYPES. The DITI remembers the last screen that you were working on for KIT and GLOBAL Edits. You will find that this can save lots of time as you jump from pad to pad, especially if you want to edit that function for each trigger pad. The AUTOMATIC Input Selector can be very useful for edits of this nature.

The DITI also has a "HOME BASE" for KIT and GLOBAL Editing.   Simply hold down on the button (Kit or Global), and the screen will display the first editing function for that TYPE.

You can also jump from EDITING TYPE to EDITING TYPE without going back to PLAY Mode. In each case, the DITI remembers what you were editing last for each Type. To get back to PLAY mode, just tap on the same button one more time.

THE ARROWS

Notice that there are UP / DOWN arrows, LEFT / RIGHT arrows and ENTER.
These buttons work the same way for all functions.

The UP / DOWN Arrows change the VALUE of what you are editing
The LEFT / RIGHT Arrows move through the different Screens (like a cursor) within the editing type.
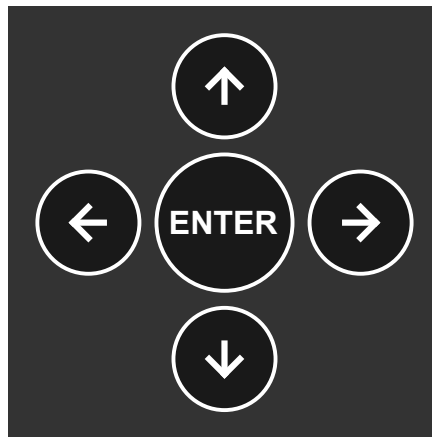
In Play Mode, the UP / DOWN Arrows Change the KIT TYPES, that is the name of the sound module that you are using.
The LEFT / RIGHT Arrows changes the SOUND PATCHES, that is the list of sounds from that sound module.

When you are in EDIT mode, every time that you touch the right or left arrow, the cursor moves to the next parameter that is editable. You know what is editable because the value is blinking.

When you touch the up or down arrows, the value increases, or decreases. At the same time, you will notice that an (*) asterisk appears. This tells you that you have made a change.

When you tap on the ENTER button, the new value is automatically STORED, and the asterisk disappears. You do not need to save the KIT, as each function is stored as you make changes by pressing the ENTER button.

THE DISPLAY

```
TamborFUN        +01
                  01
```

The screen on the DITI displays all of the information that you need to program for every function on the DITI.

In PLAY MODE, the display lists the NAME of the KIT TYPE on the top line along with the KIT Number. A KIT TYPE is the name of the sound module or soft synth that you are using.

The second line displays the Sound Patch Name (if applicable), along with the Sound Program Number. A Sound Patch is a listing of the sounds that are available for that KIT TYPE.

When you go into EDIT MODE, the display usually shows the FUNCTION NAME and PAD NUMBER on the top line. The bottom line is where the VALUE number is displayed. The BLINKING number is the value that is editable for that function.

THE LEDs' and TRIGGER INPUTS

1/4" TRS Inputs
On the DITI you will notice that there are 12 inputs. There are 11 stereo inputs and one Continuous Controller input. It is possible to have up to 22 triggers and 1 Continuous Controller active at once. Each trigger input also has a number assigned to it (1-12), and in turn each input number has a letter (A or B). This letter represents which channel you are editing. The letter "A" represents the TIP of stereo plug. The letter "B" represents the RING of the stereo signal. If you plug a mono 1/4" jack into the DITI, you will automatically be using the A channel.

Every time you strike your trigger pad, the DITI momentarily turns on the LED associated with that trigger input. The TIP or A channel sends out a green light, the RING or B channel sends out a red light. This is to let you know immediately what you are triggering.

For single zone FSR triggers, the DITI uses the RING or B channel to power the FSR sensor. This means that each FSR trigger requires one stereo input (A and B channels) on the DITI.

For multi-zone FSR instruments, such as the jamKAT®, there are special Pad Types that allow the DITI to power all the zones of the sensor using only one of the B channel inputs. This allows the DITI to use both the A channel and B channel of other inputs for triggering the different zones of the sensor.

The DITI can also accommodate piezo style pads and triggers and multi-zone cymbals. With a Stereo to Dual Mono "Y" adapter, 2 piezo style pads or triggers can be used on one DITI Input.

HD15 Connector
The HD15 connector on the back panel is for connecting Alternate Mode instruments such as the jamKAT® , hybriKIT®, and more. Simply connect the HD15 cable included with the instrument.

This connector connects directly to inputs #1 to #6 and #8. The HD15 connector is not a separate input from the 1/4" connectors. For example, when using with a jamKAT, inputs inputs #1 to #6 and #8 are in use, so the 1/4" inputs for these inputs cannot be programmed separately.

FSR
FSR (force sensing resistor) is a sensing technology that uses pressure to determine when and how hard a trigger pad is struck. This advanced technology is very different from the trigger pads that are made by most of the electronic drum manufacturers on the market. These companies use piezo triggers as their sensor of choice. These sensors work on vibration. They are common because it is inexpensive technology that works fairly well. There are problems with piezo sensors however because of the nature of vibration technology. It makes them prone to cross triggering from neighboring trigger pads and stage loud noises. Also the response of piezo triggers is not particularly linear.

Another amazing advantage of FSR is that it is possible to have multiple zones on one surface without the fear of interaction or cross triggering. FSR relies on pressure to the sensor, not vibration. Therefore multiple discrete zones on one surface are entirely possible. Complete isolation is virtually impossible with piezo sensors unless a membrane switch is used. The problem with this method is that the zones are monophonic, meaning that only one zone speaks at a time. This is not the case with FSR technology.

FSR however needs power in order to drive the conductive link that is the heart of the technology. It is this requirement that has changed the nature of how the DITI operates.

THE EDIT MODE BUTTON

EDIT
When you press on the KIT EDIT Button, here is where you can assign the functions on each of the pads for the KITs. There are many Preset FACTORY KIT TYPES and 36 USER KITS in the DITI. On every pad in each of the kits, you can assign the MIDI Channel and Note number, gate time, and all of the powerful functions listed below. You also need to assign the appropriate PAD TYPE for each input.

There are many screens in the Kit Edit Mode section. The DITI helps you know where you are in two ways. First, it remembers where you last edited. Even if you leave the Edit Mode and move to the Global Screens, the last edited screen will pop up when you press the Edit Button again.

If you press on the Edit Button and hold it down, it moves to the first screen in Edit Mode. This is a great way to start the editing process because it is your Home Base.

All of the Editing buttons act as a toggle. When you press on it, it goes into the Edit Mode. If you press on it again, it goes back to Play Mode.

If you are in Edit Mode and you press on any of the other Functions, the DITI Jumps directly to the last edited screen in that function. These features will really help you get around the DITI in no time.

SELECTING YOUR EDIT PAD

The DITI has two ways of selecting the Trigger Pad that you want to EDIT. Press down and hold the GLOBAL BUTTON for a moment. When the GLOBAL button is held down, the DITI jumps to the very first screen of Global Edit which is appropriately called SELECT EDIT PAD.

```
SELECT EDIT PAD
AUTOMATIC   1B
```

The UP/DOWN Arrows allows you to select any one of the 24 inputs available. If you manually select a trigger that way, all of the editing that you perform will always be for that trigger.

You may also notice that you might see the word AUTOMATIC on the bottom line. This means that the DITI will automatically select what trigger you are editing by simply hitting that trigger pad.

This is a tremendous feature to use when you are Editing note numbers, channels, etc., but can be a problem when you are setting up the DITI for the first time, that is until after you have correctly loaded in the appropriate PAD TYPES for each input. So for now, manually select the trigger pad you want to edit, and then jump to the EDIT Screen by simply holding down the EDIT button.

You are now ready to begin editing the trigger pad that you selected in this manor.

EDIT SCREENS
ASSIGNING MIDI CHANNEL

Assigning the MIDI CHANNEL 1-16

```
MIDI CHAN pad 1B
  Channel = 10
```

On this display, you can change the MIDI Channel on the selected pad. MIDI Channels are from 1 to 16. Use the Up or Down Arrows to change the MIDI channel. You will see an " * " indicating that the MIDI channel has been changed.

Press the Enter Key to Store the new MIDI Channel Number. Notice that the " * " disappears.

Press the Right Arrow Button to advance to the next Editing Function.

ASSIGNING MIDI NOTE NUMBER

Assigning the **MIDI NOTE** Numbers. SLOTS 1-32   **MIDI Note Numbers** 1-127, plus
Special Functions

```
MIDI NOTE pad 1B
  Slot 01 = 10
```

Each pad on the DITI can play up to 32 different note numbers. The pad plays one or
more of these sounds depending on the SOUNDS function. You can tell the DITI to
change sounds controlled by velocity, or by an alternating note pattern. You can even
tell the DITI to play chords.

On the second line of the display, the SLOT "xx" tell you what Position (1 through 32)
you are editing. Each of these 32 slots (positions) can be assigned to any of the 127
note numbers, plus special "KAT" functions.

SLOT 1-32
Move the Cursor (left or right arrows) until you see that the Slot xx (number) is flashing.
Now use the Up or Down Arrows to call up which "Slot" (1-32)" to Edit. Move the Cursor
(Right Arrow) so that the MIDI Note Number is flashing. Use the Up or Down Arrows to
change the MIDI note Number from 1-127.

You will see an " * " indicating that the MIDI Note Number has been changed.

Press the Enter Key to Store the new MIDI Note Number.   Notice that the " * "
disappears.

How many sounds you hear at once is controlled by the "SOUNDS" function. This tells
the DITI how many sounds can be played on a trigger. Multiple sounds can be called in
by velocity or by alternating modes, depending on what you select. By Default, the pad
is set to 1 SOUND. This means that you are editing and hearing the sound (MIDI note
number) assigned to Slot 01. More about SOUNDS later.

SPECIAL DITI FUNCTIONS AFTER MIDI NOTE 127

Unique to the DITI (and trapKAT), there are special functions that can be assessed by advancing the MIDI note Number past 127.
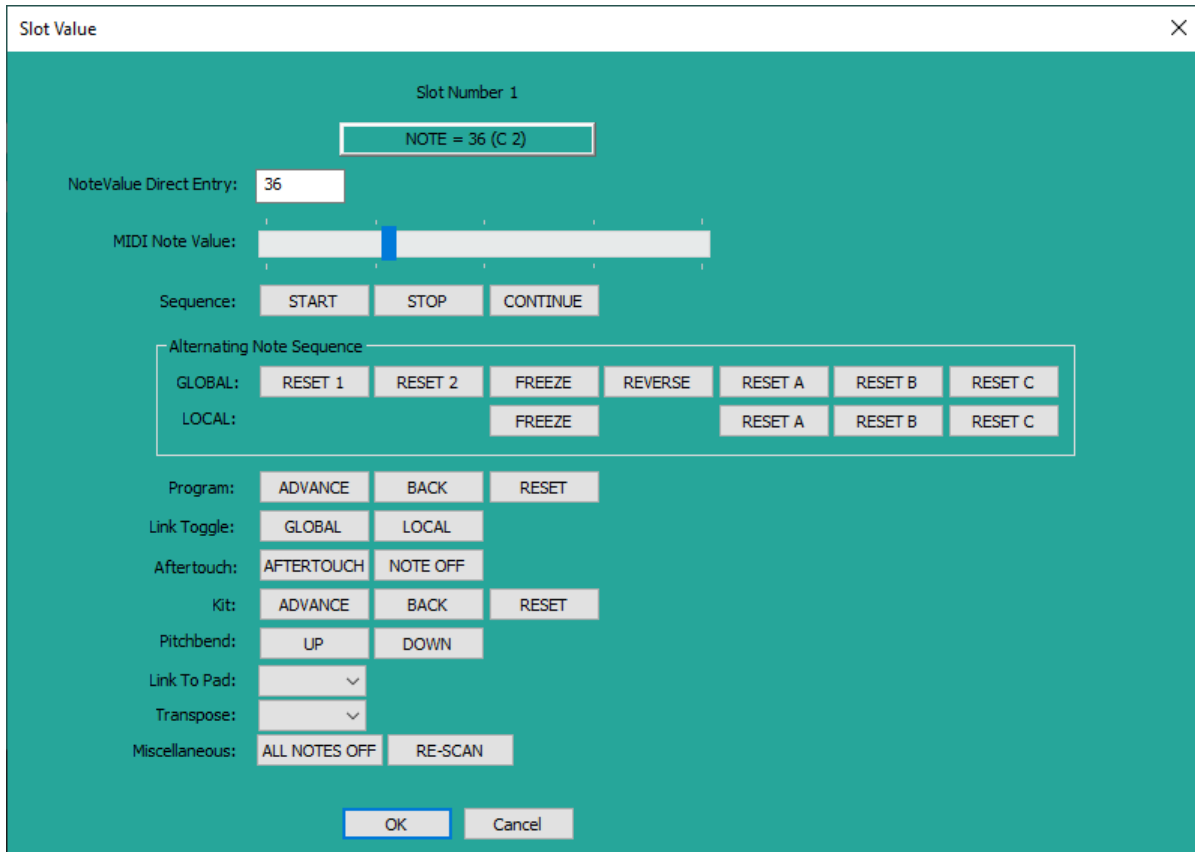
The above photo is taken from our DITI Editor… It explains and organizes the NOTEs function on the DITI.

The top line shows the standard MIDI note values from 1-127. You can also choose OFF here.

The DITI Editor shows both the note number and the note value making it easier to decide on what note to choose.

Below that there is a SEQUENCE section.
The three choices are STOP, START and CONTINUE. When you assign a slot to any
of these, the sequence command is sent to your sound module. If you module is
a sequencer, viola!

Below that is ALTERNATE NOTE SEQUENCE choices
This allows you to control your alternate note patterns. There are two sections, LOCAL
and GLOBAL. This means that the function assigned to a slot will either affect just the
pad sequence (local setting) or the function will affect any pad in the KIT that is assigned
to GLOBAL.
On the DITI, if you assign a Reset, Freeze or Reverse on SLOT ONE, then the function
acts as a GLOBAL function and all pads will be affected. If you assign these functions
on any other slot, then the effect will be local, for that pad only.

There are basically three types of Alternate Mode functions; Resetting, Freeze and
Reverse.

RESET

aRST1/2
aRSTA/B/C/G (Global)
aRSTA/B/C/L (Local)

```
MIDI NOTE pad 1A
Slot 01 = aRST1*
```

aRST1/2

The most common alternate mode reset is aRST1. This simply resets the alternate
note pattern back to the beginning, slot 1. If you are playing in groups of eight, and
you want to assign a different pad for resetting, aRST2 comes in handy. This resets
the alternate note pattern to slot 2, allowing the "downbeat" to be the reset pad, but
keeping the integrity of the groups of 8 in place.

aRSTA/B/C/G (Global)
aRSTA/B/C/L (Local)

```
MIDI NOTE pad 1A
Slot 01 =aRSTAG*
```

Sometimes you might want to reset to some other slot location. The DITI has three alternate slot locations that you can define in the Global Screens. In the USER RESET screen, you can choose RESET A, B, or C and the slot number to reset to. Then anytime RESET A, B or C is played, the alternate mode pattern(s) will then jump to that slot location. You have the option of setting these resets to be Global (G) or Local (L). If the reset is Global, this will reset all alternating patterns in the KIT. A Local reset will reset only that pad.

FREEZE

aFREZG / aFREZL

```
MIDI NOTE pad 1A
Slot 01 =aFREZG*
```

This is the Alternate Freeze Function. This function works in two different ways. If aFREZ is assigned to slot 1 with the SOUNDS set to One Sound, then ALL Alternating pads are frozen in their slot (note) position.

Striking aFREZ pad again acts as a toggle. When you strike the pad again, all alternate note patterns will be unfrozen.

If aFREZ is assigned to any of the other 31 slots, then that particular pad alone freezes on that note position. It remains frozen until another pad's aFREZ in struck on slot one. When leaving the kit, alternating freezes are also unfrozen.

aFREZ works the same way as RESET. If you assign this function on Slot one in "one note simultaneous, or if you have 4 note simultaneous and assign slots 1-4, the FREEZE will stop all alternate note patterns until the pad is struck again. If a pad is

assigned to SIMULTANEOUS in the Sound Mode, then aFREZ will work
Globally when assigned to slots 1,2,3 or 4.

REVERSE

aREV

```
MIDI NOTE pad 1A
Slot 01 =aRVRSE*
```

This is the Alternate Reverse Function. This function works in two different ways. If aREV is assigned to SLOT 1 and the Sounds Mode is set to One Sound, then ALL Alternating pads on that kit start playing in reverse. Here's an example. You assign a pad to play 1,2,3,4…1,2,3,4.
If you strike another pad with aREV on slot one, then the pad will play 4,3,2,1…4,3,2,1

If the Sound Mode is assigned to SIMULTANEOUS, then this function can be assigned to any of the first 4 slots.

If aREV is assigned to an Alternate Mode, say slot 5, then this function acts like a loop. It will play the following 1, 2,3,4 (aRev), 3,2,1,2,3,4,3,2,1, etc

GLOBAL FUNCTIONS ASSIGNED in the FIRST FOUR NOTE SLOTS

On the DITI, you can assign Global Functions to the first four slots on any pad. You must also change the SOUNDs function to SIMULTANEOUS in order for these functions to work. When Global Functions are assigned to these slots and Simultaneous is assigned in the SOUND screen, up to four Global Functions can be assigned at once. Functions (note numbers) such as aFREZ, aRST1, aRST2 and aRVRSE are Global Functions that affect how alternate note patterns work. Functions such a "T" are automatically global in nature.

PROGRAM CHANGE CONTROL

PC-adv / PC-bck /PC-rst

```
MIDI NOTE pad 1A
Slot 01 =PC-rst*
```

This is the KIT Program Change Advance or Backwards Function. This function advances to the next SOUND PATCH. When a pad is struck with the note number assigned to pcADV or pcBACK, the Program Change number that is assigned to the Sound Patch is sent out. By default, the Program Change number increments or decrements by one. The setting called PC-rst (PROGRAM CHANGE RESET), resets the Sound Patch back to the beginning (sound patch 0)

CHOKE

chkNTE

```
MIDI NOTE pad 1A
Slot 01 =chkNTE*
```

This function comes in handy when you are using a membrane switch cymbal pad. The membrane switch on a trigger pad tells the DITI to play a different sound (slot two or three or five instead of one), when it is pressed. If the Choke function is assigned to SLOT 4, the cymbal pad will respond to choking when the pad is pressed. The DITI automatically sends out a note off command to notes assigned to slot 1, 2, 3, 6 and 7.

CHOKE AFTERTOUCH

chkAFT

```
MIDI NOTE pad 1A
Slot 01 =chkAFT*
```

This function is similar to Choke, it sends out note offs for the note number assigned to slots 1, 2, 3,6 and 7. It also sends out polyphonic aftertouch for these note numbers.

SEQUENCE CONTROL

aSTRT / aCONT / aSTOP

```
MIDI NOTE pad 1A
  Slot 01 =sSTRT*
```

When the sSTRT function is assigned to a pad, the DITI sends out a Sequence Start Command to the sound source or MIDI sequencer.

When the sSTOP function is assigned to a pad, the DITI sends out a Sequence Stop Command to the sound source or MIDI sequencer.

When the sCONT function is assigned to a pad, the DITI sends out a Sequence Continue Command to the sound source or MIDI sequencer.

PITCH BEND

PB UP / PB DWN

```
MIDI NOTE pad 1A
Slot 01 = PB UP*
```

When the PB UP function is assigned to a pad, the DITI sends out a Pitch Bend Up Command to the sound source.

When the PB DWN function is assigned to a pad, the DITI sends out a Pitch Bend Down Command to the sound source.

The pitch bend value is equal to the velocity of the pad when struck.

KIT ADVANCE / BACK

KT-adv / KT-bck

```
MIDI NOTE pad 1A
Slot 01 =KT-adv*
```

When KT-adv function is assigned to a pad, the DITI advances to the next KIT number.

When KT-bck function is assigned to a pad, the DITI advances backwards to the previous KIT number.

Remember that you have to assign this to every KIT that you want this function to operate.

ALL NOTES OFF

NtsOFF

```
MIDI NOTE pad 1A
Slot 01 =NtsOFF*
```

When this function is assigned to a pad, the DITI sends out an All Notes Off Command to the sound source. This will shut off all triggered notes and stop them from sounding.

RESCAN

ReSCAN

```
MIDI NOTE pad 1A
Slot 01 =ReSCAN*
```

When the ReScan function is assigned to a pad, the DITI will rescan all the inputs and

adjust the idle levels of the pads. FSR pads can sometimes have slight variations in resistance output. The DITI compensates for this when it is powered on. ReScan performs the same function without having to power off and on the DITI. This is useful when plugging in a new pad when the DITI is powered on, or if a pad is not performing correctly.

LINK TOGGLE

LTOG-G / LTOG-L

```
MIDI NOTE pad 1A          MIDI NOTE pad 1A
Slot 01 =LTOG-G*          Slot 01 =LTOG_L*
```

Besides setting up any pad to be LINKED to one another, it is also possible to toggle that link on and off locally for that one pad or globally for the entire Kit. The special note numbers needed for these functions are LTOG-G (Link Toggle GLOBAL) or LTOG-L (Link Toggle Local)

SLOT LINKING

LINK1A - LNK12B

```
MIDI NOTE pad 1A          MIDI NOTE pad 1A
Slot 01 =LINK1A*          Slot 01 =LNK12B*
```

There is another way to use linking. Instead of assigning a note number to a slot, you can assign a Link Location for a "one shot". Whatever note is assigned to that pad will sound.   There are 24 Slot Links available from 1A through 12B.

TRANSPOSE MODEs
T-12, T-0, T+12
t-12, t-0, t+12, TF
transpose enable screens

```
MIDI NOTE pad 1A
Slot 01 =   T+12
```

```
MIDI NOTE pad 1A
Slot 01 =    t+1
```

```
TA 123456789ABC
   NYYNNNNNNNNN
```

```
TB 123456789ABC
   NYYNNNNNNNNN
```

The DITI has the ability to selectively TRANSPOSE any or all of the notes in a KIT.
If you want to transpose the notes on just one pad with every strike, then simply
substitute a MIDI note with a "t" value. The small "t" means that transpositions will
happen only on the pad that is struck. The value after the "t" represents the amount of
transposition desired. The range of transposition for every strike is + or - one octave
(12 steps either direction). If you want to reset the pad, the "t" value is then set to 0.

So how do you do this on just one pad? Simply set up TWO NOTE SIMULTANEOUS in
the SOUNDS Screen. You then assign one SLOT to the starting MIDI Note, and the
other SLOT to the Transposition desired.

The real power of the Transposition Mode is when you use the "T". This means that
any "T" value you use in a SLOT could affect ALL of the pads in a Kit. Of course you
might not want EVERY pad to be transposed. In order to control this, there are two
screens that are called TRANSPOSE ENABLE Screens pictured above.

These Screens display which pad inputs should be Enabled for Transposition, meaning
that any T value in the kit would affect that pad. N=No and Y=Yes.

TA on the top line means "TRIGGER A INPUT". TB on the top line means "TRIGGER B
INPUT".
We wanted to put all of this information on one screen, but because there are 12 inputs,
we were running out of space on the screen. To solve this, A = input10, B= input 11,
and C= input 12.

To transpose the DITI, simply assign the note number in ANY slot to a "T" value instead of a regular note value.

T values (for transpose) go from T+1 (meaning transpose 1 step up) to T+12 (transpose 12 steps up) to T-1 through T-12 (going down in half steps from -1 to -12 steps). All notes including chords, alternate patterns, etc. will be transposed in the kit.

To reset the transpositions back to normal (zero), simply assign any slot position to T-0. All transpositions will be rest back to normal. This includes inputs that are using "t" transpositions as long as the input has been set to Enable.

TRANSPOSE FREEZE

```
MIDI NOTE pad 1A
Slot 01 =   T F*
```

Between the "t"s and "T"s, you ill find the "**TF"** function.   When a slot is assigned to TF (transpose freeze), ALL transposing pads (enabled) will stop transposing until the TF pad is struck again.

Each slot in the Alternate 32 mode can be assigned to a T note instead of a normal note creating lots of transpositions within a kit. Because transpositions can affect all slots, chords can instantly be transposed by hitting one pad. You can also combine regular notes and transpose notes on the same pad assigning them to different slots and using the LINK Mode. By using different SOUND modes like Alternating or Simultaneous or Velocity Shift, real composition power is right at your fingertips!

TRANSPOSE COUNT

```
TRANSPOSE pad 1A
COUNT =    001*
```

When setting up a trigger for transpositions, it is necessary to tell the DITI how many times you want the pad to transpose. The DITI counts how many transpositions occur before it resets itself back to the original note number that was assigned to SLOT ONE. This function in an interesting way increases the alternate mode function to up to 127 notes before resetting. The difference is that each alternating transposition is also transposed to the same amount that was assigned to that pad.

You can also choose INFINITE. The DITI will not count how many times it will transpose. It simply transposes forever!

ASSIGNING MIDI VELOCITY RANGE

Assigning the MIDI MINIMUM VELOCITY
Velocity Range 00-127

```
MIN VEL   pad 1A
 Min Vel = 020
```

On this display, you can change the MIDI Minimum Velocity on the selected pad.   The MIDI Velocity ranges from 000-127. Use the Up or Down Arrows to change the MIDI Velocity. You will see an " * " indicating that the MIDI Velocity has been changed.

Press the Enter Key to Store the new Minimum Velocity. Notice that the " * " disappears.

Soft to loud is represented by the numbers 000-127. 000 is the softest and 127 is the loudest.   Setting this number allows you to control how soft your softest hit will sound. If you set this number to 64 for example, your softest strike would produce a medium volume.

Assigning the MIDI MAXIMUM VELOCITY
Velocity Range 00-127

```
MAX VEL    Pad 1A
  Max Vel = 127
```

On this display, you can change the MIDI Maximum Velocity on the selected pad.   The MIDI Velocity ranges from 000-127. Use the Up or Down Arrows to change the MIDI Velocity. You will see an " * " indicating that the MIDI Velocity has been changed.

Press the Enter Key to Store the new Maximum Velocity. Notice that the " * " disappears.

Soft to loud is represented by the numbers 000-127. 000 is the softest and 127 is the loudest.   Setting this number allows you to control how soft your softest hit will sound. If you set this number to 64 for example, your loudest strike would produce a medium volume.

NOTE:
The Dynamic Curve used in the Global Settings for a Trigger Input can override the minimum and maximum velocity setting. There are SIXTEEN points in a Curve. The first and last points control the absolute minimum and maximum velocity permitted. Setting the minimum velocity above the lowest curve point will still function as expected. If you set the pad minimum to 1, but the curve first dynamic point was 5, then the lowest velocity heard would be 5, not 1. You can of course change that by using a different Dynamic Curve or a User Curve. The maximum velocity in the kit will still function, but cannot exceed the maximum value set in the curve in the same manner.

If you are noticing that you cannot achieve the full range of 00-127, create your own USER Dynamic Curve in the Global Setting. There are 5 User curves available 1-5. These can be found in the GLOBAL Edit screens.

DYNAMIC OVERRIDE

Let's face it, an instrument is only as good as it is responsive. Nuance is what separates a truly musical instrument from just another pad controller. What could be more important other than making sure that an instrument would respond to dynamics controlled by YOU, the player and not just some canned range dictated by the hardware?

Understanding dynamics is an obsession at Alternate Mode, and Training is at the heart of it. The challenge for us was to find a way to make it easy to understand but also to have the ability for enormous flexibility.

We developed a two tiered training system, PAD TYPE TRAINING and INDIVIDUAL PAD TRAINING per KIT by a Mode called DYNAMIC OVERRIDE.

As you probably know by now, a PAD TYPE is a system that allows one to automatically call up many parameters on an input so that it will maximize how a trigger pad plays. Besides setting the Gain, Mask Time, etc. Each PAD TYPE stores a MINIMUM and MAXIMUM training level that was set at the factory. This means that when you identify what you plugged into the DITI's input by calling up the PAD TYPE NAME, a built in training of soft and hard hits will be implemented without any input from you. It also means that each and every time you call up that PAD TYPE, the dynamic response will be set and will have the same settings for EVERY INPUT on EVERY KIT.

That may be "good enough" for many situations, but of course we wouldn't stop there. Just like you can alter any of our PAD TYPE Settings by using the USER version of the PAD TYPE, you can also TRAIN each and every PAD Type to your own playing dynamics. When you Train a pad, you are retraining a PAD TYPEs minimum and maximum playing range. This is GLOBAL when using PAD TYPES. When you train a pad type, all pads using that PAD TYPE name will respond to your training values.

But again, why stop there. You might have an instance where you want a pad with the same PAD TYPE to respond differently in a particular KIT or Input. So the DITI allows you to OVERRIDE the dynamics of the PAD TYPE so that you can TRAIN every pad on every kit individually.   This gives the user enormous control of one's performance on a particular pad, especially considering that you also have minimum and maximum velocity settings and curves per pad as well. We told you we were obsessed with dynamics!

When you are training a PAD TYPE, and have set the "TRAIN OVERRIDE" settings in the KIT EDIT screens to NO -

```
   TRAIN        1A
OVERRIDE = NO
```

The TRAINING screen looks like this -

```
PADTYPE Max Dyn
      Pad -   2A
```

When you are training a PAD, and have set the "TRAIN OVERRIDE" settings in the KIT midi to YES -

```
   TRAIN        1A
OVERRIDE = YES
```

The TRAINING screen looks like this -

```
OVERRIDE Max Dyn
      Pad -   2A
```

Here are the rules regarding the TRAINING.

When Dynamic Override is set to YES in KIT EDIT, the min/max dynamic settings from the kit will be used for playing. Changes to the min/max dynamic settings (via manual or training) will affect the values in the kit for only the zone selected.
When Dynamic Override is set to NO, the min/max dynamic settings from the pad type will be used for playing. Changes to the min/max dynamic settings (via manual or training) will affect the values in the pad type and all other zones with that same pad type if the user pad type is selected for that zone.
Changing the Dynamic Override between YES and NO allow you to toggle between the min/max dynamic settings stored in the kit and the settings stored in the pad type.

DAMPEN MODE
FSR AND PIEZO DAMPEN

```
DAMPEN pad 1A
ENABLE
```

FSR DAMPEN MODE

The DAMPEN MODE function on the DITI is designed to dampen or choke a sound. Because FSR triggers work on pressure, the DITI can detect a slow rise in pressure caused by fingers pushing on a pad. When it detects this gesture, a dampening routine begins. When DAMPEN is turned on, the DITI will send a note off command when pressure is applied to the FSR trigger pad after a note has been turned on.

In addition to this, if a note is assigned to slot 5, it will play that note as well. Why? Some modules use a different note number for shutting off notes. This features gives the DITI alternate ways of dampening (choking) a sound.

Slot 5 can also be used as a **DEAD STROKE.** Instead of sending out a note designed for dampening, it could also be used to play another sound on the dampen gesture.

NOTE: Dampening is not the same thing as cymbal choking.

More on this in the Cymbal Choking Section.

TIP: Do not use any of the "C" GAIN Settings. You need to use a GAIN Setting with "R" in it. Start by using a GAIN of R4.

A Note about Dampening

The DITI actually recognizes two different types of dampening gestures. They are described below.

Initial Attack Dampening: striking pad with finger/mallet and then maintaining contact with the pad to dampen the note.

Previous Note Dampening: dampening motion performed by slowly pressing finger/mallet to the pad to dampen a previously played note.

Also in the Global Screens you can adjust how the dampening gestures react. Check out -
Damp Count, Damp Upper Threshold, Damp Lower Threshold and Damp Ration in Globals Section of the manual.

PIEZO DAMPENING
An exciting new feature on the DITI is that ordinary single zone piezo triggers can have a choke dampening function as well. This is how dampening works on a piezo trigger.

When you dynamically train a pad in the TRAIN Screen, the DITI asks you to hit the pad hard, then soft. Your minimum and maximum velocity settings are superimposed within this dynamic playing range. When Dampening is turned on and TRIGGER is the INPUT Type, the DITI uses playing dynamics below your trained soft hit to send out a note off command.

Dampening turned on therefore has no effect on the playability or dynamic range of the pad, but it extends the function of your playing dynamics by using a velocity range below your training.

You can of course TRAIN your soft hit a little harder so that you extend the range of the Dampening Function. This is what makes the DITI so powerful and different from any other Trigger to MIDI converter on the market.

TIPS: You can manually set the triggering point for the dampen function in the Global Screens.

The CHOKE ON function in SLOT 4 does NOT pertain to Dampening. This feature is used in the SWITCH INPUT TYPE.

Slot 5 however does function. When the Piezo Dampening Function is detected, besides sending a note off for slot one and aftertouch, it will also play the note number assigned to Slot 5. If you do not want to hear a sound, just assign Slot 5 to OFF.

ASSIGNING THE GATE TIME

Assigning the **GATE TIME** 25mS-1000mS plus Special Gate Functions

```
PAD GATE  pad 1A
Gate = 200 msec
```

On this display, you can change the Gate Time on the selected pad. Gate Time is the amount of sustain or how long the note plays after it is struck.
Gate Times are expressed in 100mS intervals. 1000mS = 1 second. The settings go from 100mS up to 1 second (1000mS)

You will see an " * " indicating that the MIDI GATE has been changed.

Press the Enter Key to Store the new Gate Time Setting. Notice that the " * " disappears.

SPECIAL GATE TIME FUNCTIONS
The DITI also allows the GATE function to perform special functions that relate to how long a sound or note will play.

INFINITE GATE

```
PAD GATE   pad 1A
Gate = Infinite
```

When this setting is entered, the DITI will only play NOTE ON Commands and will not send out any NOTE OFFs. Normally, the DITI sends out a NOTE OFF Command after the Programmed GATE Time expires. This can be an effective mode when trying to create cymbal rolls or when you do not want to sound to be shut off.

LATCH MODE

```
PAD GATE   pad 1A
Gate = latch
```

This is a great mode for controlling LOOPS. In this Mode, each strike of the pad alternates between a NOTE OFF or a NOTE ON.

GATE MODE

ROLL MODE

```
GATE MODE pad 1A
ROLL MODE
```

In this Mode, NOTE OFFs are not sent until after you stop playing on a pad. This allows you to play cymbal rolls without the "machine gun" effect. After you stop playing, the DITI waits until the assigned gate time expires, then it sends out ONE note OFF command for that Note Number. One note off usually shuts off all of the note ons.

VELOCITY GATE

```
GATE MODE pad 1A
VELGATE 25 msec
```

Velocity Gate Mode controls how long a sound lasts by how hard you hit. You assign your normal Gate time on the previous screen, then you assign a Gate Value in the Gate Mode Screen. As you play louder, the gate time moves from the assigned pad gate value to the Gate Mode value. This means that notes can get longer or shorter, depending on how you set the VELGATE Gate Time.

SUSTAIN
FSR PRESSURE Function

When using FSR pads like the Aquarian inHEAD™ or onHEAD™, the DITI allows you to control the sustain of the sound simply by pressing on the pad. If you press and hold down the pad, one note will sound and will not shut off until you release the pad.   This is how a piano works naturally, but it's not the way other drum controllers function, unless of course it is an Alternate Mode KAT Controller such as the malletKAT, drumKAT or trapKAT! This is a special by-product of FSR responding to pressure, not vibration.

TIP: Try using a Gain Setting of R4. Note that some GAIN settings will not work at all for capturing sustain, especially true for any Gain settings with the value C. Also, do not use Latch or Infinite Gate Times when trying to sustain an FSR pad.

PAD CONTROL MODES

```
PAD CNTRL pad 1A
OFF              *
```

Note Shift
Velocity Control
Control Paths
Slot Shift
OFF

The DITI offers special modes that use pressure and pad velocity in some very unique ways. **Note Shift Mode** uses velocity to send out a range of note numbers controlled by your soft and hard hits. **Velocity Control Mode** uses your playing velocity to send out controller values to any controller number.

NOTE SHIFT MODE

```
PAD CNTRL pad 1A
NOTE SHIFT =045*
```

```
PAD CNTRL pad 1A
MINMAX=0371046*
```

When you assign any trigger input to NOTE SHIFT in the PAD CONTRL screen, your playing velocity (how hard you hit) on the pad determines what note number to play. There is a range of notes that NOTE SHIFT will play. The lowest note is assigned to SLOT ONE. This is the base note. When you turn on the NOTE SHIFT in the PAD CONTROL Screen, you can then assign the note number that is the highest note in the Note Shift. It can be a higher or lower note number than the note number assigned to slot one. This means that the note shift will either go Up or Down when playing.On the next screen to the right, you can assign the dynamic range that the NOTE SHIFT will operate in.   This is not the velocity of the note.   The notes velocity or volume comes from the min/max velocity setting that is associated with the SLOTS.

The MINIMUM and MAXIMUM settings assigned here come from the DYNAMIC TRAINING. When you first train your pad, a Minimum and Maximum Dynamic Range is recorded and stored for that input. By Default, these same values are also displayed on this screen as well. If you don't change them, the NOTE SHIFT will shift from the lowest note value set in SLOT ONE, to the highest note value assigned in the Note Shift Screen as you play from soft to loud.

If you change the minimum setting to a higher number, then the note shift will not start until that dynamic is reached. If you lower the maximum setting, then the note shift will stop changing when that dynamic is reached.

This means that you can control exactly when the note shift starts and ends by setting this "range of operation". The note shift happens only in the specified velocity range.

The normal velocity minimum and maximum settings affect how loud the notes play when playing soft to loud, while the minimum and maximum in the NOTE SHIFT range, tell the DITI when to turn on and off the NOTE SHIFT.

Note that the min/max range settings of Note Shift go from 0000 to 1024 to match the 1024 levels of dynamics established by the A/D converters. Four values for the minimum setting and 4 values on the maximum setting. YES… It's a busy screen. When you place the cursor on the Min or Max setting, only four values will blink.

In the example above, the minimum value is 0371, and the maximum value is 0466, and the " * " means that the values were edited.

VELOCITY SHIFT

```
PAD CNTRL pad 1A
 VEL SHIFT =004*
```

Velocity Shift converts your playing velocity to a controller value. What this means is that instead of sending out a note number with different velocity values as you play from soft to hard, Velocity Shift sends out a controller value assigned to the Controller Number that you assign in PAD CONTROL Screen.

```
PAD CNTRL pad 1A
MINMAX= 037 118*
```

Velocity Shift has its own minimum and maximum effect settings. This establishes the "range of effect". When you play your softest, the Controller value sends out the minimum value that you set in the minimum setting. When you play your hardest, the controller value will send out the value programmed in the maximum setting.

The controller range goes from 000-127.
ControllerCC# also goes from 000-127 as well as PITCH BEND UP (PbUP) and PITCH BEND DOWN (PbDn)
To turn on PAD CONTROL , set the PAD CONTROL Screen to
VELOCITY SHIFT
Next, assign the controller number.
Next, assign the velocity effect range.

The CC# number is assigned in the Velocity Control Screen. So if for example, you set the Velocity Control to PAN, as you play from soft to hard, the DITI will send out pan messages going from left to right within the RANGE of the minimum and maximum ranges.

The feature works independently from the SLOTs. This means that you can also send out note numbers along with the Controller Values. Both the Slots and the Controller have their own minimum and maximum ranges.

If you don't want to hear any notes, but just want to have the pad send out controller data, set SLOT one to OFF and make sure that the SOUNDS screen is set to ONE Sound.

CONTROL PATHS

```
PAD CNTRL pad 1A
CTRL PATHS=001 *
```

Another variation of PAD CONTROL is Control Paths. What this feature does is to assign a Controller Number, a Range, Steps, and Direction on any pad.   What this means is that you can send out discrete values of any controller number (including pitch bend) controlled by how many steps (how many strikes). The values move from the minimum setting up to the maximum setting in steps. When it reaches the maximum, it reverses direction.

On the CTRL PATHS Screen, set the CC# Number you want to send. The MIDI channel is determined by channel set for the entire pad.

Set the Minimum and Maximum Range you want for that Controller #.

```
PAD CNTRL pad 1A
MINMAX= 000 127*
```

Set how many Steps you want for the CC#'s value to go from Minimum to Maximum (up to 32 steps)

```
PAD CNTRL pad 1A
Steps = 32      *
```

This function is designed to control the knobs on your synths without having to push or touch anything. Because it is independent from the note number, you can play on the pad, hear the sound, and enjoy the effect transforming with each strike.

SLOT SHIFT

```
PAD CNTRL pad 1A
 SLOT SHIFT ON *
```

Slot shift is a cool way to get up to 32 notes in a velocity shift fashion. You determine how many notes you want to shift to. When you set a slot of OFF, that will tell the DITI how many notes you want to shift by your playing volume. The DITI divides the amount of slots by the minimum and maximum velocity settings.

ASSIGNING THE FSR TRIGGER SWITCH
(controlling cross stick or rim shot sounds)

Whenever a drummer wants to play a cross stick sound, they would lean their hand on the snare drum, and then tap the rim with the shaft of the stick to get the cross stick sound. When the rim was just struck, you would hear the rim shot sound.

SWITCH BY = NONE, 1A--12B

```
                    pad 1A
 SWITCHES NONE
```

All throughout the pages of this manual, you might have noticed that the DITI constantly takes advantage of the power of FSR to create useful powerful functions that cannot be produced with ordinary piezo triggers.

FSR SWITCHES is one of those features. This function controls the sound output of one trigger depending on the condition of another trigger... WHAT??

Think about playing a cross stick sound on your drum. Now play a rimshot sound on the same rim surface. The sound of that rim was determined by the pressure (your hand) on the snare drum (another trigger).

What the DITI does when this function is turned on is to decide if the sound should be a cross stick (slot two) or a rim shot (slot one) dependent on if there is pressure (your hand) on the snare drum (FSR pad that you are pressing). The sound can be anything of course, but the function of pressure to determine what sound to play is what SWITCH BY is all about.

Because multiple Inputs are involved (an FSR pad, and one other Trigger), the DITI allows you to decide what Trigger Input should be affected by the pressure on the FSR pad assigned to SWITCH PAD.

This means that when editing any Trigger Input, you can go to the "SWITCH BY" Screen and assign what FSR pad will affect this trigger. When pressure is detected from the assigned Trigger Input (that is displayed on the screen), the current trigger plays the note from SLOT 2 instead of SLOT 1.

Any Trigger Input can use the "SWITCH BY" function. The rule to remember is that the trigger input that you are assigning to the current trigger MUST be an FSR trigger pad**.** You must also set the FSR pad to **DAMPEN ENABLED**. In order for this FSR pad to work with pressure or sustain, the GAIN must NOT have the letter C in its setting.   Start my using R4 (or just 4) for the Gain setting on the FSR pad. Also make sure that if you are using a B input, it must be set to TRIGGER. The input that powers the FSR cannot also be used to be the switch pad modifier.

REMOTE EDITING
CONTROLLING EDITING VIA THE TRIGGER PADS

Using the Buttons on the DITI can be tiresome when doing lots of edits. We've created a way for you to use any of the DITI's trigger pad inputs to replace the buttons. You can globally assign which pad you want to function as the button on the DITI. You don't have to give up that pads playing function either because the DITI uses a foot switch (our PMCP foot switch) to tell the DITI that when pressed, it changes the trigger pads function from playing sounds to editing the DITI.

```
Assign Edit Pad
GLOBAL:   1A
```

```
Assign Edit Pad
    EDIT:   2A
```

You only need to assign these pads once and it will function on all of the kits regardless what is plugged into the inputs.

NOTE:
You must be using a PMCP Continuous Controller footswitch or a device that sends Continuous data. The DITI uses the U version of the PAD TYPE "PMCP for C. Control" in order to read the foot controller. Once you assign the footswitch to an INPUT, in this special mode, the DITI ignores what the PAD TYPE setting is in the KIT, but instead assumes you are using this PAD TYPE.   If you are using a pedal that does not perform correctly, you can call up this PAD TYPE, Train it and make other adjustments. As usual, the DITI stores these User Pad Type settings, and will then use these adjustments. This is really cool because you don't need to set up the Input Type for the footswitch in every kit. This feature overrides the normal PADTYPE setting in that input.

When using the Up, Down, Left, Right and Enter Arrows, you must first be in GLOBAL or EDIT Modes. So the order of things are: Step on the footswitch, hit the assigned Global or Edit Pad, then use the remote pads as if you were using the keypad.

ASSIGNING THE FOOTSWITCH FOR KIT ADVANCE / BACKWARDS
PROGRAM ADVANCE / BACKWARDS / PROGRAM RESET

```
Assign Edit Pad
KITADV:   2A
```

The PMCP footswitch can also be assigned to KITADVANCE/BACKUP, PROGRAM ADVANCE/BACKUP and also PROGRAM RESET which takes the SOUND PROGRAMS back to the Beginning.

ASSIGNING THE SOUND FUNCTION

```
SOUNDS     Pad 1A
PTS 070 090 102
```

On this display, you can change the SOUNDS Function on the selected pad. SOUNDS define what happens when you strike the pad. The DITI is capable of playing more than one note number at a time determined by velocity or an alternating note pattern.

The DITI therefore can play up to 32 alternating notes per pad, plus a list of velocity shifting presets. There is also multi note capability. Below is a listing of SOUNDS types and a definition of how the pad functions when you strike it.

SOUNDS =
SIMULTANEOUS

Here you can assign from one to four sounds that will play simultaneously. The sounds come from slots 1-4.

```
SOUNDS     Pad 1A
4 SIMULTANEOUS *
```

SOUNDS=
VELOCITY SWITCH

```
SOUNDS     Pad 1A
   SNDS SWITCH
```

Here you can assign from one to four sounds that will shift slots depending on how hard you hit.

```
SOUNDS     Pad 1A
PTS 070 090 102
```

These settings affect all SWITCHES, CROSSFADES and LAYERING SOUND MODES.
IMPORTANT: These velocity shift points are affected by the PAD TYPES CURVE settings. This means that even though two different pads can have the same SOUNDS setting, the response can be different because the Curve controls how fast a sound goes from soft to loud.

SOUNDS= SNDS LAYER

```
SOUNDS     Pad 1A
2 SNDS LAYER
```

Here you can assign from one to four sounds that will layer in slots depending on how hard you hit. This means that you can have one to four sounds come in as you play from soft to loud.

These settings affect all SWITCHES, CROSSFADES and LAYERING SOUND MODES.
IMPORTANT: These velocity shift points are affected by the PAD TYPES CURVE settings. This means that even though two different pads can have the same SOUNDS Setting, the response can be different because the Curve controls how fast a sound goes from soft to loud.

SOUNDS=
CROSSFADE

```
SOUNDS    pad 1A
2 SNDS FADE
```

Here you can assign from one to four sounds that will crossfade slots depending on how hard you hit. This mode also has a BLENDING feature, so that you can control how much the crossfade allows two sounds to play at once.

```
BLEND     pad 1A
DURATION     050
```

These settings affect all SWITCHES, CROSSFADES and LAYERING SOUND MODES. IMPORTANT: These velocity shift points are affected by the PAD TYPES CURVE settings. This means that even though two different pads can have the same SOUNDS Setting, the response can be different because the Curve controls how fast a sound goes from soft to loud.

SOUNDS =
ALTERNATING SOUNDS

```
SOUNDS    pad 1A
   ALTERNATE    *
```

Like the name suggests, the DITI will play alternating sounds every time you strike the pad. This means that you can play up to 32 alternating notes on a single pad just by repeatedly striking the pad.   If you want to have just 16 alternating notes, then simply assign the 17th NOTE SLOT to aREST (alternate reset). The DITI will then play SLOTS 1 through 16, and then start over again. You can also take advantage of the aFREEZ and aREST2 functions to reset the alternate pattern at will or freeze the alternating pattern at the slot that you want.

aREST2 by the way resets the alternate note pattern to slot number 2. aFREEZ locks the sound on that slot until it is released with an aREST. How do you do that?

SPECIAL KIT FUNCTION WHEN USING aFREEz and aREST in SLOT ONE

Whenever an aFREEz or aREST (2) is placed into slot ONE, the function becomes global for all alternating patterns in the kit. All alternating patterns either restart or lock in place until that global pad is struck again.

 If you want to play in groups of 8 or 16, tapping on a RESET would disrupt that pattern unless the REST started on the second slot. Cool yes?

PAD LINKING

```
LINK      Pad 1A
to Pad12B  010%*
```

Like the drumKAT and trapKAT, it is possible to link any pad to any pad. This means that you can link a pad say pad 1B to 2B. When you strike pad 1B, functions that are in both 1B and 2B will sound at the same time. The DITI can link up to 6 pads at once. Striking just one pad can send out a whole host of sounds!

To the right of the "Link to" assignment, there is a percentage parameter. It goes from 10% to 200%. This is a velocity scaling setting. Now you can control the relative volume between the pad you are playing on and the linked pad.

HiHAT SELECT

```
HI HAT    pad 1A
SELECT =   NONE
```

NONE
GM HI HAT
HATNOTE

The DITI allows you to set trigger inputs 8A or 8B or 9A or 9B to HI HAT Select. There are three modes, GM, HATNOTE and NONE to play in conjunction with the hi hat pedal on input 7A. This means that you can have up to 4 different pads assigned to HI HAT mode.
Depending on the pedal position, the DITI will play different note numbers when the pad is struck.

There are three basic types of HI HAT modes, NONE, GM HI HAT and HATNOTE.

NONE

```
HI HAT    pad 1A
SELECT =   NONE
```

In this mode, you are relying on the drum software to determine what sound is being played for the hi hat. In this case, the drum software relies on Continuous Controller information coming from the hi hat pedal. You must set the FOOT CONTROLLER Function to either Controller #4 or Controller # 1 on the DITI.

The chick and splash sound usually is provided by the drum software's interpretation of how fast you are playing the pedal. If you need the DITI to provide the chick and splash sounds, you can by assigning a note number to the CHK input. The splash can be set on SLOT 2 of the CHK input. (more on CHK and CTL discussed in the Global Section).

When the Pad Selection is set to CHK, special functions become visible in the Global screens where you can set the chic and splash sensitivities.

When using the HI HAT mode selected to NONE, you will need to assign the NOTE NUMBER provided by the drum software company to a dedicated hi hat pad on the DITI.

That hi hat pad provides the velocity information, and the hi hat pedal determines what sound to play.

GM Hi HAT

```
HI HAT     Pad 1A
SELECT = GenMID*
```

In this mode, the pad assigned to GM HI HAT will play an open or closed sound, MIDI notes 42 or 46 depending on the position of the pedal. The chick and splash sounds are controlled by the position of the foot pedal. The hi hat pad should be assigned to MIDI NOTE number….

Chick = MIDI NOTE #44
Closed = MIDI NOTE #42
Open+ MIDI NOTE # 46

When you first select the GM HI HAT, the DITI will pre assign these note numbers to the selected trigger pad (8 or 9)

HATNOTE

```
HI HAT     Pad 1A
SELECT = HATNOT*
```

In this mode, the pad assigned to HATNOTE plays 8 different note numbers depending on the position of the hi hat pedal. This mode is pre assigned to work specifically with the gigKAT, or KS controllers from Alternate Mode.

Use SLOTS 1 through 8 to set up note numbers for the Hi HAT. If you are only using say 4 or 5 notes for the hi hat, spread them (by repeating them) along the 8 SLOT numbers. This is another great way to control where the sound plays depending on the pedal position.

When you Select HATNOTE, the DITI presets the 8 note slots for the gigKAT. You can change them as you need to depending on your synth.

TIP:
Only Trigger input 8A-8B and 9A-9B can be assigned to HATNOTE MODE.

It is also possible to change the default note values for these modes. The DITI automatically assigns these Hi Hat note numbers to the Note Positions 1 through 8.

Please note that some VST drum Software like BFD, Addictive Drums, Superior Drummer, etc. do not rely on this mode for controlling the hi hat. Instead, these software products use Continuous Controller information derived from the position of the hi hat pedal to determine what sound to play. In this case, the HI HAT Select is set to NONE. Simply set the MIDI note number needed by the software to control hi hat sounds.

If the VST is controlling the chick and splash sounds as well, then the CHK note number should be set to OFF.

CHIC TYPE
Assigning the CHIC TYPE

CONTROL
TRIGGER

```
CHICK TYPE
CONTROL      *
```

```
CHICK TYPE
TRIGGER      *
```

Most of the popular hi hat pedals on the market use only continuous controller information to determine the position of the chick sound. The chic sound and its velocity information are interpreted by how fast you are moving the pedal. Splash is also interpreted this way.

For these pedal devices, the DITI CHIC TYPE needs to be assigned to **CONTROL**. This means that the chick sound is controlled by the movement of the pedal.

If you do not want to rely on the DITI or the VST Software to provide the velocity of the Chick, you can assign the CHIC TYPE to TRIGGER.   Input 7B is then assigned to the chick sound.
You will need a hi hat pedal that has a separate piezo output for the chick sound. You will also need a stereo cable adapter that splits the signal so that you can access both the A and B channels of Input 7.

HI HAT CONTROLLER

```
HIHAT CONTROLER
Controller OFF
```

```
HIHAT CONTROLER
Controller #01
```

```
HIHAT CONTROLER
Controller #04
```

```
HIHAT CONTROLER
Controller Vol
```

```
HIHAT CONTROLER
ControllerPitch
```

OFF
CONTROLLER #1
CONTROLLER #4
CONTROLLER VOLUME
CONTROLLER PITCH

The DITI allows the Foot Controller Pedal to send out more than just chic and splash information.
Controller # 4 is used by many drum software companies to determine pedal board position. Used in conjunction with a trigger pad assigned to the hi hat MIDI note number (determined by the software/sound module), the DITI will be able to control the sounds of the hi hat pedal opened through closed.
A Foot Controller Pedal can also be used to control the pitch of a sound (like a pitch wheel on a keyboard) when the pedal is set to Pitch.

Controller #1 and Volume are assignable functions for the foot controller as well.
Choices for The FOOT CONTROLLER are

CC Controller #1
CC Controller #4
Controller Vol. The DITI sends out VOLUME Commands using the hi hat pedal
Controller Pitc The DITI sends out Pitch Bend Commands on the assigned MIDI Channel.
Controller OFF

MIDI MIXER /CONTROLLER

```
CONTROLLER 1=002
Num=004 Chan=10
```

The DITI has the ability to send up to 16 Controller Values when entering a Kit. Each CC# has its own MIDI Channel and stored Value. It can function as a MIDI MIXER, controlling the volume sliders on a soft synth mixer's channel, or it can control knob settings on any synth. Changes to the CC# values happen in real time.

The top line displays 1 of 16 controllers along with the value. The bottom line displays the CC# and the MIDI Channel.

EDITING PATCH NAMES

```
 Edit Patch Name
Studio
```

There are 36 User Kits in the DITI. Each Kit can have its own unique name. There are also 50 Sound Patches per KIT that are part of a KIT TYPE. These Sound Patches can also have their names changed by you.

Use the Left /Right arrows to move the cursor to the letter position that you want to change, and use the Up/Down Arrows to change the letter or number. Push the ENTER Button to lock in the Name. You will notice that the asterisk disappears when you push on the ENTER button.

PATCH VOLUME CONTROL

```
PATCH VOLUME
CHANGE    = 127
```

00-127, OFF

The DITI functions as a digital mixer because it can store a MIDI volume level of your choice for the patch kit. The assigned MIDI Volume value is sent on whatever MIDI Channel the Patch Volume Channel is set to. Every time you use the left or right arrows, the DITI sends out a new patch and volume number.

PATCH PROGRAM CHANGE

```
PATCH PROGRAM
CHANGE    = 001
```

000-127, OFF

The DITI sends out a PATCH PROGRAM Change per Kit. The MIDI Channel for the Program Change must be defined in the PATCH Program Change Channel Screen.

The DITI sends out a PATCH Bank, Program and Volume Change per Kit on an assigned MIDI Channel when calling up a KIT. When the user uses the left and right arrows, the DITI only sends out a program number, volume number and a new PATCH name. By default, the program number is incremented by one, but it is possible to change that number to any Bank, Program change number and Patch Name.

PATCH PROGRAM CHANGE MIDI CHANNEL

```
PATCH PROG CHNG
CHANNEL    = 16
```

In this screen you can assign the Patch Program Change MIDI channel (1-16).

CREATING A CHAIN OF PATCH PROGRAMS

```
PATCH PROGRAM
CHANGE     = RST
```

Within Each KIT, you can create the Sound Patches that you want in any order. But how do you quickly get back to the beginning? Assign the Program Change to RESET When you are in Play mode and assign a pad or PMCP footswitch to PC-ADV (program change advance), the Sound Patch will return to the beginning when RST is assigned. Please note that when you are using the Left/Right Arrows, you can still edit and program past the "loop", the RESET Program assignment.

BANK LSB BANK MSB

```
PATCH BANK LSB
    Bank = OFF
```

```
PATCH BANK MSB
    Bank = 001
```

A Bank Change command consists of sending out two numbers, an LSB number and an MSB number. (LSB=least significant byte, MSB=most significant byte). A Bank is a collection of Program Numbers (sounds) usually 127 Programs per Bank.
The DITI sounds out the Bank Change Command on the MIDI Channel that the PATCH Program Change Command is set to. Every time you enter a new KIT on the DITI, it automatically sends out the BANK, VOLUME and PROGRAM CHANGE assigned to the PATCH on the specified MIDI Channel.   This program change is used to call up the SOUND (the kit) on your drum module.

AUXILIARY PATCH CHANGES PER KIT

```
AUX PROG CHANGE
slot [1]  = OFF
```

If you are using a multi timbral synth, you might need to send out more than one program change. Thankfully, the DITI can send out 8 additional MSB/LSB Bank, Program and Volume Change commands, each on their own MIDI Channel.

There are eight Slots, each slot holds an MSB /LSB Bank Change command as well as Program Change and Volume Commands, each on their own channel.

Use the Right Arrow to scroll to these screens and use the UP and Down Arrows to call up one of the eight slots and the value needed for the function.

ALL NOTES OFF COMMAND

```
Send
ALL NOTES  OFF ?
```

If a note ever gets stuck on, you can instantly send an ALL NOTES OFF COMMAND. To find it quickly in the Edit Screens, Press on the Edit Button and hold until it jumps to the first screen. Tap the Left Arrow.

Simply press the Enter Button. If a Gate Time is set to INFINITE and the DITI is plugged into a non drum module (synth), the note will appear to be stuck on because the DITI, does not send out a NOTE OFF in this Mode. The All Notes Off Command fixes this problem.

MIDI EQUALIZER

```
EQUALIZER pad 1A
SEG 10   VAL   0
```

The DITI has built in dynamic curves that are designed for each of the PAD TYPES. Every trigger pad either gets a curve named after itself, or uses a common dynamic curve such as "linear or exponential".
We try to make each of the trigger pads respond in a linear way.   But what about the sound module? Different manufactures each have their own Global dynamic response to velocity.

This can be a problem if you use different sound modules or notice that all of the pads have this unwanted bump of volume in a particular playing range.

Enter "the MIDI EQUALIZER". Now you have the power to create a GLOBAL response curve for EACH KIT in the DITI.
The Equalizer breaks up the MIDI velocity range into 10 segments. That's about 12.7 velocities values in each segment. When this screen is active and you play on any pad, the DITI automatically displays what segment you just played in. If you are not happy with the response, you can raise or lower that segments values by + or - 9 values. This gives you the ability to tailor the overall response of your sound module to your playing style. Cool yes?

UNDERSTANDING KITS and KIT TYPES

In Play Mode, you can call up the name of the sound module that you are using. This is what we call KIT TYPES. The Up and Down arrow changes the name of the module.

When a KIT TYPE is entered, the bottom line of the display contains the list of sounds that are in the module. Usually the first 50 presets listed in the module are loaded in. You can scroll through the list by using the Left or Right Arrows. Some modules might not have any presets that are stored, so the left and right arrows don't do anything. USER KIT TYPES do not have stored names, but if you use the left or right arrows, the program change will increment or decrement. For our gigKAT, the DITI will display the full drum sound listing, several hundred presets!

All of these Sound Programs are not really stored completely. Just their name, bank and program number. You can change the order of these sound programs simply changing the program change. Now you can create your own collection of sound programs in the order that you want. This is called, setting up a CHAIN.

All of the other parameters in the KIT TYPE are shared by the Sound Patches.   This means for example that if you changed a pad's MIDI note number, all of the sound programs in that KIT TYPE would also use that MIDI note number for all of the sound programs. This is a really cool function because all you have to do is set up ONE kit in the KIT TYPE, and all of the Sounds will use these new parameter settings. This makes editing fast, and allows you to enjoy all of the sounds in that kit in the same way.

Any edits that you make to the KIT will be saved automatically. If you want to reset the Kit back to the factory setting, simply hold down the ENTER button.

Of course you can create your own USER KIT from scratch. There are 36 USER KITS that you can have total control over with settings unique to that one KIT. By using the UP and DOWN arrows, you can create your own CHAIN of USER kits as well.

On the bottom line of the display in USER KITS, you will see the Program Change Name (you can edit that name if you want), the Program Change Number (assigned in the Edit Screen), and finally the Sound Patch Number 1-50

When you reinitialize the DITI, the DITI still remembers the ROM KIT TYPEs (Factory Kits 1-14), but your individual USER Kits will be lost.

If you save your Kits via a SYSEX Dump, all edits made by you will be stored and ready for reload when you send an ALL KITS or individual KIT DUMP back into the DITI.

Every KIT can have its own set of PAD TYPES. If you move to different drum modules (KITS), make sure that the right PAD TYPE is set for each input.

The following is a list of parameters stored in a KIT TYPE

Sound Module Name (KIT NAME)
Up to 50 Sound Patches
12 PAD TYPES
TRAINING for EACH INPUT A and B   (includes dynamic levels, envelope, scan time, etc)
MIDI FUNCTIONS INCLUDING
Channel
Slot 1-32 Note numbers
Min and Max Velocity
Dampen On/Off
Gate Settings
Sounds Setting
Pad Control Options (note shift, Velocity Shift, Switch Pad)
Switch By Function
Link Function
Equalizer
Hi Hat Functions
Chic Type
Foot Controller Assignment
Patch Program Change Settings (Bank, Program Change, Volume, Channel)
One set of 4 Auxiliary Programs per Kit (sent when entering new KIT (not patch)

GLOBAL SCREENS

SELECT EDIT PAD

```
SELECT EDIT PAD
 AUTOMATIC   1B
```

AUTOMATIC 1A-12B

PAD 1A	**PAD CTL**
PAD 1B	**PAD CHK**
PAD 2A	**PAD 8A**
PAD 2B	**PAD 8B**
PAD 3A	**PAD 9A**
PAD 3B	**PAD 9B**
PAD 4A	**PAD 10A**
PAD 4B	**PAD 10B**
PAD 5A	**PAD 11A**
PAD 5B	**PAD 11B**
PAD 6A	**PAD 12A**
PAD 6B	**PAD 12B**

The DITI has two ways of selecting trigger pads.
When "SELECT EDIT PAD" is set to AUTOMATIC, then the DITI will automatically display the trigger pad that is struck. This is great for quickly calling up settings on triggers and for moving around quickly on different triggers.

There will be times when you want to LOCK in a trigger for editing. This is most useful when the Trigger Interaction Training has not been performed. This is also a way to guarantee that you are editing the desired pad. To access this mode, use the Up/ Down arrows to find the trigger you are looking for. If Automatic is not displayed next to the Trigger Input number, then the DITI will rely on you to change the Trigger Input when you are editing.

If you are using a single zone FSR trigger like the onHEAD or inHEAD, only the A zone will show up on AUTOMATIC Trigger select when you strike the pad. That is because the B zone isn't really a trigger. It is a power source for the FSR.

PAD TYPES

The **PAD TYPE** is designed to take the headache out of programming. If you haven't noticed already, there are lots of GLOBAL Edits for each trigger input. It is a time consuming task to set up every trigger input. It can also be intimidating and confusing because there is so much power under the hood of the DITI with lots of choices and variables at your fingertips.

> We don't want you to suffer…...really!

The PAD TYPE essentially PROGRAMs the DITI. I'll say that again because it is sooo important.

SETTING UP THE "PAD TYPE" PROGRAMS THE DITI FOR YOU!

What this means is that most of the parameters that are in the Global Screens, that affect how the pad plays, is programmed for you. Simply load in the correct PAD TYPE and hit Enter.

What is a **PAD TYPE**?

There are many different kinds of trigger pads that will function in the DITI. Each one of these triggers needs its' own unique set of parameter values to make them play properly. There is a long list (and constantly growing) list of pads that are in the market today. Your task is to:

Know what you are plugging into the DITI……..say an onHEAD™ trigger pad from Aquarian.

The onHEAD is a PAD TYPE.

Know what input you are plugging it into ……….say Input 2

Find the word onHEAD™ in the PAD TYPE Screen.
HIT ENTER

The DITI will automatically load in the PAD TYPE (i.e. onHEAD™) with the proper GAIN structures, INPUT Type Setting, Training Range, MASK Time and ENVELOPE Settings and much more.

Of course you can always "tweak" these settings yourself and we encourage you to do that. Everyone plays differently, and this means that some settings might need to be tweaked to make you happy. Even your our choice of drum stick can become a "tweak" factor.

For that reason there are FACTORY PAD Types (f) and USER PAD TYPES (u). When you enter the PAD TYPE Screen, your first choice is to decide if you want to use the factory pad type, or if you want to call up a user pad type. When working on a factory PAD Type, if you hit ENTER, the DITI will automatically save the edit and put you into the User pad type with the same name. You can reset the User Pad type back to its Factory setting by press holding the ENTER key for several seconds when the cursor is on the USER PAD Types Name.

IMPORTANT POINT TO REMEMBER REGARDING PAD TYPES

It's really great that you only need to call up the PAD TYPE that matches your brand trigger, BUT if you tweak, the DITI REMEMBERS EVERYTHING FOR THAT PAD TYPE, on EVERY KIT IN THE ENTIRE INSTRUMENT.

What this means is that if you start tweaking a PAD TYPE, and you only want to effect the ONE pad that you are working on, you will need to copy this PAD TYPE to one of the USER PAD TYPES to accommodate your tweaks. If you don't, every time you call up the edited PAD TYPE on any kit, your tweaks will be there.

The concept of the PAD TYPE is that you call up your brand trigger and the settings are there, ready to go. If you don't like them, you can change them and it will be remembered. But that PAD TYPE is GLOBAL parameter and its settings will always be the same for all kits.

IMPORTING /EXPORTING PAD TYPES

Because there so many PAD TYPES , each taking up lots of precious memory, we decided to have some of them available on our website instead of having long lists. This gives you the option of selecting what PAD TYPES you want in the DITI, and allows you to save your own if you need more of them.

Exporting a PADTYPE. Just push and hold down the ENTER key when the cursor is blinking on any PADTYPE. The data is automatically sent out the MIDI OUT port. Make sure that your software is "waiting to receive" a SYSEX Dump.

Importing a PADTYPE. Whenever a PADTYPE SYS EX dump is sent to the MIDI IN Port, the DITI will automatically load in the PADTYPE. There is a special location in memory for importing one PADTYPE. If you want to import more than one PADTYPE, you will need to COPY the existing PADTYPE to a USER PADTYPE Location (User - through User 9)as the incoming PADTYPE dump will overwrite the existing one.

PAD TYPEs also include a TRAINING setting. This is the minimum and maximum velocity range of your playing. Every time you call up that PAD TYPE in your Kit, the training values stored in the PAD Type will be in effect.   You can retrain the PAD TYPEs, training to your personal liking when using the USER version of the PAD Type. Every time you call up this PAD TYPE, those settings will be used.

The DITI has a DYNAMIC OVERRIDE setting in each KIT however that allows you to store unique Training Values on EACH KIT on EVERY PAD. This is called DYNAMIC OVERRIDE. By turning on DYNAMIC OVERRIDE on any particular pad, the user is allowed to tweak each pad's training values per Kit.

There are 9 USER PAD TYPES that you can copy to. You can also name any of these USER PAD TYPES.

PAD TRAINING
The DITI LEARNs how you play through the TRAINING feature. When you TRAIN the DITI, it loads in the dynamic range values automatically. This is the best way to get started on the DITI. By simply telling the DITI what your hard and soft hits are, it will tailor the dynamics of the trigger to your own personal playing style. It also creates a Global envelope for that trigger input that helps control false and double triggering.

As you want to improve the way a pad responds, you can dig into this manual and learn the tricks to make it happen.

After you scroll through the list and find the name of the trigger pad that most closely matches your trigger pad in the PAD TYPE screen, press ENTER. The DITI will then load in all of the default parameters for that pad. You can of course change any of these values. These "presets" act as a great starting point for optimal trigger performance.

Once you finish setting up all of the PAD TYPES, you have to assign the note numbers and channel numbers to the Kit. Find one of the KIT TYPE templates that matches the sound module or drum software you are using, and then voila, you are ready to start playing!

Not so bad after all right?

Here is the list of parameters that are saved in a PAD TYPE

Input Type
Exclusive
Gain
Threshold
Mask Time
Equalizer
Dynamic Curve

PAD TRAINING
Max Dynamic
Min Dynamic
Scan Count
Interaction

TO REVIEW ABOUT PAD TYPES

A PAD TYPE is like a separate entity in the DITI. Once you edit a FACTORY OR USER PAD TYPE, its settings apply to EVERY INPUT on EVERY KIT TYPE that uses that PAD TYPE. That means you only have to edit the PAD TYPE **ONCE** for the entire DITI for that particular trigger. If you want a variation response for that brand trigger, you can override the training settings in KIT EDIT (OVERRIDE =YES), or you can copy the PAD TYPE and modify it for your response variation.

```
TRAIN    pad 1A
OVERRIDE = YES
```

This is really important, so let's say it another way.

If you want to use ONE Training (soft and hard hits) for a PAD TYPE for all of the kits, simply call up the Factory or User PAD TYPE, TRAIN it if you want, and enjoy that response on the entire instrument.

If you want to tweak that PAD TYPE's Training, but don't want to affect the entire instrument, you can:

a) Copy that PAD TYPE to a USER PAD Type, retrain it to your liking, then use that instead   OR
b) Override the PAD TYPES TRAINING completely but calling up the OVERRIDE screen in the KIT EDIT. When you do this, the Training that you do will be for that pad on that kit only.

INPUT TYPE

```
INPT TYPE pad 1A
    TRIGGER
```

```
INPT TYPE pad 1A
     FSR
```

```
INPT TYPE pad 1A
 HIHAT CONTROLLER
```

```
INPT TYPE pad 1A
  CONTROL CC#
```

```
INPT TYPE pad 1A
    SWITCH
```

TRIGGER
FSR
SWITCH
CONTROL CC#
HiHAT CONTROLLER
PRESSURE CONTROLLER

Selecting the INPUT TYPE on the DITI defines what kind of trigger you are using on the input and also defines what the function is. When you enter the PAD TYPE on the proceeding screen, the DITI automatically sets this INPUT TYPE. You can however experiment with these settings or start from scratch by creating your own User PAD Type, then define what INPUT Type you need. You are now entering the "advanced" section of the DITI.

INPUT TYPE = TRIGGER

When a trigger input is set to TRIGGER, the DITI is looking for voltage. Piezo trigger pads are this variety of a trigger, and is the most common electronic pad on the market. If an inHEAD™ or onHEAD™ is using the inBOX™ converter, then those FSR pads are converted to a voltage trigger as well. Its INPUT name therefore is a TRIGGER because the inBOX converted the FSR signal into a voltage signal. The inBOX allows

an FSR trigger to work with standard drum machines that require voltage for their trigger inputs.

Some examples of PAD TYPES that would use TRIGGER as the INPUT TYPE are

Piezo Triggers
Aquarian EBD
Dauz Pads
Single Zone Cymbal Pads

Note that some PAD TYPES will use the TRIGGER Input Type on only one of the jacks inputs. FSR trigger pads will use the TRIGGER Input Type on the A input (FSR on the B Input). Membrane Switch pads will also use the TRIGGER Input Type on the A input as well. (SWITCH on the B input)

INPUT TYPE = FSR

When a trigger input is set to FSR, this tells the DITI to set the B input as the power source for FSR sensors. Single zone FSR pads like the Aquarian inHEAD™ and onHEAD™ are pads that use this setting.   In this case, a stereo cable is used. The "A" input is set to INPUT TYPE =TRIGGER, and the "B" input is set to **INPUT TYPE =FSR**. Now the FSR pad is being powered by the B input, and the performance velocity is being tracked by the A Trigger Input.

BTW, If you had set the PAD TYPE to onHEAD™ or inHEAD™, both the A and B INPUT Types would be automatically loaded in with this configuration.

If you are using a single zone HybriPAD or HybriHEAD from Alternate Mode, or you see the words DITI DIRECT on the onHEAD or inHEAD product, then that FSR trigger can plug directly into the DITI without the inBOX. Its input type would be named FSR.

If you are using the original version of the Aquarian inHEAD or onHEAD that was originally sold with the inBOX, then you will need a simple Tip/Sleeve to Tip/Rig converter sold separately. This rewires the original tip sleeve configuration of the jack to a tip ring configuration, allowing the DITI to power the FSR without an inBOX.

AQUARIAN CONVERTER JACK

If you have purchased an Aquarian inHEAD or onHEAD without the DITI DIRECT logo fear not! This simple "Aquarian to DITI Converter Cable " will switch the wires so that these triggers can be plugged into the DITI without the need for an inBOX.

MULTI ZONE FSR

If we wanted to connect a 3 ZONE FSR Trigger Pad to the DITI, then the INPUT TYPE would have a slightly different configuration.   Two Stereo Jacks and two Trigger Inputs would be needed for a three zone sensor.

If we were using inputs 1 and 2 on the DITI, 1B would be set to FSR , and 1A would be set to TRIGGER. 3A and 3B would both be set to TRIGGER.   The Input B on Trigger One powers all of the zones on the sensor and converts them to TRIGGERS.

Note: On Multi Zone FSR Triggers, there is a "common" lead. This feeds power to the other triggers on the multi zone pad. It is the "common" input that is set to FSR on the B channel. The common input will be noted on the FSR Multi zone.

When using trigger pads like the **jamKAT** and **HybriKIT**, this type of configuration is used.

INPUT TYPE = SWITCH MODE

MEMBRANE SWITCH TRIGGER PADS
Damp Switch, 2 and 3 Zone SWITCH Input Types

The DITI is designed to work with Dual Zone and Three Zone Trigger pads that use a membrane switch on the rim or bell of the trigger pad. KAT, Roland and Yamaha are manufacturers that use this system where the of the pad is gathered by a piezo sensor

in the middle of the pad, but the sound module plays one of a multiple of sounds depending on whether pressure is placed on the membrane switch which is on the rim, or on the bell of the trigger pad itself.   Some manufacturers also use a three zone system on their cymbals. The piezo is on the bow of the cymbal pad, and on both the bell and the rim are resistors (switches) that tell the system what sound to play. These switches can also function as a choke mechanism when the edge of the cymbal pad is pressed on.

The DITI addresses all of these trigger pad functions into one INPUT Type called SWITCH on Input B. PLEASE NOTE THAT **DAMPEN MODE must be ENABLED** in the KIT EDIT Screen.
The PAD TYPE setting does not automatically change this to Enabled.

```
DAMPEN pad 1A
    ENABLE
```

IMPORTANT: INPUT A plays notes based on the piezo trigger. The INPUT TYPE for the A input is set to TRIGGER. If the membrane switch is not activated, MIDI note assignments are played from the A Input.

 Any of the SOUND functions can be activated. This means that the bow of the cymbal or the "head" of the drum can include velocity switching, multiple notes or even alternating notes depending on the setting that is chosen in the SOUNDS function. The A Input can also have the LINK function active, allowing it to play notes and functions from other inputs

When TRAINING, the DITI sees the voltage generated from the piezo and sets the dynamic range based on your soft and hard hits.

WHEN THE MEMBRANE IS DETECTED
 INPUT B is activated. Slots 2,3,4,5,6 and 7 perform specific functions.

```
MAX DYN  pad 1A
0450switch=0600
```

The left value is the Training Value results of the piezo being trained on the rim or bell for Input B.
The right Value is the Membrane Switch Training Value.

Here is where it gets real interesting…. When you TRAIN the edge, bell or rim of the trigger pad, the DITI reads the piezo's voltage AGAIN, but this time from the position of the edge, bell or rim. The DITI creates a unique dynamic range setting from the piezo but at a further distance from the head. This means that the dynamics on the edge, bell or rim are not compromised. A complete range from 00-127 is now possible, complete with its own curve that is totally independent from the head.

When you TRAIN the edge, bell or rim, the DITI also stores a SWITCH RESISTOR VALUE.
When the DITI detects this resistance value, it plays notes from the different SLOTS on INPUT B.
First you need to active the CHOKE FUNCTION in SLOT FOUR. Turn on either "Choke Aftertouch" or "Choke Note Off". This tells the DITI to recognize the resistor and to either send a note off or note aftertouch command when the membrane is pressed.

SLOTS in SWITCH MODE (INPUT B)

SLOT ONE
The SLOT ONE note value on input B is set to the same MIDI note as SLOT ONE on Input A. When the CHOKE is initiated on the B Input, SLOT ONE will send a note off, corresponding to the NOTE ON in SLOT ONE on Input A.

SLOT TWO
For a two zone trigger pad, the DITI will play the note number assigned to SLOT TWO on INPUT B, when the switch resistor value is detected. It will also send a note off and/or aftertouch command when the pad is choked.

SLOT THREE

For a three zone trigger pad, there are two membrane switches with different resistor values. The DITI will play the note number assigned to SLOT THREE on INPUT B if the Switch Resistor value exceeds the value stored when Training. This means that if you are TRAINING a three zone trigger pad, take notice of the display and look at the resistor value when hitting the pad hard. Play on both the bell and the edge to determine which value is higher. (The DITI displays these values in real time when TRAINING).

Whichever membrane (bell or edge) has the lower value will be assigned to SLOT TWO. Keep in mind also that you are also training the dynamics of the bell or rim. The training values are assigned for both, so choose which position you want to control the dynamic range for notes assigned to SLOT TWO and SLOT THREE.

SLOT FOUR activates the SWITCHING of the SLOTs and it also controls sending out **Aftertouch** or **Note Off** when the membrane is pressed (choking a cymbal). Remember that the DAMPEN FUNCTION must be Enabled in the KIT EDIT.

SLOT FIVE

If a Choke is detected, and a note number is assigned to Slot Five, a NOTE OFF is sent. Some drum software (like ADDICTIVE DRUMS) use this note number to shut off the note ons in slot one and two.

SLOTS 6 and 7

Some multi zone cymbals (i.e. Roland) uses two separate cables to control the different sounds on the cymbal pad. In order for the DITI to shut off notes from this other input, extra Note Offs and Aftertouch commands are sent. If notes are assigned to Slots 6 or 7 and choking is detected, these extra commands are sent out as well.

Remember you must be using a stereo cable when using these trigger pads because we are detecting two types of sensors...the piezo on the tip and the membrane switch on the ring of the jack.

NOTE:

Slot ONE will only send a NOTE OFF and an Aftertouch command if a note is assigned to it. The note ON comes from slot ONE on the A Input. If you want the choke function to shut off the A input slot one note, then assign that same note number to slot one on the B channel.

EVEN MORE INTERESTING (SLOTS 6 through 32):

Let's say that you are using alternate notes and or linking, and you want the choke function to shut off some or all of these notes assigned to Input A. No problem. Slots 6 through 32 will send a NOTE OFF to any note number assigned to those slot locations when the choke is performed.

Think of how cool this could be controlling lots of loops, toggling them on and off in the switch mode.

The trained resistor value is stored in the Global Screens and can be tweaked if choking is sometimes problematic. Sometimes you have to find the sweet spot on the switch in order to get consistent results.

WHAT IS THE DIFFERENCE BETWEEN CYMBAL CHOKING, and DAMPENING?

The DITI is designed to function with as many different technologies as possible. Manufacturers design their own way of recognizing dampen and choke gestures, so we have to figure out what they are and create functions for them.

MEMBRANE SWITCHES

When using a drum trigger or cymbal trigger that uses a membrane switch as the sensing technology, the DITI looks for the resistance caused by the activation of the membrane switch, and either plays a different note or sends out a choke gesture.   The choke gesture for membrane switches on the DITI is called CHOKE ON that is used in SLOT 4 of the TRIGGER. When CHOKE ON is active, the DITI sends out a note off and a polyphonic Aftertouch command for that note. It also has the ability to send out an alternative note number in slot 5.

FSR DAMPEN

If you do not have a membrane switch trigger pad, you still can dampen or choke a sound if you turn on DAMPEN in the EDIT Screens. The DITI uses two different ways of dampening depending if you are using an FSR Trigger or a PIEZO Trigger.

If DAMPEN is turned on and you have an FSR trigger pad, the DITI reads the pressure on the pad, and can determine that you are pressing on the pad rather than striking on it. It then sends a note off and polyphonic Aftertouch command for SLOT ONE when

this gesture is detected. It will also send out a note number that is programmed in SLOT FIVE. This makes a DEAD STROKE possible.

THE CHOKE ON Features does NOT function in this mode. This special DITI note number is used for membrane switch triggers only.

PIEZO DAMPEN

Piezo Dampen does the same thing as FSR dampen, but it uses a completely different approach to detect dampening on a piezo.

Piezo triggers do not detect pressure. But the choking and dampen function can still be performed on this type of trigger.

When you train your pad, it creates your MINIMUM and MAXIMUM Training Values. The DITI knows what you are calling your softest hit. When DAMPEN is turned on and you are using a piezo trigger, any strike that is below this minimum value initiates the dampen gesture.

You can set that "tripping point" in your TRAINING or manually in the Global Screens. Just look for the MINIMUM Dynamic value that was calculated when you trained that pad.

INPUT TYPE = CONTROL CC#

Sensing Pressure has its distinct benefits because of the marvelous things that you can do with it using FSR trigger pads and the DITI. Below are variations of specific INPUT TYPE functions that sense pressure and converts them to continuous control data.

When an FSR pad is set to Input Type CONTROL CC#, the pad sends out a number between 1-127 as pressure is applied to it. There are 127 different types of CC Messages. Things like modulation, Hi HAT control, LFO control, are all examples of the different types of CC messages that can be sent out. The DITI can send out any of these 127 messages.

The way it works is that SLOT ONE becomes the Continuous Control #. Because there are 127 MIDI note numbers, it is the perfect place to assign the Continuous Control number.

A value between 00 and 127 is sent determined by the pressure it senses on the pad.

Please note that there is only one CC# value sent with each strike. Your dynamic playing affects the pads velocity and controller amount at the same time.

TIPS REGARDING CONTROL CC#:

When using the INPUT TYPE "Control CC#", start by using the PAD TYPE =FSR CONTROLLER. It will preset most of these settings.

You must TRAIN your FSR PAD. The training is slightly different for this function. You need to manually call up the "A" pad for training. Do not use the Automatic pad select feature.

Training is done by pressing and holding the pad for the max dynamic training. Once you set the pressure for the pad, hold it steady and hit ENTER. When you release the pad, you will see the minimum value displayed, then press ENTER.

If you see any jittering on the CC data, just raise the threshold.

In the EDIT SCREENS, use SLOT ONE for selecting the Controller #.
Pressing on the pad will send continuous controller values instead of velocity values.

You can set the range of controller values by using MINIMUM and MAXIMUM velocity settings in the EDIT Screen.

POSITIONAL SENSING USING CC#
CC# + SOUND

When an input type is set to CONTROL CC#, SLOT ONE is assigned to a CC Controller Number. But remember, the DITI can send out more than sound at a time. If you set the SOUND function to 2 SOUNDS SIMULTANEOUS, then the DITI can also send out a note number and its velocity along with the continuous controller data.
This is a really important function because you can simulate positional sensing on a Roland Sound Module or Addictive Drums and others simply by setting the CC# to 16.

The fun doesn't stop there, you can assign things like PANNING to SLOT ONE or PITCH BEND and get fantastic effects by using the combination of CC# + the sound assigned to Slot 2.

Using the inputs with FSR Footswitches
Setting up an FSR pad or FSR Footswitch
for Sustain / Pressure / Continuous Control

Normally, when you call up a PAD Type that is set for FSR, the DITI will automatically preset the GAIN level that is optimized for triggering. If you want to use the pad to control sustain, a different GAIN is needed. Sustain is when you press on the pad, and the DITI does NOT send out a note off until after you release the pad. Remember that you cannot have a gate time of INFINITE. You must have a timed gate. But in order for the DITI to see pad pressure, it must not have any GAIN setting with the C letter in it. The C for capacitor processes the signal so that it sees the peaks of the signal, but not the continuous movement of pressure. A Gain Setting of R is needed for the DITI the recognize pressure. We have found that a Gain setting of R4 is the first setting to try. When this setting is used (on the A Input with the B input set to FSR), the DITI will see continuous pressure movement.

Setting up an FSR trigger or FSR footswitch in this way allows the DITI to use the INPUT TYPE=FSR SUSTAIN. The DITI will then send out continuous control values based on the pressure of the pad (the CC# is assigned to Slot 1). You can get both CC data and a note at the same time by changing the SOUNDS selection to 2 SOUNDS SIMULTANEOUS.

 You might notice that when using the R setting, the DITI may not interpret strikes as well. This is especially true if you are using an FSR footswitch like the PMCP. If you see the DITI triggering on the upstroke, then simply change the Gain.

When using the PMCP FSR Trigger Footswitch, a decision has to be made as to how you want to use the footswitch. If you want it to trigger notes or send out functions like KIT ADVANCE, or ALTERNATE RESET, then set up the Gain number that uses the C word. If you want to use the footswitch as a continuous controller pedal, then use the R word, such as R4.

INPUT TYPE = CONTROL FREEZE

Control Freeze is very similar to Control CC# but the difference is that when you press and hold on the pad, the DITI locks in that value. Now you can use pressure on the pad to control a Mixer or to define a value and position of the synths knobs.

If you work on this manually, you must make sure that the Gain is set to an R position, most likely R4. You should also TRAIN the Input.

TIP: You might find that it works better when you train the minimum with some pressure value other than 000. The FSR is very sensitive down in the lower pressure zones.

To unfreeze a position, simply touch the pad softly. It will jump down to that value.

You can press up and down to get the value that you need, but if you slow down too much, it will lock.

There are two screens in the Global Section that help to fine tune how the freeze operates.

Strip Rate - this is the time interval, in milliseconds, between taking controller readings. The lower the number (the scanning time), the better the resolution of the values but if too low it becomes hard to freeze the value.

```
STRIP RATE
rate = 20 msec
```

Sensitivity - the controller will be determined to be stopped if the difference between all the controller readings in a "sample period" are within this value. The sample period is 10 times the Strip Rate

```
CONTROLLER
SENSITIVITY=20
```

INPUT TYPE = HAT CONTROLLER
input 7 (padCTL and padCHK)

The DITI has a dedicated input for hi hat control. It is input 7. When editing trigger input 7, you will see the name "padCTL" instead of the name 7A. This A input is designed for Continuous Controller hi hat pedals. This input uses the tip for hi hat control, so a mono 1/4" cable will function.

To TRAIN the hi hat pedal press the TRAIN button. You will then see the CONTROLLER VALUE Screen. Now press the pedal all the way down, hold it down and hit enter. Release the pedal and hit enter.

Note that the ring of 7 (7B) can also be used as a trigger. When editing, you will notice the name PAD CHK instead of 7B. When using both a continuous controller and a dedicated chick trigger, a stereo 1/4" cable is needed.

The DITI can derive a chick sound from either the A input or the B input. In the KIT EDIT Screens, you must choose between CONTROL or TRIGGER for the Chick Type. If you set the Chick Type to CONTROL, the chick is calculated by the speed of your movement. When TRAINING the PAD CTL input, the DITI determines the range. If you set the Chick Type to TRIGGER, then the velocity of the chick is determined by the piezo element. It is necessary for you to properly TRAIN both the PAD CHK and the PAD CTL for proper continuous control, and chick and splash control regardless of which Chick Type you use.

For more information on TRAINING the hi hat pedal, go to the section on TRAINING.

eHAT2

Our hi hat trigger fits underneath your bass drum pedal (as long as it has a flat base plate). This pedal is an FSR Hi HAT pedal. It has an incredible range and feel because we are using Nubounce rubber in the spring mechanism. Alternate Mode sells the eHAT2 as a stand alone trigger that you connect to your own pedal or we sell a bundle with our own bass drum pedal. You will find that this pedal has the widest dynamic range of any pedal on the market!

EXCLUSIVE MODE
On/Off

```
EXCLUSIVE pad 1A
exclusive = NO
```

The DITI has a special mode called EXCLUSIVE to help eliminate crosstalk when two different piezo triggers are on the same drum, connected to Inputs A and B

When a trigger is struck, the DITI looks to see what input has the highest velocity. The DITI will only allow one signal to sound at a time.

GAIN CONTROL

```
GAIN      pad 1A
   gain = RC  1
```

Settings
1-4
C 1 - C4
R 1- R4
RC-1 RC4

An explanation of the GAIN NAMES and what they mean.

There are sixteen possible GAIN settings for the DITI, which may be broken down into three different groups.

The first group of GAIN sensitivity goes from 1- 4, 1 being the highest sensitivity. These gain settings determines the sensitivity and range of a trigger. It determines how soft a hit will respond, and what the hardest hit the DITI will accept before it clips.

When training a pad, you may have to change the GAIN to eliminate clipping. Start with the highest GAIN setting (Gain =1), and lower it if clips when striking with your hard hit. When you Train, if you see the MAXIMUM Training Value to be above 850, then you are probably clipping. Also, if you see values in the 800's when not giving it a hard hit, then you need to lower the GAIN by raising the value from 1 to 2, 3 or 4.

```
GAIN      Pad 1A
   gain =       1
```

The second group of GAIN Settings has a pull-down resistor, represented by the letter "R" in the GAIN value. Depending on the type of trigger pad used, and how you play, it may be advantageous to have the R enabled. Generally, adding the pull-down resistor will decrease the apparent sensitivity of the trigger pad, but may also improve the overall response of the pad, making its performance more natural. The only way to really know is to try it and see how the pad responds after the training is performed.

```
GAIN      Pad 1A
   gain = R   4
```

The final group of GAIN Settings is a capacitor which is added in series with the signal from the trigger pad, indicated by "C" in the GAIN value. The capacitor has the effect of acting like a high-pass filter. The C Gains accentuates rapidly changing signals while blocking slowly changing signals. For certain types of pads or playing styles it may enhance the playability by having the capacitor enabled.

```
GAIN      Pad 1A
   gain = C   4
```

Experiment with the GAIN settings to determine what works best for your particular pad and playing style. You can't damage the DITI with a "wrong" setting (but you CAN make it play poorly!)

it is also possible to have both the pull down resistor R and the C capacitor in the Gain structure. This is represented by RC in the Gain Settings.

```
GAIN        pad 1A
   gain = RC    4
```

TIPS FOR SETTING THE RIGHT GAIN SETTING

Yes, there are many different types of gain structure choices that you can pick on the DITI. This design allows the DITI to work with most of the trigger pads on the market. It also gives you the opportunity to see how the various GAIN settings affect how the trigger performs.

Gains 1-4 are the Gain numbers to try first. If you notice double triggering, then, experiment with the C settings. The C setting adds a capacitor to the circuit that help control minute changes in the voltages that could contribute to false triggering.

The R setting adds a resistor to the circuit.

During the Training of the pad, when you strike the pad hard and soft, you will get the feedback you need to see if you are getting the desired dynamics. During this process, you can change the GAIN Setting by using the UP or DOWN Arrows. After you press on the Arrow, try to Train Again and look at the dynamic range of the trigger. The goal is to find a Gain Setting that will give you a wide range of numbers from soft to hard hits.

THRESHOLD

```
THRESHOLD pad 1A
threshold = 020
```

THRESHOLD 000-200

This screen controls the low end sensitivity of the trigger pad. The lower the number, the more sensitive the pad becomes on small hits. Too low of a threshold setting can cause the pad to false trigger. Too high of a threshold setting can cause the pad to become insensitive to soft hits.

The goal is to get the lowest threshold setting without false or double triggering. The GAIN setting will have a tremendous effect on the threshold. Finding the right balance between the Gain and Threshold is the trick to great triggering.

A THING ABOUT THRESHOLDS
auto calibration

This "thing" applies to players using FSR triggers. If you have ever used a KAT product like the malletKAT or trapKAT, you might recall that the instrument calibrates the FSR every time you turn the instrument on. This is because FSR works on pressure.

The DITI does the same thing. Every time you turn on the DITI, it looks at all of the trigger inputs and evaluates if any of the FSR inputs have any pressure (load) on the signal. The DITI looks at these values and creates a new "idle" level. This ensures that there will be no false triggering.
That means DON'T lean on the pads while you are powering it up.

So here's the Thing…..
It's always best to plug in all of your triggers before your turn on the DITI so that it can properly calibrate the pads for you.

If you do plug in an FSR pad while the DITI is on, simply press on the TRAIN button twice (on and off). This action tells the DITI to recalibrate the thresholds.

MASK TIME

```
MASK TIME pad 1A
mask time = 020
```

010-200

Piezo triggers can vibrate for a long time. 200mS is an eternity in drumming. If a trigger vibrates for a long time, it is possible that double triggering will be heard.   The MASK TIME setting is like a window. When the trigger is struck, the window is closed until after the Mask Time (measured in milliseconds) expires. During this mask time, the vibrations coming from the trigger are ignored.   Once the window is open again, hopefully the vibrations are BELOW the THRESHOLD Setting, and no False Triggering will take place.

DYNAMIC CURVE

```
DYN CURVE pad 1A
    curve = 01
```

The Dynamic CURVE controls how evenly the signal goes from soft to loud when you are playing. There are 16 points in the CURVE.   Each point is called a Value. (00-15). Every Value point gets assigned a number from 00-127. This value number represents the actual MIDI velocity at that point.

The outermost points represent the entire MIDI RANGE of the CURVE.   This means that if you set the outermost points (values 0 and 15) to say 24-90, then that becomes the absolute limits of the velocity range for that trigger regardless of the MIDI velocity

settings you program in the User Kit.

The outermost points represent the entire MIDI RANGE of the CURVE.   This means that if you set the outermost points (values 0 and 15) to say 24-90, then that becomes the absolute limits of the velocity range for that trigger regardless of the MIDI velocity settings you program in the User Kit.
An even spacing of soft to loud is a LINEAR CURVE.

Rather than just having basic curves like linear, exponential, logarithmic, etc, we have created CURVEs based on the response of some of the trigger devices on the market. What GAIN setting you use and how you play (your TRAINING of the DITI) will definitely have an effect on the CURVE. Also what sound module you use interacts with the DITI's curve because it has its own set of velocity CURVE.   Confusing...yes!   The good news is that most sound modules start off with its own linear curve, so the dynamic wars are at a minimal.

With the name of each CURVE, we will list the 16 point settings used. This way if you want to make changes, you can manually load in these values into one of the USER CURVES and start tweaking from there.

When zeroing in on your own CURVE, use a program like MIDI MONITOR to see when you are getting an unwanted jump in velocity. Then you will know where to move one of the points up and down.

It is important to mention again that the GAIN Setting and the TRAINING that you do on the trigger can have a tremendous effect on how the trigger pad responds.

The best thing to do is to experiment with these CURVEs to find the best one that responds to your playing style.

TIP:
The number that you are seeing in the curve is the actual MIDI velocity point. So when you are looking at a MIDI Scope and seeing velocity values as you are playing, you can go to that point in the CURVE and move it up or down to get the response you are looking for.

Remember that CURVE are a personally thing. You can use any curve you like on any trigger.

When a PAD TYPE is called up using these CURVEs, the GAIN setting that was used to create the CURVE will be used. The curve listing below will specify what GAIN setting was used when the CURVE was created.

What is the difference between a PAD TYPE and a CURVE?

A CURVE is one component of the PAD TYPE. Even though the curve name might be the same name as the PAD TYPE, the curve parameter is where you define how you want the pad to respond.

CURVE LISTINGS

Linear   01-09-17-25-34-42-51-59-68-76-85-93-102-110-119-127

Compressed Linear   15-23-30-38-45-53-60-68-76-83-90-97-106-112-120-127

Hand Drum2   10-18-26-32-40-45-50-59-67-78-85-90-95-105-115-127

Piezo Curve   15-25-35-45-50-55-60-65-75-80-95-100-105-110-115-127

FSR Full Range   10-20-29-39-49-56-68-74-81-89-94-98-104-114-119-127

Yam XP 100 SD   01-19-29-39-49-59-64-69-74-85-89-94-99-104-104-127

Piezo Cymbal   24-40-45-50-55-60-65-70-75-80-85-9095-100105-127

altZONE   01-09-14-19-25-29-34-44-54-59-69-79-89-99-119-127

Logarithmic   05-17-28-39-49-59-67-75-83-90-98-104-111-116-122-127

Exponential   05-10-16-23-29-36-42-49-57-65-75-84-96-105-116-127

Spline (S Curve)   05-08-14-20-28-37-49-63-77-89-99-106-114-120-124-127

Loud   50-55-61-66-71-76-81-86-91-96-102-107-112-117-124-127

Hand Drum   10-20-25-37-45-51-60-65-76-80-85-90-99-104-110-127

FSR Compressed   20-27-34-42-49-56-64-73-79-86-93-100-107-113-120-127

FSR Shelf 1   15-15-20-50-50-55-58-65-72-75-78-105-108-112-115-127

FSR Shelf 2   15-26-37-50-52-55-56-58-68-79-82-84-86-90-109-127

FSR Shelf 3   25-25-25-25-25-60-60-60-60-60-85-85-85-85-85-120

User Curve 1-5   User Defined

USER DYNAMIC CURVE

There are 5 USER CURVES that you can create for yourself.

After entering the USER DYN CURVE number that you want to edit, use the right arrow key to move through the 16 Value Points in the CURVE.

Value 00 represents the lowest MIDI Velocity in the CURVE. Note that this value overwrites the MIDI velocity setting in the Kit Min Velocity Setting. This means that if you set this value to say 10, even if you set the min velocity to 0 in the kit, the smallest velocity that you will get is a 10. If on the other hand you program Value 0 to a setting of 0, and you program 24 in the min velocity setting of the kit, the smallest velocity that you will see when playing is 24 because the kit minimum velocity is above the lowest curve setting.

Values Parameters (0-15) are MIDI velocity points that you can raise or lower. When used in conjunction with a program like MIDI MONITOR, you can find the spot where you might want to raise or lower the velocity.

Value 15 represents the highest MIDI velocity in the CURVE. If you set this value below 127, then the CURVE will prevent any velocities above that setting regardless of how hard you play or what your maximum velocity setting is in the kit.

After you press on the right arrow key, you will see the EDIT points for the CURVE. There are 16 points to each CURVE. Each value that you see represents the MIDI velocity along the CURVE.

```
USER DYN CURVE
 value 01   010
```

By changing these values, you can extend the soft range, or quicken the rise time, etc. This is another one of those areas that need experimentation, especially if you are not happy with the linear curve one setting.

DYNAMIC RANGE

MINIMUM DYNAMIC

0001-1023

```
MIN DYN  pad 1A
min dyn = 0010
```

MAXIMUM DYNAMIC

0001-1022

```
MAX DYN  pad 1A
max dyn = 0500
```

When you TRAIN the trigger pad, the DITI automatically remembers your softest and hardest hits, and translates them into values and stores them here. There are approximately 900 levels of dynamics that the DITI can recognize.

It is possible to tweak these values yourself, but the TRAINING function is all about recording your soft and hard hits and storing these values here.

Remember that there are two kinds of TRAINING dynamics stored in the DITI. One is for the PAD TYPE. This means that every time you call up that PAD TYPE, its TRAINING dynamics will be used unless you decide to OVERRIDE it in the KIT EDIT Screens. When the OVERRIDE setting is set to YES, then you can freely TRAIN that pad for that particular Kit only.

NOTE DISPLAY

```
NOTE DISPLAY
NOTE NAMES     *
```
```
NOTE DISPLAY
NOTE NUMBERS  *
```

The DITI can display MIDI note numbers in two different ways… As a number from 00-127 or from musical names C0-G9. Set this Globally for all MIDI note number screen displays.

PROGRAM CHANGE RECEIVE

It is possible to change KITs or sound programs via BANK or PROGRAM CHANGEs coming into the DITI via the MIDI IN. Incoming bank change commands (LSB changes…MSB ignored) changes the DITI's KITS. Incoming Program Change Commands changes the sounds or programs within the Kit. Simply assign a MIDI channel for each of these commands and the DITI will respond to these changes. A value of OFF means that incoming bank or PROGRAM CHANGE commands will not effects KITs or sound programs.

```
PROGRAM CHANGE
   IS OFF   *
```
```
BANK CHANGE
   IS OFF
```
```
PROGRAM CHANGE
   Channel 01*
```
```
BANK CHANGE
   Channel 01*
```

REINITIALIZING THE DITI

```
GLB-REINITIALIZE
yes? press ENTER
```

GLOBAL-REINITALIZE

GLOBAL REINITALIZE erases everything in the DITI and restores it to the factory settings.   All of your TRAINING and KIT EDITs will be erased when performing this function. The first 17 KITs will remain, but will revert to factory settings. The remaining KITs will reset to GENERAL MIDI KITs.

DATA DUMPING   SYSTEM EXCLUSIVE

The DITI is capable of sending and receiving System Exclusive Messages. You can send this information to another DITI, or attach a USB MIDI Interface to your computer and store these files on the computer using programs like SYSEX LIBRARIAN for the MAC or MIDIOX for the PC or music sequence programs that store SYSEX Files.

There are several types of DUMPS that the DITI can perform

DATA DUMP KIT

```
DATA DUMP KIT
yes? press ENTER
```

This sends out all of the KIT information on the current active Kit. This includes all of the note number assignments, channel info, kit name, etc. The receiving DITI places the incoming Kit Dump to its current kit, not from the Kit number on the sending DITI.

```
DATADUMP ALLKITS
yes? press ENTER
```

This sends out all of the KIT information on all 50+ Kits.

TIP: It's not likely that you are going to use all of the DEFAULT KITS that are preinstalled on the DITI. When you send an Individual KIT to the DITI via SYSEX, the DITI automatically stores that KIT into the current KIT location. This means that you can write over these default kits. Now you have more kits to create. Remember also that each of these Kits have 50 Program Changes attached to them. You can name them and control your synth. The note numbers assigned to the pads are the common denominator.

DATA DUMP GLOBAL


```
DATADUMP GLOBAL
yes? press ENTER
```

This sends out all of the Global Information which includes all of the settings in the Global Edit.
The global parameters that are sent in a Global Dump are:

Pad Types
Envelope (can't view, but stored when Interaction Training)
Envelope Duration
Interaction parameters (can't view)
User Dynamic Curve values
MIDI Merge setting
Splash Count Index
Chic Point Index

It is important to Save BOTH the ALL KITS and GLOBAL dumps because "PADTYPES" are stored in the Global Area while the Kit information is stored in the ALL KITS dump.

The DITI will automatically receive SYSEX Dump Files. To send a SYSEX file, you must hit ENTER.

Both the receiving and sending DITI will provide screen feedback on the progress and success of the file.

COPY CURRENT KIT

```
COPY CURRENT KIT
    to kit 01
```

1-60

There are 36 USER KITS In the DITI. You can copy any Kit to any Kit by using this function.
Call up the Current Kit that you are using and want to copy. Then use the up or down arrows to assign where you want to copy the kit to. Hit Enter… Done.

COPY CURVE

```
COPY CURVE TO
USER CURVE 1
```

When calling up factory curve, it is possible to quickly copy the 16 curve values to one of the four USER curves. When using this screen, the CURRENT curve in the kit will be copied to one of the four USER curves of your choice.

COPY INPUT

```
COPY INPUT
 1AB to  2AB
```

Each of the 12 inputs on the DITI contain KIT EDIT information (note numbers, channels, gate, etc) as well as PAD TYPE information (input types, gain, mask times, etc). The function conveniently copies ALL of the information on both the A and B inputs to any other input on the DITI.

COPY PAD

```
COPY PAD
 1AB to  2AB
```

The Copy PAD Function is just like the COPY INPUT function except it does NOT copy the PAD TYPE info. This function copies all of the MIDI configurations (gate, note number, channel, Controls, etc) on both the A and B inputs.

COPY PAD TYPE

```
COPY PAD TYPE
 to user type 1
```

The DITI has 9 USER PAD TYPES.   You can copy the current PAD TYPE that you are editing, (u or f) and store it in one of them. You can also edit the names of this User Type.

MIDI MERGE

Merge is ON / OFF

```
MIDI MERGE
   IS OFF
```

Information coming in from the MIDI IN on the DITI can be routed to the MIDI OUT
when the MIDI MERGE is set to ON. A good use for this would be when both triggers
plugged into the DITI and another MIDI Controller plugged into the MIDI in jack can both
route information to a single drum machine.

SCAN COUNT

SCAN COUNT

```
SCAN CNT  pad 1A
    count = 004
```

Here is where you can select how many SCANS or snapshots the DITI will look at the
Trigger signal before deciding how big the signal is. The smaller the number of Scans,
the quicker the signal will play with less latency (delay). The bigger the number of
SCANS, the more accurate the determination of how hard your hit was but this will add
some delay.
Basically, the goal is to find the smallest number that gives accurate dynamics. FSR
Trigger Pads are usually fine with 3 or 4 scans. Piezo trigger pads might need more
scans as the signal takes a longer time to rise. Acoustic drum triggers often need more
scans. You will need to experiment.

CONTROL FREEZE ADJUSTMENTS

There is an Input Type "CONTROL FREEZE" that allows you to pressure and hold a value on a pad. We have created two screens that allow you to tweak how this function performs.

Strip Rate - this is the time interval, in msec, between taking controller readings. The lower the number (the scanning time), the better the resolution of the values but if too low it becomes hard to freeze the value.

```
STRIP RATE
rate =  20 msec
```

Sensitivity - the controller will be determined to be stopped if the difference between all the controller readings in a "sample period" are within this value. The sample period is 10 times the Strip Rate.

```
CONTROLLER
SENSITIVITY=30
```

INTERACTION CONTROL

Interaction or false triggering has always been a challenge when dealing with trigger pads, especially piezo trigger pads because the sensors work on vibration and vibration is everywhere when you are playing.

Also double triggering on the same pad can also be a problem when the signal does not die down quickly.

The DITI has a special TRAIN function specifically designed to address both of those issues.

What it does it when you train for interaction, the DITI scans all of the other triggers and see if they are triggering. It suppresses those signals by imposing an envelope over the signal.   It also temporarily raises the threshold on those offending pads. All of this is done automatically.

Just press the INTERACTION Button, tap the trigger you want to TRAIN and Hit the pad hard.   WAIT ONE FULL SECOND BEFORE STRIKING AGAIN.   The DITI needs to scan everything. After a second or so, you can hit the pad again hard to make sure that it got everything.

Notice the screens going nuts when you do this. That's the DITI scanning for interaction.

Play around after doing this to make sure that the interaction is gone. There are lots of tweaking that is available after the TRAIN process to help with interaction that still persists.

After you Train the pad, the DITI stores the envelope for that trigger. A value is placed in the ENVELOPE DURATION. That is a time value, approximately in milliseconds.

Sometimes the DITI gets heavy handed in protecting from false triggers and puts a large value in this location. That is great except when you need buzz rolls. If you notice that notes are missing when playing your pad, simply go to this screen and lower it manually in the Global Screen.

ENVELOPE DURATION

```
ENV DUR    pad 1A
duration   =100
```

You can also LOCK the duration value in so that the INTERACTION Training does not change or affect this value. To LOCK in this value, hold down the ENTER pad until you see an L. You can toggle this out.

```
ENV DUR    pad 1A
duration  =100L
```

Remember, if the Envelope Duration is set too high, the DITI will not be able to play fast strikes because the envelope duration functions similar to a mask time.

If Automatic Interaction Training did not get rid of all of the interaction, don't worry. There are still some tricks in the DITI's arsenal.

INTERACTION LEVEL

```
INTERACT  pad 1A
      level = 07
```

Interaction Level temporarily raises the thresholds of the offending triggers at the level displayed. You can dramatically raise this level from 00-512. The default is 07.

The important part to remember here is that raising this level is not for the pad that you are training. It is a number to change directly on the offending pad. This will raise the false triggering pad's threshold higher if needed.

 After changing this level, you will need to TRAIN the pad again.

ENVELOPE THRESHOLD

```
ENVTHRESH pad 1A
      level = 60
```

This setting controls the sensitivity of the offending trigger pads. If you have trouble with a pad false triggering after you train it, raise the offending pad's ENVELOPE THRESHOLD.

Remember, this is not for the pad that you trained for interaction. It is for the trigger that is still interacting. You do not need to retrain the trigger after changing values to this parameter.

ENVELOPE MINIMUM VALUE

```
 MIN ENV  pad 1A
min value = 035
```

000-100

This is for the pad you are training for double hits to itself. Set this BEFORE TRAINING.
This value changes the shape of the envelope. It does not affect time, but instead controls the amplitude of the interaction envelope.

Important Information about the Envelope Training Screens

Interaction Training

When a pad is trained for interaction, a recording of the signal generated by the struck pad is saved along with a list of pads that interact with the struck pad. This recording is called the envelope and is used to prevent the struck pad from interacting with itself. This self-interaction is called double triggering. The list of interacting pads is used to prevent these pads from playing when the trained pad is struck during normal playing. The **Envelope Duration** is also set automatically during Interaction Training and this duration is a measure of how long the envelope is used to prevent double triggering and pad interaction. This value can be reduced (but not increased) after Interaction Training by the user to manually reduce the time that the envelope is in effect.

The **Minimum Envelope** should be set before Interaction Training. It sets the minimum value of the envelope and is used to adjust how difficult it is for the struck pad to double trigger. Setting a higher value will tend to prevent double triggering but will also prevent the pad from responding to light hits while the envelope is active. Setting a lower value

will tend to allow more double triggering while allowing the pad to respond to light hits. Note that the **Minimum Envelope** cannot reduce the minimum value of the envelope recorded during training. It can only be used to prevent the envelope from going below the **Minimum Envelope** value.

The **Envelope Threshold** is manually set by the user and is temporarily added to the threshold of the struck pad after it has been struck and remains in effect only while the **Envelope Duration** is in effect. This has an effect similar to the **Minimum Envelope** but can be set by the user either before or after Envelope Training.

When a pad is struck, the threshold of all pads that interacted during Interaction Training is temporarily increased for as long as the **Envelope Duration** is in effect. The amount this threshold is increased is determined by Interaction Training and by the **Interaction Level** parameter. This parameter is set manually by the user and can be changed either before or after Interaction Training. Increasing the **Interaction Level** of a pad tends to prevent this pad from interacting with the struck pad but can also prevent the pads from responding to light hits while the **Envelope Duration** is in effect. Note that the **Interaction Level** parameter is set for the pad that is interacting with the struck pad.

Envelope Modified by Minimum Envelope and Envelope Duration

Minimum Envelope

Envelope Duration
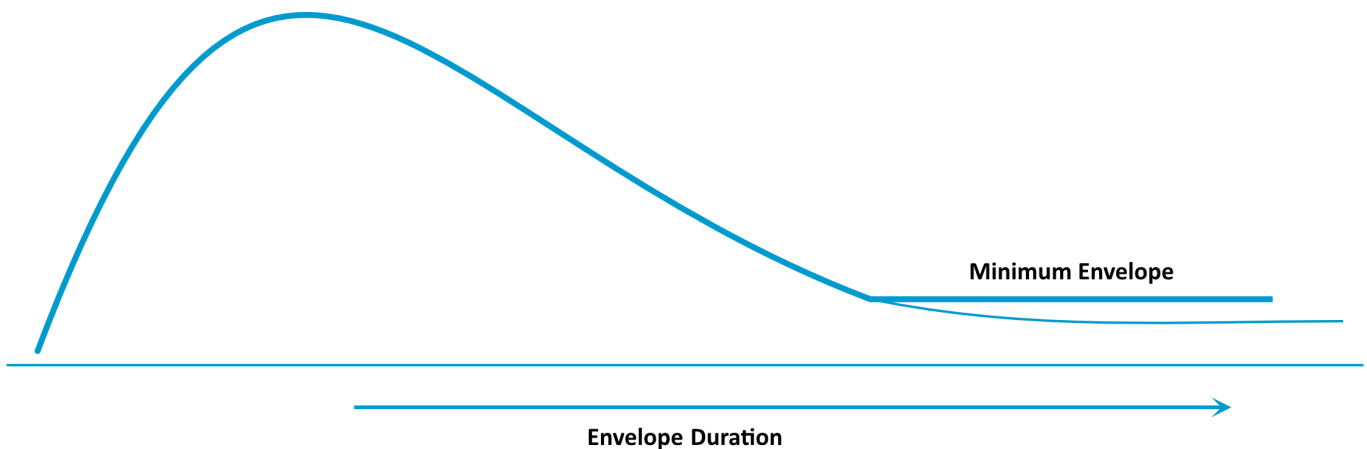
TECHNICAL EXPLANATION OF HOW TRIGGER INTERACTION WORKS

The envelope is a "picture" of the signal produced when a pad is struck and is created during Envelope Training. The envelope is used to prevent two types of interaction: interaction between the pad that is struck and the other pads, and interaction between the pad that is struck and itself (double triggering).

The four parameters related to the envelope that are adjustable by the user are:

Minimum Envelope
The envelope calculated during training will not be allowed to go below this value. Increasing this value will increase the ability to prevent double triggering. Increasing this value will increase the ability to prevent double triggering on pads that "ring" a long time.

Envelope Threshold
This is an additional value added to the threshold ***while processing the envelope*** to arrive at the total calculated threshold. Increasing this value will increase the ability to prevent double triggering on pads that "ring" a long time.

Envelope Duration
Determines how long the envelope is used to suppress interaction or double triggering. The envelope is no longer used to suppress double triggering or interaction once this interval expires. Increasing this value will increase the ability to prevent both types of interaction by extending the duration of the envelope.

Interaction Level
Increases the threshold of pads that interact with the struck pad. Increasing this value will increase the ability to prevent interaction between the pad that is struck and the other pads. It does not affect double triggering

MULTI ZONE FSR TRIGGERS

FSR Triggers need power to make them function. On the DITI, the RING (B Channel) is the power source for the sensor, and the TIP (A Channel) is the trigger. When you TRAIN an FSR Trigger, you need to TRAIN only the A channel. The B channel is set to FSR, and it is functioning as a power source and does not need to be trained.

If you happen to have a multi zone sensor, the B Channel provides the power for all of the zones on that sensor, even though you are using more than one trigger input.

If you have a three zone sensor for example, and are using inputs one and two on the DITI, the A channel on input one would be set to Trigger and the B channel set to FSR. This normally is set for you automatically when you call up the PAD TYPE.

DAMPEN MODE PARAMETERS

```
DAMP COUNT
      count = 200
```

```
DAMP UPPER
      THRESH = 040
```

```
DAMP LOWER
      THRESH = 005
```

```
DAMP RATIO
      ratio = 10
```

The DITI actually recognizes two different types of dampening gestures. They are described below.

Initial Attack Dampening: striking pad with finger/mallet and then maintaining contact with the pad to dampen the note.

Previous Note Dampening: dampening motion performed by slowly pressing finger/mallet to the pad to dampen a previously played note.

There are four screens that control how dampen gestures can be controlled.

Upper Damp Threshold

Applies only to Previous Note Dampening.

When scan count expires, if the reading is > **Upper Damp Threshold**, the note will be played instead of dampening a previous note.

Damp Ratio

Applies only to Previous Note Dampening.

A measure of how slowly the signal must rise to be detected as a dampen motion. A smaller number means a slower rise is needed to be detected as a dampen motion.

Lower Damp Threshold

Applies only to Initial Attack Dampening.

The reading must be greater than the Lower Damp Threshold long enough for the Damp Count to expire for the initial attack note to be dampened.

Applies only to Initial Attack Dampening.

See the description for the Lower Damp Threshold.

INTERACTION MODE SCREENS

INTERACTION MODE

```
INTERACTION MODE
   tap any pad
```

The DITI has Interaction Software that helps get rid of unwanted false triggers from other triggers (and itself) when a pad is struck.   When you select a pad and strike it (repeatedly), the DITI stores an Envelope that controls the thresholds and mask times of the other pads plugged in.
IMPORTANT….wait about 1 second between hits so that the DITI doesn't think triggers are interacting!

TRAIN ENVELOPE

```
Train Envelope
   Pad -   1A
```

After you "tap on any pad", the screen changes to TRAIN ENVELOPE. Simply hit the pad a few times. You will notice that some leds blink on the DITI, sometimes when there aren't triggers plugged in. That's normal. The DITI is manipulating the thresholds and mask times during those strikes.

After hitting the pad several times, simply tap on the Interaction Button again to get out of INTERACTION MODE

TRAIN MODE SCREENS
PAD TYPE TRAIN

TRAIN MODE

```
TRAIN MODE
tap any pad
```

When you first tap on the TRAIN MODE button, the DITI asks you to tap on any pad.

If you want to GLOBALLY TRAIN the pad, the TRAINING values will be stored as part of the parameters of the **PAD TYPE** that was selected for the trigger. That means that you only have to train the PAD TYPE ONCE. Every time you call up that PAD TYPE name, your Training Values will use used.

TRAIN MAXIMUM DYNAMIC

```
PADTYPE Max Dyn
Pad -   2A
```

The DITI is now asking you to play the trigger with the maximum velocity that you expect to play at. Don't overplay. Be realistic. Soon after you strike the pad, the display will give you a value.

0001-875

```
MAX DYN  pad 1A
max dyn = 0650
```

If you strike the pad again, the DITI will show you the new Maximum Train Value.

The Maximum value can change significantly depending on what GAIN value you chose. The goal is to find a good value spread between the soft and hard hit.

We have found that when the value gets near the 850 mark, there is a good chance that you are saturating the input. The remedy is to lower the GAIN.

You can go back to the Global Screens, find the Gain Value and lower it by one OR you can use a shortcut.   While you are in the Training Screen (with the MAXIMUM DYNAMIC showing), use the UP arrow to raise the Gain by one or use the DOWN arrow to lower the GAIN by one. If you keep repeating pressing either arrow, you will eventually go through all 16 Gain Structures. If you want to know what Gain you decided on, you will need to go to the Global Screen for verification. Remember, you can jump back and forth just by touching the Global or Train Buttons. If you hold down the button for too long, it will jump back to the beginning of the Edit Screens.

When you decide on the Train value, tap the ENTER key. The DITI will then ask you to Train the Minimum Dynamic.

TRAIN MINIMUM DYNAMIC

```
MIN DYN  pad 1A
mix dyn = 0010
```

Now play the pad soft. The minimum dynamic is displayed. Hit the ENTER key to get out of TRAIN MODE.

If your soft hit does not get a response from the DITI, it means that you either have to lower the threshold in the Global Screen or have to RAISE the Gain Setting.

TIP: When you press on the TRAIN pad, the DITI resets the thresholds of all of the Trigger Inputs.   If you plug a trigger in while the unit is on, pressing on the Train button TWICE (on then off) should adjust low end thresholds.

OVERRIDE

As we just stated above, Training the pads normally store these values as part of the PAD TYPE used on that input. This means that these training values will be used every time you call up that PAD TYPE.   But what if you want to really dig in, and Train EACH PAD on EACH KIT and not be limited by the Training in the PAD TYPE.

This is possible on the DITI by simply going to the pad that you want to Train, and in the KIT EDIT SCREEN change the OVERRIDE parameter from NO to YES.   Now when you Train that pad, the values will be stored in the KIT on that PAD, and the PAD TYPE training values will be ignored.

```
OVERRIDE Max Dyn            OVERRIDE Mix Dyn
    Pad -   1A                  Pad -   1A
```

In the KIT EDIT SCREEN, change the value to YES so that you can TRAIN that pad individually
In the TRAIN SCREENS, the parameter changes from PAD TYPE to OVERRIDE TRAIN

TRAINING YOUR HI HAT PEDAL

Training your hi hat pedal is similar to training your other pads on the DITI, but there are a few differences. Make sure that you are in the 7A input, PAD CTL before TRAINING.

In order to get to the hi hat Training Screen, you must press the TRAIN button and HOLD IT DOWN until you see the MAX CONTROLLER Screen. Notice the high value.

```
Max Controller
  level = 0800
```

Now press down on the pedal all the way. If you are using the correct cable (mono tip) and have plugged in a compatible continuous hi hat pedal, you will see the numbers get much lower.

After you press the pedal all the way down, tap the ENTER button. Now the screen will change and ask for the minimum controller level. Release the pedal, then hit ENTER.

```
Mix Controller
  level = 0200
```

Tap on the TRAIN button again to exit TRAIN MODE.

Like all of the other trigger inputs, you can change the GAIN levels and see large differences in the overall range. You will also notice that not all of the GAIN level possibilities are available. This is the nature of this type of control input.

You should also TRAIN the PAD CHK input. First make sure that you are in fact EDITing the padCHK. You can assign this input by holding down the Global Edit button until it jumps to its first screen, SELECT EDIT PAD. Use the Up/Down arrows until you see PAD CHK.

```
SELECT EDIT PAD
         PAD   1A
```

Now tap on the TRAIN button, and TRAIN the chick just like you would a regular trigger.

Don't be surprised that the numbers are small. This is because the DITI is reading a range of movement, not the normal dynamic range
Please note that this TRAINING is necessary for proper dynamics of your hi hat pedal.

In the Kit Edit Screens, you can tell the DITI if you are using a trigger (input b) or the controller (input a) for the chick and splash sounds.

When you have SELECTED padCTL in the Global Edit, a hi hat CURVE becomes available in the Global Screens. There are 5 curves available for adjusting the continuous controller values.

```
SELECT EDIT PAD
         PAD CTL
```

DECLARATION OF CONFORMITY

C E

Manufacturer:
Alternate Mode Inc.
53 1st Ave.
Chicopee, MA 01020 USA
Phone: : 413 594-5190

Authorized Representative in EC:
Name, Title
Company Name
Address
Country
Phone

We hereby declare that the equipment listed herein conforms to the harmonized standards of the following European Commission Directives: 2004/108/EC and 2006/95/EC

Trade Name: Trigger-to-MIDI Interface

Model Numbers: DITI

Under 2004/108/EC

In accordance with EN 55022:2010, Emission
Class B ITE radiated and conducted emissions

In accordance with EN 55024:2010, Immunity
EN 61000-4-2:2009 Electrostatic Discharge: ±4kV contact, ±8kV air
EN 61000-4-3:2010 Radiated Immunity: 3V/m
EN 61000-4-4:2004 Electrical Fast Transients/Burst: ±1kV AC, ±0.5kV I/O
EN 61000-4-5:2006 Surges: ±1kV differential mode, ±2kV common mode
EN 61000-4-6:2009 Conducted Immunity: 3V
EN 61000-4-11:2004 Supply Dips and Variations: 30% and 100%

Test information is contained in a report by Atlas Compliance & Engineering, Inc.
Dated July 8, 2013
Report No.: 1328AMIditi_ce

Under 2006/95/EC

In accordance with EN 60950-1:2006/A12:2011

Test information is contained in a report by Atlas Compliance & Engineering, Inc. dated:
July29, 2013

Report No.: 1331AMIditi_lvd

This Declaration is made July 8, 2013 by:

MARIO J DECiuTiiS
Printed Name

PRESIDENT
Title

Signature

AltERNATE Mode INC
Company

DECLARATION OF CONFORMITY

FCC

Responsible Party:

Alternate Mode Inc.
53 1st Ave.
Chicopee, MA 01020 USA
Phone: 413 594-5190

We hereby declare that the equipment listed herein:

Trade Name: Trigger-to-MIDI Interface

Model Number: DITI

Conforms to the following specifications:

FCC CFR 47 Part 15 Subpart B Section 15.107(a) and
Section 15.109(g) Class B Digital Device
tested per ANSI C63.4-2009 procedures

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Test information is contained in a report by Atlas Compliance & Engineering, Inc.
Dated: April 12, 2013
Report Number: 1315AMIditi_fc

This Declaration is made April 12, 2013 by:

MARIO J DECiuTiiS
Printed Name

PRESIDENT
Title

Signature

chicopee, MA 01020
Place

APPENDIX A

CABLES AND ADAPTERS

HD15 Input Cable

This cable connects from Alternate Mode instruments such as the jamKAT, hybriKIT, or eCAJON directly to the DITI. Connect to the HD15 IN on the back panel of the DITI.

The HD15 IN connects directly to the 1/4" Inputs. It is not a separate input. Therefore, any pad that is plugged in the 1/4" inputs will be duplicate if its already in use by the HD15 cable.

HD15 Breakout Cable

This cable connects from Alternate Mode instruments such as the jamKAT, hybriKIT, or eCAJON directly to the DITI. This is a legacy product and was replaced by the HD15 Input Cable.

Aquarian To DITI Cable
(inHEAD, onHEAD, PED)

This converter cable allows you to use any Aquarian inHEAD, onHEAD or PED trigger from Aquarian Drumheads on the DITI without using the inBOX.

By inserting this cable between the trigger and the DITI, the cable converts the output of the trigger from Tip Sleeve to Tip Ring. The DITI needs this configuration in order to power the heads.

All Aquarian FSR triggers come with an 1/8" male jack attached to the output. This is provided so that the head can normally be plugged into the inBOX.

When the converter cable is attached, the output is a 1/4" female connector that can then be plugged into the DITI with a standard stereo 1⁄4" cable.

Alternate Mode sells onHEADS and inHEADS that have already been converted to the Tip Ring Configuration. The HybriHEAD™ and HybriPAD™. These triggers have a 1/4" stereo female jack on it. Simply use a stereo 1/4" cable to connect them to the DITI.

On the DITI, set the PADTYPE to onHEAD, or inHEAD, etc.

Dual Zone To DITI Adapter Cable

For connecting a 2 zone Hybripad or Hybrihead to the DITI.
2 zone pads and heads require 2 inputs on the DITI, one input for each zone. Use 2 stereo 1/4" cables to connect from the two female jacks
from this cable to the DITI inputs.

NOTE: This cable is **required** to use 2 zone pads and heads with the DITI. The DITI can only accept 1 individual single zone FSR per input.

PMCP Adapter Cable
Tip Sleeve to Tip Ring

This cable is designed to work with the PMCP FSR PEDAL (Poor Man's Controller Pedal). Use this on any input other than 7A which is a dedicated Hi Hat Controller input.

For 7A, you do NOT need this converter cable. Just plug the PMCP directly into the 7A (CTL) input.

This cable converts the Tip Sleeve configuration of the PMCP to a Tip Ring Configuration, needed by the DITI. Set the PAD TYPE on the DITI to "PMCP for C. CNTRL"

REMEMBER…this adapter is not required on DITI input 7A, which is designated as a dedicated Hi Hat controller input.

The Input on this cable is a 1/4" Female Jack. Plug the output of the PMCP directly into this.   The Output is a 1/4" male jack.   Plug this directly into any of the inputs except 7A. This cable converts the Tip Sleeve configuration of the PMCP to a Tip Ring Configuration, needed by the DITI.

Set the PAD TYPE on the DITI to "PMCP for C. CNTRL"

The DITI will automatically set the GAIN to R4, the Max Train to 474 and the Min Train to 008.

If you decide to use the PMCP on the TOM TOM Inputs, you will need to either RETRAIN the pedal or change the MAX TRAINING to 261 in order to get the full dynamic range.

Stereo Plug To Dual Mono Y Cable

Use This splitter cable to plug 2 piezo triggers into 1 DITI input.
The DITI can have up to 22 piezo triggers (inputs 1-6, 8-12). Input A on the DITI is the "tip" and the B input is the "ring" of the stereo plug.

Use two mono cables to connect the Y adapter to the DITI.

APPENDIX B

CONNECTING ALTERNATE MODE PRODUCTS

altZONE / trigKAT

The altZONE and trigKAT FSR triggers from Alternate Mode have female 1/4" connector that connects directly into the DITI using a standard 1/4" stereo cable.
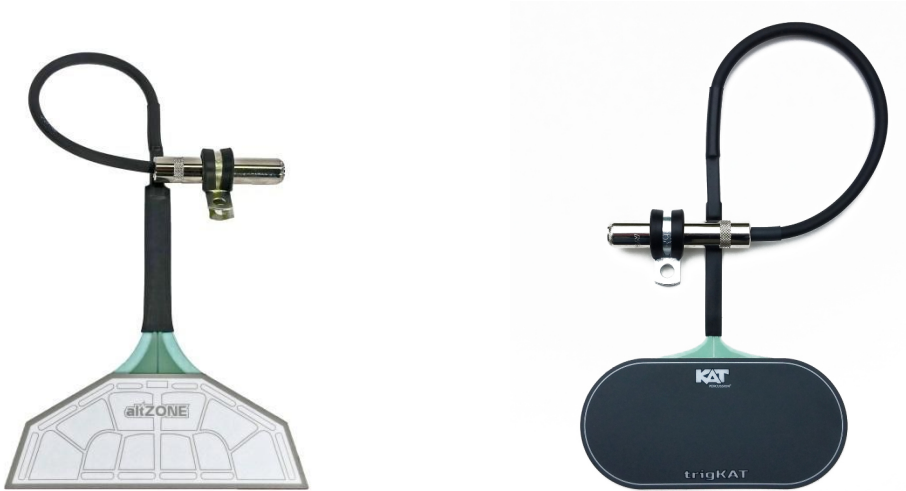
HybriPAD™.

The HybriPAD™ FSR pad from Alternate Mode has a female 1/4" connector that connects directly into the DITI using a standard 1/4" stereo cable.

eKIC

The eKIC bass drum trigger has 2 mono outputs . Either of the 2 outputs can connect to the DITI using a standard mono 1/4" cable. The other output can be used to connect to another eKIC.

eHAT

The eHAT hi hat trigger connects to the DITI using a standard mono 1/4" cable.

eTRIG

The eTRIG acoustic trigger connects to the DITI using a standard mono 1/4" cable.

jamKAT / hybriKIT

The jamKAT and hybriKIT can connect to the DITI in 2 ways. With Alternate Mode's HD15 cable, you can connect directly to the HD15 connector on the back side of the DITI. There is also a HD15 breakout cable available which connects to the 1/4" inputs on the DITI.

APPENDIX C
THE PCMP

The PCMP doesn't look like much, and it doesn't cost much, but is a little heavyweight in it's own right. The FSR Foot Controller has three distinct functions on the DITI.

When plugged "as is" into input 7A (foot pedal), the PCMP functions as a continuous controller hi hat pedal. It has an incredible dynamic range displaying even values across the entire MIDI spectrum.

When plugged into any of the DITI's other Inputs, with the PAD TYPE set to "PMCP for C.CNTRL", the PCMP can send out any Controller Number and Value when pressed on. This can be used for things like Pitch Bend or Sustain or any other CC# function. The PCMP needs a simple converter jack that changes the configuration from tip/sleeve to tip/ring when using on inputs other than input 7.

When plugged into any of theDITI's other inputs with the PAD TYPE set to "PCMP for TRIGGER", the PCMP will send out MIDI note numbers with velocity information. There are special MIDI note numbers that perform functions such as Alternate Reset, or Alternate Freeze or Kit Advance.   These are handy functions that can be set on the PCMP.   The PCMP needs a simple converter jack that changes its configuration from tip/sleeve to tip/ring when using on inputs other than input 7.

DITI FUNCTION & SCREEN LISTING

INTERFACE

UP-DOWN ARROWS

- Change KITs in PLAY MODE
- Change Values in EDIT MODE

LEFT – RIGHT ARROWS

- Change Sound Program in PLAY MODE
- Move Curser in EDIT MODE

ENTER

- SavesALL EDITS
- Asterisk disappears to confirm SAVE EDIT

DISPLAY

- Top line displays KIT in PLAY MODE
- Bottom line displays Sound Program in PLAY MODE
- Top line displays FUNCTION and PAD # in EDIT MODE
- Bottom line displays FUNCTION NAME and VALUE in EDIT MODE

LEDS

- Yellow LEDS represent A CHANNEL
- RED LEDS represent B CHANNEL

EDIT MODE   BUTTON
Stores Parameters of the KIT

MIDI CHANNEL

- (1-16)
-

MIDI NOTE

- Slots (1-16)
- Note numbers 00-127
- Transposition values T-12---T+12
- Special KAT Functions
- Off
- Sequencer Start, Stop, Continue
- Alternate Reset 1&2
- Alternate Freeze
- Program Change Advance / Backwards
- Kit Change Advance / Backwards
- Choke Aftertouch
- Choke Note

MIN VELOCITY

- 000-127

MAXIMUM VELOCITY

- 000-127

DAMPEN

- Enable / Disable

PAD GATE

- Infinite
- Roll
- Latch
- 100mS-6000mS

SOUNDS

- 1-4 Simultaneous
- 1-4 Layering
- 1-4 Crossfading with Blending Control
- 1-4 Velocity Shift
- Alternating

EQUALIZER

- Each KIT separate Equalizer Settings
- 10 Segments
- Auto Detect on Hit
- -9-+9 velocity change

PAD CONTROL

- Off
- NOTE SHIFT
- NS Note Value 000- 127
- Min / Max Range 0000 – 0000
- VELOCITY SHIFT
- VS Note Range 000-127
- Min/ Max Range 000-127
- CONTROL PATH
- CC#, Min/Max Range 000-127
- Steps and Direction

SWITCH BY

- Any FSR PAD

TRANSPOSE

- INFINITE
  COUNT 001-127

LINK MODE

- Link Any Pad to Any Pad (6 link limit)

HI HAT MODE

- for Inputs 8 and 9
- NONE
- General MIDI
- HAT NOTE
- Input 7 for Chick and Splash

CHIC TYPE

- CONTROL
- TRIGGER

FOOT CONTROLLER

- Controller #04

- Controller #01
- Controller Volume
- Controller Pitch
- Off

EDIT KIT NAME

- For USER KITS ONLY

EDIT PATCH NAME

- PROGRAM CHANGE
- BANK LSB AND MSB
- VOLUME CHANGE
- PROGRAM CHANNEL

AUXILIARY PROGRAM CHANGE

- SLOTS 1-4 (Up to 4 Aux Program Change Per Kit)
- PROGRAM CHANGE
- BANK LSB AND MSB
- VOLUME
- CHANNEL

DYNAMIC OVERRIDE

- YES OR NO

KITS INCLUDE

- All Functions in KIT EDIT (listed above)
- PAD TYPE for Each Input A&B (listed below)
- EQUALIZER SETTING
- MIN / MAXIMUM DYNAMIC TRAINING VALUES PER INPUT PER KIT When Dynamic Override is Activated

GLOBAL FUNCTIONS
Stores PAD TYPE Parameters and GLOBAL Functions

SELECT EDIT PAD

- **1A-1B------12A-12B**
- **Auto Detect**

PAD TYPE FUNCTIONS INCLUDE
(Each Kit uses one PAD TYPE per Input)
(PAD TYPES are GLOBAL)
any change to a PAD TYPE Globally effects ALL Kits using that   PAD TYPE

- **PAD TYPE**
- Factory and User
- Trigger Zone
- Yam XP 100
- Yam PCY 100
- Yam XP 80
- Yam PCY 135Y
- Rolnd FD8 HiHAT
- Rolnd Cy15R Edge
- Rolnd Cy15R Bel
- Rolnd Mesh
- PMCP for Trigger
- PMCP for C. Control
- PMCP for HiHAT
- onHEAD + RIM
- onHEAD Compressed
- onHEAD Full Range
- inHEAD+ RIM
- inHEAD for Toms
- INHEAD Compressed
- inHEAD Full Range
- FSR ZONE
- FSR Controller
- eKIC
- eHAT2
- DAUZ 6" Pad
- Aquarian Kick
- Aquarian EBD

- altZONE for Bass
- altZONE

INPUT TYPE

- Trigger
- FSR
- HI HAT CONTROLLER
- CONTROL CC#
- SWITCH
  FSRT

EXCLUSIVE

- No /Yes

GAIN

- 1-4
- R1- R4
- C1-C4
- RC1-RC4

THRESHOLD

- 000-200

MASK TIME

- 10mS -200mS

DYNAMIC CURVE

- Linear Curve
- Compress Linear
- Hand Drum
- Piezo Curve
- FSR Full Range
- Yam XP 100 SD
- Piezo Cymbal
- altZONE
- Logarithmic
- Exponential
- Spline S Curve
- Loud
- Hand Drum 2

- FSR Compressed
- FSR Shelf 1,2,3
- User Curve 1-5

SCAN COUNT

- 02-100

KIT FUNCTIONS in GLOBAL

MINIMUM and MAXIMUM DYNAMIC VALUES

- Values Stored when Training
- User can alter Min/Max Values
- Each Kit has Dynamic Values per Input
- 0001-1023

GLOBAL FUNCTIONS INCLUDE

- **USER CURVE**
- 15 segments
- MIDI velocity Range 000-127

GLOBAL REINITIALIZE
DATA DUMP KIT
DATA DUMP ALL KITS
DATA DUMP GLOBAL
COPY CURRENT KIT
COPY PAD
COPY PAD TYPE
COPY CURRENT CURVE TO USER CURVE 1-5
MIDI MERGE

TRAINING ENVELOPE

INTERACT LEVEL

- 001-512

ENVELOPE LEVEL

- 000-100

MINIMUM ENVELOPE

- 00-100

ENVELOPE DURATION

- 10-400

ENVELOPE THRESHOLD

- 000-200

INTERACTION MODE

- **TRAIN ENVELOPE**
- tapping on pad trains pad for false triggering and interaction with other
  pads

TRAIN

- Hit Pad Hard
- Hit Pad Soft

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DITI 3.0 GS Extended User Kit List

KIT #	KIT NAME	BANK	PC#1 PG	NAME	PC#2 PG	NAME	PC#3 PG	NAME
1	TamborFUN	65	21	Lg Tambourine	14	Sakara	9	Bata Medium
2	MetalSpin	67	58	Saw Sounding	33	Metal Rattle	30	Beat Pot
3	Tumba	62	1	Asma Davul	12	Hollo	18	Tumba 1
4	BanBang	63	24	Perng Mang	5	Banbang	27	Taiko 1
5	Kae Keeke	67	5	Cajon 1	23	Kae Keeke	13	Clay Pot
6	Djembe	65	1	Djembe Low	9	Bata Medium	8	Bata Large
7	Metal Shoes	67	34	Metal Shoes	9	Cajon 5	3	Bohdran
8	Tambourines	60	55	Tambourine 1	52	Caixa	51	Crotales
9	Tabla	61	18	Tabla 2	19	Bayan Big Drm 2	22	Ghattam 2
10	Bata Large	65	21	Lg Tambourine	8	Bata Large	2	Djembe
11	Anklung	63	21	Charp Medium	35	Anklung	31	Gong Hit
12	Taiko	63	24	Perng Mang	27	Taiko 1	31	Gong Hit
13	Taiko 2	63	3	Kuaiban	28	Taiko 2	29	Ohkawa
14	Ta Pon	63	24	Perng Mang	19	Ta Pon Small	27	Taiko 1
15	Big Drum	63	6	Bell	4	Big Drum	7	Large Bell
16	Kuaiban	63	5	Banbang	3	Kuaiban	14	Slide Bell
17	China	63	2	Gong China	1	Bianzhong mallet	9	Small Cym
18	Clay Drum	67	13	Clay Pot	6	Cajon 2	12	Clay Drum
19	Clay Bongo	67	9	Cajon 5	5	Cajon 1	10	Clay Bongo High
20	Cajon	67	8	Cajon 4	13	Clay Pot	7	Cajon 3
21	Frame	67	4	Pipe Snare	6	Cajon 2	2	Frame
22	Bohdran	67	35	Wood Bells	5	Cajon 1	3	Bohdran
23	Sakara	65	6	Moroccan Bongo	15	Soogoo	14	Sakara
24	Talking Drum	65	13	Igba	11	Talking Drm Lg	12	Talking Drm Sm
25	Moroccan	65	8	Bata Large	6	Moroc Bongo L	7	Moroc Bongo H
26	Dumbac	65	13	Igba	4	Dumbac High	3	Dumbac
27	Djembe 2	65	1	Djembe Low	0	Djembe	2	Djembe
28	Bata	65	5	Sm Moroc Bongo	10	Bata Small	9	Bata Medium
29	Tambourine	60	57	Tambourine 3	56	Tambourine 2	58	Tambourine 4
30	Quika	60	59	Samba Whistle	53	Quika	54	Vibraslap 1
31	Caxixi	60	40	Caxixi High	35	Guiro 1	42	Caxixi Low
32	Wood Bells	60	28	Cowbell 4	23	Claves Low	24	Jamblock
33	Agogo	60	20	Agogo Low	21	Agogo Medium	22	Agogo High
34	Tamborim 2	60	4	Conga 2	5	Quinto 2	19	Tamborim 2
35	Surdo	60	17	Surdo 2	15	Surdo 1 High	16	Surdo 1 Low
36	Panderio	60	13	Pandeiro Choro	14	Pandeiro Samba	12	Pandeiro Mute

37	Timbales	60	9	Bongo 2 Macho	10	Timbales Hembra	11	Timbales Macho
38	Bongos	60	7	Bongo 1 Macho	6	Bongo 1 Hembra	7	Bongo 1 Macho
39	Bayan	61	15	Bayan Big Drm 1	13	Bayam Drm tuned	16	Kohl
40	Ghattam	61	6	Tabla 1 F#	22	Ghattam	23	Kanjira
41	Tabla 2	61	12	Bayan Big Drm 1	0	Tabla C	10	Tabla 1 A#
42	Hollo	62	12	Hollo	6	Darbuka	23	Riq
43	Bongo ME	62	25	Tar	5	Bongo	8	Def 2
44	Bendir	62	0	Arbane	4	Bendir 2	7	Def 1
45	More Spin	67	57	Spinning Tube	58	Saw Sounding	59	Tinkerbell
46	Spinners	67	54	Spinnger Large	56	Spinner Small	55	Spinner Medium
47	Ratchet	67	51	Devil Chaser	48	Ratchet	50	Flexaton
48	Wind Chimes	67	45	Chime	43	Wind Chimes	44	Wind Chime
49	Bell Tree	67	39	Bell Tree Chimes	38	Chime	36	Sleigh Bells
50	Congas	60	2	Quinto 1	3	Tumba 2	5	Quinto 2

General MIDI

64	Sopran Sax
65	Alto Sax
66	Tenor Sax
67	Bariton Sax
68	Oboe
69	English Horn
70	Bassoon
71	Clarinet
72	Piccolo
73	Flute
74	Recorder
75	Pan Flute
76	Blown Bottle
77	Shakuhachi
78	Whistle
79	Ocarina
80	Square Lead
81	Saw Lead
82	Calliope
83	Chiffer Lead
84	Charang
85	Solo Vox
86	5th Saw wave
87	Bass & Lead
88	New Age
89	Warm Pad
90	Polysynth
91	Choir pad
92	Bowed
93	Metallic
94	Halo pad
95	Sweep

96	Rain
97	Soundtrack 5th
98	Crystal
99	Atmosphere
100	Brightness
101	Goblins
102	Echoes
103	Sci-fi Star
104	Sitar
105	Banjo
106	Shamisen
107	Koto
108	Kalimba
109	Bag pipe
110	Fiddle
111	Shanai
112	Tinkle Bell
113	Agogo
114	Steel Drums
115	Woodblock
116	Taiko Drum
117	Melodic Tom
118	Synth Drum
119	Reverse Cymbal
120	Guitar Noise
121	Breath Noise
122	Seashore
123	Bird
124	Telephon
125	Helicopter
126	Applaus
127	Gunshot

LEGEND

HPF	High Pass Filter
BPF	Band Pass Filter
LPF	Low Pass Filter
Notch	Notch Filter
(1)	DRUM MAP - Exclusive mode - one note give sound
velo.	Velocity split
Slide	Velocity zone 116-127 Slide up version
Silence	no Sound

General MIDI

0	Grand Piano
1	Bright Piano
2	Electric Grand Piano
3	Honky Tonk
4	E-Piano Tines
5	E-Piano FM
6	Harpsichord
7	Clavinet
8	Celesta
9	Glockenspiel
10	Music Box
11	Vibraphon
12	Marimba
13	Xylophon
14	Tubular Bell
15	Dulcimer
16	Drawbar Organ
17	Percussive Organ
18	Rock Organ
19	Church Organ
20	Reed Organ
21	Accordion
22	Harmonica
23	Accordion Tango
24	Nylon Guitar
25	Acoustic Steel
26	Jazz Guitar
27	Guitar clean
28	Guitar mute clean
29	Overdrive Guitar
30	Distortion Guitar
31	Guitar harmonics

32	Upright Jazz Bass
33	E-Bass fingered
34	E-Bass picked
35	Fretless Bass
36	Slap Bass 1
37	Slap Bass 2
38	Synth Bass 1
39	Synth Bass 2
40	Violin
41	Viola
42	Cello
43	Contrabass
44	Tremolo Strings
45	Pizzicato Strings
46	Harp
47	Timpani
48	String Ensemble 1
49	String Ensemble 2
50	Synth Strings 1
51	Synth Strings 2
52	Choir Aahs
53	Voice Dohs
54	SynthVoice
55	Orchestra Hit
56	Trumpet
57	Trombone
58	Tuba
59	Trp. Mute
60	Horn
61	Brass Section
62	Synth Brass 1
63	Synth Brass 2

Piano — Bank MSB 1

Prg.		
00	Grand Piano	
02	Rock Piano	
04	Classic Grand Piano	
06	Honky Tonk	
07	Grand Latin Octave	
11	Grand Piano	Layered Pad
127	Silence - no sound	

E-Piano — Bank MSB 2

Prg.		
0	Electric Grand	
1	Electric Grand & Mic. Attack	
2	Electric Grand MKS	MKS & Grand
3	Electric Grand Mic. Attack	curved velocity - layer this sound
4	E-Piano MK1 Classic	
5	E-Piano MK1 Classic	soft
9	E-Piano MK1 Classic	Layered EP-FM
10	E-Piano MK1 Classic	Layered Pad
11	E-Piano V3 Bella	
12	E-Piano V3 Bella	Note-off 1 Octave up
15	E-Piano Wurl. A200	
16	E-Piano Wurl. A200	Vibrato 1
17	E-Piano Wurl. A200	Vibrato 2
18	E-Piano DX Classic	
19	E-Piano FM	
127	Silence - no sound	

Organ — Bank MSB 3

Prg.		
0	Organ 776555678 slow	slow Rotary
1	Organ 776555678 fast	fast Rotary
2	Organ 800000568 slow	slow Rotary
3	Organ 800000568 fast	fast Rotary
4	Organ 008530000 slow	slow Rotary
5	Organ 008530000 fast	fast Rotary
6	Organ 800000000 slow	slow Rotary
7	Organ 800000000 fast	fast Rotary
8	Organ 807800000 slow	slow Rotary
9	Organ 807800000 fast	fast Rotary
10	Organ 804708000 slow	slow Rotary
11	Organ 804708000 fast	fast Rotary
12	Organ 800008000 slow	slow Rotary
13	Organ 800008000 fast	fast Rotary
14	Organ 800000008 slow	slow Rotary
15	Organ 800000008 fast	fast Rotary
18	Organ 888 perc slow	
19	Rock Organ	
20	Ham Full	
28	Theatre Organ Mighty Tower	
38	Organ House	
39	Combo Retro Vibrato 1	
40	Combo Retro Vibrato 2	
41	Classic Organ Tutti 1	
118	Theatre Organ Glocken Hit	
119	Theatre Organ Glocken short	
120	Theatre Organ Glocken Reiteration	
121	Theatre Organ Xylophone Hit	
122	Theatre Organ Xylo. Reiteration	
123	Theatre Organ Xylo. Hit & Reiteration	
124	T. O. Glocken Reiteration	velocity dynamic
126	T. O. Xylo Reiteration	velocity dynamic
127	Silence - no sound	

Perc. Tuned Instr. Bank MSB 5

Prg.	
0	Music Box
1	Music Box octave delay
2	Music Box octave delay – soft Attack
3	Vibraphone
4	Vibraphone short Release
5	Vibraphone soft Attack
6	Vibraphone no Vibrato
7	Vibraphone no Vibrato shot Release
8	Vibraphone fast Tremolo
9	Celeste
10	Tinkle
11	Marimba
12	Marimba octave delay
13	Marimba & Xylophone
14	Xylophone
15	Xylophone octave delay
16	Tubular Bell
17	Tubular Bell 2
18	Timpani
19	Kalimba
20	Cortales
21	Steel drums
127	Silence – no sound

String Instr. Bank MSB 6

Prg.	
0	Harpsichord
1	Harpsichord & Octave
2	Clavinet 1
3	Clavinet 2
4	Zither
5	Dulcimer 3 strings
6	Dulcimer 3 strings+
7	Dulcimer 3 strings Tremolo
8	Dulcimer 3 strings bowed
9	Dulcimer 5 strings
10	Dulcimer 5 strings+
11	Dulcimer 5 strings Tremolo
12	Dulcimer 5 strings bowed
13	Harp
14	Harp long
16	Sitar
17	Shamisen
18	Koto
127	Silence – no sound

Guitar Bank MSB 7

Prg.	
00	Guitar Nylon
01	Guitar Nylon soft
02	Guitar Nylon Octave
03	G. Nylon Slide velo. 116-127
04	Guitar Nylon Harmonics
05	Guitar Steel 1
06	Guitar Steel 1 soft
07	Guitar Steel 1 hard
08	Guitar Steel 1 double
09	Guitar Steel 1 mute
10	Guitar Steel 1 bowed
11	Guitar Steel 2
12	Guitar Steel 2 soft Attack
13	Guitar Steel 3
14	Guitar Steel 3 soft Attack
15	Banjo
16	Banjo Slide velo. 116-127
21	Git. Jazz 1
22	Git. Jazz 2
23	Git. Jazz & Octave
24	Pedal Steel Vibrato
25	Pedal Steel
26	Pedal Steel bowed
27	P. Steel Slide velo. 116-127
32	E-Guitar 1 US clean
33	E-Guitar 1 US mute
34	E-Guitar 2 BR clean HPF
35	E-Guitar 2 BR mute HPF
36	E-Guitar Overdrive
37	E-Guitar Distortion
127	Silence – no sound

Accordion Bank MSB 8

Prg.	
00	Harmonica
01	Harmonica Slide velo. 116-127
03	Accordina
04	Accordion Musette 888
07	Accordion Musette 4+888+16
08	Accordion Musette Vintage Italian
13	Accordion Musette 888 Benelux
17	Accordion 88 French
18	Accordion 88+16
19	Accordion 4+88
20	Accordion 4+88+16
21	Tango 8+16
22	Tango 8+16 Repetition
23	Accordion Celeste 88 French
24	Accordion Celeste 88+16
28	Accordion SuperVI – Reed 8
30	Accordion SuperVI – Reed 88
31	Accordion SuperVI – Reed 4+16
38	Accordion 16
56	Melodeon Tradition Norway „Coroma"
117	Jew´s harp
127	Silence – no sound

Full Strings & Disco Strings — Bank MSB 9

Prg.		
00	Full Strings 1 Chamber Emotion	velocity to Attack
01	Full Strings 1 Chamber short	Release shot
02	Full Strings 1 Chamber medium	Release medium
03	Full Strings 1 Chamber long	Release long
04	Full Strings 1 Chamber slow	Slow Attack
05	Full Strings 2 short	Release shot
06	Full Strings 2 medium	Release medium
07	Full Strings 2 long	Release long
08	Full Strings 2 forte	forte only
09	Full Strings 2 piano	piano only
10	Full Strings 3 Emotion	velocity to Attack time
11	Full Strings 3 FAD	layered 4
12	Full Strings 3 slow	slow
13	Full Strings 3	standard
14	Full Strings Tremolo	
15	Full Strings Pizzicato	
127	Silence - no sound	

Synth Strings — Bank MSB 11

Prg.		
0	Strings PWM	
1	Strings PWM - up	
2	Strings PWM - ENV	
3	Strings PWM - notch	
4	Strings MKS	
5	Strings MKS II	
6	Strings MKS LP24	
7	Strings MKS Rise	
8	Strings Retro Solino	
9	Stringmaster Retro	

Prg.		
10	Strings M12	
11	Strings M12	
12	Strings M12	
13	Strings M12 Notch	
14	Strings M12 Notch	
15	Strings M12 Notch	
127	Silence - no sound	

Solo Strings — Bank MSB 10

Prg.		
0	Geige	
1	Geige	soft Attack
9	Classic SoloViolin	velocity dynamic
10	Classic SoloViolin	marcato
16	Classic SoloViola	velocity dynamic
17	Classic SoloViola	marcato
23	Classic Solo Cello	velocity dynamic
24	Classic Solo Cello	marcato
30	Classic Solo Contra Bass	velocity dynamic
31	Classic Solo Contra Bass	marcato
127	Silence - no sound	

Brass Solo — Bank MSB 12

Prg.		
0	Trumpet 1	velo. split 48 - 96
1	Trumpet 1	velo. split 64
2	Trumpet 1	piano only
3	Trumpet 1	mezzo only
4	Trumpet 1	forte only
5	Trumpet 1	velocity zone 116-127 fall
6	Trumpet 1	velocity zone 116-127 goup
7	Trumpet 1	velocity zone 116-127 Slide
19	Cornet	
20	Cornet	soft
21	Cornet	hard
22	Cornet	portamento Attack
23	Trumpet mute	
24	Trumpet mute AV	Repetition / Auto Variation
25	Flugelhorn	
26	TromboneVibrato	
35	Tuba	
36	Tuba soft	
127	Silence	no sound

Brass Section — Bank MSB 13

Prg.		
0	US Trumpet Section	dynamic split
3	US Trumpet Section fast fall	fast fall
4	US Trumpet Section medium fall	medium fall
5	US Trumpet Section Split	velo. 116-127 fall
15	Flugelhorn Duo	
16	Tenorhorn Ensemble Vibrato	
127	Silence – no sound	

Classic Brass — Bank MSB 14

Prg.		
06	Classic Horn Solo	
07	Classic Horn Solo	piano
20	Horn Ensemble	velocity split
21	Horn Ensemble	piano only
127	Silence – no sound	

Saxophone — Bank MSB 15

Prg.			
00	Soprano Sax	dynamic split	
01	Soprano Sax softer	softer zones	
02	Soprano Sax harder	harder zones	
03	Soprano Sax and noise	breath noise	
04	Soprano Sax Slide	velo. 116-127 Slide	
06	Alto Sax	dynamic split	
07	Alto Sax softer	softer zones	
08	Alto Sax harder	harder zones	
09	Alto Sax breath	breath noise	
10	Alto Sax Slide	velo. 116-127 Slide	
11	Tenor Sax	dynamic split	
12	Tenor Sax softer	softer zones	
13	Tenor Sax harder	harder zones	
14	Tenor Sax breath	breath noise	
15	Tenor Sax Slide	velo. 116-127 Slide	
16	Max Jazz Tenor	velo. split 116	Random Key & breath noise
17	Max Jazz Tenor	velo. split 64	Random Key & breath noise
18	Max Jazz Tenor soft	soft only	Random Key & breath noise
19	Max Jazz Tenor	velo. split 96	
20	Max Jazz Tenor Vibrato less delay	velo. split 96	
21	Max Jazz Tenor soft	soft only	breath noise
22	Max Jazz Tenor Slide	velo. 116-127 Slide	Random Key & breath noise
23	Max Jazz Tenor Slide soft	velo. 116-127 Slide	Random Key & breath noise
24	Tenor Sax Funky		
27	Baritone Sax		
127	Silence – no sound		

Winds — Bank MSB 16

Prg.		
0	Clarinet	
1	Clarinet soft	
2	Clarinet Slide	velocity zone 116-127 Slide
3	Hugo Clarinet - no loop	
4	Hugo Clarinet Slide	velocity zone 116-127 Slide
5	Clarinet Vito Tradition	2 zone velocity Repetition
6	Clarinet Vito Tradition	4 zone velocity
7	Clarinet Vito Tradition soft	soft velocity 1-97
10	Piccolo	
11	Flute	
12	Flute EQ	
13	Flute High Pass Filter	
14	Low Whistle	
15	Panflute	
20	Bottle	
21	Bottle Q	
22	Bottle LFO	
23	Whistle	
24	Okarina	
30	Border Pipe	
31	Border Pipe AV	Auto Grace note
33	Border Pipe Drone	
127	Silence	no sound

Choir — Bank MSB 18

Prg.		
00	Classic Choir Aah	
01	Classic Choir Aah	Filter
02	Classic Choir Ooh	
03	Classic Choir Ooh	Filter
04	Choir Pop Ooh	
05	Choir Pop Ooh	Filter
08	Boys Aah	
09	Boys Bap	
10	Boys Daa	
11	Boys Doo Bass	
12	Boys Doo	
13	Boys Falsetto Ooh	
14	Boys Hmm	
15	Boys Laa	
16	Boys Mix Ooh	
17	Boys Ooh	
18	Girls Aah	
19	Girls Doo	
20	Girls Ooh	
21	Voiceless	
126	Voice Kit	mapping like Drum Kit 58
127	Silence - no sound	

Bass — Bank MSB 19

Prg.		
00	E-Bass 1	
01	E-Bass 1 & Note-off	
02	E-Bass 1 Slide	velocity zone 116-127 Slide
03	E-Bass 2	
04	E-Bass 2 & Note-off	
07	E-Bass 4	
08	E-Bass 5 Picking 1	
09	E-Bass 5 Picking 1 & Note-off	
15	E-Bass Fretless	
16	E-Bass Slap 1	
17	E-Bass Slap 1 & Note-off	
18	E-Bass Slap 2	
19	E-Bass Slap 2 & Note-off	
20	Upright Jazz Bass	Random
21	Upright Jazz Bass & Note-off	Random
22	Upright Jazz Bass	velocity split at 96 & 105
23	Upright Jazz Bass & Note-off	velocity split at 96 & 105
24	Upright Jazz Bass	velocity split 120
25	Upright Jazz Bass & Note-off	velocity split 120
26	Upright Jazz Bass	no finger Attack
34	Bowed Upright Bass	
35	Bowed Upright Bass	shorter Release
127	Silence	no sound

Synthesizer

Prg.	
0	Bells & Pad
1	Digital Pad
2	OBX & Wavebell
3	DX1 Toy
4	Star Theme
5	Brightness
6	OB & Noise
7	Atmos
8	Brass Comp
9	Brass Rex
10	Polysynth Classic
11	Halo Pad
12	Caliope
13	Charang
14	Fairly Space
15	Echo Drop
16	VF Vox
17	Bass & Lead
18	Fantasia
19	Bowed Glass
20	Soft Pad
21	Ice Rain
22	Goblin
23	SoundTrack
24	Atmosguitar
25	Bottle soft
26	Polysynth Classic 5th
27	SquareLead
28	P5Brass
29	Saw

Bank MSB 20

Prg.	
30	SawEnv
31	C-Lead
32	SoloVox
33	MetalPad
34	JunoSweep
35	Vangbrass
36	Crystal
37	FM8
38	Mo55
39	DXBell
40	OBS1
41	OBSoft
42	Hook
43	FMPluk
44	FMBrazz
45	Ice
46	BoHook
54	Vibrimba
64	M12Brass
71	Brazza
79	KX11
82	JPArp
83	JX Barimba

Synthesizer & Bass

Prg.	
116	Classic Synth Bass
117	Classic Synth Bass Rezo
118	JBass 1
119	JBass 2
120	JBass 3
121	JBass soft
122	CS Classic Bass
123	MoBass
124	MoBass ENV
125	XBass 1
126	XBass 2
127	Silence - no sound

FX & Percussion

Prg.		
00	Orchestra Hit Major	
01	Orchestra Hit Minor	
62	Synth FX down	
63	Synth FX up	
64	Drum Kit	Map Drum Kit 0
66	Classic Percussion	Map Drum Kit 48
127	Silence - no sound	

Vibraphone 1 stereo — Bank MSB 47

Prg.		
0	Vibraphone 1 stereo	Curve soft vel. 30 - hard layer vol -3db
1	Vibraphone 1 stereo	Curve soft vel. 30 - hard layer vol -3db no RRobin*
2	Vibraphone 1 stereo	Curve medium vel. 70 - hard layer vol -3db
3	Vibraphone 1 stereo	Curve medium vel. 70 - hard layer vol -7db
4	Vibraphone 1 stereo	Curve hard vel. 96 - hard layer vol -3db
5	Vibraphone 1 stereo	Curve hard vel. 96 - hard layer vol -7db no RRobin*
6	Vibraphone 1 stereo Tremolo 2.9 (30)	Curve soft vel. 30 - hard layer vol -3db
7	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 30 - hard layer vol -3db
8	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 30 - hard layer vol -3db
9	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 30 - hard layer vol -3db
10	Vibraphone 1 stereo Tremolo 2.9	Curve soft vel. 30 - hard layer vol -7db
11	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 30 - hard layer vol -7db
12	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 30 - hard layer vol -7db
13	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 30 - hard layer vol -7db
14	Vibraphone 1 stereo Tremolo 2.9 (70)	Curve soft vel. 70 - hard layer vol -3db
15	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 70 - hard layer vol -3db
16	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 70 - hard layer vol -3db
17	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 70 - hard layer vol -3db
18	Vibraphone 1 stereo Tremolo 2.9	Curve soft vel. 70 - hard layer vol -7db
19	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 70 - hard layer vol -7db
20	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 70 - hard layer vol -7db
21	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 70 - hard layer vol -7db
22	Vibraphone 1 stereo Tremolo 2.9 (96)	Curve soft vel. 96 - hard layer vol -3db
23	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 96 - hard layer vol -3db
24	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 96 - hard layer vol -3db
25	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 96 - hard layer vol -3db
26	Vibraphone 1 stereo Tremolo 2.9	Curve soft vel. 96 - hard layer vol -7db
27	Vibraphone 1 stereo Tremolo 3.9	Curve soft vel. 96 - hard layer vol -7db
28	Vibraphone 1 stereo Tremolo 4.9	Curve soft vel. 96 - hard layer vol -7db
29	Vibraphone 1 stereo Tremolo 5.9	Curve soft vel. 96 - hard layer vol -7db
30	Vibraphone 1 stereo	layer only soft
31	Vibraphone 1 stereo Tremolo 2.9	layer only soft
32	Vibraphone 1 stereo Tremolo 3.9	layer only soft
33	Vibraphone 1 stereo Tremolo 4.9	layer only soft
34	Vibraphone 1 stereo	layer only soft no RRobin*

* RRobin - Round Robin - Round-robin is a method of sample playback which allows you to play different sampled versions of the same sound, resulting in variations in otherwise static patterns.

Marimba — Bank MSB 46

Prg.		
0	Marimba stereo	Curve hard vel. 96 - hard layer vol -3db
1	Marimba stereo	Curve hard vel. 96 - hard layer vol -5db
2	Marimba stereo	Curve hard vel. 96 - hard layer vol -7db
3	Marimba stereo	Curve medium vel. 61- hard layer vol -3db
4	Marimba stereo	Curve medium vel. 61 - hard layer vol -5db
5	Marimba stereo	Curve medium vel. 61 - hard layer vol -7db
6	Marimba stereo	soft layer only
7	Marimba stereo Copy 0 - soft atk.	Curve hard vel. 96 - hard layer vol -3db
8	Marimba stereo Tremolo 2.9	Curve hard vel. 96 - hard layer vol -7db
9	Marimba stereo Tremolo 3.9	Curve hard vel. 96 - hard layer vol -7db
10	Marimba stereo Tremolo 4.9	Curve hard vel. 96 - hard layer vol -7db
11	Marimba stereo Tremolo 5.9	Curve hard vel. 96 - hard layer vol -7db
12	Marimba stereo Tremolo 2.9	Curve medium vel. 61 - hard layer vol -2db
13	Marimba stereo Tremolo 3.9	Curve medium vel. 61 - hard layer vol -2db
14	Marimba stereo Tremolo 4.9	Curve medium vel. 61 - hard layer vol -2db
15	Marimba stereo Tremolo 5.9	Curve medium vel. 61 - hard layer vol -2db
16	Marimba stereo Tremolo 2.9	soft layer only
17	Marimba stereo Tremolo 3.9	soft layer only
18	Marimba stereo Tremolo 4.9	soft layer only
19	Marimba stereo Tremolo 5.9	soft layer only
20	Marimba stereo dynamic detune	Curve hard vel. 96 - hard layer vol -3db
21	Marimba stereo dynamic detune	Curve hard vel. 96 - hard layer vol -7db
22	Marimba stereo dynamic detune	Curve hard vel. 61 - hard layer vol -3db
23	Marimba stereo dynamic detune	Curve hard vel. 61 - hard layer vol -7db
24	Marimba stereo detune	Curve hard vel. 96 - hard layer vol -3db
25	Marimba stereo detune	Curve hard vel. 61 - hard layer vol -7db
26	Marimba stereo dynamic LFO	Curve hard vel. 96 - hard layer vol -3db
27	Marimba stereo dynamic LFO	Curve hard vel. 96 - hard layer vol -7db
28	Marimba stereo dynamic LFO	Curve hard vel. 61 - hard layer vol -3db
29	Marimba stereo dynamic LFO	Curve hard vel. 61 - hard layer vol -7db
30	Marimba stereo dynamic LFO	soft layer only
31	Marimba stereo	one sample only A
32	Marimba stereo	one sample only B
33	Marimba stereo Copy 0 - no RR	Curve hard vel. 96 - hard layer vol -3db
34	Marimba stereo Copy 6 - no RR	soft layer only
35	Marimba stereo Copy 6 - no RR	Curve hard vel. 96 - hard layer vol -3db - soft attack

Vibraphone 2 — Bank MSB 48

Prg.		
10	Vibraphone 2 Tremolo 2.9	Curve soft vel. 30 – hard layer vol -10db
11	Vibraphone 2 Tremolo 3.9	Curve soft vel. 30 – hard layer vol -10db
12	Vibraphone 2 Tremolo 4.9	Curve soft vel. 30 – hard layer vol -10db
13	Vibraphone 2 Tremolo 5.9	Curve soft vel. 30 – hard layer vol -10db
14	Vibraphone 2 Tremolo 2.9	Curve soft vel. 30 – hard layer vol -7db
15	Vibraphone 2 Tremolo 3.9	Curve soft vel. 30 – hard layer vol -7db
16	Vibraphone 2 Tremolo 4.9	Curve soft vel. 30 – hard layer vol -7db
17	Vibraphone 2 Tremolo 5.9	Curve soft vel. 30 – hard layer vol -7db
18	Vibraphone 2 Tremolo 2.9	Curve soft vel. 96 – hard layer vol -10db
19	Vibraphone 2 Tremolo 3.9	Curve soft vel. 96 – hard layer vol -10db
20	Vibraphone 2 Tremolo 4.9	Curve soft vel. 96 – hard layer vol -10db
21	Vibraphone 2 Tremolo 5.9	Curve soft vel. 96 – hard layer vol -10db
22	Vibraphone 2 Tremolo 2.9	Curve soft vel. 96 – hard layer vol -7db
23	Vibraphone 2 Tremolo 3.9	Curve soft vel. 96 – hard layer vol -7db
24	Vibraphone 2 Tremolo 4.9	Curve soft vel. 96 – hard layer vol -7db
25	Vibraphone 2 Tremolo 5.9	Curve soft vel. 96 – hard layer vol -7db
26	Vibraphone 2 Tremolo 2.9	soft layer only
27	Vibraphone 2 Tremolo 3.9	soft layer only
28	Vibraphone 2 Tremolo 4.9	soft layer only
29	Vibraphone 2Tremolo 5.9	soft layer only
30	Vibraphone 2 go up	Curve soft vel. 30 – hard layer vol -10db
31	Vibraphone 2 go up	Curve soft vel. 96 – hard layer vol -7db
32	Vibraphone 2 Bend	Curve soft vel. 30 – hard layer vol -10db
33	Vibraphone 2 Bend	Curve soft vel. 96 – hard layer vol -7db
34	Vibraphone 2 - only as layer	Curve soft vel. 30 – hard layer vol -3db
35	Vibraphone 2 - only as layer	Curve soft vel. 70 – hard layer vol -3db
36	Vibraphone 2 - only as layer	Curve soft vel. 90 – hard layer vol -3db
127	Silence - no sound	

Vibraphone 1 stereo — Bank MSB 47

Prg.		
35	Vibraphone 1 stereo - go up	Curve soft vel. 30 - hard layer vol -3db
36	Vibraphone 1 stereo - go up	Curve soft vel. 93 - hard layer vol -3db
37	Vibraphone 1 stereo - only as layer	Curve soft vel. 30 - hard layer vol -3db
38	Vibraphone 1 stereo - only as layer	Curve soft vel. 70 - hard layer vol -3db
39	Vibraphone 1 stereo - only as layer	Curve soft vel. 90 - hard layer vol -3db
127	Silence - no sound	

Vibraphone 2 — Bank MSB 48

Prg.		
0	Vibraphone 2	Curve soft vel. 30 – hard layer vol -10db
1	Vibraphone 2	Curve soft vel. 30 - hard layer vol -7db
2	Vibraphone 2	Curve soft vel. 56 - hard layer vol -10db
3	Vibraphone 2	Curve soft vel. 56 - hard layer vol -7db
4	Vibraphone 2	Curve soft vel. 72 - hard layer vol -10db
5	Vibraphone 2	Curve soft vel. 72 - hard layer vol -7db
6	Vibraphone 2	Curve soft vel. 96 - hard layer vol -10db
7	Vibraphone 2	Curve soft vel. 96 - hard layer vol -7db
8	Vibraphone 2	Curve soft vel. 114 - hard layer vol -7db
9	Vibraphone 2	soft layer only

Prg.		
0	Vibraphon 3 MC	
1	Vibraphon 3 MC	softer dynamic layer freq
2	Vibraphon 3 MC	softer dynamic layer volume and freq.
3	Vibraphone 3 Tremolo 2.9	
4	Vibraphone 3 Tremolo 3.9	
5	Vibraphone 3 Tremolo 4.9	
6	Vibraphone 3 Tremolo 5.9	
7	Vibraphone 3 Tremolo 2.9	softer dynamic layer freq
8	Vibraphone 3 Tremolo 3.9	softer dynamic layer freq
9	Vibraphone 3 Tremolo 4.9	softer dynamic layer freq
10	Vibraphone 3 Tremolo 5.9	softer dynamic layer freq
11	Vibraphone 3 Tremolo 2.9	softer dynamic layer volume and freq.
12	Vibraphone 3 Tremolo 3.9	softer dynamic layer volume and freq.
13	Vibraphone 3 Tremolo 4.9	softer dynamic layer volume and freq.
14	Vibraphone 3 Tremolo 5.9	softer dynamic layer volume and freq.
15	Vibraphone 3	bowed
127	Silence – no sound	

Prg.		
0	Xylophone	
1	Xylophone	filter curve
2	Xylophone	only as layer
3	Glockenspiel 1	Release 780
4	Glockenspiel 1	Release 680
5	Glockenspiel 1	Release 570
6	Glockenspiel 1	Decay 590
7	Glockenspiel 1	only as layer
8	Glockenspiel 2	-
9	Cortales	Decay 750
10	Cortales	Decay 580
11	Cortales	Decay 530
12	Cortales	Tremolo 4
13	Cortales	Tremolo 5
14	Cortales	only as layer
15	Timpani 1	
16	Timpani 2	4 layer
17	Timpani 2	3 layer
18	Timpani 2	2 layer
19	Timpani 2	only forte
20	MC Timpani3	4 layer - sp. 32/64 /116 stereo pan
21	MC Timpani3	4 layer - sp. 32/64/96 stereo pan
22	MC Timpani3	4 layer - sp. 32/64/116
23	MC Timpani3	4 layer - sp. 32/64/96
24	MC Timpani3	3 layer - sp. 32/95
25	MC Timpani3	3 layer - sp. 48/84
26	MC Timpani3	2 layer - sp. 95
27	MC Timpani3 (low velo. up)	4 layer - sp. 32/64 /116 stereo pan
28	MC Timpani3 (low velo. up)	4 layer - sp. 32/64/96 stereo pan
29	MC Timpani3 (low velo. up)	4 layer - sp. 32/64/116
30	MC Timpani3 (low velo. up)	4 layer - sp. 32/64/96
31	MC Timpani3 (low velo. up)	3 layer - sp. 32/95
32	MC Timpani3 (low velo. up)	3 layer - sp. 48/84
33	MC Timpani3 (low velo. up)	2 layer - sp. 95

Prg.		
34	MC Chimes	long release
35	MC Chimes	medium release
36	MC Chimes	short release
37	MC Chimes Round Robin	long release
38	MC Chimes Round Robin	medium release
39	MC Chimes Round Robin	short release
40	MC Chimes	LFO slow
41	Celesta	short release
42	Celesta	-
43	Celesta	LFO 2.9
44	Celesta	LFO 3.9
45	Celesta	LFO 4.9
46	Celesta	High Pass Filter
47	Steel Drum	only as layer to use
48	Steel Drum	
49	Steel Drum Mix 1	
50	Steel Drum Mix 2	only for experiment
51	Steel Drum Mix delay	
127	Silence	no sound

Prg.		
00	FM Vibra	
01	FM Vibra	soft attack
02	FM Vibra	Tremolo 2.9
03	FM Vibra	Tremolo 3.9
04	FM Vibra	Tremolo 4.9
05	FM Vibra	Tremolo 5.9
06	Wooden Hit	Release 700
07	Wooden Hit	Decay 700
08	Wooden Hit	soft attack
09	X-Bell	Release 700
10	X-Bell	Decay 700
11	X-Bell	soft attack
12	FM-Tubula	Release 700
13	FM-Tubula	Decay 700
14	FM-Tubula	soft attack
15	FM-Steel	Release 700
16	FM-Steel	Decay 700
17	FM-Steel	soft attack
18	SynPan	Release 700
19	SynPan	Decay 700
20	SynPan	soft attack
21	Hard Mallet Syn	
22	Synth Tackl	
23	Synth Tackl	soft attack
24	Reso noise	stereo
25	Reso noise	mono
26	Reso C note	only C
127	Silence	no sound

Chromatic – Tuned Percussion — MSB 52

Prg.	Instrument		ID no.
00	Tumba	Latin	60102
01	Tumba & Dynamic	Latin	60102
02	Timbales Hembra & Dynamic	Latin	60108
03	Timbales Hembra	Latin	60108
04	Timbales Macho	Latin	60107
05	Timbales Macho & Dynamic	Latin	60107
06	Surdo Low	Latin	60121-01
07	Surdo Low & Dynamic	Latin	60121-01
08	Agogo Low	Latin	60113-01
09	Cowbell 3 Cha Cha Bell	Latin	60109
10	Triangle High	Latin	60010
11	Tabla Articulation TA	India	60401
12	Tabla Articulation TIN	India	60401
13	Japan Bowls Low	Japan	60514a
14	Japan Bowls Low slow attack HPF	Japan	60514a
15	Japan Bowls Low fade in NOTCH	Japan	60514a
16	Japan Bowls Mid	Japan	60514b
17	Japan Bowls Mid slow attack NOTCH	Japan	60514b
18	Japan Bowls High	Japan	60514c
19	Japan Bowls High slow attack NOTCH	Japan	60514c
20	Japan Bowls High fade in HPF	Japan	60514c
21	Gamelan	Indonesia	60039-00
22	Gamelan & Octave	Indonesia	60039-01
23	Gamelan & Quinte	Indonesia	60039-02
24	Gamelan & Oct. Delay	Indonesia	60039-03
25	Gamelan Soft Attack	Indonesia	60039-04
26	Angklung Chromatic & Tremolo	Indonesia	60037
27	Angklung Full Stroke	Indonesia	60037
28	Angklung Short Stroke	Indonesia	60037
29	Angklung Loop Tremolo (ENV hold)	Indonesia	60037
30	Gong Chromatic	World	60510
31	Hang 1 Chromatic (note 98-105 slap articulations)	World	35064
32	Hang 1 Chrom. Soft (note 98-105 slap articulations)	World	35064
33	Hang 1 Chrom. Oct. (note 98-105 slap articulations)	World	35064
34	Hang 1 Chrom. housing reso. (note 98-105 slap a.)	World	35064

Chromatic – Tuned Percussion — MSB 52

Prg.	Instrument		ID no.
35	Hang 2 Chromatic	World	35065
36	Bianzhong Mallet	China	95028
37	Bianzhong Mallet & dynamic layer	China	95028
38	Bianzhong Mallet / NOTCH	China	95028
39	Gong	China	95029
40	Gong & dynamic layer	China	95031
41	Banbang	China	95032
42	Bell	China	95033
43	Large Bell	China	95034
44	Large Bell & dynamic layer	China	95034
45	Qing	China	95039
46	Qing & dynamic layer	China	95039
47	Renart EK	Thailand	60601
48	Renart EK & dynamic layer	Thailand	60601
49	Renart Toom	Thailand	60602
50	Ta Pon Big	Thailand	60603
51	Ta Pon Big & dynamic layer octave	Thailand	60603
52	Wong	Thailand	60611
53	Wong & dynamic layer	Thailand	60611
54	Wong & dynamic layer quinte	Thailand	60611
55	Wong & dynamic layer octave	Thailand	60611
56	Kalimba	Africa	35014
75	Steel Drums A	Caribbean	35029
58	Steel Drums B	Caribbean	35061
59	Alpine Bells Hit (Notch)	Alpin	35017-01
60	Alpine Bells Tremolo (Notch)	Alpin	35017-02
61	Sonic Mallet Chromatic	World	35063
62	Sonic Mallet Chromatic & Hang 2 Stroke+	World	35063

Chromatic – Tuned Percussion Orchestra — MSB 50

Prg.	Instrument		ID no.
52	Timpani C soft sample with less attack	Orchestra	35010
53	Timpani P soft sample with less attack	Orchestra	35018

Prg.	Instrument		ID no.	Art.
00	Tumba 1	Latin	60102	12
01	Conga 1	Latin	60101	12
02	Quinto 1	Latin	60100	12
03	Tumba 2	Latin	60030-20-79	10
04	Conga 2	Latin	60030-20-80	10
05	Quinto 2	Latin	60030-20-81	12
06	Bongo 1 Hembra	Latin	60105	12
07	Bongo 1 Macho	Latin	60104	12
08	Bongo 2 Hembra	Latin	60030-01	11
09	Bongo 2 Macho	Latin	60030-01	8
10	Timbales Hembra	Latin	60108	12
11	Timbales Macho	Latin	60107	12
12	Pandeiro Mute	Latin	60119-01	12
13	Pandeiro Choro	Latin	60119-02	12
14	Pandeiro Samba	Latin	60119-03	12
15	Surdo 1 High	Latin	60121	12
16	Surdo 1 Low	Latin	60121	12
17	Surdo 2 Low	Latin	60030-18	10
18	Tamborim 1	Latin	60122	8
19	Tamborim 2	Latin	60030-37	11
20	Agogo Low	Latin	60113-01	9
21	Agogo Medium	Latin	60113-02	9
22	Agogo High	Latin	60113-03	9
23	Claves Low	Latin	60116	7
24	Jamblock	Latin	60110	4
25	Cowbell 1 Cha Cha Bell	Latin	60109	9
26	Cowbell 2 Bongo Bell	Latin	60103	10
27	Cowbell 3 Low	Latin	60029d	10
28	Cowbell 4 Low	Latin	60029e	10
29	Cowbell 5 High	Latin	60308	7
30	Cowbell 6 High	Latin	60030-44	11
31	Cowbell 7 Low	Latin	60030-44	9
32	Triangle 1 Low	Latin	60123	8
33	Triangle 2 High	Latin	60010	6
34	Triangle 3 High	Latin	60030-63	11

Percussion – Latin   MSB 60

Prg.	Instrument		ID no.	Art.
35	Guiro 1	Latin	60117	11
36	Guiro 2	Latin	60030-70	9
37	Guiro 3	Latin	60313	9
38	Guira 1	Latin	60117	8
39	Guira 2	Latin	60312	10
40	Caxixi High	Latin	60015	12
41	Caxixi Medium	Latin	60015	12
42	Caxixi Low	Latin	60015	12
43	Shekere	Latin	60120	6
44	Maracas 1	Latin	60018	4
45	Maracas 2	Latin	60029b	8
46	Maracas 3	Latin	60315	6
47	Maracas 4	Latin	60030-46	17
48	Maracas Metal	Latin	60030-47	9
49	Cabasa	Latin	60030-43	5
50	Shaker	Latin	60318	17
51	Crotales	Latin	60124	4
52	Caixa	Latin	60114	9
53	Quika	Latin	60030-32	17
54	Vibraslap 1	Latin	60012	5
55	Tambourine 1	Latin	60304	8
56	Tambourine 2	Latin	60305	12
57	Tambourine 3	Latin	60030-39	8
58	Tambourine 4	Latin	60000	6
59	Samba Whistle	Latin	60316	6
60	Grand Casa 32" S	Latin	54034-01e1	1
61	Grand Casa 32" M	Latin	54034-01c1	1
100	Tumba - Conga - Quinto	Latin		
101	Bongo Hembra Macho	Latin		
102	Timbales Hembra Macho	Latin		
103	Pandeiro Choro Mute Samba	Latin		
104	Surdo Low High	Latin		
105	Cowbell 1 - 4	Latin		
106	Agogo Low Mid High	Latin		
107	Caixixi Low Mid High	Latin		
108	Cowbell 1+2, Tamburim, Jamblock, Guiro, Triangle	Latin		

Percussion – India — MSB 61

Prg.	Instrument		ID no.	Art.
00	Tabla 1 C	India	60401	12
01	Tabla 1 C#	India	60401	12
02	Tabla 1 D	India	60401	12
03	Tabla 1 D#	India	60401	12
04	Tabla 1 E	India	60401	12
05	Tabla 1 F	India	60401	12
06	Tabla 1 F#	India	60401	12
07	Tabla 1 G	India	60401	12
08	Tabla 1 G#	India	60401	12
09	Tabla 1 A	India	60401	12
10	Tabla 1 A#	India	60401	12
11	Tabla 1 B	India	60401	12
12	Bayan Big Drum 1	India	60401	12
13	Bayan Big Drum 1 - tuned +1 semi tone	India	60401	12
14	Bayan Big Drum 1 - tuned +2 semi tone	India	60401	12
15	Bayan Big Drum 1 - tuned min 4 semi tone	India	60401	12
16	Kohl	India	60408	12
17	Ghattam 1	India	60409	9
18	Tabla 2	India	60030-34	14
19	Bayan Big Drum 2	India	60030-19	14
20	Mrdangam	India	60030-30	12
21	Pakhavaj	India	60030-31	18
22	Ghattam 2	India	60151	14
23	Kanjira	India	60030-06	11
24	Indian Female	India	60410	20

Percussion – Turkey & Middle East — MSB 62

Prg.	Instrument		ID no.	Art.
00	Arbane	Turkey	60161	16
01	Asma Davul	Turkey	60162	15
02	Bas Darbuka	Turkey	60163	20
03	Bendir 1	Turkey	60164	22
04	Bendir 2	Turkey	60166	17
05	Bongo	Turkey	60167	11
06	Darbuka	Turkey	60168	24
07	Def 1	Turkey	60170	25
08	Def 2	Turkey	60171	22
09	El Zilli 1	Turkey	60172	6
10	El Zilli 2	Turkey	60173	6
11	Firca	Turkey	60174	15
12	Hollo	Turkey	60175	15
13	Kabuk	Turkey	60176	11
14	Kasik	Turkey	60178	7
15	Prmak Zil	Turkey	60179	8
16	Sekir 1	Turkey	60180	6
17	Sekir 2	Turkey	60181	7
18	Tumba 1	Turkey	60182	14
19	Tumba 2	Turkey	60183	10
20	Zilli Cubuk	Turkey	60184	9
21	Tupan Drum	Middel East	60030-00	19
22	Metal Riq	Middel East	60030-08	16
23	Riq	Middel East	60030-09	15
24	Gaval	Middel East	60030-14	18
25	Tar	Middel East	60030-38	14
26	Bendir 3	Middel East	60030-12	20

Percussion - Asia — MSB 63

Prg.	Instrument		ID no.	Art.
00	Beijing Opera	China	95027	11
01	Bianzhong Mallet	China	95028	25
02	Gong China	China	95029	13
03	Kuaiban	China	95030	12
04	Big Drum	China	95031	9
05	Banbang	China	95032	7
06	Bell	China	95033	7
07	Large Bell	China	95034	6
08	Medium Cymbal	China	95036	8
09	Small Cymbal	China	95035	5
10	Large Cymbal	China	95037	13
11	Muyu	China	95038	6
12	Qing	China	95039	7
13	Shenbo	China	95040	5
14	Slide Bell	China	95041	4
15	Small Bell	China	95042	7
16	Chinese Tambourine	China	60030-02	12
17	Chinese Tom	China	60030-03	11
18	Ta Pon Big	Thailand	60603	7
19	Ta Pon Small	Thailand	60604	6
20	Charp Small	Thailand	60605	6
21	Charp Medium	Thailand	60606	7
22	Charp Large	Thailand	60607	9
23	Klong	Thailand	60608	11
24	Perng Mang	Thailand	60609	12
25	Ching	Thailand	60610	9
26	Spike Tree	World	60030-73	12
27	Taiko 1	Japan	60022	15
28	Taiko 2	Japan	60515c	12b
29	Ohkawa	Japan	60515f	6
30	Hyoshigi	Japan	60515b	3
31	Gong Hit & Action roll	Asia	60518b	8
32	Tibet Gong	Tibet	60517a	8
33	Tibet Bell	Tibet	60517b	6
34	Temple Bells	Tibet	60030-62	8
35	Anklung	Indonesien	60030-66	10

Percussion - Orchestra — MSB 64

Prg.	Instrument		ID no.	Art.
00	Grand Casa 32"		54034-01a1	1
01	–"–	soft zones	54034-01a2	1b
02	Grand Casa 32"		54034-01b1	1
03	–"–	soft zones	54034-01b2	1b
04	Grand Casa 32"		54034-01c1	1
05	Grand Casa 1		60501	16b
06	Concert Cymbals 1		60502-CSY	19
07	Grand Casa & Cymbals 1		60501+02	19
08	Grand Casa 2		60300	14
09	Concert Cymbals 2		60302-18	6
10	Concert Cymbals 3		60302-19	7
11	Grand Casa & Cymbals 3		60300+02	14
12	Classic Snare 1		60509 503	15
13	Cymbal 18"		60502-C18	15
14	Cymbal 24"		60502-C24	15
15	Cymbal Roll		60311	4
16	Gong		60309	11
17	Tam Tam 1		60508	14
18	Tam Tam 2		60319	6
19	Triangle 1		60504	13
20	Triangle 2		60303	12
21	Large tambourine		60325	17
22	Small tambourine		60326	11
23	Claves		60505-02	7
24	Castagnets		60505-01	5
25	Cowbell		60505-03	9
26	Tambourine		60506	10
27	Tempelblock		35066	7
100	Orchestra Percussion			
	43-47 Grand Casa 32"			
	48-59 Grand Casa			
	60-78 Concert Cymbals			
	79-83 Cymbal 24"			
	84-92 Snare			
	93 up TamTam, Gong, Triangle, Claves, Tambourine			

Percussion – Human — MSB 66

Prg.	Instrument		ID no.	Art.
00	Clap Single	Human	60031+06a	23
01	Clap Group	Human	60031+06b	7
02	Body Percussion	Human	60026	16
03	Body Percussion Group	Human	60200	11
04	Room Clapper	Human	60030-72	10
05	Finger Snap	Human	60032	10
06	Blopp Single	Human	60038	4
07	Oktoberfest6 shouts	Human	90002	12
08	Hey	Human	90001	6

Percussion – Africa — MSB 65

Prg.	Instrument		ID no.	Art.
00	Djembe	Africa	60112	12
01	Djembe Low	Africa	60112	12
02	Djembe	Africa	60030-27	14
03	Dumbac	Africa	60030-28	13
04	Dumbac High	Africa	60030-29	13
05	Small Maroccan Bongo	Africa	60030-10	7
06	Maroccan Bongo L	Africa	60030-07	9
07	Maroccan Bongo H	Africa	60030-07	10
08	Bata Large	African	60030-21	12
09	Bata Medium	African	60030-22	12
10	Bata Small	African	60030-23	12
11	Talking Drum Large	Africa	60030-35	14
12	Talking Drum Small	Africa	60030-36	15
13	Igba	African	60030-15	10
14	Sakara	Africa	60030-33	12
15	Soogoo	World	60030-17	19
16	Donke Rattle /Vibraslap	Africa	60030-45	6

Prg.	Instrument		ID no.	Art.
00	Bass Drum	World	60030-11	12b
01	Oil Drum	World	60030-16	19
02	Frame Drum	World	60030-13	31
03	Bohdran	Celtic	60033	20
04	Pipe Snare	Celtic	50003	7
05	Cajon 1	World	60177	22
06	Cajon 2	World	60112	10
07	Cajon 3 Large	World	60030-24	11
08	Cajon 4 Small	World	60030-25	15
09	Cajon 5	World	60034	20
10	Clay Bongos High	World	60030-04	9
11	Clay Bongos Low	World	60030-04	9
12	Clay Drum	World	60030-05	16
13	Clay Pot	World	60030-26	11
14	Cave Drum	World	60513	6
15	Washboard	World	60035	10
16	Woodblock	World	60029e	3
17	Woodlog	World	60030-20	10
18	Wood Stick	World	60030-78	7
19	Spoons	World	60030-60	7
20	Pu Shaker	Hawaii	60157	7
21	Puili Rattles	Hawaii	60156	8
22	Kaiaaw	Hawaii	60155	7
23	Kae Keeke	Hawaii	60154	6
24	Ipu Gourd	Hawaii	60153	7
25	Ili Ili	Hawaii	60152	3
26	Metal Shaker	World	60030-49	12
27	Metal Shaker R	World	60030-50	10
28	Shaker Tree	World	60030-58	8
29	Triple Shaker	World	60030-64	12
30	Beat Pot	World	60030-40	12
31	Rainmaker	World	60150	6
32	Rusty Rattle	World	60030-56	7
33	Metal Rattle	World	60030-48	14
34	Metal Shoes	World	60030-51	11

Prg.	Instrument		ID no.	Art.
35	Wood Bells	World	60030-65	8
36	Sleigh Bells	World	60030-59	12
37	Bell Stick	World	60030-42	8
38	Chimes	World	60005	8
39	Bell Tree Chimes	World	60030-41	8
40	Bamboo Chimes	World	60512	4
41	Metalmospheres	World	60030-52	9
42	Metalmospheres Small	World	60030-53	6
43	Wind Chimes	World	60030-54	6
44	Wind Chimes	World	60511	8
45	Chimes	World	60310	3
46	Wood Tree	World	60030-55	7
47	Mini Cymbal	World	60317	6
48	Ratchet	World	60030-71	7
49	Broom	World	60030-68	8
50	Flexaton	World	60518a	3
51	Devil Chaser	World	60030-69	6
52	Lotus Flute	World	60323	5
53	Benzasard	World	60030-67	7
54	Spinner Large	World	60030-74	5
55	Spinner Medium	World	60030-75	8
56	Spinner Small	World	60030-76	7
57	Spinning Tube	World	60030-77	5
58	Saw Sounding	World	60030-57	9
59	Tinkerbell	FX	90112	5

Key	Nr.	Prg. 0 Standard Kit	Prg. 1 Standard Kit	Prg. 2 Standard Kit	Prg. 3 Standard Kit	Prg. 4 Standard Kit	Prg. 5 Standard Kit	Prg. 6 Standard Kit	Prg. 7 Standard Kit
G	7	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	8	Dance Kick	♪	♪	♪	♪	♪	♪	♪
A	9	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	10	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	11	Dance Kick	♪	♪	♪	♪	♪	♪	♪
C	12	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	13	Surdo Mute	♪	♪	♪	♪	♪	♪	♪
D	14	Surdo Open	♪	♪	♪	♪	♪	♪	♪
	15	Hi Q	♪	♪	♪	♪	♪	♪	♪
E	16	Whipe Slap	♪	♪	♪	♪	♪	♪	♪
F	17	Scratch	♪	♪	♪	♪	♪	♪	♪
	18	Scratch	♪	♪	♪	♪	♪	♪	♪
G	19	Finger Snap	♪	♪	♪	♪	♪	♪	♪
	20	Click Noise	♪	♪	♪	♪	♪	♪	♪
A	21	Metronom Click	♪	♪	♪	♪	♪	♪	♪
	22	Metronom Bell	♪	♪	♪	♪	♪	♪	♪
	23	Seq. Click	♪	♪	♪	♪	♪	♪	♪
C	24	Seq. Click	♪	♪	♪	♪	♪	♪	♪
	25	Brush Tap	♪	♪	♪	♪	♪	♪	♪
D	26	Brush Swirl	♪	♪	♪	♪	♪	♪	♪
	27	Brush Slap	♪	♪	♪	♪	♪	♪	♪
E	28	Brush Tap Swirl	♪	♪	♪	♪	♪	♪	♪
F	29	Snare Roll	♪	♪	♪	♪	♪	♪	♪
	30	Castagnet	♪	♪	♪	♪	♪	♪	♪
G	31	Snare soft LS Cravio.	Snare soft EZ GMS Piccolo	Snare soft EZ Roge.	Snare soft LS Bronze	Snare soft QA 5.5 Radio King	Snare soft LS SG	Snare soft CR	Snare soft QALatin
	32	Sticks	♪	Sticks	♪	♪	♪	♪	♪
A	33	Bass Drum LS Ludw.	Bass Drum EZGMS 2	Bass Drum EZ GMS	Bass Drum LS Studio	Bass Drum QA MAS	Bass Drum AD LL	Bass Drum Modern 1	Bass Drum QA Latin
	34	SnareVar. LS Cravio.	SnareVar. EZ GMS Piccolo	SnareVar. EZ Roge.	SnareVar. LS Bronze	SnareVar. QA 5.5 Radio King	SnareVar. LS SG	SnareVar. CR	SnareVar. QA Latin
	35	Bass Drum LS Ludw.	Bass Drum EZ GMS 2	Bass Drum EZ GMS	Bass Drum LS Studio	Bass Drum QA MAS	Bass Drum AD LL	Bass Drum Modern 2	Bass Drum QA Latin
C	36	Bass Drum LS Ludw.	Bass Drum EZ GMS 2	Bass Drum EZ GMS	Bass Drum LS Studio	Bass Drum QA MAS	Bass Drum AD LL	Bass Drum Modern 3	Bass Drum QA Latin
	37	Sidestick LS Cravio.	Sidestick EZB Piccolo	Sidestick EZ Roge.	Sidestick LS Bronze	Sidestick QA 5.5 Radio King	Sidestick LS SG	Sidestick CR	Sidestick QA Latin
D	38	Snare LS Cravio.	Snare EZB Piccolo	Snare EZ Roge	Snare LS Bronze	Snare QA 5.5 Radio King	Snare LS SG	Snare CR	Snare QA Latin
	39	Clap	♪	♪	♪	♪	♪	♪	♪
E	40	Snare Rimshot LS Cravio.	Snare Rimshot EZB Piccolo	Snare Rimshot EZ Roge.	Snare Rimshot LS Bronze	Snare RS QA 5.5 Radio King	Snare Rimshot LS SG	Snare Rimshot CR	Snare Rimshot QA Latin
F	41	Tom Low Low EZ GMS	♪	♪	♪	♪	♪	♪	♪
	42	HiHat closed (0)	♪	♪	♪	♪	♪	♪	♪
G	43	Tom Low EZ GMS	♪	♪	♪	♪	♪	♪	♪
	44	HiHat Pedal (0)	♪	♪	♪	♪	♪	♪	♪
A	45	Tom Medium L EZ GMS	♪	♪	♪	♪	♪	♪	♪
	46	HiHat open (0)	♪	♪	♪	♪	♪	♪	♪
	47	Tom Medium EZ GMS	♪	♪	♪	♪	♪	♪	♪
C	48	Tom High EZ GMS	♪	♪	♪	♪	♪	♪	♪
	49	Crash Cymbal 1	♪	♪	♪	♪	♪	♪	♪
D	50	Tom High High EZ GMS	♪	♪	♪	♪	♪	♪	♪
	51	Ride Cymbal 1 [Repetition]	♪	♪	♪	♪	♪	♪	♪
E	52	China Cymbal	♪	♪	♪	♪	♪	♪	♪
F	53	Ride Cup	♪	♪	♪	♪	♪	♪	♪
	54	Tambourin [Repetition]	♪	♪	♪	♪	♪	♪	♪
G	55	Splash Cymbal	♪	♪	♪	♪	♪	♪	♪
	56	Cowbell	♪	♪	♪	♪	♪	♪	♪
A	57	Crash Cymbal 2	♪	♪	♪	♪	♪	♪	♪
	58	Vibraslap	♪	♪	♪	♪	♪	♪	♪
C	59	Ride Cymbal 2 [Repetition]	♪	♪	♪	♪	♪	♪	♪
	60	Bongo high [Repetition]	♪	♪	♪	♪	♪	♪	♪
	61	Bongo low [Repetition]	♪	♪	♪	♪	♪	♪	♪
D	62	Conga mute [Repetition]	♪	♪	♪	♪	♪	♪	♪
	63	Conga open [Repetition]	♪	♪	♪	♪	♪	♪	♪

Key	Nr.	Prg. 0 - 7
E	64	Conga low [Repetition]
F	65	Timbale high [Repetition]
A	66	Timbale low [Repetition]
G	67	Agogo high [Repetition]
	68	Agogo low [Repetition]
A	69	Cabasa [Repetition]
	70	Maracas [Repetition]
	71	Whistle
C	72	Whistle
	73	Guiro short
D	74	Guiro long
	75	Claves
E	76	Woodblock low
F	77	Woodblock hi
	78	Cuica mute
G	79	Cuica open
	80	Triangle mute (5)
A	81	Triangle open (5)
	82	Shaker
	83	Jingle Bell
C	84	Chimes
	85	Tamburin Hit 1
D	86	Tamburin Hit 2
	87	Tamburin Hit 3
E	88	Tamburin Hit 4
F	89	E-Snare
	90	E-Snare
G	91	E-Snare
	92	E-Snare
A	93	E-Snare
	94	E-Snare
	95	E-Snare
C	96	E-Snare
	97	E-Snare
D	98	E-Snare
	99	E-Snare
E	100	E-Snare
F	101	E-Snare
	102	E-Snare
G	103	E-Snare
	104	E-Claps
A	105	E-Claps
	106	E-Claps
	107	E-Claps
C	108	E-Claps
	109	Claps Hit 1
D	110	Claps Hit 2
	111	Claps Hit 3
E	112	Claps Hit 4
F	113	Stomp 1
	114	Stomp 2
G	115	Stomp 3
	116	Reverse Stomp
A	117	Reverse Snare
	118	Reverse Clap
	119	Reverse BD
C	120	HiHat Open 1/2
	121	Cym. Crash NL
D	122	Cym. Ride NL
	123	Cym. Cup NL
E	124	Cym. Splash NL
	125	Reverse Cym.

Left section (Nr. 7–63):

	Nr.	Prg. 8 Overhead Kit	Prg. 9 Overhead Kit	Prg. 10 Overhead Kit	Prg. 11 Overhead Kit	Prg. 12 Overhead Kit	Prg. 13 Overhead Kit	Prg. 14 Overhead Kit	Prg. 15 Overhead Kit
G	7	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	8	Dance Kick	♪	♪	♪	♪	♪	♪	♪
A	9	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	10	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	11	Dance Kick	♪	♪	♪	♪	♪	♪	♪
C	12	Dance Kick	♪	♪	♪	♪	♪	♪	♪
	13	Surdo Mute	♪	♪	♪	♪	♪	♪	♪
D	14	Surdo Open	♪	♪	♪	♪	♪	♪	♪
	15	Hi Q	♪	♪	♪	♪	♪	♪	♪
E	16	Whip Slap	♪	♪	♪	♪	♪	♪	♪
F	17	Scratch	♪	♪	♪	♪	♪	♪	♪
	18	Scratch	♪	♪	♪	♪	♪	♪	♪
G	19	Finger Snap	♪	♪	♪	♪	♪	♪	♪
	20	Click Noise	♪	♪	♪	♪	♪	♪	♪
A	21	Metronom Click	♪	♪	♪	♪	♪	♪	♪
	22	Metronom Bell	♪	♪	♪	♪	♪	♪	♪
	23	Seq. Click	♪	♪	♪	♪	♪	♪	♪
C	24	Seq. Click	♪	♪	♪	♪	♪	♪	♪
	25	Brush Tap	♪	♪	♪	♪	♪	♪	♪
D	26	Brush Swirl	♪	♪	♪	♪	♪	♪	♪
	27	Brush Slap	♪	♪	♪	♪	♪	♪	♪
E	28	Brush Tap Swirl	♪	♪	♪	♪	♪	♪	♪
F	29	Snare Roll	♪	♪	♪	♪	♪	♪	♪
	30	Castagnet	♪	♪	♪	♪	♪	♪	♪
G	31	Snare soft QA 12x15 WFL	Snare soft QA 4x14SW	Snare soft QA 4x15 Ludw.	Snare soft QA 5x14 Leedy	Snare soft QA 5x14 Ludwig	Snare soft QA 6.5x14 Lud.	Snare soft QA Black Beauty	Snare soft QA 7x14 Radio K.
	32	Sticks	♪	♪	♪	♪	♪	♪	♪
A	33	Bass Drum EZ GMS	Bass Drum EZ GMS 2	Bass Drum LS Ludw.	Bass Drum AD LL	Bass Drum QA Latin	Bass Drum AD Tam.	Bass Drum LS IC	Bass Drum LS Studio
	34	SnareVar. QA 12x15 WFL	SnareVar. QA 4x14SW	SnareVar. QA 4x15 Ludw.	SnareVar. QA 5x14 Leedy	SnareVar. QA 5x14 Ludw.	SnareVar. QA 6.5x14 Lud.	SnareVar. QA Black Beauty	SnareVar. QA 7x14 Radio K.
	35	Bass Drum EZ GMS	Bass Drum EZ GMS 2	Bass Drum LS Ludw.	Bass Drum AD LL	Bass Drum QA Latin	Bass Drum AD Tam.	Bass Drum LS IC	Bass Drum LS Studio
C	36	Bass Drum EZ GMS	Bass Drum EZ GMS 2	Bass Drum LS Ludw.	Bass Drum AD LL	Bass Drum QA Latin	Bass Drum AD Tam.	Bass Drum LS IC	Bass Drum LS Studio
	37	Sidestick QA 12x15 WFL	Sidestick QA 4x14SW	Sidestick QA 4x15 Ludw.	Sidestick QA 5x14 Leedy	Sidestick QA 5x14 Ludw.	Sidestick QA 6.5x14 Lud.	Sidestick QA Black Beauty	Sidestick QA 7x14 Radio K.
D	38	Snare QA 12x15 WFL	Snare QA 4x14SW	Snare QA 4x15 Ludw.	Snare QA 5x14 Leedy	Snare QA 5x14 Ludw.	Snare QA 6.5x14 Lud.	Snare QA Black Beauty	Snare QA 7x14 Radio K.
	39	Clap	♪	♪	♪	♪	♪	♪	♪
E	40	Snare RS QA 12x15 WFL	Snare Rimshot QA 4x14SW	Snare RS QA 4x15 Ludw.	Snare RS QA 5x14 Leedy	Snare RS QA 5x14 Ludw.	Snare RS QA 6.5x14 Lud.	Snare RS QA Black Beauty	Snare RS QA 7x14 Radio K.
F	41	Tom Low EZ GMS Overhead	♪	♪	♪	♪	♪	♪	♪
	42	HiHat closed (0)	♪	♪	♪	♪	♪	♪	♪
G	43	Tom Low EZ GMS Overhead	♪	♪	♪	♪	♪	♪	♪
	44	HiHat Pedal (0)	♪	♪	♪	♪	♪	♪	♪
A	45	Tom M. L. EZ GMS Overhead	♪	♪	♪	♪	♪	♪	♪
	46	HiHat open (0)	♪	♪	♪	♪	♪	♪	♪
G	47	Tom M. EZ GMS Overhead	♪	♪	♪	♪	♪	♪	♪
C	48	Tom High EZ GMS Overhead	♪	♪	♪	♪	♪	♪	♪
	49	Cash Cymbal 1	♪	♪	♪	♪	♪	♪	♪
D	50	Tom High High EZ GMS Ov.	♪	♪	♪	♪	♪	♪	♪
	51	Ride Cymbal 1 [Repetition]	♪	♪	♪	♪	♪	♪	♪
E	52	China Cymbal	♪	♪	♪	♪	♪	♪	♪
F	53	Ride Cup	♪	♪	♪	♪	♪	♪	♪
	54	Tambourin [Repetition]	♪	♪	♪	♪	♪	♪	♪
G	55	Splash Cymbal	♪	♪	♪	♪	♪	♪	♪
	56	Cowbell	♪	♪	♪	♪	♪	♪	♪
A	57	Crash Cymbal 2	♪	♪	♪	♪	♪	♪	♪
	58	Vibraslap	♪	♪	♪	♪	♪	♪	♪
C	59	Ride Cymbal 2 [Repetition]	♪	♪	♪	♪	♪	♪	♪
	60	Bongo high [Repetition]	♪	♪	♪	♪	♪	♪	♪
	61	Bongo low [Repetition]	♪	♪	♪	♪	♪	♪	♪
D	62	Conga mute [Repetition]	♪	♪	♪	♪	♪	♪	♪
	63	Conga open [Repetition]	♪	♪	♪	♪	♪	♪	♪

Right section (Prg. 8 – 15, Nr. 64–125):

	Nr.	Prg. 8 - 15
E	64	Conga low [Repetition]
F	65	Timbale high [Repetition]
A	66	Timbale low [Repetition]
G	67	Agogo high [Repetition]
	68	Agogo low [Repetition]
A	69	Cabasa [Repetition]
	70	Maracas [Repetition]
	71	Whistle
C	72	Whistle
	73	Guiro short
D	74	Guiro long
	75	Claves
E	76	Woodblock low
F	77	Woodblock hi
	78	Cuica mute
G	79	Cuica open
	80	Triangle mute (5)
A	81	Triangle open (5)
	82	Shaker
	83	Jingle Bell
C	84	Chimes
	85	Tamburin Hit 1
D	86	Tamburin Hit 2
	87	Tamburin Hit 3
E	88	Tamburin Hit 4
F	89	E-Snare
	90	E-Snare
G	91	E-Snare
	92	E-Snare
A	93	E-Snare
	94	E-Snare
	95	E-Snare
	96	E-Snare
C	97	E-Snare
D	98	E-Snare
	99	E-Snare
E	100	E-Snare
F	101	E-Snare
	102	E-Snare
G	103	E-Snare
	104	E-Claps
A	105	E-Claps
	106	E-Claps
	107	E-Claps
C	108	E-Claps
	109	Claps Hit 1
D	110	Claps Hit 2
	111	Claps Hit 3
E	112	Claps Hit 4
F	113	Stomp 1
	114	Stomp 2
G	115	Stomp 3
	116	Reverse Stomp
A	117	Reverse Snare
	118	Reverse Clap
	119	Reverse BD
C	120	HiHat Open 1/2
	121	Cym. Crash NL
D	122	Cym. Ride NL
	123	Cym. Cup NL
E	124	Cym. Splash NL
	125	Reverse Cym.

Table 1 (Nr. 7 – 63)

	Nr.	Prg. 16 Power Kit	Prg. 17 Power Kit	Prg. 18 Power Kit	Prg. 19 Power Kit
G	7	Dance Kick	♪	♪	♪
	8	Dance Kick	♪	♪	♪
A	9	Dance Kick	♪	♪	♪
	10	Dance Kick	♪	♪	♪
	11	Dance Kick	♪	♪	♪
C	12	Dance Kick	♪	♪	♪
	13	Surdo Mute	♪	♪	♪
D	14	Surdo Open	♪	♪	♪
	15	Hi Q	♪	♪	♪
E	16	Whipe Slap	♪	♪	♪
F	17	Scratch	♪	♪	♪
	18	Scratch	♪	♪	♪
G	19	Finger Snap	♪	♪	♪
	20	Click Noise	♪	♪	♪
A	21	Metronom Click	♪	♪	♪
	22	Metronom Bell	♪	♪	♪
	23	Seq. Click	♪	♪	♪
C	24	Seq. Click	♪	♪	♪
	25	Brush Tap	♪	♪	♪
D	26	Brush Swirl	♪	♪	♪
	27	Brush Slap	♪	♪	♪
E	28	Brush Tap Swirl	♪	♪	♪
F	29	Snare Roll	♪	♪	♪
	30	Castagnet	♪	♪	♪
G	31	Snare soft AD Sono	Snare soft LS Ludw.	Snare soft QA Gadd Power	Snare soft QA Gadd Power
	32	Sticks	♪	♪	♪
A	33	Bass Drum AD Tama	Bass Drum QA Gadd	Bass Drum LS Ludwig	Bass Drum AD LL
	34	SnareVar. AD Sonor	SnareVar. LS Ludw.	SnareVar. QA Gadd Power	SnareVar. QA Gadd Power
	35	Bass Drum AD Tama	Bass Drum QA Gadd	Bass Drum LS Ludwig	Bass Drum AD LL
C	36	Bass Drum AD Tama	Bass Drum QA Gadd	Bass Drum LS Ludwig	Bass Drum AD LL
	37	Sidestick AD Sono	Sidestick LS Ludw.	Sidestick QA Gadd Power	Sidestick QA Gadd Power
D	38	Snare AD Sono	Snare LS Ludw.	Snare QA Gadd Power	Snare QA Gadd Power
	39	Clap	♪	♪	♪
E	40	Snare Rimshot AD Sono	Snare Rimshot LS Ludw.	Snare RS QA Gadd Power	Snare RS QA Gadd Power
F	41	Tom Low SG	♪	♪	♪
	42	HiHat closed (0)	♪	♪	♪
G	43	Tom Low SG	♪	♪	♪
	44	HiHat Pedal (0)	♪	♪	♪
A	45	Tom M. L. SG	♪	♪	♪
	46	HiHat open (0)	♪	♪	♪
	47	Tom M. SG	♪	♪	♪
C	48	Tom High SG	♪	♪	♪
	49	Crash Cymbal 1	♪	♪	♪
D	50	Tom High High SG	♪	♪	♪
	51	Ride Cymbal 1 [Repetition]	♪	♪	♪
E	52	China Cymbal	♪	♪	♪
F	53	Ride Cup	♪	♪	♪
	54	Tambourin [Repetition]	♪	♪	♪
G	55	Splash Cymbal	♪	♪	♪
	56	Cowbell Rock	Cowbell Rock	Cowbell Rock	Cowbell Rock
A	57	Crash Cymbal 2	♪	♪	♪
	58	Vibraslap	♪	♪	♪
	59	Ride Cymbal 2 [Repetition]	♪	♪	♪
C	60	Bongo high [Repetition]	♪	♪	♪
	61	Bongo low [Repetition]	♪	♪	♪
D	62	Conga mute [Repetition]	♪	♪	♪
	63	Conga open [Repetition]	♪	♪	♪

Table 2 (Nr. 64 – 125)

	Nr.	Prg. 16 - 19
E	64	Conga low [Repetition]
F	65	Timbale high [Repetition]
	66	Timbale low [Repetition]
G	67	Agogo high [Repetition]
	68	Agogo low [Repetition]
A	69	Cabasa [Repetition]
	70	Maracas [Repetition]
	71	Whistle
C	72	Whistle
	73	Guiro short
D	74	Guiro long
	75	Claves
E	76	Woodblock low
F	77	Woodblock hi
	78	Cuica mute
G	79	Cuica open
	80	Triangle mute (5)
A	81	Triangle open (5)
	82	Shaker
	83	Jingle Bell
C	84	Chimes
	85	Tamburin Hit 1
D	86	Tamburin Hit 2
	87	Tamburin Hit 3
E	88	Tamburin Hit 4
F	89	E-Snare
	90	E-Snare
G	91	E-Snare
	92	E-Snare
A	93	E-Snare
	94	E-Snare
	95	E-Snare
C	96	E-Snare
	97	E-Snare
D	98	E-Snare
	99	E-Snare
E	100	E-Snare
F	101	E-Snare
	102	E-Snare
G	103	E-Snare
	104	E-Claps
A	105	E-Claps
	106	E-Claps
	107	E-Claps
C	108	E-Claps
	109	Claps Hit 1
D	110	Claps Hit 2
	111	Claps Hit 3
E	112	Claps Hit 4
F	113	Stomp 1
	114	Stomp 2
G	115	Stomp 3
	116	Reverse Stomp
A	117	Reverse Snare
	118	Reverse Clap
	119	Reverse BD
C	120	HiHat Open 1/2
	121	Cym. Crash NL
D	122	Cym. Ride NL
	123	Cym. Cup NL
E	124	Cym. Splash NL
	125	Reverse Cym.

Note	Nr.	Prg. 24 Dance Kit	Prg. 25 Electro Kit	Prg. 26 808/909 Kit	Prg. 27 909 Kit	Prg. 28 Analog Kit	Prg. 29 Dance Kit	Prg. 30 Dance Kit	Prg. 31 House Kit
G	7	E-Kick	♪	♪	♪	♪	♪	♪	♪
	8	E-Kick	♪	♪	♪	♪	♪	♪	♪
A	9	E-Kick	♪	♪	♪	♪	♪	♪	♪
	10	E-Kick	♪	♪	♪	♪	♪	♪	♪
	11	E-Kick	♪	♪	♪	♪	♪	♪	♪
C	12	E-Kick	♪	♪	♪	♪	♪	♪	♪
	13	E-Kick	♪	♪	♪	♪	♪	♪	♪
D	14	E-Kick	♪	♪	♪	♪	♪	♪	♪
	15	Hi Q	♪	♪	♪	♪	♪	♪	♪
E	16	Whipe Slap	♪	♪	♪	♪	♪	♪	♪
F	17	Scratch	♪	♪	♪	♪	♪	♪	♪
	18	Scratch	♪	♪	♪	♪	♪	♪	♪
G	19	Finger Snap	♪	♪	♪	♪	♪	♪	♪
	20	Click Noise	♪	♪	♪	♪	♪	♪	♪
A	21	Metronom Click	♪	♪	♪	♪	♪	♪	♪
	22	Metronom Bell	♪	♪	♪	♪	♪	♪	♪
	23	Seq. Click	♪	♪	♪	♪	♪	♪	♪
C	24	Seq. Click	♪	♪	♪	♪	♪	♪	♪
	25	E-Kick	♪	♪	♪	♪	♪	♪	♪
D	26	E-Kick	♪	♪	♪	♪	♪	♪	♪
	27	E-Kick	♪	♪	♪	♪	♪	♪	♪
E	28	E-Kick	♪	♪	♪	♪	♪	♪	♪
F	29	E-Kick	♪	♪	♪	♪	♪	♪	♪
	30	E-Kick	♪	♪	♪	♪	♪	♪	♪
G	31	Elec Snare	♪	♪	♪	♪	♪	♪	♪
	32	E-Kick	♪	♪	♪	♪	♪	♪	♪
A	33	E-Kick	♪	♪	♪	♪	♪	♪	♪
	34	Elec Snare	♪	♪	♪	♪	♪	♪	♪
	35	Dance BD	Elec BD	909 BD	909 BD	606 BD	Dance BD	Dance BD	Dance BD
C	36	Dance BD	Elec BD	808 BD	909 BD	80 BD	Dance BD	Dance BD	Dance BD
	37	Rim 808	Rim 808	808 Rim	909 Rim	606 Rim	909 Rim	909 Rim	909 Rim
D	38	Elec Snare 1	Elec Snare	808 Snare	909 Snare	Snare 80	Dance Snare	Dance Snare	Dance Snare
	39	Clap 808	Clap 808	Clap 808	Clap 808	Clap 80	Hit Clap	Hit Clap	Hit Clap
E	40	Elec Snare 2	Elec Snare 2	909 Snare	909 Snare	Snare 85	Dance Snare	Dance Snare	Dance Snare
F	41	Elec Tom909	Elec Tom 80 Lin.	808 Tom	909 Tom	Tom 85	909 Tom	909 Tom	909 Tom
	42	HH 909	HH elec	808 HHat cl.	909 HHat cl.	HHat cl. 85	909 HHat cl.	909 HHat cl.	909 HHat cl.
G	43	Elec Tom909	Elec Tom 80 Lin.	808 Tom	909 Tom	Tom 85	909 Tom	909 Tom	909 Tom
	44	HH 909	HH elec	808 HHat P.	909 HHat P.	HHat cl. 85	909 HHat e.	909 HHat e.	909 HHat e.
A	45	Elec Tom909	Elec Tom 80 Lin.	808 Tom	909 Tom	Tom 85	909 Tom	909 Tom	909 Tom
	46	HH 909	HH elec	808 HH. op.	909 HH. op.	HHat cl. 85	909 HH. op.	909 HH. op.	909 HH. op.
	47	Elec Tom909	Elec Tom 80 Lin.	808 Tom	909 Tom	Tom 85	909 Tom	909 Tom	909 Tom
C	48	Elec Tom909	Elec Tom 80 Lin.	808 Tom	909 Tom	Tom 85	909 Tom	909 Tom	909 Tom
	49	E-Crash 909	Crash 909	808 Cym	909 Cym	808 Cym	808 Cym	808 Cym	808 Cym
D	50	Elec Tom909	Elec Tom 80 Lin.	808 Tom	90 Tom	Tom 85	90 Tom	90 Tom	90 Tom
	51	E-Ride 909	♪	♪	♪	♪	♪	♪	♪
E	52	E-China	♪	♪	♪	♪	♪	♪	♪
F	53	E-Cup 66	♪	♪	♪	♪	♪	♪	♪
	54	E-Tamb. 77	♪	♪	♪	♪	♪	♪	♪
G	55	E-Splash Cymbal	♪	♪	♪	♪	♪	♪	♪
	56	E-Cowbell	♪	♪	♪	♪	♪	♪	♪
A	57	E-Crash Cymbal 2	♪	♪	♪	♪	♪	♪	♪
	58	E-Vibraslap	♪	♪	♪	♪	♪	♪	♪
	59	E-Ride Cymbal 2	♪	♪	♪	♪	♪	♪	♪
C	60	E-Bongo high	♪	♪	♪	♪	♪	♪	♪
	61	E-Bongo low	♪	♪	♪	♪	♪	♪	♪
D	62	E-Conga mute	♪	♪	♪	♪	♪	♪	♪
	63	E-Conga open	♪	♪	♪	♪	♪	♪	♪

Note	Nr.	Prg. 24 - 31
E	64	E-Conga low
F	65	E-Timbale high
	66	E-Timbale low
G	67	E-Agogo high
	68	E-Agogo low
A	69	E-Cabasa
	70	E-Maracas
	71	E-Whistle
C	72	E-Whistle
	73	E-Guiro short
D	74	E-Guiro long
	75	E-Claves
E	76	E-Woodblock low
F	77	E-Woodblock hi
	78	E-Cuica mute
G	79	E-Cuica open
	80	E-Triangle mute
A	81	E-Triangle open
	82	E-Shaker
	83	E-Jingle Bell
C	84	E-Chimes
	85	Tamburin Hit 1
D	86	Tamburin Hit 2
	87	Tamburin Hit 3
E	88	Tamburin Hit 4
F	89	E-Snare
	90	E-Snare
G	91	E-Snare
	92	E-Snare
A	93	E-Snare
	94	E-Snare
	95	E-Snare
C	96	E-Snare
	97	E-Snare
D	98	E-Snare
	99	E-Snare
E	100	E-Snare
F	101	E-Snare
	102	E-Snare
G	103	E-Snare
	104	E-Claps
A	105	E-Claps
	106	E-Claps
	107	E-Claps
C	108	E-Claps
	109	E-Claps
D	110	E-Claps
	111	E-Claps
E	112	E-Claps
F	113	E-Claps
	114	E-Claps
G	115	E-Claps
	116	E-Claps
A	117	E-Claps
	118	E-Claps
	119	E-Claps
C	120	E-Claps
	121	Cym. Crash NL
D	122	Cym. Ride NL
	123	Cym. Cup NL
E	124	Cym. Splash NL
	125	Reverse Cym.

Note	Nr	Prg. 32 Jazz Kit	Prg. 33 Jazz Kit	Prg. 34 Jazz Kit	Prg. 35 Jazz Kit
G	7	Dance Kick	~	~	~
	8	Dance Kick	~	~	~
A	9	Dance Kick	~	~	~
	10	Dance Kick	~	~	~
	11	Dance Kick	~	~	~
C	12	Dance Kick	~	~	~
	13	Surdo Mute	~	~	~
D	14	Surdo Open	~	~	~
	15	Hi Q	~	~	~
E	16	Whipe Slap	~	~	~
F	17	Scratch	~	~	~
	18	Scratch	~	~	~
G	19	Finger Snap	~	~	~
	20	Click Noise	~	~	~
A	21	Metronom Click	~	~	~
	22	Metronom Bell	~	~	~
	23	Seq. Click	~	~	~
C	24	Seq. Click	~	~	~
	25	Brush Tap	~	~	~
D	26	Brush Swirl	~	~	~
	27	Brush Slap	~	~	~
E	28	Brush Tap Swirl	~	~	~
F	29	Snare Roll	~	~	~
	30	Castagnet	~	~	~
G	31	Snare soft LS Ludw.	Snare soft Monti.	Snare soft QAVintage	Snare soft714 Slinger
	32	Sticks	~	~	~
A	33	Bass Drum AD Prem.	Bass DrumYam.	Bass Drum LS Ludw.	Bass Drum GMSopen
	34	SnareVar. LS Ludw.	SnareVar. Monti.	SnareVar. QAVintage	SnareVar. 714 Slinger
	35	Bass Drum AD Prem.	Bass DrumYam.	Bass Drum LS Ludw.	Bass Drum GMSopen
C	36	Bass Drum AD Prem.	Bass DrumYam.	Bass Drum LS Ludw.	Bass Drum GMSopen
	37	Sidestick LS Ludw.	Sidestick Monti.	Sidestick QAVintage	Sidestick714 Slinger
D	38	Snare LS Ludw.	Snare Monti.	Snare QAVintage	Snare 714 Slinger
	39	Clap	~	~	~
E	40	Snare Rimshot LS Ludw.	Snare Rimshot Monti.	Snare Rimshot QAVintage	Snare Rimshot714 Slinger
F	41	Tom Low Low Jazz	~	~	~
	42	HiHat closed (0)	~	~	~
G	43	Tom Low Jazz	~	~	~
	44	HiHat Pedal (0)	~	~	~
A	45	Tom Medium L. Jazz	~	~	~
	46	HiHat open (0)	~	~	~
	47	Tom Medium EZ Jazz	~	~	~
C	48	Tom High Jazz	~	~	~
	49	Crash Cymbal 1	~	~	~
D	50	Tom High High Jazz	~	~	~
	51	Ride Cymbal 1 [Repetition]	~	~	~
E	52	China Cymbal	~	~	~
F	53	Ride Cup	~	~	~
	54	Tambourin [Repetition]	~	~	~
G	55	Splash Cymbal	~	~	~
	56	Cowbell	~	~	~
A	57	Crash Cymbal 2	~	~	~
	58	Vibraslap	~	~	~
C	59	Ride Cymbal 2 [Repetition]	~	~	~
	60	Bongo high [Repetition]	~	~	~
	61	Bongo low [Repetition]	~	~	~
D	62	Conga mute [Repetition]	~	~	~
	63	Conga open [Repetition]	~	~	~

Note	Nr	Prg. 40 Brush Kit	Prg. 41 Brush Kit
G	7	Snare Brush LS Monti.	Snare Brush LS Monti.
	8	Snare Brush LS Monti.	Snare Brush LS Monti.
A	9	Snare Brush LS Monti.	Snare Brush LS Monti.
	10	Snare Brush LS Monti.	Snare Brush LS Monti.
	11	Snare Brush LS Monti.	Snare Brush LS Monti.
C	12	Snare Brush LS Monti.	Snare Brush LS Monti.
	13	Surdo Mute	~
D	14	Surdo Open	~
	15	Hi Q	~
E	16	Whipe Slap	~
F	17	Scratch	~
	18	Scratch	~
G	19	Finger Snap	~
	20	Click Noise	~
A	21	Metronom Click	~
	22	Metronom Bell	~
	23	Seq. Click	~
C	24	Seq. Click	~
	25	Snare Brush LS Monti.	Snare Brush LS Monti.
D	26	Snare Brush LS Monti.	Snare Brush LS Monti.
	27	Snare Brush LS Monti.	Snare Brush LS Monti.
E	28	Snare Brush LS Monti.	Snare Brush LS Monti.
F	29	Snare Brush LS Monti.	Snare Brush LS Monti.
	30	Snare Brush LS Monti.	Snare Brush LS Monti.
G	31	Snare Brush LS Monti.	Snare Brush LS Monti.
	32	Sticks	Sticks
A	33	Bass Drum AD Prem.	Bass DrumYam.
	34	SnareVar. Brush LS Monti.	SnareVar. Brush LS Monti.
	35	Bass Drum AD Prem.	Bass DrumYam.
C	36	Bass Drum AD Prem.	Bass DrumYam.
	37	Sidestick Brush LS Monti.	Sidestick Brush LS Monti.
D	38	Snare Brush LS Monti.	Snare Brush LS Monti.
	39	Clap	~
E	40	Snare RS Brush LS Monti.	Snare RS Brush LS Monti.
F	41	Tom Low Low Brush	~
	42	HiHat closed (0)	~
G	43	Tom Low Brush	~
	44	HiHat Pedal (0)	~
A	45	Tom Medium Brush	~
	46	HiHat open (0)	~
	47	Tom Medium Brush	~
C	48	Tom High Brush	~
	49	Brush Crash Cymbal 1	~
D	50	Tom High High Brush	~
	51	Brush Ride Cymbal 1 [Repe.]	~
E	52	China Cymbal	~
F	53	Brush Ride Cup	~
	54	Tambourin [Repetition]	~
G	55	Splash Cymbal	~
	56	Cowbell	~
A	57	Brush Crash Cymbal 2	~
	58	Vibraslap	~
C	59	Brush Ride Cymbal 2 [Repe.]	~
	60	Bongo high [Repetition]	~
	61	Bongo low [Repetition]	~
D	62	Conga mute [Repetition]	~
	63	Conga open [Repetition]	~

Note	Nr	Prg. 32-41
E	64	Conga low [Repetition]
F	65	Timbale high [Repetition]
	66	Timbale low [Repetition]
G	67	Agogo high [Repetition]
	68	Agogo low [Repetition]
A	69	Cabasa [Repetition]
	70	Maracas [Repetition]
	71	Whistle
C	72	Whistle
	73	Guiro short
D	74	Guiro long
	75	Claves
E	76	Woodblock low
F	77	Woodblock hi
	78	Cuica mute
G	79	Cuica open
	80	Triangle mute(5)
A	81	Triangle open(5)
	82	Shaker
	83	Jingle Bell
C	84	Chimes
	85	Tamburin Hit 1
D	86	Tamburin Hit 2
	87	Tamburin Hit 3
E	88	Tamburin Hit 4
F	89	E-Snare
	90	E-Snare
G	91	E-Snare
	92	E-Snare
A	93	E-Snare
	94	E-Snare
	95	E-Snare
C	96	E-Snare
	97	E-Snare
D	98	E-Snare
	99	E-Snare
E	100	E-Snare
F	101	E-Snare
	102	E-Snare
G	103	E-Snare
	104	E-Claps
A	105	E-Claps
	106	E-Claps
	107	E-Claps
C	108	E-Claps
	109	Claps Hit 1
D	110	Claps Hit 2
	111	Claps Hit 3
E	112	Claps Hit 4
F	113	Stomp 1
	114	Stomp 2
G	115	Stomp 3
	116	Reverse Stomp
A	117	Reverse Snare
	118	Reverse Clap
	119	Reverse BD
C	120	HiHat Open 1/2
	121	Cym. Crash NL
D	122	Cym. Ride NL
	123	Cym. Cup NL
E	124	Cym. Splash NL
	125	Reverse Cym.

Prg. 48 Orchestra

Note	Nr.	Name
G	7	-
	8	Gran Casa
A	9	Gran Casa
	10	Gran Casa
	11	Gran Casa
C	12	Gran Casa
	13	Gran Casa
D	14	Gran Casa
	15	Gran Casa
E	16	Gran Casa
F	17	GC. forte
	18	GC. forte
G	19	GC. medium
	20	GC. piano
A	21	-
	22	-
	23	Gong
C	24	-
	25	-
D	26	-
	27	Closed HH
E	28	Pedal Ped.
F	29	Open HH.
	30	Ride Cymbal
G	31	Ride Cymbal
	32	-
A	33	-
	34	-
	35	Gran Casa
C	36	Gran Casa
	37	-
D	38	Concert Sn.
	39	Castanets
E	40	Concert Sn.
F	41	Timpani
	42	Timpani
G	43	Timpani
	44	Timpani
A	45	Timpani
	46	Timpani
	47	Timpani
C	48	Timpani
	49	Timpani
D	50	Timpani
	51	Timpani
E	52	Timpani
F	53	Timpani
	54	Tamburin
G	55	Concert Cy.
	56	Concert Cy.
A	57	Concert Cy.
	58	Concert Cy.
	59	Concert Cy.
C	60	Concert Cy.
	61	Concert Cy.
D	62	Concert Cy.
	63	Concert Cy.
E	64	Concert Cy.
F	65	Concert Cy.
	66	Cymbal Roll
G	67	Castanet 1
	68	Castanet 2
A	69	Castanet Roll
	70	-
	71	-
C	72	Triangle op.
	73	Triangle mute
D	74	Triangle roll
	75	-
E	76	-
F	77	Wind. dwn.
	78	Wind. up
G	79	-
	80	-
A	81	Tambourin
	82	Tambourin
	83	Tambourin Roll
C	84	-
	85	-
D	86	-
	87	-
E	88	Applaus
F	89	C. Snare pp
	90	C. Snare p
G	91	C. Snare mp
	92	C. Snare mf
A	93	C. Snare f
	94	C. Snare ff
	95	C. Snare pp
C	96	C. Snare p
	97	C. Snare mp
D	98	C. Snare mf
	99	C. Snare f
E	100	C. Snare ff
F	101	Snare Roll p
	102	Snare Roll p
G	103	Snare Roll m
	104	Snare Roll m
A	105	Snare Roll f
	106	Snare Roll f
	107	Snare Ro.dyn
C	108	Snare Ro.dyn
	109	Snare Ro.dyn
D	110	Snare Ro.dyn
	111	Snare Ro.dyn
E	112	Opera Gong
F	113	Opera Gong
	114	Opera Gong
G	115	Opera Gong
	116	Opera Gong
A	117	Opera Gong
	118	Opera Gong
	119	Opera Gong
C	120	Opera Gong
	121	Opera Gong
D	122	Opera Gong
	123	Opera Gong
E	124	Intro Tune

Prg. 58 Voice Kit

Note	Nr.	Name
G	7	-
	8	-
A	9	-
	10	-
	11	-
C	12	-
	13	-
D	14	-
	15	-
E	16	-
F	17	Breath 1
	18	Breath 2
G	19	Finger Snaps
	20	Male Count: 'One'
A	21	Male Count: 'Two'
	22	Male Count: 'Three'
	23	Male Count: 'Four'
C	24	Male Count: 'a'
	25	Female Count: 'One'
D	26	Female Count: 'Two'
	27	Female Count: 'Three'
E	28	Female Count: 'Four'
F	29	Female Count: 'a'
	30	Vocal Bass Drum 3
G	31	Vocal Snare 4
	32	Vocal Rim Shot
A	33	Vocal Bass Drum 2
	34	Vocal Snare 3
	35	Vocal Bass Drum 1
C	36	Vocal Bass Drum
	37	Vocal Cross Stick
D	38	Vocal Snare 1
	39	Vocal Clap
E	40	Vocal Snare 2
F	41	Vocal Floor Tom
	42	Vocal Closed Hi Hat
G	43	Vocal Low Tom
	44	Vocal Pedal Hi Hat
A	45	Vocal Mid Tom 2
	46	Vocal Open Hi Hat
	47	Vocal Mid Tom 1
C	48	Vocal Hi Tom 2
	49	Vocal Crash Cymbal
D	50	Vocal High Tom 1
	51	Vocal Ride Cymbal
E	52	Male Ad Lib 1
F	53	Male Ad Lib 2
	54	Male Ad Lib 3
G	55	Male Ad Lib 4
	56	Male Ad Lib 5
A	57	Male Ad Lib 6
	58	Vibra Slap
	59	Male: Hmm Hmm
C	60	Female: „Next'
	61	Female: 'Here We Go'
D	62	Female: 'Play With Acc.'
	63	Female: 'Manual Play'
E	64	Female: 'Better L.- NextTime!'
F	65	Female: 'Please Pr.Any Pads'
	66	Female: 'Go'
G	67	Female: 'Ouch'
	68	Female: 'Uh Oh'
A	69	Female: 'Chuckle'
	70	Female: 'Oh Yeah'
	71	Female: 'Yep'
C	72	Female: „Fantastic! New..
	73	-
D	74	Breath 1
	75	Breath 2
E	76	-
F	77	-
	78	Vocal Cuica High
G	79	Vocal Cuica Low
	80	Male „All Right'
A	81	Male „Get Down'
	82	Male 'Chicka'
	83	Male 'Ku-Chi-Ka'
C	84	Male 'Everybody Come..
	85	Male 'Huh'
D	86	Male 'That's Good!'
	87	Male 'Owl'
E	88	Male 'Yeah!'
F	89	Male 'Ah'
	90	Male 'That's Bad'
G	91	Male 'HitThe Note'
	92	-
A	93	-

V3SOUND - MIDI IMPLEMENTATION

	Recognized	
Basic Default	1 - 16	
Mode	3 poly mode	
Messages		
Note number	* 12-109	* depends on sounds
Velocity Note ON	9nH,v=1-127 o	
Note OFF	9nH,v=0 x	
Key aftertouch	o	
Channel aftertouch	o	
Pitch Bend	0-12	
Bank Select	00	* value depends on sound board - see page 3-13
Controller	01 - Modulation	
	05 - Portamento time	
	06 - Data Entry	
	07 - Volume	
	10 - Panorama	
	11 - Expression	
	64 - Sustain	
	65 - Portamento	
	66 - Sostenuto	
	71 - Filter resonance	
	72 - ENVELOPE Release	
	73 - ENVELOPE Attack	
	74 - Filter cutoff	
	75 - ENVELOPE Decay	
	76 - Vibrato rate	
	77 - Vibrato depth	
	78 - Vibrato delay	

	84 - Portamento control	
	91 - Reverb send	
	93 - Chorus send	
	120 - All sound off	
	121 - Reset all controllers	
	123 - All note off	
	126 - Mono-mode	
	127 - Poly-mode	
RPN 0000H	BnH 65H 00H 64H 00H 06H vv	Pitch bend sensitive in semitone (default=2)
RPN 0001H Fine tune in cent	BnH 65H 00H 64H 01H 06H vv	vv=00 -100 vv=40H 0 vv=7FH +100
RPN 0002H Coarse tune half tone	BnH 65H 00H 64H 02H 06H vv	vv=00 -64 vv=40H 0 vv=7FH +64
NRPN 18rrH	BnH 63H 18H 62H rr 06H vv	Pitch coarse of perc. rr in semitone (vv=40H->no modif)
NRPN 1ArrH	BnH 63H 1AH 62H rr 06H vv	Level of perc. sound rr (vv=00 to 7FH)
NRPN 1CrrH	BnH 63H 1CH 62H rr 06H vv	Pan of perc. sound rr (40H = middle)
NRPN 1DrrH	BnH 63H 1DH 62H rr 06H vv	Reverb send level of perc rr (vv=00 to 7FH)
AUX AUDIO OUT (Reverb return is fixed in Main out)	BnH 63H 38H 62H rr 06H vv	rr = MIDI channel - CH1 = 00 CH2 = 01 vv = 0 MAIN 127=AUX Example :Set CH1 to AUX - send 3 MIDI controllers: For all parts with MIDI-channel 1 cc99 value 56 + cc98 value 00 + cc06 value 127
Program Change :	0-127	* depends on sound board
System Exclusive:		
SYSEX	F0H 7EH 7FH 09H 01H F7H	General MIDI Reset
SYSEX	F0H 7FH 7FH 04H 01H 00H II F7H	Master volume (II=0 to 127, default 127)
SYSEX DSP1	F0h,41h,00h,42h,12h,40h,7Fh,7Fh,xxh,00h,F7h xxh=Effect 00h=HALL1 01h=HALL2 02h=ROOM1 03h=ROOM2 04h=ROOM3" 05h=PLATE1 06h=PLATE2 07h=PLATE3 08h=CHORUS 09h=FLANGE 0Ah=DELAY1 0Bh=DELAY2 0Ch=CHORUS/ROOM1 0Dh=CHORUS/ROOM2 0Eh=VOCCANCEL 0Fh=ROTARY SPEAKER	
SYSEX DSP2	F0h,41h,00h,42h,12h,40h,01h,38h,xxh,00h,F7h	xxh=Effect 0h=CHORUS 1 01h=CHORUS 2 02h=CHORUS 3 03h=CHORUS 4 04h=FEEDBACK 05h=FLANGER 06h=SHORT DELAY 07h=FB DELAY