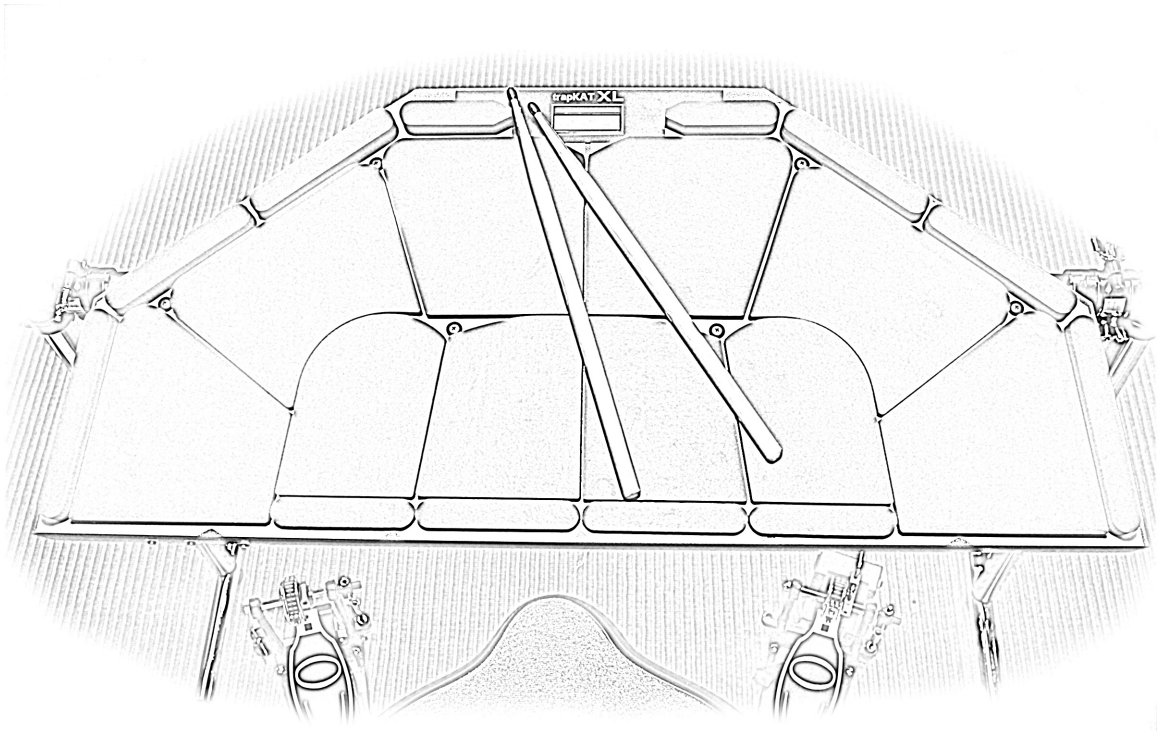
trapKAT 4

trapKAT 5KS

Manual



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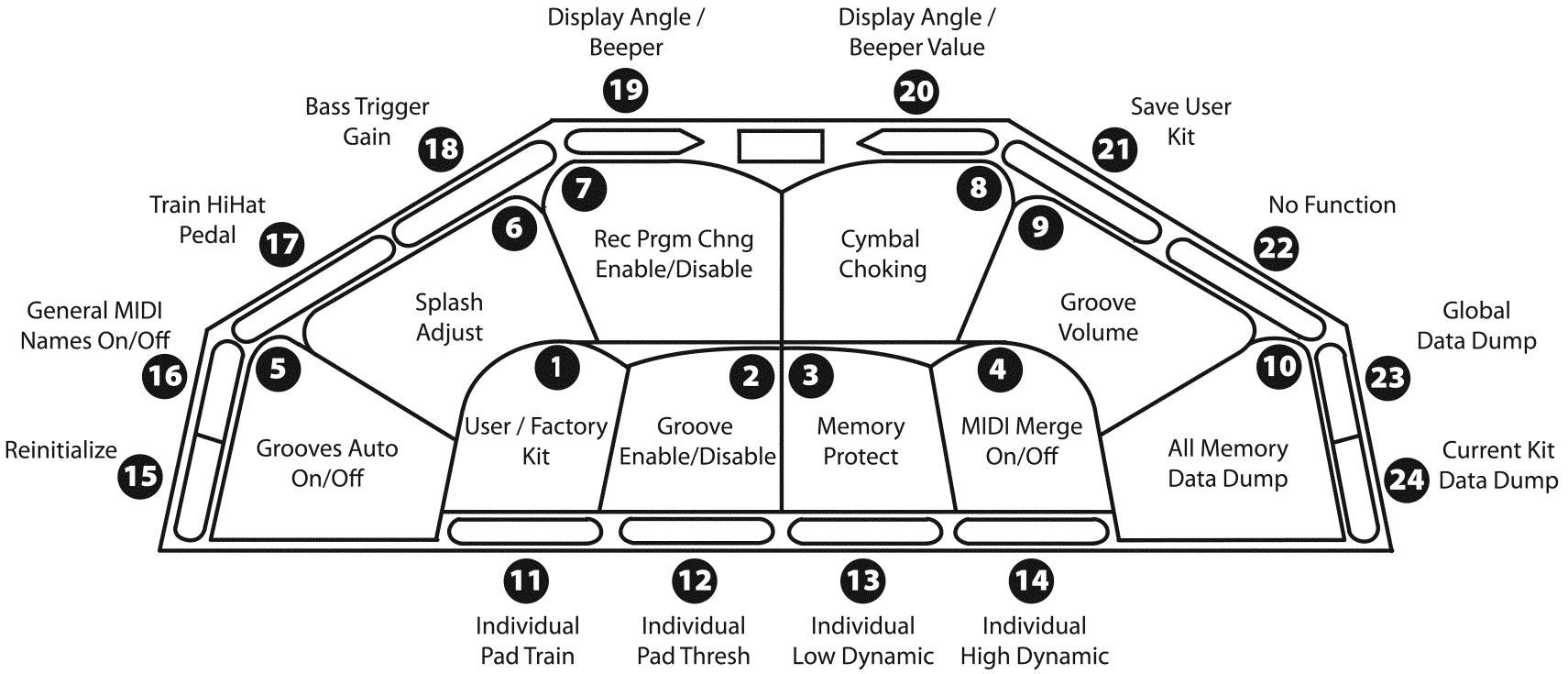
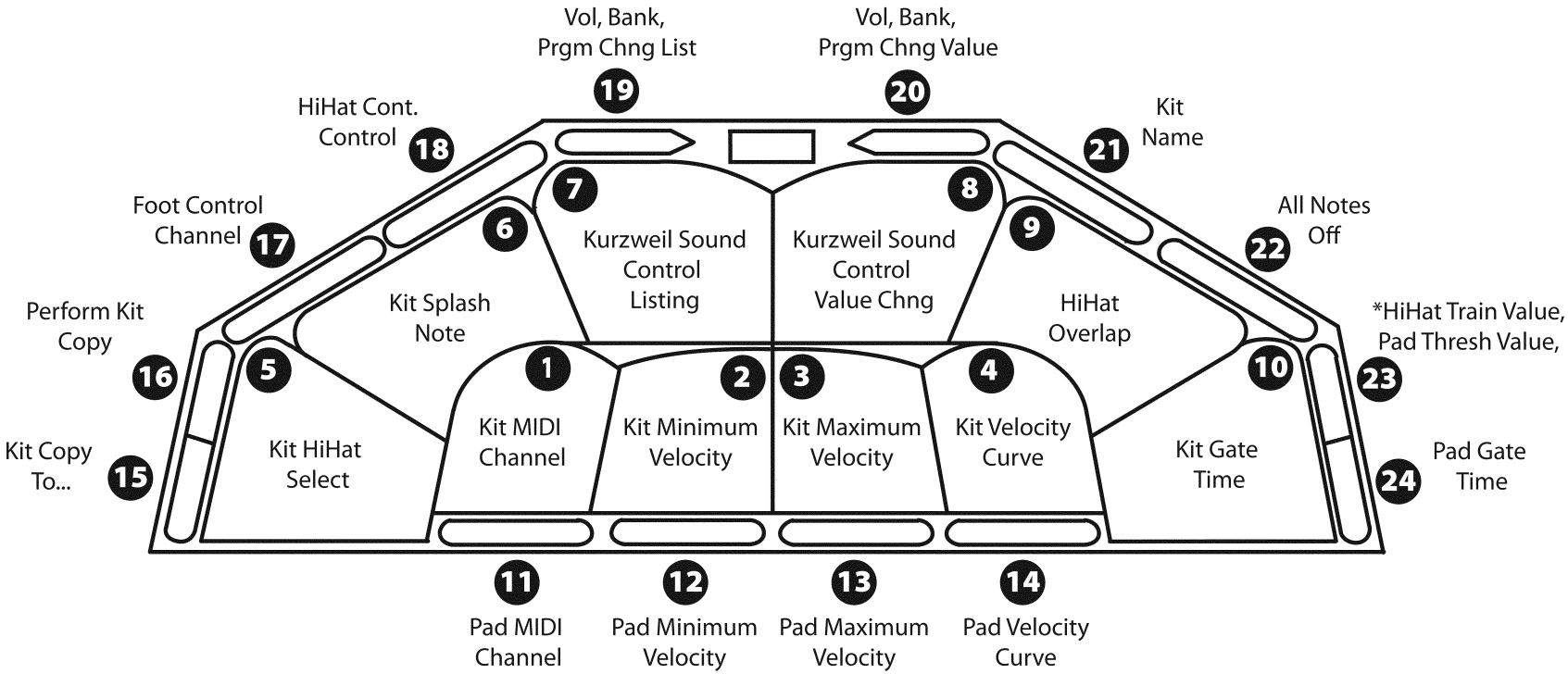
Hold down the GLOBAL EDIT footswitch and hit a pad to access these functions.



KIT EDIT PAD LAYOUT

Hold down the KIT EDIT footswitch and hit a pad to access these functions.



* HiHat Train Value & Pad Thresh Value will show after 2nd consecutive strike on pad.

INTRODUCTION

Welcome to Alternate Mode's trapKAT 5KS with Sounds Powered by Kurzweil. We are really excited about this revised version of the trapKAT, first introduced into the market by KAT Inc back in 1995.

Since the original trapKAT, much has changed. We now use a lightweight aluminum frame which is about 2/3rds lighter than the original trapKAT. We have replaced the original heavy gum rubber pads with our new nuBOUNCE playing surface. This new playing surface just feels great to play on. There are a 24 pads on the trapKAT, 10 large pads and 14 rim shot style pads that can be played with the shaft of your drumstick. There are also bass drum and HiHAT inputs, making a total of 26 things to play on.

Our proprietary FSR (force sense resistor) sensors have improved as well. They are now more dynamic and durable than ever before. Our new gold powered coated surface has been well received on our malletKAT and has now found its way onto the trapKAT.

Many of the drumKAT's performance features are now part of the operating system of the trapKAT. There are Alternate Modes, Velocity Switch Modes, Layering, Pad Linking as well as some Gate Control Modes such as Roll Mode and Latching for Loops. We have even added Controller Functions so that CC Data can be sent along with note data.

The real excitement of the day is that the new trapKAT 5KS has its own built in sound module. With “Sounds powered by Kurzweil”, the new trapKAT has entered a whole new world. Sure it still is possible to plug your trapKAT into any MIDI sound module or soft synth plug in, but now there is a convenience factor that changes everything. Turn on the trapKAT and begin playing with no programming required. Sure you can tweak to your hearts content, but the trapKAT is now truly a turn key instrument with 24 kits ready to go. Just select a kit and play away.

The sound card in our trapKAT is the second edition of the sounds used in our malletKAT 7KS. Besides having around 1000 traditional instruments to choose from, there are about 256 drum and percussion kits to access. We've created a new “instant access” mode to get at these drum patches without having to know anything about Bank or Program Changes.

Because this Kurzweil Sound Engine was built around their PC3 keyboard platform, the trapKAT's sounds can be used for “music minus one” playing. The trapKAT has a MIDI In jack so that sequence data can be routed directly to the sound card. If you own a malletKAT, you can have access to the incredible vibes, marimbas, timpani, and orchestral percussion that also resides in the sound card, while still playing your trapKAT. The trapKAT has a 1/4” headphone jack, stereo balanced output jacks, stereo input jacks for mixing other music with the trapKAT and volume control push buttons.

Because the trapKAT 5KS is conceived as a total electronic drum set, we developed our own eHAT and eKIC pedals. These pedals are different because unlike other companies models, you can determine the pedal height and spring tension on both of them. It is the fact that you are using a real bass drum pedal that makes it feels incredibly natural and comfortable to play on. We also sell our own stand, so that a complete bundle is available for your convenience.

QUICK START

Getting setup is easy. There are two brackets that connect to the back of the trapKAT. These brackets in turn get mounted onto the brackets on your rack stand. Once you set the mounting brackets on your stand and lock them in, setting up the trapKAT will only take seconds to set up.

The trapKAT uses a screw in style power adapter (different from other KAT models). This adapter is universal so it can be used all throughout the world. Simply plug it in and turn it on.

Plug the eKIC (or another Bass Drum Trigger) into the “BASS DRUM INPUT” on your trapKAT. It requires a standard 1/4” mono cable.

Plug the eHAT (or another HiHAT Controller) into the “HAT INPUT” on your trapKAT. It also requires a standard 1/4” mono cable

Plug the supplied footswitch into the “KIT SELECT”

Use either the Headphone jack or the Audio Outputs to hear your sounds. Use the up or down buttons to control the Volume.

The trapKAT is now ready to play.

Notice that there are twenty four pads on the trapKAT. The trapKAT also has 24 Kits to play on. Each pad represents a number from 1 to 24. Every time you step on the footswitch, you jump to the next kit, from 1 to 24. You can instantly jump to any kit simply by holding down the Kit Select footswitch, and while held down, tap on any one of the pads. When you do this, the trapKAT calls up the KIT number that matches the pad number.

You are now ready to stop reading and start enjoying yourself. Please get behind the trapKAT and start playing!!!!!!

trapKAT version 4 (WITHOUT SOUNDS)

If you purchased a trapKAT without sounds, the audio jacks and headphone jacks will not be present. You will see hole covers instead. This means that you can upgrade your trapKAT if you desire to get our sound card in the future.

The trapKAT without the sound card can still easily be setup and ready to play because our FACTORY Kits have been preset to work with the General MIDI standard. This means that almost every drum machine's note numbers will match the note numbers assigned to the trapKAT's pads. Of course you can change the pads sound to any other sound, but more on that later. You can still use the KIT SELECT footswitch to change kits.

You will need to plug a MIDI cable into the MIDI OUT jack on the trapKAT into the MIDI IN input on your drum machine.

CONNECTIONS

Let's take a look at all of the connections on the back of the trapKAT. Looking at the trapKAT from the back, starting on the left you will see...

POWER SWITCH
Yes, this is your standard on/off switch. Please note that if you turn off the trapKAT KS, wait several seconds before turning it back on. The instrument needs to reset itself. If you happened to restart it too fast, the sounds might not fire up. No worries, just shut it off and wait a few seconds then all we be fine. Also notice that there is a warm up cycle. This is for the benefit of the sound card. It needs to reinitialize itself, and takes about 8 seconds before the trapKAT turns itself completely on.

AC ADAPTOR INPUT
The trapKAT comes supplied with a removable, locking AC adaptor that connects to the trapKAT and your 110v outlet. If you are in Europe, we will supply you with a different plug. The adaptor is the same however, and will automatically switch to your 220/240v operation.

The KS adaptor is a 15v, 1.5mA, 2.1mm, positive tip adaptor. Please use the adaptor supplied with the trapKAT KS - the sound card will not power up with it! The original 9V, 500 mA, positive tip power adaptors, that came with the drumKAT, original trapKAT or malletKAT Pro will NOT work!

BASS DRUM INPUT
This is where you plug your bass drum trigger into. The input uses a ¼" mono cable. The trapKAT KS is optimized to play with the eKIC. If you have others, the trapKAT will need to be TRAINED in order to optimize your bass drum trigger. There are also GAIN controls that make the trapKAT compatible with most bass drum triggers on the market.

FOOTSWITCH INPUTS
There are 4 Footswitch Inputs built into the trapKAT KS. The trapKAT prefers MOMENTARY OPEN style footswitches. The footswitches supplied with the trapKAT are of this variety.

If you own MOMENTARY CLOSED style footswitches, they will still work, BUT you must plug them in BEFORE you turn on the trapKAT. The trapKAT reads the pedals polarity on power up and makes them work properly. If you do use a momentary closed footswitch, you should not remove them from the input while the trapKAT is on. It will think you are stepping on the footswitch!

KIT SELECT FOOTSWITCH
Using this footswitch allows you to access the trapKAT's Kits. You can access these kits in two ways. Simply step (tap) on the footswitch to increment to the next kit. The faster way to call up any kit is to hold down the footswitch and while held down, tap any pad. The pads number (1-24) will also match the Kits number (1-24). There are USER KITs and FACTORY KITs in the trapKAT. These KIT types are called up in the GLOBAL Screens.

NOTE EDIT FOOTSWITCH
Changing sounds on the trapKAT is easy. All you have to do is hold down this footswitch, and while it is held down, hit the pad that you want to change. The first time that you strike the pad, you will hear

the sound that is assigned to the pad. The next time you tap on the pad (with the footswitch still held down,) the sound will increment by one. You can play as fast as you like. You will hear the sound change each time the pad is struck.

If you pass by the sound, you can easily go backwards in the list of sounds. Simply release the footswitch and quickly hold it down again. The sounds will now play in the reverse order.

What you are actually doing is advancing through note numbers, MIDI note numbers. There are 127 notes possible. That means that you could be scrolling through up to 127 sounds on any pad. This is great for chop building! Learning to use the “Quick-click” on the footswitch for changing the direction of the sounds can come in real handy in getting the sound that you want quickly.

Notice on the display that the screen tells you what note number you are playing. The Beep Sound also changes. This is really necessary so that you know which direction you are going and how far you need to go.

You might also be seeing a name of a sound on the display. These names show up if in the GLOBAL section, GM Names are turned on. If you are not using a GM drum module (and the Kurzweil is not strictly GM), you will need to ignore these names. Its a blessing if you are using a drum machine like the Roland TD 30, or a curse if you are using a soft synth and thinking that is the sound. The trapKAT doesn't know what is plugged into its' MIDI Out port. So it is best to get into the habit of looking at the note number and not the sound name.

KIT EDIT FOOTSWITCH

You probably noticed that there aren't many buttons on the trapKAT. This footswitch turns each of the pads into a function for editing the KIT that you are playing. When you stepped on the NOTE EDIT footswitch and tapped on a pad, you saw and heard a note number. When you step on the KIT EDIT FOOTSWITCH and hit a pad, a function will be displayed. Just about every pad has a function, some have multiple functions. These will be described in the KIT EDITING section of the manual.

So think of using the KIT EDIT footswitch when you want to alter a setting in the particular kit that you are playing. Alter what you might ask.... things like velocity, channel, HiHAT pads, kit names, gate time settings, and the list goes on and on.

GLOBAL EDIT FOOTSWITCH

This footswitch is for doing things that are.....Global. That means that these settings affect the entire instrument, and not just one kit.

The overall training of the pads, saving your kits, doing data dumps, memory protection are all examples of Global things to do on the trapKAT.

Like the other footswitches, you use this footswitch in conjunction with hitting a pad. While this footswitch is held down, tap on any pad. Its Global Function is then displayed. We will describe what these Global functions are in the GLOBAL EDITING section of the manual.

MIDI OUT JACKS

There are two MIDI OUT jacks on the trapKAT. They are identical and are there for convenience in

case you are using more than one sound source for your sounds. Data goes OUT from this jack. Data goes to both the internal sound card and to the external world through these jacks at the same time. You do not need a MIDI cable if you are using the trapKAT with the sounds built in. The cable connection is done inside the instrument.

MIDI IN JACK
Plug a MIDI cable into this port if you want to send a SYS EX Data Dump to the trapKAT or if you want an external controller or sequencer to access the internal sounds.

It is also possible to program the MIDI note number of a pad if you are in Note Edit and you send a note number externally to the trapKAT from an outside source. This is called AutoTrain.

HiHAT INPUT
This is where you connect your eHAT to the trapKAT. You must use a 1/4” mono cable. On the eHAT, make sure that you are plugging into the middle jack marked (HiHAT). Don't use the Chick jack on the eHAT. You don't want to send voltage to the trapKAT's HiHAT input. The chick jack is not designed to be used with the trapKAT, but for future products (the DITI).

At the factory, we TRAIN the trapKAT to work perfectly with the eHAT. If you are using another manufacturer's hat pedal, you will probably will need to TRAIN the pedal in order to get the best results. TRAINING the pedal will be discussed in the GLOBAL Section of the manual.

THE MANUAL

Controlling the trapKAT effectively really requires that you understand the functions that lie underneath the KIT EDIT and GLOBAL EDIT Screens. Understanding the basics of MIDI really is also necessary so that the concepts discussed do make sense. You will then be able to program your own kits that reflect your needs and requirements in playing the trapKAT.

There is however another way out... a sort of purgatory for the land of MIDI. We compiled a list of questions that musicians ask us over and over again on how to get around the trapKAT. Each of the questions asked will go over all of the steps necessary to solve the specific problem. The answer's will be abbreviated but, it will answer the question. It's a shortcut yes, but it will help you get around the instrument in a “need to know” basis.

After reading this section in the manual, there will be several other sections that will cover all of the screens and functions in the trapKAT. This will be the NOTE EDIT, KIT EDIT FUNCTIONS and GLOBAL EDIT FUNCTION sections. This will be followed by the Appendix that will have listings of Sounds, Definition of Terms, Warranty and other important information.

Please also note that there are other ways of learning about the trapKAT. There is a VIDEO HELP DESK on the alternatemode.com website that will have video demonstrations on “how to's”. There is a KNOWLEDGE Database on the website that has answers to questions asked. There is a Forum where questions can be answered and finally (last resort), you can call us at 877-933-6237

20+ QUESTIONS MOST OFTEN ASKED

HOW DO I.....*OR.....** ***WHY CAN'T I
OR.....WHY DO I.....OR …....WHAT IS???

WHAT ARE THE PAD NUMBERS

There are 10 big pads and 14 rim pads. The first 4 big pads left to right are 1 to 4. The next circle of pads from the left are pads 5-10. The little rim pads in front of the instrument are numbers 11-14. The outer rim pads starting from the left are pad numbers 18-24

GET MY HiHAT TO WORK

In order to have a good working HiHAT pedal, you will need to do three things. First you must TRAIN your pedal. Then you must decide what pads you want to have the HiHAT function to work on (1 to 4) and finally you will need to determine which mode of HiHAT you want (GM HiHAT, Controller HiHAT or HATNOTE Modes).

To TRAIN the HiHAT pedal, Step on the Global Edit Footswitch. While held down, tap on rim pad # 17. The display will then guide you to depress the HiHAT pedal all of the way down and then hit any pad, followed by releasing the pedal and hitting any pad. Your pedal is now Trained!

Now you need to define what pad or pads are going to be HiHAT pads that will respond to the position of your HiHAT pedal. To do this, step on the KIT EDIT Footswitch. While held down, tap on pad # 5. The display will show what pads have been previously selected.. Now strike pad #5 again. The screen will ask you to select what pads you want to be HiHAT pads. Tap on the pad or pads that you want to be HiHAT pads. Once you've done that, simply release the pedal.

Finally you need to decide if you are using General MIDI HiHATs (if you are connecting to a GM drum machine), or if you are using Continuous Controller Data for Drum Modules or Soft Synths that looks at the pedal position or if you are using HATNOTE mode (designed for the Kurzweil Built in Engine).

Step on the KIT EDIT Footswitch. While held down, tap on pad # 18. Each time you tap on the pad, you will see choices to select. HATNOTE, 01, 04, 04F and None. HATNOTE is the setting to use if you are using the 5KS, “NONE” is the setting if you are using a General MIDI drum module, and 01, 04 and 04F are Continuous Controller Number Settings used in the popular VST drum modules or upscale drum modules like the Roland TD30.

There are other settings that can further tweak the HiHAT Settings in the Global Screen settings.

GET MY BASS DRUM PEDAL TO WORK

Like the HiHAT pedal, the bass drum trigger needs to be TRAINED to get the best results. The proper MIDI note number needs to be assigned and finally the right velocity setting in the Kit needs to be

tailored to your taste.

There are three GAIN settings in the Global Setting called MIN, MED and MAX. There are also names of bass drum trigger pedals from the past. It is always best to start with the MIN Setting. If you find that you need more volume or dynamic range, you can always bump up to the next level. To set the Gain Setting, step on the Global Edit Footswtich. While held down, tap on pad # 18. Each time you tap on that pad, you will see the choices toggle between Min/ Med/ and Max.

Next you should TRAIN the pedal. Step on the Global Edit Footswitch, and while down, tap on pad #11. When you tap on the pad, the screen will ask you to choose you pad (or trigger) you want to TRAIN. Tap on your Bass Drum Pedal. The screen will ask you to play softly. Do it once and wait until it asks again to play hard. After you do that, you will need to tap on the Global Edit Footswitch again to get out of this mode. You can look at the values that the trapKAT set for your training in the Global Screens (pads 13 and 14). You can also lower the Threshold is you need softer triggering (Global pad 12). These are described in more detail in the Global Editing Section of the manual.

You now have to make sure that the bass drum is assigned to a bass drum sound. Usually this is MIDI note number 36. To change the MIDI Note Number, Step on the NOTE EDIT Footswitch and while held down, tap on the bass drum trigger. The MIDI note number is displayed. You can change it simply by tapping on the bass drum trigger with the Edit Footswitch held down.

The last thing to consider is the minimum velocity of the bass drum. Usually the minimum velocity needs to be raised some. Try using a value a 32 to begin with. To change the Minimum Velocity, Step on the KIT EDIT Footswitch and tap on pad # 12. The minimum velocity is displayed. You can change it by tapping on the pad.

GET THE trapKAT TO RESPOND TO MY PLAYING STYLE

One of the main features of the trapKAT (and the other KAT Controllers) is that you can teach the instrument your playing style. By performing a TRAIN on the pads, the trapKAT understands what you mean to be soft and loud. The MIDI velocity dynamics are superimposed within the dynamic range that you set. This is a very poweul feature as it makes your instrument personal!

Training the pads is easy. Step on the Global Edit Footswitch and Tap on Pad # 11 twice. You can then let go of the footswitch. Now, pad by pad, do as the screen asks.... play each pad soft, then hard. After you have done this to all of the pads and bass drum trigger, step on the Global Edit Footswitch again to get out of this mode.

You can see the results on your Training by using the Global Edit Footswitch and tapping on pads 13 and 14. These pads will show you the values the trapKAT “read” when you played soft and hard.

RESET THE trapKAT

Getting the trapKAT back to the original Factory Settings is easy. Step on the Global Edit Footswitch and while held down, tap on pad #15. It will ask you to tap on pad #15 again. Then just to be sure, it will ask you to hold down pad #1 then hit #15 a third time. When you do this, you will see the display acknowledge that the trapKAT has been reinitialized. The instrument defaults to the FACTORY Kits. If

you are have the trapKAT 5KS, you will need to go the the USER Kits. The User Kits have 24 presets ready to go to get started with the 5KS.
After you reinitialize the trapKAT, the instrument automatically turns on MEMORY Protection. If you attempt to change any parameter on the trapKAT, you will hear a “bad” beep. To shut off MEMORY Protection, step on the Global Edit Footswitch, and while held down, tap on pad #3. This pad toggles the Memory Protection on and off.

GO BETWEEN FACTORY AND USER KITS

The FACTORY Kits on the trapKAT 5KS are meant to be used for GM Drum Modules. These Kits have not been optimized for the Kurzweil sound card. For the trapKAT with sounds, you should be using the USER KITS. Please note that you can make changes to Factory and User Kits, but you can only save USER Kit information. When you alter a Factory Kit, the changes go away as soon as you leave the kit. This is also true now for the User Kits unless you choose to do a SAVE function to that Kit.

Going between FACTORY and USER KITs is simple. Step on the Global Edit Footswitch and tap on pad #1. Each time you tap on that pad, the trapKAT switches between Factory and User Kits. When you shut off the trapKAT and turn it back on, it will remember what Bank of Kits you are using.

QUICK CLICK

Changing values on the trapKAT is usually performed by repeated taps on the same pad. Each tap increments the value by one. If you overshoot your desired value or if you want to decrement values and go in the reverse direction, a QUICK CLICK is the answer. While you are incrementing values, quickly release and repress the footswitch (within a second). The values will now change direction. This works for the Note Edit, Kit Edit and Global Edit Footswitches.

SAVE A KIT

Manual Kit Saving is new to the trapKAT 5KS. In all previous versions, the trapKAT automatically saved any changes that you made. We have changed this feature so that saving a Kit only happens when you deliberately want it to.

To Save a Kit, step on the Global Edit Footswitch, and while held down, tap on pad # 21. The display will ask to to confirm that you want to Save. Hit the pad again and the current User Kit is saved.

CHANGE THE SOUNDS

When discussing changing sounds, we have to make a distinction between changing a sound on a pad, or changing the sound on a kit.

Changing a sound on a pad simply requires that you step on the NOTE EDIT footswitch, tap on the pad that you want the sound to change, then continue tapping to hear all of the sounds that are available in that kit. There are 127 note numbers that are possible in any Kit. When talking about melodic sounds, note number 00 is the lowest sound, and 127 is the highest note possible. If the sound is a marimba for example, each note number just plays a different note on the marimba. When talking about drum

sounds, each note number usually plays a different sound. Usually there aren't 127 sounds available in a kit, but this is how the theory works. For both pad sounds, and kit sounds, there is a MIDI channel that they play on. There are 16 MIDI channels available. This means that you can have different Kits sounds as well.

The way sounds are changed on a synthesizer is to send a Program Change Message to the synth. There are 127 program changes possible. But because modern synths have more than 127 sounds in their systems, Bank commands were created. A Bank is a collect of 127 different sounds (programs).

If you look at the Appendix and check out the Sounds built into the trapKAT, you will see a BANK Change number and a Program Change number associated with every sound. On the top of the list is the Bank Change Number. This is called the MSB, LSB number. There are two numbers associated with the Bank. On the Kurzweil, the MSB is always 00, and the LSB is a single number that represents each Bank of 127 Sounds. Going down that list is the Program Number and Sound Name.

On the trapKAT, you can store up to 4 different Bank and Program Numbers per kit. Recall that each of these sounds must be associated with a MIDI Channel number. This is the way that we can differentiate the different sounds on different pads when the sound is a kit sound, not a pad sound.. Also, we can control the relative Volume for each of these Sounds. Yes this sounds confusing, but don't give up. Continue reading.....

The good news is that most of the time you will only be calling up one Bank and Program Number per User Kit. The even better news is that if you own a trapKAT 5KS, you don't even need to know about any of this. We created a short cut for you that allows you to get at all of the 256 drum presets built into the instrument without dealing with Banks and Program Numbers.

So lets start with the shortcut for trapKAT 5KS Users. We programmed User Kit number 24 with the shortcut stored in the Kit for demonstration purposes. Step on the KIT SELECT Footswitch, and while held down, tap on pad #24. Release the footswitch.

Now for the magic. Just tap on pads 23 or 24. Notice that the name of the kit changes. Pad 23 increments to the next kit and pad 24 decrements through the kits. You can check out all of the drum sounds this way. Notice also that besides the Kit Name, the display tells you what the Bank (LSB) and Program Number is. If you find a Kit that you want to Save permanently as a User Kit, step on the Global Edit Footswitch and hit pad #21 twice.

You can turn on this cool new feature on any User Kit by assigning this function to any pad. This function is turned on simply by assigning a special MIDI note number to the pad of your choice. Normally MIDI note numbers go from 00-127. The trapKAT has added note numbers to do special things such as PROGRAM ADVANCE and PROGRAM BACKUP. These are MIDI Note numbers 137 and 138. Step on the NOTE EDIT Footswitch and select the pad you want to assign this function. Now continue tapping on that pad until you reach to note number 137 or 138. Isn't that easier!

If you need to get to a sound that is not in Bank 4 or 5, (the drum banks) or if you don't own a 5KS, you will need to assign a MIDI Channel, Bank Number (MSB-LSB), Program Change Number and Volume Number to the Kit. If you need more than one sound, you can store up to 4 of these on different MIDI Channels.

It KIT EDIT, pads # 19 and 20 are assigned to this task. When you step on the KIT EDIT footswitch and continue tapping on pad 19, you will see Volume (1), Program (1), Channel (1) MSB (1) and LSB (1), then Volume (2), Program (2) etc etc all the way up to LSB (4)

When you see the value displayed, tap on pad #20 to increment the value. You can also QUICK CLICK the footswitch to go the other direction.

MANAGE KIT NAMES

If you own the trapKAT 5KS, you probably do not need to create your own KIT names. By using the Program Advance, and Program Backward functions in the User Kit, the name of the kit automatically loads in. (please read “Change the Sounds” above).

If you want to name your own Kit, you can. This is performed by stepping on the KIT EDIT footswitch and tapping on pad #21 twice. While continuing to hold down the footswitch, the pad numbers below change the characters on the display.

Pad 1 assigns upper case letters
Pad 11 assigns lower case letters
Pad 3 assigns a space between characters
Pad 12 assigns a character
Pad 3 advances the cursor
Pad 13 reverses the cursor
Pad 4 advances the characters
Pad 14 reverses the characters.

Let go of the footswitch when you are done. You will be surprised just how fast you can name kits in no time.

CHANGING NOTE NUMBERS DOESN'T DO ANYTHING

The trapKAT can play up to 16 sounds on one pad. Most of the time when you are changing note numbers, you will be working on slot number 1 (of 16). If you accidentally stepped on the NOTE EDIT Footswitch and the KIT EDIT FOOTSWITCH at the same time and then struck a pad, you then switched editing to slot number 2 of 16. You can tell which slot you are working on by looking at the screen when the Note Edit Footswitch is held down. For example, you might see something like #38-01. The number 38 is the MIDI note number. The 01 represents slot 1 of 16.

Hearing these other sound slots depends on if you have a special function turned on such as Alternate Mode or Velocity Shift. These are activated in the Velocity Curve Screens. These functions will be described in the KIT EDIT FUNCTIONS chapter.

If you find that you are not in slot number 1, then step on both the NOTE EDIT and KIT EDIT footswitches at the same time, and continue tapping on the pad until slot 1 rotates back on the screen.

THE TRAPKAT IS PLAYING ITSELF

Every pad on the trapKAT has its own “THRESHOLD” setting. This is the low end (softest) sensitivity

setting where the trapKAT decides when to start sending out notes. If you ever hear any false triggering, fixing the problem is easy. First identify the hyper sensitive pad. If you don't know which pad it is, step on the NOTE EDIT Footswitch. It will just jump to that pad when the pad triggers itself.

Step on the Global Edit Footswitch, and while held down, tap on pad #12. The screen will ask you to hit the pad that you want to adjust. Hit that pad, then hit the pad again. Each time you strike the pad, it will raise the THRESHOLD by a value of one. If you want to go backwards, performa a “Quick-Click”

CONTROL INDIVIDUAL DRUM VOLUMES and EFFECTS

New screens have been added to the trapKAT 5KS to control the individual drum volumes in the Kurzweil sound card as well as the ability to control the reverb and EFX per kit. Step on the KIT EDIT footswitch and tap on pad #7. Each time you strike the pad, you will see the next parameter and its value. There are individual volume control settings for the bass, snare, toms, HiHAT, and miscellaneous sounds, as well as a general reverb and EFX setting. If the parameter is set to OFF, then the sounds default value is sent. If a value is added, then that value overrides the default setting. To change the default setting to a value of your liking, then tap on pad #8. Each strike on pad #8 increases the value of the parameter.

THE DIFFERENCE BETWEEN TRAINING AND VELOCITY SETTINGS

There is a difference between TRAINING your pads Globally and setting up your velocity settings in a particular KIT. When you go into the GLOBAL screens and elect to TRAIN a pad, you are setting up the playing range for those pads for the entire instrument. A TRAIN tells the trapKAT what you define as a soft and hard hit. Setting up a velocity range on the other hand tells the trapKAT how loud to play a pad when you play soft and hard. There is a range from 00 to 127. This is the velocity range. In every kit, you define what is the minimum velocity number you want when you play soft, and the maximum velocity when you play hard.

I DON'T HEAR ANY SOUNDS ON MY 5KS

If you don't hear any sounds in the headphone or audio out jacks, then first try raising the volume of the kit. Notice that there are two little buttons next to the headphone jack. This is the Master Volume control for both the headphones and audio outs.

Please note that if you turn off the trapKAT and back on again too quickly, the sound card may not boot up. Shut the trapKAT off and wait about 10 seconds before turning the trapKAT back on. If that doesn't work, then make sure that you have not assigned a Bank and Program number that does not exist in the sound list.

Finally, make sure that you are using the correct 15v power adaptor that came with the trapKAT 5KS. Current users of the malletKAT, drumKAT or original trapKAT can not use the power supply (9v) that was supplied with that controller.

I DON'T HEAR ANY SOUNDS ON MY SOUND SOURCE

When you don't hear any sounds coming from your sound source, it usually is because you haven't set the correct MIDI channel. There are 16 MIDI Channels possible. The trapKAT transmits on a MIDI

Channel, and the sound source receives on one. Check to see what MIDI channel you are transmitting on in the trapKAT. Then check your sound source to make sure that it is receiving on the same channel.

To see what MIDI channel you are transmitting on your trapKAT, step on the KIT EDIT Footswitch, and while held down, tap on pad 1. The MIDI channel will be displayed. You can change the channel by hitting pad one repeatedly. If you want to have different MIDI channels on different pads, tap on pad 11. The screen will ask what pad you want to see the MIDI Channel.

THERE IS A BIG DELAY WHEN I USE MY COMPUTER

When any MIDI controller is plugged into a computer for the purpose of sound generation, latency becomes an issue. What should be noted is that the delay heard is not coming from the trapKAT. The trapKAT sends out data in about 1mS. (that's 1000th of second). Sound generation from a computer can be 10 times that, and that can be very noticeable.

If you decide to use a computer for sound generation, consider getting the fastest computer you can afford with plenty of RAM. Today computers are sold with SSDs (solid state drives). These are much faster than traditional drives and they are truly road worthy.

The real culprit for latency is the sound card in the computer. It simply isn't fast enough for use as a musical instrument. Of course it's fine for playing back music, but not for real time generation of sound. To that end, manufacturer's have created external Audio/MIDI devices that use special drivers (ASIO for example) that are designed for using your computer as a sound source. Using an audio/midi interface is even more critical for drummers because we hear latency much better than other musicians.

Even when you get this device (there are many to choose from.. just type in AUDIO MIDI INTERACE in GOOGLE) , there are settings that are crucial for dealing with latency issues. In the preference screens on these devices you can control the Sample Rate and Buffer Rate. Raising the Sample Rate and Lowering the Buffer Rate assures the lowest latency, but it puts the most demand on your computer. Usually the preference screen also displays the latency in mS. You will need to find the balance between CPU usage and latency.

WHAT'S A GROOVE, CAN I MAKE MY OWN

There are Grooves built into the trapKAT, but it is a feature that comes from the past. Remember that the trapKAT was introduced back in 1995. It's intention was to have a groove ready to play when the trapKAT was sitting in the stores. These grooves were built to work in the GENERAL MIDI format. If you are plugged into a GM compatible sound source, the grooves will work fine, but they do not sound correct when you are using the Kurzweil sound card. Perhaps with enough requests for an upgrade, we will create new grooves to work especially for the Kurzweil. Unfortunately, the grooves are preset and new grooves can not be created by the user. In the GLOBAL EDIT section, the operation of the grooves will be described.

GET RID OF THE BEEPER SOUND

Turning the Beeper On or Off is done by stepping on the Global Edit Footswitch, and while held down, tap on pad #19. The screen will display its current setting. To change it, tap on pad #20

BACK UP MY USER KITS

The trapKAT is a like a computer, and can be subject to data loss. Backing up your kits should be a routine process. There are free programs for both MAC and PC that you can use to back up your data using a MIDI Interface. There are links on our website to get them. It is also possible to use your sequencer to store data. This type of storage is called SYS EX DATA Dumping.

On the trapKAT there are three kinds of SYS EX Dumping. All Memory Data Dump, 1 Kit Data Dump and Global Dump. We recommend using the “All Memory” dump. Its the easiest and the best way to save all of your work. To perform a Data Dump, make sure that you plug a MIDI cable to the trapKAT's MIDI out jack, then connect that to your MIDI Interface. Open up one of the programs suggested on our website (SYSEX Librarian, MIDIOX, etc) and enable it to “RECIEVE” data.

On the trapKAT, step on and hold down the Global Edit Footswitch and hit pad # 10. All of the trapKAT's memory will be sent out the MIDI out jack.

The trapKAT will automatically receive data dumps back. Just plug a MIDI cable to the MIDI IN jack, and send the file over using the same program.

WHAT SOUND SOURCES DOES THE TRAPKAT WORK WITH

The trapKAT will work with any MIDI sound source... including hardware drum machines, keyboards and all virtual and soft synth plugins.

KIT EDIT FUNCTIONS

The following section will go over all of the KIT Edit Functions that are in the trapKAT. It is in these screens that all of the programming of the kits happen. Accessing these functions are always the same. Step on the KIT EDIT Footswitch, and while held down, tap on one of the pads. The pads function will display. Here is the list of functions.

Pad 1	Kit MIDI Channel
Pad 2	Kit Minimum Velocity
Pad 3	Kit Maximum Velocity
Pad 4	Kit Velocity Curve
Pad 5	Kit HiHAT Selectable
Pad 6	Kit Splash Note
Pad 7	Kurzweil Sound Control Listing
Pad 8	Kurzweil Sound Control Value Change
Pad 9	HiHAT Overlap
Pad 10	Kit Gate Time
Pad 11	Pad MIDI Channel
Pad 12	Pad Minimum Velocity
Pad 13	Pad Maximum Velocity
Pad 14	Pad Velocity Curve
Pad 15	Kit Copy “to” Kit
Pad 16	Perform Kit Copy
Pad 17	Foot Control Channel
Pad 18	HiHAT Continuous Control
Pad 19	Volume, Bank, Program Change Listings
Pad 20	Volume, Bank Program Change Value Change
Pad 21	Kit Name
Pad 22	All Notes Off
Pad 23	No Function/HiHAT Train Values/Pad Threshold Values
Pad 24	Pad Gate Time

In an attempt to make these functions more understandable, we have combined the pad functions into categories. This should make it easier to program the trapKAT as related functions described below have been organized in one topic.

MIDI CHANNEL
Pad #1 and Pad #11

To change the MIDI Channel on the entire User Kit, tap on pad #1. The Kit's current MIDI channel is displayed. To change the MIDI channel, tap on the pad again or “quick click” to reverse direction when tapping on the pad.

If you want to change the MIDI Channel on just one pad, use pad #11, Pad MIDI Channel. When you tap on pad# 11, it will ask you to select the pad that you want to change the MIDI Channel.

There are 16 MIDI channels available in MIDI. Any pad can be assigned to it's own MIDI channel. If you have a multi-timbrel sound module, very creative kits can be created! A different program sound can be assigned to any MIDI channel, allowing the trapKAT to control many sounds at once.

KIT VELOCITY (Minimum, Maximum, Velocity Curves)
Pad #2,12, 3,13, 4 and 14

There are three settings that affect the response of each pad. They are called Minimum and Maximum Velocity, and Velocity Curve. The Min and Max Velocity affect the range of how loud or soft an individual sound can be. The Velocity Curve affects the feel or how fast the sound gets louder as you smoothly play harder and harder.

The range for velocity is 00-127. If you set the Minimum to 00 and the Maximum to 127, you are programing the pad to play the widest dynamic range possible. Counter to what you may first think, this is not always the best choice. For example, most people find that the bass drum needs a narrower range, say 32-127. If the softest hits are not heard, then you will need to raise the Minimum Velocity Setting. If you want the same crack of a snare drum, you might want to raise the Minimum Velocity even higher. If you hear a sound that is not balanced, i.e. too loud, you might want to lower the Maximum Velocity.

After the range is set, the next factor to consider is the Velocity Curve. The curve tells the trapKAT how fast to change from soft to loud. Usually folks like a linear or smooth response, and use the default Curve #1. There are exponential and logarithmic curves that stay soft longer as you play harder or the other way around.

It is possible to set one Minimum, Maximum and Curve Setting for the entire kit. Use pad 2 for the Kit Minimum Velocity, pad 3 for the Kit Maximum Velocity. The range possible is 00-127. Use pad 4 to Select a Kit Curve. There are 8 “normal” curves to choose from and then there are “special curves” discussed below.

The normal curves are...

Velocity Curve 1	Linear-smooth from soft to loud
Velocity Curve 2	Stays soft longer than curve 1
Velocity Curve 3	Stays soft even longer than curve 2
Velocity Curve 4	Slow linear curve with an accent on the top end
Velocity Curve 5	High minimum, stays even then accent on top
Velocity Curve 6	moves from soft to loud much quicker than curve 1
Velocity Curve 7	another variation on the Linear Curve
Velocity Curve 8	and another variation of the Liner Curve

As you can see, these curves are very subjective. They will sound different depending on the sound, the velocity ranges set and the curve factor built into the sound module. It is for this reason we recommend that you stay with Curve 1 unless you want “more” or something different. Experiment.

If you decide that you want to have different velocity ranges and curves for different pads, the trapKAT allows you to do this. Pad # 12 controls individual pad minimum velocity. Pad # 13 controls individual maximum pad velocity. Pad # 14 controls individual pad velocity curve. When any of these pads are tapped, the trapKAT will ask what pad you want to change. Hit the desired pad and change the velocity or curve by continued strikes on that pad. If you change any pad, and go back to the Kit Velocity pads, you will see "various" on the screen, informing you that different pads have different velocity values. If you proceed to change the value here, all velocities within the kit will be reverted to this value.

FOOT CONTROL CURVES

There are 7 different foot control curves to choose from to personalize the feel of your HiHAT controller pedal. Choose the one that best suits your type of controller pedal.

Hold the Kit Edit footswitch down and also press down once on your controller pedal. Each subsequent press on the pedal toggles through the foot controller curves.

SPECIAL CURVES (MULTI MODE and ALTERNATE MODE)
Pad 4 and 14

In the search to add drumKAT like features to the trapKAT, we developed a way of adding multi mode and alternate mode features to the trapKAT without the necessary programming needed on the drumKAT to do this. This was accomplished by adding special "canned" curves that performed these functions simply by calling up that function. These curves are located in Velocity Curve pads #4 (kit) and pads #14 (individual pad) settings. They appear after the " 8 normal" curves.

To select a multi-pad or alternate mode curve, step on the Kit Edit footswitch and hit either pad 4 for the entire kit or pad 14 (recommended) to find the special curve function. These Special Curve Functions are:

2nd Note @ Hardest	sound 2 plays only for the hardest hits
2nd Note @ Hard	sound 2 plays only for hard hits
2nd Note @ Medium	sound 2 plays when medium hits are executed
2nd Note @ Soft	sound 2 plays when soft hits are executed
2 Note Layer	two sounds are played simultaneously.
Xfade @ Middle	crossfades of sounds 1 and 2 where they mix in the middle
Xswitch @ Middle	crossfades on sounds 1 and 2 where there is an exclusive switching from one to the other in the middle

1 @ Medium; 3 @ Hardest	sound 3 comes in only for the hardest hits. Sound 2 comes in for the medium hits
2 @ Medium; 3 @ Hard	sound 3 comes in only for the hard hits. Sound 2 comes in for the medium hits
2 Double 1; 3 @ MED	sound 3 comes in only for medium hits. Sound 2 doubles sound one all of the time
3 Note Layer	simultaneously plays sounds 1,2 and 3
4 Note Shift	sound 4 comes in for the hardest hits. Sound 3 for medium, sound 2 on the soft hits
4 Note Layer	simultaneously plays sounds 1, 2,3 and 4
Alternating	from 2 to 16 notes in an alternating pattern (more info below)
Control + 3 Notes	continuous data send from pad along with note data (more info below)

In order for these curves to work properly, note numbers have to be assigned to the NOTE NUMBER SLOTS. There are up to 16 slots per pad. These are assigned using the Note Edit Footswitch combined with the KIT Edit Footswitch.

Step on the Note Edit Footswitch and tap on a pad. You will see the pad number, a three digit note number already assigned to the pad followed by a dash …
then you will see the SLOT number from 1- 16

While the Note Edit Footswitch is held down, press on the Kit Edit Footswitch. Each press on the Kit Edit Footswitch increments the slot by one. When you release this footswitch, you can then edit the note number in that slot.

The trapKAT remembers what slot you last used, so be careful. You might be thinking you are programing the first slot, but check the slot number first before changing note numbers

ALTERNATE MODE

The trapKAT can play up to 16 alternating notes on any pad. It is also possible to use “silence” as a note value so that rhythms can sound simply playing even 16th notes on that pad.

To turn to this function, select the Curve called, ALTERNATING for that particular pad. Next program the MIDI note numbers you want in the Slot positions.

There are several “special” note numbers that have a direct affect on the Alternating Curve. These are called “Alternate Reset”, “Alternate Freeze” and NO. These “note numbers” can be found when you scroll past 127 using the Note Edit Footswitch.

If “Alternate Reset” is assigned to a slot (other than slot #1), then the alternating pattern will then start again from the beginning. This feature allows the pad to be set to any alternating pattern from 2 notes to 16 notes.

If “Alternate Reset” is assigned to a slot #1, then the Alternate Resets affect ALL Alternating pad in the entire User Kit.

The “Alternate Freeze” function stops the alternating pattern from advancing to the next note slot. If the Alternate Freeze is placed in the first position (slot #1) in the Alternating, then ALL alternate notes in the entire kit will be frozen.

If the Alternate Freeze function is placed in any of the other remaining 15 MIDI note number slots, then that pad will stop advancing until the pad is reset. (Alternate Reset)

If “no” is assigned to a slot, then a silent note will take the place of a MIDI note number

CONTINUOUS DATA
Control + 3 Notes mode

Any pad can be assigned to send out continuous control data on a pad. The MIDI note number assignment becomes the CC# number and the velocity of the hit becomes the CC value. Minimum and Maximum CC ranges are assigned by the velocity minimum and maximum settings of that pad.

The same pad assigned to “Ctrl + 3” can also simultaneously send out up to 3 MIDI notes per pad. These are assigned in slots 2, 3 and 4. Any MIDI note assignments in the other slots (5-16) will have no effect.

When the pad is played, the velocity information (how hard you hit) is converted to the Controller value. The softest hit will send out a CC value of 0, while the hardest hit will send out a CC value of 127. The outer boundaries are controlled by the minimum and maximum velocity settings that you set for the pad.

The Gate Time for the pad serves as a SLEW. This means how long it takes to go from value to value. It is like a portamento for controller values.

To use this function, set the Curve on the desired pad to “Ctrl + 3 Notes”. The MIDI note assignment for slot #1 then becomes the Continuous Controller Number. How hard you hit the pad then becomes the Control Data number (00-127) in real time. How fast the value goes from number to number is determined by the Gate Time.

Finally Slots 2, 3 and 4 can be assigned to MIDI notes. These notes will be played simultaneously , that is layered along with the control data information.

HiHAT CONTROL
Pad #5,6,9,17 and 18

Getting responsive HiHAT control is a very important of your kit setup. Depending on your sound source and HiHAT pedal, different settings and parameters are possible.

Here are some different ways that the HiHAT is tackled in Electric Drums

General MIDI HiHAT- Notes are assigned to open, closed, chic and splash. There are no variations of open and closed. Pads on the trapKAT are assigned to perform this function (HiHAT Pads)

Continuous Control- For these sound modules, only one note number on the pad is required to get at all of the positions on the HiHAT. On the trapKAT, HiHAT pedal position is recorded and sent out via continuous controller messages. The HiHAT pad assignments do not need to be activated.

HATNOTE- On the trapKAT 5KS, different HiHAT note numbers are sent out depending on the position of the HiHAT pedal.

Before determining which method is right for you, please make sure that you TRAIN your HiHAT pedal. (Global Kit Footswitch pad#17).

Also make sure that the Foot Controller is set to the same MIDI channel as the rest of the KIT. This is found in Kit Edit, pad # 17. This pad normally defaults to “SAME AS CHICK” in which case you do not have to do anything.

SELECTING PADS to be HiHAT PADS
When a HiHAT pad is played, the note that is sent out depends on whether the HiHAT pedal is depressed or not. If the HiHAT pedal is depressed, a “closed” note will be played. If the HiHAT pedal is not depressed, an “open” note will be played. The trapKAT needs to know which pads should be controlled by your HiHAT pedal position.

To select a pad or pads to be a HiHAT pad, press on the Kit Edit Footswitch, and while held down, hit **pad #5.** You will see the pad numbers that are currently selected for HiHAT.

If you strike the pad a second time, the pad numbers go blank, and the screen asks you to Select what pads you want to be the HiHAT pad. You can now tap one, two three or four different pads that all will be assigned to the HiHAT Mode. Release the footswitch.

DEFINING SETTINGS FOR OPEN CLOSED and CHICK

To define the MIDI note number for the **Open** Sound, step on the Note Edit Footswitch and tap on one of the HiHAT pads. Do not press on the pedal. Every tap on the HiHAT pad increments the midi note by one. You can do a “quick click” to reverse direction. The GM note for Open Sound is MIDI note #46.

To define the MIDI note number for the **Closed** sound, step on BOTH the Note Edit Footswitch and depress the HiHAT pedal. While both are held down,tap on one of the HiHAT pads. Every tap on the

HiHAT pad increments the midi note by one. You can do a “quick click” to reverse direction. The GM note for Closed Sound is MIDI note #42.

To define the MIDI note number for the **Chick** sound, step on and keep down the Note Edit Footswitch and then tap on the HiHAT pedal. Every tap on the HiHAT pedal increments the midi note by one. You can do a “quick click” to reverse direction. The GM note for Closed Sound is MIDI note #42.

To define the MIDI note number for the **Splash** sound, step on the Kit Edit Footswitch and while held down, tap on **pad #6.** Each subsequent tap on the pad will increment the note number. Usually the open sound MIDI note number #46 is used for the Splash.

Please note that the min/max velocity settings, curve and gate time settings are all programmed in the normal way and that these settings affect all of the notes in the HiHAT.

CONTINUOUS HiHAT CONTROL

Most of the new drum machines on the market today use continuous controller information to create various amounts of open and closed HiHAT. This permits your HiHAT pads to not just be open or closed, but to play sounds that vary continuously from open to closed. As you more your eHAT or other CC controlled HiHAT pedal, the trapKAT sends a stream of information to the sound source about the changing position on the HiHAT pedal. This in conjunction with hits on the HiHAT pads, give you varying HiHAT sounds.

Step on the Kit Edit footswitch, and tap on pad **#18.** This is your HiHAT Continuous Control Screen. Manufacturers of drum modules use different Controller Numbers for controlling HiHATs.

The most popular is CC 4. On the trapKAT, we offer CC#01, CC#04 and CC#04F.

In the early models of drum modules, some manufacturers did not not use the full range of CC control. There were two versions of CC4. One went from 0-64 and the other went from 0-127.
On the trapKAT, CC4 setting represented the limited range, and CC4F (full) represented the full range. Today everyone that uses CC control uses the CC#04F version.

It is also possible not to send out CC data on the trapKAT. Just scroll to the value of “NONE” on pad #18.

HATNOTE and HATNOTE OVERLAP

You may have noticed another choice on pad #18 called HATNOTE.
HATNOTE offers an 8 note hi hat feature to users with a HiHAT controller like the eHAT, and a sound module that uses multiple sounds for the HiHAT. This is the what the trapKAT 5KS uses for the Kurzweil sounds built in. Varying degrees of HiHAT open sounds appear when you strike a HiHAT pad and have set the Continuous Controller function to HATNOTE. There is no need to program the note numbers for this mode. These values are “fixed” and preprogrammed to work automatically.

HATNOTE OVERLAP

Hit pad **#9** while holding down the Kit Edit Footswitch and you will see the HATNOTE Overlap

screen. This screen allows yow to set a specified time in which your HiHAT notes will overlap instead of abruptly cutting each other off. This will create a more realistic sound. The Overlap times are the same as the Gate Time Settings (.005-6.3, Roll Mode, Infinite)

COPY KITS
Pad # 15 and 16

It is possible to copy a preset Factory Kit or a User Kit to any of the 24 User Kit locations. “Kit Copy” will always copy the KIT you are currently in to some other selected USER Kit. Kit Copy is performed using pads # 15 and #16, when the Kit Edit footswitch is depressed.

When pad #15 is struck, the screen will display “Copy Current Kit to User Kit XX”. While the footswitch is still held down, hit pad #15 repeatedly. You will see the User Kit value increment with each hit of the pad. When you reach the User Kit location where you want to store this current kit, Hit pad #16. The screen will ask you to verify that you want to do this. Hit pad #16 again to Store the Kit.

So remember, pad #15 Changes the Kit Number and Pad 16 performs the copy function

SOUND CONTROL (Volume, Bank, Program Change)
Pad # 19 and 20

The trapKAT KS can send out 4 different Bank Changes, Program Changes and Volume Changes on 4 different MIDI channels. With the KIT Edit footswitch held down, tap on pad #19 (left of the display). This is a “tunnel” screen, meaning that each time you tap on pad #19, a new screen pops up. These are the Screens in the Tunnel. Here are the screens in the Tunnel

Volume 1 = xxx
Program Change 1 =xxx
Program Change Channel 1 = xxx
Bank (MSB1) = xxx
BANK (LSB1) = xxx

Volume 2 = xxx
Program Change 2 =xxx
Program Change Channel 2 = xxx
Bank (MSB2) = xxx
BANK (LSB2) = xxx

Volume 3 = xxx
Program Change 3 =xxx
Program Change Channel 3 = xxx
Bank (MSB3) = xxx
BANK (LSB3) = xxx

Volume 4 = xxx
Program Change 4 =xxx
Program Change Channel 4 = xxx
Bank (MSB4) = xxx
BANK (LSB4) = xxx

Usually, you only need to send out the first group, that is a Volume, Program, and Bank Change commands on one MIDI channel.

If you have a trapKAT KS, you can look at the SOUND LIST in the Appendix Settings. On the top of every list, is the BANK NUMBER, which is called up by using two sets of numbers (MSB,LSB)

A Bank is a collection of up to 127 Sounds (program changes)

In order to call up a sound on a Kit, the Bank, Program and Volume numbers on a MIDI channel must be sent in order for the sound to change.

Pad #20 changes the values on all of these parameters. Each tap on pad 20 increments the value of the number displayed. If you quickly release the Edit Footswitch and press down on it again quickly, (quick-click), you can change the direction of values, decrementing instead of incrementing.

Most sound modules have a listing in the back of their manual with all of the sounds available. These sounds will require its own MSB,LSB Bank Change and Program Change and Volume Change Commands.

Please note that some sound modules (Kurzweil is one of them), require these parameters to be sent out as one packet. That means that as you change one parameter at a time,you will not hear the sound change until after you Save the Kit, leave the kit, then return to it.

If you have the trapKAT KS (with sounds) and are using the “Program Advance /Backwards” special note numbers to scroll through the drum kits, the sound change is immediate. The trapKAT sends out the packet automatically.

KURZWEIL SOUND CONTROL
Pad # 7 and 8

New screens have been added to the trapKAT 5KS to control the individual drum volumes in the Kurzweil sound card as well as the ability to control the reverb and efx per kit. Step on the KIT EDIT FOOTSWITCH and tap on pad #7. Each time you strike the pad, you will see the parameter and a value. There are individual volume control settings for the bass, snare, toms, HiHAT, and miscellaneous sounds, as well as a general reverb and efx setting. If the parameter is set to OFF, then the sounds default value is sent. If a value is added, then that value overrides the default setting. To change the default setting to a value of your liking, then tap on pad #8. Each strike on pad #8 increases the value of the parameter.

Below are the screens in the “tunnel” on pad #7. Each time you tap on pad #7 with the Edit Footswitch

held down, the display rotates through the screens. The default value is NO. This doesn't mean that there is no effect or volume, it means that the trapKAT (the user) is not overriding the settings of the volumes, reverb and EFX that was preset at the factory. The value range goes from 00-127

Filter	Putting a value here other than NO adds a Filter effect to the entire kit.
Pitch	Changes the pitch of the entire kit up or down
Kick Vol	Raises or lowers the kick drum sounds
Snare Vol	Raises or lowers the snare drum sounds
Tom Vol	Raises or lowers the tom sounds
HiHAT Vol	Raises or lowers the HiHAT sounds
Misc Vol	Raises or lowers the rest of the sounds
FX	affects the amount of the effects channel (usually chorus or delay)
Reverb	affects the amount of reverb

KIT NAMING
Pad #21

It is possible to assign a name to your User Kits, using up to 12 letters. Hit pad #21 twice while holding down the Kit Edit footswitch.

To change the character of the letter that's flashing, use the following pads

Pad 1	assigns upper case letters
Pad 11	assigns lower case letters
Pad 2	assigns a Space between characters
Pad 12	assigns a character
Pad 3	advances the cursor
Pad 13	reverses the cursor
Pad 4	advances the characters
Pad 14	reverses the characters

New to the trapKAT 5KS (with the Kurzweil Sound Engine) is the auto loading of kits and their names when using the “special note numbers” called Program Advance and Program Backwards. When pads are tapped with their notes assigned to these “numbers”, a new drum kit and their name is automatically loaded into the kit. This is the fastest way to Kit Name. If you want to use this kit permanently, all you have to do is Save the Kit in the Global Screen pad # 21

ALL NOTES OFF
Pad # 22

If a note ever get's stuck on (does not shut off), the trapKAT can send a ALL NOTES OFF command that will shut off all notes. Simply Step on the Kit Edit Footswitch and hit pad #22 twice.

PAD GATE TIME
Pad #24, #10

Gate Time is the length of the sound. It is the time between a MIDI Note On and the corresponding MIDI Note Off. On many drum machines, Gate Time has no effect. Many drum machines ignore MIDI Gate Time and simply play the sound to its completion. However the Kurzweil Sound Card built into the trapKAT and most keyboard synthesizers need a Gate Time value to match the length of the sound you want played.

Pad#24 and pad#10 are the Gate Time Pads in Kit Edit. As in previous KIT settings (channel, velocity, etc) it is possible to have a KIT Gate Time (same gate for entire Kit) pad # 24 or an individual pad time setting for each pad (pad # 10). Simply hold down the Kit Edit footswitch, tap on one of these pads, and continue to hit the pad until you arrive at the value you want. You can also "quick click" to reverse direction on the values when tapping.

Gate Times are expressed in milliseconds from .005 to 6.3 seconds.

There are three special Gate Time Settings also possible.

ROLL MODE
Roll Mode was designed to be used with sound modules and samplers that respond to note off commands. This feature helps to eliminate the "machine gun" drum roll effect by delaying a note off command until after 6 seconds has elapsed from the time the pad was last hit. ROLL MODE is a selection after the millisecond options (past 6.3 seconds)

INFINITE MODE
When a pad's gate time is set to INFINITE, it means that no note offs are sent on the pad. Just note on events.

LATCH MODE
LATCH MODE is a Gate Mode setting that toggles between note on and note off with repeated hits. This is an extremely effective mode when you want to control loops.

HIDDEN FUNCTIONS Pad #23
HiHAT TRAIN RESULTS
IDLE LEVELS

The first time that you strike pad# 23 with the Kit Edit footswitch held down, you will see the display say NO FUNCTION. But if you strike it again, you will see a peculiar screen looking something like this

OPEN 038 091 174 218 247 CLOSED

This is the **HiHAT TRAIN RESULTS** Page
The values shown above are numbers that the trapKAT loads into this screen when you TRAIN your HiHAT pedal. The trapKAT breaks down movement of your pedal into 5 malleable zones.
This advanced screen is useful to make sure that your pedal is working properly. You can also manually tweak these values.

Pad # 1 tweaks the first value
Pad #2 tweaks the second value
Pad #3 tweaks the third value
Pad #4 tweaks the fourth value
Pad #10 tweaks the fifth value

IDLE LEVEL SCREEN

If you Step on the Kit Edit Footswitch and tap on pad #23 three times you will be entering the Idle Level Screen. Release the footswitch after you hit the pad three times and you will something like this

R0001001001 0100
P00110000

This screen shows you the "idle level" of all 24 of your pads. This idle level is a measure of what the internal computer sees from your pads when you are not playing – when they are "idle". The sensors in the trapKAT are called FSR (force sensing resistor). These sensors are sensitive to very light playing or pressure. Therefore, even the pressure of the nuBounce playing surface can show up. That is OK. The software is designed to take care of small constant pressures. This is what we call the "idle levels" of your pads.

Looking at these numbers, the top row displays the values of all 14 rim pads. The first 10 numbers are pads #15 to #24. The next four values of the top line are the 4 rim pads in front of you, pad #11-14 The bottom line has pads 1 through 10. To identify which pad is which, pick a pad and press on it and watch which number on the screen rises when you press on it. It is normal for there to be some jitter or fluctuation in the numbers around some specific value. This is the scanning process.

If the numbers go beyond 4 or 5 on a new trapKAT XL or KS, then it means that there is pressure due to pad shift. Pad shift can occur if the pad gets real hot from the sun playing outdoors, and the glue material (PSA) underneath softens and the pad shifts (you move it vertically). This information informs us that maintenance is required on the pads. If you see consistent high numbers, you should contact us at the factory.

REMEMBER TO SAVE YOUR KITS!!!!!

New to the trapKAT 5KS, User Kits must now be saved manually. The auto saving of the User kits have been removed so that the Program Advance/Backwards Functions can change sounds to a kit without permanently affecting the kit.

Saving a Kit is real easy. Step on the Global Edit Footswitch and tap on pad # 21 twice. That's it. Your current User Kit is now saved to Permanent Memory.

GLOBAL EDIT FUNCTIONS

The following section will go over all of the GLOBAL Edit Functions that are in the trapKAT. It is in these screens that you program the parameters that effect the entire instrument. Accessing these functions are always the same. Step on the GLOBAL EDIT Footswitch, and while held down, tap on one of the pads. The pads function will display. Here is the list of functions.

Pad 1	User/Factory Kits
Pad 2	Groove Enable/Disable
Pad 3	Memory Protect
Pad 4	MIDI Merge On/Off
Pad 5	Grooves Auto On/Off
Pad 6	Splash Adjust
Pad 7	Receive Program Change Enable/Disable
Pad 8	Cymbal Choking
Pad 9	Groove Volume
Pad 10	All Memory Data Dump
Pad 11	Individual PAD TRAINING
Pad 12	Individual Pad Threshold
Pad 13	Individual Low Dynamic
Pad 14	Individual High Dynamic
Pad 15	Reinitialize
Pad 16	General MIDI Names On/Off
Pad 17	TRAIN HiHAT Pedal
Pad 18	Bass Trigger Gain
Pad 19	Display Angle / Beeper Listing
Pad 20	Display Angle / Beeper Value Change
Pad 21	Save User Kit
Pad 22	No Function
Pad 23	Global Data Dump
Pad 24	Current Kit Data Dump

USER/ FACTORY KITS
PAD#1

The trapKAT has two banks of KITS. These are called Factory Kits and User Kits. There are 24 Kits in a BANK. The Factory Kits are designed to work with a General MIDI drum module or drum machine. The User Kits on the trapKAT 5KS are designed to work with the new Kurzweil Sound Engine built into the trapKAT.

You can change settings in the Factory Kit, but your changes are not saved. When you leave the kit, the original Factory Kit is restored. If you edit a Factory Kit and want to Save it, you must use the Kit Edit footswitch and pad #15-16 to save your Kit to a User Kit.

A User Kit is a collection of your pad note numbers, MIDI channels, velocity and curve settings, gate times and Kit Name. The User Kits in the trapKAT can be altered and saved by you. It is a starting

point. If you need to restore the Kits back to the Factory Setting, you will need to reinitialize the instrument.

Calling up a Factory Bank or User Bank is easy. Step on and hold down the Global Edit Footswitch, and hit pad#1. Striking the pad again toggles between the two Banks.

GROOVE ENABLE
PAD #2,5,9,15,16,23, and 24
The Melodic and Percussion Grooves built into the trapKAT are from the original 1.0 software created back in 1995! They were designed to work with General MIDI drum modules, so the new Kurzweil Sound card plays back music but not what was originally intended. It is likely that future upgrades of the trapKAT 5KS will rewrite these grooves.

The Grooves in the instrument were conceived as a selling tool when the trapKAT was demoed in the stores. The idea was that if the drummer started playing, they would forget what the trapKAT looked like and would just start playing and have fun. But because the user can not add their own grooves or modify the existing groove other than the tempo, these grooves got old in a real hurry.

By Default, the Grooves are now disabled on the trapKAT. To turn them on, step on and hold down the Global Edit Footswitch and hit pad #2. You can now toggle the Grooves on or off.

When the Grooves are Enabled, pads 15, 16, 23 and 24 stop functioning as normal drum sounds and act as a Groove Controller, changing grooves, starting and stoping them and controlling their tempos.

Pad 15 are Melodic Grooves, music minus drums. Each strike of the pad changes the Groove.
Pad 16 are Percussion Grooves. Each strike of the pad changes the Groove
Pad 24 is a Start/ Stop Pad
Pad 23 is a Tempo Control Pad. Hit the pad twice at the tempo you want (in quarter notes)
Pad 9 controls the Volume of the Grooves. The volume goes from 0-10

Pad #5 Globally Turns on or off the Groove

MEMORY PROTECT
Pad #3
If Memory Protect is Turned ON, you can not save any Kits or make any changes to the Kits. You will know that the Memory Protection is On because you hear a “bad” beep every time to try to change anything. If you perform a REINITIALIZE, the trapKAT defaults to MEMORY PROTECTION ON.

Turning Memory Protect on or off is performed on pad #3 with the Global Edit Footswitch held down.

MIDI MERGE
Pad #4
MIDI information coming into the MIDI In of your trapKAT may be passed (or merged) through to the MIDI Outs if the MERGE is ON. If you have another controller besides your trapKAT, you may want to have both the external controller and the trapKAT use the same sound source. The Merge setting allows you to do that.

If you are editing note numbers on the trapKAT, you can AutoLoad the MIDI note number and MIDI channel directly from the MIDI IN.

Turning On or OFF the Merge is performed simply by depressing the Global Edit footswitch and hitting pad 4 twice.

If you are in Note Edit Mode and you press a key on an external keyboard plugged into the MIDI IN port with MERGE On, that note and channel will automatically be loaded into the pad's note number.

SPLASH ADJUST
Pad #6
Splash is a HiHAT event that drummers use when they kick up the HiHAT pedal fast to get a splash sound.

This function controls the “EASE” of when splash occurs. There are 10 variations of “ease”, plus off.

Adjusting the “ease of splash” is performed by hitting pad #6 with the Global Edit footswitch depressed.

PROGRAM CHANGE RECEIVE ENABLE/DISABLE
Pad# 7
You can have the trapKAT change Kits under the control of some external device like another controller or sequencer. To do this you must select a MIDI Channel to Receive Program Changes on. This Channel must match the MIDI Channel that the external device is sending Program Changes to the trapKAT on. This setting can be on any MIDI channel 01-16 or set to OFF

To select the Channel to Receive Program changes on, simply depress the Global Edit footswitch and hit pad #7.

CYMBAL CHOCKING
Pad #8
Some drum modules use “aftertouch” to control choking a cymbal performed by grabbing the pad in the same manner you would grab an acoustic cymbal to choke it. Try it! Enable Cymbal Choking under pad #8 in Global Edit and see if you drum module responds to this.

There is another cymbal chocking method that was implemented by Alesis™ called Exclusive 96 Mode. Note number 96 is essentially a silence pad and is another method you should try on your drum module if you are looking to choke your cymbal.

GROOVE VOLUME
Pad #9
This function controls the overall volume of Grooves if that are enabled. Choices are 0-10

MEMORY DATA DUMPS
Pad 10, 23,24
Data Dumps are used to send out your trapKAT RAM settings to be saved on an external storage device like a data disk or computer so that you may receive them later. On our website, we have links for

programs for your MAC (SysEx Librarian) or PC (MIDIOX) that store data dumps on your PC.

Data dumps are used as a backup against the accidental loss of your User Kits and Global settings. Having a Data Dump of your Kits is like having a spare tire in your car trunk. It is not necessary until you need it, buy when you need it, you'll regret not having been prepared.

The trapKAT sends out 3 different kinds of Data Dumps.

Pad #10 Sends out an ALL MEMORY DUMP. All Kit and Global Data is sent out.
Pad # 23 sends out only the GLOBAL Data. This is your training settings
Pad # 24 sends out the current KIT.

Step on the Global Edit footswitch and tap one of these pads twice. The appropriate data will be sent out. Make sure that you have a MIDI cable plugged into the MIDI OUT port on the trapKAT, and that you have the MIDI cable plugged into your receiving device, enabled and waiting to receive the data. Don't forget to Name the dump once its completed.

The trapKAT will automatically receive the Dump and notify you went the SYS EX is complete.

PAD TRAINING
Pads # 11,12,13,14
TRAINING

Everyone's playing style is different from everyone else's. Some players play with a much lighter touch than others. Because of this, the trapKAT allows you to “train” your own personal dynamics. Dynamics are your range between hard and soft hits. As well as training your dynamics, you can also adjust the sensitivity of your playing pads to suit your style.

TRAINING your pads consists of telling the trapKAT what a soft hit and a hard hit are in your playing style. If you are a finesse player, you hard hit may only be a medium hit for a basher. One set of settings aren't appropriate for both playing styles because when you play through your personal dynamic range from soft to hard, you need to get a full range of volume out of the sounds you are playing-not just soft to medium loudness.

To train the trapKAT for your playing dynamics, do the following
Depress the Global Edit footswitch and hit pad **#11**. The screen will ask you to hit pad #11 again. Now choose a pad that you want to Train and hit the pad softly.....wait until the trapKAT asks you to hit the pad hard. That pad is now Trained.
You can now TRAIN every pad and the bass drum pedal. Just keep on going from pad to pad, wait for the screen to tell you to hit the pad soft and then hard. When you are finally finished Training, step on the Edit footswitch again. The trapKAT will stay in TRAIN mode until you step on the Edit Footswitch.

The pads and rim pads all need to be trained individually because of their varied locations, uses, and heights. Retrain any pad that doesn't respond the way you like. Feel free to experiment with your training, using different levels of soft and hard hits. This training, together with the velocity and curve settings (that are in the User Kits), you can tailor the response of the trapKAT to feel natural and dynamic to your playing style.

PAD THRESHOLD
PAD # 12
The TRAINING does not affect the low end sensitivity, that is the level of softness that the trapKAT will “see”. This softest level is called a pad's threshold. The Threshold is the setting that affects how sensitive your pads are. The lower the value, the more sensitive that particular pad will be. However, if you make the Threshold too low, the pad may trigger itself, and you will hear “note chatter”.

Please note again, that the Minimum, Maximum and Curve Velocity Settings in the User Kits on every pad will influence the response of a pad. So if the pad sound is too soft for example, you might want to raise the pads minimum velocity. Please refer to the Velocity Setting Section in the Kit Edit Screens for details on programming velocities on the trapKAT.

Depress the Global Edit footswitch and hit pad# 12. It will ask you to hit the pad again.
Now choose the pad that you want to change the Threshold.

If you strike that pad again, you will increment the threshold, making it LESS sensitive. To decrement while editing, do a “quick-click”, that is release the footswitch and quickly re-depress it. The beeping when you hit a pad will change to indicate that you are now decrementing, decreasing the values. A second “quick click” will return to normal incrementing.

If you strike any other pad (remember to keep the footswitch held down) you will see the value of its Threshold and be able to change the pads value as well. It is normal for you pads to have different values so only change those you want to make more or less sensitive.

PAD LOW AND HIGH DYNAMICS
PADS #13, 14
The training of your pads determines two values: your “low dynamic” and your “high dynamic”. These settings tell you where your soft and hard hits lie in the trapKAT's range. As well as training with the soft and hard hits, you can also manually changes these values yourself.

To see the values that the trapKAT stored after a TRAIN or to modify these values,
step on the Global Edit footswitch and hit pad# 13 for LOW DYNAMICS, or pad # 14 for HIGH DYNAMICS. It the pad again to see the values.

If you strike that pad again, you will increment the Dynamic. If you “quick click”, striking the pad again reverses the values.

Hits that are softer than your Low Dynamic setting will play at your minimum velocity setting. Hits that are harder than your high dynamic will still play at your Maximum Velocity Setting. This is an important concept. It means that the TRAIN determines the RANGE that the trapKAT will see. If you play softer than what you trained at, the trapKAT still sends out the value that you set up in the Minimum velocity setting. If you play harder than the TRAIN, any volume playing beyond that will still only play the maximum velocity.

In other words, you want to put your Min/Max Velocity Range WITHIN your Training settings. What this means in practicality is that when you TRAIN, be realistic. When it asks you to play soft in the TRAINING process, play the way you play.....hit the softest hit that you really will play. When it asks

you to play hard..... don't just bash it. Think about what level of hard playing you want the trapKAT to go to reach its maximum velocity setting. This is one place where you might need to experiment to get the trapKAT to respond the way you want it to!

REINITIALIZE
PAD #15
To Reinitialize your trapKAT back to all the original FACTORY and USER Kit settings, simply hold down the Global Edit footswitch, and hit pad #15. The trapKAT will ask ask you to hit pad #15 again, while your pressing pad #1.

If you then hit pad #15 again, while holding down pad #1, and while still depressing the Global Edit footswitch, the trapKAT will return to the original settings for everything. User Kits, Pad Thresholds and Preferences.

If you have a trapKAT 5KS, then you will need to go back to User Kits. But before you do that you must shut off Memory Protect.

So, if you have a trapKAT 5KS and you reinitialize the trapKAT...
1) Step on the Global Edit Footswitch held down and hit pad #3 to shut off Memory Protect.
2) Step on the Global Edit Footswitch held down again, but now hit pad #1 to get to User Kits

GENERAL MIDI NAMES
PAD #16
When setting up your MIDI note numbers on your pads, you can also choose to display the General MIDI Name of that note number. This feature only works if you are using a GM drum module. The Kurzweil Sound engine built into the trapKAT has an enhanced GM sound set. This means that the basic sounds are still assigned to the GM locations, but there are many other sounds that are not GM that are used in the sound card. This is a good thing because there is more variation of sound available on the trapKAT 5KS

Step on the Global Edit footswitch, and while held down, tap on pad #16. The GM Mode toggles between on and off with multiple hits.

TRAIN HiHAT Pedal
PAD #17
It really is important to TRAIN your HiHAT pedal in order to get the best results out of the pedal. Make sure that you are using a 1/4” mono jack plugged into the trapKAT. Step on the Global Edit Footswitch and tap on pad #17 twice.

The screen will ask you to depress the HiHAT pedal all of the way down and then hit any pad.
Next, the screen will ask you to release the HiHAT pedal then hit any pad.

BASS DRUM TRIGGER GAIN
PAD #18
The BASS Drum input can be TRAINED, and the THRESHOLD and DYNAMICS can be changed in the same way as for the pads. Simply play the bass drum pedal instead of hitting a pad when TRAINING.

There is one important difference with the Bass Drum Trigger than with the pads. It has a GLOBAL GAIN Setting to help accommodate the variety of bass drum triggers available. Simply hit rim pad #18 with the Global Edit footswitch depressed and you can cycle through the three Gain Settings with repeated kits.
MIN (best for eKIC), MID (triggers that need more Gain) MAX (triggers needing high GAIN). If after the training the bass input, the response of your bass trigger is not optimum, then try a new Gain, then Train again. You can look at the Training Values (pad#13,14) to see the results of the GAIN change.

DISPLAY ANGLE/ BEEPER
PAD #19,20
On the trapKAT can change the viewing angle of the display and you can turn the Beeper on or off. When you tap on pad #19 in Global Edit, the screen toggles between the Display Setting and the Beeper Setting with each hit. To change the angle or the beeper setting, tap on pad #20

SAVE USER KIT
PAD #21
New to the trapKAT 5KS is the SAVE USER KIT function. In the past, the trapKAT automatically saved kits. Now after editing your User Kit, you will need to step on the Global Edit footswitch, and while held down, tap on pad 21 twice. Your current User Kit will be stored into permanent memory.

PAD LINKING
It is possible to LINK and pad to any pad. This means that when a pad is LINKED, striking one pad will play the notes from two pads. The pad that you are playing on, PLUS the pad that is linked to that pad.

To turn on the Link Pad Function,
Step on the NOTE EDIT FOOTSWITCH and tap on the pad that you want to set up the LINK. Now with the NOTE EDIT FOOTSWITCH still held down, tap on the GLOBAL EDIT FOOTSWITCH. Each time you tap on the GLOBAL Footswitch, the LINK Advances to the next pad. The choices go from pad 1 to 24 and NO.

When you assign a pad to LINK, both the pad that you are playing on AND the sounds assigned to the LINK pad will sound.

If you want to cancel this function, set the LINK to OFF. This is done by continuing tapping the footswitch past pad 24. The LINK Screen will say NO. Remember that quick-click. (release and step again). Doing this on the Note Edit Footswitch will change direction of the pad LINK Numbers.

NOTE EDIT FOOTSWITCH

Changing note numbers on the pads is a real easy task. All you have to do, is hold down the NOTE EDIT FOOTSWITCH, and while it is held down, tap on any pad.

Every other hit on that pad with the footswitch down will increment the number by one. If you want to go the other direction, use “quick click”. (release and repress the footswitch). The numbers now go in reverse order.

HEAR SOUND
When you are changing the note numbers using the NOTE EDIT FOOTSWITCH, the trapKAT automatically auditions the sound. This means that the note number that you are calling up is also being triggered, and is being sent out to the MIDI OUT jack and the internal sound card.

It is now possible to turn ON or OFF this HEAR SOUND function.
Step on the GLOBAL EDIT FOOTSWITCH, and while held down, step on the HiHAT controller pedal.

The screen will either read, “Hear Sound is On” or “Hear Sound is Off”. When you go back to the Note Edit, the result of this toggle will determine if you can hear the sounds while you are editing or not.

SPECIAL NOTE NUMBERS
Normally, MIDI note numbers go from 00-127. Each number has the ability to play a sound.

The trapKAT has SPECIAL note numbers. When scrolling past 127 using the NOTE EDIT FOOTSWITCH, you will see the special notes that aren't really notes but FUNCTIONS. These special notes do all kinds of cool things on the trapKAT. Take a look....

NO
This special note number function plays a silence when the pad is struck. If you are using one of the Alternate Mode Curves, this function allows you to have the desired number of alternating notes, but can have the option of having a silent location within the pattern. This can help create rhythmic patterns on a pad.

Sequence Start, Sequence Stop, Sequence Continue
When a pad is set to any of these functions (by its note number name), a sequence command is sent to the external and internal sound module. If the module is capable of playing sequences, then any trapKAT pad can be set to control the starting, stopping and continuing of sequences.

Alternate Reset
The Alternate Reset function resets the alternating pattern to start from the beginning. If the Alternate Reset is placed in the first position (slot #1) in Alternating Mode, then All alternating notes in the kit will be rest. It the Alternate Reset Function is placed in any of the other remaining 15 MIDI note numbers slots, then that pad will reset back to the beginning.

Alternate Freeze
The Alternate Freeze function stops the alternating pattern from advancing to the next note slot. If the Alternate Freeze is placed in the first position in Alternate Mode, then All Alternate Notes in the kit will be frozen. If the Alternate Freeze Function is placed in any of the remaining 15 MIDI note number slots, then that pad will stop advancing until Reset.

Kit Advance, Kit Backwards
If a note number is assigned to Kit Advance or Kit Backwards, striking this pad will advance or step backwards, the User Kit by one. Note that every kit must be assigned its own Kit Advance/Backwards Function.

Pitch Wheel
If a pad note number is assigned to PITCH Wheel, then pressing on this pad will send out pitch data.

Program Advance, Program Backup
These are special functions that are designed to work only with the trapKAT 5KS.

As you may recall from the Kit Edit Section, changing programs (sounds) require a Bank (MSB/LSB) Change, and a Program Change Command on a specific MIDI channel.

We have attempted to make a shortcut on the trapKAT. Most of the drum and percussion sounds are located in Banks 4 and 5 in the sound module. The Program Advance/Backup is a special function that sends out the Bank and Program change with just one tap of the pad.

When a pad's MIDI note number is set to Program Advance or Backup, drum sounds along with the drum or percussion's name are automatically loaded into the User Kit. Every time you strike the pad, a new drum kit is loaded in. The screen also changes, displaying the Bank and Program Change that has just been loaded in. This makes it easy for you to find the drum sound that you want.

If you like a kit, and want to save it permanently in the User Kit, SAVE it by stepping on the Global Edit Footswitch and tapping on pad #21 twice.

NOTE SLOTS

The trapKAT can play up to 16 sounds on one pad. Most of the time when you are changing note numbers, you will be working on slot number 1 (of 16). If you accidentally stepped on the NOTE EDIT Footswitch and the KIT EDIT FOOTSWITCH at the same time and then struck a pad, you then switched editing to slot number 2 of 16. You can tell which slot you are working on by looking at the screen when the Note Edit Footswitch is held down. For example, you might see something like #38-01. The number 38 is the MIDI note number. The 01 represents slot 1 of 16.

Hearing these other sound slots depends on if you have a special function turned on such as Alternate Mode or Velocity Shift. These are activated in the Velocity Curve Screens. These functions are described in the KIT EDIT FUNCTIONS chapter.

If you find that you are not in slot number 1, then step on both the NOTE EDIT and KIT EDIT footswitches at the same time, and continue tapping on the pad until slot 1 rotates back on the screen.

KIT SELECT FOOTSWITCH

The trapKAT has three ways of accessing your 24 Kits. This applies to both the Factory and User Kits.

Every time you step on the KIT SELECT FOOTSWITCH, the trapKAT advances the Kit by one.

If you step on the footswitch and hold it down, and then a hit a pad, the trapKAT jumps to that kit. You may recall that the trapKAT's pads numbered from 1-24 coincide with the 24 Kits that are available.

This allows for instant access jumping from any kit to any kit. Just step on the Kit Select Footswitch and type a pad.

Finally, you can set a pad to “Advance” to the next Kit or go “Backwards” to the last adjacent Kit. To do this, set the MIDI note number to “Advance” or “Backwards”. These are the special note numbers that can be found past MIDI note #127. When using this function, these special MIDI notes must be programmed in every Kit. These are Kit parameters.

APPENDIX

GLOSSARY OF TERMS

Below is a list of terms that are used throughout the manual. Here are non technical explanations.

Bank Change

Changing sounds on the malletKAT require both a Program Change and a Bank Change. A Bank Change is a collection of Program Changes. Each Bank has 127 Programs in them. A Bank Command consists of two numbers MSB xx and LSB xx. On the Kurzweil, MSB are always 00. The LSB number changes the bank.

Channel

In MIDI there are 16 MIDI channels. A MIDI channel is like a phone number. For two instruments to communicate, they must talk over the same channel. This is very much like communicating with a friend on the phone. You must dial the correct phone number first.

Controller

A MIDI Controller is a device whose purpose is to control other MIDI devices (as opposed to a sound source whose job is to be controlled). Generally, a Controller is the Interface device which you play on, such as a Guitar Controller, Keyboard Controller, Drum Controller, etc.

Data Dump

The internal data information that a musical instrument sends out so that you an save its setting on a back up system.

Default

The standard, customary or “safe” value for a given setting.

Dynamics

A measure of how hard or softly you are playing with your sticks.

Editing

The act of changing the settings in a device.

Factory Kits

Kits that are always present in your instrument. These are Kits that are designed to work with General MIDI Instruments. User Kits (unmodified) are designed to work with the Kurzweil Sound Engine built into the trapKAT.

Gate Time

The length of time that a note plays as sent by the trapKAT. It is the length of time that the trapKAT waits after it sends a Note On Command, before it sends a Note Off. Many drum machines ignore the Gate Time sent by the trapKAT and sound the note until its fully “played out”. Melodic sounds like horns, strings, & organs often do respond to Gate Time.

General MIDI (GM) Sound Module

A sound module that conforms to the General MIDI specification specifying Program layout by

sound type for simple connection between MIDI devices.

Groove

A Groove is a pattern or riff that you can select to play along with. There are melodic and percussion GM grooves in the trapKAT.

Kit

A collection of MIDI Note and Channel settings for all of your pads, HiHAT and bass drum. Basically, a KIT defines what sounds you pads make. There are Factory and User Kits in the trapKAT.

MIDI

MIDI stands for Musical Instrument Digital Interface. It is a agreed upon standard for communications between electronic musical instruments. It is simply the means by which your trapKAT communicates with the sound sources you connect it to.

MIDI Delay

A term which is mistakenly used by many to refer to all kinds of delay ranging from Sound Source delay, to Sound Travel Delay, to actual delay due to MIDI. The delay caused by the transmission of MIDI information is only 1 millisecond! That's .001 of a second.

MIDI IN

A 5 pin DIN jack by which an instrument receives MIDI information from another musical instrument. Though its MIDI IN, the trapKAT can receive DATA Dumps, Kit changes and Note # Auto Train information.

MIDI OUT

A 5 pin DIN jack by which an instrument sends out MIDI information to another instrument. The trapKAT sends out Channel, Note and Velocity information and Continuous Controller messages.

NOTE NUMBER

A MIDI Note is the number sent in a MIDI Note ON or MIDI Note OFF command to tell the receiving instrument which sound (pitch) to make.

PROGRAM CHANGE

A MIDI command which instructs the receiving instrument to change a new group of settings. For Sound Sources, this generally means selecting a new group of sounds.

RESPONSE

What Velocity the trapKAT sends out related to your playing dynamics. A natural response is that the velocity (hence the loudness) gets bigger as your dynamics increase.

SCREEN

A display “window” on the trapKAT, usually with information about the current setting

SOUND SOURCE

A device that accepts MIDI input and then plays a sound based on the information it received. Drum machines, samplers and synthesizers are all examples of Sound Sources.

SOUND SOURCE DELAY

The time it takes for a Sound Source to play a sound after it has received all the MIDI information it needs. Usually this is about 2 to 15mS.

SOUND TRAVEL DELAY

The time is takes for a sound to travel through the air from the source (speakers, drumhead, etc) to our ears. Sound travels around 1.125 feet per second.

TOGGLE

To switch back and forth from one selection to another. For example, in Global Edit, pad one toggles (switches) between Factory and User Kits.

TRIGGER

Any of various external impact sensors that can be plugged into the trapKAT bass input. Normally these are foot triggers like the eKIC.

USER KIT

Kits that are changeable in your trapKAT. These are Kits that you an alter to meet your needs.

VELOCITY

A measure of how loud or soft a MIDI note will play on your sound source when playing on the trapKAT.

APPENDIX

MIDI FOR PERCUSSION

The world of Percussion has some special needs that affect how MIDI is generally used for Percussion and Drum Sounds. These special differences include how Note Offs (Gate Time) are handled, how Notes and Program Changes are used, and sensitivity to time delay and polyphony.

Keyboardists, guitarists, string, and horn players are all used to dynamically controlling the length of the Sounds they produce. This is not generally true for drummers and percussionists. Generally, once a drum is struck, it plays its sound out on its own. (Of course there are exceptions like cymbal choking and damping mallet or drum sounds - but often the sounds do play out on their own.)

Because of this, it is not unusual for a drum machine to not pay any attention to Note Off Commands. This means that generally, even if a drum machine is told to turn off a Sound after only a few milliseconds, most will play the Sound out until it is done on its own anyway. Because of this, you can choose on the trapKAT not to send any Note Off Commands - because often, for drum Sounds, they are not needed and simply fill up space in sequencers and waste the time of the Receiving Sound Source.

Another difference for Percussion is that different Note Numbers are more likely to stand for totally different Sounds - (not just different pitches of the same Sound). There are exceptions to this, but a keyboard player is more likely to think of MIDI Notes correlating to Pitch and a drummer is more likely to think of MIDI Notes as referring to totally different Sounds.

For a keyboard player, a **Program Change** Command is typically thought of as selecting some specific Sound which the MIDI Notes access different Pitches of. For a drummer, a Program Change is generally thought of as selecting a specific collection of individual sounds which specifies which different Sounds can be accessed through MIDI Note On Commands.

Because drummers and percussionists have a highly developed sense of time, they are more sensitive to time delays. A drummer is very sensitive to where a Sound is played with respect to the beat. This brings us to MIDI Delay. The MIDI time delay for a Note On Command is 1 millisecond (one thousandth of a second). It is imperceptible! (5 milliseconds (mS) is where you start to notice, 10 mS is noticeable and 20 mS is obnoxious.) (1 mS = .001 Second)

So why do we hear all this talk about MIDI Delay? Because they are really talking about **Sound Source Delay** when they talk about MIDI Delay. So what is Sound Source Delay? It is the time that it takes a Sound Source to respond to a MIDI Note On Command it has received and start to make a Sound. Sound Source delay typically ranges from 1/2 mS to 15 mS. The Sound Sources with 1/2 mS to 3 mS delay are the ones worth owning.

So if you want to avoid “MIDI Delay”, <u>avoid Sound Source Delay</u>! Call us and we’ll tell you how the current Sound Sources rate.

Interestingly enough, there is also <u>Sound Travel Delay</u>! It actually takes sound a noticeable time to travel through the air. Hence echoes. Hence you see lighting, then hear thunder seconds later. Specifically, sound travels 1 foot in just a bit less than 1 mS. This means that a monitor placed 10 feet from your ears will cause around 10 mS of delay - Sound Travel Delay! (There is about a 2mS

delay from when you strike your acoustic snare drum to when the sound gets to your ear!) Earphones have a Sound Travel Delay of only a teeny bit, since the little speakers inside are so close to your ears.

Looking at the actual times involved in MIDI Delay (1mS), Sound Source Delay (.5mS-15mS), and Sound Travel Delay (2-10mS), you can see that actual MIDI Delay is the least of your worries.

(By the way, a MIDI Merge (In-merged-to-Out) generally has 1 to 2 mS Processing Delay.)

Because a drum sustains *after* you hit it for some time, quick hits or rolls have essentially two or more separate acoustic sounds playing at once. Drums need polyphony per drum to sound real. The trapKAT has 4 Note polyphony per pad so that you can capitalize on any sound sources that support polyphony per note.

APPENDIX

Inserting New Software Chips For Software Updates

PHYSICALLY CHANGE YOUR SOFTWARE CHIP:
Tools Needed: 1 medium flat screwdriver.

1) First, remove the AC adaptor plug from the back of the trapKAT!
2) Find a smooth, clean, flat surface and place your trapKAT upside down on it, the jacks facing away from you.
3) Remove back cover of the trapKAT (16 screws).
4) When the trapKAT is opened, you will see one large circuit board towards the back. On the front right of the printed circuit board is a large chip with a white paper label that says something like “trapKAT 4.5”. The chip with the white label is your Software Chip, the code that runs your trapKAT - its Operating System. Before you take the old software chip out, note how it is oriented in the socket. Specifically notice that the “notch” on the end of the chip is away from you.
5) The chip is at the top end of the circuit board. To remove an old chip, you will use your flat screwdriver. You will pry the chip out of its socket. Look at the Upgrade chip you received and you will be able to tell what is the chip and what is the socket. You want to insert the screwdriver *between* the chip and the socket so as to pry up the chip but not the socket. As you start to pry up the chip insert the screwdriver further under the chip and pry up more, then insert screwdriver even further and then pry up more until the chip comes out of the socket. Don’t be scared - just pry a little bit and then push the screwdriver in further, until the chip is out. Take your time, don’t be in a hurry. Make sure you insert the screwdriver *between* the chip and the socket before you start to pry each time. (Instead of between the socket and the circuit board.)
6) After you have the chip out, place the new chip in its socket, being careful to orient it in the same way that the old chip was (remember the “notch”?). Take a little care to align the legs of the chip into the holes in the pins of the socket. Then push down evenly on the chip. It should push down snugly into the socket. Visually check to see that none of the legs got squished and are smashed under the chip.
7) Replace the back cover of your trapKAT and reinsert the 16 screws.
8) Turn your trapKAT back over, and reinsert the AC adaptor plug into the trapKAT. Now turn your trapKAT back on. If the display is working, you are OK. If the display is not working then:
   a) Remove the AC adaptor plug again.
   b) Turn the trapKAT over again and remove the 16 screws.
   c) Take the back cover off again.
   d) Try reinserting the chip (don't get legs bent under the chip).
   e) Put the back cover on, turn the trapKAT back over, reinsert the AC adaptor plug, and turn the power back on.
   f) If this still fails, put your OLD software back in and give us a call @ 413-594-5190. 9) After you have had the new software in and used it for several days, please send the old chip back to us. They are reusable.

APPENDIX
WARRANTY POLICIES

The trapKAT has a limited warranty. The trapKAT is warrantied against defects due to materials or workmanship for 1 YEAR ON PARTS AND LABOR, except for the FSR SENSORS which are warrantied for 6 months.

Save your sales receipt, it is required for proof of warranty.

WARRANTY RESTRICTIONS

Damage or defects sustained through unauthorized repair or tampering, or abusive treatment are not covered by this warranty. The warranty does not cover damages to the trapKAT as a result of incorrect polarity AC Adaptor. The shipping expenses and arrangements for repair are the responsibility of the purchaser.

Alternate Mode is not responsible for loss of Kit Memory when your controller is sent in for repair or upgrade. Please, save your Kits on a Data Disk, Sequencer, or Computer before sending in for repair.

CARE AND MAINTENANCE

The trapKAT is an electronic musical instrument that was designed to take a pounding - from a pair of drum sticks - not from rolling down the stairs. Simply use good judgment and your trapKAT will provide you with years of enjoyment.

Don’t pour or spill liquids on your trapKAT. Don’t leave in a very hot car for extended periods of time. Don’t leave in overly damp areas for extended periods of time.

Do not clean the pads or metal surfaces with alcohol or solvents.

If you want to clean the pads, dampen a cloth with Armor All™ and wipe the pads down. Do not squirt the liquid directly on the pad.

APPENDIX

CUSTOMER SERVCE

There are many ways of getting the customer service you need.

You can contact us at: katsales@alternatemode.com. Call us at 877-933-6237 or 413-594-5190. You can fax us at: 413-592-7987. We have a forum on our website, www.alternatemode.com as well as a knowledge base software program on the website as well. We have a Video Help Desk on the Support page of the site and finally we have live internet broadcasts on www.alternatemode.tv

IF YOU NEED TO SEND THE trapKAT BACK TO THE FACTORY

If you need your trapKAT repaired or worked on for any reason, call our Customer Service staff and ask for an "**RA**" number. This is a "**Return Authorization**" number. When you call in your RA, our staff will ask you for information like your name, address, phone number, serial number, purchase date, software version (power-up display) and a description of the problem. Write this "**RA**" number on the **outside of the box** when you send it back to Alternate Mode.

SHIPPING: If you need to ship the trapKAT back in for a repair or an update, use care and good judgment. It is best to save the original packing material to make shipping easy and safe. If you do not have the original packing material, box the trapKAT in tight with packing noodles, paper, etc. so that it is not flopping around in the box during shipping. Leave enough space inside the box to pad the corners of the trapKAT. **Shipping expenses and proper packing of instruments shipped to Alternate Mode are the responsibility of the consumer.**

TrapKAT USER KITS

01 Full Room
02 Birch Wood
03 Ring Tone
04 25th Anniversary
05 LA A Kit 3
06 LA B Kit 3
07 FabFringe
08 J Geils
09 Low Rock
10 Flabby
11 Modern Rock
12 Fnessence
13 Thigpen
14 Coral Box
15 BeatBox 101
16 Superfly
17 VRT Bendir
18 VRT DmbkDjembe
19 VRT Tabla
20 Magic Mbira
21 Natural Perc 1
22 Choose BdsdTT*
23 Choos2BDsdTT*
24 Drum & Bass*

*SPECIAL NOTES
Kits 22 and Kits 23 are designed to allow you to call up your own Bass Drum, Snare Drum and Tom Toms

The Snare Drum Pads (2,3,5,12,13,14,15) are on a MIDI channel 2
You can choose the snare drum that you want by changing their MIDI note numbers (from 19-108).

The Bass Drum pads (11 and Bass Trigger Input) are on MIDI channel 3
You can choose the bass drum that you want by changing their MIDI note numbers (60-104)

The Tom Tom pads (6,7,8,10) are on MIDI channel 4
You can choose the tom toms that you want by changing their MIDI note numbers (36-100)

Kit Number 24 Is a Special Audition Kit that allows you to listen to all of the drum set kits in the trapKAT. Pads Number 23 and 24 scroll forward or backwards through the list. The drum sounds are on Banks 4 and 5. The display on the trapKAT tells you where you are on the list

Let's talk about the organization of the Kurzweil Sound Module in the trapKAT. The sound card built in is called the mini C. It is a derivative of the PC3 keyboard (which costs thousands). Each sound (instrument) say a vibraphone gets its own program number. Drum Kits are organized the same way. Each drum kit gets its own Program Number. A drum set is a carefully created kit designed to play the kits' sounds as an organized self contained instrument. There is an easy way on the trapKAT to quickly go through all of these kits without knowing or caring about banks or program numbers.

The pad assignments via MIDI note numbers go through the sounds assigned to that kit. So if you wanted a snare drum sound on say pad 5 (there are at least 5 snares per kit), and you assign that pad to that sound by scrolling through the note editing footswitch, all of the different kits would play a snare drum on that pad. Programming on this level is easy. Very easy.

But what happens if you want the Bass Drum from kit 1, and the snare drum from kit 7 and the tom from... etc. Because the trapKAT is a "KAT", you can do this. The trapKAT can call up 4 different kits (programs) in every User Kit. Each of these Kits need to be on a different MIDI channel. So this is where it is more complicated, but more rewarding.

There is also another way. Kurzweil put some special program kits in the mini C. Rather than having a self contained drum set in these special programs, these kits are a collection of sounds, say all the mono kicks or all the stereo kicks or snares or toms or cymbals.

The trapKAT User Kit now can be a construction kit where you can design your own kit. Yes you need to know about Banks and Program Changes, Note Number Assignments, but with Knowledge comes Power.... that has always been our tradition!

PC	MSB 00 LSB 04
1	Kit 1 Open Rock
2	Kit 2 SquashRock
3	Kit 3 Full Room
4	Kit 4 East Space
5	Kit 5 CopperRing
6	Kit 6 Birch Wood
7	Kit 7 DeadRocker
8	Kit 8 Ring-tone
9	Kit 9 Gadd'sLair
10	Kit 10 Hinomaru
11	Kit 11 KirkeeB 1
12	Kit 12 25thAnniv
13	Kit 13 LA A Kit1
14	Kit 14 LA A Kit2
15	Kit 15 LA A Kit3
16	Kit 16 LA B Kit1
17	Kit 17 LA B Kit2
18	Kit 18 LA B Kit3
19	Kit 19 Pomele
20	Kit 20 KirkeeB 2
21	Kit 21 J Geils
22	Kit 22 Tightie
23	Kit 23 Low Rock
24	Kit 24 Drum&Bass
25	Kit 25 Flabby
26	Kit 26 Boxy Tubs
27	Kit 27 West Boxy
28	Kit 28 Big Buzz
29	Kit 29 Schnizzle
30	Kit 30 Bonzo'sRm
31	Kit 31 Old Traps
32	Kit 32 Fat Boy
33	Kit 33 ModernRok
34	Kit 34 80'sPower
35	Kit 35 WoolyPckt
36	Kit 36 Reso-King
37	Kit 37 Los Feliz
38	Kit 38 Mahogany
39	Kit 39 80's PTS
40	Kit 40 FabFringe
41	Kit 41 LouStools
42	Kit 42 Orngcrush
43	Kit 43 Static
44	Kit 44 LiteBrite
45	Kit 45 Brush 1
46	Kit 46 Brush 2
47	Kit 47 PillowFuz
48	Kit 48 Thigpen
49	Kit 49 Fnessence
50	Kit 50 Proc Pop
51	Kit 51 Jersey
52	Kit 52 HardKnock
53	Kit 53 CoralBox
54	Kit 54 Cold Cash
55	Kit 55 Spooge
56	Kit 56 DJ-Dub
57	Kit 57 Beatbx101
58	Kit 58 Rhythmcon
59	Kit 59 Superfly
60	Kit 60 Lay Down
61	Kit 61 TrashFunk
62	Kit 62 RadioEcho
63	Kit 63 TouchTone
64	Kit 64 Sweeper
65	Kit 65 ScratchMe
66	Kit 66 Ice Heart
67	Kit 67 ChakraJam
68	Kit 68 Voice Box
69	Kit 69 6 Mil$Man
70	Strange Hits
71	Strange Hits2
72	VinylNoyzComboMW
73	Recrd Start/Stop
74	5 Kits Templte 1
75	Aud Kik/Snr Mono
76	Aud Kik/Sn Streo
77	Stereo KickDrums
78	Mono Kick Drums
79	StereoSnareDrums
80	Mono Snare Drums
81	Tom-toms
82	Hi-hats
83	Rdes&Crshs&Rolls
84	E Perc/SoundFX
85	Vocal Percussion
86	Drum Percussion
87	WoodMetlShakPerc
88	VRT Accessory A
89	VRT Accessory B
90	VRT Accessory C
91	VRT BongoConga
92	VRT Bendir
93	VRT Bodhran
94	VRT BodhrnBendir
95	VRT Djembe
96	VRT DumbekDjembe
97	VRT FrameDrums
98	VRT FrameHybrid
99	VRT Gourd
100	VRT Tabla
101	VRT TalkingDrum
102	PERC KatManDude
103	PERC PolyRitmico
104	PERC Carnival
105	HIT'n Rung 1
106	HIT'n Rung 2
107	HIT'n Rung 3
108	HIT'n Rung Keys
109	KEY SoftBars
110	KEY XyLoomBa
111	KEY Asian Metal
112	KEY TablaBars
113	KEY SlitBars
114	KEY GourdBars
115	KEY MamboBars
116	MIXnMatch Perc1
117	MIXnMatch Perc2
118	MIXnMatch Perc3
119	MIXnMatch Perc4
120	ATM HoldnSlide
121	ATM Birdy Birdy
122	ATM SacredShrine
123	ATM Tera Nova
124	ATM Oody Oody
125	ATM FlexiCrotale
126	ATM Bit'aGlitter
127	ATM Drip'nGlittr

PC	MSB 00 LSB 05	PC	MSB 00 LSB 05	PC	MSB 00 LSB 05	PC	MSB 00 LSB 05
1	Brt Natural Kit	26	AngryBastard Kit	52	Backsweep Kit	78	Coliseum Kit
2	SmoothRocker Kit	27	Vibra Lunch Kit	53	Bug Zapper Kit	79	RipperKit1
3	Low Rocker Kit	28	Ricochet Kit	54	Elektro Sand Kit	80	TripTrash
4	SuperNatural Kit	29	Frida's Gate Kit	55	Sandy Bott'm Kit	81	Beatbox2
5	Big Woosh Kit	30	Metallic Cut Kit	56	Box o' Sand Kit	82	SumpKit1 MWSus
6	Fat Nat Kit	31	Cannibal Kit	57	Fine Grit Kit	83	ElectroKit2MW
7	Abe Junior Kit	32	Tunnel Feel Kit	58	Matchmaker Kit	84	Paper Tom
8	Charlemagne Kit	33	Tuna Slap Kit	59	Zucchinni Kit	86	GlubFlangeKit
9	H-Fact Kit	34	Plywood Kit	60	Pump da Well Kit	87	DryFattyKit
10	SoftCookie Kit	35	Door Knocker Kit	61	L'trk Reflux Kit	88	Drums w Bass 1
11	Brushes Kit	36	Slapstick Kit	62	Squash Clap Kit	90	GateClapDrmLE
12	HipgigJunior Kit	37	Scratchbox Kit	63	Scoopit Up Kit	91	Dub Kit
13	Cocktail Kit	38	Anvil Head Kit	64	Tone Keeper Kit	92	Rock Room Drums
14	BeatBoxBrush Kit	39	Cat Scratch Kit	65	Phase "E" Kit	93	ResNoise Kit
15	Jinglehop Kit	40	Scream Kit	66	Straw Blow Kit	94	144ms Gated Kit
16	Tiny Bopper Kit	41	Mangled Kit	67	Falling Star Kit	95	FatNoise Kit
17	Move'n Air Kit	42	Rawhide Kit	68	Super Ball Kit	96	Hypd Natural Kit
18	Ali's Punch Kit	43	Shrugie Kit	69	Pixie Dust Kit	97	Rango Kit
19	Rock Trance Kit	44	Big Dog Kit	70	Air Waves Kit	98	NoiseSlapToms
20	Ringling Pop Kit	45	Sweeper Kit	71	Tub Floater Kit	99	16LayerCake Kit
21	Marley Kit	46	Gravel Dump Kit	72	Why Not Kit	100	HopRoom Kit
22	L'tric Nat Kit	47	Mudflap Kit	73	Turntablism Kit	101	Natural Ringer
23	TrashPanTom Kit	48	Mud Slinger Kit	74	Stud3and4C	102	BeachGroover
24	Tin Man Kit	49	Shrug's Bros'Kit	75	RadKings3	103	Rock Snarer
25	Cheapo Dist Kit	50	Wet Sponge Kit	76	ResonantTraps	104	Drum Pad Kit 1
		51	Succotash Kit	77	Ambient Rock1	105	Filter Kit

PC	MSB 00 LSB 00	PC	MSB 00 LSB 00	PC	MSB 00 LSB 00	PC	MSB 00 LSB 00	PC	MSB 00 LSB 00
1	Standard Grand	27	Supertramp Wurly	54	OleTime Gospel	83	Big Old Jupiter	110	Jaco Fretless
2	Studio Grand	28	FlydDarkside/Wah	55	FooledAgnVox	84	9Yards Bass	111	Upright Growler
3	RubensteinSWComp	29	What'd I SayWrly	56	BostonScreamer	85	BowhSaw Bass	112	Levin/GabrlFrtls
4	Horowitz Grand	30	DeepFuzz Wurly	57	Power Pop Horns	86	ARPesque Bass	113	NYC Kits
5	NYC Jazz Grand	31	No Quarter Pnt	58	Sax/Trumpet Sctn	87	DaywalkerBassMW	114	LA Kits
6	Pop Power Piano	32	MistyMountain EP	59	BigBand/AMradio	88	Harpolicious	115	Rock Kits
7	ColdPliano	34	AcidJazzVelFlute	60	MeanSalsaSection	89	Slo QuadraPad	116	Roots/Indie Kit
8	Grand "Evans"	35	TimbaSynth	61	R&B/Funk Section	90	Phase Shimmer	117	Kikz/Snarz MW
9	Blues Piano 1974	36	Blue PVC Tubes	62	Bassie Orchestra	91	Le Pesque	118	EarthKikz n Snrz
10	Rock Piano 1974	37	SimpleHipHopLead	63	P*Funk Horns	92	Wispy One	119	Anazlog Machine
11	Lola Piano	38	Stereo TouchKoto	64	70s Stones Horns	94	Fairlight Pad	120	Produced Kit '08
12	TakeMeToThePilot	38	Modwheel DJ	66	DarkNYCStudio	95	Tronesque	121	Natural Perc
13	Deb's Ghost Pno	40	Retro Sparkle	67	Pop Tripper Str	96	So Lush Pad	122	Rhythm 4 Reel
14	Ken Brns Uprigt	41	RealSupasticious	69	Vienna Octaves	97	Boutique Six Str	123	New Marimba
15	SMiLE/RkyRaccoon	42	Joe's Clav	71	Pizzicato	98	Boutique 12 Str	124	2-HandSteelDrums
16	Piano & String	43	Rufus/Marley WAH	72	Tremolando	99	Emo Verser	125	Real Vibes
17	Beaten in Rhds	44	Black Cow Clav	73	Choir Complete	100	Voxxed Elec 12	126	SteamPunkMallets
18	Stevie's Rhds	45	Hiya Ground sw	74	Haah Singers	101	Real Nylon	127	Magic Celeste
19	Gilpin'sSuitcase	46	TrampledUnder D6	75	Manhattan Voices	102	Dual Strat	128	Drums 'n Bells
20	Duke's Dyno Rhds	47	Harpsichord	76	Aaahlicious	103	BurningTubes MW		
21	MotorBootyMutron	48	BriteHarpsichord	77	NYC in LA	104	Rockin' Lead MW		
22	Sweet Loretta EP	49	Gregg's B	78	Crystal Voices	105	P-Bass		
23	Rhds/WahSW	50	Real AllOut B	79	Airy Pad	106	E-Bass		
24	Hotrod Dyno Rhds	51	Clean Perc	80	Cathedral Vox	107	Beasties Bass		
25	WoodstockClunker	52	The Ninth Bar	81	Classic Comp	108	Flea/Bootsy		
26	Stage Mix Wurly	53	Lord's B3 MW	82	Fitty-Fitty Lead	109	Big Dummy		

PC	MSB 00 LSB 01	PC	MSB 00 LSB 01	PC	MSB 00 LSB 01	PC	MSB 00 LSB 01	PC	MSB 00 LSB 01
1	Piano Stack	29	Crisp and Soft	56	VAST1-3,8&9	84	SynBell Morph	110	Lowdown Bass
2	Dark Grand	30	Soft Warm Ballad	57	1-Note PowerRiff	85	Perc>Morph>Bass	111	Eberhardt Frtls
3	Grand Piano 440	31	TX Stack	58	Miami Pop Horns	86	EvilOctaveWheel	112	Sly Bass
4	Piano Recital	32	Tight Bright FM	59	80sPopOctaveSax	87	TranceRiff	113	Maroon Drums
5	Ole Upright 1	33	PolyTechnobreath	60	BuenaVista Brass	88	SickoSynco	114	BourneRemixDrum
6	WestCoastPno&Pad	34	PianoSynth Stack	61	Tenor Express	89	Buzzy Strings	115	BeastieRetroDrum
7	Perfect PnoPad	36	BigSyn/HornStack	62	Sgt.Pepper Brass	90	VA1Saw/Sqr/Pulse	116	DryPumpin'Drums
8	Dreamy Piano	37	'70s Arena Synth	63	Goldfinger Brass	91	Airy Impact	117	'60s Rock&Soul
9	Piano w DvStrgs	38	'80s Arena Synth	64	Bari/TenorSect	92	Spider's Web	118	Headhunters Kit
10	PnoAgtStrngs	39	'90s Funk Stack	65	Studio A Strings	93	ARP Big Synth	119	FranticHouseDrms
12	DancePnoEchplex	40	Nexx Prog Stack	66	Studio B Octaves	94	Class Pad	120	Dance/Marilyn
13	Ivory Harp	41	Crisp Clav	69	Owen's Strings	95	HarmonicEnvelops	121	Mellow Marimba
14	Piano Lushness	42	Stevie Fuzz	70	Studio C Strings	96	Heaven & Earth	122	Skullophonic
15	Piano & Wash	43	HeartbreakerWAH	71	Tender Strings	97	Bling 6 String	123	Percussionist
16	Piano & Vox Pad	44	ChoclateSaltyClv	72	Toxic Strings	98	MediumCrunchLead	124	Shiny Sparkles
17	XfadBelltoneRhds	45	SailinShoes Clav	73	Mixed Choir	99	DoubleCleanChrs	125	HybridTuned Perc
18	Extreme Hardstrk	46	StopMakingSense	74	Concert Choir	100	Comp'd Phaser	126	Dynamic Perc
19	Fagen Phaser	47	Harpsi Rotovibe	75	Aaah Vocals	101	TremBucker	127	Cage's Ensemble
20	RoyalScam Rhds	48	PhsyclGrafitiClv	76	Jazzy Ballad Vox	102	Cascade Sitar	128	Magic Mbira
21	AustnCtyLmtsWrly	49	ParisCmboAccordn	77	AntiqueAhhChorus	103	Heavy Buckers		
22	BrightDynamicWly	50	WhiterShadeB3	78	Bright Syn Vox	104	Nasty'70s Guitar		
23	'70sWahLeslieEP	51	Doors Vox	79	Vox Orgel	105	Finger Bass		
25	Classic DX Rhds	52	Indagardenoveden	80	Vox & Strings	106	KneeDeepMinimoog		
26	Rich EP+Pad	53	Animals Vox	81	Press Lead	107	AC Buzzer Bass		
27	90's FM Shimmer	54	Magic Wolf	82	ClassSquare	108	Motown Bass		
28	Bright HardstrEP	55	Farfisa 1	83	ARP2500 Brass	109	Squire'sHeavyPik		

PC	MSB 00 LSB 02
17	VA1 Saw Lead
18	VA1 Sqr Lead
19	MaroonSynBass
20	VA1DistBassSolo!
21	DownwardSpiralMW
22	VA1DstPulseWheel
24	VA1 DetunedPulse
25	VA1 Detuned Saws
26	VA1 Detuned Sqrs
27	VA1 Emerson Lead
28	MwhlClubsweeper
29	Innervate
30	ChemBrosBassLead
31	UFO Pad
32	VA1SliderMorphSQ
48	Preston SpaceWah
49	Analog/DigHybrid
50	Jump! Obx
51	'80s End Credits
52	VA1Distlead CC
53	Divider
54	Mono Trekkies
55	Disco Divebomb
56	MutronTweetyPerc
57	Disgusting Bass
58	VA1ShaperSweeper

PC	MSB 00 LSB 02
59	ElectroPercSynth
60	MWhlMayhemBass
61	ElectronicaSplit
62	HiPassMWhlBlips
63	Plasma Cannon
64	32 Layer Bass!
104	St.P PWM BASS
105	SquareChirpLead
110	Synbrass Pillow
113	Outkast Drums
114	PopRock'08 Kit
115	Hello Brooklyn
116	Snoop Kit
117	EpicRemixDrums
118	ZooYorkRemixDrms
119	Roc-A-Fella Kit
120	Breakestra Kit
122	DigitalMoonscape
123	Falgor'sLament
124	BPM BionicStrngs
127	MeanStereoSweep
128	PulseVowel

PC	MSB 00 LSB 03
1	Winds & Strings
2	Winds, Horn & Str
4	LH Timp Roll Orch
7	Poltergeist Trem
9	Pizz w/PercUpTop
11	Fast Winds &Pizz
24	Strings & Silver
25	Reeds & Bells
26	Perc Atk Strings
29	Orch w/ Bells On
31	Horns,Winds&Str
34	StBaroque Harpsi
35	String Continuo
38	Fifes & Drums
39	Solo Flute
40	Tremolo Flute
41	Fast Orch Flute
42	Piccolo
43	Solo Oboe
44	Slow Oboe
45	Fast Orch Oboe
46	Lead Oboe
47	Solo Eng Hrn prs
48	Fast Orch EngHrn
49	Slow EngHorn prs
50	Lead English Horn

PC	MSB 00 LSB 03
51	Solo Clarinet
52	Slo OrchClarinet
53	Fast Orch Clar
54	Lead Clarinet
55	Solo Bassoon
56	Solo Bassoon vib
57	Solo Dbl Reeds
58	Woodwind Section
59	Ensemble WWinds
60	BassClar/Clar/Fl
61	Solo Fr Horn
62	Ensemble Fr Horn
63	Lead French Horn
64	Dyn Orch Fr Horns
65	HornSect Layer
66	Solo BrtTrumpet
67	Hard Trumpet
68	Lead Trumpet
69	Soft Trumpet
70	Slow Soft Trp
71	Two Lead Trumpets
72	Lead MuteTrumpet
73	Solo Tenor Sax
74	Sax,Horns,MuteTrp
75	Solo Trombone
76	Ens Trombone

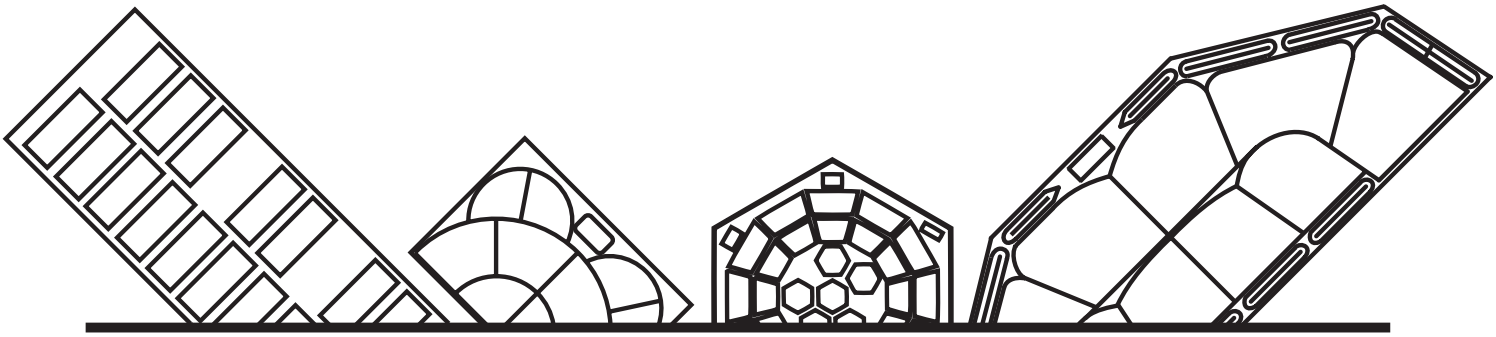
PC	MSB 00 LSB 03
77	Trombone Section
78	Dyn Orch Bones
79	Bari Horn Section
80	Dyn Bari Horns
81	Solo Tuba
82	Dyn Orch Tuba
83	Low Orch Brass
84	Low Brass Chorale
85	Fast Orch Brass
86	Brass Fanfare
87	Dyn Orch Trumpets
88	Solo Violin fast
89	Folk Violin slow
90	Solo Viola fast
91	Solo Viola slow
92	Solo Cello fast
93	Solo Cello slow
94	Solo Basso 1
95	Solo Basso 2 slo
96	String Quartet
97	Solo Harp
98	Orch Harp 1
99	Delicate Harp
100	HarpArps & Gliss
101	Slo Orch Chorus
102	Pipe Stops

PC	MSB 00 LSB 03
103	Soft Stops
104	All Stops
105	Chapel Organ
106	AllStops AllVox
107	Pipes & Voices
108	Orch Timpani
109	Solo Timpani
110	Tam/Cym/BD/Timp
111	Basic Orch Perc
112	Timp & Aux Perc
113	Temple Blocks
114	Modern Blockery
115	Perc & Blocks
116	Stereo Tam-tam
117	Cymbal Roll Tr
118	Xylophone
119	Solo Marimba
120	Orch Marimba
121	Vibraphone
122	Celeste
123	Glockenspiel
124	Chimes/Glock
125	Bells Across
126	CelesteGlockHarp
127	Chime Bell
128	Carillon

PC	MSB 00 LSB 06	PC	MSB 00 LSB 06	PC	MSB 00 LSB 06	PC	MSB 00 LSB 06
1	FM E Piano 1	27	16' Open Flute	53	4' Reed	79	Soft Marimba
2	FM E Piano 2	28	16' Stop Flute	54	4' Gamba	80	Subtle Marimba
3	Hybrid DX & Pad	29	16' Diapason	55	4' DiaCeleste	81	Rubber Marimba
4	FluidStradaGtr	30	16' Ped Bourdon	56	4' Ballpark Stop	82	Marimba Squash
5	Fluid E Gtr	31	16' Ped Diapason	57	4' Viol	83	Cold Marimba
6	OrganWaveComper	32	16' Ped Reed	58	2 2/3' OpenFlute	84	Double Marimba
7	Poly Brassy	33	16' Reed A	59	2 2/3' StopFl 12	85	Marimba Echos
8	SynBrass Comper	34	16' Reed B	60	2 2/3' Diapason	86	Canyon Marimba
9	PolyPitch Brass	35	16' Gamba	61	2 2/3' Reed	87	Marimba Abyss
10	Poly Sweep 2	36	16' DiaCeleste	62	22/3' Gamba	88	Vibe Dream
11	Scat Vocals	37	16' Ballpark Sto	63	2 2/3' DiaCelest	89	Mello Vibraphone
12	Scat Choir	38	16' Viol	64	22/3' Ballpark S	90	Thick Vibes
13	FM SqareBell	39	8' Open Flute	65	2 2/3' Viol	91	Creamy Vibes
14	Toot Lead	40	8' Stop Flute	66	2' Open Flute	92	Golden Vibes
15	WetToot	41	8' Diapason	67	2' Stop Flute	93	Chorus Vibes
16	LegatoBrassyLead	42	8' Ped Bourdon	68	2' Diapason	94	Vibes in Phase
17	Treble FM Lead	43	8' Reed	69	2' Reed	95	Vibe Trance
18	Delicate FM Lead	44	8' Gamba	70	2' Gamba	96	Surreal Vibes
19	Micromoog Plus	45	8' DiaCeleste	71	2' DiaCeleste	97	Cyrstal Vibes
20	Deep Vox Bed	46	8' Ballpark Stop	72	2' Ballpark Stop	98	BriteSwirl Vibes
21	SloSynOrch Wet	47	8' Viol	73	2' Viol		
22	Vox Bed 2	48	51/3' Ped Bourd.	74	Rich Marimba		
23	Hi Vox Cloud	49	4' Open Flute	75	Tempered Marimba		
24	LFO Pitcher Pad	50	4' Stop Flute	76	Lonely Marimba		
25	MagicChinaFlower	51	4' Diapason	77	Marimba Plate		
26	Climax Perc	52	4' Ped Bourdon	78	Thick Flt Marimb		

PC	MSB 00 LSB 07	PC	MSB 00 LSB 07	PC	MSB 00 LSB 07	PC	MSB 00 LSB 07	PC	MSB 00 LSB 07
1	Ezra's Burner	28	Wah B3+Echoplx	54	LeeMichaelsB3	94	12SAWMWheelLead	120	Cars Square Lead
2	HotTubeGospel	29	Sweet n Nice	55	GM Standard Kit	95	HotMalletMWheel	121	Data Shape Saw
3	B3 Midrange	30	Soft Chords	56	GM Room Kit	96	ScreaminWhlBass	122	Saw+Mogue 4Pole
4	Blues&Gospel	31	SputtringingB3	57	GM Power Kit	97	SyncWheelLead	123	VA1NakedPWMPoly
5	Prog B3 Perc2	32	Melvin C.	58	GM Elec Kit	98	ModwheelKotoSyn	124	VA1NakedPWMMono
6	Prog B3 Perc3	33	All Out	59	GM Synth Kit	99	VASprSaw	125	VA1NakedSawPoly
7	Tube B3 Perc	34	J's Comper	60	GM Jazz Kit	100	VASprSaw+Allpass	126	VA1NakedSqrPoly
8	Prog B3 Perc4	35	Brother Jack	61	GM Brush Kit	101	Silent Program	127	VA1NakedSqrMono
9	BrgtTubeScream	36	Model One	62	GM Orch Kit	102	Click Track	128	VA1NakedSawMono
10	Zepelin Solo	37	Thick Gospel	63	VAST1-3Ch/Perc	103	Default Program		
11	Argent B3	38	Growler B	64	VAST1-3 Ch/Perc2	104	Diagnostic Sine		
12	MusselShoalsB3	39	Ready 2 Rock	65	Fisher's VAST B3	105	Propht V Sync Ld		
13	XtremTubeB3Prc	40	Thimmer	74	Blues Harmonica	106	Tempo SyncPulse		
14	Classic Traffic	41	The Real ABC	75	WheelBowCello	107	Slo Syn Orch		
15	Warm B3	42	GospelSpecial	76	WheelBowViola	108	Anabrass		
16	Warmer B3	43	In The Corner	77	WheelBowFiddle	109	Fat Syn Orch		
17	ChrsEchoOrgan	44	NightBaby	78	Electric Cello	110	WheelGrowlMoogue		
18	SlowPhaseOrgan	45	Gimme Some	82	Classic MiniBass	111	The Way It Is		
20	Lord'sDirtBomb	46	The Grinder	83	TalkWahPoly+Syn	112	AlphaCentauri		
21	Mellow Mitch	47	Mean Bean	84	MeanWahMono	113	SynOrcWhaleCall		
22	Sly's Revenge	48	Dew Dropper	85	Bass Pedal	114	Downes Lead		
23	LateNighter	49	Two Out	86	SyncSqr Template	115	Minipulse 4Pole		
24	FirebreatheC3	50	J's All Out	87	CarpenterSndtrck	116	BPM Lead		
25	Mr Smith	51	My Sunday	89	PannerTemplate	117	GatedSqrSweepBPM		
26	Errol G.	52	Good Starter	92	Candy*O SyncLead	118	BPMEchplexPad		
27	Testify	53	Sacrificer	93	WheelSyncBlips	119	GatedNoisweepBPM		

PC	MSB 00 LSB 32	PC	MSB 00 LSB 32	PC	MSB 00 LSB 32	PC	MSB 00 LSB 32	PC	MSB 00 LSB 32
1	GM Piano 1	27	Jazz Guitar	53	Choir Aahs	79	Whistle	105	Sitar
2	Bright Grand	28	Clean E Gtr	54	Voice Oohs	80	Ocarina	106	Banjo
3	Electric Grand	29	Muted Guitar	55	Synth Vox	81	Square Wave	107	Shamisen
4	Honky-Tonk Pno	30	Overdrive Gtr	56	Orchestra Hit	82	Sawtooth Wave	108	Koto
5	Elec Piano 1	31	Distorted Gtr	57	Trumpet	83	Synth Calliope	109	Kalimba
6	Elec Piano 2	32	Gtr Harmonics	58	Trombone	84	Chiffer Lead	110	Bagpipe
7	Harpsichord	33	Acoustic Bass	59	Tuba	85	Charang	111	Fiddle
8	Clavinet	34	Finger Bass	60	Muted Trumpet	86	Solo Vox	112	Shanai
9	GM Celesta	35	Picked Bass	61	French Horn	87	5th Saw Wave	113	Tinkle Bell
10	Glockenspiel	36	Fretless Bass	62	Brass Section	88	Bass & Lead	114	Agogo
11	Music Box	37	Slap Bass 1	63	Synth Brass 1	89	Fantasia	115	Steel Drums
12	Vibraphone	38	Slap Bass 2	64	Synth Brass 2	90	Warm Pad	116	Wood Block
13	Marimba	39	Synth Bass 1	65	Soprano Sax	91	Polysynth	117	Taiko
14	Xylophone	40	Synth Bass 2	66	Alto Sax	92	Space Voice	118	Melodic Tom
15	Tubular Bells	41	Violin	67	Tenor Sax	93	Bowed Glass	119	Synth Drum
16	Dulcimer	42	Viola	68	Baritone Sax	94	Metal Pad	120	Reverse Cymbal
17	Drawbar Organ	43	Cello	69	Oboe	95	Halo Pad	121	Gtr Fret Noise
18	Perc Organ	44	Contrabass	70	English Horn	96	Sweep Pad	122	Breath Noise
19	Rock Organ	45	Tremolo Strings	71	Bassoon	97	Ice Rain	123	Seashore
20	Church Organ	46	Pizz Strings	72	Clarinet	98	Soundtrack	124	Bird
21	Reed Organ	47	Harp	73	Piccolo	99	Crystal	125	Telephone
22	GM Accordion	48	Timpani	74	Flute	100	Atmosphere	126	Helicopter
23	Harmonica	49	Ensemble Strings	75	Recorder	101	Brightness	127	Applause
24	Bandoneon	50	GM Slow Strs	76	Pan Flute	102	Goblins	128	Gun Shot
25	Nylon Guitar	51	Synth Strings 1	77	Bottle Blow	103	Echo Drops		
26	Steel Str Gtr	52	Synth Strings 2	78	Shakuhachi	104	Star Theme		



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