

drumKAT Turbo Guide

INTRODUCTION

Yes, once again, the drumKAT has taken a giant leap forward with new and exciting performance features that no other controller even dares to approach.

Welcome to the drumKAT 4.0 Guide! As you know, the drumKAT is in constant evolution. Since the drumKAT's introduction in 1988, it has been and continues to be the most innovative and advanced drum controller ever invented. We are now proud to once again offer our newest upgrade, "the turbo upgrade", making the best even better. With this new upgrade, you will find many new ways of expressing yourself. Incredible new power at your finger tips.

Below, you will find a list of the latest software changes for 4.0. All of these changes are available to everyone who ever bought a drumKAT. Of course, as the drumKAT evolves even further in years to come - our future innovations will be made available to you too. So, please stay in touch with us!

PERFORMANCE IMPROVEMENTS

With the addition of the new microprocessor, pad tracking is more reliable and dynamic. The **TURBO drumKAT** is now **40% faster than the 3.5**. A new sequence timing chip has been added that doubles the resolution of the motif generator down to 32nd notes! An extra memory chip has been added that doubles the amount of kit and sequence memory as well.

NEW FEATURES:

- 48 KITS (depending on complexity of kits)
- 32 MOTIFS (depending on length - no longer fixed)
- Increased Tracking Speed - 40% faster!
- Multiple LINKs
- Bank Select
- Roll Mode (improves the sounds of drum machines and samplers)
- Notation Mode (used in conjunction with notation software)
- ALTERNATE 128 (alternates up to 128 notes per pad)
- EVENT SLICE (play back slices of your MOTIF in real time, while controlling dynamics and gate time)
- CHICK LINK (foot sound can be linked to any pad or trigger)
- FOOTSWITCH ASSIGNABLE TO TAP TEMPO (use the footswitch for TAP TEMPO speed)
- NEW PAD CONTROL SCREENS
 - PROGRAM CHANGE (with Bank and Volume), TEMPO CHANGE
 - KIT CHANGE
- MOTIF TRANSPOSE

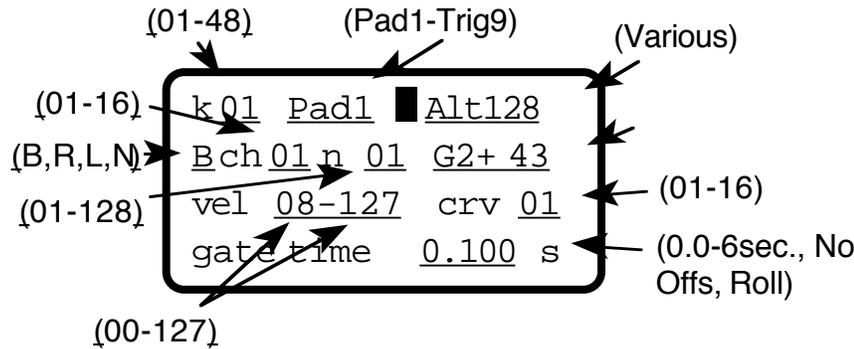
Turbo Features

1. Alternate 128 Mode

USES:

ALternate 128 operates the same way as ALT 8 except that it allows you to select up to 128 different notes on one pad.

HOW TO SETUP:



1. In the KIT EDIT screens, using the PAD EDIT screen, assign a pad or trigger to ALT128 mode.
2. On the second line of the edit screen, assign the MIDI output (R, L, B, N), the Channel # (1-16), the note position (OFF-128) and the MIDI Note # (OFF-128).

*Shutting off a note position automatically shuts off any notes that follow it. If you wish to have a space in between numbers, assign the MIDI output to N - it will be sent to Neither output.

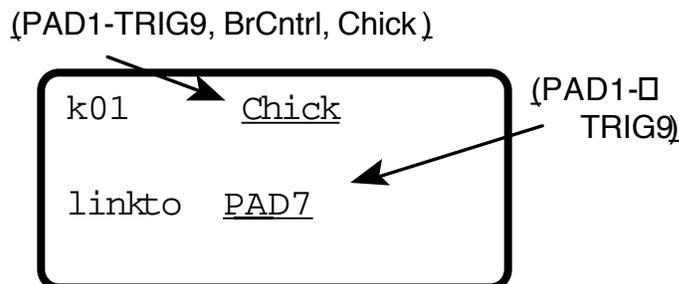
*All note positions share the same Velocity Range, Curve and Gate Time.

2. Chick Link

USES:

Now you can Link the Foot or "Chick" sound to any pad or trigger.

HOW TO SETUP:



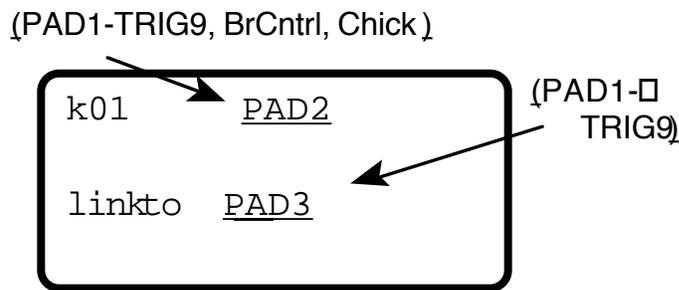
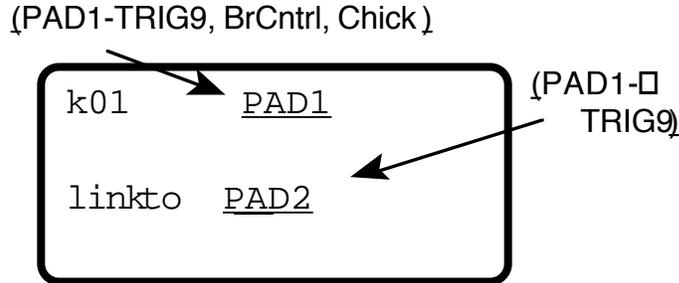
1. In the KIT EDIT screens, find the LINK screen and choose Chick to Link to pad 1 -10 or trigger 1 -9.

3. Multiple Link Mode

USES:

Multiple Link allows you to link up to 3 different things together including pads, triggers, Breath Controller and Chick.

HOW TO SETUP:



1. In the KIT EDIT screens, find the LINK screen and choose a pad, trigger, breath control or Chick to Link to pad 1 -10 or trigger 1-9.
2. In the same screen, select the pad or trigger you Linked "to" and Link that to another pad or trigger.

4. Dynamic Allocation & Saving Kits

USES:

The #1 requested feature that all drumKAT owners have wanted is now available, MORE MEMORY! Dynamic Allocation allows the drumKAT to store kits and motifs more efficiently. Armed with the new memory chip now in your drumKAT, you can store up to **48 Kits** and up to **32 Motifs**. What's even better, your motifs are no longer limited to a fixed length.

HOW TO SETUP:

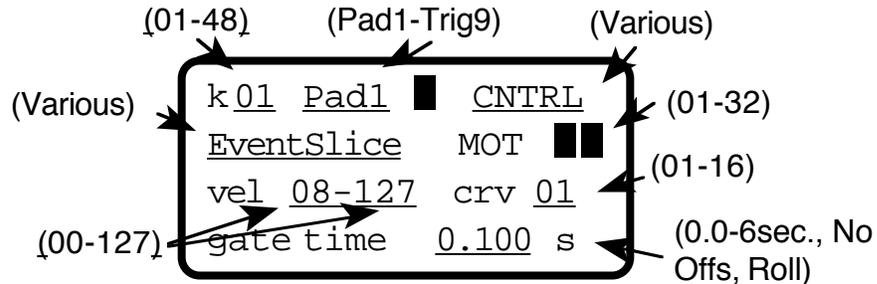
1. Whenever possible, we have attempted to reinstall the kits you had in your drumKAT. ***A kit will not appear in PLAY MODE until you Save it in EDIT MODE. You can only footswitch advance through Kits that are saved.**
2. In the KIT EDIT screens, using the PAD EDIT screen, select a kit #in the upper left-hand corner. Kits that have not been saved yet will have an asterisk (*) before the kit #. As soon as you save a kit, a (k) will appear before the kit #.

5. Event Slice Mode

USES:

Event Slice (now fully implemented) allows you to play back a Motif in Real Time. Each time you hit a pad or trigger, a "Slice" of the Motif is played.

HOW TO SETUP:



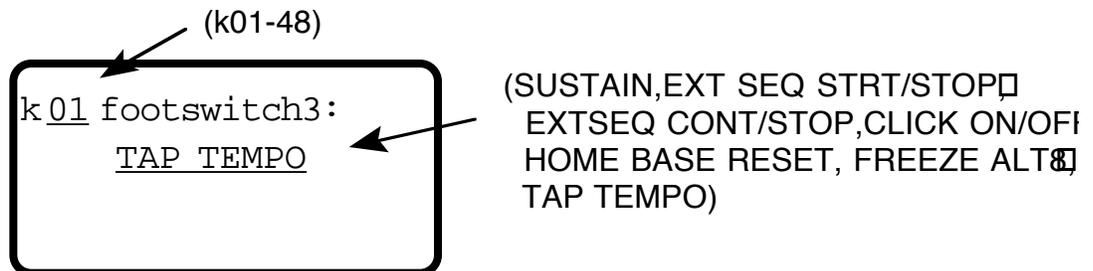
1. In the Kit Edit screens, using the Pad Edit screen, choose a pad or trigger and assign it to CNTRL Mode.
2. On the second line, select EventSlice and which Motif (1-32) you wish to play from that pad.
3. Set the Velocity Range, Curve and Gate Time for the pad.
 *The way the motif sounds depends entirely on the way you play it from the pad. The motif pays no attention to the Gate Time it was recorded with; instead, Event Slice super-imposes a Gate Time time that you set on the pad.

6. Footswitch to Tap Tempo

USES:

In addition to all its other functions, you can now assign Footswitch 3 to act as your Tap Tempo control.

HOW TO SETUP:



1. In the KIT EDIT screens, using the "footswitch 3" screen, select TAP TEMPO as its function. *Tap Tempo for the footswitch operates the same way as Tap Tempo on a pad. The drumKAT measures the time in between two taps on the footswitch and changes to that tempo.

7. Motif Transpose

USES:

Up to 30 Motifs are now able to be transposed along with pads.

HOW TO SETUP:

SCREEN "A":

(k01-48)

```

k 01 motif trnpse
1-10  NNNNNNNNNN
11-20 NNNNNNNNNN
21-30 NNNNNNNNNN
    
```

(Yes or No)

SCREEN "B":

(k01-48) (PAD1-TRIG9)

```

k 01  PAD1  CNTRL
AutoPadTran&Home
+02, -12, RPT, ___
___'___'___'___
    
```

(Various Choices)

(GroupStepTrnspose, GroupStepTrans R, □ AutoPadTrnspose, AutoPadTrans&Home)

(-60 - +60, RST, RPT,STP)

1. All screens that allow you to transpose Motifs are found in the KIT EDIT screens. Screen "A", allows you to select whether or not a Motif can be transposed. If you would like a Motif to transpose, simply assign a "Y" (Yes) in the Motif position on the line.
Example: To allow Motif 7 to transpose, assign a "Y" to the 7th position on the Motif 1-10 line of the display.
2. In screen "B", you assign which pad or trigger (in CNTRL MODE) does the transposition and which type of transposition you want to perform. For a full description of what each type of transposition does, refer to the drumKAT 3.5 Guide or Manual.

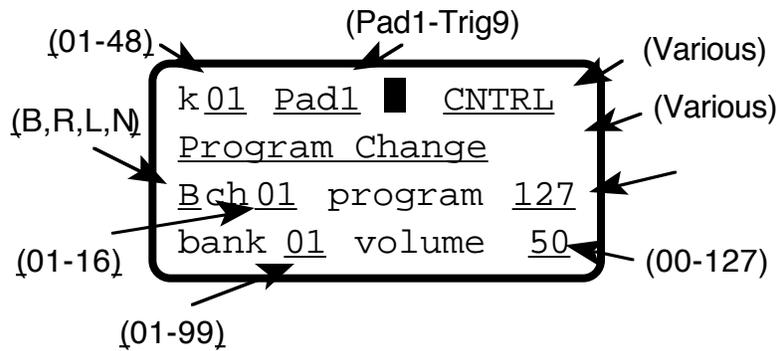
8. New Pad Control Screens

Bank/Program/Volume Change, Tempo Change & Kit Change

USES:

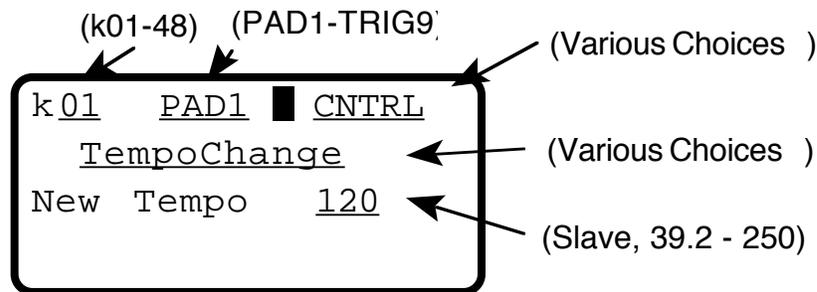
You can now assign a pad or trigger to perform a Program Change (along with Bank and Volume), Tempo Change or Kit Change, with one simple hit.

HOW TO SETUP BANK/PROGRAM/VOLUME CHANGE:



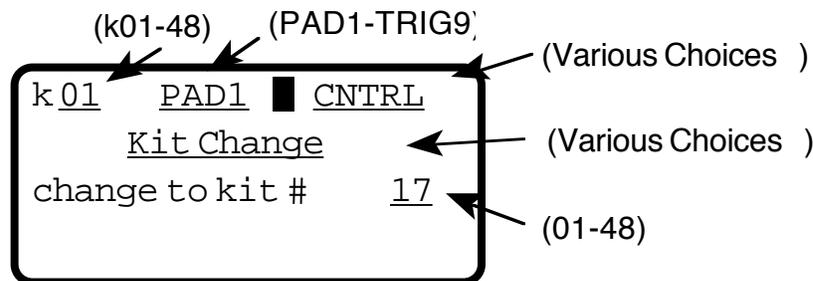
1. In the KIT EDIT screens, assign a pad or trigger to CNTRL MODE.
2. On the second line of the same screen, select Program Change.
3. On the third line, select the MIDI output, MIDI Channel and program #.
4. On the fourth line, select the bank # and the volume #.

HOW TO SETUP TEMPO CHANGE:



1. In the KIT EDIT screens, using the PAD EDIT screen, assign a pad or trigger to CNTRL MODE.
2. On the second line of the same screen, select Tempo Change.
3. On the third line, select the new tempo you wish to send (SLAVE, 39.2 - 250 bpm). *If SLAVE is selected, the motif will sync to an external source.

HOW TO SETUP KIT CHANGE:



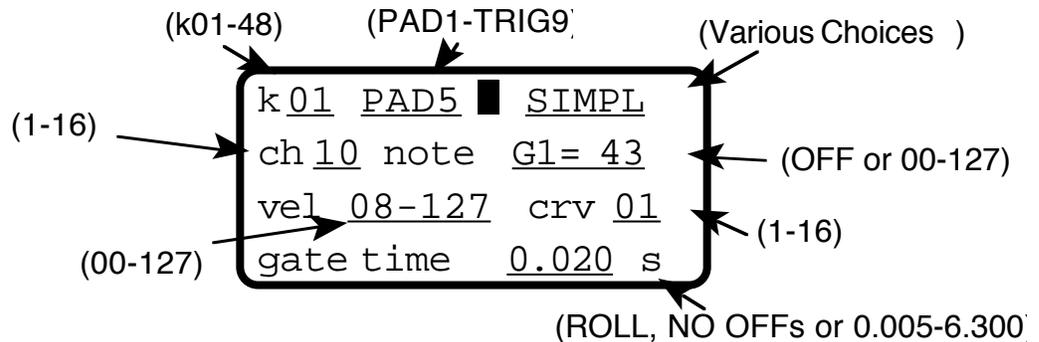
1. In the KIT EDIT screens, using the PAD EDIT screen, assign a pad or trigger to CNTRL MODE.
2. On the second line of the same screen, select KIT Change.
3. On the third line, select the which kit you wish to change to.

9. Roll Mode

USES:

This feature was designed to improve the sound of drum rolls in certain drum machines and samplers that respond to note off commands. When this feature is enabled, no note off is sent until you stop playing on the pad. The "machine gun" effect produced by some sound sources will be eliminated.

HOW TO SETUP:



1. In the KIT EDIT screens, using the PAD EDIT screen, select ROLL in the Gate Time setting.
2. Pad must be set to 4 Note Polyphonic in the KIT EDIT screens.

10. Notation Mode

USES:

Notation Mode allows drummers and composers the ability to notate music for the drumKAT in an easy to read fashion with most any computer sequencer. As we all know, drumKAT kits can get fairly complicated. With this mode enabled, the Right pair of MIDI outs output which pad/trigger you are playing instead of what the pads are programmed to do*. This creates a "kinetic map". When used in conjunction with a notation software package, the user sees standard notation which represents what pad was hit at a specific time in tempo. Now, complex textural drumming compositions, can be reduced to a notational system that is clear and easy to read. Pads and triggers use preassigned note numbers, creating a uniform, consistent nomenclature for all future drumKAT/textural drumming players.

*The Left pair of outs will send the information that you have assigned the pads to do.

PAD NOTE ASSIGNMENTS:

Hi- K: Pac
 ((6 6 7 7 7 7 7 7 8 8
 (tri

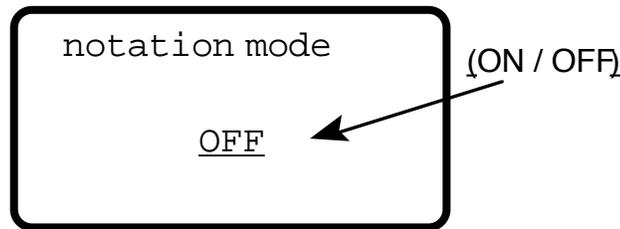
Note placement and Note # assignments for the 10 onboard PADS. *You'll notice that we also included the Kick drum (Trigger 1) with the Pads to make it easier to read/play.

TRIGGER NOTE ASSIGNMENTS:

Tri Tr Tri Tr Tr Tr Tri Tri
 4 4 4 5 5 5 5

Note placement and Note # assignments for the 9 TRIGGER inputs.

HOW TO SETUP:



1. In the GLOBAL screens, locate the Notation Mode screen and select either ON / OFF for this function.

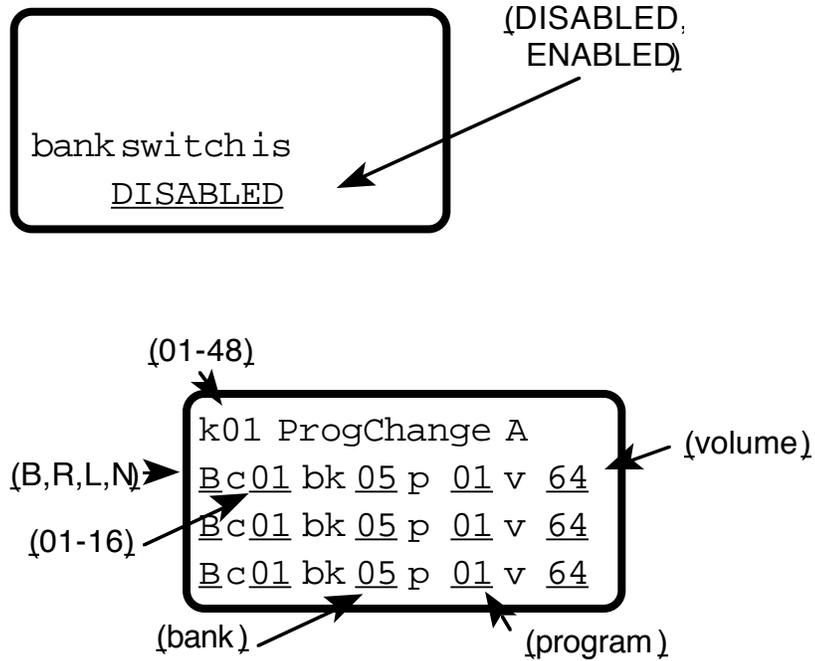
11. Bank Select

USES:

Most sound modules today offer the user more than 127 different sounds. The way these sounds are setup in these modules are in banks (up to 127 sounds per bank). Bank Select allows you to select which bank you want the sound to come from.

HOW TO SETUP:

1. In the PREFERENCES screens, locate the BANK SWITCH screen and select ENABLE / DISABLE.



2. In the KIT EDIT screens, locate the PROGRAM CHANGE screen and select the MIDI output, MIDI Channel, Bank #, Program # and the Volume #. Since there are two Program Change screens, make sure you don't have different information being sent to the same channel.

12. Memory Usage Screen

USES:

You can now see how much memory each of your kits occupy in the Memory Usage screen. This screen is located under the PREFERENCES screens.

```
memory usage
free memory 18233
kit usage   0231
motif usage 0000
```

13. Kit Clear Screen

USES:

This screen shows you the Kit #, whether or not it is being used in any songs, the amount of memory it occupies and also allows you to clear the Kit. This screen is located under the PREFERENCES screens.

```

kit 01 Actv Song1
0231 bytes used
to clear kit
hit pad 8!

```

14. Motif Clear Screen

USES:

This screen shows you the Motif #, whether or not it is being used in a Kit, the amount of memory it occupies and also allows you to clear the Motif. This screen is located under the PREFERENCES screens.

HOW TO SETUP:

1. In the PREFERENCES screens, locate the MOTIF CLEAR screen. Select the Motif # and hit Pad 8 to clear the Motif.

```

mot 01 InActive
0000 bytes used
to clear motif
hit pad 8!

```

drumKAT Turbo 2000

Version 4.5 Features

The turbo 2000 4.5 kits are larger in size than all of the other previous versions of the turbo. In order to play your older kits on the new 4.5, you must first save all of your kits individually, one at a time on a data disk or computer. Install the new version, initialize the instrument (including kits), then load in one kit at a time all of your kits. After you do this, then you will be able to use the ALL KITS dump and ALL MEMORY dump at will. Save your motifs as well and reload them back in. Because these kits are larger, it is possible that you may have trouble loading in the last kit(s). You can check how much memory is left by looking into your preference screens.

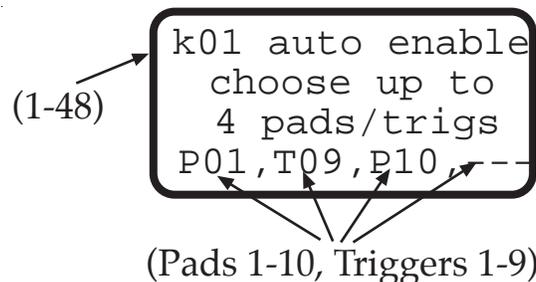
15. Auto Play Mode

USES:

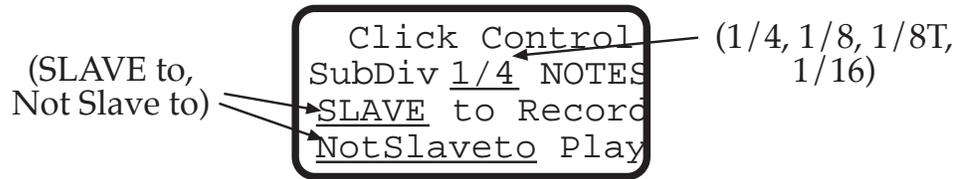
Auto Play Mode is a new mode that makes the drumKAT think that you're hitting the pad in tempo. When you assign a pad to Auto Play, the pad will play the notes assigned to that pad at the tempo set in the kit. The tempo is determined by the kit tempo and the sub division (quarters, eighths, sixteenths, etc.) that is set up in the Click Control Screen under the Record Screens. Up to four pads can be assigned to auto play. The Auto Play works in Simple, Multi, and the various Alternate / Random Modes. Each strike of an Auto Play pad or trigger acts as a toggle on or off. It's possible to link (only one link per Auto Play pad) two pads in Auto Play Mode. Because Multi-Mode also sets up delays, thousands of rhythms can be performed with a single touch of a pad.

HOW TO SETUP:

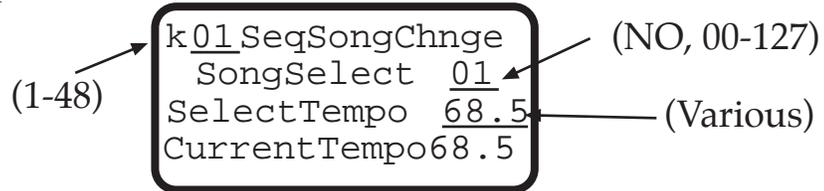
1. In the Kit Edit screens, find the Auto Play Enable screen.



2. On the fourth line, select up to 4 pads or triggers you want to have Auto Play Enabled.
3. Next choose the subdivision you wish the pad to play at in the Click Control Screen, under the Record Screens.



- Now choose the tempo you wish the pad to play at, in the Sequence Song Select screen, in the Kit Edit Screens.



*TIP...If you have a "free" pad or trigger to use, assign it to Control Mode and let it be a Tap Tempo pad. This will allow you to control the tempo "on the fly".

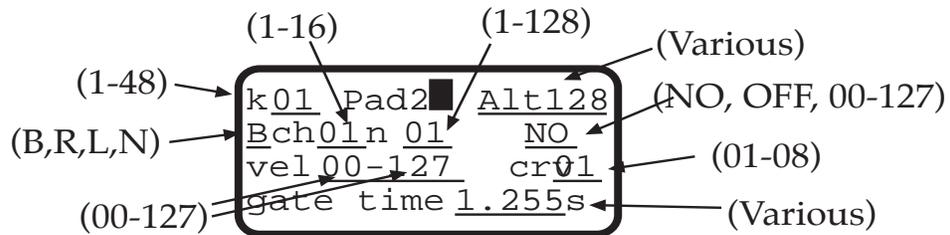
16. Alternate 128 with "Rests"

USES:

Alternate 128 now has "NO" as a possible note assignment. This means that if a ALT 128 pad was assigned to Auto Play, the "NO" numbers act as rests, allowing for unlimited rhythmic possibilities.

HOW TO SETUP:

- In the Pad Edit screen, under the Kit Edit screens, select NO as the note number selection.



17. Alternate Reverse

USES:

A new control screen called Alt Reverse is now implemented that allows Alternate and Mel Alternate Modes (alt 4, alt 8, alt 128, melalt8) to reverse direction of the note assignments. This mode works in conjunction with all transposition modes, allowing the user to have more control of melody. The Alt Reverse Control pad will act as a toggle, meaning that the first time the pad is struck, the direction of all alt pads will change direction. If the Alt Reverse pad is struck again, the pattern will return to the opposite (original) direction.

*TIP...to assure the original direction of the Alternate Mode patterns, assign a pad to Control Alternate Reset or Control Home Base.

Note that Control Note Freeze will supercede Reverse. If freeze is struck in either forward or reverse mode, the current sound will play over and over until "unfrozen" either by hitting the freeze pad again or striking a Reverse pad again. However, if a Reverse Pad is struck again the the alternating pad is unfrozen, the direction will be the opposite to the one prior to being "frozen".

HOW TO SETUP:

1. In the Kit Edit screens, select a pad to be a Control Pad. On the second line, select Alternate Reverse as the function.

18. New Program Change Screen

USES:

The sixteen program changes in Turbo 4.0 have been changed to allow for 16 program change slots that each have their own output assignments (left side, right side, both, neither) and their own MIDI channels.

This new mode for example allows the user to have two devices assigned to the same MIDI channel, but each getting a different program number. This is achieved by assigning each prospective program change to different output assignment.

Simple bank change numbers have now been changed so that the user can assign both the MSB and the LSB (required by new synths) number assignments. Originally, when the drumKAT user sent a bank change of 2 for example, the drumKAT sent out a bank change message that said: MSB of 0, and a LSB of 2. Companies such as Korg now require a value other than 0 for the MSB in order to activate different banks. Having the ability to assign both values when sending out a bank change, the drumKAT should now be compatible with virtually all manufacturers bank change requirements. Please refer to your sound modules specification sheet in order to find the MSB, LSB Bank assignments.

Note: If you select "NO" for MSB & LSB, no Bank Change information will be sent.

HOW TO SETUP:

1. In the Kit Edit screens, find the Program Change screen.

19. Sound Path Mode

USES:

This is an exciting new mode for the turbo 2000, that allows you to control the direction of a sound (by MIDI channel) and the volume of a sound in real time. When a pad in this mode is struck, it will send out 2 types of controller

information on the selected channel, out the selected MIDI Sides. One will be volume information, the other will be pan information. You can select a volume range and a direction range (left to right). A TL (time line) value is selected in order to tell the drumKAT how many strikes of the pad it will take in order for the path to take its course. Finally, options are added such as reverse or infinite, so that this operation can repeat automatically.

HOW TO SETUP:

1. In the Pad Edit screen (under the Kit Edit screens), advance the cursor and change the mode of the pad to SNDPATH.
2. Select the Pad Number, MIDI Output, Channel, Volume Range and Panning Range.
3. Choose a TL amount. The TL (time line) determines how many strikes of the pad it will take for the volume and pan from the first range setting to reach the second setting. The range is 2 to 16 strikes.
4. Choose a Path. The path determines the direction of the pan (Left to Right, or Right to Left) and also the volume direction. (Loud to Soft or Soft to Loud) i.e...LR-LS means left to right, loud to soft. The sound will pan from the first setting to the second setting with the volume simultaneously going from the first setting to the second setting. Once the time line has been completed, there are two possible settings...
 - ...rev (reverse) = The values will start from the second setting and go back to the first setting.
 - ...inf (infinite) = The values continue to play from the first setting to the second setting.
 - ...rst (reset) = The values go through their assigned settings and then reset to a center panning and a velocity of 64.

20. Control Path Mode

USES:

The Control Path Mode is similar to the Sound Path, except that you can choose what Control Number you want to use. This means that you can control reverb, lfo, depth, pan, vol,.....literary any MIDI controller number that is accepted by your synth.

HOW TO SETUP:

1. In the Pad Edit screen (under the Kit Edit screens), advance the cursor and change the mode of the pad to CNTPATH.
2. Select the Pad Number, MIDI Output, Channel, Controller number and the range (amount) of controller effect you wish.

3. Choose a TL amount. The TL (time line) determines how many strikes of the pad it will take for the volume and pan from the first range setting to reach the second setting. The range is 2 to 16 strikes.
4. Once the time line has been completed, there are two possible settings...
 - ...rev (reverse) = The values will start from the second setting and go back to the first setting.
 - ...inf (infinite) = The values continue to play from the first setting to the second setting.
 - ...rst (reset) = The values go through their assigned settings and then reset to a center panning and a velocity of 64.

**Come check us out on-line @ www.alternatemode.com
The MIDI Percussionists Website**

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