

YAMAHA DTX900 POWER GUIDE – STACK/ALTERNATE FUNCTION

Up until now, all of the DTX900 guides have been “quick starts” and not one has mentioned the word MIDI. One reason for this is that knowledge of midi simply isn’t required to program user kits, record user songs, or assign samples to pads. Another is that most drummers playing e-kits use them as stand-alone instruments to play preset drum sounds only. If these are the only things you want to do with DTX900 then you do not need this document.

But, if you want to use your DTX900 to play multiple drum sounds, chords or melodies with the pads you will need to use the STACK/ALTERNATE (STK/ALT) function - and you will need to know about MIDI. Interested?

This guide assumes you already know more than “just the basics” of the DTX900. The zip file includes an “AllKit” file called “**PWRSTACK.T3K**” that includes kit data created by the tutorials. You may wish to load this file into your DTX900 so you can follow along the tutorial before continuing.

Make sure to back up your own user kits before loading any “All Kit” file from an outside source!

STACK/ALTERNATE OVERVIEW (OUTLINE):

- I. MIDI Basics
 - a. Midi Channels and Notes
 - b. MIDI and DTX900
- II. STACK/ALTERNATE Function
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 - b. Basic Navigation
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MIDI BASICS

Flashback to 1983: The Musical Instrument Digital Interface (MIDI) was originally developed to provide a standardized means of connecting electronic musical instruments together so they could “talk” to each other. The first demonstration involved a Prophet synthesizer connected “via MIDI” to a Roland synthesizer. The basic concept was that notes played on one keyboard would trigger the same notes on the other keyboard provided both are set to the same midi channel (from 1-16). If the channels matched the notes would play. Channels and Notes – we’ll keep these things in mind for later.

MIDI and the DTX-900

When you play the pads on the DTX900 series you are actually playing midi notes on midi channel ten (10), just like pressing keys on a midi keyboard. Only instead of the notes going out via midi to another device, they are sent to the midi tone generator inside the DTX900 module to produce drum sounds.

Think of the DTX900 like a TV with 16 channels in it and that most of the time it is “tuned-in” to channel 10. You may have noticed that some of the preset kits play keyboard sounds (“normal” voices) in addition to regular drum sounds (Pre:09 AJ Jazz Funky, Pre:19 AJ Happy, and Pre:40 AfterHours). These kits have pads that play notes on midi channels other than ten.

Therefore: DTX900 uses different midi NOTES on different midi CHANNELS to play different sounds.

STACK/ALTERNATE FUNCTION

The STK/ALT page is where you program the pads to play specific midi notes on a specific midi channel just like a midi keyboard. **Each note in the STK/ALT page must be assigned to a STEP** and you can have up to 100 steps per pad, and up to 500 steps per kit. You can play layered (stacked) notes for each strike - or play different notes with each strike (alternate). What’s more, stack and alternate can be combined and use different midi notes with different midi channels on the same pad for incredible musical power. On top of all

that, you can also set the length of the midi notes (for sustaining or looping sounds) and the velocity range in which notes will be played (for triggering different sounds/notes based on how hard you hit).

TERMINOLOGY USED IN STK/ALT MODE

Step – Each note in STK/ALT mode has a step number. Only one step [001] is pre-programmed for most of the preset kits (stack/alternate function is not used). Pads with more than one note at step 001 are stacked. Pads with two or more steps (001, 002, etc) use the alternate function.

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME		DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME		DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME	
snareHd	001	10	D 1	0.3			kick	001	13	B 0	0.5			snareCl	001	14	C#2	0.2		
END							001	10	C 1	0.2				002	14	B 1	0.2			
							001	16	C#3	0.2				003	14	F#1	0.2			
							001	16	D#3	0.2				004	14	G 1	0.2			
PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER		PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER		PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER	

1 step 001 = one sound 4 step 001's = STACKED 4 different steps = ALTERNATE

CHANNEL – Determines the midi channel of the selected step. Range 1-16.

NOTE – Determines midi note - Pitch octave shown (ex. C#-1). Range: C#-2 – G8.

GATETIME – Determines the time in seconds a note is played. Range: 0.0s -9.9s.

Velocity Limit – Determines the velocity range in which the STK/ALT notes will sound. The notes will sound only when you hit the pad at velocities within the range specified. Range: 0-127.

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME	VELOCITYLIMIT	
kick	001	0	-	127			
	001	0	-	127			
	001	0	-	127			
	001	0	-	127			
	001	0	-	127			
PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER		

STK/ALT - BASIC NAVIGATION

Press **[F3]** STK/ALT and strike the snare head. The STK/ALT page has two sets of sub-function buttons depending on where the cursor is.

When the **STEP** value is highlighted:

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME	
snareHd	001	10	D 1	1.0		
END						
PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER	

- 1) **SOURCE** – indicates trigger source for editing. When unlocked, source can be “selected by strike”
- 2) **STEP** – indicates the STK/ALT step number
- 3) **INSERT** – Inserts a new step at current location and increases the numbers of steps after it by one.
- 4) **ADD** – Adds a new same number step to the current location without affecting other steps.
- 5) **DELETE** – Deletes the step at current location

- and decreases the numbers of steps after it by one.
- 6) **CLEAR** – Clears the step at the current location without affecting numbers of the other steps.
- 7) **CHORD** – Calls up the display for entering notes with an external midi device - useful for programming chords.
- 8) **LOCK** – Prevents accidental “select by strike” of trigger source.

When any step **VALUE** is highlighted:

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME	
snareHd	001	10	D 1	1.0		
END						
PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER	

- 1) 2) 3) Indicates the midi **CH**annel, **NOTE** and **GATETIME** for the current step. You can change an individual parameter by selecting it with the cursor and using the INC/DEC buttons or jog-dial.
- 4) **ALL** – pressing this button while changing the value changes the values of ALL steps of the trigger.
- 5) **STEP** – pressing this button while changing the value changes the values of ALL CURRENT steps.
- 6) **>** – Indicates another page (velocity limit) can be called up by repeatedly pressing the **[>]** button.

MIDI DRUM MAP

Because the STK/ALT function uses midi notes it will be useful to have a drum map. A drum map is a list of sounds and their corresponding midi notes. The drum map below shows the midi note voice assignments for the **PRE: 01 Oak Custom** kit, and whether or not they are in use by a trigger source. There are 82 drum notes/voices per kit, from C#-1 (13) to A#5 (94). You can create your own drum map by assigning Voices to midi notes on the VOICE SELECT MIDI SOURCE page (shown below). Each kit in the DTX900 has a unique drum map that is stored automatically when you STORE your kit to a user memory location.

MIDI Note		Trigger	Voice Assignment			MIDI Note		Trigger	Voice Assignment		
Pitch	No.	Source	Bank	No.	Voice	Pitch	No.	Source	Bank	No.	Voice
C# -1	13	n/a	perc1	001	Surdo SW	C 3	60	n/a	perc1	040	BongoHi Op1
D -1	14	Tom1Rm1	tom1	002	Oak 10 Rm	C# 3	61	n/a	perc1	046	BongoLoOp1
D# -1	15	Tom1Rm2	tom1	003	Oak 10 Hp	D 3	62	n/a	perc1	055	Conga Slp
E -1	16	Crash2Cp	cymb	006	Dark 18Cp	D# 3	63	n/a	perc1	056	Conga Op
F -1	17	Crash2Bw	cymb	004	Dark 18	E 3	64	n/a	perc1	061	Tumba Op
F# -1	18	Tom2Rm1	tom1	005	Oak 12 Rm	F 3	65	pad14Hd	perc1	083	TimbalesHi
G -1	19	Tom2Rm2	tom1	006	Oak 12 Hp	F# 3	66	pad15Hd	perc1	083	TimbalesLo
G# -1	20	Tom3Rm1	tom1	008	Oak 14 Rm	G 3	67	pad13Rm1	perc1	094	Agogo Hi
A -1	21	n/a	efct1	095	Metronome2	G# 3	68	pad13Rm2	perc1	095	Agogo Lo
A# -1	22	n/a	efct1	094	Metronome1	A 3	69	n/a	perc1	098	Cabasa
B -1	23	Tom3Rm2	tom1	009	Oak 14 Hp	A# 3	70	n/a	perc1	099	Maracas
C 0	24	Tom4Rm1	tom1	011	Oak 16 Rm	B 3	71	n/a	perc1	105	WhistLong
C# 0	25	Tom4Rm2	tom1	012	Oak 16 Hp	C 4	72	n/a	perc1	105	WhistLong
D 0	26	pad12Hd	cymb	050	China 19	C# 4	73	n/a	perc1	106	GuiroShort
D# 0	27	SnrClOff	snar1	006	OakCusClOf	D 4	74	n/a	perc1	107	GuiroLong
E 0	28	pad12Rm1	cymb	051	China 19Eg	D# 4	75	n/a	perc1	108	Claves
F 0	29	pad12Rm2	cymb	060	Splash2	E 4	76	pad15Rm1	perc1	109	WoodClock1
F# 0	30	n/a	perc1	010	Castanet2	F 4	77	pad15Rm2	perc1	110	WoodBlock2
G 0	31	SnrHdOff	snar1	004	OakCus Off	F# 4	78	HhEgOp	hihat	002	Vivid 13EO
G# 0	32	n/a	perc1	114	Stick1	G 4	79	HhEgCl	hihat	004	Vivid 13EC
A 0	33	n/a	kick1	002	Oak 22 Mt	G# 4	80	n/a	perc1	124	Triangl2Mt
A# 0	34	SnrOpOff	snar1	005	OakCusOpOf	A 4	81	n/a	perc1	125	Triangl2Op
B 0	35	pad11	kick1	001	Oak 22	A# 4	82	n/a	perc2	002	Shaker2
C 1	36	Kick	kick1	001	Oak 22	B 4	83	HhSplsh	hihat	006	Vivid 13Sp
C# 1	37	CrStick	snar1	003	OakCusClRm	C 5	84	n/a	perc2	010	WindChime
D 1	38	SnareHd	snar1	001	OakCustom	C# 5	85	n/a	perc1	057	Conga MtSW
D# 1	39	n/a	perc1	011	Handclap	D 5	86	n/a	perc1	062	Tumba MtSW
E 1	40	SnareOp	snar1	002	OakCusOpRm	D# 5	87	n/a	perc1	043	BongoHiMt1
F 1	41	Tom4Hd	tom1	010	Oak 16	E 5	88	n/a	perc1	103	ShekereSW2
F# 1	42	HhBwCl	hihat	003	Vivid 13Cl	F 5	89	n/a	perc1	075	Djembe2Slp
G 1	43	Tom3Hd	tom1	007	Oak 14	F# 5	90	n/a	perc1	076	Djembe2 Mt
G# 1	44	HhFtCl	hihat	005	Vivid 13Ft	G 5	91	n/a	perc1	074	Djembe2 Lo
A 1	45	n/a	tom1	004	Oak 12	G# 5	92	n/a	perc1	067	Cajon Tip
A# 1	46	HhBwOp	hihat	001	Vivid 13Op	A 5	93	n/a	perc1	065	Cajon Lo
B 1	47	Tom2Hd	tom1	004	Oak 12	A# 5	94	n/a	perc1	066	Cajon Slp
C 2	48	Tom1Hd	tom1	001	Oak 10						
C# 2	49	Crash1Eg	cymb	002	Vivid 17Eg						
D 2	50	n/a	tom1	001	Oak 10						
D# 2	51	RideBw	cymb	025	Brite 20						
E 2	52	RideEg	cymb	026	Brite 20Eg						
F 2	53	RideCp	cymb	027	Brite 20Cp						
F# 2	54	pad14Rm1	perc1	013	Tambrin2SW						
G 2	55	Crash1Cp	cymb	003	Vivid 17Cp						
G# 2	56	pad13Hd	perc1	034	Cowbell5						
A 2	57	Crash2Eg	cymb	005	Dark 18Eg						
A# 2	58	pad14Rm2	perc2	114	An Cowbell						
B 2	59	Crash1Bw	cymb	001	Vivid 17						

Midi notes/voices not assigned to a trigger source are designated as "n/a". They can be accessed in VOICE SELECT by viewing the SOURCE display and selecting MIDI:



Notes/Voices can also be selected from an external midi keyboard on midi channel 10.

NOTE: The DTX950K kit has 34 trigger sources. By using pad inputs 11-15 you can increase that number up to 47. Regardless of triggering method up to 64 voices can be played simultaneously (max. polyphony). A blank drum map template is provided at the end of this document.

STACK/ALTERNATE - DRUM VOICES

Want to layer a tambourine on your floor tom? Or setup a trigger to play through different pitch drums with each strike? These are just some of the things you can do with STK/ALT mode when the pad is set to play multiple notes/steps assigned to *midi channel 10*.

BASIC SKILLS

The best way to learn something complex is to break it down into smaller steps. Start in DRUMKIT mode and **select PRE: 01 Oak Custom kit**.

Press **[F3] STK/ALT** and cursor to STEP 001 for snareHd and press **[SF2] ADD**.

SOURCE		snareHd		
SOURCE	STEP	CH	NOTE	GATETIME
snareHd	001	10	D 1	0.3
	001	10	off	0.3
	END			

INSERT

ADD

DELETE

CLEAR

CHORD

mod

PLAY

VOICE

STK/ALT

EFFECT

PAD

OTHER

Change the new note from “off” to **F0**. The asterisk indicates that the note it is in use by another trigger (pad12Rm2). Press **[SF6]** button to lock the source.

SOURCE		STEP	CH	NOTE	GATETIME
snareHd	001	10		D 1	0.3
	001	10	*	F 0	0.3
	END				

ALL

STEP

CHORD

no

PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER
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Congratulations on stacking a splash onto a snare! If you press the AUDITION button on the front panel you will hear *both* voices. Press **[>]** until you get to the velocity limit page and set the minimum velocity for note F0 (the second note listed) to value **110**.

DRUMKIT		SOURCE		snareHead	
SOURCE	STEP	CH	NOTE	VELOCITY	LIMIT
snareHd	001	10	D 1	127	
	001	10	* F 0	110	
	END				
ALL STEP CHORD					
PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER

Now the splash stacks only when striking the pad with a velocity greater than 110. Return the min. velocity back down to **0**.

Don't want to layer a splash? You can target any voice in the drum map by selecting the appropriate midi note. What if the voice you want isn't there?

Press **[F2] VOICE** then **[SF1] SELECT**. Select the source display mode (indicated in upper left - toggle with **[SF5]**) and use the jog-dial to scroll to the **MIDI** source display..



SOURCE	NOTE	VOICE
MIDI	F 0(29)	cymbal:060 [Splash2]

Use the cursor to highlight the note value and select **F0(29)** - the Splash2 voice is currently assigned.

Cursor to the right and change the voice from cymbal:060 Splash2 to **perc2:110 ElecClap3**.

From this screen the AUDITION button will only trigger the selected voice. Strike the snareHd to hear the stacked sounds together.



SOURCE	NOTE	VOICE
MIDI	F 0(29)	Perc2:110 [ElecClap3]

You may want to adjust the volume of this stacked sound independently from the snareHd volume. Let's do this now. Press **[SF2] OUT-TUNE** and adjust the volume down to **76**.



SOURCE	NOTE	VOLUME
MIDI	F 0(29)	76

The above procedure teaches you all the basic skills you need in order to create stacked trigger pads of your own design. Now let's ALTERNATE...

Press **[F3] STK/ALT**, then cursor to the step column and change the F0 step to **002** (flashes), press **[ENTER]** to confirm the change.

SOURCE		STEP	CH	NOTE	GATETIME
snareHd	001	10		D 1	0.3
	002	10 *		F 0	0.3
	END				

INSERT

ADD

DELETE

CLEAR

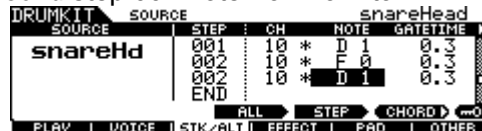
CHORD

no

PLAY	VOICE	STK/ALT	EFFECT	PAD	OTHER
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By setting up two steps we have switched to the Alternate function. Trigger strikes will alternate between the Oak Custom snare (D1 in step 001) and the Elec.Clap3 (F0 in step 002).

Let's add the same snare to the second step. Highlight STEP 002 and press **[SF2] ADD**. Change the *second* step 002 note from “off” to **D1**.



SOURCE	STEP	CH	NOTE	GATETIME
snareHd	001	10	* D 1	0.3
	002	10	* F 0	0.3
	002	10	* D 1	0.3

This is actually a combination of the STACK and ALTERNATE functions together in one trigger. Play a beat that uses snare on 2 & 4 and you'll notice that each alternate snare beat has the clap sound.

[STORE] the kit before continuing. It's a good idea to store your kit often to avoid accidental data loss. The kit created thus far is provided for you as **USR:01 Oak STK/ALT1** in the “PWRSTACK.T3A” AllData file.

ADVANCED STK/ALT SKILLS

In the above tutorial you learned how to stack notes, set the velocity limit, and change the voice for any midi note to create your own Drum Map. You also learned how to alternate notes, and that you can combine the stack and alternate functions together. This next section takes it a step (no pun intended) further.

Often times you will find it helpful to COPY the stack/alternate settings from a trigger SOURCE instead of building them from scratch. Select the **USR:01 Oak STK/ALT1** kit you created in the previous example:

Press **[F6] OTHER** then **[SF5] COPY** to access the COPY page.



Change the Type to **Source** and copy the **snareHd** trigger from our **Currently** selected user kit to the **hhBwC1** source of same kit. Put a check mark in the box next to **STACK/ALTERNATE COPY** to copy the STK/ALT settings as well.

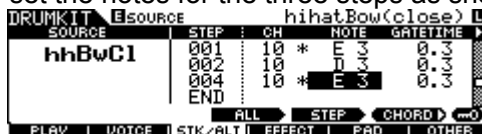
Press **[ENTER]** and **[INC/YES]** to execute the copy. Navigate to the **STK/ALT** page for the **hhBwC1** and use **[SF6]** to lock it.

Using the basic skills, change step 002 D 1 to step 004 (flashes) and press **ENTER**.



By skipping step 3 you have created a rest. Press the **AUDITION** button on the front panel (or play the hhBwC1) and you will hear every third tap is silent.

Next, set the notes for the three steps as shown.



You created a per cussion riff! Now, one last thing...

Press **[F5] PAD** then **[SF4] TRIGGER** to get to the Trigger page 1. Set the **hhBwC1 Trigger Link** to **"rim1"** (the edge source).



Select the **hhEgC1** source (manually or release **[SF6]** and tap it) and set **hhEgC1 Trigger Link** to **"bow"**.



Trigger Link is a different way of stacking sounds because it links sources together on the same pad. Now when you play the closed hi-hat (edge or bow) you will also get an alternating pattern of percussion sounds. What's different about this setup (as opposed to the "2 & 4" snare example) is that this combination of sounds allows a bit of improvisation. By mixing up 1/4 notes, 1/8th notes and 1/16th notes it ends up sounding like there is a guest (ghost?) percussionist playing along with you – but it's all you!

NAME and **STORE** your kit, and now you have a kit like **USR:02 OakStackXTRA** from the data file. Only this kit has additional examples of stack/alternate and trigger link pre-programmed to inspire you.

Now that you have expanded your basic skills to include copying STK/ALT source settings, creating a rest, and how to use Trigger Link - hopefully you have some ideas of your own about how to use these features. The real fun begins when you change the midi channel.

STK/ALT Applications for other MIDI Channels – "NORMAL" VOICES

When steps and notes are set to *channels other than 10* you can use the STK/ALT function to play bass lines, chords and melodies. Midi channels 1-9 and 11-16 play "normal" voices like piano and strings. How much you care to explore this is up to you. You can do a little or a lot with this powerful feature.

STACK/ALTERNATE – MELODIC TUTORIAL

In this tutorial you will continue to develop your skills at programming in the STK.ALT pages, but this time using the MIDI sounds on **channels other than 10**. In addition, you'll explore some of the advanced pad and trigger functions, as well as the MIDI settings for DRUMKIT mode that control the sounds you play

It helps to have a musical idea in mind when programming a melodic STK/ALT kit, and there are many approaches you can take. One approach is to program full-length melodies by entering a long series of steps into the STK/ALT page for a specific pad(s) designated for this purpose. Another is to take a textural approach; creating smaller STK/ALT note series which can be linked with the drum sounds around the kit and used for improvisation. In this tutorial you will create a jazzy STK/ALT kit that uses this second approach; however the techniques covered will still apply to creating melody-specific kits.

PIANO TOM1

In the first part you will setup a three note piano part for tom1 and copy the results to two other trigger sources. You will also learn to use the [SF3] ALL button to control the way the notes are played. Before you start, **make sure the ACCOMP slider is up** and get ready to play some keyboard sounds from the pads!

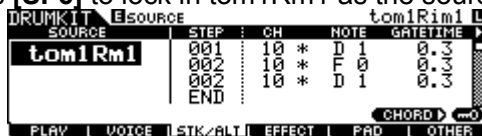
Go back to the **USR:01 Oak STK/ALT1** kit from the data file and press **[F6] OTHER** then **[SF5] COPY** to call up this screen:



Set up the screen as shown above to copy the **snareHd** trigger **Source** from the **Currently** selected kit (USR:01 Oak STK/ALT 1) to the **tom1Rm1** source of same kit – put a **check mark** in the box next to **STACK/ALTERNATE COPY** to copy the STK/ALT settings to the trigger source.

Press **[ENTER]** and **[INC/YES]** to execute the copy.

Press **[F3] STK/ALT**, turn off the trigger lock **[SF6]**, strike the **tom1Rm1** trigger source and press **[SF6]** to lock in tom1Rm1 as the source.



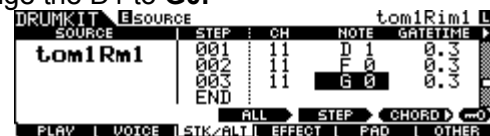
Cursor right to the *second* step 002 and change it to **step 003** (flashes) and press **[ENTER]**.



Cursor right to the channel value for any step. Press and hold **[SF3] ALL** then use the jog-dial to set all steps to midi channel **11**.

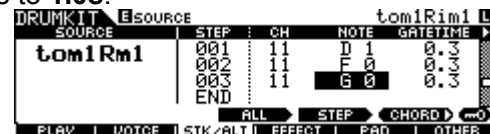


Move the cursor to the step 003 note column and change the D1 to **G0**.



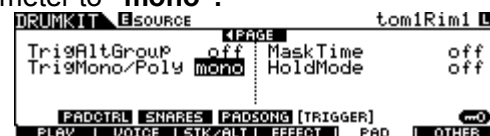
Now you have three alternating notes that all play the same piano sound. But the notes are very short. Let's make the steps longer.

Highlight the **GATE TIME** parameter (for any step) then **press and hold [SF3] ALL** while setting the value to **1.0s**.



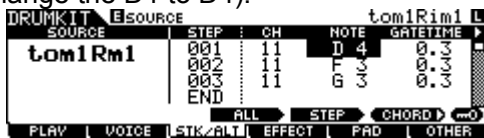
Now they all play longer, but rapid playing will cause the notes to overlap, resulting in a harsh sound. Aside from using notes that don't sound harsh when overlapping you could set the trigger mode to mono.

Press **[F5] PAD** and **[SF4] TRIGGER** to access the Trigger page 1. **Cursor right** several times to get to page 2. Set the tom1Rm1 **TrigMono/Poly** parameter to **"mono"**.



Now each note cuts off the one before it. This lets you vary the length of each note based on how fast or slow you play. Let's try something else and make the notes higher in pitch.

Go back to the **[F3] STK/ALT** page and highlight the top note (D1). Press and hold **[SF3] ALL** and press **INC/YES** button 36 times (or use the jog-dial and change the D1 to D4).



Now that the notes are 3 octaves higher in pitch they might sound good in poly mode. Go back to the **[F5] PAD [SF4] TRIGGER** screen (note the display stayed on the second page) and set the mode back to poly.



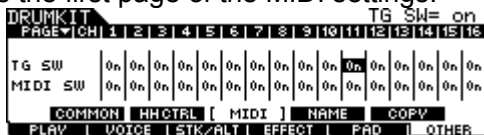
This time they don't sound harsh with rapid playing.

In the above tutorial you learned how to change the midi channel, gate time and octave for all steps, and how to set the trigger mode from poly to mono and back again. Congratulations!

MIDI SETTINGS

Now that you know how to set up triggers to play on different midi channels, we're going to break away from the pads and look at the MIDI settings page where you select the *sounds* for the different midi channels.

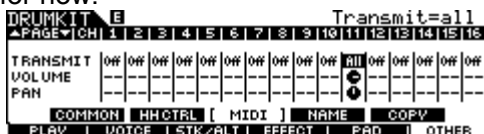
Press the **[F6] OTHER [SF3] MIDI** buttons to access the first page of the MIDI settings.



This page controls whether or not the internal **TG** (tone generator) **Switch** is on/off for all midi channels. The default is "on". The **MIDI Switch** determines if notes will be sent out the external port.

Press the **cursor down** until you get to the next page. This page and the ones following determine what (if any) midi messages will be transmitted when you call up the drum kit.

Using the cursor and jog-dial, set the channel 11 **Transmit** value to "All". Leave the other settings alone for now.



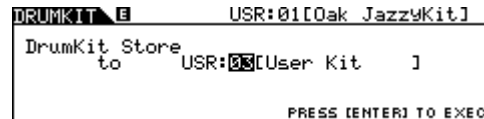
Press the cursor down until you get to the next page.



To prepare for the next section, COPY the tom1Rm1 Source to the **RideEg** and the **RideCp** trigger sources in our Current Kit. Be sure to put a **check mark in the box** next to Stack/Alternate copy.



Now let's name the kit "Oak JazzyKit" and then **STORE** the kit to **USR:03** before continuing.



This page is where you set up sounds for each midi channel. Yamaha calls these "normal" voices. Set channel 11's **VCE NUM** to **12** (Vibes).



Now when you play on the tom1Rm1 you will hear a vibraphone sound instead of a piano.

While you are on these pages go back up and turn the Transmit setting to "All" for channels 3 and 4.



Now set the Voice number for channel 3 to **34** (Finger Bass), and set the values for channel 4 as follows: **MSB=63, LSB=0 and Voice=2** (VintageEP).



The GM sounds are great but the MSB 63 bank has eighty-three sounds from various series of Motif, and these sounds are what give the preset songs such realism. It is definitely worth your time to check them all out.

JAZZY RIDE

At the end of the Piano Tom1 lesson you copied the tom1Rm1 to the ride bow and ride cup. In the MIDI Settings lesson you setup bass and electric piano sounds on midi channels 3 and 4. Now you can set up the ride bow & cup to play on channels 3 and 4 and change their steps to play a bass line and piano chord.

From the STK/ALT page, press [SF6] to unlock the trigger and **select the rideCp** by giving it a good tap. **Set ALL the steps to channel 3.**

DRUMKIT	ESOURCE	STEP	CH	NOTE	GATETIME
rideCp					
		001	4	D 4	1.0
		002	4	F 0	1.0
		003	4	G 0	1.0
		END			

Now the notes play the Finger Bass sound, but the notes are too high. **Lower them all three octaves** using the [SF3] ALL button. The screen will look like this:

DRUMKIT	ESOURCE	STEP	CH	NOTE	GATETIME
rideCp					
		001	1	D 1	1.0
		002	1	F 0	1.0
		003	1	G 0	1.0
		END			

It sounds a bit muddy so go back to the [F4] PAD [SF4] TRIGGER page 2 and set the Trigger mode to **Mono**.

DRUMKIT	ESOURCE	TRIG	TRIG	TRIG	TRIG
rideCp					
		TrigAltGroup	off	MaskTime	off
		TrigMono/Poly	mono	HoldMode	off

We're almost done. Back on STK/ALT page select the **RideEg** (you know how to do this by now) and **set all the steps to 001** (takes it out of alternate function).

DRUMKIT	ESOURCE	STEP	CH	NOTE	GATETIME
rideEg					
		001	11	D 4	1.0
		002	11	F 0	1.0
		003	11	G 0	1.0
		END			

Set all steps to **channel 4** and all steps gate time to **2.5 seconds**. **Lower all the notes by one octave** so the screen looks like this:

DRUMKIT	ESOURCE	STEP	CH	NOTE	GATETIME
rideEg					
		001	4	D 3	2.5
		002	4	F 0	2.5
		003	4	G 0	2.5
		END			

Now the edge of the ride plays a complementary chord (stack of notes) to the bass notes on the cup and the vibraphone notes on the rim of tom1.

The final step comes when you use the Trigger Link function. Go to [F4]PAD [SF4]TRIGGER page 1. **Link the rideEg to the bow** so that when you play it you hear the piano chord AND ride bow voice.

DRUMKIT	ESOURCE	PAGE	TRIG	TRIG	TRIG
rideEg					
			TrigLink	bow	
			TrigVelocity	variable	

Link the rideBw to rim2 (cup) so that you play it you hear the ride bow voice AND the bass line.

DRUMKIT	ESOURCE	PAGE	TRIG	TRIG	TRIG
rideBw					
			TrigLink	rim2	
			TrigVelocity	variable	

Link the tom1Hd to rim1 so that when you play it you hear the drum voice and the vibes riff.

DRUMKIT	ESOURCE	PAGE	TRIG	TRIG	TRIG
tom1Hd					
			TrigLink	rim1	
			TrigVelocity	variable	

STORE the kit to USR: 03 "Oak JazzyKit". By combining the skills you've learned in this tutorial with a little bit of musical know-how and imagination you can create DTX900 user drum kits that will allow you to express yourself in ways no acoustic kit ever could.

If you don't know what notes to program but you know a keyboard player, you can capture their chords from a connected midi keyboard. Press the [SF5] CHORD button on the STK/ALT page and see page 88 in the DTX900 Owner Manual for more details.

DRUMKIT	ESTK/ALT	CHORD	STEP	CH	NOTE	CH	NOTE
rideEg							
			001	4	D 2	06	
			002	4	F 1	07	
			003	4	G 1	08	
			004			09	
			005			10	

I hope you found this guide helpful and inspiring, Happy Drumming!

Tom Griffin
Technical Sales Specialist
Product Support Group
Pro Audio & Combo Division
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DTX900 USER KIT WORKSHEET

KIT: _____

<u>MIDI Note</u>		<u>Trigger</u>	<u>Voice Assignment</u>			<u>MIDI Note</u>		<u>Trigger</u>	<u>Voice Assignment</u>		
<u>Pitch</u>	<u>No.</u>	<u>Source</u>	<u>Bank</u>	<u>No.</u>	<u>Voice</u>	<u>Pitch</u>	<u>No.</u>	<u>Source</u>	<u>Bank</u>	<u>No.</u>	<u>Voice</u>
C# -1	13					F# 2	54	pad14Rm1			
D -1	14	Tom1Rm1				G 2	55	Crash1Cp			
D# -1	15	Tom1Rm2				G# 2	56	pad13Hd			
E -1	16	Crash2Cp				A 2	57	Crash2Eg			
F -1	17	Crash2Bw				A# 2	58	pad14Rm2			
F# -1	18	Tom2Rm1				B 2	59	Crash1Bw			
G -1	19	Tom2Rm2				C 3	60				
G# -1	20	Tom3Rm1				C# 3	61				
A -1	21					D 3	62				
A# -1	22					D# 3	63				
B -1	23	Tom3Rm2				E 3	64				
C 0	24	Tom4Rm1				F 3	65	pad14Hd			
C# 0	25	Tom4Rm2				F# 3	66	pad15Hd			
D 0	26	pad12Hd				G 3	67	pad13Rm1			
D# 0	27	SnrClOff				G# 3	68	pad13Rm2			
E 0	28	pad12Rm1				A 3	69				
F 0	29	pad12Rm2				A# 3	70				
F# 0	30					B 3	71				
G 0	31	SnrHdOff				C 4	72				
G# 0	32					C# 4	73				
A 0	33					D 4	74				
A# 0	34	SnrOpOff				D# 4	75				
B 0	35	pad11				E 4	76	pad15Rm1			
C 1	36	Kick				F 4	77	pad15Rm2			
C# 1	37	CrStick				F# 4	78	HhEgOp			
D 1	38	SnareHd				G 4	79	HhEgCl			
D# 1	39					G# 4	80				
E 1	40	SnareOp				A 4	81				
F 1	41	Tom4Hd				A# 4	82				
F# 1	42	HhBwCl				B 4	83	HhSplsh			
G 1	43	Tom3Hd				C 5	84				
G# 1	44	HhFtCl				C# 5	85				
A 1	45					D 5	86				
A# 1	46	HhBwOp				D# 5	87				
B 1	47	Tom2Hd				E 5	88				
C 2	48	Tom1Hd				F 5	89				
C# 2	49	Crash1Eg				F# 5	90				
D 2	50					G 5	91				
D# 2	51	RideBw				G# 5	92				
E 2	52	RideEg				A 5	93				
F 2	53	RideCp				A# 5	94				

MIDI CHANNEL VOICES:

1:	5:	9:	13:
2:	6:	10:	14:
3:	7:	11:	15:
4:	8:	12:	16:

NOTES: