

YAMAHA DTX900 POWER GUIDE – VELOCITY-SWITCHING USER VOICES

One of the most powerful features of the DTX900 is the ability to create your own user voices. By setting up *velocity-switching* user voices you can play different user voices (samples) according to your playing dynamics. The idea is to have several samples of the same drum recorded at different dynamic levels (*p, mf, f*) that play in the appropriate velocity range of the trigger.

A NOTE ON POWER GUIDES:

This guide assumes you already know more than “just the basics” of the DTX900. Because it includes the STK/ALT function you should also read the “POWER GUIDE-Stack/Alternate Function” document found on dtxperience.com. The zip file includes an “AllData” file for this guide called “PWRVELSW.T3A” that includes kit and sample data. You may wish to load this file into a DTX900 (with DIMM installed) before continuing.

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

At a minimum, you should know a bit about how MIDI works. Basically speaking, the DTX900 produces sound in response to **midi notes** generated from trigger signals to the input jacks, the internal sequencer or from an external midi keyboard. There are **82 midi notes available for drums** on midi **channel 10**.

Each trigger on the DTX900 is programmed to play at least 1 midi note called a **STEP** - which is like playing 1 key on a keyboard. This chart shows the midi notes for kit **USR: 01 INIT EMPTY** from the data file.

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					F# 2	54				
D -1	14	Tom1R1				G 2	55	Crash1cup			
D# -1	15	Tom1R2				G# 2	56				
E -1	16	Crash2cup				A 2	57	Crash2edge			
F -1	17	Crash2bow				A# 2	58				
F# -1	18	Tom2R1				B 2	59	Crash1bow			
G -1	19	Tom2R2				C 3	60				
G# -1	20	Tom3R1				C# 3	61				
A -1	21					D 3	62				
A# -1	22					D# 3	63				
B -1	23	Tom3R2				E 3	64				
C 0	24	Tom4R1				F 3	65				
C# 0	25	Tom4R2				F# 3	66				
D 0	26					G 3	67				
D# 0	27	CrStick(off)				G# 3	68				
E 0	28					A 3	69				
F 0	29					A# 3	70				
F# 0	30					B 3	71				
G 0	31	SnrHead(off)				C 4	72				
G# 0	32					C# 4	73				
A 0	33					D 4	74				
A# 0	34	RimShot(off)				D# 4	75				
B 0	35					E 4	76				
C 1	36	Bass Drum				F 4	77				
C# 1	37	CrStick				F# 4	78	HHedgeOP			
D 1	38	SnrHead				G 4	79	HHedgeCLS			
D# 1	39					G# 4	80				
E 1	40	RimShot				A 4	81				
F 1	41	Tom4Head				A# 4	82				
F# 1	42	HH Bow cls				B 4	83	HHpedalSPL			
G 1	43	Tom3Head				C 5	84				
G# 1	44	HHpedal cls				C# 5	85				
A 1	45					D 5	86				
A# 1	46	HHbow open				D# 5	87				
B 1	47	Tom2Head				E 5	88				
C 2	48	Tom1Head				F 5	89				
C# 2	49	Crash1edge				F# 5	90				
D 2	50					G 5	91				
D# 2	51	Ride bow				G# 5	92				
E 2	52	Ride edge				A 5	93				
F 2	53	Ride cup				A# 5	94				

Notice that there are more midi notes than there are trigger sources. We'll need these extra notes for the different dynamic drum samples we'll assign as STEPS for each instrument in our velocity-switching user kit.

A DIFFERENT ARCHITECTURE

In the DTX 900, the X-Panded Articulation technology allows a Preset voice to play up to 8 samples using only one midi note. For User voices it works a bit differently. You must assign the dynamic samples for each drum to multiple midi notes of the kit, and then setup the triggers with *velocity-switching* STEPS to play them.

This guide will cover how to build a User Kit that uses two velocity layers for the kick, three layers for the toms and five layers for the snare (plus 2 rim sounds) with user voices (samples) loaded from a USB device. The principles covered can be applied to rim-shots and cymbals if needed – up to 82 notes/user samples per kit.

DISCLAIMER: Creating great drum sounds is an art. If it were easy there would be no need for instruments like DTX900 series or the slew of software plug-ins that tackle this area of sound design. This guide will show you how to build a user kit with velocity switching samples. Crafting a polished drum preset from what you learn here may involve additional work in terms of EQ, Tone and Effect settings that are beyond the scope of this guide. In other words – your mileage may vary. Now, let's take a look at the road map...

BASIC PROCEDURE (OUTLINE):

- I. Create/Load User Voices of dynamic drum samples.
 - a. Sample format and Naming
 - b. To Normalize or not?
 - c. Using the User Voice banks
- II. Assign User Voices to midi notes of a User Kit.
 - a. What is a Drum Map?
 - b. What notes should I use?
 - c. Optional midi keyboard for note select
- III. Add STEPS (as needed) to the desired trigger source's STK/ALT page.
 - a. Tip on adding notes according to dynamic range
 - b. Set the Velocity Range for each step
 - c. Add Cymbals and other MIDI Voices
- IV. Setting important parameters for each STACK
 - a. INPUT versus SOURCE editing – very useful
 - b. Decay of User Voices – setting Receive Key Off
- V. Name, STORE and SAVE your Kit

STEP 1 - Create/Load User Voices of Dynamic Drum Samples

User voices in the DTX900 (with optional DIMM installed) are digital samples in **16-bit format** that reside in the User Banks of the SAMPLING mode and have a name up to 10 characters long. When loading **AIFF** or **Wave** files via USB, only the first 8 characters of the file name will be loaded. Keep this in mind when naming samples. In this guide, the waves are named with the drum, diameter and dynamic. This allows them to be listed logically when looking at them alphabetically – as in the FILE Load screen - from Forte, to Mezzo, to Pianissimo and the Rims. Samples can be **stereo or mono**. Mono drum samples are recommended – they translate better when using the individual outs and use less polyphony. Reserve your stereo samples for loops and sound effects. [The DTXPANSION kits use all stereo drum samples – see bottom of last page]

Because our definition of “dynamic drum samples” implies that our samples vary in terms of volume (a soft strike is lower than a medium strike which is lower than a hard strike) the question of **normalizing** (setting the raw samples to the same digital level) can be addressed. In the **USR: 01 INIT EMPTY** kit the default settings for all Voices (midi notes) are the same. They have the same Output level (100) and share the same response to velocity (sensitivity). Therefore the output level of the lowest hit will trigger the sample with a “less than full volume” output. If the sample of the pianissimo drum is too low, then a natural transition between samples will require you to offset the output and velocity sensitivity – much more difficult than working with samples that are of consistent sound levels. For that reason the **individual samples should be relatively the same volume level** so that there will not be an exaggerated change in volume as you play from soft to hard. Normalizing should be done with caution, however, as it can increase any residual noise in the sample to undesirable levels.

There are 8 sample banks **[A – H]** that can hold up to 127 samples each. To keep things organized, load your samples in a **logical order** - such as from smallest drum to largest and hardest strike to softest.

If you loaded the “PWRVELSW.T3A” data file then the samples and kits for this tutorial are already loaded.

Below is a list of our tutorial User Voices - located in **User Bank A** of SAMPLING Mode. Note that they are in a logical order. And while they are only 8 characters long, the names are still quite descriptive of the sound.

A:001	KIK22_F	A:009	SNRIM2ON	A:017	TOM12_R2	A:025	TOM14_P
A:002	KIK22_MF	A:010	SNR_OFF	A:018	TOM13_F	A:026	TOM14_R1
A:003	SNR_1FF	A:011	SNRIM1OF	A:019	TOM13_MF	A:027	TOM14_R2
A:004	SNR_2F	A:012	SNRIM2OF	A:020	TOM13_P	A:028	TOM16_F
A:005	SNR_3M	A:013	TOM12_F	A:021	TOM13_R1	A:029	TOM16_MF
A:006	SNR_4P	A:014	TOM12_MF	A:022	TOM13_R2	A:030	TOM16_P
A:007	SNR_5PP	A:015	TOM12_P	A:023	TOM14_F	A:031	TOM16_R1
A:008	SNRIM1ON	A:016	TOM12_R1	A:024	TOM14_MF	A:032	TOM16_R2

STEP 2 - Assign User Voices to Midi Notes of a User Kit

Once you have the desired user voices loaded (either by sampling or importing) the next step is to **assign those voices to the MIDI notes** of a user kit – creating a **Drum Map**. You can assign any voice to any note from C#-1 to A#5 - but if you want the option of assigning factory Voice Sets to any of the pads, or if you want to copy inputs from Preset kits, then you should **avoid assigning user voices to certain notes**. For example, in this guide, we are only using user voices for the drums – therefore we do *not* want to assign our samples to notes that are already used by the cymbals because later we'll use the convenience of a preset Voice Set. Below is the Drum Map that shows how user voices are assigned to kit **USR 02: Drums Mapped** from the PWRVELSW.T3A file:

MIDI Note		Trigger Source	Voice Assignment			MIDI Note		Trigger Source	Voice Assignment		
Pitch	No.		Bank	No.	Voice	Pitch	No.		Bank	No.	Voice
C# -1	13		A	002	KIK22_MF	F# 2	54				
D -1	14	Tom1R1	A	016	TOM12_R1	G 2	55	Crash1cup			
D# -1	15	Tom1R2	A	017	TOM12_R2	G# 2	56				
E -1	16	Crash2cup				A 2	57	Crash2edge			
F -1	17	Crash2bow				A# 2	58				
F# -1	18	Tom2R1	A	021	TOM13_R1	B 2	59	Crash1bow			
G -1	19	Tom2R2	A	022	TOM13_R2	C 3	60				
G# -1	20	Tom3R1	A	026	TOM14_R1	C# 3	61				
A -1	21		A	029	TOM16_MF	D 3	62				
A# -1	22		A	030	TOM16_P	D# 3	63				
B -1	23	Tom3R2	A	027	TOM14_R2	E 3	64				
C 0	24	Tom4R1	A	031	TOM16_R1	F 3	65				
C# 0	25	Tom4R2	A	032	TOM16_R2	F# 3	66				
D 0	26		A	024	TOM14_MF	G 3	67				
D# 0	27	CrStick(off)	A	012	SNRIM2OF	G# 3	68				
E 0	28		A	025	TOM14_P	A 3	69				
F 0	29		A	004	SNR_F	A# 3	70				
F# 0	30		A	005	SNR_M	B 3	71				
G 0	31	SnrHead(off)	A	010	SNR_OFF	C 4	72				
G# 0	32		A	006	SNR_P	C# 4	73				
A 0	33		A	007	SNR_PP	D 4	74				
A# 0	34	RimShot(off)	A	011	SNRIM1OF	D# 4	75				
B 0	35		A	019	TOM13_MF	E 4	76				
C 1	36	Bass Drum	A	001	KIK22_F	F 4	77				
C# 1	37	CrStick	A	009	SNRIM2ON	F# 4	78	HHedgeOP			
D 1	38	SnrHead	A	003	SNR_FFF	G 4	79	HHedgeCLS			
D# 1	39		A	020	TOM13_P	G# 4	80				
E 1	40	RimShot	A	008	SNRIM1ON	A 4	81				
F 1	41	Tom4Head	A	028	TOM16_F	A# 4	82				
F# 1	42	HH Bow cls				B 4	83	HHpedalSPL			
G 1	43	Tom3Head	A	023	TOM14_F	C 5	84				
G# 1	44	HHpedal cls				C# 5	85				
A 1	45		A	014	TOM12_MF	D 5	86				
A# 1	46	HHbow open				D# 5	87				
B 1	47	Tom2Head	A	018	TOM13_F	E 5	88				
C 2	48	Tom1Head	A	013	TOM12_F	F 5	89				
C# 2	49	Crash1edge				F# 5	90				
D 2	50		A	015	TOM12_P	G 5	91				
D# 2	51	Ride bow				G# 5	92				
E 2	52	Ride edge				A 5	93				
F 2	53	Ride cup				A# 5	94				

Note that the Forte samples are each assigned to the default drum head note value; this will save us time in creating our stacks and lets us play the kit to get a sense of how it will sound. The remaining samples are spread out amongst the remaining notes with some sense of order. By not assigning user voices to any notes used by the cymbal triggers we will be able to use the VOICE SET feature of DTX900 to try out any of the preset cymbals we care to in the kit we are creating.

How to assign Voices to MIDI Notes

Use the following as a step by step guide to creating a drum map:

Press **[F1] VOICE [SF1] SELECT** then **[SF5] SOURCE** to select the SOURCE display mode. Use the jog-dial to change the source to **MIDI**. The first available note C#-1 (13) is selected.



Next, **CURSOR RIGHT** and use the jog-dial to assign the Voice Bank for C#-1(13) to **USR-A**. Then **CURSOR RIGHT** again and select voice: **002 KIK22_MF** as specified in our drum map from the preceding page.



Now **CURSOR DOWN** and you will highlight the note number. Use the INC/YES button to advance to the next MIDI note D-1(14).



CURSOR RIGHT and set the Bank and Voice number for MIDI note D-1(14) to **USR-A:016 TOM12_R1** as specified in our drum map.



TIP: When assigning user voices to notes, you may wish to have a midi keyboard connected to the DTX900 along with a printout of your drum map. The keyboard lets you “remotely” select the notes while the cursor stays on the voice select area, reducing the number of button presses as you map your samples.

Continue assigning as many User Voices to MIDI notes (up to 82) as you wish, being careful NOT to assign them to notes used by the cymbal triggers.

After mapping your User Voices to MIDI notes **STORE** your Kit to a new location and you will have a kit like **USR:02 Drums Mapped** from the data file.

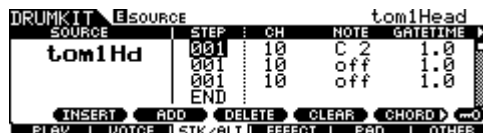
STEP 3 - Add STEPS (as needed) to the trigger STK/ALT pages.

Next we will use the STACK/ALTERNATE pages to ADD additional STEPS to our triggers – one additional step for the kick, two additional steps for each tom head, and an additional four steps for the snare head. **TIP:** Since the forte sample is already assigned to the first step, make the next lowest note in the display the mezzo note and the pianissimo note below that.

How to create a VELOCITY SWITCHING STACK

This was covered in the power guide on Stack/Alternate function but shown again here for convenience/context. The following step by step guide is for Tom1 which uses three velocity layers. You will adapt the technique for the kick and the snare as they have different velocity layer user voices.

Press **[F3] STK/ALT** button and **strike tom1head** to select it. **CURSOR RIGHT** to the STEP column and press **[SF2] ADD** twice to add two steps with value 001 to the Tom1head trigger source.



CURSOR RIGHT and highlight the NOTE value for the middle step and use the jog-dial to set it to **A1** (the TOM12_MF voice).

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME
tom1Hd	001	10	C 2	1.0	
	001	10	A 1	1.0	
	001	10	off	1.0	
	END				

Next, **CURSOR DOWN** use the jog-dial to set the third step to **D2** (the TOM12_P voice).

DRUMKIT	SOURCE	STEP	CH	NOTE	GATETIME
tom1Hd	001	10	C 2	1.0	
	001	10	A 1	1.0	
	001	10	D 2	1.0	
	END				

Now you have the three samples all playing at the same time when you strike the pad. The next part (I almost said “step”) involves setting up the steps to play in specific ranges of velocity.

CURSOR RIGHT until you access the VELOCITY LIMIT display. Here you will use the CURSOR and DATA WHEEL to set the

velocity range for each step according to the dynamic range of the sample.

DRUMKIT	SOURCE	STEP	VELOCITY LIMIT
tom1Hd	001	111 - 127	
	001	54 - 110	
	001	0 - 53	
	END		

Adjust the velocity range for the different steps according to the dynamic range of the sample. Do not overlap steps, as this will cause two drums to sound at the same time. The settings shown here are only guides. Your own playing style and the samples you’ve chosen (along with your ears) will dictate the appropriate ranges for each step. Repeat the process for each tom, then kick and snare. Focus on one instrument at a time; we’ll make other adjustments to the sounds after we get them “working” individually.

TIP: You might find it useful to have [SF6] “Trigger Lock” engaged when editing individual instruments.

STORE your kit to a new location. The kit created thus far is **USR 03: VelSwitchSTK** in the data file.

Add Cymbals and Other MIDI Voices

After you get the steps switching okay for the kick, snare and toms it’s time to add some cymbals. On the INPUT [F2] VOICE > [SF1] SELECT screen you can use the Voice Set feature to assign preset cymbal sounds to the cymbal triggers. The display must be in **INPUT** mode (toggle using [SF5] button) in order to use a Voice Set. In this tutorial the voice sets for crash1, ride and crash2 INPUTS are set to the voice sets shown below:

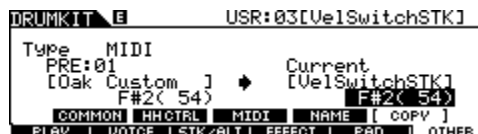
DRUMKIT	INPUT	crash1	DRUMKIT	INPUT	ride	DRUMKIT	INPUT	crash2
crash1	VoiceSet	cymbal:019 [Warm 16-1]	ride	VoiceSet	cymbal:025 [Warm 20-1]	crash2	VoiceSet	cymbal:004 [Dark 18]

If you try using the above method for hi-hat you might notice that the closed sounds do not cut off the open sounds. **For hi-hat use the “Input” COPY screen** to copy the hi-hat – which includes additional settings - from any preset kit.

DRUMKIT	USR:03[VelSwitchSTK]
Type Input	STACK/ALTERNATE COPY
PRE:01	Current
[Oak Custom]	[VelSwitchSTK]
hihat	hihat
COMMON	HHCTRL
MIDI	NAME
PLAY	COPY

While on the COPY screen, you might decide to “fill-in” the missing voices. What missing voices, you ask? Take a look at the drum map. Remember there are 82 notes available, and there are some notes from F#2(54) to A#5(94) do not have voices assigned to them. **Fill in additional voices by setting the copy type to “MIDI”** and selecting the appropriate note. Do not use the notes for crash2 and hi-hat. You only have to do this if you need some extra sounds (if you buy extra pads), or you wish to layer sounds with the switching sounds we have already, or if you wish to use a preset pad song. If this isn’t your scenario you can skip it for now – just know about it in case you ever change your mind.

Press **[F6] OTHER** and **[SF5] COPY**. Set the Type to **MIDI**, below that set the kit to **PRE:01**, and start with midi note **F#2(54)**. Repeat for the other missing notes (see drum map on page 1).



Once you have added cymbals (and MIDI voices if desired) please **STORE** your kit to a new location. The kit created thus far is **USR 04: w/Cymbals&MIDI** and is included in the accompanying data file "PWRVELSW.T3A".

STEP 4 - Setting important parameters for each Stack

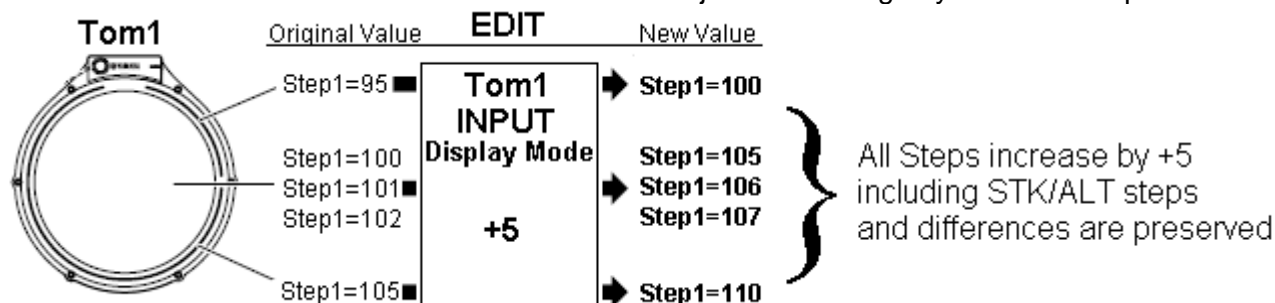
Because our Velocity-Switch Kit started life as a completely initialized kit with all settings set to a default value, all our voices are set to the same volume, pan, effect send levels, EQ, tone and slider select settings. If you've called up the **User Kit 04: w/Cymbals&MIDI** from the data file you can verify this by playing the toms and moving the TOM Slider on the front panel. It doesn't work, does it? We need to make settings to each of the user voices we've created, and to our chosen cymbal sounds, so the kit behaves and sounds the way we want.

WHOA! Does that mean if we want to Tom1 to respond to the TOM Slider we have to set the slider select value for each of the midi notes relevant to Tom1? That's five different edits! How am I going to keep track of all that – the samples are all over the drum map!?!? Aye carumba! That's a lot of editing!

Thankfully there is a very easy way. One of the slickest features of the DTX900 is the ability to make edits to all of the voices of a stacked or alternated trigger simply by using the **TRIGGER INPUT** or **SOURCE** display mode. Why is this so slick, you ask? Because edits made in these display modes could save you many button presses and will also preserve any differences you've specifically programmed to any individual steps via the **MIDI** display mode. Here's how it works:

INPUT display:

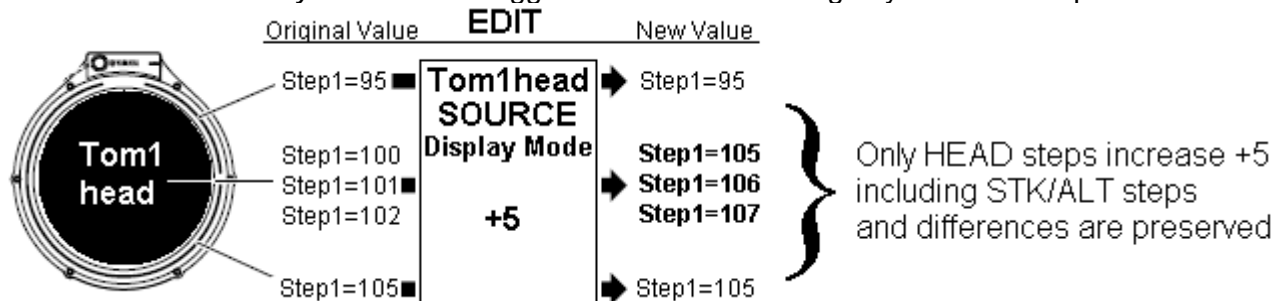
Edits affect *all* voices of *all* sources of the selected INPUT jack - including any STK/ALT steps.



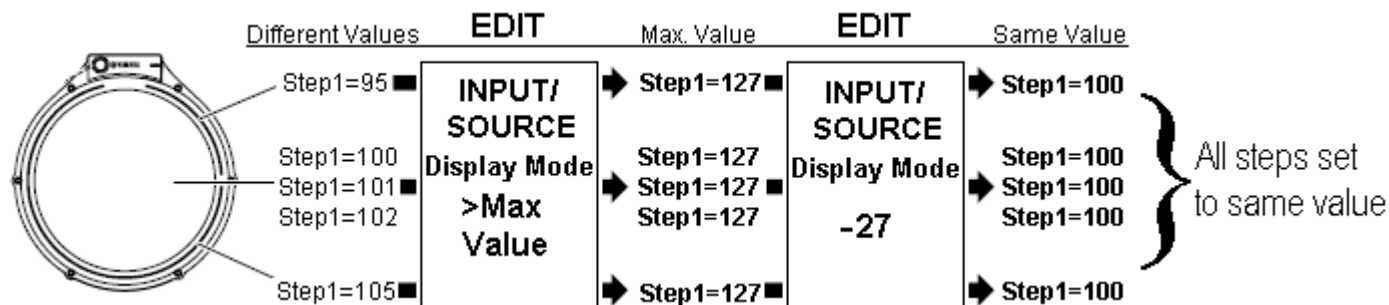
When you make an edit to a parameter of Tom1 with the INPUT display selected you are actually changing the values of that parameter for all the relevant Tom1 sounds (head, rim1 and rim2) in one step. This is very handy when you want to change something like volume, pan or effect level because you typically want these parameters to be shared by the head and rim sounds of a tom-tom.

SOURCE display:

Edits affect *all* voices of *only* the selected trigger SOURCE - including any STK/ALT steps.



In INPUT and SOURCE mode, edits you make are *offsets* and will preserve any differences that exist in the stacked or alternate notes – provided you do not dial past the minimum or maximum value. You can set all steps of the relevant source(s) to the same value by scrolling past the max or min value and then making your setting.



I still don't get it – what's this guy talking about? Well, when you make an edit to a parameter of Tom1 with the INPUT display selected you are actually changing the values of that parameter for all the relevant Tom1 sounds (head, rim1 and rim2) in one step. This is very handy when you want to change something like volume, pan or effect level because you typically want these parameters to be shared by the head and rim sounds of a tom-tom.

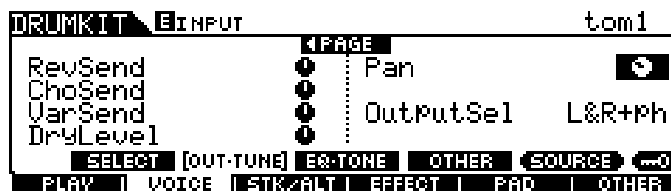
Okay, but what's this offset business? Well, let's say you wanted the Tom1Rim2 sound to be a little bit softer (Volume=95) than the head (Volume=100) but you want the Rim1 sound to be louder (Volume=105). You would need to make those edits using the SOURCE display mode for each trigger source. If you are adjusting the head of Tom1 and there are three steps that make up the head sound (as in our case here in this power guide), you can still use the SOURCE display mode and your changes will be adjusted for each step in the STK/ALT steps of that source automatically. That by itself is pretty slick, but along comes a "producer" who asks you to make Tom1 just a little louder. If you switch to INPUT display mode and increase the output by 5 clicks of the INC button or data wheel, then you have now just set Tom1Rim2 to 100, the head and all layers are now 105, and the Rim1 is now 110. Five sounds were changed by just one edit with differences preserved. Now THAT'S slick.

If you want to set all steps for all sources of an input to the same value, you can do so by scrolling past the maximum or minimum value and then dialing a new setting (see diagram at the top of this page).

Now – back to our kit. The parameters to edit are SLIDER SELECT, PAN and VOLUME. I've listed them this way for a reason. Press **[F2] VOICE** then **[SF4] OTHER** and **cursor right** to the **SliderSel** value on PAGE 2. Use the INPUT display mode (toggle with **[SF5]**) to set slider select value for all triggers to their proper group:



Next press **[SF2] OUT-TUNE** and cursor right to set the **Pan** parameter on page 2. This step is all about using your ears – don't worry that you cannot see absolute values or that the knob icons do not update from trigger to trigger. Trust your ears! (NOTE: You must be monitoring in stereo in order to hear the effect of the Pan parameter).



I saved Volume for last; it is a prime example of the benefit of using the SOURCE display mode. Before continuing make sure all the volume sliders are set all the way up to maximum on the DTX900 mixer.

Cursor left to get to the **[F2] VOICE [SF2] OUT-TUNE PAGE 1**. Press **[SF5] SOURCE** to change the display mode. Strike or select the **tom1head** trigger source. Like all volumes in the original INIT EMPTY kit it is set to a default value of 100.



As you increase or decrease the value, play the tom1head with various dynamics. Note that all the layers are responding to your changes evenly – that's incredible! In SOURCE display mode you can set the volumes for the head, rim1 and rim2 sounds independently. If you ever wish to change them as a group simply use the INPUT display mode. To make changes to a single step of a stacked trigger use the MIDI display mode. After making changes using the above techniques STORE your kit to an available memory location. If you've been following the tutorial you should now have a kit like **USR 05: Balanced Kit** from the data file.

DECAY of User Voices – setting Receive Key Off

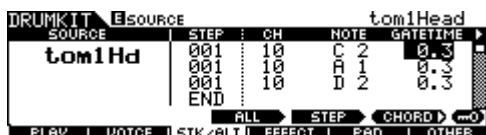
If you have been playing the user kits from the data file you might have thought that the toms have too much “ring” in them. This is intentional for this tutorial, because it gives us an opportunity to learn another unique aspect of working with User Voices. If you try and adjust the Decay parameter for a trigger that has User Voices you will notice that there does not seem to be any change to the length of the sound no matter how you set it.

In order to adjust the decay (how fast the volume falls to zero from maximum) of user voices we need to know about three settings: **Receive Key Off**, **Gate Time** and **Release**. These three parameters work together to give DTX900 users powerful control over their user voices for a wide variety of applications. Here’s how:

Press **[F2] VOICE** then **[SF4] OTHER** and strike or select the Tom1head trigger in the **SOURCE** display mode. On **page one** (you may need to cursor left) highlight the **RcvKeyOff** parameter and set it to “on”.



Press **[F3] STK/ALT** and move the cursor to highlight the **GATE TIME** value for any step in the column. Press and hold the **[SF4] STEP** button and set the value to “0.3”. Play the tom head and you will note the sound seems gated.



Press the **[F2] VOICE** then **[SF3] EQ/TONE** buttons. Press **CURSOR RIGHT** until you get to Page 2 and you will see the **Release** parameter set to zero. Release is the rate (how fast) the note fades to silence. In this case it takes no time (zero time) to fade, which is why the sound seems gated. This can be a used as an effect for sustaining sounds such as setting a crash cymbal to “auto choke”, or stopping a musical loop based on gate time.

Use **INC/DEC** or **DATA WHEEL** to set the **Release** to about **+15**. Now you hear a bit more of the tom ring. Adjust to a value that suits your ears and repeat the process for all the tom head trigger sources.



EDIT TIP: You can save some button presses by editing one parameter for all drums before moving to the next parameter. That way, you can just tap your way around the kit, set each drum, and move to the next parameter.

STEP 5: NAME, STORE your User Kit to internal memory, then **SAVE to USB** device as an “AllData” file. You should now have a kit like **USR 06: Key-Off Kit** from the data file. If you make changes to EQ and Effect settings you might end up with a kit like **USR 07: Basement Kit**, **USR 08: HallPhaseKit**, or **USR: 09 Variation-EQ**. These kits were built from the tutorial kit so you can hear how other parameters affect the overall sound.

POWER TIP: – You can set up **ALTERNATING Velocity Switching User Voices** by creating a series of **STEP 002** velocity switching notes (on the **STK/ALT** page) that are assigned to play alternate hit voices for a drum.

SEPTEMBER 2, 2009 – DTXPANSION! Top drum programmer David Polich has created a collection of Sonic Reality’s best drum sounds specifically for Yamaha’s DTX electronic drums. These amazing kits utilize some of the same velocity switching techniques outlined in this guide – and take it a step further with 5-layer *alternating* hits on the snare, plus a 3-layer alternating hi-hat. They even come with the drum map! Get all the details at:

http://dtxperience.com/dtx_store/frameDTXPANSION.html

Hope this helps. Visit www.DTXPERIENCE.com for all the latest DTX info. Happy Drumming!

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