

## ***Synth Controller manual addendum for edition 'Thet4'***

This Synth Controller edition is not meant to stand in direct competition to a software editor. Software is much cheaper and allows setting all the modulations and other parameters much easier.

The 'Thet4' controller becomes handy when bringing your TETRA to life in realtime. Together with thoroughly prepared patches making use of the modulations (see chapter 'Blue layer') the Synth Controllers is much fun in tandem with your TETRA. Be sure not to miss our youTube-demo for this edition :-)

### *Technical detail*

The Thet4-Edition uses NRPN-data for tweaking the TETRA.

### *Display of the currently tweaked parameter*

Changing a patch causes the TETRA to display the patchname. Tweaking the Synth Controller's pots changes the sound, but it won't reflect the currently tweaked para on the display until you move one of TETRA's 4 pots (CUTOFF, RESO, ATTACK, DECAY/RELEASE) or press ASSIGN PARAMS to switch the TETRA into edit mode.

### *Bi-Polar parameters*

Most of the dials work the common way: leftmost is 0, rightmost is max. of value, like e.g. the envelope times or OSC FREQ. Some parameters are bipolar, meaning in middle position they have no effect, rightmost is max and leftmost is negative maximum for the value. Examples: FINE TUNE, VCF ENV AMNT or MOD 1-3 (Amount). To have NO effect of the VCF ENV on lowpass (=cutoff) the ENV AMOUNT dial has to be in middle position. VCF VELO (right beside) is a normal parameter and has to be leftmost to set it to 0.

Bipolar parameter are easily identified by the small MINUS-sign to the leftmost pot-position, PLUS at rightmost and a vertical null-line in the middle. In the blue layer you can spot the LFO AMNTs only allowing positive amounts, whereas MOD 1-3 are bipolar. The Synth Controller follows exactly the specs of the TETRA here.

### *Parameter resolution*

As we are talking about VCF ENV AMOUNT ... this is one of the rare parameters of the TETRA having the full value resolution (0-127) in positive as well as in negative range. Most of the parameter only got a resolution of 127 steps in positive direction. As above, the Synth Controller exactly mirrors the specs of the TETRA.

## *Switching-parameters*

The Thet4-Edition has 2 dials with a double function: VCF KEY AMNT (orange layer) and ENV 3 DELAY (blue layer). What makes the two unique is identical for both, we therefore only explain it for VCF KEY AMNT.

Being a 'normal' parameter, VCF KEY AMNT has only a positive value spread from 0 to +127. However there is a null-middle line, full rightmost is +127 and fully leftmost is - What? +127 again? YES! This pot also allows switching the filter characteristic between 2 POLE and 4 POLE. Right half is KEY AMOUNT of 0 to +127 with 4 POLE, left half is 0 to +127 with 2 POLE.

Equivalent behavior on ENV3 DELAY: besides setting the ENV 3 DELAY the pot also switches REPEAT for ENV 3 ON and OFF.

## *Blue layer*

The blue layer is dedicated to ENV 3, LFO 1-3 and MOD 1-3 AMOUNT. None of these parameters affects the sound directly. The power of this 'modulation-layer' comes to effect when your patch has set the appropriate modulation routings like e.g. LFO 1 to Pulsewidth, LFO 2 to Reso, MOD 1 source: Sequencer 1, MOD 1 destination: PAN a.s.o

## *Buttonfunctions - LAYER A / LAYER B*

As you surely know, the TETRA allows playing two completely different sounds at the same time (with half of voice count). These two sounds are called LAYER A and LAYER B and are always part of the patch, although mostly only LAYER A is active.

The Synth Controller allows editing both layers separately. If you like to tweak LAYER B, hold the middle button for 2 seconds. The LEDs shortly flash to indicate the switching was accomplished. To go back to LAYER A simply hold the upper button.

## *Buttonfunctions - LEARN CHANNEL*

For getting things work, the controller and the TETRA must share the same midichannel. For teaching the controller the desired channel hold all 3 buttons for 2 seconds. The LEDs start to flash, you can now send a midinote on the right channel into the controller.

## *Buttonfunctions - BYPASS MODE*

The Bypass mode is explained in detail in the main manual. When it's active, incoming MIDI data is sent right to the MIDI OUT jack - no filtering, no processing. To engage bypass mode hold the combination printed on the faceplate: upper and lower button. The LEDs keep flashing while bypass is active. To exit to normal editing mode just

shortly press one of the buttons.

### *Buttonfunctions – SEQ 1 / SEQ 2*

The DSI TETRA is a marvelous machine – besides 3 envelopes, 4 LFOs and all the modulation possibilities it additionally offers 4 sequencer tracks – per layer, meaning 8 tracks per patch!

As the Synth Controller got these 16 dial pots and the TETRA practically shows the currently tweaked value of the sequencer step, there had to be a SEQUENCER MODE on the Synth Controller - logically. Due to hardware limitations we could only allow tweaking SEQ 1 and 2. But the LAYER switching also works for the sequencer, so when switched to LAYER B you can tweak SEQ 1 & 2 of LAYER B.

To edit the steps of SEQ 1 hold the upper 2 buttons for 2 seconds, for SEQ 2 the lower 2 buttons. Which parameter is modulated by the sequencer tracks has to be set on the TETRA itself of course..

You can leave SEQ mode by shortly pressing one of the 3 buttons.