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INSTALLATION

The Tensile Tile is shipped with a [standard](#) 10 pin power cable. The red line on the cable indicates -12 volts. Make sure to plug in the power cable with this red line nearest to the “red neg” comment on the back of the Tensile Tile.

POWER

The Tensile Tile requires +/- 12 volts to operate properly.

USER INTERFACE



2 x Audio / CV Inputs:

+/- 10 Volt. Input 1 is the input on the left. Input 2 is the input on the right.

2 x LEDs:

These offer visual feedback to help you navigate the Tensile Tile.

1 x Button:

Used to navigate through the Tensile Tile.

1 x Audio / CV Output:

+/- 10 Volt output dependent on selected algorithm.

POWER ON

Upon start up, the Tensile Tile will revert back to the algorithm it was on last time it was used.

UNDERSTANDING THE LEDS

Any time the Tensile Tile is powered on, or a new algorithm is selected the LEDs will blink to indicate which algorithm is selected. First the upper, then the lower LED will blink.

The blink count of the upper LED represents which folder you are inside.

The blink count of the lower LED represents which algorithm within the folder you have selected.

Example: Top LED blinks 2 times. Next, the lower LED blinks 3 times.

The Tensile Tile is using the 3rd algorithm within the 2nd folder.

USING THE BUTTON

Switching Algorithms

In usual operating conditions, a quick tap on the button will increment the Tensile Tile to the next algorithm in the current folder. After reaching the last algorithm the Tensile Tile will wrap back around to the first within that folder.

Switching Folders

Pressing and holding the button for a moment will turn on the upper LED. If you release the button while this LED is illuminated the Tensile Tile will jump to the next folder of algorithms. After reaching the last folder the Tensile Tile will wrap back around to the first folder. When switching folders, the first algorithm in that folder is always selected.

Jumping to your favorite algorithm

Press and hold the button for a bit longer and you'll notice the top LED turns off and the lower LED turns on. If you release the button now, the Tensile Tile will immediately jump to you favorite algorithm.

Saving your favorite algorithm

If you want to save the algorithm you are currently using as your favorite, press and hold the button until BOTH LEDs are solidly lit, and then release. This saved algorithm is remembered after power off and can always be recalled or overwritten.

Swapping input jacks

Press and hold the button until the LEDs start blinking. If you release the button the two input jacks will swap places. This setting is persistent as well.

Entering update mode

Finally, hold the button until both LEDs turn off. Continue holding it down. After a couple seconds, the upper LED will begin to blink. If you release the button the Tensile Tile will be put into update mode. If you enter this mode by mistake, just turn off power and restart.

UPDATING

Find the latest update [HERE](#)

After entering update mode the Tensile Tile will be patiently waiting for an audio signal on the input closest to the button.

The update is an audio file. Open it up in your media player or DAW of choice. Patch a cable from your audio interface headphone output to the Tensile Tile and press play.

The upper LED should blink during the update.

If the lower LED turns on that means that the update failed. This is usually due to the signal not being “hot” enough. Try adjusting the gain on your interface. When the lower LED turns off the Tensile Tile is ready for you to try updating again.

Upon a successful update the Tensile Tile will immediately jump back to normal operation.

USING THE ALGORITHMS

Unless otherwise noted, all inputs can handle audio rate modulation.

Audio Effects Folder

Low Pass Filter

Input 1 is filtered relative to input 2's voltage (0 → 5v CV)

Ring Modulator

Inputs 1 & 2 are multiplied together

Sample Rate Reducer

Input 1: Signal input

Input 2: 0 – 5v control voltage.

Wave Shaper Folder

Hyperbolic Tangent

Sine Wave

Noise

Input 2: 0 – 5v control voltage.

Input 1 gain is dependent on CV.

Bit Manipulator Folder

Crusher Flipper

Input 2: 0 – 5v control voltage

Input 1 will be affected by amount of CV on input 2

Utility Folder

VCA Inverted VCA

Input 2: 0 – 5v control voltage

Input 1 is attenuated relative to CV input

Delay

Input 2: 0 – 5v control voltage delay time

Input 1 signal is delayed relative to CV input

Fundamentals Folder

Polarizer

Input 1 is inverted if input 2 is negative voltage

Rectifier

Input 1 negative values become positive

Input 2 positive values become negative

Outputs are summed

Sample and Hold

If input 2 is triggered input 1 will be sampled and sent to the output

Slew Limiter

Does not work at audio rate

Input 1: Any voltage

Input 2: 0 – 5v control voltage slew time

Rhythm Generator

Does not work at audio rate

Input 1: 0 – 5v control voltage tempo

Input 2: 0 – 5v a higher voltage increases the chance that the next step is toggled on or

off

Function Folder

Comparator

If input 1 > input 2 output is 5v, otherwise output is 0v

Minimum

Outputs the input that is a lower voltage

Maximum

Outputs the input that is a higher voltage

Logical Gate Folder

1. AND
2. OR
3. XOR
4. NAND
5. NOR
6. NXOR

A gate is output dependent on two gate inputs.

Input		Output					
Input 1	Input 2	AND	OR	XOR	NAND	NOR	NXOR
0	0	0	0	0	1	1	1
0	1	0	1	1	1	0	0
1	0	0	1	1	1	0	0
1	1	1	1	0	0	0	1

Envelope Generator Folder

ASR #1

Input 1: Gate input
Input 2: 0 – 5v control voltage
Attack and release times are identical

ASR #2

Input 1: Gate input
Input 2: 0 – 5v control voltage
Attack and release times are inverse of each other

Oscillator Folder

Sine with phase modulation

Input 1: volt per octave

Input 2: expects audio

Sine with sine wave shaper

Input 1: volt per octave

Input 2: 0 – 5v control voltage

applies gain to oscillator and passes it through another sine wave function

Square wave with pulse width control

Input 1: volt per octave

Input 2: 0 – 5v control voltage

Pulse width

ALGORITHM QUICK REFERENCE

Folders	1	2	3	4	5	6	7
1. Audio FX	LPF	Ring Mod	Sample Rate Reducer				
2. Wave Shapers	Tanh	Sine	Noise				
3. Bit Manipulators	Crusher	Flipper					
4. Utilities	VCA	Inverted VCA	Delay				
5. Fundamental	Polarizer	Rectifier	S and H	Slew Limiter	Rhythm Gen		
6. Function	Comparator	Minimum	Maximum				
7. Logic Gates	AND	OR	XOR	NAND	NOR	NXOR	
8. Envelope Generator	ASR 1	ASR 2					
9. Oscillators	Sine PM	Sine Shaper	Pulse				