

Vein-Tap.com

Dark Waves Tap Tempo Tremolo v2.0

Instruction Manual

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Intro

Thank you for choosing the Dark Waves Tap Tempo Tremolo pedal from Vein-Tap.com! We're sure it's about to become your go-to tremolo unit. It's got a multitude of awesome control options, but most importantly, it's a fantastic, musical tremolo with pure, old-school analogue tone circuitry which can help you create fantastic tremolo sounds.

This manual will describe the Dark Waves' controls and options. Read thoroughly and soon you will be the master of the Dark Waves, and you'll know exactly how to create your own custom tremolo sounds.

Thanks again for choosing the Dark Waves Tap Tempo Tremolo pedal from Vein-Tap.com, and remember that if you need any help, email me at info@vein-tap.com and I'll be glad to offer advice.

All the best!

Ben

Vein-Tap.com

Pedal Diagram



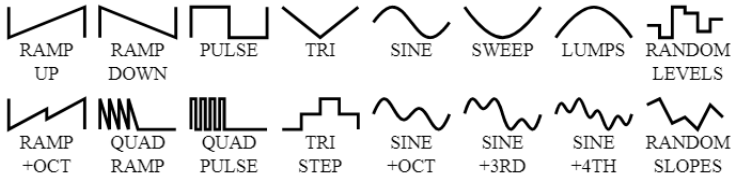
1. Power Jack – plug a standard, centre negative 9v power supply here. Most standard power supplies will work: if it'll power a Boss pedal, it'll power the Dark Waves Tap Tempo Tremolo.
2. Input – plug your guitar, or the previous effects pedal in your chain, in here.
3. Output – plug your amp, or the next pedal in your chain, in here.

4. Bypass Footswitch – turn the effect on and off with this soft touch footswitch.
5. Status / Wave LED – this LED will reflect the tremolo wave you create with the Dark Waves' controls. This LED will light red when the effect is bypassed, and yellow when the effect is engaged.
6. Dark Waves Controller Input – plug the Dark Waves Controller in with the included TRRS cable here. See page 11 for more info about the Dark Waves Controller. If you don't own the Dark Waves Controller, you can tap the tempo in without a tempo LED by connecting a standard Normally Open momentary footswitch, such as a standard Vein Tap tap tempo pedal, or the tap tempo footswitch on the Holy Era Tap Tempo Delay.
7. Wave Shape Selector – see page 6 for more details about this control.
8. Depth Control – select how much your tone is affected by the tremolo with this control, from completely static at 1 to fully silenced at the nadir of the tremolo wave at 11.

9. Tempo Multiplier Control - see page 10 for more details about this control.
10. Rate Control – controls how fast the tremolo wave is, from 20 seconds per cycle at 1 to 12.5 cycles per second at 11.
11. Centre Shift Control - see page 9 for more details about this control.

Wave Shapes

There are 16 wave shapes to choose from with this control:



The Wave Shape control allows you to select 8 wave shapes in sequence. When the Dark Waves Controller's Alternate Waves switch is disengaged, the upper 8 wave forms are available. When engaged, the lower 8 wave forms are available. See the Dark Waves Controller chapter on page 11 for more details.

The wave shapes, in order, are:

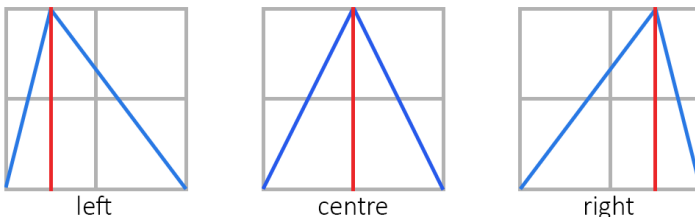
1. Ramp Up – signal travels from full silence at the beginning of the cycle to full volume at the end.
2. Ramp Down – signal travels from full volume at the beginning of the cycle to full silence at the end.
3. Pulse – no slope between the positive and negative waves.

4. Triangle – signal travels from zenith to nadir at a uniform rate.
5. Sine Wave – signal travels faster at the centre of the wave, and slows at the zenith and nadir of the wave.
6. Sweep – signal travels quickly to and from the zenith, and slowly at the nadir of the wave.
7. Lumps – signal travels quickly to and from the nadir of the wave, and slowly at the zenith of the wave.
8. Random Levels – signal randomly changes volume, with no slope in between points.
9. Ramp + Oct: like the Ramp Up wave shape, with a sudden dip in the middle of the wave.
10. Quad Ramp: four rapid down ramps, which stay down on the fourth ramp for an equal amount of time.
11. Quad Pulse: four rapid square wave pulses, which stay in the negative after the fourth pulse for an equal amount of time.
12. Tri Step – signal divides evenly between 0%, 50% and 100%.

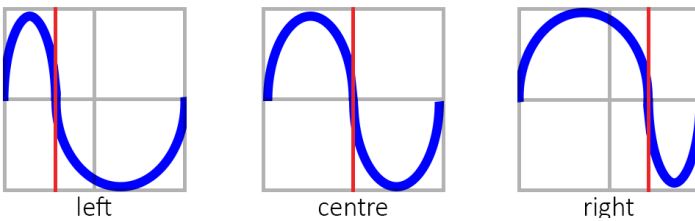
13. Sine + Oct: like the Sine wave, with a smaller wave in the parent wave's centre.
14. Sine + 3rd: Two positive sine waves followed by two negative sine waves.
15. Sine + 4th: One half, one full, and one half positive sine wave, followed by one half, one full, and one half negative sine wave.
16. Random Slopes – signal slopes between random levels.

Centre Shift

The Dark Waves Tap Tempo Tremolo's Centre Shift control allows you to take the centre point of a wave, and move it. This is best expressed graphically. In this example, we're using the triangle wave shape:



The Centre Shift control moves the exact centre of the wave shape, so the equivalent change on the Sine Wave shape would be:



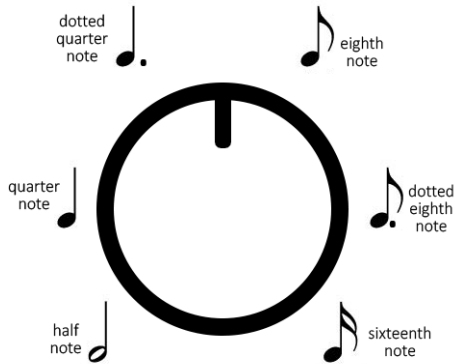
This can be applied to all waves except both Random wave shapes, which can be neither tamed nor reasoned with.

Tempo Multiplier

The Tempo Multiplier control allows you to take the tempo, either tapped in with the Dark Waves Controller or set by the Rate control, and multiply it to get certain tempo divisions.

The multipliers are, from left to right:

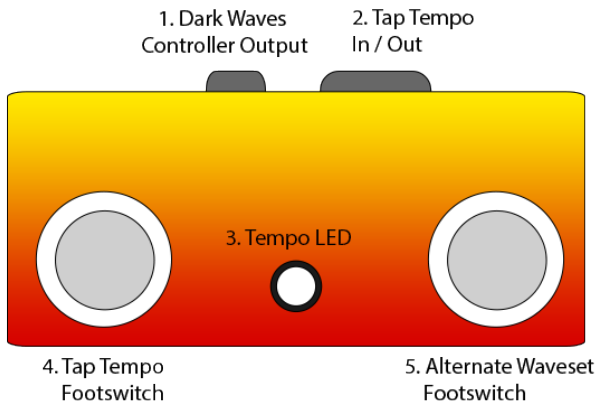
1. Half note, or minim. Tempo is read at 50%.
2. Quarter note, or crotchet.
Tempo is read as set.
3. Dotted quarter note, or triplet crotchet.
Tempo is read at 150%.
4. Eighth note, or quaver. Tempo is read at 200%.
5. Dotted eighth note, or triplet quaver. Tempo is read at 300%.
6. Sixteenth note, or semiquaver. Tempo is read at 400%.



Using the Tempo Multiplier allows you to get untappably fast tempos – up to 100 cycles per second.

The Dark Waves Controller

The Dark Waves Controller extends the footswitchable capabilities of the Dark Waves Tap Tempo Tremolo pedal by adding an external tap tempo footswitch on the right, and a tempo multiplier footswitch on the left.



1. Dark Waves Controller Output –connects to the lower left input on the Dark Waves (point number 6 on the pedal diagram on page 3 of this manual) with a TRRS cable.
2. Tap Tempo In / Out – connects to a compatible (momentary, Normally Open) tap tempo input on an

external pedal (such as the Holy Era Tap Tempo Delay) to allow the Dark Waves Controller to share the tapped tempo. Can also accept incoming momentary Normally Open tap tempo signal to control the Dark Waves Tremolo's Rate.

3. Tempo LED – blinks in accordance with the tempo set by the Tap Tempo Footswitch, or the Rate and Multiplier controls if the tempo is set manually.
4. Tap Tempo Footswitch - allows you to override the tempo set by the Rate control by tapping the switch twice. The Dark Waves reads the time between two taps and sets that amount of time as the new Rate. Override this by turning the Rate control, or by tapping in a new tempo.
5. Alternate Waveset Footswitch – use this latching footswitch to select the alternate waveset shown in as the lower 8 wave shapes on page 6 of this manual. The Tempo LED will light red when the Alternate Waveset is disengaged, and yellow when the Alternate Waveset is engaged.

Pre-Amp or Effects Loop Placement

It's entirely up to you where you put your Dark Waves Tap Tempo Tremolo pedal in your pedal chain. If your amp has an effects loop, then putting the Dark Times in it will make the pedal have a more profound effect on your signal, especially if you're using a high-gain amplifier. Placing the effect before your amp's input will make the effect a little more subtle, especially on high gain amplifiers and doubly so when the effect is put before drive / distortion pedals.

As always, there's nothing more fun than experimenting with your tone, so find out what your friends and bandmates would do, ask on the forums, consider the fact that modulation effects such as tremolo traditionally go in the effects loop of an amp... and then throw the rules away and find out for yourself. There's nothing better than sounding good when the rules say you shouldn't!

Outro

That's everything! I really hope you love your Dark Waves Tap Tempo Tremolo pedal as much as I love my own, and that it soon becomes an essential part of your pedalboard. Remember that your Dark Waves Tap Tempo Tremolo pedal enjoys a lifetime guarantee, so if ever you have any problems, get in touch with me at info@vein-tap.com and I'll put any problems right or answer any questions you may have.

Enjoy your new pedal, and thanks again for choosing Vein-Tap.com!

All the best,

Ben

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