



# TREMULVS MAXIMVS

## Amplitude Modulator

### RATE

The Tremulus Maximus varies the volume of the input signal at a frequency set by the RATE knob.

The fully counter-clockwise position corresponds to the minimum frequency of 2 Hz, or 2 cycles per second.

As the knob is turned clockwise, the frequency goes up. At about 12:00, the effect transitions from tremolo range to audio range and the character of the effect changes. In the tremolo range the rate is slow enough that the volume variation is audible, whereas in the audio range the effect produced is rather a kind of modification of the frequency (or tonal) content of the guitar.

When in the audio range, you can get some of the best sounds by 'tuning' the modulation frequency to the notes that you're playing. To do this, play your note and slowly turn the RATE knob until you hear the tuning line up. A few octaves are available to go through, so there's not just one point on the knob where you'll be in tune. Note that when switching between triangle/square the frequency changes slightly, so the rate will need to be readjusted.

### TRIANGLE / SQUARE TOGGLE SWITCH

Two waveforms are available for modulating the input signal: triangle and square. The square is set with the switch towards the top edge of the enclosure, and the triangle in the other position. When set to square, the lights will be pink, and for triangle they'll be green.

For tremolo operation, the square is more extreme of an effect, giving sharp rather than smooth transitions. For the upper half of the RATE knob, they can sound more similar although they do each have their own distinct sonic character.

### DEPTH

The DEPTH knob allows you to set the intensity of the effect, from barely noticeable at its minimum setting (fully counter-clockwise) to its most extreme at the other end.

Generally speaking (especially at tremolo frequencies) the square gives a more pronounced effect than the triangle and so may require a lower DEPTH setting to get the same intensity.

When in the upper half of the RATE knob, higher DEPTH settings are generally required to bring out the effect (you'll probably find yourself staying in the upper half of the DEPTH knob rather than using its full range). When playing in the lower half of the RATE knob, on the other hand, you can use that lower half of the DEPTH knob to dial in a subtle tremolo.

### AUTO

The AUTO feature automatically varies the rate based on your playing. The variation is based on the amplitude of the input, so louder inputs result in more variation.

When the AUTO knob is fully counter-clockwise, the rate will stay constant. The further that AUTO is turned clockwise, the further the rate jumps when you play a note. The starting rate is determined by the position of the RATE knob, and the jump is in direction of faster rate.

When in the audio RATE region (RATE ~12:00 or higher), the rate will slightly increase upon activating the AUTO feature, so if you're tuning the rate to your playing then turn on the AUTO first and then tune. Some very interesting dynamic resonances can be produced by using subtle AUTO settings after having tuned.

### EXPRESSION PEDAL

An expression pedal input is available to take over control of the RATE knob. When the expression pedal is plugged in it automatically takes control, meaning the RATE knob will no longer do anything.

Apart from simply varying the rate while keeping your hands free, the expression pedal can also effectively be used to transition between tremolo and clean by taking advantage of the fact that at its lower to medium settings the DEPTH knob gives less of an effect at higher rates. Therefore by keeping the DEPTH in the 9:00 – 3:00 range (depending on whether you're using square or triangle modulation), you can retain the tremolo effect at lower rates but at higher rates the effect will pretty much sound bypassed.

The expression pedal is connected via stereo cable (TRS – tip ring sleeve). The tip must be connected to the potentiometer wiper (this is generally the standard for expression pedals). Expression pedals can have different resistance values. 10KΩ must be used to obtain the best results (this is one of the most common values). If higher values are used, most of the range of the expression pedal will be at very low rates and all of the high rates will be squeezed into the top. For any questions regarding expression pedal compatibility, please feel free to contact us at [info@rpseffects.com](mailto:info@rpseffects.com)