

## AXE-FX III FIRMWARE 12.00 FLANGER UPDATE

1. The Delay parameter on the Basic page has been replaced by a "Manual" knob. It functions the same as a typical pedal/rack flanger. To manually control the flanging set Depth to zero. The sensitivity of the Manual control is inversely proportional to Depth and the Manual control is disabled when Depth is at maximum.
2. The Depth control mixes the LFO and Manual controls. When Depth is at minimum the delay time is controlled entirely by Manual. When Depth is at maximum the delay time is controlled solely by the LFO.
3. There are now separate Minimum Time and Maximum Time parameters. These set (not surprisingly) the minimum and maximum delay time when the Depth is at maximum and Manual is at minimum. These are updated when the type is changed. The Flanger block now allows minimum delay times as short as 340 microseconds. If one of the Thru-Zero modes is selected the dry path is delayed accordingly resulting in a net minimum delay time of zero.
4. The "Focus" parameter cuts the bass in the wet path but unlike a low cut compensates the dry path so the net frequency response is flatter.
5. There are three "VCO Curve" types. Linear yields a linear delay time vs. LFO. Exponential gives an exponential response which can be more "musical" because the notches will move more linearly with the logarithm of frequency. Square-law is sort of in-between and is what the old A/DA flanger used.
6. The "Exponent" parameter controls the exponent for the Exponential type. A value of 1.0 is "ideal" and results in the notches sweeping linearly with  $\log(\text{frequency})$ . Higher values cause the delay time to dwell at shorter times and then increase rapidly towards the longer times. Lower values cause the delay time to dwell at longer times.
7. There are five new types based on classic pedals. The MXF-117 is based on the MXR 117, the BBF-2 is based on the Boss BF-2, the Electric Mystery and Deluxe Mystery are based on the Electric Mistress and the D/AD 185 is based on the aforementioned A/DA flanger.
8. There are two Thru-Zero modes: AUTO and MANUAL. AUTO automatically adjusts the thru-zero so that the zero-point is mid-sweep regardless of the Manual value. MANUAL is intended to replicate manual tape flanging. To use MANUAL set the Depth to zero and vary the Manual control to simulate pressing on the tape flange. If Dry Delay is 50% the zero-point on the Manual control is 5.0. Lower values of Dry Delay will shift the zero-point down and vice-versa. Set Thru-Zero to MANUAL and attach an expression pedal to the Manual parameter for the "Ultimate Tape Flanger".
9. The LFO Monitor graph allows monitoring the LFO waveform in real time. Note that for some models the LFO waveform will be distorted due to the nonlinear filtering that occurs. This tends to make a triangle wave look like something in between a sine wave and a sawtooth.