Happy Nerding — FM AID

- Manual PDF

Happy Nerding FM AID 2020 User Manual PDF

Creative Modulation with Happy Nerding FM AID

For Distorted Percussive Sounds, Aggressive Basslines, and Haunting Pads

The FM AID is a powerful through-zero linear FM module that excels in producing a wide range of timbres based on the interplay of its Carrier, Modulator, and modulation options. Here's how you can get extreme, unique results, tailored to specific sonic goals:

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1. Distorted Percussive Sounds

Patch Ideas: - **Short, Transient Sources:** Use fast decaying envelopes or VCAs to shape an audio-rate Carrier oscillator's amplitude, making it snappy or clicky. - **Audio-Rate Modulation:** Patch a drum sample, burst generator, or short envelope into the Modulator input while using a sharp waveform (e.g., square or saw) as the Carrier. - **Self-Feedback:** Patch one of the FM AID outputs (Triangle/Saw/Square) back into the MOD input. This recursion can lead to digital-style noise, metallic clangs, and aggressive transients especially at higher FM knob settings (try 6-10).

Tips: - Play with the onboard trimmer for the Carrier input to adapt to nonstandard voltage ranges (e.g., using louder drum triggers). - Modulate

the FM depth (index) with a stepped random S&H or LFO for evolving, glitchy drum textures.

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2. Crazy, Evolving Basslines (Dubstep/Drum & Bass)

Patch Ideas: - **Carrier/Modulator Ratios:** Use two oscillators at musically interesting frequency offsets (e.g., 1:2, 2:3, 5:7), experimenting with saw and square combinations. - **CV Sequence Modulation:** Route a pitch CV (from your sequencer) to the FM AID's CV input, but invert it for classic "falling bass" effects. The CV knob is bipolar, allowing you to dial in negative or positive FM-index tracking. - **Audio-Rate LFOs:** For growling or talking basslines, use a slow but audio-frequency LFO or wavefolder through the MOD input. Push FM depth high for formant-rich and metallic sounds. - **Activate Feedback:** Self-patch the Triangle or Sine output into MOD for thick, noisy "reese" basses, then filter the result externally for movement.

Tips: - Use the Envelope to modulate FM depth or Modulator amplitude for more dynamic movement. - Experiment with patching sub-octave signals (octave dividers) or complex waveforms (e.g., wavetables) as the Modulator.

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3. Haunting Atmospheric Pads

Patch Ideas: - **Subtle FM with Slow Movement:** Use LFOs or smooth random voltages (WWII*Chaos, Wogglebug, etc.) in the CV input to slowly vary FM index while feeding lush analog waveforms (triangle, sine) to Carrier and Modulator. - Carrier=Modulator Trick: Leave the MOD input unpatched. The carrier signal will be normalled to both, producing unique internal wavefolding, ideal for eerie drones. - Complex Modulators: Try using a filtered noise source, a heavily modulated wavetable, or even a granular sampler output as the Modulator for evolving shimmer and texture. - Stereo Textures:** Mult each type of pad modulation to several outputs (Sine,

Triangle, Saw, Square), then pan those in your mixer for thick, swirling atmospheres.

Tips: - Run slow random CV or LFOs to morph between three or four outputs, cross-fading for motion. - Subtly automate the Carrier oscillator's frequency for organic, drifty pads.

Bonus Pro Modulation Tips

- **Velocity Dynamics:** Patch velocity or aftertouch CV to the FM AID's CV input for expressive modulation of movement, especially in evolving pads or percussive hits.
- **Hard-Sync Oscillators:** Sync your Carrier and Modulator oscillators for locked, "static" FM tones—great for both percussive hits (eliminates beating) and "laser" leads.
- **Try Modulating Everything:** Audio-rate, LFO-rate, envelopes, random S&H, sequencer lanes—every kind of voltage you can provide the CV input will yield a different character.

For further technical reference, review the official Happy Nerding FM AID Manual.

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