Dual Multiplier

not a multiple! a multiplier!

What the heck is that? Well, a four quadrant multiplier is similar to the classic ring modulator. Use it to create sideband rich spectral soundscapes, create pitched noise, use it with DC for tremolo effects, or use it with integrators and summers to pull of analog computer patches! Really, this module rewards those who enjoy experimentation.

Unique to our Dual Multiplier is the normalization of the top section straight into the bottom section, so even with just two signals plugged in, you already get a few different results.

Features

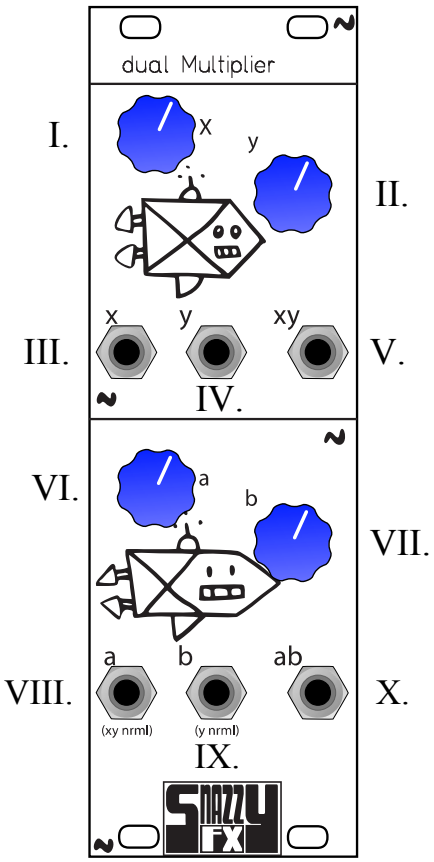
- Two wideband multipliers
- DC coupled inputs
- Attenuators on each input (very useful for DC signals)
- Use as 2x 4 quadrant VCAs
- Top multiplier normals into the bottom multiplier for easy creation of varied timbres
- High bandwidth allows for harmonically interesting soundscapes
- Pull off analog computing patches

Starting points

- Plugging audio sources into the inputs (two sine or triangle waves)
- For spectral fun, try putting multiple *Dronebank* inputs into the top section
- Pitched noise – plug a VCO into one input and white noise into the other. As you increase pitch, the noise will change too. (Also works with chaotic noise)
- Use for analog computing patches anywhere you see multiplier symbols!
- Use as two four quadrant VCAs (just put your envelope into one input)
- Use to create spectral shifts in vocal samples by multiplying the sample with a modulated LFO
- Check out the Snazzy FX videos for more ideas

Width 8HP
Current draw 13mA

Front panel



top section

- I. x input attenuator
- II. y input attenuator
- III. x input jack
- IV. y input jack
- V. x*y output jack

bottom section

- VI. a input attenuator
- VII. b input attenuator
- VIII. a input jack
- IX. b input jack
- X. a*b output jack

All inputs (III, IV, VIII, IX) are DC coupled.

Y input jack (IV) normals into B input jack (IX).
XY output jack (V) normals into A input jack (VIII).

XY output (V) is the result/product of top multiplier. It performs four quadrant multiplication on signals input with jacks III and IV.

AB output (X) is the result/product of bottom multiplier. It performs four quadrant multiplication on signals input with jacks VIII and IX.

The attenuators are very useful when used with DC inputs.