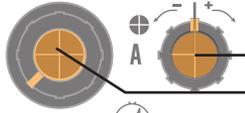
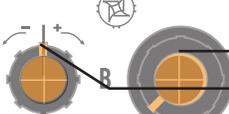


ENGLISH TEAR
VOLTAGE PROCESSOR AND MS CONVERTER

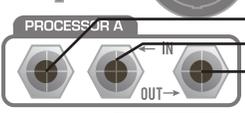
ENGLISH TEAR connects your modular system to Korg's MS-20 synthesizer. Each converter circuit has a range of 3.5 octaves.
* You must let English Tear warm up for 5 minutes after turning your system on, for proper scaling.



CV Attenuverter for voltage processor A
Offset knob for voltage processor A



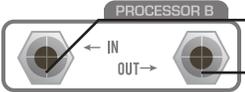
CV Attenuverter for voltage processor (2X gain on positive side)
Offset knob for voltage processor



CV input 1 (routed through attenuverter)

CV input 2 (full scale)

CV output



CV input (routed through attenuverter)

CV output



Expo (v/oct -> hz/v converter)

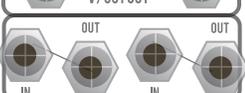
Suggested patch: V/oct Input to your modular quantizer OUTPUT, CV source, sequencer, etc. Hz/V Output to the MS-20 "Key CV IN" jack.



Log (hz/v -> v/oct converter)

Suggested patch: Hz/V Input to the MS-20 "Key CV Out" jack.

V/oct Output to your modular system's quantizer or oscillators.

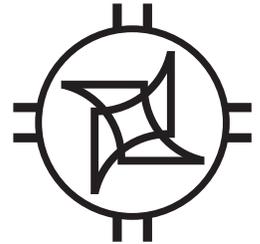


Trigger converters: inverts polarity of gate signal.

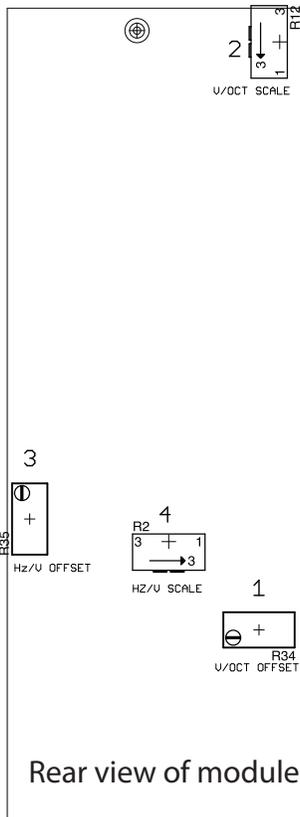
Connect input to MS KBD Trig OUT, output to Eurorack env Trig OR Connect input to Eurorack trig source, output to MS KBD Trig in

THE HARVESTMAN MODEL 2401
SEATTLE WASHINGTON USA

REVISION 2.0



More information and media samples:
<http://www.theharvestman.org/2401.php>
Support:
email support@theharvestman.org



CALIBRATION

Log Converter:

1. Connect voltmeter to V.Oct Out.
2. Connect Hz/V in to MS20 Key CV out.
3. Press the lowest key on the keyboard.
4. Adjust Trimmer 1 (v/oct offset) until the meter reads 0.5V.
5. Press the highest key on the keyboard.
6. Adjust trimmer 2 (v/oct scale) until the meter reads 3.5V.
7. Repeat steps 3-6 in sequence until all readings are correct.

Expo converter:

1. Calibrate the Log Converter circuit as detailed above.
2. Listen to the MS20 output in a basic patch: filters open, both oscillators set to square wave, 4' octave setting, tuned to perfect unison, NO MODULATION.
3. Connect Log Converter Hz/V Input to MS20 Key CV out.
4. Connect Log Converter V/Oct Output to Expo Converter V/oct Input.
5. Connect Expo Converter Hz/V Output to MS20 VCO 2 CV Input.
6. Press the lowest key on the keyboard.
7. Adjust Trimmer 3 (Hz/V Offset) until both oscillators are in unison.
8. Press the highest key on the keyboard.
9. Adjust Trimmer 4 (Hz/V Scale) until both oscillators are in unison.
10. Repeat steps 6-9 in sequence until the oscillators are in tune across the entire keyboard.

After the scale adjustments of both circuits are accurate, you may use the two offset trimmers (#1, #3) to set the base frequency of each circuit to match your sequencer, quantizer, or CV keyboard with the MS20.