AWMS ((air-wave modulation source))

FM SOURCE

SQUEEZE
CLEAN
ANTENNA

Tuning

Tuning CV   FM Out

LFO

FREQ RANGE
FAST
VERY FAST
SLOW

Freq

Freq CV   TRI Out   SQR Out

SAMPLE / HOLD

EXT. Samp   EXT. Trig   S&H Output

HOLOCENE ELECTRONICS

air-wave modulation source

Module Width (10hp)
Module Depth (22mm) / (25mm incl. Power Cable)
Current Consumption +12v (87mA) -12v (35mA)

The Awms is a voltage controlled FM radio designed to introduce broadcasted randomness in your modular system anything from randomized and distorted radio stations to random voltage derived from broadcasting.

FM Source Section is a simple, quick, and dirty, voltage-controlled FM radio Receiver. It's CV input, and the Tune knob lets you scroll through your favorite static noises and radio stations. Not only is it a great noise source to have for your modular setup, due to the output being normalized to the sample and hold input, random voltages based on the current broadcasting stations / static are also available.

Bandwidth of 87 ~ 108 Mhz or 64 ~ 108Mhz is selectable via a jumper pin on the back side of the module.

Squeeze switch lets you amplify and asymmetrically clip the signal to bring the static in between stations to useful amplitudes or clip the broadcasted audio. (Great for use in underground situations with bad reception. It may replace your white noise generators! Also in our case can still be useful as a random voltage generator as well)

Clean signal maximum ranges 10 volts Peak to Peak (Depending on the broadcasting dynamic range) and the Squeezed signal 13 volts Peak to Peak (-2 ~ 11v due to asymetrical LED clipping, biasing the sample and hold output to mostly be positive)

Cv input range 0~5v when fully CCW.

The tuning is continuous, meaning it isn't a trigger or button based automatic tuner like most tuners today, and because of that it may not tune in the highest fidelity every single time. (When feeding the cv input consider a more stepped voltage rather than a smooth one, or with a smooth voltage consider using a slow attenuated control voltage to fit your intended range)
This device is not designed to be a precision instrument!

The LFO section is a triangle and square wave voltage-controlled low-frequency oscillator.A three-way toggle switch can switch between three different frequency ranges. Each range is according to the list below.

Fast - 3 sec ~ 19Hz
Very Fast - 319Hz ~ 15.69KHz
Slow - 17 sec ~ 3Hz

Output voltage range
Triangle wave ± 6v
Square Wave ± 10v

The Squarewave Output is normalized to the Sample and Hold circuits trigger input.

Sample and Hold By default, with nothing plugged into the input, it samples the audio coming out of the FM radio to generate random voltages. It can sample external inputs as well as external clock sources.

PATCH TIP!

with the LFO's frequency range set to "VERY FAST" the output of the sample and hold yields bit crushed audio from the AIR-WAVES (~ use groovy font) or your sound source of choice with the external sample input.

Included in the Box is a small 3.5mm adaptable antenna, however if you lose it or forget to bring it with you, you can always use a long patch cable.

Block Diagram of internal routing

FM RADIO

Input
‣ Tune cv

Output
‣ Audio

LFO

Input
‣ Frequency cv

Output
‣ Square Wave

Output
‣ Triangle Wave

S&H

‣ Trigger in

‣ Sample in

Output
‣ Sample & Hold