General

The DRUM-04 module is based upon the circuit used in the MFB-503. It offers a tight bass drum that is adjustable over a wide range in both pitch and decay. In addition, the bass drum's sound parameters Attack, Decay, Tune and Pitch can be addressed through CV-signals from envelopes, LFOs, sequencers etc.

Set-Up

DRUM-04 is fully compatible to Doepfer's A-100 modular system - in size, bus-power and CV/Gate voltage. Connect the 10-pin cable to a corresponded 16-pin jack on the Doepfer mainframe bus or the MIDI/CV circuit board. Supply voltage needs to be +/- 12 volts, 5-volt connections are not required. The wattage is +/- 30 mA, the module size 12 TE (Teileinheiten) = 60 mm.

ATTENTION: Please, check for correct polarity! The colored side of the connector-cable needs to point downwards so that the cable is not twisted.

Functions

The bass drum sound is triggered by the **Trigger** input. Common triggers are analogue or digital gate-signals of a step-sequencer, a MIDI-CV/Gate-converter or a square-LFO. Alternatively, drum pads, dynamic or piezo-trigger-microphones may also be used. Dynamic triggering will not only affect the sound's volume but also decay and pitch.

Sens is a trim control to adjust the input's sensitivity to the trigger-signal. The highest sensitivity allows triggering at a minimum voltage of around 0.5 volt. The input reacts to the positive slope of the signal.

Out carries the audio signal. This can be routed into a mixer (e.g. DRUM-99), a VCA or any other sound manipulating module. You may also use the output to connect the DRUM-04 directly to your mixing console or audio-interface.

Parameters

The bass drum sound consists of three parts: a basic tone that derives from a triangle-like waveform, a short impulse and a noise part.

The basic tone is tuned between 30 to 100 Hz using the **Tune** control. The input **CV Tune** with its corresponding attenuator allows modulation by any CV source.

Further pitch modulation is controlled by the parameter **Pitch**, a characteristic sound element found in many analogue bass drums like the famous Simmons electronic drums or Roland's TR909. This parameter controls the duration of a pitch bending with fixed modulation amount. The bending is under control of input **CV Pitch** with its corresponding attenuator. Use any CV-source like a step-sequencer. The maximal bending duration is approximately one second.

Decay controls the overall duration of the bass drum sound up to a maximum of approximately two seconds. CV-input **CV Decay** with corresponding attenuator controls this parameter.

Attack mixes a short impulse signal of pre-defined length with the other sound sources to increase percussiveness. Here, input **CV Attack** with attenuator puts this sound element's (volume) under CV-control.

Attention: The required voltage for all CV-inputs need to be within a range of 0 to 10 volts.

Noise adds an amount of noise to the bass drum signal. When applied with the right amount, the resulting sound resembles the legendary electronic Simmons drums.

Drive controls the amount of distortion applied to the sound. It ranges from light overdrive that will increase the bass drum's perceived loudness and punch to audible distortion as used in styles like Techno, Big Beat or Drum'n'Bass. In many cases, the usage of **Drive** will make an external distortion unit dispensable.

Attention: There are no CV-inputs available for **Drive** and **Noise** parameters. These parameters need to be set manually.

MFB

Operating Manual

DRUM-04 Module