AVP SYNTHESIZERS

MAD-5

MAD-5 Midi Analog Drum synthesizer

User Manual

MAD-5 is an analog drum synthesizer which is inspired by the sounds of the 20th century soviet drum machines while having the flexibility, MIDI control and compact package of the 21st century. It consists of 22 knobs, 1 switch and 1 button which allows you to manipulate/control the sound and midi. It also has individual outputs for each of the five drum instruments so you can easily rout and process them separately with your external effects especially in a live configuration.

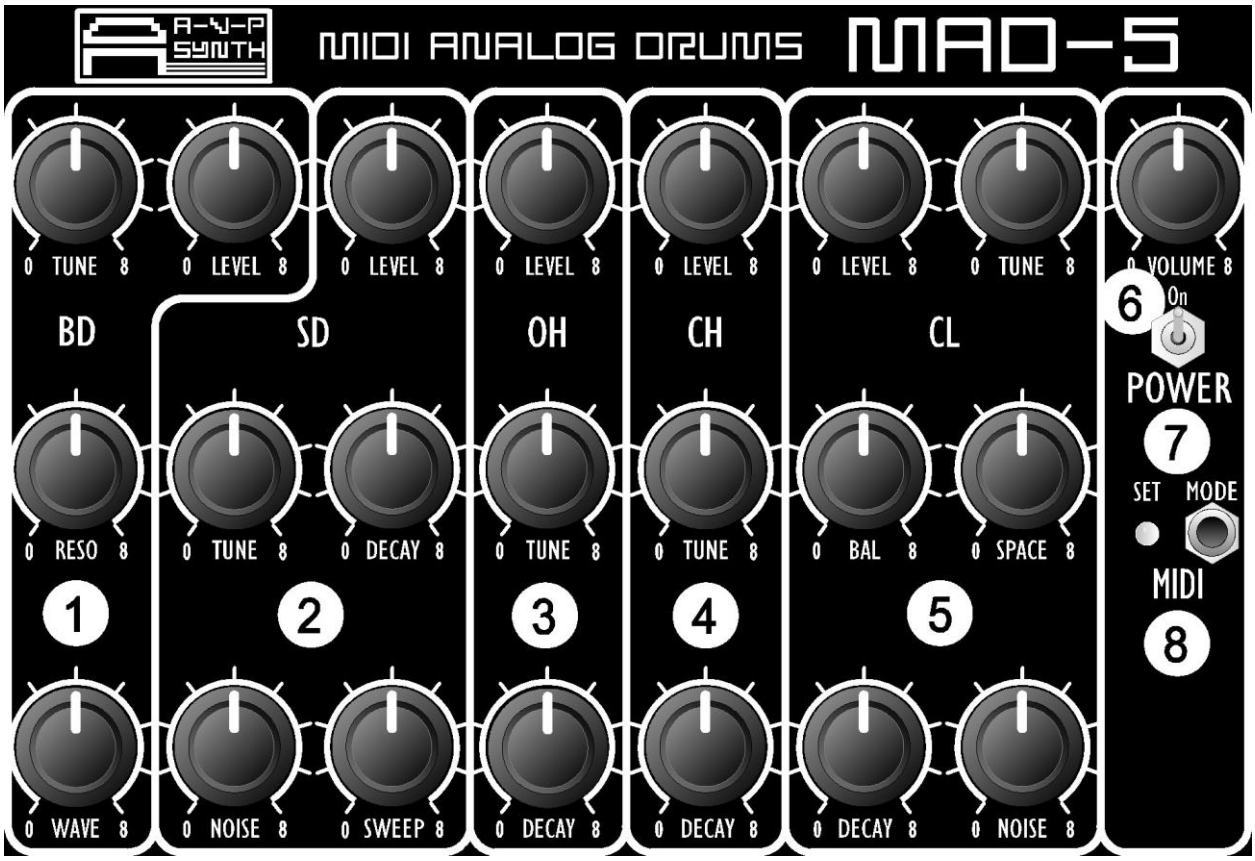
Specification

- The method of synthesis: 100% analog synthesis;
- Drum instruments: five (bass drum, snare drum, open hat, close hat, clap);
- Noise Generators: four (for snare drum, open hat, close hat and clap);
- MIDI interface: MIDI In, 16 channels (Midi learn);
- Audio outputs: one mix output (mono 6.3mm jack) and five individual outputs (mono 6.3mm jack);
- Controls: 22 knobs, 1 switch and 1 button;
- External power supply: adapter 15 VAC (included)

* MAD-5 operates on 220 volts, if used on 110 volts - a power converter from 220 to 110 volts is required. So if you are in a 110 volts area, please only use it with a power converter. Without it, the unit will get damaged and will stop functioning.

Controls

Front panel



Rear panel

1. Bass Drum (**BD**): volume control (LEVEL), pitch control (TUNE), resonance control (RESO), wave forms control (WAVE);
2. Snare Drum (**SD**): volume control (LEVEL), pitch control (TUNE), decay control (DECAY), noise filter control (NOISE), frequency shift control (SWEEP);
3. Open Hat (**OH**): volume control (LEVEL), pitch control (TUNE), decay control (DECAY);
4. Close Hat (**CH**): volume control (LEVEL), pitch control (TUNE), decay control (DECAY);
5. Clap (**CL**): volume control (LEVEL), pitch control (TUNE), balance (BAL), clap's attack time control (SPACE), decay control (DECAY), noise filter control (NOISE);
6. Total volume control (**VOLUME**);
7. Power switch (**POWER**);
8. MIDI selection button, midi learn (**MOD**), MIDI indicator (**SET**);
9. MIDI connection (**MIDI INPUT**);
10. Mix audio output (**MIX OUTPUT**);
11. Individual drum instrument's audio outputs (**OUTPUTS**);
12. Adapter jack (**15 VAC**).

Connecting MAD-5

Power (15 VAC adapter): Connect the power adapter to the **POWER** jack
Audio output (6.3mm jack): In order to connect to a mixer or other audio interface/equipment, please insert a 6.3 mm mono jack into the **MIX OUTPUT** of **MAD-5** or in the Individual **OUTPUTS**;
MIDI Input: Connect the **MIDI OUT** port of the sequencer or MIDI keyboard (or other MIDI device) to the **MAD-5 MIDI IN** port.

Setting the MIDI-channel

- In order to set the needed MIDI channel on the **MAD-5** - a **MODE** button is used which is located on the front panel just under the **POWER** switch. The 1st MIDI channel is set by default. In order to change the MIDI channel, you have to hold the **MODE** button while switching the **POWER** on;
- Indicator **SET** should start to blink;
- From your MIDI device/DAW/Sequencer by which you want to control **MAD-5**, you have to send a midi message from a channel that you have assigned (for example choose channel 2 on your device and press any key on your keyboard). From there on the **SET** indicator will stop blinking meaning that the desired MIDI channel has been set. It will be saved in the memory of **MAD-5**.

Powering on

Set the **POWER** switch to **On**. From that moment on **MAD-5** is ready for action ☺

Overview of controls

MAD-5 structure consists of five analog drum instruments sections.
Each of the drum instrument has a volume control (**LEVEL**).
In the **BD** section, the **TUNE** control allows to adjust the pitch tone of the bass drum, **RESO** – resonance control, which in some positions of the knobs allows to control the decay of the **BD**.
Note! *When the **TUNE** knob positions is set somewhere from 4 until 8 and the **RESO** knob is turned up, the **BD** starts to self-oscillate.*
The **WAVE** control adjusts the form of the BD wave – from a sine wave form (left position of the knob) to a square form (right position of the knob). Thus, the **WAVE** control allows for quite a flexible sculpting of the **BD** tone.
In the **SD** section the **TUNE** control allows to adjust the pitch tone of the snare drum, **DECAY** – to adjust the desired decay, **SWEEP –** frequency shift (the effect applies in small proportions, maximum effect peak can be heard when the positions of the **SWEEP** and **TUNE** knobs are turned fully clockwise).
The **NOISE** control adjusts the filter's cutoff frequency of the **NOISE** generator.
In the **OH** section the **TUNE** control allows to adjust the pitch tone, **DECAY** – adjusts the desired decay of the open hat.
In the **CH** section the **TUNE** control allows to adjust the pitch tone, **DECAY** – adjusts the desired decay of the close hat.
In the **CL** section the **TUNE** control allows to adjust the pitch tone, **SPACE** – the attack time of the clap. **NOISE** control adjusts the filter's cutoff frequency of the

NOISE generator. **DECAY** control –the desired decay of the clap and **BAL** control – the balance between the **NOISE** generator and a clap.

Note: At high volume settings, the OH and CH can be slightly heard (if pressed or programmed) in the MIX OUTPUT even with their volume levels at 0, this is due to the 80s type of schematics used which cannot be eliminated, in order to overcome this we suggest to use the individual OUTPUTS;

Working with MIDI

Each of the drum instruments of the **MAD-5** responds by pressing the respective keys on the MIDI-keyboard, another MIDI trigger device, or when receiving MIDI data from sequencer. When the drum instruments receive MIDI control messages, the corresponding indicator lights start flashing.
The keyboard layout is shown below.

Keyboard layout

Control of drum instruments of the **MAD-5** is triggered by the following notes:
BD (Bass Drum) – C2 (note «Do» of the second octave);
SD (Snare Drum) – D2, E2 (notes «Re» and «Mi» of the second octave);
OH (Open Hat) – F2, G2 (notes «Fa» and «Sol» of the second octave);
CH (Close Hat) – A2, B2 (notes «La» and «Si» of the second octave);
CL (Clap) – D# (note «D-sharp» of the second octave).