AVP SYNTHESIZERS

MAD-5 mk2 Midi Analog Drum synthesizer

User Manual

MAD-5 mk2 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 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.

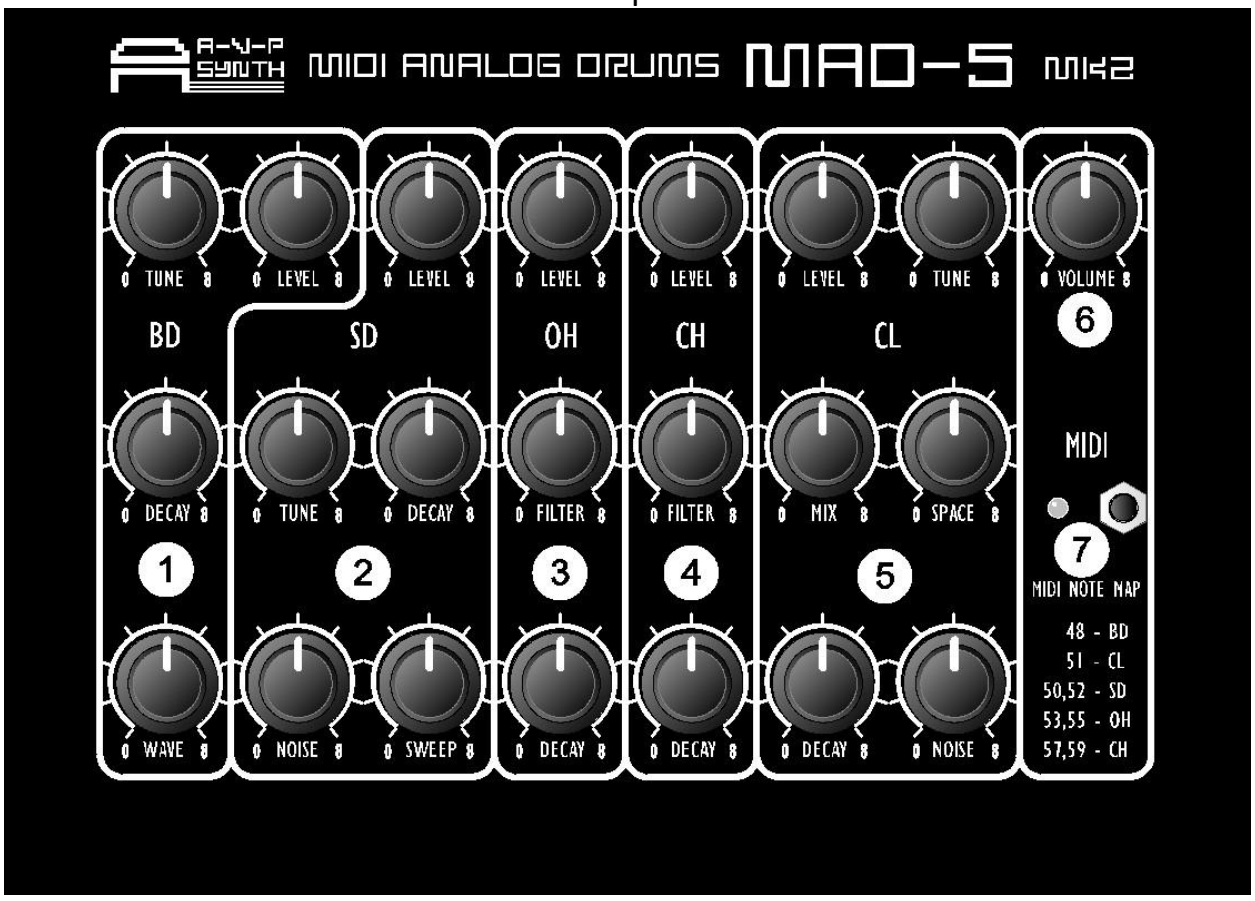
Specification

- The method of synthesis: 100% analog synthesis;
- Drum instruments: 5 - bass drum (BD), snare drum (SD), open hat (OH), close hat (CH), clap (CL);
- MIDI interface: MIDI IN - 16 channels (MIDI learn), MIDI THRU;
- Audio outputs: one mix output (mono 6.3mm jack) and five individual outputs (mono 6.3mm jack);
- Trigger inputs: 5 trigger inputs for every drum instrument (mono 3.5mm jack);
- Controls: 22 knobs and 1 button;
- External power supply: adapter 15 VAC (included)*
- Steel case;
- Dimensions: L190xW162xH91 mm;
- Weight: 1.26 kg.

* MAD-5 mk2 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), decay control (DECAY), 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), cutoff control (FILTER), decay control (DECAY);
4. Close Hat (**CH**): volume control (LEVEL), cutoff control (FILTER), decay control (DECAY);
5. Clap (**CL**): volume control (LEVEL), pitch control (TUNE), noise/clap balance (MIX), clap's attack time control (SPACE), decay control (DECAY), noise filter control (NOISE);
6. Total volume control (**VOLUME**);
7. MIDI selection button, MIDI indicator (**MIDI**);
8. MIDI connection (**MIDI IN, MIDI THRU**);
9. Total audio output (**MIX OUT**);
10. Individual audio outputs (**INDIVIDUAL OUTS**);
11. Trigger inputs (**TRIGGERS IN**);
12. Power On/Off button (**ON**), power supply jack (**15 VAC**).

Connecting MAD-5 mk2

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 OUT** of **MAD-5 mk2** or in the **INDIVIDUAL OUTS**;
MIDI Input: Connect the **MIDI OUT** port of the sequencer or MIDI keyboard (or other MIDI device) to the **MAD-5 mk2 MIDI IN** port.

Setting the MIDI-channel

- In order to set the needed MIDI channel on the **MAD-5 mk2** - a **MIDI** button is used which is located on the front panel. The 1st MIDI channel is set by default. In order to change the MIDI channel, you have to hold the **MIDI** button while switching the **POWER** on;
- Indicator **MIDI** should start to blink;
- From your MIDI device/DAW/Sequencer by which you want to control **MAD-5 mk2**, 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 **MIDI** indicator will stop blinking meaning that the desired MIDI channel has been set. It will be saved in the memory of **MAD-5 mk2**.

Powering MAD-5 mk2

Set the **POWER** button located on the rear to **On**. From that moment on **MAD-5 mk2** is ready for action ☺

Overview of controls

MAD-5 mk2 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, **DECAY** – decay control.
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 **FILTER** control allows to adjust the cutoff filter, **DECAY** – adjusts the desired decay of the open hat.
In the **CH** section the **FILTER** control allows to adjust the cutoff filter, **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 **MIX** 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 OUT** 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 OUTS**.

Working with TRIGGERS IN

These inputs allow you to control the drums from external sources that have pulses with a span of 5 volts and a duration of 2-5 ms.

Working with MIDI

Each of the drum instruments of the **MAD-5 mk2** 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.
On the front panel you can also find a MIDI NOTE MAP.

Keyboard layout

Control of drum instruments of the **MAD-5 mk2** 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#2 (note «D-sharp» of the second octave).

Warranty:

The standard warranty on MAD-5 mk2 is for one year from the date of purchase.

1. The warranty does not apply in the following cases:
- Expiration of the guarantee (after one year from the date of purchase); After-guarantee servicing is possible, shipping both ways is at the expense of the buyer. We try to stay reasonable concerning servicing;
- There is any mechanical damage to the inside and/or outside of the unit;
- There are signs of opening or self-repair;
- A malfunction caused by self-updating software, or installing additional options/mods;
- A malfunction caused by damage of the product by other objects and liquids, as well as results of fog, rain and snow.

2. The guarantee does not apply to:

- Adapter;
- Controls if their failure was caused by normal wear or contamination during use.

Feel free to email us if you have any questions: avpsynths@gmail.com

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