

# MB-606RE

## Introduction

The MB-606RE is a re-edit of CYM/HH and BD/SD drum parts of the Roland TR-606 to be controlled via MIDI (midibox) or CV through analog-Sequencers , in a a Eurorack-designed panel. Well known Circuit Mods from around Web & time are included by default.

## FrontPanel

On Re-design

First Version:



- [Drilling + Engraving + SmashTV Core32 Layout](#)

## General Design

The MB-606re is part of the EuroLand Group... (606, 808, 909)

It can be used in 2 Cases:

Midi /CV+Trig

**1. Midi:** Use the MB-Modulbox Standartmodules, for Digital UI and CV+Trig-Generation

## 2. CV+Trig: Just Plug CV or Trig Jacks into the Analog Modules...without Midibox.

### Use with Midi

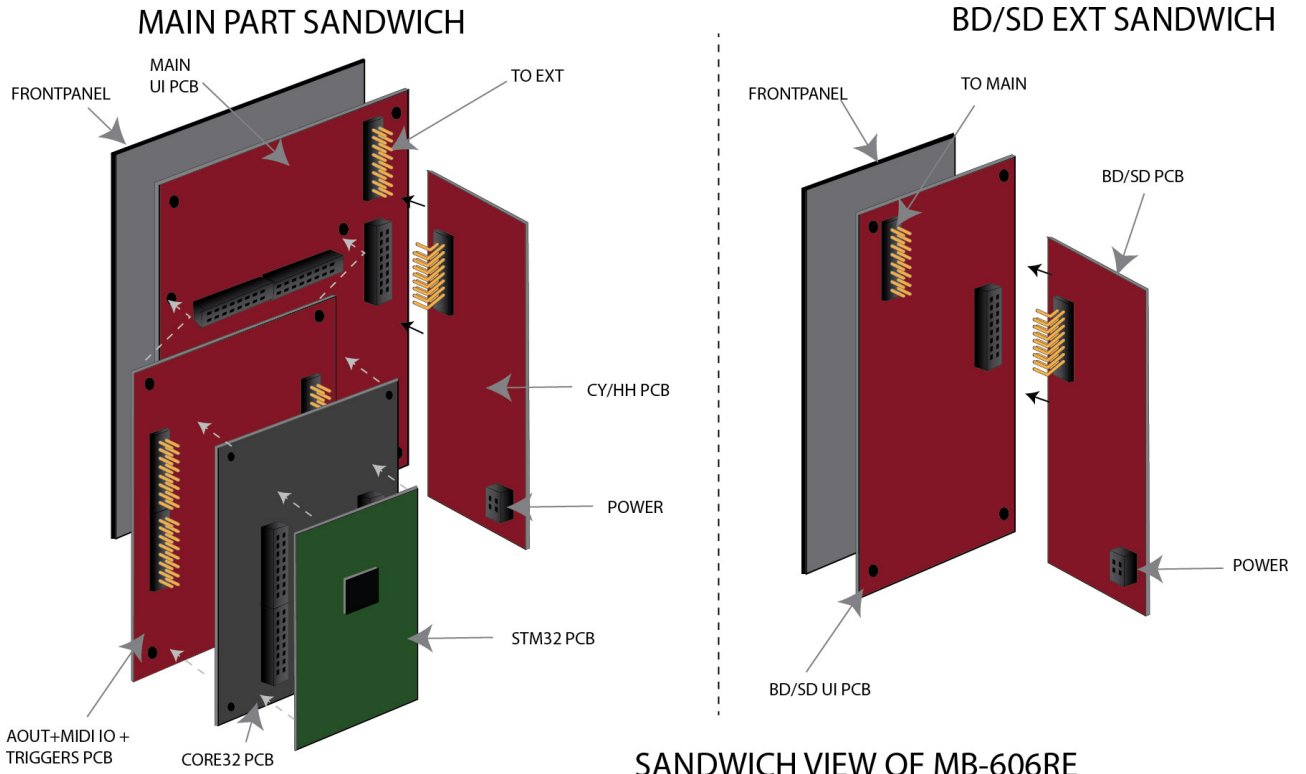
#### MB-Modulbox Main PCB UI

- **Access** to System-Settings, Channel, NoteNumbers
- **CV+Trig Out-Jacks** for Euroland Drum Modules

#### MB-Modulbox 8xPotentiometer Module

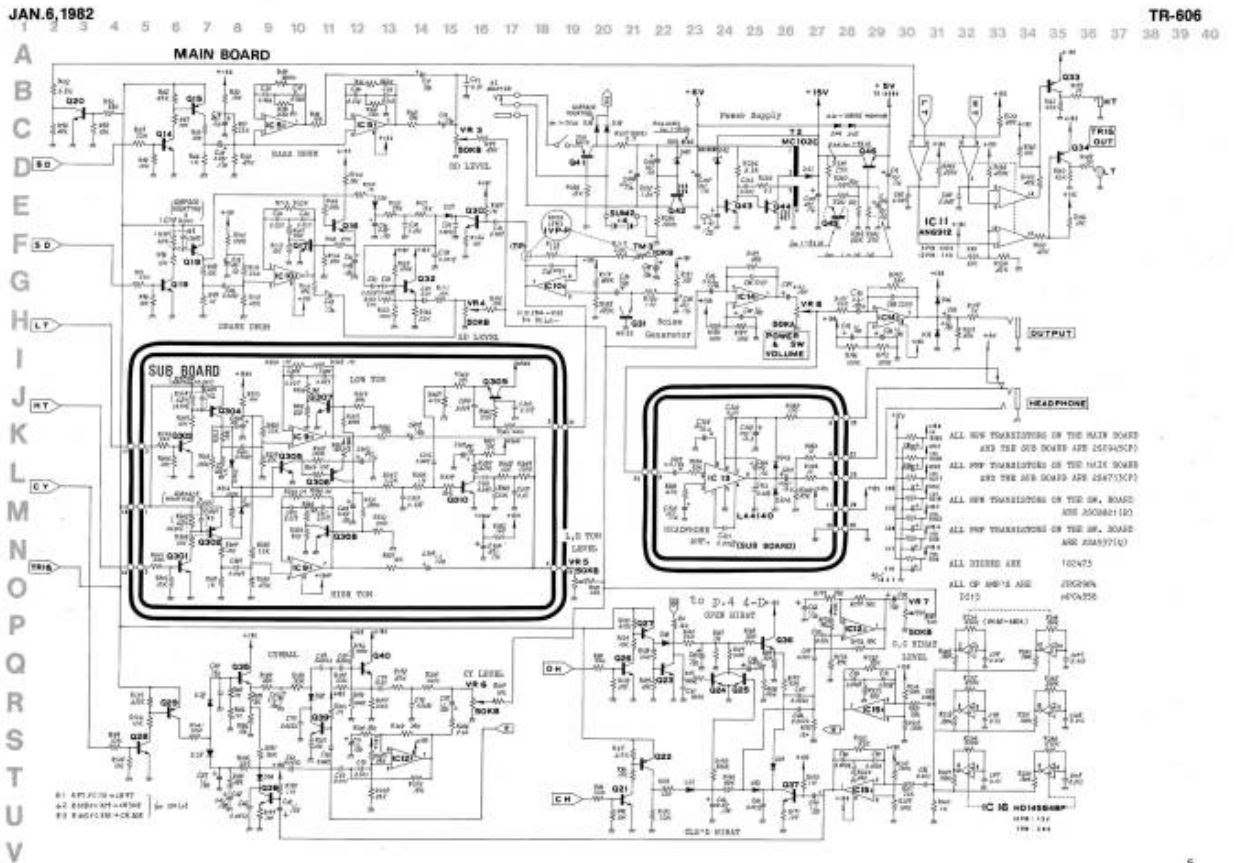
When using the Euroland Modules via Midi, then there are some Performance Parameters available: accessible via MB-Modulbox 8xPot - PCB. Have to be activated via Software. (Menu Point) All Functions have effect on all 8 Voices @ once.

- **1.Velocity Offset** (-+64 > with Center Position = normal)
- **2.Velocity Kill depending Note Kill** (-+64 > with Center Position = normal > Full Spectrum)
- **3.Random Kill** (0=full Kill, 127 no Kill, Normal Position > 127)
- **4.Velocity 2 TriggerLength** (-+64 > with Center Position = normal 10ms, turn right:time inc by velocity in%, turn left:decrease%)
- **5.Accent:** (0-127-normal 127)
- **6.—: could be something like Roll \* 7.—: not used, could be something like a Accent for a Group of CVs**
- **8.—: not used, could be something like a Accent for a Group of CVs === MB-Modulbox 8x8 LED-Button-Matrix === Set CV + Trig Routing (some kind of trigger matrix), standard is 1:1 routing, so no need for this if fixed setup. ==== Use with Midi or with Analog CV+Trig ==== Here are only the Analog-Drum-PCB discussed, since all other Digital UI is based on MB-Modulbox Standard Modules, the MB-Modulbox Main PCB2 is special Variant, described here. === 606 BD+SD, 606 HH+CY === To spare Space: we sandwich in 2 layers**
  - \* 1st PCB : **BD+SD UI-PCB / HH+CY UI-PCB »> Breakoutboard+Potentiometer Boards \***
  - 2nd PCB : **Analog Circuits: 2n We get the Analog Circuits mounted 90° angled with vertical female socket and angled DIL Pinheaders for better heat dissipation ===== Sandwich view - Analog Boards =====**

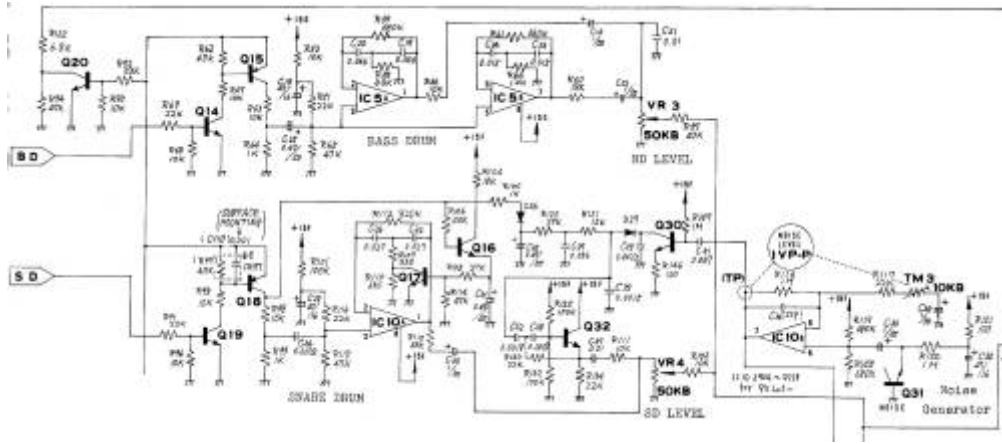


SANDWICH VIEW OF MB-606RE

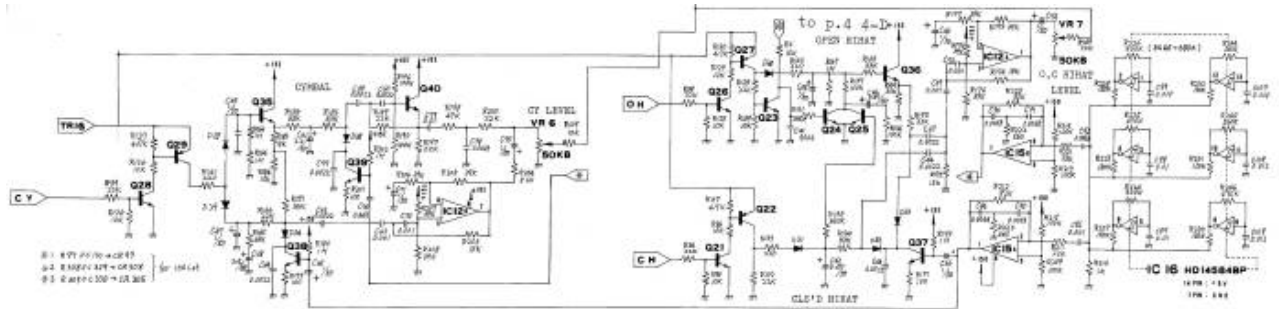
==== Original Schematics ====



==== BD / SD ====



==== CY / HH ====



==== Mods ===== Mod Sources === \* [Geoff Waterston](#) \* [confusedmachines](#) \* [amazona-workshop](#) === Analog Mods === \* HH Noise: **10K or 50K lin or log, have to check, originally 10K trimpot, only change volume not to absolutely silence.** \* 6OSC-Gain: **50K log (not sure)** \* CY-HH Ext: **50K lin** \* CY-HH BPF-Resonance: **100K Stereo lin** \* CY-HH BPF1: **5K lin** \* CY-HH BPF2: **5K lin** \* CY-HPF: : **50K log** \* HH-HPF: **50K log** \* OH Decay: **1M lin** \* CH Decay: **1M lin** \* CY Decay: **2M lin (internet)** **Phats machine has a 4M log** \* BD Tune: **50K Log** \* BD Decay: **2M lin** \* BD Tone: **100K lin** \* Noise: **50K log** \* SD Snappy: **100K lin** \* SD Decay: **500K lin** \* SD Tune: **1M lin**

# On-Going

## 1. UI Parts Listing

### Frontpanel

- [Jacks 3.5mm @ Thonk](#)
- [SPDT Switch ON-OFF-ON @ Rs-components](#)
- [Mini DIN 4 poles @ Rs-components](#)

Value	Type	Qty
3.5mm Jack	Vertical PCB-Mount	13
Switch	SPDT Vertical PCB-Mount ON-OFF-ON	1

### Pots / Knobs

- [Alps RK11K Series](#)
- [Alpha Pots @ Thonk](#)

- Knobs Suppliers

Value	Type	Qty
5K	Linear	2
10K	Linear	6
50K	Linear	6
50K	Logarithmic	6
100K	Linear	2
1M	Linear	3
2M?	Linear	2
Knobs	Soft/Plastic/Alu	31

## 2. BD/SD - CYM/HH Parts Listing

### Modded BD

Value	Type	Qty	Original Designation
2SA733/BC547	Transistor	1	Q15
2SC945/BC557	Transistor	2	Q14,Q20
JRC2904/LM2904	OpAmp	1	IC5
50K $\Omega$	Pot Log	2	Level, ModTune
100K $\Omega$	Pot Linear	1	ModTone
2M $\Omega$	Pot Linear	1	ModDecay
0,47 $\mu$ F/50V	Capa Elec	1	C25
1 $\mu$ F/50V	Capa Elec	1	C22
33 $\mu$ F/16V	Capa Elec	1	C19
47 $\mu$ F/16V	Capa Elec	1	C18
0,015 $\mu$ F	Capa Ceram	2	C23,C24
0,01 $\mu$ F	Capa Ceram	1	C21
1K $\Omega$	Res 1/4W	1	R64
3,3K $\Omega$	Res 1/4W	1	R58
4,7K $\Omega$	Res 1/4W	1	R62
6,8K $\Omega$	Res 1/4W	1	R122
10K $\Omega$	Res 1/4W	5	R52,R56Mod/R67/R68/R93
22K $\Omega$	Res 1/4W	2	R51,R69
33K $\Omega$	Res 1/4W	1	R92
47K $\Omega$	Res 1/4W	3	R59,R65,R94
100K $\Omega$	Res 1/4W	1	R57
470K $\Omega$	Res 1/4W	1	R56
560K $\Omega$	Res 1/4W	1	R61

### Modded Noise/SD

Value	Type	Qty	Original Designation
2SA733/BC547	Transistor	1	Q18
2SC945/BC557	Transistor	6	Q19,Q17,Q16,Q30,Q31,Q32
JRC4558/NJM4558D	OpAmp	1	IC10

Value	Type	Qty	Original Designation
50KΩ	Pot Log	2	Level,Noise
100KΩ	Pot Linear	1	ModSnappy
500KΩ	Pot Linear	1	ModDecay
1MΩ	Pot Linear	1	ModTune
1N4148	Diode	2	D26,D27
22pF	Capa Ceram	1	C36Mod
0,001μF	Capa Ceram	1	C97
0,0015μF	Capa Ceram	1	C38
0,0018μF	Capa Ceram	2	C52,C58
0,0033μF	Capa Ceram	1	C34
0,01μF	Capa Ceram	1	C57
0,027μF	Capa Ceram	2	C32,C33
0,047μF	Capa Ceram	1	C51
0,055μF	Capa Ceram	1	C37
2,2μF	Capa Ceram	1	C35Mod
0,47μF/50V	Capa Elec	2	C31,C35
1μF/50V	Capa Elec	2	C30,C53
47μF/16V	Capa Elec	2	C28,C54
100Ω	Res 1/4W	2	R146,R151
330Ω	Res 1/4W	2	R107,R153
680Ω	Res 1/4W	1	R115
1KΩ	Res 1/4W	2	R99,R100
2,2KΩ	Res 1/4W	1	R91Mod
4,7KΩ	Res 1/4W	1	R97
5,6KΩ	Res 1/4W	1	RDecayMod
10KΩ	Res 1/4W	5	R95,R96,R98,R102,R111
15KΩ	Res 1/4W	1	R121
18KΩ	Res 1/4W	1	R104
22KΩ	Res 1/4W	2	R113,R154
27KΩ	Res 1/4W	2	R105,R120
47KΩ	Res 1/4W	2	R114,R118
68KΩ	Res 1/4W	2	R110,R148
100KΩ	Res 1/4W	4	R101,R106,R152,R155
470KΩ	Res 1/4W	1	R112Mod
680KΩ	Res 1/4W	1	R119
1MΩ	Res 1/4W	3	R116,R147,R150

**Modded CY**

Value	Type	Qty	Original Designation
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**Modded HH**

Value	Type	Qty	Original Designation
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### 3.MB-Modulbox-Main2-PCB > 4xAOUT\_LC + 8xTrigger In PCB Parts Listing

Integrate CV Scaling circuit

Value	Type	Qty	Original Designation
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### 4.Footprints List

- ALPS Pots
- Alpha Pots
- 3,5mm Jack
- Switch

### 5. Schematics in KiCAD

[KiCad Pre-Project MAIN by Phatline](#) » schematics have to be overworked

1. Analog drums PCBs
2. UI PCBs
3. Special MB-Modulbox-Main2 PCB (4xAOUT-LC+8xTrigger out)

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