

# 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)

- **Velocity Offset** (-+64 > with Center Position = normal) - 10K lin
- **Random Kill** (0=full Kill, 127 no Kill, Normal Position > 127) - 10K lin
- **Velocity 2 TriggerLength** (-+64 > with Center Position = normal 10ms, turn right:time inc by velocity in%, turn left:decrease%) - 10K lin
- **Velocity Kill depending Note Kill** (-+64 > with Center Position = normal > Full Spectrum) - 10K lin
- **Global Accent:** (0-127-normal 127) - 10K lin

### 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.

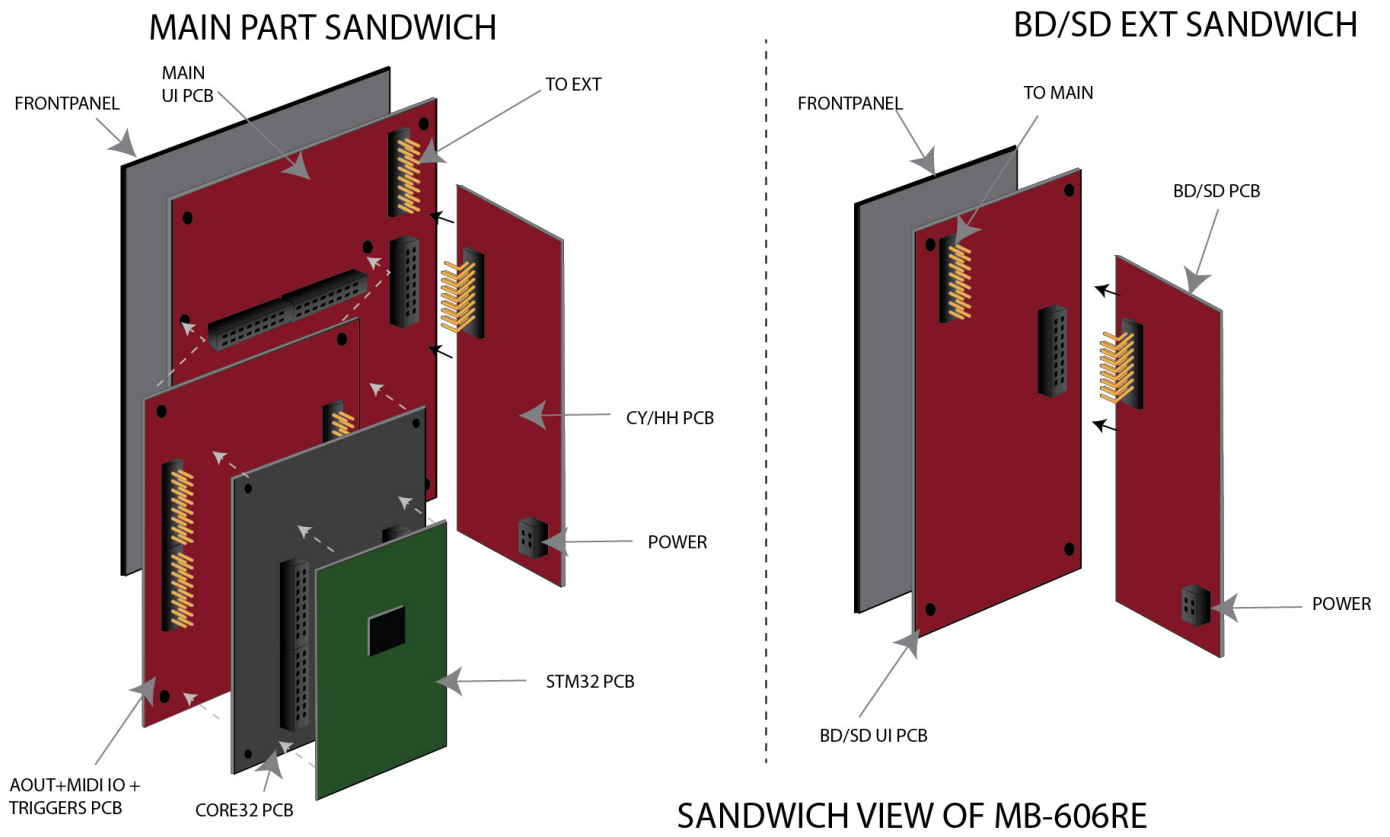
#### 606 BD+SD, 606 HH+CY

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 PCB: We get the two Analog Circuits (BD+SD / CY/HH) mounted 90° angled with vertical female socket and angled DIL Pinheaders for better heat dissipation

### Sandwich view



## Original Schematics



BD / SD



CY / HH



## 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                  |
| 50KΩ           | Pot Log    | 2   | Level, ModTune       |
| 100KΩ          | Pot Linear | 1   | ModTone              |
| 2MΩ            | Pot Linear | 1   | ModDecay             |
| 0,47μF/50V     | Capa Elec  | 1   | C25                  |
| 1μF/50V        | Capa Elec  | 1   | C22                  |
| 33μF/16V       | Capa Elec  | 1   | C19                  |
| 47μF/16V       | Capa Elec  | 1   | C18                  |
| 0,015μF        | Capa Ceram | 2   | C23,C24              |
| 0,01μF         | Capa Ceram | 1   | C21                  |
| 1KΩ            | Res 1/4W   | 1   | R64                  |
| 3,3KΩ          | Res 1/4W   | 1   | R58                  |
| 4,7KΩ          | Res 1/4W   | 1   | R62                  |
| 6,8KΩ          | Res 1/4W   | 1   | R122                 |

| Value | Type     | Qty | Original Designation   |
|-------|----------|-----|------------------------|
| 10KΩ  | Res 1/4W | 5   | R52,R56Mod/R67/R68/R93 |
| 22KΩ  | Res 1/4W | 2   | R51,R69                |
| 33KΩ  | Res 1/4W | 1   | R92                    |
| 47KΩ  | Res 1/4W | 3   | R59,R65,R94            |
| 100KΩ | Res 1/4W | 1   | R57                    |
| 470KΩ | Res 1/4W | 1   | R56                    |
| 560KΩ | 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                    |
| 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               |

| Value | Type     | Qty | Original Designation |
|-------|----------|-----|----------------------|
| 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 |
|-------|------|-----|----------------------|
|       |      |     |                      |

### Modded HH

| Value | Type | Qty | Original Designation |
|-------|------|-----|----------------------|
|       |      |     |                      |

## 3.MB-Modulbox-Main2-PCB > 4xAOUT\_LC + 8xTrigger In PCB Parts Listing

Integrate CV Scaling circuit

| Value | Type | Qty | Original Designation |
|-------|------|-----|----------------------|
|       |      |     |                      |

## 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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