

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

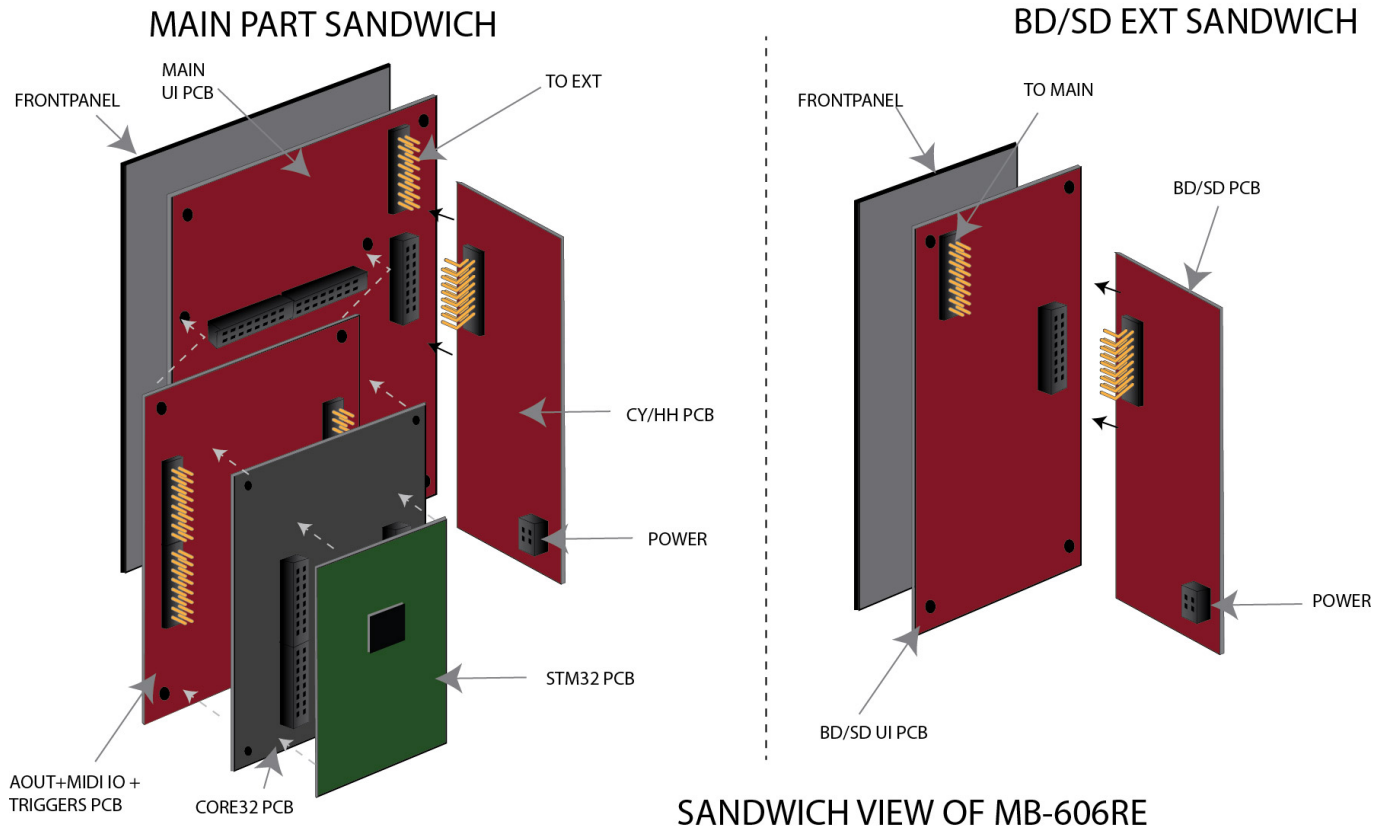
Here are only the Analog-Drum-PCB discussed, since all other Digital UI is based on MB-Modulbox Standard Modules, the MB-Modulbox Main PCB2 is special Variant, described here.

606 BD+SD, 606 HH+CY

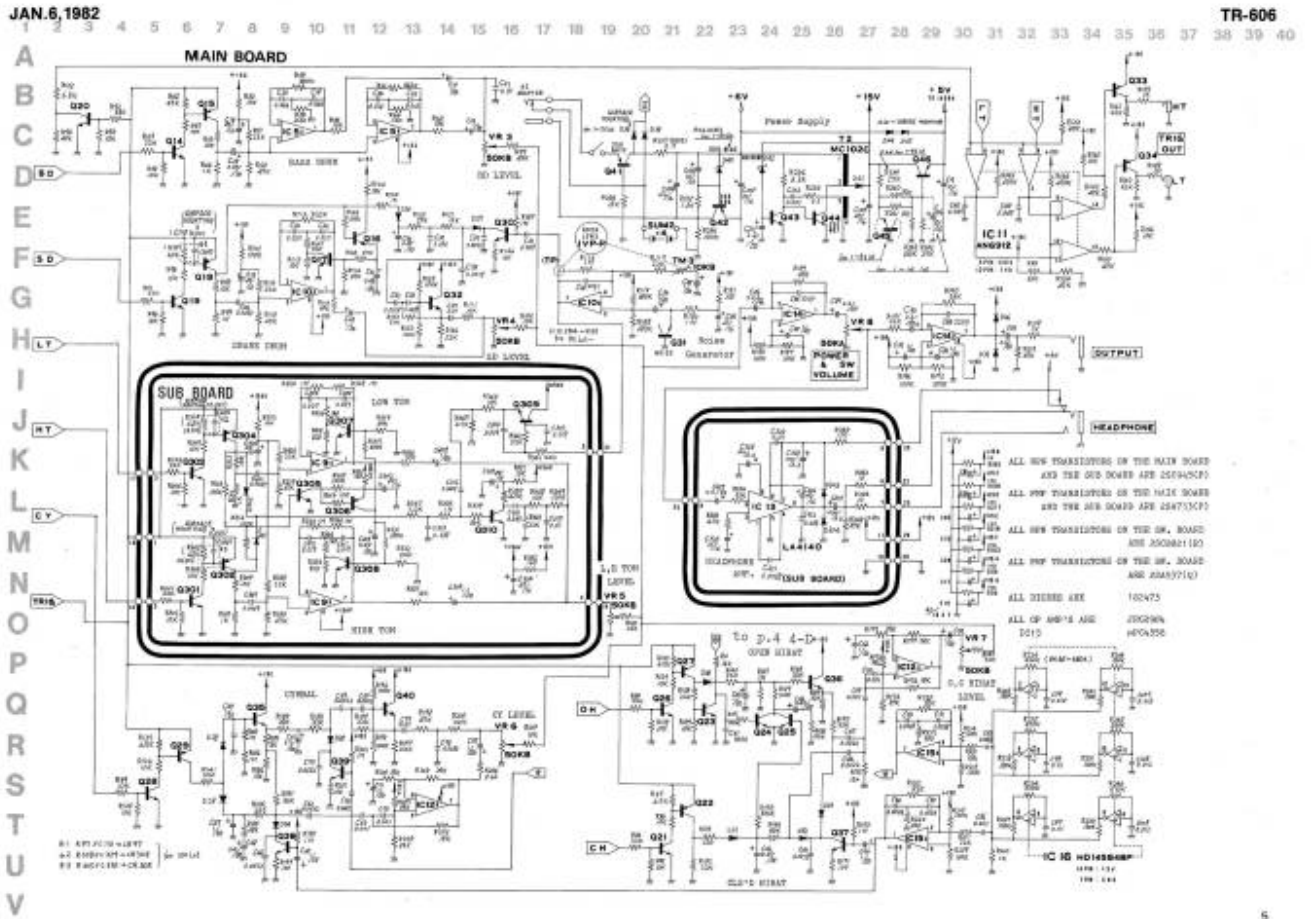
To spare Space: **we sandwich in 2 layers**

- **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

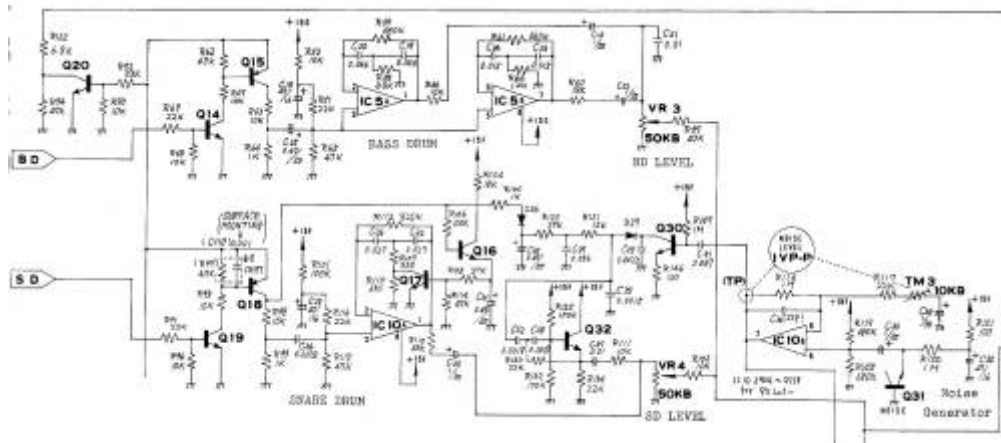
Sandwich view - Analog Boards



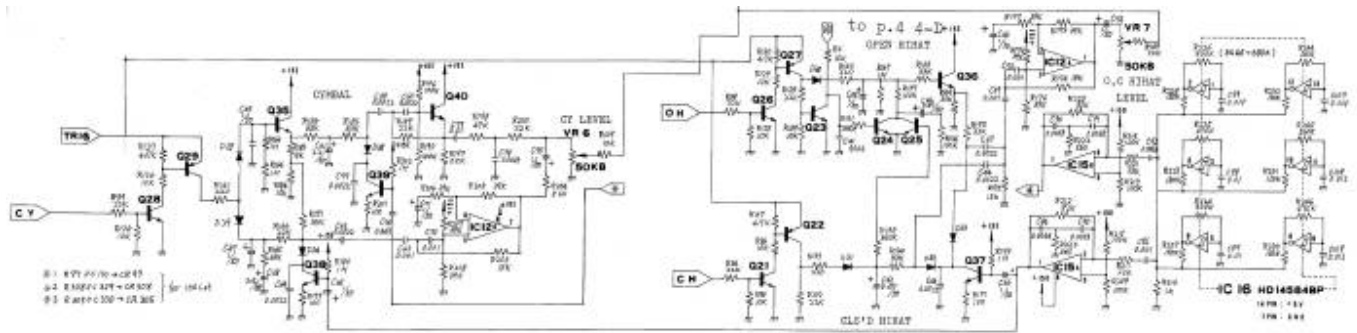
Original Schematics



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 absolute 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 Ω | Pot Log | 2 | Level, ModTune |
| 100K Ω | Pot Linear | 1 | ModTone |
| 2M Ω | Pot Linear | 1 | ModDecay |
| 0,47 μ F/50V | Capa Elec | 1 | C25 |
| 1 μ F/50V | Capa Elec | 1 | C22 |
| 33 μ F/16V | Capa Elec | 1 | C19 |
| 47 μ F/16V | Capa Elec | 1 | C18 |
| 0,015 μ F | Capa Ceram | 2 | C23,C24 |
| 0,01 μ F | Capa Ceram | 1 | C21 |
| 1K Ω | Res 1/4W | 1 | R64 |
| 3,3K Ω | Res 1/4W | 1 | R58 |
| 4,7K Ω | Res 1/4W | 1 | R62 |
| 6,8K Ω | 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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