R.M.I.

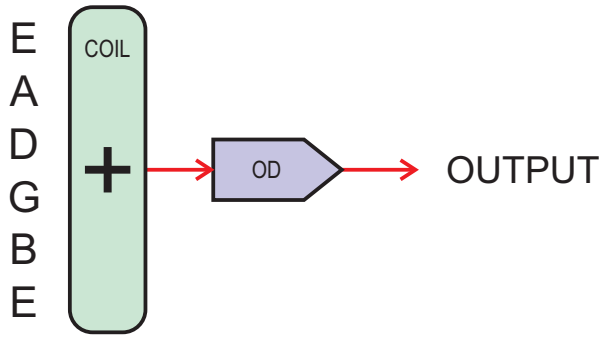
R66Mk6B

Hexaphonic Guitar Pickup

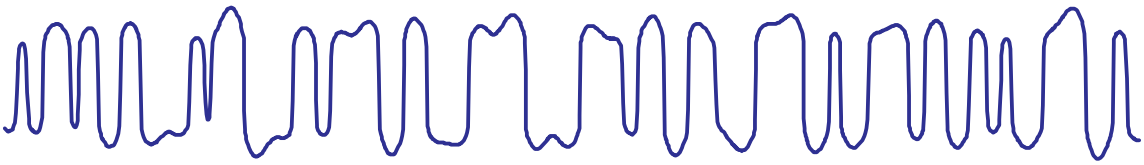
The Hexaphonic Humbucker Pickup
with built-in Voltage-Controlled Overdrive

Different design for really new sound

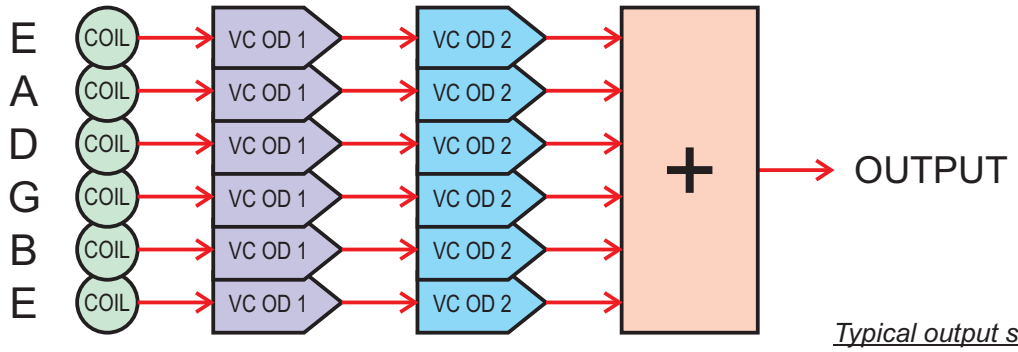
Standard Coil Pickup with Overdrive or Distortion effect.
Harmonic signals from all strings are summed directly in the pickup coil and then amplified and distorted in OD nonlinear circuit (which works usually like logarithmic amplifier). The output signal contains a lot of disharmonic frequencies and small signals from ”thin” strings are supressed by signals from ”thick” bass strings. The result is ”power chord limit”.



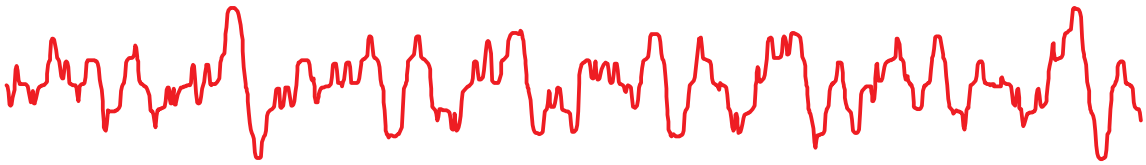
Typical output signal :



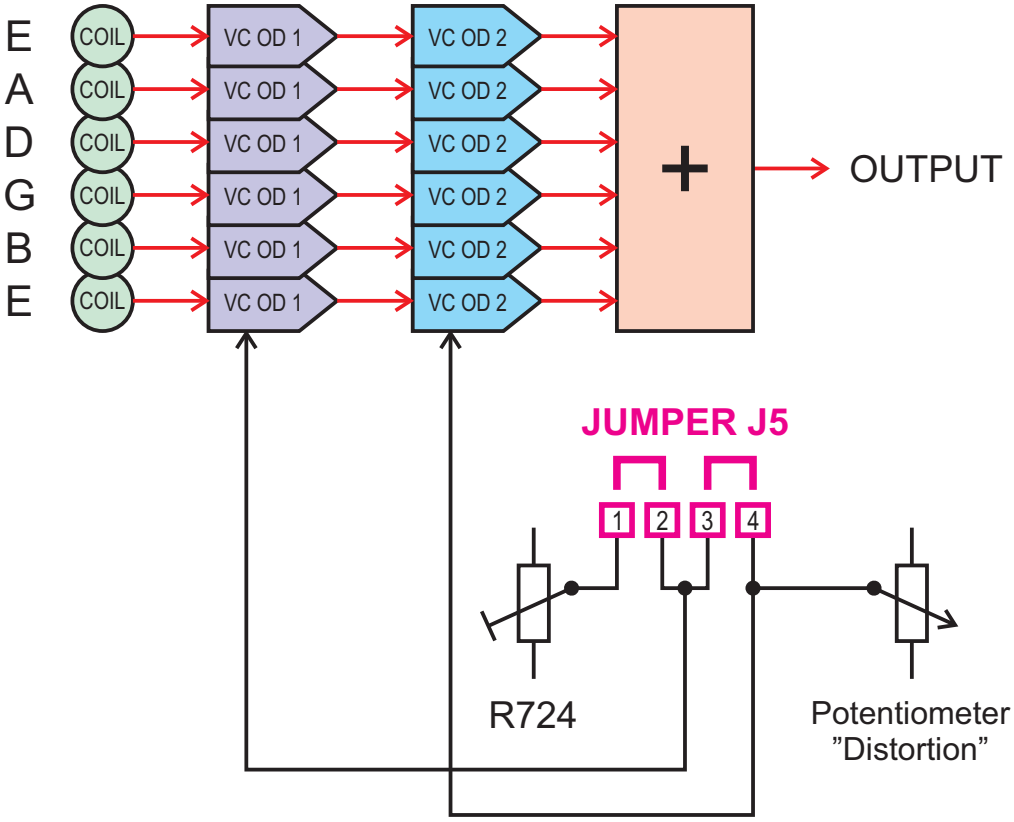
Hexaphonic Pickup with 6-Channel Overdrive or Distortion effect.
Harmonic signal from each string is amplified and distorted in two-stage VC OD (voltage-controlled overdrive) nonlinear circuit, then all distorted signals are summed in the output amplifier. The resulting output signal is completely different, containing a lot of harmonic frequencies and small signals from ”thin” strings which are not supressed by signals from ”thick” bass strings. It is possible to break the ”power chord limit” and play the same chords without or with the overdrive effect.



Typical output signal :



R66Mk6B Functional Diagram



COIL : Pickup Coil (OSFC) for each string

VC OD 1 : Voltage-Controlled Overdrive, first stage

VC OD 2 : Voltage-Controlled Overdrive, second stage

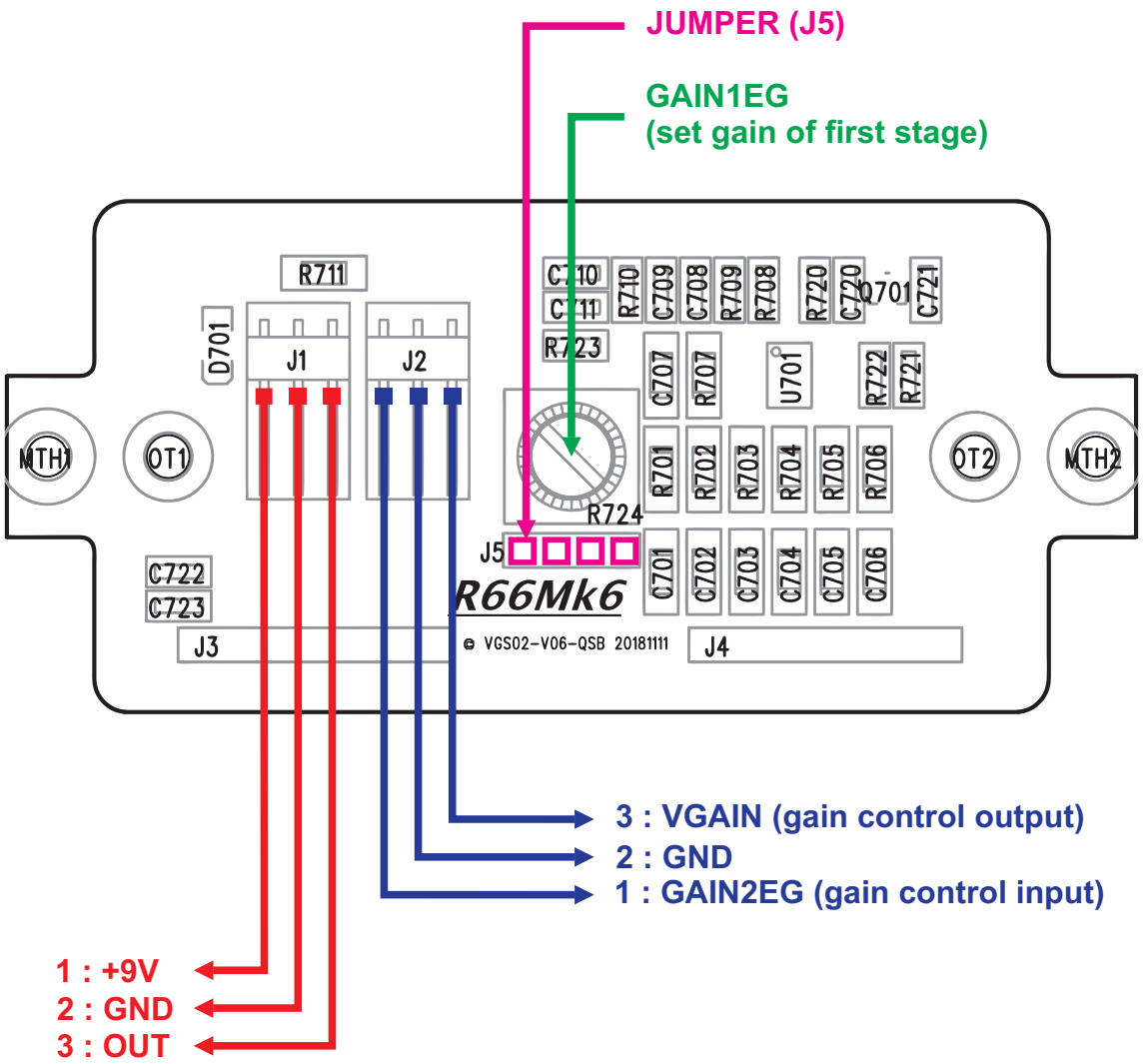
+ : Summing Output Amplifier

R724 : Trimpot at the bottom of pickup

Potentiometer ”Distortion” : External potentiometer

JUMPER J5 : Jumper at the bottom of pickup

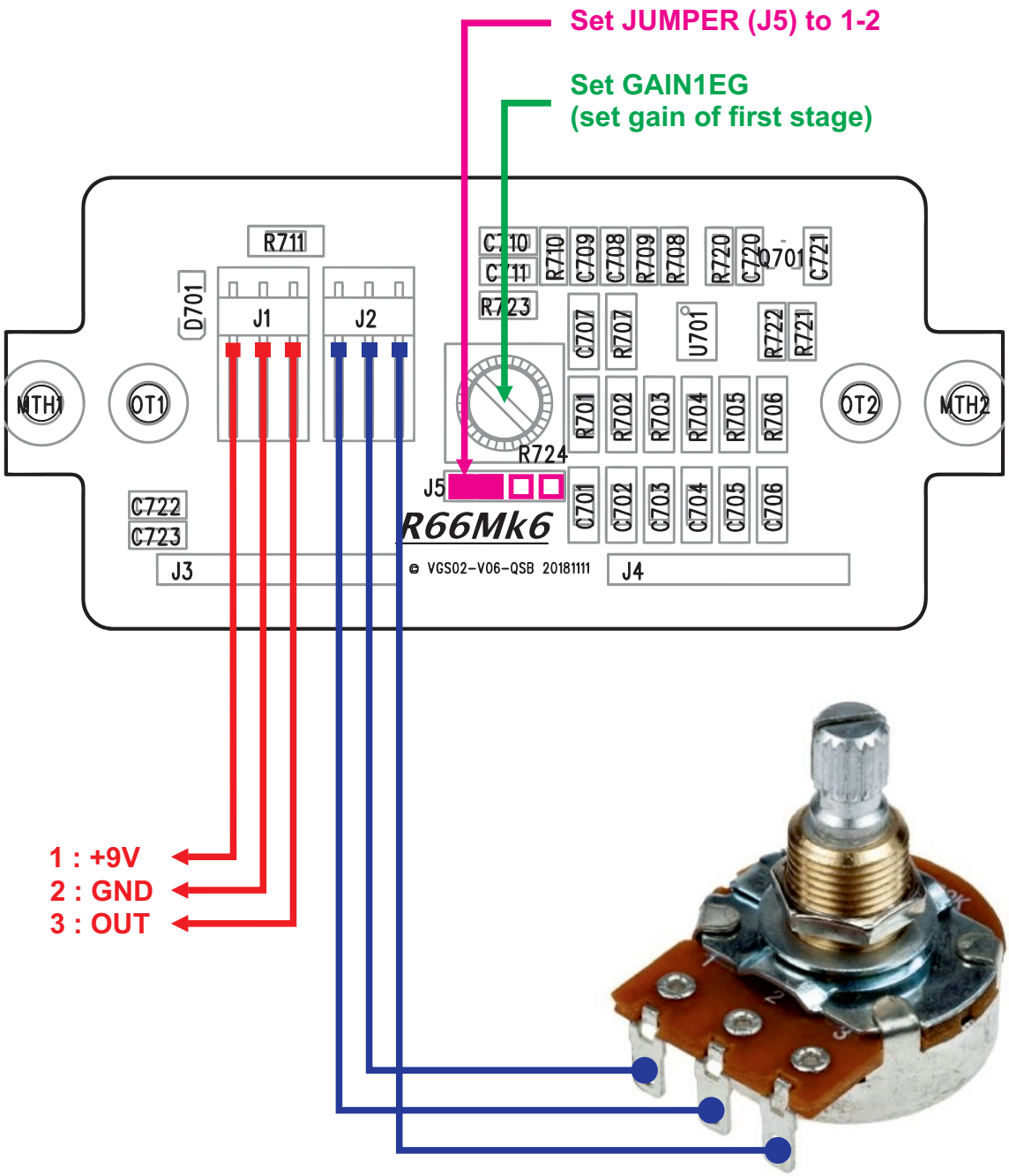
R66Mk6B Pinout - Pickup rear side



R66Mk6B Interconnection Diagram var. 1

- Gain of the first stage is controlled by trimpot R724

- Gain of the second stage is controlled by potentiometer

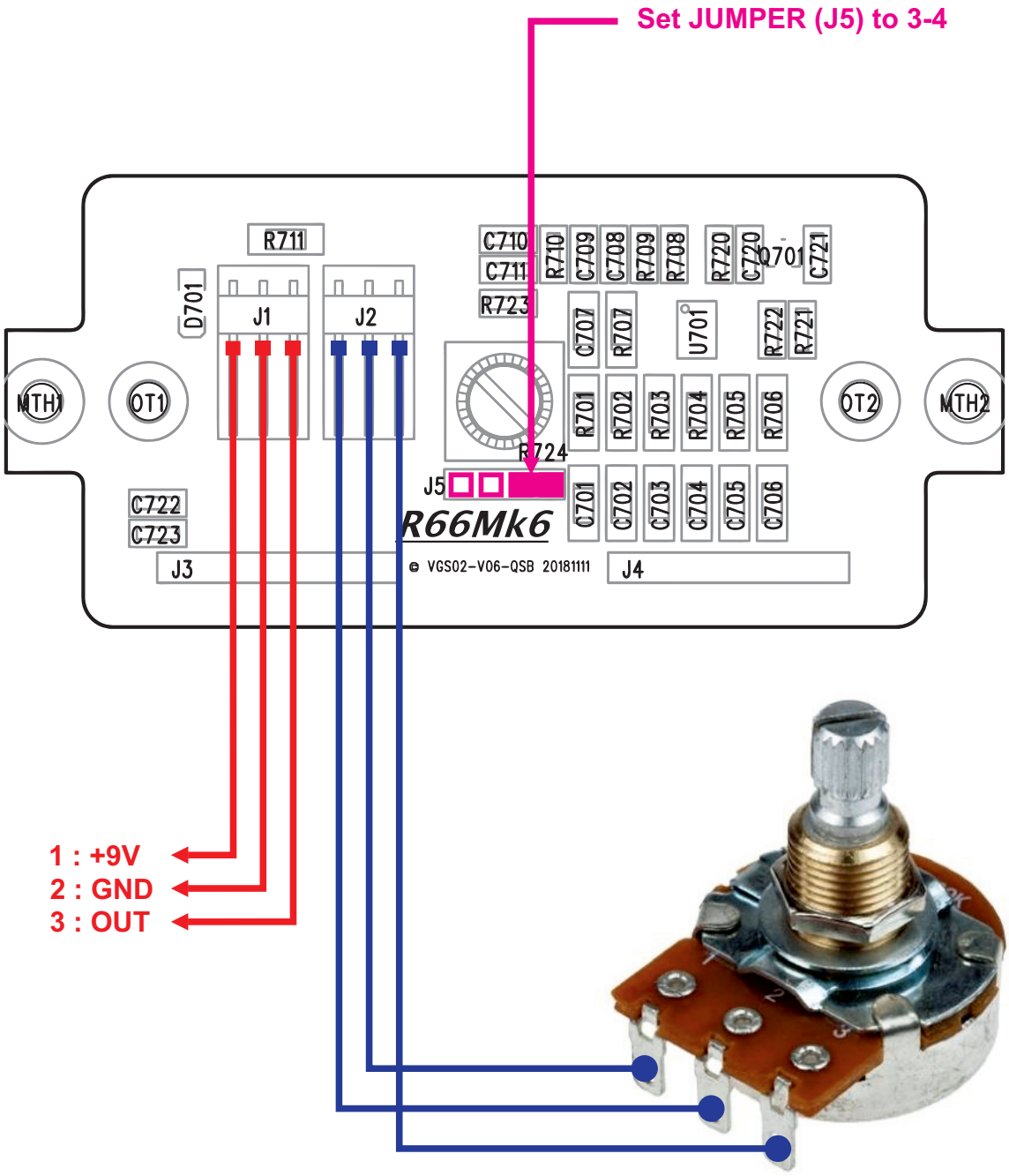


Potentiometer ”Distortion”
Recommended value :
25kB - for wide range of distortion
250kA - for smooth control of distortion

R66Mk6B Interconnection Diagram var. 2

- Gain of all stages is controlled by the potentiometer

- Trimpot R724 is off

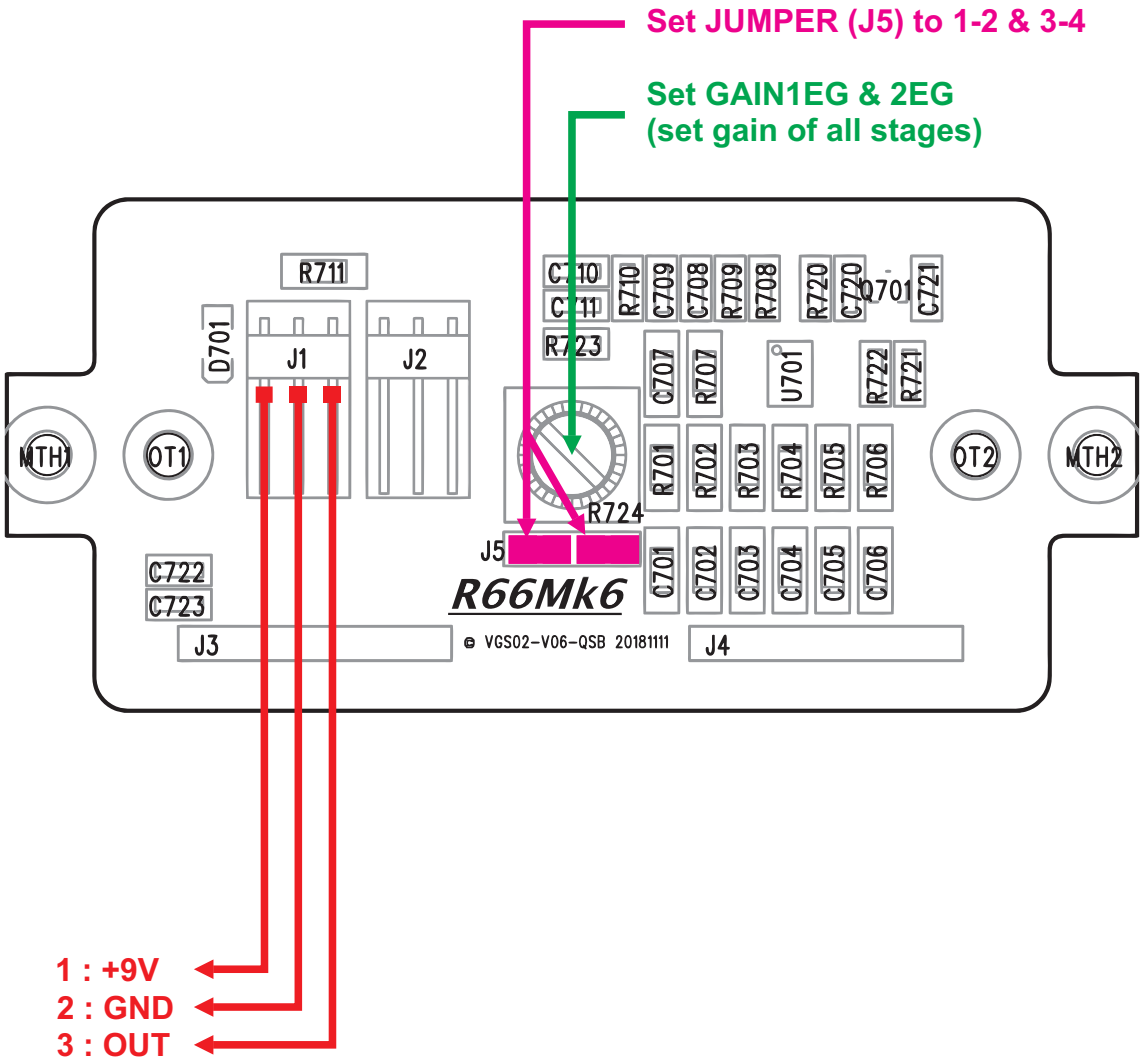


Potentiometer ”Distortion”
Recommended value :
25kB - for wide range of distortion
250kA - for smooth control of distortion

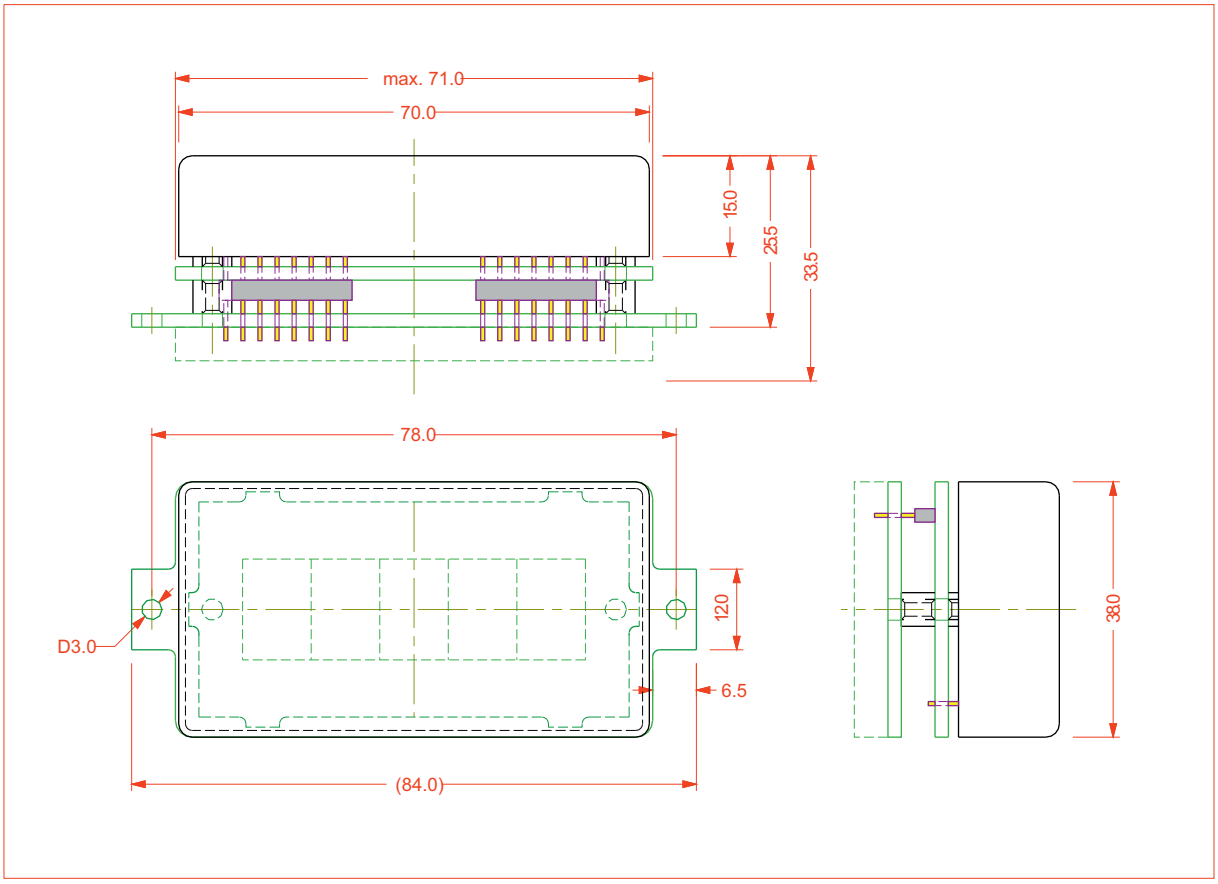
R66Mk6B Interconnection Diagram var. 3

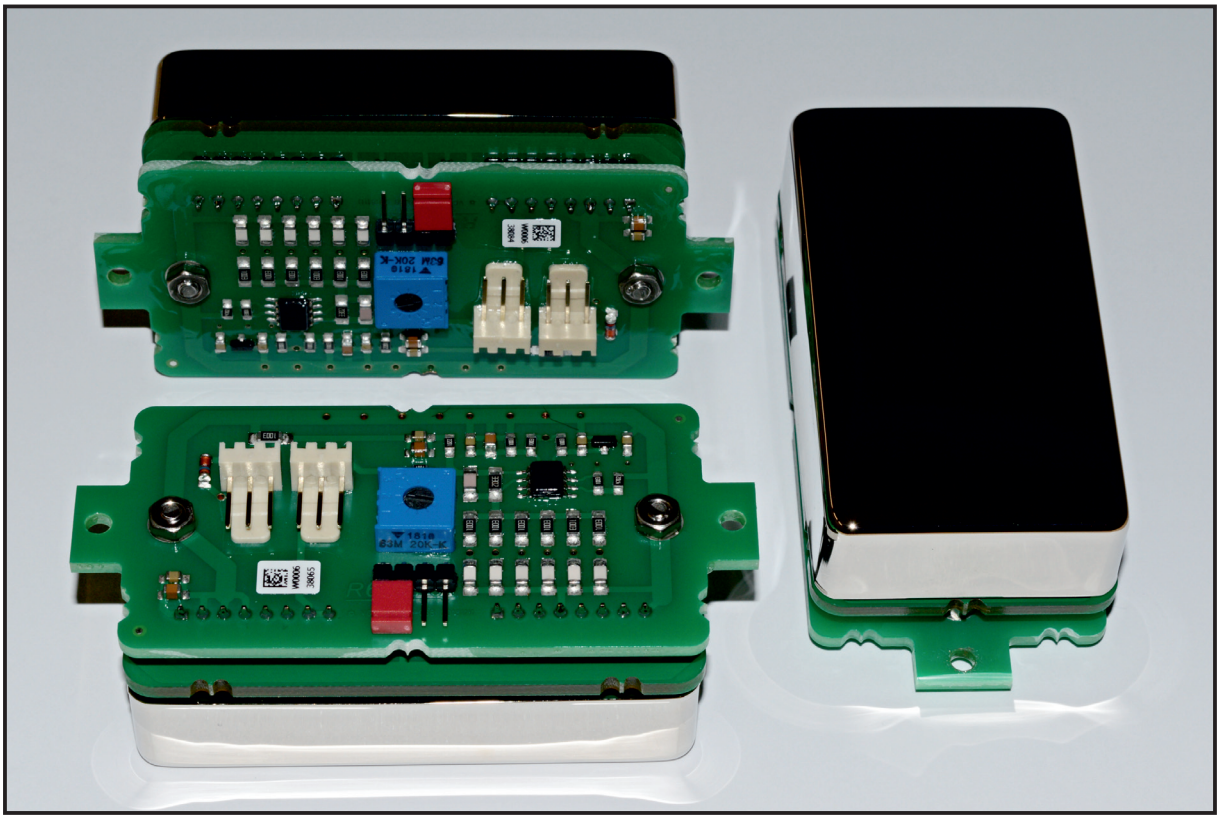
- Gain of all stages is controlled by trimpot R724

- No potentiometer is required



R66Mk6B - Dimensions





R66Mk6B - Computer Simulation

Computer simulation and comparison of

- Hexaphonic Pickup with typical 6-Channel Overdrive effect (upper circuit)

- Standard Coil Pickup with typical Overdrive effect (lower circuit)

(for more informations see page 2)