HEXINVERTER.NET
presents
NeinOhNein KICK v1.0
A DIY 909 kick replica

TR-909 is a trademark of Roland Corporation

Building Tips

In order to successfully assemble your NeinOhNein KICK, you will need to take care assembling the PCB. There are over 70 resistors, alone, and many of them are similar looking in value. One misplaced resistor could cause the unit to function completely differently than expected.

THIS IS NOT A PROJECT FOR FIRST TIMERS!

Things to note of:

There is space for two different types of transistors -- the modern BC549/59 series, and the rare, original ones used in the 909. Install ONLY ONE set in the board!

The optional components outlined in the top left are for a buffered noise output you can use elsewhere in your modular. You don't have to install these components if you don't want the noise output.

USE COAXIAL CABLE (or twisted pair) FOR THE KICK DRUM OUTPUT for best performance. (see diagram on next page)

ACCENT is an analogue input (0 to 5ish volts) that directly affects the strength of the kick sound. It is tied HIGH when there is nothing plugged in, so your kick will always sound as strong in your mix as possible unless you want to change it by feeding an input into it.

TRIGGER is the control input for the drum. Any positive voltage excursion around 2-3V should trigger the drum.

THE RARE TRANSISTORS ARE BACKWARDS ON V1.0 PCBs! d'oh!
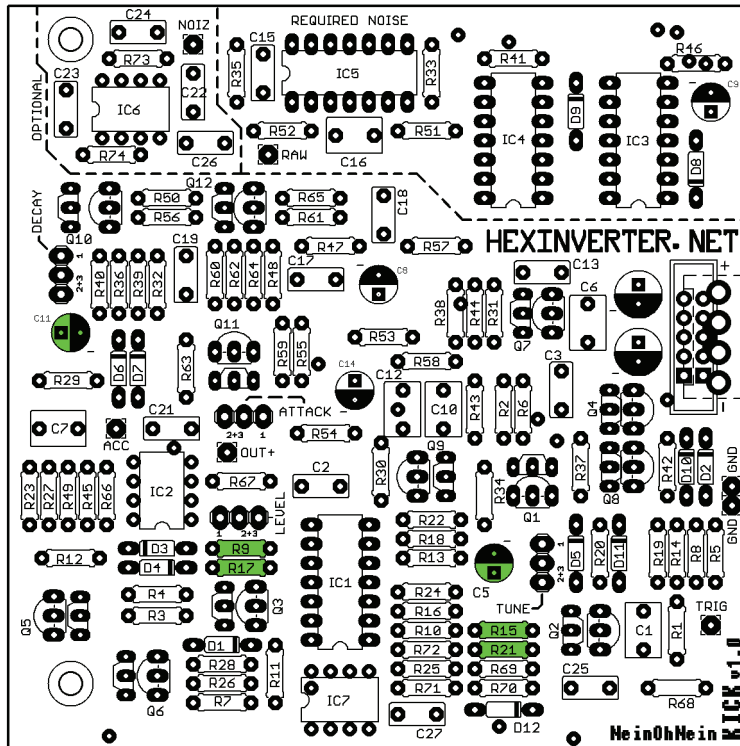
How the PCB shows them:

How you need to install them:

Modifications

There are a number of modifications you can do to extend the flexibility of the bass drum. To do them, you will be operating on these highlighted parts. They are quite easy to do...

Pitch Mod

This modification is extremely useful, and allows you to change the pitch of the drum. I highly recommend it:

REPLACE R17 WITH A 47K POT AND 4.7K RESISTOR IN SERIES WITH THE POT

Extended Decay

This mod extends the decay control so you have much more control over the decay length:

REPLACE C11 WITH A 1.5uF. The value is not too critical. Anything around 1 to 2uF should give good results!

Extended Tune

This mod extends the tune control so you have much more control over the pitch-sweep envelope that makes that "Oooonnnn" sound we all love:

REPLACE C5 WITH A 1.5uF. The value is not too critical. Anything around 1 to 2uF should give good results!

ALSO REPLACE R15 WITH 470R, AND R21 WITH 4.7K

Overdrive

You can oversaturate the diode sine waveshapers by driving more of the signal into them. This level can be varied with a pot, so:

REPLACE R9 WITH A 10K POT AND 1K RESISTOR IN SERIES WITH THE POT.

Wiring Diagram

(potentiometers viewed from front)