

## User manual

# Reuss Copenhagen Bender

Super great sounding 1960s germanium fuzz circuit based on the tonebender mark 1.5, built with rare OC140 NPN germanium transistors for the convenience of modern power polarity

### Controls

- 'LEVEL' sets the output level of the effect sound. The pedal features a recovery gain stage which amplifies the vintage circuit's modest output level, making the Copenhagen Bender very loud compared to an original 1960s Tonebender mk 1.5.
- 'ATTACK' sets the amount of fuzz. The circuit of the pedal interacts very well with your guitar's volume control, allowing you to reduce the fuzz intensity by rolling down your guitar's volume.

### Footswitch

- Switches the effect on and off, indicated by the orange LED (mechanical true bypass)

### Connectors

- Right side jack is the input of the pedal. Connect your instrument here.
- Left side jack is the output.
- The 9V DC connector is for a standard guitar pedal 'negative centre'-type jack. ONLY use this type. Reversing the polarity can damage the pedal. The pedal can also run on a 9V battery (not included). Fuzz enthusiasts insists vintage circuit sounds best with a carbon zinc battery.

**Please note:** The unit is drawing power from the battery, when there is a jack in the input connector. Always remove the input jack when the pedal is not in use, if you are running it with a battery

**Also please note:** Being a vintage circuit, the fuzz wants to see a high impedance input signal to sound correct. Any low impedance signal from a buffered bypass pedal (like a Boss or Ibanez or similar type) will make the fuzz sound wrong. It will loose punch and fullness and sound thin and fizzy. Not as intended. Always put a vintage fuzz circuit (tone benders, fuzzfaces etc.) first in your chain

### Specifications

- Vintage 1960s tonebender mark 1.5 schematic built with ultra-rare vintage new old stock 1960s OC140 germanium transistors. Each set of two transistors are carefully matched personally by Anders Marcuslund-Reuss
- The transistors are 'NPN' which makes the pedal run on modern, pedalboard friendly 'negative ground' power polarity (contrary to vintage original pedals, and most modern PNP recreations, which features positive ground / reverse polarity). No need for an isolated power supply.
- Recovery gain stage and output buffer added to the vintage circuit's original output. This makes the pedal much louder than a vintage pedal and it ensures a uniform, strong and healthy output signal to pass on in your chain, with no loss of tone and no unwanted interferences.
- Advanced power supply noise filtering circuit at the DC jack. This makes the pedal very tolerant with modern, switch mode power supplies, which are otherwise known to induce noise in vintage circuits, originally designed to run on batteries exclusively.
- Extremely high build quality. Completely handmade in the European Union
- Vintage-style 'through hole' construction (SMD parts in the power supply noise filtering mini-circuit board)
- Compact aluminium enclosure with a textured white and gold powder coat finish and real silk screen printed graphics
- High quality Neutrik jacks
- Upgrade quality footswitches (good for at least 30000 stomps)
- Runs on a standard 'Boss-style' 9V DC 'negative centre' guitar pedal power supply or a 9V battery.



### Battery access

- Remove the four screws at the bottom side of the pedal with a philips head screwdriver to remove the bottom plate and gain access to the battery

### Warranty

- All Reuss pedals comes with a limited 24 months warranty against manufacturing faults
- The warranty is not covering normal wear and tear or abuse

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