

# Pumped Up Tester

Simple circuit tester with  
added 18V / -9V functionality



# Important notes

## If you're using any of our footswitch daughterboards, DOWNLOAD THE DAUGHTERBOARD DOCUMENT

- Download and read the appropriate build document for the daughterboard as well as this one BEFORE you start.
- DO NOT solder the supplied Current Limiting Resistor (CLR) to the main circuit board even if there is a place for it. This should be soldered to the footswitch daughterboard.

## POWER SUPPLY

Unless otherwise stated in this document this circuit is designed to be powered with 9V DC.

## COMPONENT SPECS

Unless otherwise stated in this document:

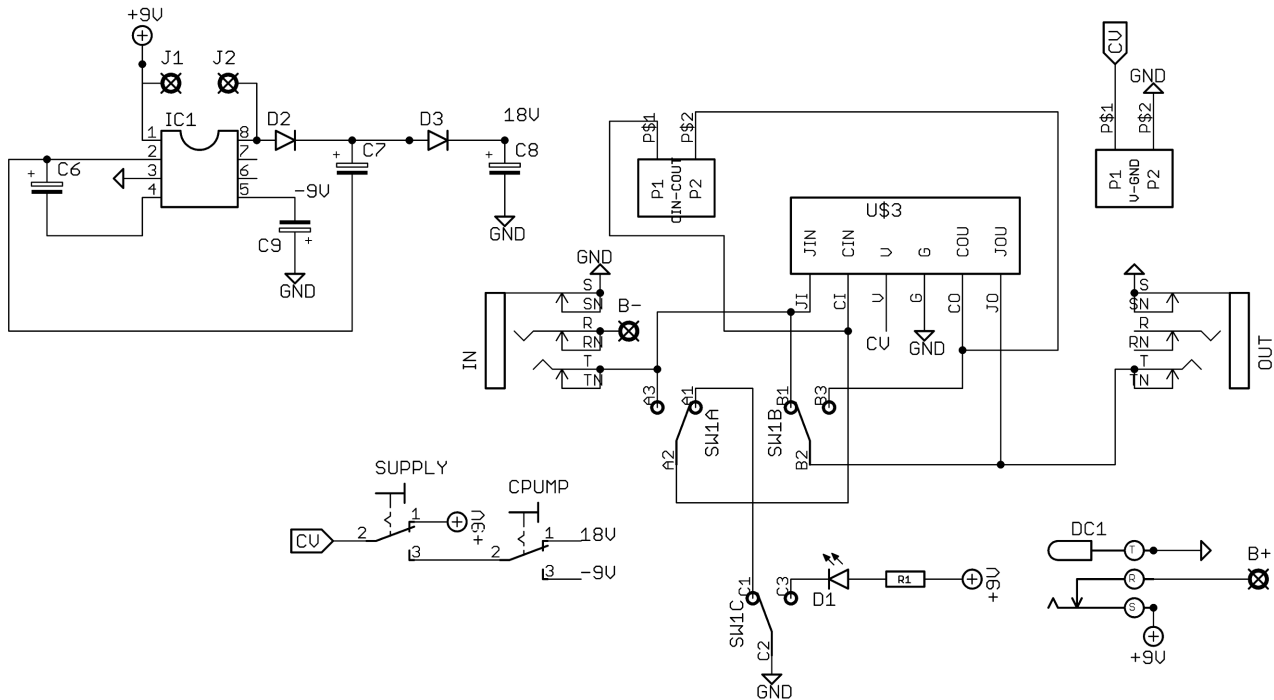
- Resistors should be 0.25W. You can use those with higher ratings but check the physical size of them.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

## LAYOUT CONVENTIONS

Unless otherwise stated in this document, the following are used:

- **Electrolytic capacitors:**  
Long leg (anode) to square pad.
- **Diodes/LEDs:**  
Striped leg (cathode) to square pad. Short leg to square pad for LEDs.
- **ICs:**  
Square pad indicates pin 1.

# Schematic + BOM



R1 2K2 (CLR)

C7-9 10u elec

D1 LED

D2-3 1N4148

Toggle switches

SPDT ON-ON

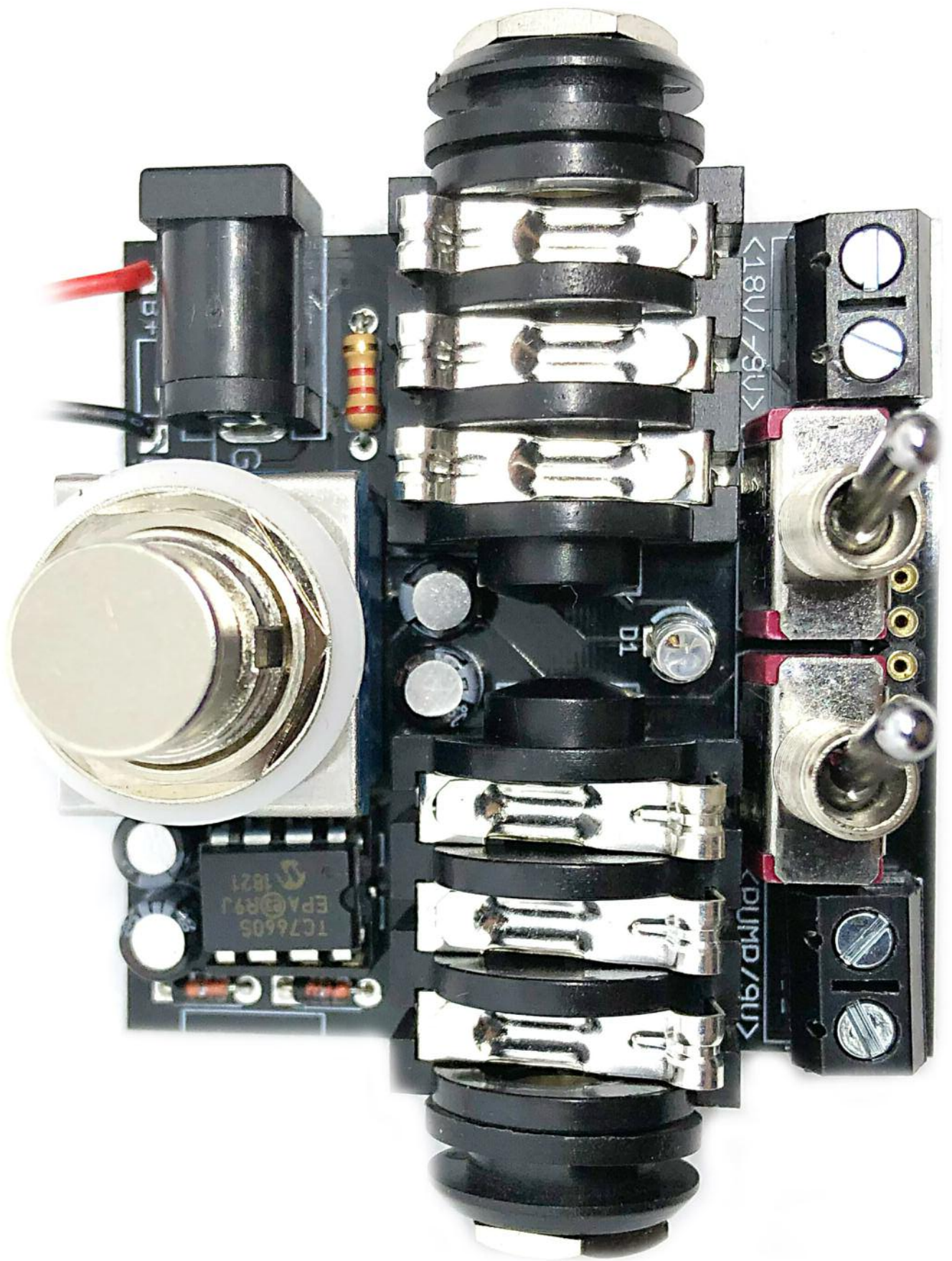
IC1

Charge Pump - you can use either a 7660S or a MAX1044. Both require a jumper wire between pads J1 and J2.

The schematic probably isn't a great deal of use to you - it's just a lot of switch and pad connections. The important thing is the functionality, which depends on the circuit being tested. See later.

If you're using a 7660 charge pump you must use one with an 'S' suffix or you'll get an audible whine in your signal.





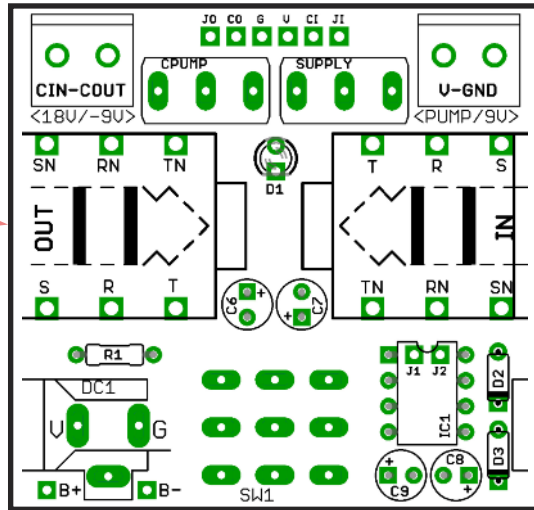
2-way screw terminal connector, 5mm pitch



SIL sockets 4 or 6 way



1/4" jack socket, PCB-mount Stereo (output jack can be mono)



R1 can be your preferred value for the LED current limiting resistor - we supply 2K2 with the kits. The short leg (-) of the LED goes into the square pad.

You don't have to connect a battery snap to pads B+ and B- unless you intend to use one. If you do, the battery will only be connected when a jack is inserted into the input socket.



2.1mm DC socket, PCB-mount\*

3PDT Footswitch or 3PDT Toggle Switch



With the power disconnected, attach your circuit to the tester. If you're using a ribbon cable simply push the exposed wires into the SIL sockets at the top centre of the PCB. In most situations there'll only be four wires - CO, G, V and JI.

If you aren't using a ribbon cable plug your wires into the terminal blocks, marked CIN (Circuit In), COU (Circuit Out), V and GND.

Ensure you have your switches positioned correctly for the circuit being tested. Using the wrong positions could damage the circuit under test:

**For standard 9V supply**

- SUPPLY (right hand) switch positioned to the RIGHT
- CPUMP (left hand) switch doesn't matter

**For 18V supply**

- SUPPLY (right hand) switch positioned to the LEFT
- CPUMP (left hand) switch to the LEFT

**For -9V (positive ground) supply**

- SUPPLY (right hand) switch positioned to the LEFT
- CPUMP (left hand) switch to the RIGHT

Note: connect your Ground and -V pads as normal - no need to switch them around

- the charge pump does that for you.

