

# **Click-Less™ True-Bypass BOSS DS-1 Distortion Install Guide**

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## ABOUT THIS MANUAL

This manual covers Click-Less™ True-Bypass installation for the BOSS DS-1 Distortion.

*It is recommended that you read this manual in full and become familiar with the installation procedure before beginning any work.*



### RECOMMENDED TOOL AND SUPPLY LIST:

- Click-Less™ True-Bypass installation kit
- Soldering station (with temperature control/regulation)
- Solder & Flux
- De-soldering braid or solder sucker
- Wire strippers
- Wire cutters
- Phillips head screwdriver
- Double-stick foam tape

## OVERVIEW

The BOSS DS-1 employs buffered electronic switching comprised of four main circuit elements:

- A buffer/driver circuit used to prevent loading of the signal path and to drive the electronic switching circuit
- Two FETs (field effect transistors) used to block/permit signal flow through the bypass and effect circuits
- A flip-flop circuit used to select which FET is ON/OFF (BYPASS/EFFECT) and route the signal appropriately
- A mechanical momentary contact switch used to control the flip-flop circuit

Installing Click-Less™ True-Bypass requires circumvention of the electronic switching system and re-routing the signal path through the Click-Less™ PCB.

Steps 1 & 2 detail circumvention of the flip-flop circuit.  
Steps 3 – 9 detail re-routing signal flow through the Click-Less™ PCB and final installation procedures.

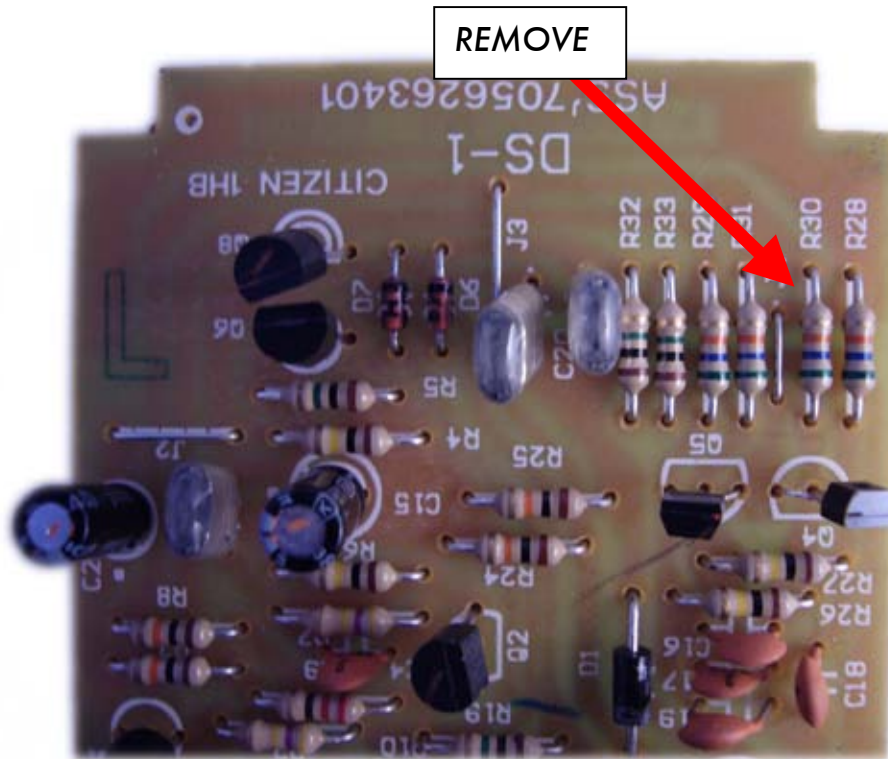
**Step 1:**

Remove the backing plate and flip the effect PCB upright as shown below:



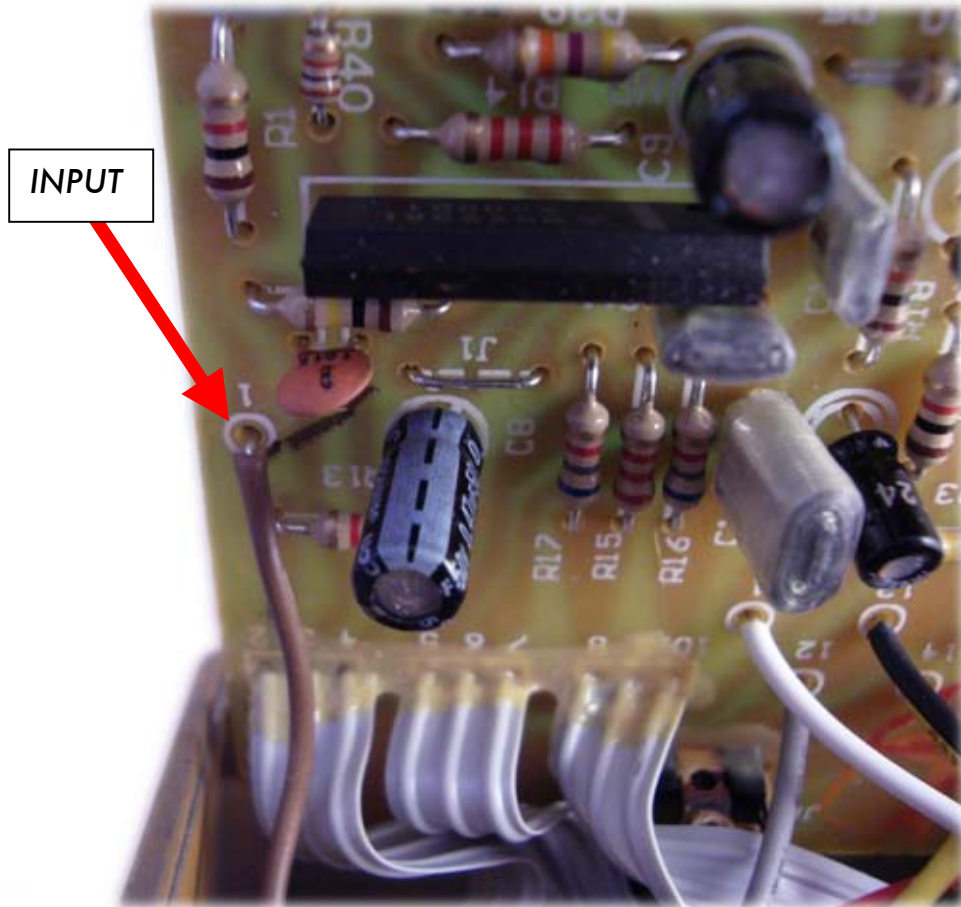
Step 2:

Locate, de-solder and remove R30 (56K resistor) from the effect PCB:



Step 3:

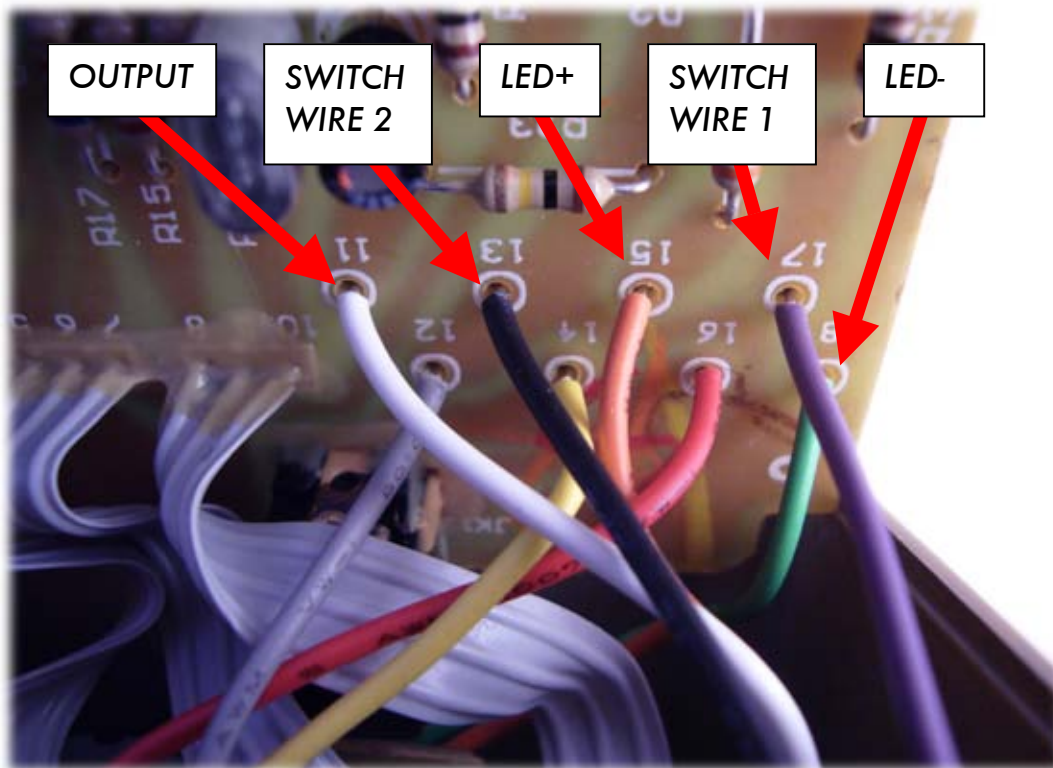
De-solder the input wire from the effect PCB:



- Input wire      Hole **1**

Step 4:

De-solder the output wire, LED wires and switch wires from the effect PCB:



- Output wire      Hole 

11
----
- Switch wire 2    Hole 

13
----
- LED + wire        Hole 

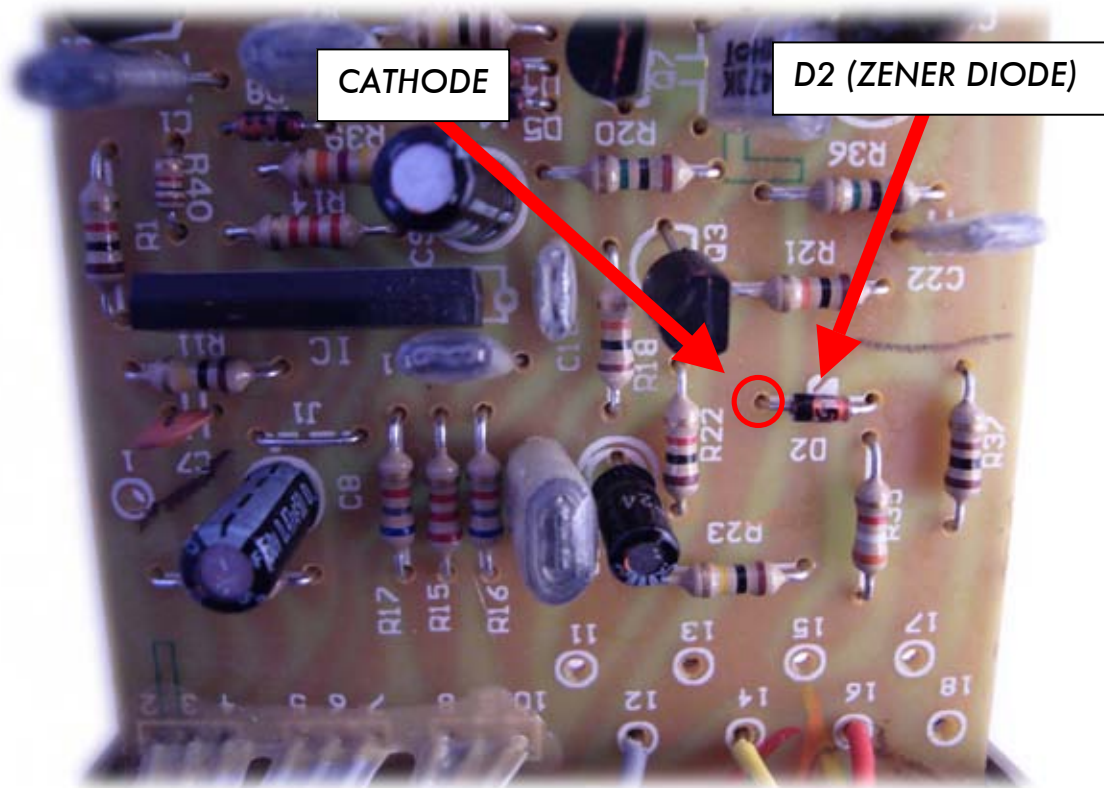
15
----
- Switch wire 2    Hole 

17
----
- LED - wire        Hole 

18
----

Step 5:

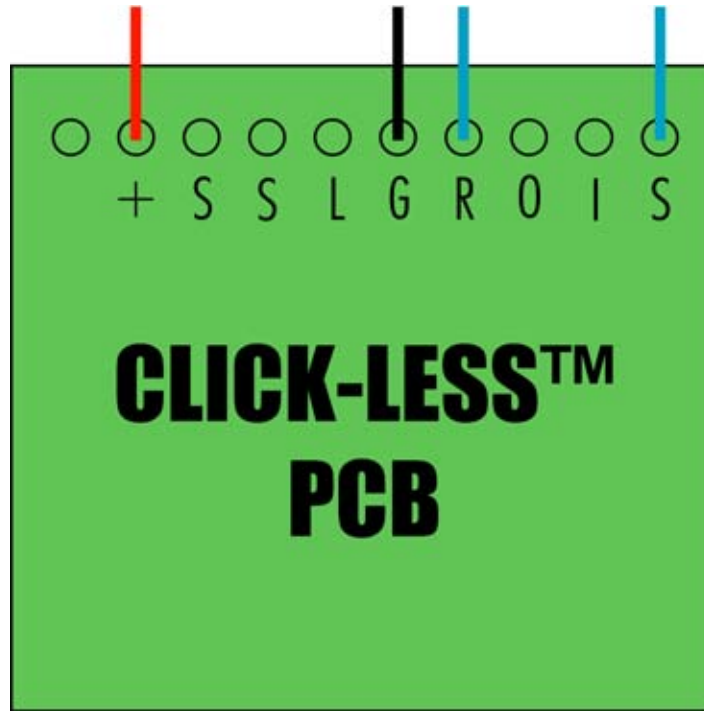
Locate, de-solder and remove D2 (zener diode) from the effect PCB, noting which terminal is the cathode (circled below and indicated by black line). This pad will supply power for the Click-Less™ PCB:



**Step 6:**

Solder four of the supplied wires to the Click-Less™ PCB pads following the diagram below:

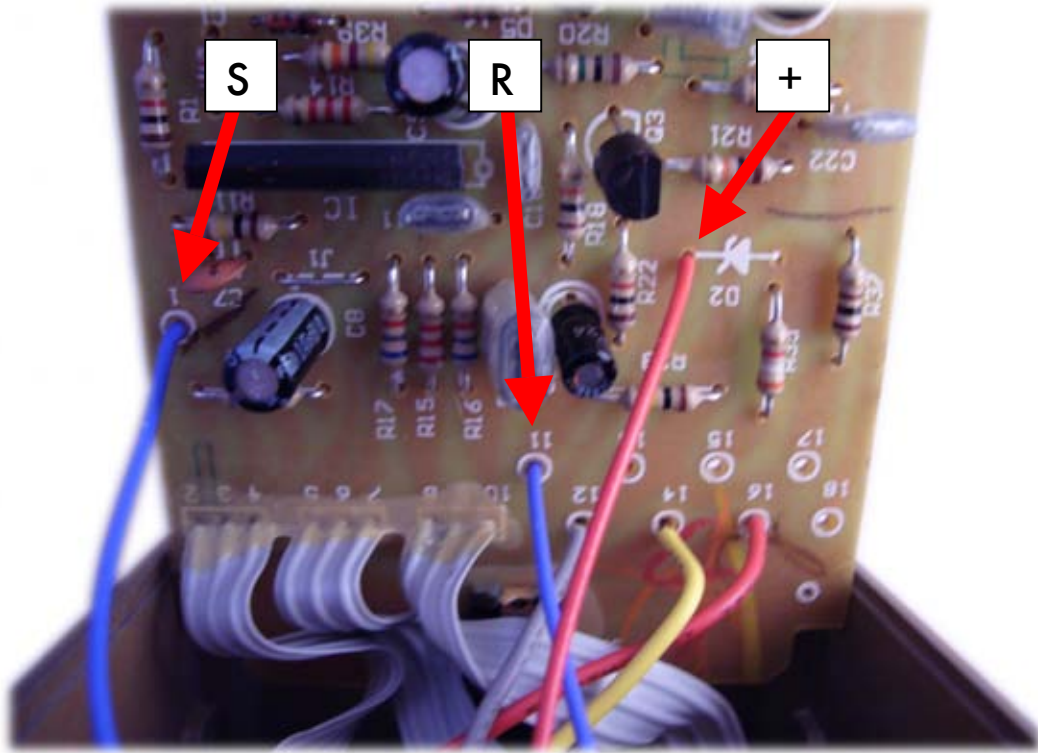
*NOTE: Wire color employed may vary. Colors indicated below are provided for reference only.*



- **+** power pad. (Red wire shown)
- **G** ground pad. (Black wire shown)
- **R** return pad. (Blue wire shown)
- **S** send pad. (Blue wire shown)

Step 7:

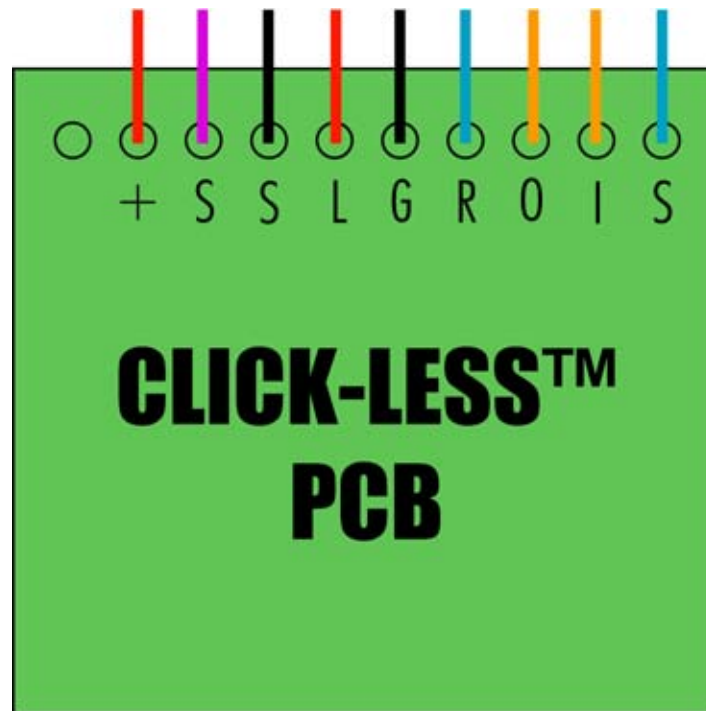
Connect the Click-Less™ PCB wires to the effect PCB:



- **S** Send wire to Hole 1
- **+** Power wire to D2 cathode hole
- **R** Return wire to Hole 11

### Step 8:

Solder the remaining wires to the Click-Less™ PCB pads following the diagram below:



- Switch 1 wire to leftmost **S** pad on Click-Less™ PCB (shown in purple)
- Switch 2 wire to adjacent **S** pad on Click-Less™ PCB (shown in black)
- LED + wire to **L** pad on Click-Less™ PCB (shown in red)
- **G** ground wire to suitable ground\*
- LED - wire to a suitable ground\*
- Output wire to **O** pad on Click-Less™ PCB (shown in orange)
- Input wire to **I** pad on Click-Less™ PCB (shown in orange)

*\*The output jack sleeve lug serves as a convenient ground.*

**Step 9:**

Apply double stick tape to the back of the Click-Less™ PCB taking care to ensure that no leads are poking through the tape, and secure the Click-Less™ PCB inside the chassis at a suitable location. Recommended placement is on the inside of the chassis, just below the output jack. See photo below:



**Congratulations! Your BOSS DS-1 Distortion has been converted to Click-Less™ True-Bypass.**