



PM Foundations ER-808 v1.4  
Clap Module

## Introduction

LM13700 through hole parts are being phased out. You may need to use a SOIC version of this part and install in a 16 pin SOIC to PDIP adapter so that it can be installed in the IC socket.

## BOTTOM mounted parts

Install and solder all the parts listed in the BOM as BOTTOM mounting parts. Cut all these leads flat to the PCB.

For R40, start with 10k and consider changing it later if you want to change the sound.

## TOP mounted parts:

### Resistors

Arrange the resistors by value on the workbench in the same order as listed in the BOM and install each numbered part for that value before moving onto the next.

Consider changing R32 later if you want to change the sound.

Install the resistors on the TOP of the board. Take care not to mix up resistors which have similar color codes.

Solder and clip the leads.

### Diodes

Install the diodes on the TOP of the board. Align the stripe on each diode with the stripe marked on the board. Solder and clip the leads. Do not mix up signal, power, schottky and zener diodes, some of them look the same. Now go back and check the polarity against the silk screen for each diode.

### IC Sockets

Install the sockets on the TOP of the board. Observe the notch or mark on the sockets and align with the notch or mark on the board. Solder.

### Bus header

Install the 10 pin right angle bus socket on the BOTTOM of the board. **This must be installed with the correct orientation or the module will be damaged when the power is connected.**

The cut-out in the socket should face the words "BUS HEADER", as shown in the photo.

The header must be completely flat and aligned with the PCB so clean up any joints that interfere with this.

## Bipolar Transistors

Separate the transistors on the workbench into NPN (2N3904) and PNP (2N3906). Install the transistors on the TOP of the board. Do not mix up the NPNs with the PNPs. These are polarized components. Align the outline with the outline on the board. They should be raised off the board surface slightly and at the same height. Solder and clip the leads.

## Ceramic and film capacitors

Install the capacitors on the TOP of the board. Solder and clip the leads.

## Trimmer resistors

Install on TOP so the adjustment is accessible from the back edge.

## Electrolytic capacitors

Install on the TOP. Make sure you orient correctly. The longer lead and/or the lead marked with a + needs to be inserted into the hole that has the “+” marking near it. Leads marked with “-” go in the board hole WITHOUT the “+”. Solder and clip the leads.

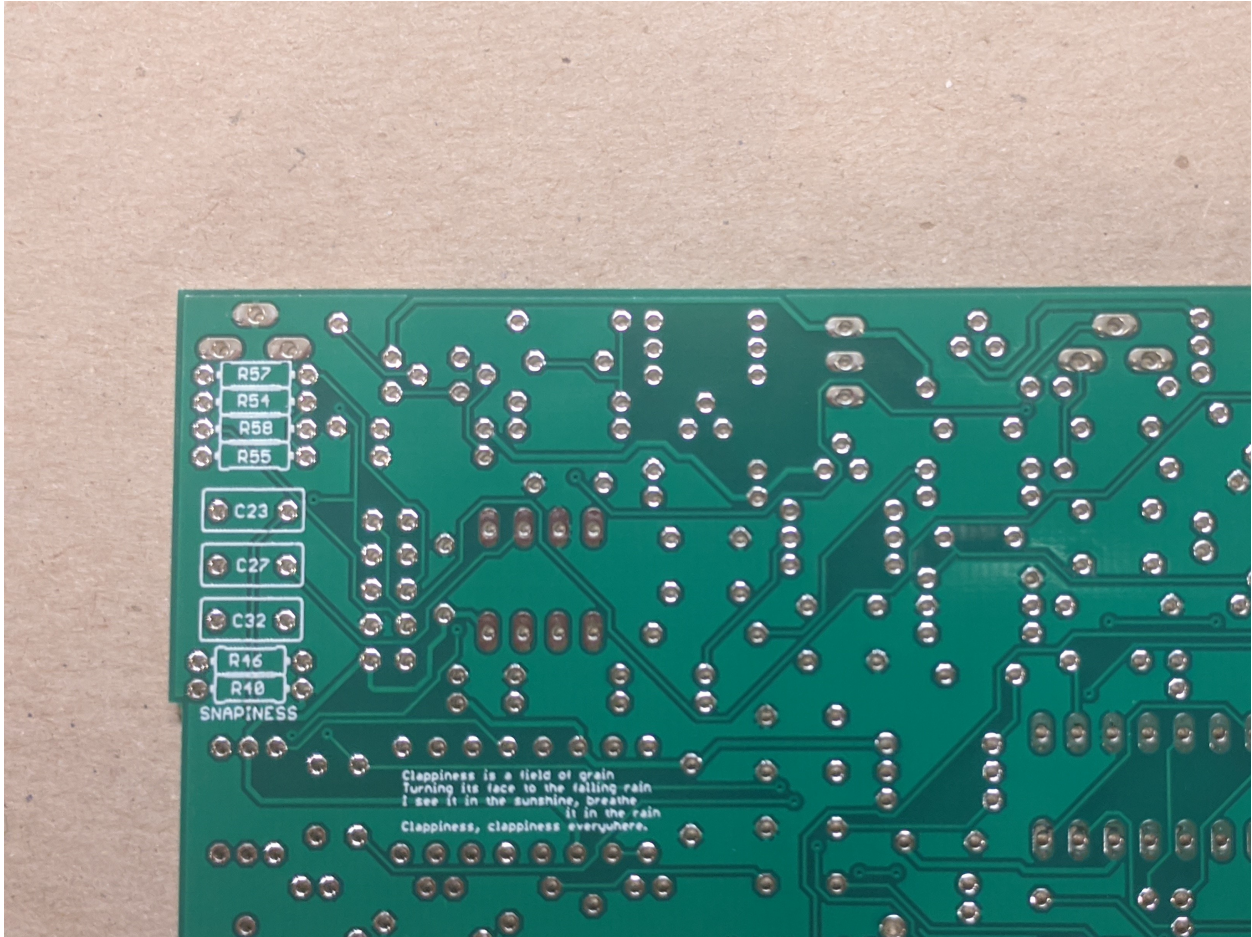
## Potentiometers, slide switches

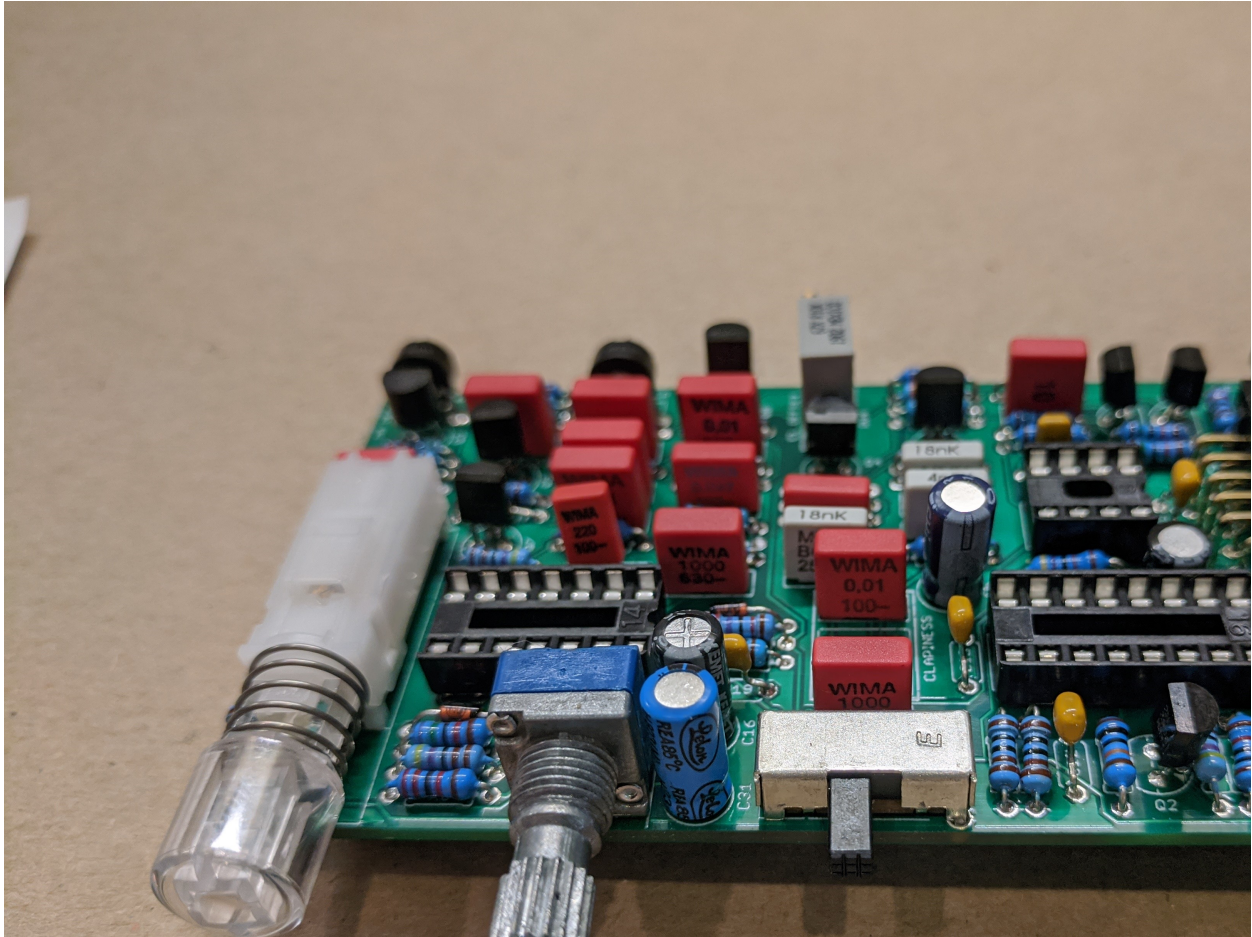
If the pots have positioning lugs on the front, cut these off with a sharp pair of flush cutting pliers.

Please ensure they are on the CORRECT SIDE OF THE BOARD before soldering otherwise PCB tracks and pads may be damaged if they are desoldered. See Photo.

## Lighted switch

Carefully insert the leads into the holes for the switch pins and LED pins. The plastic legs of the switch must be flat onto the surface of the PCB. Any plastic legs which are fouled by other component pins should be cut off so the switch can lie flat.





## Testing

Install the ICs.

Plug the module into the Bus PCB.

Connect the L and R outputs of the Trigger/Output module to an amplifier or other listening device in your rack.

Power on.

Press the button to light and then build a pattern of steps (see User Guide).

Start the sequence.

Adjust the CLAP OFFSET trimmer to get the desired sound.

Adjust the BALANCE trimmer to place the sound in the stereo field.

Check the controls.