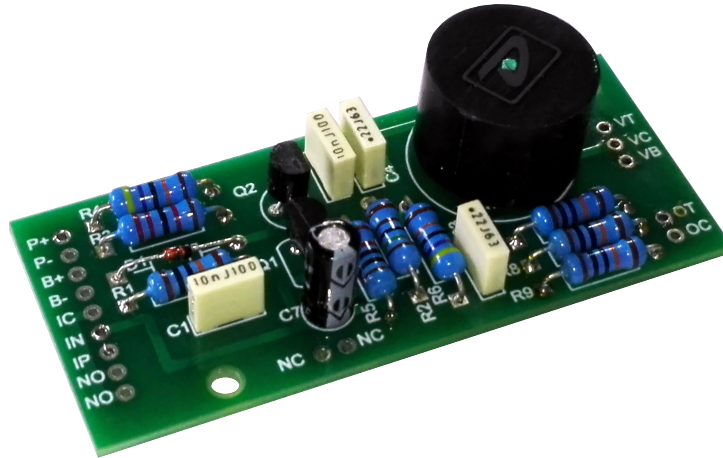


## CLASSIC WAH Installation Instructions



### Introduction

The Classic Wah circuit is a reproduction based on the classic original Colorsound Wah pedal. It is a two-transistor design which utilises an inductor in the filter circuit. The inductor is an expensive component, so later re-issues of the Colorsound Wah designed this out.

However, the inductor has characteristics which add warmth and richness to the sound which is missing on the later designs.

This circuit board provides an option for a competent person to repair, upgrade or build a Classic Wah pedal. It can be adapted to various models, is compact and reliable and uses modern components, including an inductor in the filter circuit.

### What is Included?

The package contains a fully populated and tested printed circuit board, ready for wiring.

### Tools and Equipment

You will need a soldering iron, small snipe-nosed pliers and sidecutters, standard kit for anyone interested in basic electronics. You might need a means of removing solder such as a solder pump (sucker) or desoldering braid if you make a mistake. You will also need wirecutters and strippers.

### What Else Will I Need?

You will need a Wah pedal for adaptation, or it might be possible to adapt a volume pedal. The unit should have, as a minimum, an input jack socket, output jack socket, potentiometer and control mechanism. A battery box and/or DC input jack socket are ideal, but if you have neither of these you will need to add some battery terminals and a way of installing a battery. Alternatively, you could fit a DC jack socket and run off a power adapter only.

You will also need some hook-up wire (typically 22AWG), solder, and a means of securing the PCB in place. Fixing holes (diameter 3mm) are provided in the PCB for mounting on PCB stand-offs or spacers, but providing the circuitry is insulated from metalwork or other conductive parts, it could be held in place with double-sided carpet tape or blobs of silicone sealant.

Test the circuit before fixing permanently.

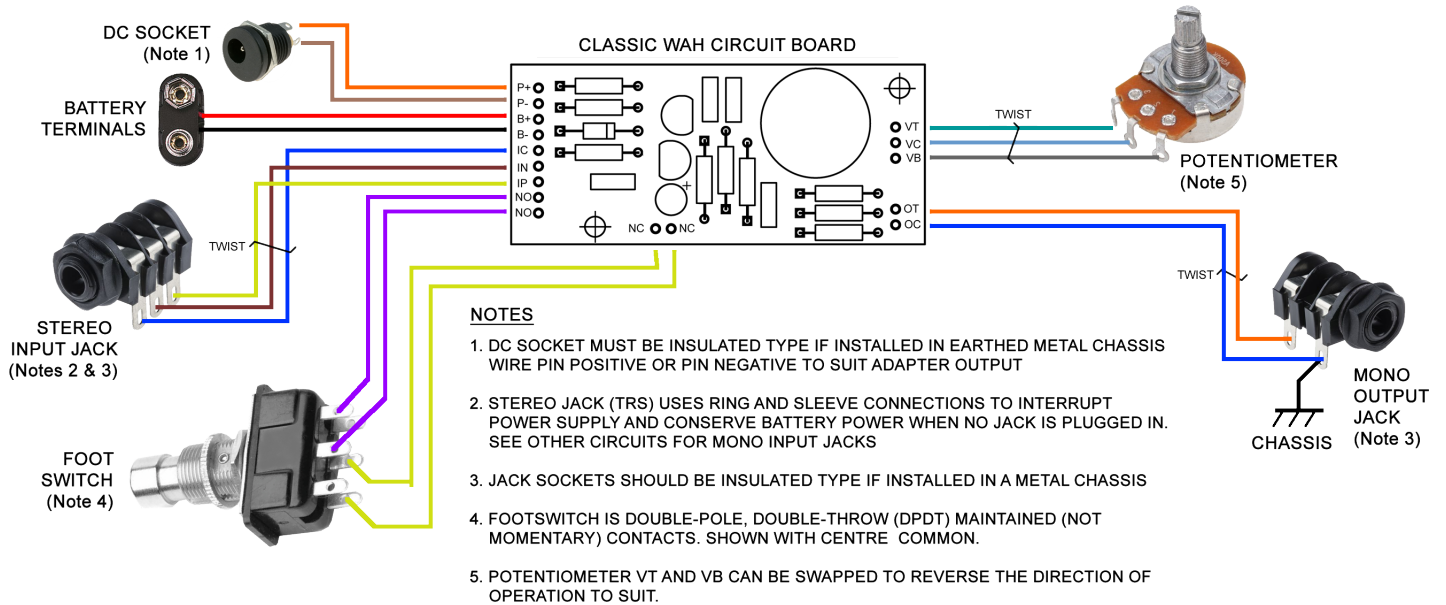
# Classic Wah Installation Instructions

## Example Circuits

The circuit can be adapted to suit the available hardware, although there may be compromises against performance:

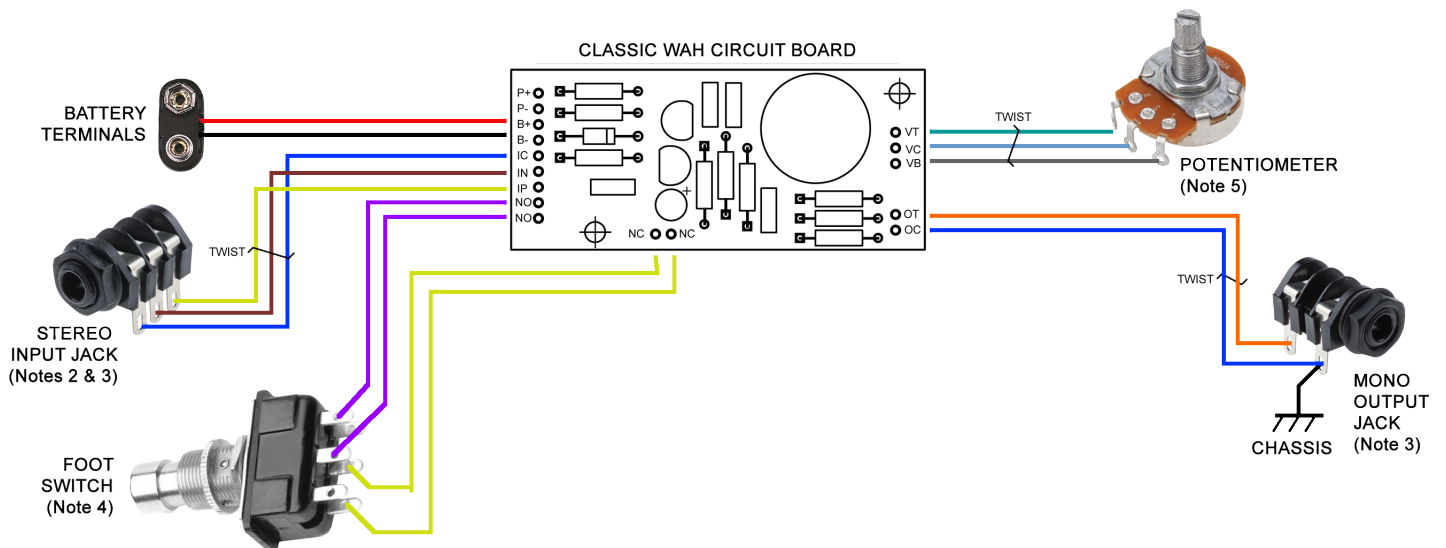
### Circuit 1: Fully Loaded

This circuit uses all the features of the Classic Wah



### Circuit 2: No DC Power Jack

Where no DC power jack available, same as circuit 1 but leave out the connections

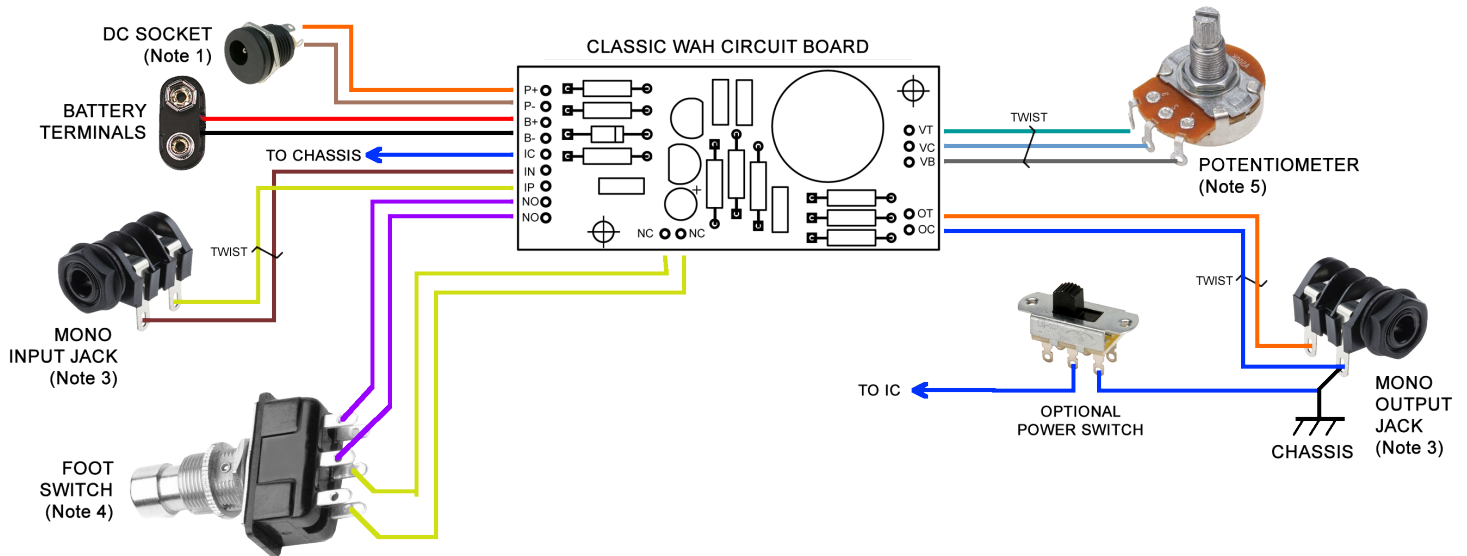


Similarly, if you want to use external power only with no battery connection, just leave out the battery terminals.

# Classic Wah Installation Instructions

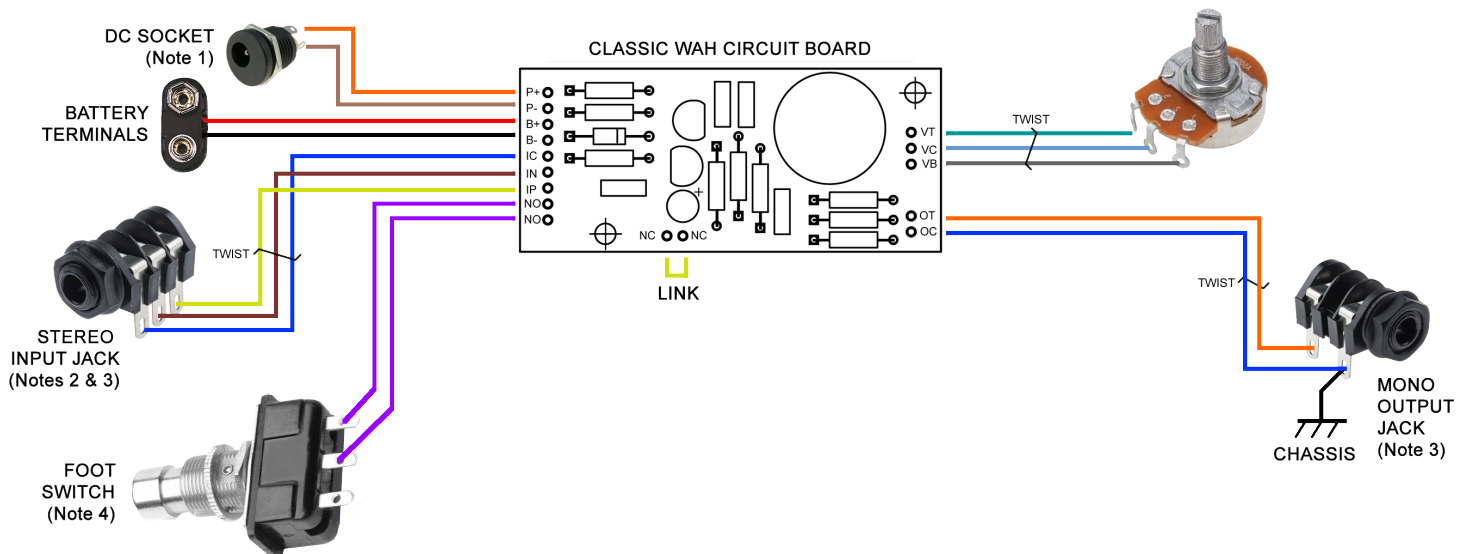
## Circuit 3: Mono Input Jack

Where a mono input jack is used, power can not be switched when a jack is plugged in - watch out for battery drain. IC can be wired direct to chassis common as shown, or insert a power switch.



## Circuit 4: Single Pole Foot Switch

Circuit 1 uses the foot switch to bypass the circuit and switch power so that battery drain only occurs when the unit is engaged. When a switch with only one pole is available, only the bypass option is available. Don't forget to add the wire link between the NC terminals!



Other variations can be accommodated. Contact [technical@ciaudio.co.uk](mailto:technical@ciaudio.co.uk) for assistance.

## Potentiometer Rating and Adjustment

The Classic Wah Circuit is designed to operate with a 100K Linear Potentiometer over about one half of it's total travel. Most pedal linkages only work over a limited range. Adjustment of the potentiometer is important for best results, and to ensure the pedal linkage doesn't smash the potentiometer end-stops. The power requirement for this application is negligible, but rugged panel mount types tend to have higher power ratings.

The potentiometer should be wired and adjusted so that with the pedal flat down the resistance between VB and VC is zero ohms, and about 50K with the pedal fully up.

If the pedal seems to work 'in reverse' try reversing the VT and VB connections at the potentiometer end.

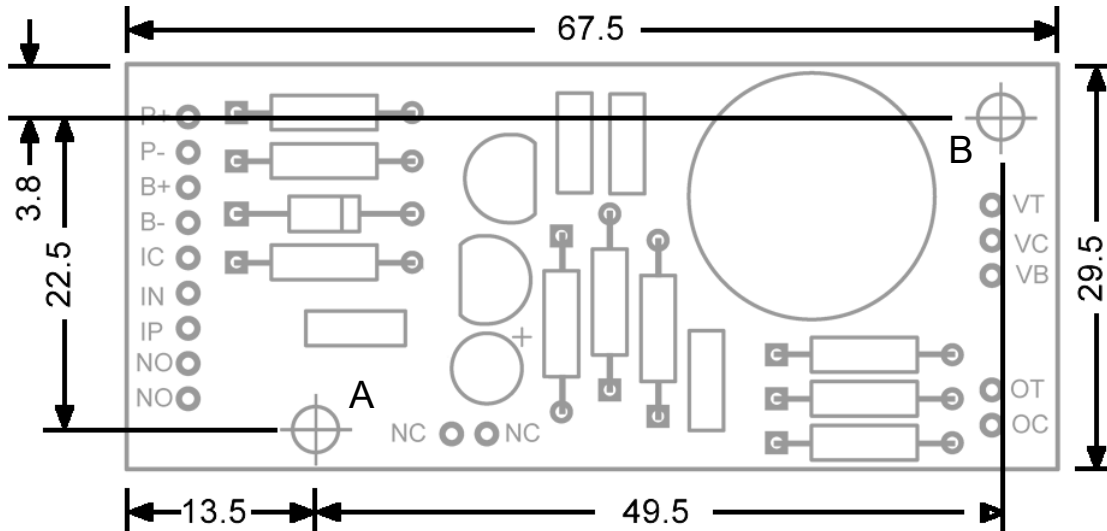
# Classic Wah Installation Instructions

## Mechanical Fitting

Two 3mm diameter mounting holes are provided for rigid fixing. The circuit board should be mounted on spacers to ensure the underside connections do not short against the pedal chassis.

If drilling mounting holes in the pedal is problematic PCB standoffs with adhesive pads are commercially available.

Less satisfactory solutions include using double-sided carpet tape or silicone sealant to fix in place.



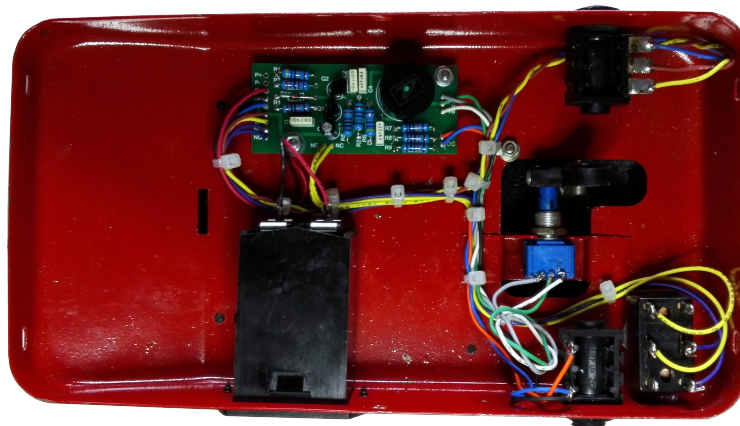
1. DIMENSIONS IN mm
2. FIXING HOLES: 2 OFF 3mm DIAMETER
3. MAX HEIGHT: 17MM (AT INDUCTOR)
4. IF METAL FIXING SCREW OR NUT IS USED AT HOLE A INSULATE TOP OF PCB TO PREVENT CONTACT WITH NEARBY TRACK

## Drilling Template

A 1:1 scale template is available for download at the following address

<http://www.cialco.co.uk/manuals/CLASSIC WAH - TEMPLATE.pdf>

Make sure that the printer is set to print actual size or 1:1. Check your print against the dimensions given in the diagram above.



Classic Wah Circuit fitted to 1990's re-issue Colorsound Wah