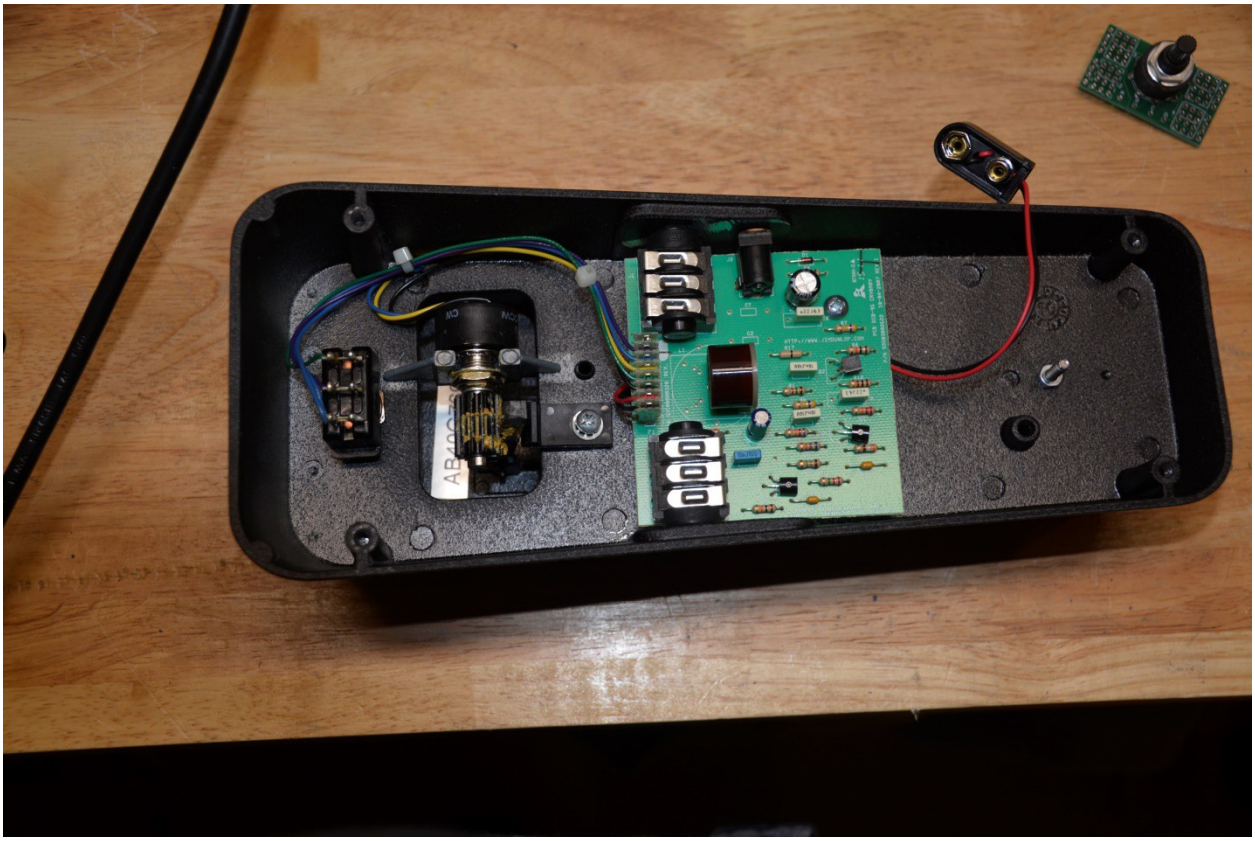
THE STORY OF THE SUPER MODDED GPCB MOWAH PEDAL

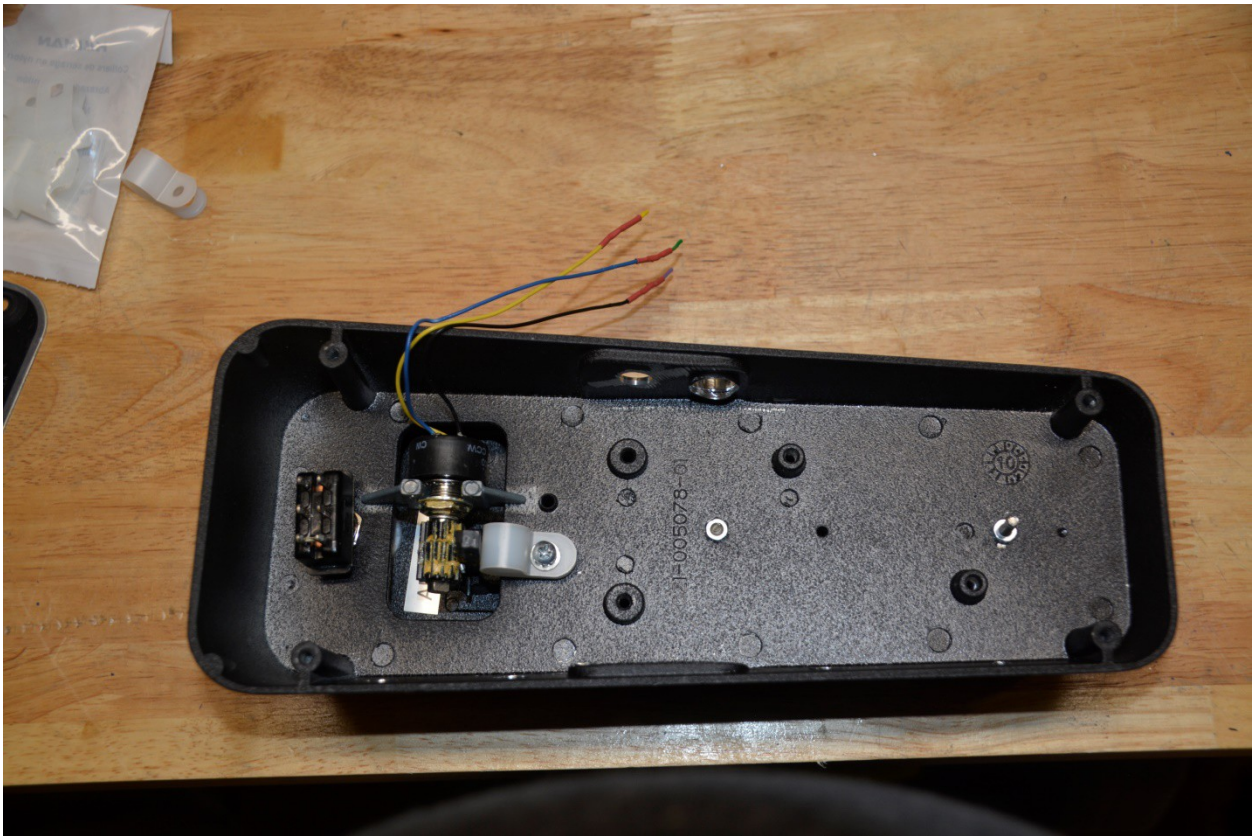
Once upon a time, there was a GPCB Moderator huddled inside his house as a blustery winter snow storm raged in beautiful Colorado. Not wanting to venture outside, he wondered what he could do to pass the time.

He had just scored a pristine CRYBABY pedal on ebay. All it needed was a tweak to stiffen the treadle. Now is the time to finally execute his dream wah pedal!

A quick order to Barry for a MOWAH board and a check of existing parts revealed that he was ready to perform surgery on the CRYBABY.



The stock circuit board assembly was removed leaving the existing DPDT footswitch and the (like new) pot in place. The stock clutch was removed and replaced with a new 3/8” nylon pipe clamp. Yes. This is a HILLMAN item that is sold at LOWES (and other stores) for $1.04 for a package of 10. It looks and works just like the original DUNLOP clutch!



The MOWAH instructions offered several great ideas for mods to improve the original design as well as provide more options for the user. Here are the changes that were made:

The Bass Boost mod was used and a SPDT switch was installed. When activated, this adds a larger capacitor to the input circuit which will permit more low frequency content to enter the wah circuit.

TR1 changes the “Q” or sharpness of the filter. Since this is an important characteristic of the wah effect, Instead of a fixed resistor and a fixed “Q”, an external pot was added to give more variety to the tone. This is sometimes called the Vocal Mod. A C50K was not available, so a 100K resistor was wired between lugs 1 and 3 of a C100K pot to make a close version of a C50K.

TR2 acts as a final volume level adjustment. This was also moved to an external A100K pot. This facilitates matching the pedal volume to the bypassed level.

The stock design provides for a SPDT switch, SW2, to select between 4 caps which determine two different sweep ranges. While this may satisfy many users, additional flexibility was achieved by using four caps of different values mounted on the versatile ROTO-TONE. This was mounted on the side of the shell and provides 4 unique sweep ranges.

Position 1 of the ROTOTONE selects a low bass range. When used with the Bass Boost switch, the pedal is perfect for bass players! Position 2 selects the normal wah range. Position 3 selects an upper mid- range and position 4 selects a high range for maximum treble emphasis.

The capacitor values used for these ranges are: 1-33nF, 2- 22nF, 3- 10nF and 4- 6.8nF.

A repurposed inductor from a VOX wah was used for this project. If you can afford it, the Sebbadius Soul inductor is really nice!

The CRYBABY version used for this project had an external power jack mounted to the original circuit board. This was replaced by the traditional switched power jack used for effects pedals.

The board- mounted IN/OUT jacks were replaced by Switchcraft open jacks.

The typical wah shell has several locations available to mount the new MOWAH board. Select one that avoids interference with jacks, pots, battery, etc. Carefully measure the positions to locate the pots, switch and ROTOTONE.

Holes for the 2 pots, ROTOTONE switch and the Bass Boost switch were drilled on the right (INPUT) side of the shell. The right side was selected because the pedal will be used close to the right side of the pedalboard. The left side could be used if desired as there is enough room in the shell for either side to hold the pots and ROTOTONE.

The power jack hole also needed to be enlarged. The shell is made of a soft pot metal and is easily drilled using standard metal bits. A small pilot hole should be made to facilitate accurate drilling of new holes. Measure the positions of the holes carefully to ensure clearance with the bottom plate.

The original DPDT foot switch was rewired to provide true bypass signal flow. No more tone sucking from an inactive wah pedal!

A couple of Barry's pot condoms were added to prevent dust from entering the pots causing scratchiness. (Not shown in the photo below.)

Here are photos of the finished project:

Another fun project from the mad workshop of wilkie1. Enjoy!