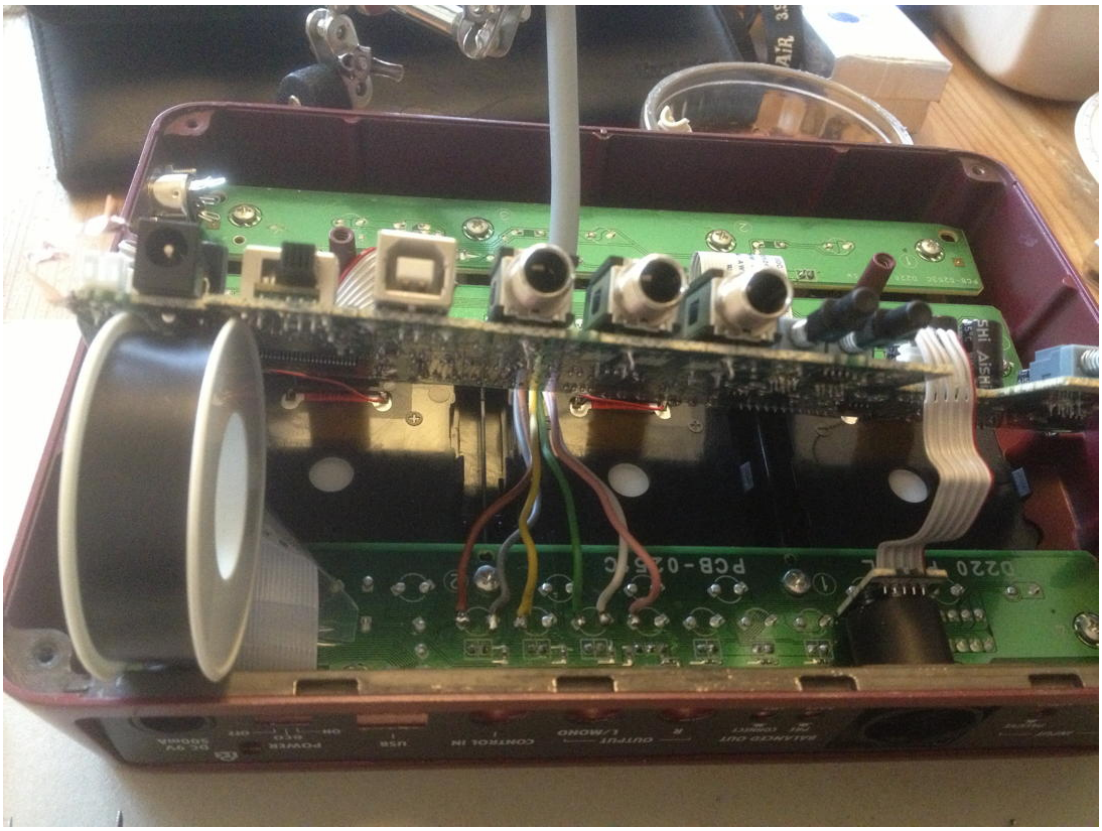
Modifying Zoom B3 for Patch Select Up and Down plus Rhythm and Tap (Version 3)

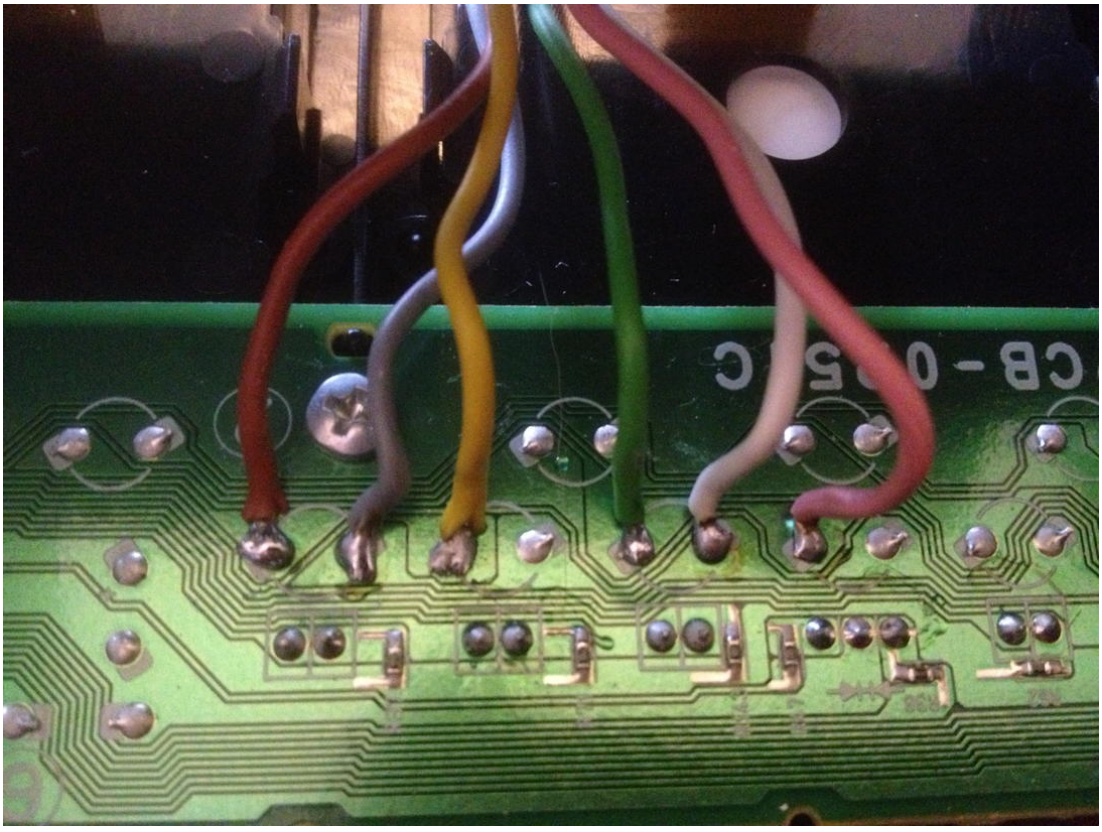
Andreas Fischlin (aka Andreas from the lower frequencies), April 2013

This modification served to use alternatively stomp footswitches to control the Zoom B3 for "PATCH SELECT" ▼ (Down) or ▲ (Up) or RHYTHM ➤ / ▮▮ (Start, Pause) or TAP (tap tempo). The footswitches do exactly the same as the front panel buttons "PATCH SELECT" ▼ or ▲ or RHYTHM ➤ / ▮▮ or TAP on the top of the Zoom B3 unit. Thus no interference with any functionality of the Zoom B3 results from this modification. This modification was inspired by AshBass' excellent website (AshBass Zoom G3 and G5 Mods and Information http://ashbass.com/AshBassGuitar/Zoom/index.html?taprhythmmod.html). However, AshBass did it only for the G3 (guitar), not the B3 (bass). AFAIK TalkBass forum member sledgehamer73 (http://www.talkbass.com/forum/f36/zoom-b3-multi-effects-926127/#post14206709) was doing that modification for the B3 for the first time and now knowing there would be no risk to do this mod on a B3 I did my following modification shortly after him. I can only say, It works fine and enhances the usability of the B3 greatly during gigging as well as practicing.

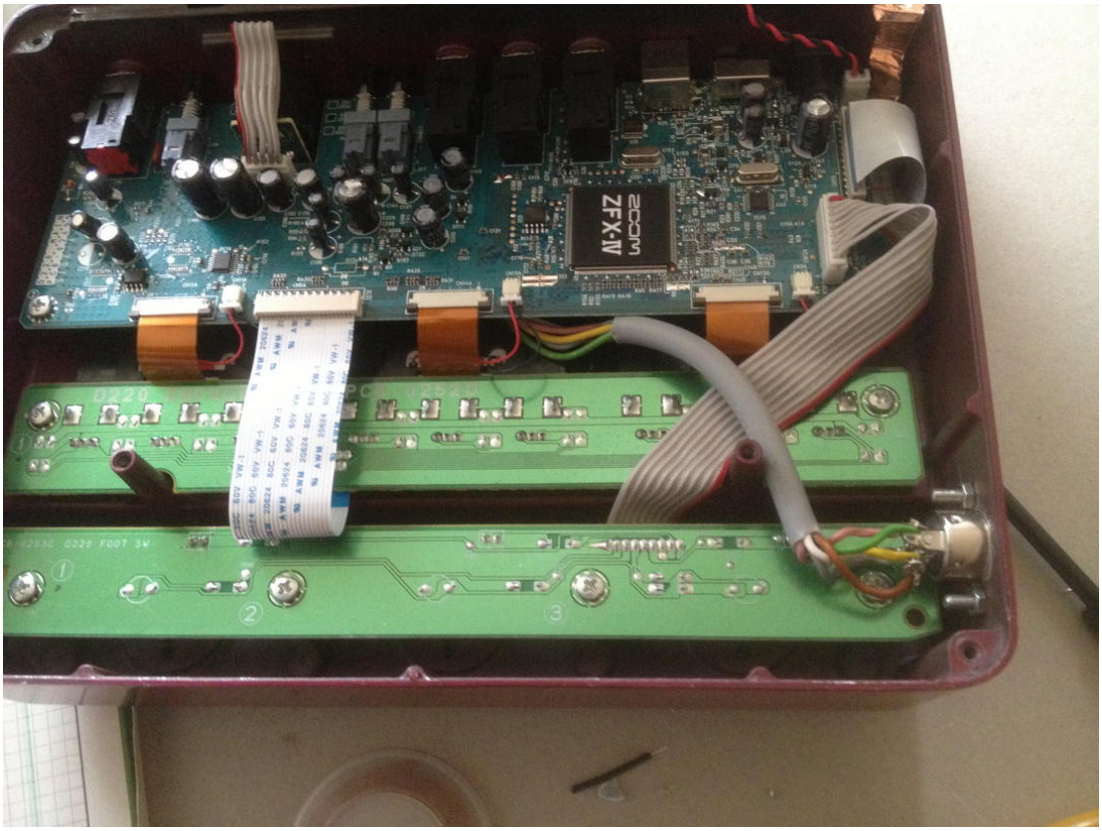
The following pictures document the modification (for instructions on how to open the unit please refer to the AshBass website http://ashbass.com/AshBassGuitar/Zoom/index.html?G3v2patchselect.html).

1) Soldering the cable's wires to the control board of the Zoom B3:

a) 

b) 

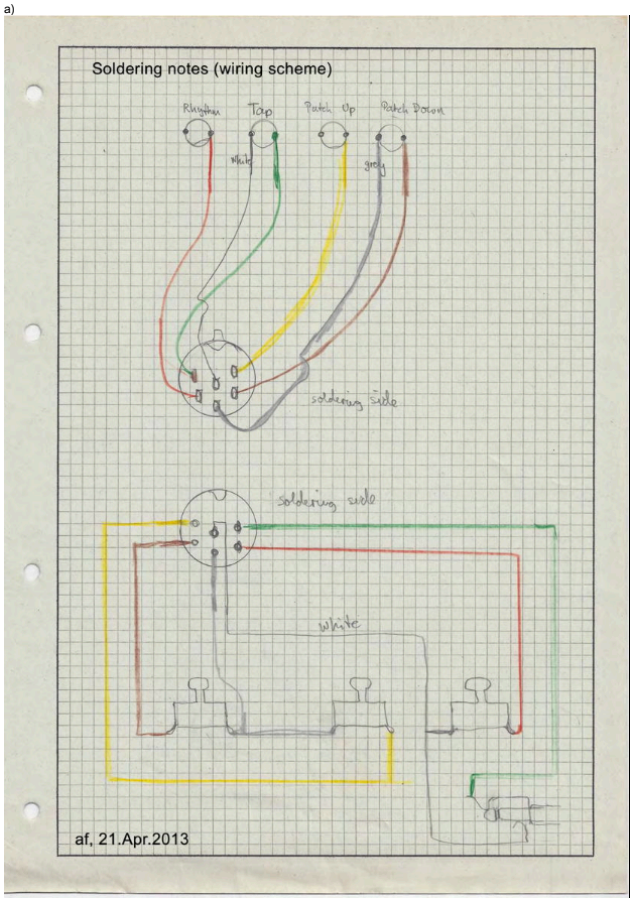
2) A DIN 6 pin jack brings the signals to the outside of the unit:

a) 

b) 

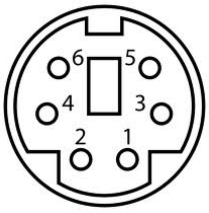
Note, I do not care that the case of the jack (or plug) touches the chassis, since it can't shorten the "ground" signal to which the control signals connect when you use the buttons "PATCH SELECT" ▼ or ▲ or RHYTHM ➤ / ▮▮ or TAP. Be aware, that such a shortening would defeat all these buttons on the front panel as well as the stomp foot switches. Nothing works anymore if this shortage happens. The needed "ground" signal differing from actual ground as on the chassis of the unit is provided by the middle pins of the jack. Those signals are connected via the grey and white wires to the control board. Note also, according to my testing it would have sufficed to lead only 5 wires out, since grey and white "ground" signal seems to be the same (shared). Thus using a 5 pin jack would also have been fine. However, I needed a space-saving right angle plug (see next pictures), which was available at my store only for this DIN 6 pin jack/plug combination. Thus, perhaps also usable for future uses, I connected both the grey and the white "ground" signal to the two middle pins of the DIN jack and made both available on the outside of the B3.

3) My soldering notes
a)



Current use in my Rockbag effects board (Warwick with 9 V outlets, RB 23110 (40.5 x 30 x 10 cm), e.g. http://www.amazon.co.uk/gp/product/B000T4V1KK?ie=UTF8&tag=shopwiki-uk-21&linkCode=as2&camp=1634&creative=6738) supporting switching instruments (AB100) between e-cello (cable connection) and bass (LINE 6 G30) in the middle of playing and signal adjustments between the two instruments (MXR 6 band EQ).

Perhaps the trickiest thing to accomplish with this mod was to solder the DIN 6-pin plug with the slightly too thick 6 wire cable I used.
b)



DIN 45322

Following picture shows not the identical plug I actually used but a similar one; it has only 5 pins:

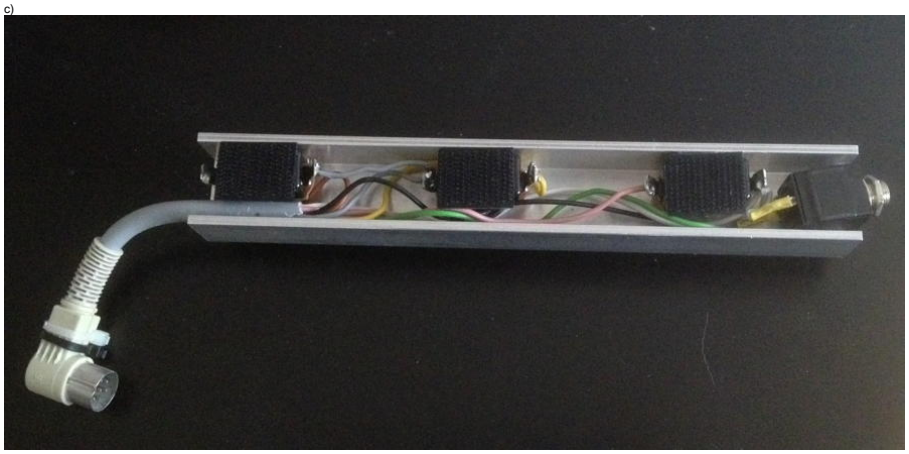
Everything got very tight. Soldering was difficult, since the wires were too thick to fit into the pins. I could almost no more close the plug and I needed some cable fixers to hold the plug together. I hereby had also to fight some shortening of the "ground" signal with the chassis (that's why I know also from personal experience what this does to the B3). I was able to overcome the latter by using shrink tubing and insulating tape inside the plug. Perhaps thanks to the tight space the plug might now remain rather solid. Future will tell.

4) These are some snapshots on the stompbox bar in the making:

a) 

b) 

c)



The dimensions of the first stomp-bar were 20.35 x 3 x 2 cm aluminum U-profile. A length of 21 cm still fits the B3's size and is a bit preferable in order to fit the jack on the right side of the bar in better (see drawing below for final bar that has this length). Note, the bar is rather low, which is good, since then is it less likely to accidentally hit a stomp on the B3 itself. However, since that bar is rather low, one has to make sure one finds footswitches that really still fit in it and are not too high. I was lucky to find the needed ones making an almost perfect fit so I could put self-adhesive velcro onto their bottoms and thus attach the bar conveniently onto the board.

5) This is the not yet finished, yet already fully functional stompbox bar hooked to the B3
a)

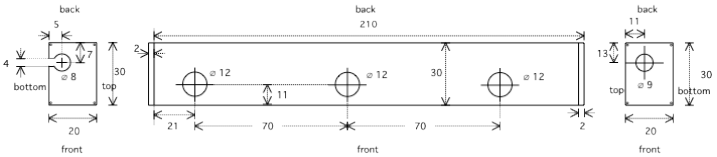
placed in front of the B3. Here the bar is just before the board (but compare with the final placing on the pedal board towards the end of this documentation):
b)

I use three momentary foot switches (Pushbutton Footswitches momentary, i.e. non-latching, e.g. available from here Pushbutton Footswitches Momentary :: Switches :: Electromechanical :: Electronic Parts :: Banzai Music GmbH).With the leftmost and the middle switch I do the "PATCH SELECT" ▼ (Down, leftmost stomp) and ▲ (Up, middle stomp) and with the third right switch I do RHYTHM ➤ / ▮▮ (Start, Pause). TAP (tap tempo) can be done with an additional, commercially available standard non-latching (momentary) footswitch. To tap the tempo I favor such a solution, say over a 4th pushbutton. Thus I have a standard 6.5 mm mono jack to the right of my stompbox bar. I use a standard mono patch cable (6.5 mm jack, plug) here to hook up the non-latching footswitch PFS20 from JSH. This solution adds flexibility. Since I don't need to tap tempo on stage when gigging with my band, I can leave that part out.

7) Here the dimensions of the final stompbar:

Stompbar

All dimensions in mm



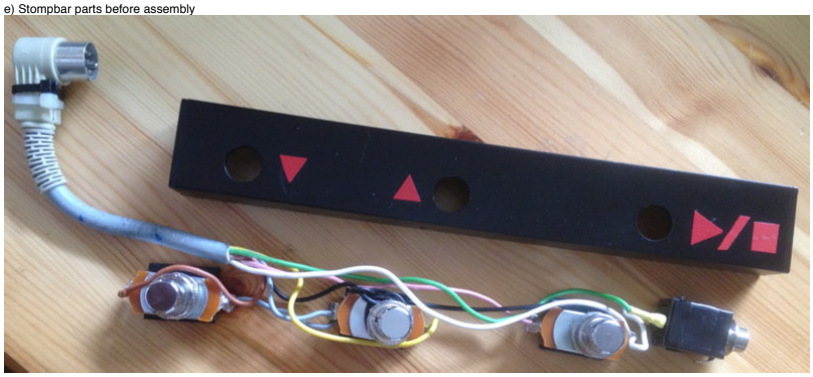
af, 26.Apr.2013

I got great help from a colleague, Peter Isler, who made the 2nd stompbar, this time with lids not only on the right, but also on the left side. The lid on the right side is essential to mount the mono 6.5 mm female jack to the stompbar, so that it becomes possible to hook up the extra footswitch for tapping the tempo.

8) Some snapshots while painting and labeling the final stompbar. I used red insulation tape for the labels.

a) - d) The painted and labelled aluminum case from all sides

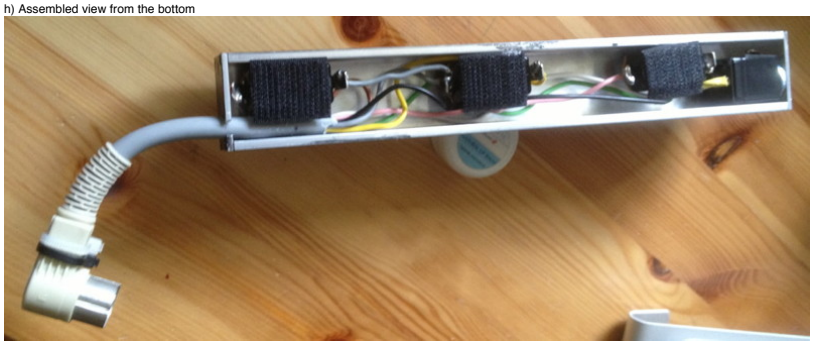
e) Stompbar parts before assembly



f) Avoiding scratches on the painted surface while tightening the screws by using a thin cardboard with a cutout of the size of the footswitches:

g) Assembled view from the top

h) Assembled view from the bottom



i) Closeup from left

k) Closeup from right

9) This is how everything looks in finished and finalized form:

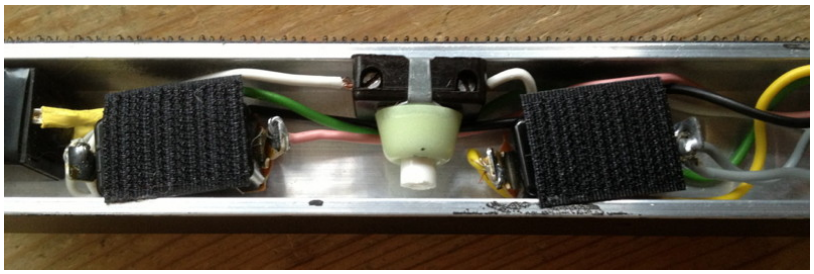
a) my effects board with the final stompbar

b) under tripod holding the e-cello

c) stompbar on the ground and velcroed to front side of effects board giving the feet a bit more space while stomping

af, 21.Apr.2013 and 30.Apr.2013

I introduced a gig mode switch. It suppresses all rhythm controls to avoid to accidentally activate drums in the middle of a performance. This switch disconnects the white cable before the 3rd rightmost stomp footswitch and the jack on the right end that takes the plug from an extra tempo tapping footswitch.



af, 3.Jan.2014