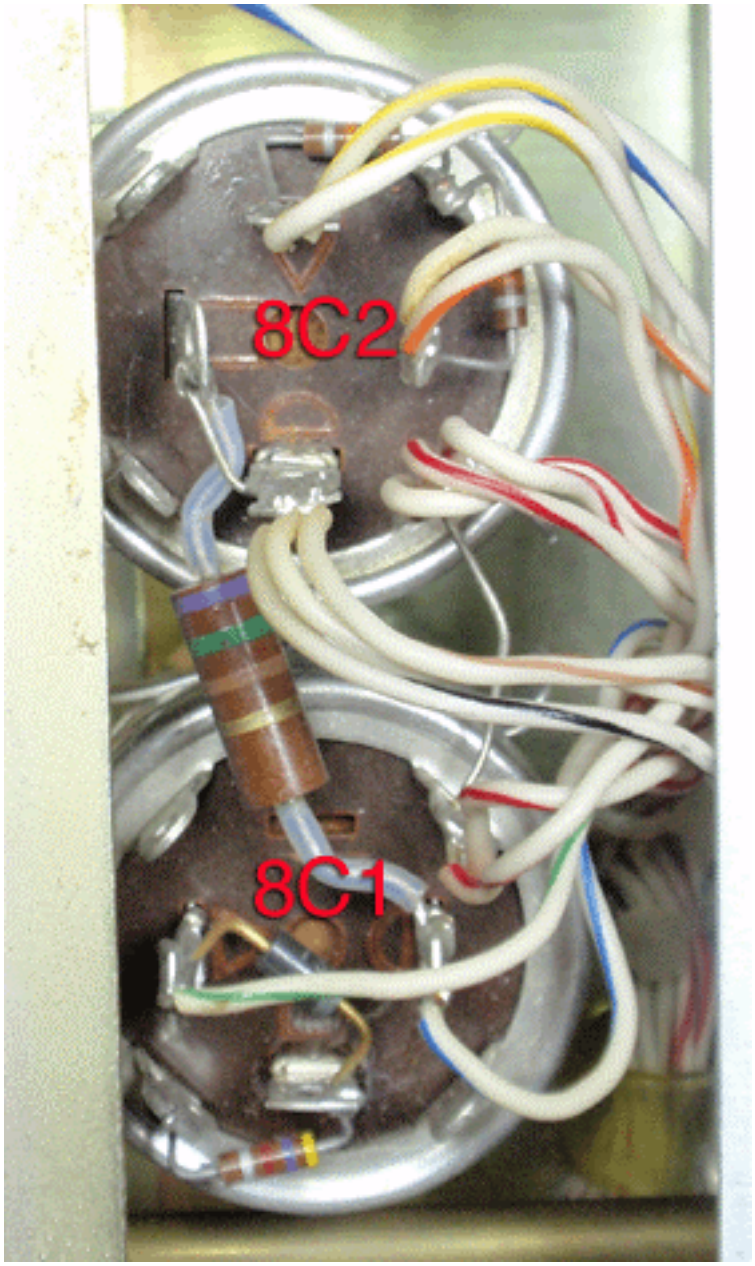
# 440C Recapping Manual

Do to all the interest in the Ampex 440B cap PCB to replace the 85 deg GE can caps in the 440B chassis, I have had requests do design a cap PCB to replace the  65 deg, Mallory can caps in the Ampex 440C chassis.

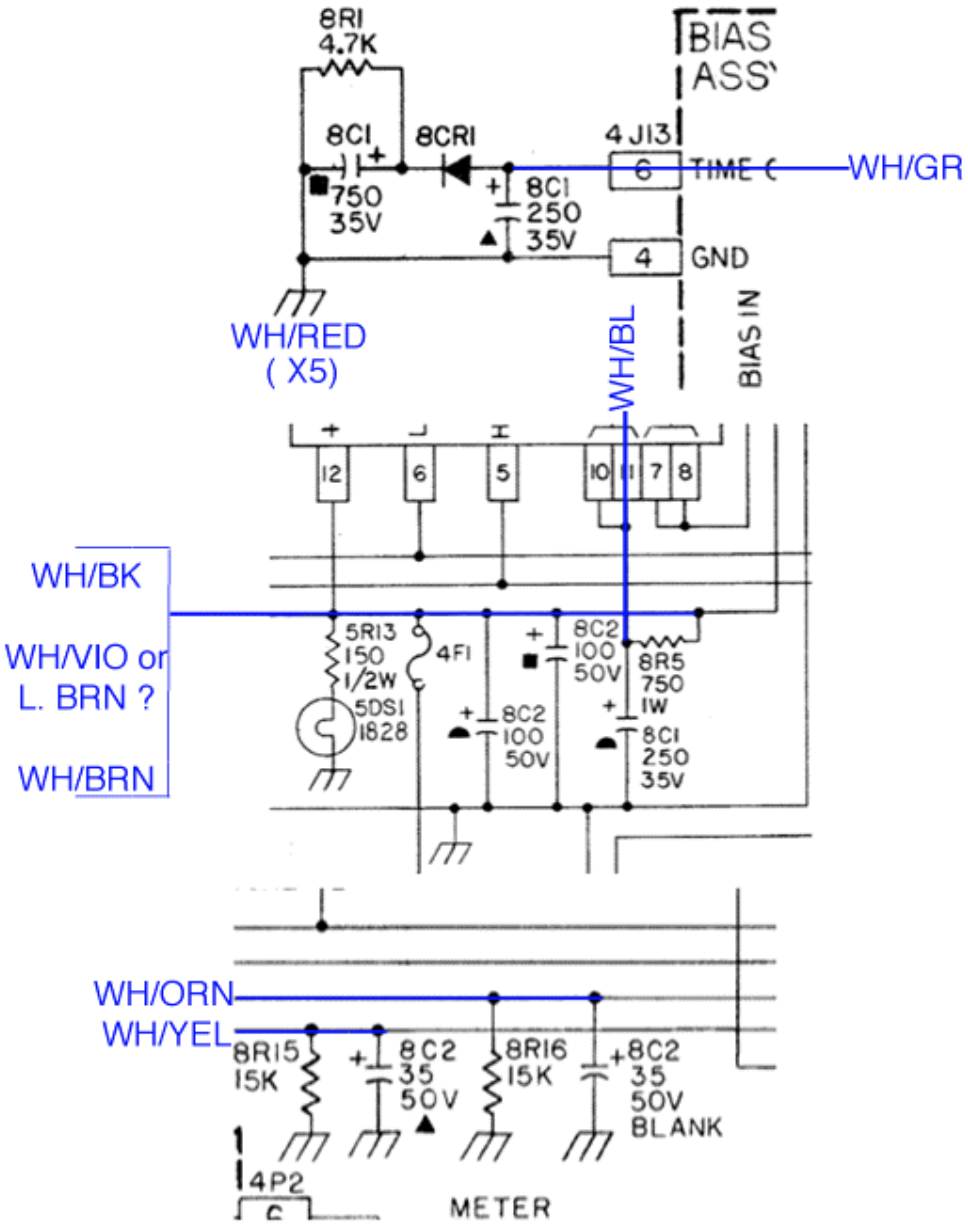



Here is the Skitz… Note these scans are 3 sections from the 440C manual. The top part is attached to the Bias PWA connector and include the 8C1 SQ, 8C1 TR, 8R1 resistor and 8CR1 diode.

The middle section is the PSU reservoir caps and contain 8C2 TR, 8C2 SQ, 8C1 RD (half round) and 8R5 1 watt resistor.

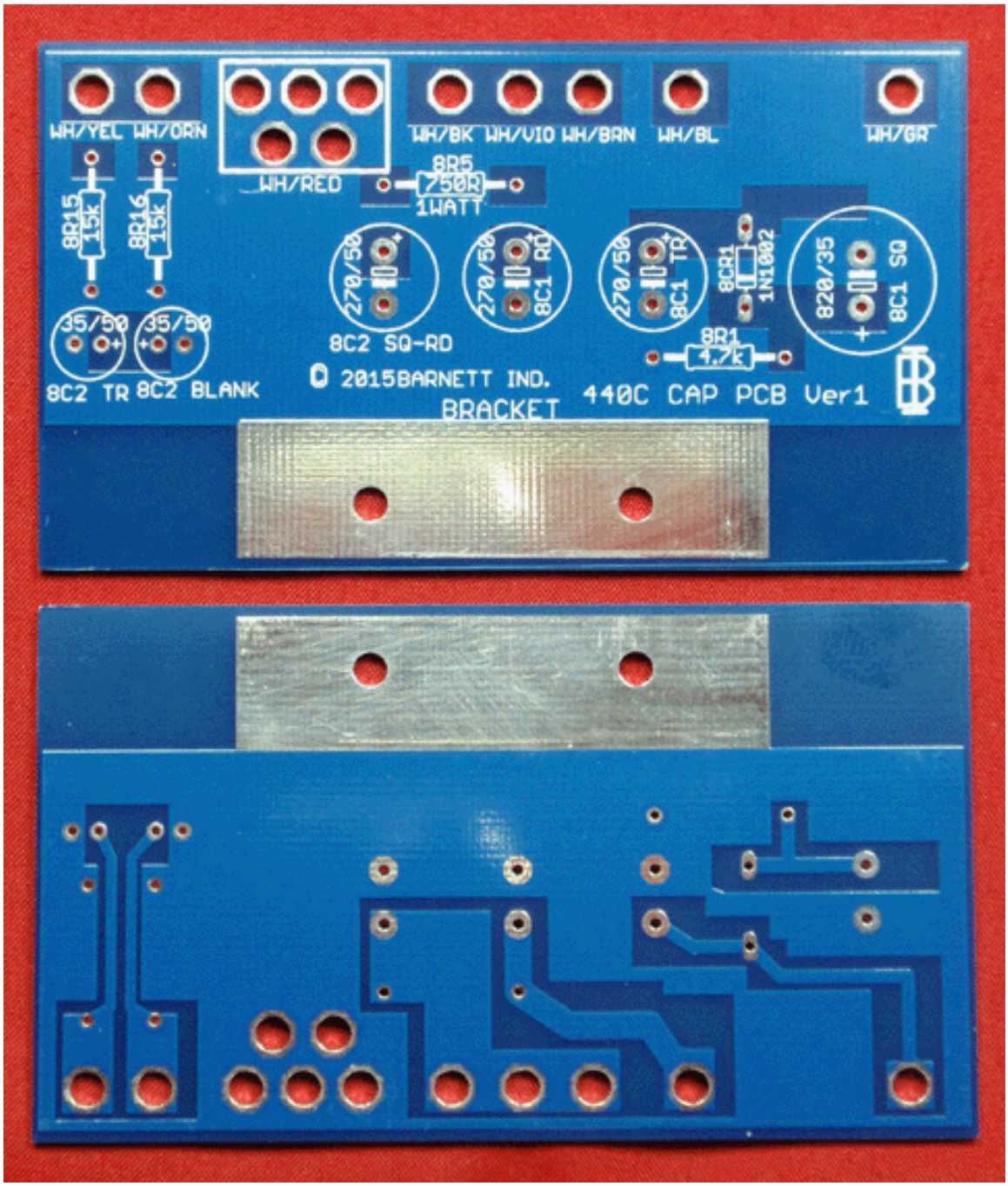
The bottom section is the EQ speed control switch attached to the Reproduce PWA and contain 8C2 TR, 8C2 Blank 8R15 and 8R16 resistors.

I have marked the wire color codes that connect to the old can caps in Blue.

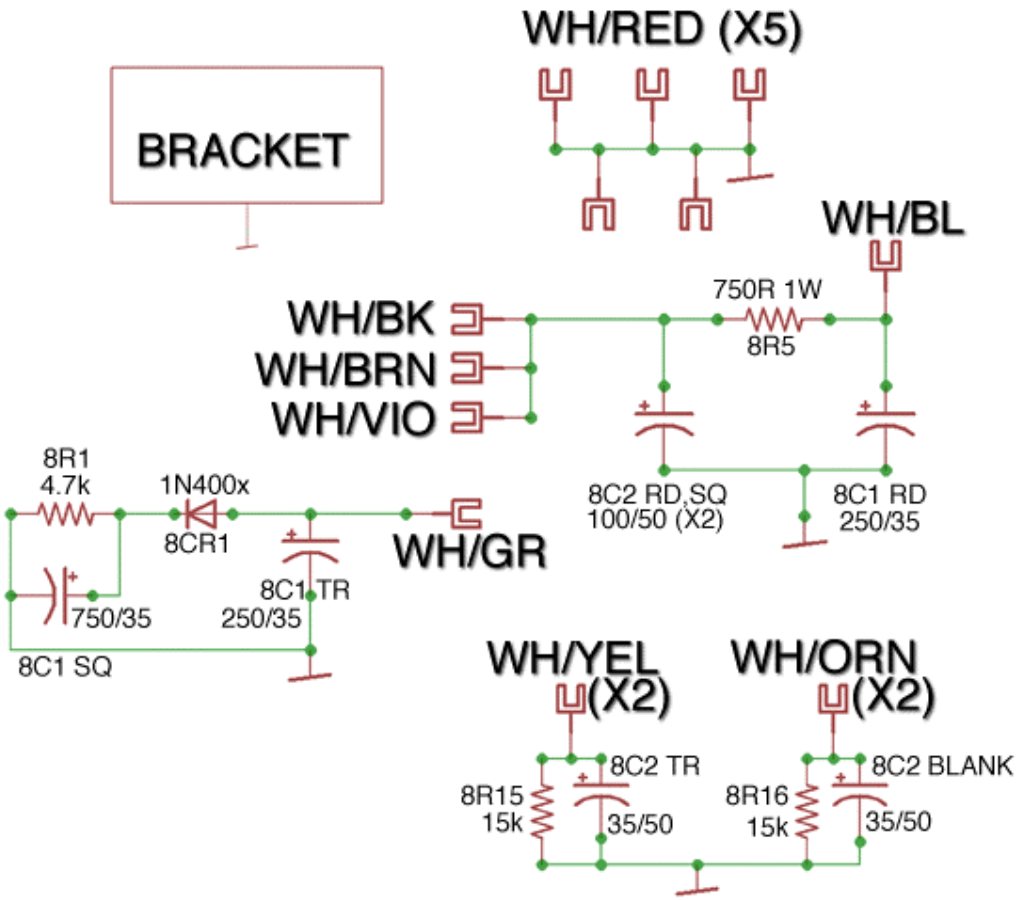



Note that 8C2 RD and 8C2 SQ are 2 100uf caps in parallel and will be replaced By one 270uf cap

This is the resulting new PCB..



Here is the skitz and BOM for the new PCB.




| BOM | | MOUSER |
|---|---|---|
| 8C1 SQ | 820/35 | 667-EEU-FC1V821L |
| 8C1 TR | 270/50 | 667-EEU-FC1H271 |
| 8C1 RD | 270/50 | 667-EEU-FC1H271 |
| 8C2 RD,SQ | 270/50 | 667-EEU-FC1H271 |
| 8C2 BLANK | 47/50 | 667-EEU-FC1H470 |
| 8C2 TR | 47/50 | 667-EEU-FC1H470 |
| 8R1 | 4.7k 1/2W | 273-4.7k-RC |
| 8R5 | 750R 1W | 594-5073NW750R0J |
| 8R15 | 15k 1/2W | 273-15k-RC |
| 8R16 | 15k 1/2W | 273-15k-RC |
| 8CR1 | | 512-1N4002 |
| TERMINALS | | 855-H9030-01 |

Note that the 750R 1Watt resistor replacement part is physically much smaller Than the old carbon comp 1 watt guy. The new guy really is 1 watt.

I do not own an Ampex 440C chassis so Rick Chinn over at the Ampex Mailing List was kind enough to box up one of his and ship it to me as a loaner. Thanks Rick!!

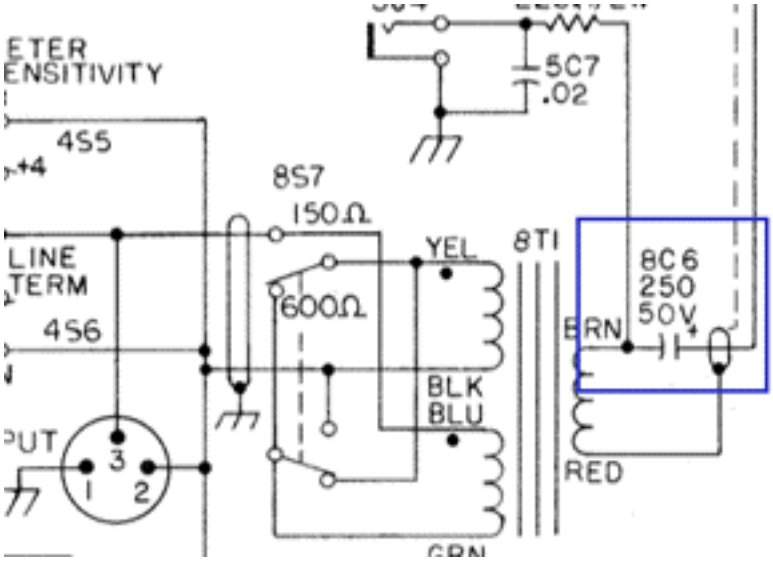
Here is a Ampex 440C recapping tutorial using this new PCB.

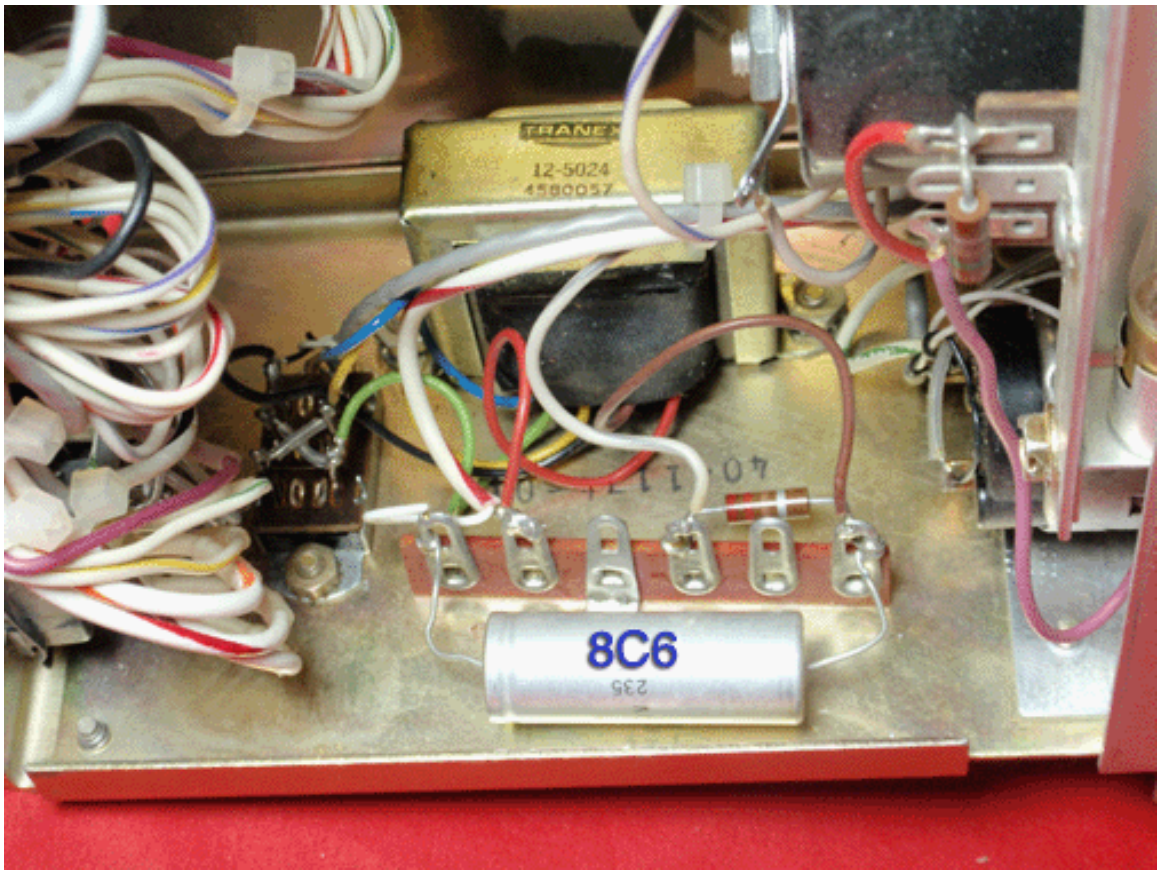
Start with the 440C PWAs. These guys are very much the same as the 440B PWAs. Check out the first part of this thread for recapping instructions…

http://groupdiy.com/index.php?topic=60609.0

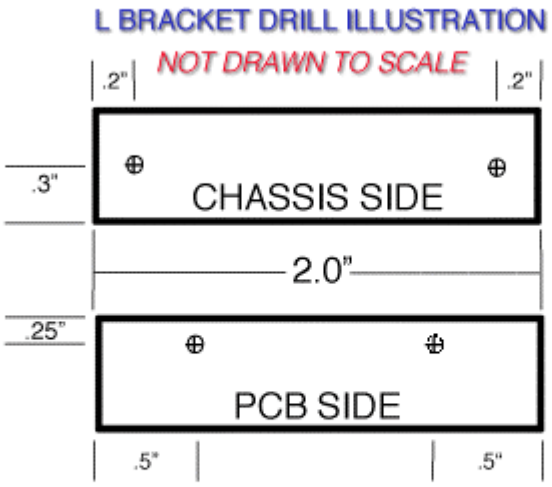
Remove the Top and Bottom covers of the chassis.

Next, replace the output cap. This guy is located on the end of the chassis behind The Reproduce level control and above the output trafo. In the Skitz this is labeled 8C6 And is 250uf/50v Replace with
Mouser part# 594-2222-138-18331 This is a Vishay /BC 105deg 330uf/63v
Optional would be t o shunt this output cap with a .1uf film cap.

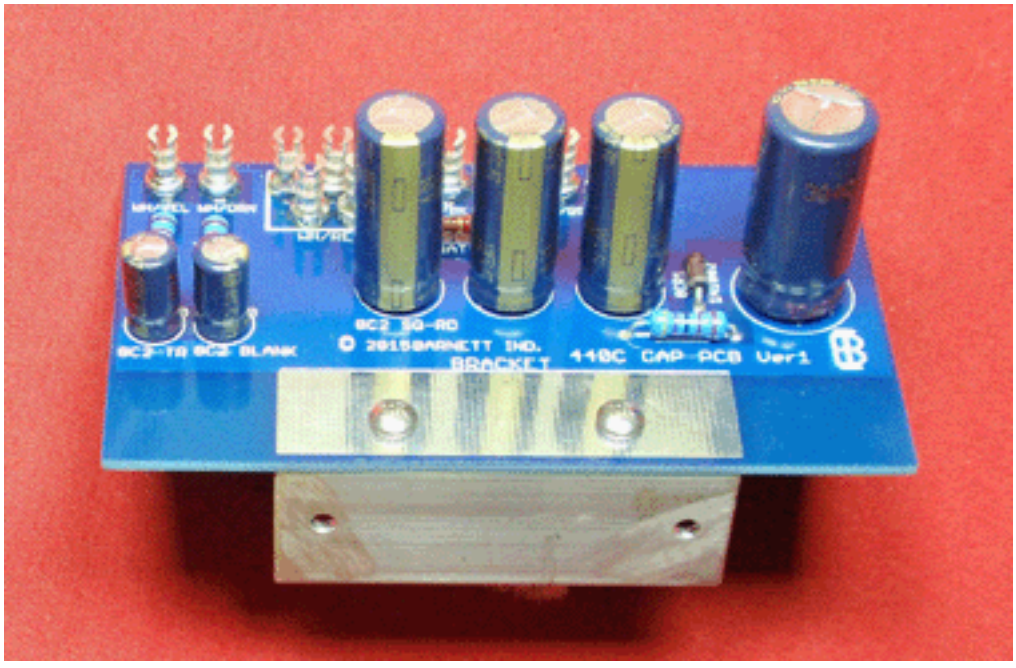




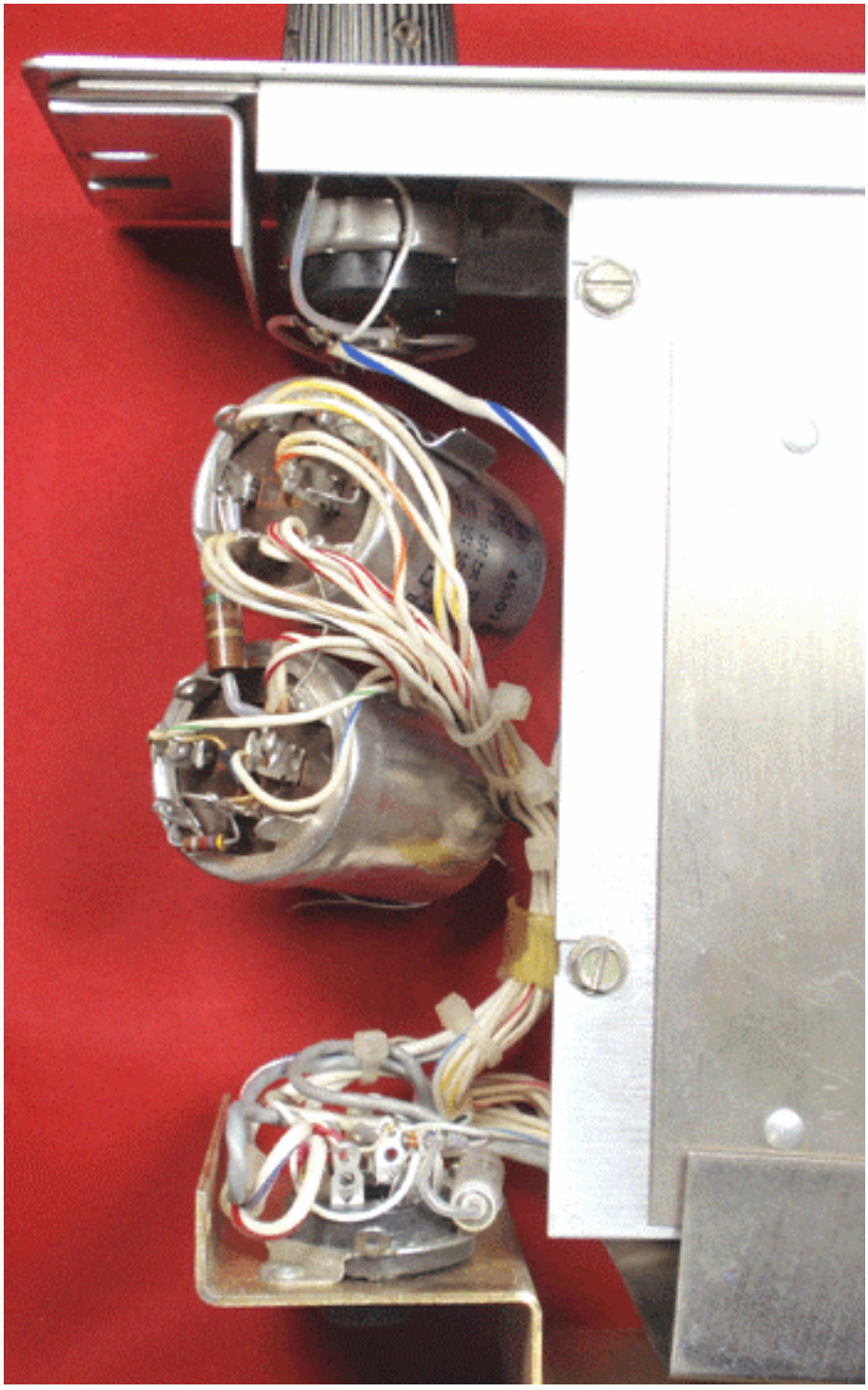
Cut a piece 1/16” X ½”  X ¾” Alum. angle stock 2” long (home depot, Lowes etc)
And drill it out with a 1/8” drill bit according to this diagram.



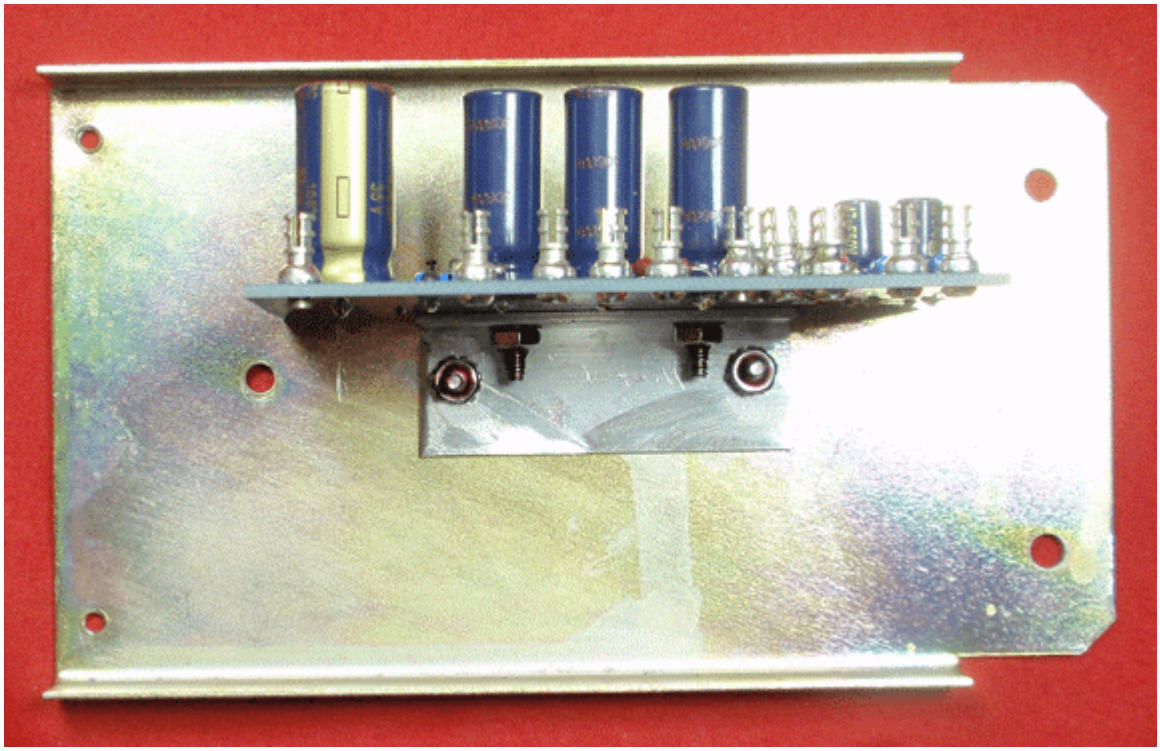

Stuff the new 440C cap PCB and install the Bracket with 4/32 harware.
Loctite the nuts.



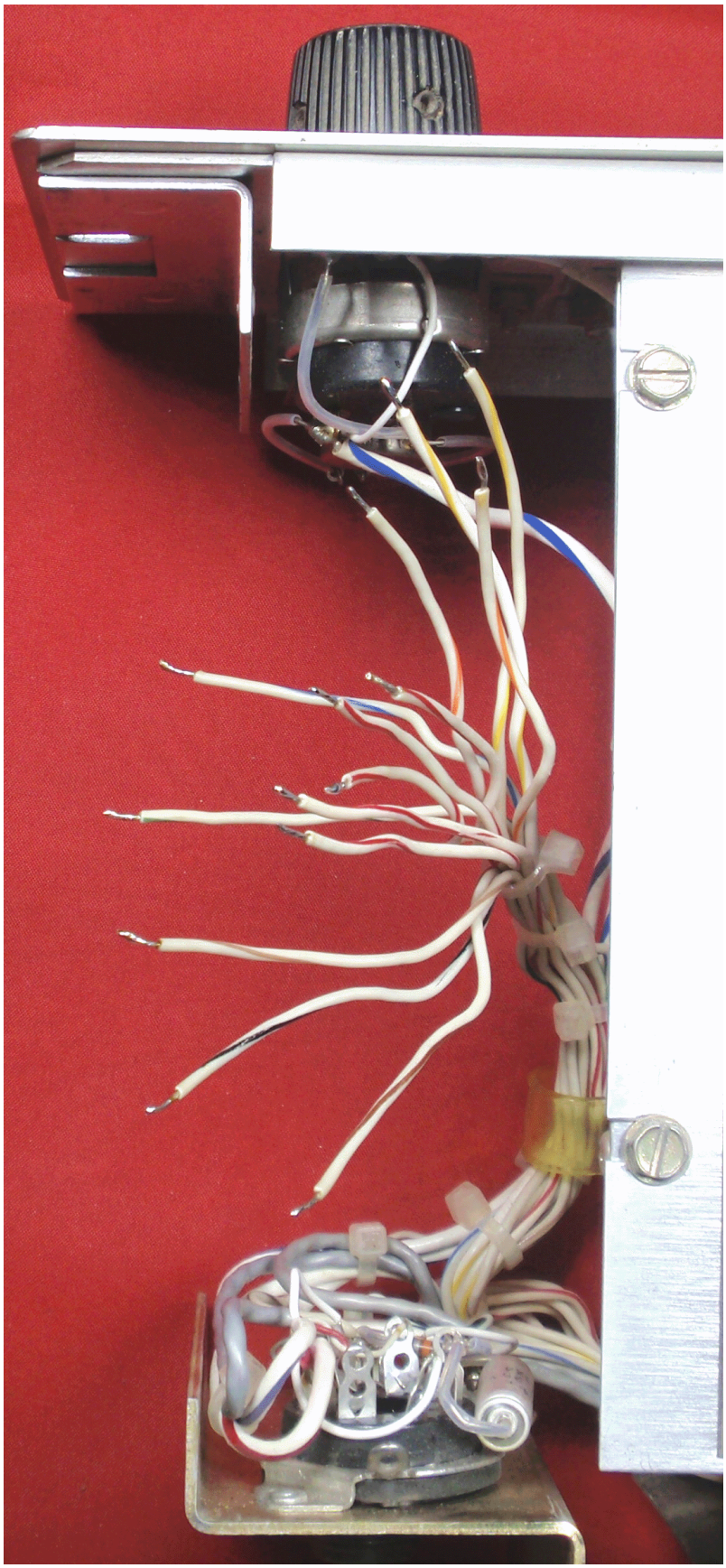
Remove the side panel behind the Record level control and remove the can cap Brackets that hold the cans to the side panel.



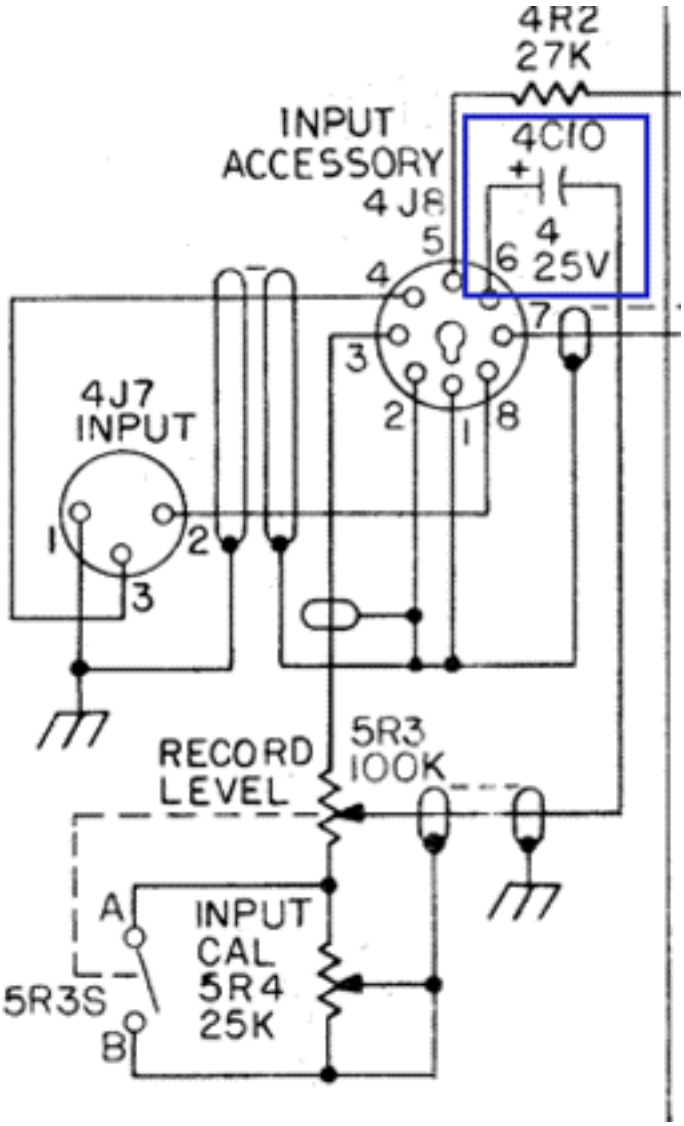
Install the new PCB on the side panel, Loctite the nuts
and set it aside.

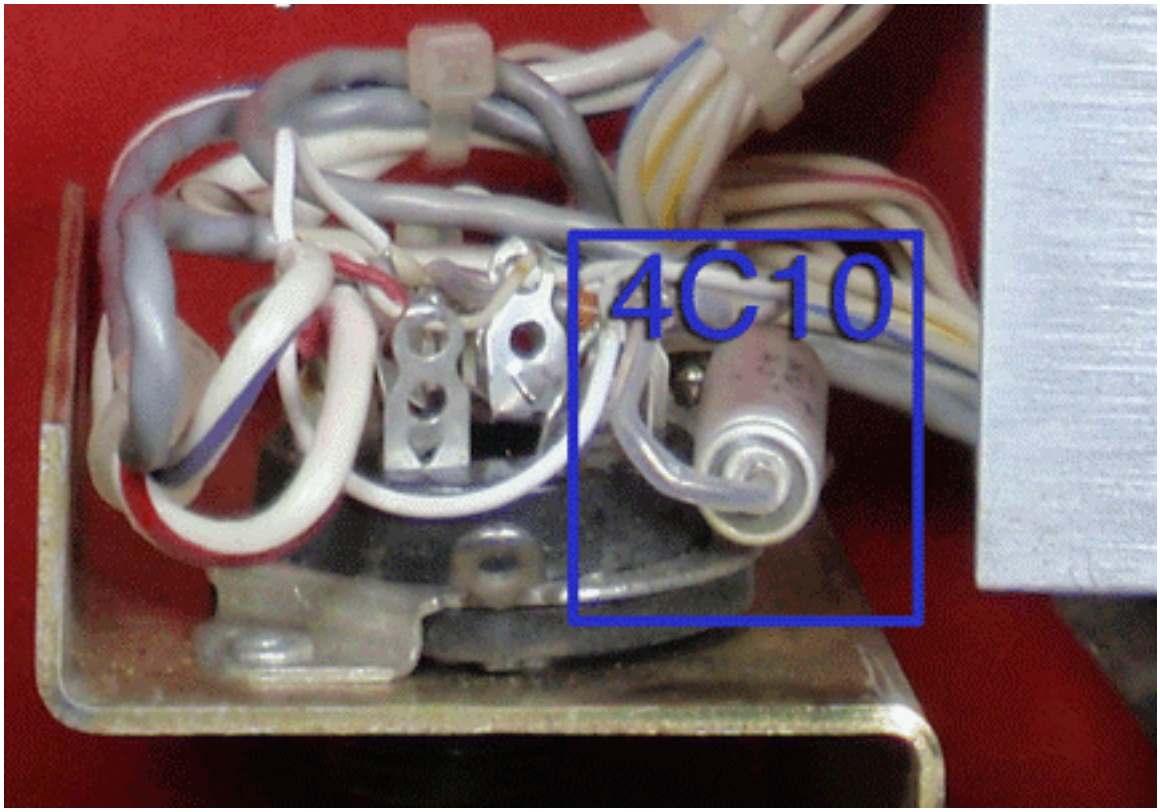


Cut the wires off the old caps at their terminals leaving the wires as long
As possible.  Strip and tin the wire ends. Set the old Mallorys aside complete
With the 4 resistors and 1 diode. These will be replaced with new parts
On the PCB.

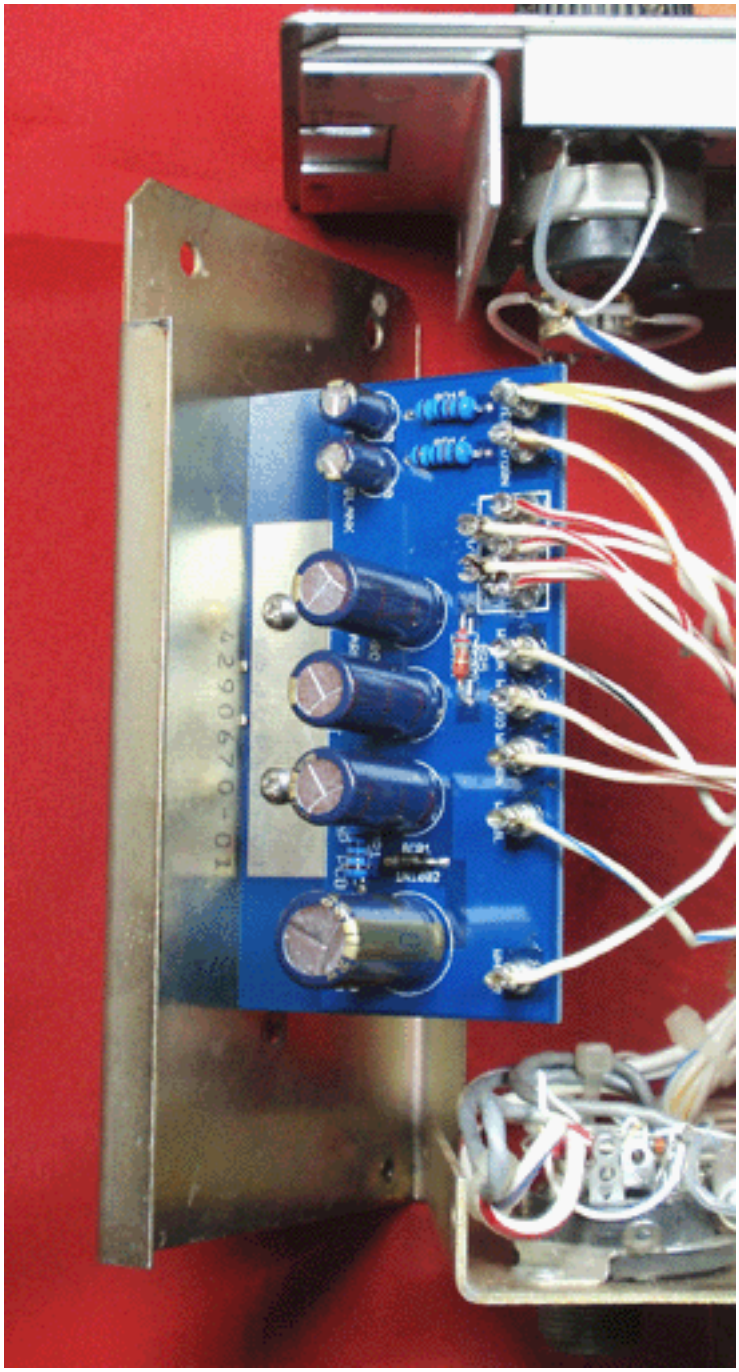


Replace the input cap marked in the skitz labeled 4C10  4uf/25v with Mouser part# 75-TE1204-E3  This is a Vishay/Sprague  TE series 10uf/25v cap.





wire the new PCB starting with the 5 wh/red wires



Next the 2 wh/orn on one terminal and 2 wh/yellows on one terminal.

Solder the remaining wires in this order..

wh/bk

wh/vio  (this could be wh/light brn)

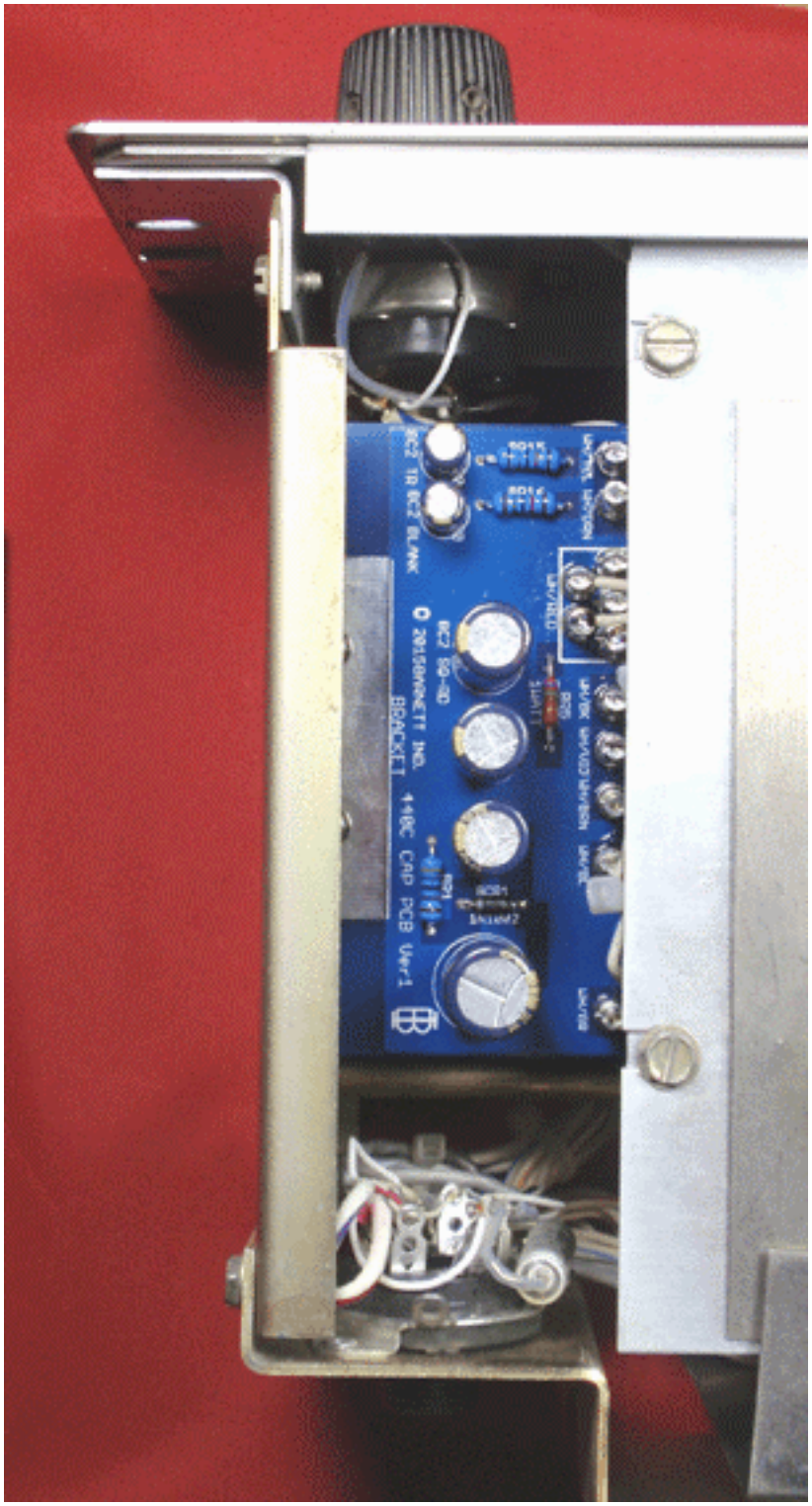
wh/brn.

wh/bl,

wh/gr

Assemble the side plate to the rest of the chassis

Make sure the long spacer and long machine screw are tight.



Double check every thing and replace the top and Bottom covers

YOU ARE DONE!!