

# FB-220 FILTER CAPACITOR BLOCK INSTALLATION INSTRUCTIONS

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## PARTS SUPPLIED WITH THIS KIT:

(1) FB-220 Filter Capacitor Block PC Board	(8) 100k $\Omega$ 3-Watt Resistors
(8) 210 $\mu$ F 450VDC Electrolytic Capacitors	(2) Plastic Support Frames
(8) 1N4005 Diodes	(3) #10-32x3/8" Screw (Non-SEMS)
(13) #10-32x3/8" SEMS Screws (with lock washer)	(3) Bent #10 Solder Lugs

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To start the installation, read these instructions very carefully. Now unplug the amplifier and remove any input, output and control cables that may be connected to the back of the amplifier. Place the amplifier on a book, front panel up, and remove the bottom screws holding the feet and case in place. Lift the case up and remove it from the amplifier. Place the amplifier on the bench with the front panel facing you. You are now ready to proceed with the installation.

- ( ) Assemble Filter Capacitor Block according to the assembly instructions and parts layout diagram.
- ( ) Remove the 15 sheet metal screws that hold the perforated cover in place and remove this along with the top rear plate cover.
- ( ) Remove the top rear #6-32 screw, nut and washer holding the right side panel in place along with the 4 sheet metal screws that attach the right side panel to the chassis.
- ( ) Remove the top front Phillips-head screw on the right side of the front panel. This will release the right side panel for removal.
- ( ) Tip the amplifier onto its left side.
- ( ) Unsolder the 3 wires attached to the old filter capacitor block. There is a **BLACK** wire from the rectifier board, a **BLUE** wire also from the rectifier board and a **RED & YELLOW** wire from the HV transformer.
- ( ) Remove the (4) #6-32 nuts and washers securing the capacitor bank bracket. Now lift the bracket up about 1/2".
- ( ) Remove the 8 capacitors and the nylon spacers. This task can be made easier by cutting some of the wires between the capacitors (they are no longer needed).
- ( ) Slip the replacement capacitor bank into the cavity vacated by the old capacitor bank with the solder lugs toward the front panel. **Make sure that you fully slide the block to the rear of the cavity. Now, slide the assembly approximately 1/16" out of the cavity.**
- ( ) Press down on the capacitor bank bracket and reinstall the (4) #6-32 nuts and washers. Depending on the tolerances of the bracket, you may have to leave off the washers. Tighten the nuts securely.
- ( ) Solder the 3 wires you removed earlier; The **BLUE** to the bottom solder lug, the **RED & YELLOW** to the middle lug and the **BLACK** to the top lug.
- ( ) Place the right side panel in position and secure with the 4 sheet metal screws removed earlier.
- ( ) Reinstall the top front Phillips-head screw on the right side of the front panel and tighten.
- ( ) Reinstall the #6-32 screw, nut and washer in the top rear of the back panel.
- ( ) Replace the perforated cover and top rear plate cover. Reinstall the 15 sheet metal screws holding these pieces in place. **DO NOT** over tighten these screws, as it is fairly easy to strip the screw threads in the aluminum underneath.

- ( ) Use the book to hold the amplifier while you reinstall the case and feet.

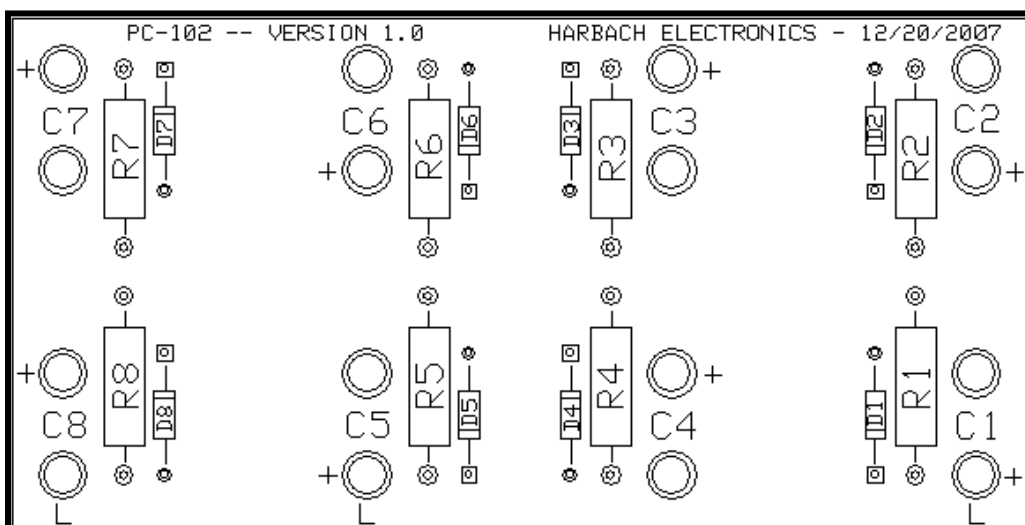
This completes the installation of the FB-220 filter capacitor block. It will provide you with a better power supply that provides the necessary B+ filtering and regulation. Your amplifier should not experience any filtering problems in the future.

### FB-220 FILTER CAPACITOR BLOCK ASSEMBLY INSTRUCTIONS

- ( ) Solder diodes and resistors to PC board according to parts layout diagram. Note: Diodes D1-D8 mount flat to the board and resistors R1-R8 must be raised above the PC board, but no more than 1/4" above board.
- ( ) Press the electrolytic capacitors through both sets of plastic holders one capacitor at a time. Note proper orientation so they match the positive/negative pads on the PC board. **NOTE: Depending on the thickness of the plastic coating on the electrolytic capacitors, you may have to enlarge the inner diameter of the holes slightly using a razor blade or razor knife. You should remove only enough from the inner diameter so that the capacitors fit very snugly!** The plastic holders should be spaced so that the bottom holder is approximately 1" from the bottom of the capacitors and the top holder is approximately 2-1/2" above the bottom spacer. You may use a few beads of hot melt glue to affix the holders to the capacitors, but this is not required.
- ( ) Mount the PC board to the top of the capacitor assembly using #10-32x3/8 SEMS screws (screws with the integral washer). NOTE: Use a regular #10-32x3/8" screw and a bent #10-32 solder lug on the holes marked "L" OR "LUG". See parts layout diagram.

### PC BOARD PARTS DESIGNATION:

<b>C1-C8</b>	210 $\mu$ F 450VDC Electrolytic Capacitors	<b>D1-D8</b>	1N4005 Diodes
<b>R1-R8</b>	100k $\Omega$ 3-Watt Resistors	<b>L1-L3</b>	#10 Bent Solder Lugs



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