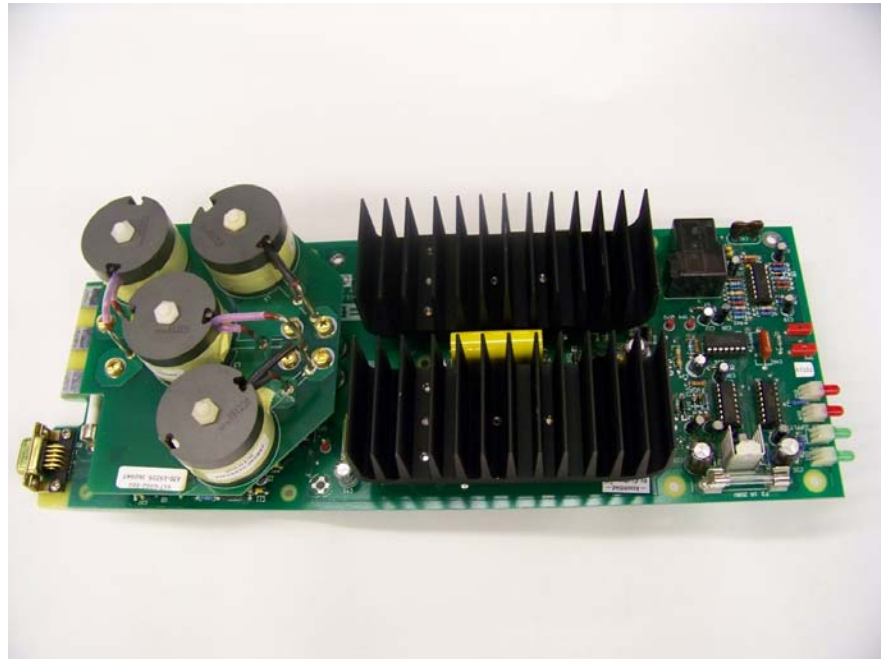




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## AM Modulator Board

### Field Upgrade kit

597-0302-105  
7/28/10  
Rev.A

## **AM Modulator Board**

### **Field Upgrade kit**

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**NOTE:** PA modules with modulators upgraded with the 917-0302-105 kit are fully backwards compatible with PA modules that have not been upgraded. It is acceptable to mix upgraded and non-upgraded PA modules in the same transmitter.

## 1 Purpose of this Document

The purpose of this document is to describe the necessary steps required to perform a field upgrade of the modulator capacitors in the AM series amplifier module.

**NOTE:** This upgrade is authorized to be performed on the 917-0302-100 modulator boards ONLY.

## 2 Tools / Items Needed

- ☐ AM Modulator Board Field Upgrade kit 977-0302-105 (1 kit required per modulator board).
- ☐ #2 Philips screwdriver
- ☐ 3/8" nut driver or suitable tool
- ☐ Solder iron and solder

## 3 Estimated Upgrade Time

Providing that you have the items listed above, it will take approximately 45 minutes per modulator board to complete this procedure.

## 4 Preparing the Module

**Step 1** – Turn transmitter OFF and remove the first PA module from the chassis. Place it on a suitable work area following electrostatic discharge precautions (ESD).



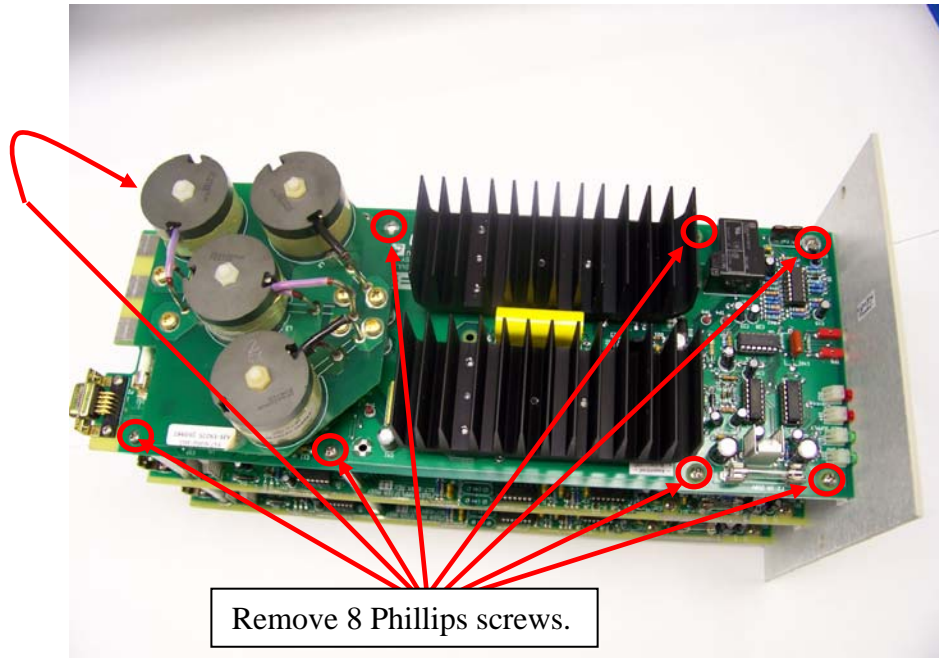


Figure 1. PA Module Assembly

**Step 2** – Remove the Modulator Assembly for the PA module by removing 8 #2 Phillips shown.

**Step 3** –On the back of the modulator board, remove the four screws and lock washers using a #2 Phillips screwdriver. See figure 2.

**Step 4** – Remove the two blue capacitors using the solder iron to melt the solder allowing the lead to be pulled out of the board.

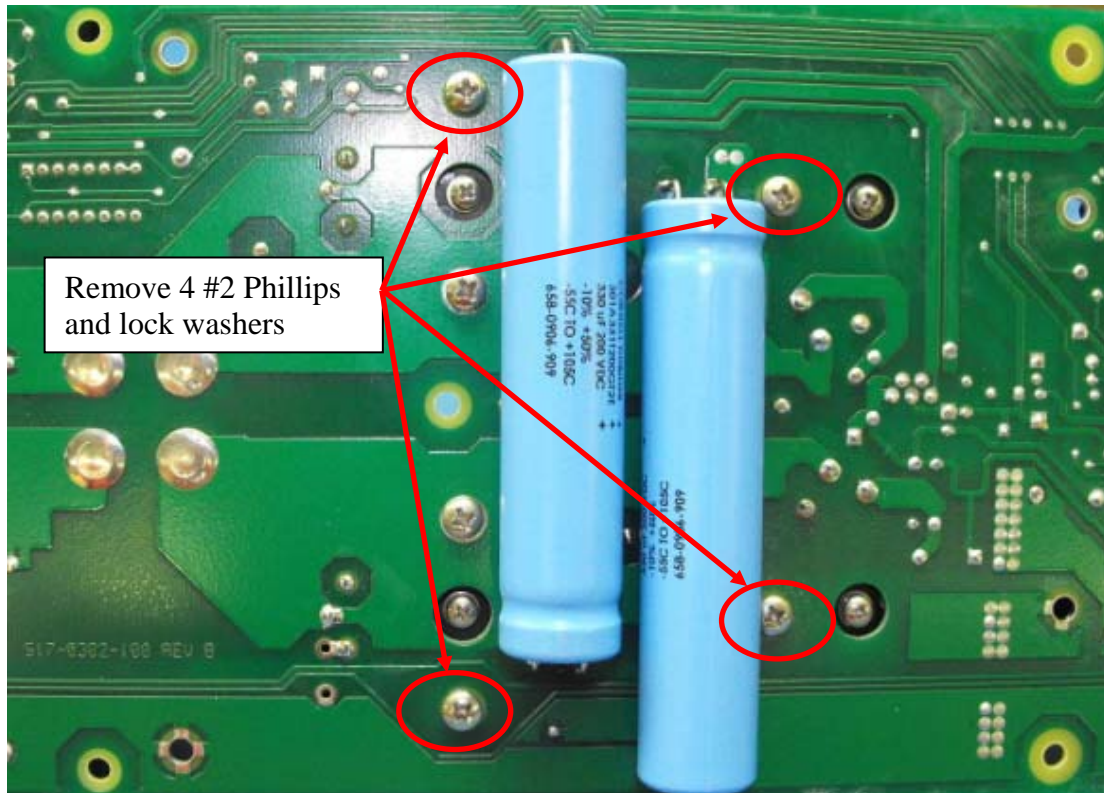


Figure 2. Remove two blue Capacitors and four Phillips screws with washers.

**Step 5** – Connect both 917-0302-105 assemblies to the modulator board 917-0302-100. You will need the following parts to assemble this to the modulator board.

- Qty 4 of ~1" cut lengths of bus wire 580-126
- Qty 4 of 420-6105 (screw)
- Qty 8 of 423-6002 (lock washer)
- Qty 4 of 441-0184 (standoff)

**Step 6** – Solder the ~1" cut lengths of bus wire 580-126 to the modulator board.

**Step 7** – Replace each screw removed from the Modulator assembly 917-0302-100 with one lock washer 423-6002 and one standoff 441-0184.

**Step 8** – Lower the 917-0302-105 assembly onto the bus wire (the side with the silkscreened logo should be facing the modulator board as shown in figure 5).

**Step 9** – Use one lock washer 423-6002 and one screw 420-6105 to fasten the board to each underlying standoff.



Figure 3. Stand-off detail.

**Step 10** – Kink the buss wire as shown in figure 4. Clip excess buss wire so that only ~ 1/8” protrudes above the adaptor board.



Figure 4. Kinked buss wire detail.

**Step 11**– Bend the wire nearly 90 degrees so it is parallel with the top pads and solder.

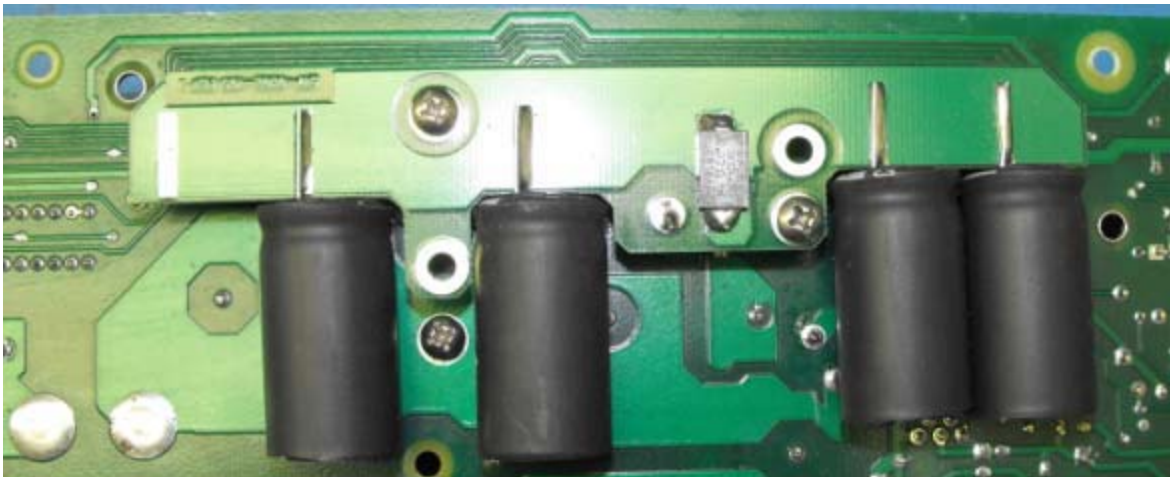


Figure 5. One capacitor board mounted on Modulator.

**Step 12** – Repeat steps 5 through 10 for the second capacitor adaptor board.



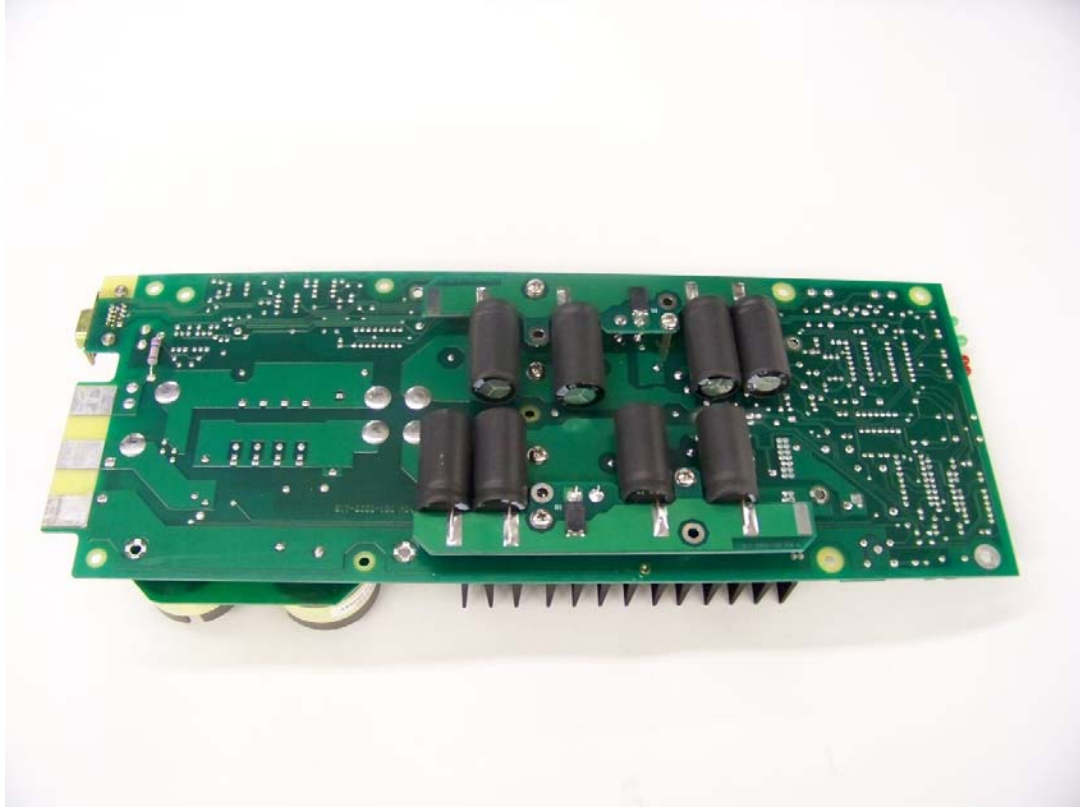


Figure 5. Finished Capacitor boards mounted on modulator.

**Step 13** –Reassemble the PA module and reinsert into transmitter.

**Step 14** –Repeat this procedure for all remaining PA modules if equipped with more than one module.

**5 Return the transmitter to the on-air state.**



## 6 RF Technical Services Contact Information

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