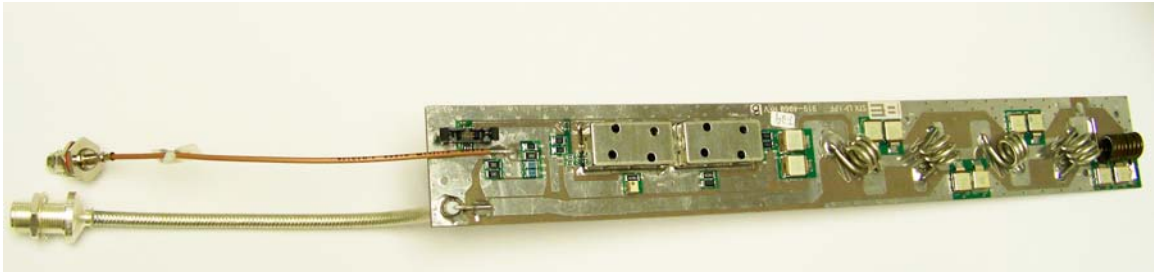




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## **STX Low Pass Filter** **Installation Application Guide**

597-4060  
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## **STX Low Pass Filter**

### **Installation Application Guide**

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# 1 STX Low Pass Filter installation

## 1.1 Overview of the removal and Installation of the Low Pass Filter.

Replacing the Low Pass Filter is a straight forward procedure. No adjustments to the Replacement Low Pass Filter are required.

# 2 Preparation

## 2.1 Overview / Estimated Completion Time

The basic installation of the STX Low Pass Filter will take about 5 minutes after the unit is on the bench.

## 2.2 Items / Tools required for the Upgrade Process

- No. 1 Phillips Screwdriver
- No. 2 Phillips Screwdriver
- 3/4" wrench
- 5/8" wrench
- 979-4060 Field Repair Kit, LPF/Coupler, STX LP
- 700°F Soldering Iron with chisel Tip
- SN 63PB37 Solder or Equivalent
- General Soldering Tools

# 3 Removal of the Low Pass Filter from STX chassis.



**WARNING: ENSURE ALL PRIMARY POWER IS DISCONNECTED BEFORE PROCEEDING.**

**Step 1** – Power unit OFF, disconnect all transmitter primary power, remove from rack and place on bench.

**Step 2** – Remove and retain the transmitter top cover screws using a #2 Phillips screwdriver.

**Step 3** – Remove and retain the screws from the PA cover using a #1 Phillips screwdriver.

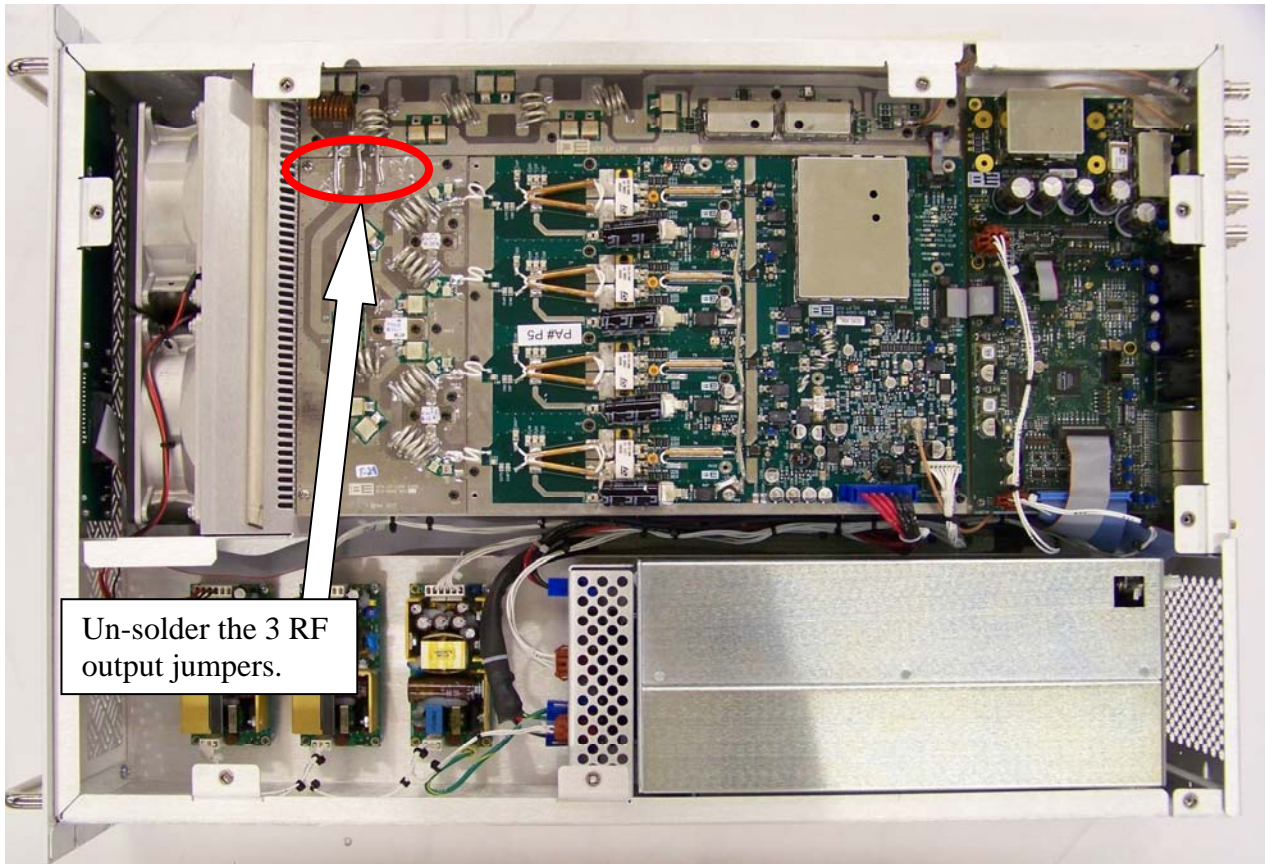


Figure 1. Low Pass Filter removal

**Step 4** – Un-solder the 3 heavy jumpers from the Combiner; 1 RF output and 2 grounds, being careful not to overheat the board.

**Step 5** – Disconnect the ribbon cable from J1 on the Low Pass filter.

**Step 6** – Remove the 6 Phillips screws holding the Low Pass Filter in the chassis.

**Step 7** – Clip the wire tie that holds the RF Sample coax noting its location.

**Step 8** – Remove the nut and washer from the RF Sample BNC connector and from the RF output N connector. And remove the filter from the chassis.

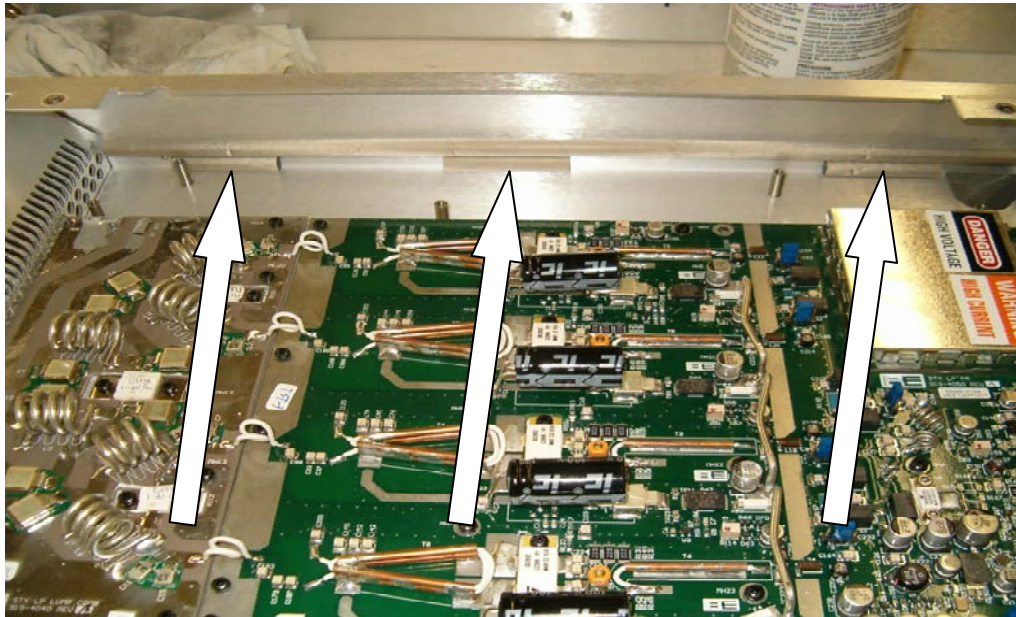
## 4 Quiet Shield foam insulation

For early production units, prior to November 2009 that has Quiet Shield Foam RF insulation under the Low Pass Filter follow the next steps. Later production units have a larger heat sink under the LPF and do not require this insulation, discard the foam strip on later production units and skip to the next section: Installing the Low Pass Filter in the chassis.

**Step 9** – Remove and discard all the original Quiet Shield foam that was under the Low Pass Filter.

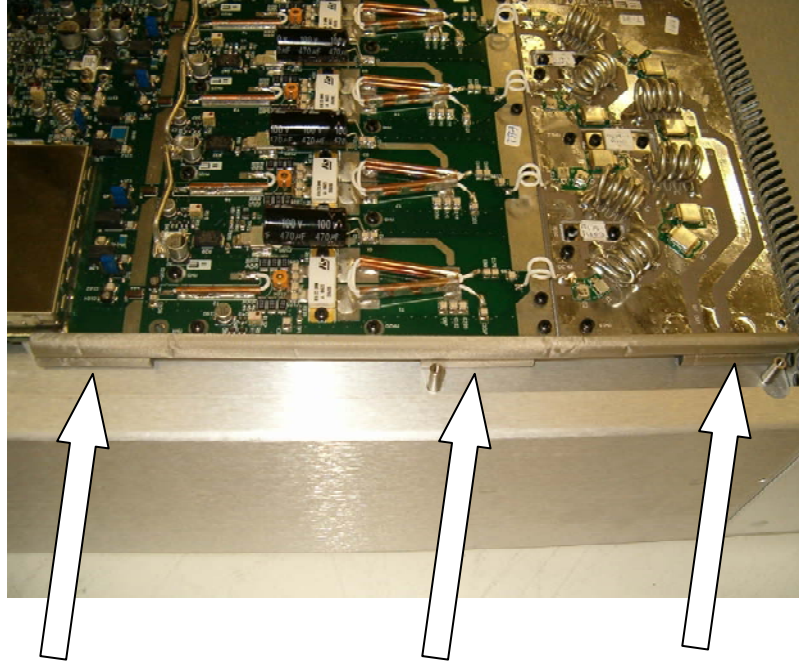
**Step 10** – Cut and apply (3) 2 inch pieces of the provided foam to the outer side wall of the chassis and against the floor under the Low Pass Filter opening. NOTE: the adhesive side is applied to the side wall of the chassis.

**Step 10** – Cut and apply (1) 15 inch piece of the provided foam to the outer sidewall of the chassis just above the 3 pieces previously applied. Use the three short pieces as a guide for the larger piece.



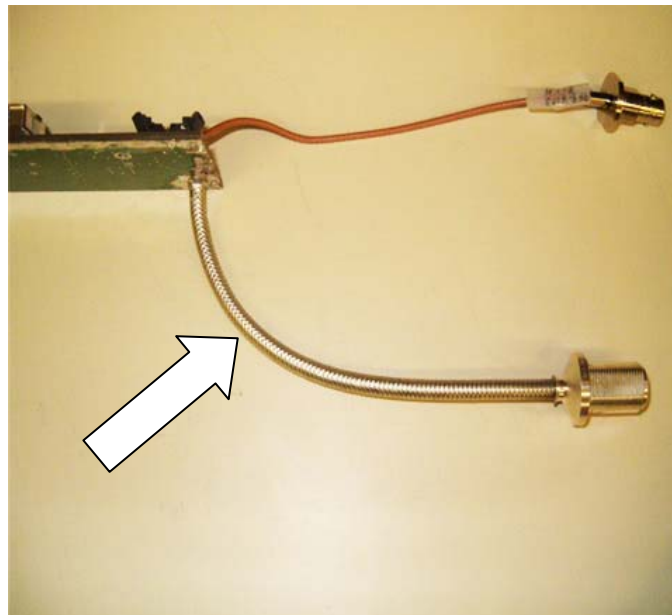
**Step 11** – Perform the same procedure on the opposite side of the Low Pass Filter opening. Cut and apply (3) 2 inch pieces of the provided foam to the inner side wall of the PA heat sink and against the floor. NOTE: the adhesive side is applied to the heat sink.

**Step 12** – Cut and apply (1) 11.75 inch piece of the provided foam to the heat sink just above the 3 pieces previously applied. Use the three short pieces as a guide for the larger piece.



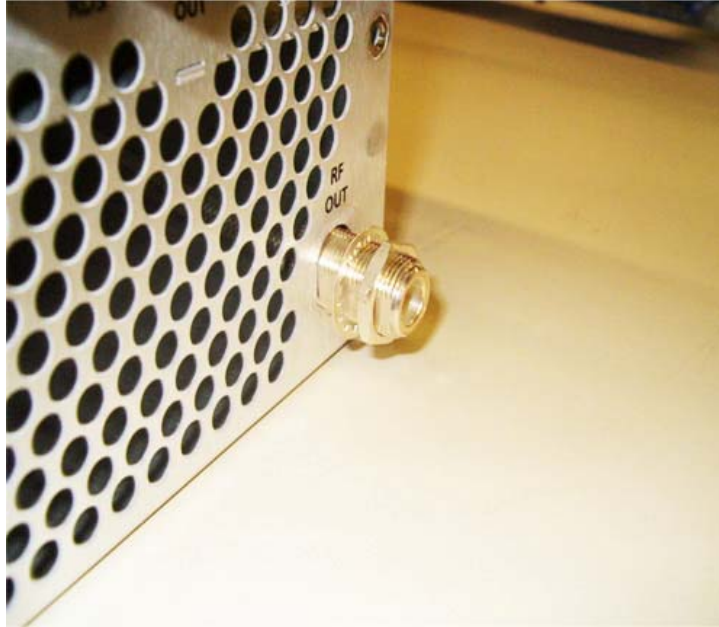
## 5 Install the Low Pass Filter in the chassis.

**Step 13** – Take the new filter and form the RF Output cable as shown.



**Step 14** – Route the RF Output cable through opening in chassis, install hardware and fasten to rear panel with  $\frac{3}{4}$ " wrench.

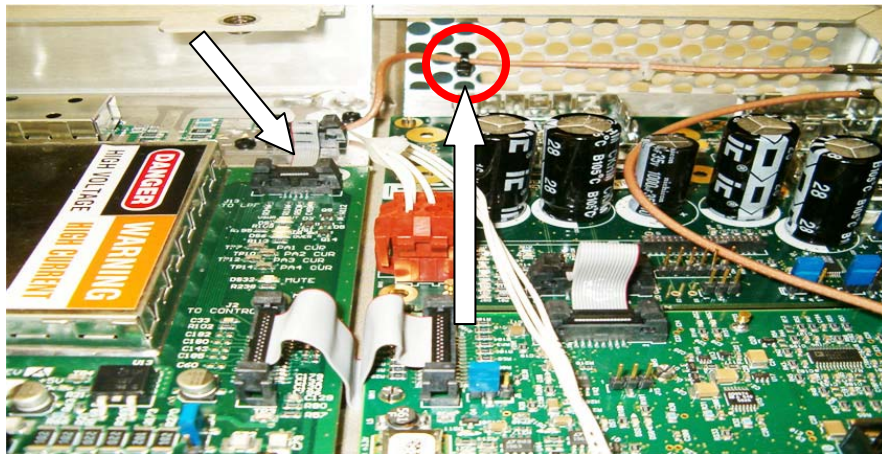




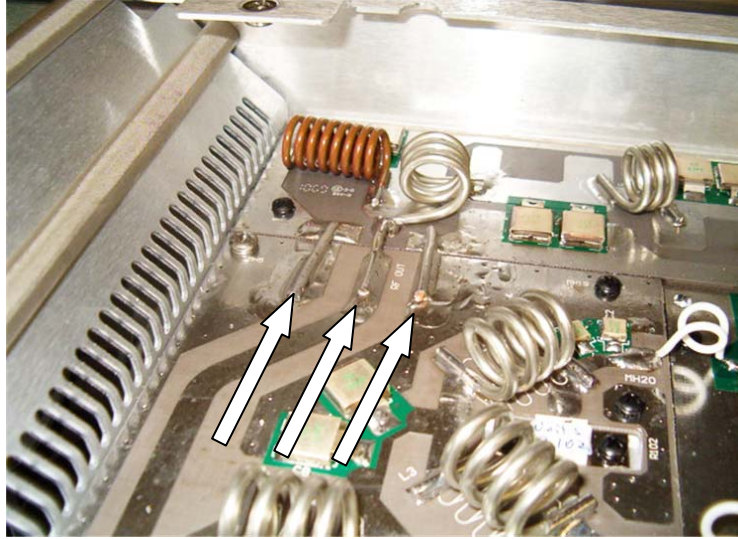
**Step 15** – Secure the filter to the chassis with #1 Phillips screws removed previously.

**Step 16** – Lay ribbon cable flat to the board so the cover does not pinch it. Connect to J1 on the Low Pass Filter.

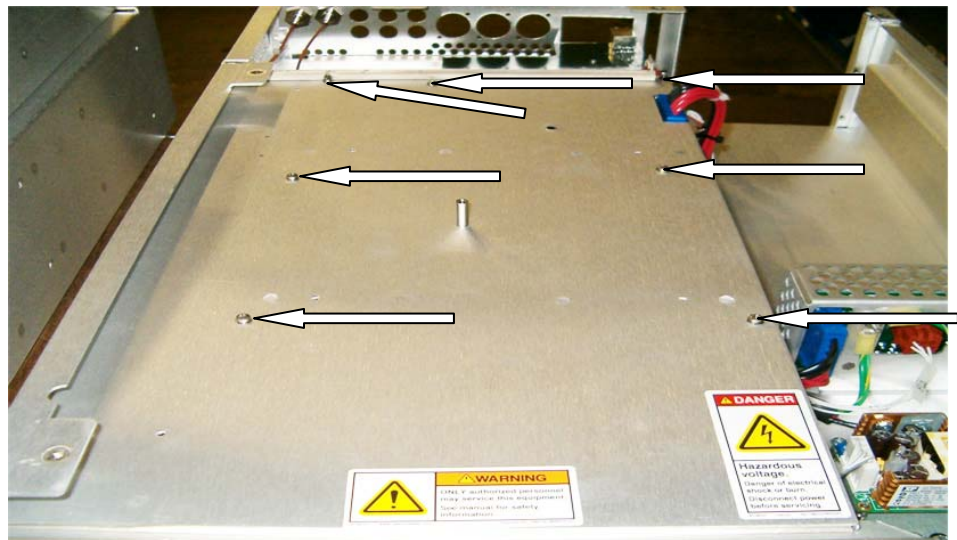
**Step 17** – Wire tie the RF sample cable as shown to align cable through cover opening and pass connector through rear panel. Fasten with 5/8" wrench.



**Step 18** – Solder the three heavy jumpers removed earlier. Clean with flux remover after soldering.



**Step 19** – Replace the PA cover using the seven #1 Phillips screws removed previously, making sure the cables are not pinched and are in their slots in the cover.



**Step 20** – Replace the top cover removed earlier using the #2 Phillips screws removed previously.

## 6 Apply Primary Power

**Step 21**– Connect to a suitable test load.

**Step 22** – Apply primary power

**Step 23** –Turn unit ON and ensure proper operation and meter readings. Verify the Forward and Reflected power is within the specified range.

## 7 RF Technical Services Contact Information

RF Technical Services -

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