

1. TEST EQUIPMENT

- A. 8620C Sweep osc.
- 86222A RF Plug In .01 - 2.4GHz
- 8410 Polar Display
- 8746B S - parameter test set .5 - 12.4GHz
- PS.501 Power Supply
  
- B. 7603 Mainframe
- 7B70 Time Base
- 7A18 Dual Trace Amp
- Current Sweeper
- 1st Converter Test Fixture

2. TEST EQUIPMENT HOOK UP

- A. 8620C Full sweep
- x.1
- Markers off
- x.1
- Mode - Auto
- Trigger Line
- Seconds 1
- Knob FCW
  
- 86222A RF on
- Power +8db
- int
  
- 8410 Auto stability FCCW
- Amplitude  $\approx$  50db
- Mode Amp1
- Phase offset +
- Amp/Div 10db/Div
- Phase/Deg/Div 90
- Degrees 0
  
- PS 501  $\approx$  .89v
- Current limit lite on
- Bananna Jacks hooked to - & + terminals
- from diplexer
  
- 8746B To S11
  
- B. 7603 Vert Mode Right
- Trig Source Right
  
- 7B70 Mode p-p auto
- Coupling AC
- Source - Int
- Time/Div - 5ms
- Magnifier - x1

7A18 - Display Mode - Ch 2  
 Volts/Div - 50mv  
 CH2 polarity - invert  
 Coupled - DC

Current sweeper  
 $\Delta F$  in  
 Main Ln  
 Start 92  
 Stop 310  
 Copymarker 102  
 $\Delta F$  22.5  
 Strobe Freq 442/43  
 $\emptyset$  Lock Loop 442/43  
 + 15 out into test fixture  
 Tuning coils into test fixture

### 3. Testing A

- A. 1. Connect a  $50\Omega$  term to bottom port according to Fig. 1. Also connect the diplexer assy. to the top port. Also shown in Fig. 1

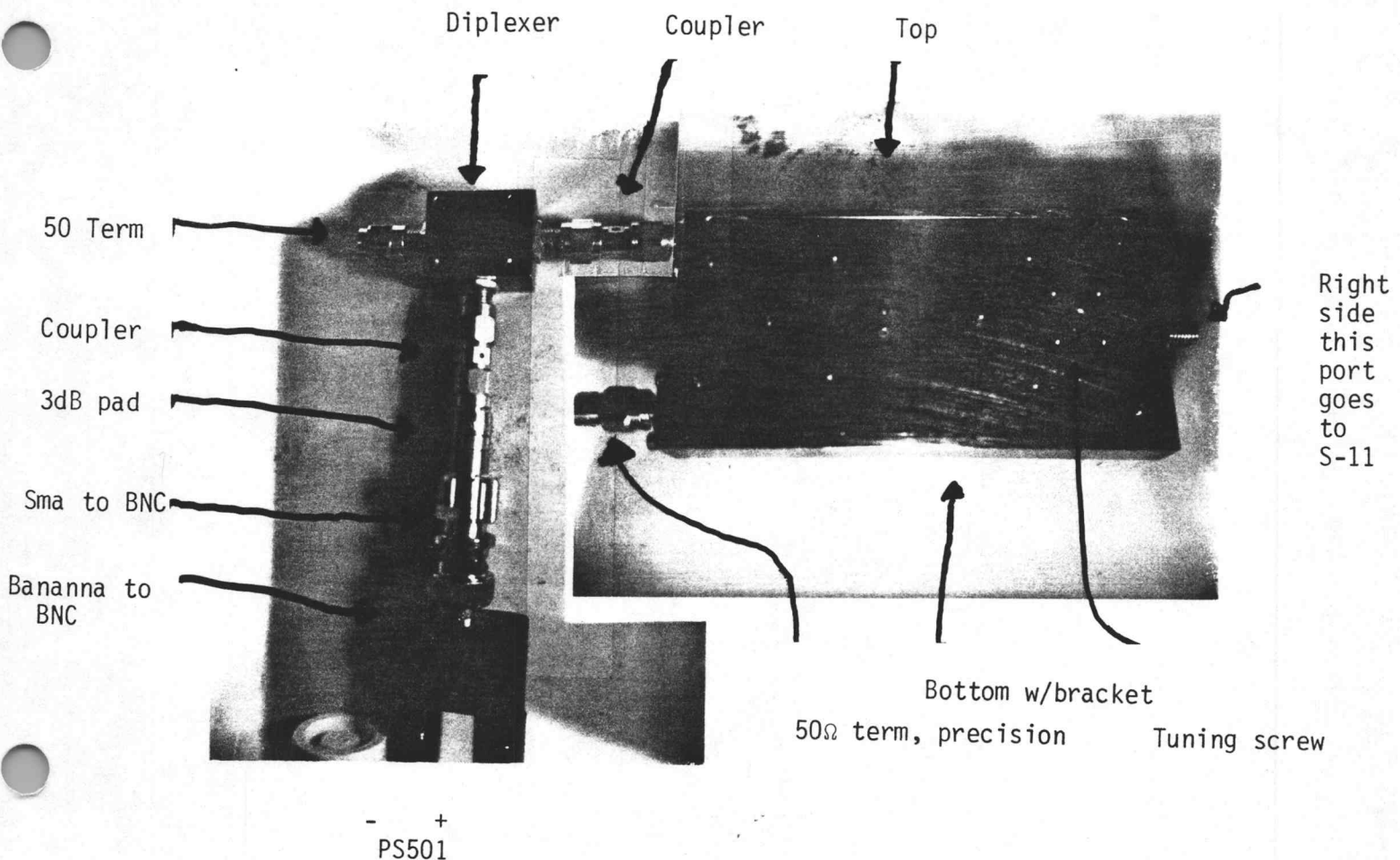


FIGURE 1

2. Once the 1st converter looks like Fig. 1 insert port on right side into S-11 port the display should look like Fig. 2. Now turn current limit pot CW until light goes off and adjust volts for a display like that of Fig. 3. Adjust for the best return loss. Then with a tweaker, turn tuning screw CW again for the best return loss.

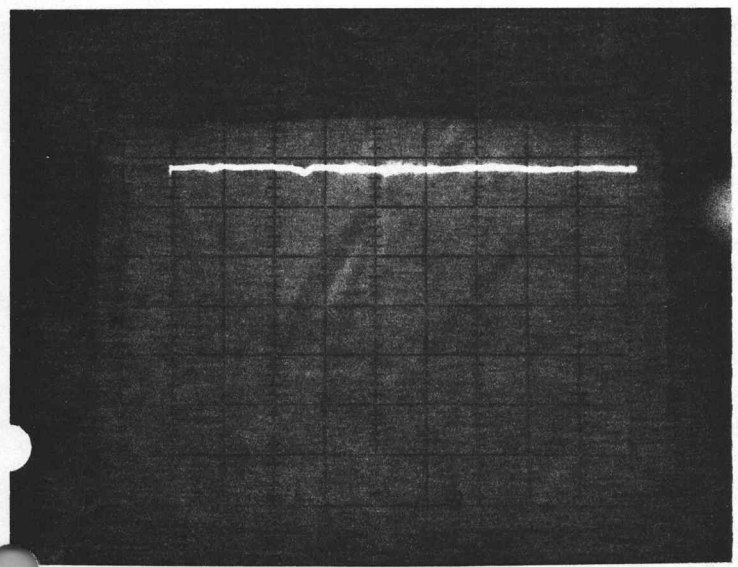


Fig. 2

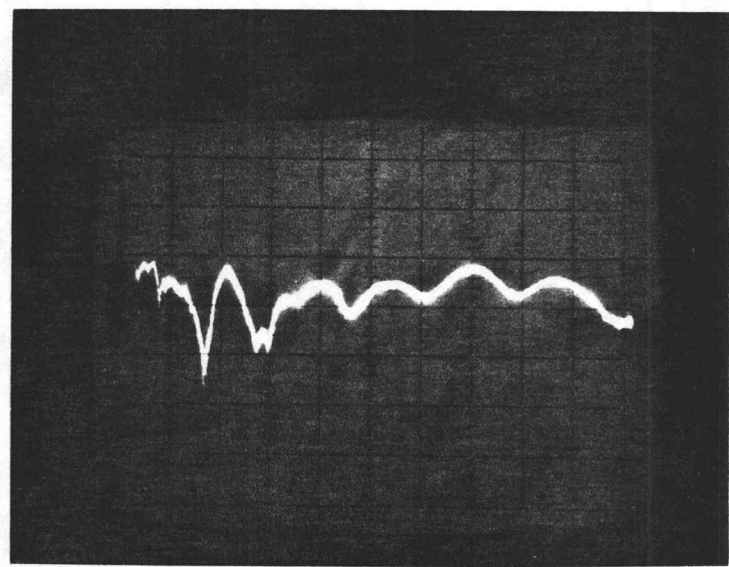
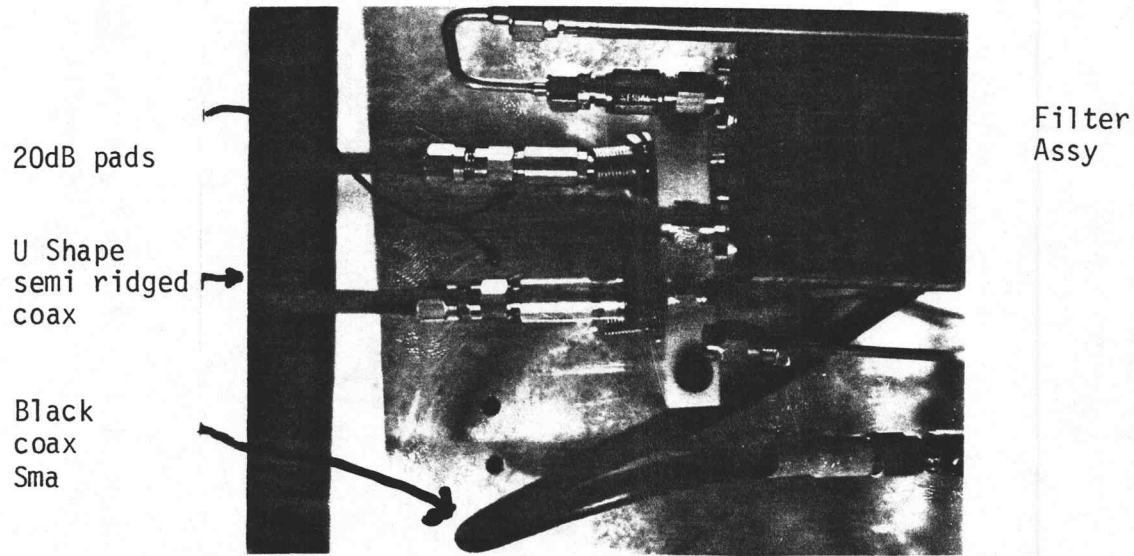


Fig. 3

3. Remove all connectors from 1st converter. This completes part A of this test proceed to the caling of the system part B.

Fig. 4

4. Caling the system part B



Connect 2 20dB pads onto the U shaped coax Fig. 4.  
 Insert one end into black coax Sma and other into left side of  
 test fixture input Fig. 4. With vertical position move peak of  
 signal to the center of the screen (40dB from the top) Fig. 5

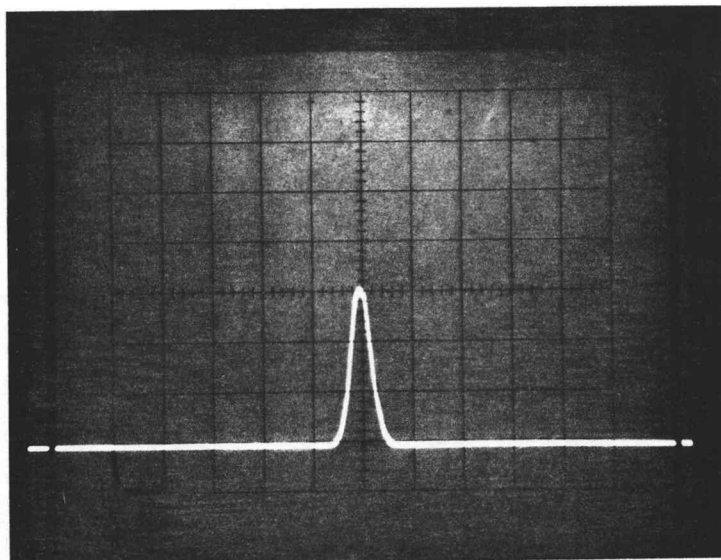
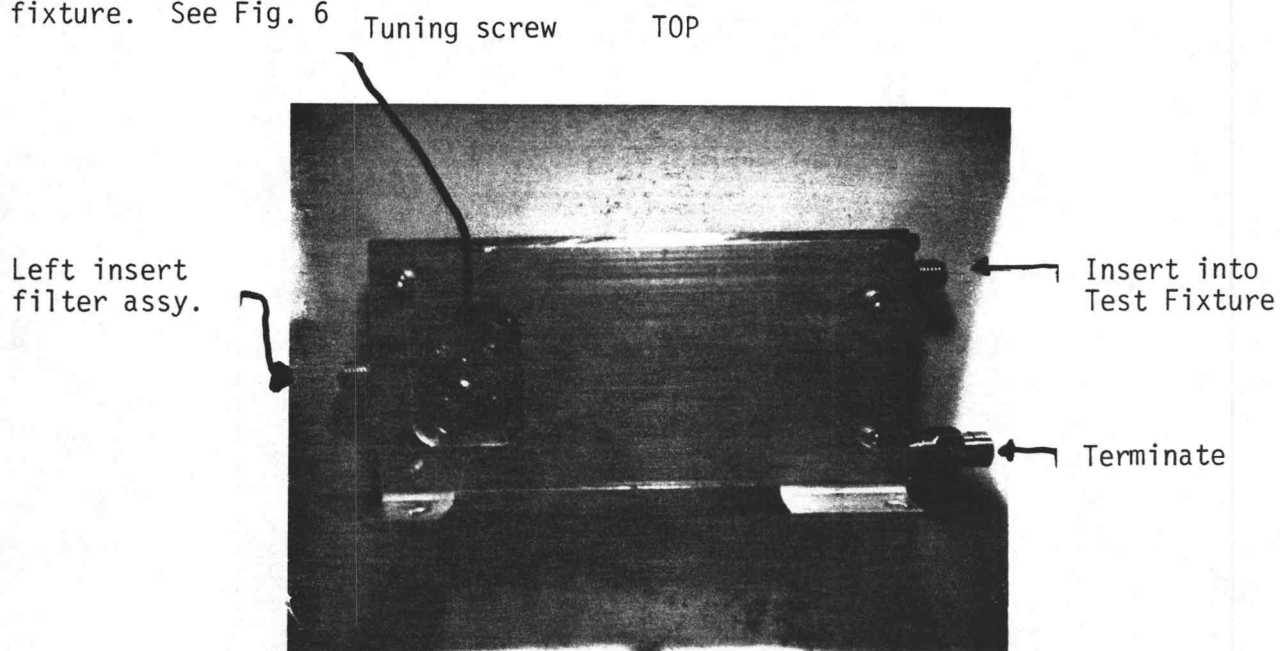


Fig. 5

### 5. Testing B

Remove 2 20dB pads and U and reconnect the filter assy back into the  
 system Fig. 4. Terminate same port on 1st converter and insert filter  
 assy into single port left side also insert the top port into test  
 fixture. See Fig. 6



Bottom Fig. 6

2. The signal should look something like Fig. 7. While holding firmly to make good grounding connection, tweek start spur screw Fig. 6 to min which must at least be 45db down. See Fig. 8. Remove-this completes the test.

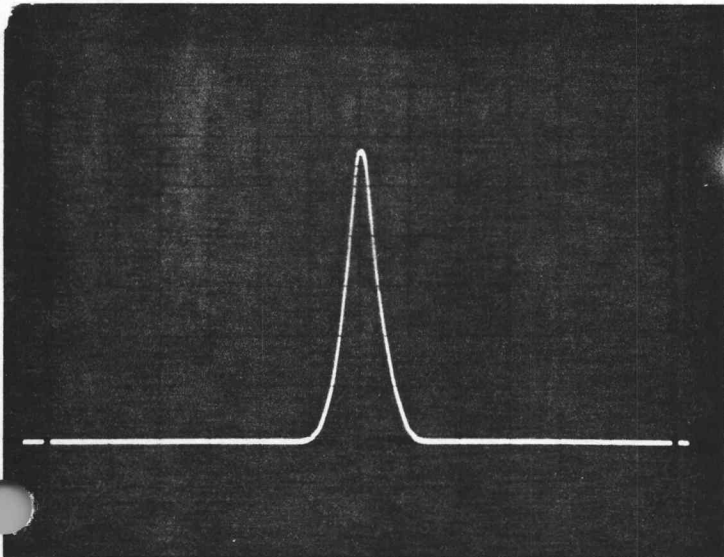


Fig. 7

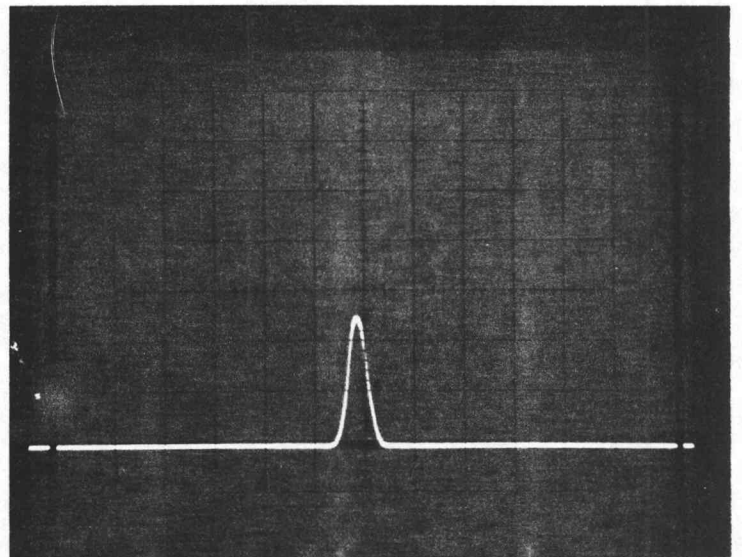


Fig. 8

#### 6. TROUBLESHOOTING HINTS AND CAL SPECS

- Test A
1. If it won't go to something like Fig. 3, replace die.
  2. If it still doesn't disassemble and look at connectors

- Test B
1. If it won't tweek down to -45, send to assy for mod.
  2. If it still won't tweek down replace die.

#### Cal Specs

At least to -45dBm.