

DATE 9-20-60
SH. 1 OF 4

TMC SPECIFICATION NO. S-502

COMPILED BY

T. E.

TITLE: FX-164, 100 KG FILTER (DVM) ALIGNMENT

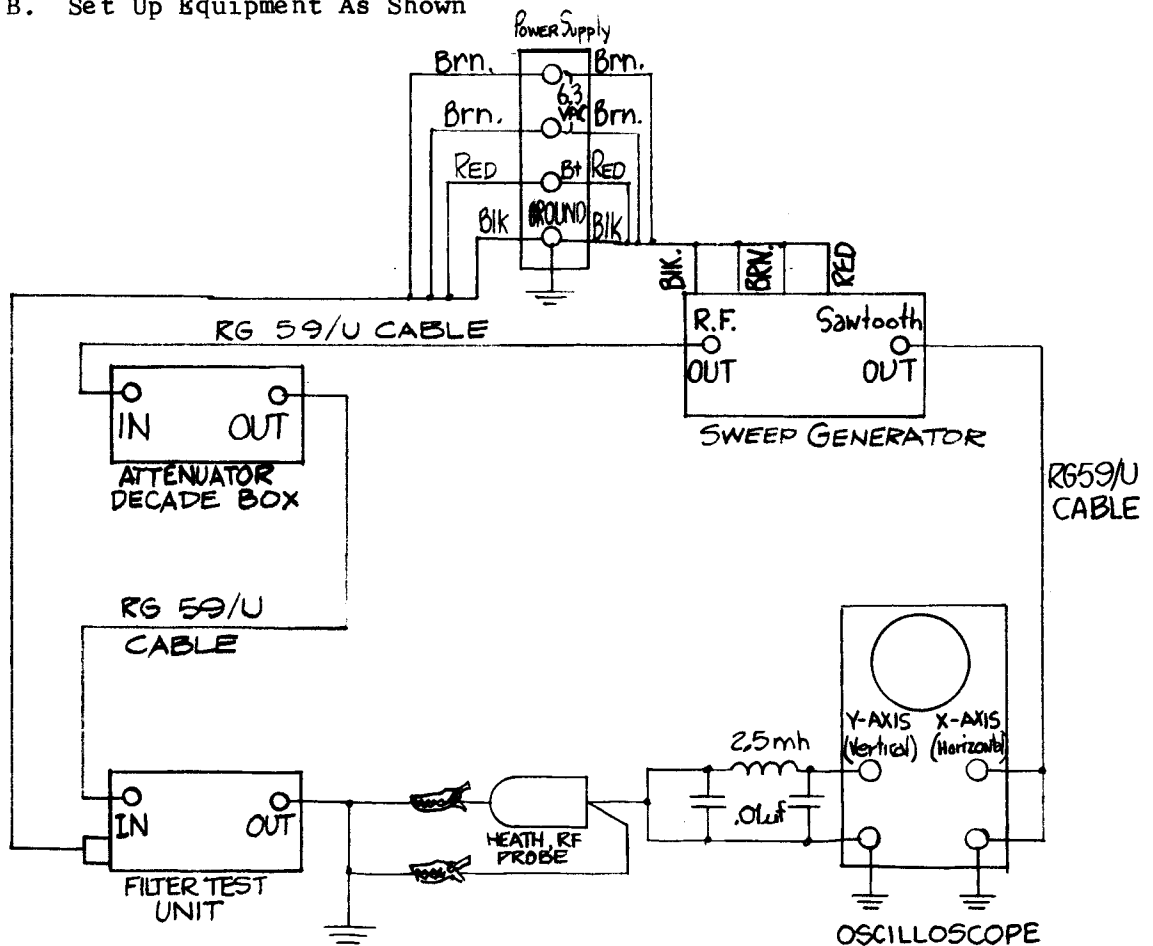
JOB

APPROVED

A. Equipment Required:

1. Sweep Generator
2. Filter Test Unit (See Below)
3. Detector Unit (Heath R.F. Probe)
4. Oscilloscope (Dumont Type 304-A or Equivalent)
5. Power Supply (Lambda Model 25 or Equivalent)
6. Attenuator Decade Box (Daven Co.)

B. Set Up Equipment As Shown



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- C. Turn on all equipment (set power supply at 250 volts)
- D. Allow sufficient time for warm-up and stabilization, then adjust scope so that horizontal trace is about 4 inches wide, and centered on scope screen.
- E. Position tracs so that it appears about 1-1/2 inches from top of screen.
- F. Momentarily switch off B+, place filter in test unit, switch on B+, again allow sufficient time for stabilization.
- G. Insert 5 db attenuation in circuit. Set scope Y-axis controls for maximum gain (DC)
- H. Adjust the following controls on sweep generator.
 - 1. Increase sweep speed (rotate clockwise as far as possible).
 - 2. Increase deviation (rotate clockwise as far as possible).
 - 3. Set RF gain to max. (clockwise).
- I. Center resonant frequency on scope by means of center frequency control. Fine tune with vernier. (Resonance is indicated by a sharp dip in the trace). If more than one dip appears, adjust 3-12 uuf trimmer on filter until one dip remains. If resonant frequency cannot be located, reject unit.
- J. Decrease deviation (counter - clockwise) until dip is about one inch wide at the top. Center with vernier control.

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- K. Peak 7-45 uuf trimmer for maximum dip in trace. If trace goes off bottom of screen, add more attenuation, so that the bottom of the trace is visible. When peaking, a widening of the shoulders of the trace indicates that the peak has been passed. Reversing direction of rotation will tend to narrow these shoulders. Peak is reached when the shoulders are narrow, but just before the bottom of the trace begins to rise again.
- L. Re-Set The Following Controls:
1. Deviation - Maximum Clockwise
 2. Sweep Speed - Minimum (Counterclockwise)
 3. Remove all but 5 db of attenuation from circuit (bottom of trace will now extend beyond scope screen)
- M. Adjust 3-12 uuf trimmer for a symmetrical pass band. When pass-band is unsymmetrical, a notch or "ear" will be visible on one side of the dip. The trimmer will cause this to increase, decrease, or shift sides. The trimmer must be set so that this ear is not visible, and both sides of the dip are smooth and identical.
- N. Remove remaining 5 db of attenuation, and repeat M above.
- O. When the above procedure has been completed, filter can be sealed and prepared for installation.

DATE 9-15-60
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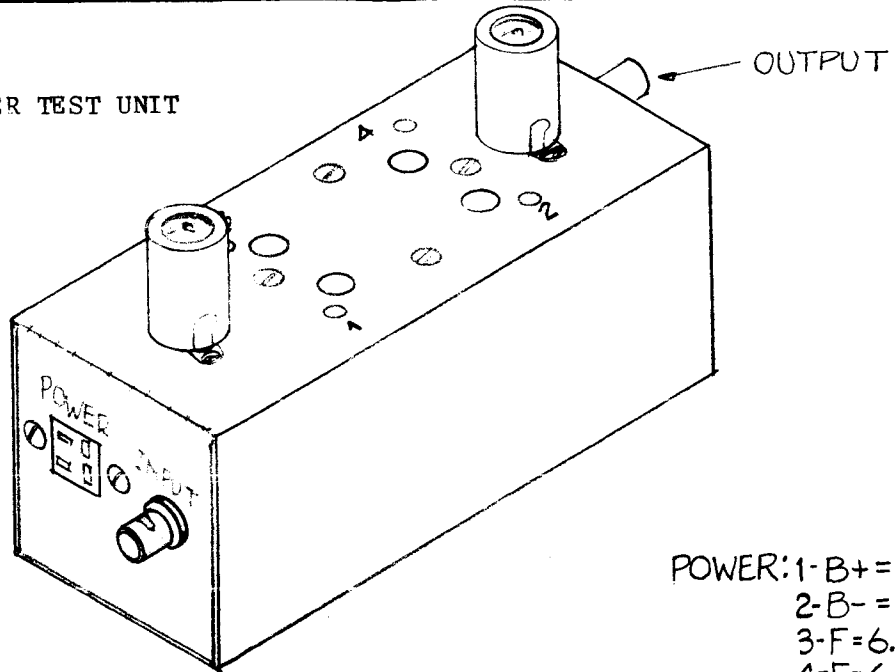
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FILTER TEST UNIT



POWER: 1-B+ = 250V
 2-B- = 0V
 3-F = 6.3 VAC
 4-F = 6.3 VAC

