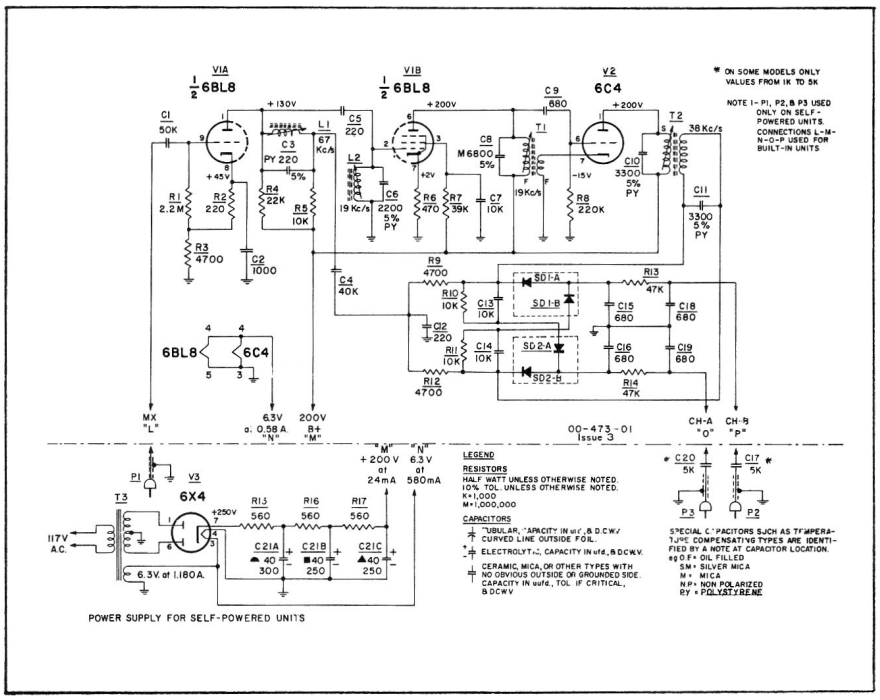
SERVICE INFORMATION AND PARTS LIST *for the*

VMXA-3
(self-powered)
MP3
(as part of
original equipment)

VIKING FM STEREO RADIO ADAPTER

For operation on 110-120 Volts 60 cycle



CHASSIS LAYOUT

V1 — 6BL8
T1 — 19KC. OSC.
V2 — 6C4
L2 — 19KC. PILOT FREQ.
T2 — 38KC. DOUBLER
L1 — 67KC. TRAP
V3 — 6 X 4

6 X 4 in Model VMXA-3 only

ALIGNMENT INSTRUCTIONS

EQUIPMENT REQUIRED

1. Multiplex Generator.
2. Audio Generator accurately calibrated at 67 Kc.
3. Audio scope and electronic switch or double beam scope.

ALIGNMENT INSTRUCTIONS

1. Remove 6C4 oscillator tube.
2. Connect audio generator to input of multiplex adapter and set generator at 67 Kc.
3. Connect scope to the junction of R9 and R12.
4. Adjust 67 Kc trap L1 for minimum pattern on scope.
5. Remove audio generator and connect multiplex generator to input of multiplex adapter. Set generator at 19 Kc.
6. Connect the scope input to pin number 6 on the 6C4 socket using a low capacity probe.
7. Adjust L2 and T1 for maximum scope pattern.
8. Replace 6C4 tube.
9. Connect scope to junction of R9 and R10.
10. Adjust 38 Kc coil T2 for maximum scope pattern.
11. Check multiplex generator as follows:

    (a) Connect output of generator to input of scope.
    (b) Adjust the generator to provide a multiplex signal modulated on one channel only. 19 Kc pilot signal must be switched off.
    (c) Observe the scope waveform. If the generator is adjusted properly, the scope pattern will be an audio sine wave envelope of 38 Kc with a straight base line.
    (d) If pattern is not correct, adjust generator according to instructions received with the instrument.

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ALIGNMENT INSTRUCTIONS (Continued)

12. Connect the multiplex generator output to the adapter input.
13. Connect the outputs of the adapter to the inputs on the electronic switch.
14. Connect the output of the electronic switch to the scope inputs.
    NOTE: If an electronic switch is not available, a manual switching arrangement may be used.
15. Adjust generator for composite signal with one channel audio and 19 Kc pilot. Total system modulation should be 80 to 90 percent.
16. With the generator output adjusted to a medium level, approximately one volt, adjustment of oscillator coil T1 will produce three peaks. One peak will appear on one scope trace and two peaks on the other. The setting of the slug producing the single peak on one scope trace is correct and most stable.
17. Replace the base plate.
18. Increase signal input to between five and ten volts (or maximum on the generator).
19. Adjust 19 Kc coil L2 for maximum audio output on correct trace found in item 16.
20. Reduce signal to 200 millivolts or just above the point where multiplex adapter oscillator loses sync.
21. Adjust oscillator coil T1 for peak on correct trace found in item 16. Signal on correct trace should be maximum possible and signal on the other trace should be minimum.
22. Repeat steps 18, 19, 20 and 21 until no further improvement is noted. (Separation on the average unit should measure 20 db minimum).

SERVICE REPLACEMENT PARTS LIST

Symbol	Part No.	Description
Platter		
C1	48-G676-4	Capacitor, Tub., Metallized .05 ufd ± 20% 150V.
C3	48-102215-05	Capacitor, Tub., Polystyrene 220 uufd. ± 5% 500V.
C6	48-102225-05	Capacitor, Tub., Polystyrene 2200 uufd. ± 5% 500V.
C8	47-36825-01	Capacitor, Dipped Mica 6800 uufd. ± 5% 300V.
C10,C11	48-103325-01	Capacitor, Tub., Polystyrene 3300 uufd. ± 5% 500V.
L1,L2	21-334-03	Horizontal Stabilizing Coil used as L1- 67 Kcs. Trap. L2- 19 Kcs. Pilot Frequency.
SD1,SD2	14-503-03	Dual Diode
T1	21-483-01	19 Kc Oscillator Coil
T2	21-482-01	38 Kc. Doubler Coil
Power Supply		
C21	44-126-01	Triple Electrolytic A Sect. 40 ufd. 400 D.C.W.V. B Sect. 40 ufd. 350 D.C.W.V. C Sect. 20 ufd. 350 D.C.W.V.
T3	24-10081-01	Power Transformer 60 cycle