FMT2 ALIGNMENT

1. TUNER AND I.F. AMPLIFIER

1.1. Connect the valve-voltmeter to the Right output, feed a IV 38 kHz signal into the junction of D8 and C38 and tune T2134 for minimum reading.

Repeat stage 1.1 for Left output.

1.2. Ratio Detector

Inject a signal from the wobulator (centre frequency 10.7 MHz) via a 0.01uF ceramic capacitor into the base of Ts/3 connect the oscilloscope input to the junction of C 16 and C 18. Tune both cores of T2158 for a satisfactory S curve (peak separation = 500kHz centre frequency = 10.7MHz. Replace wobulator by a 10.7MHz a.m. signal generator and adjust P1 for minimum output. Recheck S curve and repeat above procedure if necessary. Inject 10.7MHz c.w. signal and check that the pointer of the tuning meter is central.

Note. In all cases keep generator outputs below limiting threshold.

1.3. 2nd. I.F.

Inject a signal from the wobbulator (centre frequency 10.7MHz) via a 0.01uF ceramic capacitor into the base of Ts.2. Connect the oscilloscope, via a detector probe, to the collector of Ts3. Tune both cores of T2157 for a satisfactory bandpass curve (-dB bandwidth = 300kHz approx.)

Note. Keep wobbulator output below limiting threshold.

1.4. 1st. I.F.

Inject a signal from the wobbulator (centre frequency 10.7MHz) via a 0.01uF ceramic capacitor into the base of Ts1. Connect the oscilloscope, via a detector probe, to the collector of Ts3. Tune both cores of T2156 for a satisfactory bandpass curve (-6dB bandwidth = 300kHz approx.)

Note. Keep wobbulator output below limiting threshold.

1.5. Tuning Head

Inject a signal from the wobbulator (centre frequency 10.7MHz) via 10pF ceramic capacitor into the base of the mixer stage. Connect the oscilloscope, via a detector probe, to the collector of Ts3. Tune both cores of the 1f output transformer for a satisfactory bandpass curve -6dB bandwidth = 270kHz approx.)

Note Keep wobbulator output below limiting threshold. Inject an f.m. signal at 87.5MHz into the coaxial aerial socket and with the capacitor vanes fully meshed tune the oscillator core for tuning meter to be central Connect the oscilloscope input to the junction of C 16 and C 18 and tune the 3 r.f.amplifier coils for maximum output. Keep the generator outputs below the limiting threshold. Check the scale calibration at 98MHz and 108MHz and retrack the tuner if required. Check the limiting sensitivity (better than 4uV for -3dB output).

1.6 Listening Test

Check correct operation of all controls:-

Tuning
A.F.C.
Volume (where fitted)
Output
Quieting

Check overall sound quality i.e. frequency response, distortion, signal-noise etc.

2. DECODER TURN STEREO THRESHOLD CONTROL ANTI-CLOCKWISE.

Connect the valve volt-meter to the junction of D5 and T2133 and feed a 20mV 19kHz pilot signal into the decoder input. Tune 2128, T2129, T2132, T2133 for maximum output.
Turn the threshold control clockwise until the indicator lamp lights. Connect the valve-voltmeter to pin 4 of T2131 and tune T2130 and T2131 for maximum output.
Connect a 500mV 1kHz Left signal to the decoder input and the valve-voltmeter to the Right output. Tune T2130 for minimum reading. Repeat Right modulation and Left output. (Cross talk = - 36dB.)

3. U.S.A. MODELS ONLY

3.1. Set stereo threshold control, P3 to mid-position

3.2. Apply a 100mV 72kHz signal to the decoder input, connect a valve-voltmeter to the emitter of Ts6 and tune T2127 for minimum reading.

3.3. Connect the valve-voltmeter to the Right output, feed a IV 38kHz signal into the junction of D8 and C36 and tune T2134 for minimum reading.

3.4. Repeat stage 3 for Left output

3.5. Connect the valve-vpltmeter to the junction of D5 and T2133 and feed a 20mV 19kHz pilot signal into the decoder input. Tune T2128, T2129, T2132, T2133 for maximum reading.

(The stereo indicator lamp should not light during this step. If it lights, turn the threshold control anti-clockwise until the lamp is extinguished and retune).

3.6. Turn the threshold control clockwise until the indicator lamp lights. Connect the valve-voltmeter to pin 4 of T2131 and tune T2130 and T2131 for maximum output.

3.7. Connect a 500mV 1kHz Left signal to the decoder input and the valve-voltmeter to the Right output. Tune T2130 for minimum reading. Repeat with Right modulation and Left output.
(Crosstalk) - 30dB).