ALIGNMENT PROCEDURE-MODELS XA-701,XB-702,XC-703

NECESSARY EQUIPMENT

Television Sweep Generator
Marker Freq. Generator
Vacuum Tube Voltmeter
Oscilloscope
4.5 Mc fixed freq. Generator or equivalent

I. F. ALIGNMENT

1. Connect VTVM and the input terminal of the scopes' vertical amplifier to the juncture of 8200 ohm resistor and 410 μh choke-This is immediately following the video detector, the 8200 ohms being the resistor portion of the detector load. I. F. signal may be introduced by means of a miniature tube shield floated over the 6AG5 mixer tube.

2. With the sweep off And the marker freq. set to 25.6 mc, Adjust the 1st And 3rd I.F. coils for maximum response, as indicated by VTVM. Generator should be attenuated so as not to provide more than threshold sensitivity (1 volt on VTVM at fixed freq., 1/2 volt on sweep).

3. Re-set marker frequency to 23.3 mc and adjust 2nd and 4th I.F. transformers for maximum VTVM indication, as above.

4. With sweep turned on observe I.F. curve shape on oscilloscope-the knee of the curve should be at approximately 23.5 mc and 25.5 mc. If original alignment did not produce satisfactory curve, it may be modified by adjusting the I.F. tuning slightly, while observing the curve on the scope. Care must be taken that both peaks are approximately the same height and that the mid-portion of the curve is not down more than about 2db. The sound rides at 21.6 mc and this point should be checked to make sure that it is at least 26db below the flat top. The picture frequency rides the curve at 26.1 mc and should be 6db down on the opposite side of the curve.The curve should be about 3mc wide at 6db down (1/2 way down).

SOUND ALIGNMENT

1. Connect a 4.5 mc generator to the grid of the video amplifier tube (There again, low signal level is important, so that limiting action does not occur). Metering may be accomplished at the sound take-off point of the ratio detector (at the juncture of the 47,000 ohm resistor and 1500 mmf capacitor).

2. Adjust the top and bottom slugs on the sound trans. for maximum response.

3. Adjust primary of ratio detector (top slug) to maximum.

4. Connect meter ground to the juncture of the two 6800 ohm resistors off the sound detector, and adjust bottom slug on ratio detector to Zero voltage

R. F. ALIGNMENT

The R.F. Tuner in this receiver has been pre-aligned by the manufacturer and it is not recommended that adjustment be made in the field, especially since the fine tuning control will move the oscillator at least 3/4 mc on the low channels and 2 mc on the high channels.

ALIGNMENTPROCEDURE-MODEL XL-750

NECESSARY EQUIPMENT

Television Sweep Generator
Marker Freq. Generator
Vacuum Tube Voltmeter
Oscilloscope
4.5 Mc fixed freq. Generator or equivalent

I.F. ALIGNMENT

1. Connect VTVM and the input terminal of the scopes' vertical amplifier to the juncture of 8200 ohm resistor and 410 μh choke-this is immediately following the video detector, the 8200 ohms being the resistor portion of the detector load. I.F. signal may be introduced by means of a minature tube shield floated over the 6AG5 mixer tube.
2. With the sweep off and the marker freq. set to 23.3 mc, adjust the 1st and 3rd I.F. coils for maximum response, as indicated by VTVM. Generator should be attenuated so as not to provide more than threshold sensitivity (1 volt on VTVM at fixed freq., 1/2 volt on sweep.)
3. Re-set marker frequency to 25.6 mc and adjust 2nd and 4th I.F. transformers for maximum VTVM indication, as above.
4. With sweep turned on observe I.F. curve shape on oscilloscope- the knee of the curve should be at approximately 23.5 & 25.5 mc.If original alignment did not produce satisfactory curve, it may be modified by adjusting the I.F. tuning slightly, while observing the curve on the scope. Care must be taken that both peaks are approximately the same height and that the mid-portion of the curve is not down more than about 2db. The sound rides at 21.6 mc and this point should be checked to make sure that it is at least 26db below the flat top. The picture frequency rides the curve at 28.1 mc and should be 6db down on the opposite side of the curve. The curve should be about 3mc wide at the 6db down point (1/2 way down).

SOUND ALIGNMENT

1. Connect 4.5 mc generator to the grid of the video amplifier tube (There again, low signal level is important, so that limiting action does not occur Metering may be accomplished at the sound take-off point of the ratio detector (at the juncture of the 15,000 ohm resistor and the 3900 mmf capacitor).
2. Adjust the top and bottom slugs on the sound trans. for maximum response.
3. Adjust the primary of ratio detector (top slug) to maximum.
4. Connect meter ground to the juncture of the two 6800 ohm resistors off the sound detector, and adjust bottom slug on ratio detector to Zero voltage.

R. F. ALIGNMENT

The R.F. Tuner in this receiver has been pre-aligned by the manufacturer, and it is not recommended that adjustment be made in the field, especially since the fine tuning control will move the oscillator at least 3/4 mc on the low channels and 2 mc on the high channels.

AFC Control and Picture Size Control

AFC: Set the horizontal Hold control on the front midway, tune in a station then adjust the AFC Coil until the picture is "locked up" on the screen.

If at a later time, the horizontal size controls are changed it may be necessary to repeat the above.

HORIZONTAL: The horizontal size or width adjustment should be attempted only when it is possible to receive a test pattern.

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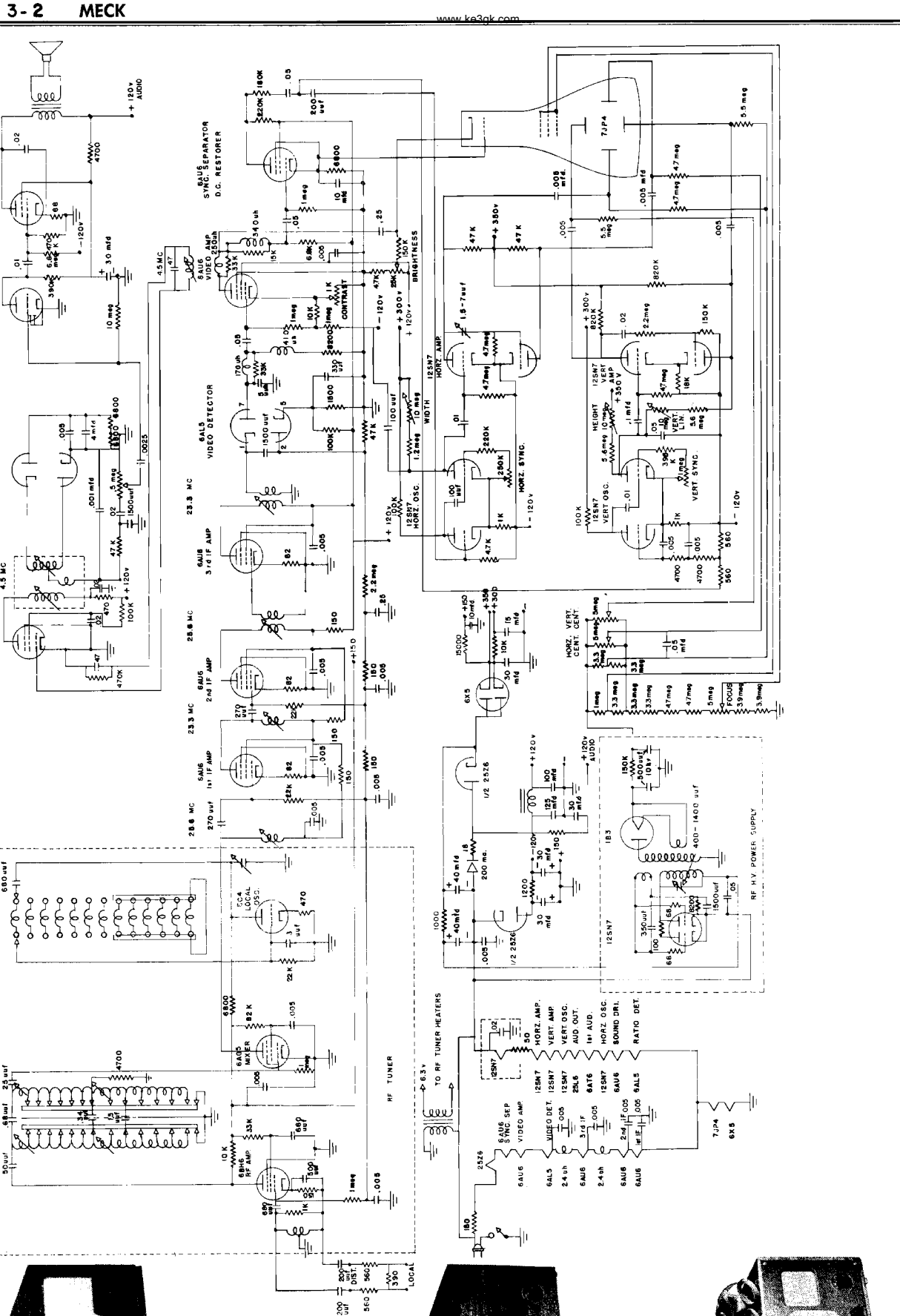
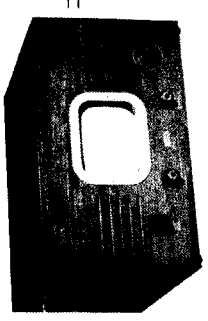


MODEL XA-701



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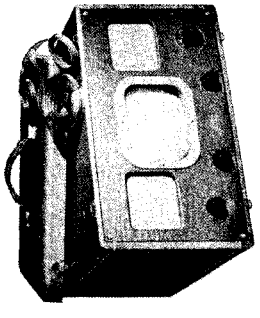
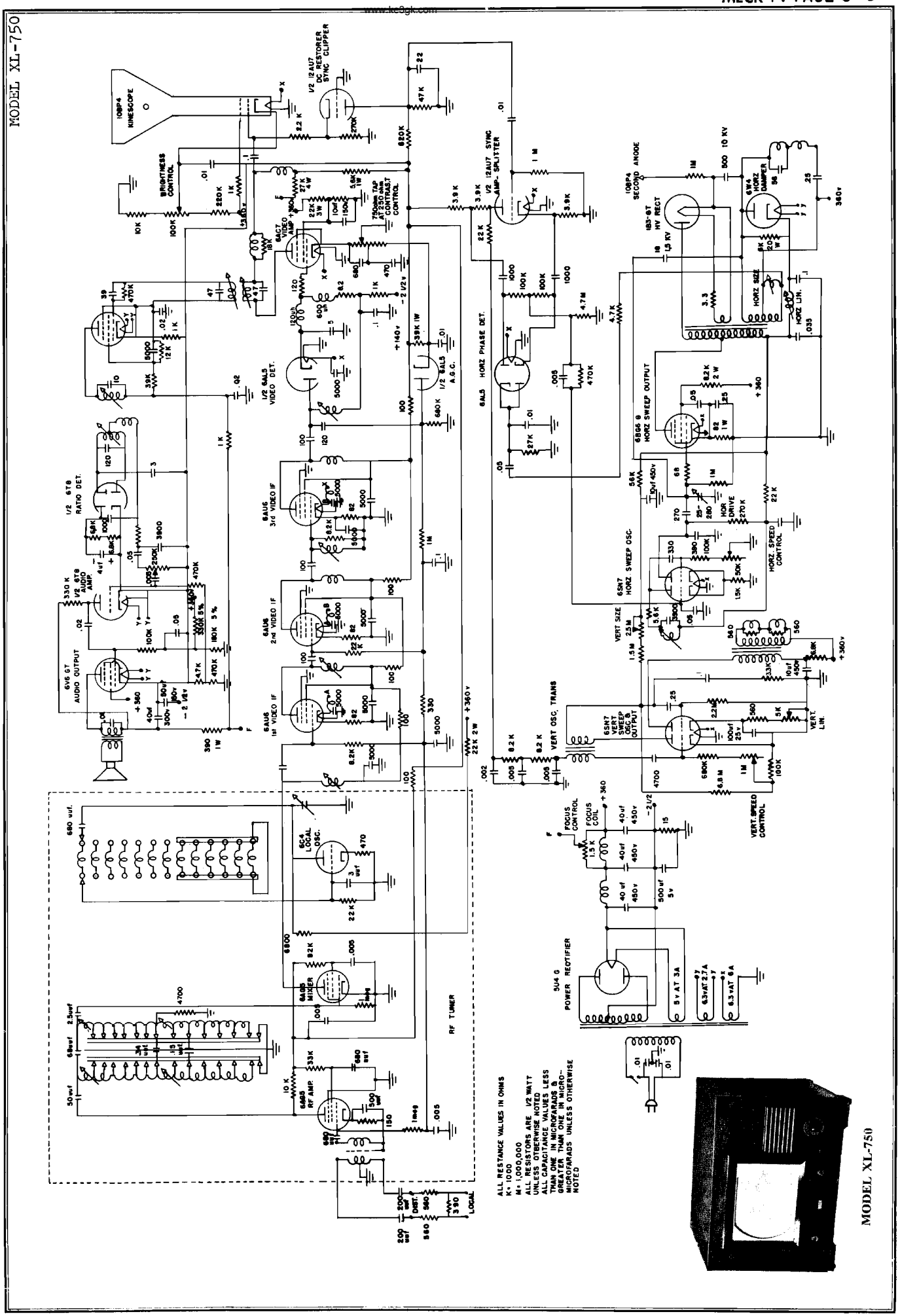


MODEL XC-703

MODEL XL-750



MODEL XL-750