1. Bias and Balance Settings and Voltage Checks
   Turn unit ON - watch carefully for any signs of voltage shorts. With bias pots (1k) still full Ccw (from top of unit), check supply for 48 to 50. Now adjust balance pots (10k) for appx. 11 volts from CCM each to 1000/30 to ground. Adjust bias pots for .8 ma. current from each test point in the rear of the unit to ground. Check tone control supply for 23v (110v).

2. Sensitivity Check
   a. Audio Oscillator to EXTRA at .3 (12 db) input. Connect 8 ohm load to Main speaker tap. Turn loudness pot to maximum. Observe output of 18 watts (12v). Check tape output jack with trouble shooting lead for the same output as input signal. At this point recheck bias for .8 ma.
   b. Audio Oscillator to Tuner at .3 (12 db) input. Connect 8 ohm to Main Speaker Tap. Turn loudness pot to maximum. Observe Output of 18 watts (12v).

3. Distortion Check
   At 12v output, max. distortion .5%

4. Tape Monitor Switch Check
   Audio Oscillator to EXTRA at .3 input to L channel. Note output at left channel speaker terminal. Put Tape Monitor switch in the IR position. Note loss of output. Connect cable from L channel tape out to L channel tape in. Note restoration of signal out. Repeat process for R channel then return tape monitor to OUT position.

5. Speakers Switch Check and Phone Jack Check
   Speakers switch to OFF position. Note complete loss of signal. Loudness to min., insert phone plug to phone jacks, remove speaker leads and connect to phone plug leads. Loudness to max., note drop of 26 30 db. Switch main speakers on, note restoration of signal. Switch remote speakers on, note drop in output of 1 to 2 db. Repeat for remote speaker terminals.

6. Cross talk and Stereo Switch Check
   At 500, turn loudness pot to 910 flat - return input voltage to .3. Mono-stereo switch to stereo. Balance switch to l, note drop of 0 db. Balance switch to r, note additional drop of 50 db. Return input voltage to previous setting. Loudness pot to max., output to 0 db on lv scale.

7. Tone Control Check ("O" db lv scale)
   Bass
   Boost 10 db ± 2 db
   Cut 10 db ± 2 db
   Treble
   Boost 10 db ± 2 db
   Cut 10 db ± 2 db

8. Frequency Response Check
   3 db down @ 20 cps or lower
   3 db down @ 30 kc

9. Regulation Check
   At 1 kc, load out - output rise 1 db maximum

10. Noise Filter Check
    At 5 kc noise filter to "in" note 4 db drop.

11. Preamp Gain Check
    Attenuate input 35 db from .3 at 1 kc input switch to phone high, input leads to phone, note output of 12v. Attenuate 5 db note, input switch to phone low, note 12v output.

12. Preamp Frequency Response Check
    a. Tuner
       3 db down @ 20 cps or lower, 1 db down @ 15 kc.
       Sharp drop off beginning @ 17 to 20 kc dropping @ 35 to 30 kc (approx. 40 db down).
    b. Phone
       1 kc
       0 db (REF.)
       10 kc
       -12, 5 db
       100 cps
       +13, 5 db

13. Hum Checks
    Position
    Loudness Pot
    Max. Hum
    Extra
    0
    3 mw
    Extra
    10
    5 mw
    Phone High
    10
    30 mw
    Phone Low
    10
    30 mw
    Tuner
    10
    10 mw

14. Repeat Steps 2 through 13 for R channel.