
SPARTON TELEVISION SERVICE MANUAL

Place this Bulletin in your SPARTON Service Manual

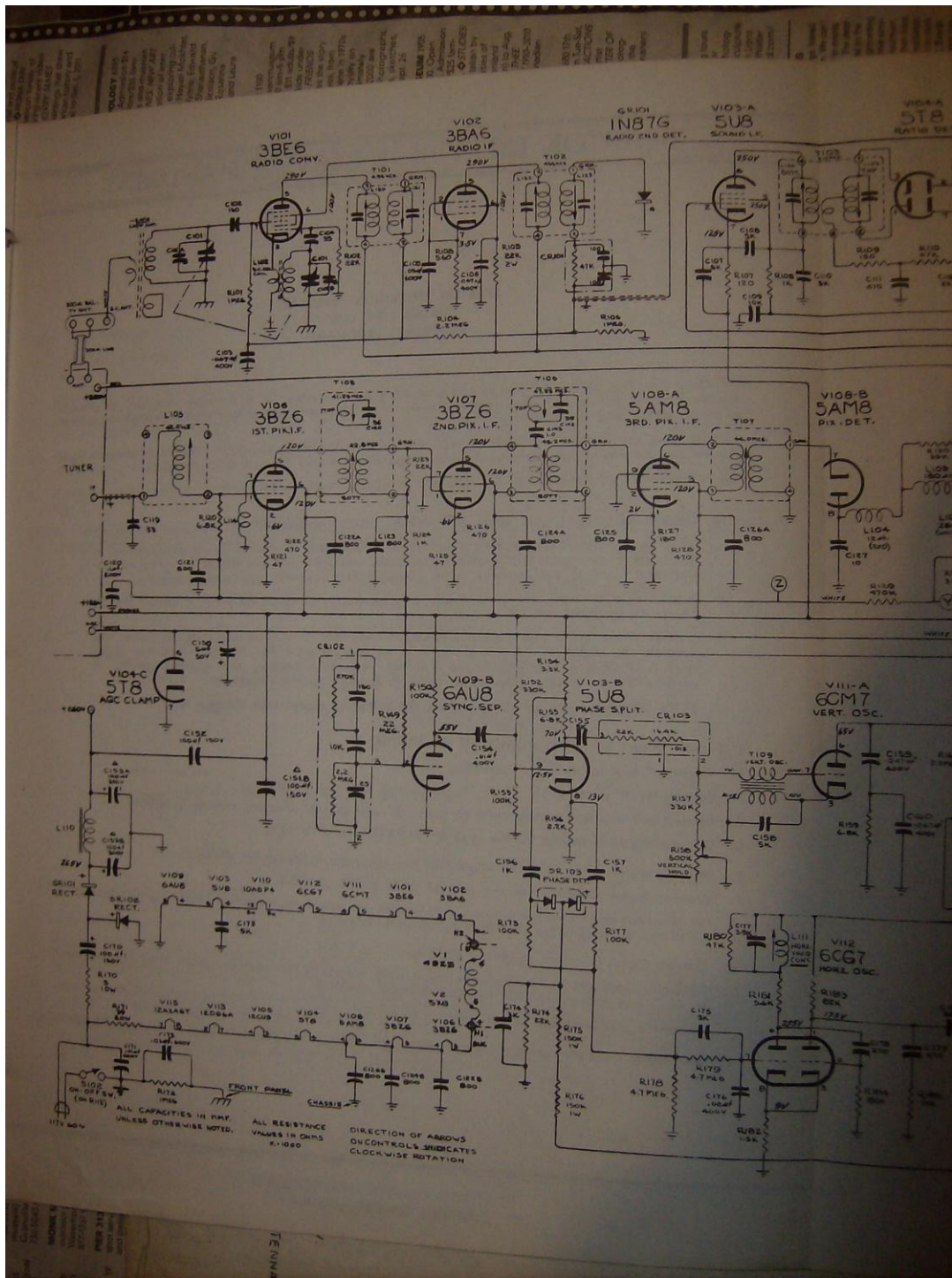
Radio & Television Receiver

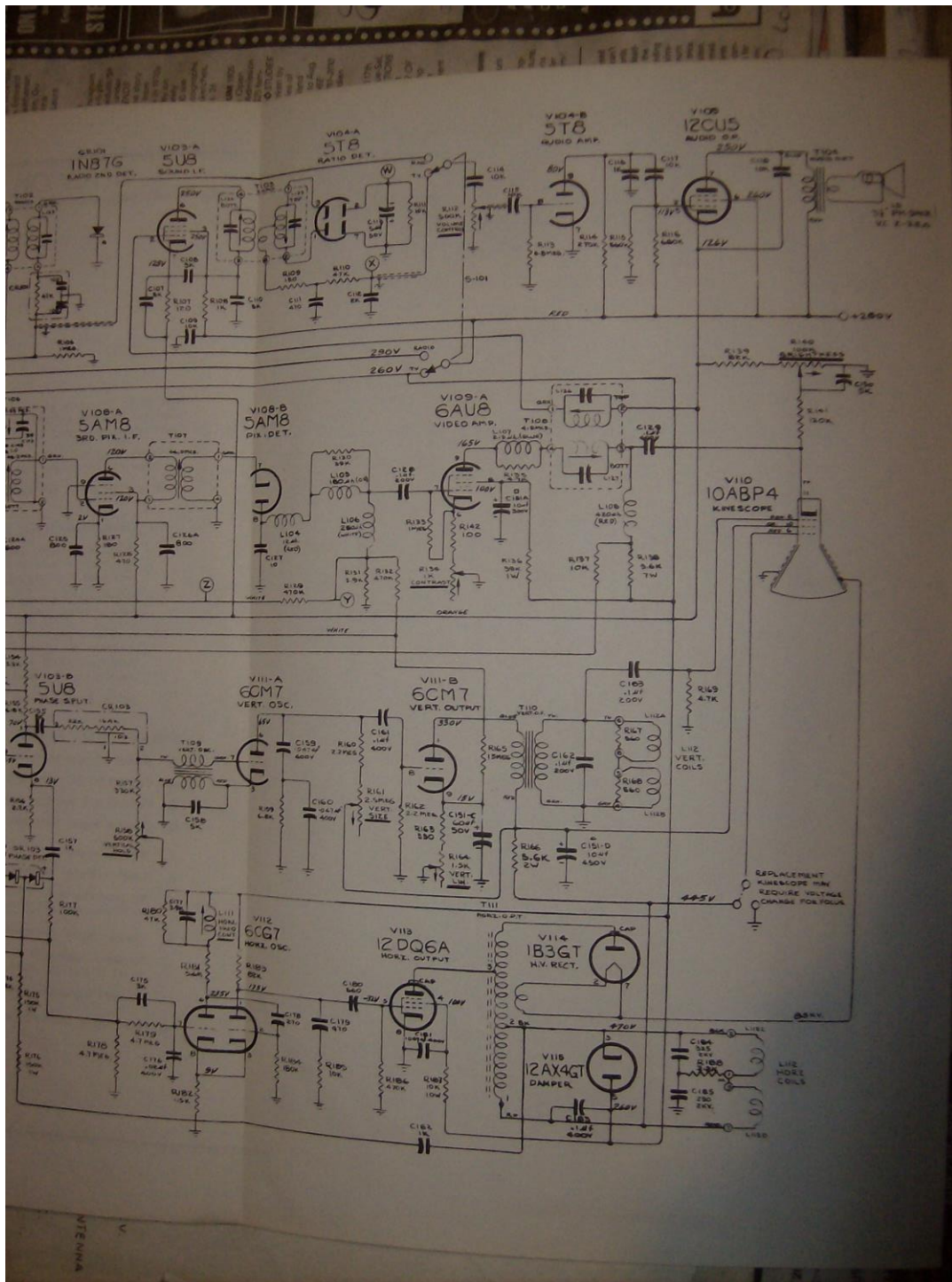
CHASSIS TYPE

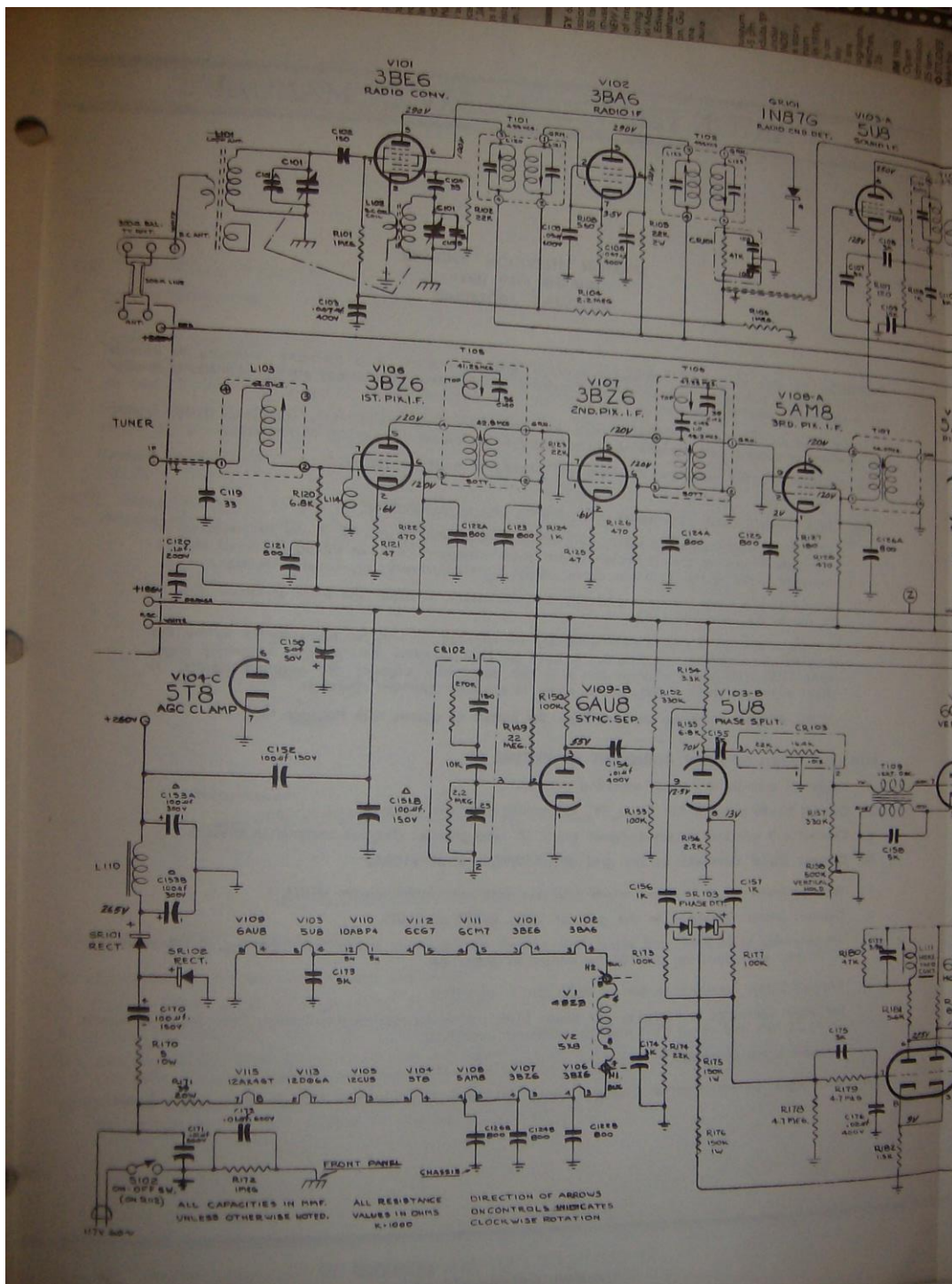
10G1

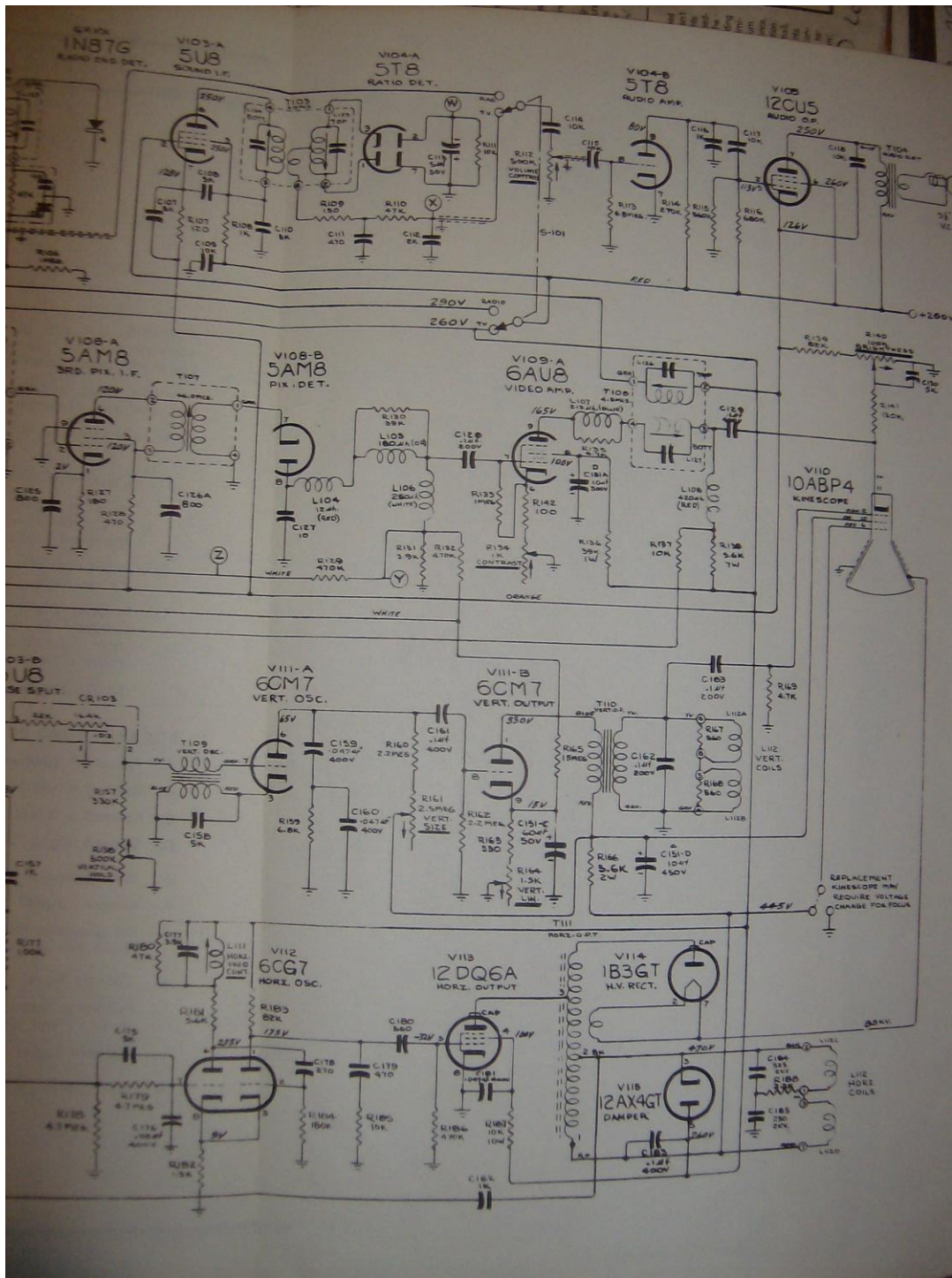
MANUAL TV23-4-57

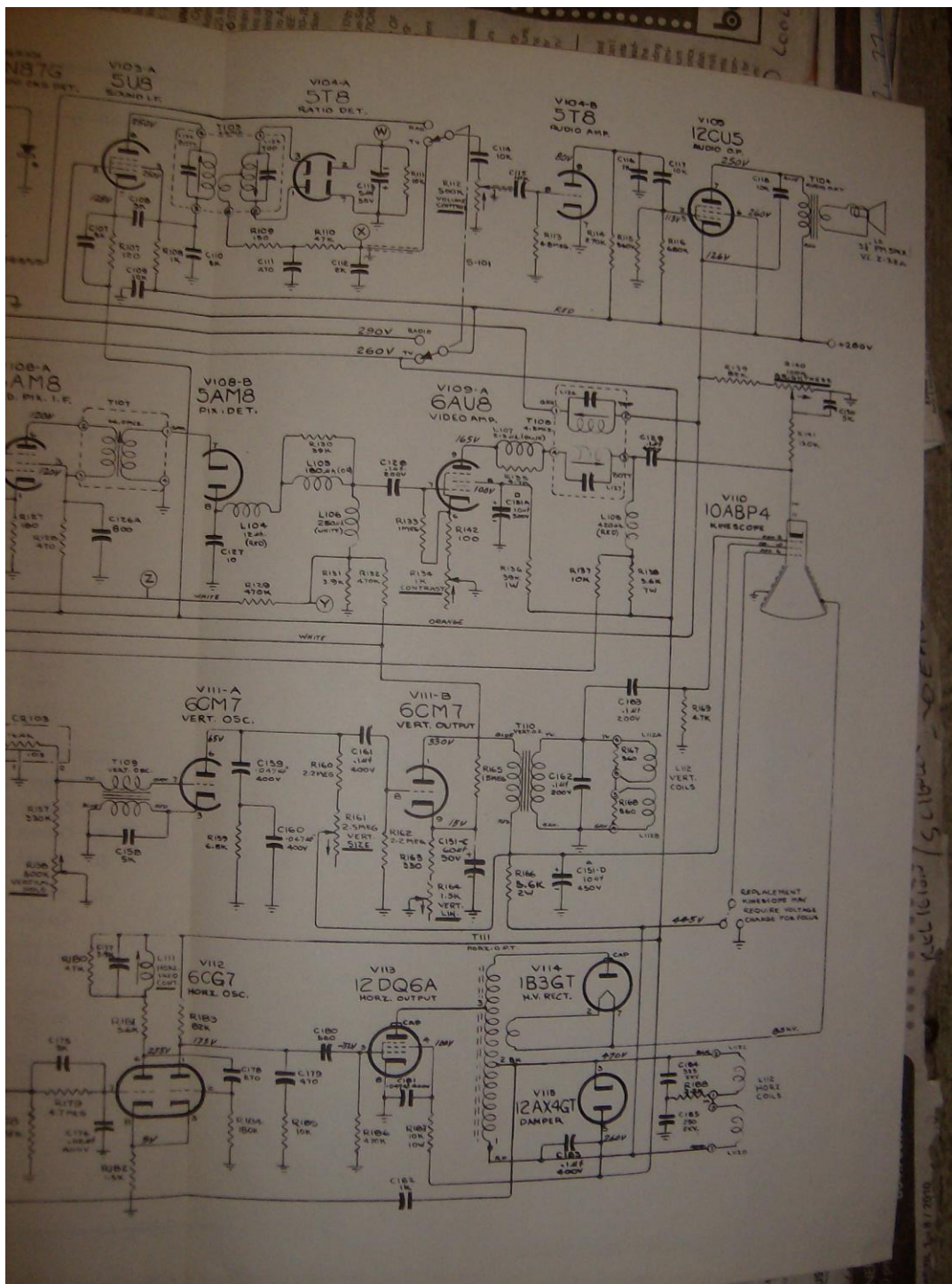
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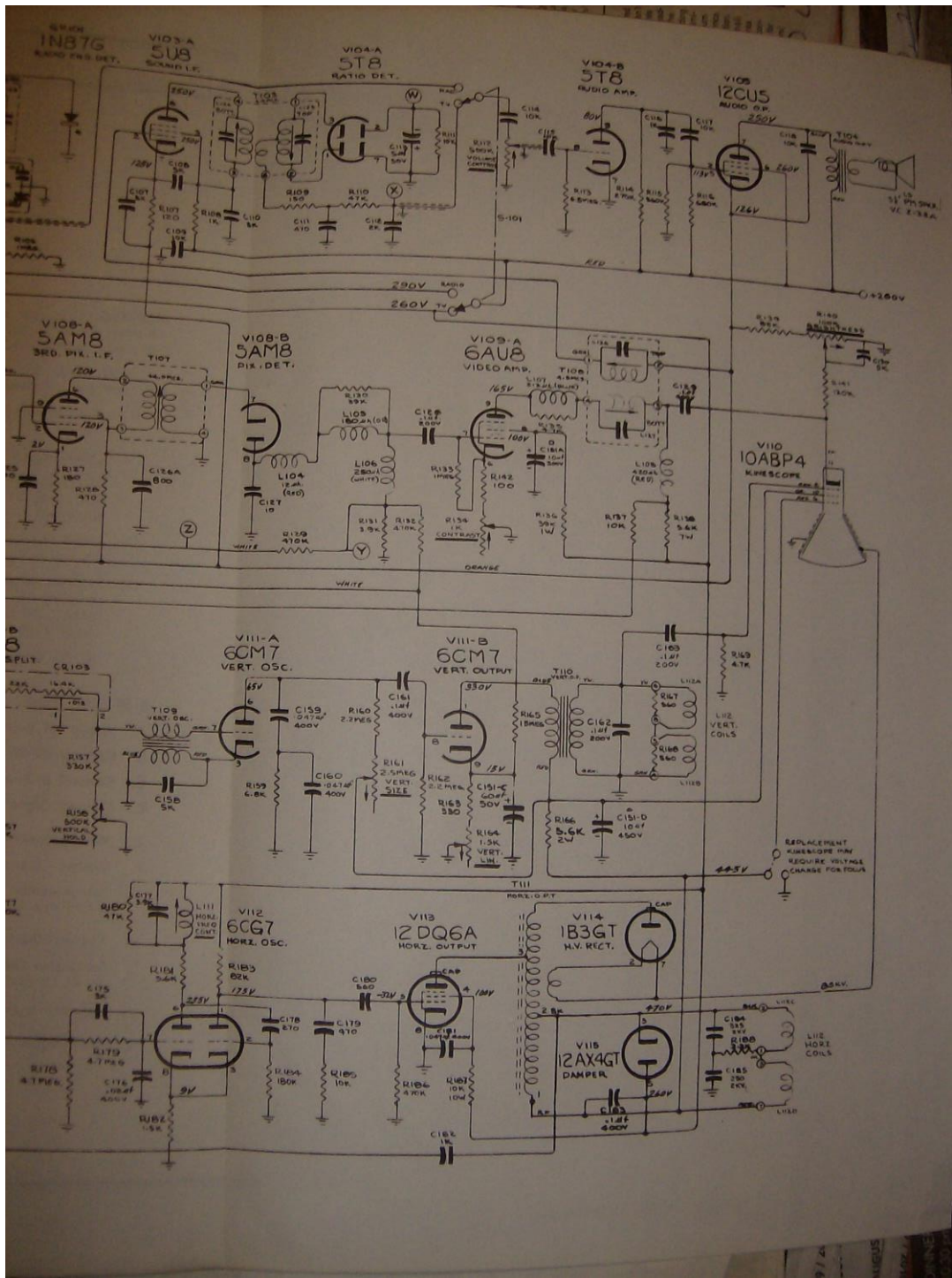












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SPARTON TELEVISION RECEIVER CHASSIS TYPE 10G1 ALIGNMENT PROCEDURE

WARNING: One side of the AC line is connected directly to chassis. It is therefore necessary to provide adequate isolation before test equipment is connected to the chassis. Before any attempt is made to re-align this model please read the following:

Under most conditions the PICTURE IF will not require complete re-alignment. The circuit design is such that tube and component part changes do not seriously affect proper functioning of the circuit.

If re-alignment is felt necessary, the following procedure must be followed:

- (1) Check overall band pass using STEP THREE, VISUAL ALIGNMENT.

NOTE: Since most equipment set-ups will differ considerably in results, it will be necessary to first check a receiver that is known to be good; variations in curve should be noted and re-alignment made to this response curve. Only slight adjustments are usually necessary.

- (2) In the case of a tuner change it is usually only necessary to adjust the input IF circuit, that is, the coil in the tuner and L103.

- (3) In cases where the IF's have been seriously maladjusted, it will be necessary to follow the complete IF alignment procedure. It must be kept in mind that the spot frequency alignment, STEP ONE, is only a guide and will not necessarily produce the required results. A visual alignment check is required in order to produce optimum operation.

NOTE: Alignment may be all done from the bottom of chassis with Hexagon tool.

STEP ONE: POINT BY POINT ALIGNMENT OF PICTURE IF:

- A. Adjust all controls to normal operating position.
- B. Connect VTVM across R131. (Point "Y" to chassis). Use low DC scale.
- C. Connect a 3 volt bias battery between point "Z" and chassis. (Positive terminal to chassis).
- D. Connect Signal Generator to the grid of 5A8 (pin 2 of V108A).
- E. With generator set at 44.0 mcs adjust T107 for maximum indication on VTVM.
- F. Connect Signal Generator to the grid of 3BZ6 (pin 1 of V107).
- G. Set generator at 45.2 mcs and adjust T106 bottom for maximum indication. Reset Signal Generator to 47.25 mcs and adjust top of T106 for minimum indication.
- H. Connect Signal Generator to grid of 3BZ6 (pin 1 of V106).
- I. Set Signal Generator to 42.8 mcs and adjust T105 bottom for maximum indication. Reset Signal Generator to 41.25 mcs and adjust T105 top for minimum indication.
- J. Connect Signal Generator to test point on tuner.
- K. With Signal Generator set at 44.0 mcs adjust L20 (tuner IF adjust) and L103 for maximum indication.

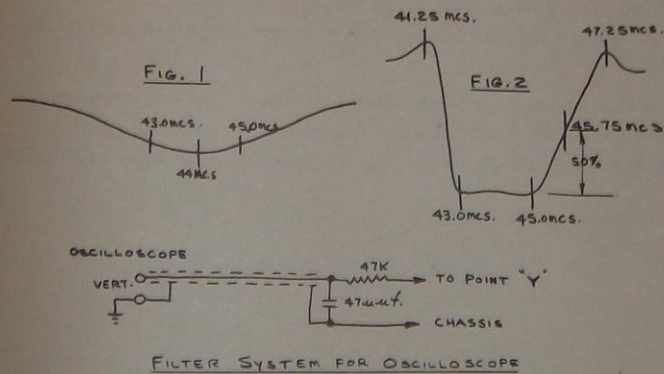
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STEP TWO: VISUAL ALIGNMENT OF PICTURE IF:

- Connect Oscilloscope across diode load R131 (Point "Y" and chassis) using shielded cable and filter system shown.
- Connect 3 volt bias battery, positive to chassis and negative to point "Z" (AGC).
- Connect Sweep Generator to grid of 5A8B (pin 2 of V108A). Generator set at centre frequency of 44.0 mc and 10 mc sweep. Adjust T107 for response curve shown in Fig. 1.
- Connect Sweep Generator to grid of first picture IF (pin 1 of V106) and adjust T105 and T106 for response curve shown in Fig. 2.
- Connect Sweep Generator to test point on tuner and adjust L20 and L103 for response curve shown in Fig. 2.

NOTE: Removing the bias battery from the AGC should not change the overall response appreciably. Abnormal changes of the response under these conditions indicate mis-alignment of the Input IF.



STEP THREE: SOUND IF ALIGNMENT

- Connect RF Signal Generator to pin 7 of V109A.
- Connect VTVM across C113 (point "W" to chassis).
- Adjust T108 (top and bottom) and T103 (bottom) for maximum indication on VTVM.
- Join two 10,000 Ohm Resistors in series and connect across C113. Connect VTVM between point "X" and joint of above resistors and adjust T103 (top) for zero output.

NOTE: It is possible to produce positive or negative voltage by varying this adjustment. The point where the voltage swings from positive to negative is zero output and indicates correct alignment.

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RADIO ALIGNMENT PROCEDURE

- A. Connect Signal Generator to Antenna Terminal (BC) and set Generator to 455 Kcs.
- B. Set tuning capacitor to approximately 1500 Kcs and adjust hexagon IF iron cores for maximum output starting with T102 adjust L123 then L122. Next adjust L121 then L120 of T101.
- C. With tuning capacitor set to minimum capacity and Signal Generator set to 1640 Kcs adjust trimmer C101B to set oscillator. (Tuning range 1640 to 535 Kcs.)
- D. With Signal Generator set at 1500 Kcs, tune in signal and adjust trimmer C101A for maximum output.

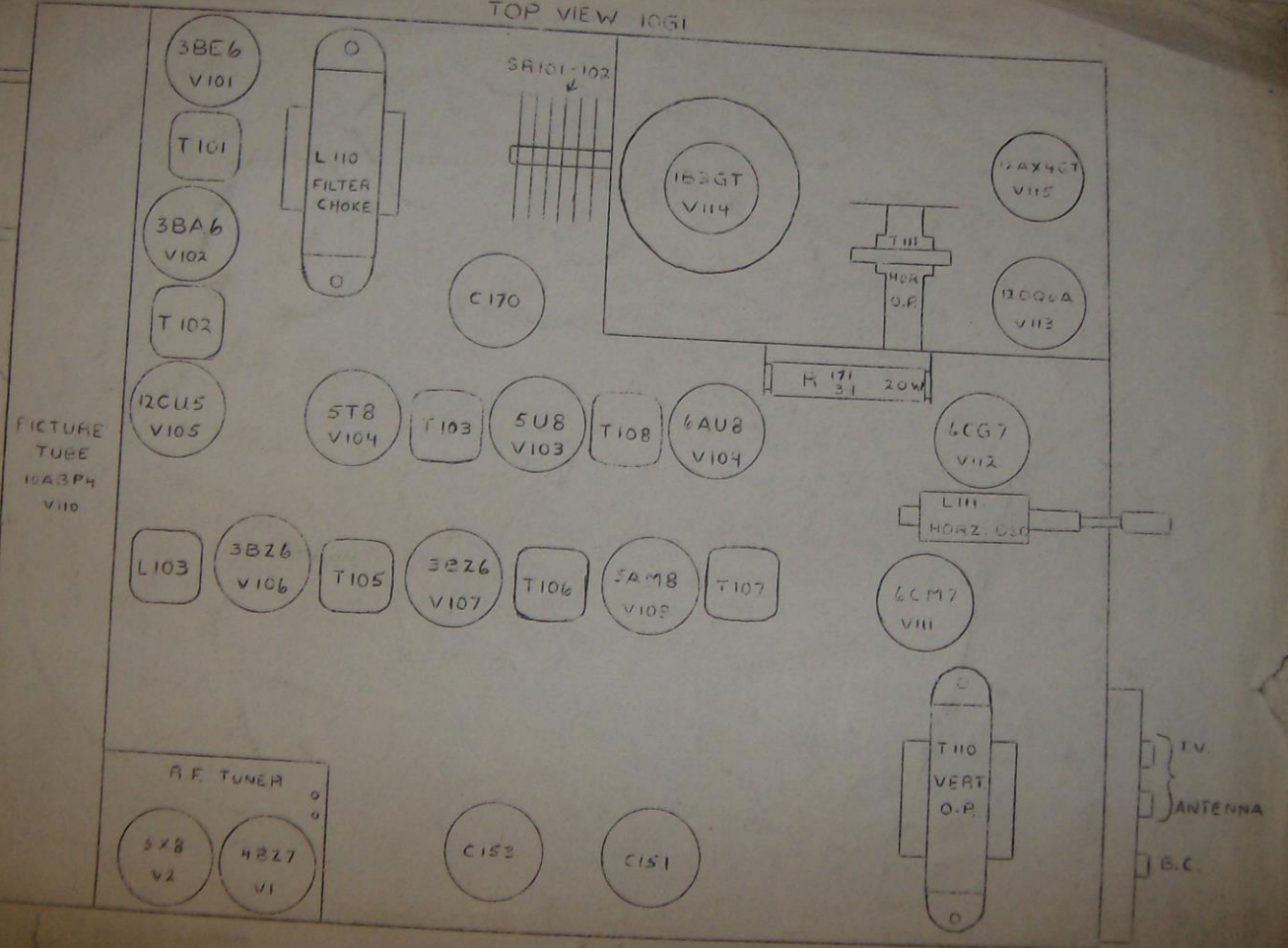
LOOP PADDER

Adjusted for optimum loop performance at factory. Field adjustment usually is unnecessary.

- A. With signal Generator and Dial set at 600 Kcs adjust loop padder for maximum output.
- B. Reset Signal Generator and Dial to 1500 Kcs and rock the tuning capacitor while adjusting C101A for maximum output.

SPARTON OF CANADA, LIMITED
London, Ontario, Canada.

TOP VIEW 1061



PICTURE
TUBE
16ABPH
V110

R.F. TUNER
5X8
V2
4BZ7
V1

TV.
ANTENNA
B.C.

