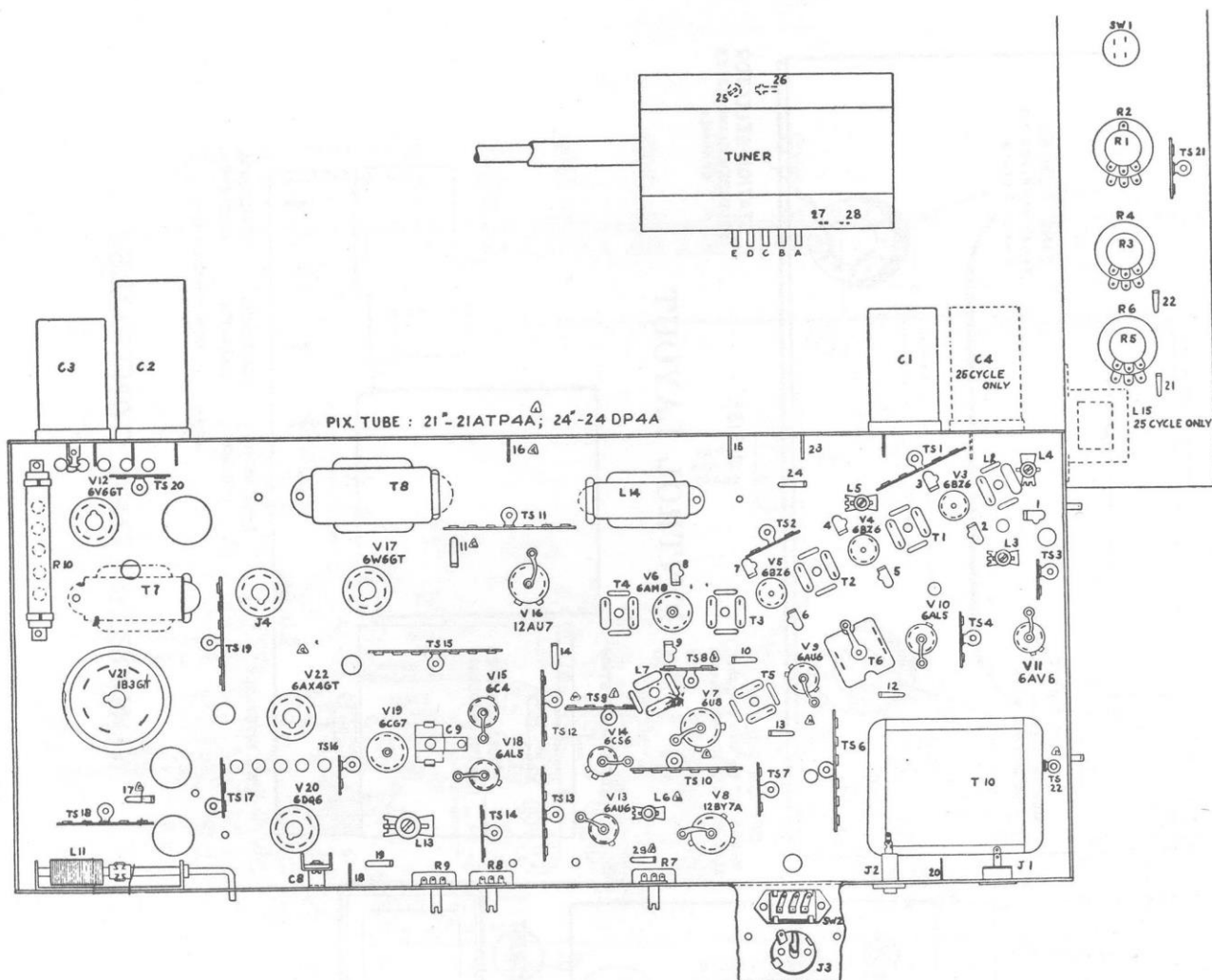




COMPONENT DESCRIPTIONS

- | | |
|--|--|
| <p> C1 Electrolytic — Single Sect.
 C2 Electrolytic — Dual Sect.
 C3 Electrolytic — Triple Sect.
 C4 Electrolytic — Single Sect. 25 cy. only
 C8 Drive Trimmer
 C9 Horizontal Frequency Trimmer
 J1 Interlock Socket
 J2 AC Outlet
 J3 Phone Socket
 J4 Yoke Socket
 L2 1st I.F. Grid Coil
 L3 47.25 Mc. Trap
 L4 39.75 Mc. Trap
 L5 41.25 Mc. Trap
 L6 4.5 Mc Trap
 L7 4.5 Mc. Sound Take-off Coil
 L11 Width Control Coil
 L13 Stabilizing Coil
 L14 Filter Choke
 L15 Filter Choke — 25 cycle only
 R1 Volume Control
 R2 Tone Control </p> | <p> R3 Contrast Control
 R4 Horizontal Hold Control
 R5 Brightness Control
 R6 Vertical Hold Control
 R7 Sync. Control
 R8 Vertical Size Control
 R9 Vertical Linearity Control
 R10 Fixed Wire Wound Resistor
 SW1 AC Off-On Switch
 Afterglow Switch
 SW2 Phono-TV-Hi-fi Switch
 T1 1st Pix I.F.
 T2 2nd Pix I.F.
 T3 3rd Pix I.F.
 T4 Pix I.F. Output
 T5 Interstage Sound I.F.
 T6 4.5 Mc Ratio Detector
 T7 Output Transformer top of chassis
 T8 Vertical Output Transformer
 T9 Horizontal Output — top of chassis under shield can
 T10 Power Transformer </p> |
|--|--|
-) Dual
) Dual
) D.P.S.T.

ALIGNMENT PROCEDURE

4.5 Mc SOUND I.F. AND TRAP

1. Trap L6:

Apply crystal calibrated 4.5 Mc. signal source capacitively to V8 pin No. 2; set contrast control at max. Connect DC VTVM through the diode probe shown schematically in Fig. 1 to kinescope cathode. Tune L6 for minimum reading on VTVM. To prevent received signals from interfering with the adjustment V6 should be removed. The VTVM should have a full scale reading of 1 or 2 volts and the signal generator should be adjusted for full output.

2. Sound I.F., L7 and T5 Pri. and Sec. and T6 Pri. (bottom):

Apply signal as above.
Connect DC VTVM across ratio detector 5 uf. electrolytic capacitor.
Tune L7 and T5 (Top and bottom) and T6 pri. (bottom) for maximum VTVM reading.

3. Radio Detector, T6 Sec. (top):

Apply signal as above.
Connect DC VTVM to junction of de-emphasis resistor and capacitor (150K and 470 uuf), at either end of shielded audio lead.
Adjust T6 sec. (top) for zero VTVM reading.

Note that adjustments numbers 2 and 3 above may be made with a received TV signal. The trap adjustment, number 1 above, may only be made as described. However the need of this adjustment being made in the field is very unlikely.

PICTURE IF ALIGNMENT

A — Alignment of M-Derived Filter

- (1) Short circuit the tuner input by connecting a shorted "clothespin" across the antenna terminals.
- (2) Disconnect the grid end of the 1.5 uuf capacitor connected between pin 1 of V4 and L5.
- (3) Set channel selector to an interference-free high frequency channel.
- (4) Connect the high side of an IF sweep generator (approximately 38 to 48 mc) to an ungrounded tube shield floating over converter tube (V2). Connect low side to chassis.
- (5) Connect H.F. terminals of the diode detector probe shown in Fig. 1 to the plate of V5 (pin 5) and ground. Connect the video terminal to ground. Adjust the oscilloscope for maximum gain.
- (6) Connect -1.5 volts bias to AGC line at junction of 100K and 330K ohm resistors on terminal strip TS 13.
- (7) Adjust L1 and L2 for maximum gain at approximately 43 mc.
Adjust T1 and T2 for maximum gain at 39.75 Mc.
Adjust L4 for maximum attenuation at 39.75 Mc.
The generator output should be adjusted so that the 39.75 mc. marker is clearly visible.
- (8) Adjust T1 and T2 for maximum gain at 47.25 mc.
Adjust L3 for maximum attenuation at 47.25 mc.
The generator output should be adjusted so that the 47.25 mc. marker is clearly visible.
- (9) Transfer diode detector probe to plate of V3 (pin 5) and ground and adjust oscilloscope for maximum gain.
- (10) Set bias to -3.0 volts and adjust L1 and L2 to obtain the response shown in Fig. 11.
The circuit is properly adjusted when the two outside peaks are of the same amplitude, and the centre peak is midway between the two outside peaks.
L1 controls the tilt of the response. L2 controls the position of the centre peak. The markers should then fall approximately as shown in Fig. 11.

B — Alignment of Staggered Quadruple

- (11) Reconnect 1.5 uuf capacitor to pin 1 of V4. Remove diode detector from V3 and connect video terminal to junction of peaking coil L18 and 1.3K ohm resistor.
- (12) Set bias to -4.5 volts and adjust sweep generator output to obtain 6 volts peak-to-peak output at diode load.
- (13) Adjust L5, T1, T2, T3 and T4 to obtain response shown in Fig. III.
Adjust L5 to place trap at 41.25 mc.
Adjust T1 to place 42.0 mc. marker at 50% point.
Adjust T2 to place 45.75 mc. marker at 50% point.
Adjust T3 and T4 to position 42.5 mc and 44.5 mc markers and obtain flat response.

NOTE: T3 is tuned to the low frequency side of the band centre frequency while T4 is tuned to the high frequency side of band centre. Care must be taken to ensure that the resonant frequencies of these transformers are not interchanged. This will not occur if initially the slug of T3 is turned all the way into the winding and the slug of T4 is turned all the way out of the winding.

- (14) Disconnect the oscilloscope, the antenna short-circuit, bias batteries and sweep generator. Replace converter tube shield.

V1 —6BZ7	Cascade RF Amp.	} supplied in tuner	V9 —6AU6	Limiter	V17—6W6GT	Vert. Output
V2 —6AT8	Pentode Converter		V10—6AL5	Ratio Detector	V18—6AL5	Hor. Phase Detector
V3 —6BZ6	1st Video I.F.		V11—6AV6	1st Audio and AGC Clamp	V19—6CG7	Hor. Multivibrator
V4 —6BZ6	2nd Video I.F.		V12—6V6GT	Audio Output	V20—6DQ6	Hor. Output
V5 —6BZ6	3rd Video I.F.		V13—6AU6	AGC Keyer	V21—1B3GT	H.V. Rectifier
V6 —6AM8	4th Video I.F. and Video Detector		V14—6CS6	Sync. Separator	V22—6AX4GT	Damper
V7 —6U8	Sync. Amplifier and Sound I.F.		V15—6C4	Sync. Splitter	V23—6AS4	Rectifier
V8 —12BY7A	Video Output		V16—12AU7	Vert. Osc.	V24—21ATP4A	21" Pix Tube
					—24DP4A	24" Pix Tube

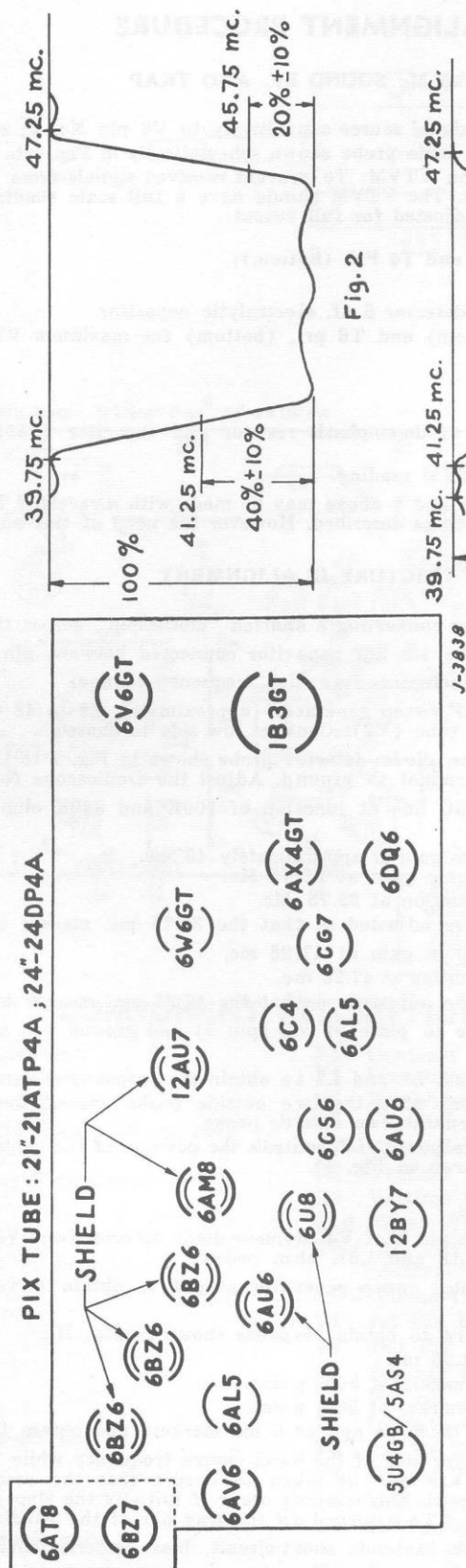


Fig. 2

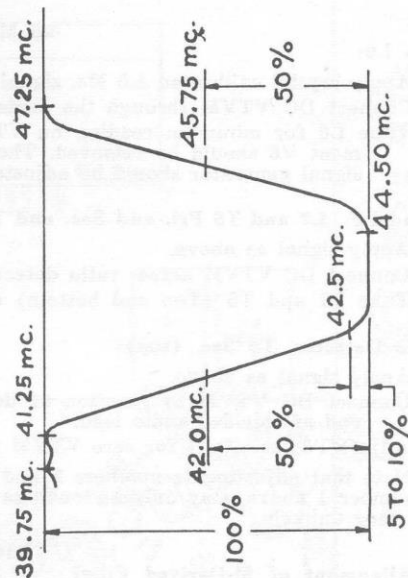


Fig. 3

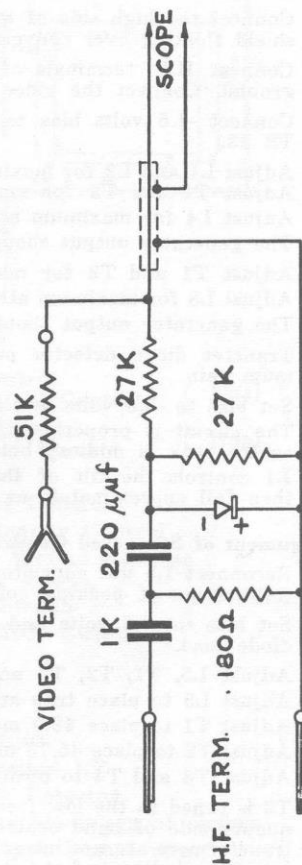
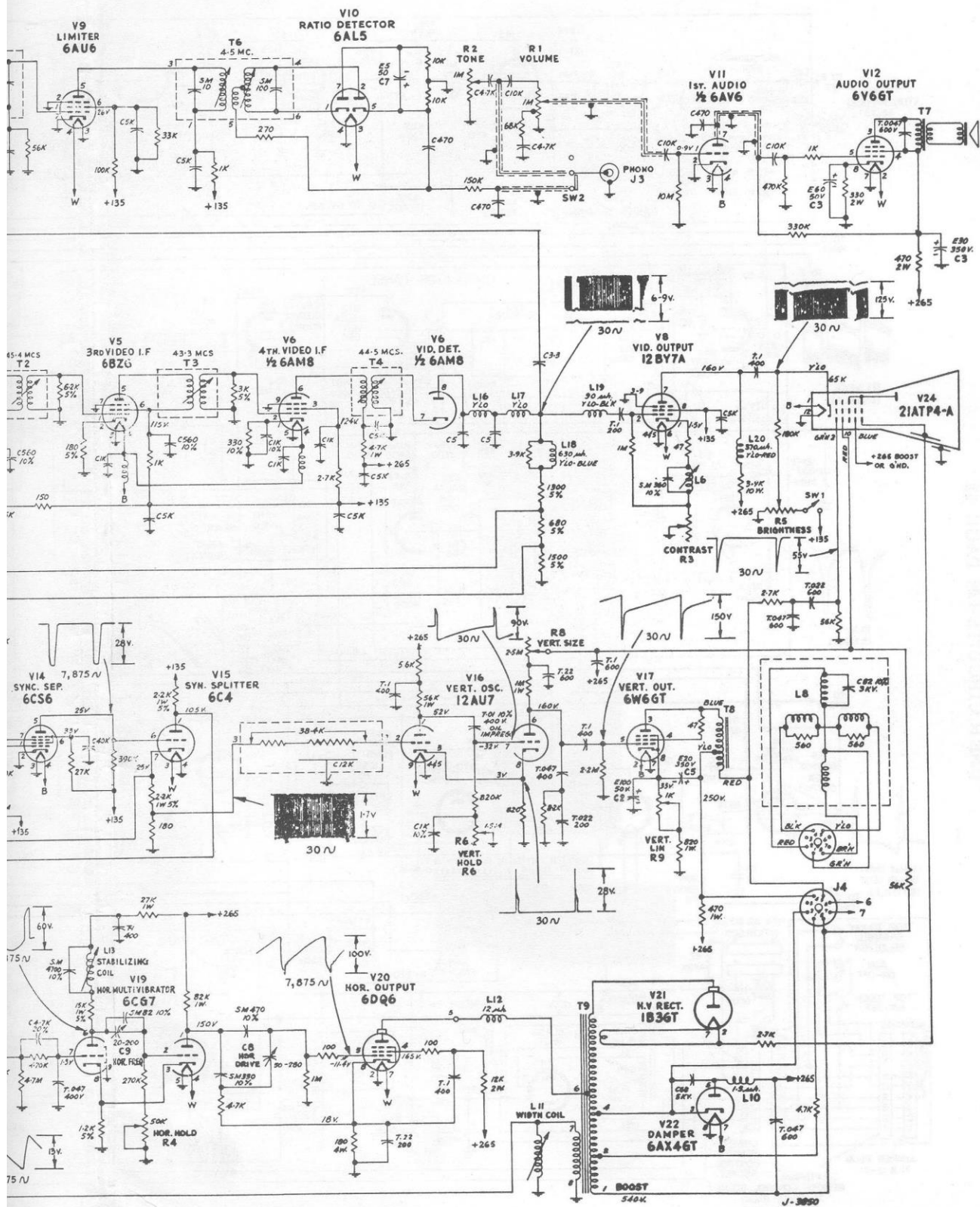


Fig. 1

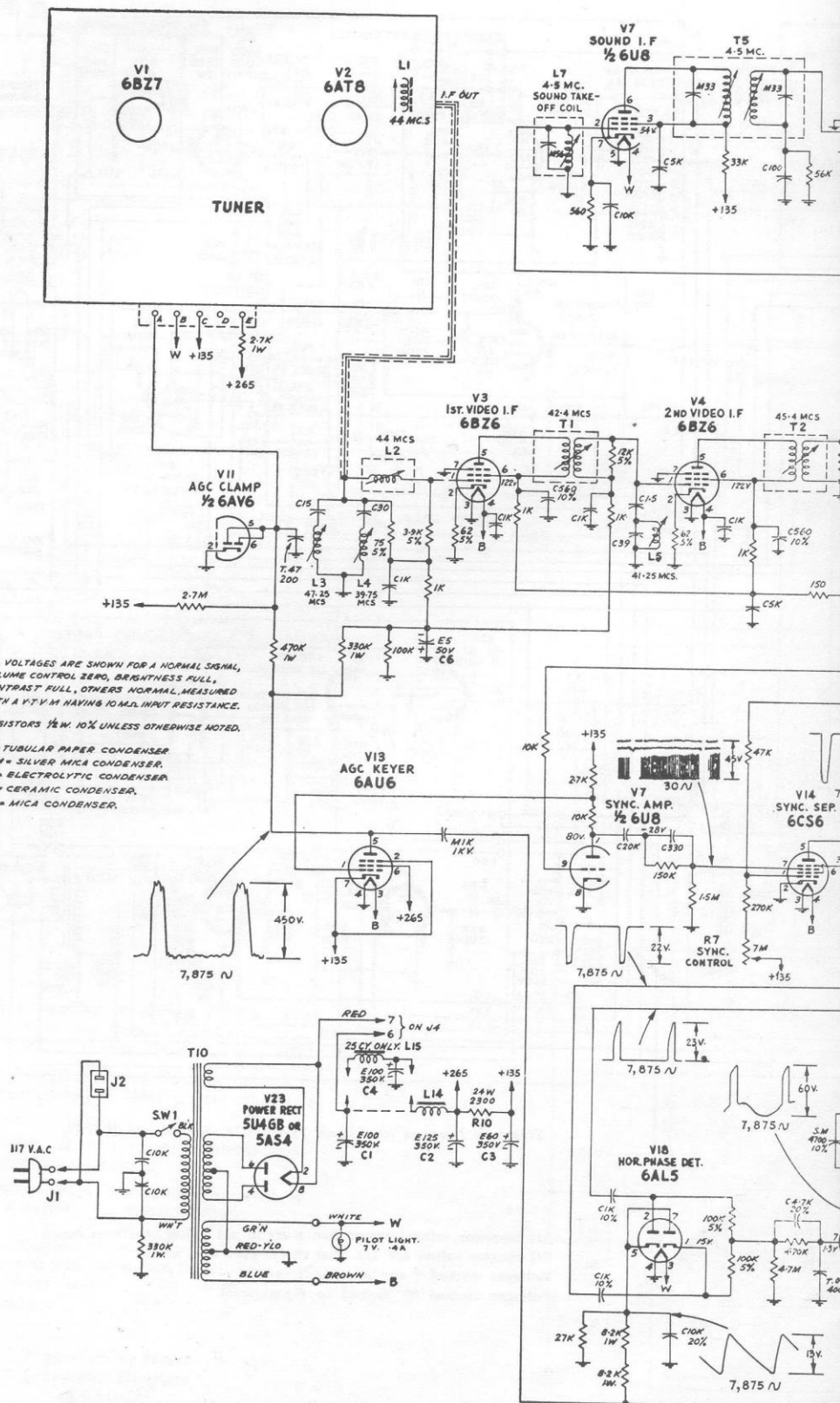


1 ALL CAPACITORS IN MMF.
2. FEED THRU CAPACITORS 800 MMF MIN UNLESS NOTED.
3 ALL RESISTORS 1/2 WATT UNLESS NOTED.

L1		Mixer Plate Coil (in tuner)
L2	P-2666	1st I.F. Grid Coil
L3	P-2967	47.25 Mc. Trap
L4	P-2966	39.75 Mc. Trap
L5	P-2933	41.25 Mc. Trap
L6	P-2320-1	4.5 Mc. Trap
L7	P-2937	4.5 Mc. Sound Take-off Coil
L8	K-1711	Deflection Yoke & Centering Device
L9		
L10	P-2343-1.5	RF Choke
L11	P-2789	Width Control Coil
L12		Choke (part of T9)
L13	P-2450	Stabilizing Coil
L14	LK-485-10	Filter Choke (used on 25 cycle models only)
L14	LK-593	Filter Choke (used on 60 cycle models only)
L15	LK-485-10	Filter Choke (used on 25 cycle models only)
L16, L17	P-2911	Choke
L18	P-2907-7	Peaking Coil — Yellow & Blue
L19	P-2907-8	Peaking Coil — Yellow & Black
L20	P-2907-9	Peaking Coil — Yellow & Red
T1	P-2889	1st Pix I.F.
T2	P-2889	2nd Pix I.F.
T3	P-2889	3rd Pix I.F.
T4	P-2915	Pix I.F. Output
T5	P-2810	Interstage Sound I.F.
T6	P-2687	4.5 Mc. Ratio Detector
T7	LK-512-6	Output Transformer
T8	LK-575-2	Transformer — Vertical Output
T9	K-1562	Horizontal Output
T10	LK-599	Power Transformer 60 Cycle
	LK-600	Power Transformer 25 Cycle



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VIKING

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TCD-258 Same as TCD-255.	
TCD-259 Same as TCD-255.	
TCD-260 Same as TCD-255.	
TMD-256 Same as TCD-256.	
TCE-261 Same as TCD-255.	