RCC TELEVISION Service Manual

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1966 Supplement No. 74

INDEX

ADMIRAL

COLOR

ADMIRAL

MONOCHROME

CANADIAN GENERAL ELECTRIC

COLOR

FLEETWOOD

COLOR

PHILCO

COLOR

RCA-VICTOR

SETCHELL-CARLSON

COLOR

SIMPSONS-SEARS

CHECK YOUR TUBE INVENTORY

A list of tube types used in receivers covered by this supplement appears on page 104.

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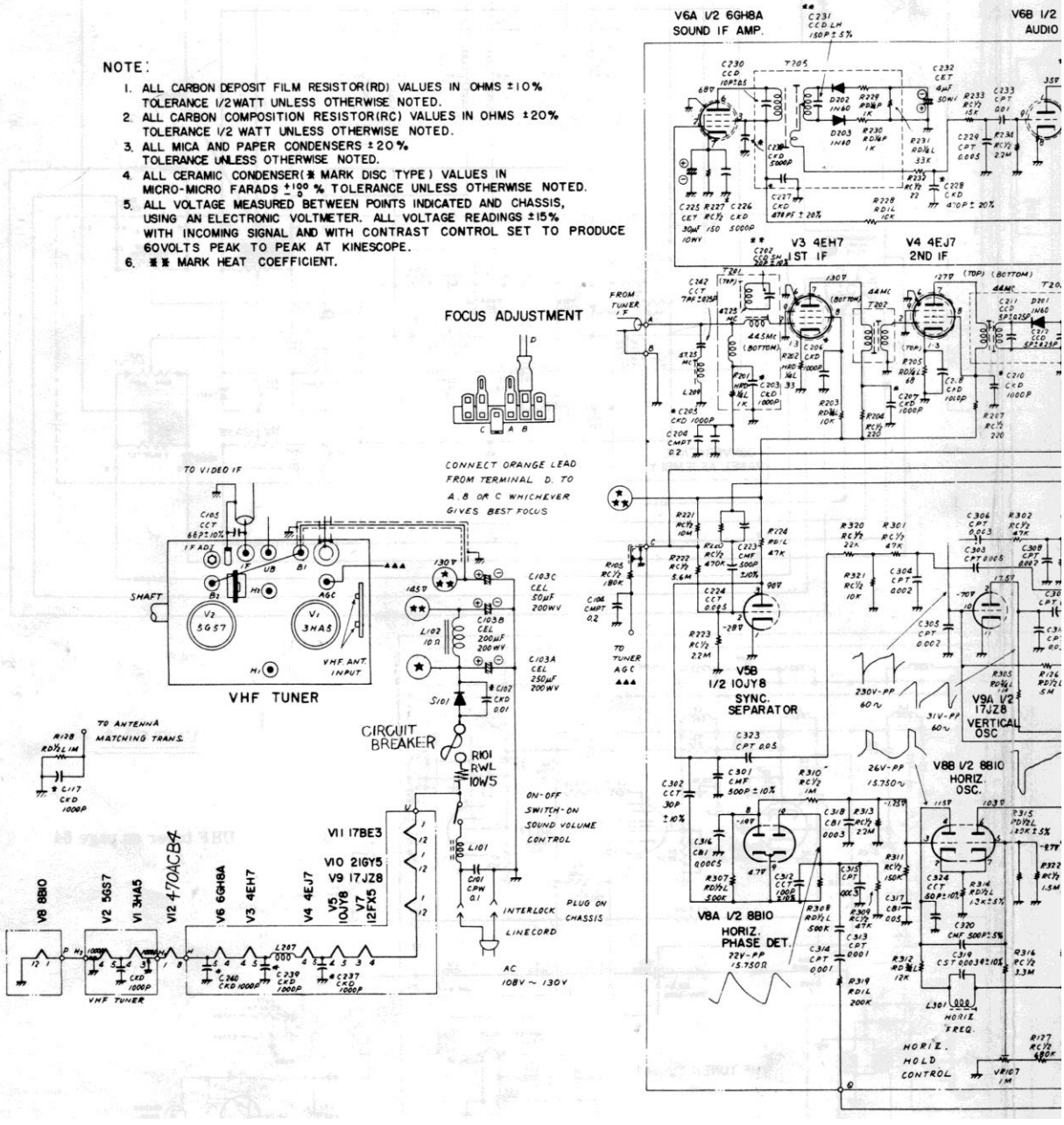
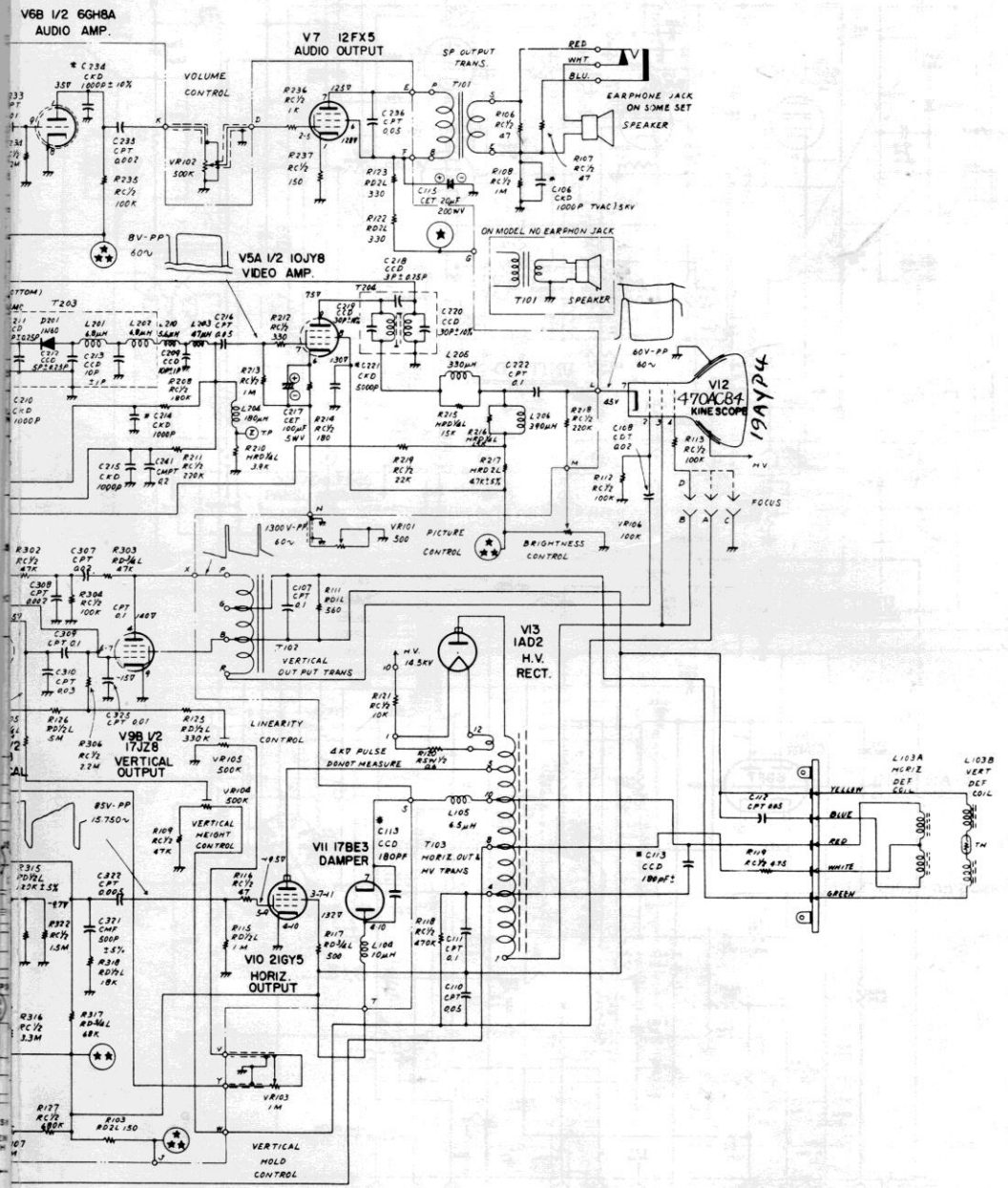
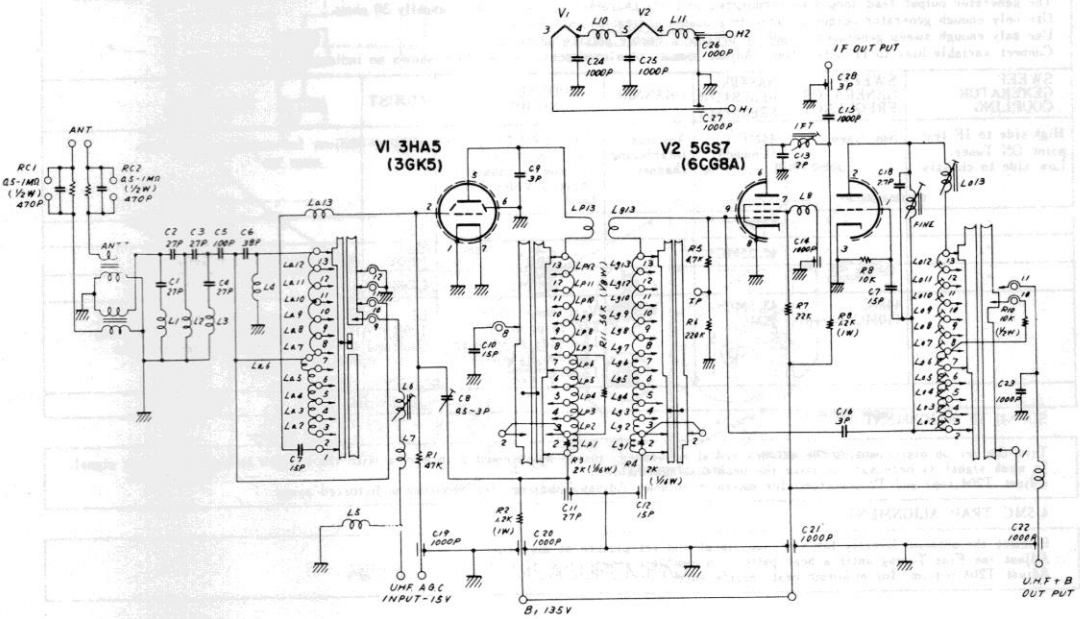
NOTE:

1. ALL CARBON DEPOSIT FILM RESISTOR(RD) VALUES IN OHMS ±10% TOLERANCE 1/2 WATT UNLESS OTHERWISE NOTED.
2. ALL CARBON COMPOSITION RESISTOR(RC) VALUES IN OHMS ±20% TOLERANCE 1/2 WATT UNLESS OTHERWISE NOTED.
3. ALL MICA AND PAPER CONDENSERS ±20% TOLERANCE UNLESS OTHERWISE NOTED.
4. ALL CERAMIC CONDENSER(✱ MARK DISC TYPE) VALUES IN MICRO-MICRO FARADS $\pm\frac{100}{0}$ % TOLERANCE UNLESS OTHERWISE NOTED.
5. ALL VOLTAGE MEASURED BETWEEN POINTS INDICATED AND CHASSIS, USING AN ELECTRONIC VOLTMETER. ALL VOLTAGE READINGS ±15% WITH INCOMING SIGNAL AND WITH CONTRAST CONTROL SET TO PRODUCE 60VOLTS PEAK TO PEAK AT KINESCOPE.
6. ✱✱ MARK HEAT COEFFICIENT.



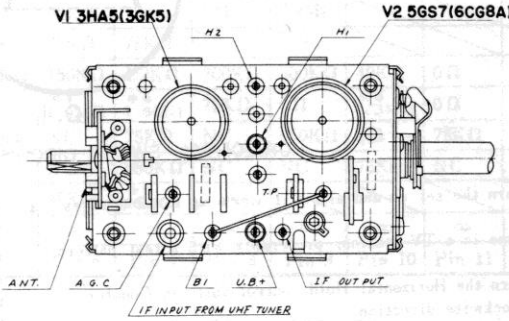

V6B 1/2 6GH8A
AUDIO AMP.
V7 12FX5
AUDIO OUTPUT
SP OUTPUT TRANS.
VOLUME CONTROL
EARPHONE JACK ON SOME SET
SPEAKER
ON MODEL NO EARPHON JACK
T101 SPEAKER
V5A 1/2 10JY8
VIDEO AMP.
V12 470AC84 KINESCOPE
19AYP4
V13 1AD2 H.V. RECT.
V9B 1/2 17JZ8 VERTICAL OUTPUT
V11 17BE3 DAMPER
V10 21GY5 HORIZ. OUTPUT
VERTICAL OUT PUT TRANS
T103 HORIZ. OUT PUT TRANS
PICTURE CONTROL
BRIGHTNESS CONTROL
FOCUS
LINEARITY CONTROL
VERTICAL HEIGHT CONTROL
VERTICAL HOLD CONTROL
4KV PULSE DONOT MEASURE
YELLOW
BLUE
RED
WHITE
GREEN

TUNER SCHEMATIC AND LAYOUT



TRANSFORMERS & COILS

T101	E11320	Transformer, Audio Output
T102	E11321	Transformer, Vertical Output
T103	E11322	Transformer, Horizontal Output
T201	E11323	I.F. Transformer, 1st Video
T202	E11324	I.F. Transformer, 2nd Video
T203	E11325	I.F. Transformer, 3rd Video & Detector
T204	E11326	I.F. Transformer, Sound
T205	E11327	Transformer, Ratio Detector
L201	E11328	Coil, Choke
L202	E11329	Coil, Choke
L203	E11330	Coil, Peaking
L204	E11331	Coil, Peaking
L205	E11332	Coil, Peaking
L206	E11333	Coil, Peaking
L207	E11334	Coil, Filament
L209	E11335	Coil, 47.25 Mc. Trap.
L210	E11336	Coil, Peaking
L301	E11337	Cotl, Horizontal Frequency
L101	E11338	Line Filter
L102	E11339	Choke, Filter
L103	E11340	Deflection Yoke
L104	E11341	Coil, Damper Choke
L105	E11342	Coil, Choke



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.

VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough generator output to provide a usable indication on VTVM.
Use only enough sweep generator output to provide a usable pattern on scope.
Connect variable bias to IF AGC line. Adjust bias to obtain response curve which shows no indication of overloading.

SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
High side to IF test point ON Tuner. Low side to chassis	Not Used	44MC (Unmod.)	Any non-interfering channel	Use VTVM DC probe thru 10K to point A. Common to chassis. (Across Video Det. Load)	T203	Adjust for maximum deflection.
〃	〃	44MC	〃	〃	T202	〃
〃	〃	47.25MC	〃	〃	T201 (TOP)	Adjust for minimum deflection.
〃	〃	〃	〃	〃	L208	〃
	44MC (10MC sweep)	43.5MC 45MC		Vert Amp. thru 27K to point. A. Low side to chassis (Across Video Det. Load)	L2 T201 (Bottom)	Chock for response similar to Fig 1. If necessary retouch T202, T203 and L2 T201 (Bottom) as required for desired response.

SOUND IF ALIGNMENT

Turn the set on disconnecting the antenna and if necessary, insert an attenuator in series with the antenna to provide a weak signal. (a weak signal is necessary to make the peak distinguishable.)
Adjust T204(top) and T205(bottom) for maximum volume. Adjust T205(top) for maximum undistorted sound.

4.5MC TRAP ALIGNMENT

Connect the antenna directly for a strong signal and set picture at maximum.
Adjust the Fine Tuning until a beat pattern is visible.
Adjust T204(bottom) for minimum beat interference.

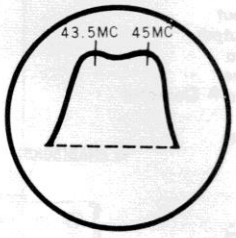


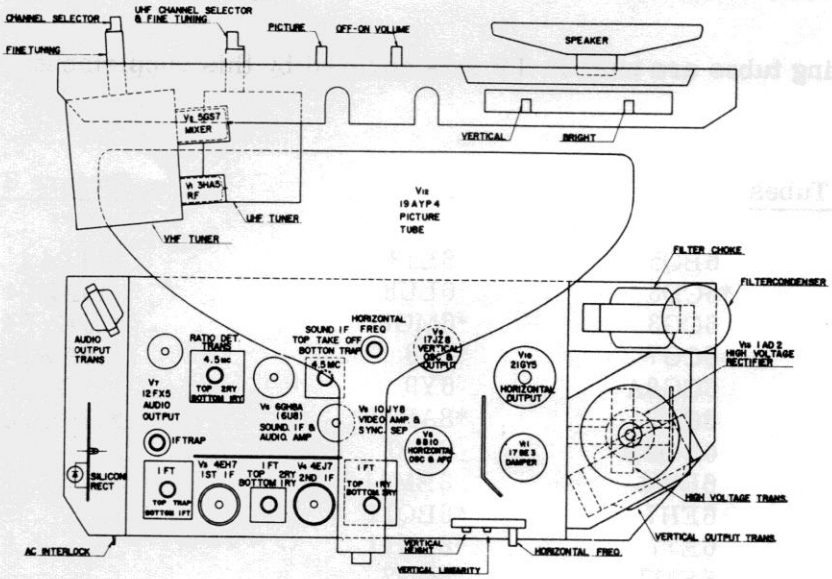
FIG. 1

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

1. Turn the set on and allow it warm up for 2 minutes.
2. Tune in a TV station, preferably with a test pattern.
3. Turn the Horizontal Hold control fully in Counter Clockwise direction.
4. Rotate Horizontal Frequency control coil through small hole on bottom of cabinet in Counter clock-wise direction until picture falls out of horizontal sync. (if picture is not out of sync at the end of the control range, momentarily switch tuner to "free" channel and then return to original.)
5. Reverse rotation of Frequency Control coil slowly until picture falls into sync.
6. Set the Horizontal hold control at the center of range.

C817.13500

TUBE LAYOUT



RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V 1	3HA5	440KΩ	0Ω	—	—	75KΩ	0Ω	0Ω					
V 2	5GS7	11KΩ	75KΩ	0Ω	—	—	75KΩ	90KΩ	0Ω	200KΩ			
V 3	4EH7	33Ω	150KΩ	33Ω	—	—	0Ω	75KΩ	75KΩ	0Ω			
V 4	4EJ7	68Ω	0Ω	68Ω	—	—	0Ω	75KΩ	83KΩ	0Ω			
V 5	10JY8	0Ω	1.8MΩ	130KΩ	—	—	*1 650Ω	840KΩ	75KΩ	78KΩ			
V 6	6GH8A	150KΩ	2.5Ω	83KΩ	—	—	83KΩ	150Ω	0Ω	2.2MΩ			
V 7	12FX5	150Ω	*2 500KΩ	—	—	400KΩ	75KΩ	75KΩ					
V 8	8B10Ⓐ	—	1.2KΩ	900KΩ	83KΩ	180KΩ	150KΩ	1.2KΩ	700KΩ	300KΩ	40KΩ	0Ω	—
V 9	17JZ8	—	*3 1.3KΩ	NC	75KΩ	NC	*4 1.6MΩ	*4 1.6MΩ	75KΩ	0Ω	*5 1.3MΩ	0Ω	--
V10	21GY5	—	NC	75KΩ	0Ω	950KΩ	NC	75KΩ	NC	950KΩ	0Ω	75KΩ	—
V11	17BE3	—	NC	NC	75KΩ	NC	NC	950KΩ	NC	NC	75KΩ	NC	—
V12	19AYP4	—	85KΩ	950KΩ	1MΩ	NC	85KΩ	*6 260KΩ	—				
V13	1AD2	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12

NC NO CONNECTION
* 1 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF PICTURE.
* 2 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VOLUME.
* 3 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL HEIGHT.
* 4 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL LINEA.
* 5 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL HOLD.
* 6 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF BRIGHTNESS.