RCC TELEVISION Service Manual

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GORDON OLIVER TELEVISION
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NOTE: RE INDEXING

Since most TV circuits require fold pages for clear reproduction, it is necessary to bind them as a group in the middle of the book. As a result, related data such as alignment, voltages etc., may be widely separated in some cases. To avoid confusion, use your index to locate ALL data.

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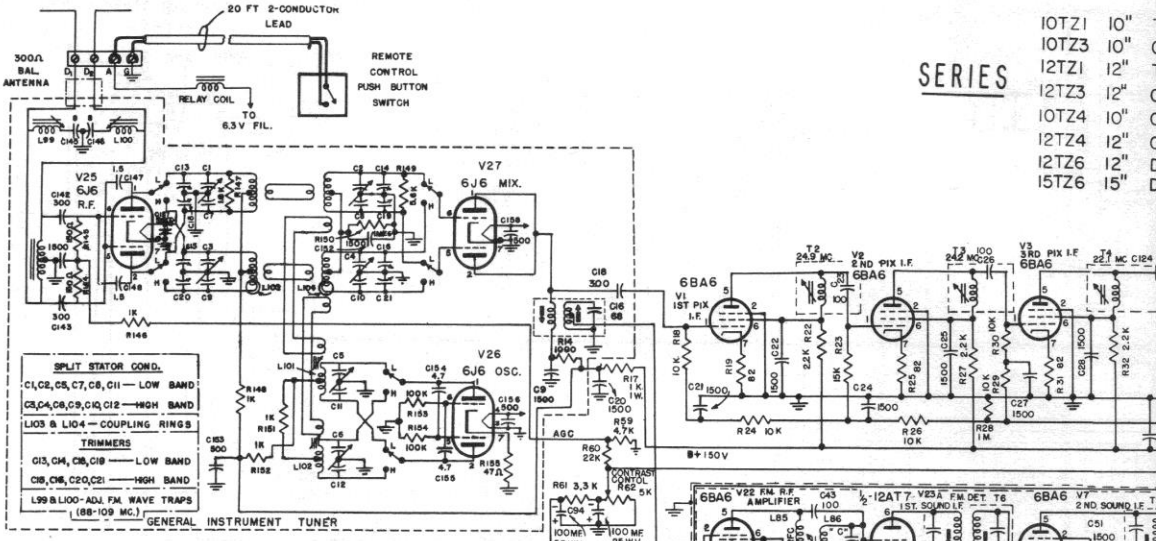
SERIES

10TZ1	10"	
10TZ3	10"	
12TZ1	12"	
12TZ3	12"	
10TZ4	10"	
12TZ4	12"	
12TZ6	12"	
15TZ6	15"	



TELEVISION I.F. ALIGNMENT DATA

VIDEO

T1- TOP TRAP 20.25 MC
BOT. PEAK 21.75 MC
T2- 24.9 MC
T3- 24.2 MC
T4- 22.1 MC
T5- 22.8 MC

SOUND

T6-7-8-9 - 20.25 MC

A.M. I.F. ALIGNMENT

T10 - T11 - 455 KC

6- THE ½ AMP FUSE USED IN SERIES WITH THE CATHODE OF THE 6BG6G IS A PIGTAIL TYPE, SOLDERED IN PLACE.

THE 5 AMP LINE FUSE IS ACCESIBLE FROM THE BOTTOM OF THE CHASSIS FOR REPLACEMENT BY REMOVING THE MASONITE BOTTOM COVER.

NOTES

1- R.F. TUNER SWITCH SHOWN AT LOW CHANNELS POSITION.

2- SELECTOR SWITCH SHOWN IN TELEVISION POSITION.

3- ITEMS MARKED "†" R-92-94 R-98-99 C-81-82 ARE MATCHED PAIRS ±1%. REPLACE AS MATCHED PAIRS.

4- SPEAKERS: ◎

SERIES	TYPE	SPKR. USED	RECORD CHANGER
10TZ1	TABLE	6" PM	NONE
12TZ1	"		
10TZ4	CONSOLE	10" PM	WEBSTER MODEL 256
12TZ4	"	"	

5- THE FOLLOWING TABLE SHOWS CHANGES REQUIRED IN FOCUS RESISTORS FOR 10" OR 12" PICTURE TUBES. ◐

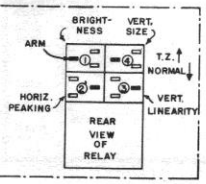
TUBE	SYMBOL	R	WATTS	SERIES
10BP4	127A	680Ω	10	10TZ
12QP4	127A	680Ω	10	10TZ
12JP4	—	NONE	—	12TZ
12QP4	127B	1800Ω	7	12TZ

⏚ R129 — LIFT OFF GROUND AND RETURN TO "B-", AS SHOWN BY DOTTED LINES FOR 10BP4, 12LP4 & 12QP4.

RELAY POSITION

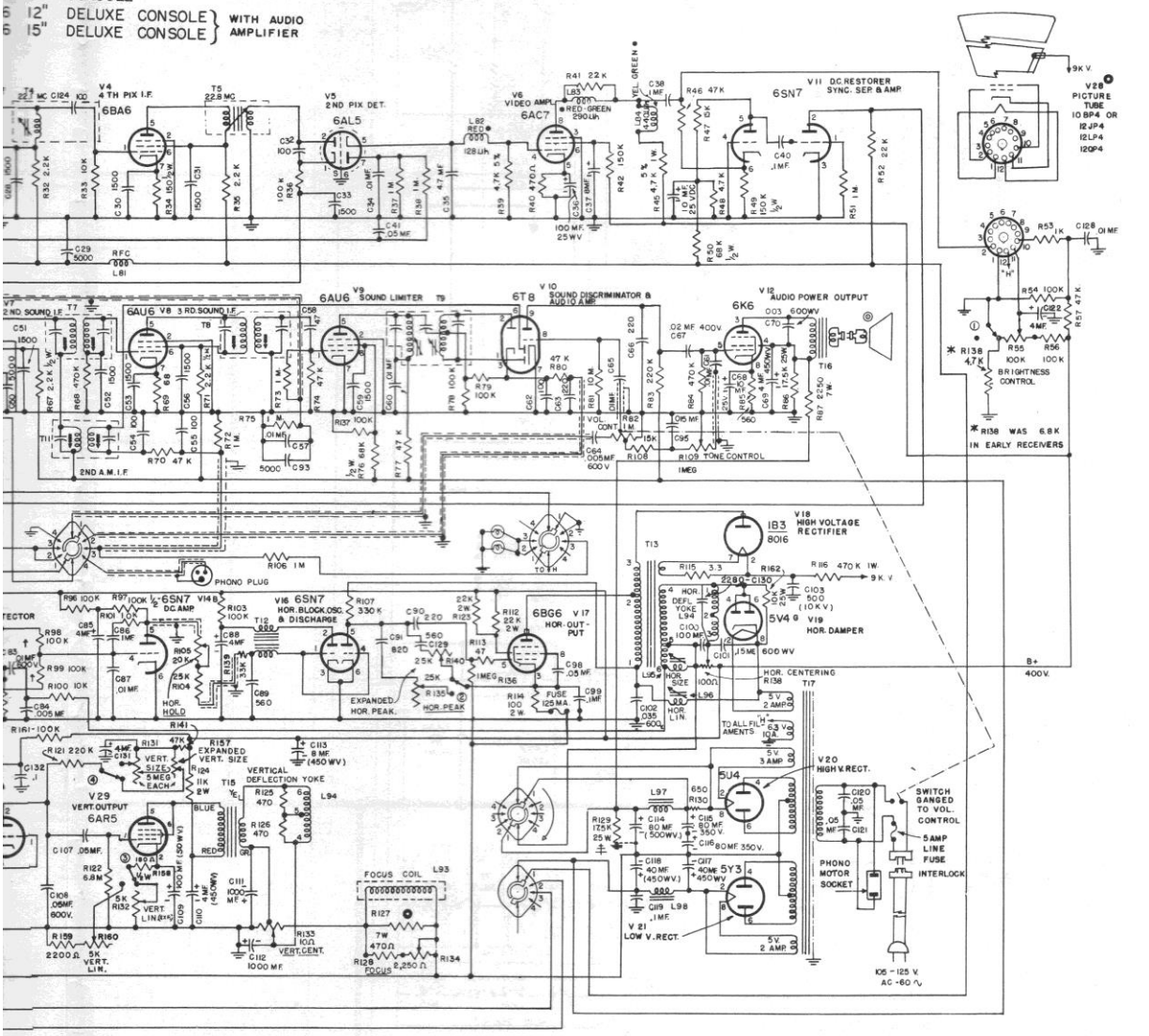
TZ.- NON ENERGIZED
NORMAL — ENERGIZED

RELAY CONTACTS IN DIAGRAM SHOWN IN T.Z. (EXPANDED) POSITION.



GARROD
10TZ, 12TZ, 15TZ

- 10" TABLE
- 10" CONSOLETTE
- 12" TABLE
- 12" CONSOLETTE
- 10" CONSOLE
- 12" CONSOLE
- 12" DELUXE CONSOLE } WITH AUDIO AMPLIFIER
- 15" DELUXE CONSOLE }

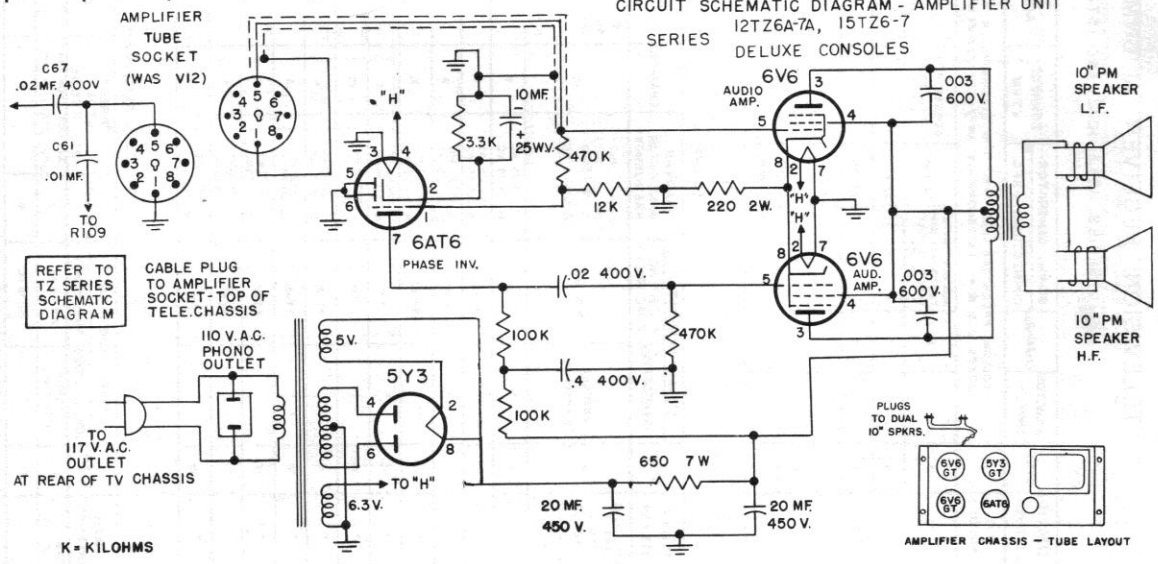


GAROD
10TZ, 12TZ, 15TZ

AM-FM RECEIVER ALIGNMENT CHART SERIES 10TZ, 12TZ, & 15TZ TELEVISION RECEIVERS

CIRCUIT ALIGNED	STEP	SELECTOR SWITCH POS.	R'C'V'R DIAL SET TO	SIGNAL GENERATOR		METER		COMPONENT ADJUSTED	METER INDICATION	REMARKS
				FREQUENCY	CONNECTIONS	TYPE	CONNECTIONS			
BC I.F.	1	BC	1650 KC	455 KC 30% MOD.	THRU .1MFD TO 6BE6 GRID PIN #1	A C OUTPUT	ACROSS VOICE COIL	TOP AND BOTTOM OF T-10, T11	MAXIMUM DEFLECTION	
FM I.F.	2	FM	108.5 MC	20.25 MC. UN MOD.	THRU .01MFD. TO GRID OF 12AT7 (PIN #7)	D C VTVM	FROM LIMITER GRID, PIN 1 OF 6AU6 AND GROUND.	TOP AND BOTTOM OF T6, T7, T8	"	
FM DISC.	3	"	"	"	"	"	FROM DISC. CATHODE, PIN 3 OF 6T8 AND GROUND.	TOP OF T9	MAX. DEFLECTION OF EITHER POLARITY	
	4	"	"	"	"	"	"	BOTTOM OF T9	0 VOLTS	ADJUST FOR ZERO BETWEEN PLUS AND MINUS PEAKS
BC OSC	5	BC	1650 KC	1650 KC 30% MOD.	COUPLED TO R'C'VR LOOP BY 2 OR 3 TURNS	AC OUTPUT	ACROSS VOICE COIL	C-126	MAXIMUM DEFLECTION	
BC RF	6	"	1500KC	1500 KC 30% MOD.	"	"	"	C-125	"	
FM OSC	7	FM	108.5 MC	108.5 MC UN MOD.	THRU BALANCED 300 Ω DUMMY ANT. TO F.M. ANT & GND.	D C VTVM	FROM LIMITER GRID PIN 1 OF 6AU6 AND GROUND.	C-123 2-6 MMF. TRIMMER ADJ. AGENT TO TUNING GANG	MAXIMUM DEFLECTION	
	8	"	87.5 MC.	87.5 MC. UNMOD.	"	"	"	OSC. COIL CORE L90	"	REPEAT STEPS 7 & 8 AS NECESSARY
FM R.F.	9	"	95 MC.	95 MC UNMOD.	"	"	"	RF COIL CORE L 86	"	
	10	"	"	"	"	"	"	ANT. TRANS. CORE T-18	"	

CIRCUIT SCHEMATIC DIAGRAM - AMPLIFIER UNIT
12TZ6A-7A, 15TZ6-7
SERIES DELUXE CONSOLES



TELEVISION RECEIVER ALIGNMENT CHART

SERIES 10TZ, 12TZ, AND 15TZ

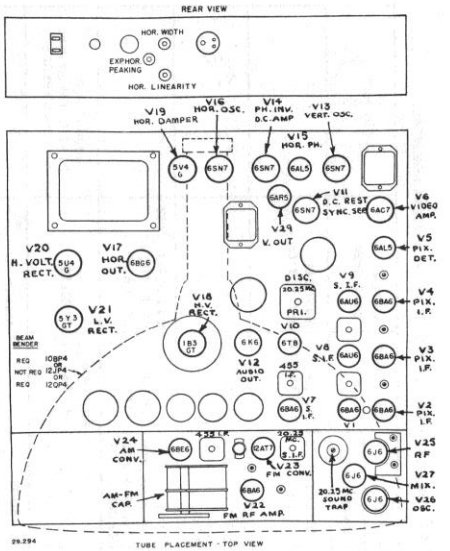
CIRCUIT ALIGNED	STEP	SELECTOR SWITCH	CHANNEL	SIGNAL GENERATOR CONNECTIONS	SIGNAL GENERATOR FREQ.	CONNECT VTVM	ADJUST	METER INDICATION	REMARKS
TV SOUND	1	FOLLOW PROCEDURE FOR FM-IF & DISCRIMINATOR ADJUSTMENT, STEPS 2,3, & 4 AS SHOWN ON AM-FM ALIGNMENT CHART.							USE IDENTICAL SIGNAL GEN. FREQ AS IN STEPS 2,3,&4 OF FM IF ALIGNMENT. VISUAL CHECK DESIRABLE FOR "TOUCH-UP" OF BAND-PASS CIRCUIT. (SEE FIG. 1)
TV IF	2	TV	8	ACROSS CENTER TAP OF MIX. GRID COILS & GND. (R150)	22.8 MC	ACROSS 4.7K LOAD RES. (R39)	T5	MAX. DEFL.	
	3	"	"	"	22.1 MC	"	T4	"	
	4	"	"	"	24.2 MC	"	T3	"	
	5	"	"	"	24.9 MC	"	T2	"	
	6	"	"	"	21.75 MC	"	T1 (BOT.)	"	
	7	"	"	"	20.25 MC	"	T1 (TOP)	MIN. DEFL.	

TV RF ALIGNMENT

DUMMY ANTENNA	STEP	SIGNAL GENERATOR CONNECTIONS	SIGNAL GENERATOR FREQUENCY (10 MC SWEEP)	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
ONE 150 Ω CARBON RESISTOR IN SERIES WITH EACH LEAD.	8	ANTENNA TERMINALS	213 MC	211.25 MC & 215.75 MC	13	VERT. AMPLIFIER ACROSS CENTER TAP OF MIX. GRID COILS & GND. (ACROSS R150 & C152).	C15, C16 C20, C21 (SEE FIG. 2)	ADJUST FOR RESPONSE APPROX. AS SHOWN BELOW, WITH MARKERS MORE THAN 70% OF PEAK AMPLITUDE. KEEP THE RF AND MIXER TRIMMER PAIRS IN APPROX. THE SAME RELATIVE POSITION.
"	9	"	177 MC	175.25 MC & 179.75 MC	7	"	L103, L104	ADJUST RINGS FOR WAVE-FORM AS SHOWN BELOW.
"	10	"	183 MC	181.25 MC & 185.75 MC	8	"		CHECK RESPONSE ON ALL CHANNELS. SLIGHT ADJUSTMENT OF C15, C16, C20 OR C21 MAY BE REQUIRED TO OBTAIN OPTIMUM RESPONSE ON ALL CHANNELS.
"	11	"	189 MC	187.25 MC & 191.75 MC	9	"		
"	12	"	195 MC	193.25 MC & 197.75 MC	10	"		
"	13	"	201 MC	199.25 MC & 203.75 MC	11	"		
"	14	"	207 MC	205.25 MC & 209.75 MC	12	"		
"	15	"	85 MC	83.25 MC & 87.75 MC	6	"	C13, C14 C18, C19	ADJUST FOR RESPONSE APPROX. AS SHOWN BELOW.
"	16	"	79 MC	77.25 MC & 81.75 MC	5	"		CHECK RESPONSE ON ALL CHANNELS. SLIGHT ADJUSTMENT OF C13, C14, C18, OR C19 MAY BE REQUIRED TO OBTAIN OPTIMUM RESPONSE ON ALL CHANNELS.
"	17	"	69 MC	67.25 MC & 71.75 MC	4	"		
"	18	"	63 MC	61.25 MC & 65.75 MC	3	"		
"	19	"	57 MC	55.25 MC & 59.75 MC	2	"		

TV OSC. ALIGNMENT

DUMMY ANTENNA	STEP	SIGNAL GENERATOR CONNECTIONS	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM DC PROBE	ADJUST	REMARKS
SAME AS ABOVE	20	ANTENNA TERMINALS	215.75 MC	13	ACROSS 6AU6 LIM. GRID (PIN 1) & GND.	L102	ADJUST FOR MAXIMUM DEFLECTION.
"	21	"	87.75 MC	6	"	L101	"
"	22	CHECK TO SEE THAT ALL OTHER CHANNELS ARE RECEIVED WELL WITHIN THE LIMITS OF THE FINE TUNING CONTROL. IF NOT, SOME COMPRIMISE MAY BE MADE BY ADJUSTING L102 FOR HIGH CHANNELS AND L101 FOR LOW CHANNELS.					



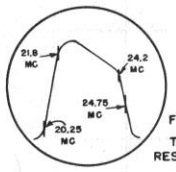


FIG. 1 TV IF RESPONSE

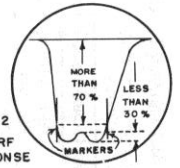
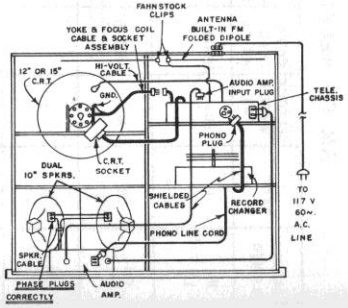


FIG. 2 TV RF RESPONSE

RECOMMENDED RESPONSE CURVES



CONSOLE REAR VIEW SHOWING CONNECTION OF UNITS