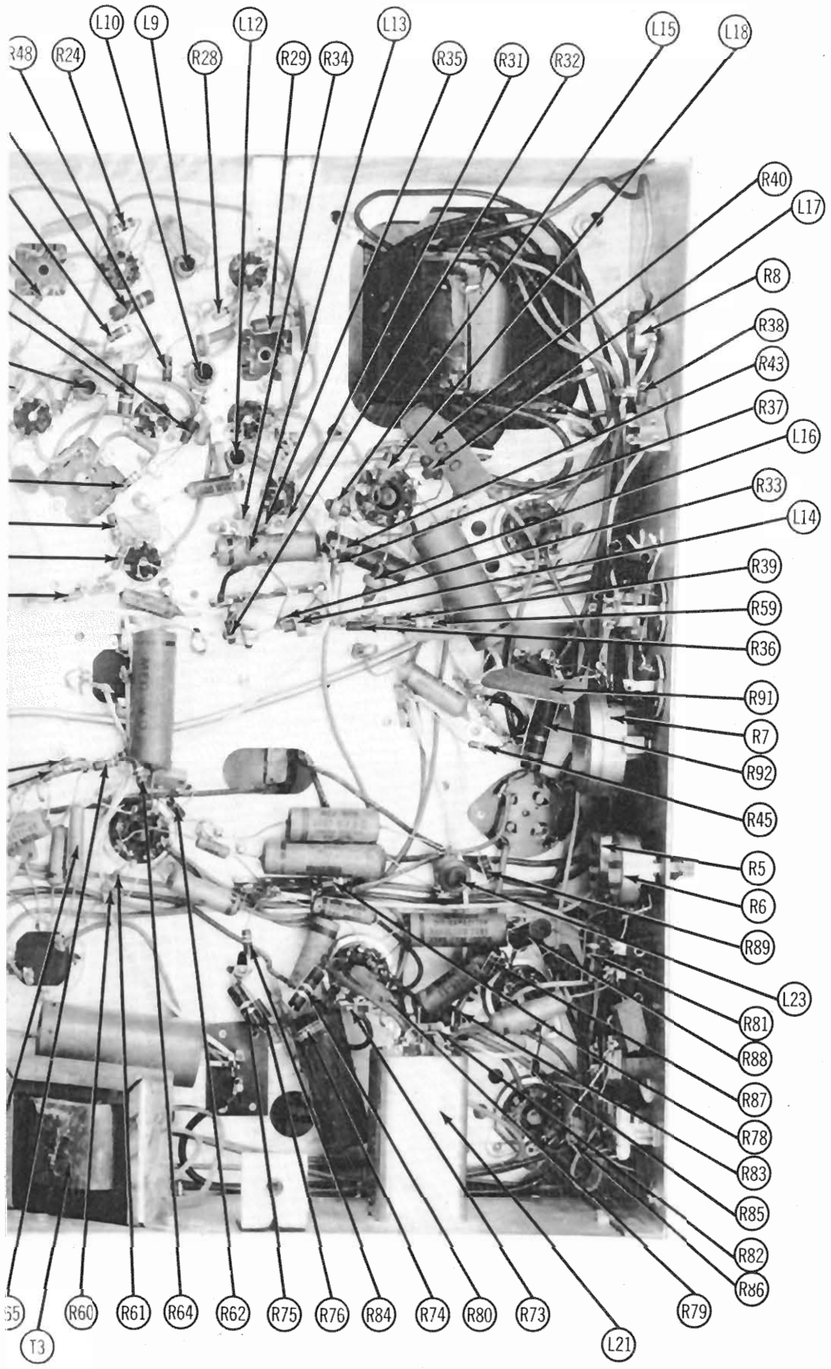
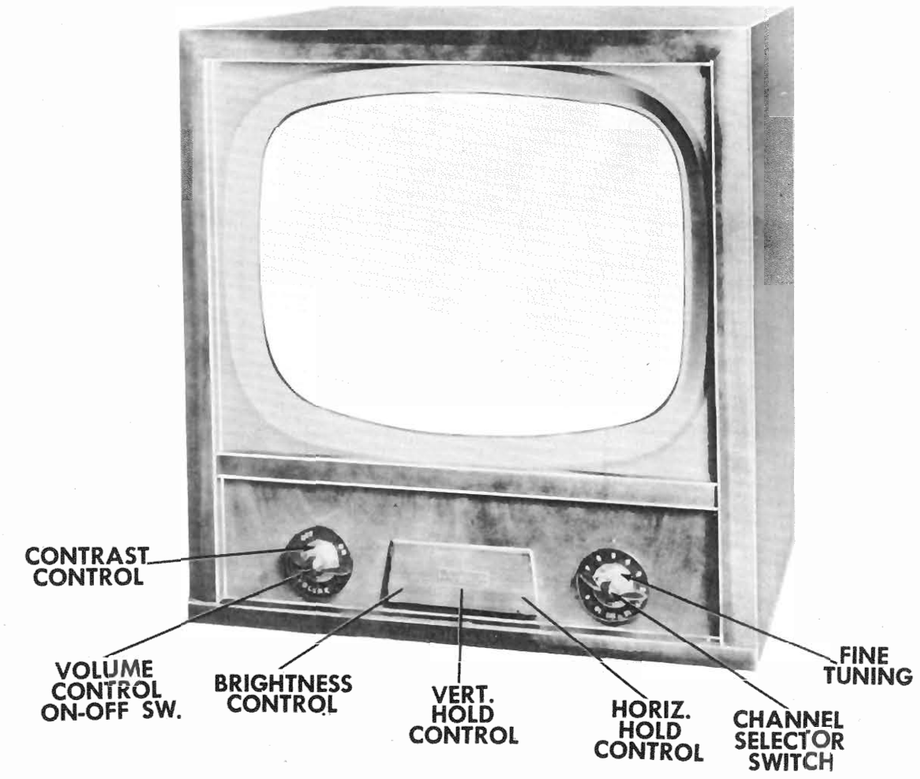


ISTOR AND INDUCTOR IDENTIFICATION



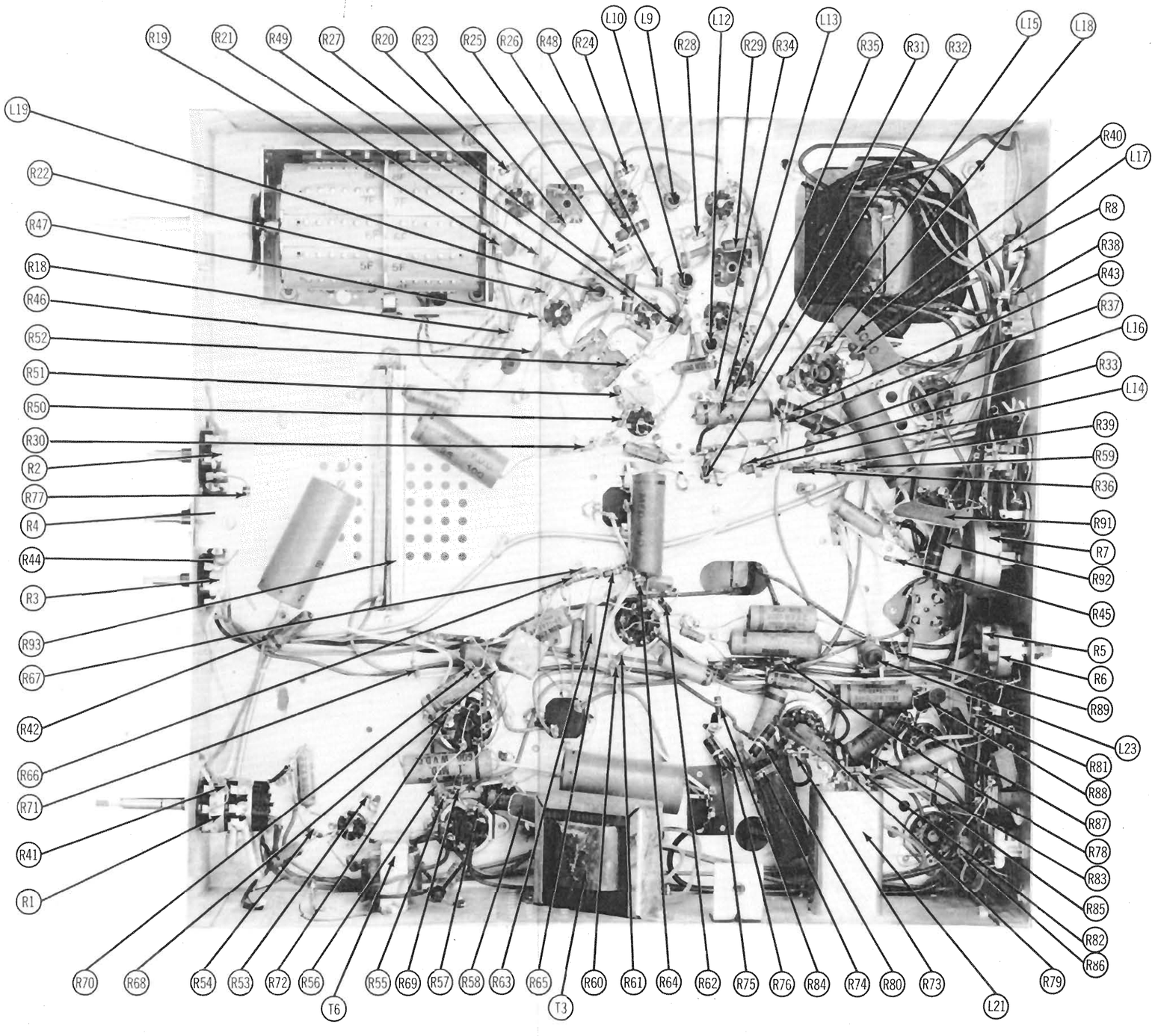
AMBASSADOR MODELS C1720, C2020, C2420, CD2020, T1720, T2020

Ambassador T2020

TRADE NAME	Ambassador Models C1720, C2020, C2420, CD2020, T1720, T2020
SUPPLIER	Allied Pur. Corp., 401 5th Ave., New York 16, N. Y.
TYPE SET	Television Receiver
TUBES	Twenty-One
POWER SUPPLY	110-120 Volts AC- 60 Cycle — RATING 2.24 Amp. @ 117 volts AC
TUNING RANGE	Channels 2 thru 13

INDEX

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

CONTRAST CONTROL

VOLUME CONTROL ON-OFF SW.

Ar

TRADE NAME	Ambassa
SUPPLIER	Allied Pr
TYPE SET	Televisio
TUBES	Twenty-(
POWER SUPPLY	110-120 V
TUNING RANGE—Channels	

HOW

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

▲ MEASURED WITH VTVM

■ MEASURED WROM 135 V LINE

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DOTTED IN PARTS ARE NOT USED IN ALL MODELS. WHEN DOTTED IN PARTS ARE USED POINTS MARKED X ARE BROKEN.

WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 30 VOLTS PEAK TO PEAK SIGNAL AT PICTURE TUBE

1. DC voltage measurements are at 20,000 ohms per volt; AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation, No signal applied.

AMBASSADOR
MODELS C1720, C2020, C2420, CD2020, T1720, T2020

1ST SOUND IF V9 6AG5
2ND SOUND IF V10 6AU6
DISCR V11 6AL5
AF AMP V12 6AT6
AUDIO OUTPUT V13 6V6GT
VOLUME CONTROL 1MEG
PHONO INPUT
TV
130V LINE
1ST VIDEO IF V3 6AG5
2ND VIDEO IF V4 6AG5
3RD VIDEO IF V5 6AG5
VIDEO DET AGC RECT V6 6AL5
VIDEO AMP V7 6AG5
VIDEO OUTPUT V8 6K6GT
THRESHOLD CONTROL
CONTRAST CONTROL 10K
BRIGHTNESS CONTROL 50K
ION TRAP
PICTURE TUBE V21 20CP4
SYNC SEP
SYNC AMP V14 6SN7GT
VERT OSC V15 6BL7GT
VERT OUTPUT
VERT. HOLD CONTROL 1MEG
VERT. HEIGHT CONTROL 2.5MEG
VERT. LINEARITY CONTROL
DEFLECTION YOKE
HORIZ. HOLD CONTROL 50K
HORIZ AFC
HORIZ OSC
HORIZ. FREQ.
HORIZ. PHASE
HORIZ OUTPUT V17 6BG6G
HORIZ. DRIVE
HV RECT V19 1B3GT
DO NOT MEASURE
WIDTH
DAMPER V18 6AX4
HORIZ. LINEARITY
BLUE
GRN
RED
PHONO

RF TUNER-RIGHT SIDE

RF TUNER-BOTTOM VIEW

CHASSIS TOP VIEW

CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

RESISTANCE MEASUREMENTS

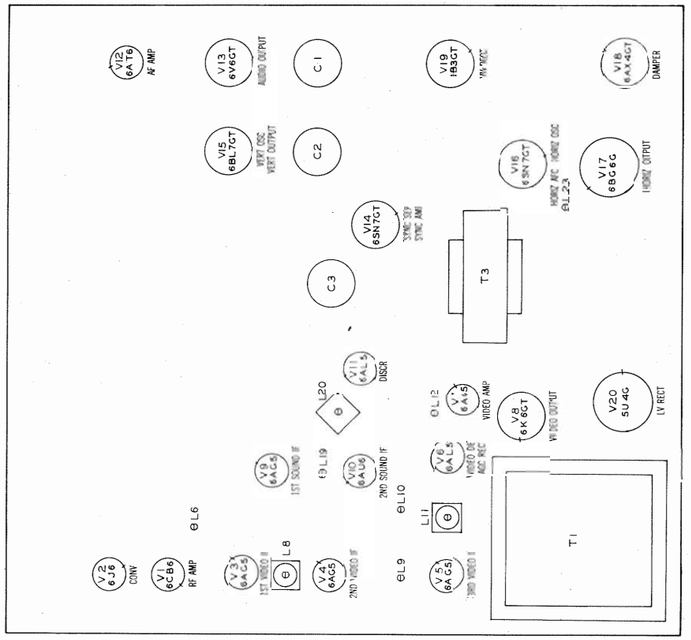
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	1.1Meg	0Ω	.1Ω	0Ω	■2.2KΩ	■2.2KΩ	0Ω		
V 2	6J6	■4.7KΩ	■15KΩ	.1Ω	0Ω	220KΩ	10KΩ	0Ω		
V 3	6AG5	1.1Meg	39Ω	.1Ω	0Ω	■1KΩ	■1KΩ	39Ω		
V 4	6AG5	1.1Meg	39Ω	.1Ω	0Ω	■11KΩ	■1KΩ	39Ω		
V 5	6AG5	.3Ω	150Ω	.1Ω	0Ω	■4.9KΩ	■1KΩ	150Ω		
V 6	6AL5	.2Ω	127KΩ	.1Ω	0Ω	550Ω	0Ω	5.6KΩ		
V 7	6AG5	470KΩ	220Ω	0Ω	.1Ω	■4.3KΩ	■0Ω	220Ω		
V 8	6K6GT	†5KΩ	0Ω	†5KΩ	†320Ω	■4.3KΩ	†5KΩ	.1Ω	■600Ω	
V 9	6AG5	0Ω	150Ω	0Ω	.1Ω	■1KΩ	■1KΩ	150Ω		
V 10	6AU6	10KΩ	0Ω	.1Ω	0Ω	■10KΩ	■10KΩ	0Ω		
V 11	6AL5	200KΩ	100KΩ	.1Ω	0Ω	0Ω	0Ω	100KΩ		
V 12	6AT6	10Meg	0Ω	0Ω	.1Ω	0Ω	0Ω	†330KΩ		
V 13	6V6GT	INF	■.1Ω	†850Ω	†550Ω	200KΩ	INF	■0Ω	5KΩ	
V 14	6SN7GT	2.2Meg	■220KΩ	0Ω	■220KΩ	■8.2KΩ	3.3KΩ	0Ω	.1Ω	
V 15	6BL7GT	1.2Meg	†2.3Meg	0Ω	820KΩ	†1.5KΩ	1.4KΩ	0Ω	.1Ω	
V 16	6SN7GT	700KΩ	100KΩ	280KΩ	200KΩ	†22KΩ	0Ω	0Ω	.1Ω	
V 17	6BG6G	†3.3KΩ	0Ω	0Ω	INF	1Meg	INF	.1Ω	†3.3KΩ	TOP CAP #99Ω
V 18	6AX4GT	INF	INF	INF	INF	†326Ω	INF	.1Ω	0Ω	
V 19	1B3GT	PINS 1 THRU 8 HAVE INF RESISTANCE								TOP CAP #606Ω
V 20	5U4G	INF	13KΩ	INF	37Ω	INF	34Ω	INF	13KΩ	
V 21	20CP4	■0Ω	†5KΩ	PIN 10 #330KΩ	PIN 11 †24KΩ	PIN 12 ■.1Ω				

ALL CONTROLS SET FOR NORMAL OPERATION, NO SIGNAL APPLIED
† MEASURED FROM PIN 8 OF V20
# MEASURED FROM PIN 3 OF V18
■ MEASURED FROM 130VDC LINE

DISASSEMBLY INSTRUCTIONS

1. Remove 4 push on type control knobs from front panel.
2. Remove 5 wood and 2 metal screws. Remove rear cover.
3. Disconnect built-in Antenna and Speaker.
4. Remove 2 nuts holding Speaker. Remove Speaker.
5. Remove 3 Chassis Bolts. Remove Chassis.

NOTE. For Picture Tube Removal it is necessary to remove chassis as outlined above.



TOP VIEW

BOTTOM VIEW

TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube to disable the high voltage.

VIDEO IF ALIGNMENT

Remove the converter tube (V2) from its socket and replace with a 6J6 which has pin 1 removed. This will disable the local oscillator and reduce the possibility of erroneous indications.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	21.25MC (unmod.)	Any	DC probe to Point (A). Common to chassis.	A1, A2	Adjust for MINIMUM deflection.
2.	"	"	27.25MC	"	"	A3	"
3.	"	"	22.69MC	"	"	A4	Adjust for maximum deflection. Attenuate signal generator output to maintain approximately 2 volt reading.
4.	"	"	22.45MC	"	"	A5	"
5.	"	"	23.4MC	"	"	A6	"
6.	"	"	25.4MC	"	"	A7	"

OVERALL VIDEO IF RESPONSE CHECK

Connect the negative lead of a 3 volt battery to the ungrounded side of C32. Connect the positive lead to chassis.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
7.	Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	24MC (10MC Swp)	23.0MC 25.75MC	Any	Vert. Amp. to point (A). Low side to chassis.	A4, A6, A7	Check for response curve similar to fig. 1. Adjust A7 for proper placement of 25.75MC marker. Retouch A4 for placement of 23.0MC marker. Retouch A6 for flat top on response curve. Remove bias battery.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
8.	Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	21.25MC (unmod.)	Any	DC probe to Point (B). Common to chassis.	A8, A9	Adjust for maximum deflection.
9.	"	"	"	"	DC probe to Point (C). Common to chassis.	A10	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450 KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8	Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	21.25MC (450 KC Swp)	21.25MC	Any	Vert. amp. to point (B). Low side to chassis.	A8, A9	Adjust for maximum amplitude and symmetry as per fig. 2.
9.	"	"	"	"	"	Vert. amp. to point (C). Low side to chassis.	A10	Adjust A10 so 21.25MC occurs at center of crossover lines as per fig. 3. SLIGHTLY retouch A9 for maximum amplitude and straightness of cross over lines.

OSCILLATOR ALIGNMENT

Remove the dummy converter tube and replace the original 6J6 in its socket.
Complete oscillator alignment may not be necessary. If the oscillator seems to be off frequency approximately the same amount for a majority of the channels it may be possible to correct them in one step using A11. It should be noted that this is an all channel oscillator circuit adjustment and should not be used to correct any individual channel. If adjustment of A11 will not bring all channels well within the range of the fine tuning control, it will be necessary to adjust the channel strip adjustment for each channel that is off frequency. The channel strip adjustments are reached through a hole just to the right of the channel switch shaft. The correct adjustment screw is accessible through this hole as the channel switch is turned to each channel.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10	Direct	High side to either antenna terminal. Low side to chassis.	215.75MC (unmod.)	13	DC probe to Point (C). Common to chassis.	A12	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
		209.75MC	12			A13	
		203.75MC	11			A14	
		197.75MC	10			A15	
		191.75MC	9			A16	
		185.75MC	8			A17	
		179.75MC	7			A18	
		87.75MC	6			A19	
		81.75MC	5			A20	
		71.75MC	4			A21	
		65.75MC	3			A22	
		59.75MC	2			A23	

ALIGNMENT INSTRUCTIONS (CONT.)

RF ALIGNMENT

Reconnect the negative lead of the 3 volt battery to the ungrounded side of C32.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
11.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	207MC	205.25MC 209.75MC	12	Vert. amp. thru 10KΩ to point (D). Low side to chassis.	A24, A25 A26	Adjust for response curve similar to fig. 4 with markers above 90%.
12.	"	"	213MC (10 MC Swp)	211.25MC 215.75MC	13	"		Check all channels for response curve similar to fig. 4. If markers fall below 70% on any channel make slight adjustment of A24, A25 and A26 with channel switch set for that channel. Recheck all channels to see that they have not been seriously affected.
			201MC (10MC Swp)	199.25MC 203.75MC	11			
			195MC (10MC Swp)	193.25MC 197.75MC	10			
			189MC (10MC Swp)	187.25MC 191.75MC	9			
			183MC (10MC Swp)	181.25MC 185.75MC	8			
			177MC (10MC Swp)	175.25MC 179.75MC	7			
			85MC (10MC Swp)	83.25MC 87.75MC	6			
			79MC (10MC Swp)	77.25MC 81.75.MC	5			
			69MC (10MC Swp)	67.25MC 71.75MC	4			
			63MC (10MC Swp)	61.25MC 65.75MC	3			
			57MC (10MC Swp)	55.25MC 59.75MC	2			

4.5MC TRAP ADJUSTMENT

With alignment completed and the receiver operating, connect a short across the trap winding of L8. Tune in a strong TV station and examine the picture for evidence of 4.5MC beat interference. If interference is present adjust A27 to minimize that interference. Remove the short from L8.

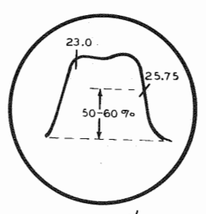


FIG. 1

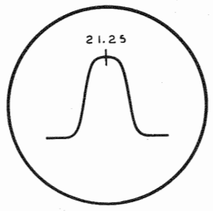


FIG. 2

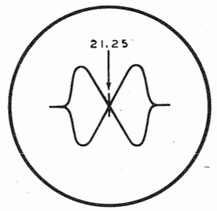


FIG. 3

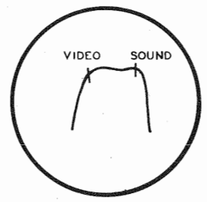


FIG. 4

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	Ambassador PART No.	JENSEN PART No.	QUAM PART No.	
SP1A	P.M.	3.2Ω		Mod. P8-V ST-116	8A31	
	CONE DIA.	V. C. DIA.				
SP1B	6"	3/4"				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ~)	Ambassador PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.	
L1	.270A	50Ω	1.5 Henries		C-2326 ①	C-2991 ①	TR-3300 ①	C-23X	

① Drill one new mtg. hole

COILS (RF-IF)

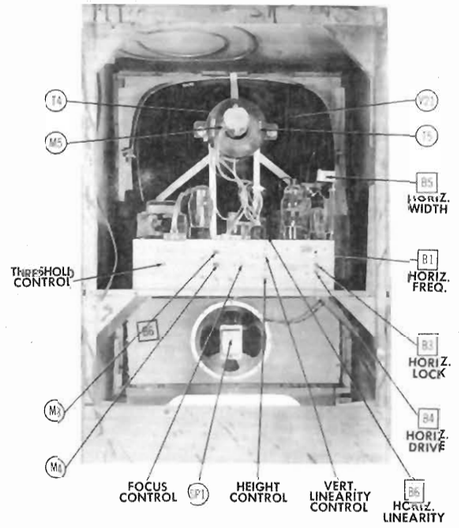
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	Ambassador PART No.	MERIT PART No.	
L2	Ant. Coil	0Ω				
L3	Fil. Choke	0Ω				
L4	RF, Mixer Grid & Osc. Coils	0Ω				
L5	Fil. Choke	0Ω				
L6	1st. Video IF	1.2Ω				
L7	Fil. Choke					
L8	2nd. Video IF	.2Ω	0Ω			Not used in some models Includes sound take-off
L9	3rd. Video IF	.3Ω				
L10	21.25MC Trap	0Ω			TV-150	
L11	4th. Video IF	.2Ω				Includes sound take-off
L12	4.5MC Trap	2Ω			TV-151	
L13	Peaking Coil	5.2Ω			TV-182	120 Microhenries, wound on 22KΩ resistor
L14	Peaking Coil	7.3Ω			TV-185	250 Microhenries
L15	Peaking Coil	5.2Ω			TV-182	120 Microhenries wound on 22KΩ resistor
L16	Peaking Coil	4.7Ω			TV-181	93 Microhenries
L17	Peaking Coil	5.2Ω			TV-182	120 Microhenries wound 22KΩ resistor
L18	Peaking Coil	4.1Ω			TV-181	93 Microhenries
L19	Sound IF	.2Ω				
L20	Discr. Trans.	.2Ω	.2Ω		TV-106	Tap ② .1Ω
L21	Horiz. Osc.	78Ω	46Ω		TV-162	Tap ③ 22Ω
L22	Width Coil	.6Ω			MWC-2	
L23	Horiz. Lin.	36Ω			MWC-1	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Ambassador PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	GJV	1/4 A. 250 V.			318.250 (3AG-P/T)		GJV 1/4	

MISCELLANEOUS

ITEM No.	PART NAME	Ambassador PART No.	NOTES
M2	RF Tuner		Black-White & Color
M3	Switch		TV-Phono
M4	Switch		
M5	Ion Trap		(Dual) Horiz. Drive & Horiz. Lock (50-360MMF)
B4	Trimmer		



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

HORIZONTAL OSCILLATOR CHECK

Turn the set on and tune in a TV station, preferably a test pattern.

Turn the horizontal hold control fully clockwise. The picture should remain in sync. Momentarily interrupt the signal by switching to another channel and back again. The picture should pull into sync.

Turn the horizontal hold control fully counter clockwise.

Momentarily interrupt the signal by switching to another channel and back. The picture should be out of sync with approximately 10 sloping bars appearing.

If the receiver passes the above check, no oscillator alignment is required, if not, continue with horizontal oscillator alignment.

HORIZONTAL OSCILLATOR ALIGNMENT

Pre-set adjustments as follows :

Horizontal drive trimmer (B4) approximately 1/4 turn from fully clockwise.

Horizontal lock trimmer (B3) approximately 1/2 turn from fully clockwise.

Horizontal frequency slug (B1) so that 3/4 inch of screw extend from coil form.

Horizontal hold control at mid-position of its range.

Adjust the horizontal phase slug (B2) to sync the picture horizontally .

Turn the horizontal hold control fully counter-clockwise and switch to another channel and back again. Approximately 10 sloping bars should appear.

With the horizontal hold control at mid range, momentarily switch to another channel and back again. The picture should return to sync.

Failure to return to sync on the last 50% clockwise rotation of the horizontal hold when the signal is interruped momentarily indicates insufficient "sync lock".

To correct this condition adjust B3 counter-clockwise.

If the picture "jumps" when the horizontal hold is turned clockwise too much "sync lock" is indicated. To correct this condition adjust B3 clockwise.

Adjust the width slug (B5) so that the screw extends approximately 1 inch above the coil dome.

Adjust B4 to the point where compression of the center of the picture just begins to appear, then reverse the adjustment a slight amount.

Adjust the linearity slug (B6) for a symmetrical picture from left to right.

AGC THRESHOLD CONTROL ADJUSTMENT

The correct setting of the threshold control will be determined by the signal strength in the area where the set is to operate.

The control should be adjusted for maximum sensitivity without overloading when the contrast control is at maximum.

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: Ambassador PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1A	RF Amplifier	6CB6	6CB6	7CM	
B	RF Amplifier	6AG5	6AG5	7BD	
V2	Converter	6J6	6J6	7BF	
V3	1st. Video IF Amp.	6AG5	6AG5	7BD	
V4	2nd. Video IF Amp.	6AG5	6AG5	7BD	
V5	3rd. Video IF Amp.	6AG5	6AG5	7BD	
V6	Video Detector - AGC Rectifier	6AL5	6AL5	6BT	
V7	Video Amplifier	6AG5	6AG5	7BD	
V8	Video Output	6K6GT	6K6GT	7AC	
V9	1st. Sound IF Amp.	6AG5	6AG5	7BD	
V10	2nd. Sound IF Amp.	6AU6	6AU6	7BK	
V11	Discriminator	6AL5	6AL5	6BT	
V12	AF Amplifier	6AT6	6AT6	7BT	
V13	Audio Output	6V6GT	6V6GT	7AC	
V14	Sync Separator - Sync Amplifier	6SN7GT	6SN7GT	8BD	
V15	Vert. Oscillator - Vert. Output	6BL7GT	6BL7GT	8BD	
V16	Horiz. AFC - Horiz. Oscillator	6SN7GT	6SN7GT	8BD	
V17	Horiz. Output	6BG6G	6BG6G	5BT	
V18A	Damper	6AX4GT	6AX4GT	4CG	
B	Damper	6W4GT	6W4GT	4CG	
V19	HV Rectifier	1B3GT	1B3GT	3C	
V20	LV Rectifier	5U4G	5U4G	5T	

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA: Ambassador PART No.	REPLACEMENT DATA: SYLVANIA PART No.		RTMA BASE TYPE	NOTES
V21	20CP4	20CP4		12D	① 3/8" longer
		20DP4 ①		12D	② Circuit changes necessary
		20CP4A ②		12D	
		20DP4A ① ②		12D	
		20HP4 ① ②		12C	
		20HP4A ① ②		12C	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Ambassador PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C1A	40	450		AFH2-57		UPT4445		FP248	TVL-2764	▲
B	40	450								▲
C2A	80	450		AFH2-62		UPT8145		FP245	TVL-2776	▲
B	10	450								▲
C3A	125	25		PRS25/100		BRH251A			TVA-1207	▲
B	60	200		AFH1-30		UP6025			TVL-1525	■
C4	50	350		PRS450/40		BR4035		TC68	TVA-1713	
C5	50	350		PRS450/40		BR4035		TC68	TVA-1713	
C6	3-9				829-10					
C7	.5-3				829-3			CT565A		
C8	120			SI120	D6-121	TM5T12	GP2K-121	UC-5312	5GA-T12	
C9	1000			SI1000	D6-102	TM5D1	GP2L-102	UC-521	5HK-D1	
C10	100			SI100	D6-101	TM5T1	GP1K-101	UC-531	5GA-T1	
C11	.5-3				829-3			CT565A		
C12	20			SI20NP0	TCZ-20		NP0K-200	ZT-542		
C13	10			SI10N750	TCN-10		N750K-100	NT-541	5TCU-Q1	
C14	.5-3				829-3			CT565A		
C15A	1000			BPD-2X001	DD-2-102	TM5DD1	812-001	DCD-521	5HK-2D1	
B	1000									
C16	10			SI10NP0	TCZ-10		NP0K-100	ZT-541	5TCC-Q1	
C17	120			SI120	D6-121	TM5T12	GP2K-121	UC-5312	5GA-T12	
C18A	1500			BPD-2X0015	DD-2-152	TM5DD15	812-0015	DCD-5215	5HK-2D15	
B	1500									
C19	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-S1	
C20A	1500			BPD-2X0015	DD-2-152	TM5DD15	822-0015	DCD-525	5HK-2D15	
B	1500									
C21	270	500		SI270	D6-271		GP2K-271	UC-5327	5GA-T27	
C22	47			SI47NP0	TCZ-47		NP0K-470		5TCC-Q47	
C23A	1500			BPD-2X0015	DD-2-152	TM5DD15	822-0015	DCD-5215	2HK-2D15	
B	1500									
C24	270	500		SI270	D6-271		GP2K-271	UC-5327	5GA-T27	
C25	1500			SI1500	D6-152	TM5T15	GP2L-152	UC-5215	5HK-D15	
C26	100			SI100	D6-101	TM5T1	GP1K-101	UC-531	5GA-T1	
C27	75									
C28	270	500		SI270	D6-271		GP2K-271	UC-5327	5GA-T27	
C29	390	500		1469-0004	D6-391	5R5T4	GP2K-391	MCB243	MS-34	
C30	47			SI47NP0	TCZ-47		NP0K-470		5TCC-Q47	
C31	1500			SI150	D6-152	TM5D15	GP2L-152	UC-5215	5HK-D15	
C32	.25	400		P488-25		PTE4P25		PT4025	4TM-P25	
C33	1500			SI1500	D6-152	TM5D15	GP2L-152	UC-5215	5HK-D15	
C34	47	500		1469-00005		5R5Q5		MCB225	MS-45	
C35	10			SI10	D6-100	5W5QI	GP1K-100	UC-541	5GA-Q1	
C36	.05	400		P488-05	DF-503	PTE4S5		PT415	4TM-S5	
C37	.002	600		P688-002	D6-202	PTE6D2	GP2-333-202	PT622	6TM-D2	
C38	.004	600		P688-004	D6-402	PTE6D4	GP2-333-402	PT624	6TM-D4	
C39	.25	400		P488-25		PTE4P25		PT4025	4TM-P25	
C40	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-S1	
C41A	1500			BPD-2X0015	DD-2-152	TM5DD15	812-0015	DCD-5215	5HK-2D15	
B	1500									
C42	270	500		SI270	D6-271		GP2K-271	UC-5327	5GA-T27	
C43	1500			SI1500	D6-152	TM5D15	GP2L-152	UC-5215	5HK-D15	
C44	270	500		SI270	D6-271	5R5T3	GP2K-271	UC-5327	5GA-T27	
C45	.002	600		P688-002	D6-202	PTE6D2	GP2-333-202	PT622	6TM-D2	

CAPACITORS (CONT.)

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Ambassador PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C46	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-D1	
C47	.002	600		P688-002	D6-202	PTE6D2	GP2-333-202	PT622	6TM-D2	
C48	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-S1	
C49	.005	600		P688-005	D6-502	PTE6D5	GP2-333-502	PT625	6TM-D5	
C50	.05	400		P488-05	DF-503	PTE4S5		PT415	4TM-S5	
C51	470	500		1468-0005	D6-471	5W5T5	GP2K-471	MC245	1FM-35	
C52	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-S1	
C53	.15	600		684-15				PT6015		
C54	470	500		1468-0005	D6-471	5W5T5	GP2K-471	MC245	1FM-35	
C55	.002	600		P688-002	D6-202	PTE6D2	GP2-333-202	PT622	6TM-D2	
C56	470	500		1468-0005	D6-471	5W5T5	GP2K-471	MC245	1FM-35	
C57	4700	500		1464-005		1DR5D5		MCB465	MS-25	
C58	.05	600		P688-05	DF-503	PTE6S5		PT615	6TM-S5	
C59	.1	600		P688-1	DF-104	PTE6P1		PT601	6TM-P1	
C60	.022	600		P688-022		PTE6S22		PT6122	6TM-S22	
C61	.022	600		P688-022		PTE6S22		PT6122	6TM-S22	
C62	50			SI50	D6-500	TM5Q5	GP1K-500	UC-545	5GA-Q5	
C63	.002	600		P688-002	D6-202	PTE6D2	GP2-333-202	PT622	6TM-D2	
C64	180									*
C65	82									*
C66	.25	400		P488-25		PTE4P25		PT4025	4TM-P25	
C67	.022	600		P688-022		PTE6S22		PT6122	6TM-S22	
C68	.05	400		P488-05	DF-503	PTE4S5		PT415	4TM-S5	
C69	180	500								
C70	.01	600		P688-01	D6-103	PTE6SI	GP2-333-103	PT611	6TM-S1	
C71	.002	600		P688-002		PTE6D2		PT622	6TM-D2	
C72	390	500		1464-0004		5R5T4		MCB243	MS-34	
C73	.05	400		P488-05	DF-503	PTE4S5		PT415	4TM-S5	
C74	.035	1000								
C75	.022	1000		P1088-022		PTE16S25		PT16122	MB-S22	†
C76	500	20000		HV20A	TV1-502	MM-A20TS	410-501			
C77	.01	600		689ZGXY-01		PJ6S1		PT611	6TM-S1	
C78	.01	600		689ZGXY-01		PJ6S1		PT611	6TM-S1	

* These items replaced by single variable trimmer in late models.
† Some models use .027MFD in this application.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Ambassador PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	10KΩ	1/2	131-0003	QJ-318 *	RTV-1		UF14L	Contrast - Panel
B	1Meg	1/2					UR16A	Volume & SW - Rear
C							US-26	Attach to R1A
R2A	50KΩ	1/2	131-0012	Q11-123	AG-44-S	AB-31	U-35	Horiz. Hold
B	Shaft		Not Req.	Not Req.	KSS-3	AK-3	Not Req.	Attach to R2A
R3A	50KΩ	1/2	131-0012	Q11-123	AG-44-S	AB-31	U-35	Brightness
B	Shaft		Not Req.	Not Req.	KSS-3	AK-4	Not Req.	Attach to R3A
R4A	1Meg	1/2	131-0013	Q11-137	AG-61-S	AB-69	U-54	Vert. Hold
B	Shaft		Not Req.	Not Req.	KSS-3	AK-4	Not Req.	Attach to R4A
R5A	5000Ω	1/2	131-0001	Q11-114	AG-19-S	AB-10	SU-14	Vert. Linearity
B	Shaft		Not Req.	Not Req.	FKS-1/4	AK-1	Not Req.	Attach to R5A
R6A	2.5Meg	1/2	131-0002	Q11-239	AG-84-S	AB-83	SU-565	Height
B	Shaft		Not Req.	Not Req.	FKS-1/4	AK-1	Not Req.	Attach to R6A
R7	5000Ω	4	131-0014		RTV-10	SVP-988		Focus - Wire Wound
R8	3000Ω	1						Threshold - Wire Wound

* CONCENTRIKIT EQUIVALENT - KIT K-2, BASE ELEMENTS & SHAFTS B17-116 & P1-121 (Panel)
B13-137 & R1-205 (Rear) & SWITCH 76-1.

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Ambassador PART No.	IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ±10% UNLESS OTHERWISE NOTED
R9	3900Ω	1		BTS-3900	Antenna Coil Shunt
R10	47KΩ				RF Amp. Grid
R11	10KΩ				RF Coil Shunt
R12	2200Ω 20%			BTS-2200	RF Amp. Decoupling
R13	4700Ω			BTS-4700	Mixer Grid
R14	220KΩ 20%				Mixer Grid
R15	15KΩ 20%			BTS-15K	Mixer Plate
R16	10KΩ				Osc. Grid
R17	4700Ω			BTS-4700	Osc. Plate
R18	1000Ω 20%			BTS-1000	AGC Network
R19	15KΩ				1st. Video IF Amp. Grid
R20	39Ω				1st. Video IF Amp. Cathode
R21	1000Ω 20%			BTS-1000	1st. Video IF Amp. Decoupling
R22	1000Ω 20%			BTS-1000	AGC Network
R23	10KΩ 5%				2nd. Video IF Amp. Grid
R24	39Ω				2nd. Video IF Amp. Cathode
R25	1000Ω	1		BTS-1000	2nd. Video IF Amp. Decoupling
R26	10KΩ 5%	1			2nd. Video IF Amp. Plate
R27	150Ω 20%			BTS-150	3rd. Video IF Amp. Cathode
R28	1000Ω			BTS-1000	3rd. Video IF Amp. Decoupling
R29	3900Ω	1		BTA-3900	3rd. Video IF Amp. Plate
R30	1Meg 20%			BTS-1Meg	AGC Network
R31	27KΩ			BTS-27K	AGC Network
R32	100KΩ 20%			BTS-100K	AGC Rectifier Diode Load
R33	5600Ω			BTS-5600	Video Det. Diode Load
R34	470KΩ 20%			BTS-470K	Video Amp. Grid
R35	220Ω			BTS-220	Video Amp. Cathode
R36	3300Ω 20%			BTS-3300	Video Amp. Plate
R37	1000Ω			BTS-1000	Video Amp. Plate
R38	56KΩ			BTS-56K	Voltage Divider
R39	10KΩ 20%			BTS-10K	Isolation
R40	5000Ω	5		1 3/4A-5000	Voltage Divider - Wire Wound
R41	2700Ω 20%			BTS-2700	Contrast Control Shunt
R42	100Ω 20%			BTS-100	Video Output Cathode
R43	4700Ω	2		BTB-4700	Video Output Plate
R44	180KΩ			BTS-180K	Voltage Divider
R45	330KΩ 20%			BTS-330K	Acc. Anode Load
R46	150Ω 20%			BTS-150	1st. Sound IF Amp. Cathode
R47	1000Ω			BTS-1000	1st. Sound IF Amp. Decoupling

RESISTORS (CONT.)

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Ambassador PART No.	IRC PART No.	IDENTIFICATION CODES
R48	10KΩ 20%	1/2			2nd. Sound IF Amp. Grid
R49	10KΩ	1			2nd. Sound IF Amp. Decoupling
R50	22KΩ 20%	1/2		BTS-22K	De-emphasis
R51	100KΩ	1/2		BTS-100K	Discriminator Diode Load
R52	100KΩ	1/2		BTS-100K	Discriminator Diode Load
R53	10Meg 20%	1/2		BTS-10Meg	AF Amp. Grid
R54	330KΩ 20%	1/2		BTS-330K	AF Amp. Plate
R55	82KΩ	1/2		BTS-82K	Output Grid
R56	180KΩ 20%	1/2		BTS-180K	Output Grid
R57	330KΩ 20%	1/2		BTS-330K	Voltage Divider
R58	500Ω	5		1 3/4A-500	Output Decoupling - Wire Wound
R59	470KΩ 20%	1/2		BTS-470K	Isolation
R60	2.2Meg 20%	1/2		BTS-2.2Meg	Sync Separator Grid
R61	220KΩ	1/2		BTS-220K	Sync Separator Plate
R62	3300Ω 20%	1/2		BTS-3350	Sync Amp. Cathode
R63	8200Ω 20%	2		BTB-8200	Sync Amp. Plate
R64	56KΩ	1/2		BTS-56K	Integrator Network
R65	56KΩ	1/2		BTS-56K	Integrator Network
R66	56KΩ	1/2		BTS-56K	Integrator Network
R67	100KΩ	1/2		BTS-100K	Vert. Feedback
R68	470KΩ	1/2		BTS-470K	Vert. Osc. Grid
R69	820KΩ	1/2		BTS-820K	Vert. Osc. Plate
R70	10KΩ	1/2		BTS-10K	Vert. Peaking
R71	560Ω	1/2		BTS-560	Vert. Output Cathode
R72	820KΩ	1/2		BTS-820K	Vert. Output Grid
R73	560KΩ 5%	1/2		BTS-560K 5%	Horiz. AFC Grid
R74	180KΩ	1/2		BTS-180K	Horiz. AFC Cathode
R75	100KΩ	1		BTA-100K	Horiz. AFC Cathode
R76	8200Ω 20%	1/2		BTS-8200	Horiz. AFC Filter
R77	120KΩ	1/2		BTS-120K	Voltage Divider
R78	220KΩ	1/2		BTS-220K	Voltage Divider
R79	3.3Meg	1		BTA-3.3Meg	Voltage Divider
R80	100KΩ	1		BTA-100K	Horiz. Osc. Grid
R81	22KΩ	1		BTA-22K	Horiz. Osc. Plate
R82	10KΩ	1/2		BTS-10K	Horiz. Osc. Transformer Shunt
R83	22KΩ 20%	1/2		BTS-22K	Horiz. Osc. Transformer Shunt
R84	150KΩ	1/2		BTS-150K	Horiz. Feedback
R85	47Ω 20%	1/2			Parasitic Suppressor
R86	1Meg 20%	1/2		BTS-1Meg	Horiz. Output Grid
R87	47Ω 20%	1/2			Parasitic Suppressor
R88	3000Ω	2			Horiz. Output Screen
R89	6800Ω	1/2		BTS-6800	Linearity Coil Shunt
R90	1Meg	1			H.V. Filter
R91	130Ω	5		1 3/4A-125	Focus Coil Shunt - Wire Wound
R92	68Ω	2			Voltage Divider
R93A	1500Ω	3			Bleeder - Wire Wound - See Note 1
B	15KΩ	10			Bleeder - Wire Wound
R94	300Ω	25			Voltage Divider - Wire Wound - See Note 2

Note 1. Not used in all Models
Note 2. On sets using P.M. focusing R94 replaces R7, R91 & T5.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: Ambassador PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.
T1	117VAC @2.24A	770VCT @.270 ADC	5VAC @3A	6.3VAC @2.7A SEC. 4 6.3VAC @1.1A					R-36B

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING: DC RESISTANCE PRI.	RATING: DC RESISTANCE SEC.	REPLACEMENT DATA: Ambassador PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.	NOTES
T2	570Ω tap @ 63Ω	10Ω tap @ .7Ω, 7.2Ω SEC. 2 0Ω			HV0-7			Horiz. Output Trans.
T3	1.2K tap @ 12Ω			A-8140-①		TSC-6-T	A-103X	Vert. Output Trans.
T4A	15Ω			DY-9	MDF-70	TY-2	Y-12	Horiz. Deflection Coils
B	58Ω							Vert. Deflection Coils
T5	420Ω			FC11 ②			B-470-R	Focus Coil

① Drill new mtg. holes
② Fabricate new mtg. bracket or use original focus coil housing.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING: IMPEDANCE PRI.	RATING: IMPEDANCE SEC.	RATING: DC RES. PRI.	RATING: DC RES. SEC.	REPLACEMENT DATA: Ambassador PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.	NOTES
T6	4.5KΩ	3.2Ω	300Ω	.7Ω		A-3825 ③	A-2930	R0-8	S-3X	③ Drill one new mtg hole.