

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Set the Horizontal Hold Control (R7) to the center of its range. Adjust the Horizontal Stabilizer Coil Slug (B1) until the picture is in sync.

Change channels to see that the picture remains in sync.

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove all knobs from front. Remove rear cover held by 11 screws.
2. Disconnect yoke plug, high voltage anode, picture tube socket, antenna leads from tuner, and speaker leads.
3. Remove one screw at top rear and one screw at top front of chassis.

4. Remove 2 screws holding chassis from bottom and remove chassis.

PICTURE TUBE REMOVAL

1. Follow steps of "Chassis Removal" instructions.
2. Lay face down on soft protective surface. Remove 4 screws (one in each corner of picture tube. Loosen bolt on retaining band. Remove picture tube.

SET 664 FOLDER 2

J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, 23CE162M-A/W-A, U23CE162M-A/W-A, U23UC262M-A/W-A (Ch. 23S350, U)

PHOTOFACT® Folder

with CIRCUITRACE®



CAUTION

ONE SIDE OF AC LINE CONNECTED TO CHASSIS

MODEL 23CE162W-A

TRADE NAME	J.C.PENNEY MODELS	CHASSIS
	23CE162M-A/W-A, 23C62PM/F/W-A, 23UC262M-A/W-A, U23CE162M-A/W-A	23S350, U
	PENNEY PENNCREST MODELS	
	416017A, 416048A	23S350, U
SUPPLIER	J.C.Penney Co. 330W. 34th Street New York, N.Y.	
TYPE SET	Television Receiver	
TUBES	VHF- Fourteen, UHF- Fifteen	
POWER SUPPLY	110-120 Volts, 60 Cycle	RATING 115 Volts, 1.3 AMP @ 117 Volts AC
TUNING RANGE	Channels 2 Thru 13 VHF, 14 Thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)	

SERVICING IN THE FIELD

SAFETY GLASS

For picture tube and safety glass cleaning, it is necessary to remove the chassis. (See "Disassembly Instructions.")

FUSE OR FUSE DEVICE

A 4.7Ω fusible resistor is used for low voltage power supply protection. (For location, see "Chassis - Top View".)

VHF OSCILLATOR ADJUSTMENT

Set fine tuning at the center of its range and adjust osc. slug (one for each channel) for best sound and picture.

AGC

No provision is made to vary the AGC on this receiver.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished

by the proper setting of the Horizontal Stabilizer Coil. Slug (Freq. B1). (See photo, page 5.)

FOCUS

The focus may be varied by the position of a strap on the base of the picture tube.

BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Buzz control for MINIMUM buzz and maximum sound. (See "Tube Placement Chart" for location.)

CENTERING

Centering is accomplished by 2 magnetic rings located on yoke rear cover.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed.
MA224 R

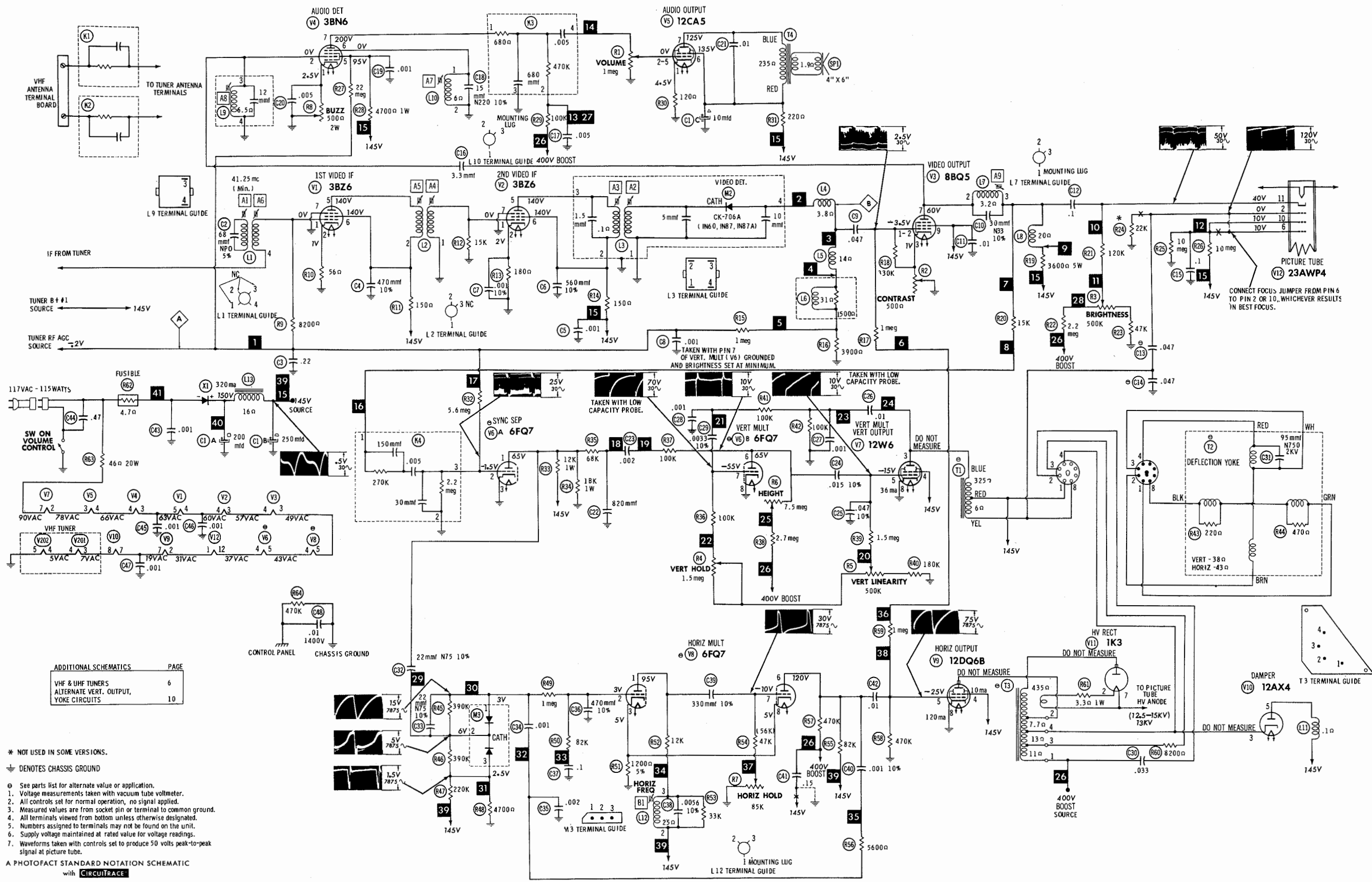
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DATE 11-63

SET 664 FOLDER 2

J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, 23CE162M-A/W-A, U23CE162M-A/W-A, U23UC262M-A/W-A (Ch. 23S350, U)

SET 664 FOLDER 2



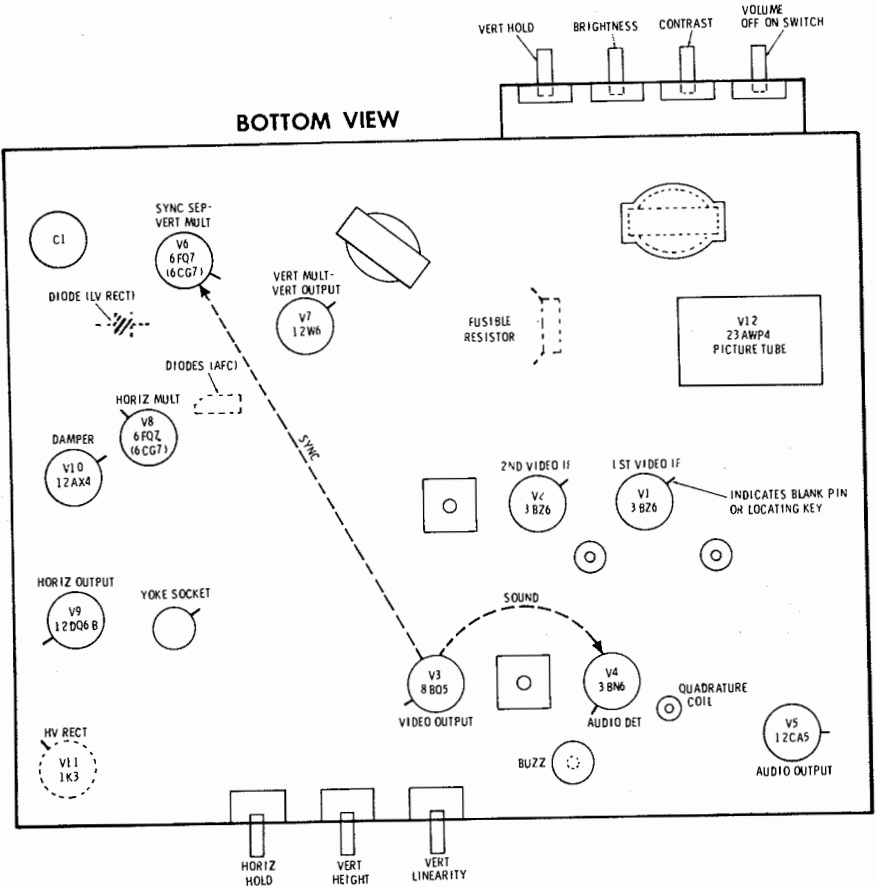
J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, 23UC62F/PM/W-A, U23CE162M-A/W-A, U23UC262M-A/W-A (Ch. 23S350, U)

FOLDER 2

RESISTANCE MEASUREMENTS

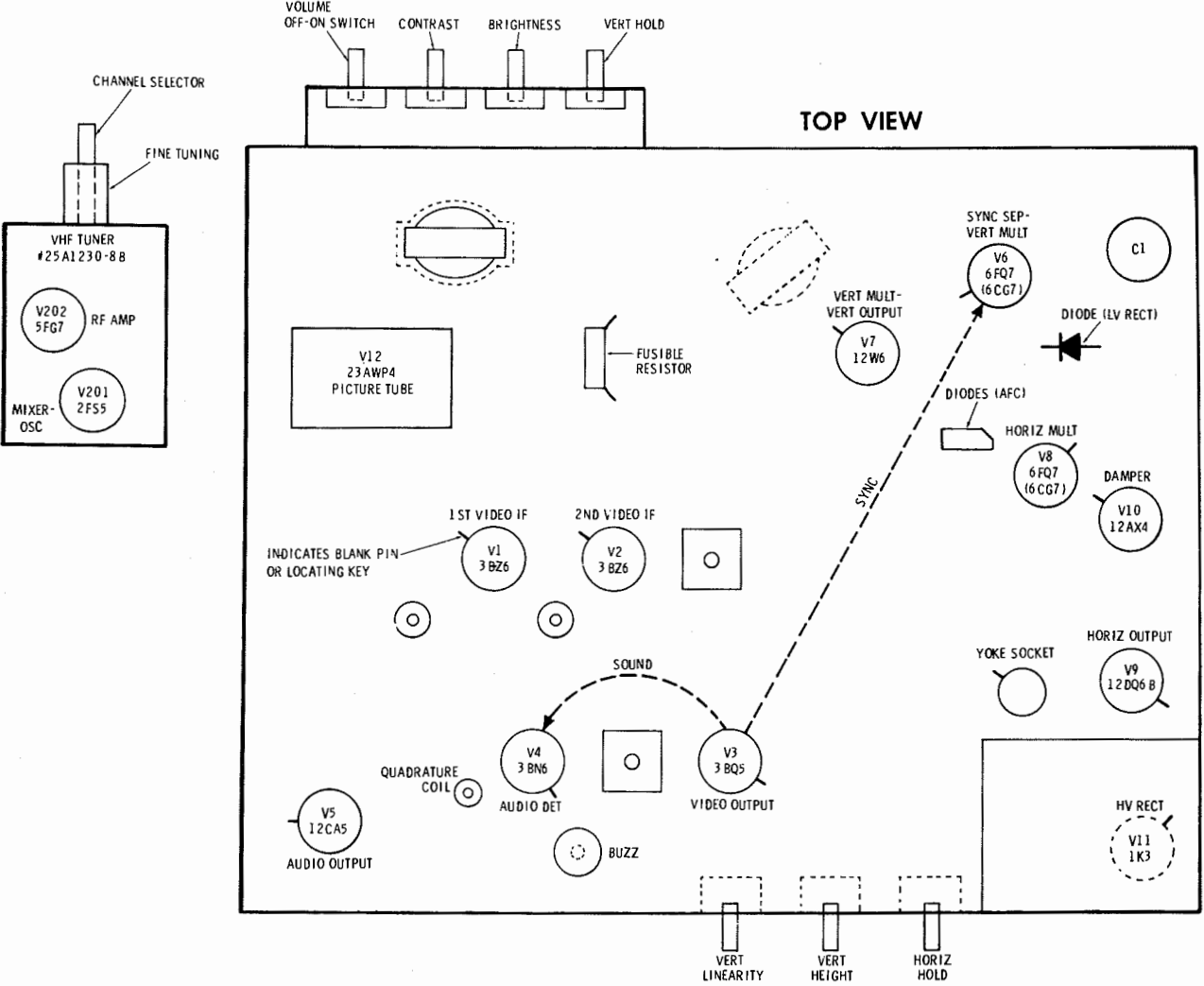
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	3BZ6	900K	56Ω	15Ω	14Ω	†165Ω	†165Ω	0Ω		
V2	3BZ6	0Ω	180Ω	14Ω	12Ω	†165Ω	†165Ω	0Ω		
V3	8B05	NC	320K	200Ω	12Ω	11Ω	NC	†3600Ω	NC	†16Ω
V4	3BN6	260Ω	6.5Ω	15Ω	16Ω	†4700Ω	6Ω	†580K		
V5	12CA5	120Ω	NC	16Ω	19Ω	300K	†235Ω	†460Ω		
V6	6FQ7	†12K	1.6 meg	0Ω	10Ω	9Ω	†4.9 meg	1.5 meg	0Ω	0Ω
V7	12W6	NC	21Ω	†340Ω	†15Ω	2 meg	NC	19Ω	0Ω	
V8	6FQ7	†12K	1.9 meg	1200Ω	11Ω	10Ω	†82K	110K	1200Ω	0Ω
V9	12DQ6B	NC	7.5Ω	NC	†16Ω	470K	TP	5Ω	0Ω	TOP CAP †7.7Ω
V10	12AX4	TP	NC	500K	NC	†16Ω	NC	5Ω	2Ω	
V11	1K3	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP †443Ω
V12	23AWP4	7.5Ω	22K	NC	NC	NC	NC	NC	NC	NC
								Pin 10 †5 meg	Pin 11 270K	Pin 12 FIL
V201	2F55	860K	0Ω	2Ω	1.5Ω	†135Ω	†135Ω	0Ω		
V202	5F67	15K	†10K	0Ω	1.5Ω	0Ω	†2200Ω	†12K	0Ω	220K

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM OUTPUT OF X1. NC NO CONNECTION
† MEASURED FROM PIN 3 OF V10. TP TIE POINT



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

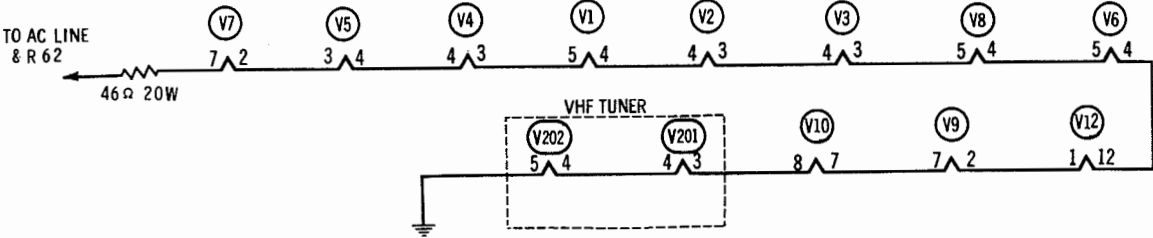
POWER SUPPLY FAILURE
No raster, no sound Fusible Resistor R82, Selenium Rectifier X1.

SWEEP FAILURE
No raster, has sound V8, V9, V10, V11, V12
No vertical deflection V8, V7
Poor vert. linearity or foldover V8, V7
Poor horiz. linearity or foldover V8, V9, V10
Narrow picture V8, V9, V10, X1
Vert. off freq. V8, V7
Horiz. off freq. AFC Diode M3, V8

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, Video Det. M2, V3
No pic, no sound, has snow V201, V202, V1
No pic, has sound, has raster V3, V12
Has pic, no sound V4, V5
Overloaded picture

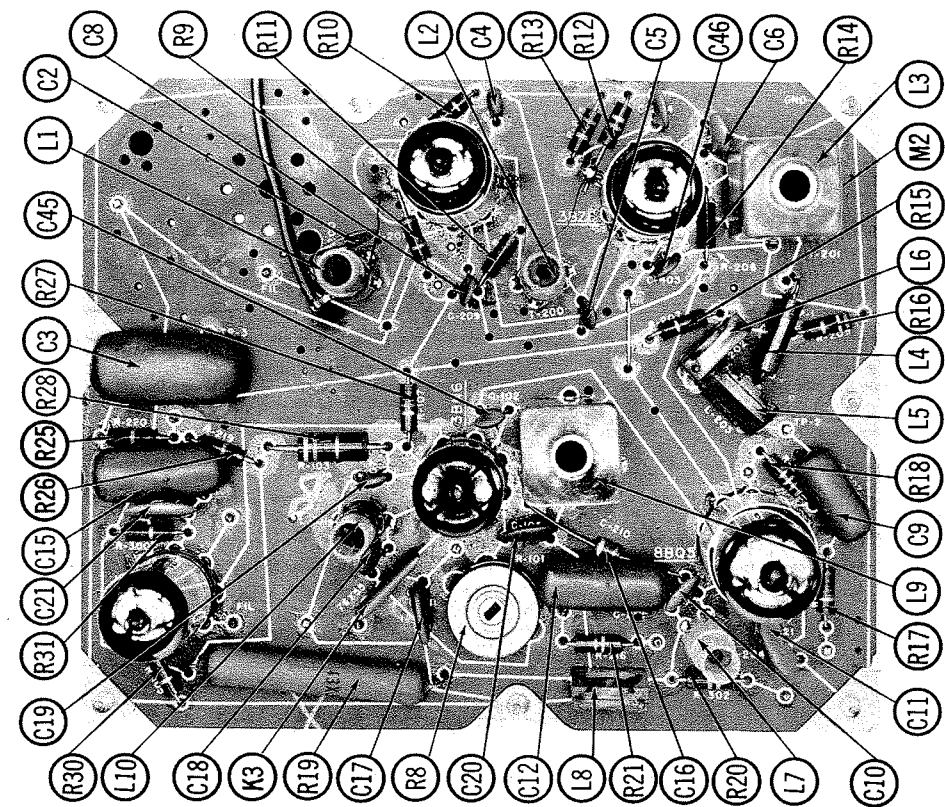
SYNC FAILURE
No vert. sync V8
No horiz. sync V8
No vert. or horiz. sync V8

This receiver employs tubes used in a series filament network, an open filament in any tube will cause the set to be inoperative. (See circuit below.)

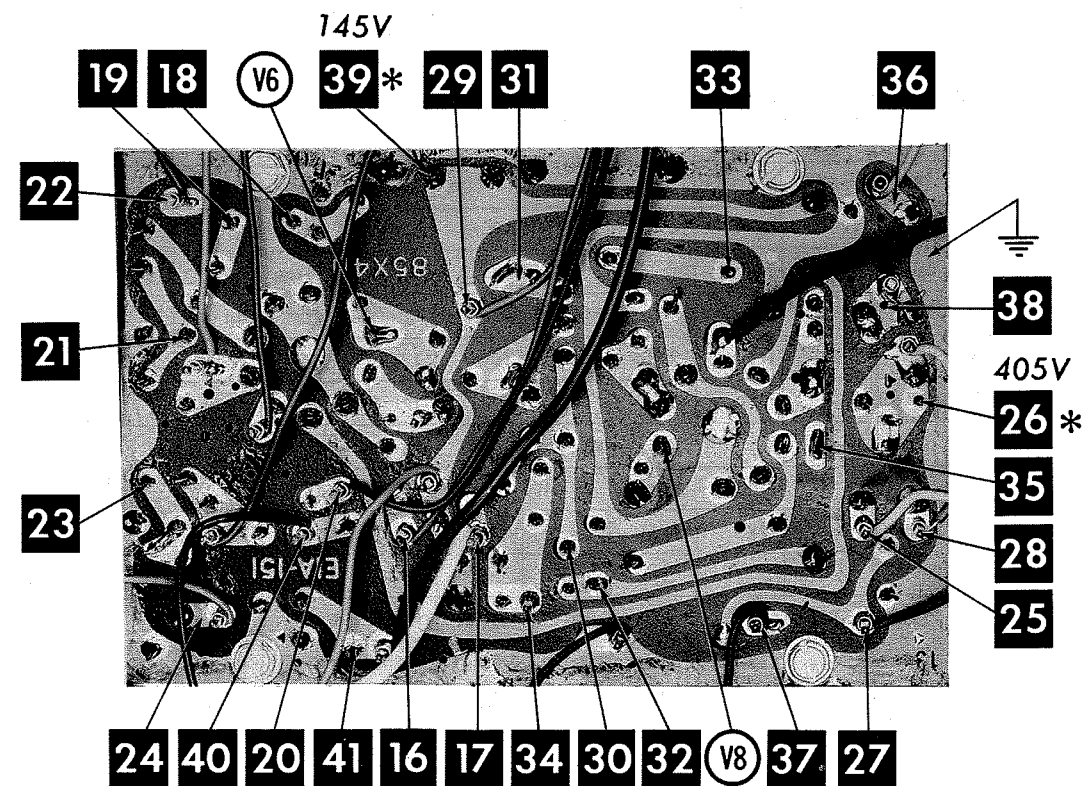


J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, 23UC262M-A/W-A (Ch. 235350, U)

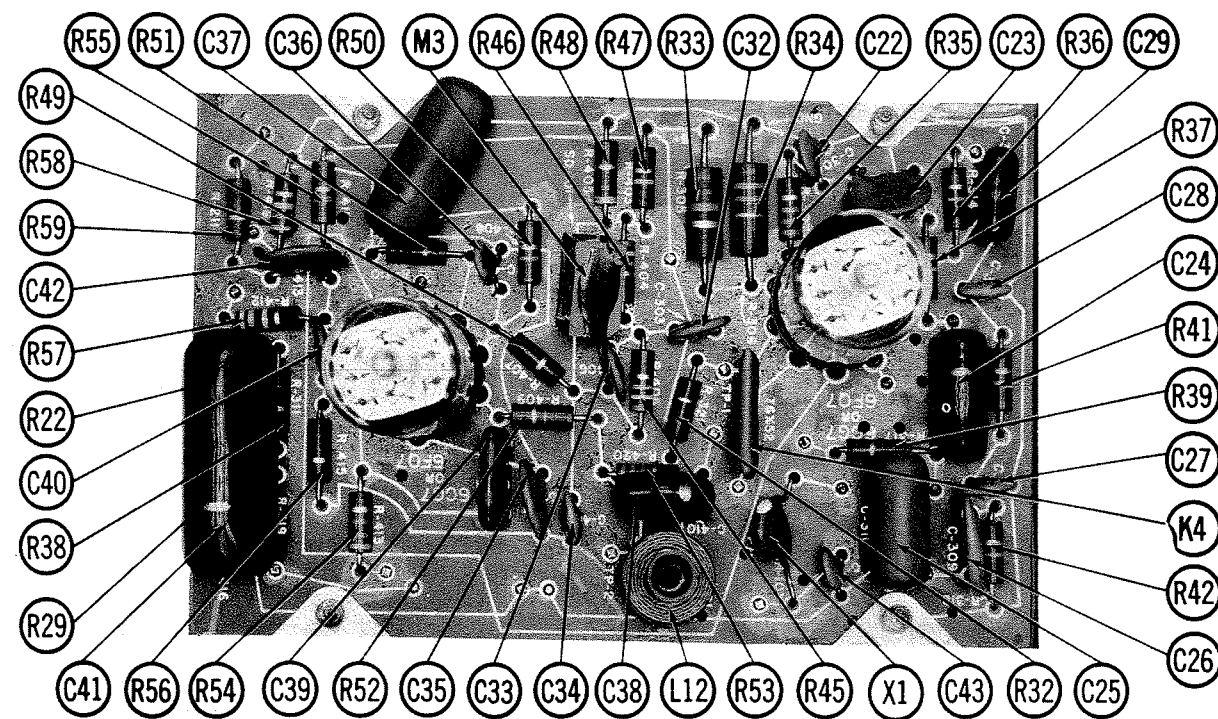
FOLDER 2



VIDEO IF - SOUND PRINTED BOARD



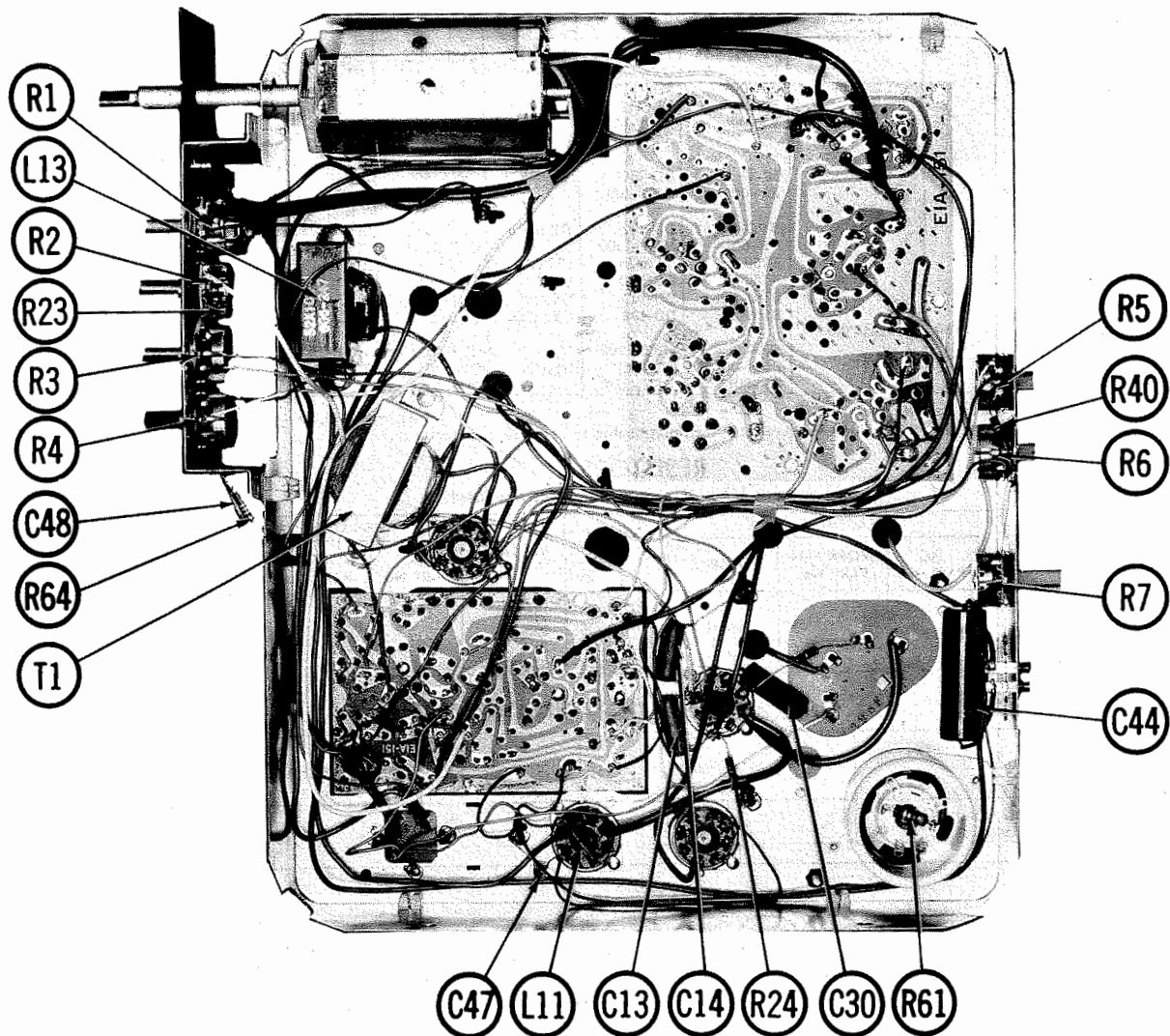
* SOURCE



HORIZ., VERT. MULT., SYNC SEP. PRINTED BOARD

J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, U23C62F/PM/W-A, U23CE162M-A/W-A, U23UC262M-A/W-A (Ch. 23S350, U)

FOLDER 2



CHASSIS - BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 thru A9 GENERAL CEMENT #9302, 8606L, 8869 .. WALSCO #2511, 2544, 2588
Mixer Plate Coil .. GENERAL CEMENT #9302, 9296, 9297 ... WALSCO #2511, 2546, 2547

VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from those shown. Connect a variable bias supply to the IF AGC line (point Δ) and adjust to obtain a response curve which shows no indication of overload. Disable Oscillator section of Mixer-Osc. Set the Channel Selector to any non-interfering channel.

INDICATOR	GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
1. Connect DC probe of a VTVM thru a 47K resistor to point Δ . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		41.25MC	A1	Adjust for MINIMUM.
2. Connect vertical input of a scope to point Δ . Low side to ground.	Connect high side to pin 1 (grid) of V2. Low side to ground.	44MC (10MC Sweep)	42.4MC 45.75MC	A2 A3	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
3. Connect vertical input of a scope to point Δ . Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	41.25MC 42.4MC 43.8MC 44.75MC 45.75MC	A4, A5, A6, Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A 2 and A3.

SOUND IF ALIGNMENT

Tune in a station and reduce the signal strength at the antenna terminals until a hiss is heard in the sound. Align for maximum undistorted sound with MINIMUM buzz by adjusting A7, A8, and Buzz control. If the hiss disappears during alignment, further reduce the signal strength.

4.5 MC TRAP ALIGNMENT

Tune in a strong TV signal and set the Contrast at maximum. Adjust the Fine Tuning until a beat pattern is visible on the screen. Adjust A 9 for MINIMUM beat interference.

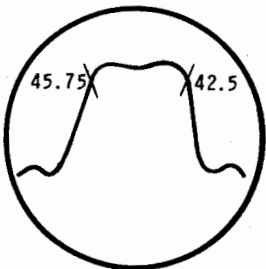


FIG. 1

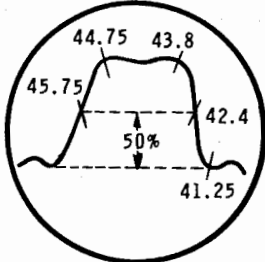
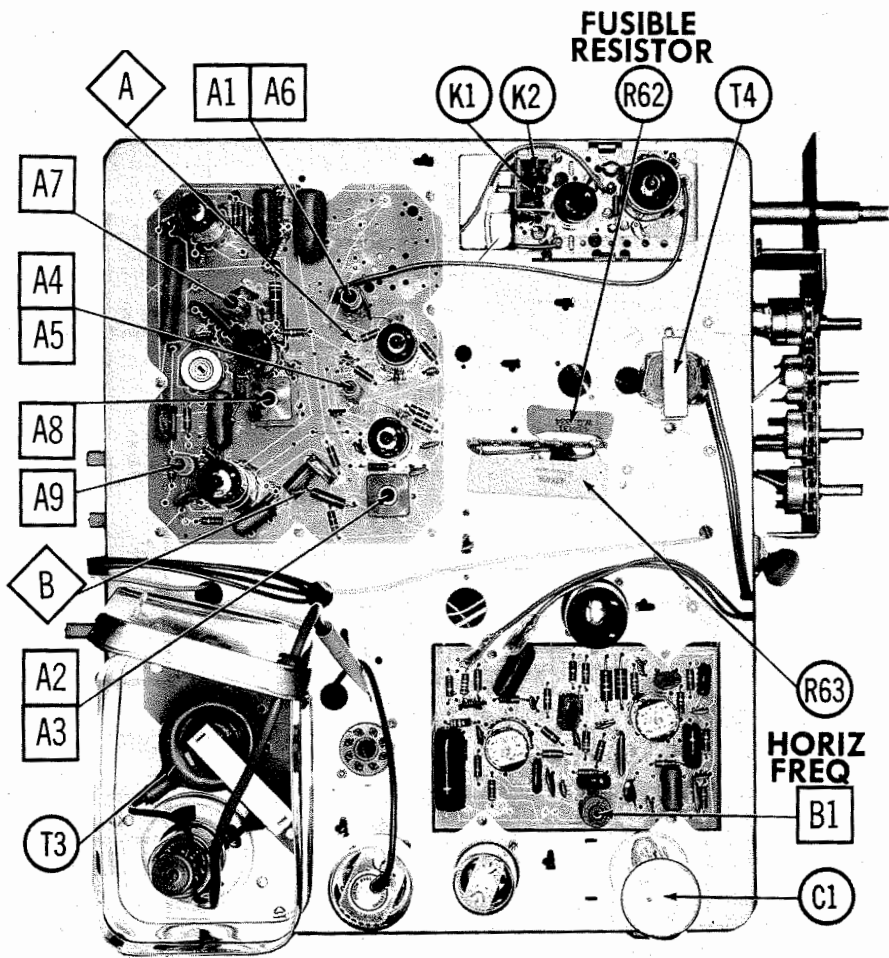


FIG. 2

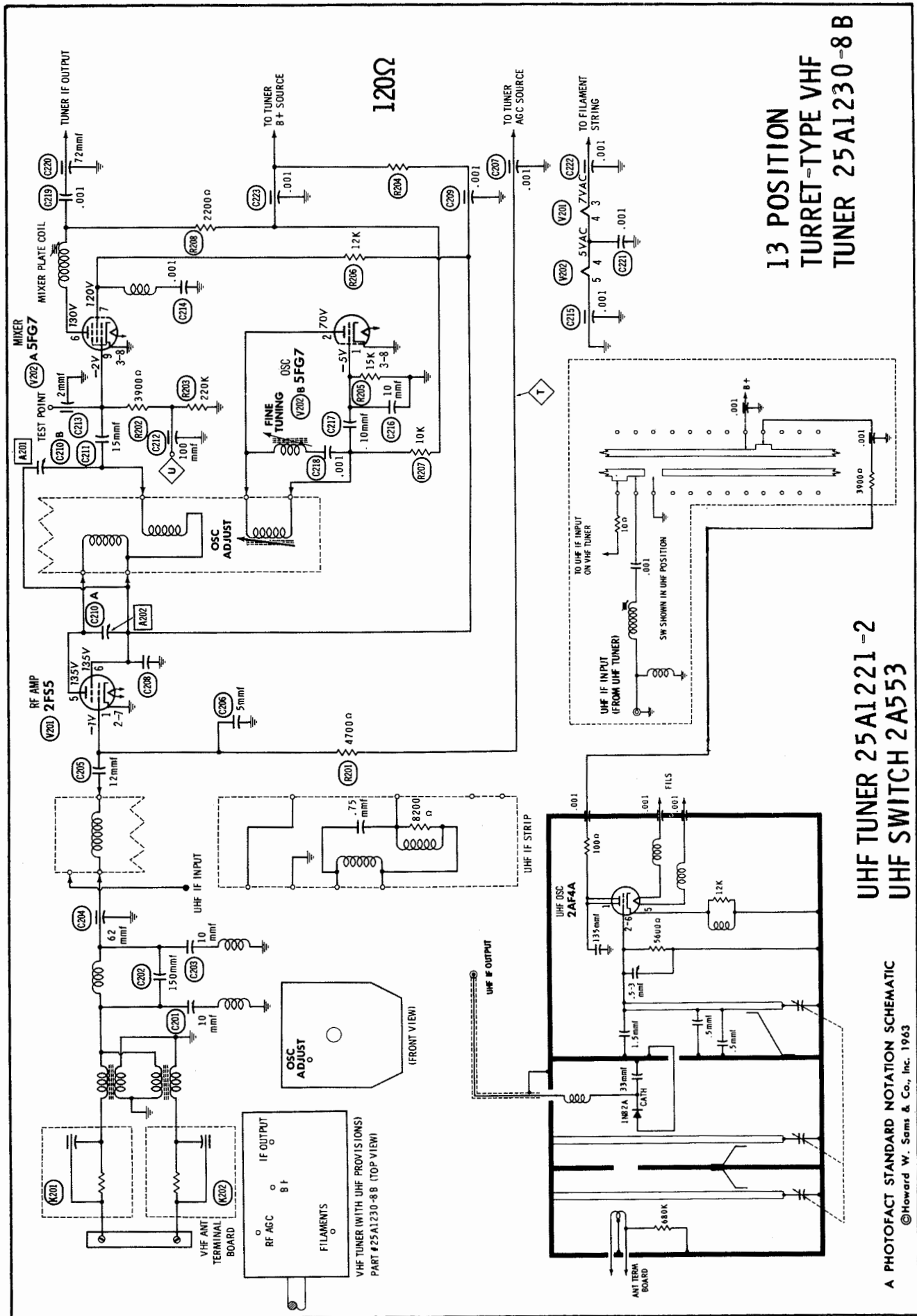


CHASSIS-TOP VIEW

SET 664 FOLDER 2

J. C. PENNEY MODELS 23C62F/PM/W-A, 23CE162M-A/W-A, 23UC262M-A/W-A, 23UC262M-A/W-A (Ch. 23S350, U)

FOLDER 2



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

MISCELLANEOUS

ITEM No.	PART NAME	J.C.PENNEY PART No.	NOTES
M1	VHF Tuner	25A1230-8B	STANDARD COIL REPLACEMENT #GGS-4221A
	VHF Tuner	25A1230-8	
	UHF Tuner	25A1221-2	
	Switch UHF	2A553	
	Diode	66X20	
M2	Diode	66X25	Video Detector (CK-706A or 1N60 or 1N87 or 1N87A) Horiz. AFC (SD-101) If used Sweep Complete except Tubes IF complete except Tubes
M3	Beam Aligner	2A476	
	Printed Board	S-38A2363	
	Printed Board	S-38A2524	

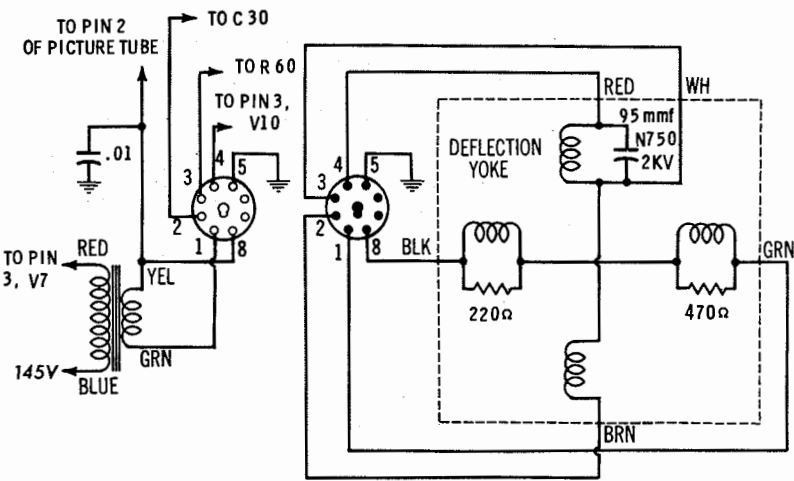
CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Safety Glass	26A712	Knob, Fine Tuning J.C.Penney	10A1029-9
Mask, All J.C.Penney Models, Penney Penncrest Model 416017A	4X1551-9	J.C.Penney Models 23CE162M-A, U23CE162M-A, 23UC262M-A, U23UC262M-A	
Penney Penncrest Model 416048A		Escutcheon, Control Panel	4X1778-2
Mask	4X1551-3	Knob, Channel Selector	26A977
Escutcheon, Control Panel	4X1760-1	Knob, Vert, Brightness, Contrast, On-Off, Volume	10A1018-20
Knob, Fine Tuning	10A1029-1	J.C.Penney Models 23CE162W-A, U23CE162W-A, 23UC262W-A, U23UC262W-A	
Knob, Channel Selector	26A777	23C62PM/F/W-A, U23C62PM/F/W-A	
Knob, Vert, Brightness, Contrast, On-Off, Volume	10A1018-5	Escutcheon, Control Panel	4X1778-1
Penney Penncrest Model 416017A		Knob, Channel Selector	26A976
Escutcheon, Control Panel	4X1760-2	Knob, Vert, Brightness, Contrast, On-Off, Volume	10A1018-19
Knob, Fine Tuning	10A1029-6		
Knob, Channel Selector	26A956		
Knob, Vert, Brightness, Contrast, On-Off, Volume	10A1018-13		
Knob, UHF Tuning Penney Penncrest	10A1016-4		
Knob, UHF Tuning J.C.Penney	10A1016-2		
Knob, UHF Indicator	10A1017-1		

WIRING DATA

High Voltage Lead	Use BELDEN No. 8869 (17KV) or 8868 (25KV)
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
300Ω Tuner Input Lead	Use BELDEN No. 8225
300Ω Antenna Lead-in	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8486 (Round) - 8 Conductor



VERT OUTPUT & YOKE CIRCUITRY USED IN J. C. PENNEY MODELS ONLY

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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ALTERNATE VERT OUTPUT, YOKE CIRCUITS

VHF TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

Maintain voltage at 117 Volts AC using an isolation transformer. Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A201, A202 GENERAL CEMENT #9087, 8290, 8868
WALSCO #2525, 2528, 2587

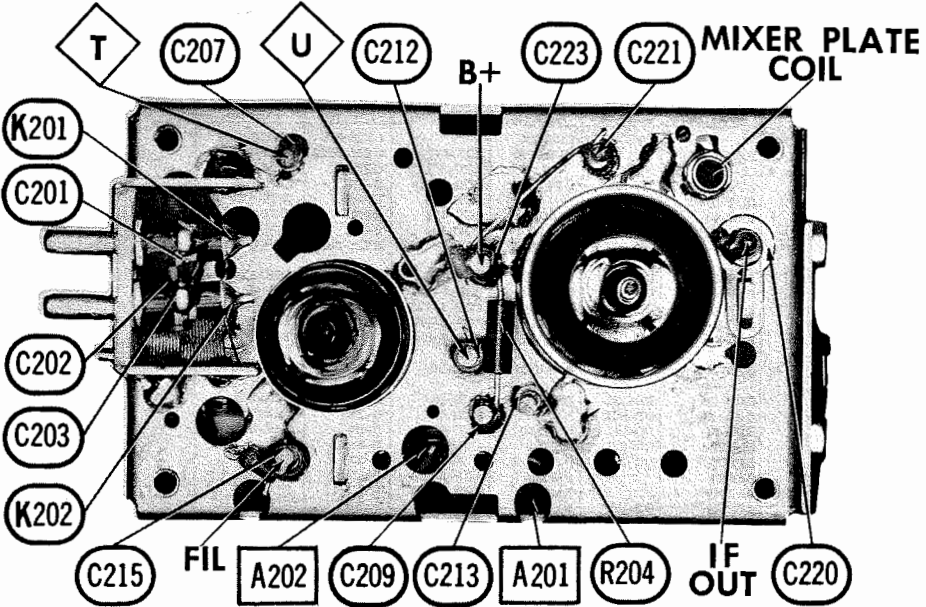
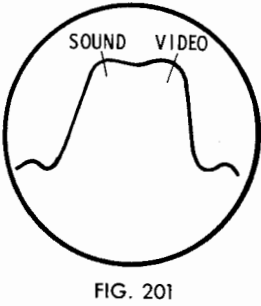
VHF OSCILLATOR ADJUSTMENT

Set Fine Tuning to center of its range. Starting with highest channel in area, adjust the appropriate oscillator screw for best picture and sound.

VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Use 10MC sweep unless otherwise noted. Connect variable bias to RF AGC line at point ④. 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
1. Across antenna terminal with 120Ω resistor in each lead.	213MC	211. 25MC	13	Vert. Amp. thru demodulator probe to point ④. Low side to chassis.	A201, A202	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. Spread or compress coils for maximum gain and symmetry similar to Fig. 201.
	207MC	205. 25MC	12			
	201MC	209. 75MC	11			
	195MC	199. 25MC	10			
	189MC	203. 75MC	9			
	183MC	187. 25MC	8			
	177MC	191. 75MC	7			
	171MC	175. 25MC	6			
	165MC	179. 75MC	5			
	159MC	183. 25MC	4			
	153MC	187. 75MC	3			
	147MC	191. 25MC	2			
	141MC	195. 75MC				
	135MC	199. 25MC				
	129MC	203. 75MC				



VHF TUNER 25A1230-8B - TOP VIEW

SET 664 FOLDER 2

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FOLDER 2

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TUBES

♦ AMPEREX ♦		GENERAL ELECTRIC ♦		RCA ♦		RAYTHEON ♦		SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	1st Video IF Amp.	3BZ6		V7	Vert. Mult. - Vert. Output	12W6		6FQ7 (8CG7) *	
V2	2nd Video IF Amp.	3BZ6		V8	Horiz. Mult.	12DQ6B			
V3	Video Output	8BQ5		V9	Horiz. Output	12AX4			
V4	Audio Detector	3BN6		V10	Damper				
V5	Audio Output	12CA5		V11	HV Rectifier				
V6	Sync Sep. - Vert. Mult.	6FQ7 (8CG7) *							

* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA					NOTES
	J.C.PENNEY PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V12	23AWP4	23AWP4 ①	23BJP4 ①	23AWP4	23AWP4 ②	① Aluminized ② Silver Screen "85"

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS		
			MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.32A	66X25	A300 or D300 or 1N2093	1N2861	F-4

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	J.C. PENNEY PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.
C1A	200 250 10	200 200 200	45X485	AFHS3-13-90	C0238 BERD0288	XC3-20	TMT-3447 CDB-D-1014	FP318.8A TVL-3490

FIXED CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	68	NPO	5%	P288N-22	DTZ-88	C10Q68C	CNO-488	10TCC-Q88	
C3	.22	200V		DI-470	DD-471	CCD-471	GEM-2022	2TM-P22	
C4	.470	10%		BPD-001	DD-102	CCD-102	GP347	10TS-T47	
C5	.001	10%		C8	DI-580	DD-581	B-210	5HK-D10	
C6	.001	10%		C7	DI-1000	DD-102	GP356	10TS-T56	
C7	.001	10%		C8	BPD-001	DD-102	GP210	10TS-D10	
C8	.001	10%		C9	P288N-047	DD-503	GEM-2147	2TM-S47	
C9	.047	200V		C10	BPD-01	DD-103	B-110	5HK-S10	
C10	.30	N33	10%	C11	P288N-1	DF-104	GEM-201	2TM-P10	
C11	.01			C12	P488N-047	DD-503	GEM-4147	4TM-S47	
C12	.1	200V		C13	P288N-1	DF-104	GEM-201	2TM-P10	
C13	.047	400V		C14	P288N-1	DF-104	GEM-201	2TM-P10	
C14	.047	400V		C15	P288N-1	DF-104	GEM-201	2TM-P10	
C15	.1	200V		C16	BPD-005	DD-502	B-250	5HK-D50	
C16	3.3			C17	BPD-001	DD-102	B-210	5HK-D10	
C17	.005	N220	10%	C18	BPD-005	DD-502	B-250	5HK-D50	
C18	.001			C19	BPD-01	DD-103	B-110	5HK-S10	
C19	.001			C20	BPD-001	DD-102	B-210	5HK-D10	
C20	.005			C21	BPD-01	DD-103	B-110	5HK-S10	
C21	.01			C22	DI-820	DD-821	B-382	10TS-T82	
C22	.002			C23	BPD0002	DD-202	B-220	5HK-D20	
C23	.002			C24	BE8S15	DD-103	PVC8115	8TM-S15	
C24	.015	800V	10%	C25	BE2847	DD-103	PVC2147	2TM-S47	
C25	.047	200V	10%	C26	BPD-01	DD-102	B-210	5HK-D10	
C26	.01			C27	BPD-001	DD-102	B-210	5HK-D10	
C27	.001			C28	BPD-001	DD-102	B-210	5HK-D10	
C28	.001			C29	BE8D33	CF-332	PVC4233	8TM-D33	
C29	.0033	400V	10%	C30	P488N-033	CF-332	GEM-4133	8TM-S33	
C30	.033	400V		C31	BPD-001	DD-102	B-210	5HK-D10	
C31	.95	2KV	N750 10%	C32	BPD-002	DD-202	B-220	5HK-D20	
C32	.22	N75	10%	C33	DI-470	DD-471	GP347	10TS-T47	
C33	.22	N75	10%	C34	P288N-1	DF-104	GEM-201	2TM-P10	
C34	.001			C35	BPD-002	DD-202	B-220	5HK-D20	
C35	.002			C36	DI-470	DD-471	GP347	10TS-T47	
C36	.470	10%		C37	P288N-1	DF-104	GEM-201	2TM-P10	
C37	.1	200V		C38			PVC4256	8PS-D56	
C38	.0056	400V	10%						

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	MALLORY PART No.	SPRAGUE PART No.	
C39	.330	10%	1469-00033	DI-1000	DM-15-331K	GP210	MS-333	
C40	.001	10%	DI-1000	DD-102	CCD-102	GEM-6015	10TS-D10	
C41	.15	600V	P688N-15	BPD-01	8DP-5-154	B-110	8TM-P15	
C42	.01		BPD-01	DD-103	CCD-103	B-210	5HK-S10	
C43	.001		BPD-001	DD-102	CCD-102	B-210	5HK-D10	
C44	.47	400V	P488N-47	BPD-001	4DP-6-474	GEM-4047	4TM-P47	
C45	.001		BPD-001	DD-102	CCD-102	B-210	5HK-D10	
C46	.001		BPD-001	DD-102	CCD-102	B-210	5HK-D10	
C47	.001		BPD-001	DD-102	CCD-102	B-210	5HK-D10	
C48	.01	1400V	DAC-27	DD16-103	18DP-3-103	UAC-110	BL-S10	

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

Note 1. C13 is used in the Penney Penncrest models only.

Note 2. C14 is a .01 when C13 is not used.

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			J.C. PENNEY PART No.	CORNELL-DUBILIER PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume, Switch	1meg	36X442	B-70-S or (F2-1meg, SU204, KR-1, AK-38)	B47S-1meg-Z	B13-137, TM5, 78-1 ① or (BU1, CF28, S81, GC) *	TA18A, US-26, or (RU18A, SL37, SF1000, US-41) or (UA18A, SF1000, US-41)
R2	Contrast	500Ω	40X537	F5-500, SU204, AK-38	F5-3	B17-103, TM5 or (BU1, CF50, S81, DC1) *	UA52R, SF1000 or (U52R)
R3	Brightness	500K	40X538	B-59 or (F1-500K, SU204, AK-38)	A47-500K-S F5-3	B11-133, TM5 or (BU1, CF18, S81, DC1) *	TA55L or (RU55L, SL37, SF1000) or (UA55L, SF1000)
R4	Vert. Hold	1.5meg	40X535	B-78 or (F2-2meg, SU204, AK-38)	A47-2meg-Z F5-3	B13-138, TM5 or (BU1, CF18, S81, DC1) *	TA28A or (RU28A, SL37, SF1000) or (UA28A, SF1000)
R5	Vert. Linearity	500K	40X538-2A	TT-59 or (F1-500K, SN1010, AK-38)	B47-500K-S	B11-133, TM4 or (BU1, CF18, S88) *	PTA55L or (RU55L, SL37, SF1000) or (UA55L, SN1000)
R6	Height	7.5meg	40X539-2	TT-90 or (F1-7.5meg, SN1010, AK-38)	B47-7.5meg-S	HLC6	PTA755L or (UA755L, SN1000)
R7	Horiz. Hold	85K	40X534-LA	TT-40 or (F1-100K, SN1010, AK-38)	B47-100K-S	B11-128, TM4 or (BU1, CF18, S88) *	PTA15L or (RU15L, SL37, SN1000) or (UA15L, SN1000)
R8	Buzz	500Ω 2W	40X551			110-800	PFL-800

* "SNAPTROL"

① Use switch with metal housing.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R19	3600Ω 5W	PW5-3600	5W-SQ-3600		R83	48Ω 20W	PW20-48	20W-SQ-48	
R82	4.7Ω	FR 4.7	F 4.7						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		J.C. PENNEY PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Video IF - 41.25MC Trap	9A2530					
L2	2nd Video IF	9A2528					
L3	3rd Video IF - Detector Assembly	9A2525					
L4	RF Choke (18uh)	36A94-1	TV-102	72F155AP	RTC-8524	T989	
L5	Peaking (180uh)	36A94-2 ①	BC-872	8154	RTC-8586	T312	
L6	Peaking (750uh)		BC-880 *	8148 *	RTC-8583 *	T327 *	
L7	4.5MC Trap	9A2529					
L8	Peaking (325uh)	36A94-3	BC-875	8132	RTC-8577	T319	
L9	1st Sound IF	9A2527		7105-R		TF298	
L10	Quadrature	9A2526					
L11	RF Choke (1.7uh)	9A2580	BC-582	4804	RTC-8516	T856	

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		J.C. PENNEY PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L12	Horiz. Stabilizer	9A2515		8335-G		HS-18		

FILTER CHOKE

ITEM No.	CURRENT (Measured)	RATINGS		REPLACEMENT DATA				NOTES
		DC RES.	INDUCTANCE (0 CURRENT 1000~)	J.C. PENNEY PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L13	.32A	16.6Ω	315 MH.	52X102-4	C-4084 ①	C-2343	26C79	① Drill new mounting holes.

*TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		J.C. PENNEY PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	Vert. Output	51X233-1	A-2853 ②	A-8146 ①	26S23	A-131X	① Cut and tape green lead
T2	Alt. Vert. Output Yoke (Horiz. 28MB) 92° (Vert. 33MB)	51X193-2 † 9A2544-1	MDF-125 ② & M-238	DY-31A ③	Y-45 ② ③	Y-45-2	† Used in J.C. Penney models only. ② Extend leads. ③ Use original rear cover and centering device.
T3	Alt. Yoke Horiz. Output	9A2485-1 † 53X398F 53X398	EVO-134	HO-297	FLY-146	D-124	

*COMPONENT CONNECTION DATA

ORIGINAL → REPLACEMENT ↓	HV TRANSFORMER				VERTICAL OUTPUT				YOKE				YOKE PLUG			
	Original Connections				Original Connections				Original Connections				TO YOKE TERMINAL			
MERIT ①	1	2	3	4	Blue	Red	Yel.		3	7	1	4	6	4	1	7
STANCOR ②③	1	2	3	4	Blue	Yel.	Red		3	7	1	4	6	4	1	7
THORDARSON ③④	1	2	3	4	Blue	Green	Red		1	7	3	6	4	6	3	7
TRIAD ③	1	2	3	4	Blue	Red	Yel.		3	7	1	4	6	4	1	7

- 1 Connect original horizontal damping capacitor (95 mfd) between yoke terminals #3 and #7. Remove jumper from yoke plug pins #6 and #7.
- 2 Remove jumper from yoke terminals #1 and #4 and extend a lead from yoke terminal #4.
- 3 Remove all leads from yoke plug except red lead to pin #4 and reconnect all leads as shown above.
- 4 Remove jumper from yoke terminals #3 and #6 and extend a lead from yoke terminals #6.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		J.C. PENNEY PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T4	5200Ω	3-4Ω	51X192-4	A-3028	A-3877 ①	24S48	① Drill new mounting hole(s).

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	J.C. PENNEY
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