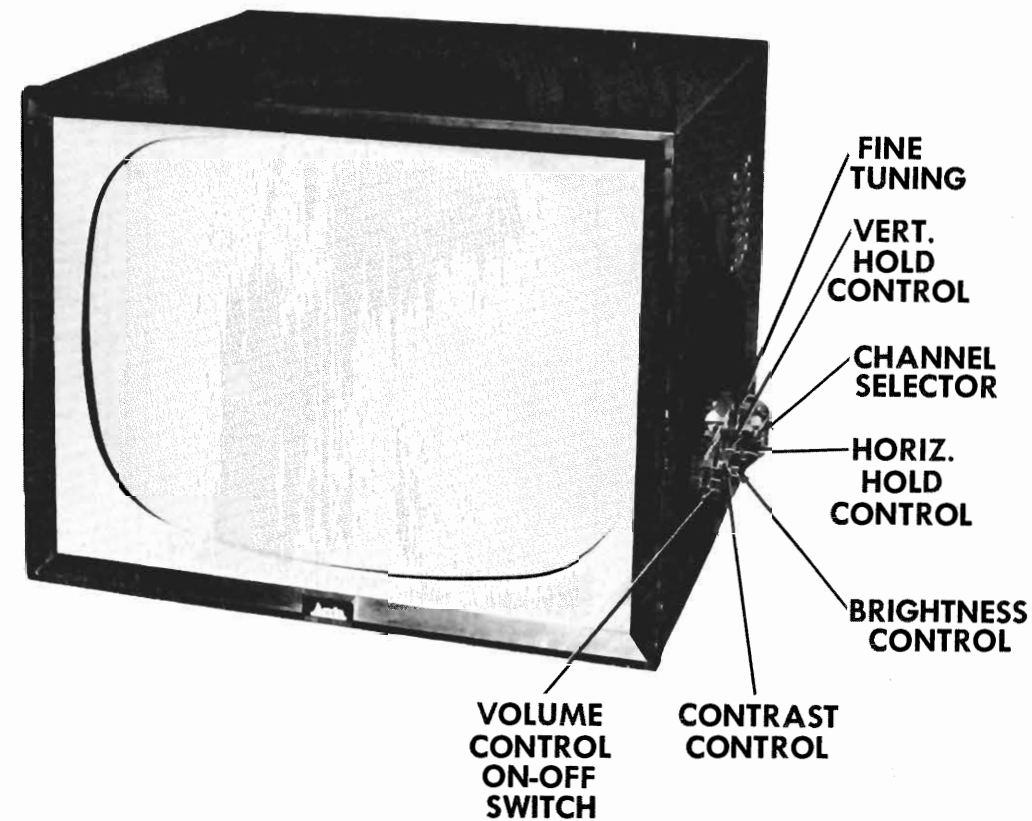


CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



ARVIN MODEL 21-555TM

TRADE NAME	Arvin	MODELS	CHASSIS
		21-554KM, 21-555TG, 21-555TM, 21-557TM.....	TE-383 "E"
		21-554KMU, 21-555TGU, 21-555TMU, 21-557TMU.....	TE-386-UHF "E"
MANUFACTURER	Arvin Industries, Columbus, Indiana		
TYPE SET	Television Receiver		
TUBES	Fifteen		
POWER SUPPLY	110-120 Volts AC-60 Cycles		RATING 1.08 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

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DATE 1-55

SET 264 FOLDER 3

ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM, TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

TRADE NAME

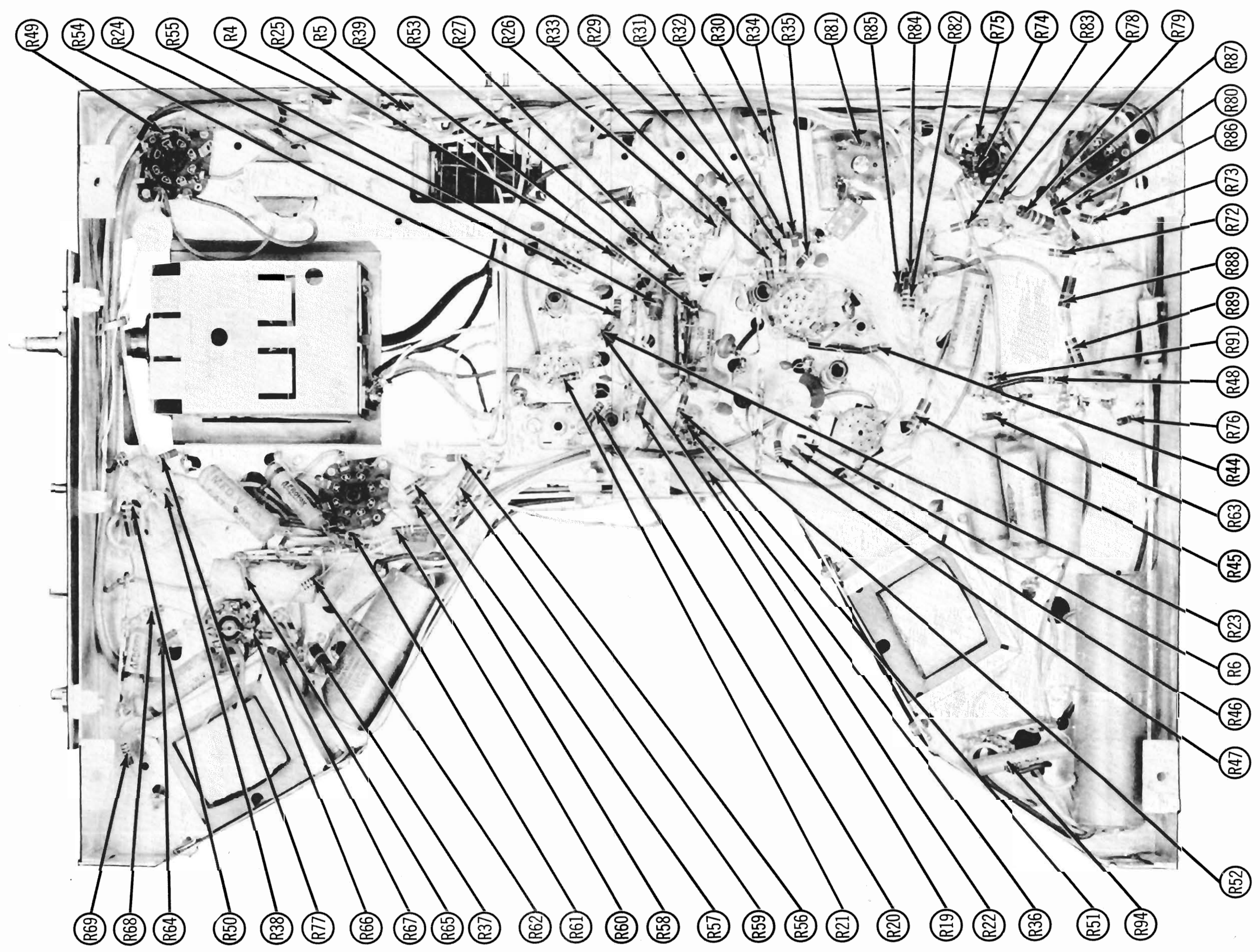
MANUFACTURER
TYPE SET
TUBES
POWER SUPPLY
TUNING RANGE

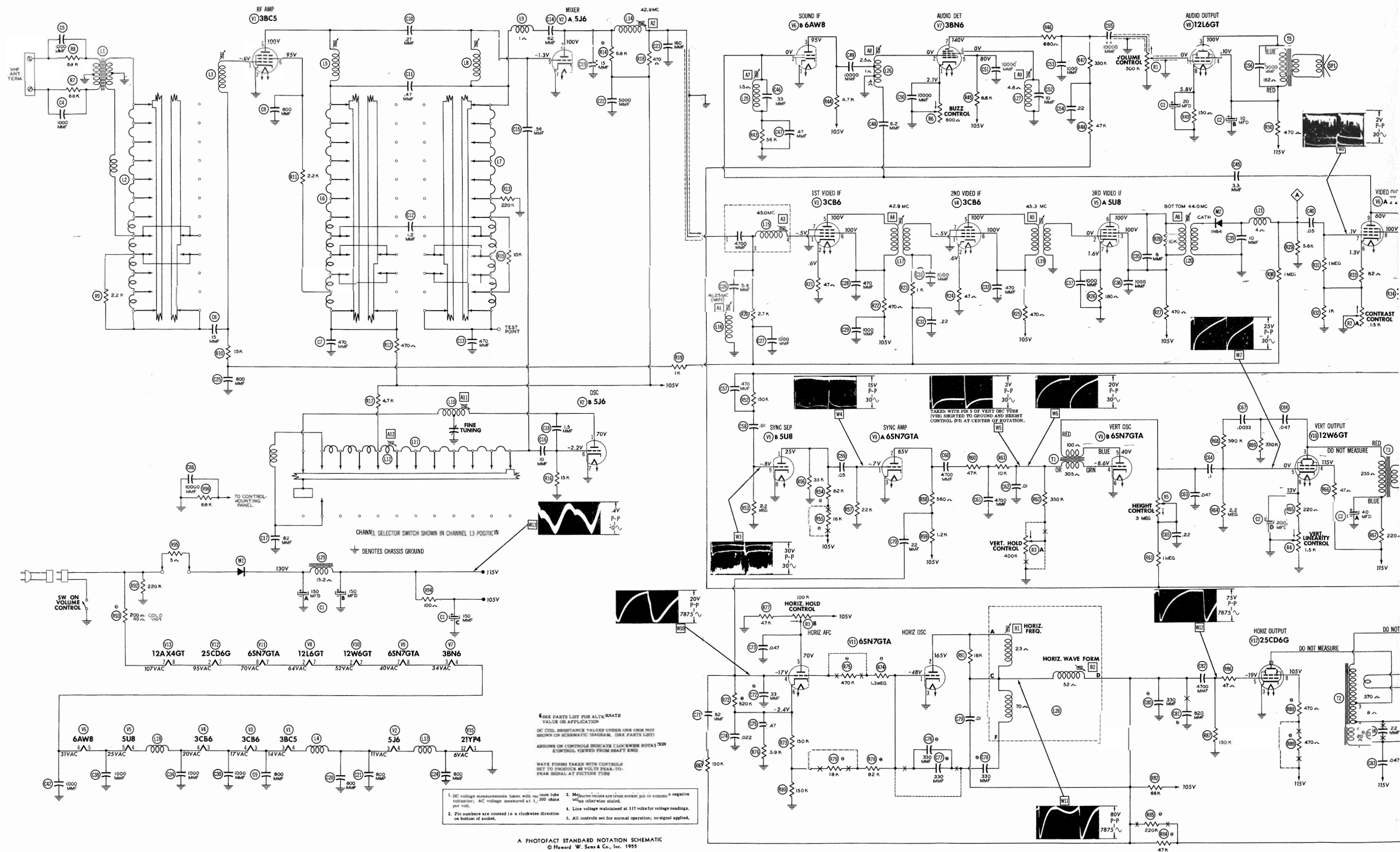
Alignment Instructi
Disassembly Instru
Horizontal Sweep C
Parts List and Des
Photographs

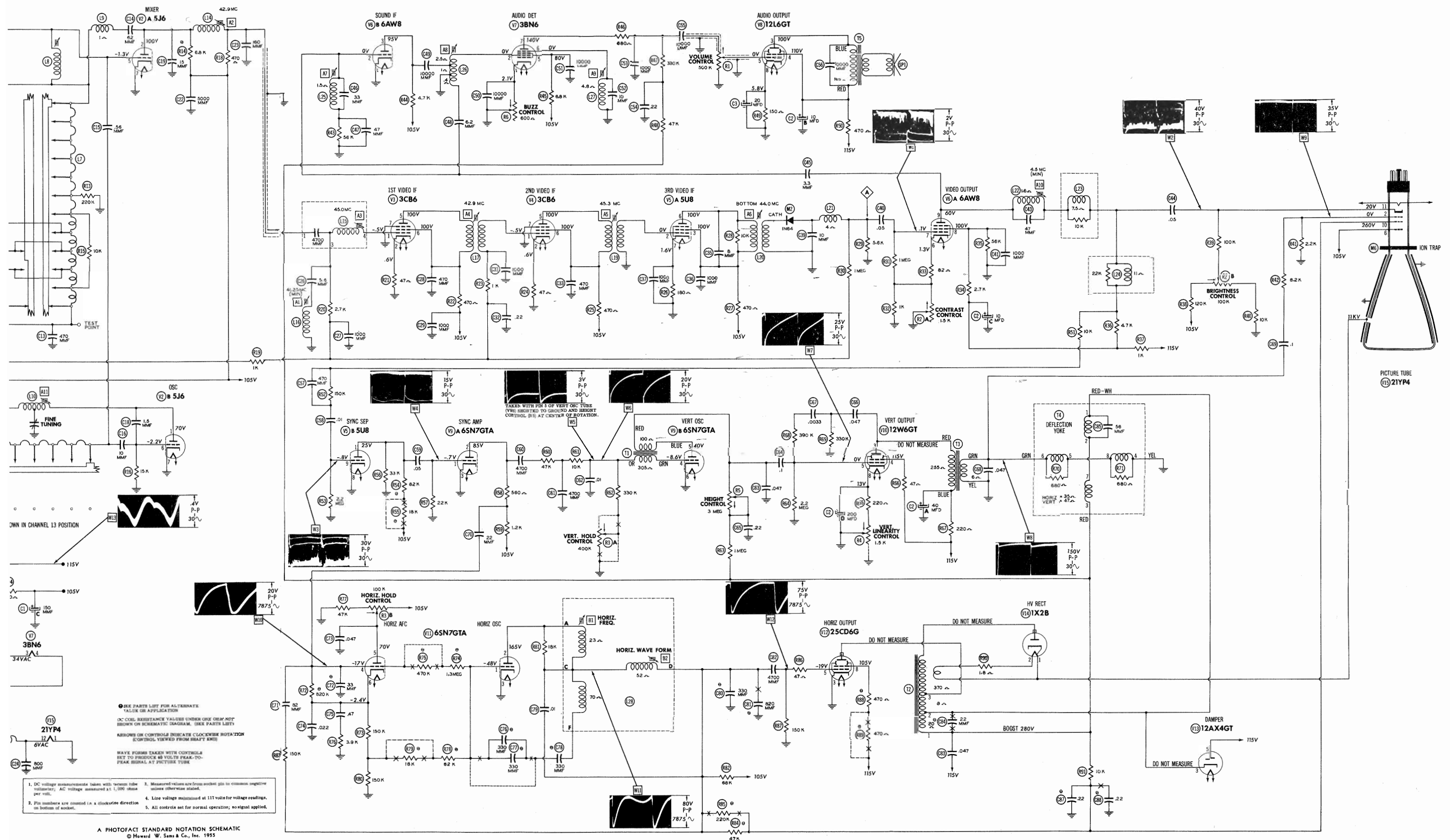
Cabinet - Rear
Capacitor Ident
Chassis - Top
RF Tuner ..
Resistor Ident

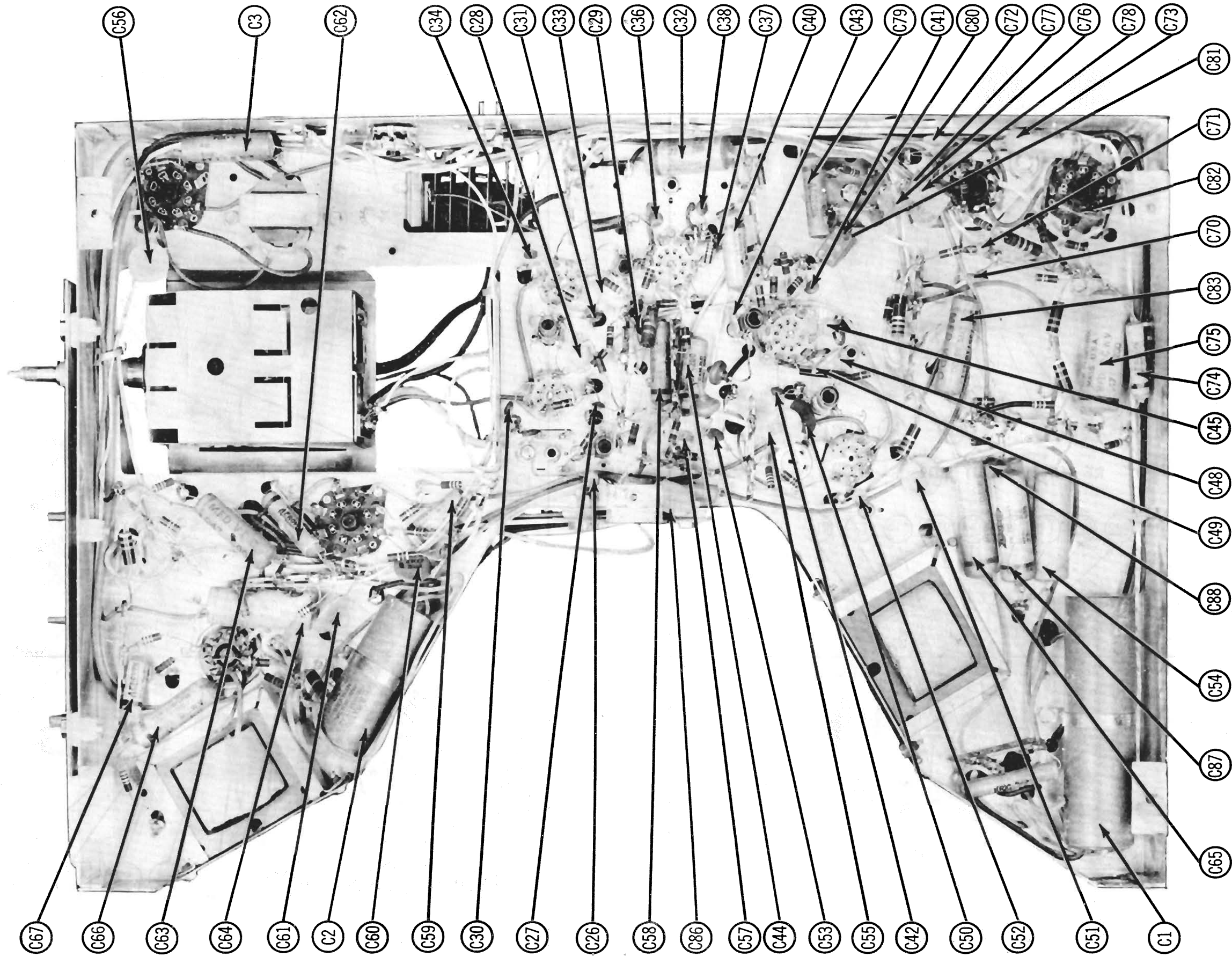
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parts have been compiled
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CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION









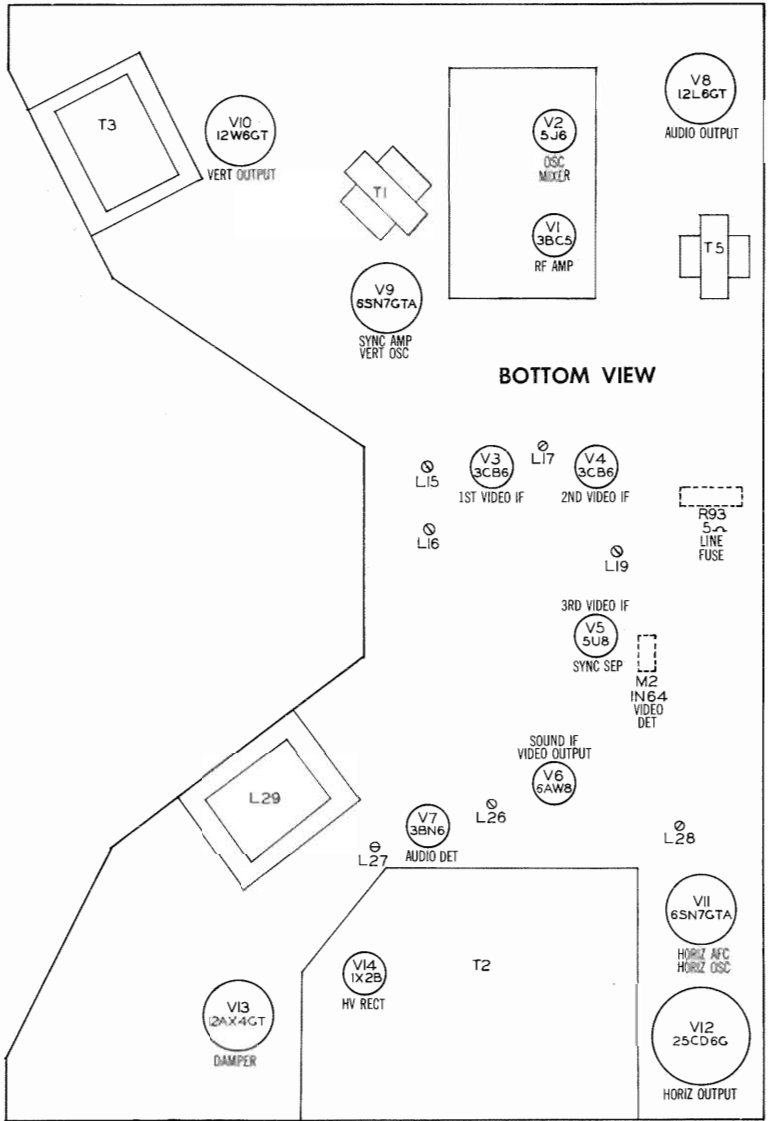
CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM,
TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

RESISTANCE MEASUREMENTS

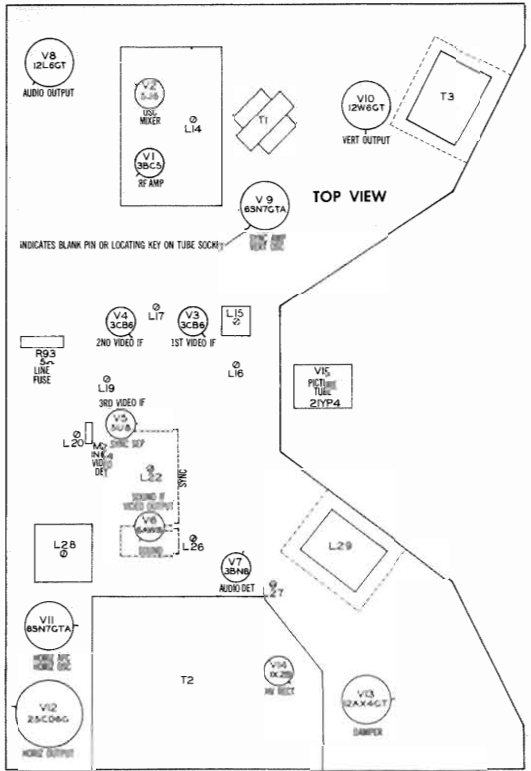
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	3BC5	1Meg	0Ω	4Ω	3Ω	†600Ω	†2.8KΩ	0Ω		
V 2	5J6	†4.8KΩ	†600Ω	3Ω	2Ω	220KΩ	15KΩ	0Ω		
V 3	3CB6	1Meg	47Ω	4Ω	5Ω	†600Ω	†600Ω	0Ω		
V 4	3CB6	1Meg	47Ω	5Ω	6Ω	†600Ω	†600Ω	0Ω		
V 5	5U8	†40KΩ	.4Ω	†600Ω	6Ω	8Ω	†600Ω	180Ω	0Ω	2.2Meg
V 6	6AW8	0Ω	56KΩ	†4.8KΩ	10Ω	8Ω	100Ω	1Meg	†3.7KΩ	†5.7KΩ
V 7	3BN6	350Ω	3.5Ω	11Ω	10Ω	†6.9KΩ	4.8Ω	450KΩ		
V 8	12L6GT	INF	18Ω	†650Ω	†470Ω	320KΩ	0Ω	16Ω	150Ω	
V 9	6SN7GTA	22KΩ	†1.9KΩ	0Ω	650KΩ	3.5Meg	0Ω	13Ω	11Ω	
V 10	12W6GT	†230Ω	16Ω	†490Ω	†60Ω	2.2Meg	INF	13Ω	550Ω	
V 11	6SN7GTA	250KΩ	50KΩ	0Ω	900KΩ	†40KΩ	300KΩ	18Ω	20Ω	
V 12	25CD6G	INF	27Ω	0Ω	50KΩ	150KΩ	150KΩ	20Ω	†1KΩ	Top Cap 8Ω
V 13	12AX4GT	INF	INF	130KΩ	INF	†13Ω	INF	30Ω	27Ω	
V 14	1X2B	PINS 1 - 8 HAVE INFINITE RESISTANCE								Top Cap 378Ω
V 15	21YP4	0Ω	2.2KΩ	Pin 6 †113Ω	Pin 10 10KΩ	Pin 11 †100KΩ	Pin 12 2Ω			

† MEASURED FROM OUTPUT OF M1.
▲ MEASURED FROM PIN 3 OF V13.



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

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

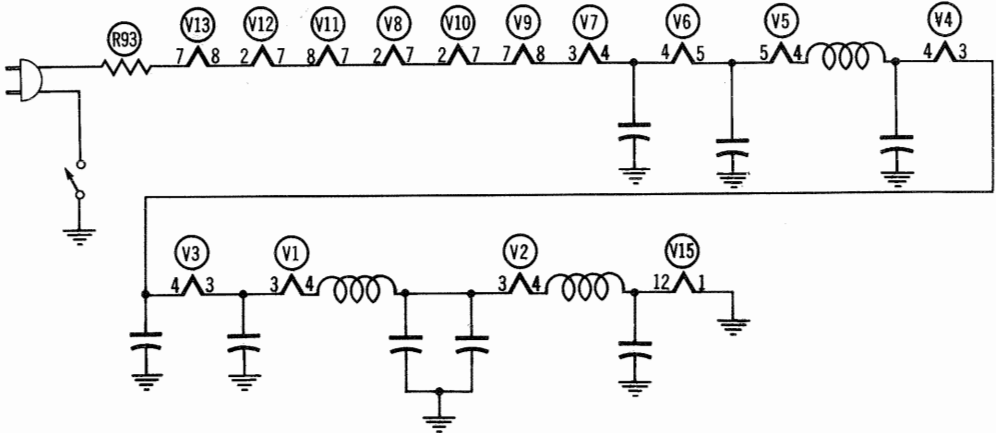
POWER SUPPLY FAILURE
No raster, no sound - Selenium Rectifier (M1)

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - V2, V3, V4, V5, V6
No pic, no sound, has snow - V1, V2, V3
No pic, has sound, has raster - V6, V15
Has pic, no sound - V6, V7, V8

SYNC FAILURE
No vert. sync - V9
No horiz. sync - V9, V11
No vert. or horiz. sync - V5, V9

SWEEP FAILURE
No raster, has sound - V11, V12, V13, V14, V15
No vertical deflection - V9, V10
Poor vert. linearity or foldover - V9, V10
Poor horiz. linearity or foldover - V11, V12, V13
Narrow picture - V11, V12, V13, V14, M1
Vert. off freq. - V9
Horiz. off freq. - V9, V11

NOTE: Since this receiver employs tubes used in series filament network, an open filament in any tube in series may cause the set to be inoperative. (See circuit below).



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT							
Use an isolation transformer to protect the test equipment. The high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube (V11) to disable the high voltage.							
VIDEO IF ALIGNMENT							
Connect the ends of a 1000Ω potentiometer across a 4.5 volt battery. Connect the potentiometer arm to the ungrounded side of C32. Connect the positive side to chassis. Adjust the potentiometer arm for -2 volts at C32. Attenuate signal generator output to maintain not more than -3 volts at VTVM.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS	
Direct	High side to an un-grounded tube shield floating over converter tube (V2). Low side to chassis.	41.25MC (Unmod)	9, 10 or 11	DC probe thru 18KΩ to point Δ . Common to chassis.	A1	Adjust for MINIMUM deflection.	
"	"	42.9MC	"	"	A2	Adjust for maximum deflection.	
"	"	45.0MC	"	"	A3	Adjust for maximum deflection. Repeat steps 2 and 3.	
"	"	42.9MC	"	"	A4	Adjust for maximum deflection.	
"	"	45.3MC	"	"	A5	"	
"	"	44.0MC	"	"	A6	Adjust for maximum deflection. Repeat steps 4, 5 and 6.	
OVERALL VIDEO IF RESPONSE CHECK							
Restore shield over converter tube to its normal position. Connect the high side of RF signal generator to chassis near V3 to provide markers. Leave the low side disconnected. Increase the bias at the ungrounded side of C32 from -2 volts to -2.5 volts. Use only enough sweep and marker generator output to provide usable indication on scope. Connect the synchronized sweep voltage from the sweep 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
Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	195MC (10MC Swp)	41.25MC 42.75MC 45.0MC 45.75MC	10	Vert. Amp. thru decoupling filter (Fig.1) to point Δ .		Check for response curve similar to Fig.2. If necessary, SLIGHTLY retouch A2 thru A6 to obtain desired response. A4 positions 42.75MC marker, A5 positions 45.75MC marker, and A6 adjusts tilt of response curve.
SOUND IF ALIGNMENT							
Remove the bias battery and tune in a TV station. Reduce signal input to receiver until hiss is heard with the sound. The signal input may be reduced by inserting an attenuator pad in series with the antenna lead-in and the antenna terminals. If an attenuator pad is not available, disconnect the antenna lead-in and stray feed the signal by placing the lead-in near the antenna terminals. Set the buzz control (R6) to its mid-range position. Adjust A7, A8 and A9 for clearest sound and minimum buzz. If the hiss should disappear during adjustment, reduce the signal input until the hiss returns.							
SOUND IF ALIGNMENT USING ON THE AIR SIGNAL AND VTVM							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS	
Not used	Not used	Not used	Tune in any local channel	Thru detector (Fig.3) to pin 2 (grid) of 6BN6 (V7).	A7,A8	Adjust for maximum deflection.	
"	"	"	"	"	A9	Set buzz control (R6) to its mid-range position. Adjust A9 for maximum sound. Readjust R6 for MINIMUM buzz. Correct adjustment of R6 should occur near its mid-range position.	

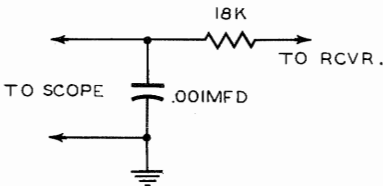


FIG. 1

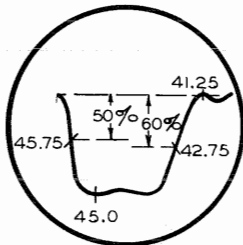



FIG. 2

ALIGNMENT INSTRUCTIONS (cont)

4.5MC TRAP ALIGNMENT							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS	
10. .01MFD	High side to pin 7 (grid) of 6AW8 (V6). Low side to chassis.	4.5MC (Unmod)	Any non-interfering channel	Thru detector (Fig. 3) to pin 11 (cathode) of picture tube.	A10	Adjust for MINIMUM deflection.	
OSCILLATOR ALIGNMENT							
Connect the bias supply as under "Overall Video IF Alignment Check". Connect the synchronized sweep voltage from the sweep 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. Set the fine tuning control to the mid-position of its range.							
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.	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. Amp. thru decoupling filter (Fig.1) to point  . Low side to chassis.	All	Adjust to place sound marker in trap notch as in Fig. 4. Video marker should be at 50%.
12. "	"	207MC (10MC Swp)	205.25MC	12	"		Check for sound and video marker placement as in Fig. 4. If necessary make compromise adjustment of All for any individual channel, then recheck all other high band channels to see that they have not been seriously affected.
		209.75MC	209.75MC				
		201MC (10MC Swp)	199.25MC	11			
		203.75MC (10MC Swp)	203.75MC				
		195MC (10MC Swp)	193.25MC	10			
		197.75MC (10MC Swp)	197.75MC				
		189MC (10MC Swp)	187.25MC	9			
		191.75MC (10MC Swp)	191.75MC				
		183MC (10MC Swp)	181.25MC	8			
		185.75MC (10MC Swp)	185.75MC				
		177MC (10MC Swp)	175.25MC	7			
		179.75MC (10MC Swp)	179.75MC				
13. "	"	85MC (10MC Swp)	83.25MC 87.75MC	6	"	A12	Adjust to place sound marker in trap notch as in Fig. 4. Video marker should be at 50%.
14. "	"	79MC (10MC Swp)	77.25MC 81.75MC	5	"		Check for sound and video marker placement as in Fig. 4. If necessary, make compromise adjustment of A12 for any individual channel, then recheck all other low band channels to see that they have not been seriously affected.
		69MC (10MC Swp)	67.25MC 71.75MC	4			
		63MC (10MC Swp)	61.25MC 65.75MC	3			
		57MC (10MC Swp)	55.25MC 59.75MC	2			
RF AND MIXER ALIGNMENT							
The RF and mixer portion of this receiver has been properly aligned at the factory and is very stable. Alignment of this portion of the receiver should not be required in the field.							

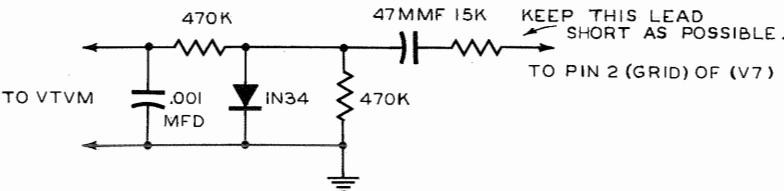


FIG. 3

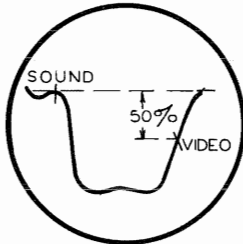


FIG. 4

ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM, TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the VHF tuner oscillator circuit may be accomplished by removing the channel selector and fine tuning knobs.

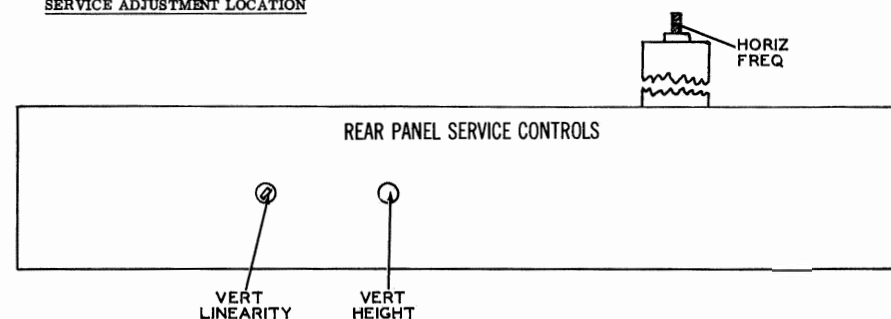
PICTURE TUBE SAFETY GLASS CLEANING

For picture tube safety glass cleaning, it is necessary to remove chassis. (See disassembly instructions).

PICTURE TUBE REMOVAL

For picture tube removal it is necessary to remove chassis. (See disassembly instructions).

SERVICE ADJUSTMENT LOCATION



HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

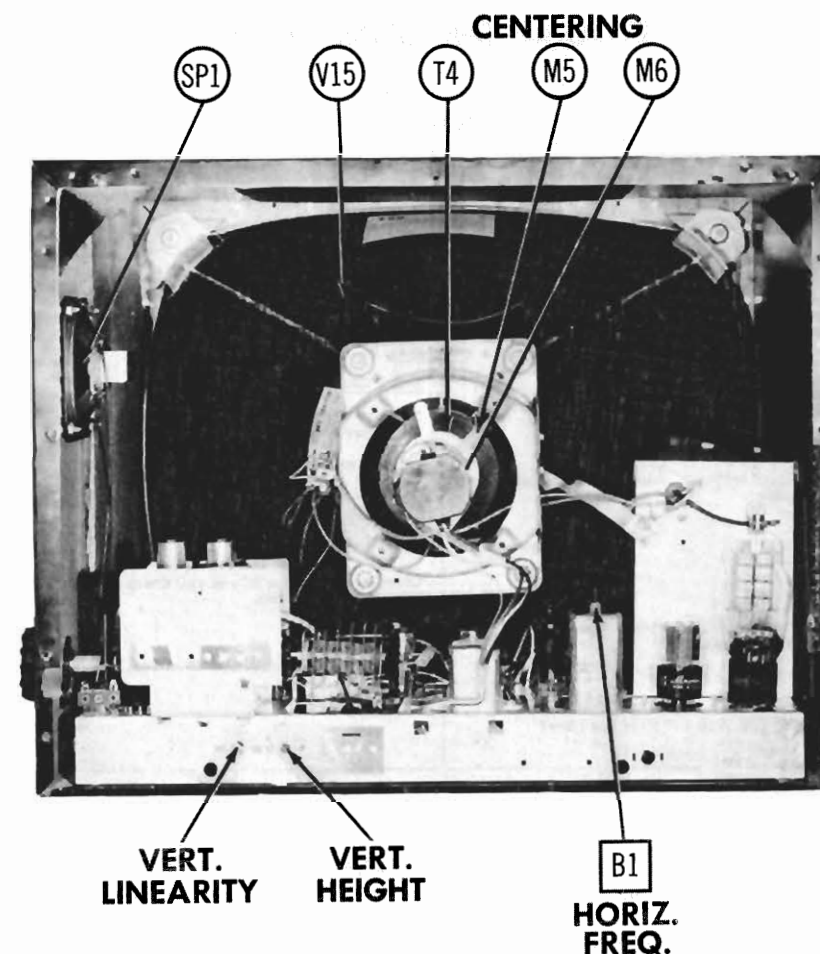
For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Adjustment is located on top of chassis. Set the horizontal hold control at the center of its range and adjust the horizontal frequency slug (L28) until picture synchronizes horizontally. (For location see tube placement chart).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, it is necessary to remove rear cover and supply power to set. Adjustment is located on top of chassis. Adjust the buzz control for maximum volume and minimum buzz.

CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the tube until the picture is properly centered.



CABINET—REAR VIEW HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

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

Turn the horizontal hold control clockwise.

Connect a short jumper from terminal "C" to terminal "D" of L28.

Adjust the horizontal frequency slug (B1) until the picture falls in sync.

Remove jumper from terminals "C" and "D" of L28.

Connect the vertical amplifier of an oscilloscope thru 10KΩ to terminal "C" of L28.

Adjust the waveform slug (B2) for a waveform similar to Fig. 5 with the broad and narrow peaks of equal height. If necessary, keep the picture in sync with B1 while making this adjustment. Remove scope.

Turn horizontal hold control fully clockwise and adjust B1 until 2 diagonal bars appear on the screen.

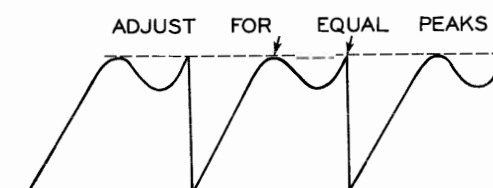


FIG. 5

DISASSEMBLY INSTRUCTIONS

1. Remove 7 push-on type control knobs from side of cabinet.
2. Remove 13 metal screws from rear cover. Remove cover.
3. Disconnect red and red/white lead from terminal strip on HV cage.
4. Disconnect green and yellow lead from terminal strip on yoke assembly.
5. Disconnect speaker leads.
6. Loosen 3 tuner mounting screws. Slide tuner toward center of chassis.
7. Remove picture tube socket and HV lead.
8. Remove 4 chassis bolts. Remove chassis.
9. Remove 4 speaker nuts. Remove speaker.

ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM,
TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

TROUBLE SHOOTING AIDS

SWEEP

HORIZONTAL	VERTICAL				
<p><u>LOSS OF SWEEP</u></p> <p>Follow procedure outlined under "Loss of High Voltage".</p> <p><u>INSUFFICIENT SWEEP</u></p> <p>Check by substitution V12 and V13. Check M1. Check adjustment B2. Check C82, C80, C81, R88 and other associated components.</p> <p><u>DRIVE LINES</u></p> <p>Check by substitution V12 and V13. Check C80, C81, C82, R81, R88, R82 and other associated components.</p> <p><u>COMPRESSED LEFT SIDE</u></p> <p>Check by substitution V12 and V13. Check horizontal output and damper stages for component failure or change of value.</p> <p><u>FOLDS</u></p> <p>Follow procedure outlined under "Drive Lines".</p> <p><u>PIE CRUST EFFECT</u></p> <p>Check by substitution V11, V12 and V13. Check C72 for open. Check L28, C79, C78, R81 and other associated components.</p> <p><u>XMAS TREE EFFECT</u></p> <p>Check by substitution V11, V12 and V13. Check T2 and T4A for internal arcing. Check L28, C79, C73, C78, C82, R81, R82, R3B and other associated components.</p>	<p><u>LOSS OF SWEEP</u></p> <p>Check by substitution V9 and V10. Check waveform W7.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check T3, T4B, C2A, R67, R66, R65 and other associated components.</td><td>Check T1, R63, R5, C64, C63, C65 and other associated components.</td></tr> </table> <p><u>INSUFFICIENT SWEEP</u></p> <p>Check by substitution V9 and V10. Check height and vertical linearity controls for proper operation. Check T3 and T4B.</p> <p><u>COMPRESSED AT BOTTOM</u></p> <p>Check by substitution V9 and V10. Check T1, R63, R5, C64, C65 and other associated components.</p> <p><u>COMPRESSED AT TOP</u></p> <p>Check by substitution V9 and V10. Check C2D, R65, R4, T3 and other associated components.</p> <p><u>FOLDS</u></p> <p>Check by substitution V9 and V10. Check R65, R64, C63, T1 and other associated components.</p>	If Satisfactory	If Unsatisfactory	Check T3, T4B, C2A, R67, R66, R65 and other associated components.	Check T1, R63, R5, C64, C63, C65 and other associated components.
If Satisfactory	If Unsatisfactory				
Check T3, T4B, C2A, R67, R66, R65 and other associated components.	Check T1, R63, R5, C64, C63, C65 and other associated components.				

SYNC

<p><u>LOSS OF VERTICAL AND HORIZONTAL SYNC</u></p> <p>Check by substitution V5 and V9. Check C57, C58, C59, R55, R54, R58, R59 and other associated components.</p> <p><u>LOSS OF VERTICAL SYNC - HORIZONTAL SYNC SATISFACTORY</u></p> <p>Substitute V9. Check T1, C60, C61, C62, R62, R3A and other associated components.</p>	<p><u>LOSS OF HORIZONTAL SYNC - VERTICAL SYNC SATISFACTORY</u></p> <p>Substitute V11. Check C70, C73, R3B, R72, R77 and other associated components.</p> <p><u>HORIZONTAL BENDING</u></p> <p>Check by substitution V5, V9 and V11. Check horizontal AFC network.</p>
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VIDEO

<p><u>LOSS OF VIDEO</u></p> <p>Substitute V6. Check C43, C44, L23, L24, R36, R37, R34 and other associated components.</p> <p><u>SOUND BARS (4.5MC BEAT)</u></p> <p>Adjust tuner fine tuning for best sound and picture. Check adjustment A10. Check video IF alignment.</p> <p><u>POOR CONTRAST</u></p> <p>Substitute V6. Check video crystal detector. Check contrast control and picture tube. Check C43, C44, C40, L23, L24 and other associated components.</p>	<p><u>NEGATIVE PICTURE</u></p> <p>Substitute V6. Check picture tube. Check video crystal detector network. Check C40, C2C, C43, C44, R34, L23, L24 and other associated components.</p> <p><u>SMEAR</u></p> <p>Substitute V6. Check C43, L23, L24 and R36. Check video IF alignment.</p> <p><u>WIDE BLACK BAR ACROSS PICTURE</u></p> <p>Check by substitution V1, V3, V4, V5 and V6 for heater to cathode leakage.</p>
--	--

AUDIO

<p><u>WEAK OR NO SOUND</u></p> <p>Check by substitution V6, V7 and V8. Check stage V8 using audio signal generator. Apply audio signal across R1.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check audio detector and audio IF stages for component failure or change of value.</td><td>Check C55, C56, C2B, R50, R49, T5, speaker and other associated components.</td></tr> </table>	If Satisfactory	If Unsatisfactory	Check audio detector and audio IF stages for component failure or change of value.	Check C55, C56, C2B, R50, R49, T5, speaker and other associated components.	<p><u>BUZZ</u></p> <p>Adjust tuner fine tuning for best sound and picture. Check adjustments R6 and A9. If still unsatisfactory, check audio IF alignment.</p> <p><u>DISTORTED</u></p> <p>Follow procedure outlined under "Weak or No Sound".</p>
If Satisfactory	If Unsatisfactory				
Check audio detector and audio IF stages for component failure or change of value.	Check C55, C56, C2B, R50, R49, T5, speaker and other associated components.				

POWER

<p><u>DEAD SET</u></p> <p>If filaments fail to light, check all tubes. Tubes are connected in series. Check R30, AC interlock assembly and switch on volume control. If filaments light, check R95 and M1. Check B+ filter and decoupling network for component failure or change of value.</p>	<p><u>SMALL AND/OR DIM PICTURE</u></p> <p>Check M1. Check R95 and R93. Check B+ filter and decoupling network.</p>
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TROUBLE SHOOTING AIDS (cont)

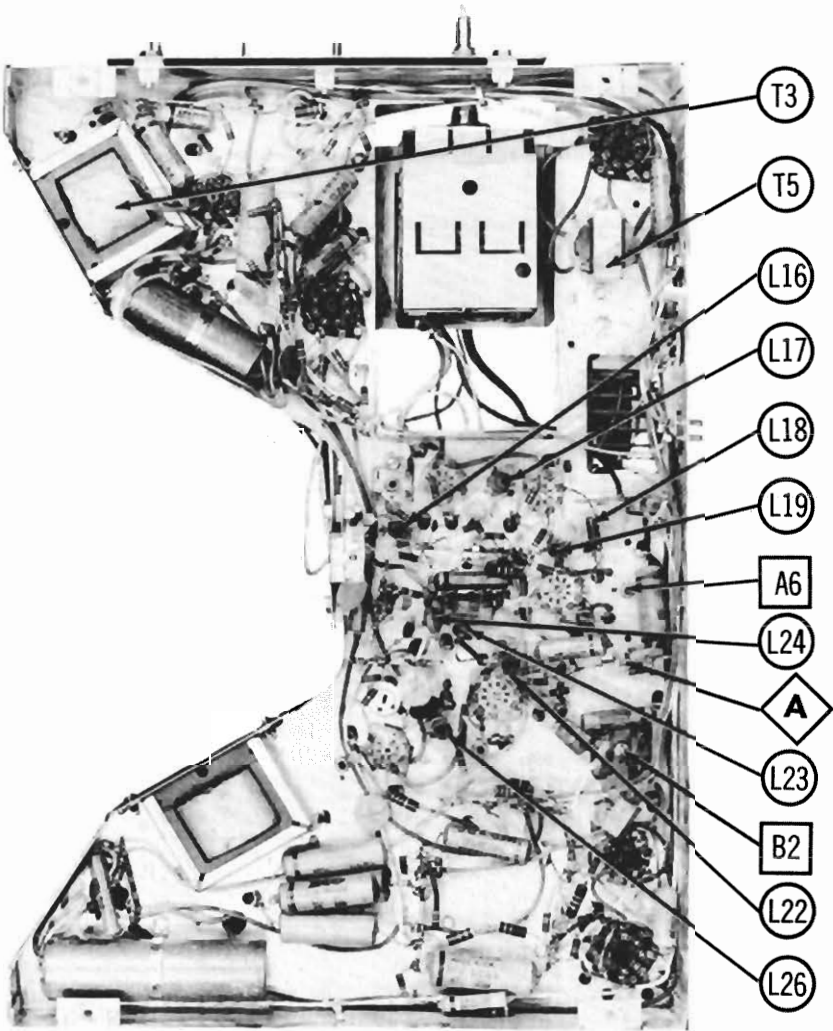
HIGH VOLTAGE

<p><u>LOSS OF HIGH VOLTAGE</u></p> <p>Check by substitution V11, V12, V13 and V14. Check waveform W12.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check T2, T4A, C84, C83, R88 and other associated components.</td><td>Check L28, C78, C79, C82, R3B, R81, R82 and other associated components.</td></tr> </table>	If Satisfactory	If Unsatisfactory	Check T2, T4A, C84, C83, R88 and other associated components.	Check L28, C78, C79, C82, R3B, R81, R82 and other associated components.	<p><u>INSUFFICIENT HIGH VOLTAGE</u></p> <p>Check by substitution V12 and V13. Check M1. Check R95, R93, R88, C82, C80, C81, T2, T4A and other associated components.</p> <p><u>BLOOMING</u></p> <p>Check by substitution V12, V13 and V14. Check M1. Check R95, R93, C82 and other associated components.</p>
If Satisfactory	If Unsatisfactory				
Check T2, T4A, C84, C83, R88 and other associated components.	Check L28, C78, C79, C82, R3B, R81, R82 and other associated components.				

GENERAL

<p><u>RASTER, SOUND, NO PICTURE</u></p> <p>Follow procedure outlined under "Loss of Video".</p> <p><u>RASTER, PICTURE, NO SOUND</u></p> <p>Follow procedure outlined under "Weak or No Sound".</p> <p><u>RASTER, NO SOUND, NO PICTURE</u></p> <p>Check by substitution V1, V2, V3, V4, V5 and V6. Check video IF components for failure or change of value.</p>	<p><u>NO RASTER, NO SOUND</u></p> <p>Follow procedure outlined under "Dead Set".</p> <p><u>KEYSTONE EFFECT</u></p> <p>Check T4 and its associated components.</p> <p><u>INTERMITTENT STREAKS</u></p> <p>Check high voltage section for corona discharge and arcing.</p>
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Symptoms shown are assumed and are not indicative of the quality and workmanship of this equipment.



CHASSIS BOTTOM VIEW-TRANS., INDUCTOR & ALIGN. IDENTIFICATION

ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM, TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

PARTS LIST AND DESCRIPTIONS (Continued)

SELENIUM RECTIFIER

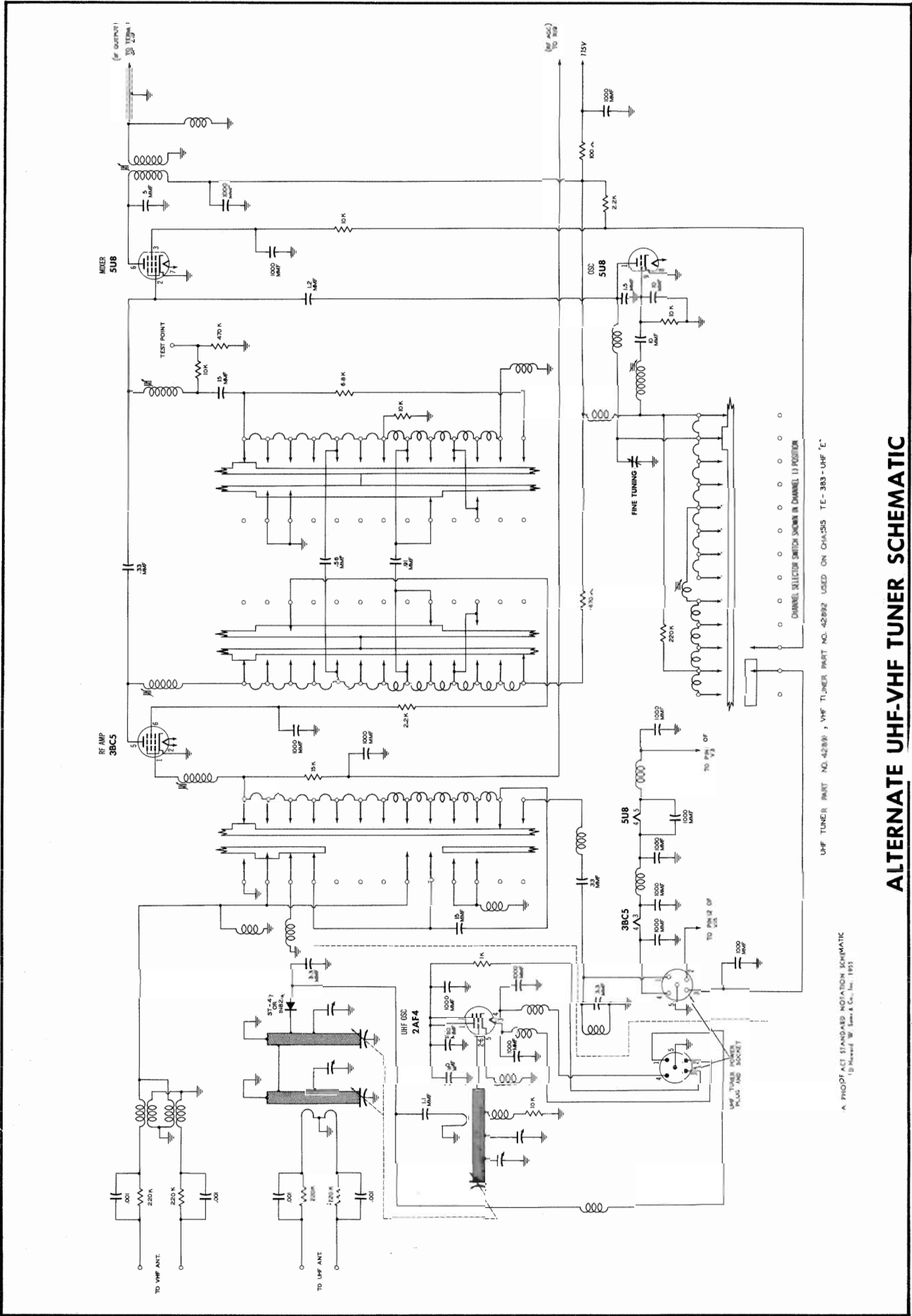
ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	ARVIN PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	SARKES TARZIAN PART No.	SELETRON PART No.	
M1	.210A	42763	1236A	RS300	6S300	300	6Q2	

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		ARVIN PART No.	FEDERAL PART No.	SYLVANIA PART No.	
M2	1N64	23261	1N60 or 1N64A	1N60 or 1N132	Video Det.

MISCELLANEOUS

ITEM No.	PART NAME	ARVIN PART No.	NOTES
M3A	Tuner	42877	VHF Models only
B	Tuner	42882	VHF & VHF-UHF Models
M4	Tuner	42893	UHF Models
M5	Centering Device	42701	
M6	Ion Trap	42823-2	
	Knob	42871-1	VHF Fine tuning (Mahogany) - VHF Models
	Knob	42871-2	VHF Fine tuning (Taupe) - VHF Models
	Knob	42838-1	VHF Fine tuning (Mahogany) VHF-UHF Models.
	Knob	42838-2	VHF Fine tuning (Taupe) - VHF-UHF Models
	Knob	42392	UHF Fine tuning
	Knob	42870-1	Channel Selector (Mahogany) VHF Models
	Knob	42870-2	Channel Selector (Taupe) VHF Models
	Knob	42875-1	Channel Selector (Mahogany) VHF-UHF Models
	Knob	42875-2	Channel Selector (Taupe) VHF-UHF Models
	Knob	42869-1	Contrast & Vert. (Mahogany)
	Knob	42869-2	Contrast & Vert. (Taupe)
	Knob	42868-1	Brightness & Horiz. Hold (Mahogany)
	Knob	42868-2	Brightness & Horiz. Hold (Taupe)
	Knob	42867-1	On-off-volume (Mahogany)
	Knob	42867-2	On-off-volume (Taupe)
	Safety Glass	42816	
	Mask	42815-1	Green
	Mask	42815-2	Gold
	Cabinet Cover	42734-1	Rear (Model 21-555)
	Cabinet Cover	42734-2	Rear - Models 21-554 & 21-557
	Arvin Name Plate	42803-3	



ARVIN MODELS 21-554KM, KMU, 21-555TG, TGU, TM, TMU, 21-557TM, TMU (Ch. TE-383 "E" Series, TE-386-UHF "E" Series)

UHF TUNER PART NO. 42893, VHF TUNER PART NO. 42882 USED ON CHA-255 TE-383-UHF "E."

CHANNEL SELECTOR SWITCH SHOWN IN CHANNEL 1 POSITION

UHF TUNER AND SOCKET

A PHOTO ACT STANDARD NOTATION SCHEMATIC
(© Revised by Teac & Co., Inc. 1953)

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA			RTMA BASE TYPE	NOTES
		ARVIN PART No.	STANDARD REPLACEMENT			
V1	RF Amp.	3BC5	3BC5	7BD		
V2	Mixer-Osc.	536	536	7BF		
V3	1st Video IF Amp.	3CB6	3CB6	7CM		
V4	2nd Video IF Amp.	3CB6	3CB6	7CM		
V5	3rd Video IF Amp.					
	Sync Sep.	5U8	5U8	9AE		
V6	Video Output-Sound IF Amp.	6AW8	6AW8	9DX		
V7	Audio Det.	3BN6	3BN6	'DF		
V8	Audio Output	12L6GT	12L6GT	'S		
V9	Sync Amp. - Vert. Osc.	6SN7GTA	6SN7GTA	8BD		
V10	Vert. Output	12W6GT	12W6GT	4CG		
V11	Horiz. AFC - Horiz. Osc.	6SN7GTA	6SN7GTA	8BD		
V12	Horiz. Output	25CD6G	25CD6G	5BT		
V13	Damper	12AX4GT	12AX4GT	4CG		
V14	HV Rectifier	1X2B	1X2B	9Y		

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA					RTMA BASE TYPE	NOTES
	ARVIN PART No.	CBS-HYTRON PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	WESTINGHOUSE PART No.		
V15	21YP4	21YP4 21YP4A ①	21YP4 21YP4A ①	21YP4 21YP4A ①	21YP4 21YP4A ①	12L 12L	① Aluminized.

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		REPLACEMENT DATA						NOTES
	CAP.	VOLT	ARVIN PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C1A	150	150	42722						TVA-3465
B	150	150							
C	150	150							
C2A	40	150	42723						TVA-4430
B	10	150							
C	10	150							
D	200	35							
C3	20	25	42724	PRS25/25		BR252		TC26	TVA-1205
C4	1000		41135-102	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C5	1000		41135-102	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C6	15			SI15NP0	TCZ-15	TZ11	NP0K-150	5TCC-Q15	
C7	470			SI470	DD-471	TP46	GPIK-471	UC-5347	5GA-T47
C8	800			BPD-0008	DD-801	K067	801-0008	DC-538	5GA-T8
C9	800			BPD-0008	DD-801	K067	801-0008	UC-538	5GA-T8
C10	.27								
C11	.47								
C12	1.2								
C13	470			SI470	D6-471	TP46	GPIK-471	UC-5347	5GA-T47
C14	62								
C15	.56								
C16	10								
C17	82			SI82	D6-820	TZ28	GPIK-820		5GA-Q82
C18	1.5								
C19	15			SI15NP0	TCZ-15	TZ11	NP0K-150		5TCC-Q15
C20	800			BPD-0008	DD-801	K067	801-0008	UC-538	5GA-T8
C21	800			BPD-0008	DD-801	K067	801-0008	UC-538	5GA-T8
C22	5000			BPD-005	DD-502	K080	801-005	DC-525	5HK-D5
C23	160								
C24	800			BPD-0008	DD-801	K067	801-0008	UC-538	5GA-T8
C25	800			BPD-0008	DD-801	K067	801-0008	UC-538	5GA-T8
C26	5.6		40355-27						
C27	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C28	470		41052-2	BPD-00047	DD-471	K060	801-00047	DC-5347	5GA-T47
C29	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C30	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C31	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C32	.22		41052-2	BPD-00047	DD-471	K060	801-00047	DC-5347	5GA-T47
C33	470		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C34	1000		20205-29						
C35	8		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C36	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C37	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C38	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C39	10		20205-30						
C40	.05		23078	P288-05	DF-503	PJ285		PT415	2TM-S5
C41	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C42	1000		23078	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C43	47		40355-23						
C44	.05		40355-25	P288-05	DF-503	PJ285		PT415	2TM-S5
C45	3.3		40355-22	SI3.3NP0	TCZ-3.3	TZ06	NP0K-3R3	ZT-5533	5TCCB-V33
C46	33		40355-23						
C47	47		40355-23						
C48	6.2		40355-29						
C49	10000		40053-103	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1
C50	10000		40053-103	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1
C51	10000		40053-103	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1
C52	10		40355-10	SI10	D6-100	TP09	GPIK-100	UC-541	5GA-Q1
C53	1000			BPD-001	DD-102	K069	801-001	DC-521	5HK-D1
C54	22		40053-103	P488-22	DD-102	CUB4P22		PT4022	4TM-P22
C55	10000		42227-2	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1
C56	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1
C57	470			BPD-00047	DD-471	K060	801-00047	DC-5347	5GA-T47
C58	.01		600	P688-01	D6-103	CUB6S1	811-01	PT611	6TM-S1
C59	.05		200	P288-05	DF-503	PJ285		PT415	2TM-S5
C60	4700			BPD-0047	DD-472	K079	801-0047	DC-5247	5HK-D47
C61	4700			BPD-0047	DD-472	K079	801-0047	DC-5247	5HK-D47
C62	.01		600	P688-01	D6-103	CUB6S1	811-01	PT611	6TM-S1
C63	.047		600	P688-05	D1F-03	CUB6S5		PT611	6TM-S5
C64	.1		600	P688-1	D1F-04	CUB6P1		PT601	6TM-P1
C65	.22		400	P488-22		CUB4P22		PT4022	4TM-P22

PARTS LIST AND DESCRIPTIONS

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	ARVIN PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C66	.047	600		P688-05	DF-503	CUB6S5		PT615	8TM-S5
C67	.0033	600		P688-0033	D6-332	CUB6D33	GP2-333-332	PT6233	8TM-D33
C68	.047	200		P288-05	DF-503	PJ285		PT415	2TM-S5
C69	.1	200		P288-1	DF-104	PJ2P1		PT401	2TM-P1
C70	.22		40355-15						
C71	.82			SI82	D6-820	TZ28	GPIK-820	UC-5482	5GA-Q82
C72	.33		40355-22	SI33	D6-330	TP27	GPIK-330	UC-5433	5GA-Q33
C73	.047	200		P288-05	DF-503	PJ285		PT415	2TM-S5
C74	.022	200		P288-022		PJ2S22		PT4122	2TM-S22
C75	.47	200		P288-5		PJ2P5		PT405	2TM-P5
C76	.330	500				5W5T33			
C77	.330	500				5W5T33			
C78	.330	500				5W5T33			
C79	.01	600		P688-01	D6-103	CUB6S1	GP2-333-103	PT611	6TM-S1
C80	.330	500				5W5T33			
C81	.820	500				1W5T82			
C82	.4700			BPD-0047	DD-472	K079	801-0047	DC-5247	5HK-D47
C83	.047	600		P688-05	DF-503	CUB6S5		PT615	6TM-S5
C84	.22	3000	40539-5						
C85	.56			BPD-01	DD-103	K082	801-01	DC-511	5HK-S1
C86	10000			P488-22		CUB4P22		PT4022	4TM-P22
C87	.22	400		P488-22		CUB4P22		PT4022	4TM-P22
C88	.22	400							

Note 1. Some versions may use a 270MMF in this application.

Note 2. Some versions may use a 1000MMF in this application.

Note 3. Not used in all versions.

Note 4. Some versions may use a .47 MFD @400V in this application.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	ARVIN PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	MALLORY PART No.	
RIA	500KΩ	1/2	E22464-89	Q11-133	A47-500K-S	B-617-S	U-50	Volume
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R1A
C	Switch		Not Req.	76-1	SWE-12	Not Req.	US-26	Attach to R1A
R2A	1500Ω	1/2	E22464-90	*QT-605	RTV-493	FI-7	UF152R	Contrast-Pan
B	100KΩ	1/2			RTV-494	R2-31	UR15L	Brightness-Rear
R3A	400KΩ	1/2		*QT-606		FI-40	UF55L	Vert. Hold-Pan
B	100KΩ	1/2				R2-31	UR15L	Horiz. Hold-Rear
R4	1500Ω	1			39-1500			Vert. Linearity Wire-wound
R5A	3Meg	1/2		Q11-140	A47-3Meg-S	BX-84	SU-59	Height
B	Shaft		Not Req.	Not Req.	FKS-1/4	Not Req.	Not Req.	Attach to R5A
R6	600Ω	1			A42828			Buzz Wire-wound

† Universal Replacement (Mallory Exact Duplicate Part No. UE-185)

Universal Replacement (Mallory Exact Duplicate Part No. UE-1390)

* CONCENTRIKIT EQUIVALENT: KIT K-2, BASE ELEMENTS & SHAFTS: B17-109 & P1-030 (PANEL)

* CONCENTRIKIT EQUIVALENT: KIT K-2, BASE ELEMENTS & SHAFTS: B11-128 & R1-13L (REAR)

* CONCENTRIKIT EQUIVALENT: KIT K-2, BASE ELEMENTS & SHAFTS: B11-133 & P1-030 (PANEL)

* CONCENTRIKIT EQUIVALENT: KIT K-2, BASE ELEMENTS & SHAFTS: B11-128 & R1-13 (REAR)

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	ARVIN PART No.	IRC PART No.	
R7	68KΩ	1		BTA-68K	Note 1
R8	68KΩ	1		BTA-68K	
R9	2200Ω	1		BTS-2200	
R10	15KΩ	1		BTS-15K	
R11	2200Ω	1		BTS-2200	
R12	470Ω	1		BTS-470	
R13	220KΩ	1		BTS-220K	
R14	6800Ω	1		BTS-6800	
R15	10KΩ	1		BTS-10K	
R16	15KΩ	1		BTS-15K	
R17	4700Ω	1		BTS-4700	
R18	470Ω	1		BTS-470	
R19	1000Ω	1		BTS-1000	
R20	2700Ω	1		BTS-2700	
R21	47Ω	1		BTS-47	
R22	470Ω	1		BTS-470	
R23	1000Ω	1		BTS-1000	
R24	47Ω	1		BTS-47	
R25	470Ω	1		BTS-470	
R26	180Ω	1		BTS-180	
R27	470Ω	1		BTS-470	
R28	10KΩ	1		BTS-10K	
R29	5600Ω	1		BTS-5600	
R30	1Meg	1		BTS-1Meg	
R31	1Meg	1		BTS-1Meg	
R32	1000Ω	1		BTS-1000	
R33	82Ω	1		BTS-82	
R34	2700Ω	1		BTS-2700	
R35	56KΩ	1		BTS-56K	
R36	4700Ω	1	41075-472	PW4-4700	
R37	1000Ω	1		BTA-1000	
R38	120KΩ	1		BTS-120K	
R39	100KΩ	1		BTS-100K	
R40	10KΩ	1		BTS-10K	
R41	2200Ω	1		BTS-2200	
R42	8200Ω	1		BTS-8200	
R43	56KΩ	1		BTS-56K	
R44	4700Ω	1		BTS-4700	
R45	6800Ω	1		BTA-6800	
R46	6800Ω	1		BTS-680	
R47	330KΩ	1		BTS-330K	
R48	47KΩ	1		BTS-47K	
R49	150Ω	1		BTS-150	
R50	470Ω	1		BTA-470	
R51	10KΩ	1		BTS-10K	
R52	150KΩ	1		BTS-150K	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	ARVIN PART No.	IRC PART No.	
R53	2.2Meg	1		BTS-2.2Meg	Note 6 Note 4
R54	82KΩ	1		BTS-82K	
R55	18KΩ	1		BTA-18K	
R56	33KΩ	1		BTS-33K	
R57	22KΩ	1		BTS-22K	Note 6 Note 4
R58	560Ω	1		BTS-560	
R59	1200Ω	1		BTS-1200	
R60	47KΩ	1		BTS-47K	
R61	10KΩ	1		BTS-10K	Note 2
R62	330KΩ	1		BTS-330K	
R63	1Meg	1		BTS-1Meg	
R64	2.2Meg	1		BTS-2.2Meg	
R65	220Ω	1		BTS-220	Note 3
R66	47Ω	1		BTS-47	
R67	220Ω	1		BTS-220	
R68	390KΩ	1		BTS-390K	
R69	330KΩ	1		BTS-330K	Note 6 Note 4
R70	680Ω	1		BTS-680	
R71	680Ω	1		BTS-680	
R72	820KΩ	5%		BTS-820K 5%	
R73	150KΩ	5%		BTS-150K 5%	Note 4
R74	1.3Meg	5%		BTS-1.3Meg 5%	
R75	470KΩ	5%		BTS-470K 5%	
R76	390Ω	1		BTS-390Ω	
R77	47KΩ	1		BTS-47K	Note 6 Note 4
R78	82KΩ	1		BTS-82K	
R79	18KΩ	1		BTA-18K	
R80	150KΩ	5%		BTS-150K 5%	
R81	18KΩ	1		BTS-18K	Note 5 Note 4
R82	68KΩ	1		BTA-68K	
R83	150KΩ	1		BTS-150K	
R84	47KΩ	1		BTA-47K	
R85	220KΩ	1		BTS-220K	Note 7 Note 7
R86	47Ω	1		BTS-47	
R87	150KΩ	1		BTS-150K	
R88	470Ω	1		BTA-470	
R89	470Ω	1		BTA-470	20308-18
R90	1.8Ω	1			
R91	10KΩ	1		BTS-10K	
R92	220KΩ	1		BTS-220K	
R93	*		42711		PW4-100
R94	100Ω	4	41075-101		
R95	5Ω	10	41853		
R96	68KΩ	1		BTA-68K	