



PHOTOFACT®

For Supplier Address See PHOTOFACT Index

NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS C & D.)

The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

Connect either 50-ohm dummy load or the normally used antenna system.



MODEL COMSTAT 35 (99-32971W)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: GC ELECTRONICS
 ALL tunable coils and transformers 9295
 CV1 thru CV3 8290

RECEIVER

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
 Adjustments made with 120-volt AC input to power supply.
 Adjust volume control to obtain suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
High side thru .01uF to Pin 2 of V2, low side to ground.	455kHz, 1000Hz @ 30% modulation.	13	T3, T4, T5	Set squelch maximum counterclockwise. Set PA-CB switch to CB. Set Delta tune to center position. Set Channel Selector to Channel 13. Keep generator output for 0.5V on AC VTVM. Adjust for maximum.
High side thru .01uF to Pin 9 of V1, low side to ground.	11.275MHz, 1000Hz @ 30% modulation.	13	T2	Same as above. Adjust for maximum.
High side thru .01uF to antenna jack, low side to ground.	27.115MHz, 1000Hz @ 30% modulation, output 10uV.	13	T1, T9, L7	Same as above. Adjust for maximum.

LAFAYETTE MODEL COMSTAT 35

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
These adjustments made with 120-volt AC input to power supply.
Adjust volume control to obtain a suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
"S" METER High side thru .01uF to antenna jack, low side to ground.	27.115MHz, 1000Hz @ 30% modulation, output 100uV.	13	RV1	Adjust for "S"9 reading on panel meter.

TRANSMITTER

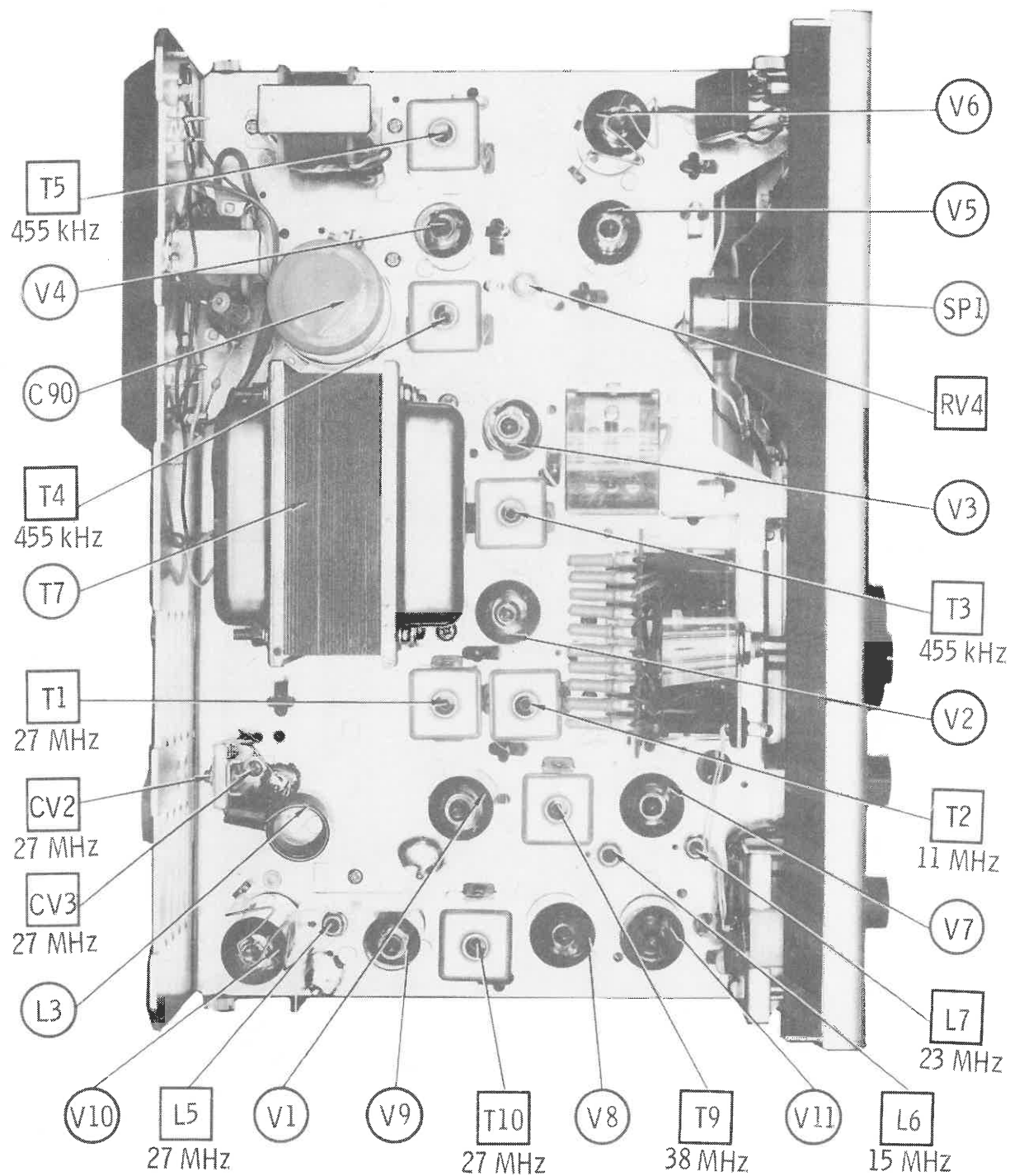
Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 120-volt AC input to power supply.

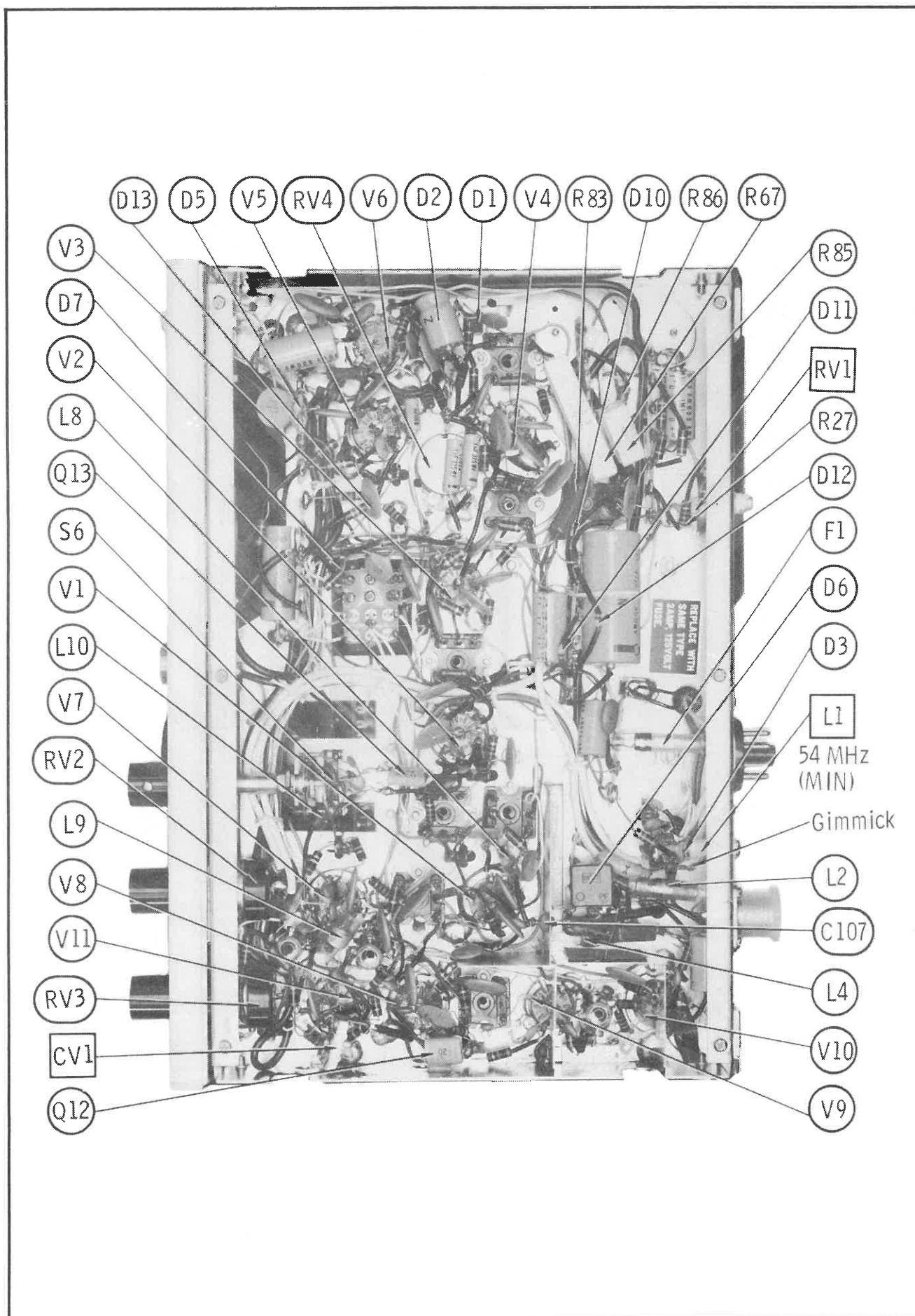
INDICATOR	ADJUST	REMARKS
11.275MHz OSCILLATOR Frequency Counter	CV1	Connect counter to top of L6. Adjust for 11.275MHz.
OSCILLATOR, MIXER, DRIVER, FINAL RF Wattmeter	T10, L5, L6	Key transmitter. Adjust for maximum.
OUTPUT POWER RF Wattmeter	CV3	Key transmitter. Adjust for 5 watts output.
TVI TRAP TV (Ch. 2)	L1	Key transmitter. Adjust for MINIMUM inter- ference on TV.
FINAL INPUT POWER Connect 0-25 DC milliammeter across R46.	CV2	Adjust for 5 watts (maximum).

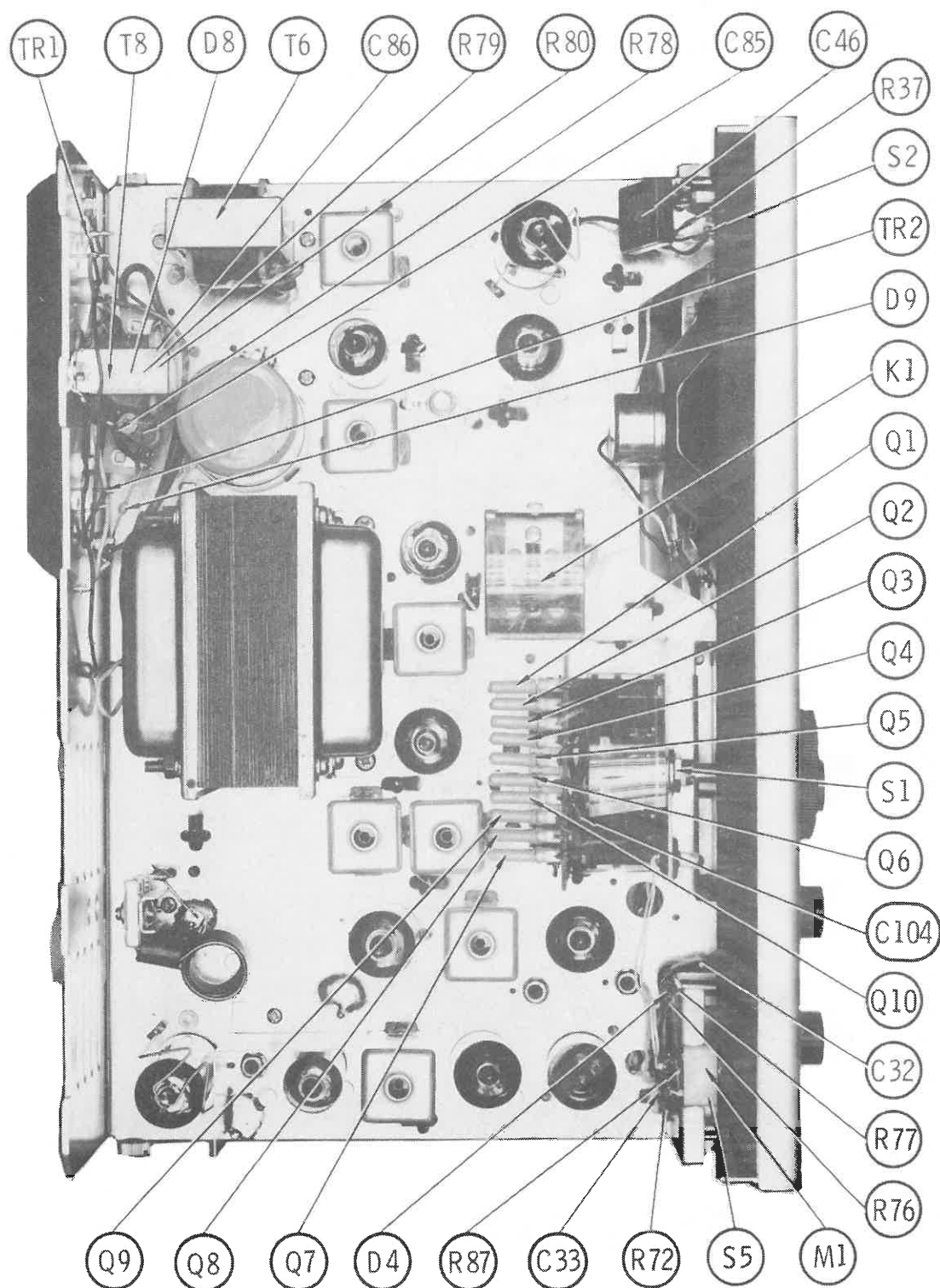
TRANSMITTER ADJUSTMENTS

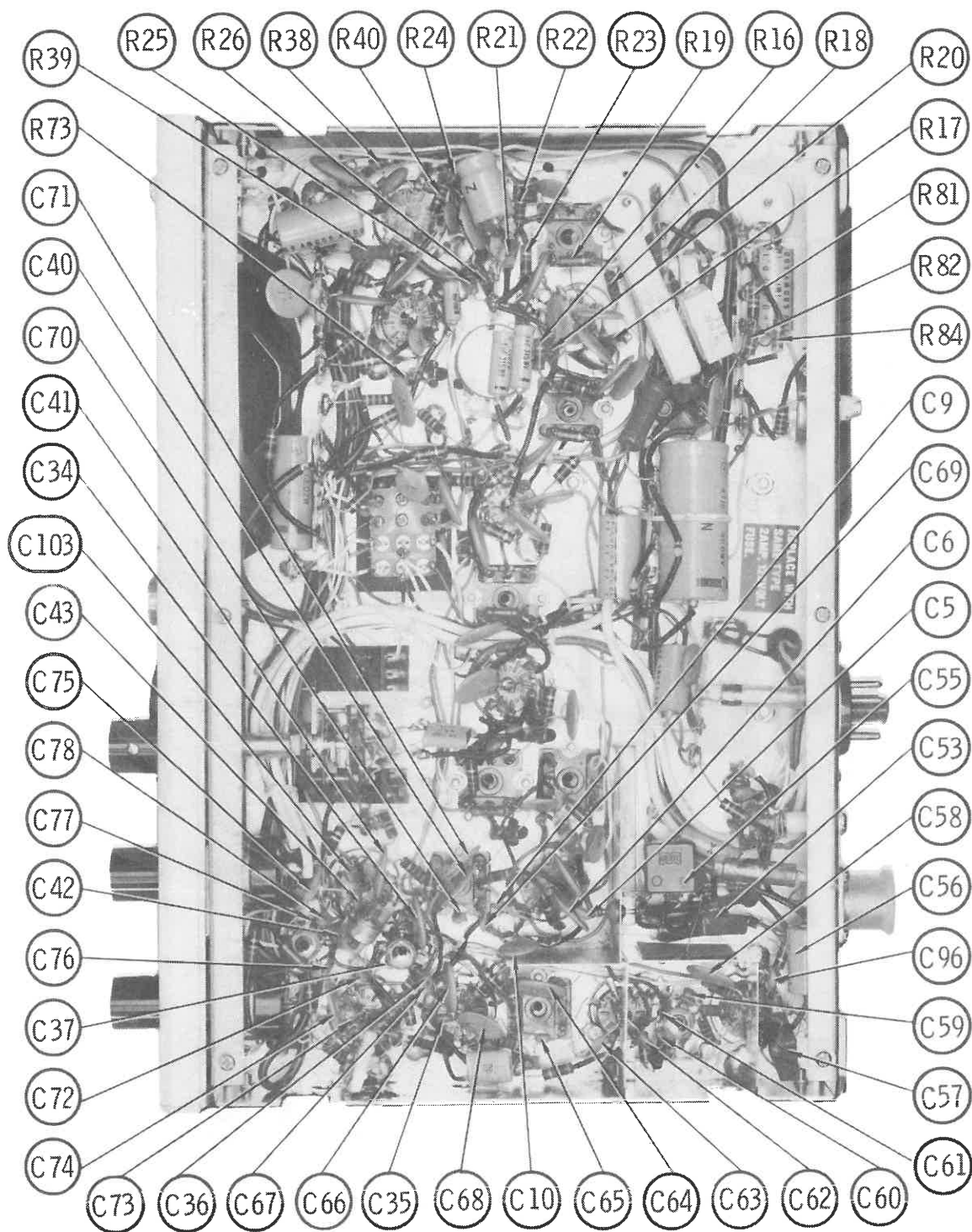
Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 120-volt AC input to power supply.

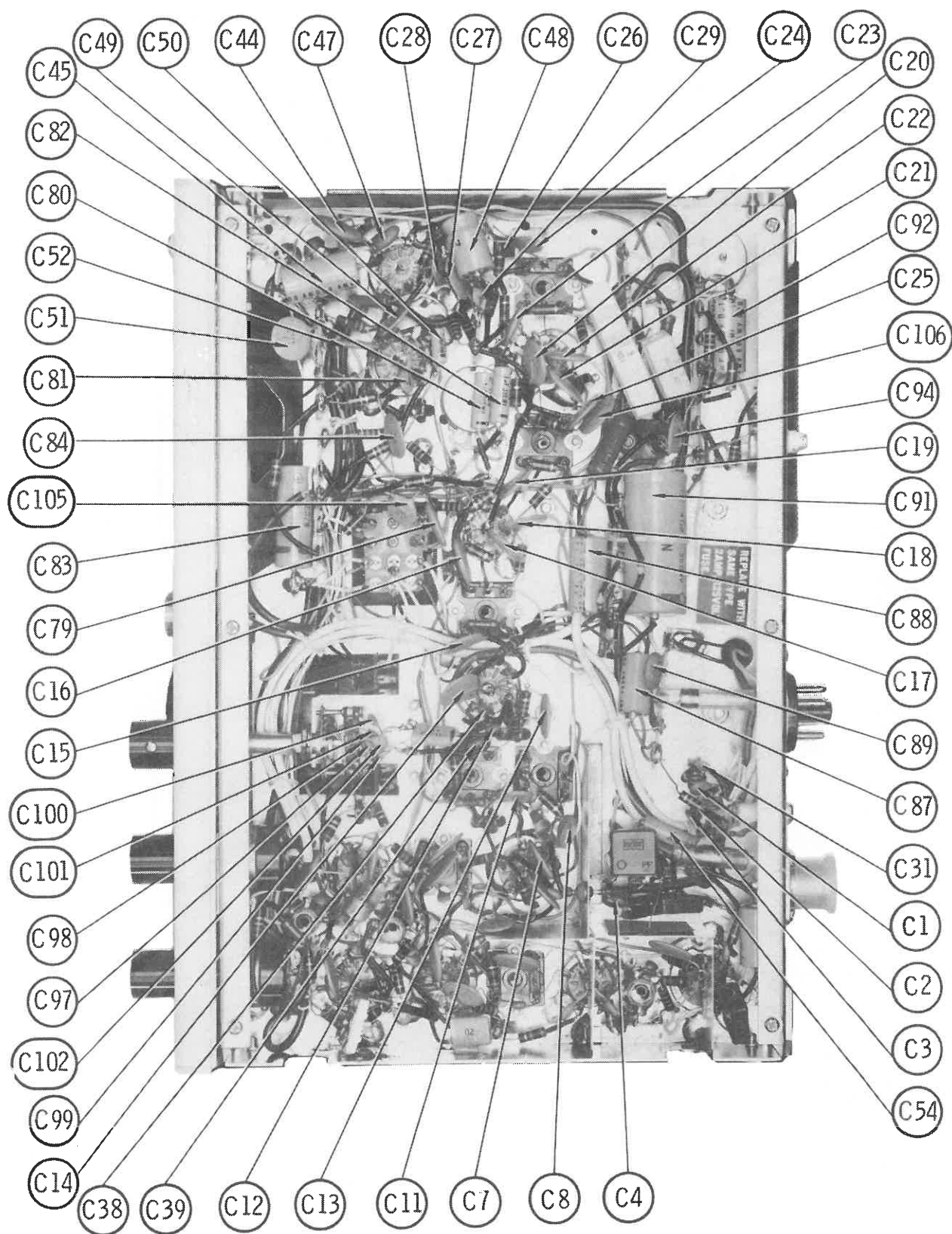
INDICATOR	ADJUST	REMARKS
RANGE BOOST Oscilloscope (Usable to 30MHz) connected to antenna jack.	RV4	Set Range Boost switch on. Inject a 1000Hz, 40mV audio signal at mic input. Key transmitter. Adjust for 80% modulation.



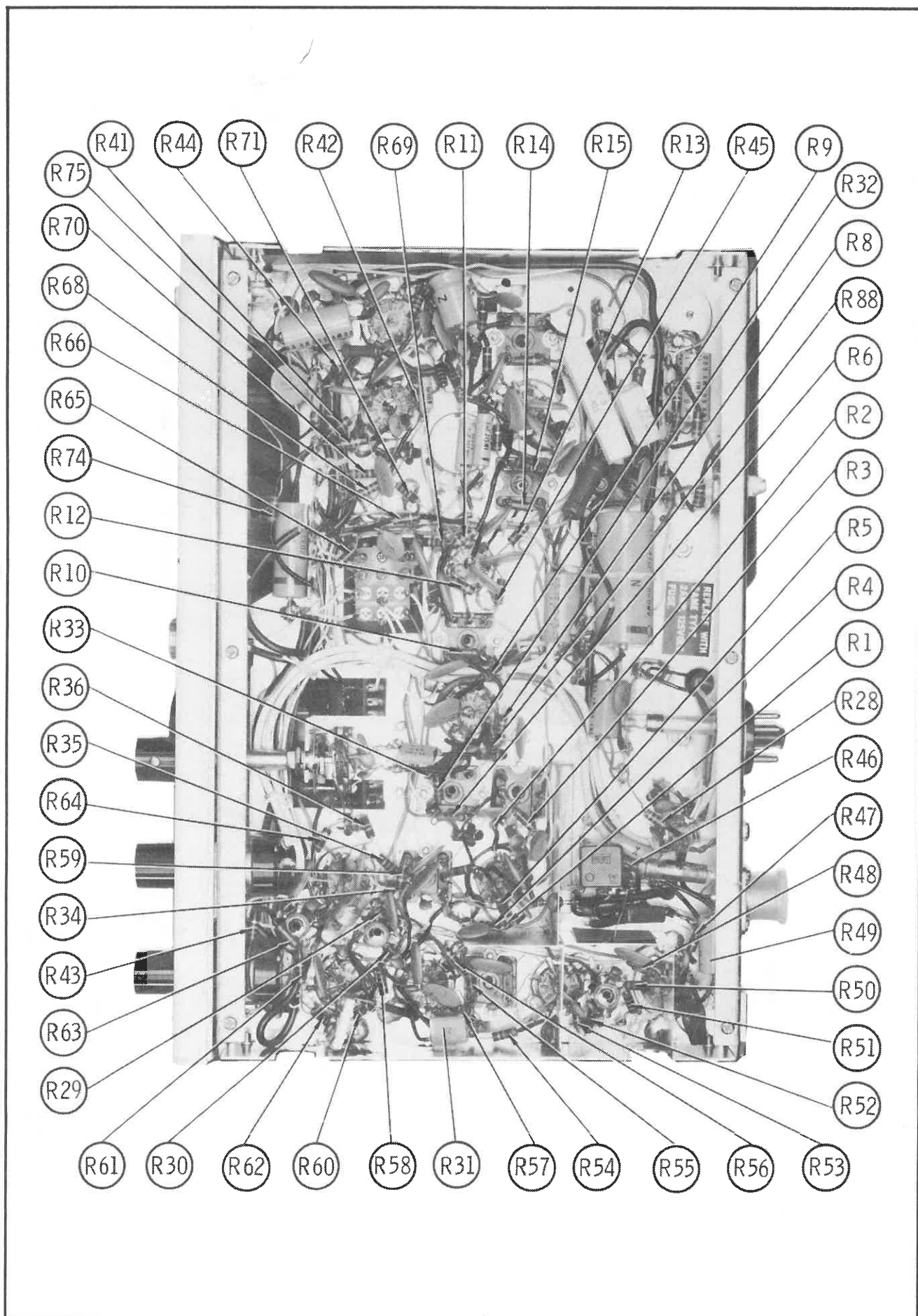


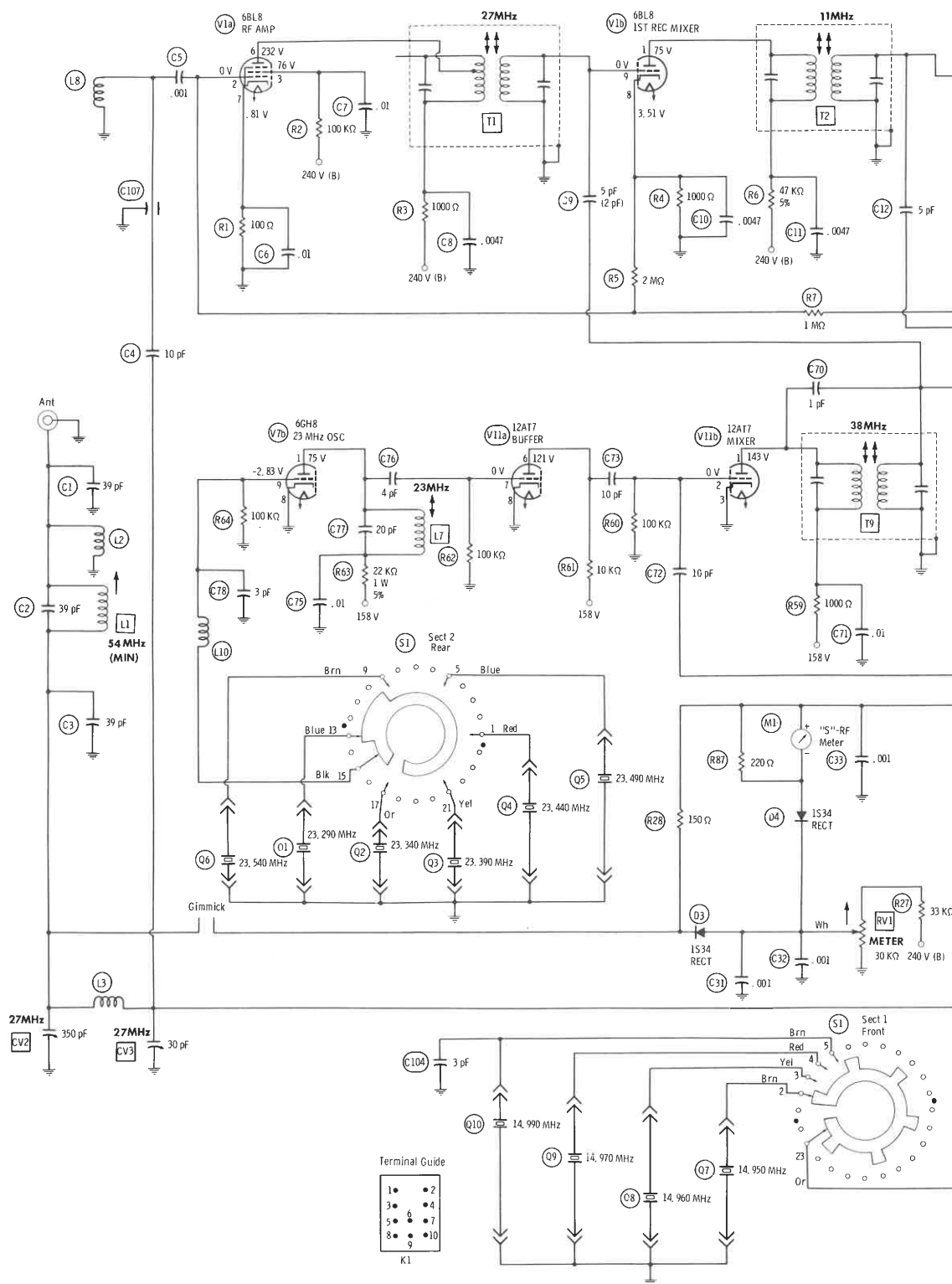






LAFAYETTE MODEL CONSTAIR 35





A PHOTOFACT STANDARD NOTATION SCHEMATIC

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SEE NOTES ON PAGE 63

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
RV1	Meter	30K	1339-11	F1-50K (1), SRS006	A47-30K-S (1), RS-2 or [NP-30K-S (1), UP-A-400]	RU54L,SL38,SK1000 or [UA54L (1), SK1000] or U35 (1)	BU1 (1),CF12, SS5,DC1
RV2	Volume/Power Switch	500K	1537-11	F1-500K (1), SRS200,KR-1	A47-500K-S (1), RS-2,SWE-12 or [NP-500K-S (1), UP-A-400,NWE-12]	RU55L,SL36,SL1500, US41 or [UA55L (1),SK3500, US41] or [U50 (1), US26]	BU1 (1),CF16, SS5,GC
RV3	Squelch/Stand By Switch	2Meg	1536-11	F1-2Meg (1), SRS200,KR-1	A47-2Meg-S (1), RS-2,SWE-12 or [NP-2Meg-S (1), UP-A-400,NWE-12]	RU26L,SL36,SL1500, US41 or [UA26L (1),SK3500, US41] or [U56 (1), US26]	BU1 (1),CF19, SS5,GC
RV4	Range Boost	500K	1340-11	F1-500K (1), SRS006	A47-500K-S (1), RS-2 or [NP-500K-S (1), UP-A-400]	RU55L,SL36,SL1500 or [UA55L (1), SK1000] or U50 (1)	BU1 (1),CF16, SS5,DC1

(1) Enlarge mounting hole.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R67	5000 10W WW	10W-SQ-5K	1108-13	R83	1000 5W WW	5W-SQ-1K	1057-13
R83	100 3W						

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec. Antenna	1639-23			
L2	RF Choke (5.6uH)	1640-23			
L3	RF Choke	1641-23			
L4	RF Choke (30uH)	1642-23			
L5	Xmit. Driver (27MHz)	1643-23			
L6	Xmit. Osc. (15MHz)	1644-23			
L7	23MHz Osc. (23MHz)	1645-23			
L8	RF Choke (2.2uH)	1646-23			
L9	RF Choke (500uH)	1922-23			
L10	RF Choke (1.1uH)	2776-23			
T1	Rec. RF (27MHz)	1466-24			
T2	Rec. Mixer (11.275MHz)	1467-24			
T3	Input IF (455kHz)	1469-24			
T4	Interstage IF (455kHz)	1470-24			
T5	Output IF (455kHz)	1468-24			
T9	38MHz Mixer (38MHz)	1465-24			
T10	Xmit. Mixer (27MHz)	1465-24			

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T6	9800	8	1358-15			

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T7	120V AC @ .78A AC	110V AC @ .38A DC	1832-15			
	SEC. 2	SEC. 3				
	25V AC @ 2A AC	12.6V AC @ 2.5A AC				

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

TRANSFORMER

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFRG. PART No.	THORDARSON PART No.	TRIAD PART No.	
T8	1.6	1		1359-15			

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFRG. PART No.	QUAM PART No.	
SP1	4" PM, 4-8 Ohms	1006-36		

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A	2298-20		AGC-2	HDJ	312.002	145150	FG2.2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	1033-37	(MK303)
M1	Meter	1218-27	S/Rf (YN-40A)
S1	Switch	2094-14	Channel Selector
S2	Switch	1350-14	PA-CB
S5	Switch	2096-14	Range Boost
S6	Switch	2095-14	Delta Tune
Q1	Crystal	1144-35	23.290MHz
Q2	Crystal	1145-35	23.340MHz
Q3	Crystal	1146-35	23.390MHz
Q4	Crystal	1147-35	23.440MHz
Q5	Crystal	1148-35	23.490MHz
Q6	Crystal	1149-35	23.540MHz
Q7	Crystal	1150-35	14.950MHz
Q8	Crystal	1151-35	14.960MHz
Q9	Crystal	1152-35	14.970MHz
Q10	Crystal	1153-35	14.990MHz
Q12	Crystal	1154-35	11.275MHz
Q13	Crystal	1155-35	11.730MHz
	Printed Circuit Board	1792-16	
	Crystal Holder	2273-19	

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Chassis	1842-80	Front Panel (Plastic)	5365-20
Cabinet Cover	1843-80	Knob A-Channel	2009-18
Base Plate	1844-80	Knob B-Squelch, Volume, Delta	2010-18
Front Panel	1845-80	Microphone Hanger	2260-10
Rear Panel	1846-80		

ACCESSORIES

ITEM	MFRG. PART No.	REMARKS
AC Power Cord	1018-38	
Microphone	1072-34	

PARTS LIST AND DESCRIPTION
(When ordering parts, state Model, Part Number, and Description.)

WIRING DATA

General-use Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord, 2-Wire	Use BELDEN No.	17106 (Plastic) or 17126 (Rubber) -6 feet 17109 (Plastic) or 17129 (Rubber) -9 feet
Shielded Antenna Lead	Use BELDEN No.	8214 Lowest-loss (RG-8/U Type) 8237 Low-loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No.	8497 3-Conductor (1 shielded for Press-to-Talk) Neoprene 8491 4-Conductor (2 shielded, 2 unshielded) Neoprene
Ignition Noise Suppression	Use BELDEN No.	7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No.	8661 (3/8 inch)

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE				ITEM No.	USE	TYPE			
V1	RF Amp/1st Rec. Mixer	6BL8				V7	15MHz Osc./23MHz Osc.	6GH8			
V2	2nd Rec. Mixer/Rec. Osc.	6BL8				V8	Xmit. Mixer/Xmit. Osc.	6GH8			
V3	1st IF	6BA6				V9	Xmit. Driver	6DA6			
V4	2nd IF	6BA6				V10	Final Amp.	6BQ5			
V5	AF Amp/Mic. Amp	12AX7				V11	Buffer/Mixer	12AT7			
V6	Output/Modulator	6BQ5									

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D1	1S1588	2409-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D2	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D3	1S34	1000-17	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D4	1S34	1000-17	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D5	VO6C	2031-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D6	VO6E	2410-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D7	VO6G	2411-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D8	VO6E	2410-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D9	VO6E	2410-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D10	VO6G	2411-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D11	VO6G	2411-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D12	VO6G	2411-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D13	VO6E	2410-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
TR1	2SB471B	1561-17	GE-16	TR-01	PTC105	HEPG6005	RE 11	SK3009	RT-127	ECG121
TR2	2SB471B	1561-17	GE-16	TR-01	PTC105	HEPG6005	RE 11	SK3009	RT-127	ECG121

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		MFR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C48	4.7 350V	1165-52	CTA1360		WBR4-350	TC60A	TVA-1602.5
C50	10 16V	1043-52	ME-1-E-010		WBR10-25	MTA10D35	TVA-1145
C54	1 315V	1166-52	CTA1400	EA15-10	WBR1-450		TVA-1599
C80	1 315V	1166-52	CTA1400		WBR1-450		TVA-1599
C82	1 315V	1166-52	CTA1400		WBR1-450		TVA-1599
C83	10 350V	1164-52	CTA1370		WBR10-450	TCG100T450G1T	TVA-1604
C85	10 50V	1046-52	ME-3-J-010	EA50-10	WBR10-50	MTA10D50	TVA-1304
C86	22 50V	1167-52	ME-4-J-025	EA50-25	WBR25-50	MTA25E50	TVA-1306
C90a	47 350V	1048-54	CTA1376		CC0236A	FP330.9A	TVL-3639.9
C91	47 350V						
	47 350V						
	47 350V						
	47 350V	1163-52	CTA1397		WBR50-450	TC79B	TVA-1612

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			ARCO/ELMENC0 PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	39		CC70-390			CN0439	10TCC-Q39
C2	39		CC70-390			CN0439	10TCC-Q39
C3	39		CC70-390			CN0439	10TCC-Q39
C4	10		CC70-100	DTZ-10	NP010	CN0410	10TCC-Q10
C5	.001		CCD-102	DD-102		GP210	10TS-D10
C6	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10

PARTS LIST AND DESCRIPTION (CONTINUED)
(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			ARCO/ELMENC0 PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C7	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C8	.0047		CCD-472				10TS-D47
C9	5		CC70-050				10TCC-V50
C10	.0047		CCD-472				10TS-D47
C11	.0047		CCD-472				10TS-D47
C12	5		CC70-050				10TCC-V50
C13	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C14	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C15	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C16	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C17	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C18	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C19	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C20	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C21	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C22	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C23	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C24	100		DD-101	GP100		GP310	10TS-T10
C25	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C26	.047		1MDF-1-103	CPJ-103	DPMS4S1	EWFI A110	1PB-S10
C27	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C28	100		DD-101	GP100		GP310	10TS-T10
C29	470		CCD-471	DD-471	GP470	GP347	10TS-T47
C31	.001		CCD-102	DD-102		GP210	10TS-D10
C32	.001		CCD-102	DD-102		GP210	10TS-D10
C33	.001		CCD-102	DD-102		GP210	10TS-D10
C34	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C35	20		CC70-200	DTZ-20	NP020	CN0420	10TCC-Q20
C36	2		CC70-2R2	DTZ-2R2	NP02P2	CN0522	10TCC-V22
C37	60		CCD-560	DD-560		GP456	10TS-056
C38	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C39	.001		CCD-102	DD-102		GP210	10TS-D10
C40	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C41	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C42	30		CC70-300				10TCC-Q30
C43	30		CC70-300				10TCC-Q30
C44	.0047 1KV	1180-51	CCD-472				10TS-D47
C45	.1 600V	1617-58	6DP-4-104		DPMS6P1	EWF6010	6PS-P10
C46	.0022 2KV	1016-56					
C47	.001 1KV	1080-51	CCD-102	DD-102		GP210	10TS-D10
C49	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C51	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C52	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C53	.001 2KV	1014-56					
C55	.001 2KV	1014-56					
C56	.047 600V	1617-58	6DP-3-473		DPMS6S47	EWF6147	6PS-S47
C57	.001 2KV	1014-56					
C58	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C59	10		CC70-100	DTZ-10	NP010	CN0410	10TCC-Q10
C60	.001		CCD-102	DD-102		GP210	10TS-D10
C61	20		CC70-200	DTZ-20	NP020	CN0420	10TCC-Q20
C62	.001		CCD-102	DD-102		GP210	10TS-D10
C63	.001		CCD-102	DD-102		GP210	10TS-D10
C64	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C65	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C66	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C67	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C68	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C69	7		CC70-6R8	DTZ-6R8	NP06P8	CN0568	10TCC-V68
C70	1					CN0510	10TCC-V10
C71	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C72	10		CC70-100	DTZ-10	NP010	CN0410	10TCC-Q10
C73	10		CC70-100	DTZ-10	NP010	CN0410	10TCC-Q10
C74	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C75	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C76	4		CC70-4R7	DTZ-4R7	NP04P7	CN0537	10TCC-V47
C77	20		CC70-200	DTZ-20	NP020	CN0420	10TCC-Q20
C78	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C79	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C81	680		CCD-681	DD-681	GP680	GP368	10TS-T68
C84	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C87	.047 600V	1617-58	6DP-3-473		DPMS6S47	EWF6147	6PS-S47
C88	.1 600V	1616-58	6DP-4-104		DPMS6P1	EWF6010	6PS-P10
C89	.0022		CCD-222			GP222	10TS-D22
C92	.1 600V	1616-58	6DP-4-104		DPMS6P1	EWF6010	6PS-P10
C94	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C96	.001		CCD-102	DD-102		GP210	10TS-D10
C97	8			DTZ-10	NP010	CN0410	10TCC-Q10
C98	15		CC70-150	DTZ-15	NP015	CN0415	10TCC-Q15
C99	27		CC70-270			CN0427	10TCC-Q27
C100	8			DTZ-10	NP010	CN0410	10TCC-Q10
C101	15		CC70-150	DTZ-15	NP015	CN0415	10TCC-Q15
C102	27		CC70-270			CN0427	10TCC-Q27
C103	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C104	3		CC70-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C105	.0047		CCD-472				10TS-D47
C106	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C107							
CV1	30 Maximum	1063-57					
CV2	350 Maximum	1037-57					
CV3	30 Maximum	1063-57					