



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index



PRESIDENT MODEL HONEST ABE

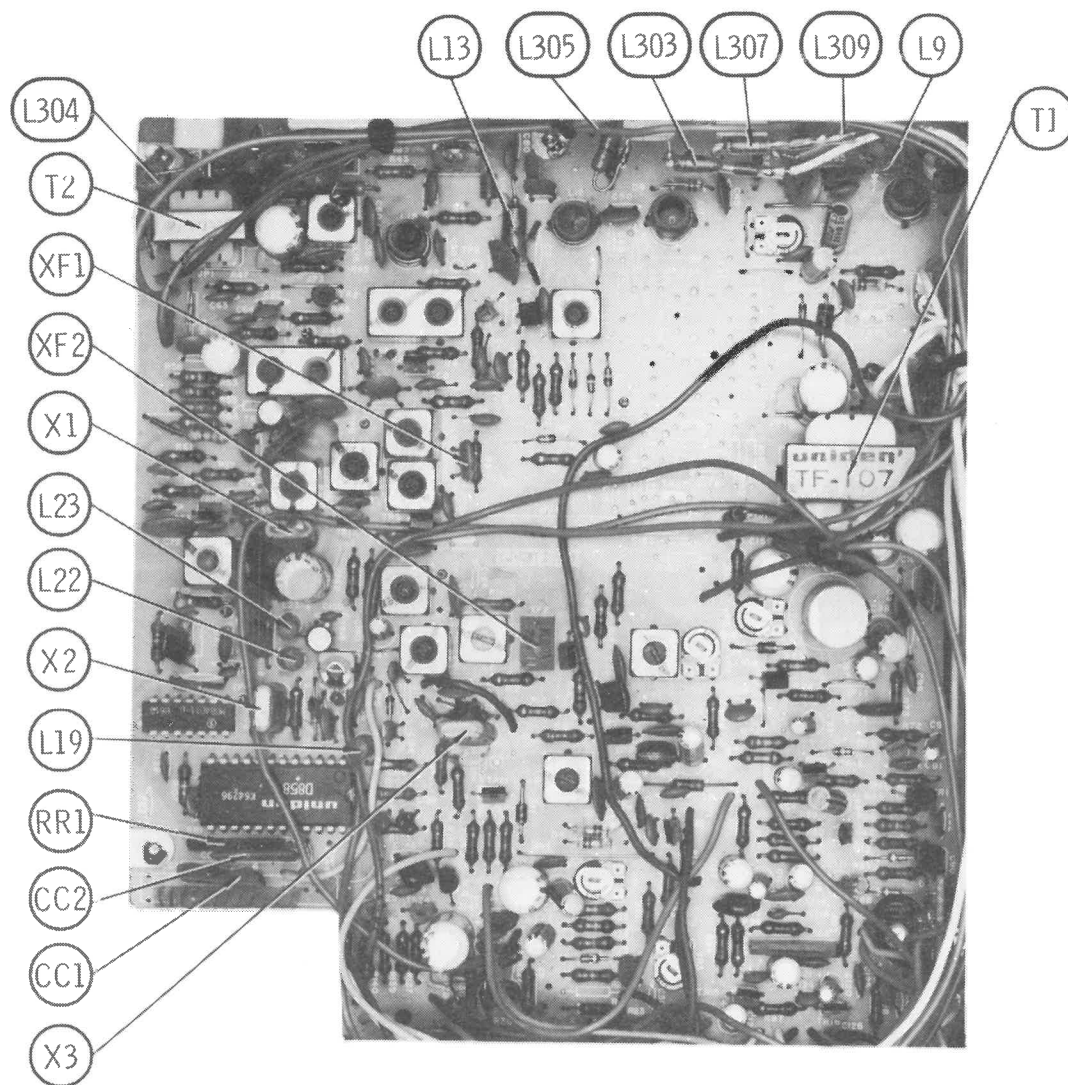
MODEL Honest Abe

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

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7CE533



MAIN BOARD

ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period.
Adjustments made with 13.8-volt DC input.
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Suggested Alignment Tools: GC ELECTRONICS
L6, L7, L8, L10, L11, L12, L15 5009
L1, L2, L3, L4, L5, L16, L17, L18, L20, L21, L24 ... 9440
VC1 5000

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope to TP1.	Ch. 19	L5	Adjust for maximum.
Input of frequency counter to TP1.	Ch. 19	VC1	Adjust for 10.240MHz.
Input of DC meter to TP5.	Ch. 19	L20	Adjust for 3.0 volts.
Input of oscilloscope to TP6.	Ch. 19	L21	Adjust for maximum.
Input of frequency counter to TP6.	Ch. 19	L24	Adjust for 37.880MHz.

PRESIDENT MODEL HONEST ABE

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Set generator output low enough to prevent AGC limiting.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP10. 455kHz, 1000Hz @ 30% modulation.	Ch. 19 RF Gain-Maximum Delta Tune-Mid range.	L8,L7,L6	Adjust for maximum output.
Output of signal generator thru .01uF to TP11. 10.695MHz, 1000Hz @ 30% modulation.	Ch. 19	L4,L3	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	L2,L1	Adjust for maximum output. Repeat above steps, if necessary.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output .9uV.	Ch. 19 RF Gain-Maximum Delta Tune-Mid range. Volume-Maximum	VR2	AGC Adjust VR2 for 2 volts audio.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 500uV.	Ch. 19	VR3	SQUELCH AMP Set squelch control VR302 fully clockwise. Adjust VR3 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR1	S METER Adjust for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

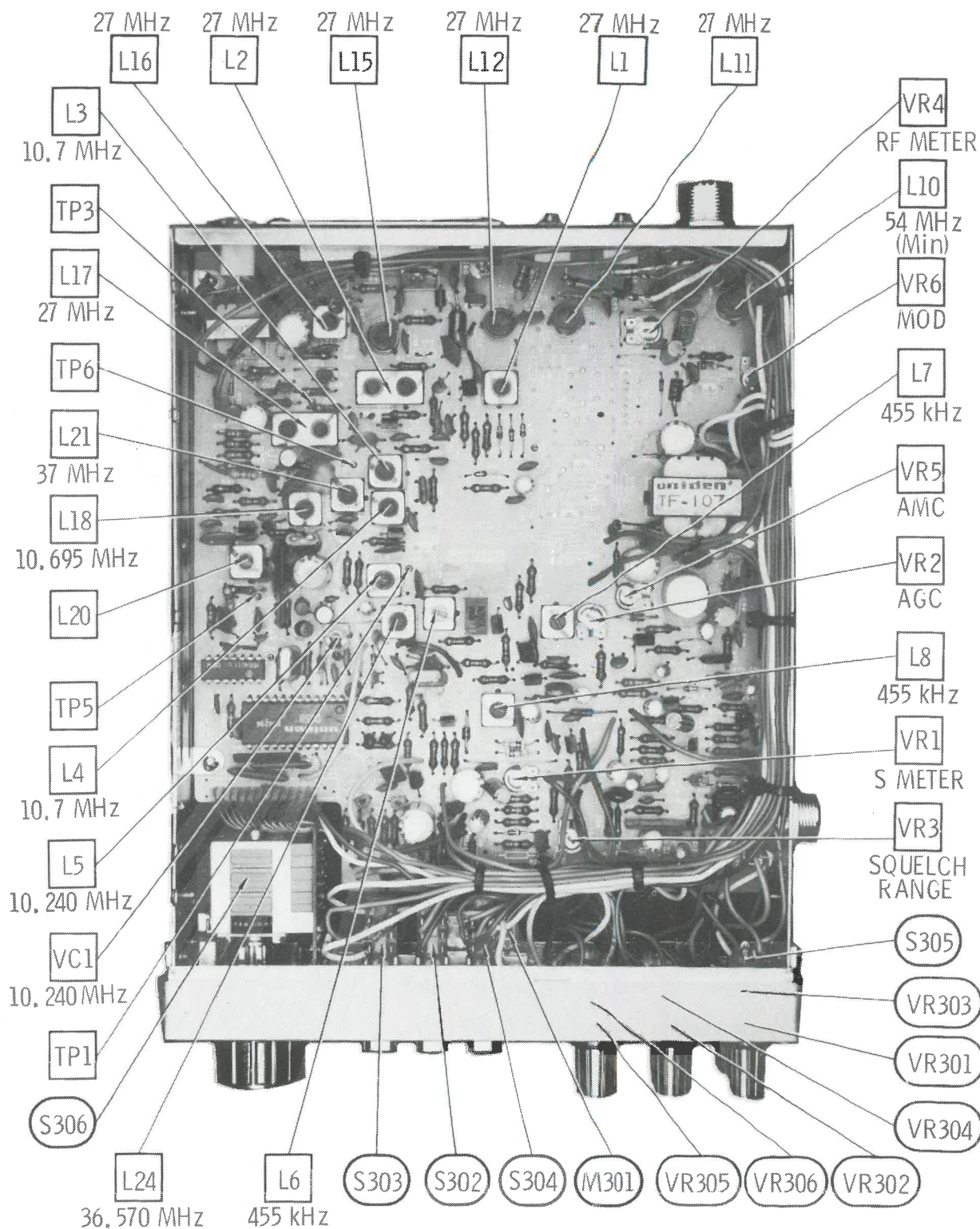
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope to TP3. Input of spectrum analyzer to antenna jack.	Ch. 19	L18,L17	Adjust for maximum.
	Ch. 19	L16,L15, L12,L11	Adjust for maximum.
	Ch. 19	L12	Adjust for 3.8 watts.
	Ch. 19	L10	Adjust for MINIMUM at 54MHz.

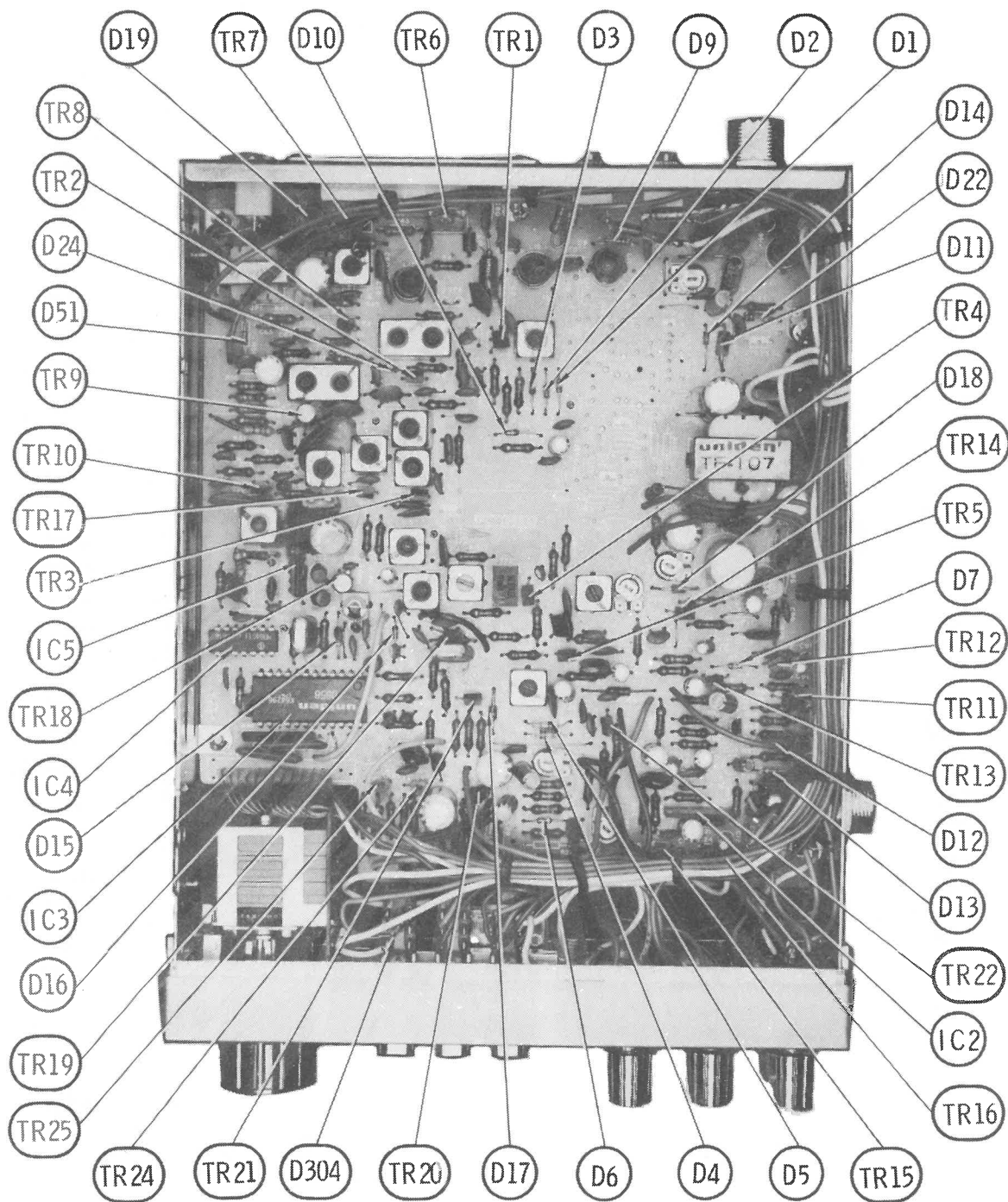
TRANSMITTER ADJUSTMENTS

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustments of transmitter.
See page 4 for channel frequencies.

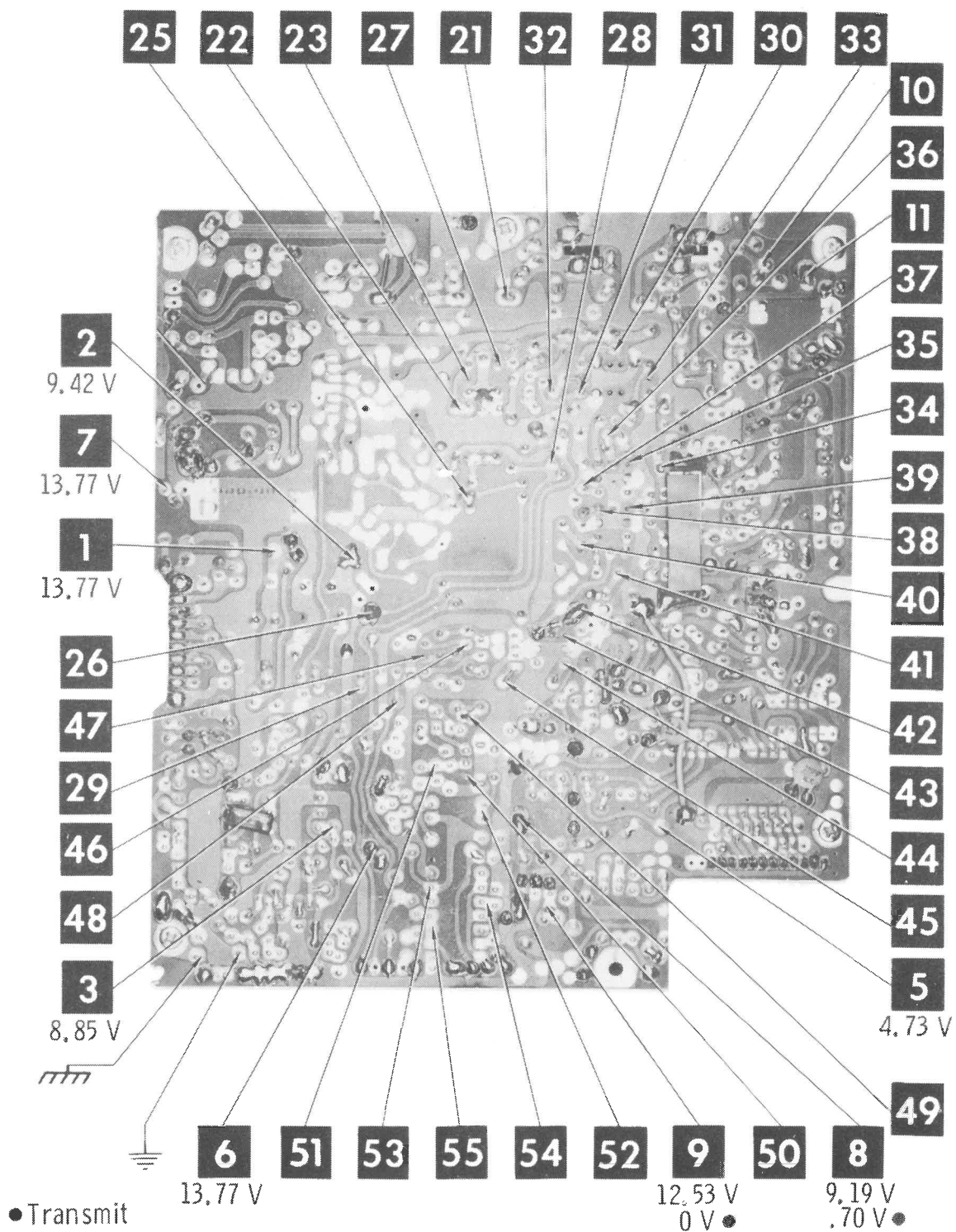
TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 1000Hz 10mV signal at mic input.	Ch. 19 Mike Gain-Maximum	VR5	AMC Adjust VR5 for 95% modulation.
Modulation meter to antenna jack. Inject a 1000Hz 10mV signal at mic input.	Ch. 19	VR6	MOD Adjust VR6 so that panel MOD meter agrees with external modulation meter.
	Ch. 19	VR4	RF PANEL METER Adjust VR4 so that RF panel meter agrees with RF wattmeter.



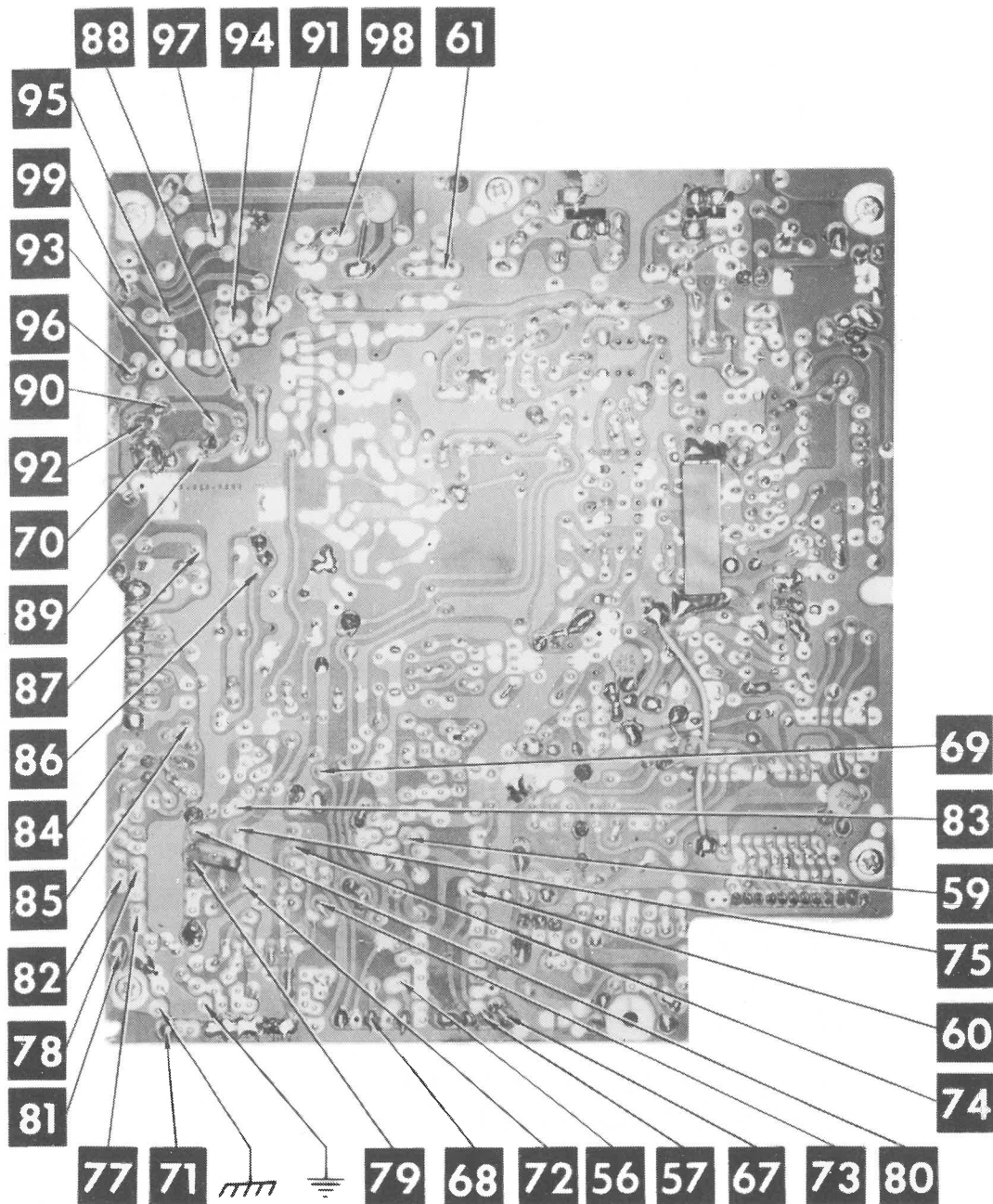
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CHASSIS - BOTTOM

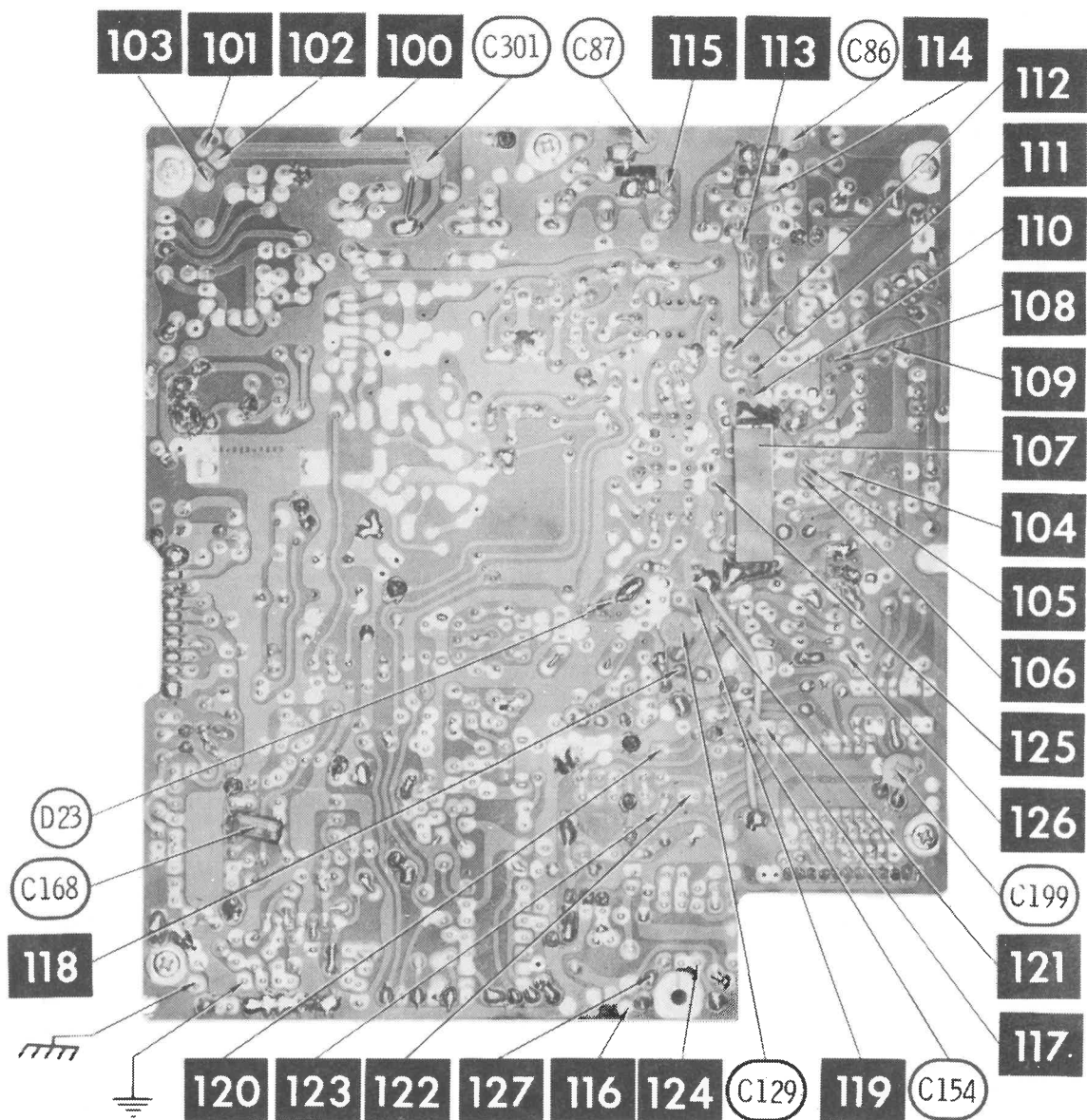


MAIN BOARD

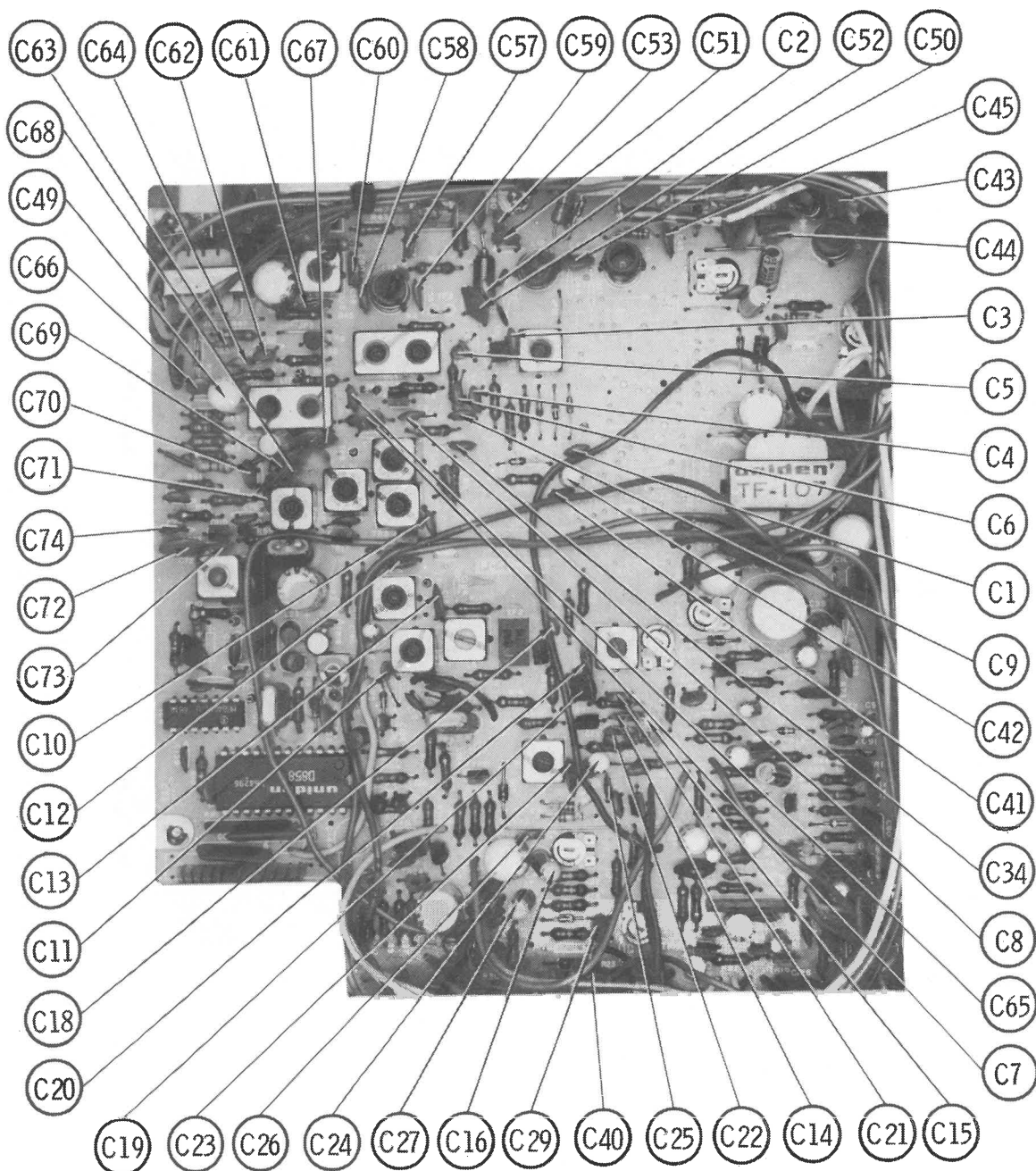


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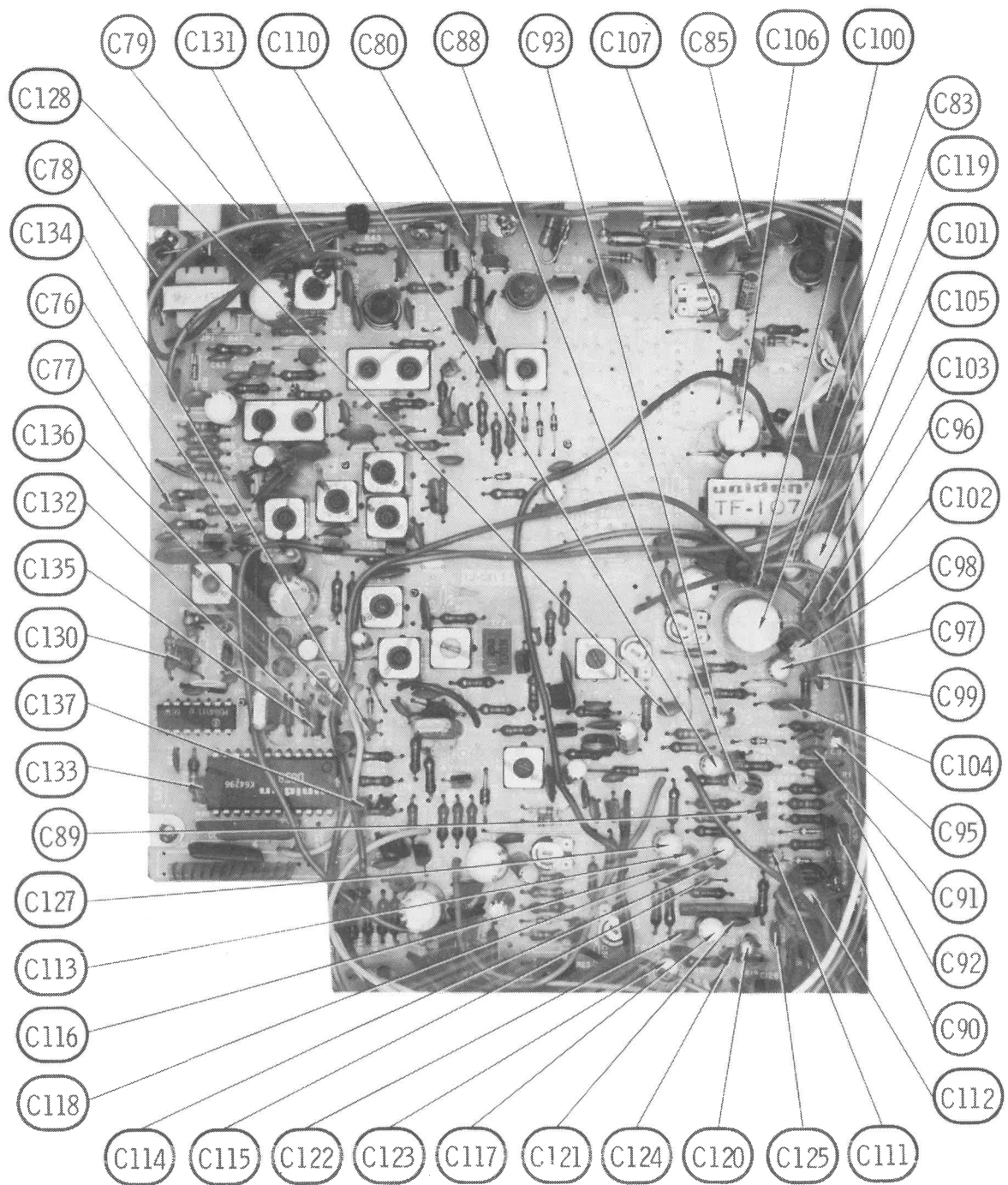
MAIN BOARD



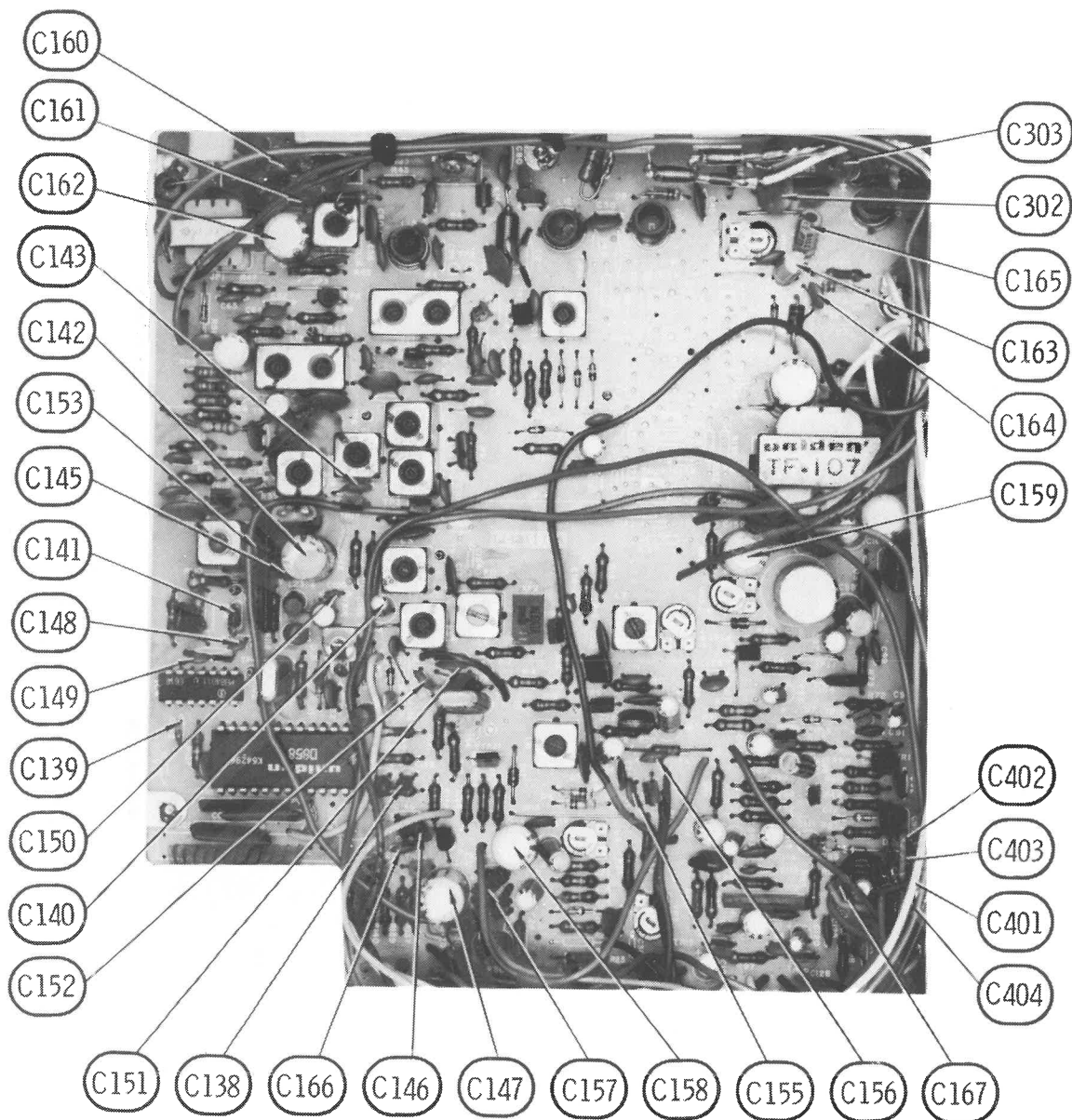
MAIN BOARD



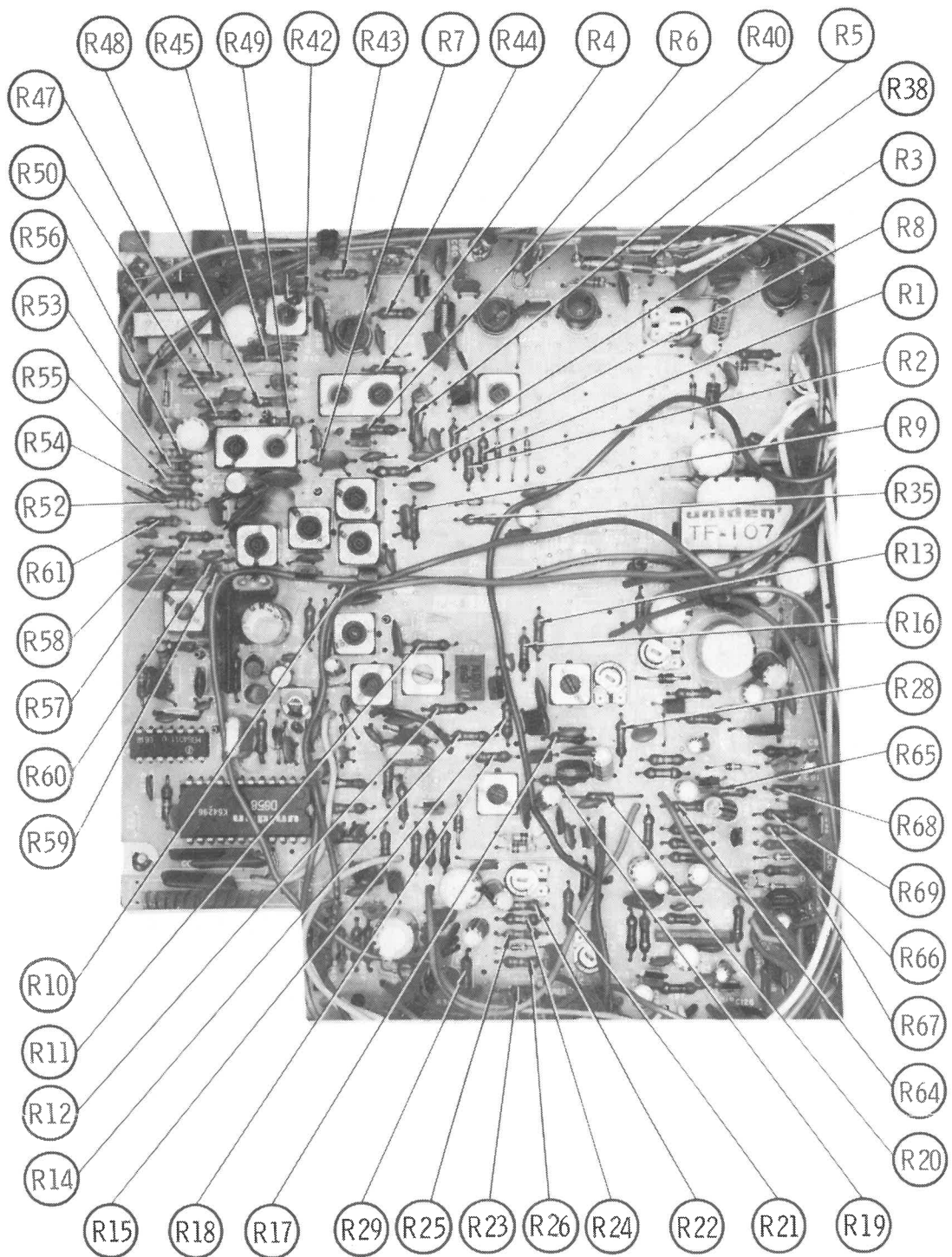
MAIN BOARD



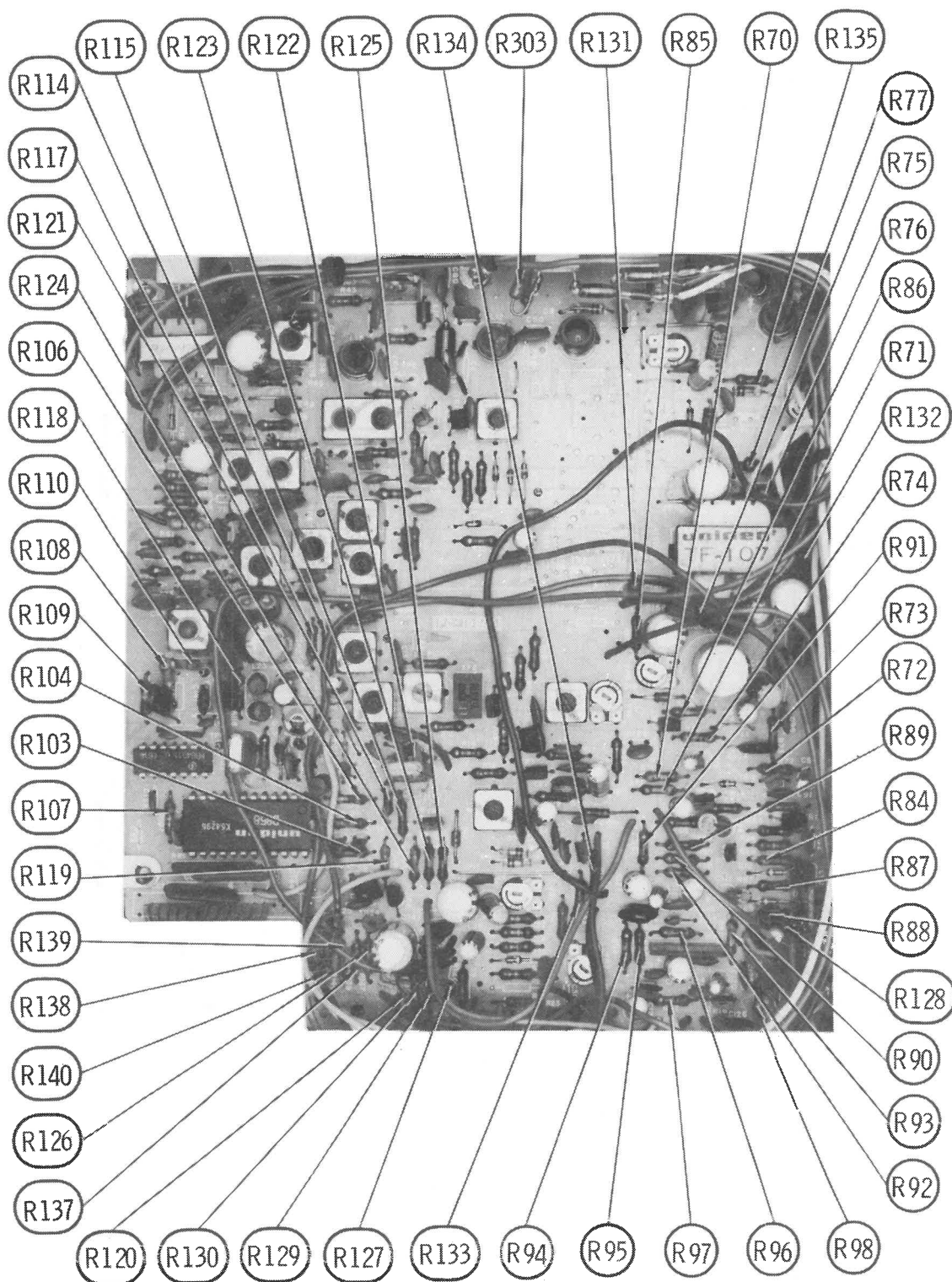
MAIN BOARD



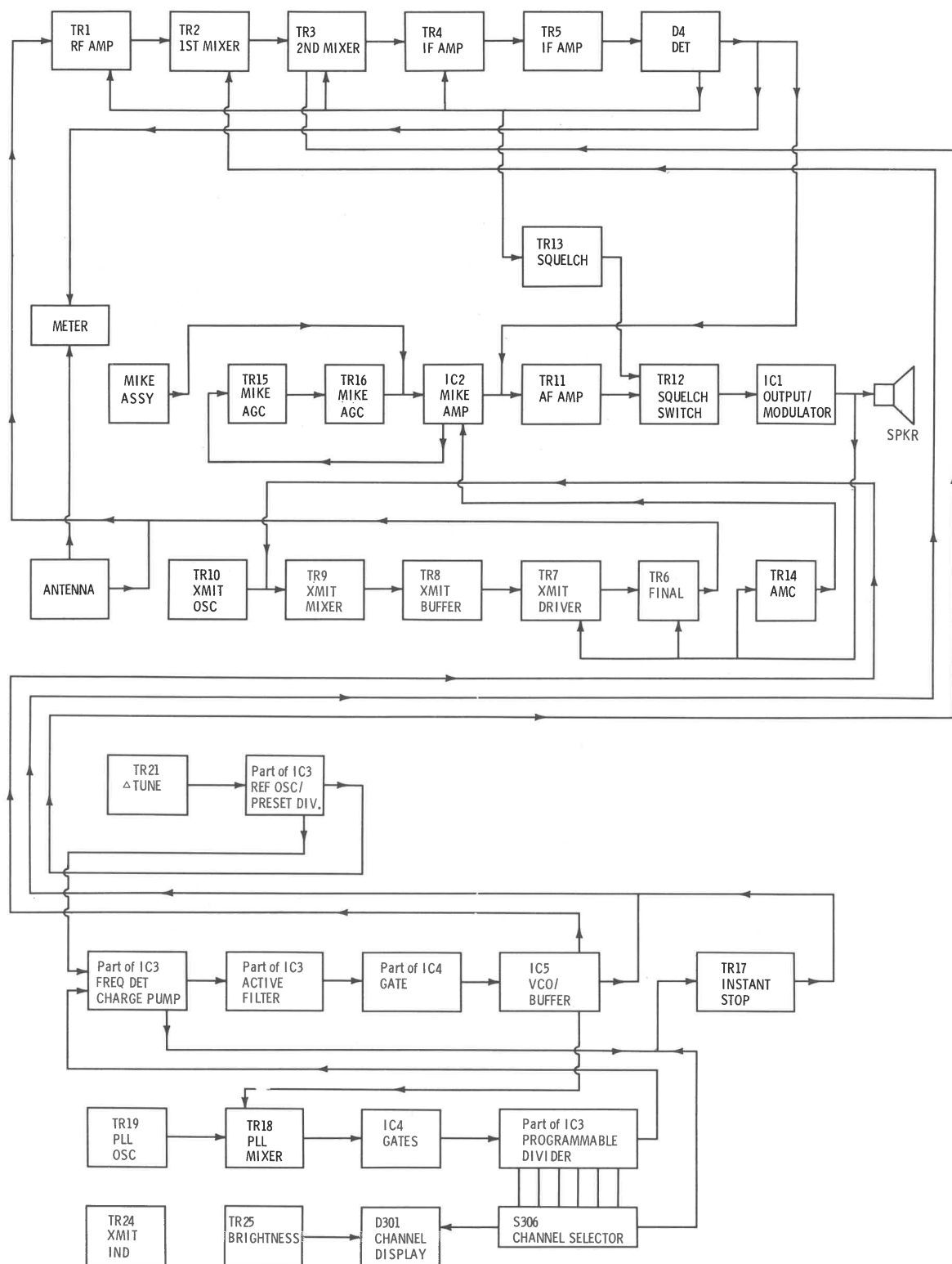
MAIN BOARD



MAIN BOARD



MAIN BOARD



BLOCK DIAGRAM

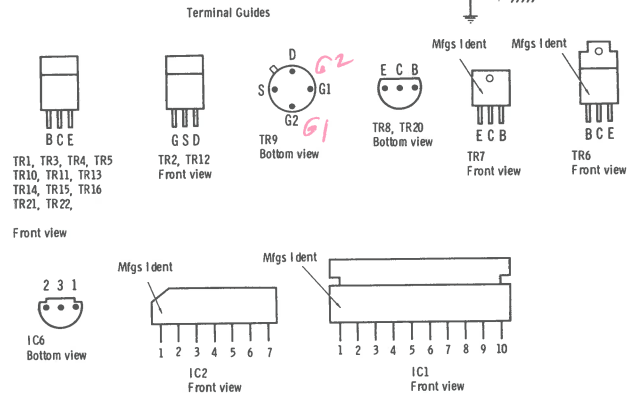
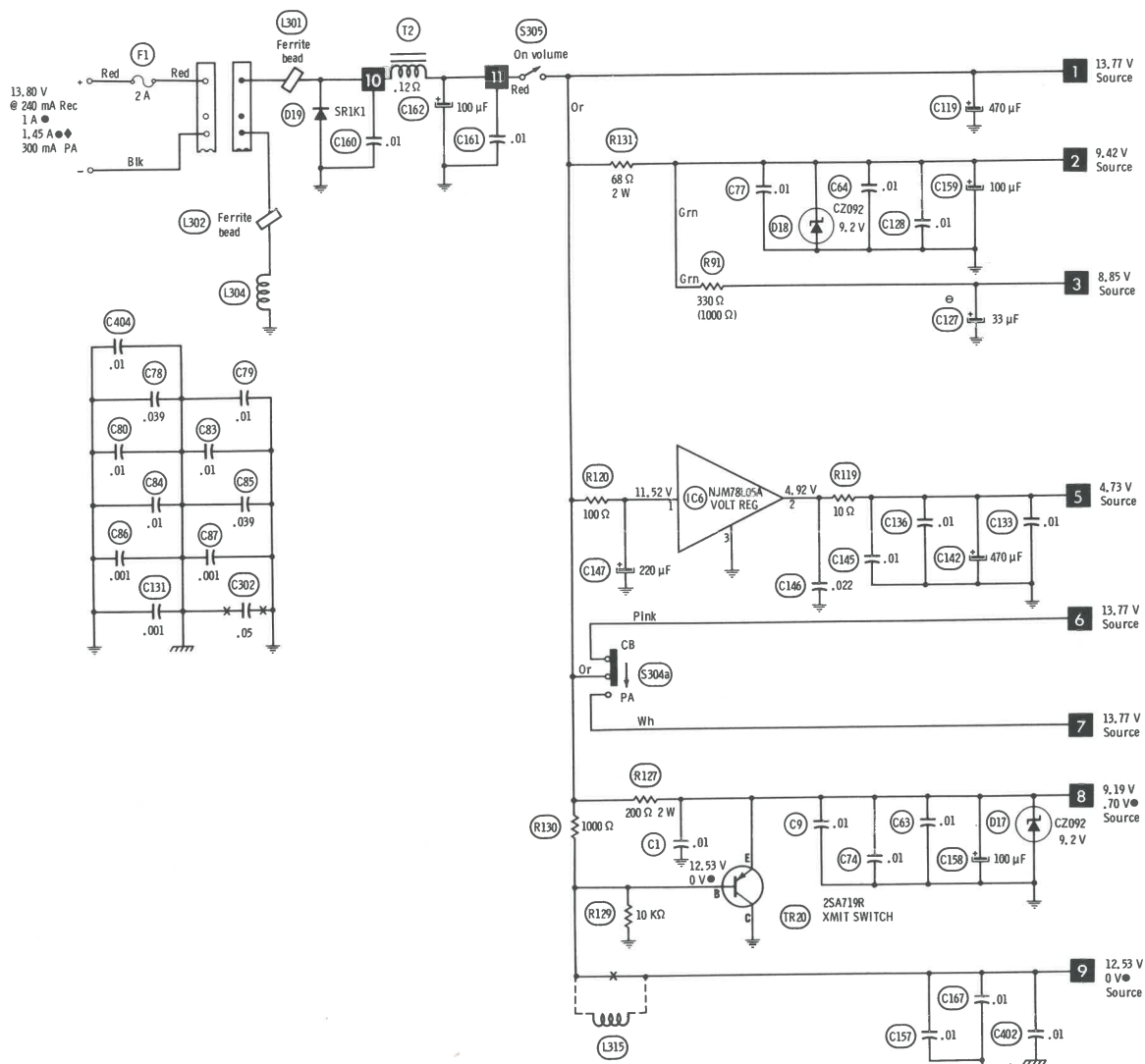
PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D1	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D2	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D3	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D4	1N60AM	2000-301	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D5	1N60AM	2000-301	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D6	1S2473K	2000-303	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D7	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D9	1N60AM	2000-301	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D10	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D11	SR1K-1	2000-304	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D12	1S2473K	2000-303	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D13	1S2473K	2000-303	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D14	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D15	1S2339-C	2000-309	GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
D16	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D17	CZ-092	2000-308	GEZD-9.1	Z1209	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D18	CZ-092	2000-308	GEZD-9.1	Z1209	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D19	SR1K-1	2000-304	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D22	1N60AM	2000-301	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D23	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D24	1S2473	2000-302	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D51			GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D304	1N60AM	2000-301	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
IC-1	UPC1156BZ	2000-005								
IC-2	UPC592HZ	2000-006								
IC-3	UPC858C	2000-001								
IC-4	MB84011U	2000-002								
IC-5	UHC-004	2000-003								
IC-6	NJM78L05A	2000-004								
TR1	2SC1342B	2000-205	GE-61 *	TR-24 *	PTC136 *	HEPS0014 *	RE 9 *	SK3018 *	RT-108A *	ECG229 *
TR2	2SK55D	2000-101	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
TR3	2SC460B	2000-204	GE-61 *	(IR)2SC460B	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR4	2SC460B	2000-204	GE-61 *	(IR)2SC460B	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR5	2SC460B	2000-204	GE-61 *	(IR)2SC460B	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR6	2SC2029/1	2000-208	GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC2092		GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC1816		GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC1678		GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC1909		GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
TR7	2SC2028/2	2000-207	GE-270	WEP913	PTC180		RE 209			ECG295
	2SC2091		GE-270	WEP913	PTC180		RE 209		RT-310	ECG306
	2SC1760		GE-270	WEP913	PTC180		RE 209			ECG295
	2SC1957		GE-270	WEP913	PTC180		RE 209		RT-162	ECG295
	2SC495T		GE-336	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
TR8	2SC1846	2000-206	GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
	2SC1974		GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
	2SC2076D		GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
	2SC2076CD		GE-210 *	TR-21 *	PTC123 *	HEPS0014 *	RE 13 *	SK3122	RT-308 *	ECG289
	2SC2076		GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
TR9	2SC735	2000-102	GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
	2SC1364		GE-210	(IR)2SC829B	PTC121	HEPS0015	RE 13	SK3122	RT-308	ECG123A
	2SC933		GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
	3SK45		GE-61 *	(IR)2SC460B	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
	2SC460B		GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR10	2SC458C	2000-204	GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR11	2SC458C	2000-203	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
TR12	MJF1033G	2000-101	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
	2SK55D		GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
	2SK55		GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
	2SK19		GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
	JF1033		GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
TR13	2SC458C	2000-203	GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR14	2SC458C	2000-203	GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR15	2SA564AP	2000-202	GE-65	(IR)2SA564A	PTC103 *	HEPS0019 *	RE 193	SK3114	RT-303	ECG234
	2SA844C		GE-21	TR-54	PTC103	HEPS0019	RE 18	SK3114	RT-126A	ECG129
	2SA844		GE-21	TR-54	PTC103	HEPS0019	RE 18	SK3114	RT-126A	ECG129
	2SA733		GE-65	TR-31	PTC103	HEPS0022	RE 26	SK3025	RT-303	ECG159
	2SA495		GE-221 *	(IR)2SA495	PTC103 *	HEPS0013 *	RE 26 *	SK3114	RT-303	ECG159 *
TR16	2SA564	2000-203	GE-65	(IR)2SA564A	PTC103 *	HEPS0019 *	RE 193	SK3114	RT-303	ECG234
	2SA659		GE-221	TR-88	PTC103	HEPS0019	RE 18	SK3025	RT-115	ECG129
	2SC458C		GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
	2SC458C		GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
	3SK45		GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
TR17	3SK45B-09	2000-102	GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
	3SK41		GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
	3SK49		GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
	2SC460B		GE-61 *	(IR)2SC460B	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
	2SA719R		GE-21	TR-28	PTC103	HEPS0012	RE 197	SK3114	RT-305	ECG290
TR18	2SA673C	2000-201	GE-269	TR-30	PTC103	HEPS0013	RE 26	SK3114	RT-126A	ECG159
	2SA673		GE-269	TR-30	PTC103	HEPS0013	RE 26	SK3114	RT-126A	ECG159
	2SA562		GE-82	TR-30	PTC103	HEPS0012	RE 197	SK3114	RT-106	ECG290

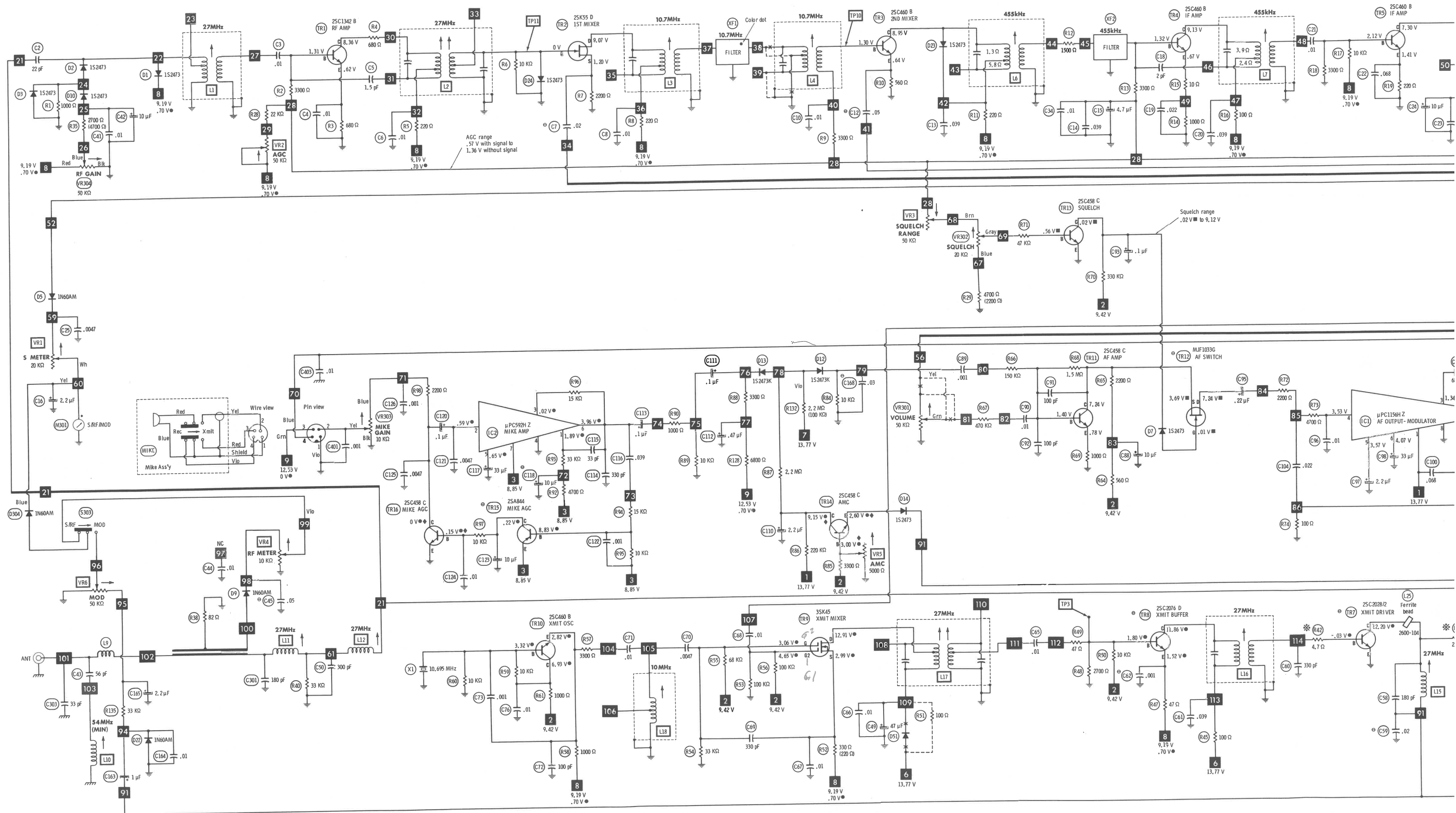
PRESIDENT MODEL HONEST ABE



- *— Circuitry not used in some versions
 - Circuitry used in some versions
 - ⊙ See parts list
 - ⊗ Nominal value
 - ⊕ Ground
 - ⊖ Chassis
- Measurements with switching as shown unless noted:
 ■ Squelch fully clockwise ♦ 100% modulation
 ● Transmit

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
 WITH CIRCUITRACE™





PARTS LIST AND (When ordering parts, state A

SEMICONDUCTOR

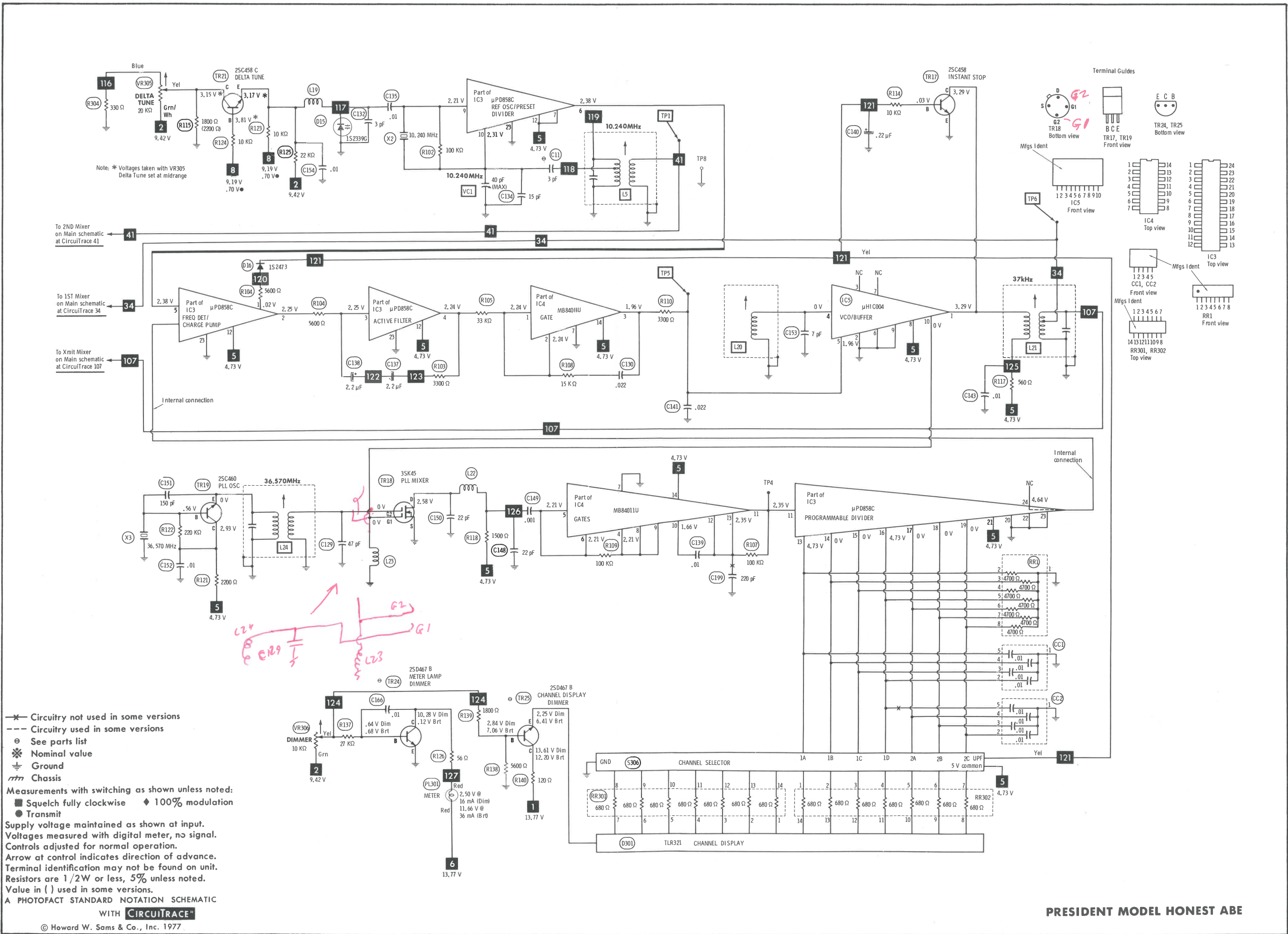
ITEM No.	TYPE No.	MFG. PART No.
TR21	2SA719	2000-203
TR22	2SC458C	2000-203
TR24	2SC458C	2000-209
	2SD467B	
	2SC467C	
	2SC1788	
	2SC1851	
	2SC1166	
TR25	2SD467B	2000-209
	2SD467C	
	2SC1788	
	2SC1851	
	2SC1166	
	2SC4545	

* Lead con

ELECTROLYTIC CA

ITEM No.	RATING
C15	4.7 25V
C16	2.2 25V
C24	10 16V
C27	1 50V
C42	10 16V
C49	47 16V
C88	10 16V
C93	.1 16V
C95	.22 16V
C97	2.2 25V
C98	33 16V
C101	33 16V
C105	220 16V
C106	220 16V
C110	2.2 25V
C111	.1 16V
C112	.47 50V
C113	.1 16V
C117	33 16V
C118	10 16V
C119	470 16V
C120	.1 16V
C123	10 16V
C127	33 16V
C137	2.2 16V
C138	2.2 16V
C140	.22 16V
C142	470 6.3V
C147	220 16V
C158	100 16V
C159	100 16V
C162	100 25V
C163	1 50V
C165	2.2 25V

(1) Used in some versions.



PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C1	.01 25V	1800-007	UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C2	22 N220 10%				*		10TCR-Q22
C3	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C4	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C5	1.5 NPO		DTZ-1R5	NPO1P5	CN0515		10TCC-V15
C6	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C7	.02 25V		DC-203	MGP02	TA120	QC2-157	TG-S20
C8	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C9	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C10	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C11	3		DTZ-3R3	NPO3P3	CN0533		10TCC-V33
	5	(1)	DTZ-4R7	NPO4P7	CN0547		10TCC-V47
C12	.05 25V	1800-034	DC-503	MGP05	TA150	QC2-207	TG-S50
C13	.039 25V						
C14	.039 25V						
C18	2 N220						
C19	.022 10%			DPMS2S22	EWFTA122	QF1-127	1PB-S22
C20	.039 25V						
C21	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C22	.068 10%			WMF1S68	EWFTA168	QF1-195	1PB-S68
C23	.039 25V						
C25	.0047 25V 10%						
C26	.0047 25V 10%						
C29	.0047 25V 10%						
C30	.0047 10%	1800-043		WMF1D47	EWFTA247	QF1-57	1PB-D47
C34	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C40	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C41	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C43	56 NPO 10%		DC-503	MGP05	TA150	QC2-207	TG-S50
C44	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C45	.05		DC-503	MGP05	TA150	QC2-207	TG-S50
C50	300		DD-301	GP300	GP330		10TS-T30
C51	.0047 25V 10%						
C52	.04 25V						
C53	100		DD-101	GP100	GP310		10TS-T10
C57	180	1800-034	DD-181		GP318		10TS-T18
C58	180		DD-181		GP318		10TS-T18
C59	.02 25V		DC-203	MGP02	TA120	QC2-157	TG-S20
C60	330		DD-331	GP330	GP333		10TS-T33
C61	.039 25V						
C62	.001		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C63	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C64	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C65	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C66	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C67	.01 25V 10%						
C68	.01 25V	1800-035	UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C69	330 N220 10%						
C70	.0047 10%						
C71	.01 25V 10%		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C72	100 NPO 5%		DTZ-100	NPO100	CN0310		10TCC-T10
C73	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C74	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C76	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C77	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C78	.039 25V						
C79	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C80	.01 25V	1800-034	UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C83	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C85	.039 25V						
C86	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C87	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C89	.001 10%			DPMS6D1	EWFTA210	QF1-1	1PB-D10
C90	.01 10%			WMF1S1	EWFTA110	QF1-91	1PB-S10
C91	100		DD-101	GP100	GP310		10TS-T10
C92	100		DD-101	GP100	GP310		10TS-T10
C96	.01 10%			WMF1S1	EWFTA110	QF1-91	1PB-S10
C99	68		DD-680	GP68	GP468		10TS-Q68
C100	.068 10%	1800-043		WMF1S68	EWFTA168	QF1-195	1PB-S68
C102	.068 10%			WMF1S68	EWFTA168	QF1-195	1PB-S68
C103	220		DD-221		GP322		10TS-T22
C104	.022			DPMS2S22	EWFTA122	QF1-127	1PB-S22
C107	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C114	330		DD-331	GP330	GP333		10TS-T33
C115	33		DTZ-33	NPO33	CN0433		10TCC-Q33
C116	.039				M192P3939R8		192P3939R8
C121	.0047 25V 10%						
C122	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C124	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C125	.0047 25V	1800-043					
C126	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C128	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C129	47 NPO 10%		DTZ-47	NPO47	CN0447		10TCC-Q47
C130	.022			DPMS2S22	EWFTA122	QF1-127	1PB-S22
C131	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C132	3		DTZ-3R3	NPO3P3	CN0533		10TCC-V33
C133	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C134	15 N220				*		10TCR-Q15
C135	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10

PRESIDENT MODEL HONEST ABE

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C136	.01 25V	1800-044	UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C139	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C141	.022		UK25-103	DPMS2S22	EWFI1A122	QF1-127	1PB-S22
C143	.01 25V			MGP01	MAG2511	QC2-141	TG-S10
C145	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C146	.022 10%		DTZ-22	DPMS2S22	EWFI1A122	QF1-127	1PB-S22
C148	22			NPO22	CN0422		10TCC-Q22
C149	.001 25V 10%		DD-102	NPO22	GP210		10TS-D10
C150	22		DTZ-22		CN0422		10TCC-Q22
C151	150		DD-151		GP315		10TS-T15
C152	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C153	7		DTZ-6R8	NPO6P8	CN0568		10TCC-V68
C154	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C155	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C156	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C157	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C160	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C161	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C164	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C166	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C167	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C168	.03				M192P3339R8		192P3339R8
C171	N220 5%				*		10TCR-Q27
C184	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C199	220		DD-221		GP322		10TS-T22
C301	180						
C302	.05 25V		DC-503	MGP05	TA150	QC2-207	TG-S50
C303	22		DTZ-22	NPO22	CN0422		10TCC-Q22
C304	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C401	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C402	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C403	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
C404	.01 25V		UK25-103	MGP01	MAG2511	QC2-141	TG-S10
CC1	.01	1800-103 (2)					
CC2	.01	1800-103 (2)					
VC1	40	1800-202					GKB40000

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

(1) Used in some versions.

(2) Consists of four .01 capacitors.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR1	S Meter	20K	1900-204	T-10K (3)	C-103 (3)	MTC14L1 (3)	X201R103B (3)
VR2	AGC	50K	1900-202				
VR3	Squelch Range	50K	1900-202				
VR4	RF Meter	10K	1900-203				
VR5	AMC	5000	1900-201				
VR6	MOD	50K	1900-202				
VR301	Volume/Switch	50K	1900-104				
VR302	Squelch	20K	1900-105				
VR303	Mike Gain	10K	1900-102				
VR304	RF Gain	50K	1900-108				
VR305	Delta Tune	20K	1900-106				
VR306	Dimmer	10K	1900-107				

(3) For horizontal mounting, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
RR1	4700		1900-401 (1)	RR302	680		1900-402 (2)
RR301	680		1900-402 (2)				

(1) Consists of seven 4700-ohm resistors.

(2) Consists of seven 680-ohm resistors.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec. Ant. (27MHz)	2200-001	LA-029		
L2	Rec. RF (27MHz)	2200-014	LA-194-6N14		
L3	Rec. Mixer (10.7MHz)	2200-003			
L4	Rec. Mixer (10.7MHz)	2200-004	LA-181-6N14		
L5	Ref. Osc. (10.240MHz)	2200-005	LA-182-6N14		
L6	IF (455kHz)	2200-002	LA-163-6912		
L7	IF (455kHz)	2200-006	LA-183-6912		
L8	IF (455kHz)	2200-007	LA-184-6912		
L9	RF Choke	2200-018			
L10	TVI Trap (54MHz)	2200-015			
L11	Ant. Match (27MHz)	2200-016			
L12	Final Amp (27MHz)	2200-020			
L13	RF Choke	2200-017			
L15	Xmit Driver (27MHz)	2200-015			
L16	Xmit Buffer (27MHz)	2200-012			
L17	Xmit Mixer (27MHz)	2200-008	LA-185-6N14		
L18	Xmit Osc. (10MHz)	2200-013	LA-193-6N14		
L19	RF Choke (3.3uH)	2200-203			
L20	VCO Buffer	2200-010	LA-187-6034		
L21	VCO Buffer (37MHz)	2200-011	LA-188-6N14		
L22	RF Choke (100uH)	2200-204			
L23	RF Choke (1.5uH)	2200-201			
L24	PLL Osc. (36.570MHz)	2200-009	LA-186-6014		
L303	RF Choke	2200-019			
L304	RF Choke				
L305	RF Choke	2200-019			
L307	RF Choke	2200-019			
L309	RF Choke	2200-019			

PRESIDENT MODEL HONEST ABE

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	1.5A	.12	1mH	2300-001 TF-083 (1)	TR507		(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			NOTES
	PRI.	SEC.		MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	67	1 8	2 54	2600-001 TF-107 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP301	4" PM, 8 Ohms	3100-001	4A05Z8	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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 Fast Acting	2800-001		AGC2	HDJ	312002	150145	F62-2

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA						
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black
Mike	3200-001	18-032	18-034	18-010	18-092	2	1	3	4	NC	1

CRYSTALS

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL	ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X1	10.695	2100-002	CC90W10695	XMIT OSC.	X3	36.570	2100-003		PLL OSC.
X2	10.240	2100-001		REF. OSC.					

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M301	Meter	2900-003	S/Rf/Mod
S302	Switch	3000-001	ANL/Off
S303	Switch	3000-102	S/Rf/Mod
S304	Switch	3000-001	CB/PA
S305	Switch		On/Off (Part of Volume Control)
S306	Switch	3000-101	Channel Selector
XF1	Filter	2200-301	10.7MHz
XF2	Filter	2200-303	455kHz
	Flat Cable	2700-101	
	Printed Circuit Board	3500-004	Main (PC-198AA)
	Printed Circuit Board	3500-003	Mic (PC-181AA)
	Flexible Board	3500-002	Channel Selector (PC-209AA)

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Upper	3300-103	Panel, Front	3300-503
Cabinet, Lower	3300-104	Knob, Channel Selector	1300-001
Bracket (Mobile)	3300-202	Knob, Push	1300-003
Hanger, Microphone	3300-401	Knob, Control	1300-002

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 13 Colors
	8524 (Stranded) Available in 13 Colors
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