

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(Refer to FCC Rules and Regulations Part 95, Subpart 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.



TEABERRY MODEL TITAN "T"

MODEL Titan "T" (4005)

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

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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	TRANSCEIVER	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 3.00 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.

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	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP1. 455kHz, 1000Hz @ 30% modulation.	Ch. 19	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 50,000uV.	Ch. 19	VR1	AGC Set volume VR201 for 0db. Decrease generator to 50uV. Adjust VR1 so that audio signal does not drop more than 10db.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19	VR203	SQUELCH RANGE Set squelch control VR202 fully clockwise. Adjust VR203 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	VR204	S METER Adjust VR204 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.	Ch. 19	L18,L17	Adjust for maximum.
	Ch. 19	L16, L15, L12,L11	Adjust for maximum.
	Ch. 19	L12	Adjust for 3.8 watts.
Input of spectrum analyzer to antenna jack.	Ch. 19	L10	Adjust for MINIMUM at 54MHz.

TRANSMITTER ADJUSTMENTS

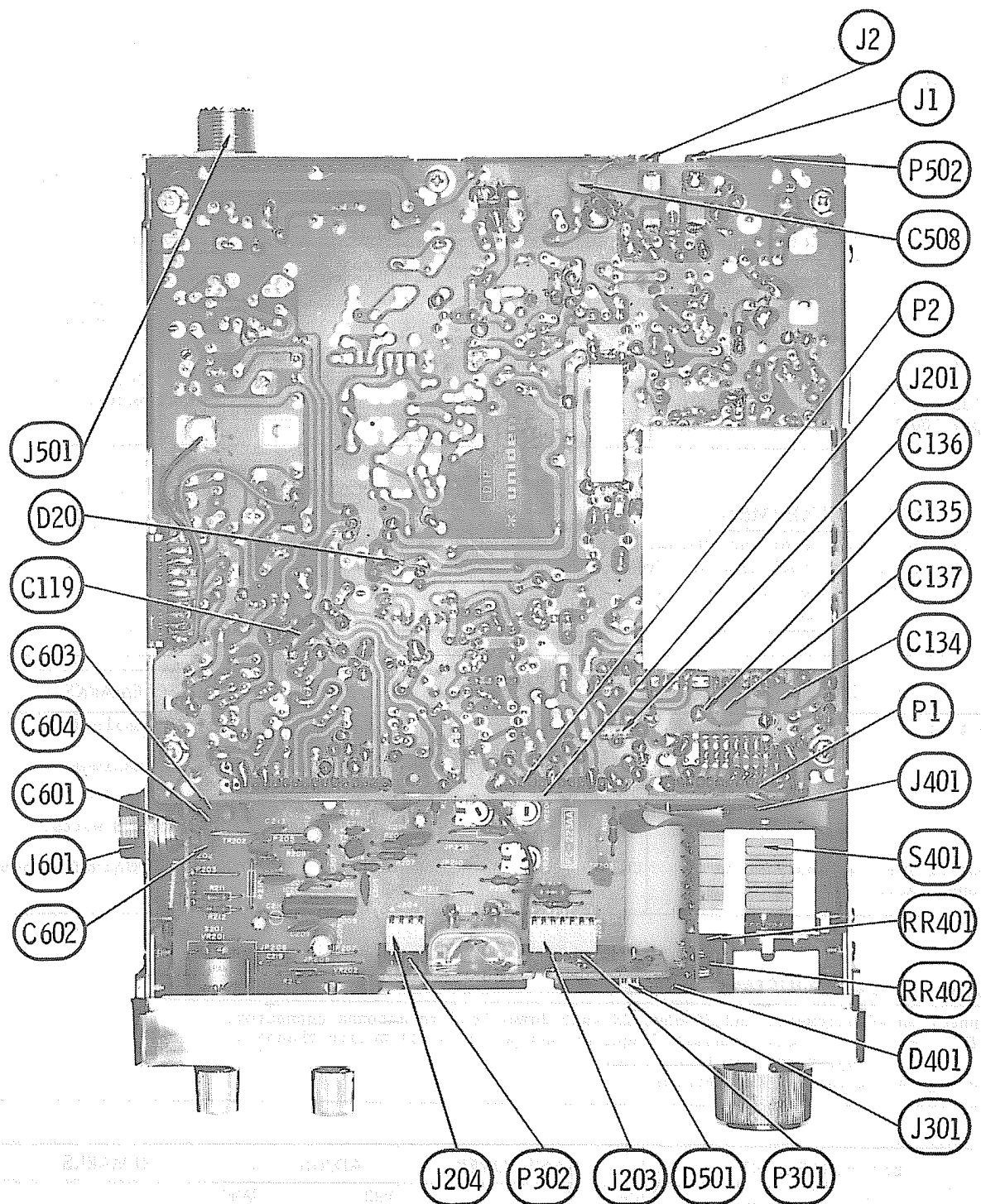
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

NOTE: Be sure to check transmit frequency and power on all active channels after adjustments of transmitter.

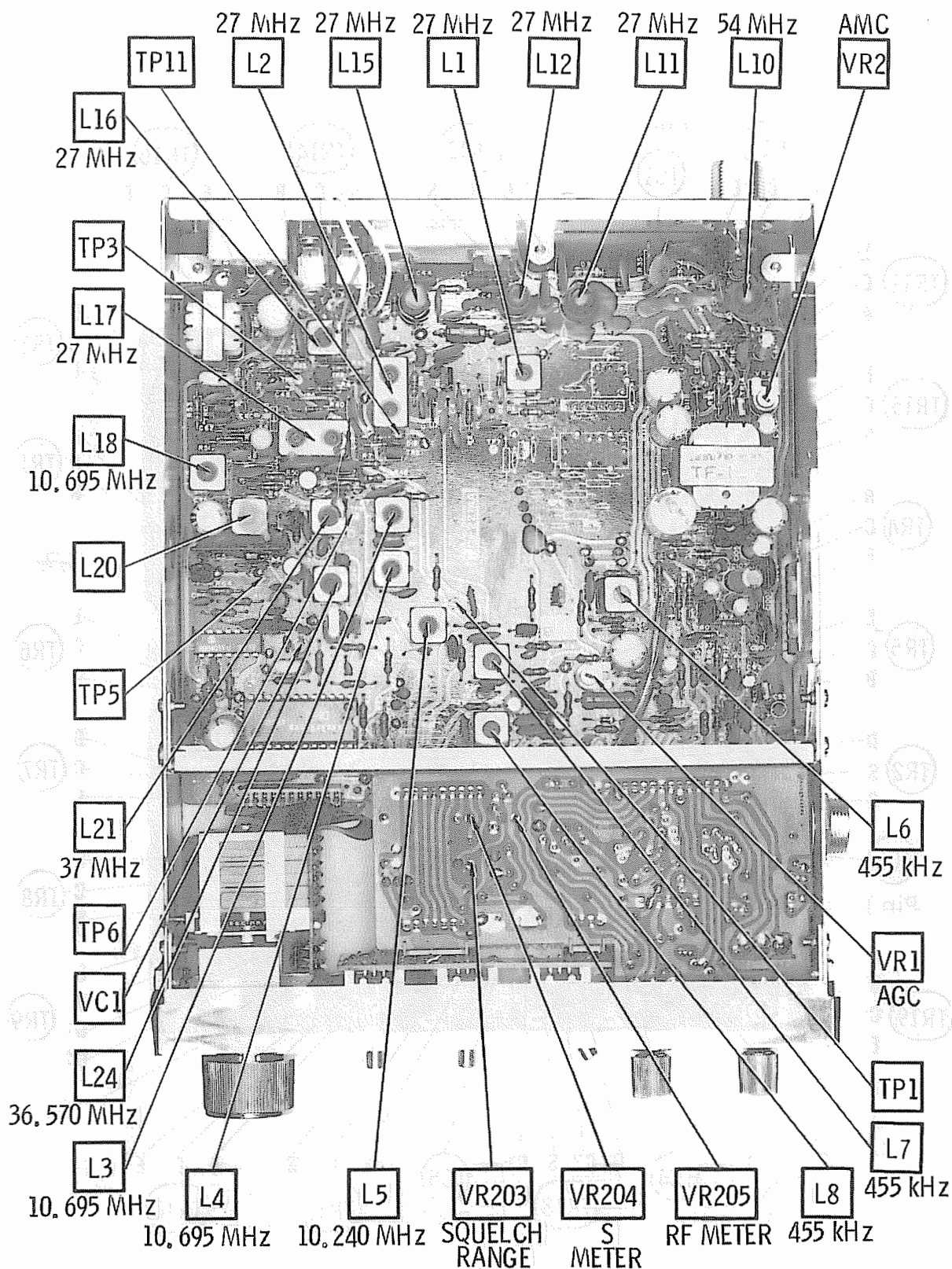
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 1000Hz, 100mV signal at mic input.	Ch. 13	VR2	AMC Adjust VR2 for 95% modulation.
	Ch. 13	VR205	RF PANEL METER Adjust VR205 for 2/3 reading on RF scale of meter.

TEABERRY MODEL TITAN "T"

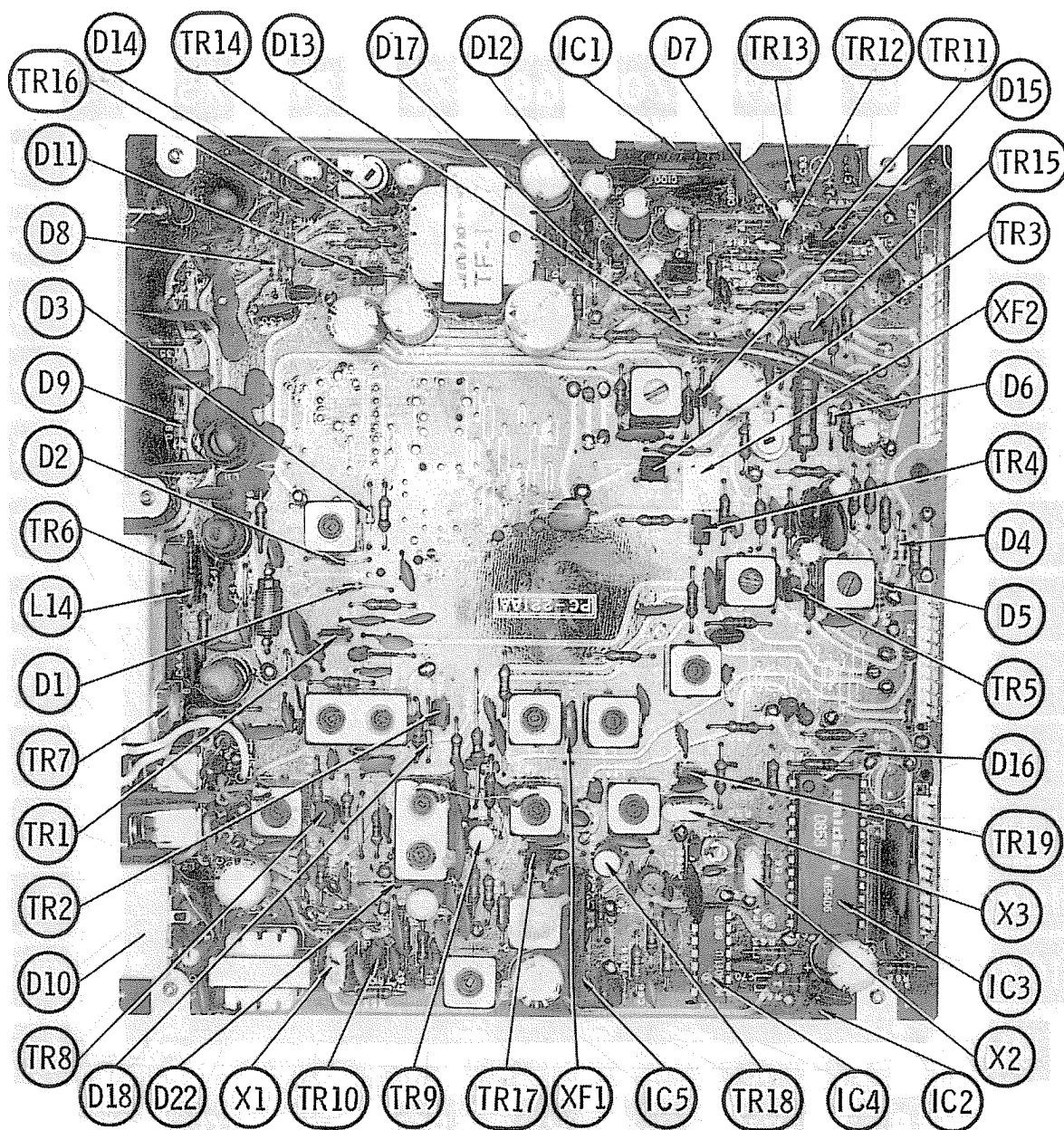


CHASSIS-TOP

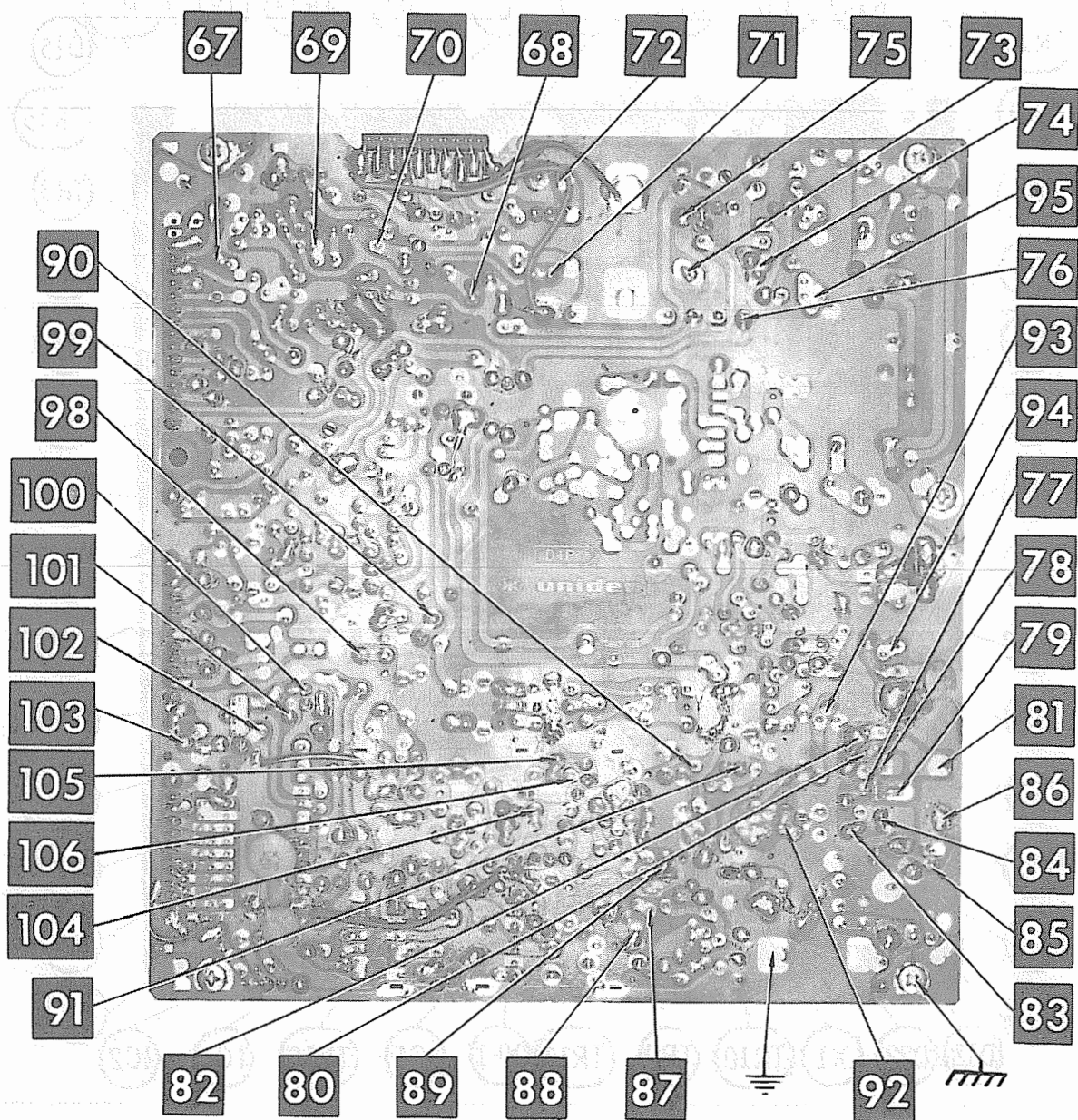


CHASSIS-BOTTOM

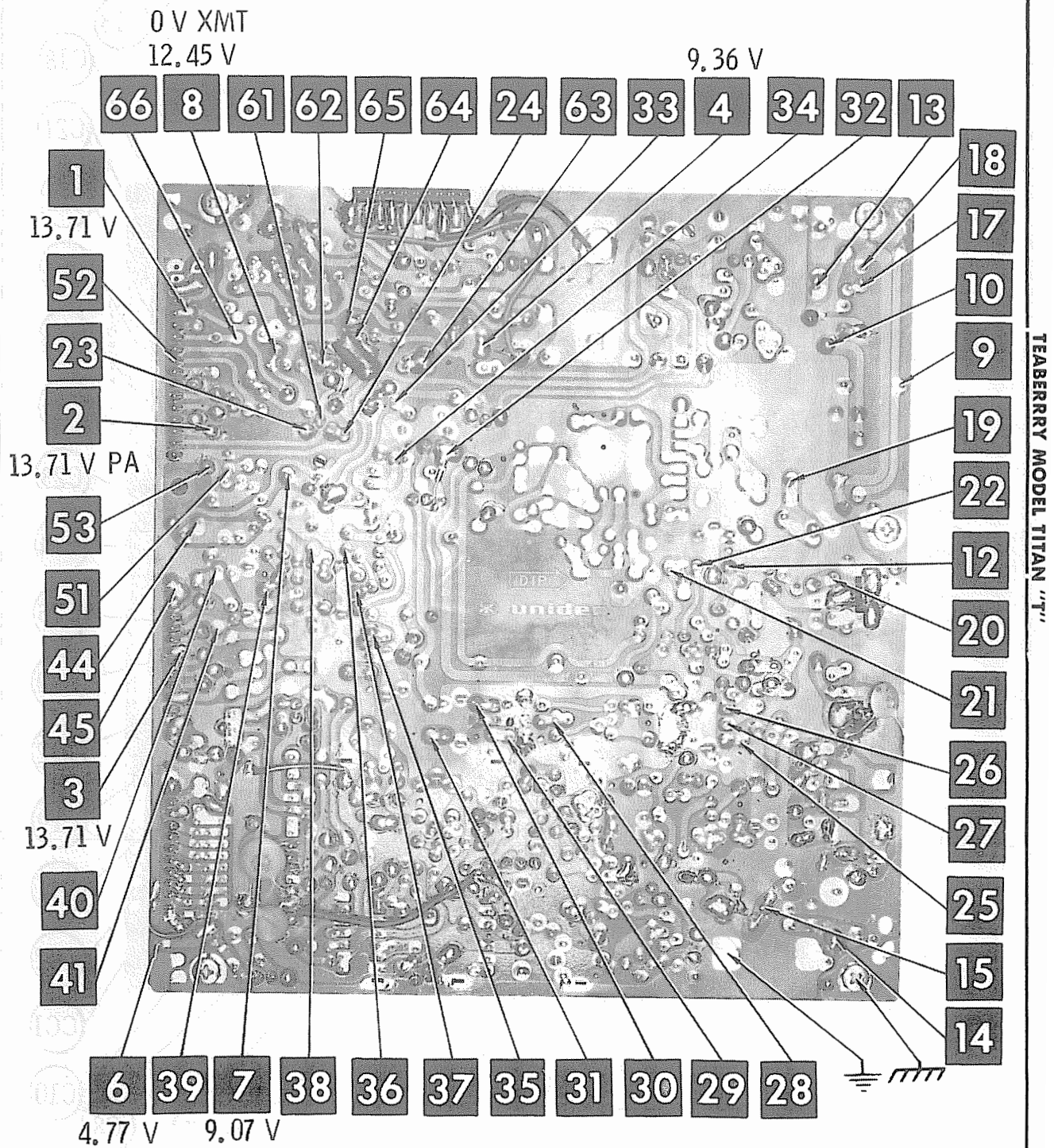


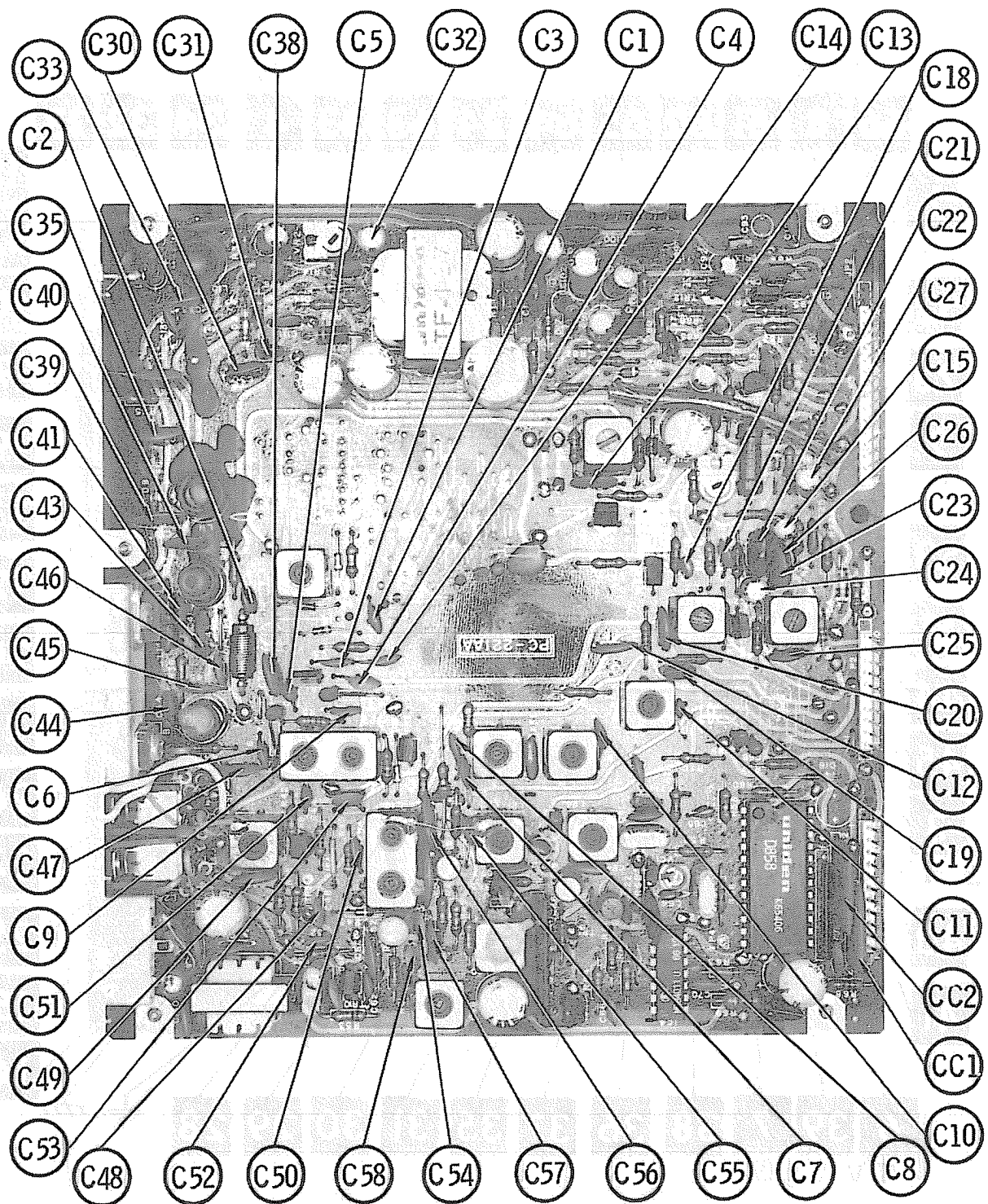


MAIN BOARD

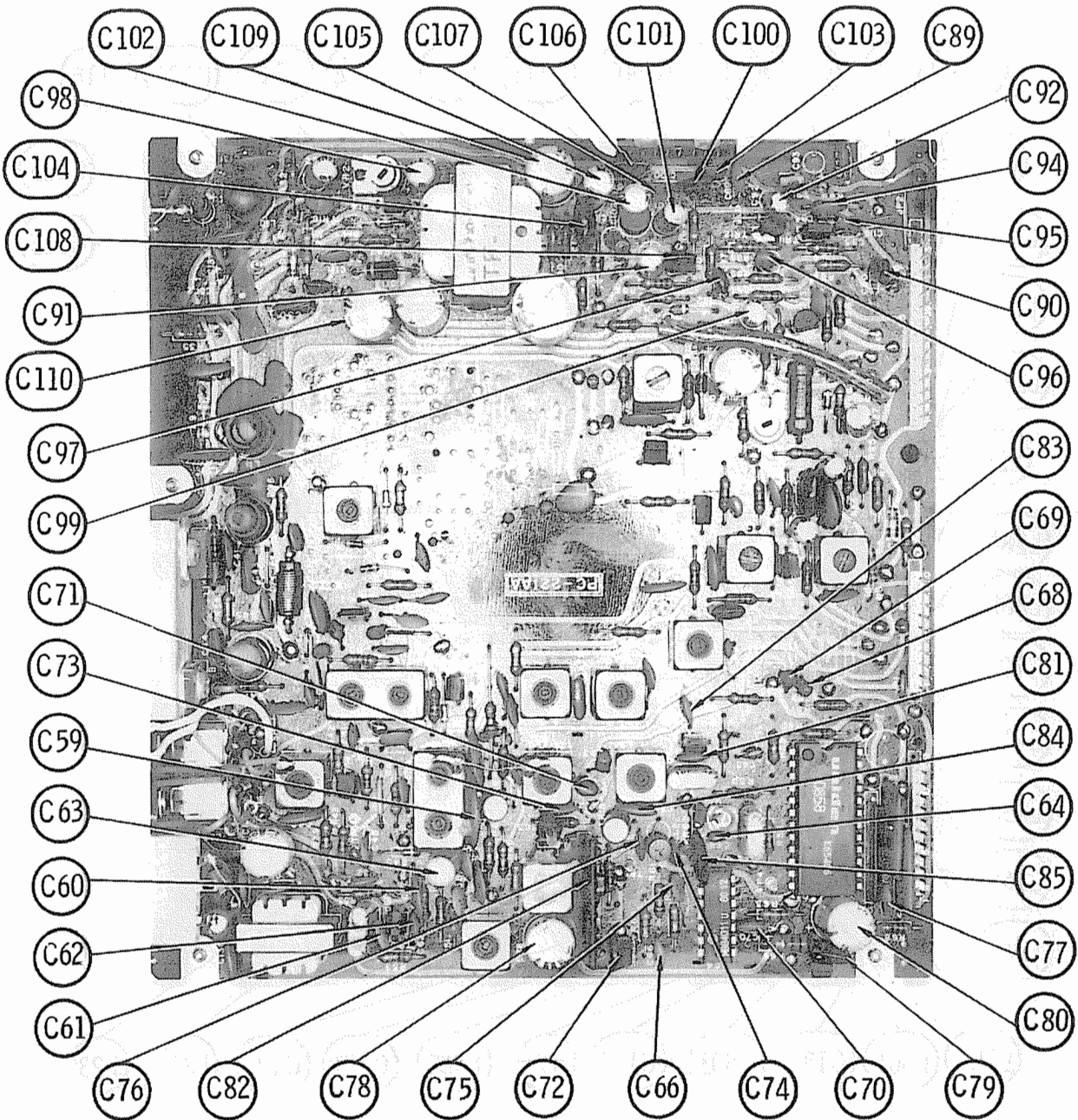


MAIN BOARD

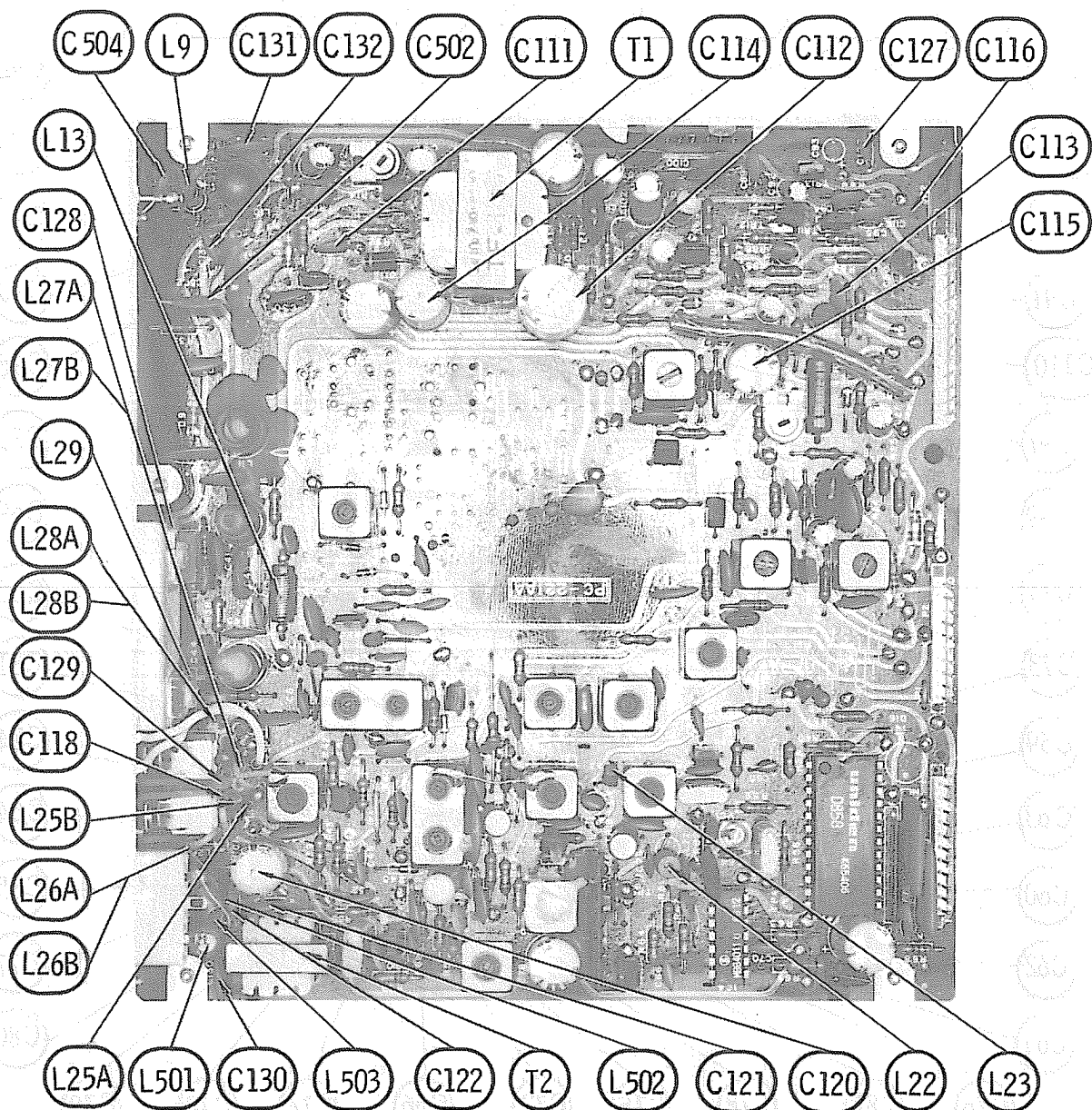




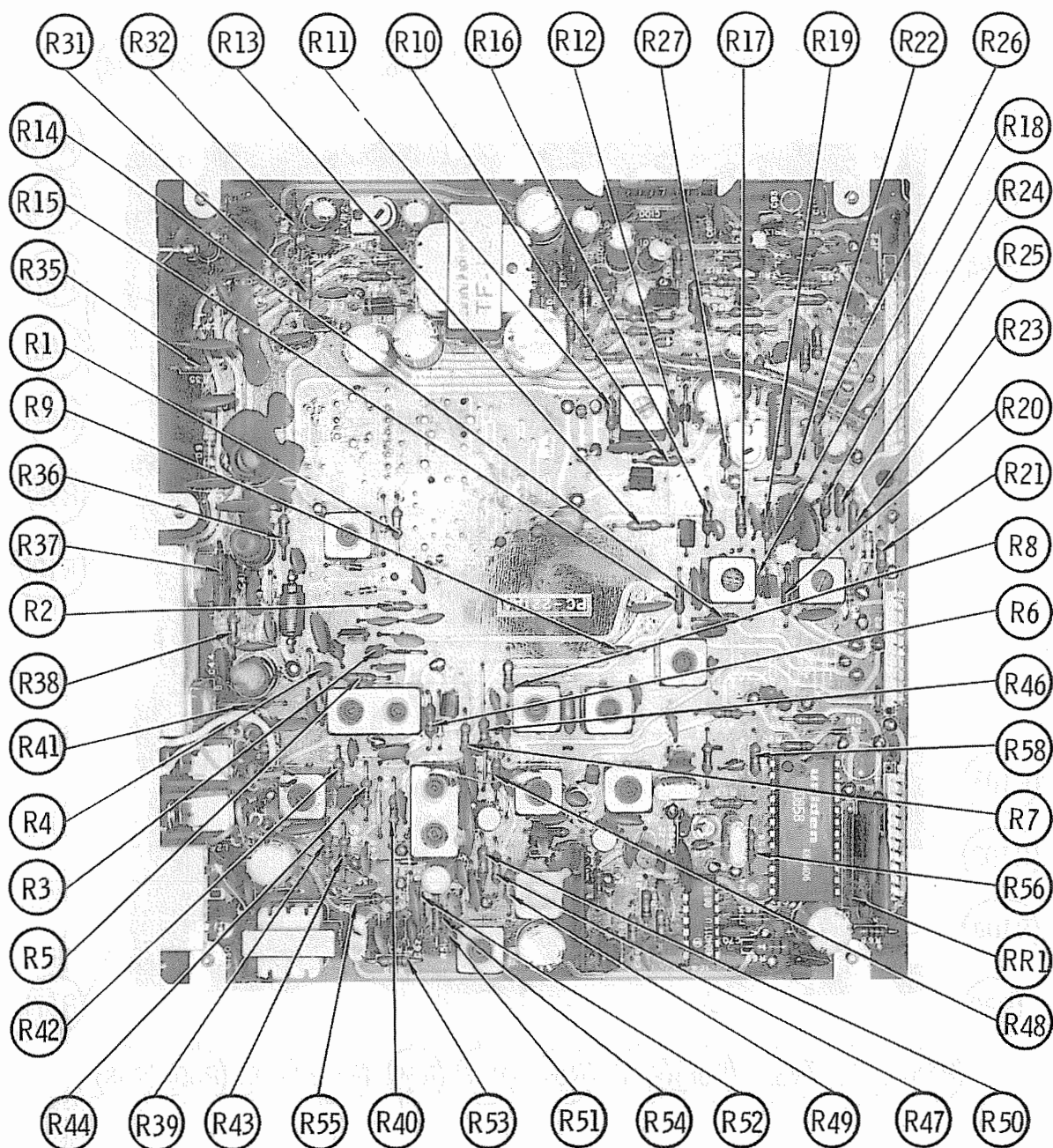
MAIN BOARD



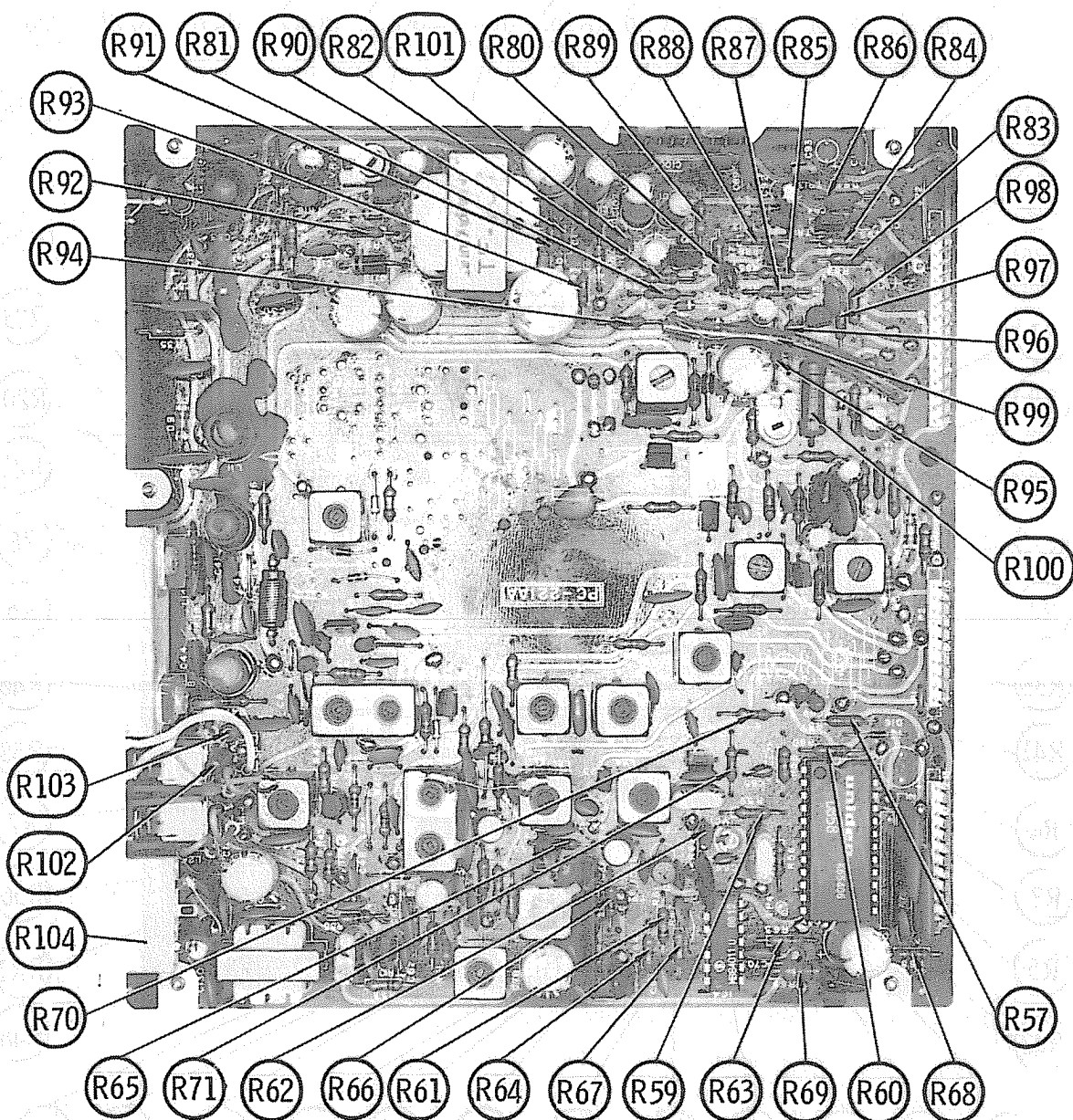
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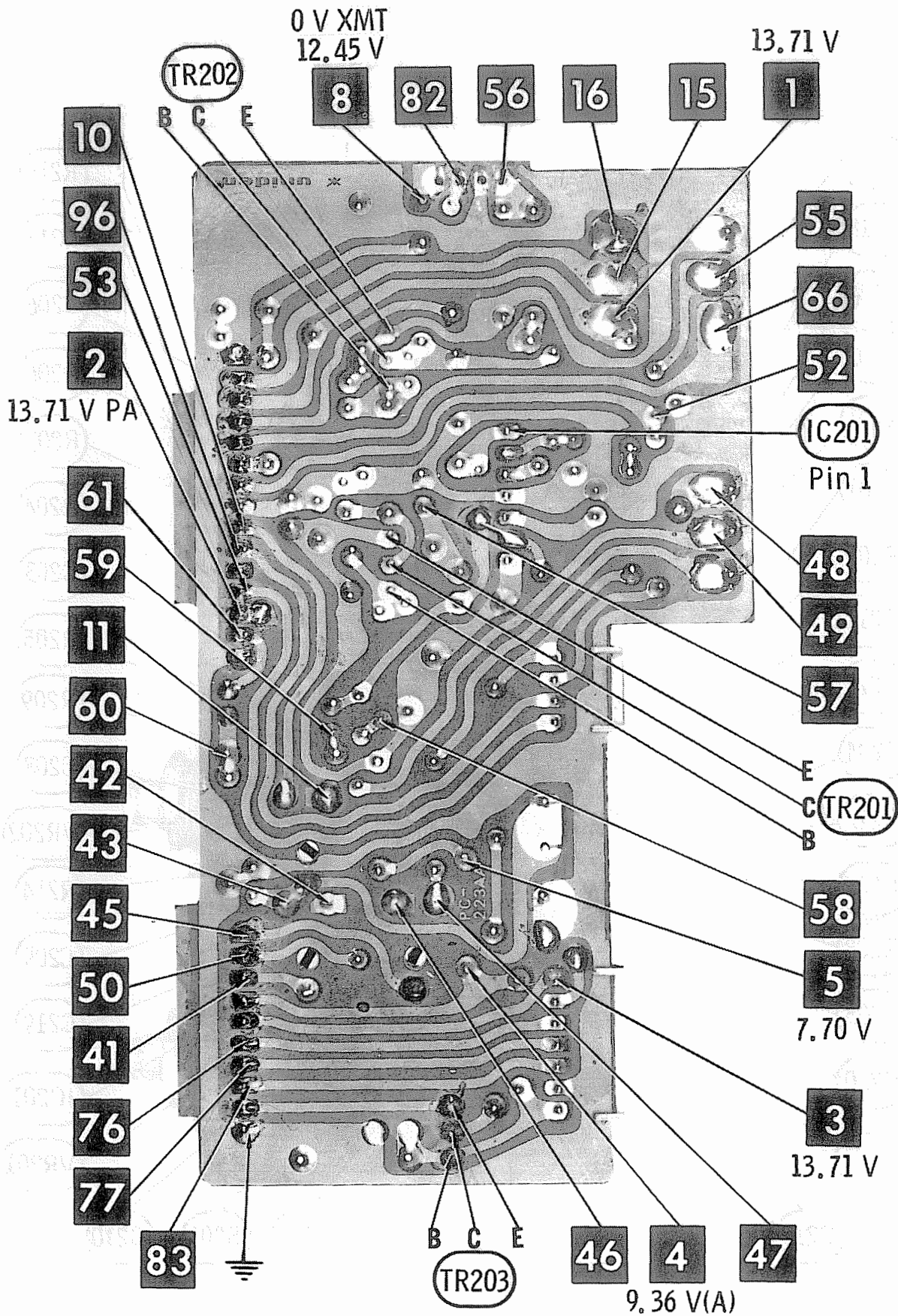
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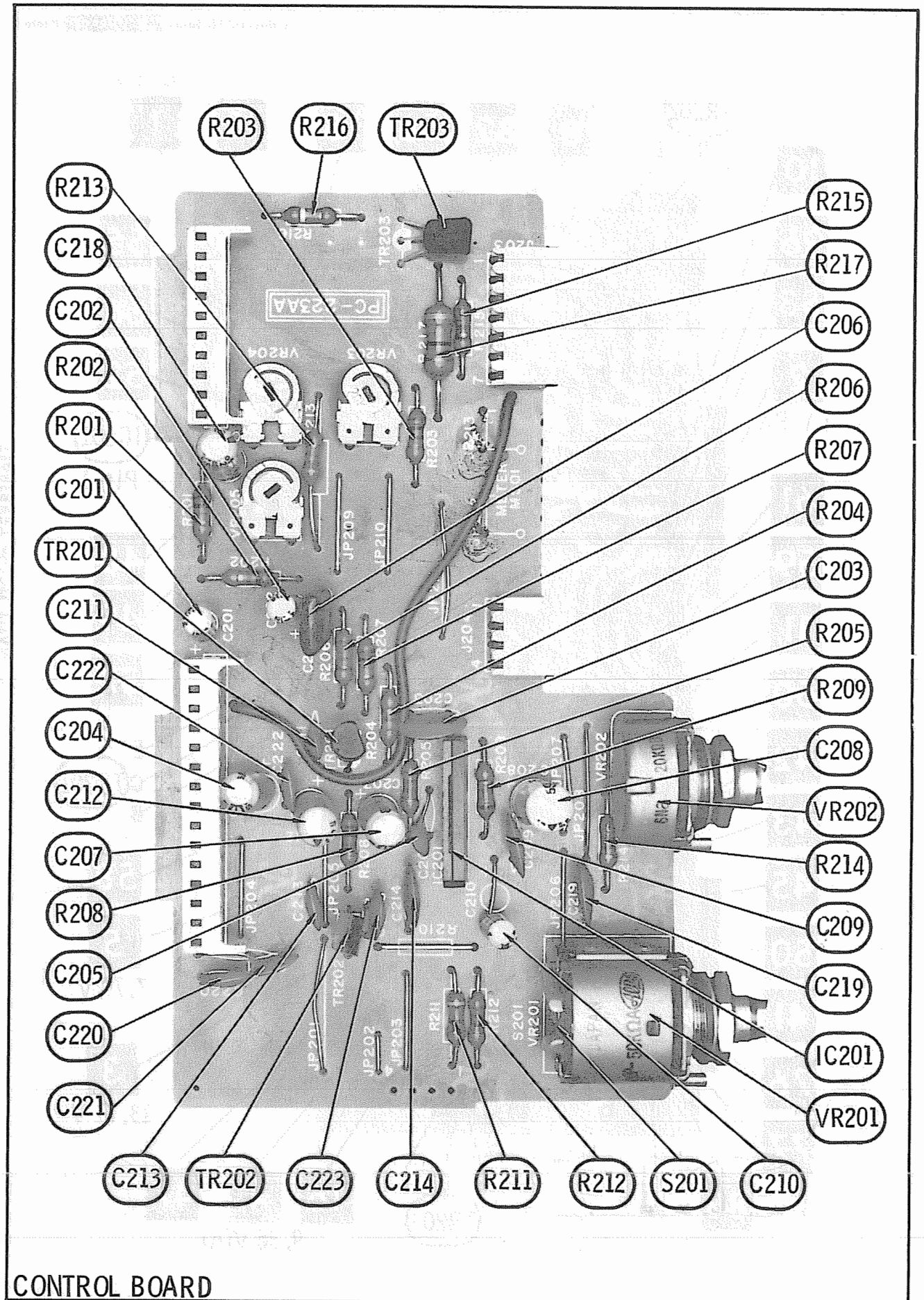
MAIN BOARD



MAIN BOARD



CONTROL BOARD

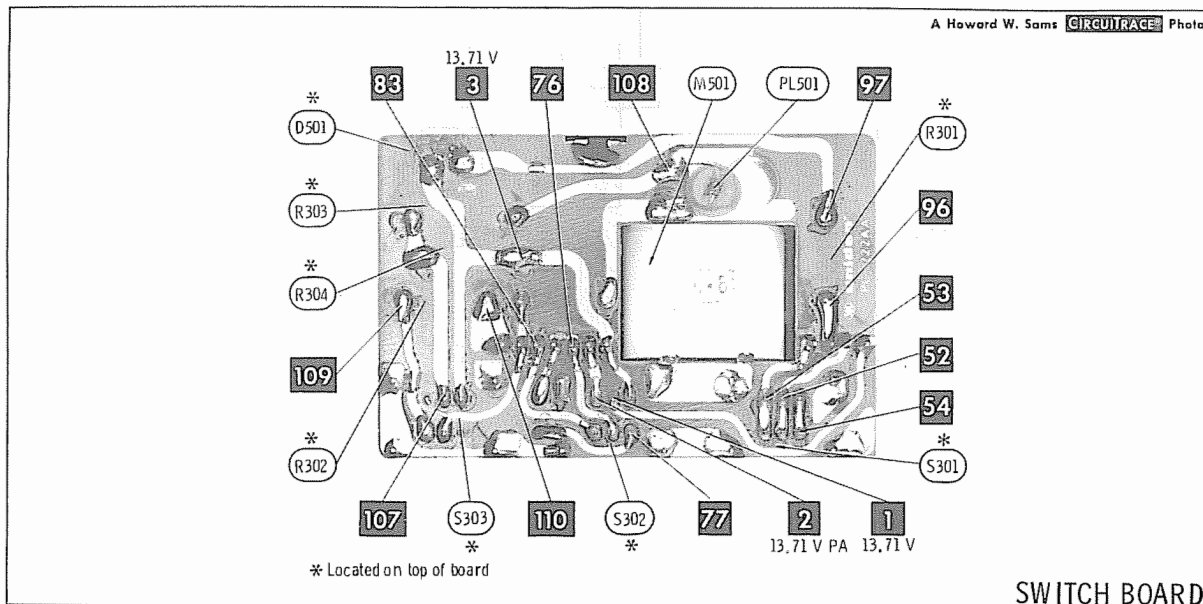


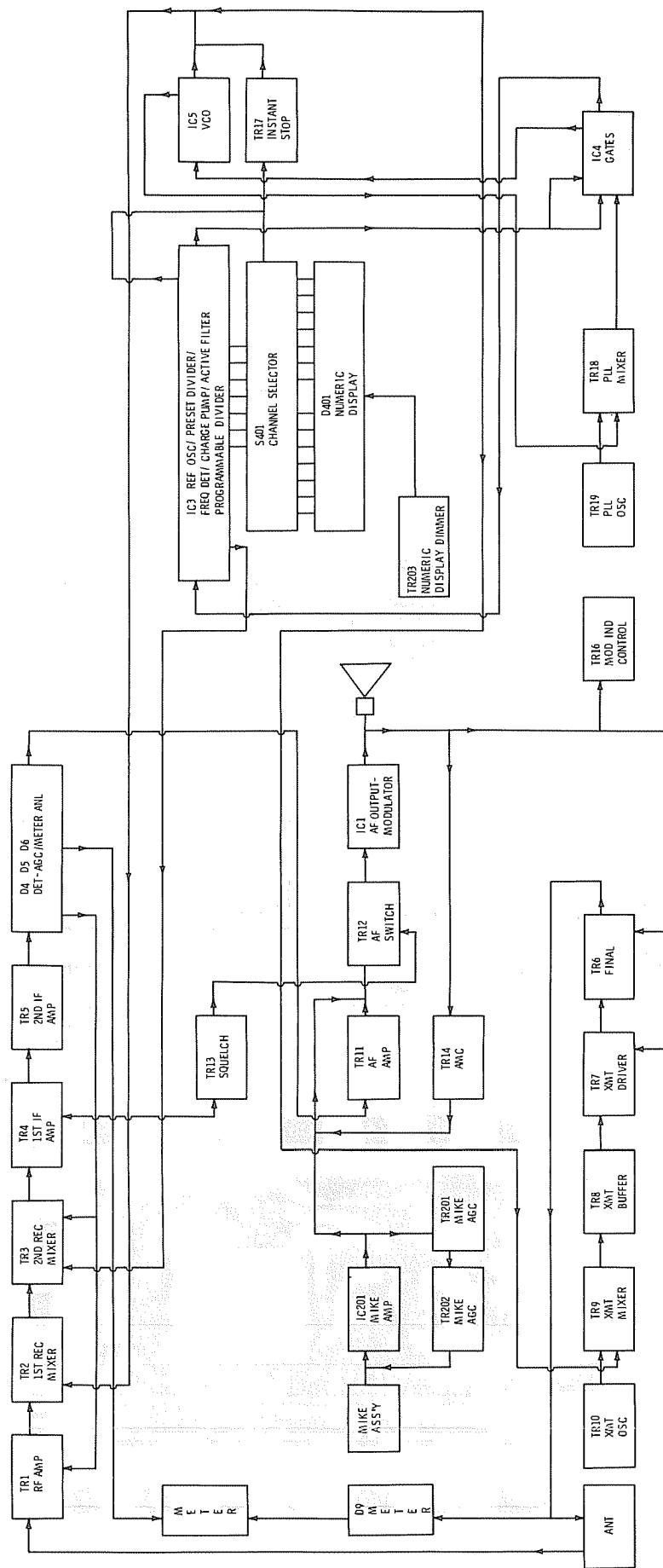
TRUTH CHART

1 = 4.77 Volts 0 = 0 Volts								
C H A N N E L	IC3 PROGRAM DIVIDER							REC & XMT VCO OUTPUT IN MHz AT TP6
	PINS							
	13	14	15	16	17	18	19	
1	1	0	0	1	0	0	0	37.660
2	0	0	0	0	1	0	0	37.670
3	1	0	0	0	1	0	0	37.680
4	1	1	0	0	1	0	0	37.700
5	0	0	1	0	1	0	0	37.710
6	1	0	1	0	1	0	0	37.720
7	0	1	1	0	1	0	0	37.730
8	0	0	0	1	1	0	0	37.750
9	1	0	0	1	1	0	0	37.760
10	0	0	0	0	0	1	0	37.770
11	1	0	0	0	0	1	0	37.780
12	1	1	0	0	0	1	0	37.800
13	0	0	1	0	0	1	0	37.810
14	1	0	1	0	0	1	0	37.820
15	0	1	1	0	0	1	0	37.830
16	0	0	0	1	0	1	0	37.850
17	1	0	0	1	0	1	0	37.860
18	0	0	0	0	1	1	0	37.870
19	1	0	0	0	1	1	0	37.880
20	1	1	0	0	1	1	0	37.900

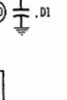
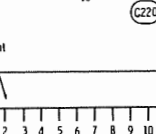
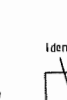
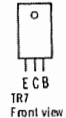
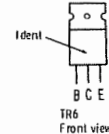
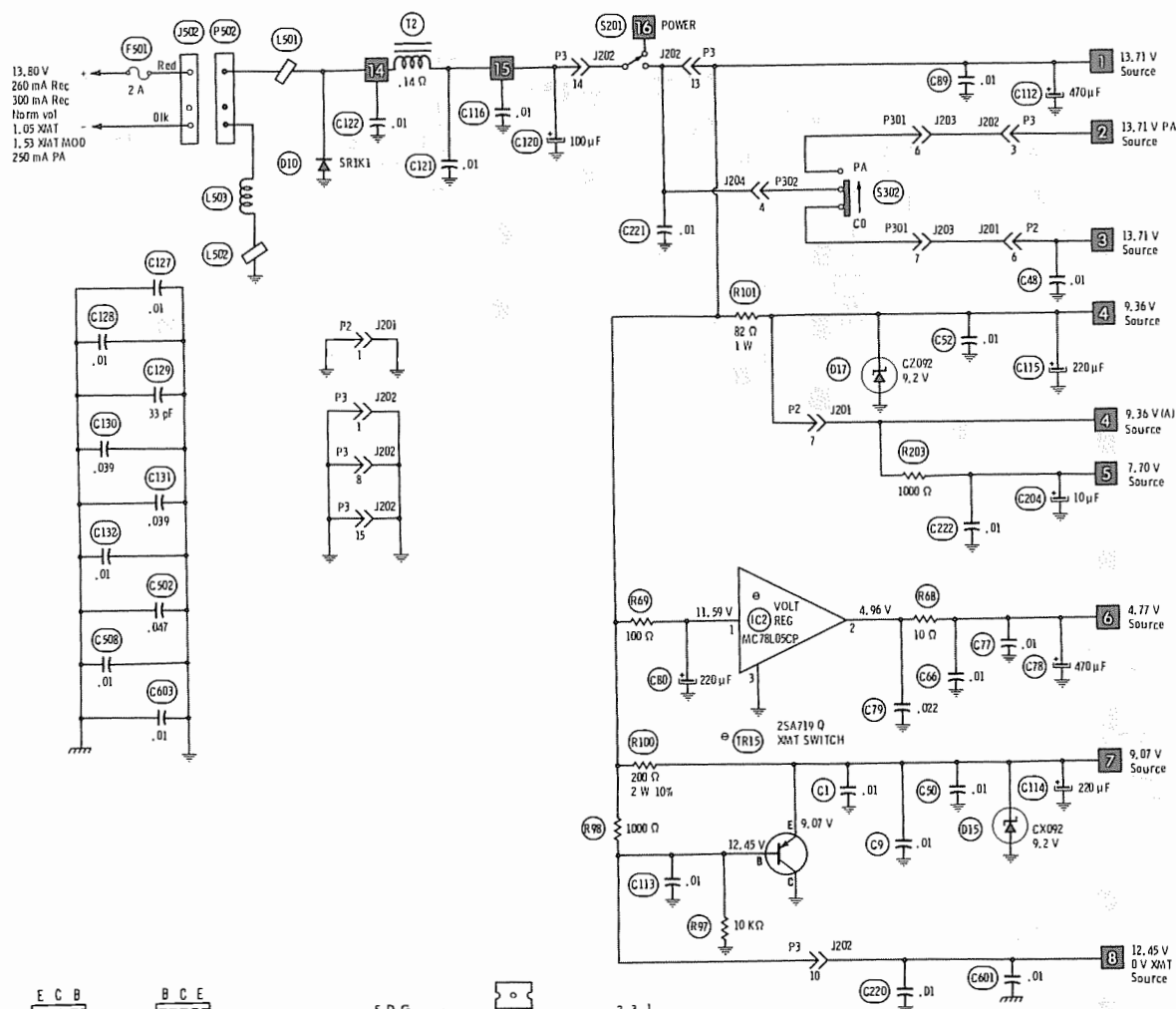
1 = <u>4.77</u> Volts 0 = <u>0</u> Volts								
C H A N N E L	IC3 PROGRAM DIVIDER							REC & XMT VCO OUTPUT IN MHz AT TP6
	PINS							
	13	14	15	16	17	18	19	
21	0	0	1	0	1	1	0	37.910
22	1	0	1	0	1	1	0	37.920
23	0	0	0	1	1	1	0	37.950
24	0	1	1	0	1	1	0	37.930
25	1	1	1	0	1	1	0	37.940
26	1	0	0	1	1	1	0	37.960
27	0	0	0	0	0	0	1	37.970
28	1	0	0	0	0	0	1	37.980
29	0	1	0	0	0	0	1	37.990
30	1	1	0	0	0	1	0	38.000
31	0	0	1	0	0	0	1	38.010
32	1	0	1	0	0	0	1	38.020
33	0	1	1	0	0	0	1	38.030
34	1	1	1	0	0	0	1	38.040
35	0	0	0	1	0	0	1	38.050
36	1	0	0	1	0	0	1	38.060
37	0	0	0	0	1	0	1	38.070
38	1	0	0	0	1	0	1	38.080
39	0	1	0	0	1	0	1	38.090
40	1	1	0	0	1	0	1	38.100

TEASERRY MODEL TITAN "T"





BLOCK DIAGRAM

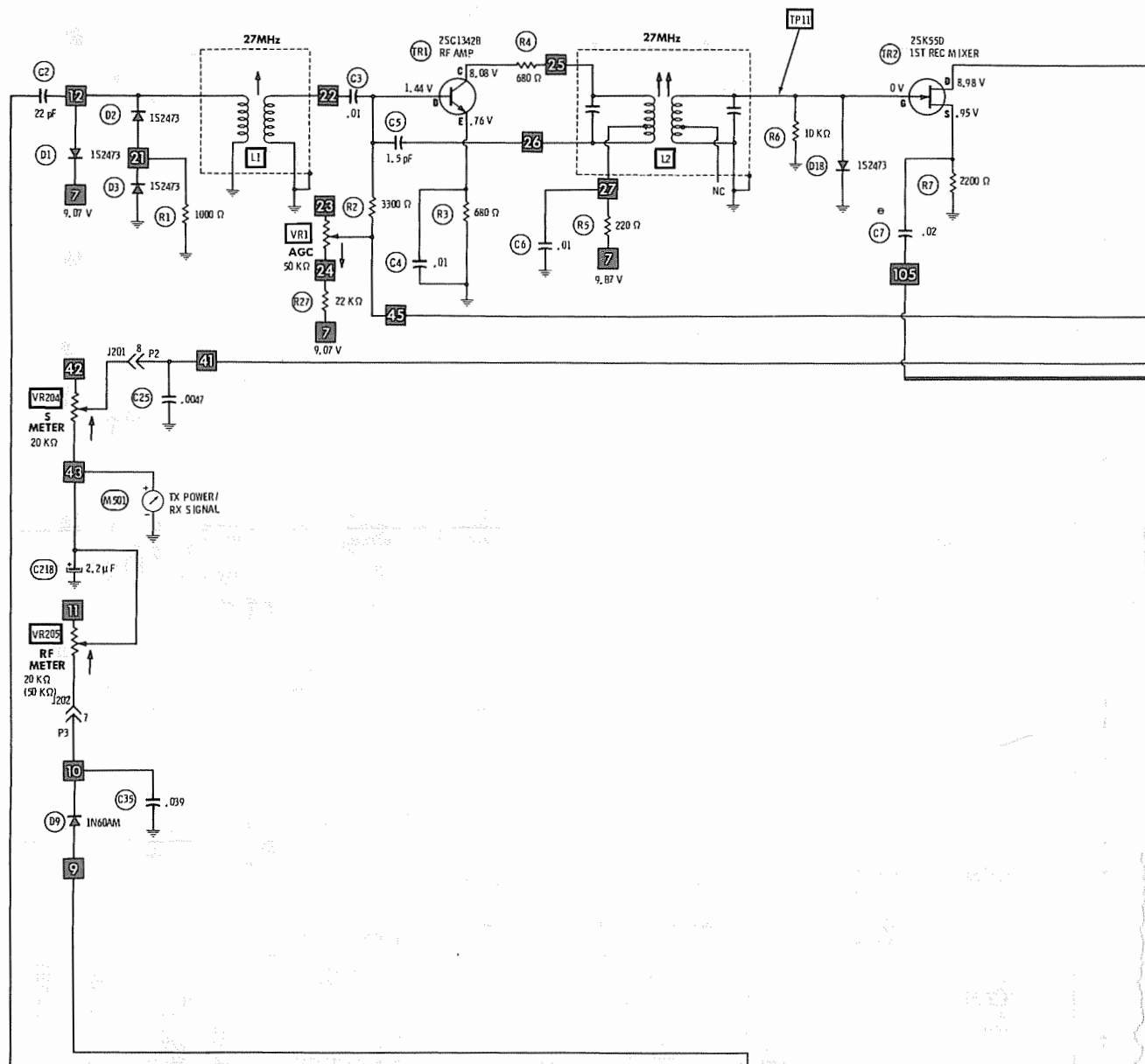


- Circuitry not used in some versions
 - - - Circuitry used in some versions
 - ⊕ See parts list
 - * Nominal value
 - ⊥ Ground
 - ⏏ Chassis
 - ∇ Common tie point
- Measurements made in Channel 1 with switching as shown unless noted.
Item numbers in rectangles appear in the alignment/adjustment instructions.
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 1/2 W or less, 5% unless noted.
Value in () used in some versions.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITACE**

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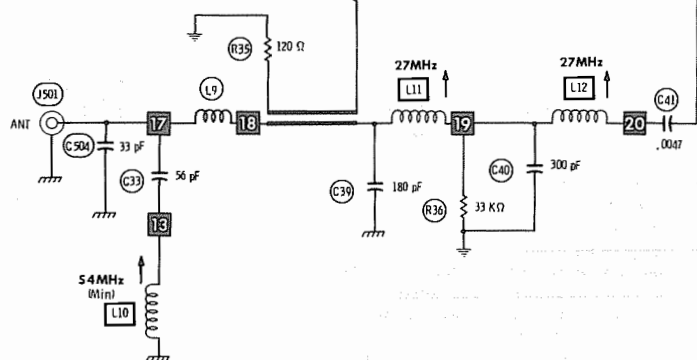


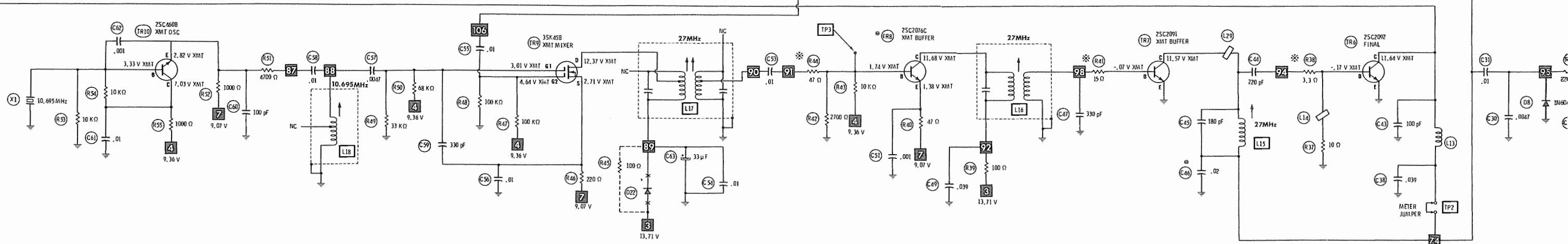
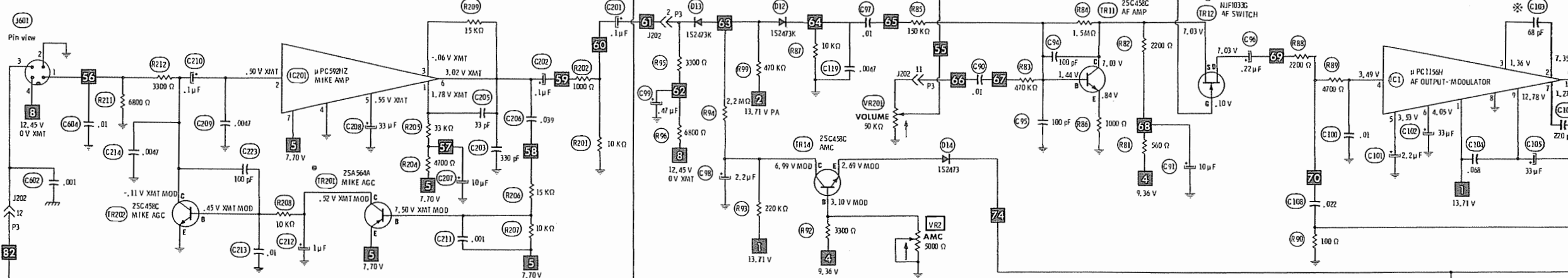
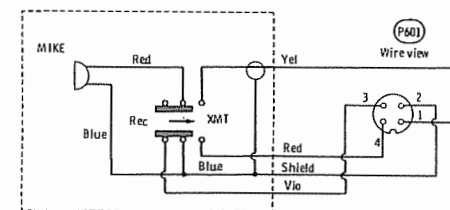
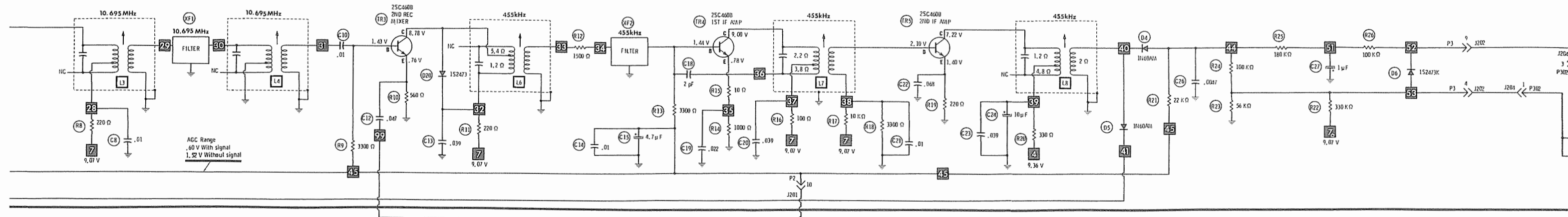
- ✖ Circuitry not used in some versions
- Circuitry used in some versions

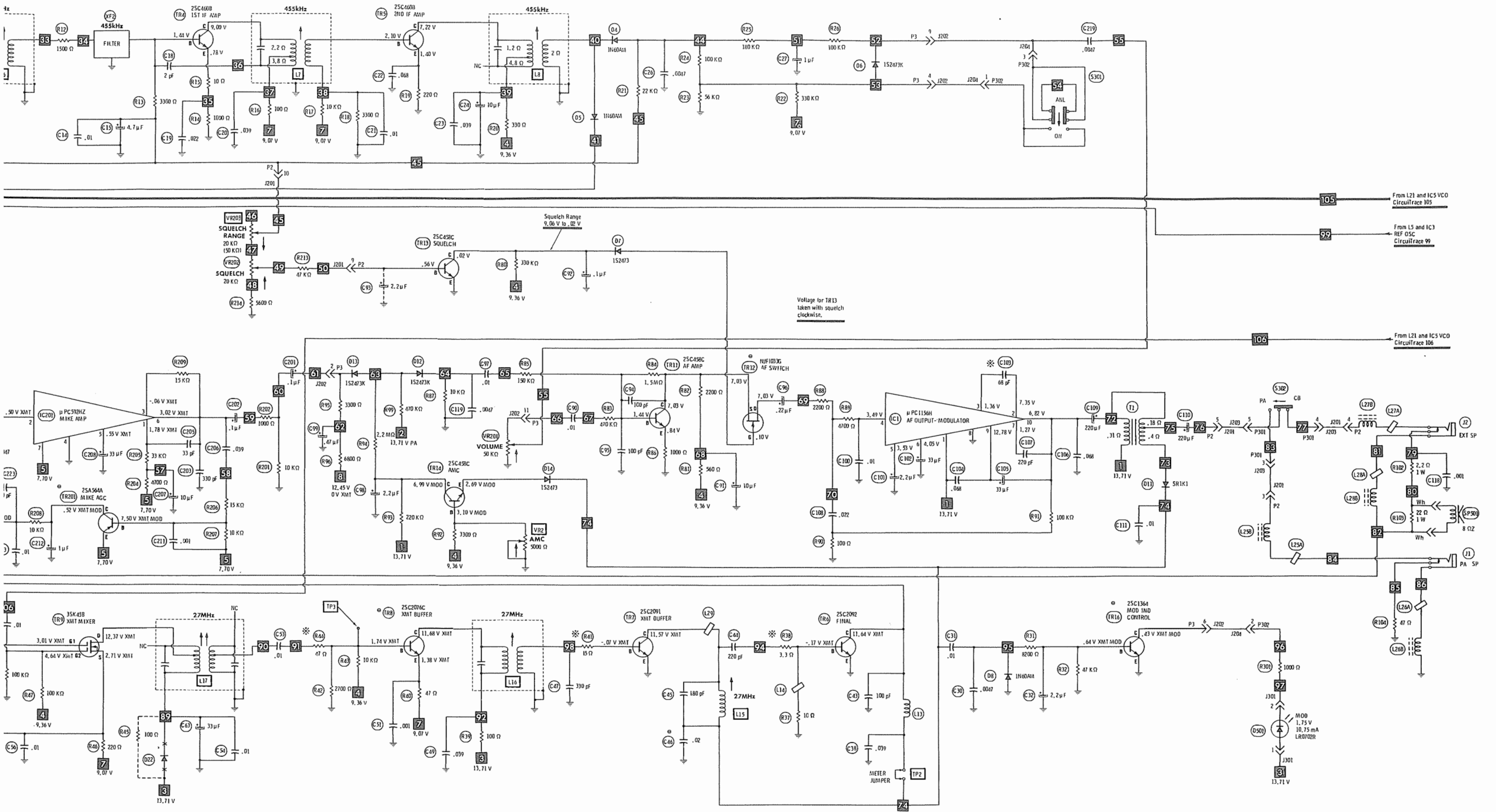
Ⓢ See parts list
 * Nominal value
 Ⓢ Ground
 Chassis
 ▽ Common tie point
 Measurements made in Channel 1 with switching as shown unless noted.
 Item numbers in rectangles appear in the alignment/adjustment instructions.
 Supply voltage maintained as shown at input.
 Voltages measured with digital meter, 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 PHOTOFACT STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**

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TEABERRY MODEL TITAN "T"

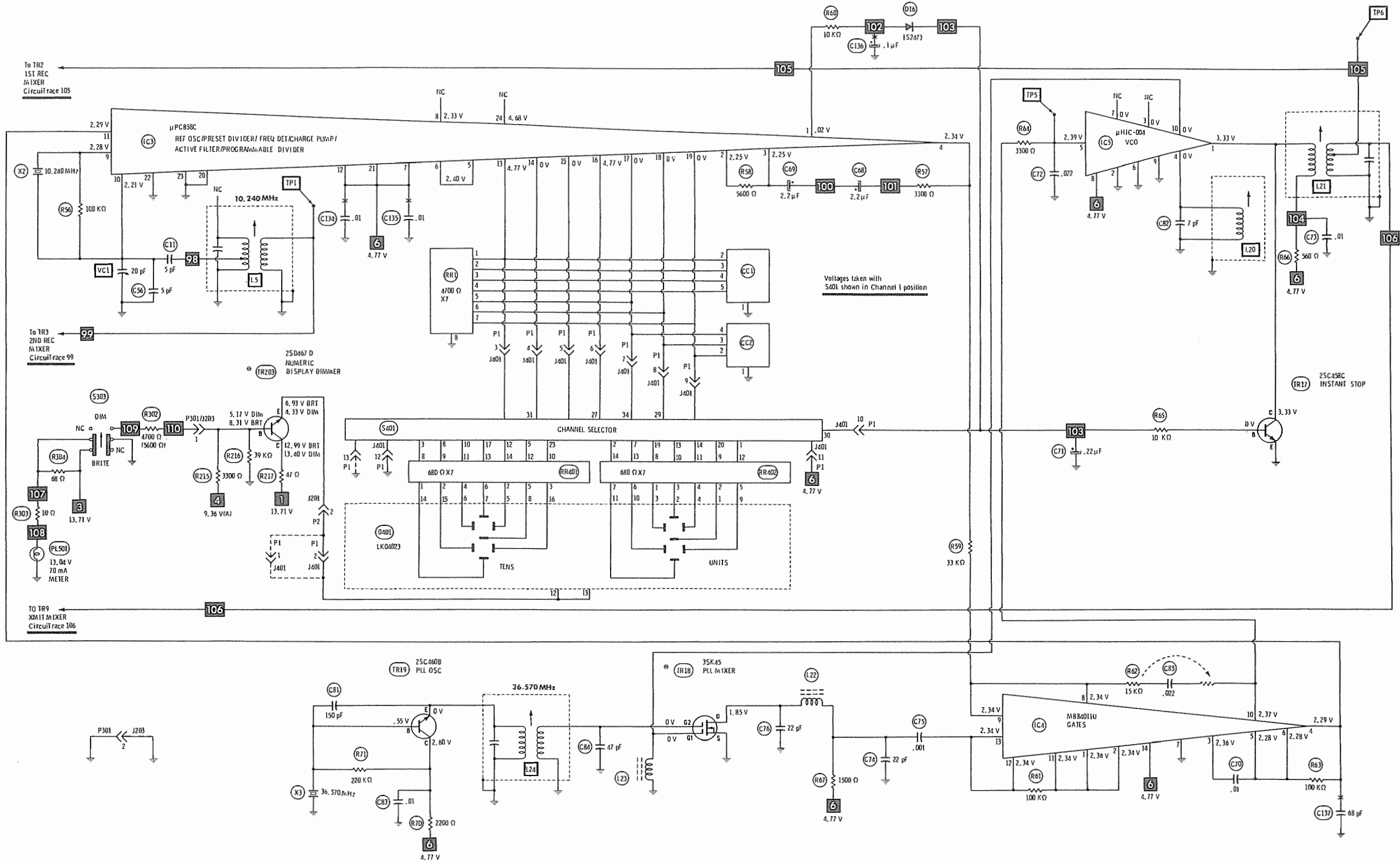
WIRING DA

General-use Hook-up
Shielded Hook-up W
Speaker Cable (avai
Bonding Strap . .
AC Power Cord . .

SEMICONDU

ITEM No.	TYPE No.	
D1	1S2473	D
D2	1S2473	D
D3	1S2473	D
D4	1N60AM	D
D5	1N60AM	D
D6	1S2473K	D
D7	1S2473	D
D8	1N60AM	D
D9	1N60AM	D
D10	SR1K1	D
D11	SR1K1	D
D12	1S2473K	D
D13	1S2473K	D
D14	1S2473	D
D15	CZ092	D
D16	1S2473	D
D17	CZ092	D
D18	1S2473	C
D20	1S2473	D
IC1	UPC1156H	C
IC2	MC78L05CP	C
IC3	UPD858C	C
IC4	MB84011U	C
IC5	UHC-004	C
IC201	UPC592H2	C
TR1	2SC1342B	C
TR2	2SK55D	C
TR3	2SC460B	C
TR4	2SC460B	C
TR5	2SC460B	C
TR6	2SC2092	C
TR7	2SC2091	C
TR8	2SC2076C	C
TR9	3SK45B	C
TR10	2SC460B	C
TR11	2SC458C	C
TR12	NJF1033G	C
TR13	2SK55D	C
TR14	2SC458C	C
TR15	2SA719Q	C
TR16	2SC1364	C
TR17	2SC458C	C
TR18	3SK45	C
TR19	2SC460B	C
TR20	2SA564A	C
TR21	2SA844C	C
TR22	2SC458C	C
TR23	2SD467D	C
	2SD467C	C

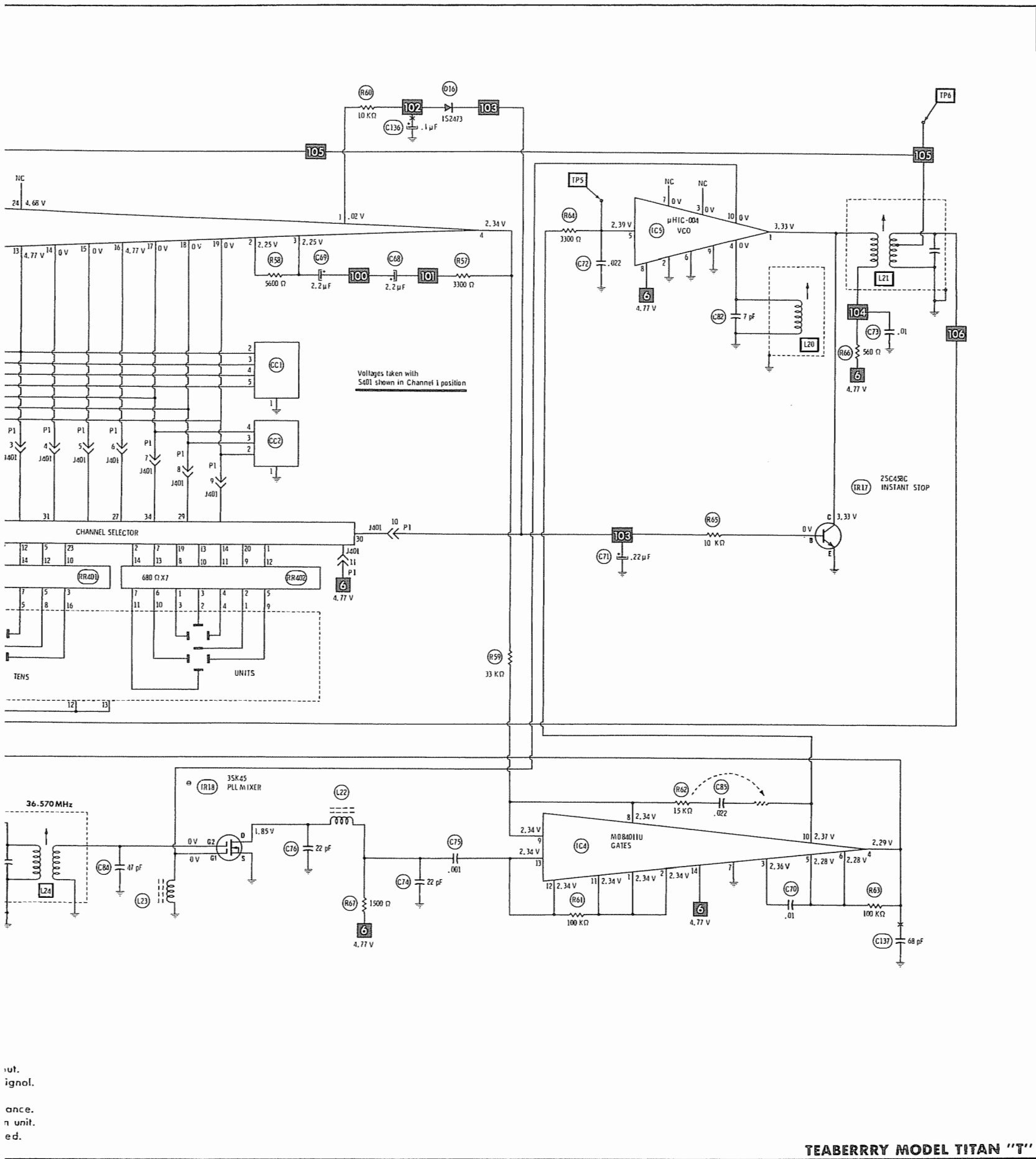
* Lead configur
(1) Used in some



— Circuitry not used in some versions
--- Circuitry used in some versions
• See parts list
* Nominal value
⊥ Ground
Chassis
Common tie point
A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITACE**
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Measurements made in Channel 1 with
switching as shown unless noted.
Item numbers in rectangles appear in the
alignment/adjustment instructions.
Supply voltage maintained as shown at input.
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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.

TEABERRY MODEL TITAN "T"



PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded) 23AWG	BELDEN No. 9471 (5')
(braided)	BELDEN No. 8401		BELDEN No. 8497 (6')
Speaker Cable (available in 4 colors)	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
Bonding Strap	BELDEN No. 8672		28AWG BELDEN No. 9466 (6')
AC Power Cord	(6') BELDEN No. 17106	4-conductor (unshielded) 23AWG	BELDEN No. 8415 (6')
	(9') BELDEN No. 17109	5-conductor (1 shielded) 28AWG	BELDEN No. 9467 (6')
			BELDEN No. 9465 (7-1/2')

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	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D2	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D3	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D4	1N60AM	DDAY001022	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D5	1N60AM	DDAY001022	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D6	1S2473K	DDAY048013	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D7	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D8	1N60AM	DDAY001022	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D9	1N60AM	DDAY001022	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D10	SR1K1	DDAY002001	GE-504A	5A40	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D11	SR1K1	DDAY002001	GE-504A	5A40	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D12	1S2473K	DDAY048013	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D13	1S2473K	DDAY048013	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D14	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D15	CZ092	DDAY010005	GEZD-9.1	Z1209	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D16	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D17	CZ092	DDAY010005	GEZD-9.1	Z1209	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D18	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D20	1S2473	DDAY048012	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
IC1	UPC1156H	DDAY061001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
IC2	MC78L05CP	DDAY061001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
IC3	UPD0858C	DDAY055001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
IC4	MB84011U	DDAY089001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
IC5	UHIC-004	DDAY087001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
IC201	UPC592H2	DDAY097001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG1194
TR1	2SC1342B	DDBY287001	GE-61 *	TR-24 *	PTC136 *	HEPS0014 *	RE 9 *	SK3018 *	RT-108A *	ECG1195
TR2	2SK550	DDCY006001	GE-FET-1	FE-100	PTC151	HEPF0010	RE 46	SK3112	RT-176	ECG133
TR3	2SC4608	DDBY277002	GE-61 *	(IR)2SC4608	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR4	2SC4608	DDBY277002	GE-61 *	(IR)2SC4608	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR5	2SC4608	DDBY277002	GE-61 *	(IR)2SC4608	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR6	2SC2092	DDBY289001	GE-337	FE-100	PTC186	HEPS0014 *	RE 203	SK3197	RT-146	ECG235
TR7	2SC2091	DDBY288001	GE-270	WEP913	PTC180	HEPS0014 *	RE 209	SK3197	RT-146	ECG295
TR8	2SC2076C	DDBY277001(1)	GE-210 *	TR-24 *	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A
TR9	3SK45B	DDCY104001	GE-FET-4	WEP905	PTC181	HEPF0004	RE 199	SK3050	RT-181	ECG222
TR10	2SC4608	DDBY277002	GE-61 *	(IR)2SC4608	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR11	2SC458C	DDBY283001	GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR12	NJF1033G	DDBY283001	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
TR13	2SK550	DDCY006001(1)	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
TR14	2SC458C	DDBY283001	GE-210 *	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR15	2SA719Q	DDBY283001	GE-269	TR-28 *	PTC103 *	HEPS0019 *	RE 26 *	SK3114	RT-305	ECG290
TR16	2SC1364	DDBY277002(1)	GE-210 *	TR-28 *	PTC103 *	HEPS0026 *	RE 197 *	SK3114	RT-305	ECG290
TR17	2SC458C	DDBY283001(1)	GE-210 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 13 *	SK3124	RT-308	ECG123A *
TR18	3SK45	DDBY283001	GE-FET-4	(IR)2SC458B	PTC121 *	HEPS0009 *	RE 13 *	SK3124	RT-187	ECG123A *
TR19	3SK45-B09	DDCY104003(1)	GE-FET-4	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
TR20	2SC4608	DDBY277002	GE-61 *	WEP905	PTC181	HEPF2004	RE 199	SK3050	RT-181	ECG222
TR21	2SA564A	DDBY277002	GE-65	(IR)2SC4608	PTC136 *	HEPS0014 *	RE 9	SK3018 *	RT-134	ECG107
TR22	2SA844C	DDBY008001(1)	GE-244 *	(IR)2SA564A	PTC103 *	HEPS0019 *	RE 193	SK3114	RT-303	ECG234
TR23	2SC458C	DDBY283001	GE-210 *	TR-30 *	PTC103 *	HEPS0019 *	RE 18 *	SK3114	RT-126A *	ECG129 *
TR24	2SC467C	DDBY410001(1)	GE-243 *	TR-87 *	PTC178	HEPS3001 *	RE 17 *	SK3024 *	RT-114 *	ECG128 *

* Lead configuration may vary from original.
(1) Used in some versions.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C15	4.7 25V	CELF514790	PC5-50	VTT4R7B50	QV1-27	EV-1319
C24	10 16V	CELF311000	PC10-25	VTT10B25	QV1-41	EV-1222
C27	1 50V	CELF811090	PC1-50	VTT1A50	QV1-11	EV-1615
C32	2.2 25V	CELF512290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C63	33 16V	CELF313300	PC30-25	VTT33D25	QV1-63	EV-1325
C68	2.2 16V	CSEN312290		TDC225M035FL		SD35-2R29
C69	2.2 16V	CSEN312290		TDC225M035FL		SD35-2R29
C71	.22 16V	CAAH312260		TDC224M050EL	QOT1-10	S050-R229
C78	470 6.3V	CELF904710	PC500-16	VTT470K16	QV1-149	EV-1150
C80	220 16V	CELF312210	PC250-25	VTT220H16	QV1-117	EV-1240
C91	10 16V	CELF311000	PC10-25	VTT10B25	QV1-41	EV-1222
C92	.1 16V	CAAH311080		TDC104M050EL	QOT1-2	S050-R109
C96	.22 16V	CAAH312260		TDC224M050EL	QOT1-10	S050-R229
C98	2.2 25V	CELF512290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C99	.47 50V	CELF814780		TDC474M050EL	QOT1-19	S050-R479
C101	2.2 25V	CELF512290	PC2-100	VTT2R2A50	QV1-19	EV-1517
C102	33 16V	CELF313300	PC30-25	VTT33D25	QV1-63	EV-1325
C105	33 16V	CELF313300	PC30-25	VTT33D25	QV1-63	EV-1325
C109	220 16V	CELF312210	PC250-25	VTT220H16	QV1-117	EV-1240
C110	220 16V	CELF312210	PC250-25	VTT220H16	QV1-117	EV-1240
C112	470 16V	CELF314710	PC500-16	VTT470K16	QV1-151	EV-1250
C114	220 16V	CELF312210	PC250-25	VTT220H16	QV1-117	EV-1240
C115	220 16V	CELF312210	PC250-25	VTT220H16	QV1-117	EV-1240
C120	100 25V	CELF511010	PC100-25	VTT100G25	QV1-97	EV-1330
C136	.1 16V	CAAH311080		TDC104M050EL	QOT1-2	S050-R109
C201	.1 16V	CAAH311080		TDC104M050EL	QOT1-2	S050-R109
C202	.1 16V	CAAH311080		TDC104M050EL	QOT1-2	S050-R109
C204	10 16V	CELF311000	PC10-25	VTT10B25	QV1-41	EV-1222
C207	10 16V	CELF311000	PC10-25	VTT10B25	QV1-41	EV-1222
C208	33 16V	CELF313300	PC30-25	VTT33D25	QV1-63	EV-1325
C210	.1 16V	CAAH311080		TDC104M050EL	QOT1-2	S050-R109
C212	1 50V	CELF811090	PC1-50	VTT1A50	QV1-11	EV-1615
C218	2.2 25V	CELF512290	PC2-100	VTT2R2A50	QV1-19	EV-1517

TEABERRY MODEL TITAN "T"

CAPACITORS

ITEM No.	RATING	MFRG. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
						Q-LINE GENERAL LINE
C1	.01 25V		UK25-103		MAG2511	HY-520
C2	22 5% 50V		DTZ-22	NP022	CN0422	10TCC-Q22
C3	.01 25V		UK25-103		MAG2511	HY-520
C4	.01 25V		UK25-103		MAG2511	HY-520
C5	1.5 +.25pF 50V		DTZ-1R5	NP01P5	CN0515	10TCC-V15
C6	.01 25V		UK25-103		MAG2511	HY-520
C7	.027		DC-303	MGP03		TG-530
	.022 25V	CKFB512230(1)	UK25-223			HY-725
C8	.01 25V		UK25-103		MAG2511	HY-520
C9	.01 25V		UK25-103		MAG2511	HY-520
C10	.01 25V		UK25-103		MAG2511	HY-520
C11	5		DTZ-4R7	NP04P7	CN0547	10TCC-V47
C12	.047 25V		UK25-503		MAG2515	HY-735
C13	.039 25V	CKFB513930				
C14	.01 25V		UK25-103		MAG2511	HY-520
C18	2 +.25pF 50V		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C19	.022 10% 50V				H192P2239R8	192P2239R8
C20	.039 25V	CKFB513930				
C21	.01 25V		UK25-103		MAG2511	HY-520
C22	.068 10%			WMF1S68	EWFI1A168	1PB-S68
C23	.039 25V	CKFB513930				
C25	.0047 25V		OD-472	GP4700	GP247	56A-D47
C26	.0047 25V		OD-472	GP4700	GP247	56A-D47
C30	.0047 25V		OD-472	GP4700	GP247	56A-D47
C31	.01 10% 50V			WMF1S1	EWFI1A110	1PB-S10
C33	56 5% 50V		OD-560		GP456	10TS-Q56
C35	.039 25V	CKFB513930				
C38	.039 25V	CKFB513930				
C39	180 5% 50V		DTZ-180			10TCC-T18
C40	300		OD-301	GP300	GP330	10TS-T30
C41	.0047 25V		OD-472	GP4700	GP247	56A-D47
C43	100		OD-101	GP100	GP310	10TS-T10
C44	220		UTZ-220			10TCC-T22
C45	180		UTZ-180			10TCC-T18
C46	.02 25V		UC-203	MGP02	TA120	TG-S20

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
C47	330	CKFB513930	DD-331	GP330	GP333	QC2-81	10TS-T33
C48	.01 25V		UK25-103		MAG2511		HY-520
C49	.039						
C50	.01 25V		UK25-103		MAG2511		HY-520
C51	.01 25V		UK25-103		MAG2511		HY-520
C52	.01 25V		UK25-103		MAG2511		HY-520
C53	.01 25V		UK25-103		MAG2511		HY-520
C54	.01 25V		UK25-103		MAG2511		HY-520
C55	.01 25V		UK25-103		MAG2511		HY-520
C56	.01		UK25-103		MAG2511		HY-520
C57	.0047 25V	CQME812225	DD-472	GP4700	GP247	QC2-81	5GA-D47
C58	.01 25V	CCRB811814	UK25-103		MAG2511		HY-520
C59	330 N220 5% 50V				*		10TCR-T33
C60	100 5% 50V		DTZ-100	NP0100	CN0310		10TCC-T10
C61	.01 25V		UK25-103		MAG2511		HY-520
C62	.001 10% 25V		DD-102G	GP1000	GP210		5GA-D10
C64	5 +.25pF 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C65	12 5% 50V				CN0412		10TCC-Q12
C66	.01 25V		UK25-103		MAG2511		HY-520
C70	.01 25V		UK25-103		MAG2511		HY-520
C72	.022 10% 50V	CCRB811814			M192P2239R8	QC2-81	192P2239R8
C73	.01 25V		UK25-103		MAG2511		HY-520
C74	22		DTZ-22	NP022	CN0422		10TCC-Q22
C75	.001 10% 25V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C76	22		DTZ-22	NP022	CN0422		10TCC-Q22
C77	.01 25V		UK25-103		MAG2511		HY-520
C79	.022 10% 50V				M192P2239R8		192P2239R8
C81	150		DTZ-150		CN0315		10TCC-T15
C82	7 +.5pF 50V		DTZ-6R8	NP06P8	CN0568		10TCC-V68
C83	.01 25V		UK25-103		MAG2511		HY-520
C84	47 5% 50V	CCRB811814	DTZ-47	NP047	CN0447	QC2-81	10TCC-Q47
C85	.022 10%				M192P2239R8		192P2239R8
C89	.01 25V		UK25-103		MAG2511		HY-520
C90	.01 10% 50V			WMF1S1	EWFA110		1PB-S10
C94	100		DTZ-100	NP0100	CN0310		10TCC-T10
C95	100		DTZ-100	NP0100	CN0310		10TCC-T10
C97	.01 10% 50V			WMF1S1	EWFA110		1PB-S10
C100	.01 10% 50V			WMF1S1	EWFA110		1PB-S10
C103	68		DTZ-68	NP068	CN0468		10TCC-Q68
C104	.068 10%			WMF1S68	EWFA168		1PB-S68
C106	.068 10%	CCRB811814		WMF1S68	EWFA168	QC2-81	1PB-S68
C107	220		DTZ-220				10TCC-T22
C108	.022 10% 50V				M192P2239R8		192P2239R8
C111	.01 25V		UK25-103		MAG2511		HY-520
C113	.01 25V		UK25-103		MAG2511		HY-520
C116	.01 25V		UK25-103		MAG2511		HY-520
C118	.001 10% 25V		DD-102G	GP1000	GP210		5GA-D10
C119	.0047		DD-472	GP4700	GP247		5GA-D47
C121	.01 25V		UK25-103		MAG2511		HY-520
C122	.01 25V		UK25-103		MAG2511		HY-520
C127	.01 25V	CKFB513930	UK25-103		MAG2511	QC2-81	HY-520
C128	.01 25V		UK25-103		MAG2511		HY-520
C129	33		DTZ-33	NP033	CN0433		10TCC-Q33
C130	.039 25V						
C131	.039 25V						
C132	.01 25V		UK25-103		MAG2511		HY-520
C134	.01		UK25-103		MAG2511		HY-520
C135	.01		UK25-103		MAG2511		HY-520
C137	68		DTZ-68	NP068	CN0468		10TCC-Q68
C203	330		DD-331	GP330	GP333	QC2-81	10TS-T33
C205	33	CKFB513930	DTZ-33	NP033	CN0433		10TCC-Q33
C206	.039 10% 100V				M192P3939R8		192P3939R8
C209	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C211	.001 10% 25V		DD-102G	GP1000	GP210		5GA-D10
C213	.01 25V		UK25-103		MAG2511		HY-520
C214	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C219	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C220	.01 25V		UK25-103		MAG2511		HY-520
C221	.01 25V		UK25-103		MAG2511		HY-520
C222	.01 25V	HHAY003001(2) HHAY003001(2) CCVY023005	UK25-103		MAG2511	QC2-81	HY-520
C223	100		DTZ-100	NP0100	CN0310		10TCC-T10
C501	33		DTZ-33	NP033	CN0433		10TCC-Q33
C502	.047 25V		UK25-503		MAG2515		HY-735
C504	33		DTZ-33	NP033	CN0433		10TCC-Q33
C508	.01		UK25-103		MAG2511		HY-520
C601	.01 25V		UK25-103		MAG2511		HY-520
C602	.001 10% 25V		DD-102G	GP1000	GP210		5GA-D10
C603	.01 25V		UK25-103		MAG2511		HY-520
C604	.01 25V		UK25-103		MAG2511		HY-520
CC1							
CC2							
VC1	20						

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

(1) Used in some versions.

(2) Consists of four .01 capacitors.

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.
VR1	AGC	50K	RRVY133009				
VR2	AMC	5000	RRVY133005				
VR201	Volume/Switch	50K	RRVY194001				
VR202	Squelch	20K	RRVY193001				
VR203	Squelch Range	20K	RRVY133007				
	Squelch Range	50K	RRVY133009(6)				
VR204	S Meter	20K	RRVY133007				
VR205	RF Meter	20K	RRVY133007				
	RF Meter	50K	RRVY133009(6)				

(6) Alternate part, may be used in some versions.

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.
RR1	Resistor Network		HHYA006001(1)	RR402	Resistor Network		HHAY008001(2)
RR401	Resistor Network		HHAY008001(2)				

(1) Consists of seven 4700-ohm resistors.

(2) Consists of seven 680-ohm resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Antenna (27MHz)	LLAY029001			
L2	Rec RF (27MHz)	LLAY194001			
L3	Rec Mixer (10.695MHz)	LLAY180001			
L4	Rec Mixer (10.695MHz)	LLAY181001			
L5	Ref Oscillator	LLAY182001			
L6	IF (455kHz)	LLAY163001			
L7	IF (455kHz)	LLAY183001			
L8	IF (455kHz)	LLAY184001			
L9	Pi Filter	LLDY073001			
L10	TVI Trap (54MHz)	LLCY018001			
L11	Antenna Match (27MHz)	LLCY020001			
L12	Final (27MHz)	LLCY018001			
L13	Pi Filter	LLDY012001			
L15	Xmt Driver (27MHz)	LLCY017001			
L16	Xmt Buffer (27MHz)	LLAY189001			
L17	Xmt Mixer (27MHz)	LLAY185001			
L18	Xmt Oscillator (10.695MHz)	LLAY193001			
L20	VCO	LLAY187001			
L21	VCO	LLAY188001			
L22	RF Choke (100uH)	LLZY001013			
L23	RF Choke (1.2uH)	LLZY002002			
L24	PLL Oscillator (36.570MHz)	LLAY186001			
L25B	RF Choke				
L26B	RF Choke				
L27B	RF Choke				
L28B	RF Choke				

TEABERRY MODEL TITAN "T"

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	.136	1.62mH	TTFY017001 TF-017(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	TTFY107001 TF-107(1)			(1) Number on unit.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP501	4" PH, 8 Ohms	ASPY003001		

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
F501	2A	ZFSY001005		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
MIC	AHKY041001	18-U32	18-034	18-010	18-092	1	2	4	3	NC	2

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	QQXY078001	CB95H10695	Xmit Osc.	X3	36.570	QQXY079001	CC20M36570	PLL Osc.
X2	10.240	QQXY077001		Ref Osc.					

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
D401	LED	DDAY084001	Digital Readout
D501	LED	DDAY073001	MOD (10.75mA @ 1.75V)
J1	Jack	JJKY078001	PA SP
J2	Jack	JJKY078001	Ext. SP
J501	Jack	JJKY035001	Antenna
J502	Jack	JJKY052001	Power
J601	Jack	JJKY072001	Power
L14	Ferrite Bead	LLDY075001	
L25	Ferrite Bead	LLDY080001	
L26	Ferrite Bead	LLDY080001	
L27	Ferrite Bead	LLDY080001	
L28	Ferrite Bead	LLDY080001	
L29	Ferrite Bead	LLDY075001	
L501	Ferrite Bead	LLDY072001	
L502	Ferrite Bead	LLDY072001	
M501	Meter	ZHTY070001	XMT Power/Rec Signal
PL501	Pilot Lamp	VPZY007001	Meter (70mA @ 13.04V)
S201	Switch		Power (On Volume Control)
S301	Switch	SSWY091001	ANL/Off
S302	Switch	SSWY091001	PA/CB
S303	Switch	SSWY091001	Dim/Brite
S401	Switch	SSRY155001	Channel Select
XF1	Ceramic Filter	FFLY047001	10.695MHz
XF2	Ceramic Filter	FFLY049001	455kHz
	Printed Circuit Board	PPCY221011	Main
	Printed Circuit Board	PPCY222011	Switch
	Printed Circuit Board	PPCY211011	Channel
	Printed Circuit Board	PPCY223001	Control

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

ITEM	PART No.	ITEM	PART No.
Case, Top	MDBP203846	Knob, Volume/Squelch	MOMP402825
Case, Bottom	MDBP203847	Microphone Hanger	MDBP402919
Knob, Channel	MDNP404296		