

# HISTORY PARTS LIST

## ABBREVIATIONS:

cer	ceramic
comp	composition
emc	electrolytic, metal cased
gmV	guaranteed minimum value
h	henry
k	kilohms ( $10^3$ ohm)
ma	milliamps ( $10^{-3}$ amps)
meg	megohms ( $10^6$ ohm)
mh	millihenry ( $10^{-3}$ henry)
mpt	metalized, paper tubular
mt	mylar, tubular
mv	millivolts ( $10^{-3}$ amps)
$\mu$ f	microfarad ( $10^{-6}$ farad)
$\mu$ h	microhenry ( $10^{-6}$ henry)
$\mu$ sec	microsecond ( $10^{-6}$ second)
nsec	nano second ( $m\mu$ or $10^{-9}$ second)
$\Omega$	ohm
pbt	paper, "bathtub"
pcc	paper covered can
pf	picofarad ( $\mu\mu$ f or $10^{-12}$ farad)
piv	peak inverse voltage
pmc	paper, metal cased
poly	polystyrene
prec	precision
pt	paper tubular
ptm	paper, tubular molded
tub	tubular
v	working volts, dc
var	variable
w	watt
WW	wire wound

## SPECIAL NOTES AND SYMBOLS:

±	approximate serial number
X000	part first added at this serial number
000X	part removed after this serial number
*000-000	asterisk preceding Tektronix part number indicates manufactured by or for Tektronix, also Tektronix reworked or checked components
mod w/	modify with _____. Simple replacement is not recommended. Replace with part listed for later instruments and also modify the circuit symbol numbers listed after mod w/.

Publication:  
061-421  
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For all serial numbers.

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# 104



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# 104 ELECTRICAL PARTS

## CAPACITORS

C1	281-012	7-45 pf	Cer.	Var.	500V		101-up
C1.1	281-518	47 pf	Cer.	Fixed	500V	10%	X203-up
C2	281-012	7-45 pf	Cer.	Var.	500V		101-up
C2.1	281-518	47 pf	Cer.	Fixed	500V	10%	X203-up
C3A,B	290-037	2x20 $\mu$ f	EMC	Fixed	450V	-20%+50%	101-202X
C3	290-037	20 $\mu$ f	EMC	Fixed	450V	-20%+50%	X203-up
C4		20 $\mu$ f	EMC	Fixed	450V	-20%+50%	X203-up
C5	281-510	.01 $\mu$ f	MT	Fixed	400V	-20%+50%	101-up
C6	Use 285-515	.025 $\mu$ f	PMC	Fixed	400V	-20%+50%	101-202
C6	285-510	.01 $\mu$ f	MT	Fixed	400V	20%	203-up
C7	285-510	.01 $\mu$ f	MT	Fixed	400V	-20%+50%	101-up
C8	**	.1 $\mu$ f	PBT	Fixed	400V	-20%+50%	101-202
C8	285-562	.47 $\mu$ f	PTM	Fixed	400V	20%	203-408
C8	285-537	.5 $\mu$ f	MPT	Fixed	400V	20%	409-up
C9	285-537	.5 $\mu$ f	MPT	Fixed	400V	-20%+50%	101-202
C9	285-526	.1 $\mu$ f	MT	Fixed	400V	20%	203-up
C10	295-014	.001 $\mu$ f	MT	Fixed	600V	+4 to +10%	X203-up
C11	295-014	.001 $\mu$ f	MT	Fixed	600V	+4 to +10%	X203-up
C12	285-526	.1 $\mu$ f	MT	Fixed	400V	20%	X203-up
C13	285-541	1 $\mu$ f	PBT	Fixed	600V	-20+50%	X203-228
C13	290-000	6.25 $\mu$ f	EMT	Fixed	300V	-10%+100%	229-up
C14	290-037	40 $\mu$ f (2x20)	EMC	Fixed	450V	-10%+50%	X203-up
C15	285-510	.01 $\mu$ f	MT	Fixed	400V	20%	X203-up
C16	285-510	.01 $\mu$ f	MT	Fixed	400V	20%	X203-up
C19	285-501	.001 $\mu$ f	MT	Fixed	600V	$\pm$ 10%	101-202X
C20	285-501	.001 $\mu$ f	MT	Fixed	600V	$\pm$ 10%	101-202X
C21	285-526	.1 $\mu$ f	MT	Fixed	400V	-20%+50%	101-202X
C22	285-541	1 $\mu$ f	PBT	Fixed	600V	-20%+50%	101-202X
C23	290-010	40 $\mu$ f (2x20)	EMC	Fixed	450V	-10%+50%	101-202X
C24	285-510	.01 $\mu$ f	MT	Fixed	400V	-20%+50%	101-202X
C25	285-510	.01 $\mu$ f	MT	Fixed	400V	-20%+50%	101-202X

## FUSES

Use 159-003	2 amp	4 AG Slo-Blo	117V, 60-cycle	101-408
159-003	1.6 amp	3 AG Slo-Blo	117V, 60-cycle	409-up
159-018	.8 amp	Slo-Blo	234V, 50-cycle	X409-up

\*\* NOTE; If part is not available locally, PTM capacitor 285-526 may be used by adding a solder lug to ground.

## INDUCTORS

L1	Order by value	.4-.65 $\mu$ h	Var.	X203-408
L1	Use 114-027	.38-.7 $\mu$ h	Var.	409-433
L1	114-027	.88-1.4 $\mu$ h	Var.	434-up
L15	Order by value	.1-.15 $\mu$ h	Var.	101-202X

## RESISTORS

R1	306-273	27 k	2 w.	Fixed	Comp.	10%	101-202
R1	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	203-up
R2	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	101-up
R3	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	101-202
R3	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	203-up
R4	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	101-202
R4	Use 311-023	50 k	1/2 w.	Var.	Comp.	20%	203-408
R4	311-023	50 k	2 w.	Var.	Comp.	10%	409-up
R5	Use 311-023	50 k	1 w.	Var.	Comp.	20%	101-202
R5	302-334	330 k	1/2 w.	Fixed	Comp.	10%	203-up
R6	Use 311-023	50 k	1 w.	Var.	Comp.	20%	101-202
R6	302-223	22 k	1/2 w.	Fixed	Comp.	10%	203-up
R7	306-103	10 k	2 w.	Fixed	Comp.	10%	101-up
R8	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	101-202
R8	302-223	22 k	1/2 w.	Fixed	Comp.	10%	203-up
R9	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	101-202
R9	302-334	330 k	1/2 w.	Fixed	Comp.	10%	203-up
R10	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	X203-up
R11	306-681	680 $\Omega$	2 w.	Fixed	Comp.	10%	X203-up
R12	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	X203-up
R13	Use 311-023	50 k	1/2 w.	Var.	Comp.	20%	X203-408
R13	311-023	50 k	2 w.	Var.	Comp.	20%	409-up
R14	302-470	47 $\Omega$	1/2 w.	Fixed	Comp.	10%	X203-up
R15	306-273	27 k	2 w.	Fixed	Comp.	10%	X203-up
R16	302-221	220 $\Omega$	1/2 w.	Fixed	Comp.	10%	X203-up
R17	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	X203-up
R18	306-153	15 k	2 w.	Fixed	Comp.	10%	X203-up
R19	302-226	22 meg	1/2 w.	Fixed	Comp.	10%	X203-up
R20	302-474	470 k	1/2 w.	Fixed	Comp.	10%	X203-up
R21	302-223	22 k	1/2 w.	Fixed	Comp.	10%	101-202
R21	302-105	1 meg	1/2 w.	Fixed	Comp.	10%	203-up
R22	302-223	22 k	1/2 w.	Fixed	Comp.	10%	101-202
R22	308-017	2 k	10 w.	Fixed	WW	5%	203-up
R23	302-334	330 k	1/2 w.	Fixed	Comp.	10%	101-202
R23	306-471	470 $\Omega$	2 w.	Fixed	Comp.	10%	203-up
R24	302-334	330 k	1/2 w.	Fixed	Comp.	10%	101-202
R24	306-472	4.7 k	2 w.	Fixed	Comp.	10%	203-up
R25	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	101-202

## RESISTORS (continued)

R25	312-001	93 $\Omega$	1/2 w.	Var.	Comp.	2%	203-up
R26	302-470	47 $\Omega$	1/2 w.	Fixed	Comp.	10%	101-202
R26	304-104	100 k	1 w.	Fixed	Comp.	10%	203-up
R27	302-221	220 $\Omega$	1/2 w.	Fixed	Comp.	10%	101-202
R27	302-474	470 k	1/2 w.	Fixed	Comp.	10%	203-up
R28	304-471	470 $\Omega$	1 w.	Fixed	Comp.	10%	101-129
R28	304-331	330 $\Omega$	1 w.	Fixed	Comp.	10%	130-202
R28	302-565	5.6 meg	1/2 w.	Fixed	Comp.	10%	203-up
R29	306-103	10 k	2 w.	Fixed	Comp.	10%	101-129
R29	306-153	15 k	2 w.	Fixed	Comp.	10%	130-202
R29	Use 311-023	50 k	1/2 w.	Var.	Comp.	20%	203-408
R29	311-023	50 k	2 w.	Var.	Comp.	20%	409-up
R30	302-474	470 k	1/2 w.	Fixed	Comp.	10%	101-202
R30	302-334	330 k	1/2 w.	Fixed	Comp.	10%	203-up
R31	302-224	220 k	1/2 w.	Fixed	Comp.	10%	X203-up
R32	Use 311-023	50 k	1/2 w.	Var.	Comp.	20%	X203-408
R32	311-023	50 k	2 w.	Var.	Comp.	20%	409-up
R33	302-475	4.7 meg	1/2 w.	Fixed	Comp.	10%	X203-up
R34	306-223	22 k	2 w.	Fixed	Comp.	10%	X203-up
R35	302-155	1.5 meg	1/2 w.	Fixed	Comp.	10%	X203-up
R36	302-225	2.2 meg	1/2 w.	Fixed	Comp.	10%	X203-408
R36	304-225	2.2 meg	1 w.	Fixed	Comp.	10%	409-up
R37	302-224	220 k	1/2 w.	Fixed	Comp.	10%	X203-up
R38	302-103	10 k	1/2 w.	Fixed	Comp.	10%	X203-228
R38	302-333	33 k	1/2 w.	Fixed	Comp.	10%	229-up
R39	302-226	22 meg	1/2 w.	Fixed	Comp.	10%	X122-202
R39	311-015	10 k	2 w.	Var.	WW	20%	203-228
R39	311-053	20 k	2 w.	Var.	WW	20%	229-up
R40	306-472	4.7 k	2 w.	Fixed	Comp.	10%	101-202
R40	304-563	56 k	1 w.	Fixed	Comp.	10%	203-228
R40	304-124	120 k	1 w.	Fixed	Comp.	10%	229-up
R41	308-017	2 k	10 w.	Fixed	WW	5%	101-202
R41	302-104	100 k	1/2 w.	Fixed	Comp.	10%	203-up
R42	306-471	470 $\Omega$	2 w.	Fixed	Comp.	10%	101-202
R42	302-183	18 k	1/2 w.	Fixed	Comp.	10%	203-up
R43	302-105	1 meg	1/2 w.	Fixed	Comp.	10%	101-202
R43	309-035	13.23 k	1/2 w.	Fixed	Prec.	1%	203-up
R44	304-222	2.2 k	1 w.	Fixed	Comp.	10%	101-202
R44	309-032	5.25 k	1/2 w.	Fixed	Prec.	1%	203-up
R45	312-001	93 $\Omega$	1 w.	Var.	Comp.	2%	101-202
R45	309-029	1582 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R46	304-104	100 k	1 w.	Fixed	Comp.	10%	101-202
R46	309-079	416 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R47	306-223	22 k	2 w.	Fixed	Comp.	10%	101-202
R47	309-071	142 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R48	302-474	470 k	1/2 w.	Fixed	Comp.	10%	101-202
R48	309-066	40 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up

## RESISTORS (continued)

R49	302-334	330 k	1/2 w.	Fixed	Comp.	10%	101-202
R49	309-062	14 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R50	302-224	220 k	1/2 w.	Fixed	Comp.	10%	101-202
R50	309-060	4 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R51	302-225	2.2 meg	1/2 w.	Fixed	Comp.	10%	101-202
R51	309-058	2 $\Omega$	1/2 w.	Fixed	Prec.	1%	203-up
R52	312-003	20 k	1 w.	Var.	Comp.	2%	X203-228
R52	312-003	20 k	1 w.	Var.	WW	2%	229-up
R53	304-222	2.2 k	1 w.	Fixed	Comp.	10%	X203-up
R54	302-470	47 $\Omega$	1/2 w.	Fixed	Comp.	10%	X203-up
R55	302-105	1 meg	1/2 w.	Fixed	Comp.	10%	X203-up
R56	304-682	6.8 k	1 w.	Fixed	Comp.	10%	X203-up
R57	304-682	6.8 k	1 w.	Fixed	Comp.	10%	X203-up
R58	Use 308-040	1.5 k	20 w.	Fixed	WW	20%	X203-408
R58	308-040	1.5 k	25 w.	Fixed	WW	5%	409-up
R59	302-224	220 k	1/2 w.	Fixed	Comp.	10%	X203-up
R60	302-684	680 k	1/2 w.	Fixed	Comp.	10%	X203-up
R61	302-565	5.6 meg	1/2 w.	Fixed	Comp.	10%	101-202
R61	311-034	500 k	1 w.	Var.	Comp.	20%	203-up
R62	302-565	5.6 meg	1/2 w.	Fixed	Comp.	10%	101-151
R62	302-475	4.7 meg	1/2 w.	Fixed	Comp.	10%	152-202
R62	302-684	680 k	1/2 w.	Fixed	Comp.	10%	203-up
R63	Use 311-023	50 k	1 w.	Var.	Comp.	20%	101-202X
R64	Use 311-023	50 k	1 w.	Var.	Comp.	20%	101-202X
R65	302-224	220 k	1/2 w.	Fixed	Comp.	10%	101-202X
R66	302-155	1.5 meg	1/2 w.	Fixed	Comp.	10%	101-202X
R67	304-563	56 k	1 w.	Fixed	Comp.	10%	101-202X
R68	302-185	18 k	1/2 w.	Fixed	Comp.	10%	101-202X
R69	302-104	100 k	1/2 w.	Fixed	Comp.	10%	101-202X
R70	302-103	10 k	1/2 w.	Fixed	Comp.	10%	101-121
R70	302-183	18 k	1/2 w.	Fixed	Comp.	10%	122-202X
R71	308-040	1.5 k	25 w.	Fixed	WW	5%	101-202X
R81	Use 311-053	20 k	1 w.	Var.	Comp.	20%	101-202X
R82	302-470	47 $\Omega$	1/2 w.	Fixed	Comp.	10%	101-202X
R83	302-105	1 meg	1/2 w.	Fixed	Comp.	10%	101-202X
R84	304-682	6.8 k	1 w.	Fixed	Comp.	10%	101-202X
R85	302-684	680 k	1/2 w.	Fixed	Comp.	10%	101-202X
R86	304-682	6.8 k	1 w.	Fixed	Comp.	10%	101-202X
R87	302-224	220 k	1/2 w.	Fixed	Comp.	10%	101-202X
R88	311-034	500 k	1 w.	Var.	Comp.	20%	101-202X
R89	302-684	680 k	1/2 w.	Fixed	Comp.	10%	101-202X

SWITCHES

SW1	260-134	On-Off	toggle	unwired	101-up
SW2	260-056	Freq. Sel.,	3 section, 4 position, rotary	unwired	101-up
SW2	262-001	Freq. Sel.,	3 section, 4 position, rotary	wired	101-up
SW3	Use 260-025	Cal.	1 section, 2 position, rotary	unwired	X203-408
SW3	260-025	Cal.	2 section, 2 position, rotary	unwired	409-up
SW4	Use 260-023	LF Range	1 section, 9 position, rotary	unwired	X203-408
SW4	Use 262-002	LF Range	1 section, 9 position, rotary	wired	X203-408
SW4	260-023	LF Range	1 section, 7 position, rotary	unwired	409-up
	262-002	LF Range	1 section, 7 position, rotary	wired	409-up

TRANSFORMERS

T1	120-005	117-234V, 50-60 cycle	101-up
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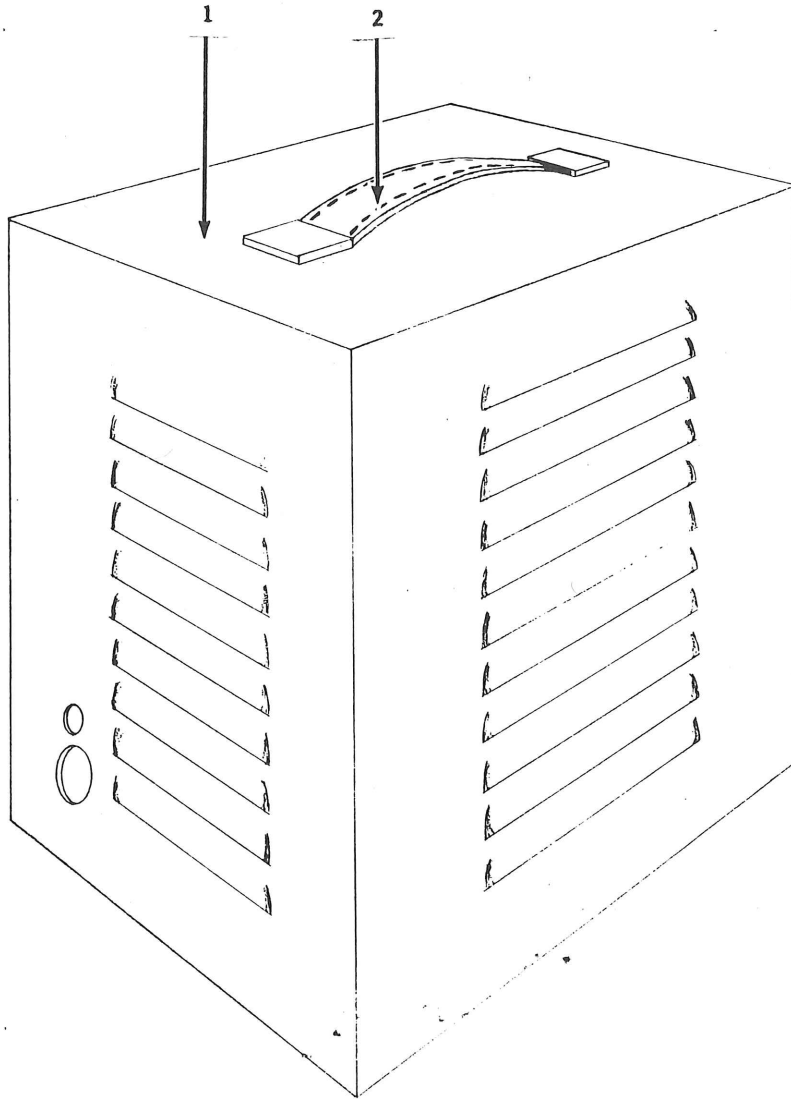
VACUUM TUBES

V1	154-012	6AG7	101-up
V2	154-012	6AG7	101-up
V3	154-012	6AG7	101-up
V4	154-012	6AG7	101-up
V5	154-032	6J6	101-up
V6	154-041	12AU7	101-up
V7	154-041	12AU7	101-up
V8	154-008	5V4G	101-up
V9	**	6Y6G	101-202
V9	154-021	6AU5GT	203-up
V10	154-022	6AU6	101-up
V11	154-002	OC3/VR105	101-up

\*\*NOTE: If 6Y6G is not available locally, 6AU5GT may be used by re-wiring circuit according to schematic diagram.

# 104 MECHANICAL PARTS

## CABINET

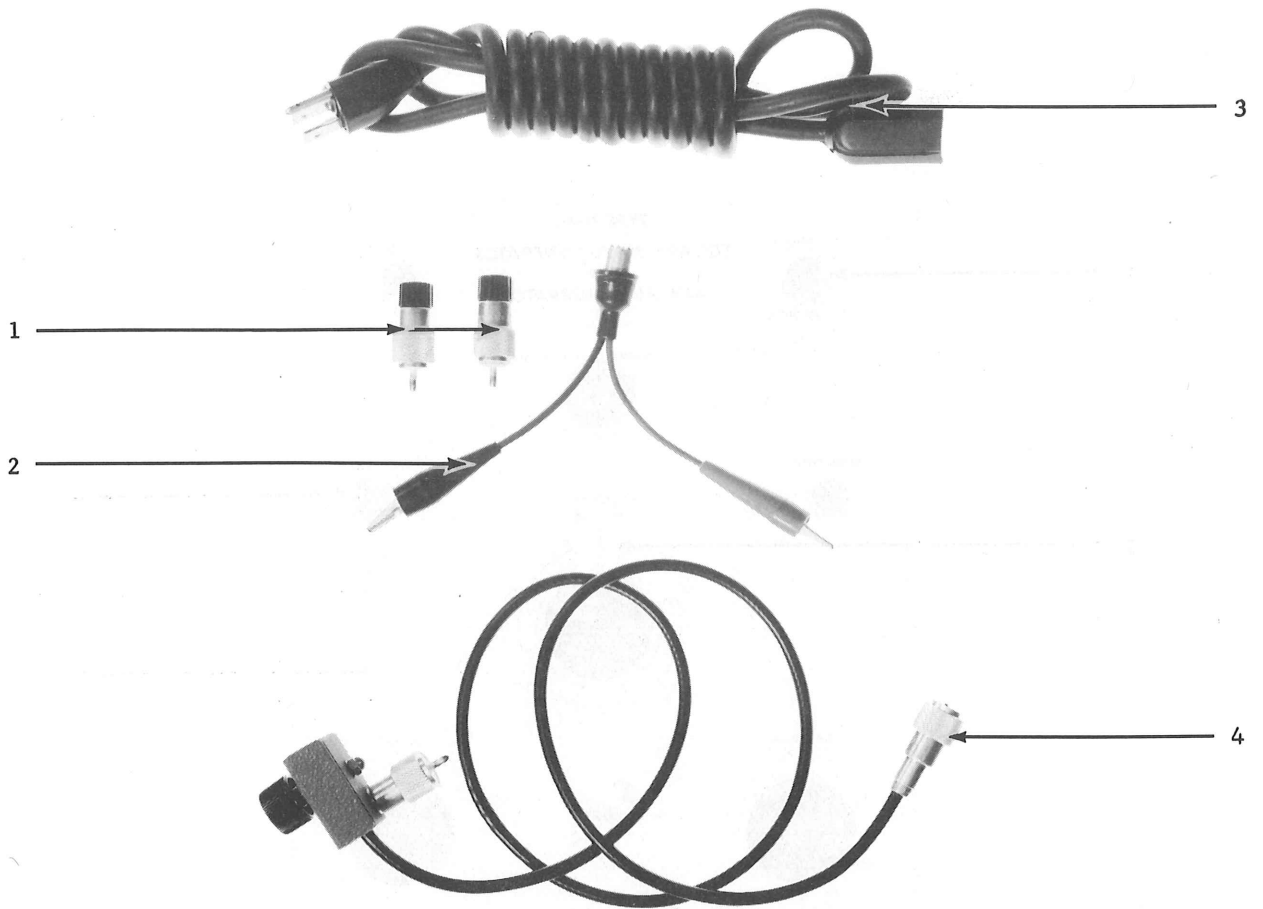


Ref. No.	Item Name	Description	Part No.
1.	Cabinet,		437-001
2.	Handle	leather	367-001



# 104 MECHANICAL PARTS

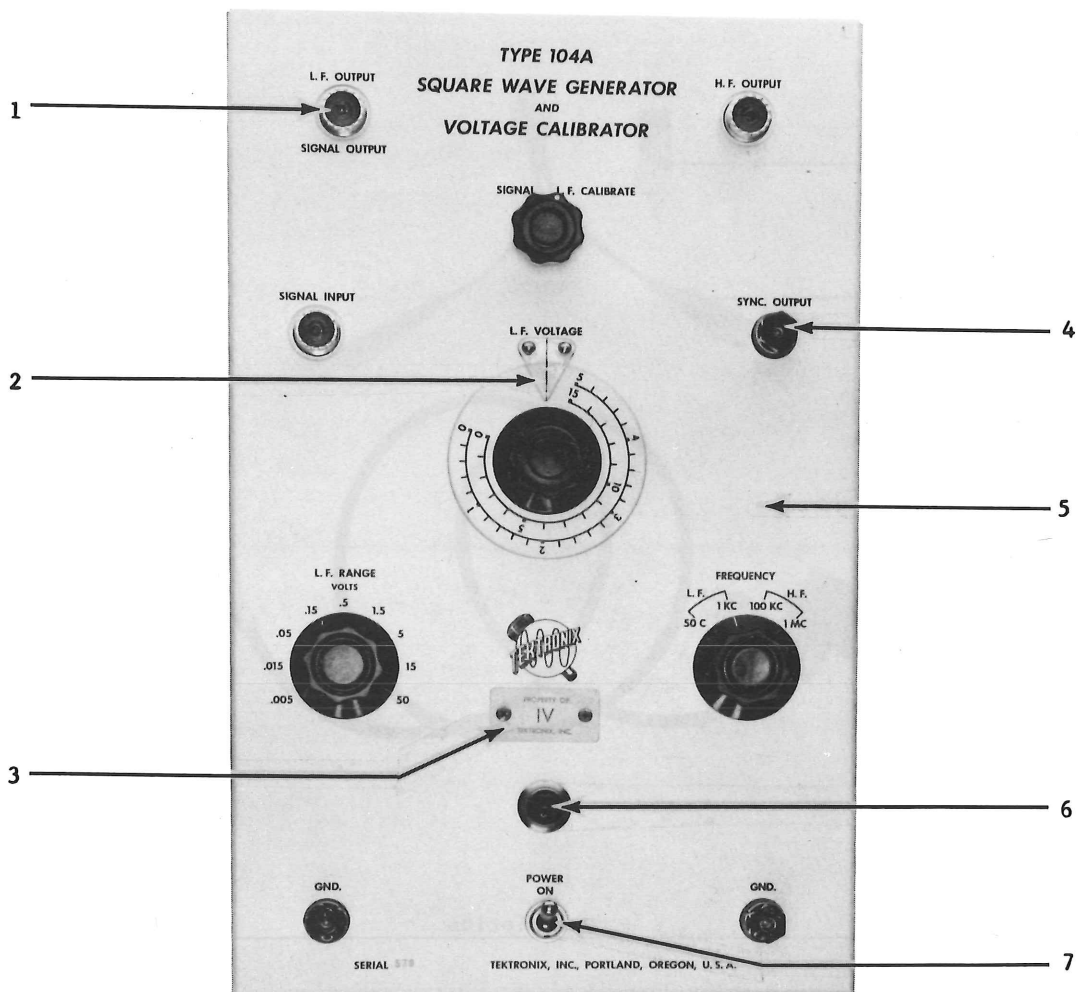
## ACCESSORIES



Ref. No.	Item Name	Description	Part No.
1.	Binding Post Adaptor (2)		013-004
2.	Adaptor		013-003
3.	Power Cord		161-004
4.	Attenuator Cable		012-004

# 104 MECHANICAL PARTS

FRONT VIEW



# 104 MECHANICAL PARTS

FRONT VIEW

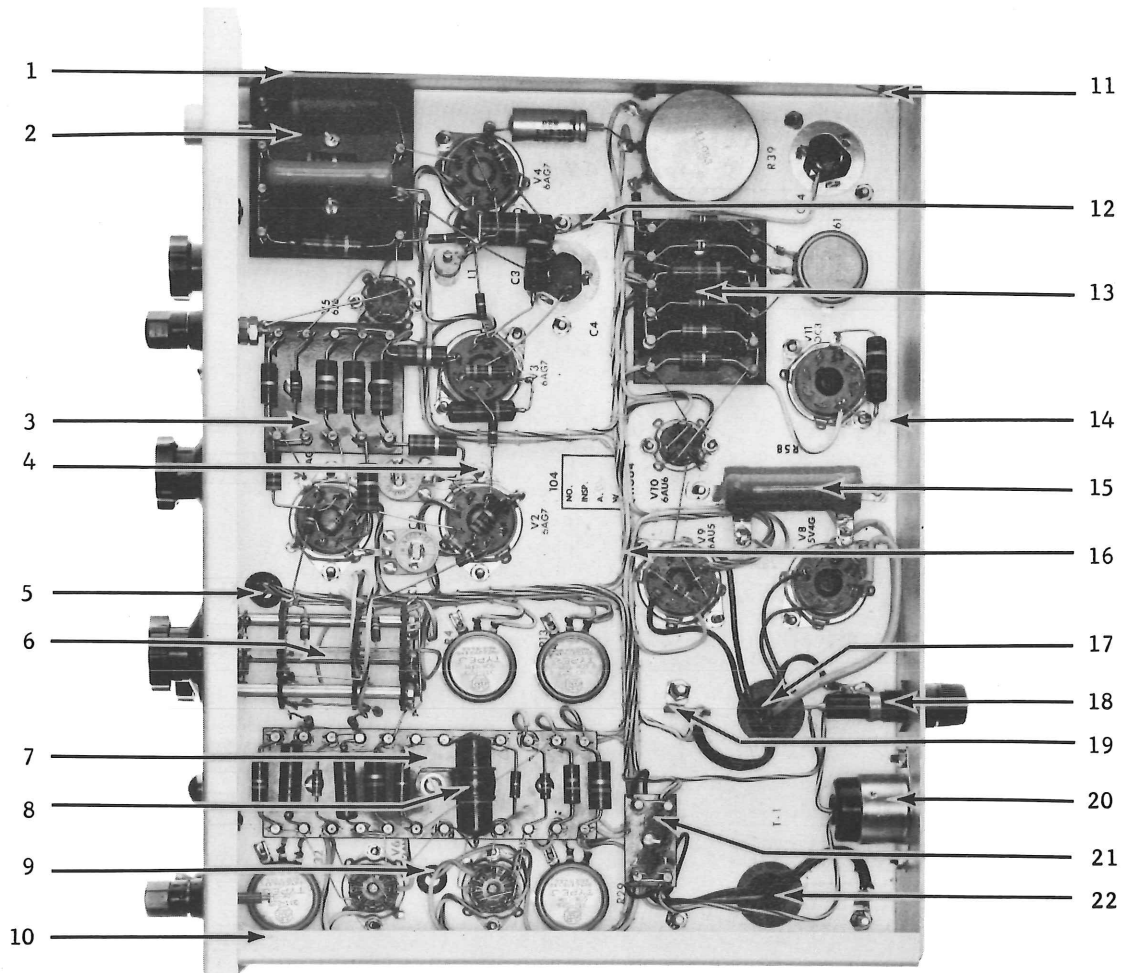
Ref. No.	Item Name	Description	Part No.
1.	Connector, coax		131-012
2.	Pointer, molded		331-002
	Screw,	2-56 x 1/2 in. RHS	211-034
	Nut,	2-56 x 3/16 in.	210-405
	Lockwasher,	#2 ext.	210-002
3.	Identification Tag	(for factory use only)	
4.	Post, binding		Ass'y 129-001
5.	Panel, Front		333-002
6.	Socket, Jewel,	pilot light red	136-025 378-518
7.	Switch Washer, Nut,	1 pole, 1 thro	260-134 210-902 210-473

## KNOBS

Part No.	Control	Color	Qty.
366-007	LF Range; Frequency	Black	2
366-507	LF Voltage	Black	1
366-510	Signal LF Calibrate	Black	1

# 104 MECHANICAL PARTS

RIGHT SIDE VIEW

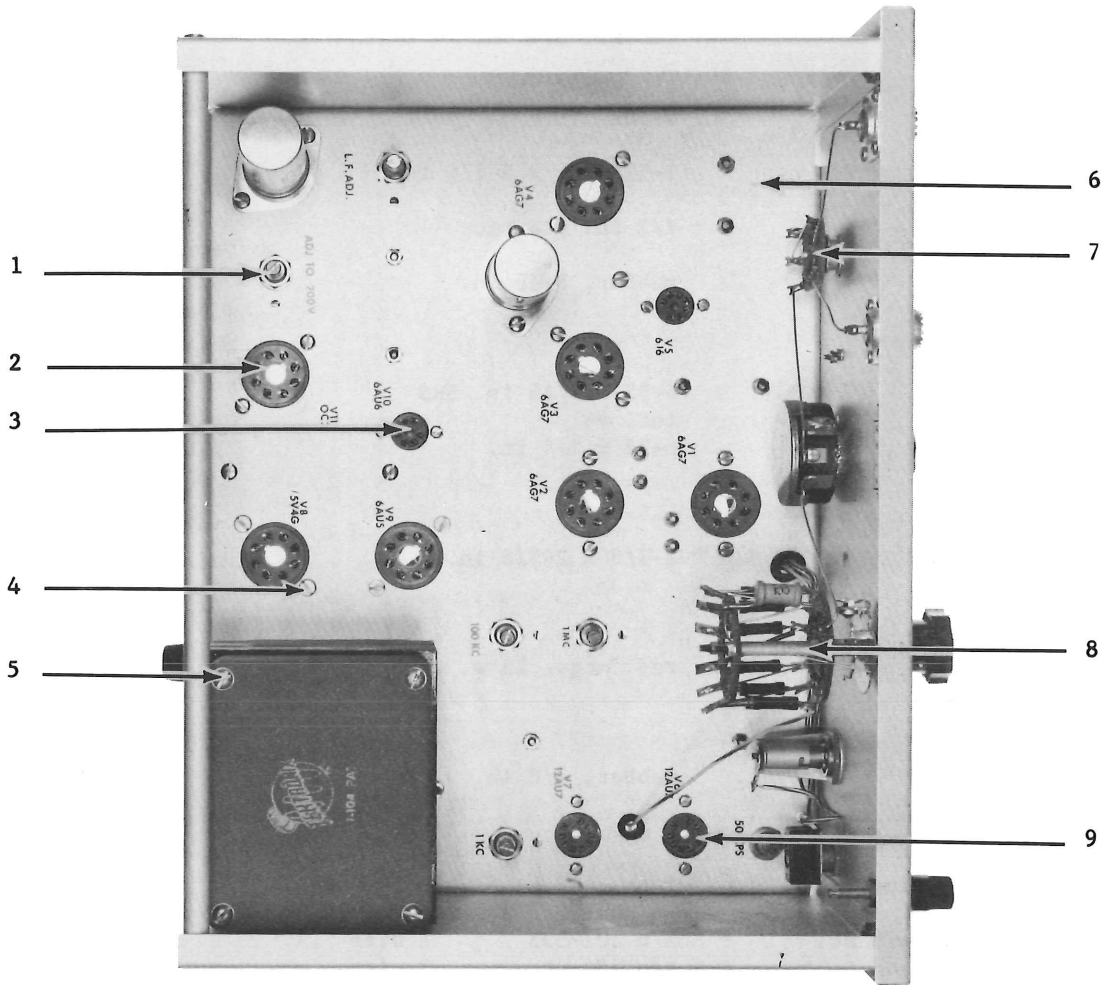


## 104 MECHANICAL PARTS

Ref. No.	Item Name	Description	Part No.
1.	Plate, Top		387-526
2.	Board, terminal	2-3/8 x 2-1/2 in.	392-010
3.	Board, terminal	1-15/16 in.	392-055
4.	Screw,	6-32 x 5/16 in. BHS	211-507
5.	Grommet,	rubber, 3/8 in.	348-004
6.	Switch, Frequency	unwired wired	260-056 262-001
7.	Board, terminal	1-5/8 in. x 5-1/4 in.	392-018
8.	Clamp, cable	1/2 in. plastic	343-006
9.	Grommet,	rubber, 5/16 in.	348-003
10.	Plate, Bottom		387-515
11.	Screw, Lockwasher, Nut,	6-32 x 5/16 in. BHS int. #6 6-32 x 1/4 in.	211-507 210-006 210-407
12.	Lug, solder		210-202
13.	Board, terminal	1-7/8 x 2-7/8 in.	293-056
14.	Chassis		441-004
15.	Bracket,	res. mtg., 25 w.	214-017
16.	Cable, harness		179-029
17.	Grommet,	rubber, 3/8 in.	348-004
18.	Holder, fuse	3 AG	352-002
19.	Connector, terminal	1 pt.	131-022
20.	Connector, Chassis Mt.	s/n 101-593      2 wire s/n 594-up      3 wire	131-010 131-102
21.	Board, terminal	3/4 x 1-3/8 in.	392-005
22.	Grommet,	rubber, 3/8 in.	348-004

# 104 MECHANICAL PARTS

LEFT SIDE



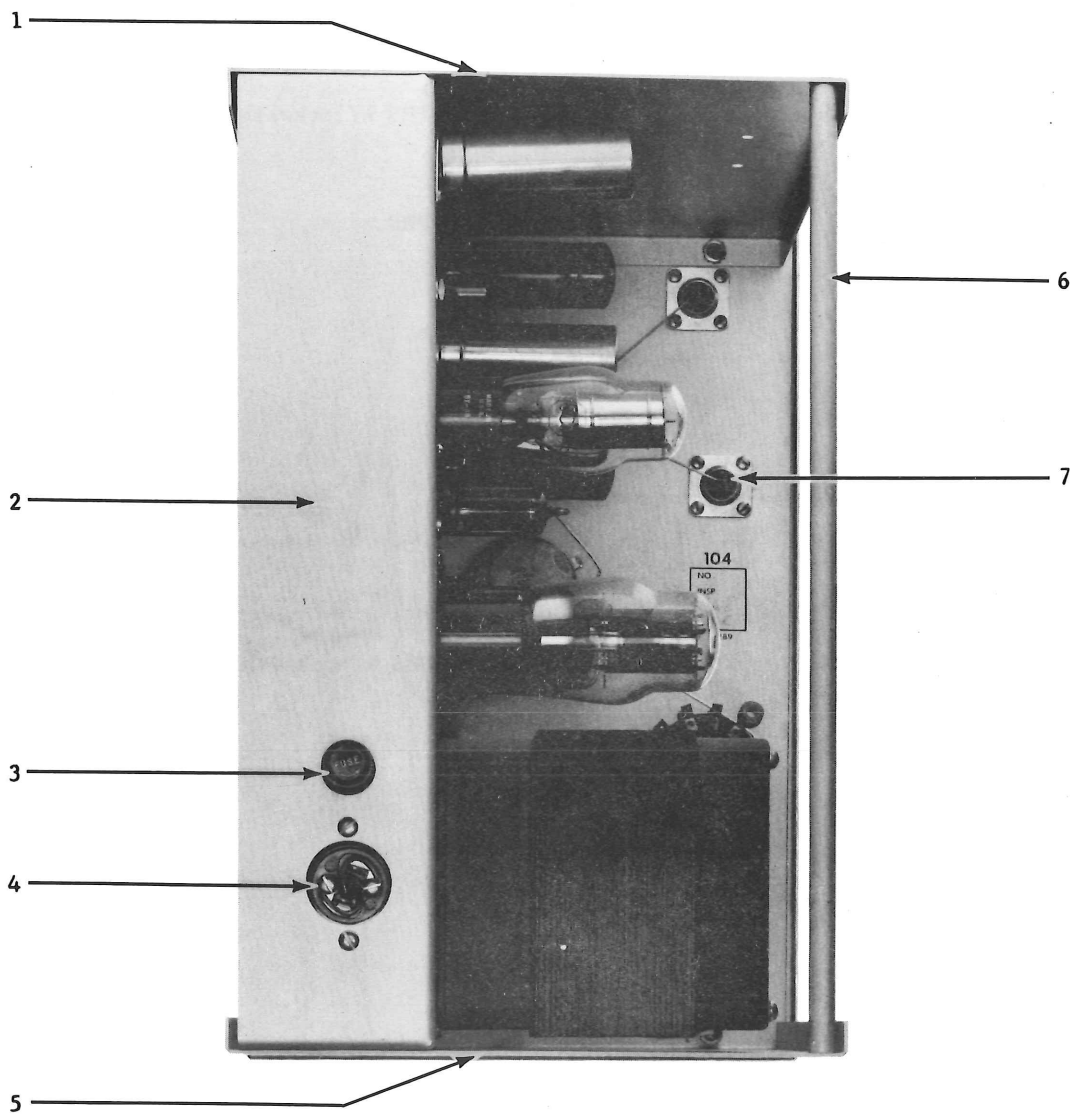
# 104 MECHANICAL PARTS

LEFT SIDE VIEW

Ref. No.	Item Name	Description	Part No.
1.	Nut, hex Washer, steel	3/8-32 x 1/2 in. .390 x 9/16 in.	210-413 210-840
2.	Socket Screw, Lockwasher, Nut, hex	STM8G 6/32 x 5/16 in. PHS w/lockwasher int. #6 6-32 x 1/4 in.	136-011 211-534 210-006 210-407
3.	Socket, Screw, Lockwasher, Nut, hex	STM7G 4/40 x 5/16 in. PHS w/lockwasher int. #4 4-40 x 3/16 in.	136-008 211-033 210-004 210-406
4.	Screw, Lockwasher, Nut, hex	6-32 x 5/16 in. FHS int. #6 6-32 x 1/4 in.	211-508 210-006 210-407
5.	Bolt, transformer Lockwasher Nut,	8-32 x 3/8 x 5 in. int. #8 8-32 x 5/16 in.	212-017 210-008 210-409
6.	Chassis		441-004
7.	Switch, Signal L.F. Cal.	unwired	260-025
8.	Switch, L.F. Range	wired unwired	262-002 260-023
9.	Socket, Screw, Lockwasher, Nut, hex.	STM9G 4-40 x 5/16 in. PHS w/lockwasher int. #4 4-40 x 3/16 in.	136-015 211-033 210-004 210-406

# 104 MECHANICAL PARTS

REAR VIEW





# 104 MECHANICAL PARTS

REAR VIEW

Ref. No.	Item Name	Description	Part No.
1.	Plate, Top	frame back	387-526
2.	Chassis		441-004
3.	Holder, Fuse	3AG	352-002
4.	Connector, Chassis Mt.	s/n 101-593 s/n 594 - up	2-wire 3-wire 131-010 131-102
5.	Plate, Bottom	frame back	387-515
6.	Rod,	alum. 3/8 x 13 in.	385-067
7.	Connector, coax		131-012

