

ELECTRONIC TECHNICIAN/DEALER • TEKFAK 111 • VOLUME 11

TV SCHEMATICS COVER OVER 21 MANUFACTURERS • HUNDREDS OF CHASSIS & MODEL NUMBERS • PUBLISHED BY ELECTRONIC TECHNICIAN/DEALER, 1 EAST FIRST STREET, DULUTH, MINNESOTA 55802

ELECTRONIC TECHNICIAN/DEALER - TEKFAK 111 - VOLUME 11

ADMIRAL

TV Chassis:

TL2	3
19H10	4-5
2K16	6-7
HI-IA, IHI-IA, IAHI, H2-1A	8
NAI-IA	9
T22H4-IA	10
T3K3-IA, T3K3-1B	11
T7H2-IA, T9HI-IA	12
TG2-2	13
K10	14-15
K20	16-17

AIRLINE

Model:

GCI-12420A, B	18-19
GI-12460A	20-21
GCI-13668B	22
GEN-11160A	23
GEN-11460A	24
GEN-11461A, GEN 11481A	25
GEN-11760A	26
GEN-11960A	27
GEN-11961A	28
GEN-13460A	29
GEN-12440C	30-31

DUMONT

Color TV Chassis:

120926, 928, 957, 958	32-33
-----------------------	-------

4K16	34-35
------	-------

ELECTROHOME

Color TV Chassis:

C-6	36-37
C-8	38-39
M10	40

EMERSON

TV Chassis:

12P60/12PG1W	41
120962, 964	42
120969, 970	43
120921, 923	44-45
120974B	46-47
120976, 977, 980, 981, 982, 983, 984	48-49
T10K10-ID, C	50-51
920	52-53

GENERAL ELECTRIC

TV Chassis:

C-1	54-55
D-2	56
ETVAI	57
H3	58-59
N-1	60-61
N-2	62-63
T-5	64

V-2	65
-----	----

J. C. PENNEY

TV Model:

1316A-89	66
1315	67

MAGNAVOX

TV Chassis:

T934	68-69
T928	70
T935	71
T936	72-73
T939	74-75
T940	76-77
T941 Series	78
T942 Series	79
T944 Series	80
T945 Series	81
T946 Series	82
T948	83
T950	84-85
T951	86-87
T949 Series	88

MOTOROLA

Chassis:

TS465	89
TS934	90-91
TS930	92-93
TS929	94-95

OLYMPIC

Color TV Chassis:

CT400	96-97
TV Models: 9P44/9P45/9P46/9P54	98

PHILCO-FORD

TV Chassis:

18CT24	99
20L23	100
20P22	101
20P24	102
20R27	103
20S32/A	104
20T33	105

Color TV Chassis:

19FT60B	106-107
20HT70/20HT71	108-109
20QT74	110-111
21ST90, T/21ST91	112-113
20V35	114

RCA SALES CORPORATION

TV Chassis:

179 Series	115
CTC49 Series	116-117
KCS183 Series	118
KCS185	119
KCS169X Series	120
KCS176 Series	121

KCS178 Series	122
KCS184A	123
CTC27X Series	124-125
CTC39XAA	126-127
CTC41 Series	128-129
CTC43 Series	130-131
CTC47	132-133

SYLVANIA

TV Chassis:

B13-1	134
B14-1	135

Color TV Chassis:

EO1-1-2-11-12	136-137
D14-3-4	138-139
D15-1-2	140-141
D12-20, 21	142-143
D16-2	144-145

ZENITH

TV Chassis:

13A12	146
14B382, 14B39Z	147
14B36	148
12A16, M, S, Z, MZ, SZ	149

Color TV Chassis:

12A10C15	150-151
12A8C14	152-153
14A9C29/14A10C29	154-155
14A9C50	156-157
40BC50	158-159

Copyright 1973
by ELECTRONIC TECHNICIAN/DEALER
1 East First Street
Duluth, Minnesota 55802

ADMIRAL

TV Chassis TL2

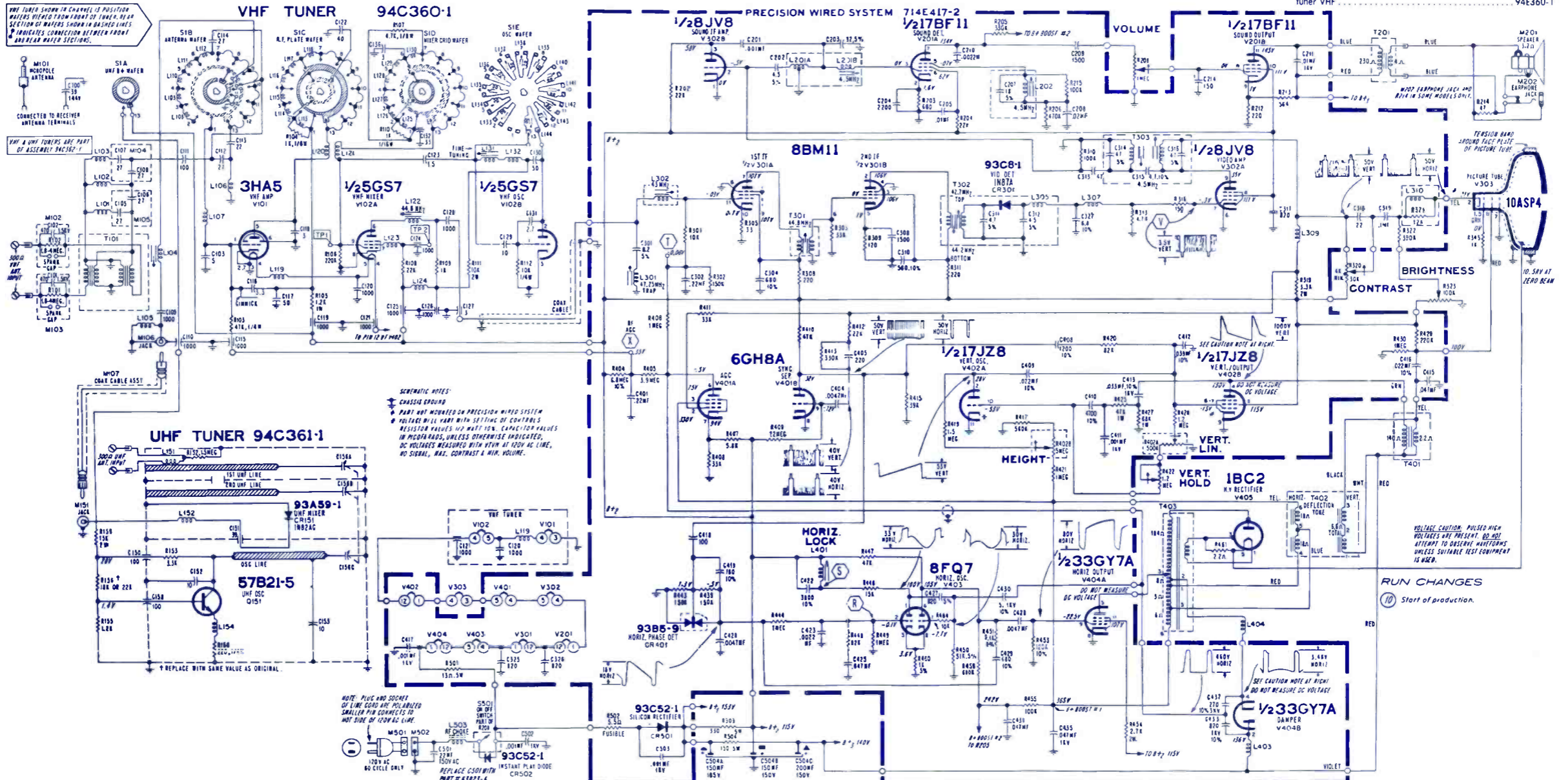
CHASSIS VOLTAGES WITH SIGNAL

17BF11		8BM11		8FQ7		33GY7A	
Pin #	Volts	Pin #	Volts	Pin #	Volts	Pin #	Volts
1	Fil	1	Fil	1	84	1	Fil
2	2.1	2	106	2	.55	2	138
3	0	3	106	3	3.5	3	
4	0	4	0	4	Fil	4	Do Not Measure
5	0	5	1.35	5	Fil	5	Do Not Measure
6	7.0	6	0	6	94	6	
7	130	7	107	7	-9	7	
8	0	8	0	8	3.5	8	0
9	7.6	9	107	9	0	9	-14
10	120	10	.6			10	0
11	145	11	.03			11	82
12	Fil	12	Fil			12	Fil

8JV8		17JZ8		6GH8A	
Pin #	Volts	Pin #	Volts	Pin #	Volts
1	0	1	Fil	1	52
2	-1.2	2	28	2	80
3	66	3	0	3	350
4	Fil	4	Do Not Measure	4	Fil
5	Fil	5	5	5	Fil
6	0	6	-16	6	-68
7	-2.5	7	-16	7	104
8	124	8	110	8	0
9	80	9	0	9	-21

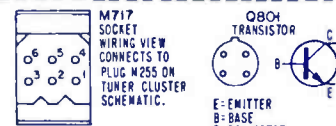
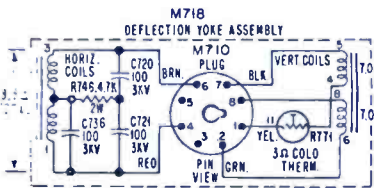
IF AGC TP "I" -11V
RF AGC TP "R" -2.6

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R208	1M, vol control with switch	75C120-1
R320	30K, contrast control	75C121-3
R322	100K, bright control	75C121-2
R402A	vert lin control	75C95-6
R402B	height control	75C95-6
R422	1.2M, vert hold control	75C121-1
R501	132Ω, 5w	61C20-56
R502	5.5Ω, fuse type	61C48-1
R504	150Ω, 5w	61C20-44
C432	270pf, 3Kv, cer disc	65A10-434
C504A	150μf, 165v elect	67D15-393
C504B	150μf, 150v elect	67D15-393
C504C	200μf, 150v elect	67D15-393
L202	quad coil	72C132-77
L301	47.25MHz trap	72C296-4
L307	resonant choke	73C45-243
L309	video peaking coil	73C5-20
L401	horiz lock coil	94D17-17
L503	ac line choke	79C81-1
T201	audio output xformer	79C81-23
T301	1st IF xformer	72C132-76
T303	sound takeoff xformer	72C185-5
T401	vert output xformer	79A139-3
T402	deflection yoke assembly	94A372-1
T403	horiz output xformer	79A138-5
CR301	diode, video detector	93C8-1
CR401	horiz phase detector	93B5-9
CR501	silicon rectifier	93A52-1
CR502	Instant play	93B52-1
	tuner UHF	94E361-1
	tuner VHF	94E360-1



RUN CHANGES

- (20) Start of production.
- (21) To standardize PWS systems with other current chassis, different part No. PWS 400 is used. R471 (9.1K, 4W) was transferred from early PWS 400 to chassis as R754.
- (22) To reduce line radiated interference, R717 & C705 were removed from ground side of AC line & connected to hot side of AC line. C704 (.047MF) was removed from across M702. C735 was added across output of L709.
- (23) To stabilize brightness range R460 & C455 were removed from between pin 2 of V404 & term. of brightness control. R778 added from term. HH of PWS500 to term. of brightness control. R456 changed from 180K to 120K.
- (24) HV adjust R779 (formerly R466) part number changed and was removed from PWS 400 and mounted on chassis. R717 & C705 transferred from hot side to cold side of AC line.
- (25) For improved performance, CR402 was removed and replaced with CR402A thru D. R465, R467 & R477 were removed. R478 & R479 were added.
- (26) As alternate circuitry, CR402A thru CR402D changed from part nos. 93C60-3 to 93C69-1. R477 added between jct. of C461 & R472 to R779. R479 changed from 270K to 300K, 5%. R478 changed from 8.20K to 1meg. C465 was C730 & was transferred from chassis to PWS400.
- (27) For improved reliability, C735 was changed from .01MF, part no. 5312-21 to .015MF, part no. 63823-1.
- (28) To increase brightness range, R178 (1meg) was replaced with Master Brightness control. R171 was changed from 820K to 180K.



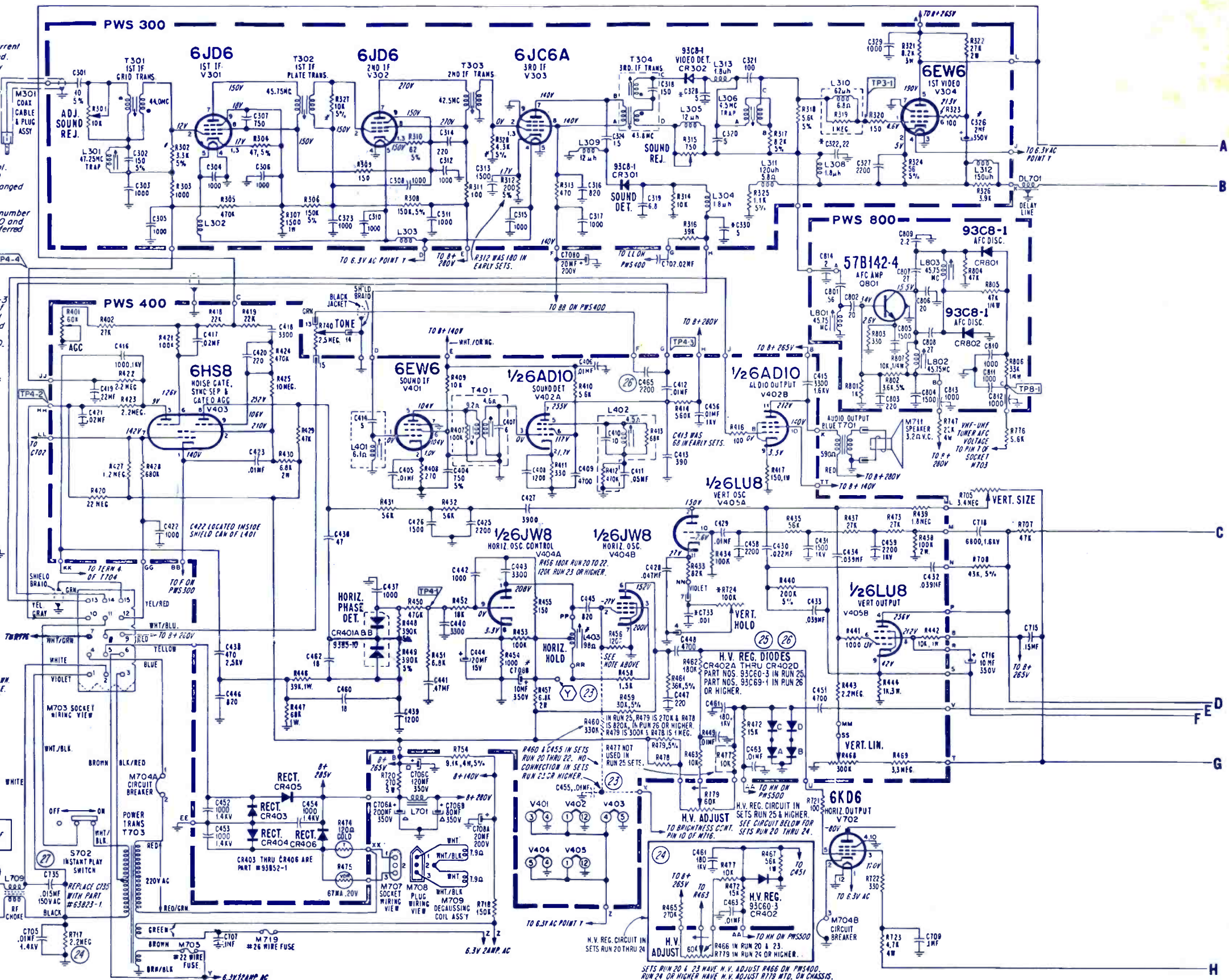
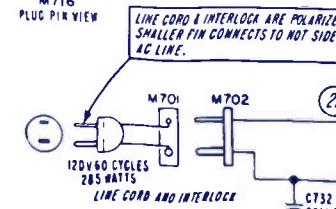
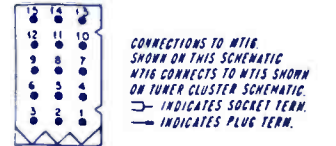
SCHEMATIC NOTES

⊕ CHASSIS GROUND. † C535 INSIDE SHIELD OF T501.

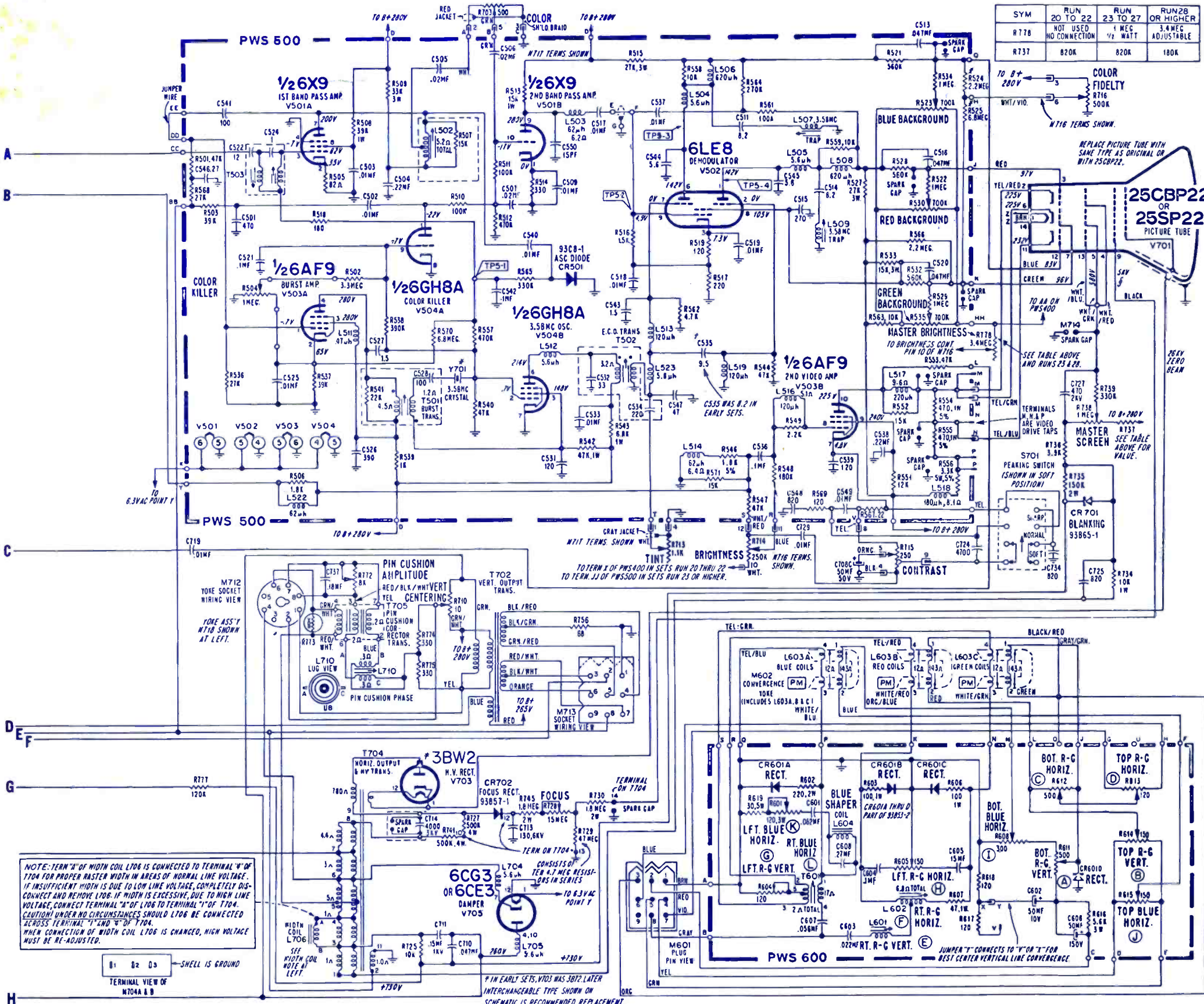
* PART MOUNTED ON BOTTOM OF PRECISION WINDUP SYSTEM. RESISTOR VALUES 1/2 WATT, 10% CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED. SEE SEPARATE SCHEMATIC FOR VHF-UHF TUNERS AND CONTROL CIRCUITRY.

RESISTANCE VALUES OF COILS LESS THAN 1 OHM NOT SHOWN. VOLTAGES MEASURED WITH VTVM AT 120 VOLTS AC LINE. NO SIGNAL OR UNUSED UHF CHANNEL. ALL CONTROLS IN NORMAL OPERATING POSITION.

Ⓢ VOLTAGE WILL CHANGE WITH SETTING OF CONTROLS.



SETS RUN 20 & 23 HAVE H.V. ADJUST R466 ON PWS400. RUN 24 OR HIGHER HAVE H.V. ADJUST R719 MTD. ON CHASSIS.



SYMBOL DESCRIPTION ADMIRAL PART NO.

R301 - adj sound rej control 75B101-8

R315 - 750Ω, sound rej control 75C101-3

R401 - 60K, AGC control 75C101-9

R466 - 60K, HV adj control 75C101-12

R468 - 300K, vert lin control 75C101-10

R474 - therm 61C50-5

R475 - varistor 61C51-4

R504 - 1M, color killer control 75C101-11

R523 - background triple control 75C95-9

R530 - background triple control 75C95-9

R535 - background triple control 75C95-9

R705 - 3.4M, vert size control 75C96-20

R710 - 10K, vert centering control 75D64-17

R728 - 15M, focus control 75C108-5

R729 - 47M, 10% (order 10-4.7M) 60B67-475

R738 - 1M, master screen control 75C136-1

R771 - 3Ω, therm in yoke 61C27-1

R773 - voltage dependent 61B46-2

R779 - HV reg control 75A101-12

C706A - 200μf, 350v elect 67D15-392

C706B - 80μf, 350v elect 67D15-392

C706C - 120μf, 350v elect 67D15-392

C708A - 20μf, 200v elect 67D15-394

C708B - 10μf, 350v elect 67D15-394

C708C - 50μf, 50v 67D15-394

C708D - 20μf, 200v elect 67D15-394

L401 - sound takeoff coil 72C287-4

L402 - quad coil 72C287-3

L403 - horiz osc coil 94D268-4

L502 - bandpass coil 72C269-4

DL701 - delay line 72C217-3

L701 - filter choke 74B18-62

L706 - width choke 73A90-1

L709 - line choke 73B31-16

T303 - second IF xformer 72C251-8

T304 - third IF xformer 72C220-2

T401 - sound IF xformer 72C314-2

T501 - burst xformer 72C284-4

T503 - bandpass input coil 72C302-1

T601 - RT blue horiz xformer 94C305-9

T701 - audio output xformer 79D33-112

T702 - vert output xformer 79D106-5

T703 - power xformer 80C104-4

T704 - horiz output xformer 79D130-3

CR402A-D - HV reg diode 93A69-1

CR501 - automatic chromo control 93B8-1

CR702 - focus rectifier 93A57-1

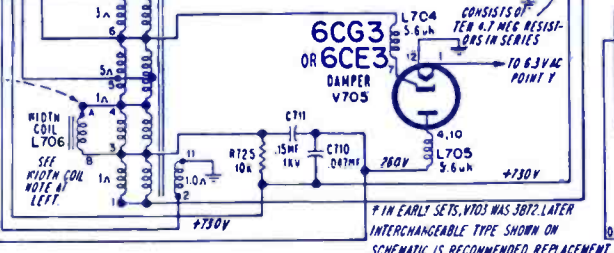
Q801 - AFC trans 57B142-4

Y701 - 3.58MHz crystal 93C22-3

M704A,B - cir brkr 84D29-1

M705 - fuse wire 98A136-4

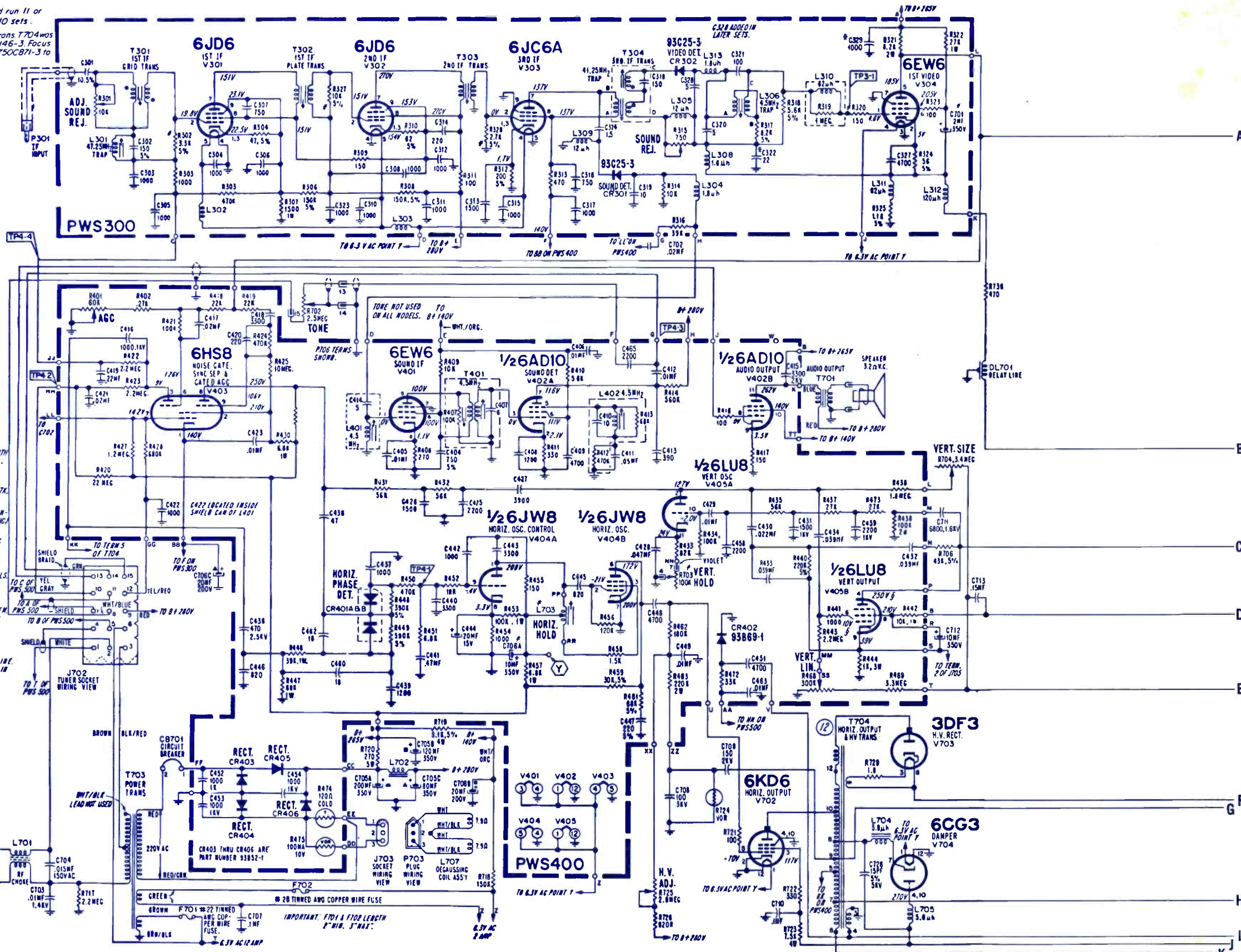
NOTE: TERMINAL "A" OF WIDTH COIL L706 IS CONNECTED TO TERMINAL "A" OF T704 FOR PROPER RASTER WIDTH IN AREAS OF NORMAL LINE VOLTAGE. IF INSUFFICIENT WIDTH IS DUE TO LOW LINE VOLTAGE, COMPLETELY DISCONNECT AND REMOVE L706. IF WIDTH IS EXCESSIVE, DUE TO HIGH LINE VOLTAGE, CONNECT TERMINAL "A" OF L706 TO TERMINAL "A" OF T704. CAUTION! UNDER NO CIRCUMSTANCES SHOULD L706 BE CONNECTED ACROSS TERMINAL "A" AND "B" OF T704.



NOTE: IN EARLY SETS, T701 WAS 30T2. LATER INTERCHANGEABLE TYPE SHOWN ON SCHEMATIC IS RECOMMENDED REPLACEMENT.

RUN CHANGES

- ① This schematic applies to sets stamped run 11 or higher. See separate schematic for run 10 sets.
- ② For improved reliability, horizontal output trans T704 was changed from part no. 79D146-2 to 79D146-3. Focus module R731 was changed from part no. 750C871-3 to 750C871-4.



SCHEMATIC NOTES.

VOLTAGE READINGS SHOWN IN BRACKETS () TAKEN WITH COLOR SIGNAL. VOLTAGE READINGS WITHOUT BRACKETS INDICATES READINGS TAKEN WITHOUT SIGNAL. TUNER SET AT UNUSED CHANNEL.

TO PREVENT LOADING IN CRITICAL STAGES, USE A 47K 1/2W ISOLATING RESISTOR AT END OF TEST PROBE.

INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MAXIMUM ROTATION (FULLY CW, BUT BELOW BLOWING).

↑ INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MINIMUM ROTATION (FULLY CCW). VOLTAGES IN VIDEO CIRCUITRY WILL VARY WITH VIDEO CONTENT OF PICTURE BEING RECEIVED. VOLTAGES SHOWN ARE TYPICAL READINGS.

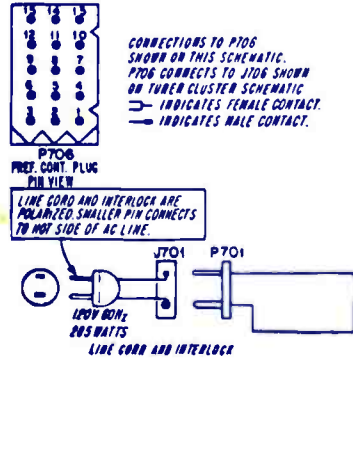
§ INDICATES VOLTAGE WILL VARY WITH SETTING OF CONTROLS.

♦ PART MOUNTED ON CHASSIS OR OTHER ASSEMBLY.

■ CHASSIS GROUND.

♦ PART MOUNTED ON BOTTOM OF PRECISION WIRED SYSTEM. RESISTOR VALUES 1/2 WATT, 10% CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED. SEE SEPARATE SCHEMATIC FOR VHF-UNT TUNERS AND CONTROL CIRCUITRY.

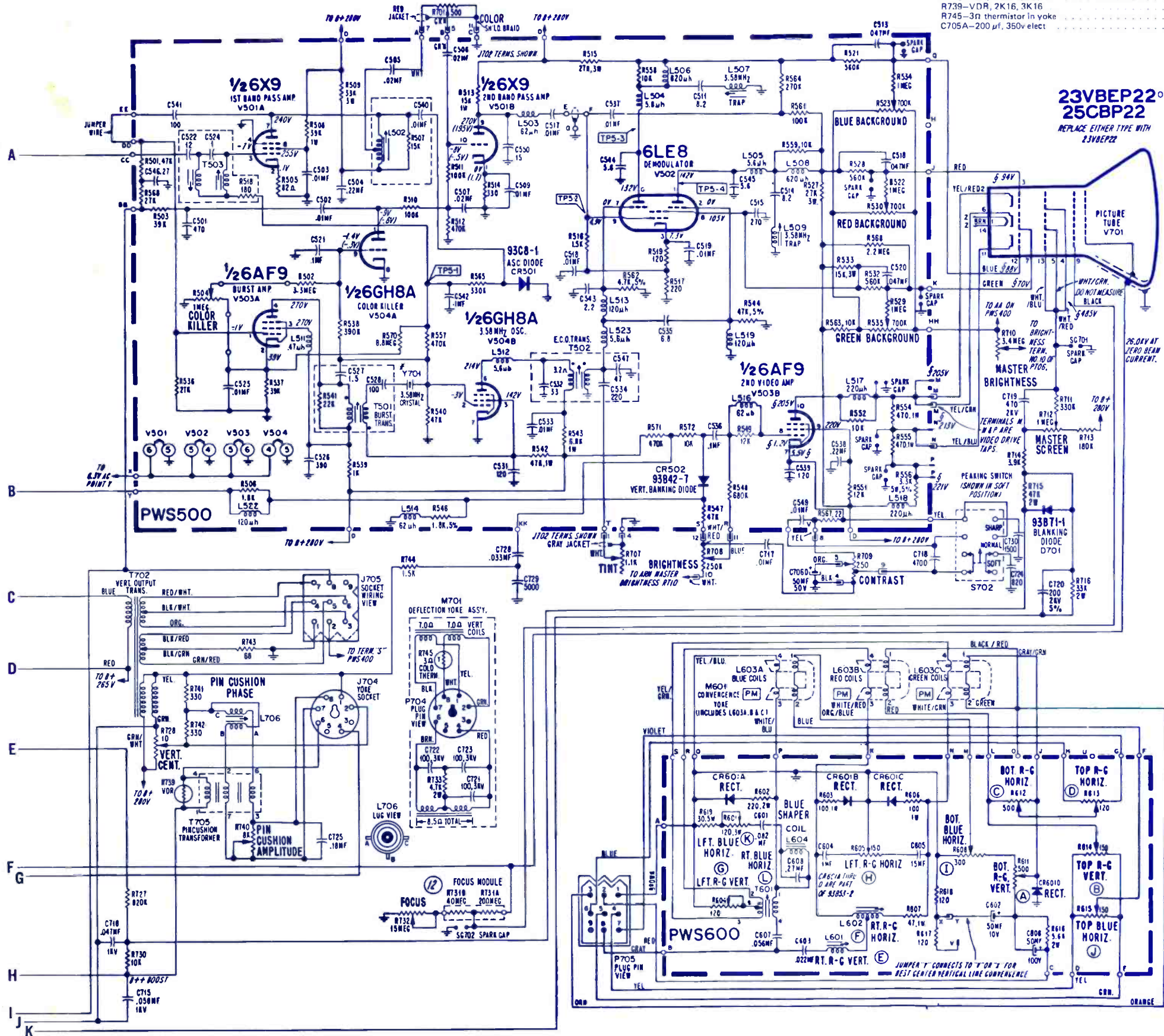
VOLTAGES MEASURED WITH VTYM AT 120 VOLTS AC LINE. NO SIGNAL OR UNUSED UNF CHANNEL. ALL CONTROLS IN NORMAL OPERATING POSITION.



ADMIRAL
Color TV Chassis
2K16

R315-750Ω sound reject control	75A101-3
R401-60K, AGC control	75A101-9
R46B-300K, vert lin control	75A101-10
R474-thermistor, NTC	61A50-3
R475-varistor	61A51-1
R704-3.4M, vert size control	75A96-20
R710-master bright	75A135-24
R724-VDR	61A46-13
R731A, B-focus rectifier	700A871-4
R732-16M, focus control	76A109-2
R739-VDR, 2K16, 3K16	61A46-2
R745-3Ω thermistor in yoke	61A27-1
C705A-200 μf, 350v elect	67A15-392

C705B-80 μf, 350v elect	67A15-392
C705C-120 μf, 350v elect	67A15-392
C706A-20 μf, 200v elect	67A15-394
C706B-10 μf, 350v elect	67A15-394
C706C-60 μf, 60v elect	67A15-394
C706D-20 μf, 200v elect	67A15-394
L401-sound takeoff coil	72A287-4
L402-quad coil	72A287-3
L502-bandpass coil	72A269-4
L701-line choke	73A31-16
L702-filter choke	74A18-62
L703-horiz coil	94A268-4
T401-sound IF xformer	72A314-2
T503-bandpass input coil	72A302-1
T701-audio output xformer	79A33-112
T702-vert output xformer	79A106-5
T703-power xformer	80A104-4
T704-horiz output xformer	79A146-3
T705-PC xformer	79A127-1
CR702-focus rectifier module	700A871-3
CB701-circuit breaker, single	84A17-11
DL701-delay line	72A217-3
NC2063-29 Tuner Cluster	
R258-1M, vol control	75C131-13
R703-color control, 500Ω	75D127-6
R713-tint control, 1100Ω	75D127-7
Control Assembly 3C3401/06/11	
R702-2.5M, tone control	75A134-12
R703-100K, vert hold control	75A134-6
R708-250K, bright control	75A134-5
R709-250Ω, contrast control	75A134-4
NC2573-14 Tuner Cluster and Control Assembly	
R258-1M, vol control	75C151-10
R703-color control, 500Ω	75D127-6
R713-tint control, 1100Ω	75D127-7
R714-bright control	75D134-5
R715-contrast control	75C134-4
R724-vert hold control	75C134-6
R740-tone control	75C134-12
NC2573-26, NC2573-11 Tuner Clusters	
R258-vol control NC2573-11	75C127-14
R258-vol control NC2573-26	75A151-10
tuner, VHF	
94E330-3	



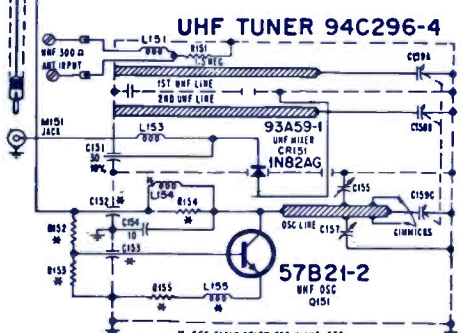
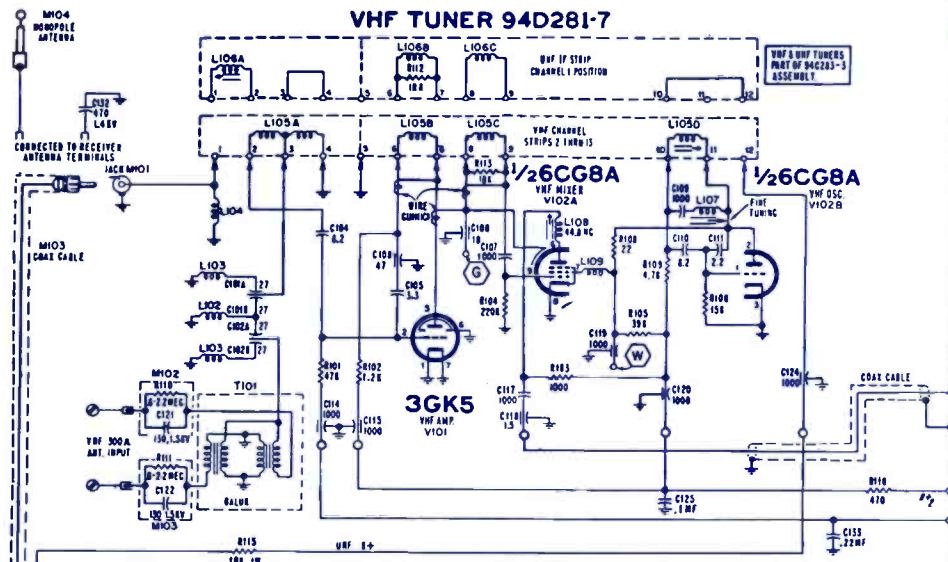
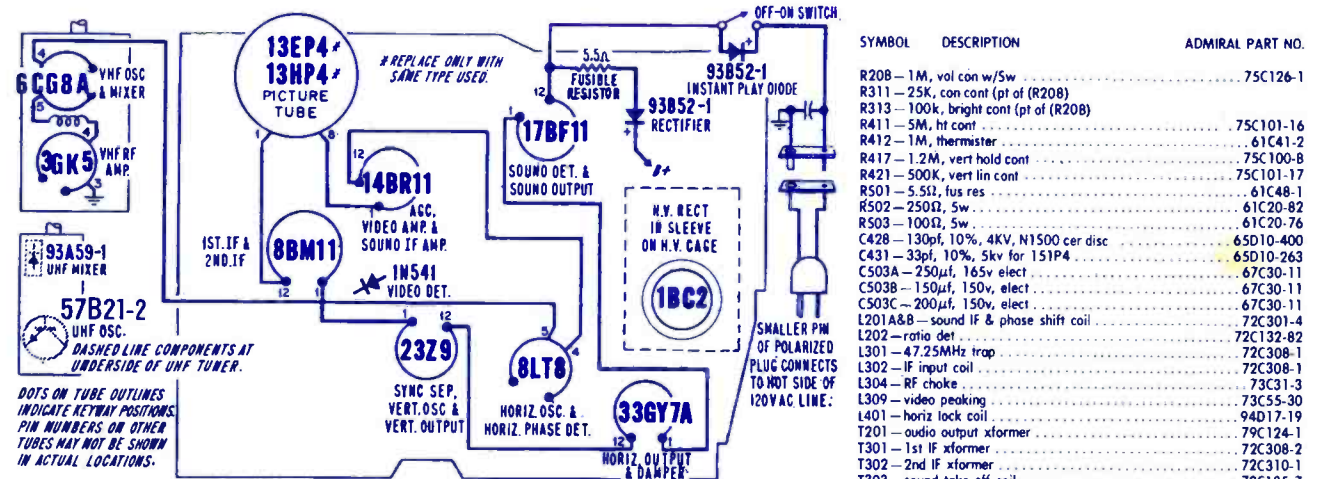
MODEL	NAME	COLOR	SIZE	TUNER CLUSTER	TUNER	CHASSIS
3C3401	Dayton	Walnut		NC2063-29	94A286-10 VHF	2K1663-29
3C3406	Rylander	Brown			94A280-11 UHF or 94A296-11 UHF	
3L3411	Clarendon	Walnut				
3L761	Avery	Walnut				
3C3351	Benton	Walnut				
3L3361	Lockholm	Walnut	*23"	NC2573-14	94A330-3 VHF 94A334-3 UHF or 94A333-3 UHF	3K1673-14
3L3421	Ridgeland	Walnut				
3L3425	Baytown	Maple				
3L3428	Alhambra	Pecan				
3L3511	Fullerton	Walnut		NC2573-11	94A330-3 VHF 94A334-3 UHF or 94A333-3 UHF	3K1673-11
3L3515	Amsterdam	Maple				
3L3518	Monaco	Pecan				
5L5101	Walnut	Walnut	*25"	NC2573-26	94A330-3 VHF 94A334-3 UHF	3K1673-26

*Picture tube diagonal measurement.

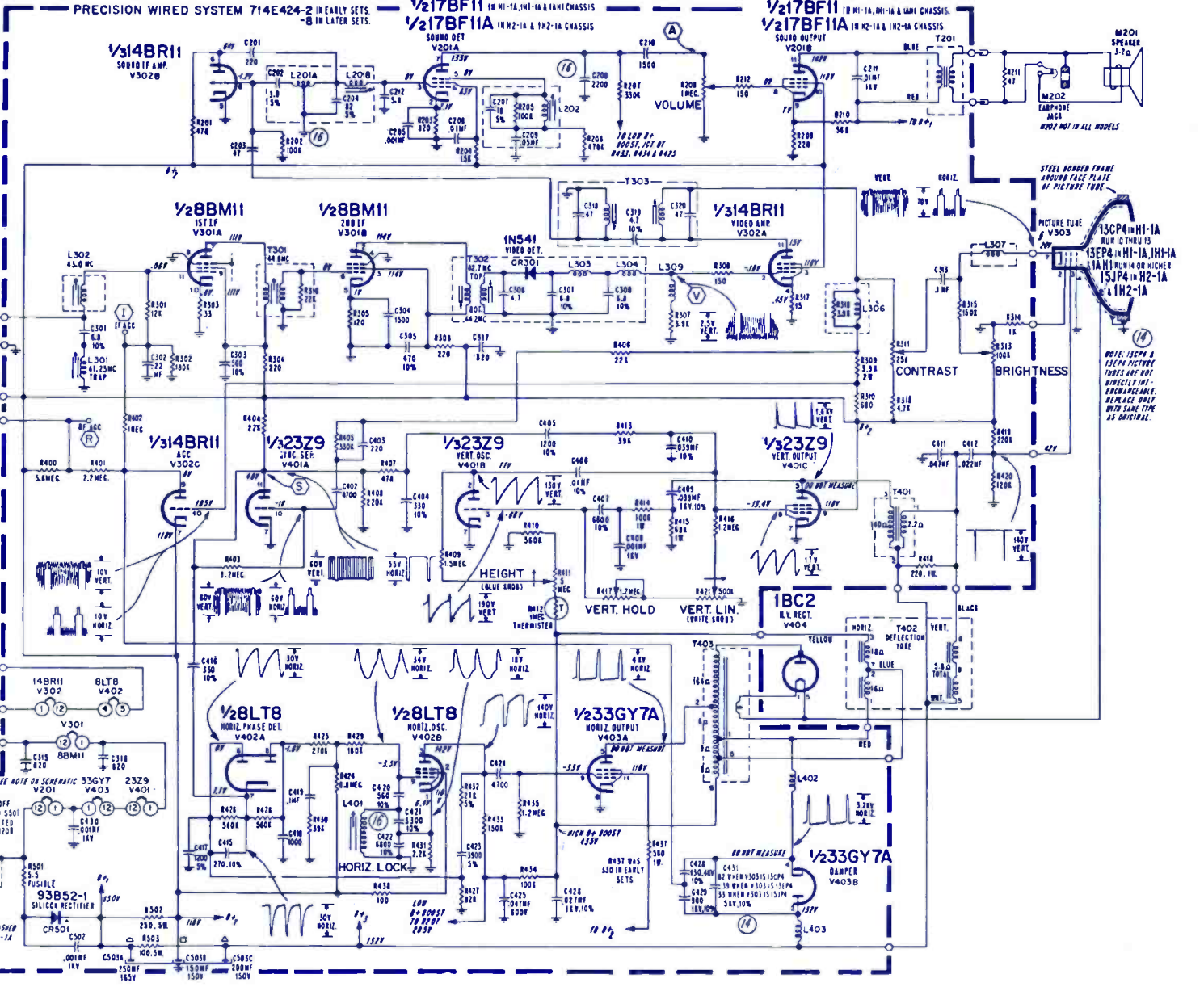
ADMIRAL

TV Chassis H1-1A,
1H1-1A, 1A1H,
H2-1A

ELECTRONIC TECHNICIAN / DEALER



- RUN CHANGES**
- (12) Different Video and Sound IF circuit. See separate schematic for chassis stamped runs 10 and 11.
 - (13) No service significance.
 - (14) Change to 13EP4 Picture Tube. C431 changed to 39PF. See Note below Picture Tube.
 - (15) No service significance.
 - (16) For improved reliability C421, C422 & C423 were moved from the top side of chassis to the underside to reduce possibility of sound drift. L201 & L202 part No was changed.
 - (17) No service significance.



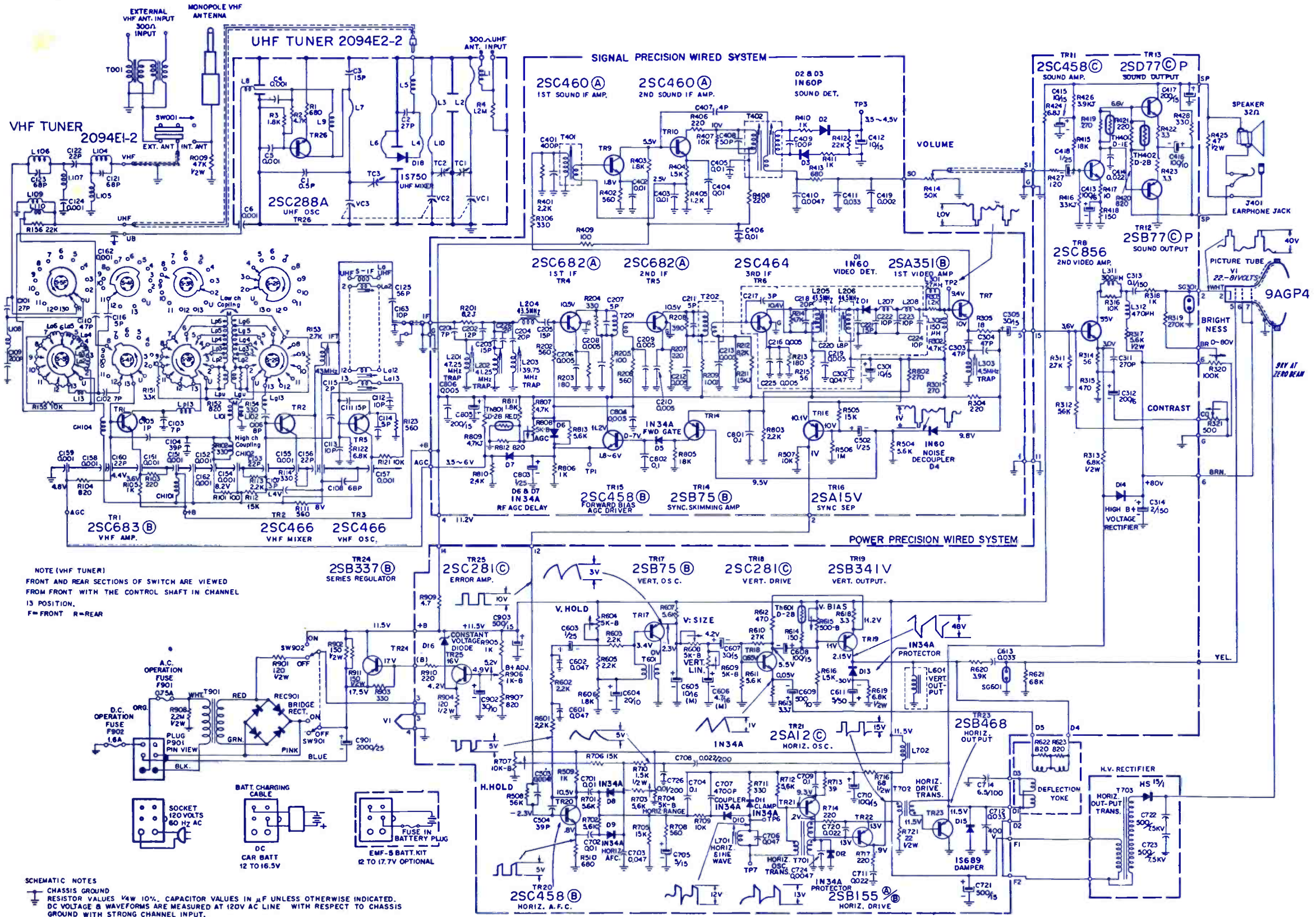
SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R320	100K bright control	2075889-76
R321	500Ω contrast control	2075889-77
R414	50K volume control W/SW901,902	2075889-78
R422,R423	3.3Ω, 5%, 1/4w	2060857-11
R424	6.8Ω, 5%, 1/4w	60B28-89
R604	5K vert hold control	2075889-74
R608	5K vert size control	2075889-75
R609	5K vert lin control	2075889-75
R615	500Ω vert bias control	2075889-73
R704	5K horiz	2075889-71
R707	10K horiz hold control	2075889-72
R808	5K AGC control	2075889-75
R808	1000Ω B plus control	2075889-70
R909	4.7Ω, 10%, 1/4w	60B28-11

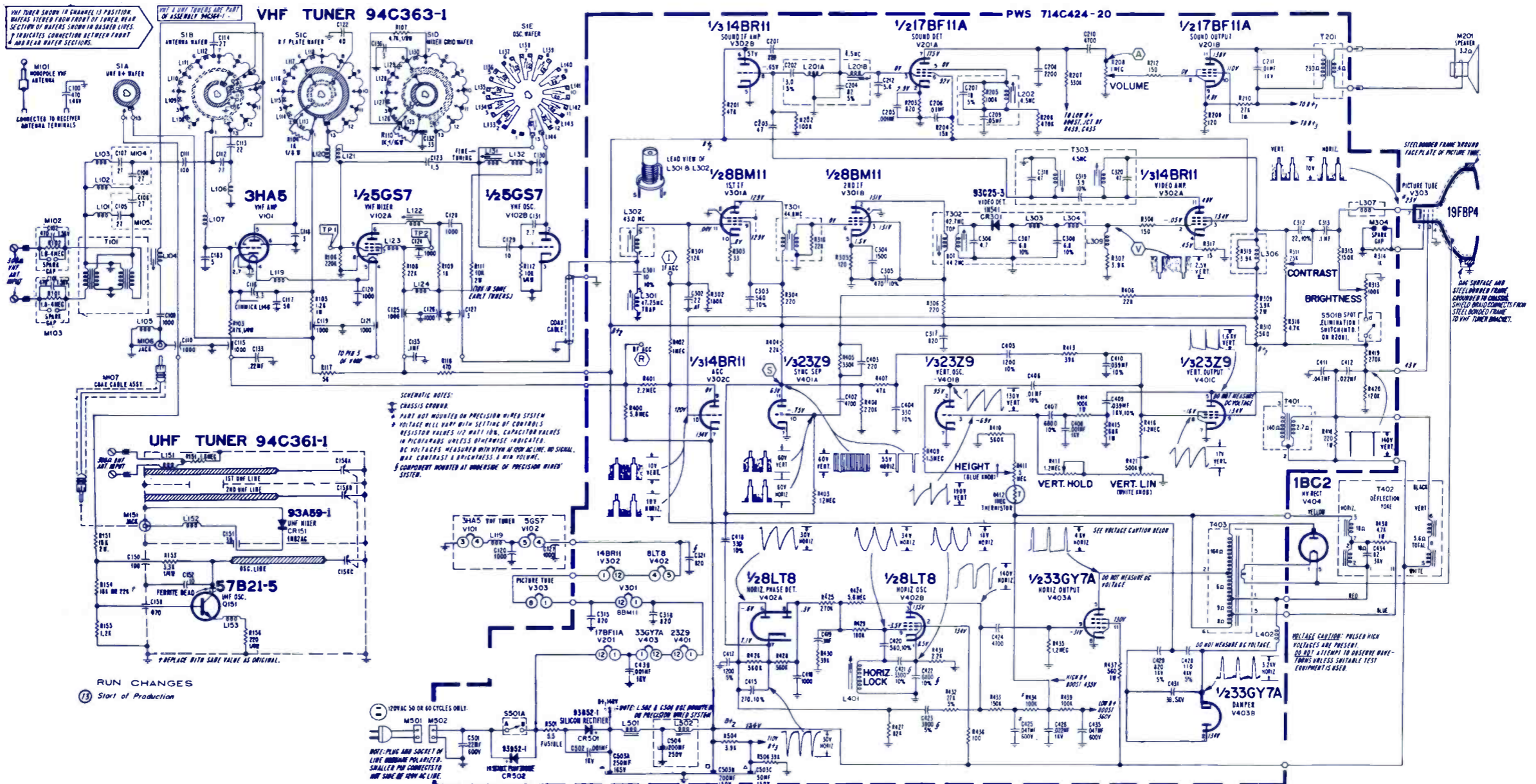
TH401	thermistor	2061845-39
TH402	thermistor	2061845-10
C416	100μf, 10v, elect	2067864-69
C609	500μf, 10v elect	2067864-80
C721	500μf, 15v elect	2067864-93
C722,C723	500pf, 7.5kv	20658112-154
L201	47.25MHz trap coil	2073872-69
L203	39.75MHz trap coil	2073872-87
L208	filter coil	2073872-75
L303	4.5MHz trap coil	2073872-68
L311	300μh peak coil	2073872-72
L912	470μh peak coil	2073872-73
L601	choke	2073872-77
L701	horiz stability coil	2073872-78
T601	vert osc xformer	2079A2-3

T701	horiz osc xformer	2094A3-2
T702	horiz drive xformer	2079A2-2
T703	horiz output xformer	2079A2-4
T901	power xformer	2080C1-9
	deflection yoke	2073A3-1
D1	video det diode	93B41-2
D4	noise gate diode	93B41-2
D5	AGC coupling diode	93B38-1
D12	osc protector	93B38-1
D13	vert damper	93B38-1
D14	boost rectifier	2093B41-32
F901	.75a fuse	2004A1-2
F902	1.6a fuse	2084A1-1
	UHF tuner	2094E2-2
	VHF tuner	1094E1-2

ELECTRONIC
TECHNICIAN / DEALER **TEKFAK**

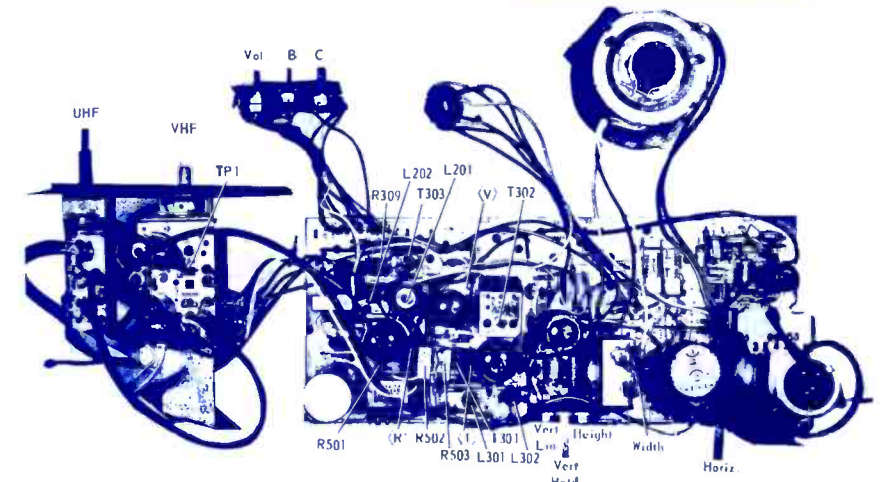
ADMIRAL
TV Chassis
NA1-1A



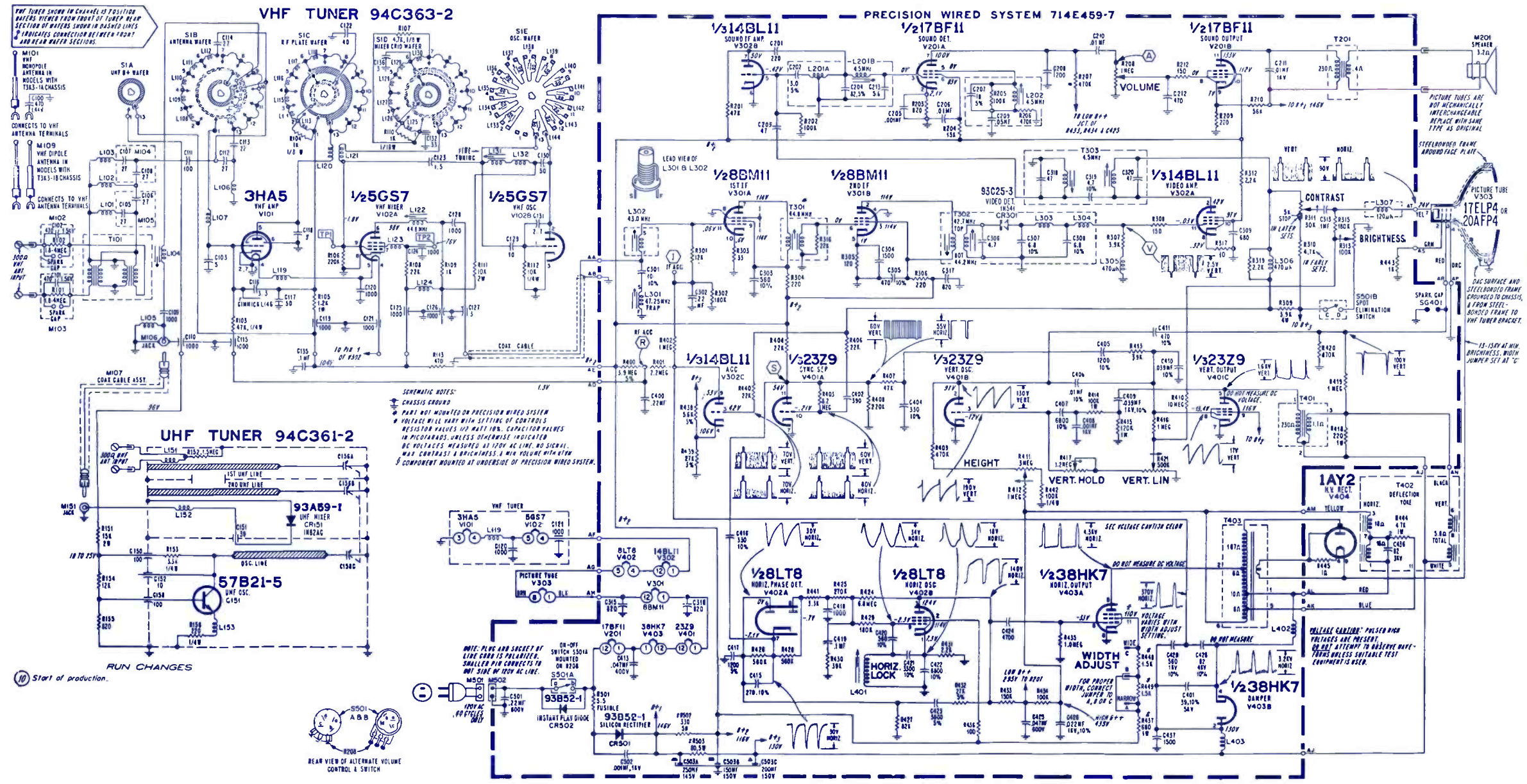


SYMBOL DESCRIPTION ADMIRAL PART NO.

R151	— 15K 2w	60B20-153
R208	— 1M. val control w/sw	75C1-176
R311	— 30K contrast control	75C112-13
R313	— 100K. bright control	75C113-13
R411	— 6M height triple control	75C129-3
R417	— 1.2M. vert hold triple control	75C129-3
R421	— 500K. vert lin triple control	75C129-3
R501	— 5.5Ω, fusible resistor	61C48-1
R502	— 330Ω 5w	61C20-66
R503	— 80Ω 5w	61C20-101
C203	— 47pf 500v NPO cer disc	65D10-198
C204	— 82pf 5% 500v NPO cer disc	65D10-98
C301	— 10pf 10% 500v NPO cer disc	65D10-87
C307,308	— 6.8pf 10% 500v NPO cer disc	65D10-102
C428	— 82pf 10% 4kv N1500 cer disc	65D10-425
C503A	— 250μf 165v elect	67C30-11
C503B	— 150μf 150v elect	67C30-11
C503C	— 200μf 150v elect	67C30-11
L201A,B	— sound IF & phase shift coil	72C301-4
L202	— ratio det.	72C132-82
L303	— 5.6 UL RF choke	73C53-243
L304	— RF choke	73C31-3
L307	— video peaking	73D55-26
L401	— horiz lock coil	94D17-19
L402	— RF choke	73C31-11
T201	— audio output xfmr	79C124-3
T301	— 1st IF xfmr	72C308-2
T303	— sound take off coil	72C185-7
T401	— vert output xfmr	79C139-2
T402	— def yoke oss'y	700C1089-6
T403	— horiz output	79D138-4
UHF tuner		94D361-2
VHF tuner		94D363-2



TOP VIEW OF CHASSIS SHOWING ALIGNMENT & SERVICE ADJUSTMENT LOCATIONS



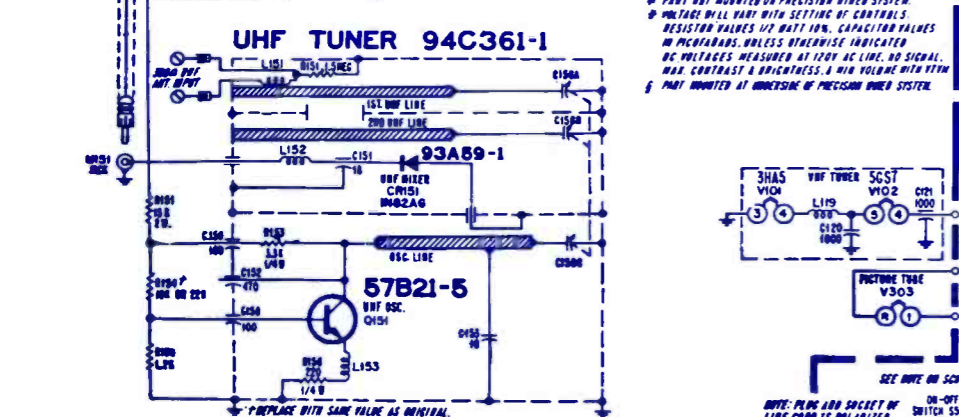
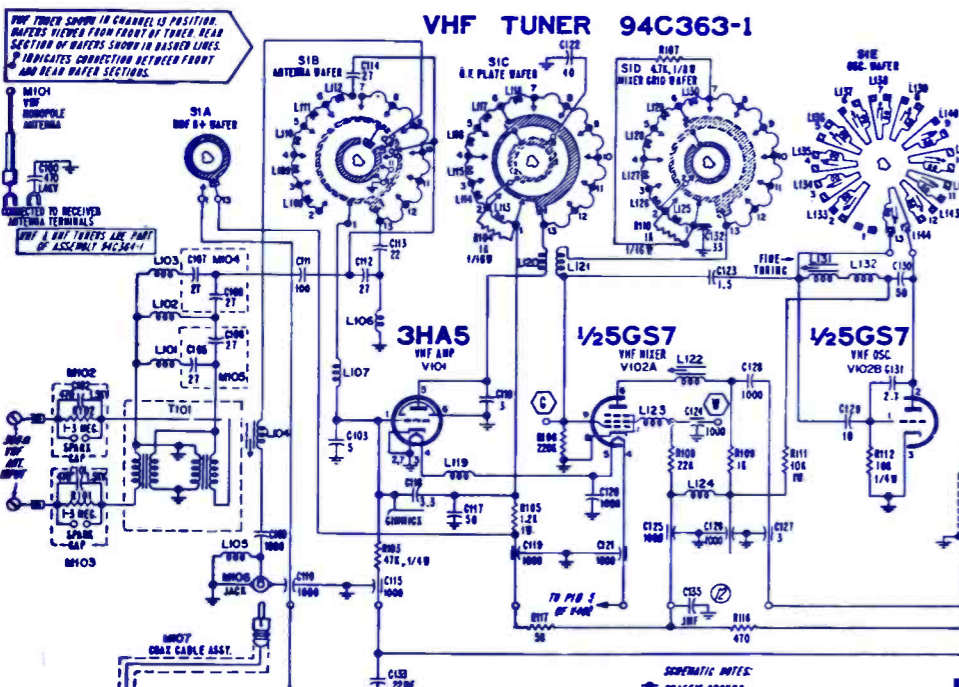
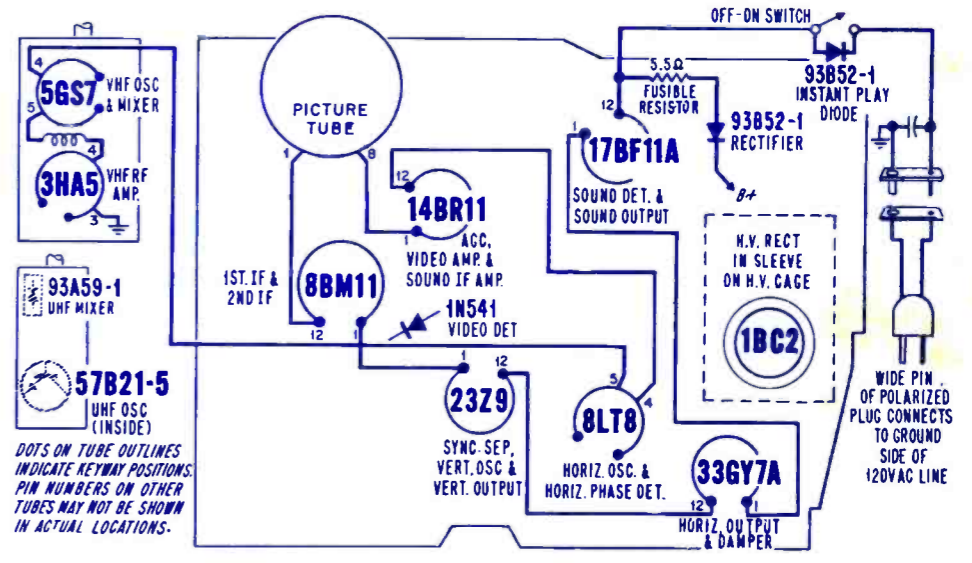
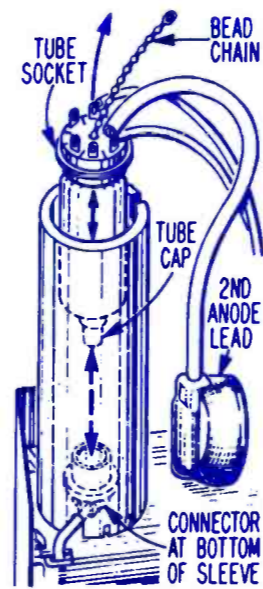
⑩ Start of production.



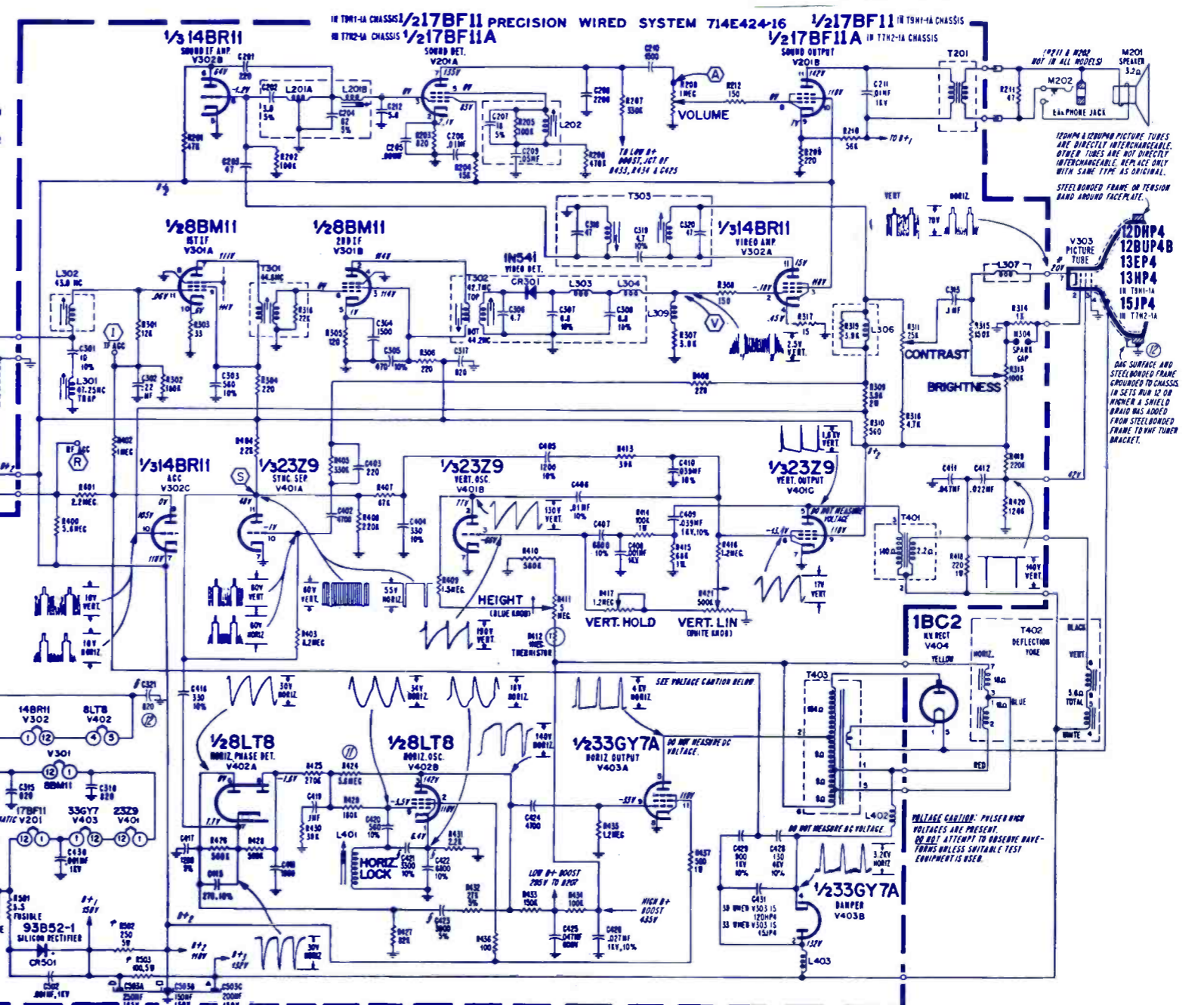
REAR VIEW OF ALTERNATE VOLUME CONTROL & SWITCH

ADMIRAL
TV Chassis T7H2-1A, T9H1-1A

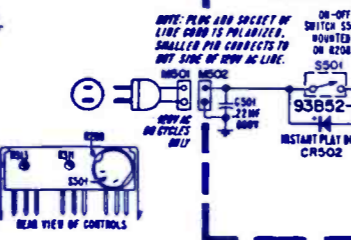
ELECTRONIC TECHNICIAN / DEALER **TEKFAK**



- Ⓜ Start of production.
- Ⓝ To improve Horizontal Oscillator reliability (with variation of tubes), connection of R424 was transferred from B+₂ to pin 3 of V402B.
- Ⓟ R417 & C321 were added to improve UHF reception in weak signal areas. Shieldbraid added from steelbonded frame of picture tube to VHF tuner bracket.



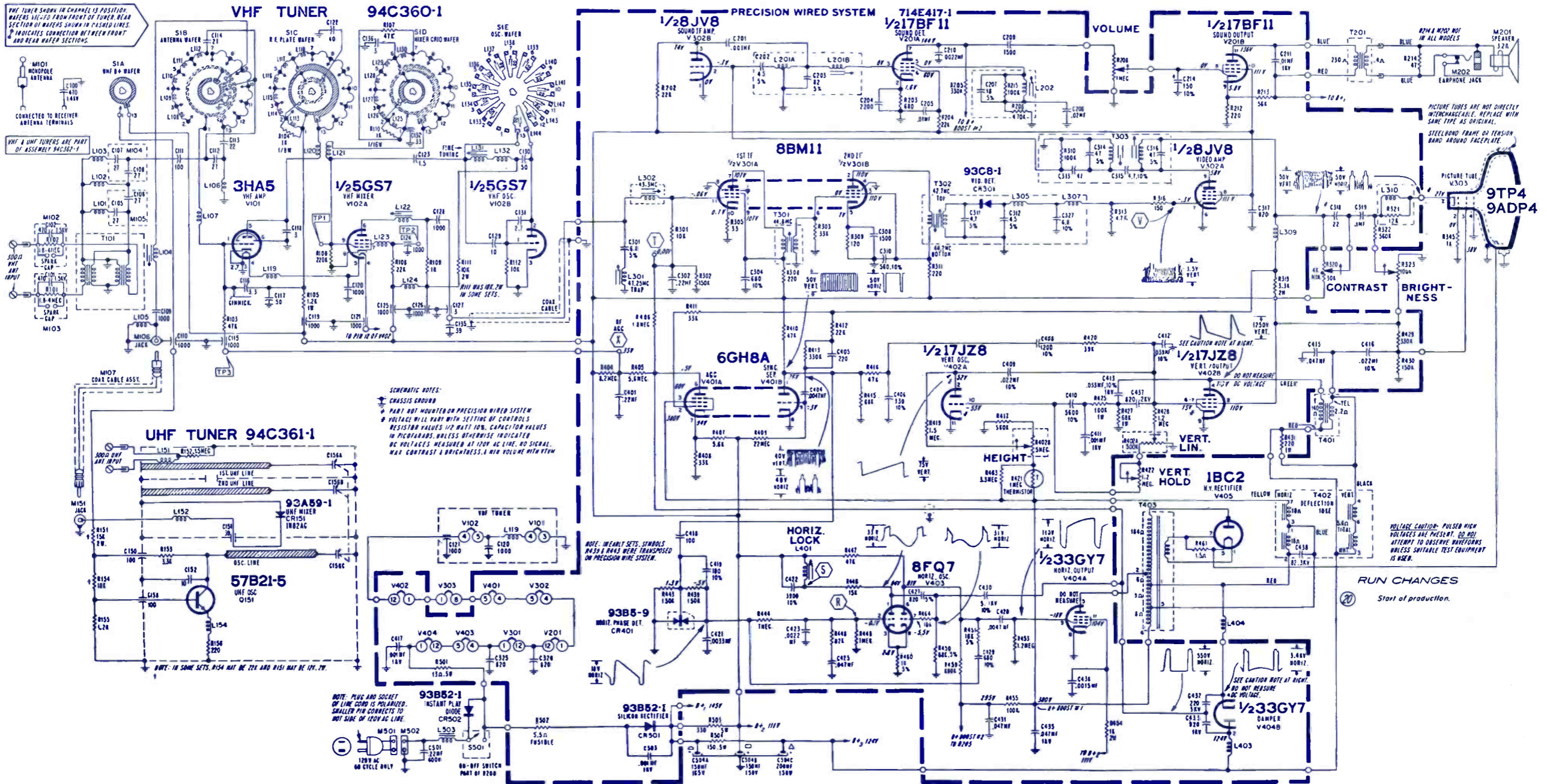
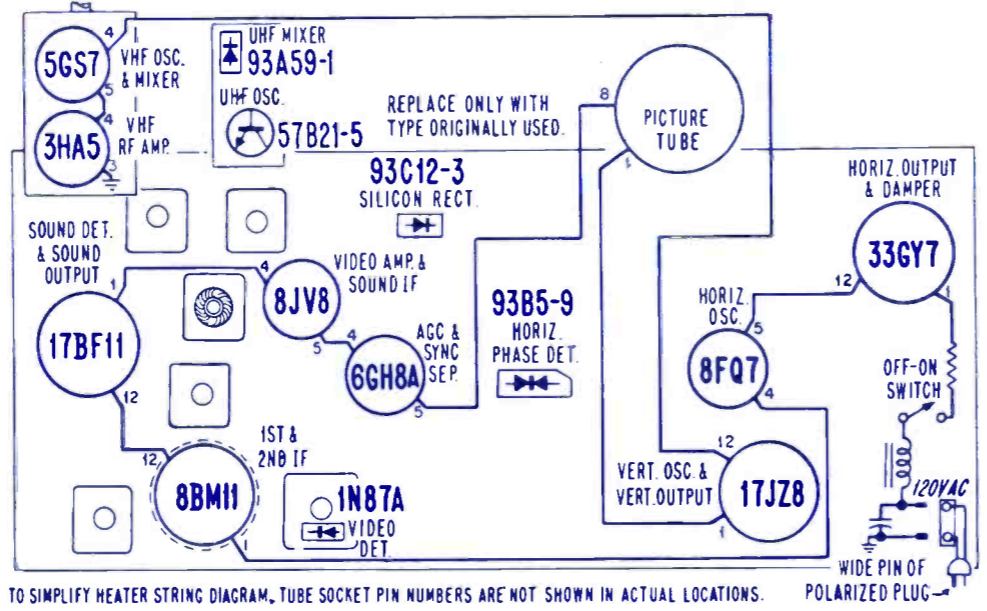
SCHEMATIC NOTES:
 Ⓝ CHASSIS COMMON.
 Ⓞ PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 Ⓟ VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 Ⓠ RESISTOR VALUES IN Ω , CAPACITOR VALUES IN PICOGRAMS, UNLESS OTHERWISE INDICATED.
 Ⓡ DC VOLTAGES MEASURED AT 200V AC LINE, NO SIGNAL, MAX. CONTRAST & BRIGHTNESS, A HIGH VOLUME WITH 100% & PART MOUNTED AT IMMERSION OF PRECISION WIRED SYSTEM.

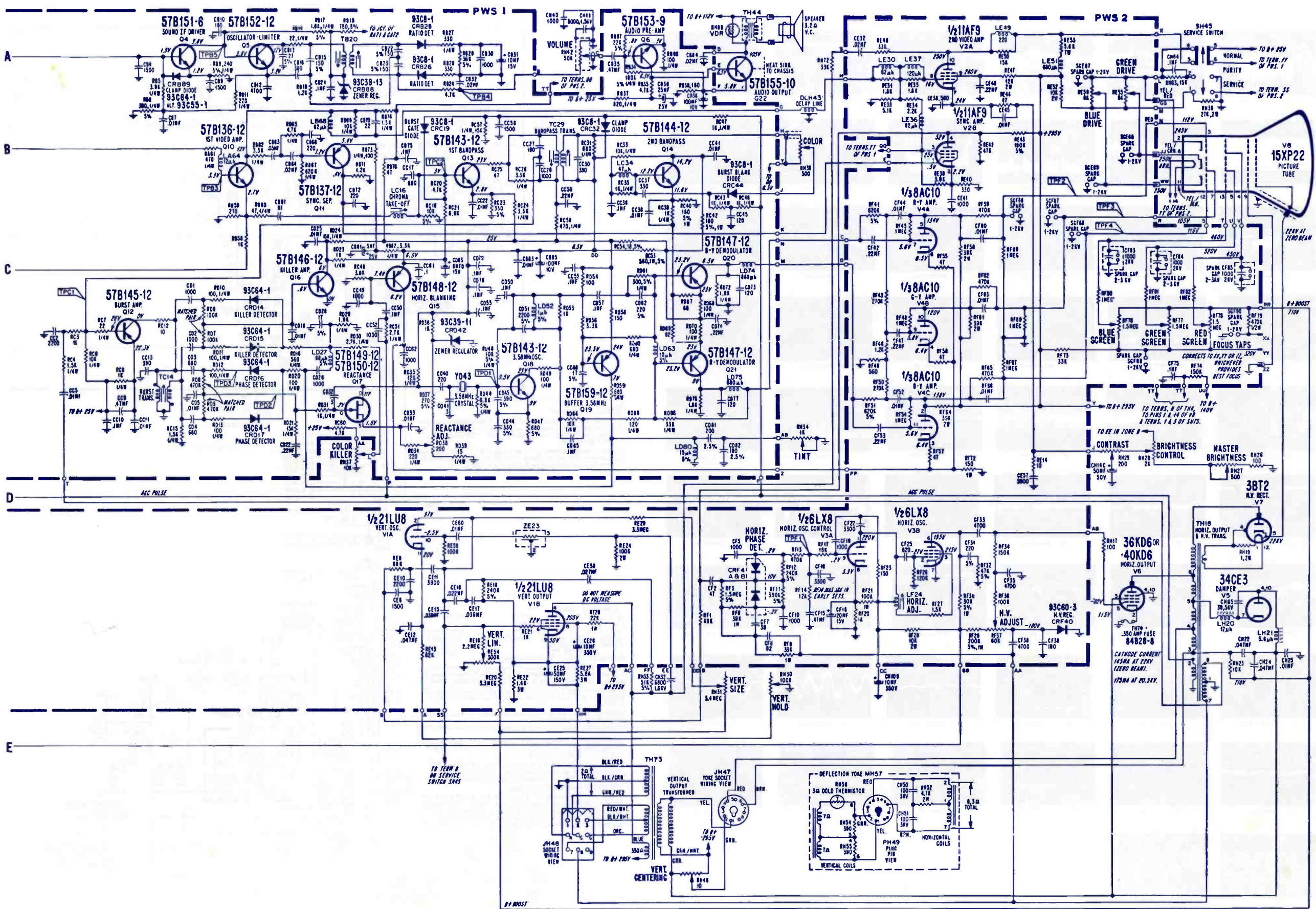


12DHP4 & 12BP4 PICTURE TUBES ARE DIRECTLY INTERCHANGEABLE. OTHER TUBES ARE NOT DIRECTLY INTERCHANGEABLE. REPLACE ONLY WITH SAME TYPE AS ORIGINAL.
 STEEL BONDED FRAME ON TENSION BAND AROUND FACEPLATE.
 V303 PICTURE TUBE
 12DHP4
 12BP4
 13HP4
 15JP4
 IN T7H2-1A
 DAC SURFACE AND STEEL BONDED FRAME CIRCUMFERED TO CHASSIS IN SETS R412 OR HIGHER. A SHIELD BRAID HAS BEEN ADDED FROM STEEL BONDED FRAME TO VHF TUNER BRACKET.

VOLTAGE CAUTION: PLEASE CHECK VOLTAGES ARE PRESENT. DO NOT ATTEMPT TO ADJUST OR SERVICE UNLESS SUITABLE TEST EQUIPMENT IS USED.
 NO NOT MEASURE DC VOLTAGE.
 NO NOT MEASURE DC VOLTAGE.
 SEE VOLTAGE CAUTION BELOW.
 NO NOT MEASURE DC VOLTAGE.

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R111	—10K, 1w	60B14-103
R208	—1M, vol cont w/sw	75C120-1
R320	—30K, contrast cont	75C121-3
R322	—100K, bright cont	75C121-2
R402A	—vert lin cont, dual	75C95-6
R402B	—height cont, dual	75C95-6
R421	—1M, therm	60A64-1
R422	—1.2M, vert hold cont	75C121-1
R502	—5.5k, fuse type	61C48-1
C135	—39pf, 5%, NPO, cer disc	65D10-347
C327	—6.8pf, 1/4%, 500v, NPO, cer disc	65D10-102
C406	—330pf, 10%, 5kv, cer disc	65D10-266
C430	—5pf, 10%, 1kv, N750, cer disc	65D10-345
C504A	—150uf, 165v, elect	67D15-393
C504B	—150uf, 150v, elect	67D15-393
C504C	—200uf, 150v, elect	67D15-393
L202	—good coil	72C132-77
L401	—horiz lock coil	94D17-17
T201	—audio output xfmr	79C81-23
T303	—sound takeoff xfmr	72C185-5
T401	—vert output xfmr	79D100-17
T402	—def yoke ass'y	700D1089-2
T403	—horiz output xfmr	79D117-1
CR401	—horiz phase det	93B5-9
	tuner UHF	94E361-1
	tuner VHF	94E360-1





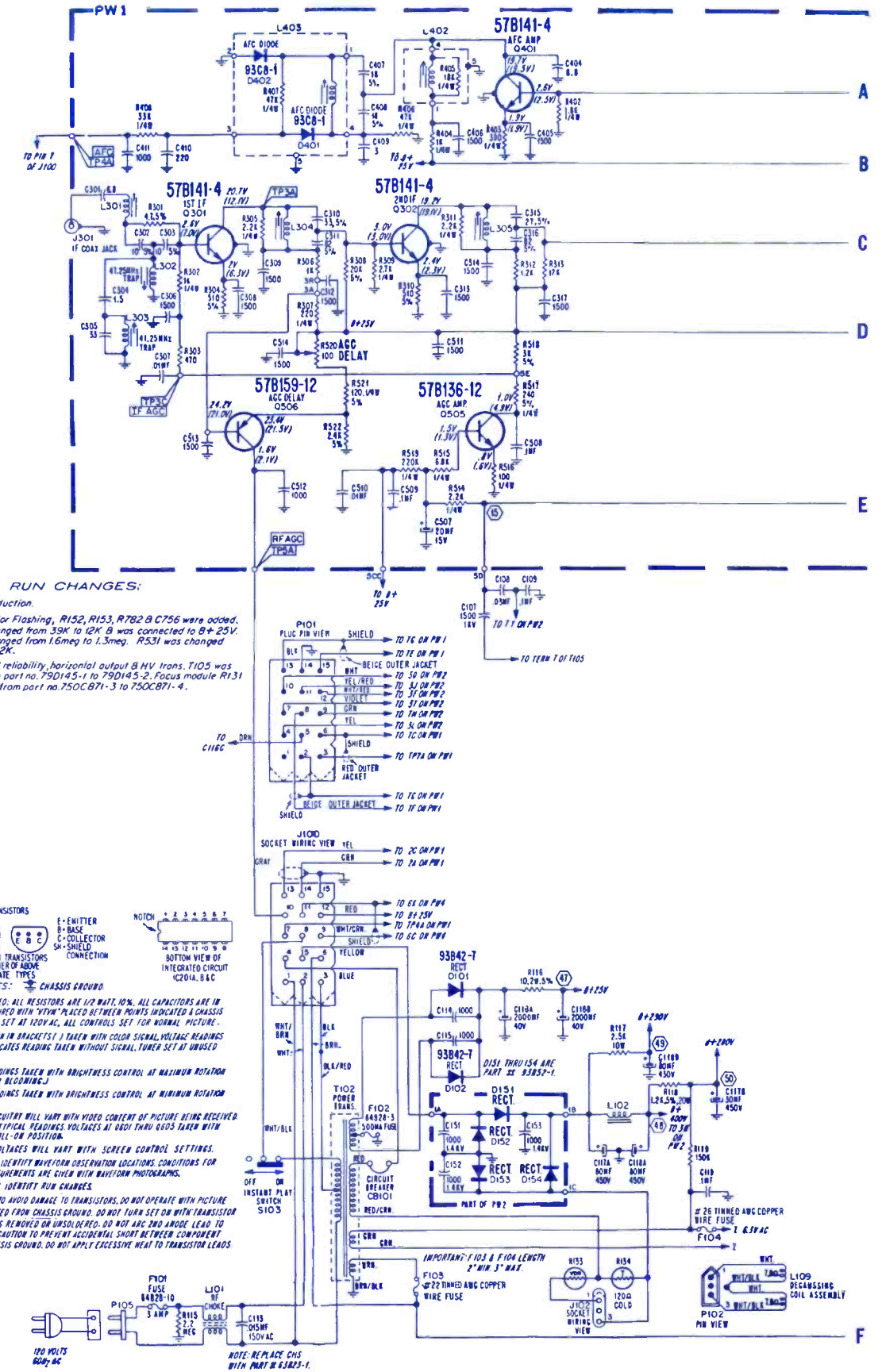
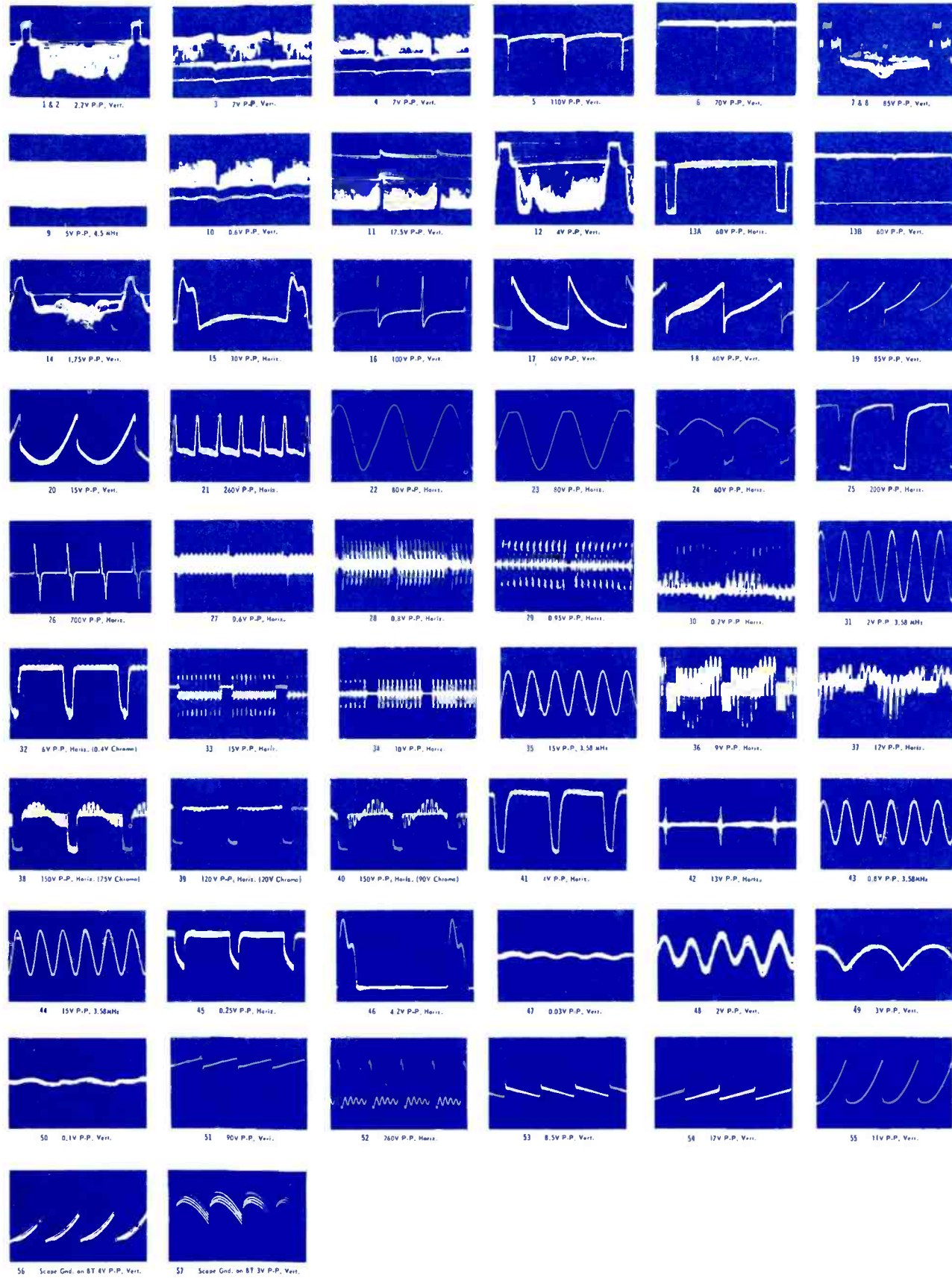
ADMIRAL

Color TV Chassis
K20

ELECTRONIC TECHNICIAN/DEALER TEKFAK

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R108	2K AGC control	75A110-11
R110	3.4M, vert size control	75A96-20
R121	500n, PC control	75A110-12
R123	10n, vert centering	75A64-37
R124	10n, horiz centering	75A64-30
R131	focus module	700A871-4
R132	15M, focus control	75A108-2
R133	voltage dependent resistor	61A46-8

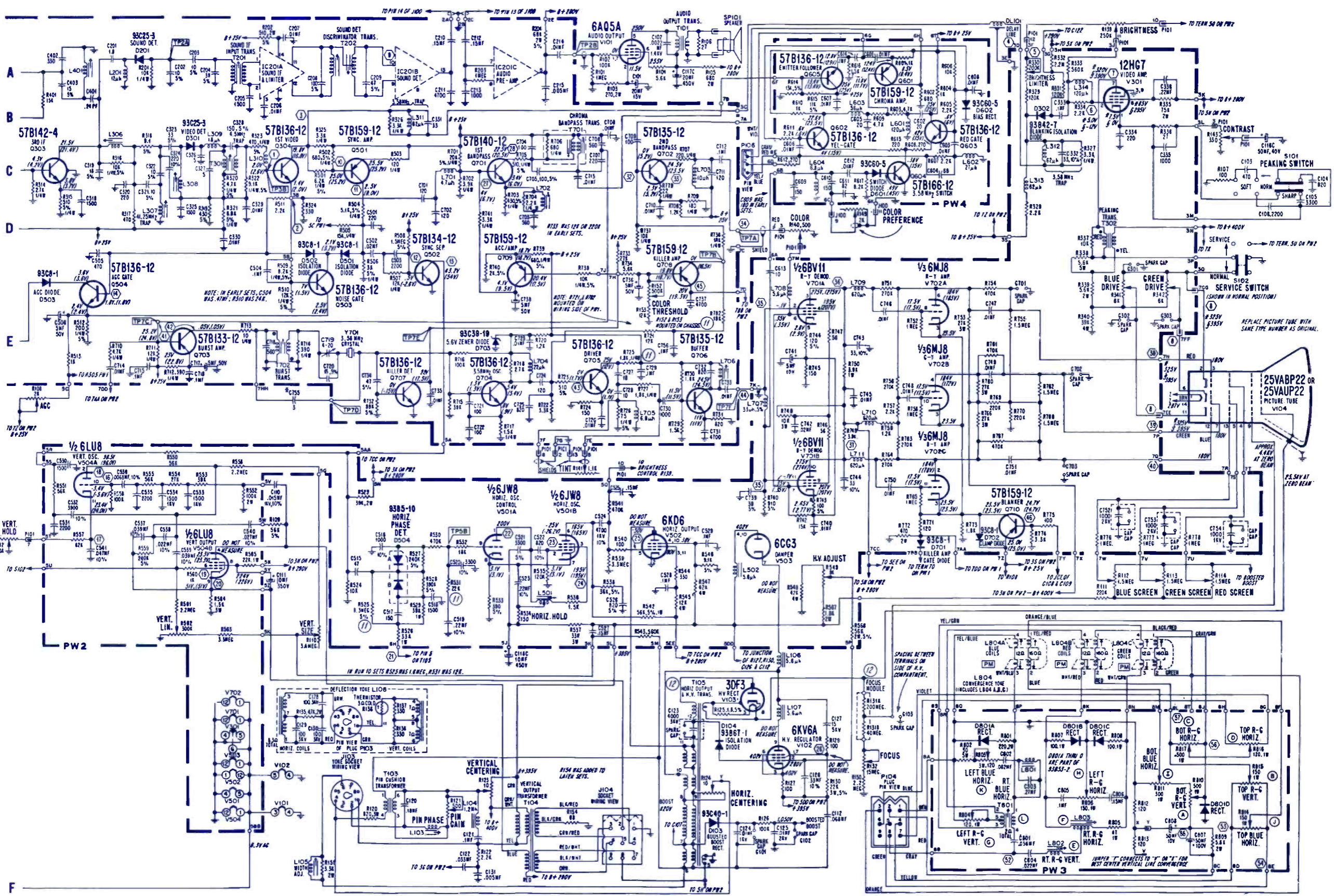
R134	thermistor 120n, cold	61A49-3
R152	500K, color threshold control	75A135-23
R330	200K, bright limit	75A95-15
R342	6K green drive	75A95-15
R549	8K, HV adjustment control	75A64-41
R562	300K, vert, linearity control	75A101-10
C116A	2000 uF, 40V electrolytic	67A15-401
C116B	2000 uF, 40V electrolytic	67A15-401
C116C	50 uF, 40V electrolytic	67A15-401
C117A	80 uF, 450V electrolytic	67A15-398



- C117B-30µf, 350v electrolytic
- C117C-20µf, 450v electrolytic
- C118A-80µf, 450v electrolytic
- C118B-80µf, 450v electrolytic
- C118C-10µf, 450v electrolytic
- L501-horiz osc coil
- T101-xformer, audio
- T102-xformer, power
- T103-xformer, p.c
- T104-xformer, vert output
- 67A15-398
- 67A15-398
- 67A15-399
- 67A15-399
- 67A15-399
- 94A35-1
- 79A142-1
- 80A106-1
- 79A143-2
- 79A134-2

- T105-xformer, horiz output
- T102-burst xformer
- DL101-delay line
- IC201A-integrated circuit
- IC201B-integrated circuit
- IC201C-integrated circuit
- CB101-circuit breaker
- 79A145-2
- 72A325-2
- 72A217-3
- 57A29-2
- 57A29-2
- 57A29-2
- 84A17-14

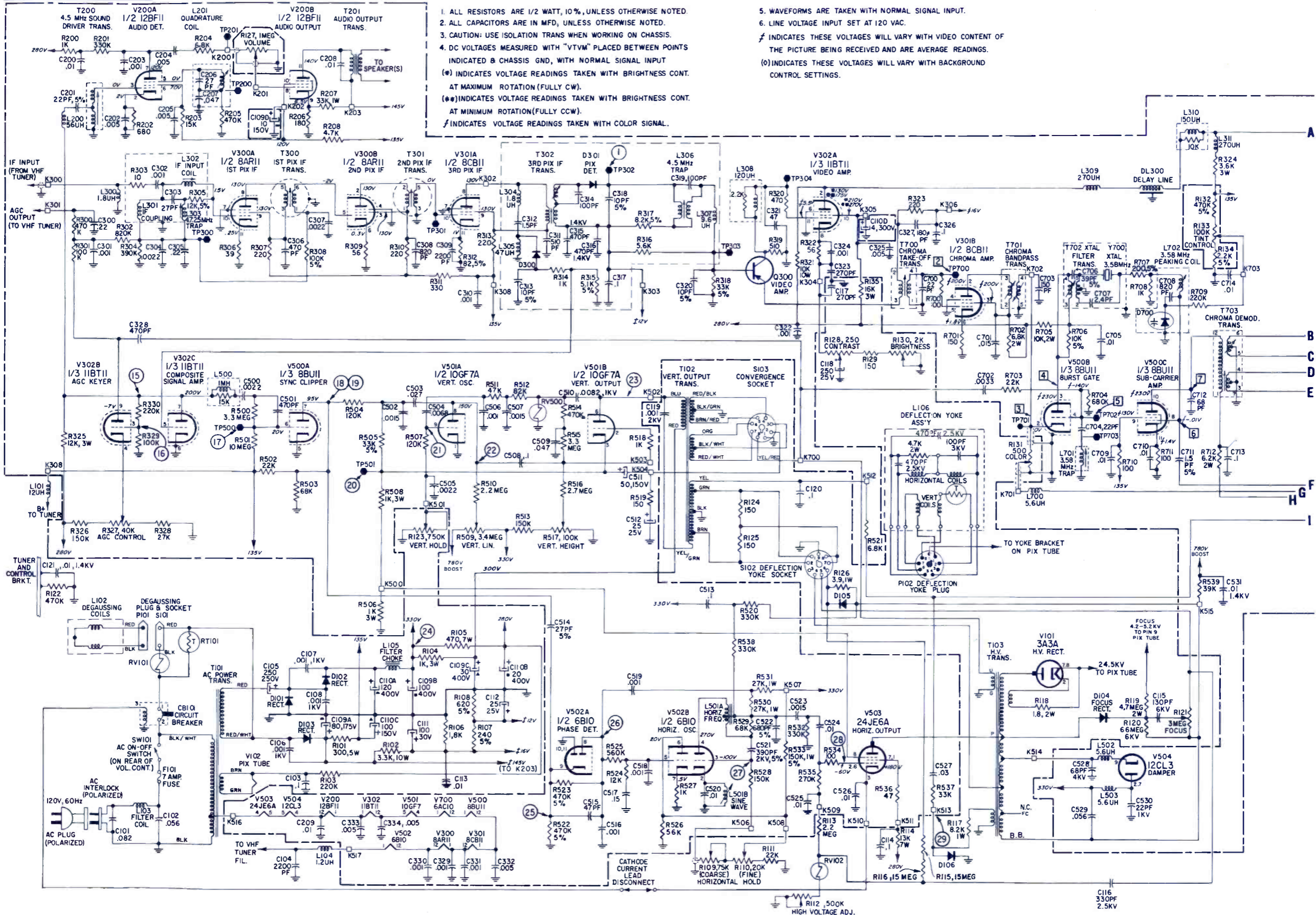
ADMIRAL
Color TV Chassis
K20



AIRLINE

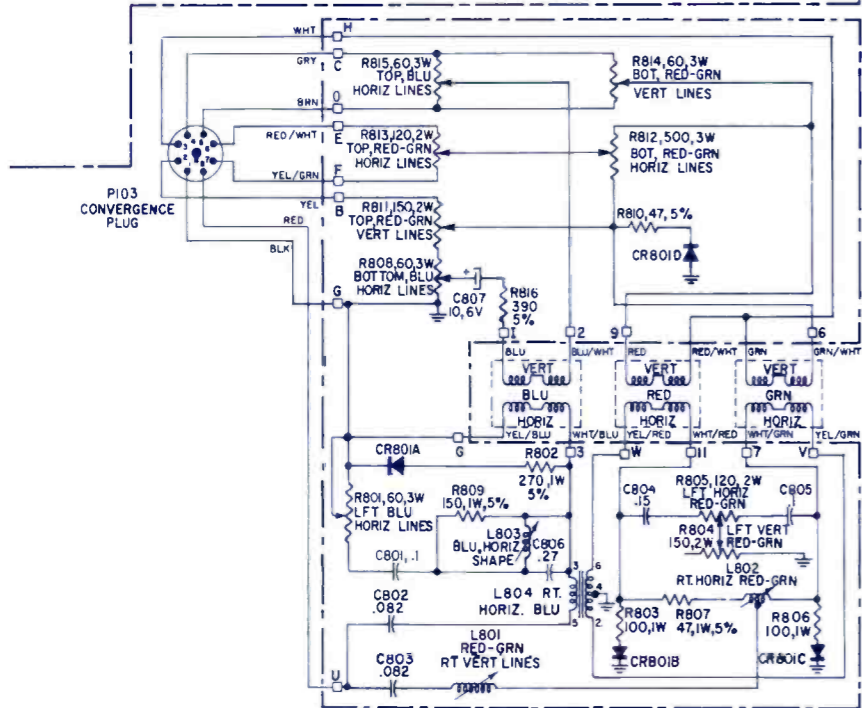
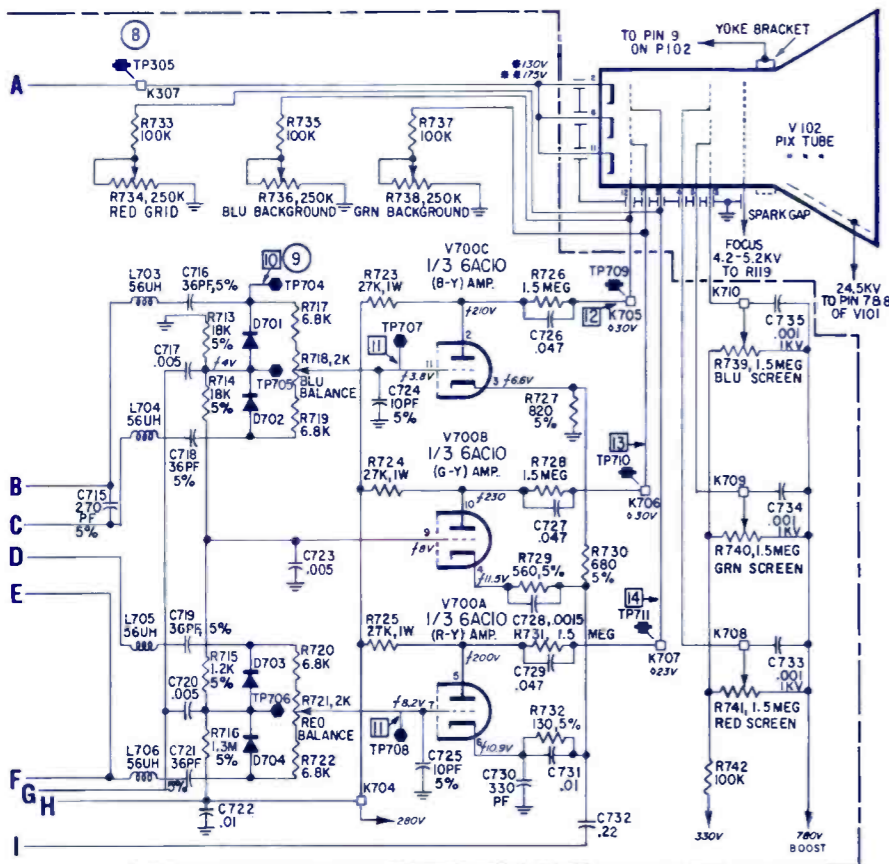
Color TV Models
GC1-12420A,B

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

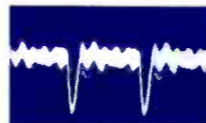


1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED & CHASSIS GND, WITH NORMAL SIGNAL INPUT
 (*) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULLY CW).
 (**) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULLY CCW).
 / INDICATES VOLTAGE READINGS TAKEN WITH COLOR SIGNAL.

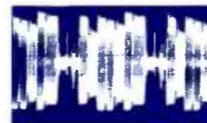
5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.
 6. LINE VOLTAGE INPUT SET AT 120 VAC.
- ∇ INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
 (O) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.



1 3V P-P
60 Hz



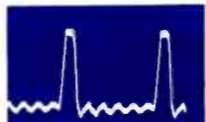
2 10V P-P
15,750 Hz



3 18V P-P
15,750 Hz



4 40V P-P
15,750 Hz



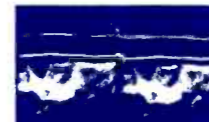
5 85V P-P
15,750 Hz



6 3.5V P-P
15,750 Hz



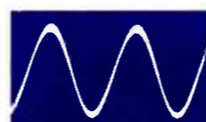
7 85V P-P
15,750 Hz



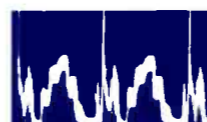
8 105V P-P
60 Hz



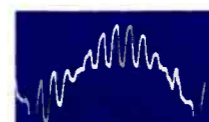
9 10V P-P
15,750 Hz



10 10V P-P
3.58 MHz



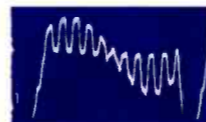
11 2.5V P-P
15,750 Hz



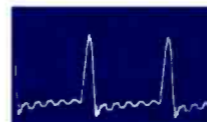
12 78V P-P
15,750 Hz



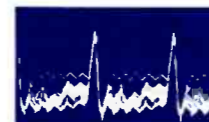
13 84V P-P
15,750 Hz



14 96V P-P
15,750 Hz



15 250V P-P
15,750 Hz



16 22V P-P
15,750 Hz



17 50V P-P
60 Hz



18 70V P-P
60 Hz



19 70V P-P
15,750 Hz



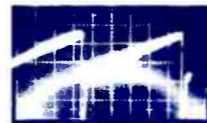
20 12V P-P
60 Hz



21 100V P-P
15,750 Hz



22 150V P-P
15,750 Hz



23 160V P-P
60 Hz



24 3V P-P
15,750 Hz



25 18V P-P
15,750 Hz



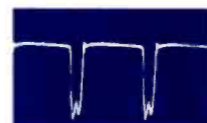
26 28V P-P
15,750 Hz



27 600V P-P
15,750 Hz



28 180V P-P
15,750 Hz

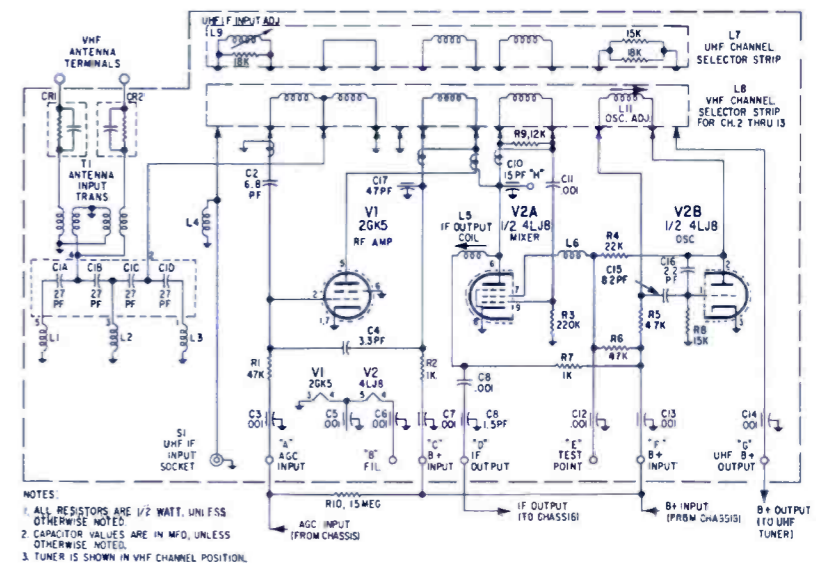


29 420V P-P
15,750 Hz

SYMBOL	DESCRIPTION	AIRLINE PART NO.
C109A,B,C,D	80μf/175v, 100μf/400v, 30μf/400v, 10μf/150v elect	034-030700
C110A,B,C,D	120μf/400v, 20μf/400v, 100μf/150v, 4μf/300v, elect	034-030600
R101	300Ω, 10%, 5w, fixed film	054-301510
R102	3.3K, 10%, 10w, WW	053-332110
R105	470Ω, 10%, 7w WW	053-471710
R109	control, horiz hold 75K (coarse)	055-068500
R110	control, horiz hold 20K (fine)	055-068500
R123	control, vert hold 750K	055-068500
R112	control, high voltage adj 500K	055-036500
R121	control, focus 3M	055-065500
R127	control, on-off-volume 1M	055-068800
R128	control, contrast, 250Ω	055-068600
R130	control, bright 2K	055-068600
R131	control, color, 500Ω	055-068900
R133	control, tint, 100K	055-069000
R327	control AGC, 40K	055-069200
R736	control, blue background 250K	055-069200
R737	control, grn background 250K	055-069200
R509	control, vert lin 3.4M	055-064200
R517	control, vert height 100K	055-064200
R734	control, red grid 250K	055-064200
R718	control, blu balance 2K	055-064500
R721	control, red balance 2K	055-064500
R739	control, blu screen, 1.5M	055-064300
R740	control, grn screen, 1.5M	055-064300
R741	control, red screen, 1.5M	055-064300
Q300	trans video amp PNP	002-012800
DL300	coil, delay line	111-037400
L105	coil, filter choke	032-030000
L106	def yoke	027-083100
L201	coil, quad	109-040300
L300-304	coil, 1.8μh	111-021000
L501A,B	coil, horiz freq/sine wave	110-031300
L503	coil, choke 5.6μh	111-036500
L701	coil, 3.58MHz trap	109-038100
L802	coil, R/G right horiz lines	111-031700
T101	x-former, power	033-015400
T102	x-former, vert output	033-014300
T103	x-former, high voltage	033-016200
T200	x-former, 4.5MHz sound driver	109-037800
T201	x-former, audio output	031-010400
T300	x-former, 1st pix IF	109-037200
T700	x-former chroma take-off	109-040500
T701	x-former, chroma bandpass	109-037000
T702	x-former, crystal filter	109-037900
T703	x-former, chroma demodulator	109-037100
CB101	cir brkr	099-003500
F101	fuse, 7o	099-003600
	tuner, UHF GC1-12420A	006-023000
	tuner, UHF GC1-12420B	006-023400
	tuner, VHF	006-021000
	yoke, convergence ass'y	027-032700

NOTES:

- INDICATES "AIR" SIGNAL
- INDICATES COLOR BAR SIGNAL



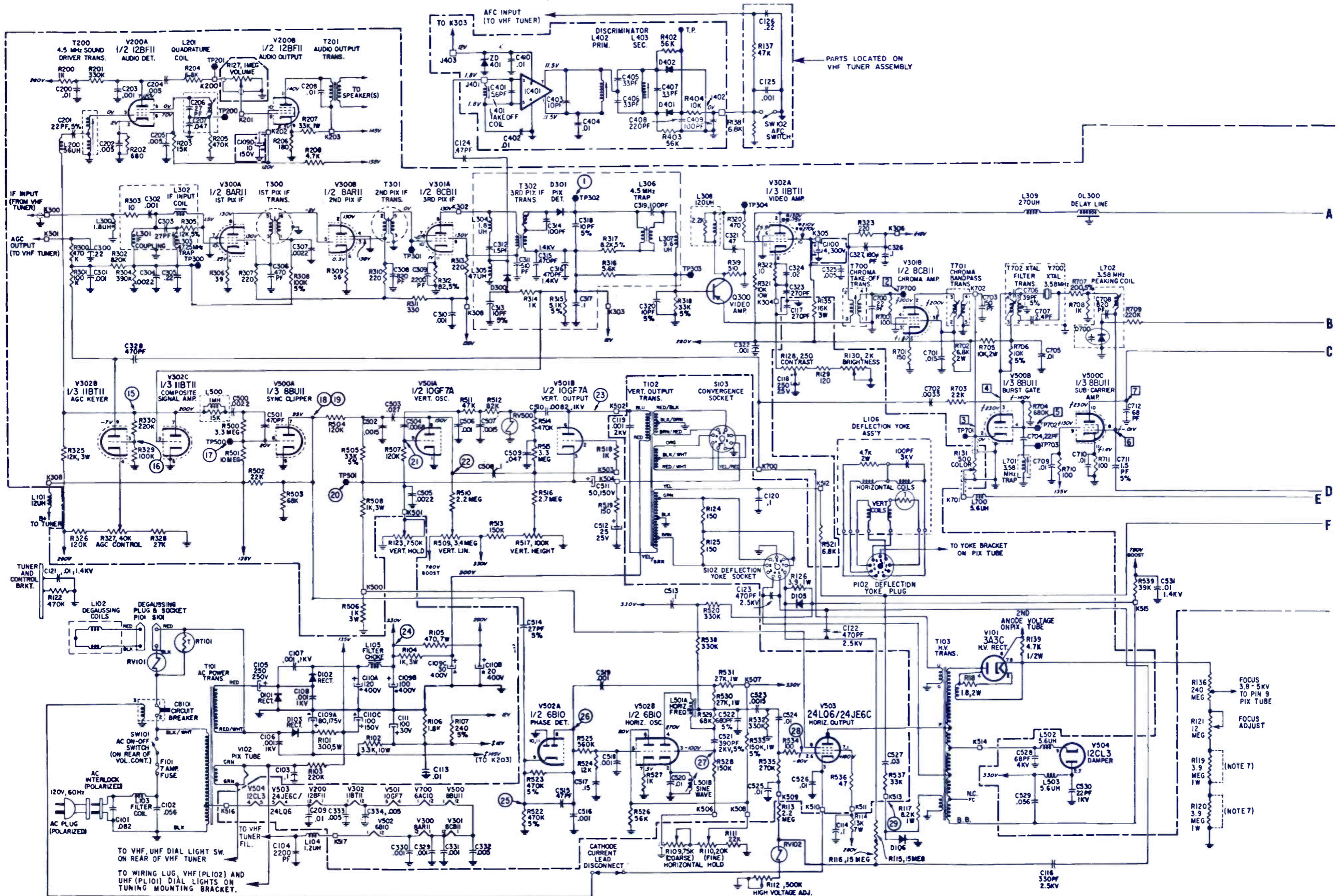
NOTES:
1. ALL RESISTORS ARE 1/2 WATT, UNLESS OTHERWISE NOTED.
2. CAPACITOR VALUES ARE IN MFD, UNLESS OTHERWISE NOTED.
3. TUNER IS SHOWN IN VHF CHANNEL POSITION.

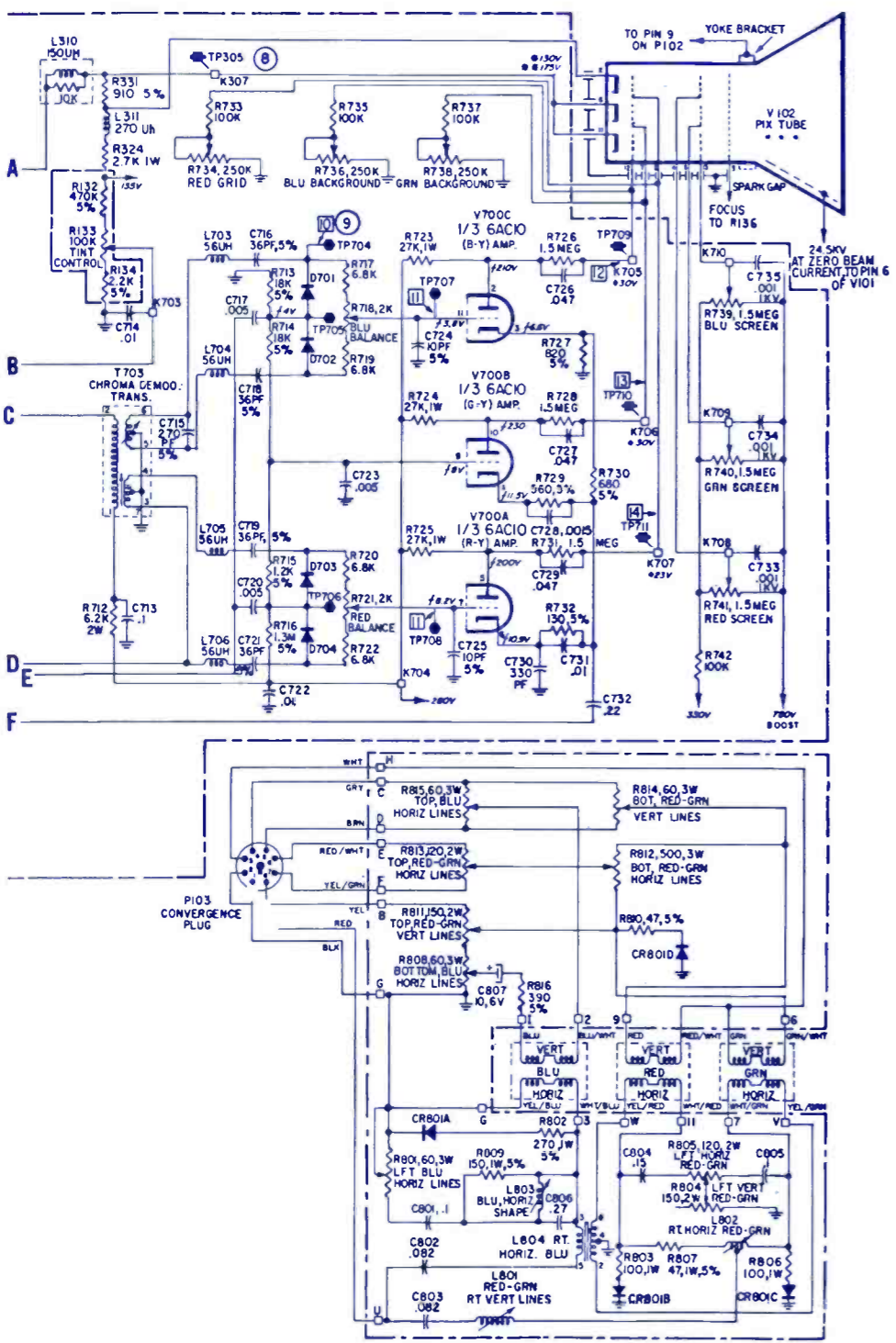
VHF Tuner Schematic Diagram

AIRLINE

Color TV Model
GC1-12460A

ELECTRONIC TECHNICIAN/DEALER **TEKFAAX**

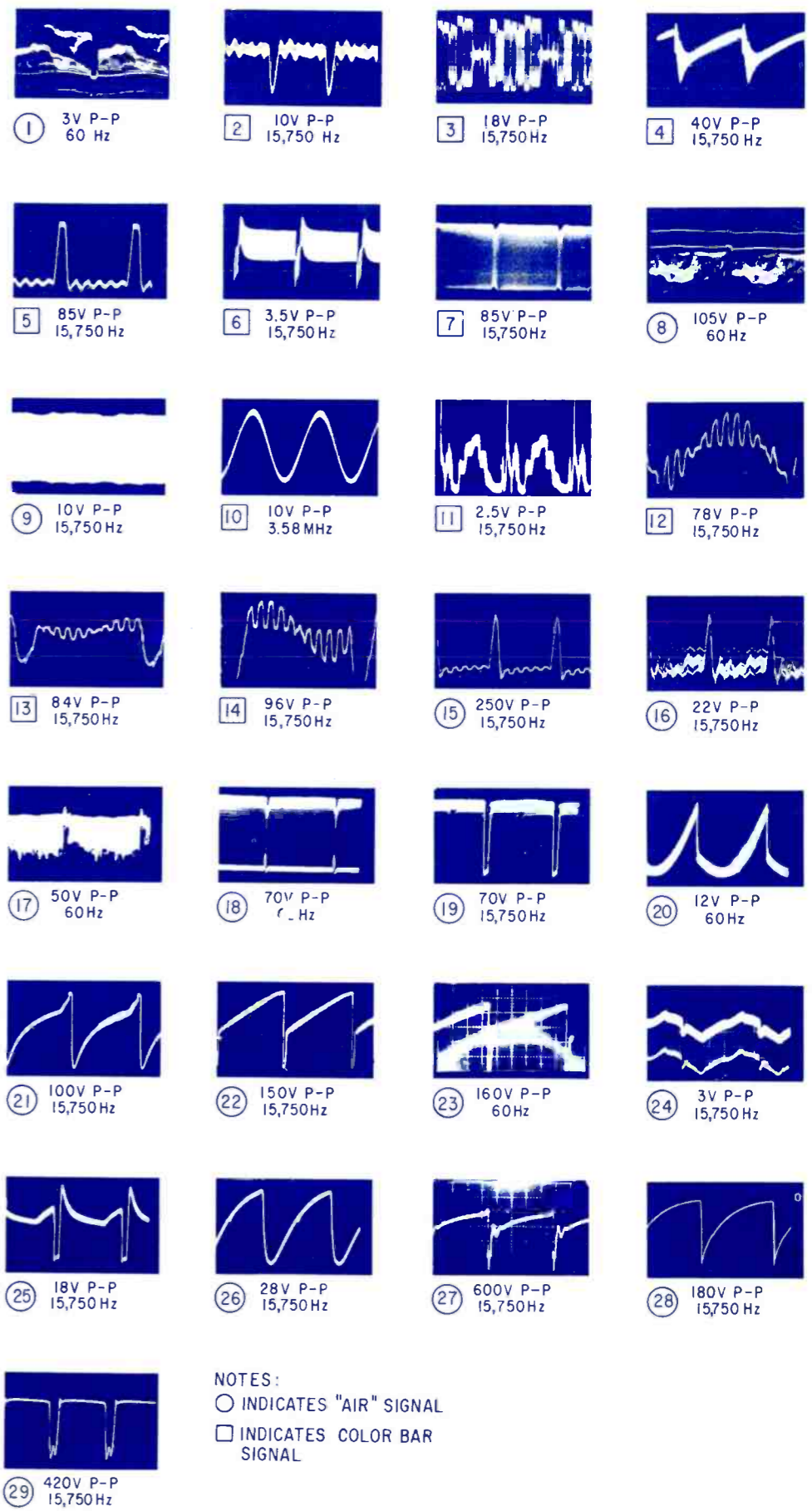




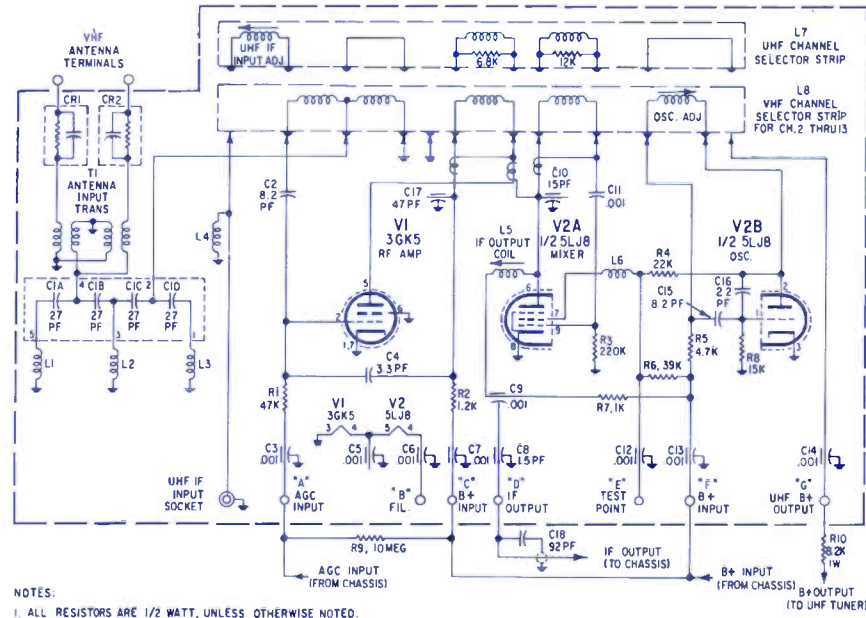
SYMBOL DESCRIPTION AIRLINE PART NO.

C109A-80 μf/175v electrolytic	034-030700
C109B-100 μf/400v electrolytic	034-030700
C109C-30 μf/400v electrolytic	034-030700
C109D-10 μf/150v electrolytic	034-030700
C110A-120 μf/400v electrolytic	034-030600
C110B-20 μf/400v electrolytic	034-030600
C110C-100 μf/150v electrolytic	034-030600
C110D-4 μf/400v electrolytic	034-030600
R114-13K, 10%, 7w, fixed film	054-133710
R136-240M, focus bleeder	057-002700
RT101-thermistor, degaussing	057-001200
RV101-VDR, degaussing	057-002600
RV102-VDR	057-002500
RV500-VDR	057-000200
R109-control, horiz hold (coarse), 75K	055-067500
R110-control, horiz hold (fine), 20K	055-067500
R123-control, vert hold, 750K	055-067500
R112-control, HV adjust, 500K	055-36500
R121-control, focus adjust, 12M	055-070400
R127, SW101-control, on-off-volume, 1M	055-068800
R128-control, contrast, 250n	055-068700
R130-control, bright, 2K	055-068700
R131-control, color, 500n	055-067300
R133-control, tint, 100K	055-068000
R327-control, AGC, 40K	055-069200
R736-control, blue background, 250K	055-069200
R738-control, green background, 250K	055-069200
R509-control, vert linearity, 3.4M	055-064200
R517-control, vert height, 100K	055-064200
R734-control, red background, 250K	055-064200
D401, 402-diode, zener	003-009200
IC401-integrated circuit	181-000100
Q300-transistor, video amp (PNP)	002-012800
ZD401-diode, zener	003-010000
DL300-coil, delay line	111-037400
L106-deflection yoke	027-033200
L201-coil, quadrature	109-040300
L303-coil, 47.25MHz trap	109-037500
L306-coil, 4.5MHz trap	109-040400
L401-coil, video takeoff	109-040600
L402-coil, discriminator primary	109-040700
L403-coil, discriminator secondary	109-040700
L501A, B-coil, horiz freq/sine wave	110-031300
L701-coil, 3.58MHz trap	109-038100
L702-coil, 3.58MHz peaking	109-039500
T101-x-former, power	033-015400
T102-x-former, vert output	033-014300
T103-x-former, HV	033-016200
T200-x-former, 4.5MHz sound driver	109-037800
T201-x-former, audio output	031-010400
T700-x-former, chroma take off	109-040500
T701-x-former, chroma bandpass	109-037000
T703-x-former, chroma demodulator	109-037100
CB101-circuit breaker	099-003500
F101-fuse, 7a	099-003600
tuner, UHF	006-022800
tuner, VHF	006-022700
yoke, convergence assembly	027-032700

NOTES
 1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
 2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
 3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
 4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED BY CHASSIS GND, WITH NORMAL SIGNAL INPUT.
 (A) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULLY CW).
 (B) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULLY CCW).
 (C) INDICATES VOLTAGE READINGS TAKEN WITH COLOR SIGNAL.
 5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.
 6. LINES VOLTAGE INPUT SET AT 120 VAC.
 # INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
 (O) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.
 7. JUMPER REMOVED AT FACTORY IF NECESSARY TO SET FOCUS CONTROL RANGE.
 8. (A) INDICATES THE VOLTAGE WILL VARY WITH FINE TUNING SETTING FROM 0V TO ± 3V.

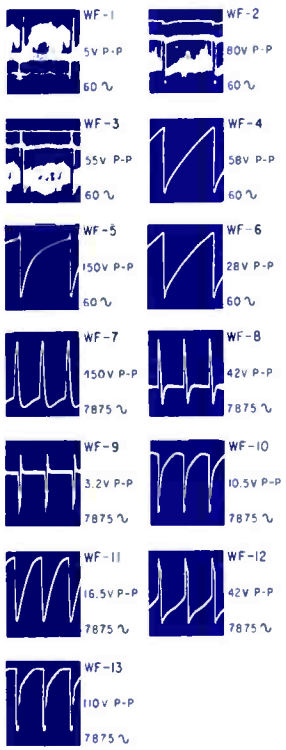


NOTES:
 ○ INDICATES "AIR" SIGNAL
 □ INDICATES COLOR BAR SIGNAL

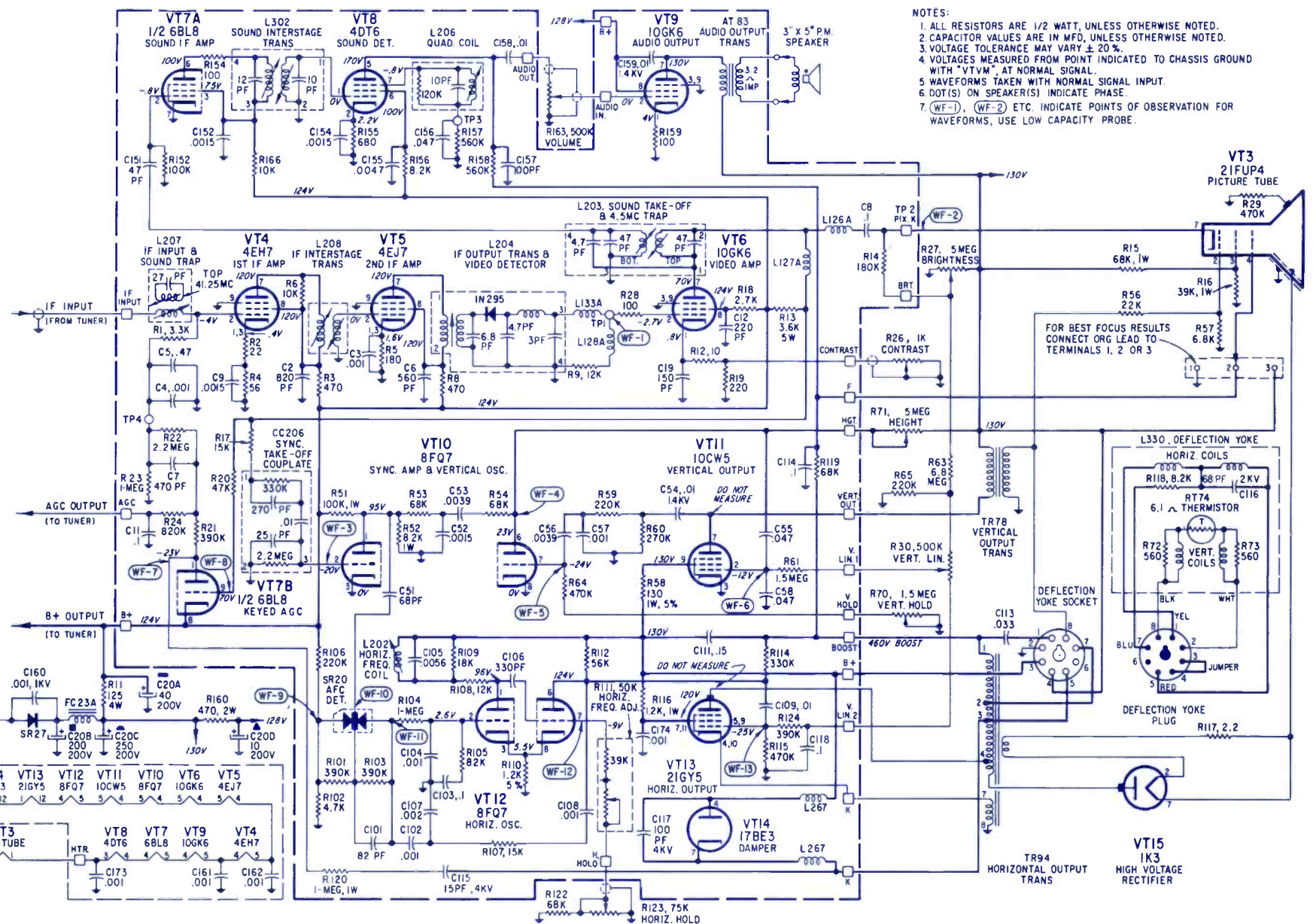


NOTES:
1. ALL RESISTORS ARE 1/2 WATT, UNLESS OTHERWISE NOTED.
2. CAPACITOR VALUES ARE IN MFD, UNLESS OTHERWISE NOTED.
3. TUNER IS SHOWN IN VHF CHANNEL POSITION.

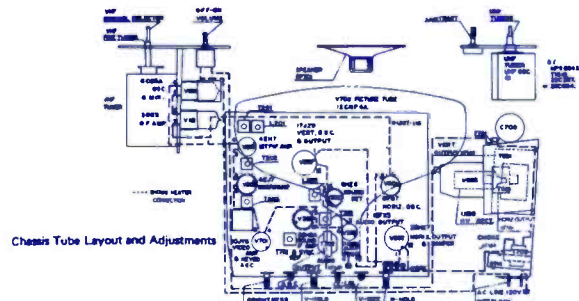
VHF TUNER CIRCUIT SCHEMATIC DIAGRAM



SYMBOL	DESCRIPTION	AIRLINE PART NO.
C20A	40µf, 200v, elect	034-018800
C20B	200µf, 200v, elect	034-018800
C20C	250µf, 200v, elect	034-018800
C20D	10µf, 200v, elect	034-018800
C106	330pf, 5%, 500v, mica	045-007200
R11	125Ω, 10%, 4w, film	054-059500
R13	3600Ω, 10%, 5w, WW	053-362510
R162	4.5Ω, 10%, 10w, carbon	053-458110
R26	contrast, 1000Ω	055-060400
R27	bright, 5M	055-032100
R30	vert lin, 500K	055-035000
R70	vert hold, 1.5M	055-060300
R71	height, 5M	055-035100
R111	horiz. freq adj, 39K	055-041700
R123	horiz hold, 75K	055-032000
R163	volume, 500K, & on/off sw	055-059700
SR20	diode, AFC det	004-002900
SR27	rectifier, silicon	004-002700
AT83	audio opt xformer	031-008301
FC23A	filter choke	032-002301
L202	horiz freq coil	110-020200
L206	quad coil	109-020601
L208	IF interstage trans	109-020800
L302	sound interstage trans	109-030200
L330	def yoke ass'y, inc R72, R73, RT74, R118 & C116	027-033000
L388	line filter coil	111-038800
TR78	vert opt trans	033-007802
TR94	horiz opt trans printed cir bd	033-009400
F19	cir brkr, 1.75a	132-003601
CC206	couplate, sync take-off tuner, VHF	099-001900
	tuner, UHF	134-020600
		006-019300
		006-023600



NOTES:
1. ALL RESISTORS ARE 1/2 WATT, UNLESS OTHERWISE NOTED.
2. CAPACITOR VALUES ARE IN MFD, UNLESS OTHERWISE NOTED.
3. VOLTAGE TOLERANCE MAY VARY ± 20%.
4. VOLTAGES MEASURED FROM POINT INDICATED TO CHASSIS GROUND WITH "VTVM", AT NORMAL SIGNAL.
5. WAVEFORMS TAKEN WITH NORMAL SIGNAL INPUT.
6. DOT(S) ON SPEAKER(S) INDICATE PHASE.
7. (WF-1), (WF-2) ETC. INDICATE POINTS OF OBSERVATION FOR WAVEFORMS, USE LOW CAPACITY PROBE.



SYMBOL	DESCRIPTION	AIRLINE PART NO.
R714	4.7Ω, 10w, 10%, resin	TV 2386
R715	5.8Ω, 4w, 10%, oxide film	TV 23272
R219	500K, pot., AGC (8V-120)	TV 25234
R315, SW701	500K, pot., on-off, volume w/switch (8V-020UL)	TV 2574
R517	1M, pot., vert hold (9V-117)	TV 25237
R518	1M, pot., vert size (9V-119)	TV 25238
R519	1M, pot., vert lin (9V-119)	TV 29238
R628	50K, pot., horiz hold (9V-182)	TV 25314
R718	20K, pot., contrast (8V-007)	TV 2572
R719	250K, pot., bright (9V-118)	TV 25239
L302	coil, sound dot (TIF-544)	TV 62254
L801	coil, horiz hold (TL-23)	TV 61174
L703-L704	coil, RF choke TL-803	TV 61191
T201	x-former, 1st pix IF and 41.25MHz trap	TV 62339

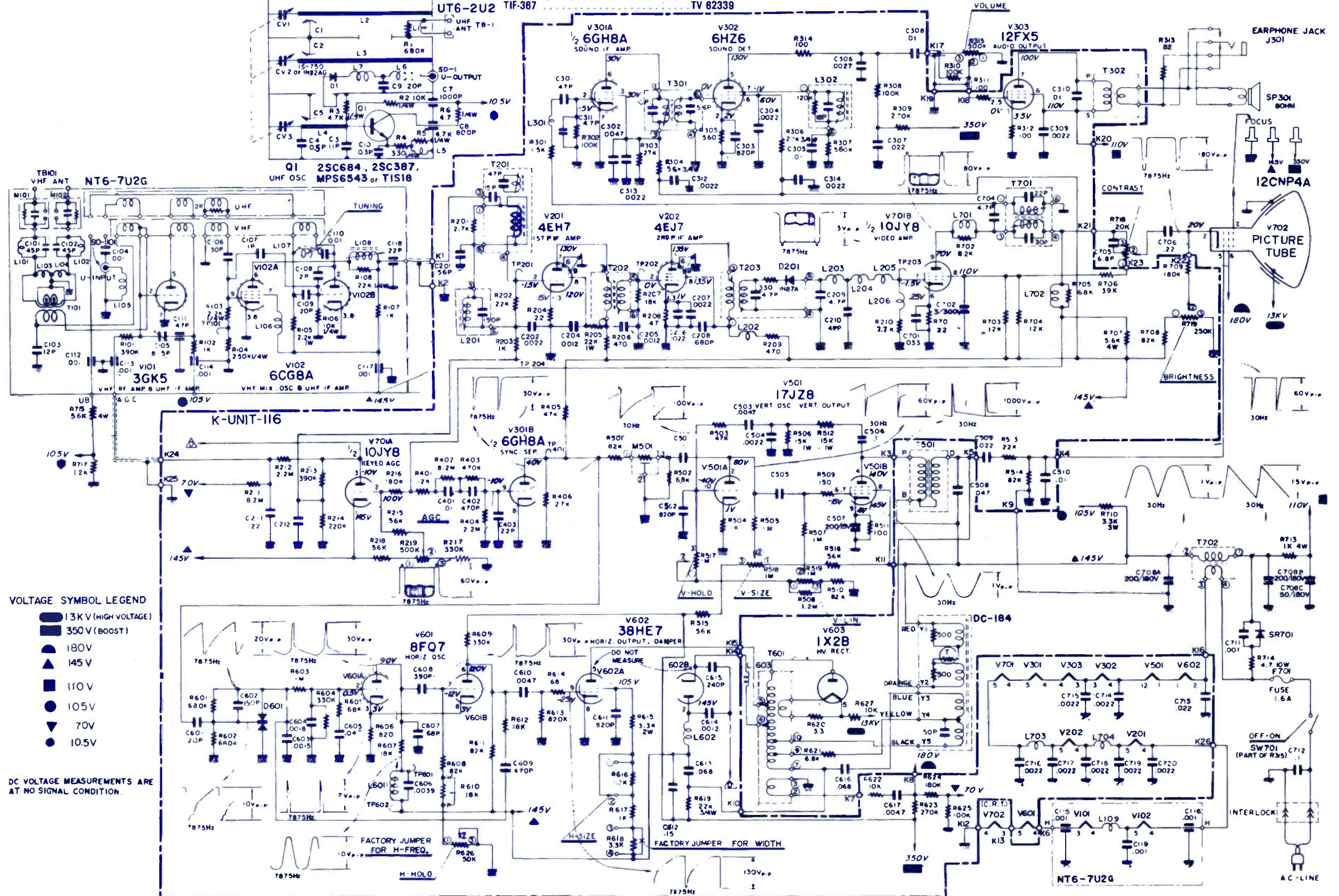
ELECTRONIC
TECHNICIAN / DEALER

TEKFAK

AIRLINE
TV Model
GEN-1160A

T202	x-former, 2nd pix IF TIF-379	TV 62340
T203	x-former, pix det TL-89	TV 62290
T301	x-former, sound IF TIF-378	TV 62341
T302	x-former, audio output 7T-194	TV 11255
T501	x-former, vert opt 8T-192	TV 11218
T601	x-former, horiz opt 8T-888	TV 11258
T701	x-former, sound IF & 4.5MHz trap 2TIF-491	TV 62252

T702	x-former, power choke 9T-204	TV 11218
M501	capfistor PRU-302	TV 3455
F701	fuse, 1.6a	31501.6
printed circuit board, K-UNIT-116 complete assy		
TV 98418		
tuner, VHF NT6-7U2G		
TV 35182		
tuner, UHF UT6-2U2		
TV 35148		
yoke, deflection ass'y		
TV 61477		

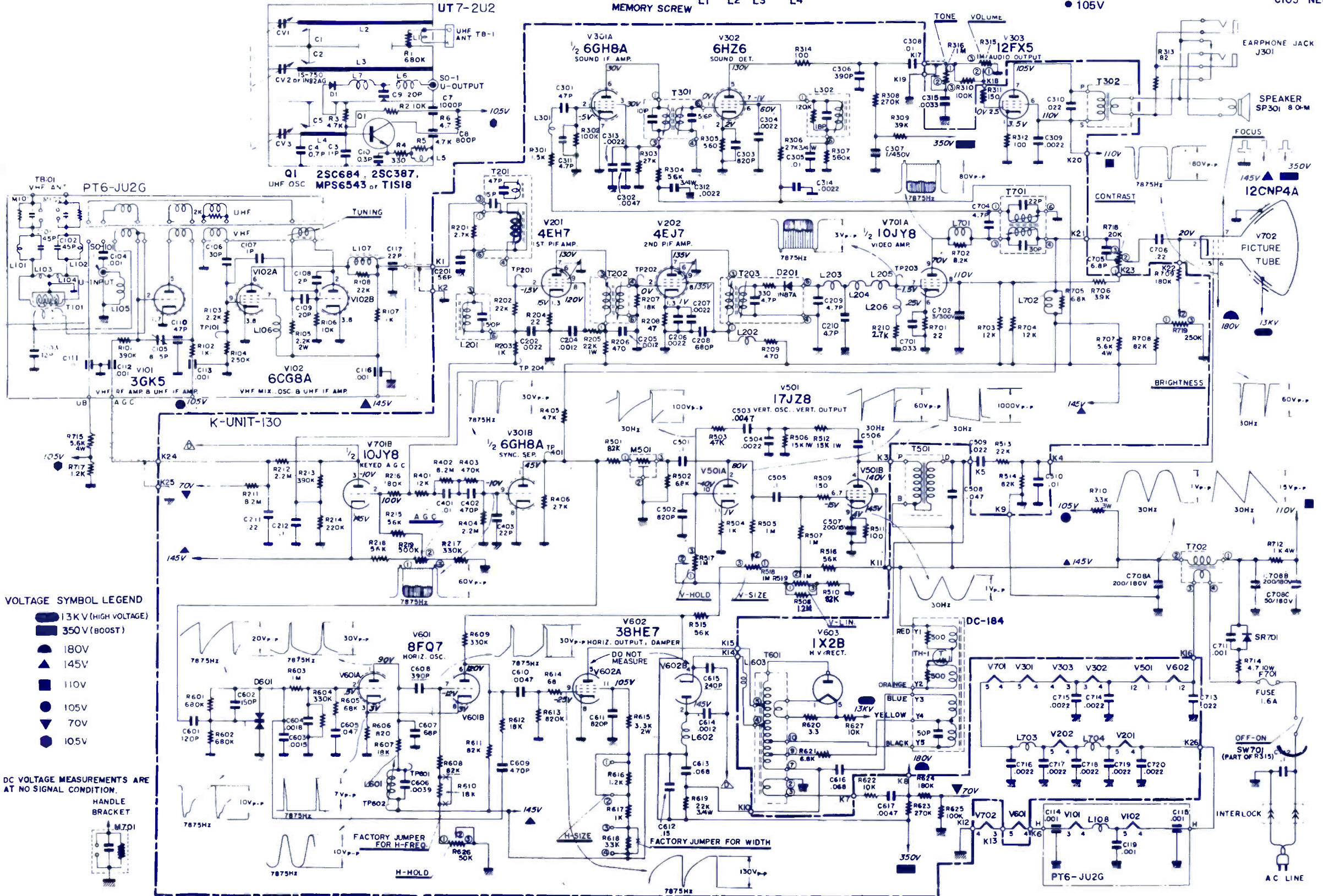
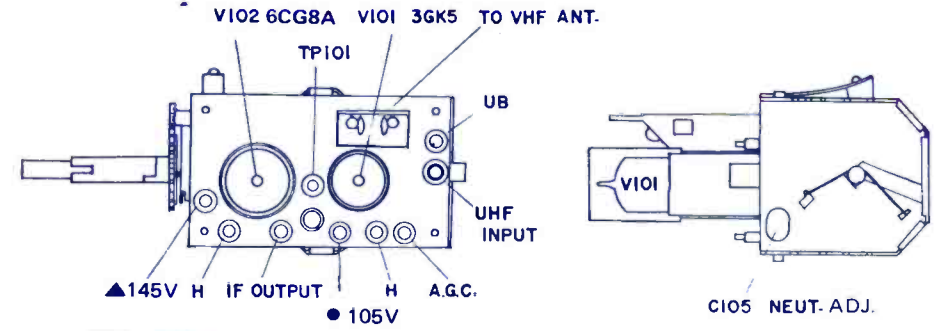
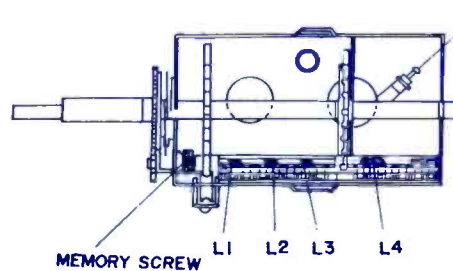


- VOLTAGE SYMBOL LEGEND**
- 13KV (HIGH VOLTAGE)
 - 350V (BOOST)
 - ▲ 180V
 - ▲ 145V
 - 110V
 - 105V
 - ▼ 70V
 - 10.5V

DC VOLTAGE MEASUREMENTS ARE AT NO SIGNAL CONDITION.

AIRLINE
TV Model GEN-11460A

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**



- VOLTAGE SYMBOL LEGEND**
- 1.3KV (HIGH VOLTAGE)
 - 350V (BOOST)
 - ▲ 180V
 - ▲ 145V
 - 110V
 - 105V
 - ▼ 70V
 - 105V

DC VOLTAGE MEASUREMENTS ARE AT NO SIGNAL CONDITION.
HANDLE BRACKET

M7D1

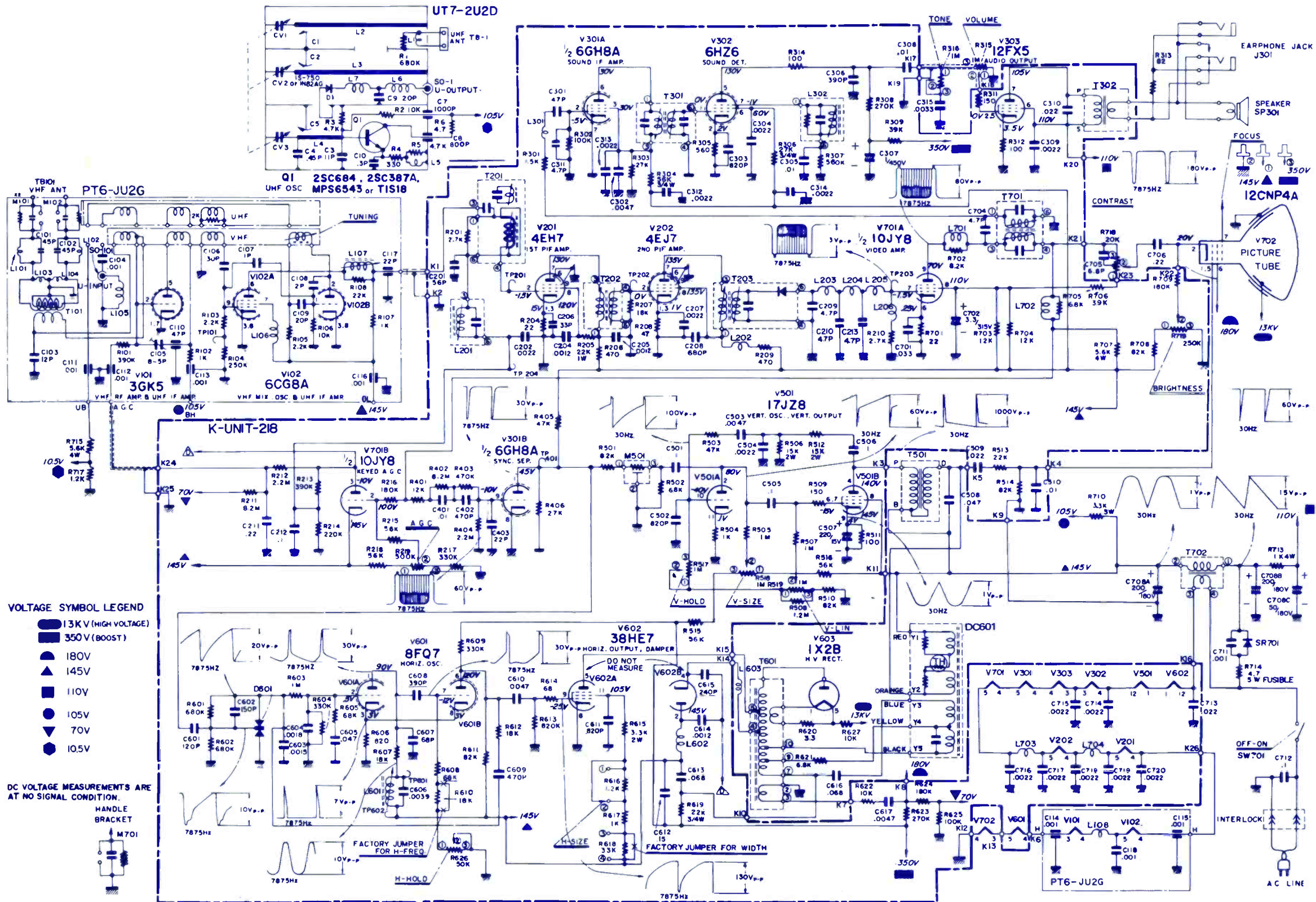
SYMBOL DESCRIPTION AIRLINE PART NO.

R219 - 500K. pot., AGC (9V-120)	TV 25234
R315 - 1M. pot., volume	TV 25408
R316 - 1M. pot., tone (9V-149)	TV 25235
R517 - 1M. pot., vert hold (9V-117)	TV 25237
R518 - 1M. pot., vert size (9V-119)	TV 25238
R519 - 1M. pot., vert lin (9V-119)	TV 25238
R626 - 50K. pot., horiz hold (9V-182)	TV 25314
R718 - 20K. pot., contrast (8V-0072)	TV 25409
R719 - 250K. pot., bright (9V-118)	TV 25239
L201 - coil, 47.5µH trap (2TIF-487)	TV 62248
L302 - coil, sound detector (TIF-544)	TV 62254
L601 - coil, horiz hold (TL-23)	TV 61174

T301 - transformer, sound IF (TIF-378)	TV 62364
T302 - transformer, audio output (7T-194)	TV 11255
T501 - transformer, vert output (8T-192)	TV 11216
T601 - transformer, horiz output (8FT-670)	TV 11263
T701 - transformer, sound IF & 4.5MHz trap (2TIF-491)	TV 62252
T702 - transformer, power (9T-204)	TV 11218
M501 - capristor (PRC-302)	TV 3455
M701 - capristor (PRC-366)	TV 3465
D601 - dual diode (SELEN-26)	TV 24226
SR701 - rectifier (SI-RECT-102)	TV 24298
tuner, UHF (UT7-2U2D)	TV 35851
tuner, VHF (PT6-JU2G)	TV 35186
DC-601 - yoke deflection (assembly)	TV 61477

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

AIRLINE
TV Models
GEN-11461A,
GEN-11481A



VOLTAGE SYMBOL LEGEND

- 13KV (HIGH VOLTAGE)
- 350V (BOOST)
- ▲ 180V
- ▲ 145V
- 110V
- 105V
- ▼ 70V
- 105V

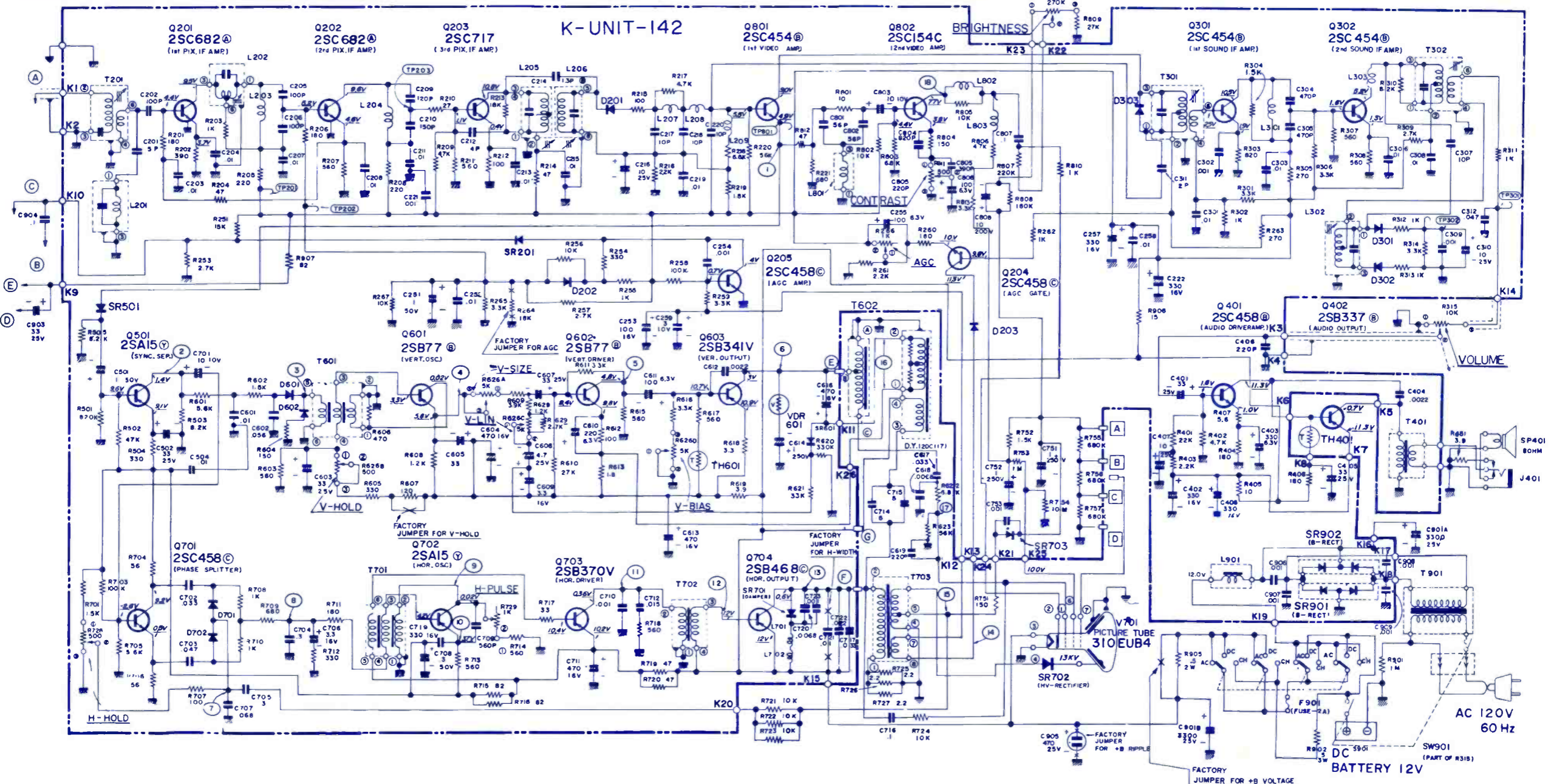
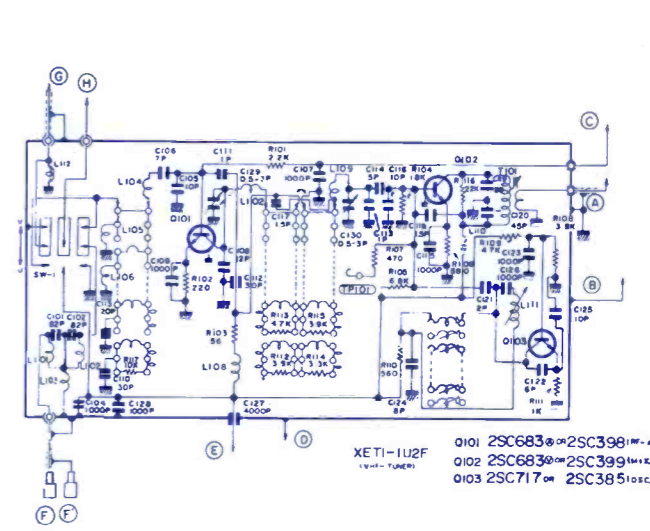
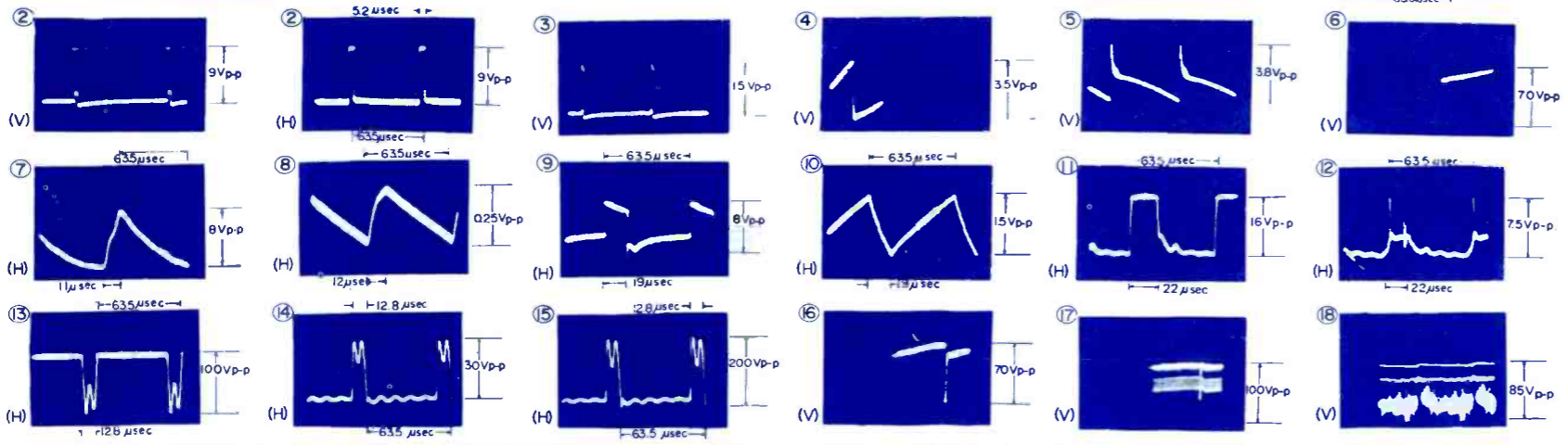
DC VOLTAGE MEASUREMENTS ARE AT NO SIGNAL CONDITION.

HANDLE BRACKET

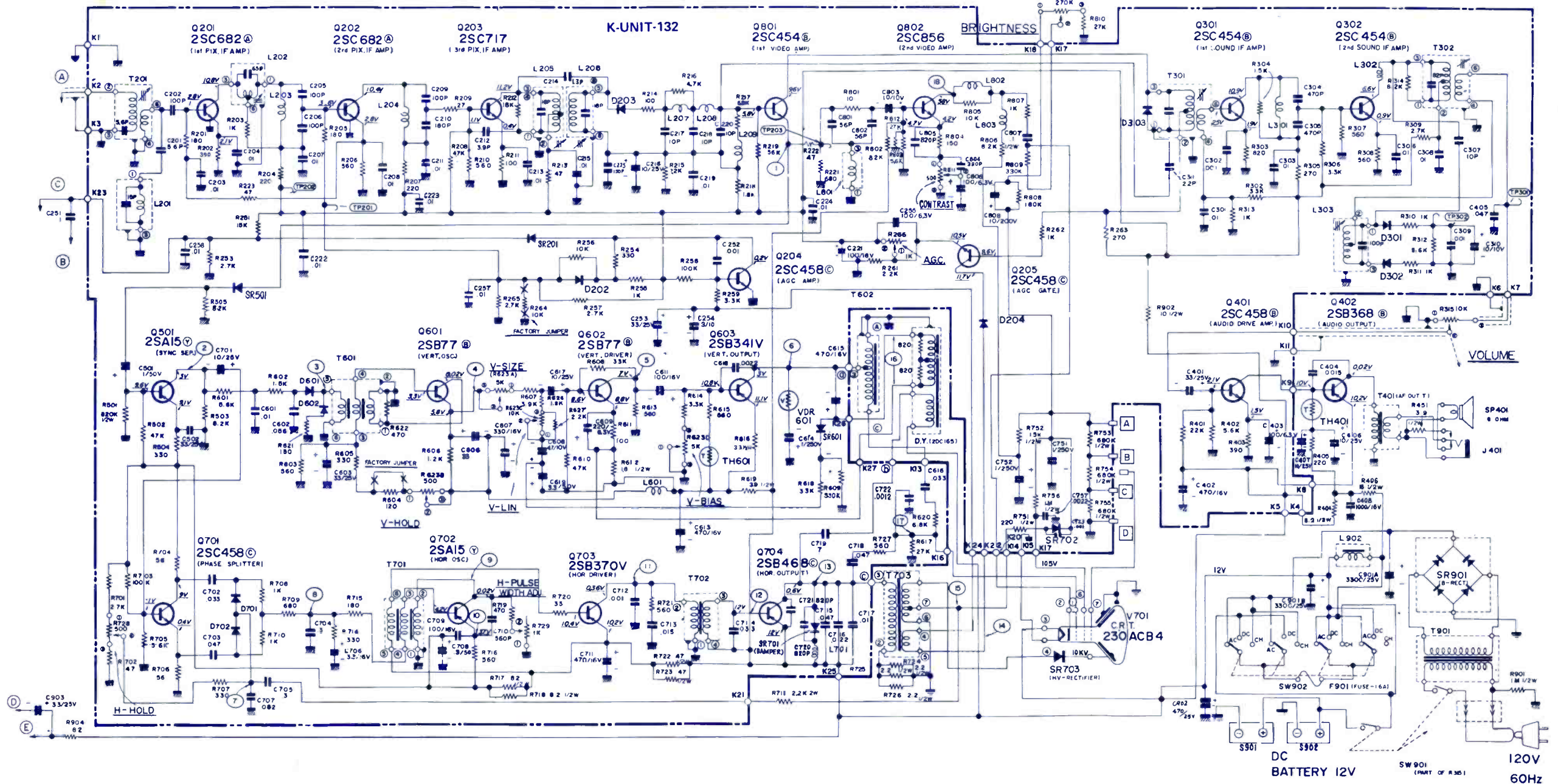
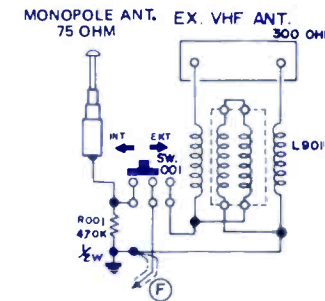
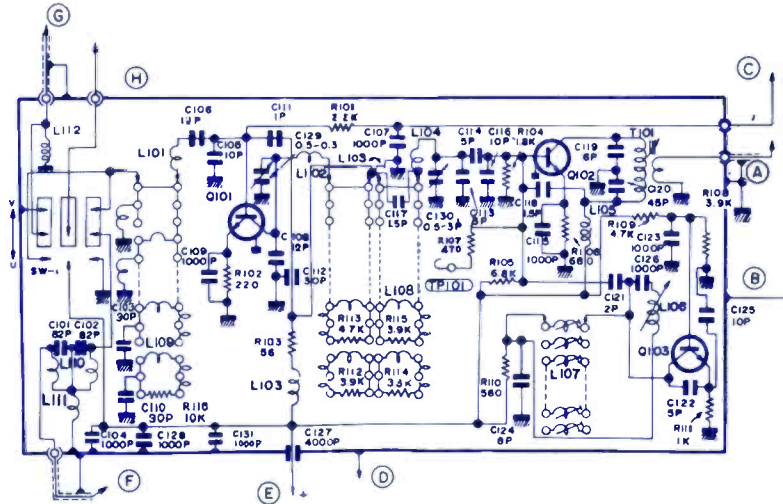
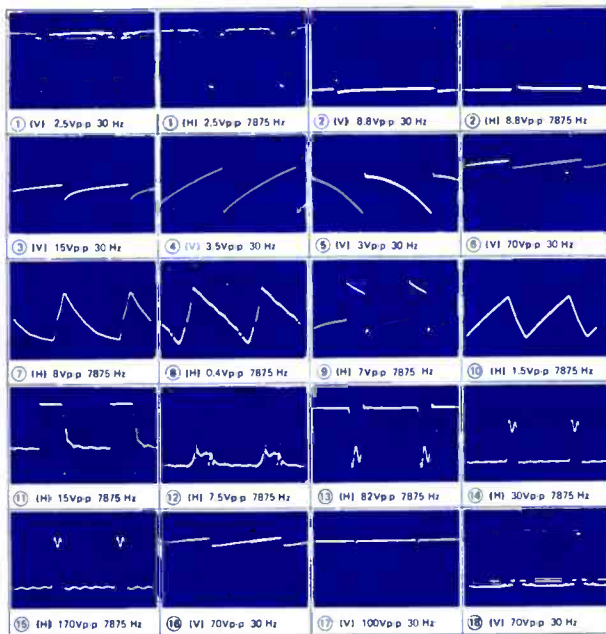
M701

AIRLINE
TV Model GEN-11760A

ELECTRONIC TECHNICIAN / DEALER *TEKFAX*



SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R111	10K 1w	60B14-103
R208	1M, vol cont w/sw	75C120-1
R320	30K, contrast cont	75C121-3
R322	100K, bright cont	75C121-2
R402A	vert lin cont, dual	75C95-6
R402B	height cont, dual	75C95-6
R421	1M, therm	60A64-1
R422	1.2M, vert hold cont	75C121-1
R502	5.51k, fuse type	61C48-1
C135	39pf, 5%, NPO, cer disc	65D10-347
C327	6.8pf, 1/4%, 500v, NPO, cer disc	65D10-102
C406	330pf, 10%, 5kv, cer disc	65D10-266
C430	5pf, 10%, 1kv, N750, cer disc	65D10-345
C504A	150uf, 165v, elect	67D15-393
C504B	150uf, 165v, elect	67D15-393
C504C	200uf, 150v, elect	67D15-393
L202	quad coil	72C132-77
L401	horiz lock coil	94D17-17
T201	audio output xformer	79C81-23
T303	sound takeoff xformer	72C185-5
T401	vert output xformer	79D100-17
T402	def yoke ass'y	700D1089-2
T403	horiz output xformer	79D117-1
CR401	horiz phase det	93B5-9
	tuner UHF	94E361-1
	tuner VHF	94E360-1



AIRLINE

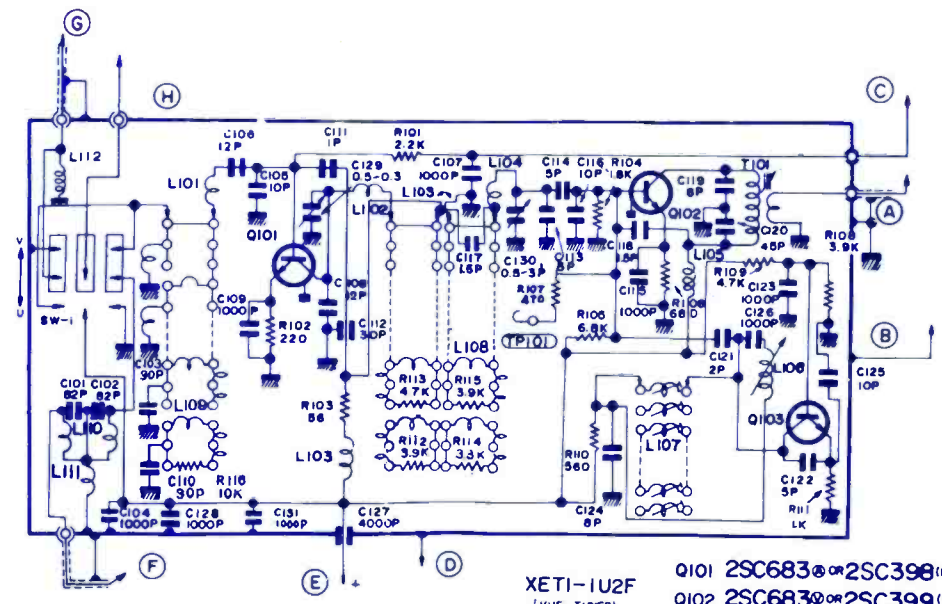
TV Model
GEN-11961A

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

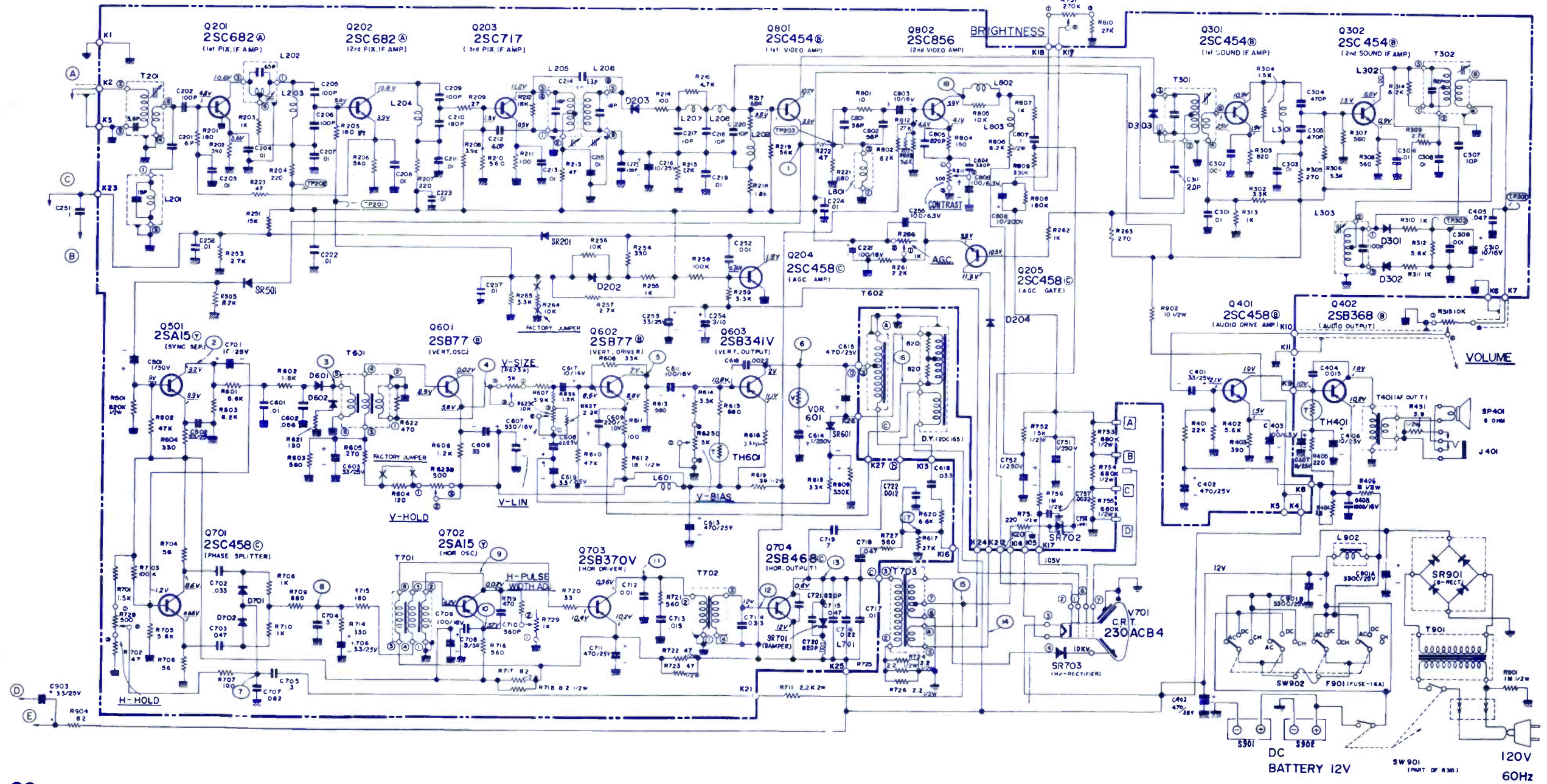
SYMBOL DESCRIPTION AIRLINE PART NO.

C606-33 μf special electrolytic	TV32427
C901A-3300 μf/25v electrolytic	TV32432
C901B-3300 μf/25v electrolytic	TV32432
R266-1K, pot, AGC	TV25328
R315, SW901-10K, pot, on-off/volume	TV25316
R623A-5K pot, vert size, vert hold, vert lin, vert bias	TV25317
R623B-500n pot, vert size, vert hold, vert lin, vert bias	TV25317
R623C-10K pot, vert size, vert hold, vert lin, vert bias	TV25317
R623D-5K pot, vert size, vert hold, vert lin, vert bias	TV25317
R728-500n, pot, horiz hold	TV25318
R729-1K, pot, horiz width	TV25328
R757-270K, pot, bright	TV2573
R811-500 n, pot, contrast	TV25319
L301-coil, sound IF	TV61606
L303-coil, sound detector	TV62438
L801-coil, 4.5MHz trap	TV62258

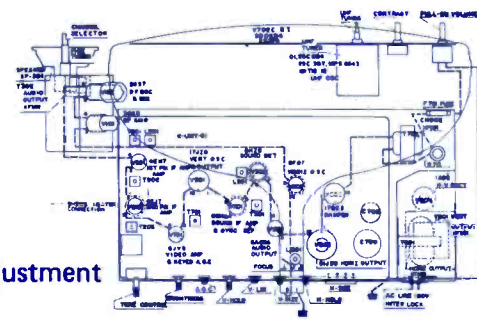
L902-coil, power choke	TV61611
T401-xformer, sound output	TV11257
T601-xformer, vert oscillator	TV11258
T602-xformer, vert output	TV11169
T701-xformer, horiz osc	TV11133
T702-xformer, horiz driver	TV11259
T703-xformer, horiz output w/1/2 h v rect bracket	TV11260
T901-xformer, power	TV11261
D202-diode, 1N34A, AGC delay	1N34A
D203-diode, 1N60, picture detector	1N60
SR601-rectifier, vert lin	TV24648
TH401-thermistor, audio circuit	TV24249
TH601-thermistor, vert circuit	TV24249
VDR601-voltage dependent resistor	TV24250
fuse, 1.6A	31501.6
UHF tuner	TV35351
VHF tuner	TV35183
yoke, deflection (assembly, w/leads)	TV61612



XET1-1U2F (VHF-TUNER)
 Q101 2SC683 or 2SC398 (RF-AMP)
 Q102 2SC683 or 2SC399 (MIX)
 Q103 2SC717 or 2SC385 (OSC)



**Chassis Tube
Layout and Adjustment**

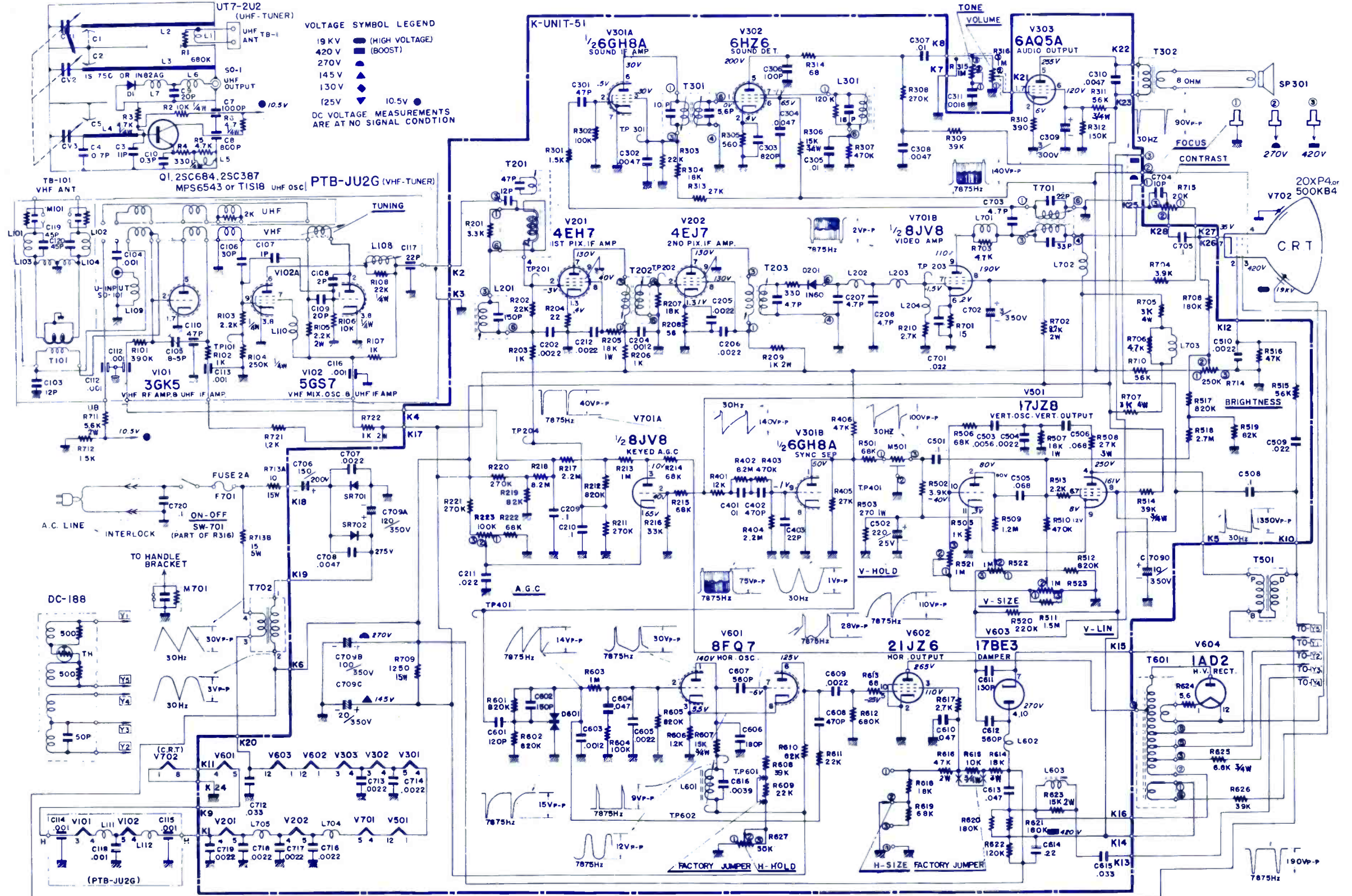


SYMBOL	DESCRIPTION	AIRLINE PART NO.
C709A	—120µf/100µf/20µf/10µf	TV32169
C709B,C,D	—@350v, elect	TV32169
C720	—1µf, spec tublr	TV33328
R223	—100KΩ, AGC (9v-150)	TV25243
R315	—1M, tone (9v-149)	TV25235
R316	—1M, vol w/on-off	TV25236
SW-701	—switch (9v-151u)	TV25236
R521	—1M, vert hold (9v-117)	TV25237
R522	—1M, vert size (9v-119)	TV25238
R523	—1M, vert lin (9v-119)	TV25238
R627	—50KΩ, horiz hld (9v-121)	TV25240
R714	—250KΩ, bright (9v-118)	TV25239
R715	—20KΩ, contrast (8v-007)	TV2572
L301	—coil, sound det (TIF-551)	TV61478
L601	—coil, horiz hold (TL-23)	TV61174
L603	—coil, horiz lin (2TL-984)	TV61479

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

AIRLINE
TV Model
GEN-13460A

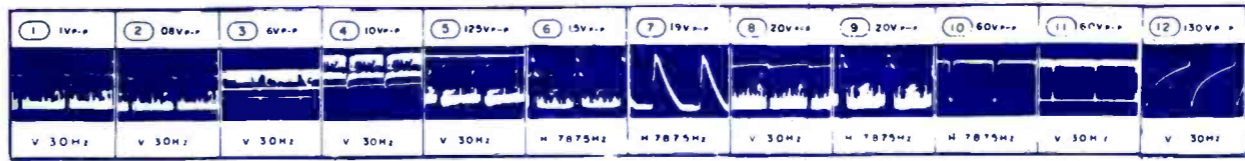
T202	—trans, 2nd pix IF (TIF-303)	TV62342
T203	—trans, pix det (2TL-957K)	TV62343
T301	—trans, sound IF (TIF-378)	TV62341
T302	—trans, audio output (7T-182)	TV11219
T501	—trans, vert output (8T-195)	TV11220
T601	—trans, horiz output (0H-650)	TV11221
T701	—trans, 4.5MHz trap (2TIF-491)	TV62252
T702	—trans, power (9T-219)	TV11222
M501	—Cap (PRC-302)	TV3455
M701	—Cap (PRC-346)	TV3465
F701	—fuse, 2a	*315002
SP301	—tuner, UHF (UT-7-2u2)	TV35158
SP301	—tuner, VHF (PTB-Ju2G)	TV35184
SP301	—yoke, defl (DC-188)	TV61617



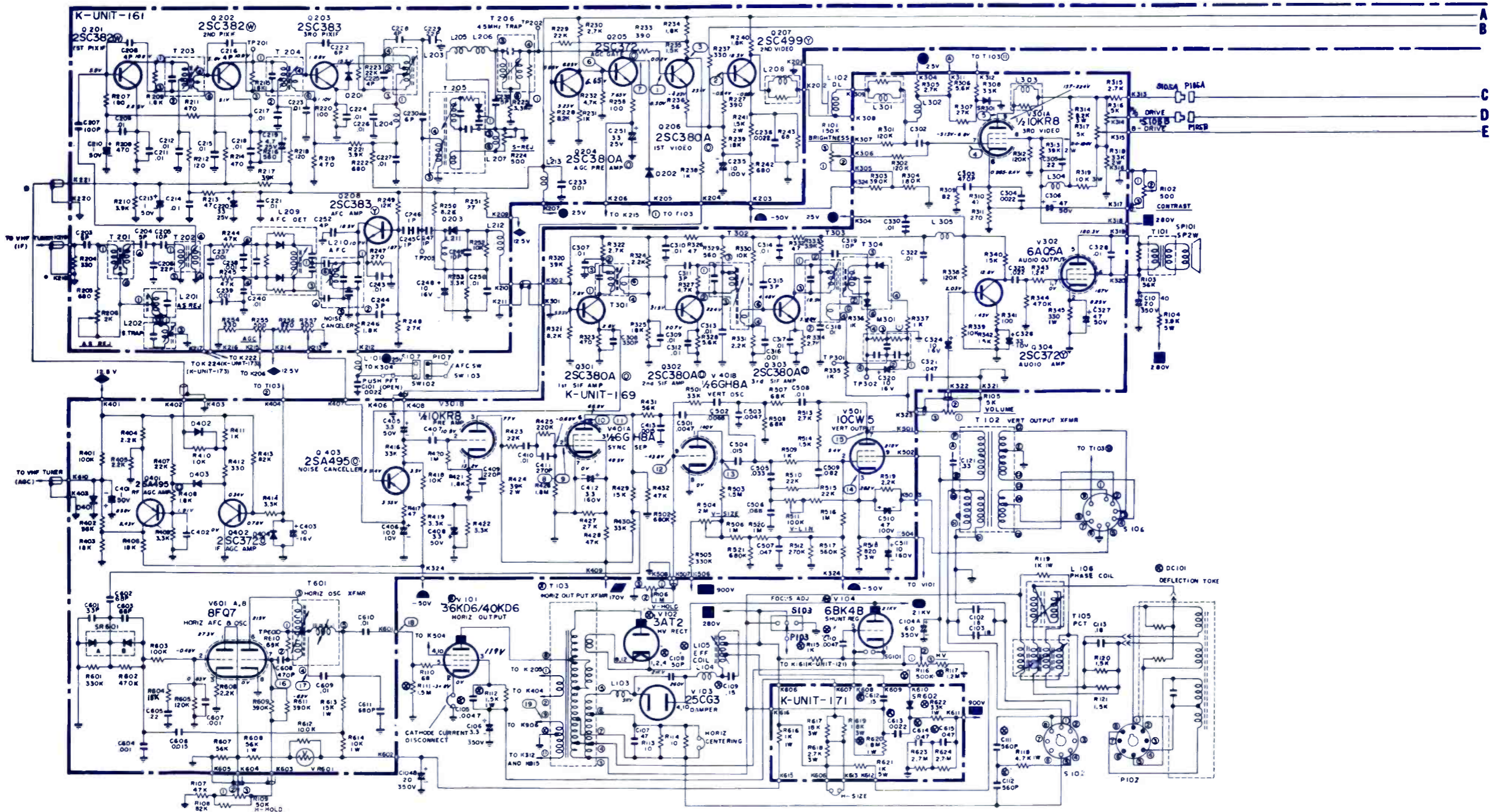
AIRLINE

Color TV Model GEN-12440C

ELECTRONIC TECHNICIAN / DEALER **TEKFA**X

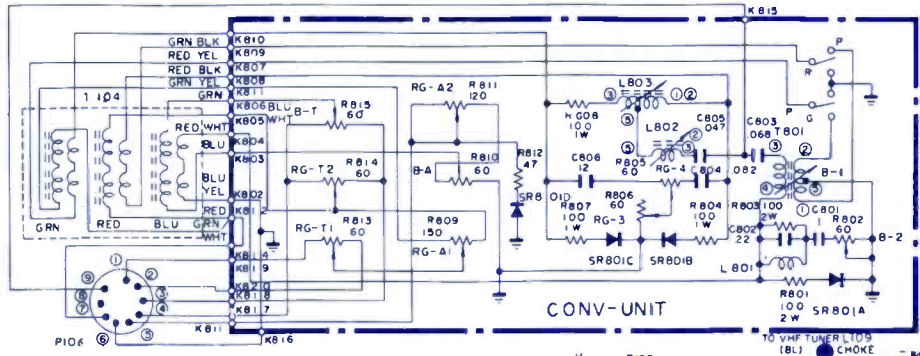
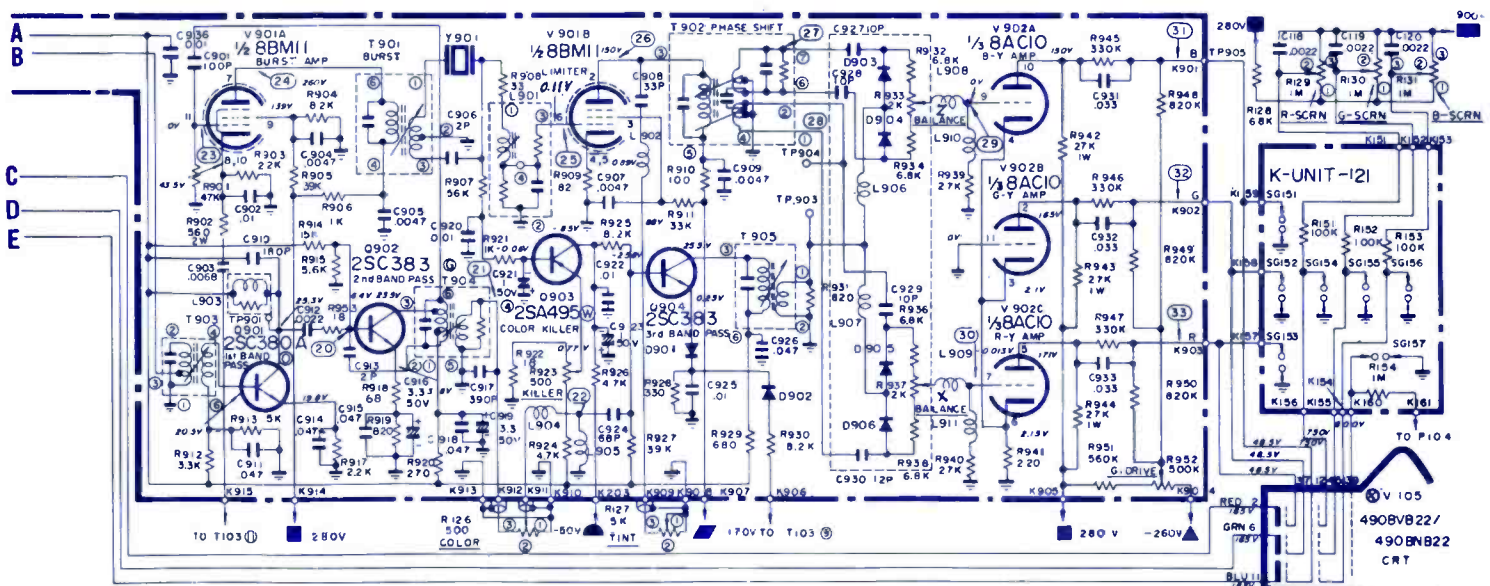


⊗ Components which affect X-Radiation



SYMBOL	DESCRIPTION	AIRLINE PART NO.
C104A,B,C,D	60µf/20µf/20µf/20µf @ 350v, elect	TV 32452
C117A,B	150µf/150µf @ 350v, elect	TV 32451
R101	150K, pot, bright (9V-171)	TV 25264
R102	500Ω, pot, contrast (9V-331)	TV 25354
R105	5K, pot, vol.	TV 25342
SW101	w/on-off switch (9V-229)	TV 25342
R106	1M pot, vert hold (8V-172)	TV 25268
R109	50K pot, horiz hold (9V-311)	TV 25363
R126	500Ω pot, color (9V-245)	TV 25345
R127	5K pot, tint (9V-223)	TV 25346
R129	1M, pot, red screen (9V-205)	TV 25343
R206	2K, pot, adjacent sound reject (9V-235)	TV 25347
R224	500Ω pot, sound reject (9V-217)	TV 25348
R316	5K, pot, green red drive (9V-241)	TV 25349
R317	5K, pot, blue drive (9V-241)	TV 25349
R504	2M pot, vert size (9V-241)	TV 25349
R511	100K pot, vert lin (9V-241)	TV 25349
R255	500Ω pot, AGC (9V-239)	TV 25350
R257	500Ω pot, noise canceller (9V-239)	TV 25350
R923	500Ω pot, color killer (9V-239)	TV 25350
R952	500K, pot, G1 drive (9V-239)	TV 25350
L102	coil, delay line (2TL-111)	TV 61672
L105	coil, horiz efficiency (2TL-91)	TV 61673

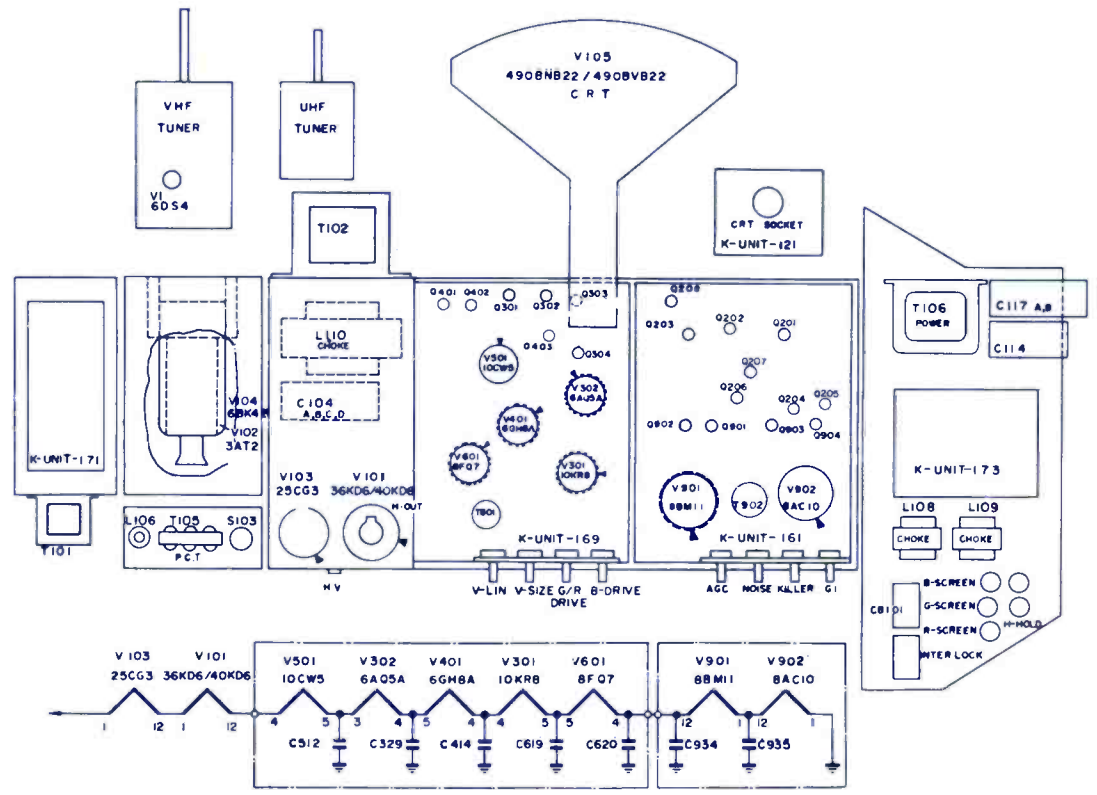
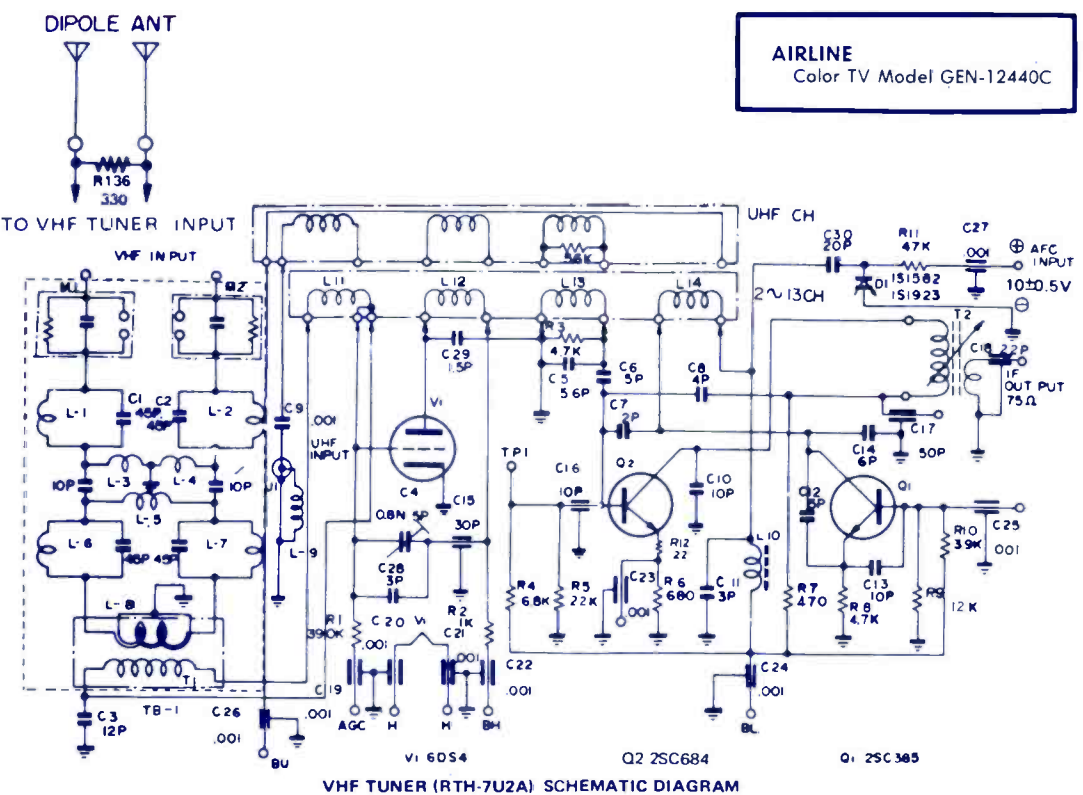
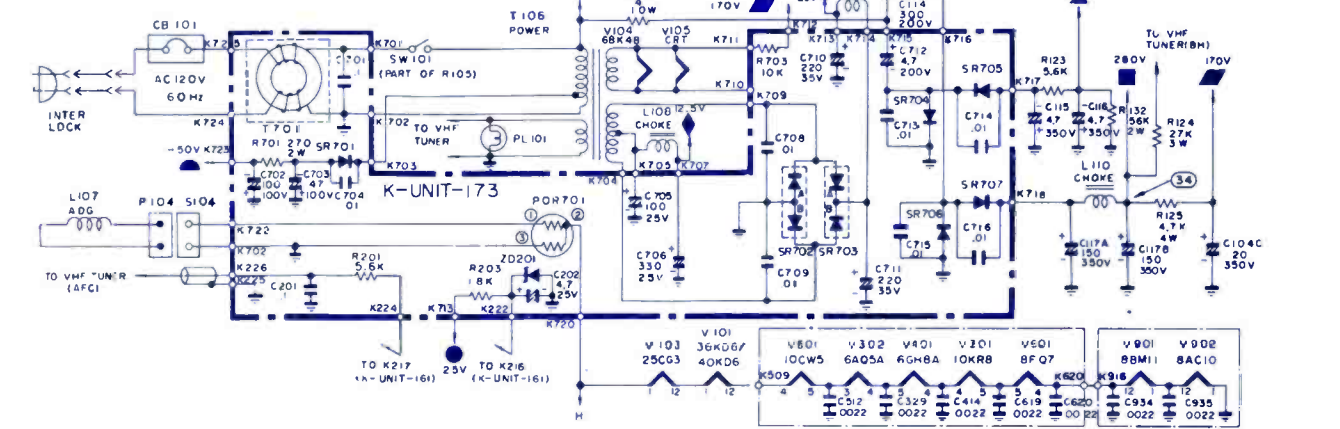
L107	coil, degaussing (2TL-161)	TV 61680
L202	coil, sound trap (91F-565)	TV 61658
T101	x-former, audio output (7T-193)	TV 11239
T102	x-former, vert output (8T-209)	TV 11297
T103	x-former, horiz output (8FT-666)	TV 11278
T106	x-former, power (5T-203)	TV 11275
T201	x-former, 1st pix IF (91F-569)	TV 62464
T206	x-former, 4.5MHz trap (91F-571A)	TV 62513
T301	x-former, sound take off (TIF-575A)	TV 62471
T304	x-former, sound det (TIF-573)	TV 62474
T601	x-former, horiz osc (2TL-980)	TV 62334
T701	x-former, ac line filter (2TL-69)	TV 62476
T901	x-former, burst (2TL-71)	TV 62480
T903	x-former, chroma take off (TIF-577A)	TV 62516
T904	x-former, 1st band pass (2TL-67A)	TV 62514
T905	x-former, 2nd band pass (2TL-101A)	TV 62515
M101	cap (PRC-366)	TV 34465
M301	cap (PRC-382)	RV 34107
VR601	varistor, AOC (TS-2171)	TV 24238
Y901	crystal, 3.58MHz (Crystal-802)	TV 24279
CB101	circuit breaker, tuner, UHF (UT7-3U2P with/dial cord drum & gear installed)	TV 12204
	tuner, VHF (RTH-7U2A)	TV 35194
	tuner, VHF (RTH-7U2A)	TV 35206
DC101	yoke, deflection	TV 60218



DC VOLTAGE MEASUREMENTS ARE AT NO SIGNAL CONDITION

VOLTAGE SYMBOL LEGEND

BB	900V
B1	280V
B2	170V
B3	-260V
B4	-50V
B5	25V
B6	12.5V



AIRLINE
Color TV Model GEN-12440C

DUMONT

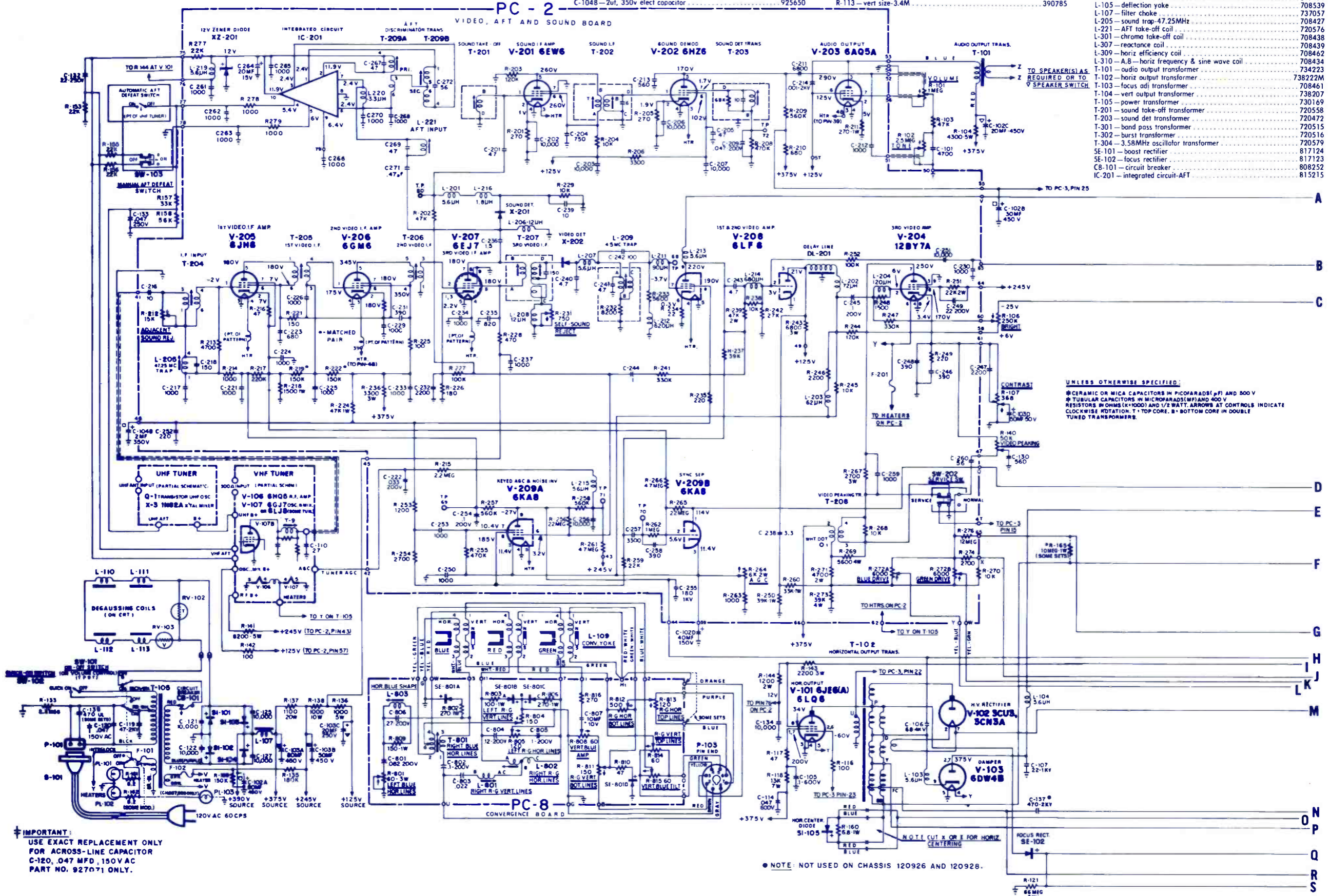
Color TV Chassis
120926, 928,
957, 958

ELECTRONIC TECHNICIAN / DEALER **TEKFA**X

SYMBOL	DESCRIPTION	DUMONT PART NO.
C-102A	80uf, 450v elect capacitor	925686
C-102B	30uf, 450v elect capacitor	925686
C-102C	20uf, 450v elect capacitor	925686
C-102D	40uf, 150v elect capacitor	925686
C-103A	80uf, 450v elect capacitor	925686
C-103B	50uf, 450v elect capacitor	925686
C-103C	20uf, 250v elect capacitor	925686
C-103D	50uf, 50v elect capacitor	925686
C-104A	80uf, 450v elect capacitor	925650
C-104B	2uf, 350v elect capacitor	925650

C-104C	25uf, 25v elect capacitor	925650
R-101	volume control w/switch (ch. 120926, 120957)	391035
R-101	volume control w/switch (ch. 120928, 120958)	391036
R-102	tone control, 2.5M	390970
R-106	bright control, 250K	390970
R-107	contrast control, 368	390963
R-108	limt control-1.2K	390965
R-109	color control-500Ω	390966
R-111	vert hold control-750K	390962
R-113	vert size-3.4M	390785

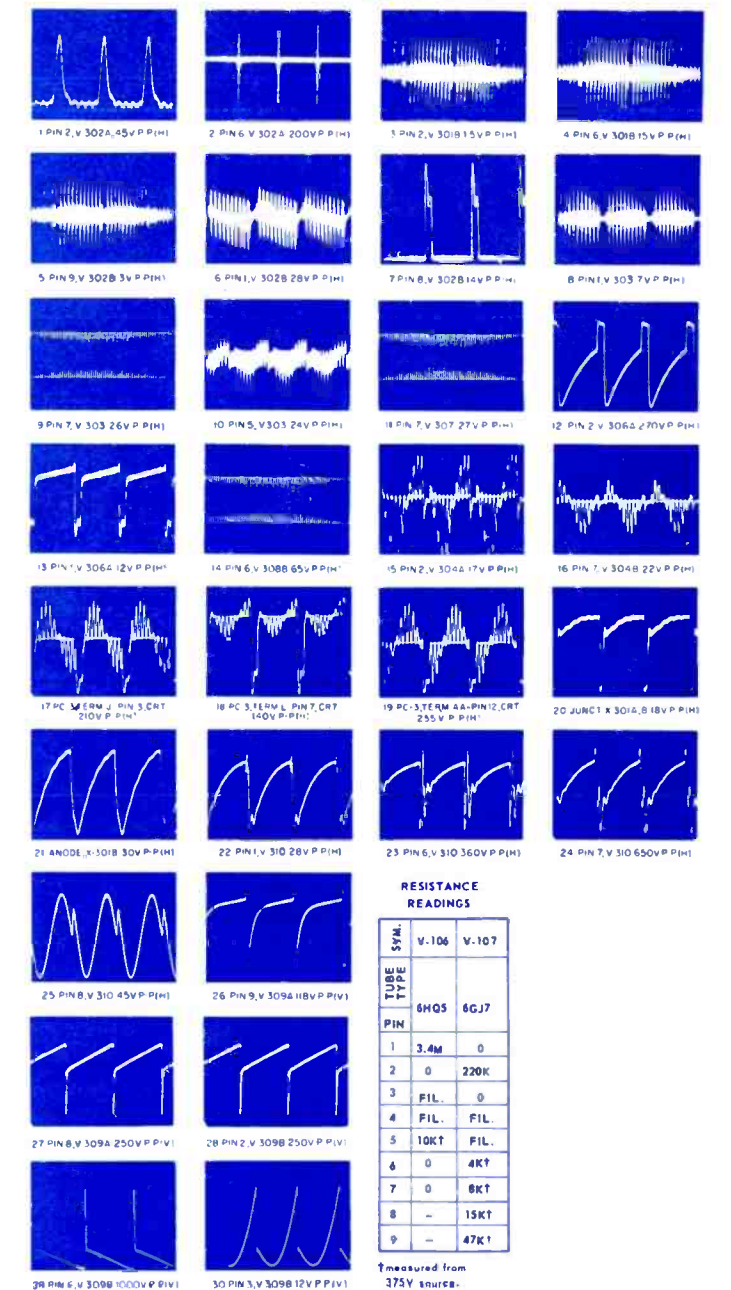
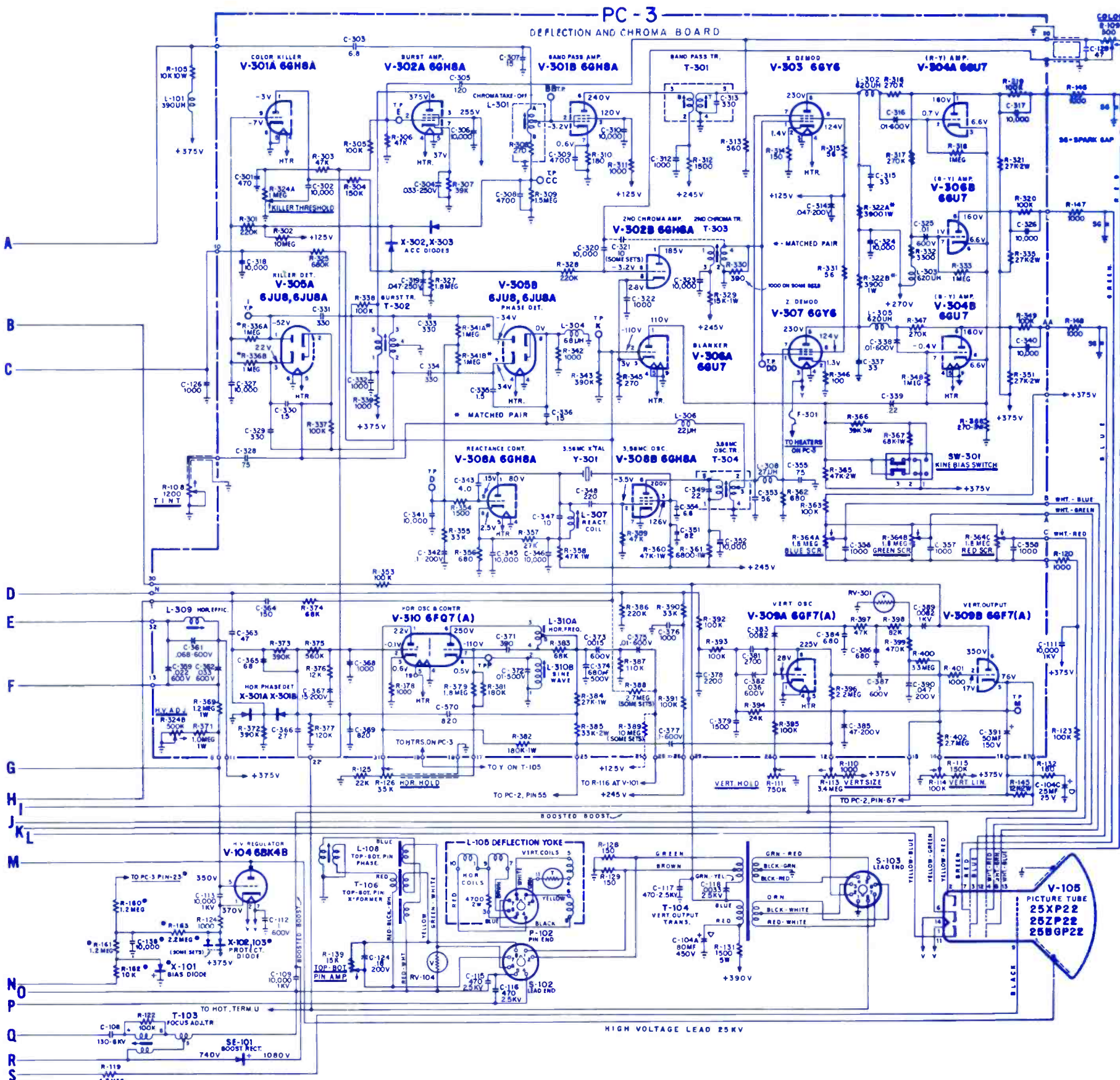
R-114	vert lin-100K	390908
R-126	horiz control-35K	390962
R-140	video peaking control-50K	390963
R-212	adjacent sound control-15K	390954
R-231	self sound reject control-750Ω	390883
R-264	AGC control-6K, 2w	390882
R-364A,B,C	triple control-blue, green, red screen adj-1.5M each	390879
RV-103	voltage dependent resistor	397186
RV-104	voltage dependent resistor	397191
RV-301	varistor	397171
L-105	deflection yoke	708539
L-107	filter choke	737057
L-205	sound trap-47.25MHz	708427
L-221	AFT take-off coil	720576
L-301	chroma take-off coil	708438
L-307	reactance coil	708439
L-309	horiz efficiency coil	708462
L-310	A,B-horiz frequency & sine wave coil	708434
T-101	audio output transformer	734223
T-102	audio output transformer	738222M
T-103	focus adj transformer	708461
T-104	vert output transformer	738207
T-105	power transformer	730169
T-201	sound take-off transformer	720558
T-203	sound det transformer	720472
T-301	band pass transformer	720515
T-302	burst transformer	720516
T-304	3.58MHz oscillator transformer	720579
SE-101	boost rectifier	817124
SE-102	focus rectifier	817123
CB-101	circuit breaker	808252
IC-201	integrated circuit-AFT	815215



UNLESS OTHERWISE SPECIFIED:
 * CERAMIC OR MICA CAPACITORS IN PICOFARADS (pF) AND 500 V
 * TUBULAR CAPACITORS IN MICROFARADS (μF) AND 400 V
 * RESISTORS IN OHMS (Ω), 1000Ω AND 1/2 WATT. ARROWS AT CONTROLS INDICATE COUNTERCLOCKWISE ROTATION. T = TOP CORE, B = BOTTOM CORE IN DOUBLE TUNED TRANSFORMERS.

† IMPORTANT:
 USE EXACT REPLACEMENT ONLY FOR ACROSS-LINE CAPACITOR C-120, .047 MFD, 150V AC PART NO. 927071 ONLY.

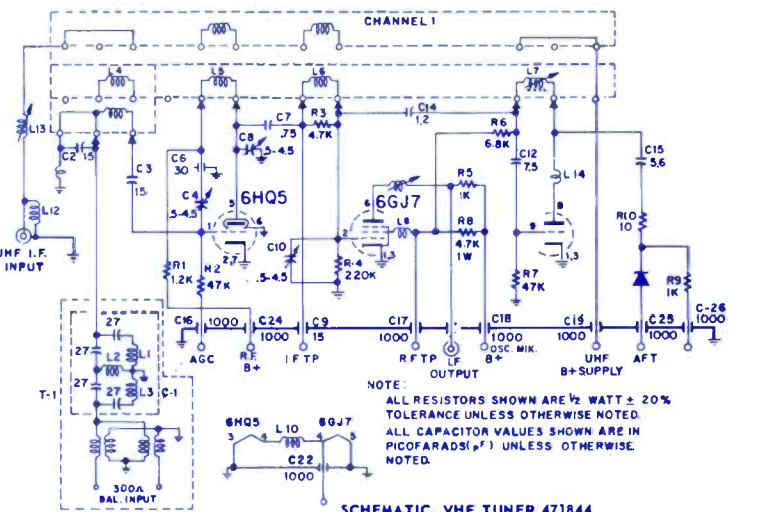
NOTE: NOT USED ON CHASSIS 120926 AND 120928.



RESISTANCE READINGS

TUBE TYPE	SYN.	V-106	V-107
PIN	6HQ5	6GJ7	
1	3.4M	0	
2	0	220K	
3	FIL.	0	
4	FIL.	FIL.	
5	10KT	FIL.	
6	0	4K†	
7	0	8K†	
8	-	15K†	
9	-	47K†	

† Measured from 375V source.

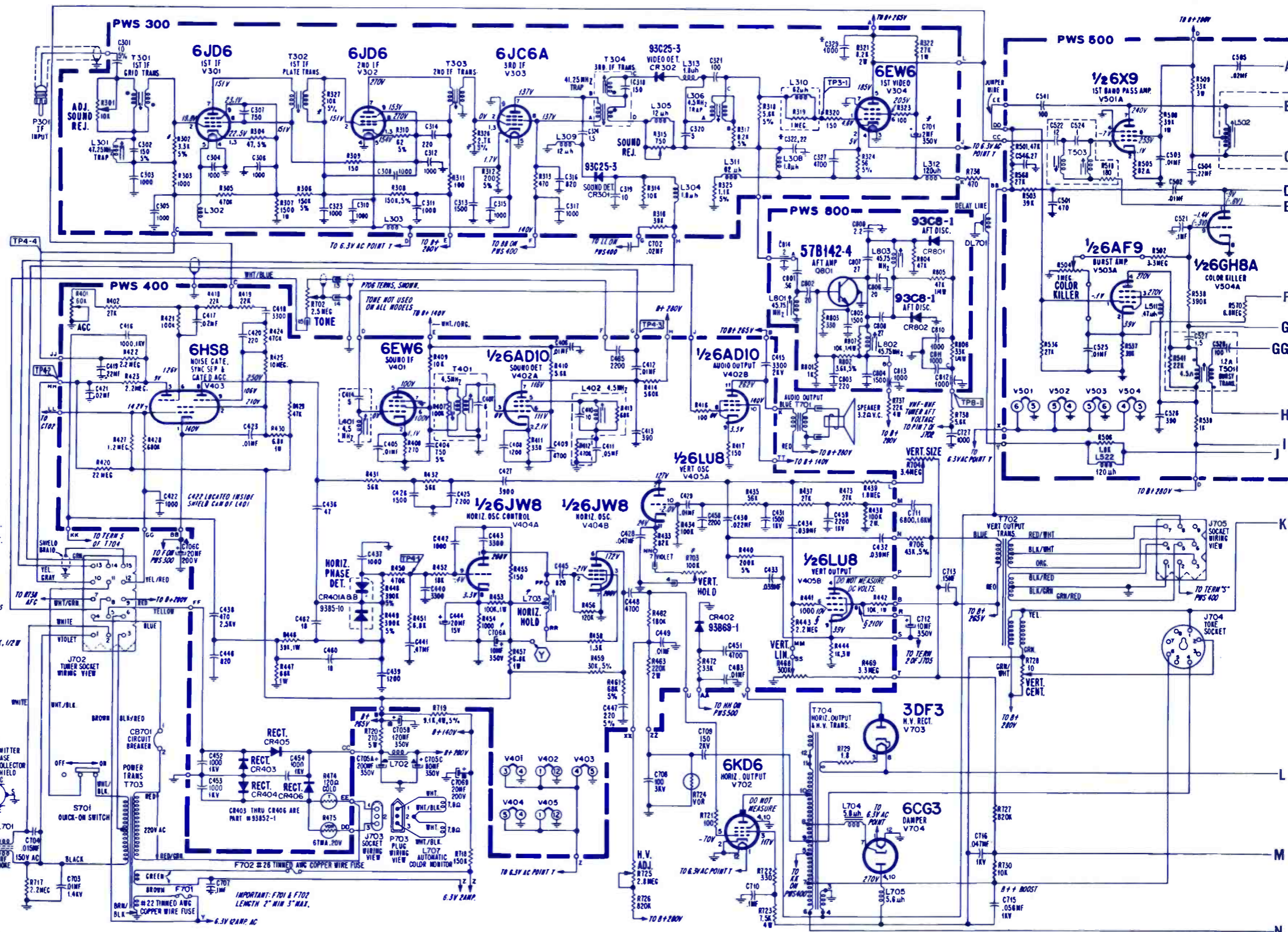


R258-1M, volume control	970430
R301-10K, adj sound reject control	75A101-8
R315-750Ω, sound reject control	75A101-3
R401-60K, AGC control	75A101-9
R468-300K, vert lin control	970435
R474-120Ω, thermistor	61A50-3
R475-67MA, 20V, VDR	61A51-1
R504-1M, color killer control	970436
R523-700K, blue background control	75A95-9
R615-150Ω, top blue horizontal control	75A64-7
R701-500Ω, color control	75A127-6
R703-100K, vert hold control	75A134-6
R704-3.4M, vert size control	75A96-20
R707-1,100Ω, tint control	75A127-7
R708-250K, bright control	75A134-5
R709-250Ω, contrast control	75A134-4

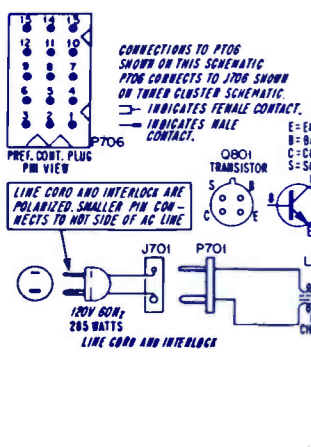
R710-3.4M, master bright control	970449
R712-1M, master screen control	75A136-1
R714-3,900Ω, special 1/2W, 10%	970450
R724-VDR	61A46-13
R725-2.8M, high voltage adjustment	970452
R728-10Ω, vert centering control	76A64-17
R731A-200M focus rectifier module	970454
R731B-40M focus rectifier module	970454
R732-15M, focus control	970455
R745-3.8Ω, thermistor	61A27-1
C705A-200μf, 350V electrolytic	970475
C705B-120μf, 350V electrolytic	970475
C705C-80μf, 350V electrolytic	970475
C706A-10μf, 350V electrolytic	970476
C706B-20μf, 200V electrolytic	970476
C706C-20μf, 200V electrolytic	970476
C706D-50μf, 50V electrolytic	970476

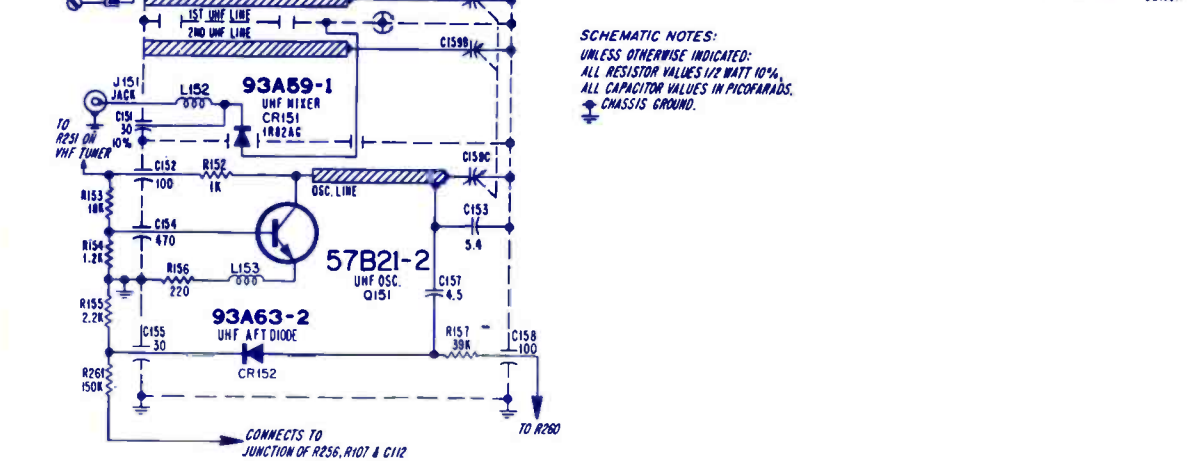
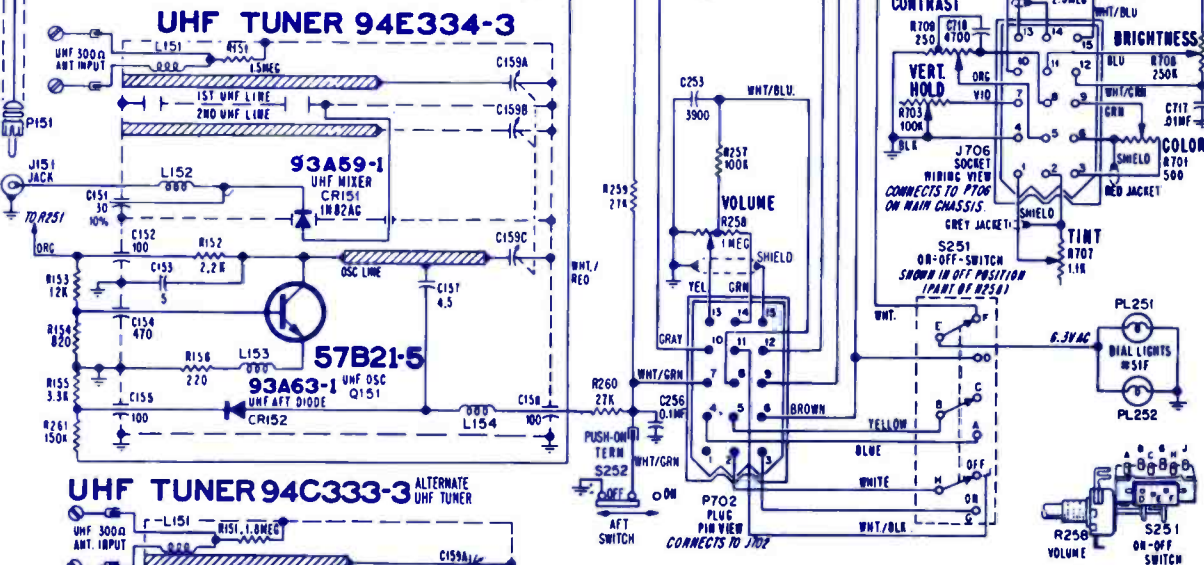
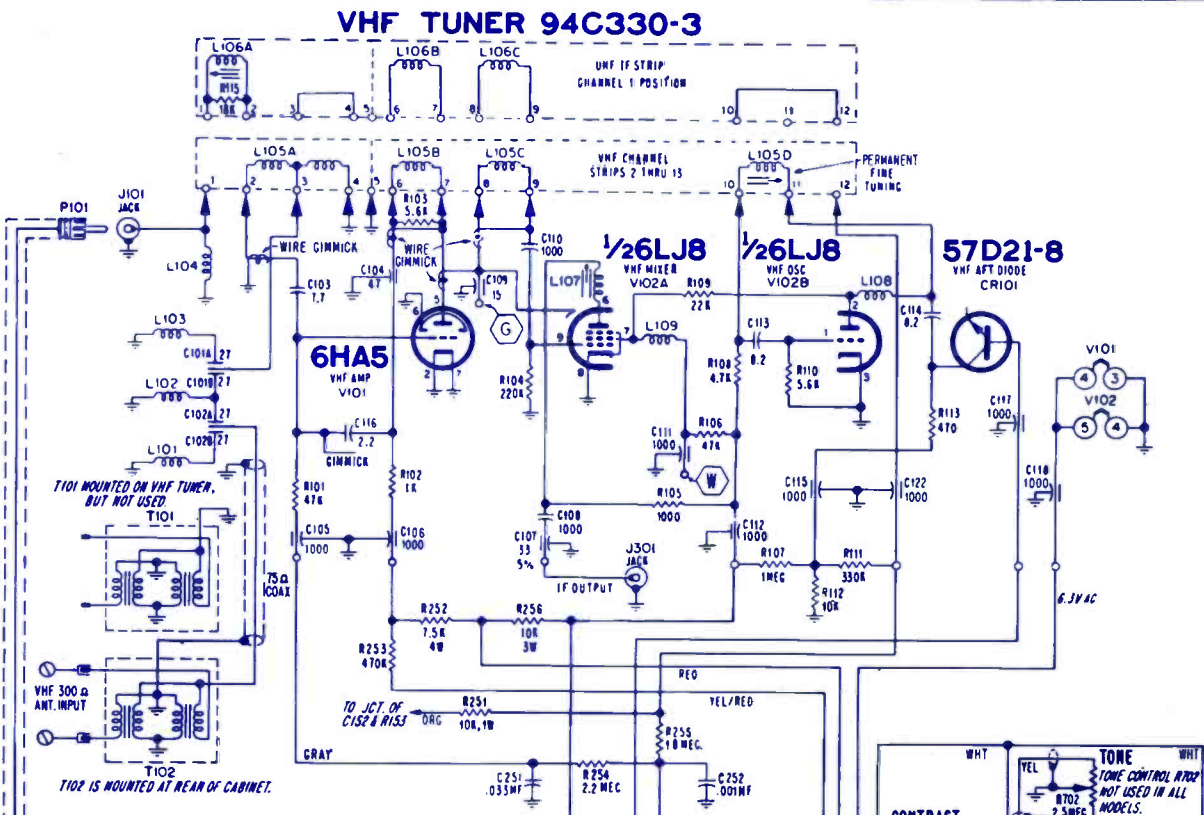
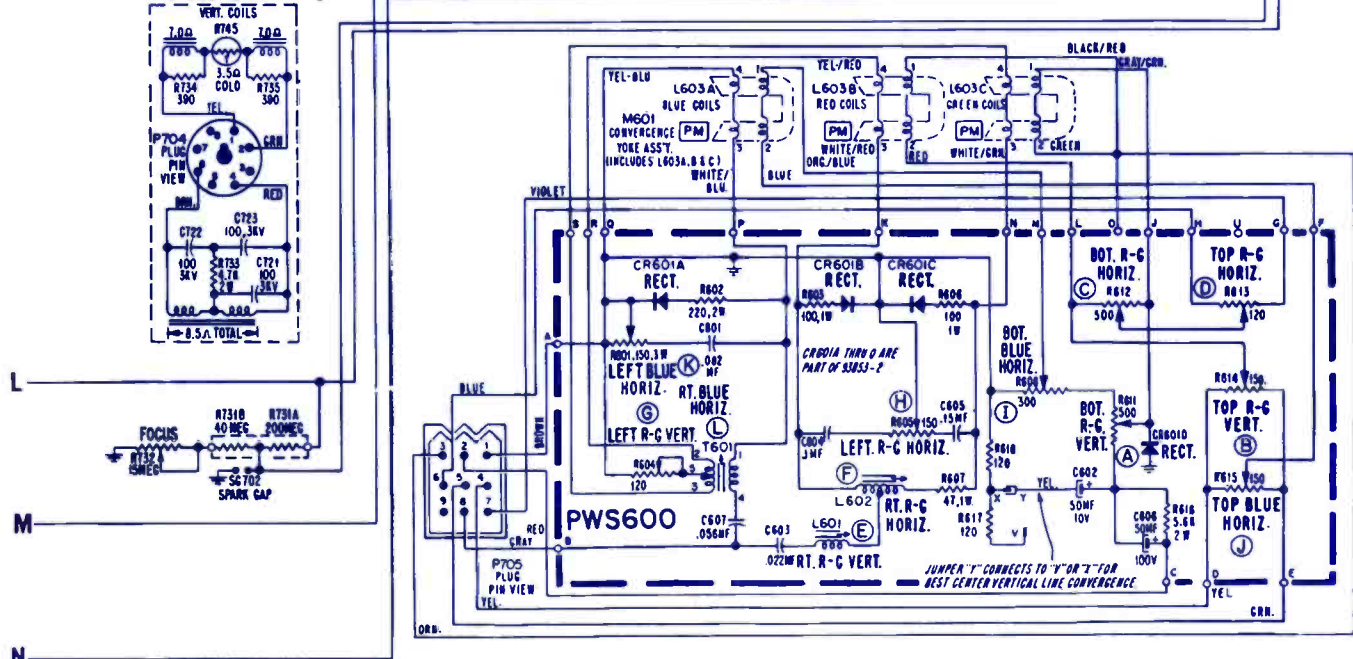
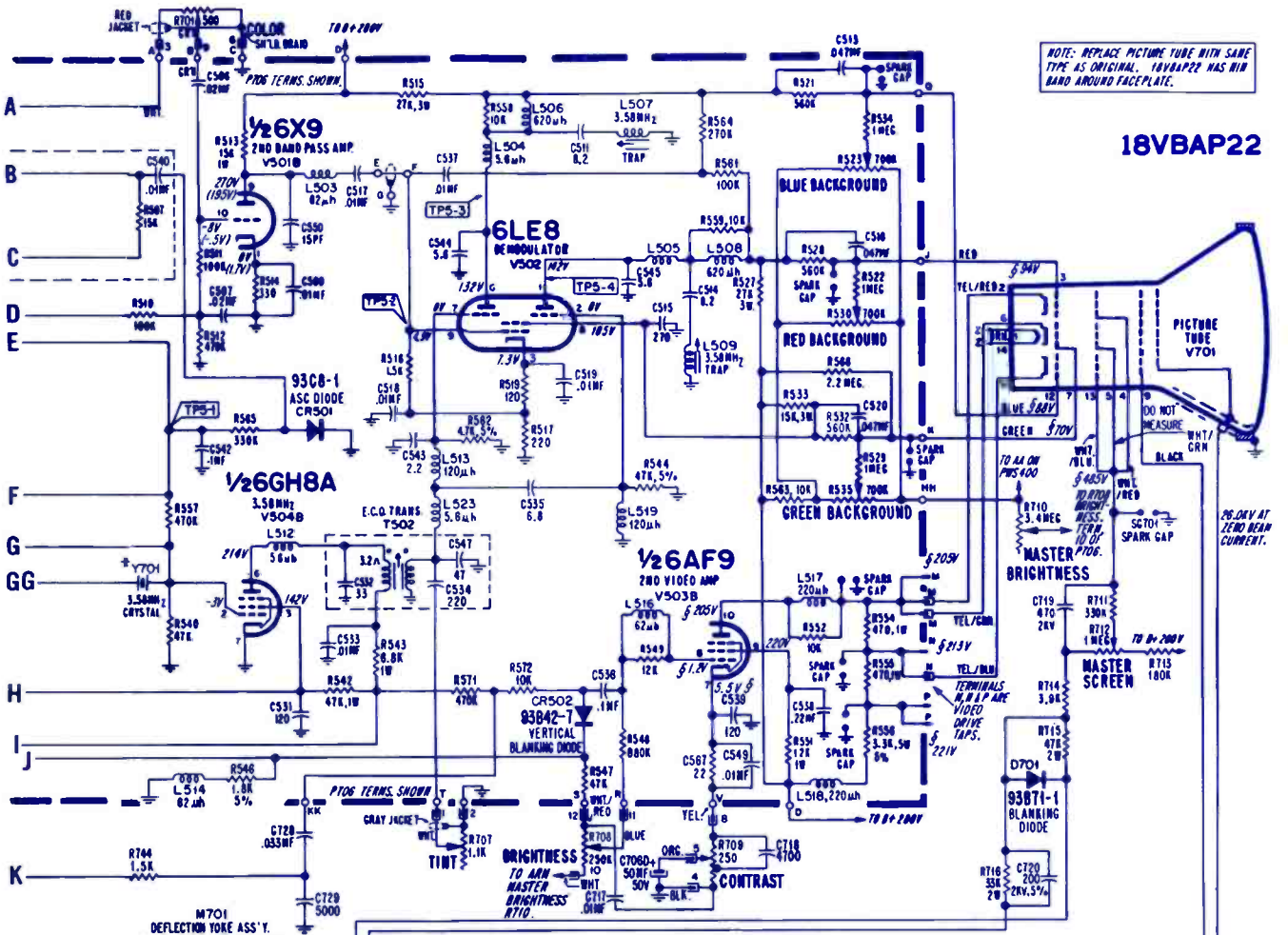
L401-sound takeoff coil	72A287-4
L402-quad coil	72A287-3
L502-bandpass coil	72A269-4
L702-filter choke	74A18-62
L703-horiz oscillator coil	94A268-4
T401-sound IF xformer	72A314-2
T501-burst xformer	72A284-4
T503-bandpass input coil	72A302-1
T701-audio output xformer	970485
T702-vert output xformer	79A106-5
T703-power xformer	80A104-4
T704-horiz output xformer	79A146-2
M701-deflection yoke	94A377-6
O801-transistor, AFT	57A142-4
CB701-circuit breaker	84A17-11
DL701-delay line	72A217-3
deflection yoke	94A377-6

RUN CHANGES
 (1) Start of production.



SCHEMATIC NOTES:
 VOLTAGES SHOWN IN BRACKETS () TAKEN WITH COLOR SIGNAL, VOLTAGES WITHOUT BRACKETS, ARE FOR NO SIGNAL INPUT, TUNER SET ON UNUSED UHF CHANNEL.
 VOLTAGES MEASURED WITH VTVM AT 100 VOLTS AC LINE. ALL CONTROLS IN NORMAL OPERATING POSITION.
 ‡ VOLTAGE WILL CHANGE WITH SETTING OF CONTROLS.
 * PART MOUNTED ON CHASSIS OR OTHER ASSEMBLY.
 † CHASSIS GROUND.
 ‡ PART MOUNTED ON BOTTOM OF PWS SYSTEM.
 RESISTOR VALUES 1/2 WATT, 10% CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
 SEE SEPARATE SCHEMATIC FOR 1NF-10NF TUBES AND CONTROL CIRCUITRY.
 TO PREVENT LOADING IN CRITICAL STAGES, USE A 47K, 1/2W ISOLATING RESISTOR AT END OF TEST PROBE.





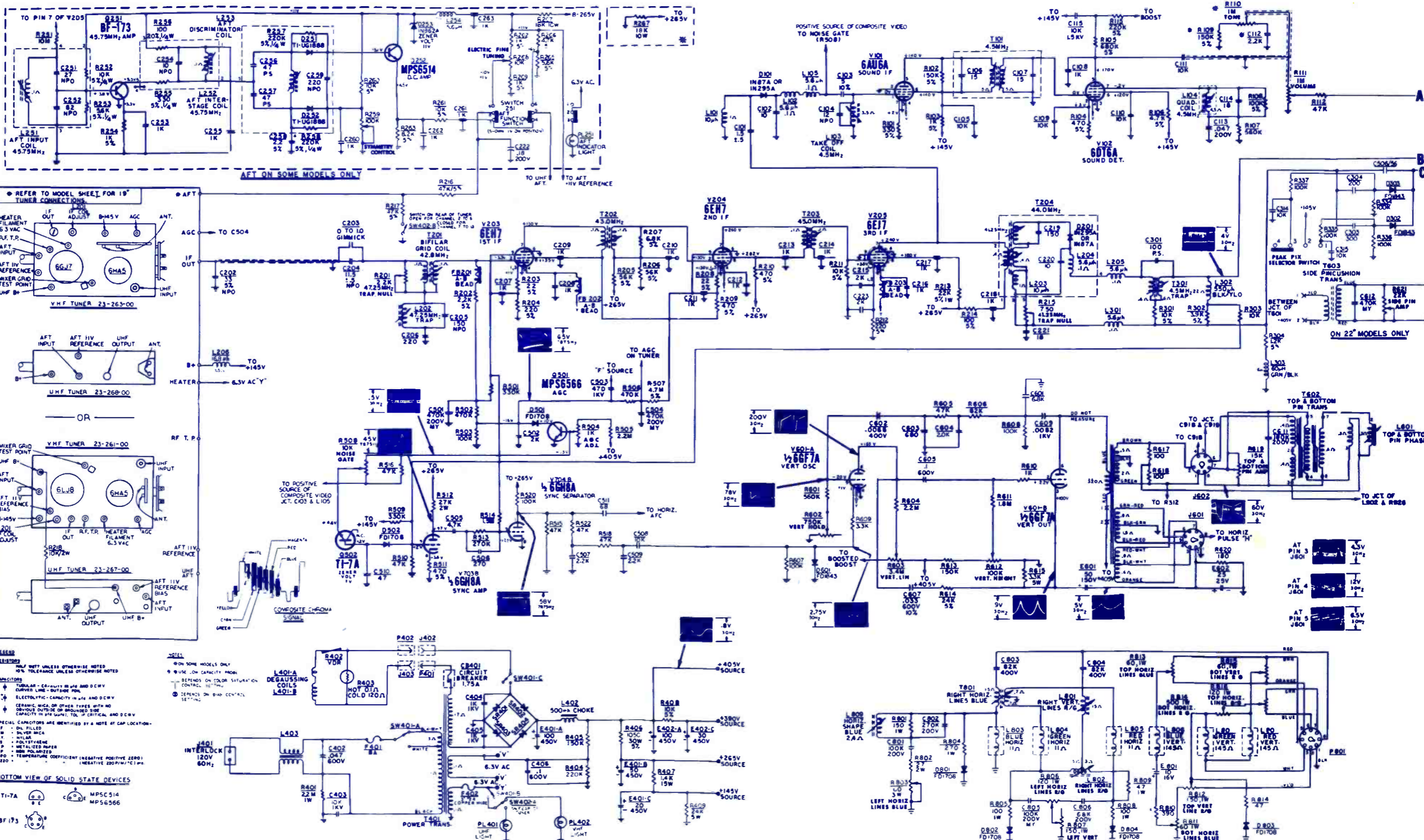
SCHEMATIC NOTES:
UNLESS OTHERWISE INDICATED:
ALL RESISTOR VALUES 1/2 WATT 10%,
ALL CAPACITOR VALUES IN PICOFARADS,
⊥ CHASSIS GROUND.

SYMBOL	DESCRIPTION	ELECTROHOME PART NO.
Q502	trans T1-7A	14-515-13
Q501	trans MPS6566	14-802-49
Q251	trans BF 173	14-803-05
Q252	trans MPS 6514	14-802-41
L809	coil blue shaper horiz	21-1025-02
T703	coil burst gate	21-1053-02
L901	coil horiz stab	21-334-05
L104	coil sound quad	21-1084-01
L103	coil sound take off	21-347-02
T101	coil sound IF xformer (4.5MHz C106&107 Inc.)	21-389-01

L202	coil 47.25MHz trap (C205 Inc.)	21-1083-01
T301	coil 4.5MHz trap	21-1000-02
L902	coil saturable react lin	21-1055-01
DL301	coil delay line (.8µ sec 680Ω)	21-1054-01
L253	coil disc	21-1040-01
L305	peaking coil 60µh	21-314-02
L306	peaking coil 36µh	21-314-38
L307	peaking coil 200µh	21-314-46
L101	RF choke 10µh	21-1400-04
L205	RF choke 5.6µh	21-1400-03
T901	horiz optpt xformer	21-219-01
T901	horiz optpt xformer	21-220-01
L910	def yoke	21-113-02
L403	line choke	21-1401-01
T401	power xformer 60Hz w/stab brkt	24-10131-01
T602	pin cushion transf	24-14006-01
T802	pin cushion transf	24-14004-01
T801	vert optpt xformer	24-100016-01
T102	audio optpt xformer	24-80080-02
L402	filter choke 500mh	24-110024-10

T803	side pinc xformer	24-140005-02
CB401	cir brkr 1.75a	26-65-09
F401	fuse 8a quick acting (use w/20-300010-20)	27-14-08
F402	fuse wire line (3in #24 copper wire)	27-16-03
SR901	boost rec sel	28-22-19
R813	control WW 60 (top horiz lines blu)	41-228-23
R816	control WW 1w 120 (top horiz lines r/g)	41-228-24
R812	control WW 1w 150 (top vert lines r/g)	41-228-25
CB401	cir brkr 1.75a	26-65-09
R201	control 22K ph (adj sound rej)	41-192-06
R215	control 750ph (sound rej)	41-227-09
R504	control 1K ph (AGC)	41-192-02
R508	control 10K ph (noise gate)	41-192-05
R813	control 100K ph horiz drive	41-192-08
R259	control 100K ph (AFT symmetry)	41-192-08

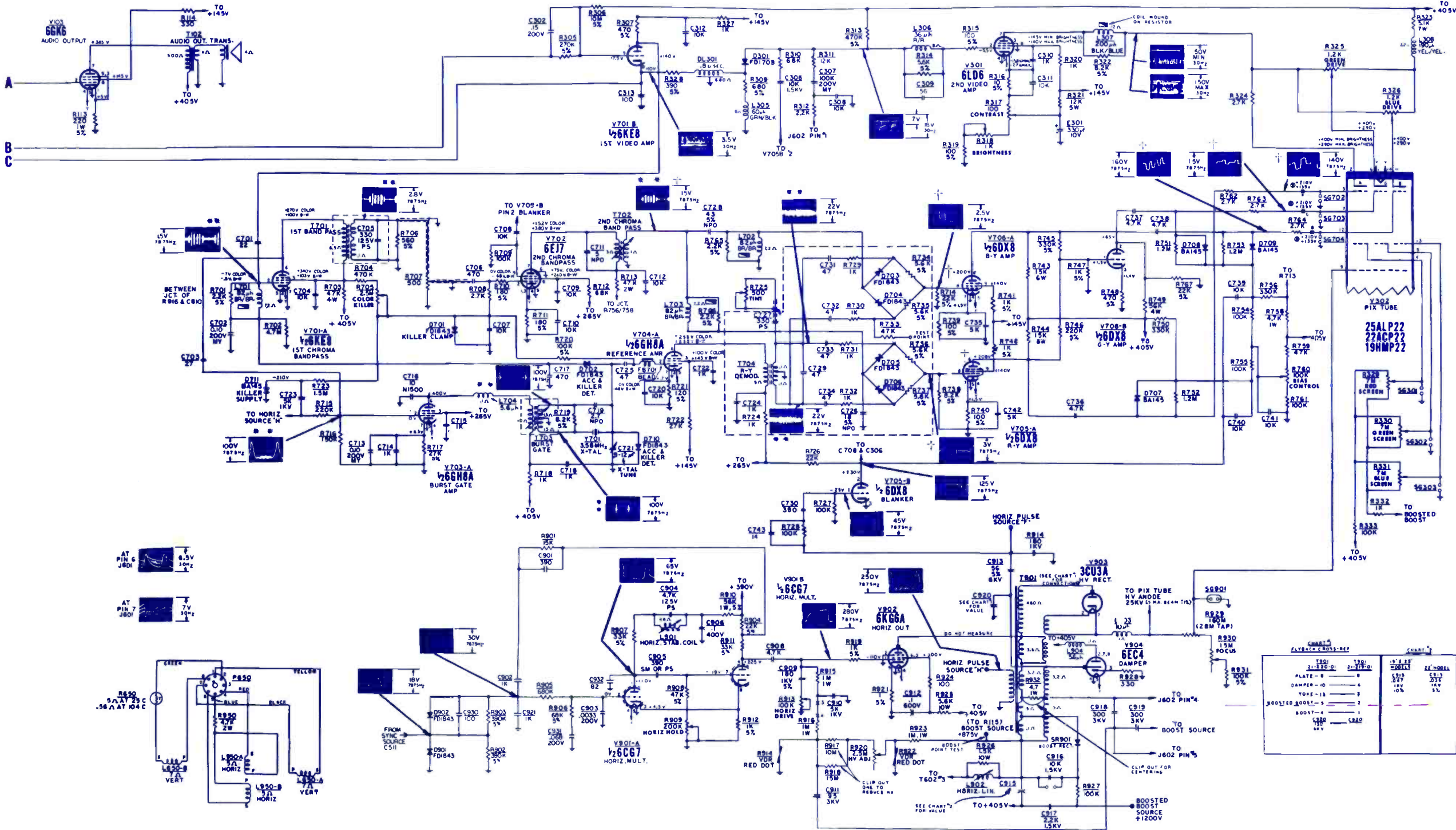
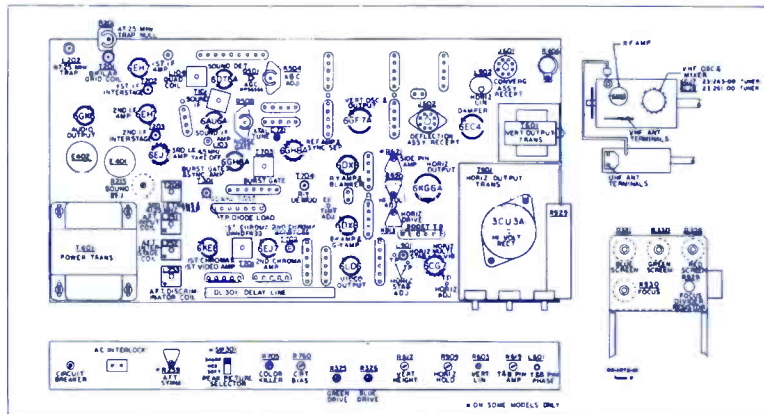
R329	control 7M (red screen)	41-227-28
R803	control 3.4M (vert lin)	41-227-31
R812	control 100K (vert height)	41-227-32
R780	control 100K (CRT bias)	41-227-32
R920	control 2.5M (HV adj)	41-227-37
R909	control 200K (horiz hold)	41-227-34
R705	control 2.5M (color killer)	41-227-37
R819	control 15K (T&B pin amp)	41-227-33
R930	control 15M (focus)	41-251-01
SG901	control 7kv	34-388-01
R407	resistor 15w 1.4K	42-41-13
R406	resistor 30w WW 1050 (w/brkt)	42-14-15
R814	VDR red dot	42-23-01
R932	resistor 1w WW 4.7Ω	42-37-36
E301	electrol 330µf, 10v	44-205-79
E401A	electrol 100µf, 450v	44-203-15
E401B	electrol 50µf, 450v	44-203-15
E401C	electrol 20µf, 450v	44-203-15
E402A	electrol 100µf, 450v	44-202-26
E402B	electrol 30µf, 450v	44-202-26



COMPLETE COLOR TEMPERATURE AND TRACKING ALIGNMENT

- (1) Set the blue drive R326 and green drive R325 controls to mid position.
- (2) Set the screen controls R329, R330 and R331, to center position.
- (3) Set kinescope bias control R760 one quarter turn from its maximum counterclockwise position.
- (4) Achieve a no signal, noise free raster by switching the VHF tuner between channels or by removing the 3rd IF tube.
- (5) With contrast at minimum, set the brightness control so that the raster is just visible.
- (6) Critically adjust the screen controls for a grey raster.

- (7) Advance the brightness control for normal brightness viewing. Adjust the drive controls for a white raster. If significant drive control adjustment is required here, recheck low level brightness setting and readjust screen controls if the raster is not grey.
 - (8) Brightness should now track from grey to white.
- NOTE:** It is essential that kinescope bias be reset whenever the above procedure has been carried out or picture tube damage may result.

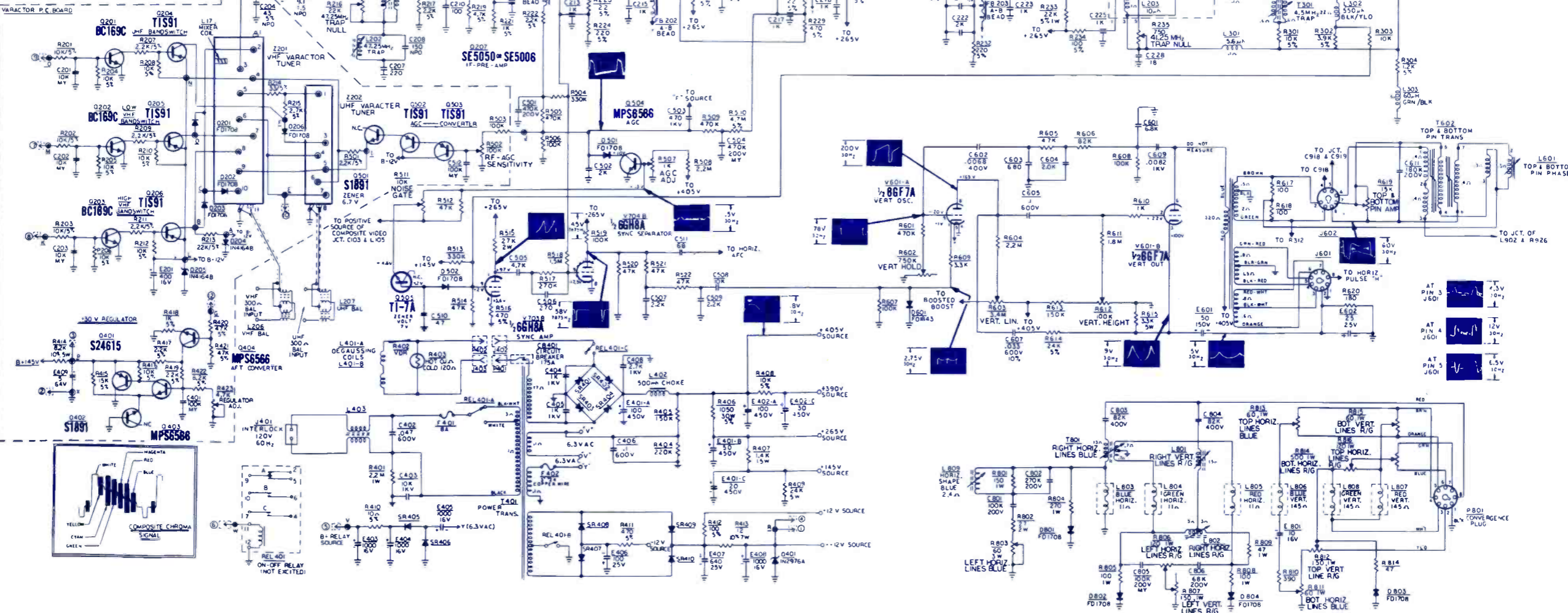
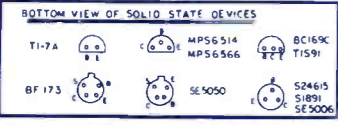
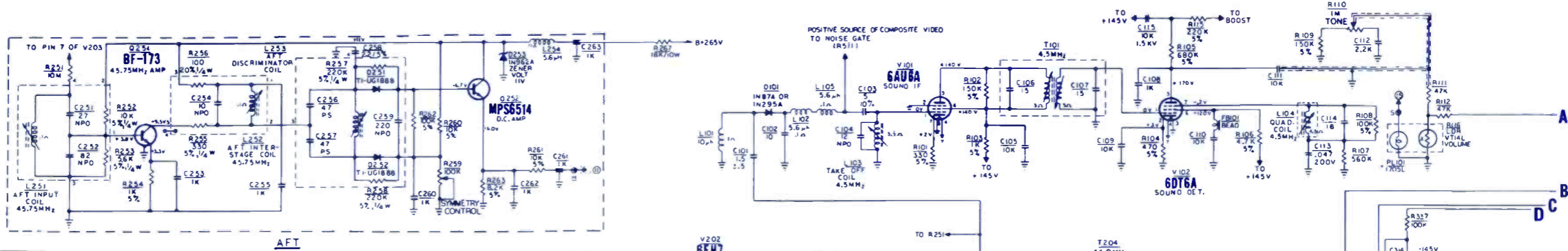


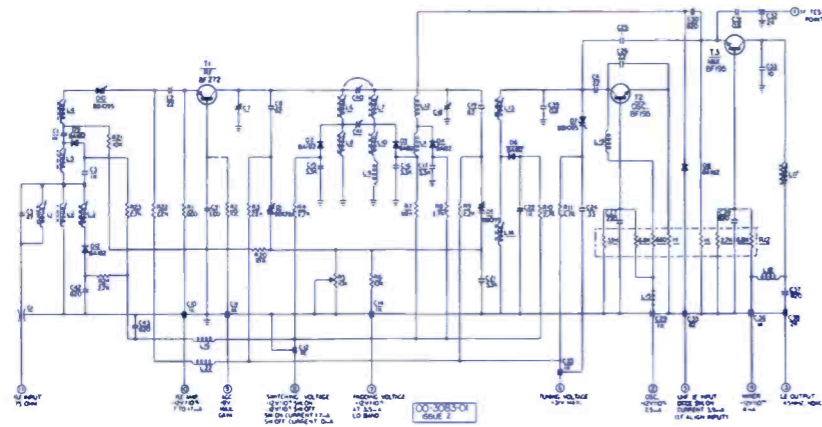
CHAR. 1	CHAR. 2	CHAR. 3	CHAR. 4
120	120	120	120
21-120-01	21-120-01	21-120-01	21-120-01
PLATE-8	4	5	5
DAMPER-10	4	5	5
YOKE-11	2	2	2
BOOSTED BOOST-5	1	1	1
BOOST-4	1	1	1
CRAD	CRAD	CRAD	CRAD

TABLE OF P.C. CONNECTIONS

- 8+ 12V
- GROUND
- 8+ 30V
- 8+ 12V
- 8+ RELAY
- LOW VHF BANDSWITCH
- HIGH VHF BANDSWITCH
- LINE BANDSWITCH
- TUNING VOLTAGE
- AFT LINE
- REGULATOR CONTROL
- TINT LINE
- COLOR LINE
- VOLUME LINE

PI CONNECTS CONTROL UNIT TO MAIN CHASSIS



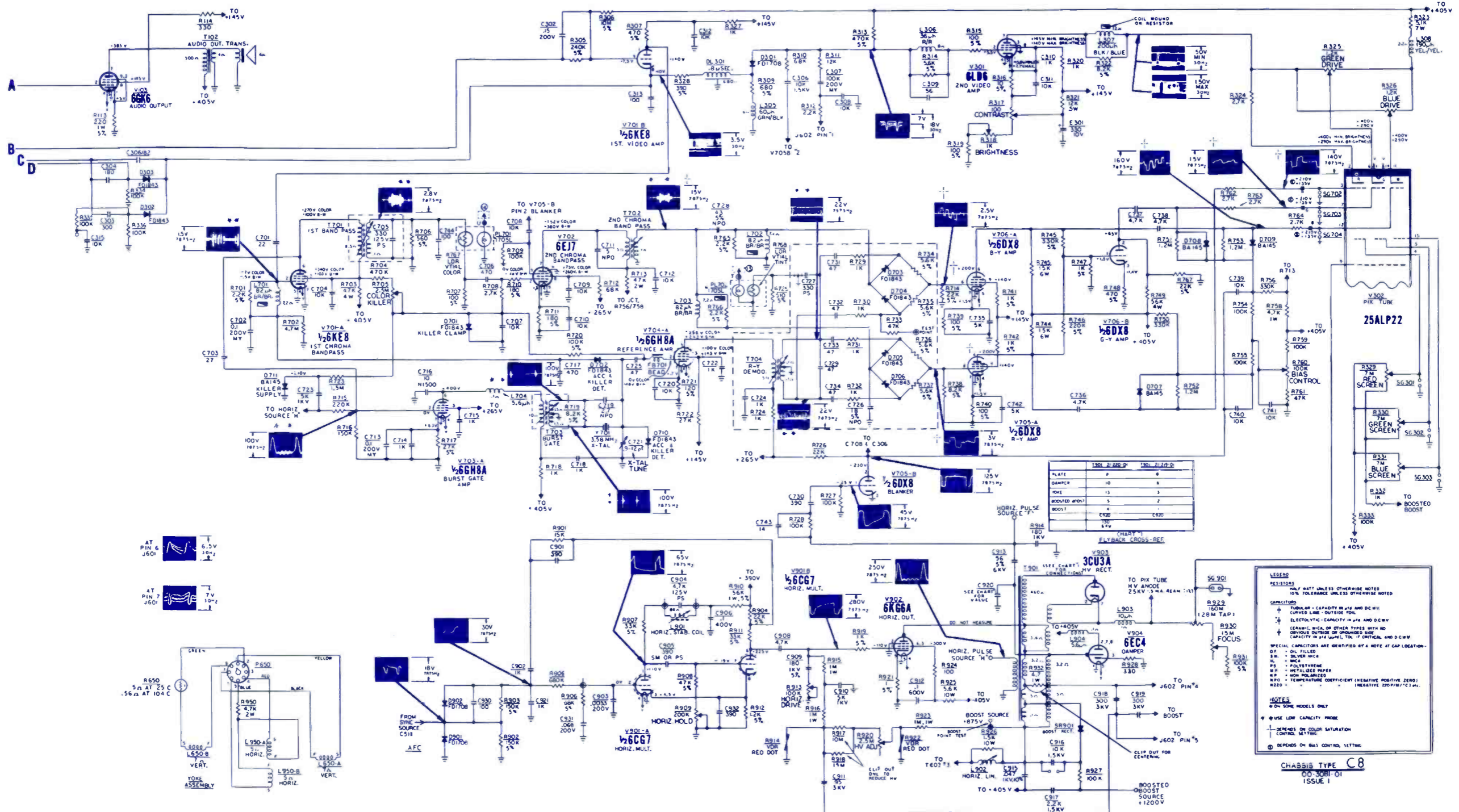


VHF TUNER

SYMBOL	DESCRIPTION	ELECTROHOME PART NO.
T703	coil burst gate	21-1053-02
L901	coil horiz stabilizing	21-334-05
L104	coil sound quad	21-1084-01
L103	coil sound take off	21-347-02
T101	coil sound IF xformer	21-389-01
T202	coil 1st IF interst xformer	21-392-02
L902	coil saturable react (lin)	21-1055-01
DL301	coil delay line (.8μ sec 680Ω)	21-1054-01
L253	coil discriminator	21-1040-01
T901	horiz output xformer	21-220-01
L910	def yoke	21-113-02

T401	power xformer 60Hz w/stabilizer brkt	24-10140-01
T601	vert output xformer	24-100016-01
T102	audio output xformer	24-80080-02
L402	filter choke 500μh	24-110024-10
CB401	cir brkr 1.75a	26-65-09
F401	fuse BA quick acting (use w/sleeve)	27-14-08
SR901	boost rectifier selected	28-22-22
RB13	control WW 1w 60Ω (top horiz lin blu)	41-228-23
RB07	cont WW 1w 150Ω (left vert lin R/G)	41-228-25
R216	contr 22K PH (adj sound rej)	41-192-06
R235	contr 750Ω (sound rej)	41-192-08
R913	contr 100K PH (horiz drive)	41-227-09
R329	contr 7M (red screen)	41-227-28
R603	contr 3.4M (vert lin)	41-227-31

R920	contr 2.5M (HV adj)	41-227-37
R909	contr 200K (horiz hold)	41-227-34
R705	contr 2.5M (color killer)	41-227-37
R930	contr 15M (focus)	41-251-01
R406	resistor 30w WW 1050Ω (w/brkt)	42-14-13
R929	focus div resistor 140μΩ ±10% 160M (28M top)	02-100651-01
R914	VDR red dot	42-23-01
E401A	electrol 100μf 450v	44-203-15
E401B	electrol 50μf 450v	44-203-15
E401C	electrol 20μf 450v	44-203-15
E402A	electrol 100μf 450v	44-202-26
E402B	electrol 30μf 450v	44-202-26



LEADER
RESISTORS
1/2 WATT UNLESS OTHERWISE NOTED
10% TOLERANCE UNLESS OTHERWISE NOTED

CAPACITORS
TYPICAL CAPACITY IN μF AND DC HV
CORVED LINE OUTSIDE TOL
ELECTROLYTIC CAPACITY IN μF AND DC HV
CERAMIC MICR OR OTHER TYPES WITH NO
OUTSIDE OR GROUND SIDE
CAPACITY IN μF, TOL, T, CRITICAL, AND D CMV

SPECIAL CAPACITORS ARE IDENTIFIED BY A NOTE AT CAP LOCATION:
OF - OIL FILLED
BK - BAKER BRICK
N - NIPER
M - MICA
P - POLYSTYRENE
PP - METALLIZED PAPER
NP - HIGH POLARIZED
NPO - TEMPERATURE COEFFICIENT (NEGATIVE POSITIVE ZERO)
N220 - (NEGATIVE 220PPM/°C) MIN.

NOTES
ON SOME MODELS ONLY
* USE LOW CAPACITY PROBE
† DEPENDS ON COLOR SATURATION CONTROL SETTING
‡ DEPENDS ON BIAS CONTROL SETTING

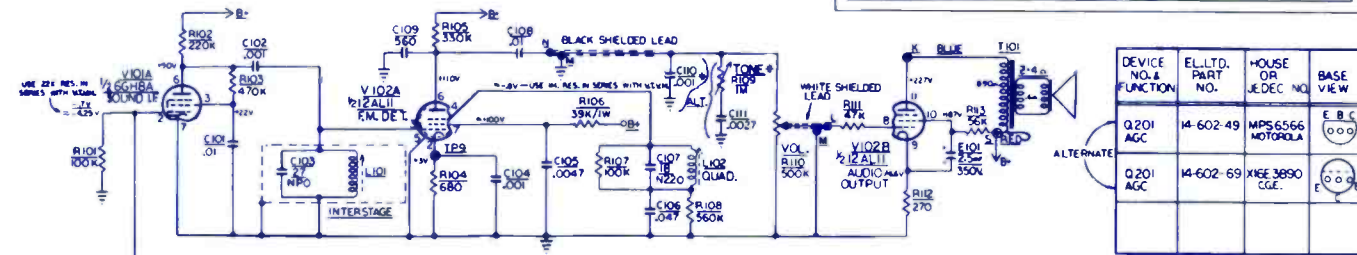
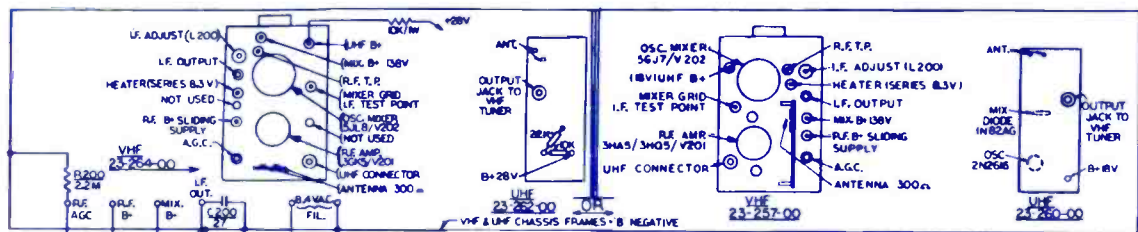
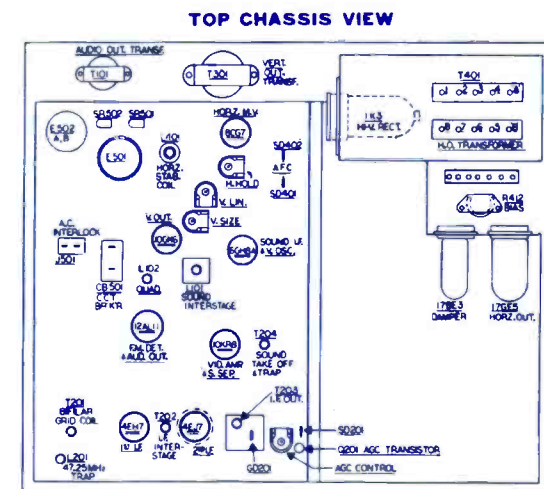
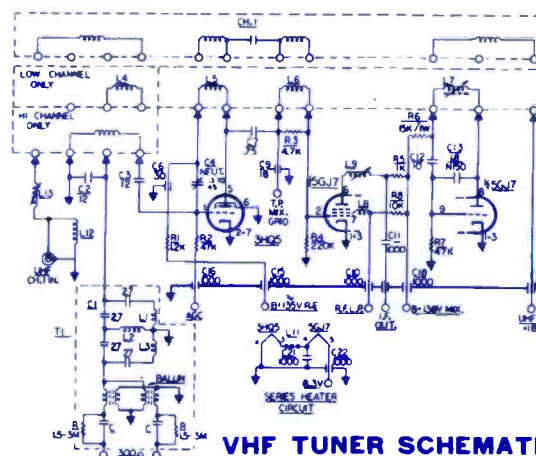
CHASSIS TYPE C8
00-3081-01
ISSUE 1

ELECTROHOME
TV Chassis M10

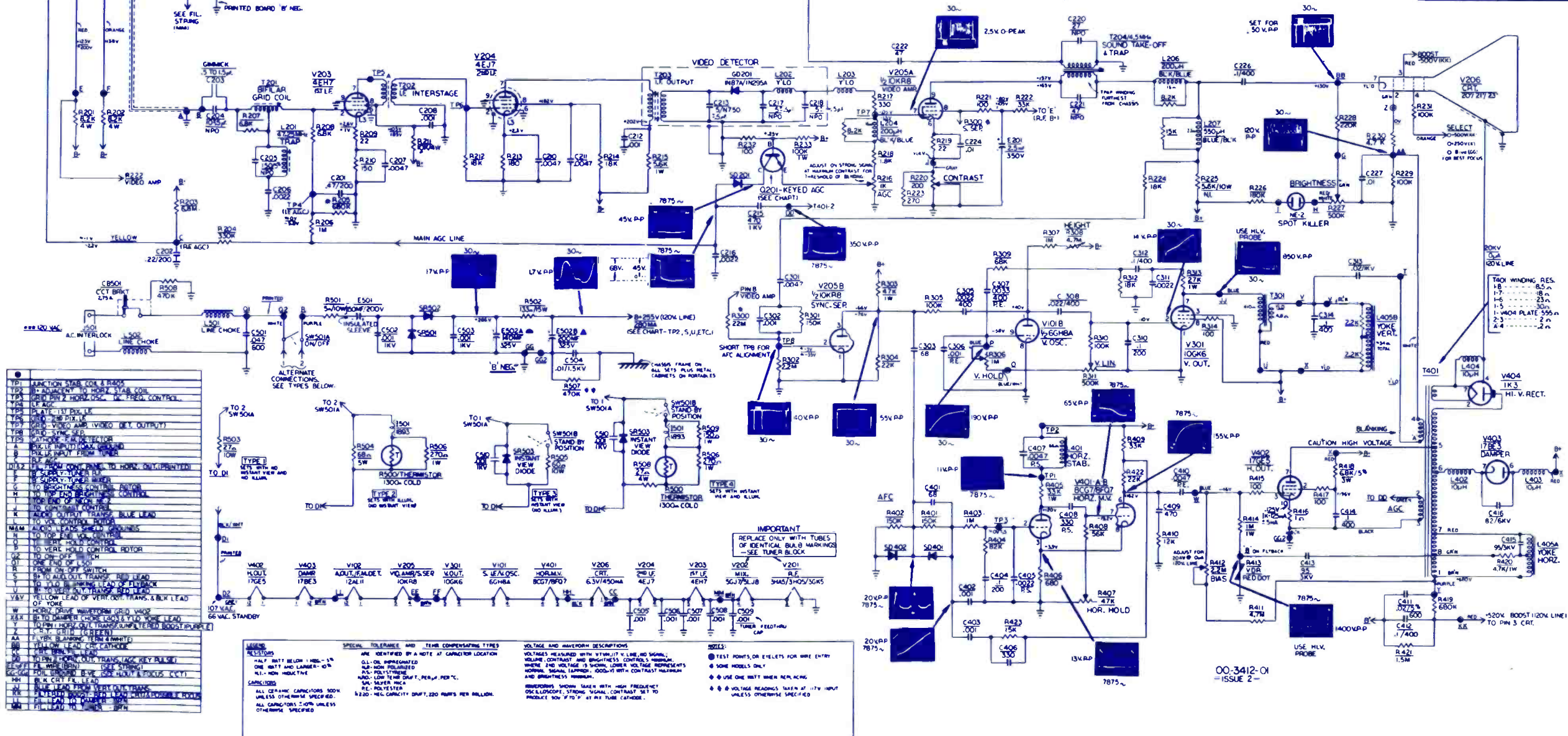
ELECTRONIC TECHNICIAN / DEALER **TEKFAX**

SYMBOL	DESCRIPTION	ELECTROHOME PART NO.
L405	---deff yoke & centering device	21-107-03
T401	---horiz output xfomer	21-225-01
L401	---coil horiz stabilizing	21-1071-01
T204	---coil 4.5MHz sound take-off & trap	21-1072-01
L102	---coil 4.5MHz sound quad	21-1073-01
L101	---coil 4.5MHz sound interstage	21-1074-01
L501, L502	---line chokes	21-1406-01
T101	---xfomer, audio output	24-8008-03
T301	---xfomer vert output	24-100013-03
CB501	---cir brkr, breaks at 2.75 amp	26-65-15

R216	---control AGC, 1K	41-192-22
R311	---control vert lin 500K	41-192-35
R308	---control vert height 4.7M	41-192-34
R407	---control horiz hold 47K	41-192-27
R412	---control horiz bias, 2.2M	41-192-12
E101/201	---elect single tublr 2.5 μ f 350v	44-205-66
E501	---elect single section with sleeve 150 μ f 200v	44-201-21
E502	---elect 2 section (A,B) 140 and 200 μ f 325v each	44-202-23



DEVICE NO. & FUNCTION	ELLTD. PART NO.	HOUSE OR JEDEC NO.	BASE VIEW
Q201 AGC	M-602-49	MPS6566 MOTOROLA	E B C O
Q201 AGC	M-602-69	K5E 3690 CGE.	O O O B



LETTERS	SPECIAL TOLERANCE AND TEMP COMPENSATING TYPES
Y1	FUNCTION STAB COIL & R205
Y2	RF AMP
Y3	RF AMP
Y4	IF AMP
Y5	IF AMP
Y6	IF AMP
Y7	IF AMP
Y8	IF AMP
Y9	IF AMP
Y10	IF AMP
Y11	IF AMP
Y12	IF AMP
Y13	IF AMP
Y14	IF AMP
Y15	IF AMP
Y16	IF AMP
Y17	IF AMP
Y18	IF AMP
Y19	IF AMP
Y20	IF AMP
Y21	IF AMP
Y22	IF AMP
Y23	IF AMP
Y24	IF AMP
Y25	IF AMP
Y26	IF AMP
Y27	IF AMP
Y28	IF AMP
Y29	IF AMP
Y30	IF AMP
Y31	IF AMP
Y32	IF AMP
Y33	IF AMP
Y34	IF AMP
Y35	IF AMP
Y36	IF AMP
Y37	IF AMP
Y38	IF AMP
Y39	IF AMP
Y40	IF AMP
Y41	IF AMP
Y42	IF AMP
Y43	IF AMP
Y44	IF AMP
Y45	IF AMP
Y46	IF AMP
Y47	IF AMP
Y48	IF AMP
Y49	IF AMP
Y50	IF AMP
Y51	IF AMP
Y52	IF AMP
Y53	IF AMP
Y54	IF AMP
Y55	IF AMP
Y56	IF AMP
Y57	IF AMP
Y58	IF AMP
Y59	IF AMP
Y60	IF AMP
Y61	IF AMP
Y62	IF AMP
Y63	IF AMP
Y64	IF AMP
Y65	IF AMP
Y66	IF AMP
Y67	IF AMP
Y68	IF AMP
Y69	IF AMP
Y70	IF AMP
Y71	IF AMP
Y72	IF AMP
Y73	IF AMP
Y74	IF AMP
Y75	IF AMP
Y76	IF AMP
Y77	IF AMP
Y78	IF AMP
Y79	IF AMP
Y80	IF AMP
Y81	IF AMP
Y82	IF AMP
Y83	IF AMP
Y84	IF AMP
Y85	IF AMP
Y86	IF AMP
Y87	IF AMP
Y88	IF AMP
Y89	IF AMP
Y90	IF AMP
Y91	IF AMP
Y92	IF AMP
Y93	IF AMP
Y94	IF AMP
Y95	IF AMP
Y96	IF AMP
Y97	IF AMP
Y98	IF AMP
Y99	IF AMP
Y00	IF AMP

LETTERS	SPECIAL TOLERANCE AND TEMP COMPENSATING TYPES	VOLTAGE AND CURRENT DESCRIPTIONS	NOTES
R	RESISTOR	VOLTAGES MEASURED WITH VISION TV LINE AND SIGNAL	⊕ TEST POINTS OR JELLYETS FOR WIRE ENTRY
C	CAPACITOR	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	⊙ SOME MODELS ONLY
T	TUBE	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	⊛ USE ONE HOLE WHEN REPLACING
L	INDUCTOR	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	⊜ VOLTAGE READINGS TAKEN AT 170V INPUT UNLESS OTHERWISE SPECIFIED
F	FUSE	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
S	SWITCH	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
TR	TRANSFORMER	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
Y	YOKES	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
V	VARIABLE	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
W	WIRE	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
X	CONNECTOR	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	
Z	ZENER	VOLTAGE MEASURED WITH VISION TV LINE AND SIGNAL	

RESISTANCE READINGS

SYMBOL NO.	TUBE TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10
V-1	3HA5	280K	0	(FILAMENT)	1.2K	0	0	...	...	...	...
V-2	5G57	10K	250K	0	(FILAMENT)	1K	0	0	220K	...	...
V-101	4BZ6	700K	47	(FILAMENT)	1K	1K	0	...	...	...	...
V-102	4BZ6	700K	47	(FILAMENT)	1K	1K	0	...	...	...	...
V-103	4DK6	0	82	(FILAMENT)	1K	1K	0	...	...	...	...
V-104	8JVB	0	3.9M	26K	(FILAMENT)	0	120	0	4.7K	...	...
V-105	4M-P25 or 6AQ5A	100K	390	(FILAMENT)	620	2.2K	NC	...	...	...	...
V-106	6LN8	450K	330K	0	(FILAMENT)	68K	1.8K	1.8K to 48K	56K	...	...
V-107	17JZ8	(FIL.)	1.8M to 2.8M	NC	150	NC	1.2M to 1.7M	1.2M to 1.7M	220	0	300K to 2.5M
V-108	17B-B14	470K	470K	0	(FILAMENT)	1K to 2K	1K to 2K	0	NC	...	...
V-109	17BR3	NC	0	NC	(FILAMENT)	NC	NC	NC	0	...	...
V-110	1X2B	INF	INF	INF	INF	INF	NC	INF	NC	INF	(CAP) 1.2M
V-111	CR1 310BY4A	68K	100K to 280K	(FILAMENT)	67K	260K	...	...	...	...	...

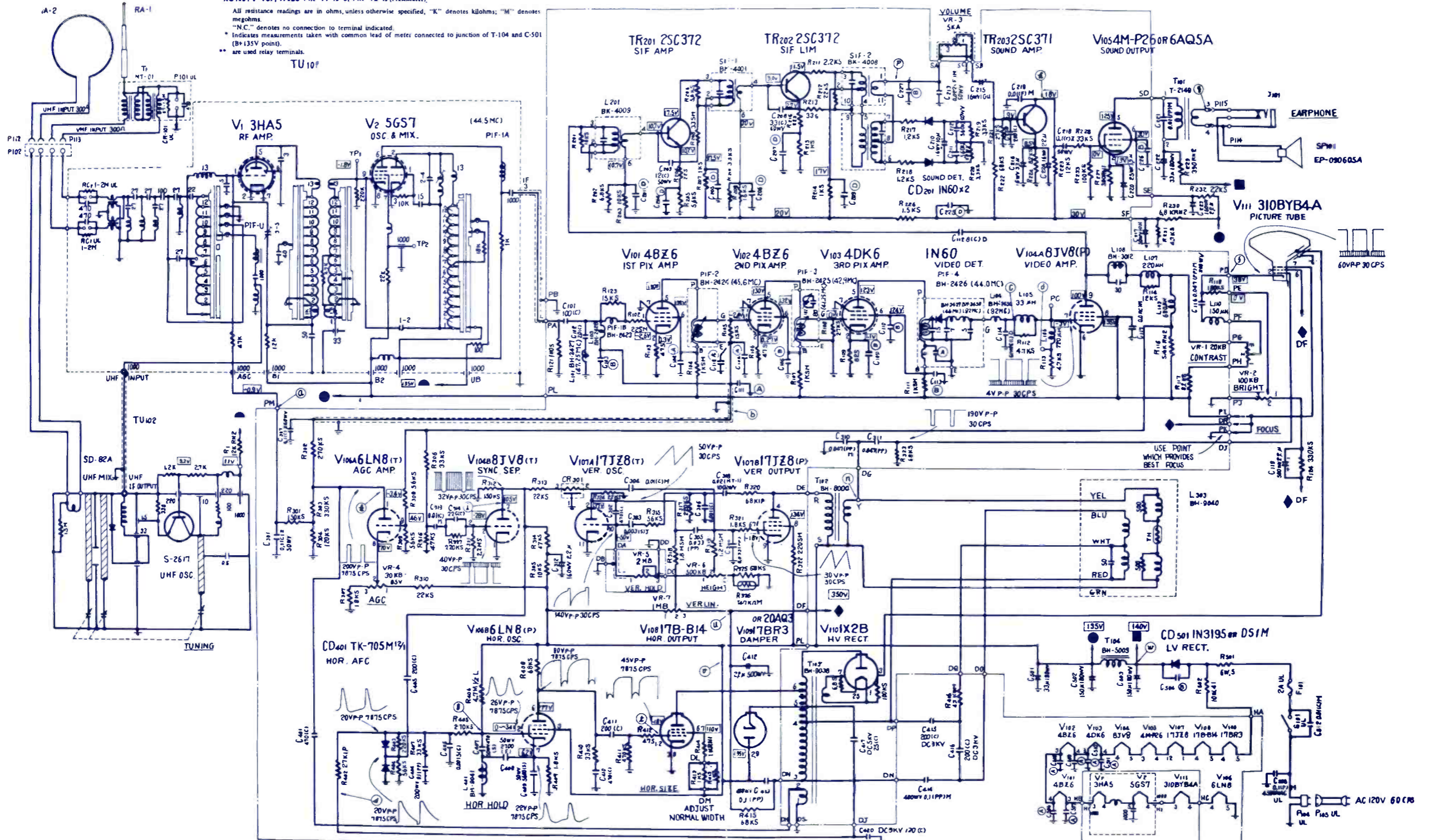
NOTES: V-107, 17JZ8 PIN 11 is 0, PIN 12 is (FILAMENT).

All resistance readings are in ohms, unless otherwise specified, "K" denotes kilohms; "M" denotes megohms.
"NC" denotes no connection to terminal indicated.
* Indicates measurements taken with common lead of meter connected to junction of T-104 and C-501 (B+ 135V point).
** are used relay terminals.

SYMBOL	DESCRIPTION	EMERSON PART NO.
TR-201, 202	trans	983742
TR-203	trans	983743
SIF-1	sound IF xformer	983749
SIF-2	sound det xformer 4.5MHz	983750
L108	video amp sound trap 4.5MHz	983758
L201	sound take off coil 4.5MHz	983759
L303	def yoke ass'y w/clamp	983760
L401	horiz osc coil w/knob	983761

T101	sound output xformer	983762
T102	vert output xformer	BH-8000
T103	horiz output xformer	983763
T104	filter choke power supply	983764
C222, 501, 502, 503	elect cap - 150 + 150 + 33 + 33µf @ 180v	983771
CR301	couplate-vert integrator	039001
CR302	couplate-sync, separator	039004
VR1	control-cont	983778

VR2	control-bright	983779
VR3	control-on volume	983780
VR4	control-AGC	983781
VR5	control-vert hold	983782
VR6	control-height	983783
VR7	control-vert lin	983784
TU101	VHF tuner 762BL-A	983785
TU102	UHF tuner U-1001TM-A	983786



EMERSON

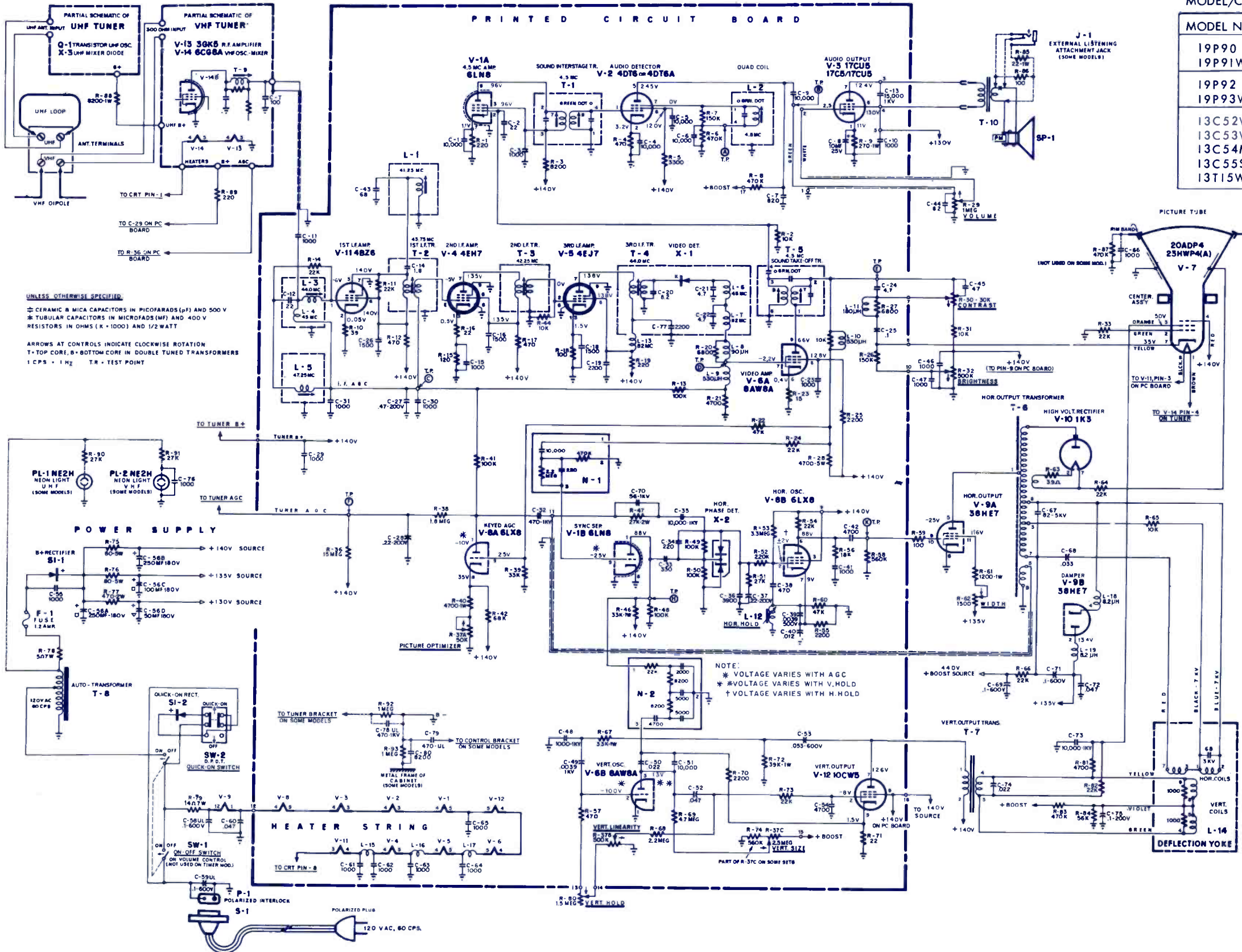
TV Chassis
120962,964

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL	DESCRIPTION	EMERSON PART NO.
R-29	volume/on-off (Ch 120962)	391081
R-29	volume (Ch 120963)	391079
R-29	volume/on-off (Ch 120964)	390912
R-30	contrast	391048
R-32	Bright	391046
R-37A,B,C	vert lin, vert. size, AGC	3910B2
R-62	width	390993
R-80	vert hold	391047
R-28	4.7K 5w397158	397158
R-75	80Ω 5W	394307
R-78	5Ω 7w	394216
R-79	14Ω 7w	394312

C-2	12-22pf NPO	928824X
C-14	1.8pf NPO	928207
C-43	68pf NPO	928828X
C-70	56pf N1500	929220X
C-T (tuner)	100pf NPO	928829
C-56A,B,C,D	250-250-100-50/180v	925713
T-1	Sound interstage	720513
T-2,3,4	IF interstage	720540
T-5	sound take-off	720512
T-6	horiz output	738210
T-7	vert output	738193
T-8	auto trans, 4-wire (Ch-120963)	730175
T-8	auto trans, 3-wire (Ch-120962)	730176
T-10	audio output (part of speaker)	

L-1	self sound trap (41.25 MHz)	720317
L-2	quad coil	720404
L-3	IF input	720589
L-4	choke	705065
L-5	adjacent channel trap (47.25MHz)	720452
L-7	choke	705066
L-12	horiz osc	716165
L-14	yoke, deflection	708532(A)
L-15	choke	705031
L-16	choke	705031
F-1	fuse, 1.2a	808236
N-1	couplate, sync sep	923059
N-2	couplate, vert integ	923159
X-1	crystal, vid det	817077



MODEL/CHASSIS/CRT CROSS REFERENCE

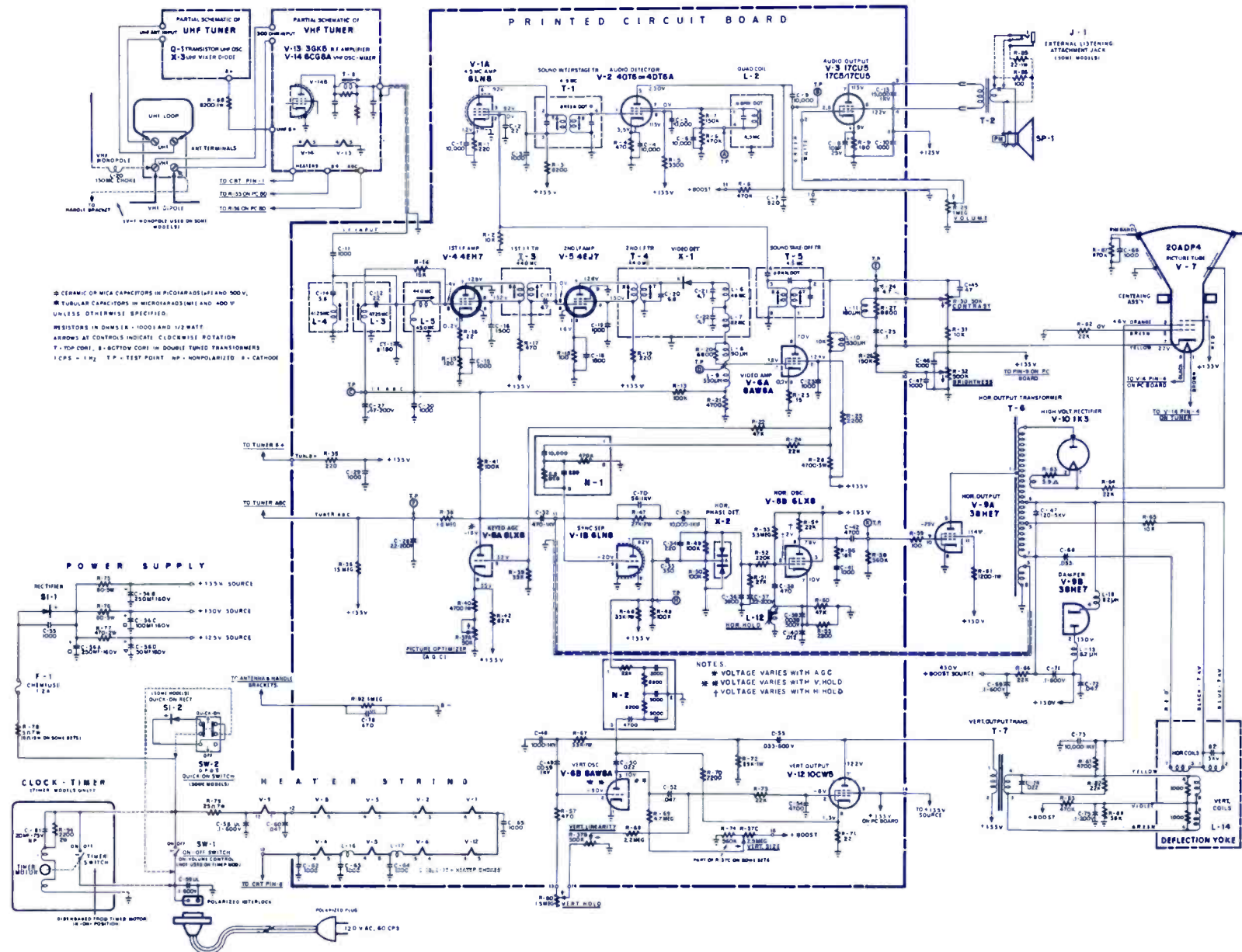
MODEL NO.	CHASSIS NO.	CRT
19P90 19P91W	120962A	20ADP4
19P92 19P93W	120963A, B	
13C52W 13C53W 13C54M 13C55S 13T15W	120964A, B	23HWP4(A)

UNLESS OTHERWISE SPECIFIED:
 * CERAMIC & MICA CAPACITORS IN PICOFARADS (PF) AND 500 V
 * TUBULAR CAPACITORS IN MICROFARADS (MF) AND 400 V
 RESISTORS IN OHMS (K = 1000) AND 1/2 WATT
 ARROWS AT CONTROLS INDICATE CLOCKWISE ROTATION
 T - TOP CORE, B - BOTTOM CORE IN DOUBLE TUNED TRANSFORMERS
 I - CPS H - Hz TR - TEST POINT

NOTE:
 * VOLTAGE VARIES WITH AGC
 * VOLTAGE VARIES WITH V.HOLD
 † VOLTAGE VARIES WITH H.HOLD

SYMBOL DESCRIPTION EMERSON PART NO.

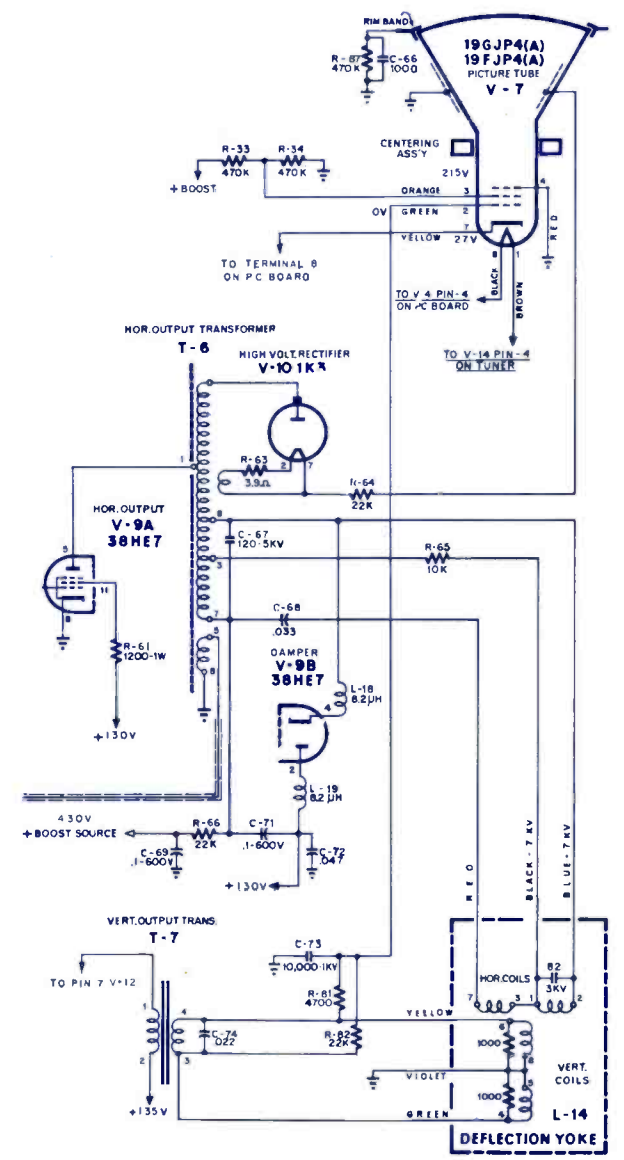
R29	— volume/on-off ch 120969	391080
R29	— volume ch 120970	391079
R29	— volume/on-off ch 120959	390814
R30	— contrast ch 120969,970	391048
R30	— contrast ch 120959	391002
R32	— bright ch 120969,970	391046
R32	— bright ch 120959	391001
R37A,B,C	— vert lin vert size AGC	391082
R80	— vert hold ch 120969,970	391047
R80	— vert hold ch 120959	391000
C2	— 22pf NPO	928824X
C12	— 22pf NPO	928824X
C14	— 5.6pf NPO	928817X
C17	— 4.7pf NPO	928816X
C20	— 6.8pf NPO	928818X
C56A,B,C,D	— 250-250-100-50/160v	925714
T1	— sound interstage	720513
T2	— audio output part of speaker	720454
T3	— 1st IF	720455
T4	— 2nd IF	720512
T5	— sound take-off	738210
T6	— horiz output	738193
T7	— vert output	720404
L2	— quad	720453
L4	— self sound trap 41.25MHz	716165
S12	— horiz osc	708532A
L14	— def yoke	705031
L16,17	— filament choke	923059
NT	— couplate, sync separator	923159
N2	— couplate vert integrator	808236
F1	— fuse, 1.2a	



⊗ CERAMIC OR MICA CAPACITORS IN PICOFARADS (PF) AND 100V.
 ⊗ TUBULAR CAPACITORS IN MICROFARADS (MF) AND 400 V
 UNLESS OTHERWISE SPECIFIED.
 RESISTORS IN OHMS (Ω), 1000 AND 1/2 WATT
 ARROWS AT CONTROLS INDICATE CLOCKWISE ROTATION
 F-1 TOP COIL, S-1 BOTTOM COIL IN DOUBLE TUNED TRANSFORMERS
 1 C-5 = 1/2 T-1 = TEST POINT NP = NONPOLARIZED + = CATHODE

NOTES:
 * VOLTAGE VARIES WITH AGC
 * VOLTAGE VARIES WITH V-HOLD
 † VOLTAGE VARIES WITH H-HOLD

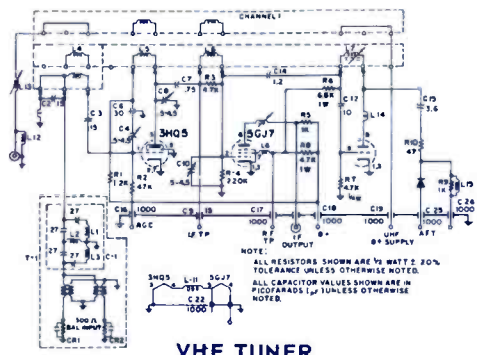
NOTE: The partial schematic shown below is to be used with models using 19GJP4 or 19FJP4 CRTs. In addition to differences in CRT circuit, note that the center tap of the vertical deflection coils is grounded.



EMERSON

Color TV Chassis
120921,923

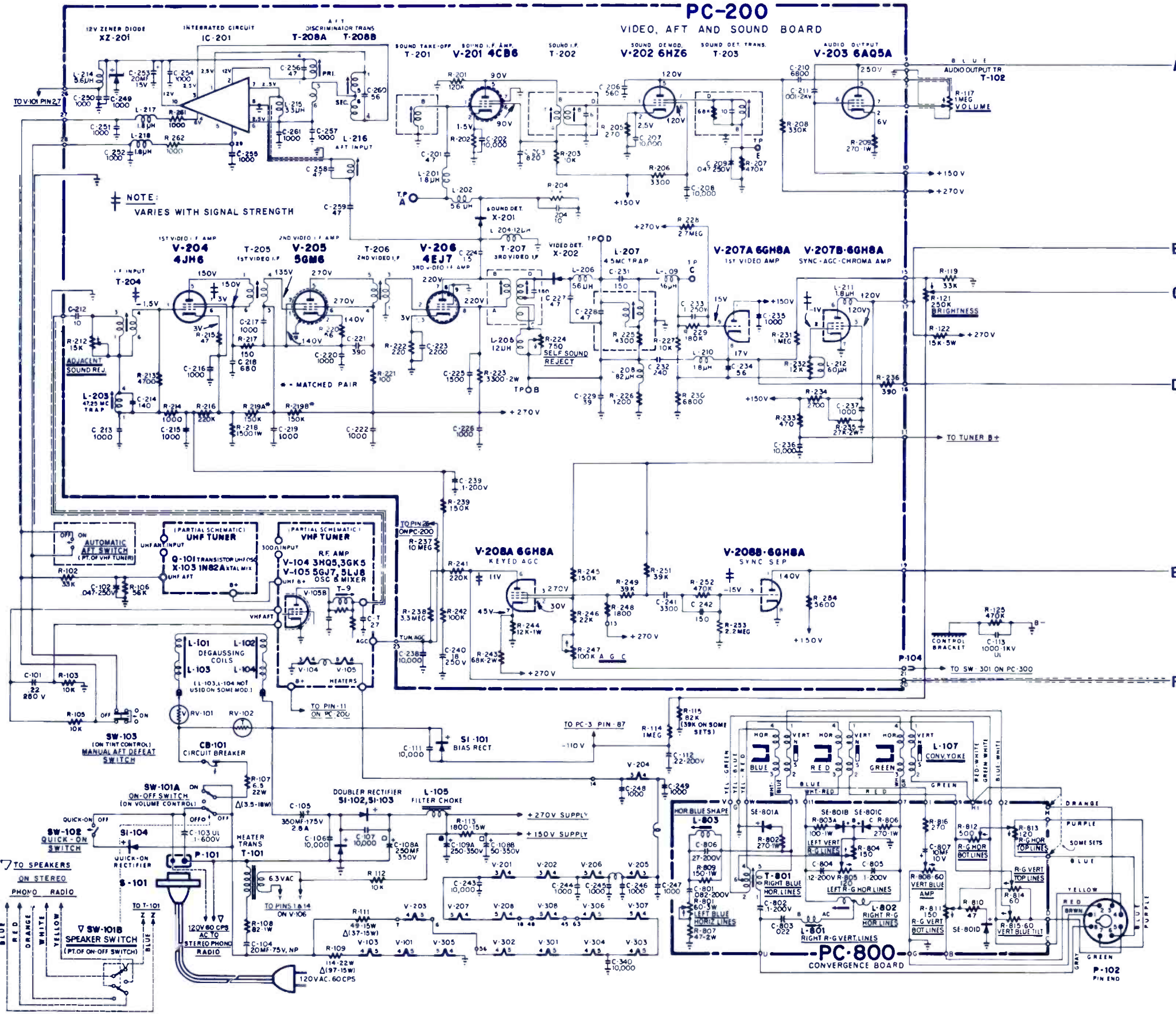
ELECTRONIC TECHNICIAN / DEALER **TEKFAAX**

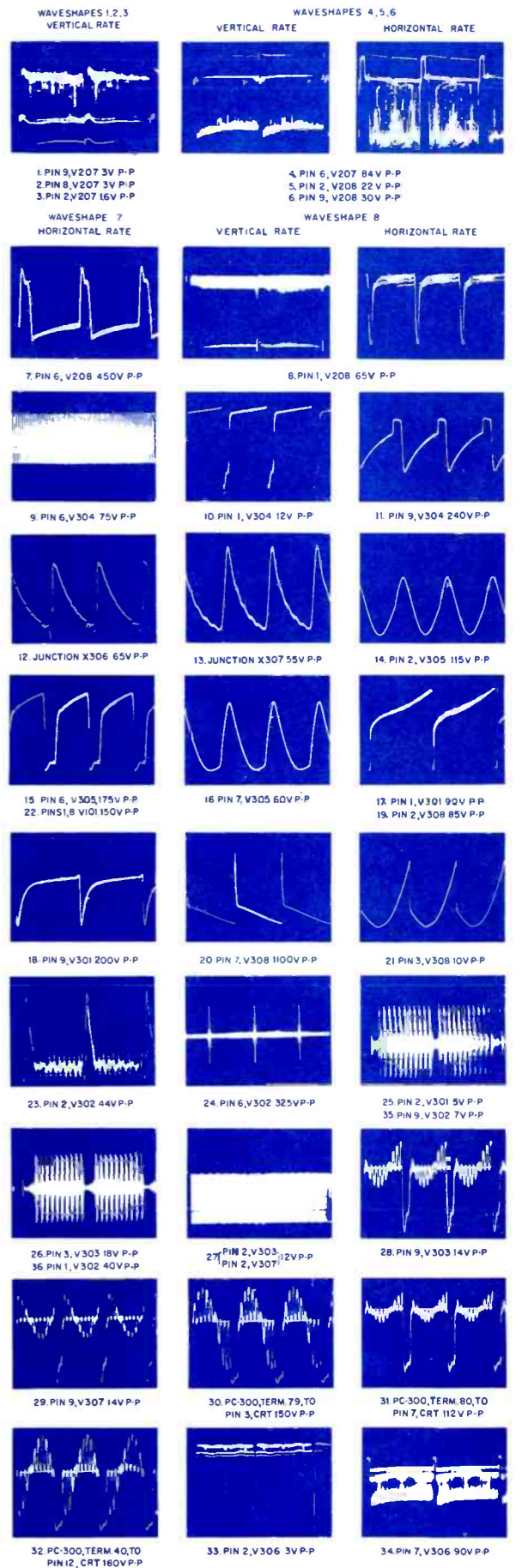
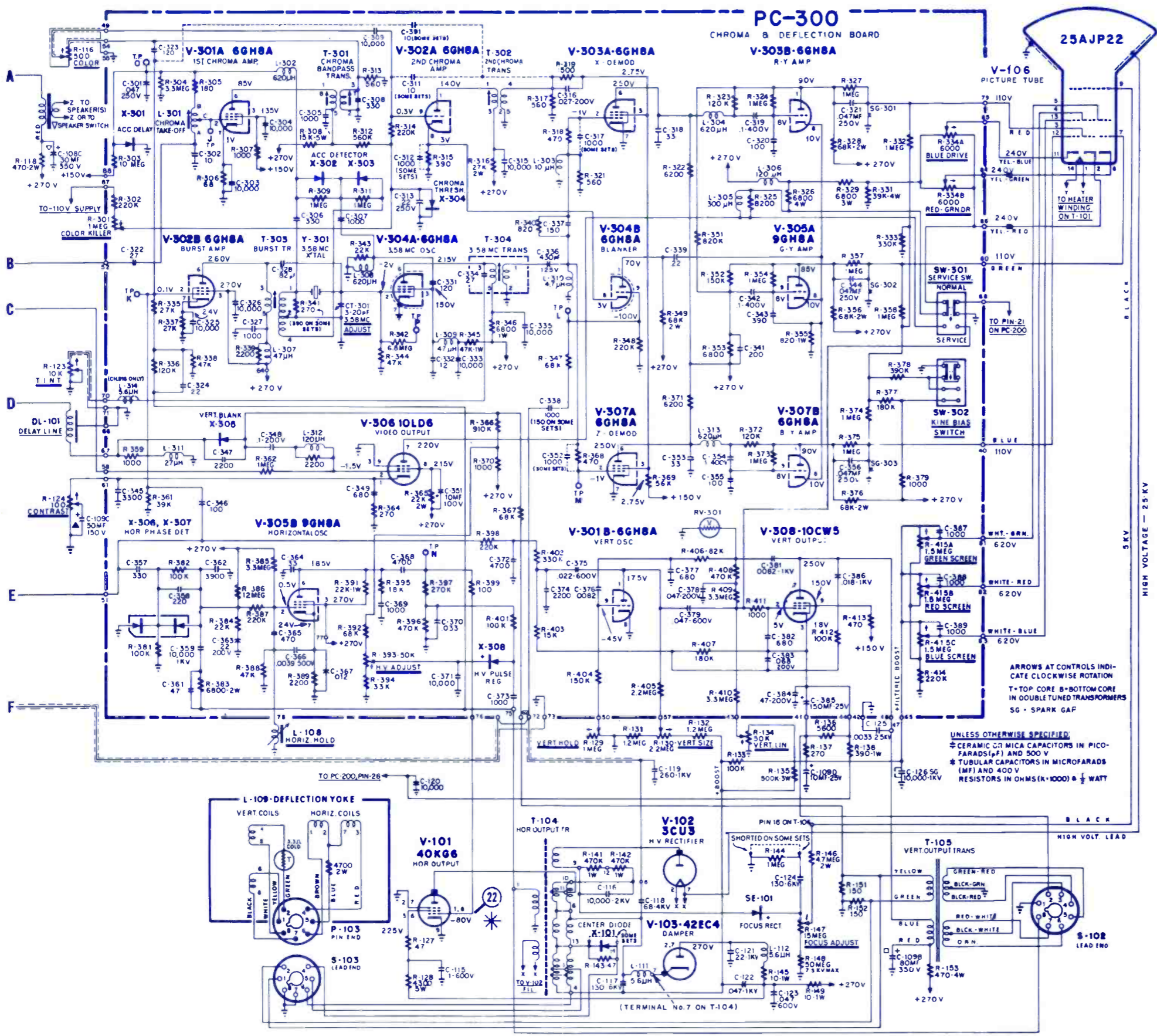


VHF TUNER

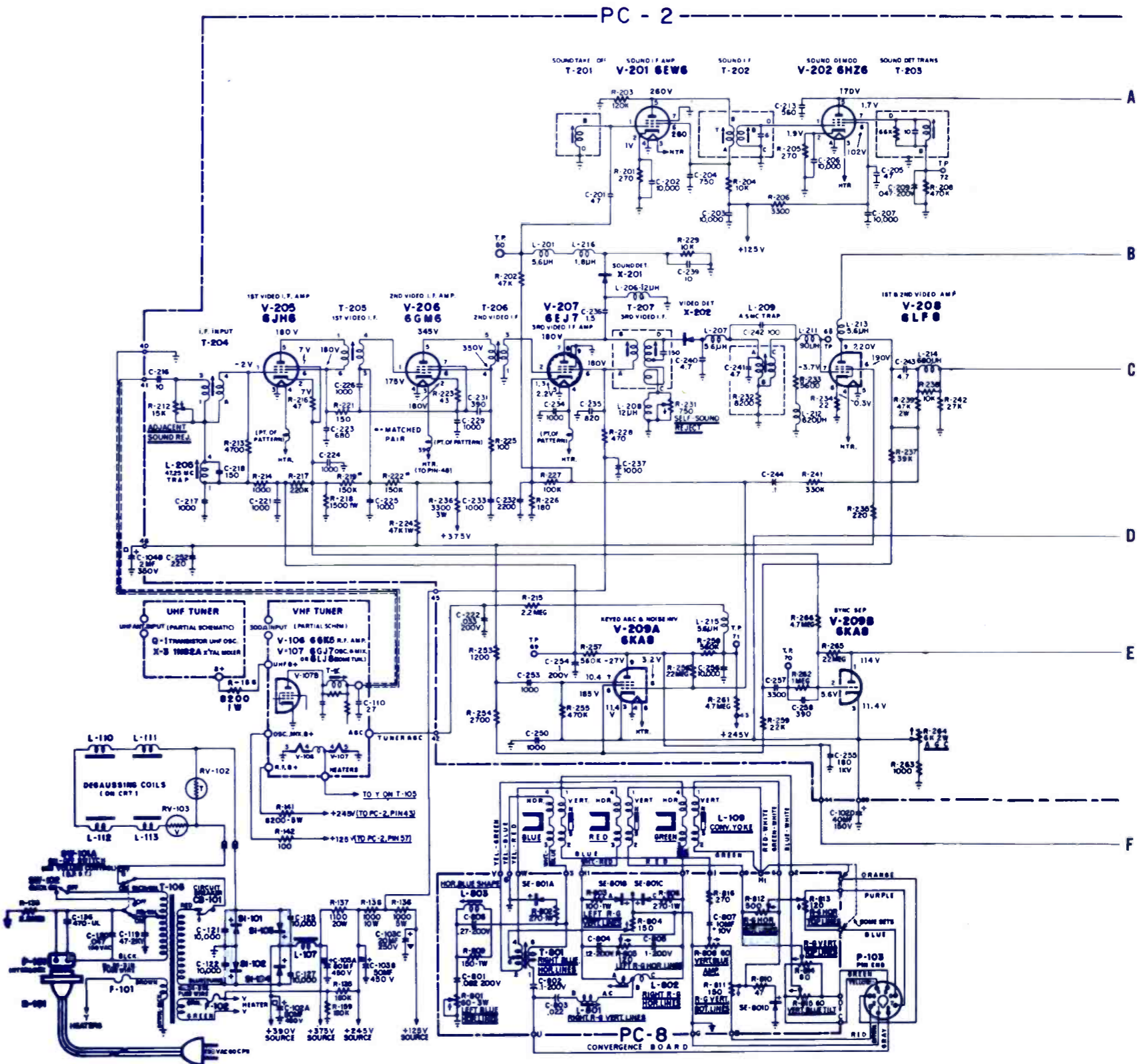
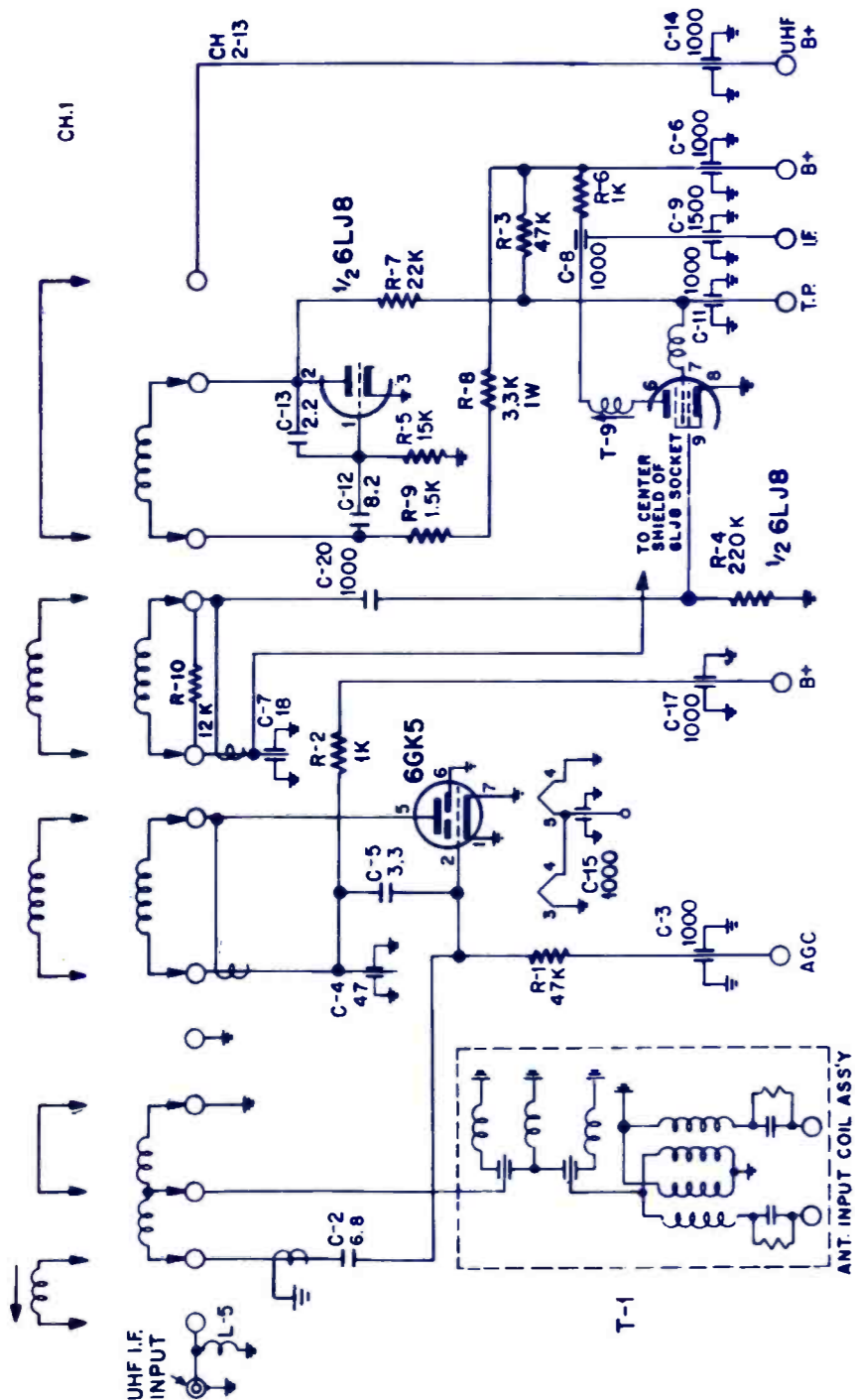
SYMBOL DESCRIPTION EMERSON PART NO.

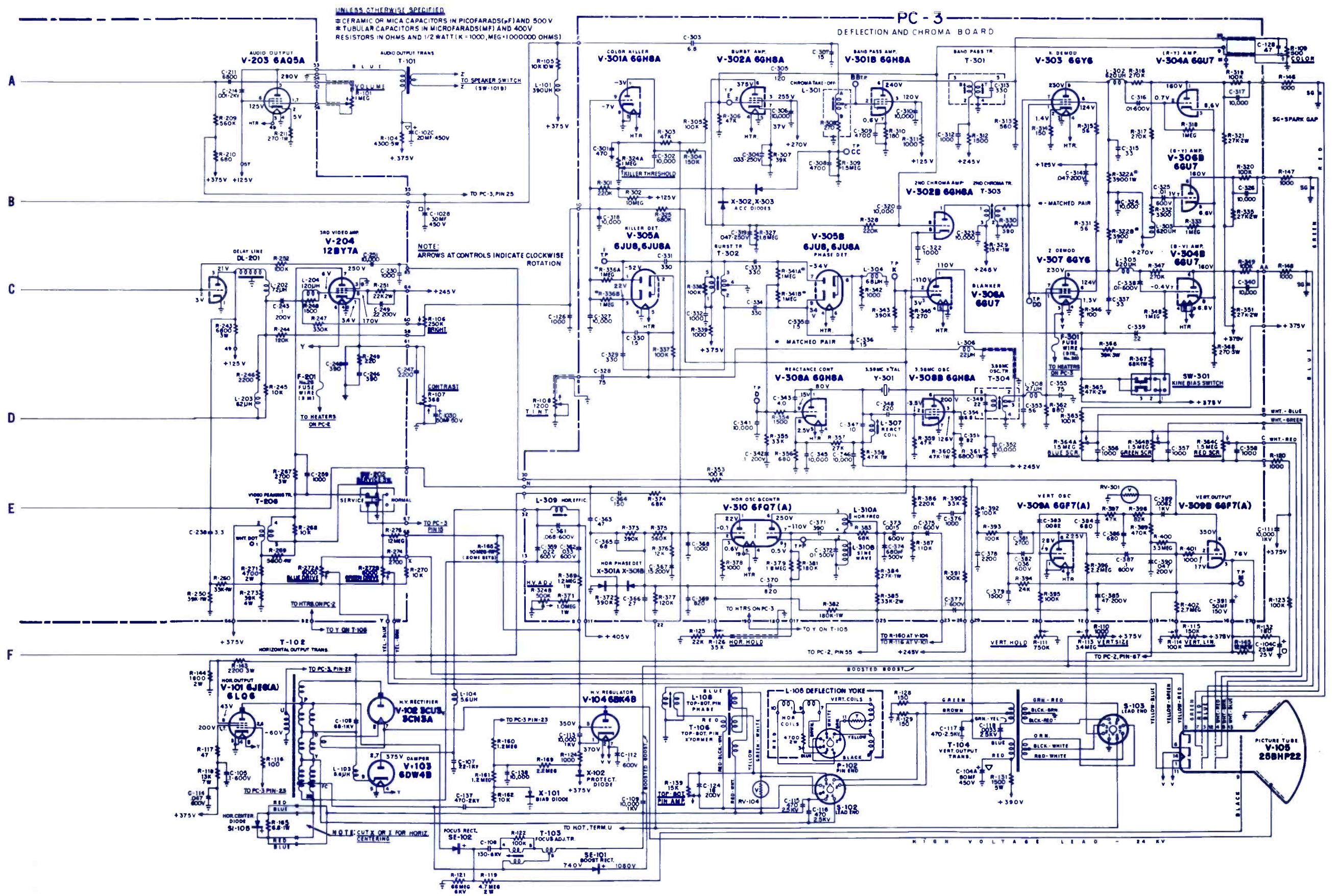
R107	—resistor WW 3.5Ω ±10% tol 18w	394302
R109	—resistor WW 97Ω ±10% tol 15w	397215
R116	—color control 500 (ch 120920 and 921)	391026
R117	—volume control 1M (ch 120920,921)	391028
R121	—bright control 250K	391033
R123	—tint control 10K (ch 120921,923)	391024
R124	—contrast cont 100Ω	391032
R129	—vert hold control 1M	391034
R130	—vert size control 2.2M	390951
R134	—vert line control 50K	390952
R147	—focus adjust control 15M	390950
R148	—resistor WW 50M ±10% tol 75kw	397208
R212	—adj sound rej control 15K	390954
R224	—self sound rej control 750Ω	390883
R247	—AGC control 100K	390953
R301	—color killer control 1M	390949
R393	—high voltage adjust control 50K	Part R301
R415A	—green screen control 1.5M	390879
R415B	—red screen control 1.5M	390879
R415C	—blu screen control 1.5M	390879
RV101	—voltage dep resistor	387186
RV102	—therm	397187
RV301	—varistor	397233
SE101	—selenium rectifier focus	817123
X101	—diode horiz centering	817120
X302,303	—diode ACC det	817177
X304	—diode chroma threshold	817172
X308	—diode high voltage pulse regulator	817172
Y301	—crystal 3.58MHz osc	817175
DL101	—delay line	709010
C108A	—cap elect 250μf @350v	925707
C108B	—cap elect 50μf @350v	925707
C108C	—cap elect 30μf @350v	925707
C109A	—cap elect 250μf @350v ch 120921,923	925708
C109B	—cap elect 80μf @350v ch 120921,923	925708
C109C	—cap elect 50μf @50v ch 120921,923	925708
C109D	—cap elect 10μf @25v ch 120921,923	925708
C214	—cap cer 140μf ±5% tol NPO	929218X
C256	—cap cer 47μf ±5% tol NPO	928811X
C302	—cap cer 10pf ±10% tol NPO	928820X
C322	—cap cer 27pf ±5% tol 500v NPO	928809X
C324	—cap cer 22pf ±10% tol 500v NPO	928824X
C332	—cap cer 12pf ±10% tol NPO	928805X
C346	—cap cer 100pf, ±10% tol NPO	928829X
IC201	—int cir AFT chroma board ass'y comp ch 120921,923	815215
T101	—transformer filament	730152
T102	—transformer audio output	734248
T104	—transformer horiz output	738229
T105	—transformer vert output	738218
T201	—transformer sound take OFF	720558
T202	—transformer sound IF	720471
T203	—transformer det	720472
T208A	—transformer AFT disc primary	720577
T301	—transformer chroma band pass	720563
T302	—transformer chroma output	720575
T303	—transformer burst	720580
T304	—transformer 3.58MHz osc	720583
L105	—filter choke power supply	737059
L108	—def yoke ass'y	708516
L201	—choke coil 1.8μh	705049
L203	—coil 47.25MHz trap	708427
L207	—coil 4.5MHz trap	708432
L210	—choke coil 1.8μh	705049
L216	—coil AFT take off	720576
L301	—chroma take off coil	708438
L304	—peaking coil 620μh	708430
L305	—peaking coil 300μh	708531
L309	—peaking coil 47μh	708521
CB101	—cir brkr	808022





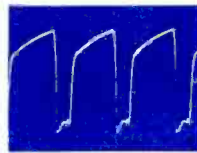
SYMBOL	DESCRIPTION	EMERSON PART NO.
R101	—volume control, w/switch	391132
R106	—brightness control	391115
R107	—contrast control	391118
R108	—tint control	391116
R109	—color control	391117
R111	—vert hold control	391119
R126	—horiz hold control	391120
R144	—1800n, 2w	



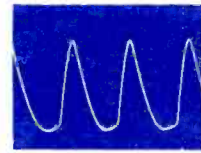


EMERSON
Color TV Chassis
120976, 977, 980,
981, 982, 983, 984

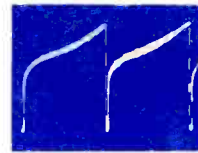
ELECTRONIC TECHNICIAN / DEALER **TEKFAK**



15 PIN 6, V305 180V P-P
22. PINS 1, 8 VIO 150V P-P



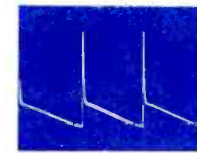
16 PIN 7, V305 60V P-P



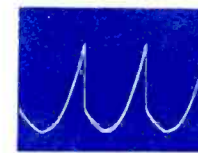
17 PIN 1, V301 85V P-P
19. PIN 2, V308 80V P-P



18 PIN 9, V301 200V P-P

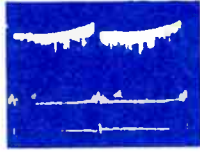


20 PIN 7, V306 1100V P-P



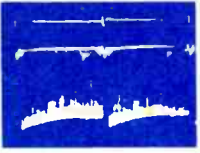
21 PIN 3, V308 10V P-P

WAVESHAPES 1, 2, 3
VERTICAL RATE



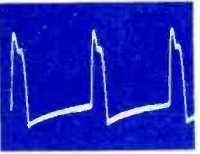
1 PIN 9, V-207 4.5V P-P
2. PIN 8, V-207 4.0V P-P
3. PIN 2, V-207 2.0V P-P

WAVESHAPES 4, 5, 6
VERTICAL RATE HORIZONTAL RATE

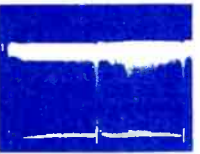


4 PIN 6, V-207 100V P-P
5. PIN 2, V-208 60V P-P
6. PIN 9, V-208 40V P-P

WAVESHAPES 7
HORIZONTAL RATE



7. PIN 6, V-208 650V P-P



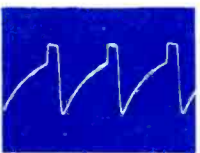
8. PIN 1, V-208 70V P-P



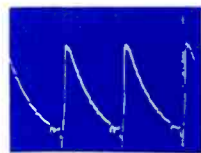
9. PIN 6, V304 70V P-P



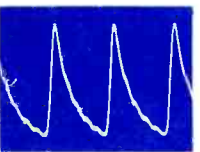
10. PIN 1, V304 10V P-P



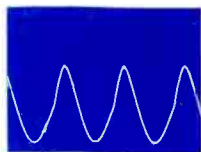
11. PIN 9, V304 240V P-P



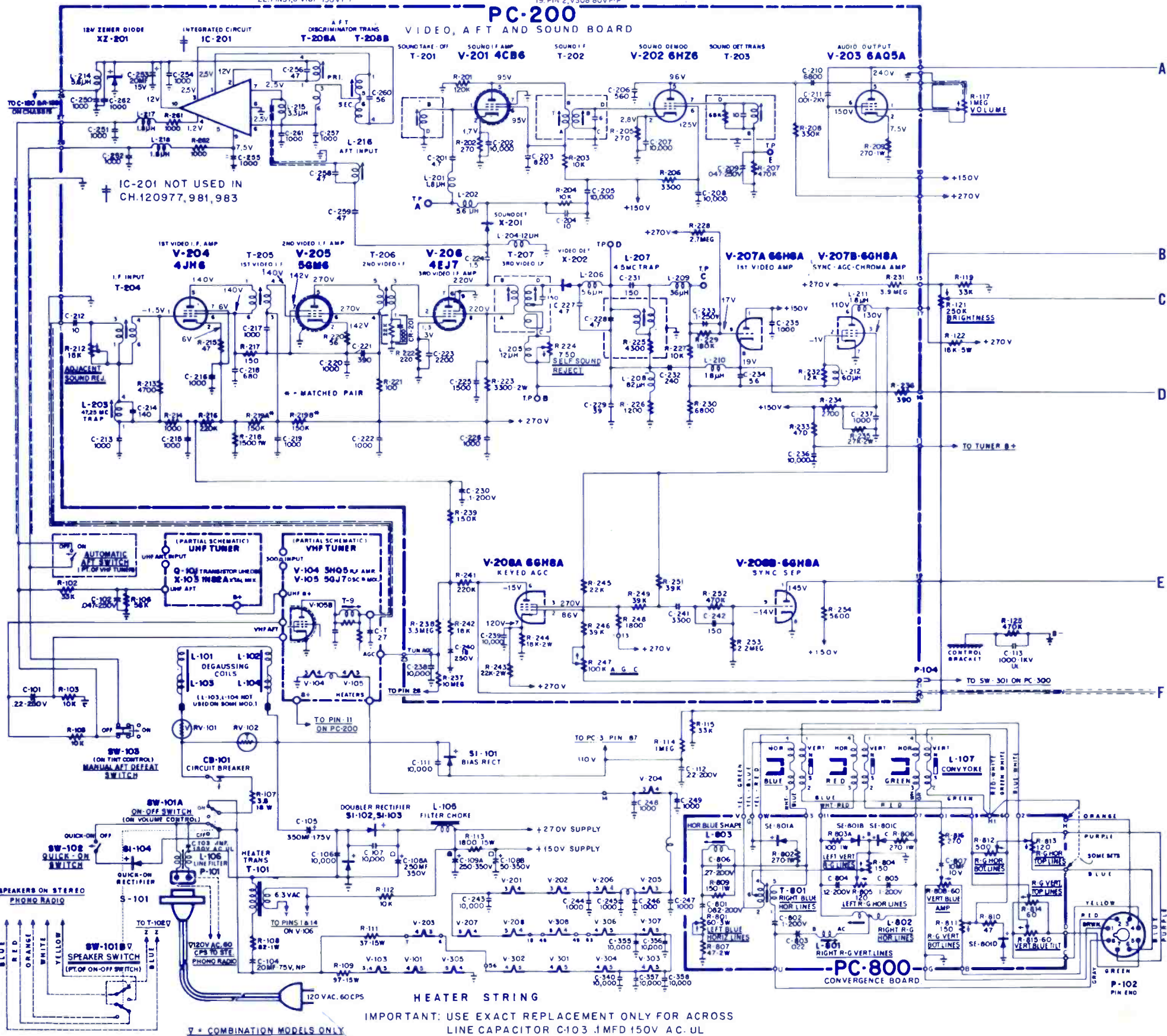
12. JUNCTION X306 60V P-P



13. JUNCTION X307 50V P-P



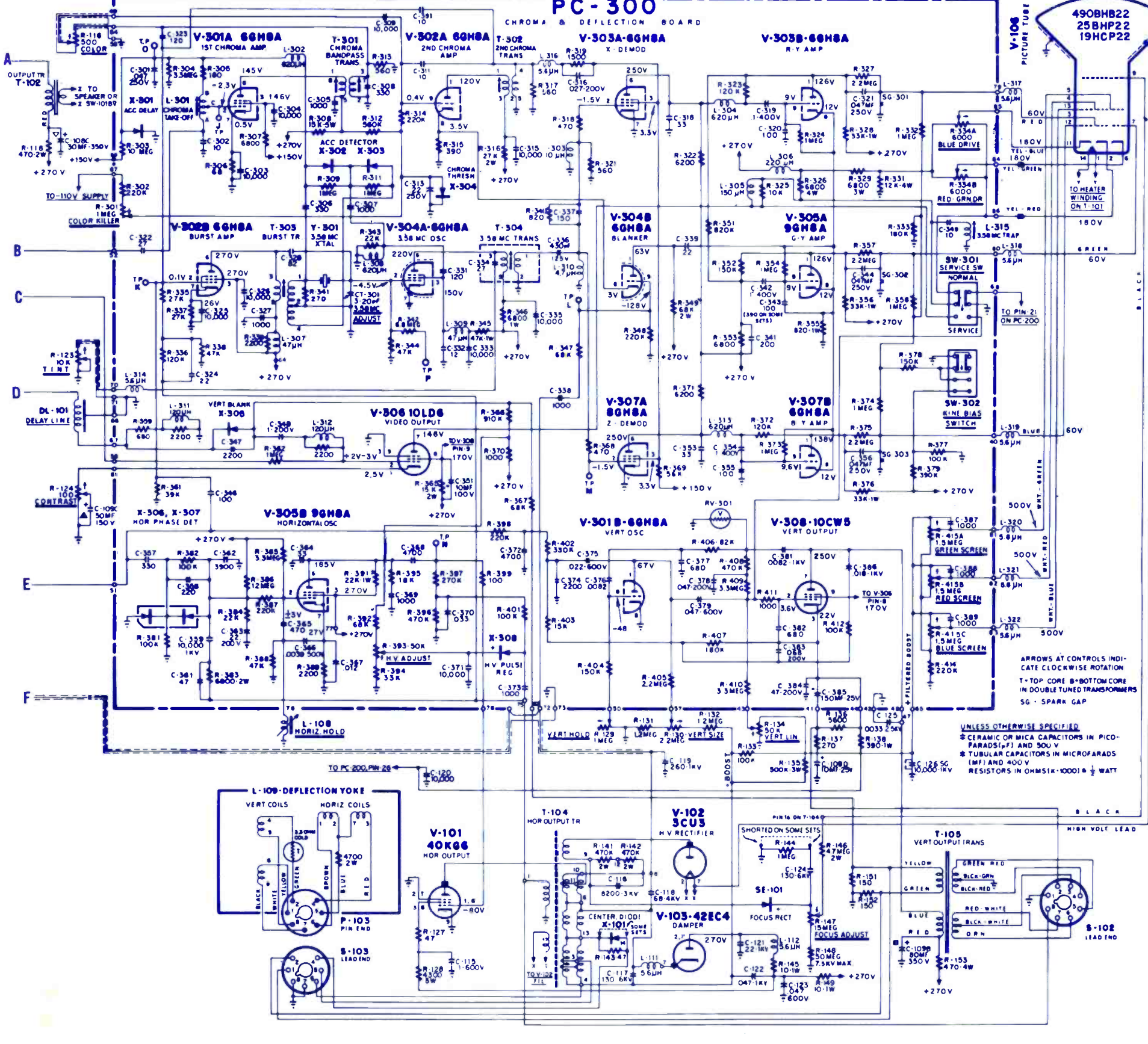
14. PIN 2, V305 110V P-P



IMPORTANT: USE EXACT REPLACEMENT ONLY FOR ACROSS
LINE CAPACITOR C-103 J.MFD 150V AC. UL



23. PIN 2, V302 44VP P
24. PIN 6, V302 250V P-P
25. PIN 2, V301 2V P-P
26. PIN 3, V303 18V P-P
27. PIN 2, V303
PIN 2, V307 7V P-P
28. PIN 9, V303 9VP P
29. PIN 9, V307 14VP P-P
30. PC-300, TERM. 79, TO
PIN 3, CRT 140V P-P
31. PC-300, TERM. 80, TO
PIN 7, CRT 112V P-P
32. PC-300, TERM. 40, TO
PIN 12, CRT 160V P-P
33. PIN 2, V306 7V P-P
34. PIN 7, V306 90V P-P



V302 6GH8A
V303 6GH8A
V304 6GH8A
V305 6GH8A
V306 10LD6
V307 6GH8A
V308 10CW5

RESISTANCE READINGS

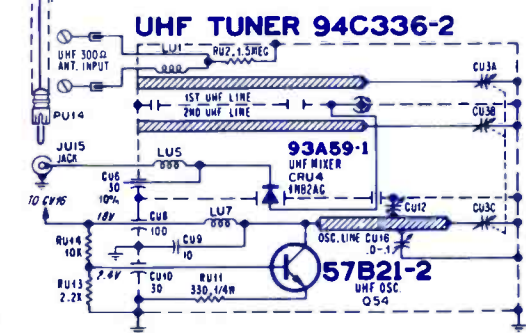
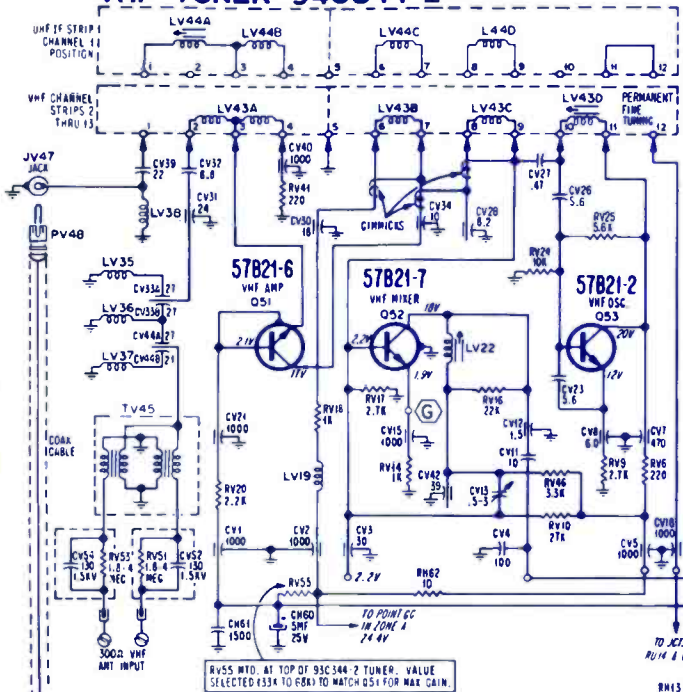
SYM. NO.	TUBE TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
V-101	40K6	640K	NC	NC	Filament	Filament	4.3K†	0	NC	0	1.1K	180K	0	2.2M	200K
V-102	3CU3	NC	FIL.	NC	Filament	Filament	10K†	10K†	0	0	200K	0	0	0	0
V-103	42EC4	NC	NC	NC	Filament	Filament	730K	730K	0	0	0	0	0	0	0
V-106	CRT	FIL.	7.4K†	730K	(3)	(4)	(1)†	730K	NC	NC	NC	NC	NC	NC	NC
V-201	4CB6	3.6	270	Filament	10K†	10K†	0	0	0	0	0	0	0	0	0
V-202	6H26	4.4	270	Filament	330K	5K†	470K	0	0	0	0	0	0	0	0
V-203	6A05A	(7)	270	Filament	1K†	1.6K†	(7)	0	0	0	0	0	0	0	0
V-204	4JH6	210K	1.6K	Filament	INF.	INF.	1.5K	0	0	0	0	0	0	0	0
V-205	5GM6	80K	INF.	Filament	100	100	INF.	0	0	0	0	0	0	0	0
V-206	4EJ7	220	22K	220	Filament	13K†	0	3.3K†	0	0	0	0	0	0	0
V-207	6GH8A	1.6K†	4.6K	4K†	Filament	13K†	0	1.1K	180K	0	0	0	0	0	0
V-208	6GH8A	7K†	36K†	1.6K†	Filament	600K	11K	0	2.2M	200K	0	0	0	0	0
V-301	6GH8A	3.2M	330K	9K†	Filament	15K†	68	0	200K	0	0	0	0	0	0
V-302	6GH8A	27K†	25K	0†	Filament	10†	27K	0	27K	0	0	0	0	0	0
V-303	6GH8A	26K†	480	1.6K	Filament	6K†	0	800	600K	0	0	0	0	0	0
V-304	6GH8A	26K†	44K	47K†	Filament	6.8K†	0	800	220K	0	0	0	0	0	0
V-305	9GH8A	26K†	400K	0†	Filament	22K†	2.2K	800	1M	0	0	0	0	0	0
V-306	10LD6	100	1M	0	Filament	16K†	7K†	16K†	0	0	0	0	0	0	0
V-307	6GH8A	26K†	470	1.6K	Filament	4K†	0	800	1M	0	0	0	0	0	0
V-308	10CW5	3.4M	3.4M	5.2K	Filament	NC	720†	720†	0	0	0	0	0	0	0

V301 6GH8A
V302 6GH8A
V303 6GH8A
V304 6GH8A
V305 9GH8A
V306 10LD6
V307 6GH8A
V308 10CW5

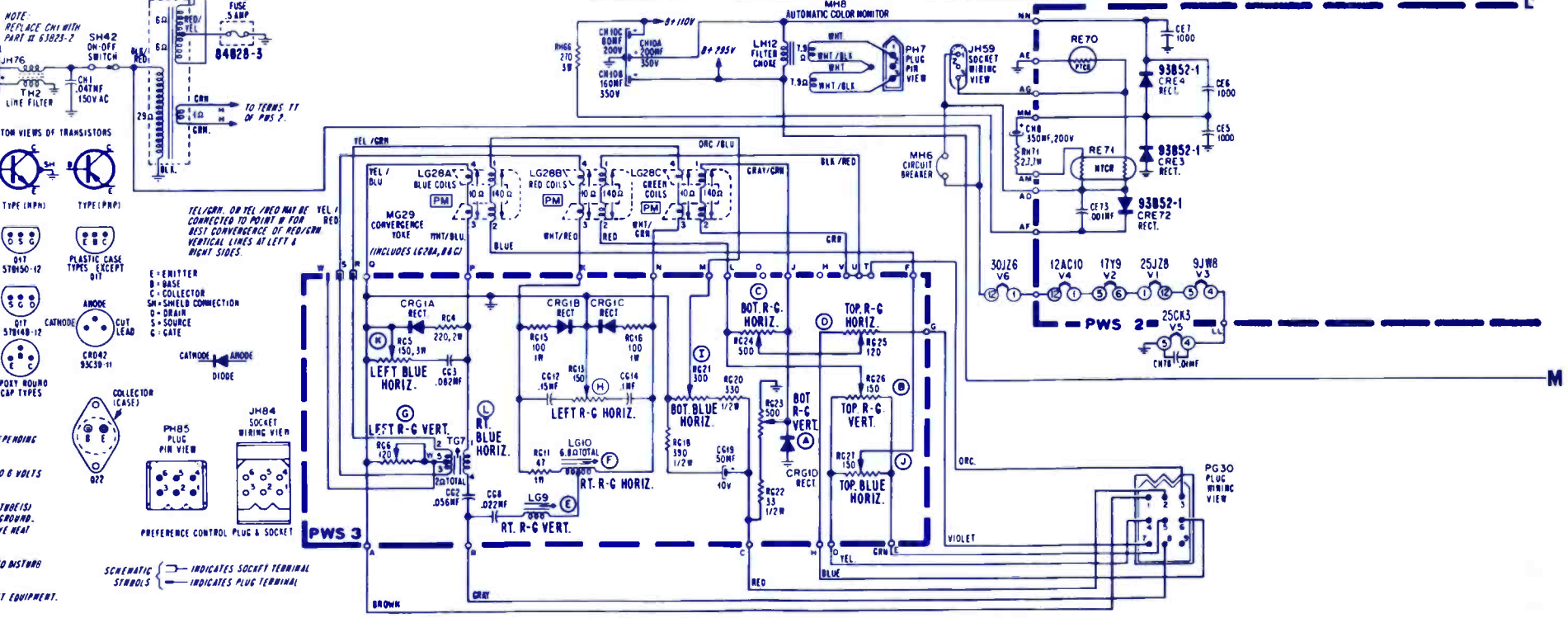
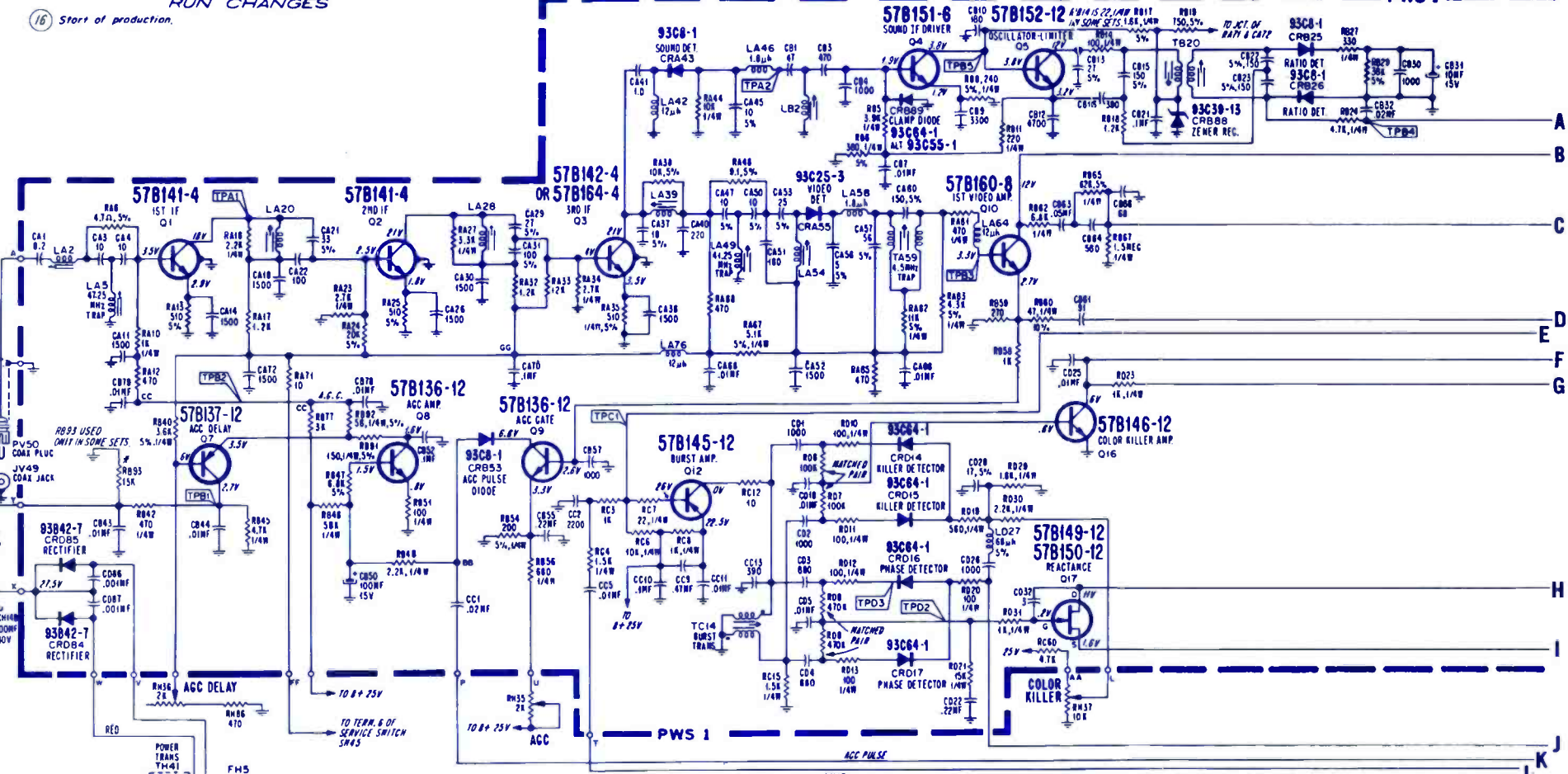
ARROWS AT CONTROLS INDICATE CLOCKWISE ROTATION
T-TOP CORE B-BOTTOM CORE IN DOUBLE TUNED TRANSFORMERS
SG - SPARK GAP

UNLESS OTHERWISE SPECIFIED
* CERAMIC OR MICA CAPACITORS IN PICO-FARADS (P) AND 50V
* TUBULAR CAPACITORS IN MICROFARADS (MF) AND 400V
RESISTORS IN OHMS(K-1000) 1/2 WATT

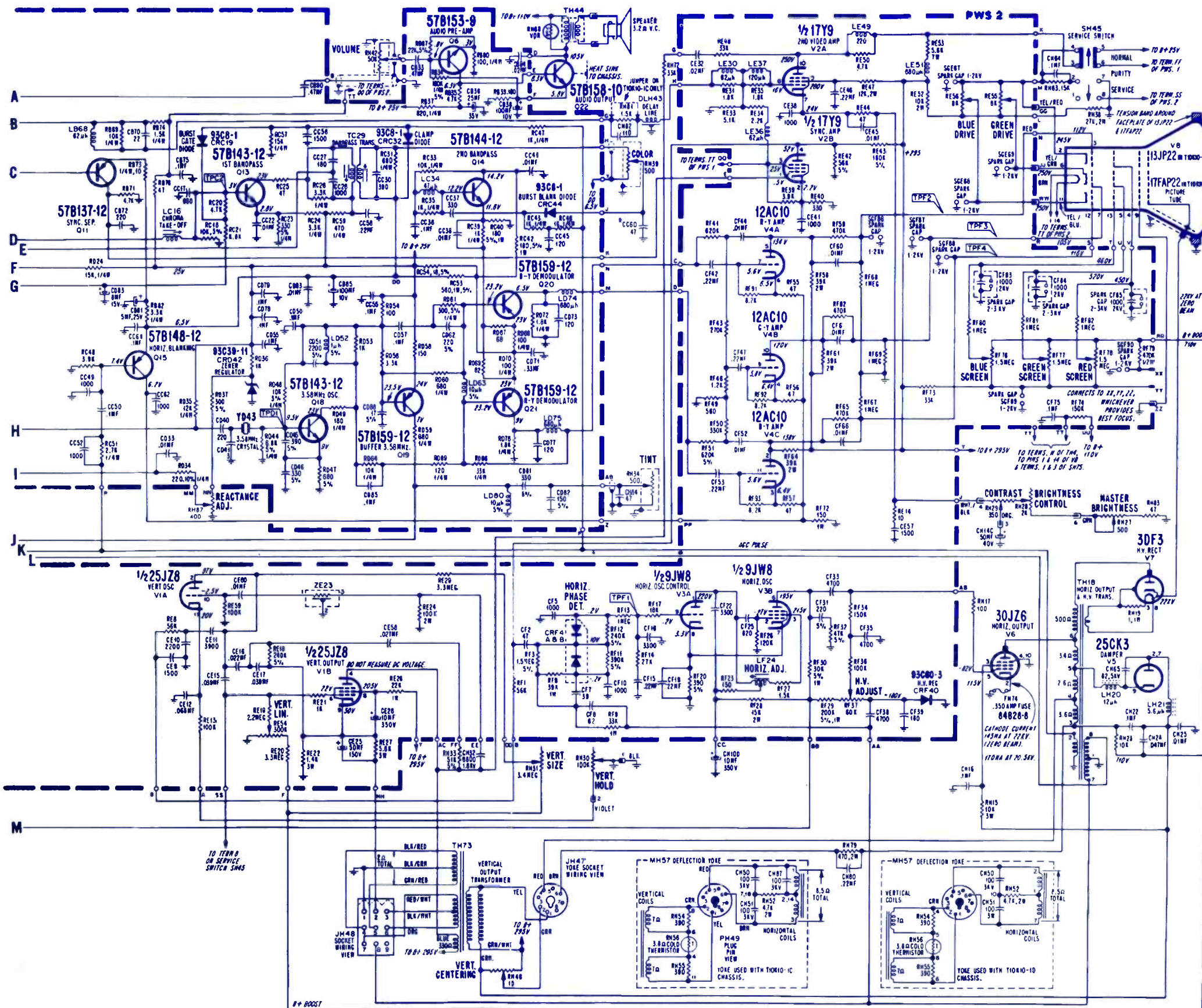
VHF TUNER 94C344-2 SEE NOTE AT RV55



16 Start of production. RUN CHANGES



SCHEMATIC NOTES
CHASSIS GROUND. RESISTOR VALUES 1/2WATT, 10% CAPACITOR VALUES IN PICOFARADS UNLESS OTHERWISE INDICATED. RESISTANCE VALUES OF COILS LESS THAN 1Ω ARE NOT SHOWN.
H INDICATES CYCLES PER SECOND.
VOLTAGE & WAVEFORM NOTES:
DC VOLTAGES TAKEN WITH VTVM, WITH RESPECT TO CHASSIS GROUND. AT 120V AC LINE, WAVEFORMS 1 & P-P VOLTAGES MAY VARY, DEPENDING ON CALIBRATION OF TEST EQUIPMENT & PARASITICANCES.
VOLTAGES TAKEN ON UNUSED UHF CHANNEL, WITH VOLUME CONTROL AT MIN, BRIGHTNESS & CONTRAST CONTROLS AT MIN.
ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL, PRODUCING 5 TO 8 VOLTS ACC. AT TEST POINT 1P07. CONTRAST, BRIGHTNESS CONTROLS SET FOR NORMAL PICTURE.
TRANSISTOR CAUTION
TO AVOID DAMAGE TO TRANSISTORS, DO NOT ARC 2ND ANODE LEAD TO CHASSIS GROUND. DO NOT TURN SET OR WITH TRANSISTORS, TUBES OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE VTVM ON R X 100 RANGE OR HIGHER. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS.
ACC. CAUTION:
DO NOT DISTURB FACTORY SETTING OF ACC. CONTROL. IF ACC. ADJUSTMENT IS REQUIRED, REFER TO SERVICE NOTES. IF NECESSARY TO DISTURB ACC. ADJUSTMENT, MARK ROTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING.
9 COMPONENT NOT MOUNTED ON PRECISION WIRED SYSTEM.
WARNING: USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ELECTRICAL SHOCK & DAMAGE TO TEST EQUIPMENT.
ARC 2ND ANODE ONLY TO PICTURE TUBE BAG OR BAG GROUNDING SPRING. CHASSIS IS CONNECTED DIRECTLY TO POWER LINE & PART MOUNTED ON BOTTOM OF PRECISION WIRED SYSTEM.

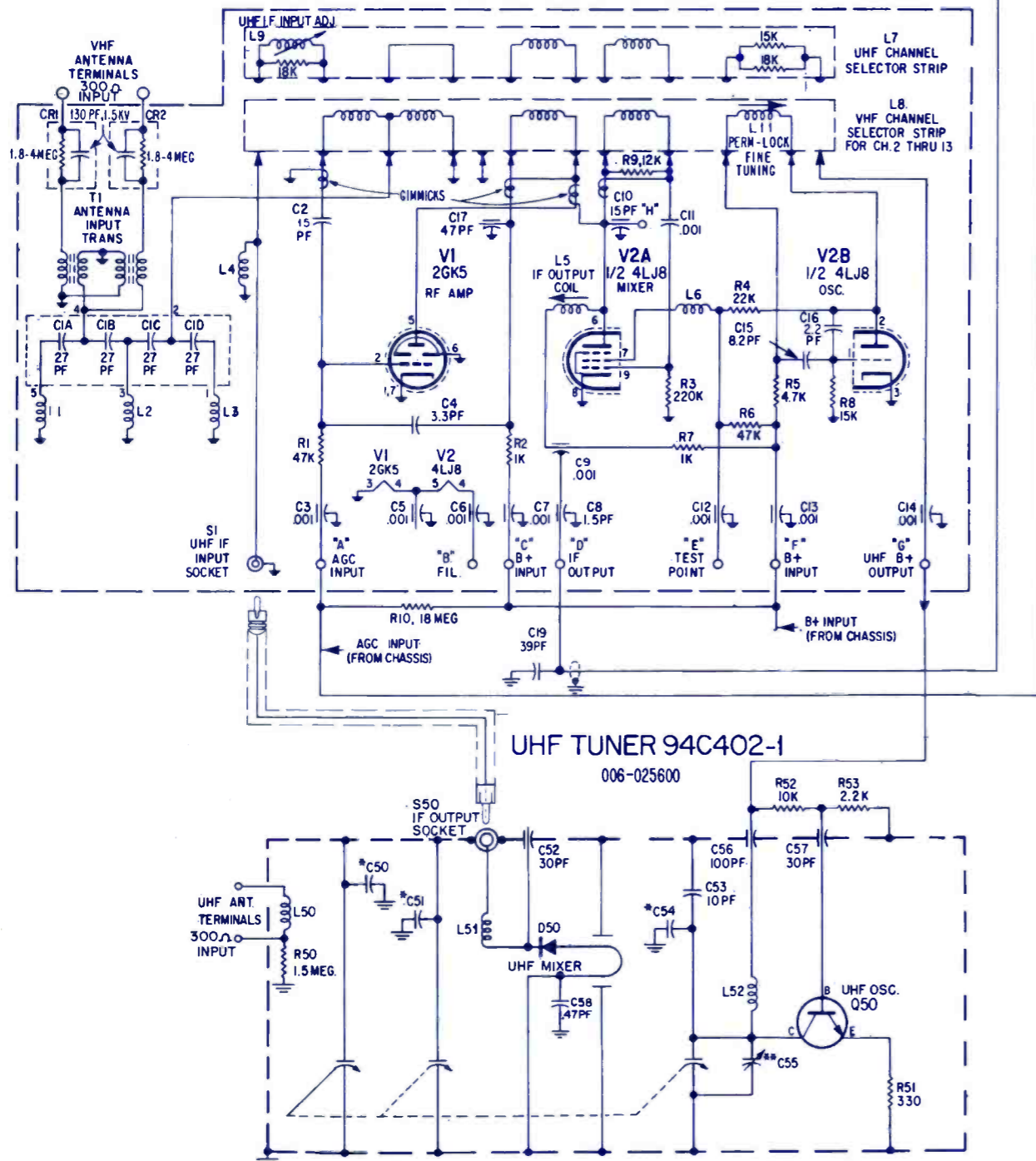


SYMBOL	DESCRIPTION	EMERSON PART NO.
RA6	4.7 n, 1/4w, 5% special	970186
RA48	9.1 n, 1/4w, 5% special	60A28-74
RE54	vert lin, triple control	75A95-12
RE55	green drive, triple control	75A95-12
RE56	blue drive, triple control	75A95-12
RE70	Positive Temp. Coef Resistor	61A52-1
RE71	Negative Temp. Coef Resistor	61A52-2
RF37	60K, HV adjust control	75A101-9
RF76	blue screen, triple control	75A95-13
RF77	green screen, triple control	75A95-13
RF78	red screen, triple control	75A95-13
RH19	1 n, 1w special	60A28-95
RH27	500 n, master bright control	970202
RH28	2K, bright control	75A140-1
RH29	350 n, contrast control	75A140-3
RH30	100K, vert hold control	75A140-2
RH31	3.4M, vert size control	75A135-6
RH34	500 n, tint control	75A141-1
RH35	2K, AGC control	75A135-7
RH36	20K, AGC delay control	970203
RH37	10K, color killer control	970205
RH39	500 n, color control	75A141-1
RH42	50K, volume control (includes On-Off Switch)	75A149-2
RH46	10 n, vert centering control	75A64-40
RH56	3.8 n, cold thermistor	61A27-1
RH69	VDR	61A46-7
RH71	2.7 n, 7w	970208
RH87	400 n, reactance control	970204
ZE23	vert integrator	63A6-29
CH10A	200 uF, 350V, Multiple Electrolytic	970235
CH10B	160 uF, 350V, Multiple Electrolytic	970235
CH10C	80 uF, 350V, Multiple Electrolytic	970235
CH10D	10 uF, 350V, Multiple Electrolytic	970235
CH14A	2,000 uF, 40V, Multiple Electrolytic	970236
CH14B	2,000 uF, 40V, Multiple Electrolytic	970236
CH14C	50 uF, 40V, Multiple Electrolytic	970236
DLH43	delay line	72A324-3
LA5	47.25MHz trap coil	970240
LA54	video detector coil	970242
LC16	chroma input coil	72A329-1
LC34	47 uF, 2nd bandpass coil	73A55-28
LD52	1 uF, 3.58MHz output coil	73A55-37
LD63	10 uF, demod. phase shift coil	73A55-8
LE30	62 uF, peaking coil	73A55-29
LF24	horiz hold control	94A351-1
LG7	right, blue horiz xformer	94A305-9
LH12	filter choke	74A30-1
TA59	4.5 MHz trap coil	72A216-7
TB20	ratio detector xformer	72A318-1
TC14	burst xformer	72A325-3
TC29	bandpass xformer	72A327-1
TH2	line choke	73A31-6
TH4	power xformer	80A108-5
TH8	horiz output xformer	79A140-1
TH44	audio output xformer	79A141-1
TH73	vert output xformer	79A131-2
CRD42	zener regulator (alt. 93A39-14)	93A39-1
CRF40	diode HV regulator	93A60-3
YD43	3.58MHz crystal	93A22-1
FH5	0.5 amp fuse	84A28-3
FH74	0.35 amp fuse	84A28-8
MH6	circuit breaker	84A17-13
	tuner VHF	94A344-2
	yoke, deflection 16 in. CRT	94A304-1
	yoke, deflection 12 in. CRT	94A353-1

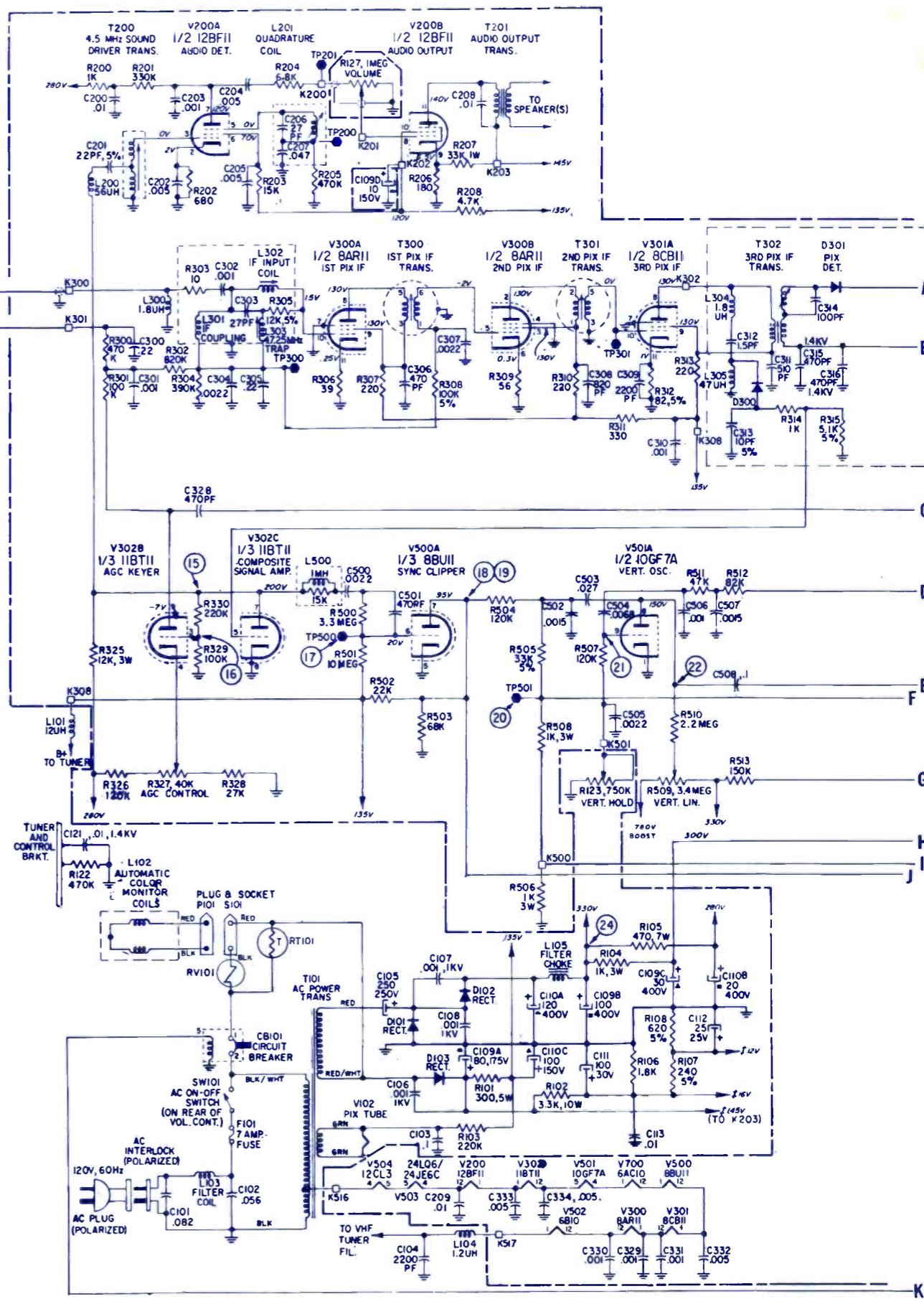
NOTES

1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED & CHASSIS GND, WITH NORMAL SIGNAL INPUT
- (*) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULLY CW).
- (**) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULLY CCW).
- f INDICATES VOLTAGE READINGS TAKEN WITH COLOR SIGNAL.

5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.
6. LINE VOLTAGE INPUT SET AT 120 VAC.
- f INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
- (0) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.



NOTES: *CAPACITOR(S) SHOWN DESIGNATES CAPACITANCE BETWEEN STATOR AND GROUND.
**TRIMMER CAPACITOR (FACTORY ADJUSTMENT)



SYMBOL DESCRIPTION EMERSON PART NO.

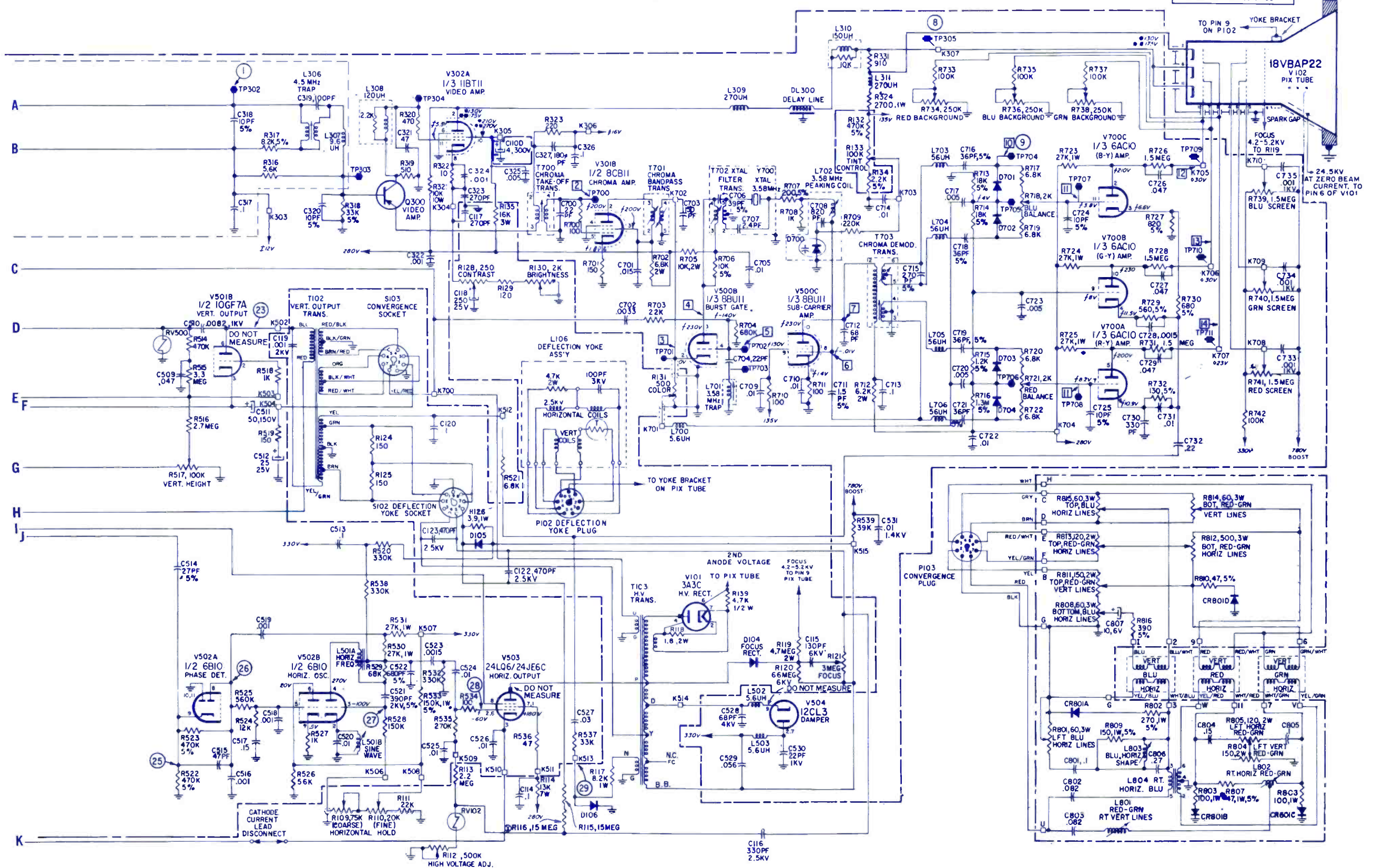
R109-75K horiz hold control (coarse)	75A156-1
R110-20K horiz hold control (fine)	75A156-1
R112-500K high voltage adjust control	75C158-2
R120-66M, 6kv	60A30-5
R121-3M focus adjust control	970807
R127-1M, on-off volume control	970808
R128-250Ω contrast control	75A158-1
R131-500Ω color control	75A160-2
R133-100K tint control	75A160-3
R135-16K, 3w, fixed film	970A09
R136-240M focus bleeder	61A63-1
R321-10K, 10w, fixed film	970810
R325-12K, 3w, fixed film	970811
R327-40K AGC control	75A155-6
R506-1K, 3w, fixed film	970812

R508-1K, 3w, fixed film	970812
R509-3.4M vert lin control	75A155-5
R517-100K vert height control	75A155-5
RT101-thermist, degaussing	61A60-1
RV101-voltage dependent resistor, degaussing	61A62-1
RV102-2ma/95v VD resistor	61A61-1
RV500-1ma/870v VD resistor	61A65-1
C109A-80μf, 175v elect	67A76-1
C109B-100μf, 400v elect	67A76-1
C109C-30μf, 400v elect	67A76-1
C109D-10μf, 150v elect	67A70-1
C110A-120μf, 400v elect	67A75-1
C110B-20μf, 400v elect	67A75-1
C110C-100μf, 150v elect	67A75-1
C110D-4μf, 400v elect	67A75-1
L103-line filter	73A126-1

L201-quad coil	72A366-1
L501A-horiz osc coil	72A373-1
L501B-horiz osc coil	72A373-1
DL300-delay line	72A372-1
T101-power xformer	80A114-1
T102-vert output xformer	79A153-1
T103-horiz output xformer	79A154-1
T200-sound take-off & 4.5MHz trap	72A361-1
T201-audio output xformer	79A151-1
T700-chroma take-off	72A368-1
T701-chroma bandpass	72A368-1
T703-chroma demodulator xformer	72A357-1
Q300-video amp transistor (NPN)	57A174-8
CB101-circuit breaker	84A31-1
F101-fuse, 7a, 125v	84A30-3
VHF tuner	94A416-3
deflection yoke	94A405-2

EMERSON
Color TV Chassis
920

REPLACE PICTURE TUBE WITH SAME TYPE AS ORIGINAL. 18VBAP22 HAS RIM BAND AROUND FACEPLATE.



GENERAL ELECTRIC

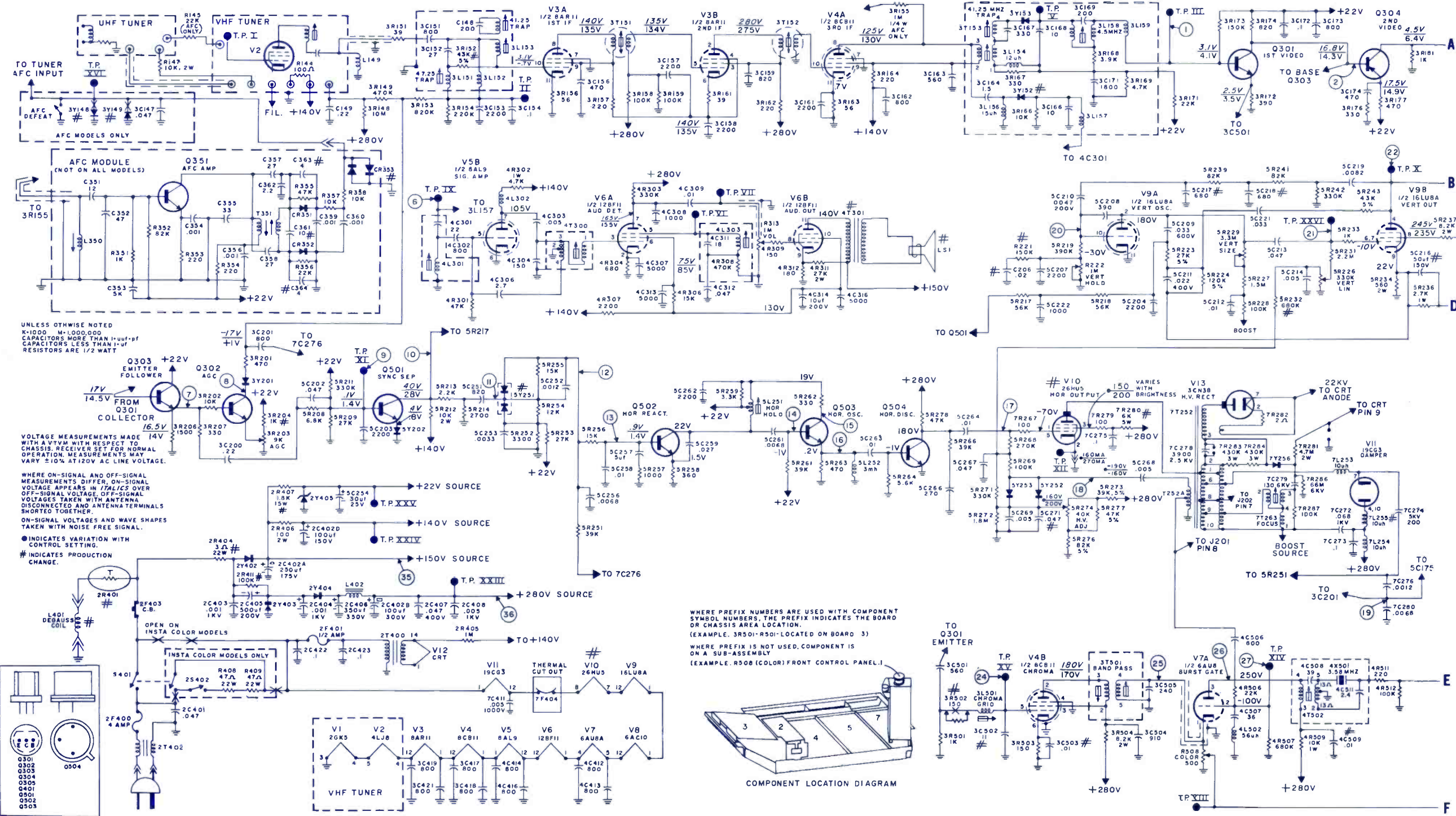
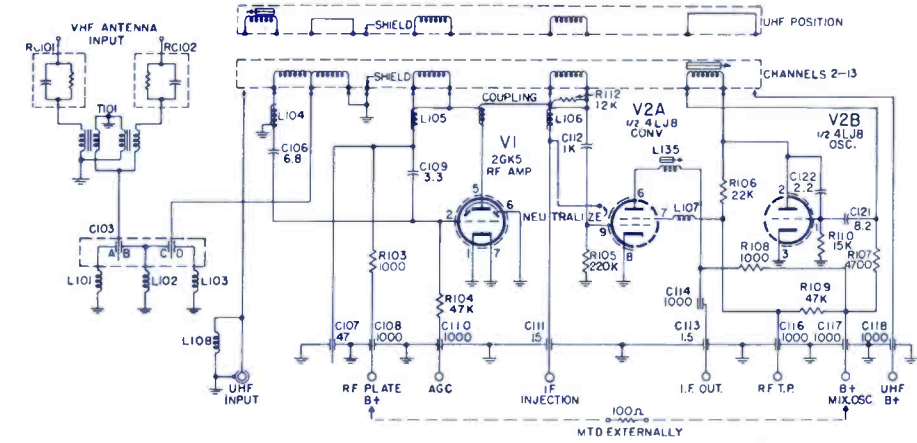
Color TV Chassis C-1

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R186	7.5K, ±10%, 7w, WW resistor	EP14X11
R401	VDR, 20%, 20v, 67ma	EU14X196
R403	thermistor, 100n, 25%/25°C	EP14X10
R404	2n, 20%, 10w, WW	EP14X9
R407	2.2K, 10%, 15w, WW	EP14X8
R408	47n, 10%, 22w, WW	EP14X16
R409	47n, 10%, 22w, WW	EP14X16
R246	thermistor, 3.8n /25°C	EU14X147
R193	500n, 30%, (tapped) contrast	EP49X39
R194	400n, 30%, bright	EP49X38
R196	150n, 20%, bright limit	EP49X28

R203	9K, 20%, AGC adj	EP49X27
R222	1M, 20%, vert hold	EP49X40
R226	330K, 30%, vert lin	EP49X31
R229	3.3M, 30%, height	EP49X31
R274	40K, 10%, HV adj	EP49X32
R313	1M, 30% volume & mtg nut w/ SPST switch	EP49X34
R508	500n, 20% color	EP49X37
R516	100K, 30% tint	EP49X36
R532	2K, 20% blue bal	EP49X29
R536	2K, 20% red bal	EP49X29
R558	1M, blue screen	EP49X33
R561	1M, green screen	EP49X33
R563	1M, red screen	EP49X33

C402A	250µf, 175v elect	EP31X1
C402B	100µf, 300v elect	EP31X1
C402C	80µf, 300v elect	EP31X1
C402D	100µf, 150v elect	EP31X1
Y256	rectifier, focus 3ma	EU57X32
Y501	varicap	EU30X87
L161	delay line	EP36X12
L251	coil, horiz osc	EP35X2
L301	coil, audio take off, w/core	EP36X28
L303	coil, quad, w/core	EP36X34
L506	choke, 56µh	EP36X33
T153	x-former, vid det, 3rd IF plate, w/core	EP61X6
T201	x-former, vert output	EP64X6
T252	x-former, horiz sweep (HVT)	EP77X1
T263	coil, focus	EP36X36
T300	x-former, audio interstage, w/core	EP36X34
T301	x-former, audio output	EP64X4
T501	x-former, chroma bandpass w/core	EP61X173
T503	x-former, chroma, demodulator, w/core	EP61X175
	fuse, 0.5a, fast blow (F401)	EP10X3
	thermal cut out (F404)	EP10X6
	UHF tuner	EP85X2
	VHF tuner, 13 position, manual	EP86X1
	yoke, deflection	EP76X2
	yoke, convergence (complete)	EU62X287



UNLESS OTHERWISE NOTED
 K=1000
 M=1,000,000
 CAPACITORS MORE THAN 1µf-µf
 CAPACITORS LESS THAN 1µf
 RESISTORS ARE 1/2 WATT

VOLTAGE MEASUREMENTS MADE WITH A VTVM WITH RESPECT TO CHASSIS. RECEIVER SET FOR NORMAL OPERATION. MEASUREMENTS MAY VARY ±10% AT 120V AC LINE VOLTAGE.

WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS DIFFER, ON-SIGNAL VOLTAGE APPEARS IN /V/LCS OVER OFF-SIGNAL VOLTAGE. OFF-SIGNAL VOLTAGES TAKEN WITH ANTENNA DISCONNECTED AND ANTENNA TERMINALS SHORTED TOGETHER.

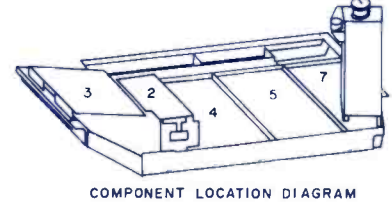
ON-SIGNAL VOLTAGES AND WAVE SHAPES TAKEN WITH NOISE FREE SIGNAL.

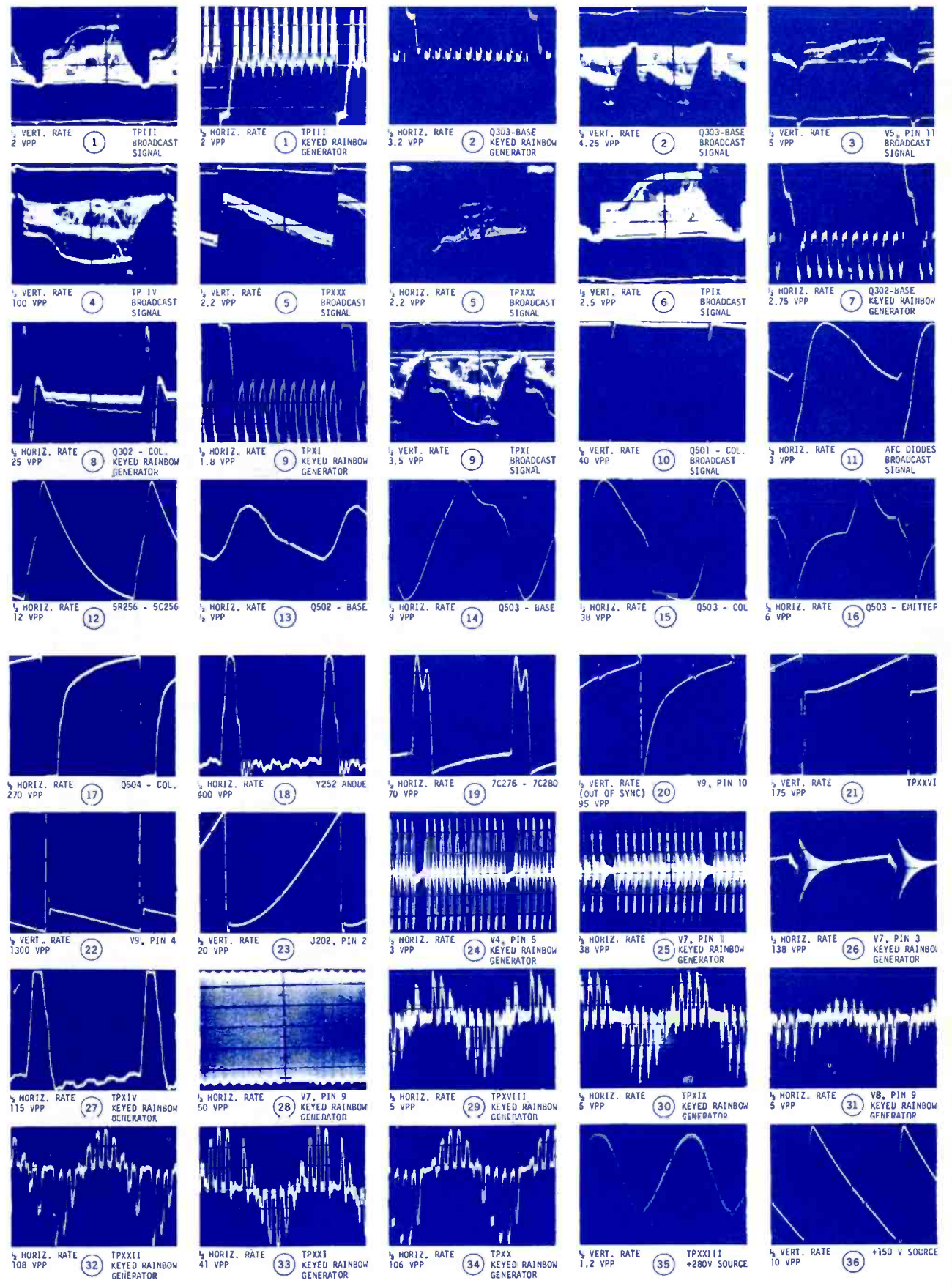
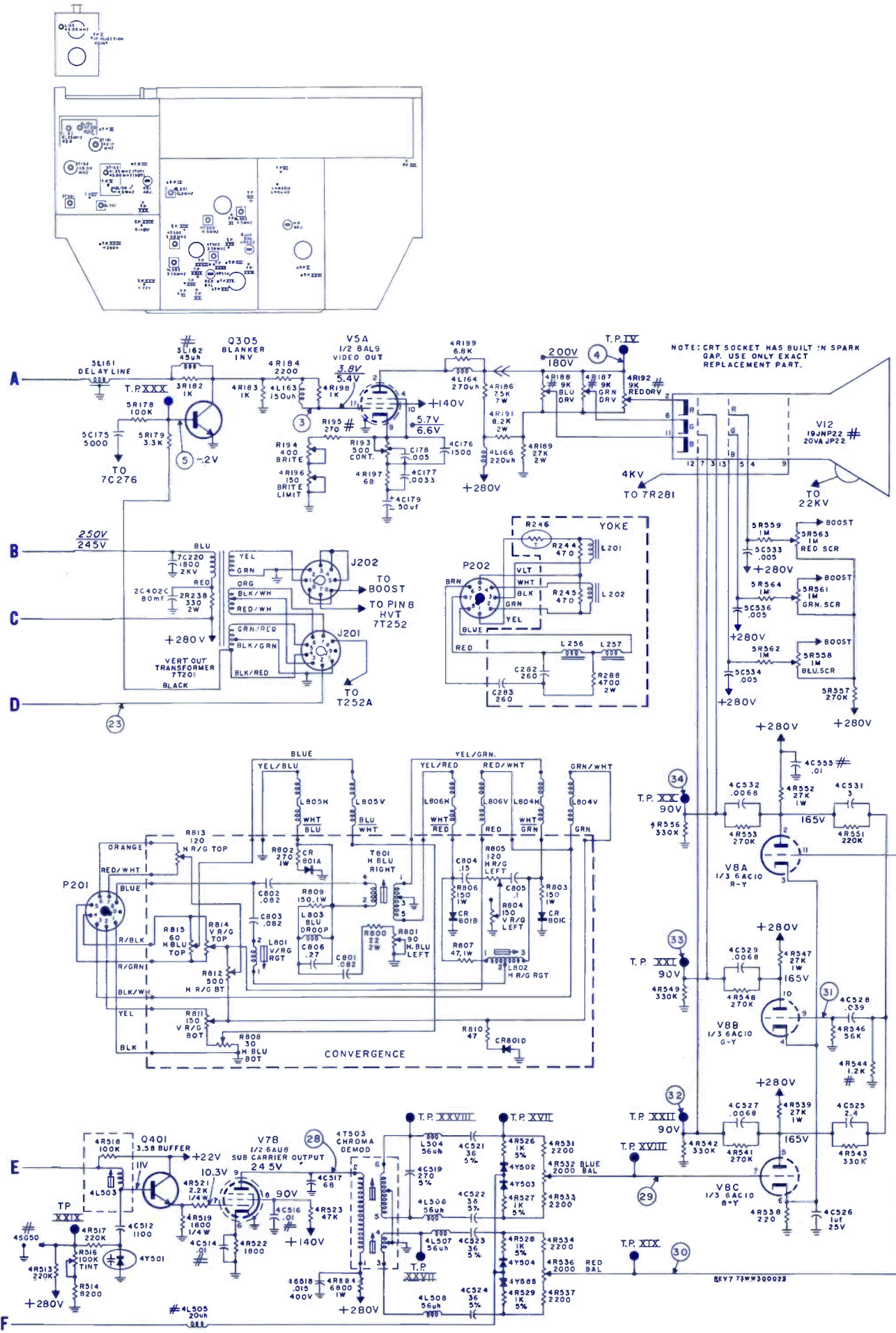
● INDICATES VARIATION WITH CONTROL SETTING.

INDICATES PRODUCTION CHANGE.

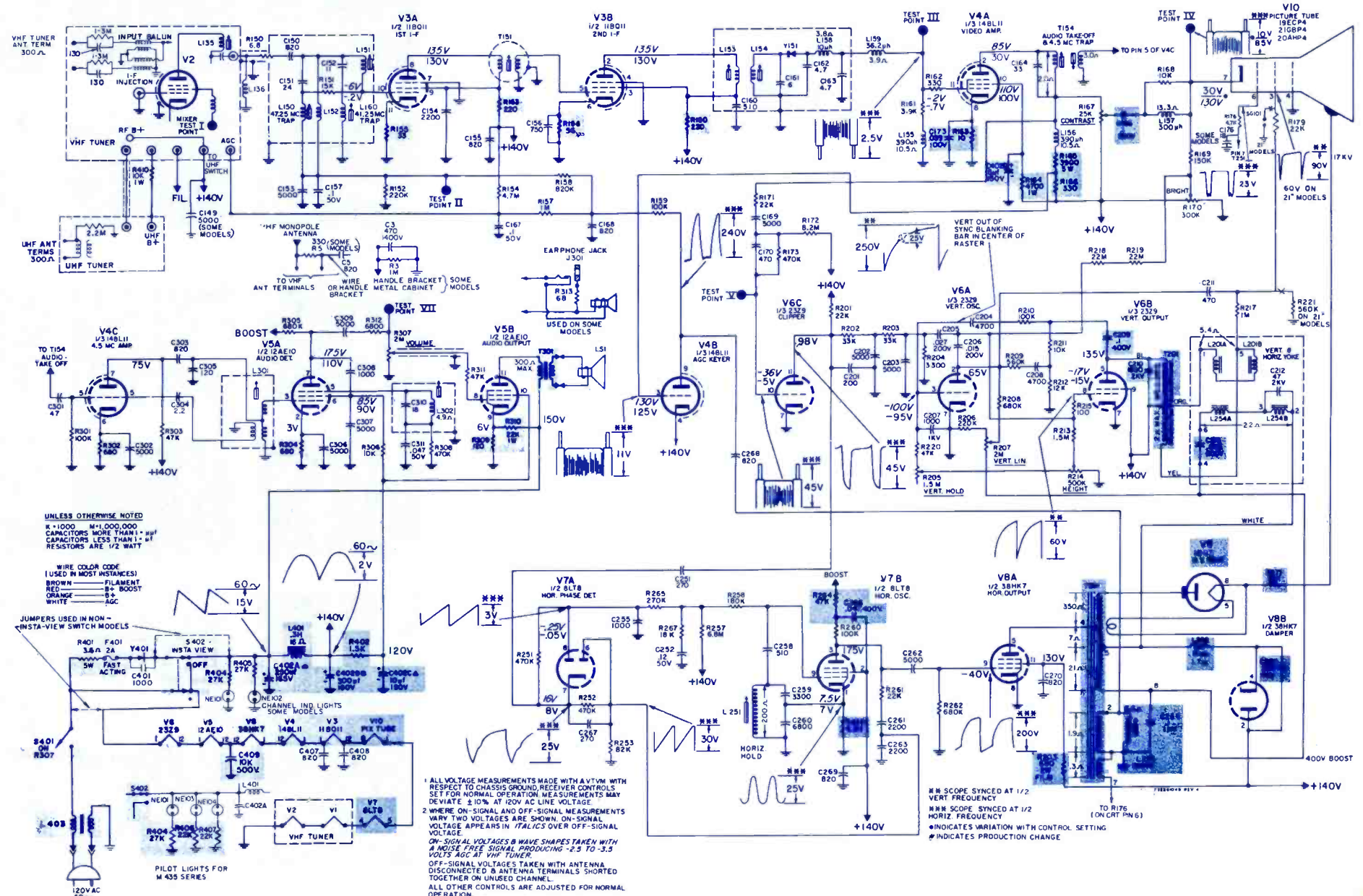
WHERE PREFIX NUMBERS ARE USED WITH COMPONENT SYMBOL NUMBERS, THE PREFIX INDICATES THE BOARD OR CHASSIS AREA LOCATION. (EXAMPLE. 3R501-R501 LOCATED ON BOARD 3)

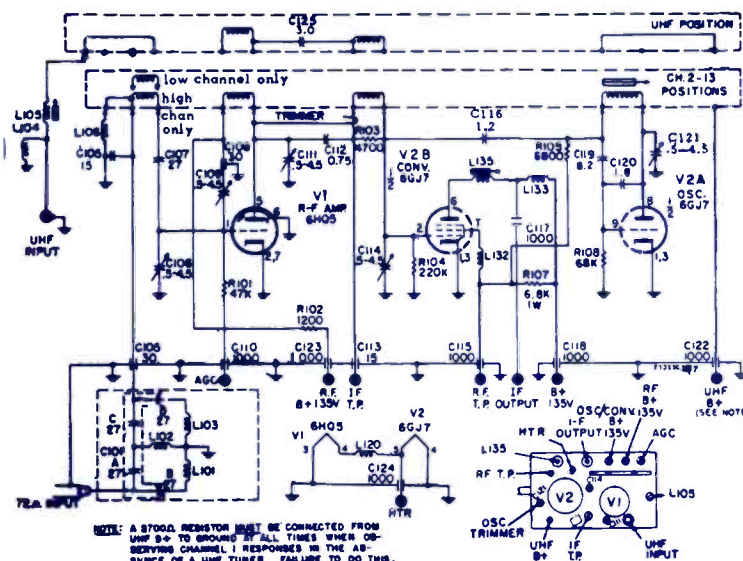
WHERE PREFIX IS NOT USED, COMPONENT IS ON A SUB-ASSEMBLY (EXAMPLE. R508 (COLOR) FRONT CONTROL PANEL.)



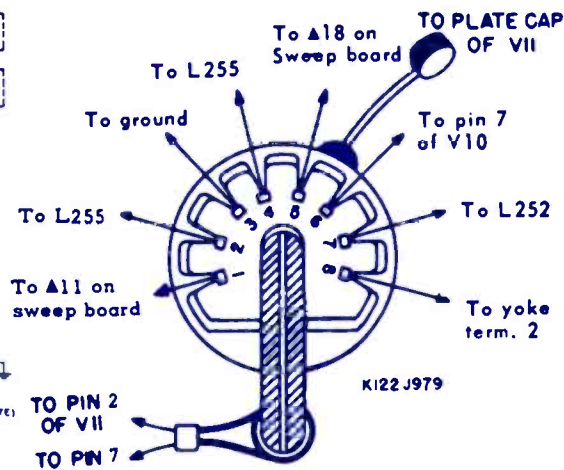


SYMBOL	DESCRIPTION	G.E. PART NO.
R401	3.6n, 10%, 5w, wire wound	ET14X183
R207	2M, vert linearity	ET49X499
R214	500K, vert size	ET49X500
C402A	250 pf, +100/-10%, 165v	ET31X300
C402B	300 pf, +100/-10%, 160v	ET31X300
C402C	10 pf, +100/-10%, 150v	ET31X300
C402D	5 pf, +100/-10%, 160v	ET31X300
L150	coil-47.25MHz trap assembled with core	ET36X647
L201	coil-deflection	ET76X56
L251	coil-horiz oscillator	ET35X51
L255	coil-width control	ET36X774
L302	coil-quadrature w/core	ET36X732
L403	coil-choke, line filter	ET36X887
T154	x-former-sound take-off, 4.5MHz trap w/core	ET36X854
T201	x-former-vert output	ET64X106
T251	coil-horiz output x-former w/cap & lead assembly	ET77X95
T301	x-former-audio output	ET64X105
	fuse-2.0a fast acting	ET10X41



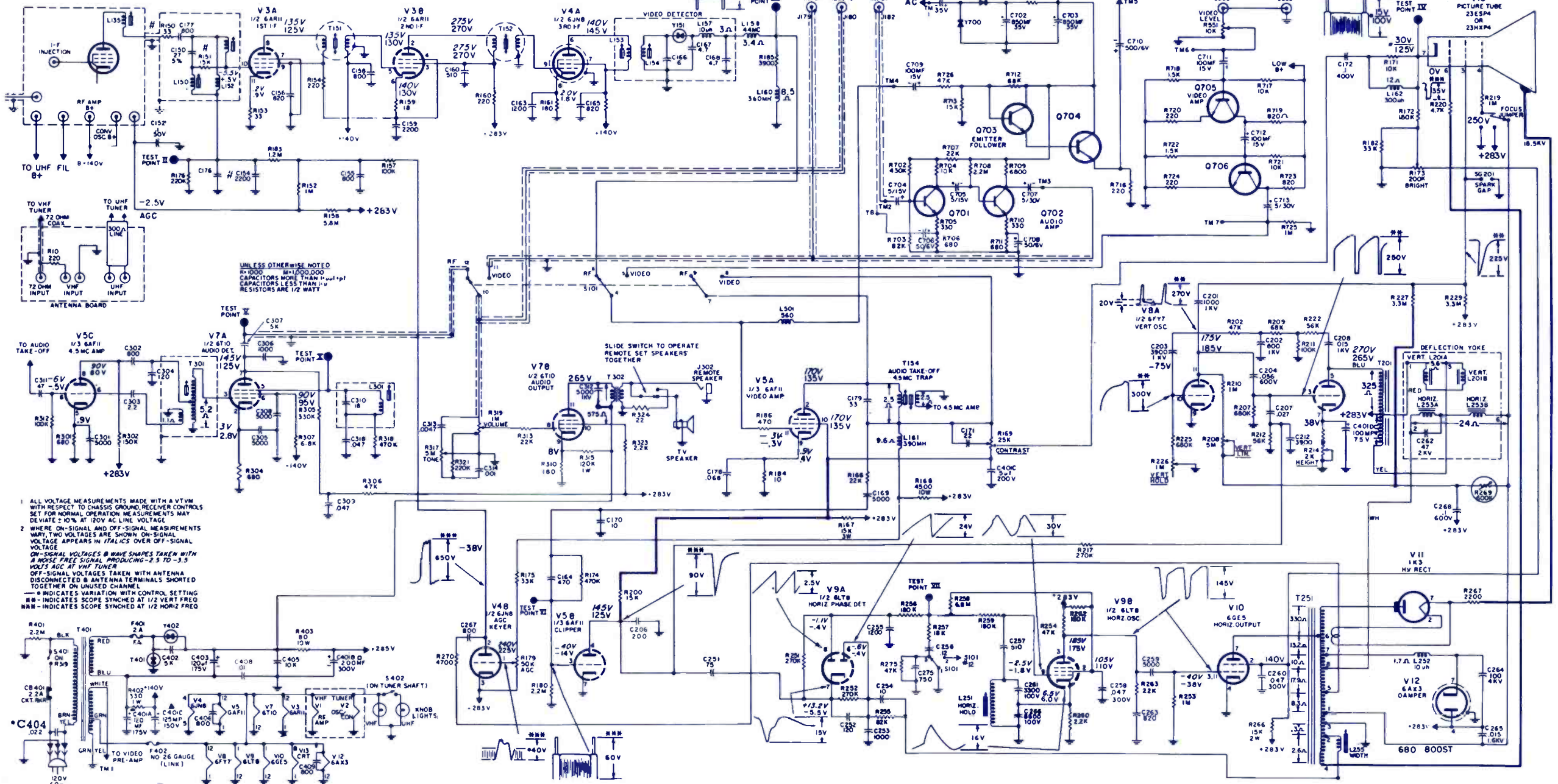


ET86X285 VHF TUNER SCHEMATIC DIAGRAM



T251 WIRING

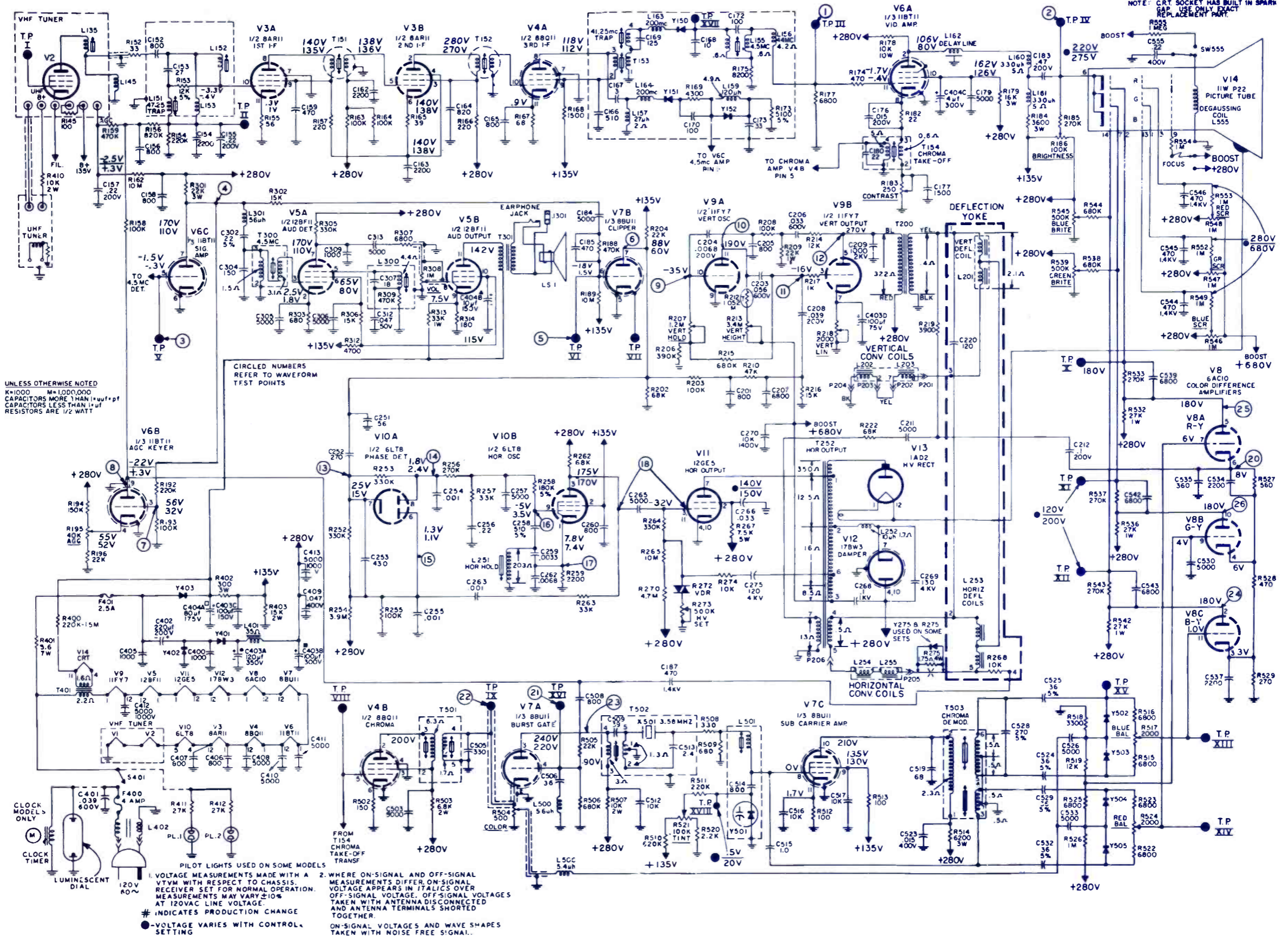
SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R187	15K, 10%, 3w glass	ET14X145
R188	4.5K, 10%, 10w, WW	COMMON
R289	800K, 25%, thermistor	ET14X192
R403	80Ω, 10%, 10 w WW	ET14X222
R405	3.3Ω, 2w, 0.75w @ 80C fusistor	ET14X219
R169	25K, w/stop @ 22K, contrast	ET49X663
R173	200K, 20%, bright	ET49X518
R179	50K, 30%, AGC	ET49X871
R208	5M, 30%, vert lin	ET49X519
R228	1M, 20%, vert hold	ET49X517
R317	dual control-1M volume	ET49X532
R319	5M tone, 30%, w/rotary sw S401	ET49X532
R551	10K, 30%, video bias	ET49X838
R802	10K, 30%, video level	ET49X838
C185	10μf, +100-10%, 15v	ET31X277
C401A	120μf, +100-10%, @175v	ET131X299
C401B	200μf, +100-10%, @300v	ET131X299
C401C	125μf, +100-10%, @150v	ET131X299
C401D	100μf, +100-10%, @75v	ET131X299
C403	120μf, +100-10%, @175v	ET31X205
C264	100pf, 10%, 4kv, N1800	ET18X800
L150	coil-4.7 25MHz trap	ET38X742
L154	coil-video det sec	ET38X587
L251	coil-horiz osc	ET35X51
L252	coil-damper choke	ET38X105
L255	coil-width control	ET38X851
L501	coil-choke, 580μh, 7%	ET38X345
T151	x-former-1st IF plate	ET81X158
T152	x-former-2nd IF plate	ET81X148
T154	x-former-audio take off & 4.5MHz trap	ET38X854
T201	x-former-vert output	ET84X99
T251	x-former-horiz opt	ET77X114
T301	coil-4.5MHz interstage	ET38X778
T302	x-former-audio	ET84X97
T401	x-former-power	ET88X103
L201	yoke, def	ET76X39
	cirbrkr-2.2a, carry or hold, CB401	ET10X32
	fuse-fast blo, 2a, 250v, F401	ET10X41
	tuner-VHF, manual AFT	ET88X285

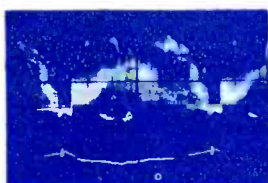


- ALL VOLTAGE MEASUREMENTS MADE WITH A VTVM WITH RESPECT TO CHASSIS GROUND. RECEIVER CONTROLS SET FOR NORMAL OPERATION. MEASUREMENTS MAY DEVIATE ± 10% AT 120V AC LINE VOLTAGE.
- WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS VARY, TWO VOLTAGES ARE SHOWN. ON-SIGNAL VOLTAGE APPEARS IN ITALICS OVER OFF-SIGNAL VOLTAGE.
- ON-SIGNAL VOLTAGES & WAVE SHAPES TAKEN WITH A NOISE FREE SIGNAL PRODUCING -2.5 TO -3.5 VOLTS AGC AT VHF TUNER.
- OFF-SIGNAL VOLTAGES TAKEN WITH ANTENNA DISCONNECTED. ANTENNA TERMINALS SHORTED TOGETHER ON UNUSED CHANNEL.
- INDICATES VARIATION WITH CONTROL SETTING.
- INDICATES SCOPE SYNCHED AT 1/2 VERT FREQ.
- INDICATES SCOPE SYNCHED AT 1/2 HORIZ FREQ.

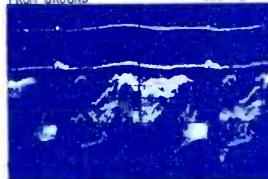
*SPECIAL FOR 120V POWER LINE DO NOT SUBSTITUTE

#INDICATES PRODUCTION CHANGES

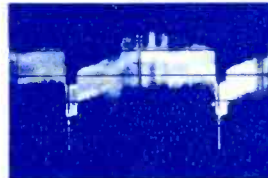




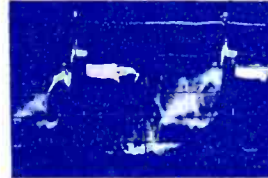
1/2 VERT. RATE
4 VOLTS PEAK
FROM GROUND



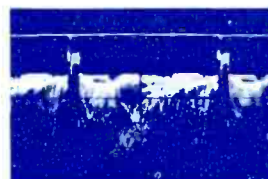
1/2 VERT. RATE
95 VPP



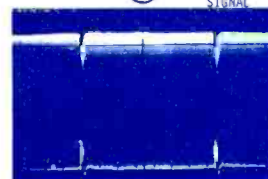
1/2 VERT. RATE
2 VPP



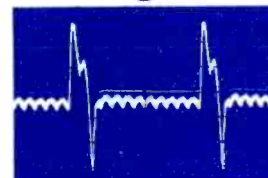
1/2 VERT. RATE
65 VPP



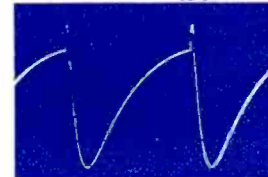
1/2 VERT. RATE
50 VPP



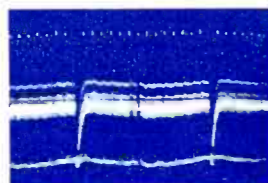
1/2 VERT. RATE
70 VPP



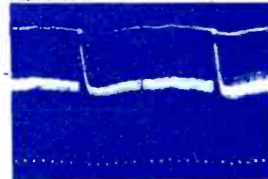
1/2 HORIZ. RATE
26 VPP



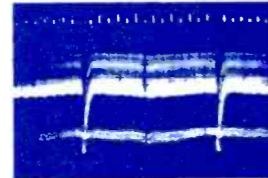
1/2 VERT. RATE
80 VPP



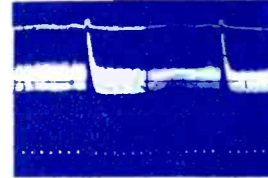
1/2 VERT. RATE
4 VOLTS PEAK
FROM GROUND



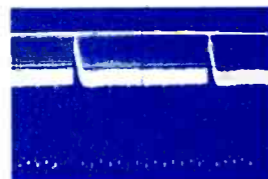
1/2 VERT. RATE
95 VPP



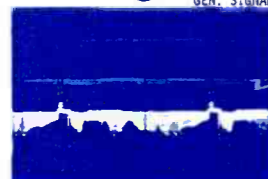
1/2 VERT. RATE
2 VPP



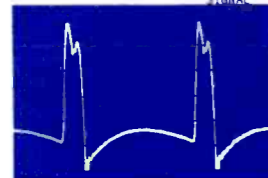
1/2 VERT. RATE
65 VPP



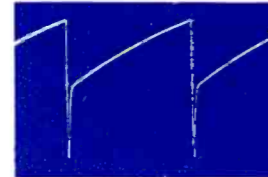
1/2 VERT. RATE
50 VPP



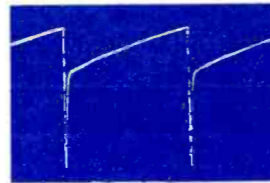
1/2 VERT. RATE
26 VPP



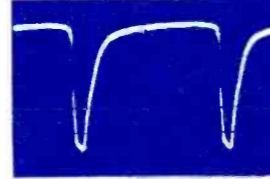
1/2 HORIZ. RATE
250 VPP



1/2 VERT. RATE
240 VPP



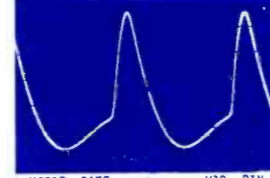
1/2 VERT. RATE
200 VPP



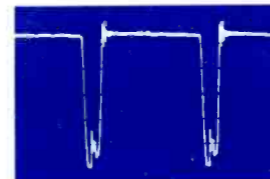
1/2 HORIZ. RATE
28 VPP



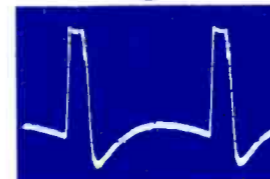
1/2 HORIZ. RATE
45 VPP



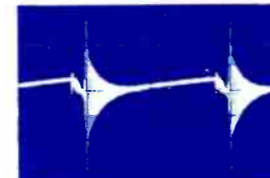
1/2 HORIZ. RATE
30 VPP



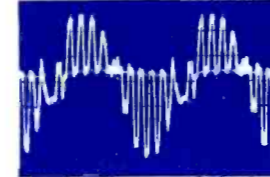
1/2 HORIZ. RATE
200 VPP



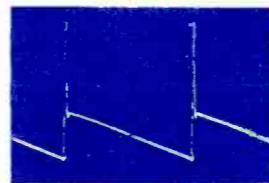
1/2 HORIZ. RATE
140 VPP



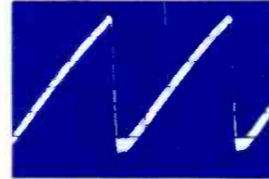
1/2 HORIZ. RATE
200 VPP



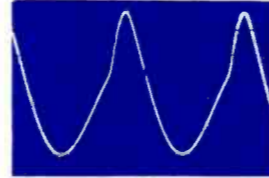
1/2 HORIZ. RATE
180 VPP



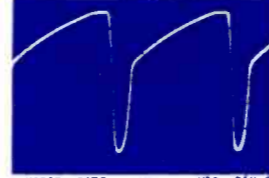
1/2 VERT. RATE
880 VPP



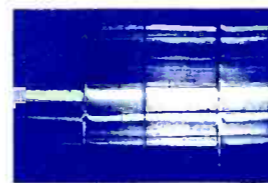
1/2 HORIZ. RATE
3 VPP



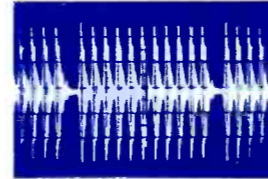
1/2 HORIZ. RATE
45 VPP



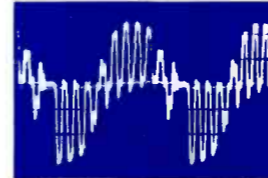
1/2 HORIZ. RATE
150 VPP



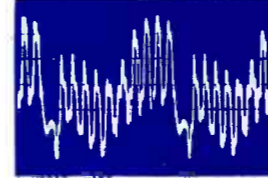
1/2 VERT. RATE
2 VPP



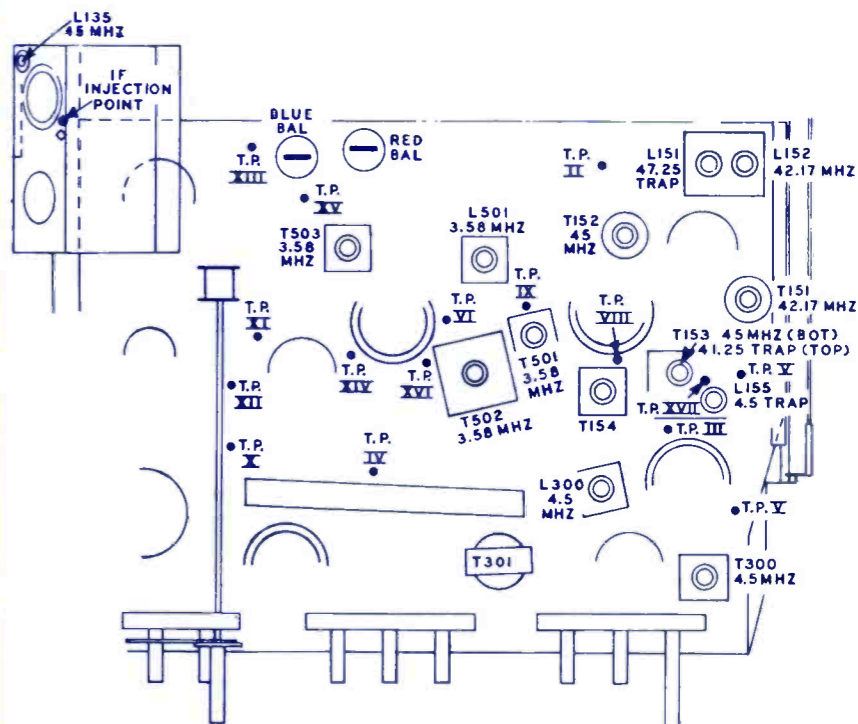
1/2 HORIZ. RATE
35 VPP



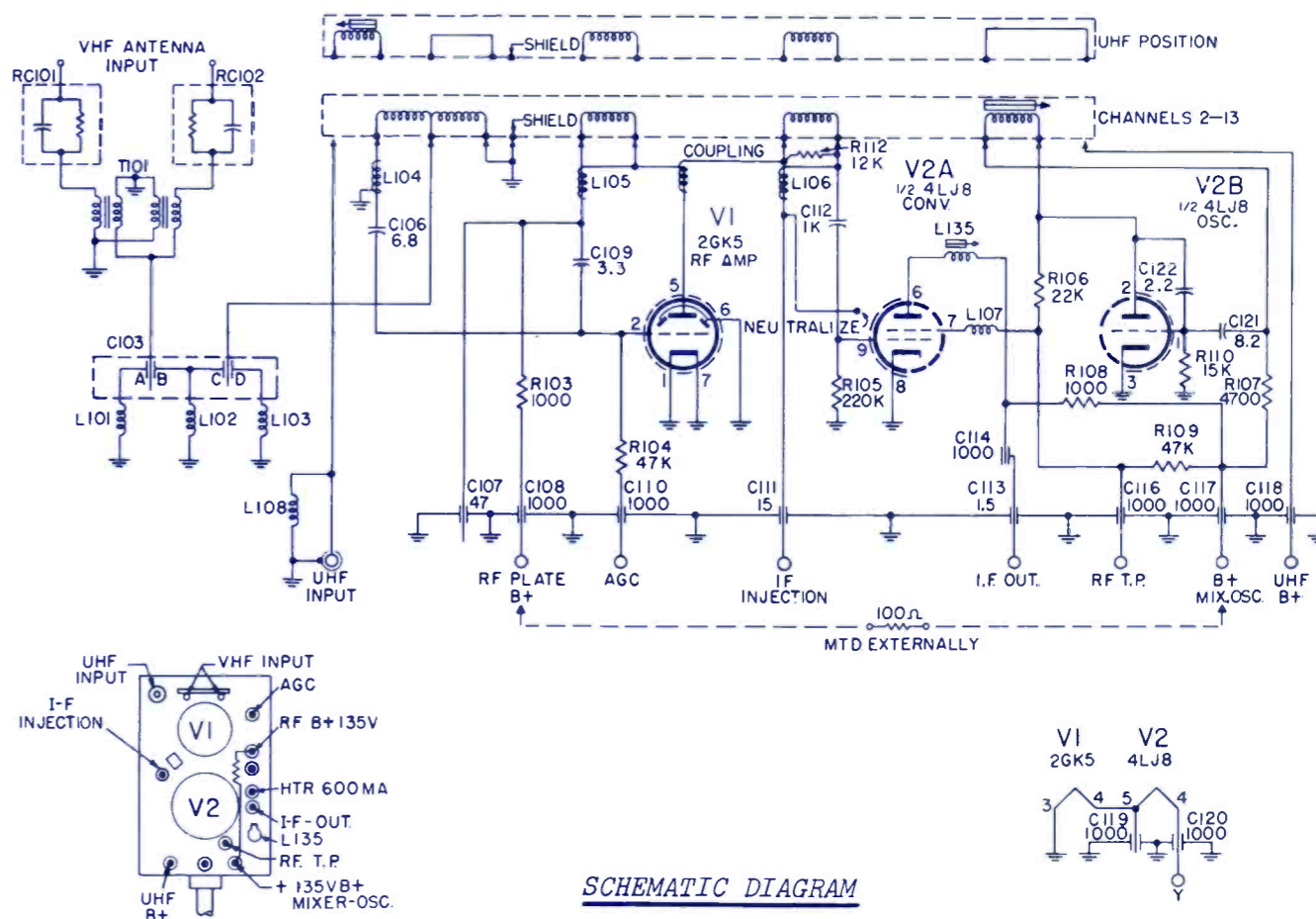
1/2 HORIZ. RATE
180 VPP



1/2 HORIZ. RATE
50 VPP



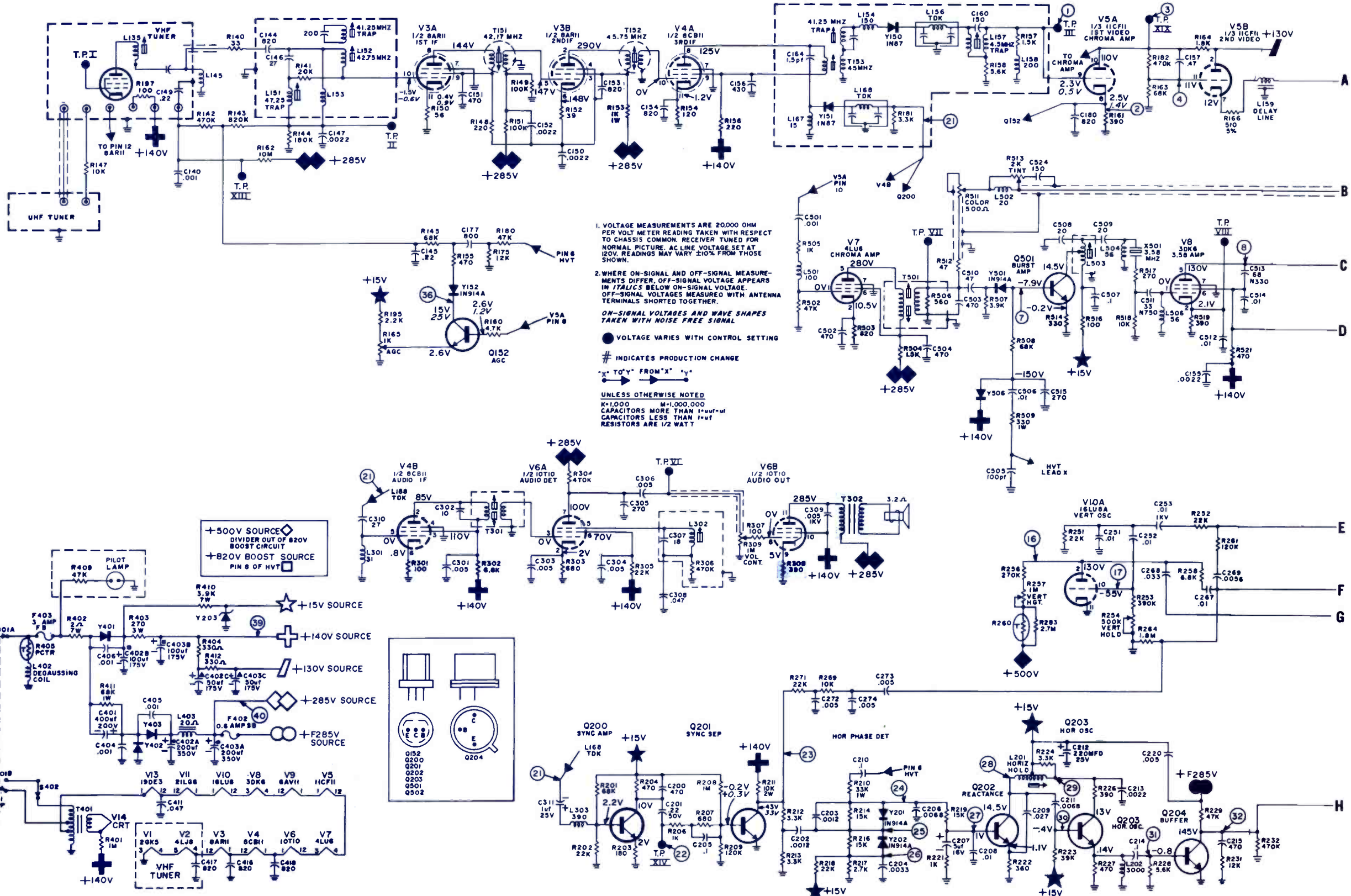
Top View
Test Points & Alignment Locations



SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
X501	Quartz, Crystal, 3.58MHz	EP41X1
C402A	200µf, +100% -10%, 350v, electro	EP31X18
C402B	100µf, +100% -10%, 175v, electro	EP31X18
C402C	50µf, +100% -10%, 175v, electro	EP31X18
C403A	200µf, +100% -10%, 350v, electro	EP31X18
C403B	100µf, +100% -10%, 175v	EP31X18
C403C	50µf, +100% -10%, 175v, electro	EP31X18
Q152	trans, NPN, silicon, AGC keyer	EP15X7
Q200	trans, NPN, silicon, Sync amp	EP15X3
Q201	trans, horiz, afc	EP15X7
Q202	trans, horiz, react	EP15X9
Q203	trans, horiz, osc	EP15X9
Q204	trans, horiz, driver	EP15X10
EP41X1		
EP31X18		
EP31X18		
EP31X18		
EP31X18		
EP31X18		
EP31X18		
EP31X18		
EP15X7		
EP15X3		
EP15X7		
EP15X9		
EP15X9		
EP15X10		

Q501	trans, NPN, silicon, burst amp	EP15X5
Q502	trans, NPN, silicon, blanking driver	EP15X9
R165	control, AGC, 1k	EP49X44
R171	control, triple contrast, 500k, 20%	EP49X50
R176	control, trip, bribe, 200k, 30%	EP49X50
R177	control, 50k, bribe limit adjust	EP49X52
R236	control, HV adjust, 350k	EP49X46
R242	control, 20M, focus adjust	EP49X51
R254	control, triple V hold, 500k, 30%	EP49X50
R257	control, dual, V height, 1M	EP49X45
R309	control, on-off vol, 1M(WM251NBG-1)	EP49X3
R511	control, color, 500Ω (WM251NWD-1)	EP49X54
R511	control, color, 500Ω (WM251NBD-1)	EP49X54
R513	control, tint, 2KΩ (WM251NWD-1)	EP49X55
R513	control, tint, 2KΩ (WM251NBD-1)	EP49X55

R542	control, triple, red screen, 1M	EP49X43
L151	coil, 47.25 trap	EP36X13
L152	coil, IF xformer	EP36X42
L156	coil, LC filter	EP36X51
L157	coil, 4.5MHz trap w/core	EP61X3
L159	coil, delay line	EP36X50
L201	coil, horiz, osc	EP36X55
L302	coil, quad	EP36X52
L402	coil, degaussing	EP36X62
L403	filter reactor	EP63X3
T151	xformer, 1st IF plate	EP61X9
T152	xformer, 2nd IF plate	EP61X7
T153	xformer, 3rd IF plate	EP61X8
T201	xformer, horiz output	EP77X7
T202	xformer, vert output	EP64X7



1. VOLTAGE MEASUREMENTS ARE 20000 OHM PER VOLT METER READING TAKEN WITH RESPECT TO CHASSIS COMMON. RECEIVER TUNED FOR NORMAL PICTURE. AC LINE VOLTAGE SET AT 120V. READINGS MAY VARY ±10% FROM THOSE SHOWN.

2. WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS DIFFER, OFF-SIGNAL VOLTAGE APPEARS IN ITALICS BELOW ON-SIGNAL VOLTAGE. OFF-SIGNAL VOLTAGES MEASURED WITH ANTENNA TERMINALS SHORTED TOGETHER.

ON-SIGNAL VOLTAGES AND WAVE SHAPES TAKEN WITH NOISE FREE SIGNAL

● VOLTAGE VARIES WITH CONTROL SETTING

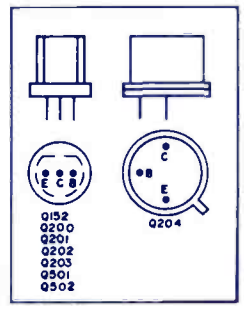
INDICATES PRODUCTION CHANGE

* TO "Y" FROM "X" * "Y"

UNLESS OTHERWISE NOTED
R=1,000 Ω M=1,000,000 Ω
CAPACITORS MORE THAN 1µF = µF
CAPACITORS LESS THAN 1µF = pF
RESISTORS ARE 1/2 WATT

+500V SOURCE
DIVIDER OUT OF 820V BOOST CIRCUIT

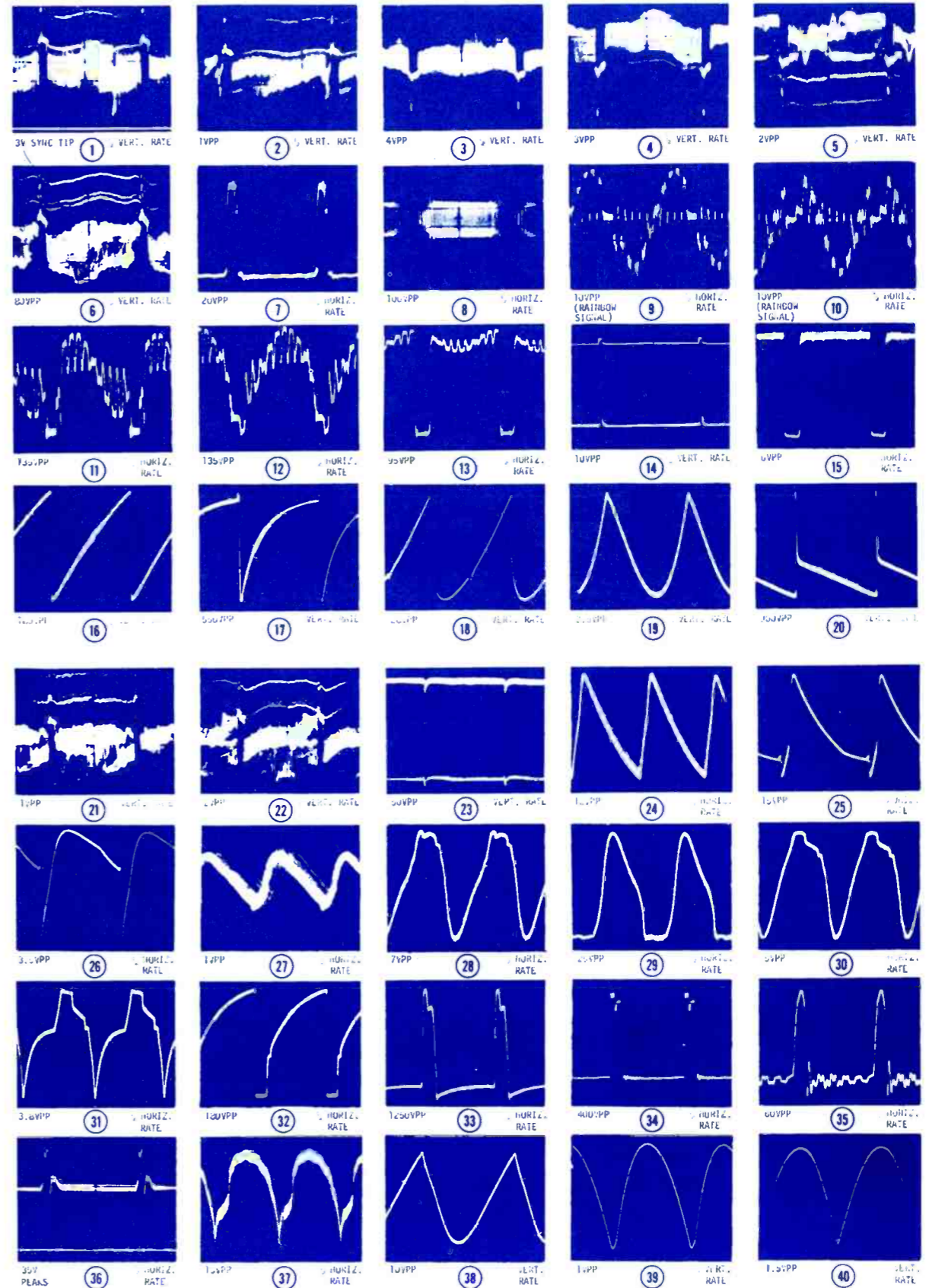
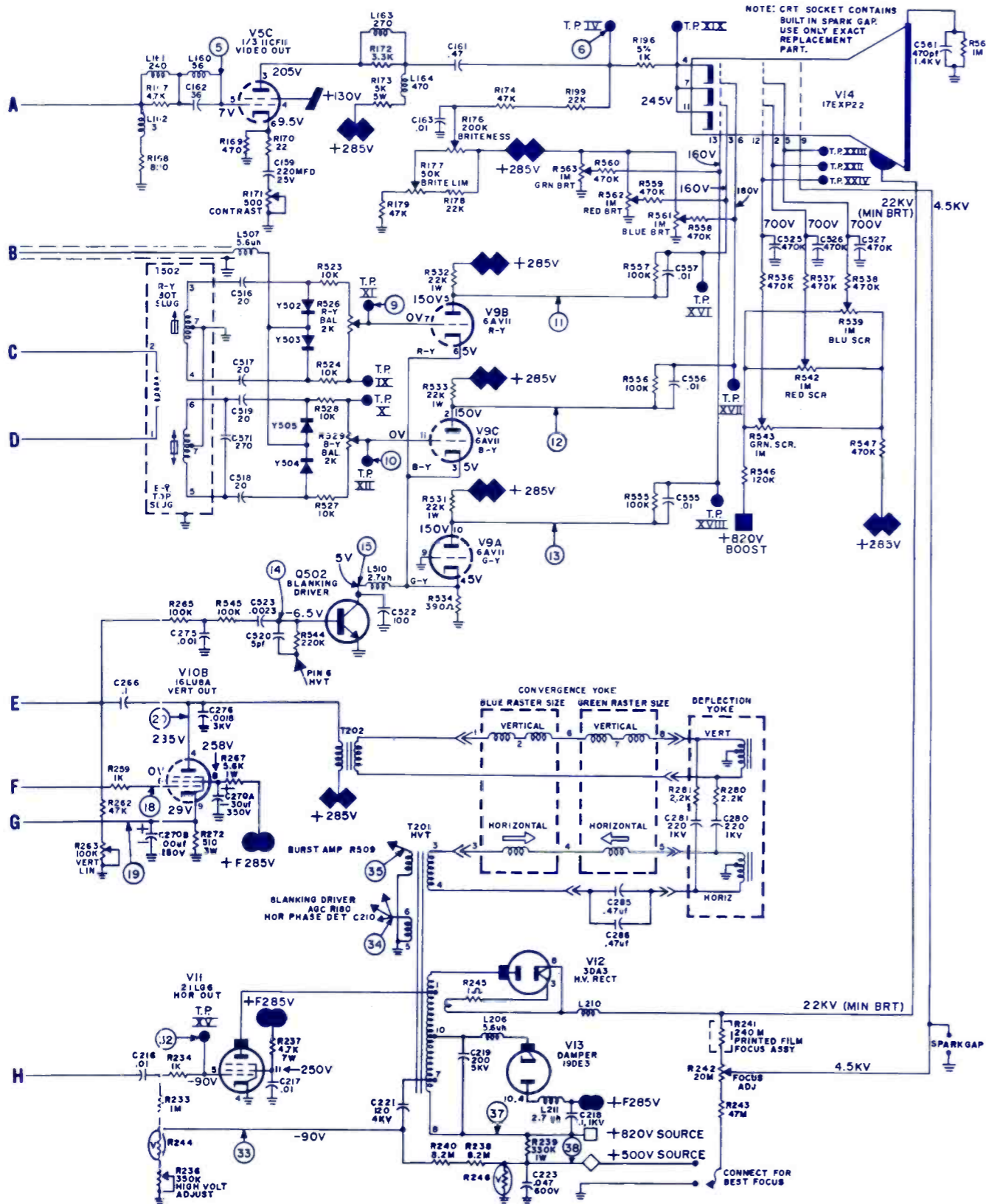
+B20V BOOST SOURCE
PIN 8 OF HVT



T302-xformer, audio output EP64X8
 T401-xformer, filament EP64X9
 T501-coils, chroma bandpass EP36X2
 T502-xformer, chroma demod EP36X65
 R173-5K, ±10%, 5w, carbon film EP14X19
 R237-4.7K, ±10%, 7w, WW EP14X6
 R241-focus, voltage dropping EP41X2
 R243-47M, ±10%, 1.5w, 4kv EP14X1
 R244-varistor, 1ma, ±15% @850v EP13X2
 R246-varistor, 1ma, ±15% @575v EP13X3
 R260-therm, 500K, ±10%, @25°C EP14X20
 R402-2, ±5%, 7w WW EP14X21
 R403-270, ±10%, 3w WW EP14X22
 R410-3.9K, ±10%, 7w, WW EP14X26

fuse, 4a slow-blo (F401) EP10X7
 fuse, 6a slow-blo (F402) EP10X5
 fuse, 3a fast-blow (F403) EP10X4
 yoke, deflection EP76X5
 CRT socket assembly EP34X11

GENERAL ELECTRIC
 Color TV Chassis N-1



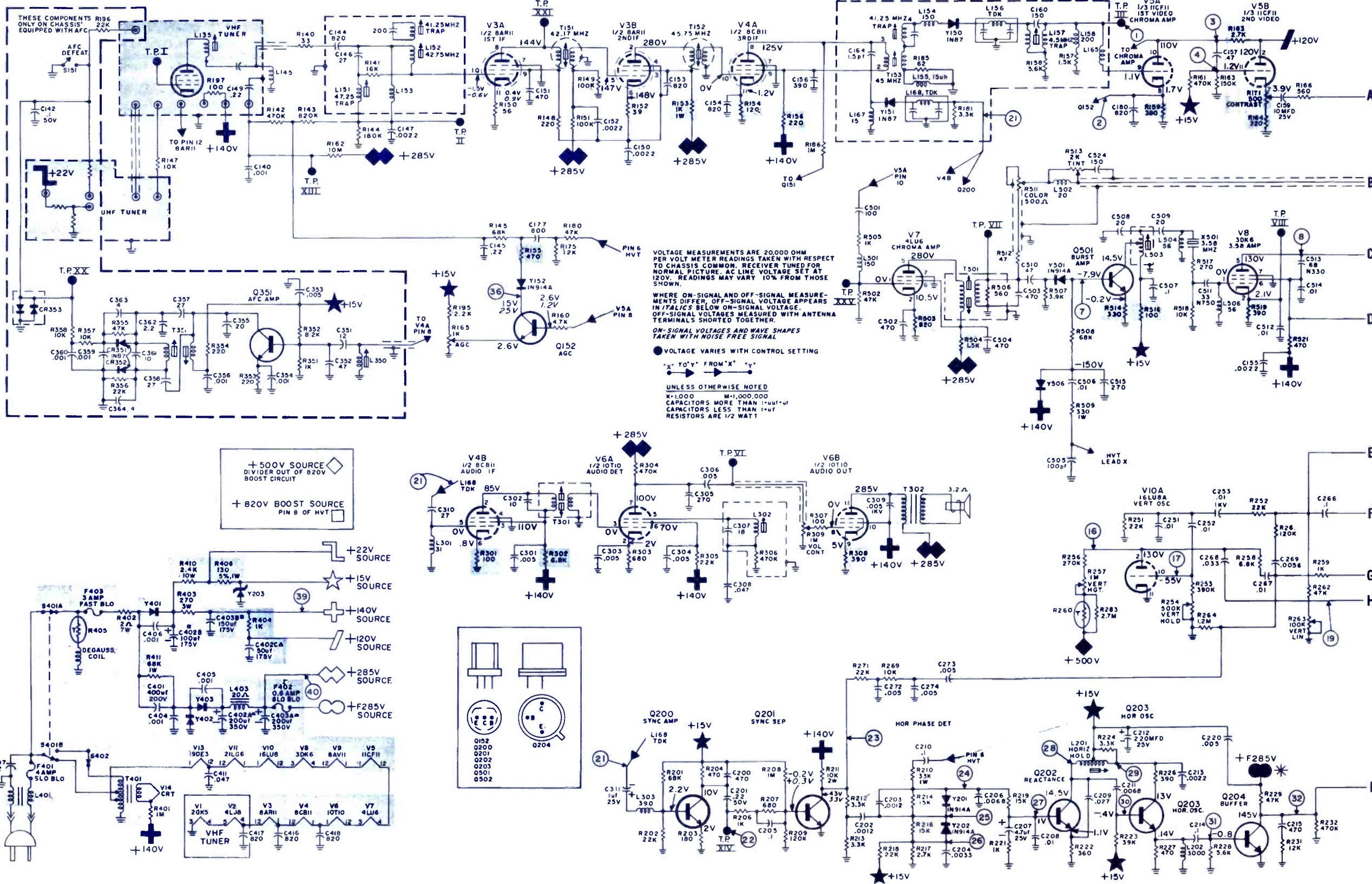
SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
C219	240µf, ±10%, 5kv, N2200	EP22X25
C402A	200µf, +100%-10%, 350v electrolytic	EP31X23
C402B	100µf, +100%-10%, 175v electrolytic	EP31X23

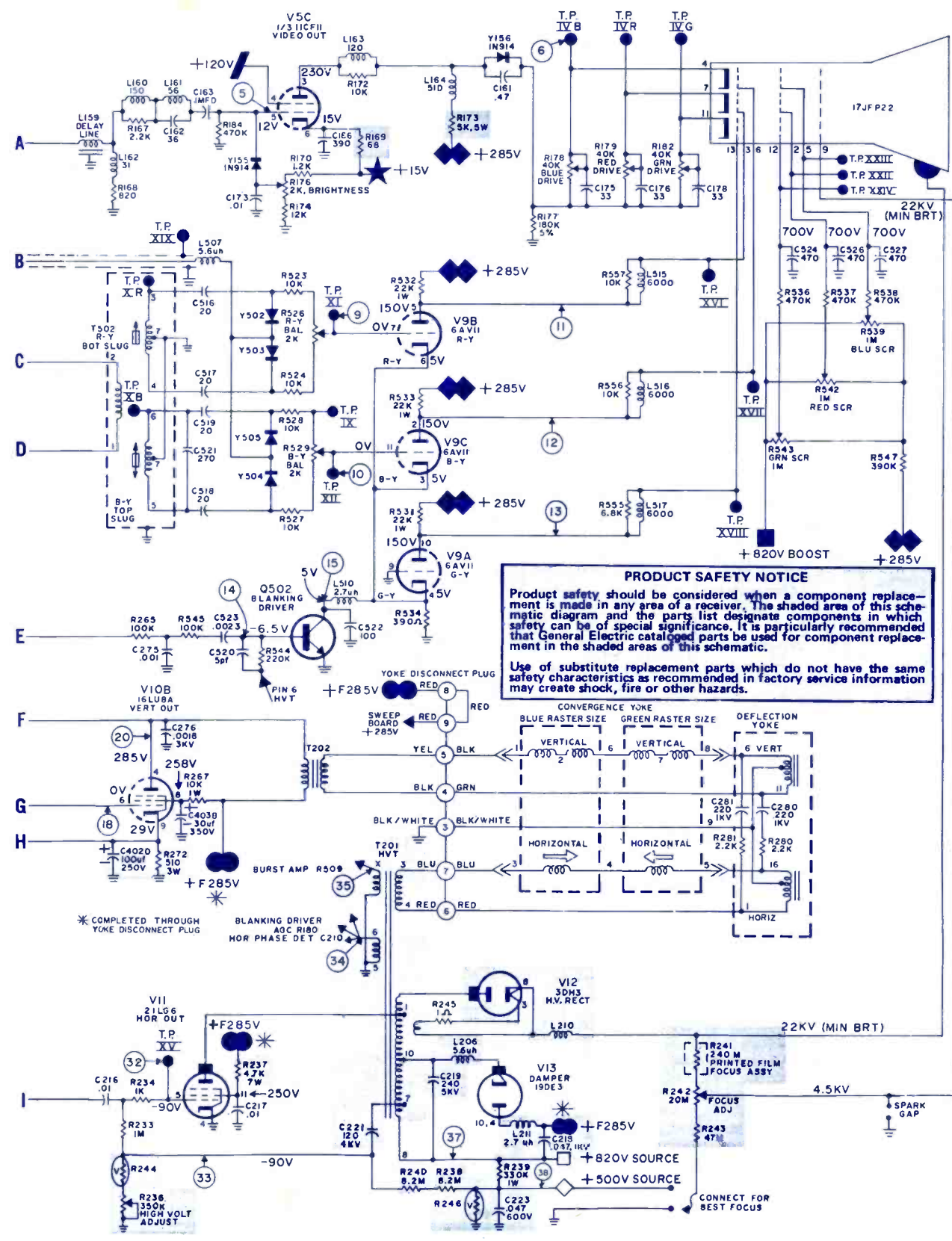
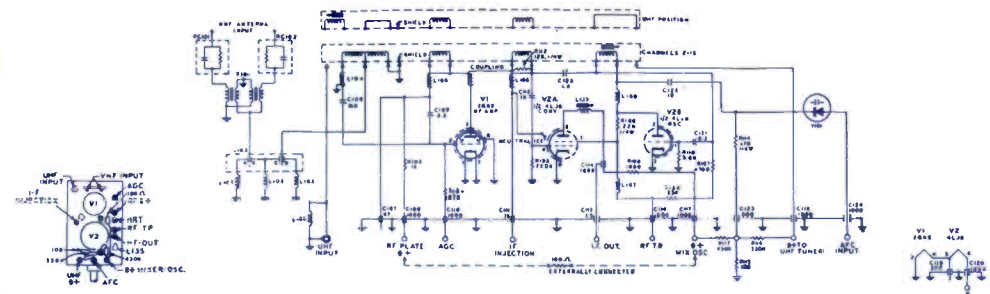
C402C	50µf, +100%-10%, 175v electrolytic	EP31X23
C402D	100µf, +100%-10%, 250v electrolytic	EP31X23
C403A	200µf, +100%-10%, 350v electrolytic	EP31X22
C403B	150µf, +100%-10%, 175v electrolytic	EP31X22
C403C	30µf, +100%-10%, 350v electrolytic	EP31X22
L152	coil, IF xformer	EP36X42

L157	coil, 4.5MHz trap w/core	EP61X3
L159	coil, delay line	EP36X50
L201	coil, horiz oscillator	EP36X55
L302	coil, quad	EP36X52
L401	line choke, 3.2-4.1MHz	EP36X57
T201	x-former, horiz output	EP77X8
T202	x-former, vert output	EP64X10
T301	x-former, audio interstage	EP36X34
T302	x-former, audio output	EP64X8
T401	x-former, filament	EP64X11
T501	coils, chroma bandpass	EP36X2
T502	x-former, chroma demodulator	EP36X65
R241	focus, voltage dropping	EP14X30
R243	47M, ±10%, 1.5w, 4kv carbon film	EP14X1
R244	varistor, 1ma, ±15%/850v	EP13X2
R246	varistor, 1ma, ±15%/575v	EP13X3
R260	thermistor, 500K, ±10%/25°C	EP14X20

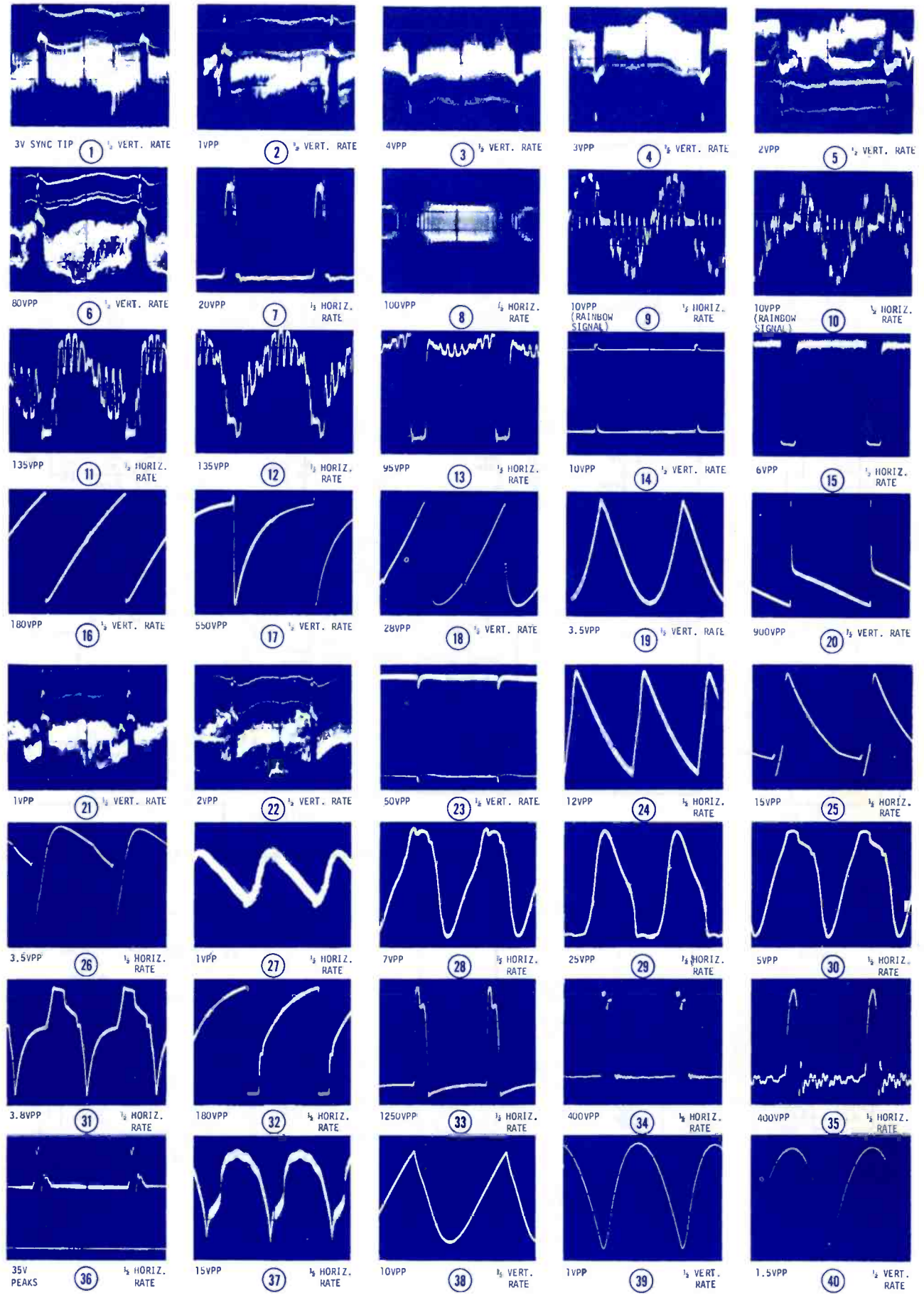
R402	-2, ±5%, 7w, 32, WW	EP14X21
R405	thermistor, PCTR, 20Ω cold, 5K hot	EP39X4
Q151	transistor, NPN, silicon, AFC amp	EU15X1
Q152	transistor, NPN, silicon, AGC keyer	EP15X7
Q200	transistor, NPN, silicon, sync amp	EP15X3
Q201	transistor, horiz AFC	EP15X7
Q202	transistor, NPN, silicon, react	EP15X9
Q203	transistor, horiz oscillator	EP15X9
Q204	transistor, horiz driver	EP15X10
Q501	transistor, NPN, silicon, burst amp	EP15X5
Q502	transistor, NPN, silicon, blanking drive	EP15X9
R165	control, AGC, 1K	EP49X44
R171	control, triple contrast, 500K, 20%	EP49X59
R176	control, triple brite, 2K, 20%	EP49X59
R178	control, triple, blue drive	EP49X58
R179	control, triple, red drive	EP49X58
R182	control, triple, green drive	EP49X58

R236	control, HV adjust, 350K	EP49X46
R242	control, 20M, focus adjust	EP49X51
R254	control, triple, vert hold, 500K, 30%	EP49X59
R257	control, dual, vert height, 1M	EP49X45
R263	control, vert lin, 100K, dual	EP49X45
R309	control, volume, 1M	EP49X53
R511	control, color, 500Ω	EP49X54
R513	control, tint, 2K	EP49X55
R526	control, dual, red balance, 2K	EP49X59A
R529	control, dual, blue balance, 2K	EP49X43
R539	control, triple, blue screen, 1M	EP49X43
R542	control, triple, red screen, 1M	EP49X43
R543	control, triple, green screen, 1M	EP49X43
	fuse, 4a slow-blow	EP10X7
	fuse, 0.6a slow-blow	EP10X5
	fuse, 3a fast-blow	EP10X4
	yoke, deflection	EP76X3





PRODUCT SAFETY NOTICE
Product safety should be considered when a component replacement is made in any area of a receiver. The shaded area of this schematic diagram and the parts list designate components in which safety can be of special significance. It is particularly recommended that General Electric cataloged parts be used for component replacement in the shaded areas of this schematic.
Use of substitute replacement parts which do not have the same safety characteristics as recommended in factory service information may create shock, fire or other hazards.



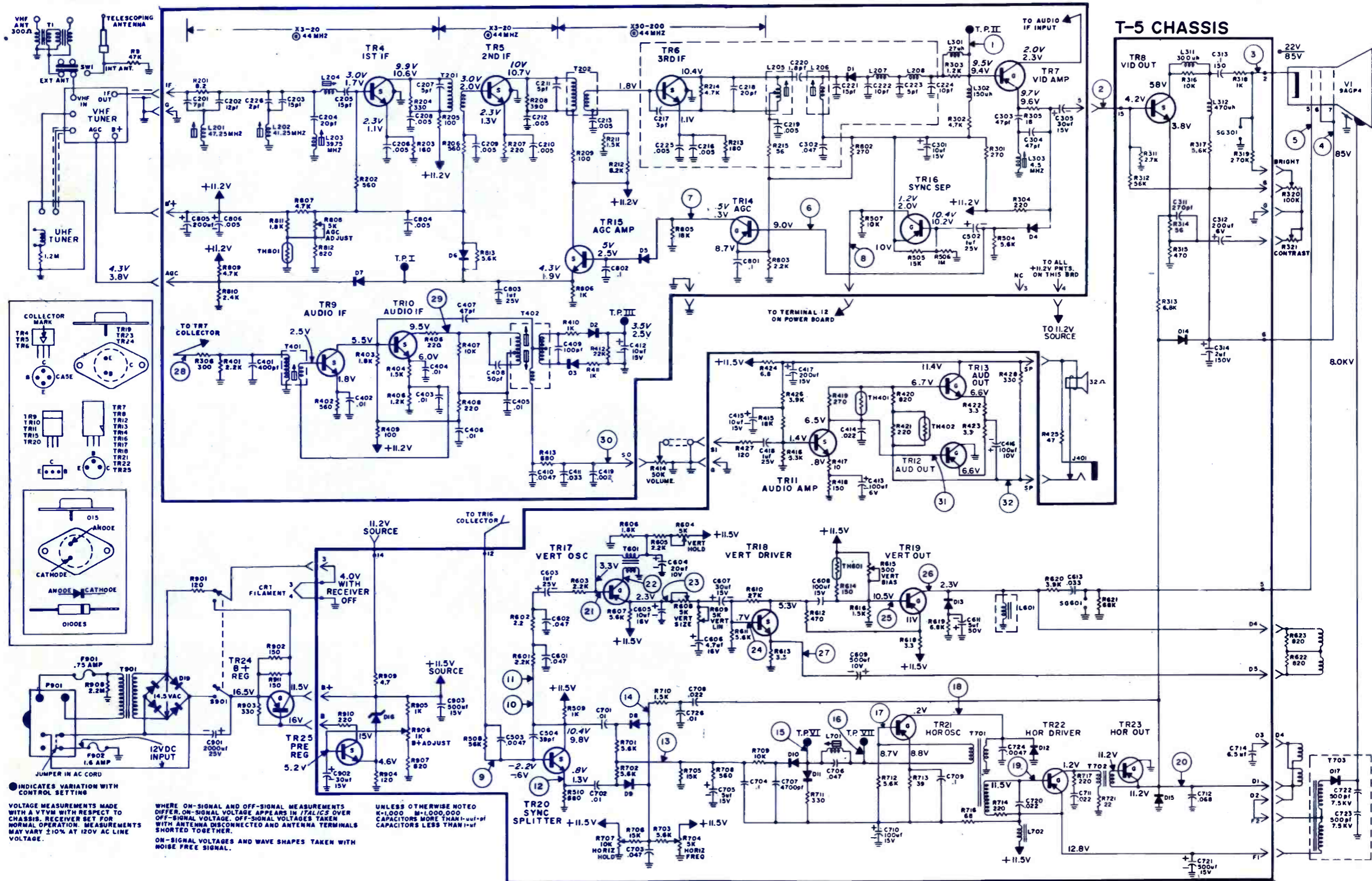
GENERAL ELECTRIC
TV Chassis T-5

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
L201	coil, trap, 47.25MHz	ES36X39
L701	coil, horiz, stab	ES36X46
T201	x-former, IF	ES81X5
T202	x-former, IF	ES81X4
T401	x-former, audio IF	ES81X3
T402	x-former, audio det	ES86X1
T601	x-former, vert osc	ES84X7
T701	x-former, horiz osc	ES35X3
T702	x-former, horiz drive	ES51X4
T705	high voltage trans asm w/C722/C723/D17	ES77X5

T901	x-former, power	ES88X1
R320	100K, bright	ES49X30
R321	500Ω, contrast	ES49X31
R414	50K, volume w/DPDT switch	ES49X32
R804	5K, vert hold	ES49X28
R808	5K, vert size	ES49X29
R809	5K, vert lin	ES49X29
R615	500Ω, vert bias	ES49X27
R704	5K, horiz freq	ES49X25
R707	10K, horiz hold	ES49X26
R808	5K, AGC adjust	ES49X29

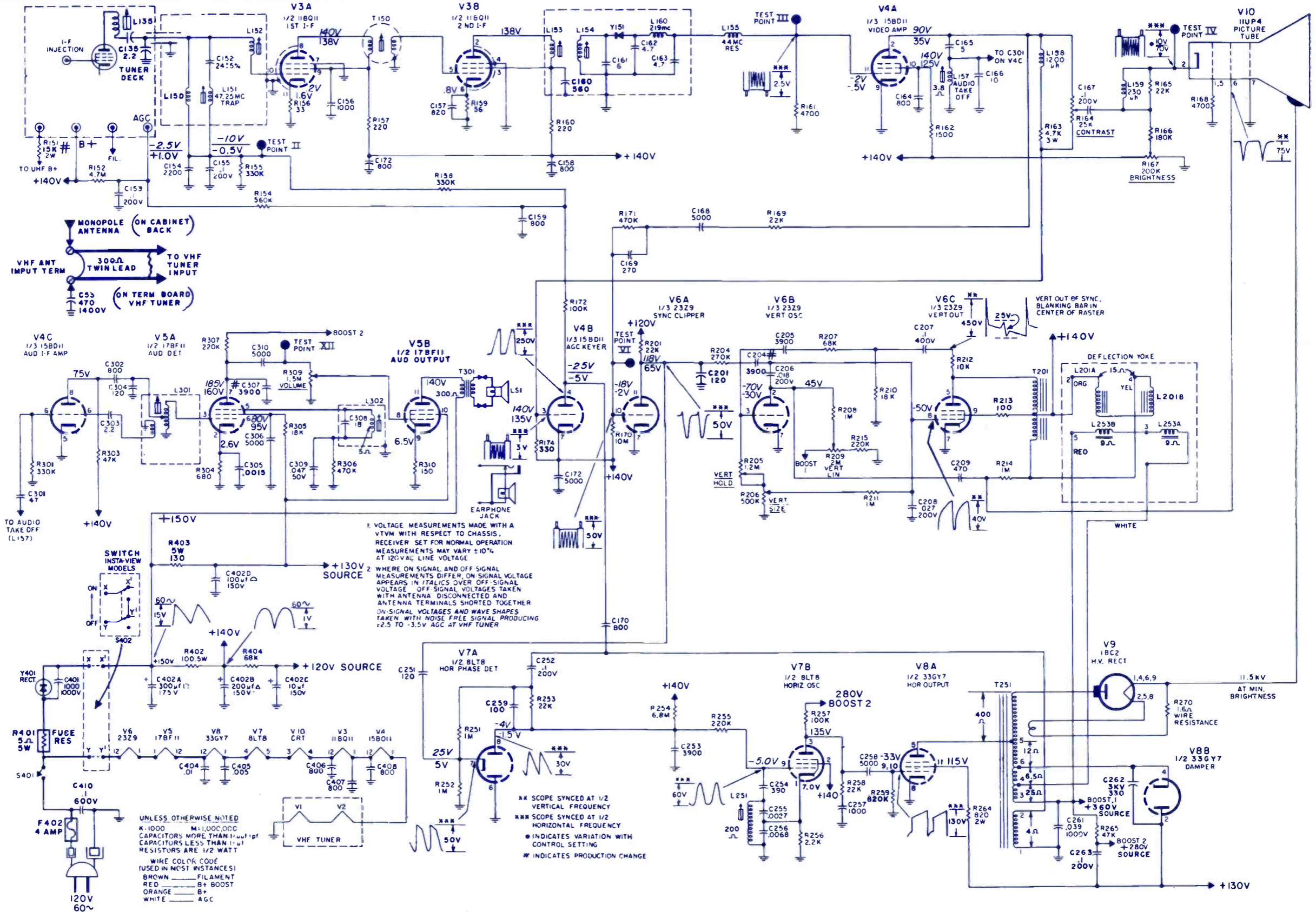
R806	1K, B + Adjust	ES49X24
TH401	thermistor	ES14X12
TH402	thermistor	ES14X11
TH601	thermistor	ES14X11
TH801	thermistor	ES14X11
	fuse, .75A (F901)	ES10X6
	fuse, 1.6A (F902)	ES10X5
	tuner, UHF	ES85X3
	tuner, VHF	ES85X4
	yoke, deflection w/R622, R623	ES76X2



SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
F401	fuse, 1.5 amp, slo-blo, pigtail	ES10X1
F402	fuse, 4 amp, fast-blo, pigtail	EP10X52
(note: wire link used in production)		
C402A	300μf, +100 - 10%, 175v	ES31X268
C402B	200μf, +100 - 10%, 150v	ES31X268
C402C	10μf, +100 - 10%, 150v	ES31X268
C402D	100μf, +100 - 10%, 150v	ES31X268
R163	4700Ω, 7w, glass	ET14X133
R164	25K, 30%, contrast	ES49X541
R167	200K, 30%, bright	TRIPLE
R309	1.5M, 30%, volume (w/spst S401)	CONTROL
R205	1.2M, 30%, vert hold	ES49X534

R206	500K, 20%, vert size	ES49X535
R209	2M, 30%, vert lin	ES49X536
R270	1.6Ω, res. wire, HV rect fil lead	ES65X36
R401	5Ω, 5w, WW	COMMON
R402	100Ω, 5w, WW	COMMON
R403	130Ω, 5w, WW	COMMON
L151	coil, 47.25MHz trap	ES36X753
L152	coil first IF grid	ES36X754
L153	coil video det primary	ES36X757
L154	coil video det sec	ES36X757
L157	coil audio take-off	ET36X587
L158	coil choke, 1200μh, 7%	ES36X663
L159	coil choke, 227μh, spec (L159 ww)	ES36X817

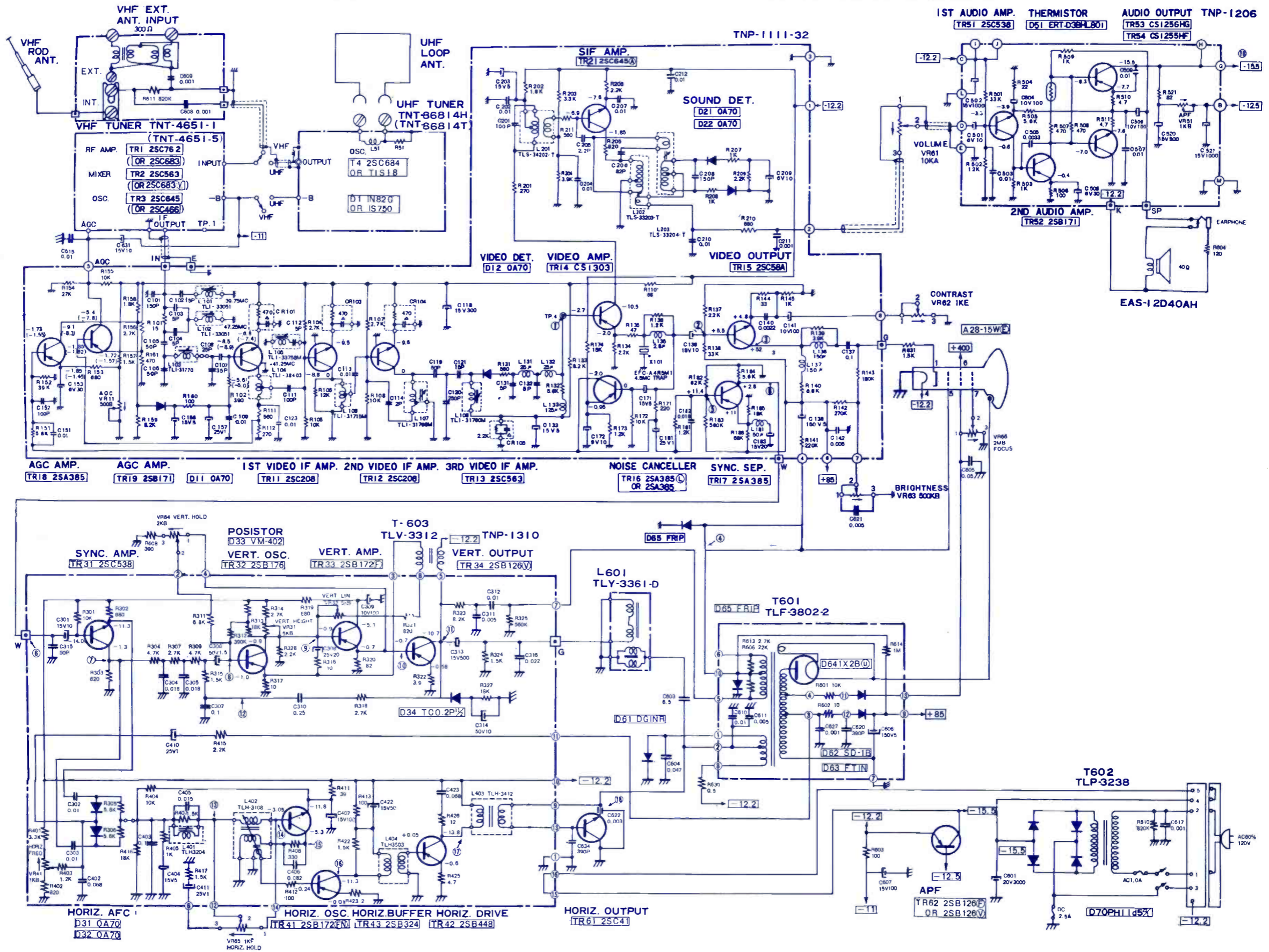
(on R165, 22k)	ES36X758	
L201A&B	yoke, def vert	ES76X48
L253A&B	yoke, def horiz	ES76X48
L251	coil, horiz osc hold	ES35X51
L301	coil, audio interstage	ET36X778
L302	coil, quad	ES36X665
T150	xformer IF	ES61X161
T201	xformer vert output	ES64X114
T251	xformer horiz output	ES77X92
T301	xformer audio output	ET64X105
tuner, UHF, trans	EUR5X53	
tuner VHF, 13 pos manual	ET86X246	



SYMBOL	DESCRIPTION	PENNEY PART NO.
VR11	500Ω AGC control	EVL-S2AA00852
VR31	5K vert height	EVL-S0AA00853
VR32	5K vert lin	EVL-S0AA00853
VR41	1K horiz freq	EVL-S0AA00813
VR51	1K APF control	EVL-S2AA00813
VR61	10K off/on volume control	EVC-B0BL20A14
VR62	1K contrast control	EVL-FOAL17E13
VR63	500K bright control	EVL-FOAL17B55

VR64	2K vert hold	EVH-80AL17B23
VR65	1K horiz hold	EVH-FOAL17F13
VR66	2M focus control	EVD-N7A510B26
L105	sound trap coil 41.25MHz	TLI-33758M
L132	peaking coil, 25μh	TLD-02501-5
L133	peaking coil, 125μh	TLD-12501-5
L136	peaking coil, 150μh	TLD-15001-5
L201	SIF xformer	TL5-34202-T
L202	discriminator, primary	TL5-33203-T
L203	discriminator, sec	TL5-33204-T
L401	AFC xformer	TLH-3204
L402	horiz osc xformer	TLH-3108

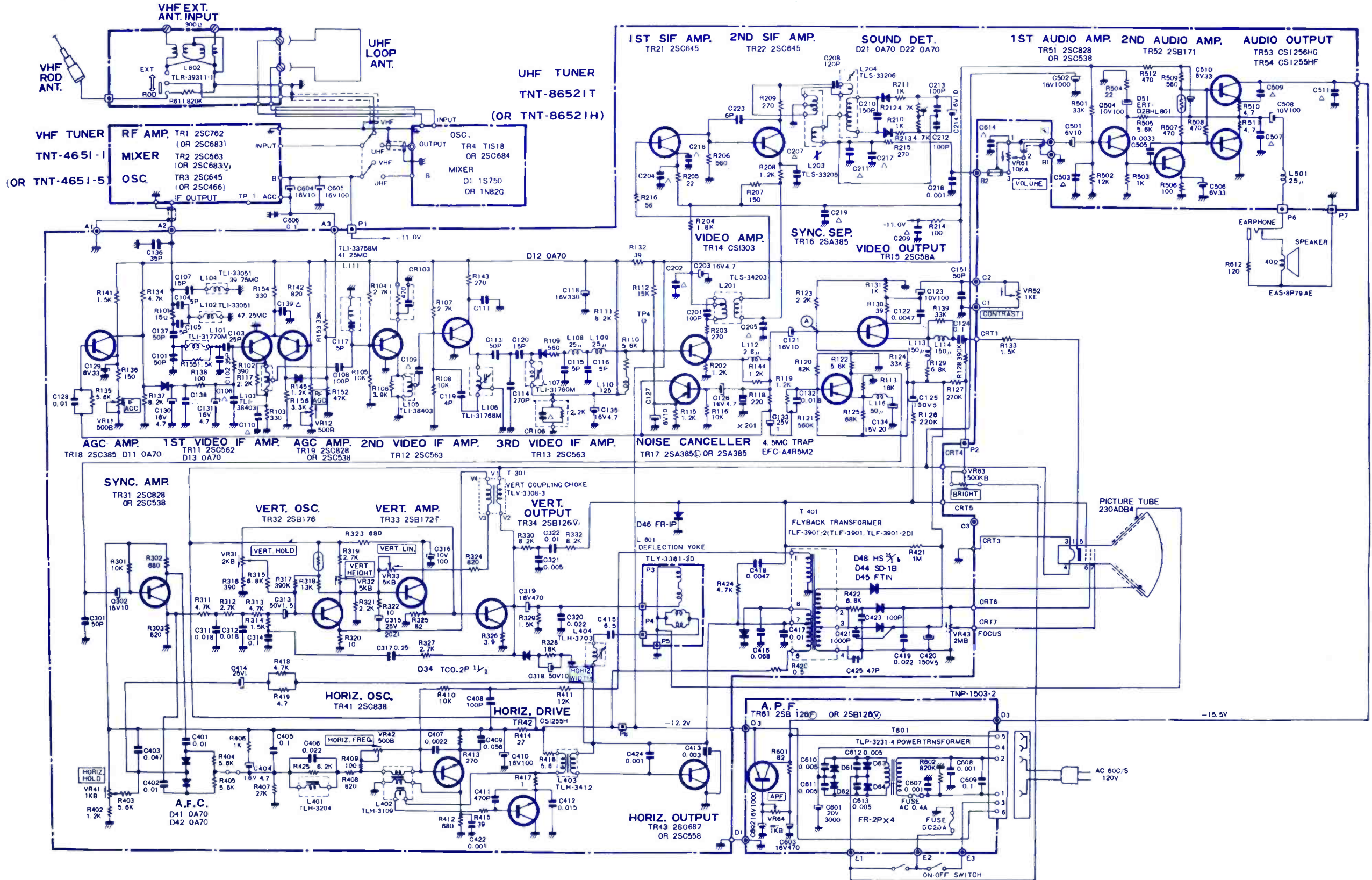
L403	horiz drive xformer	TLH-3412
L404	horiz buffer xformer	TLH-3503
L601	def yoke	TLY-3361-D
T601	flyback xformer	TLF-3802-2
T602	power xformer	TLP-3238
T603	vert choke	TLV-3312
D33	posistor	VM-402
D51	thermistor	ERT-D38H1801
	VHF tuner or TNT-86814T	TNT-86814H
	fuse AC 1.0a	TSF-5102-0
	fuse DC 2.5a	TSF-5252-3

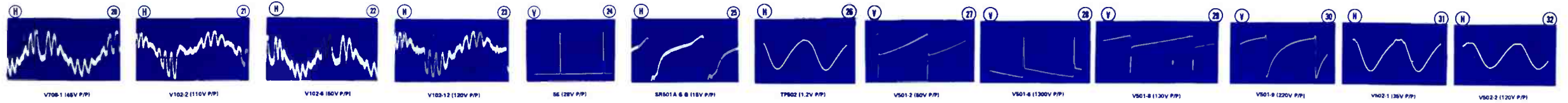


SYMBOL	DESCRIPTION	PENNEY PART NO.
VR11	500Ω IF AGC control	EVL-52AA00B52
VR12	500Ω, RF AGC control	EVL-52AA00B52
VR31	2K, vert hold	EVL-52AA00B52
VR32	5K, vert height	EVL-52AA00B52
VR33	5K, vert lin	EVL-52AA00B52

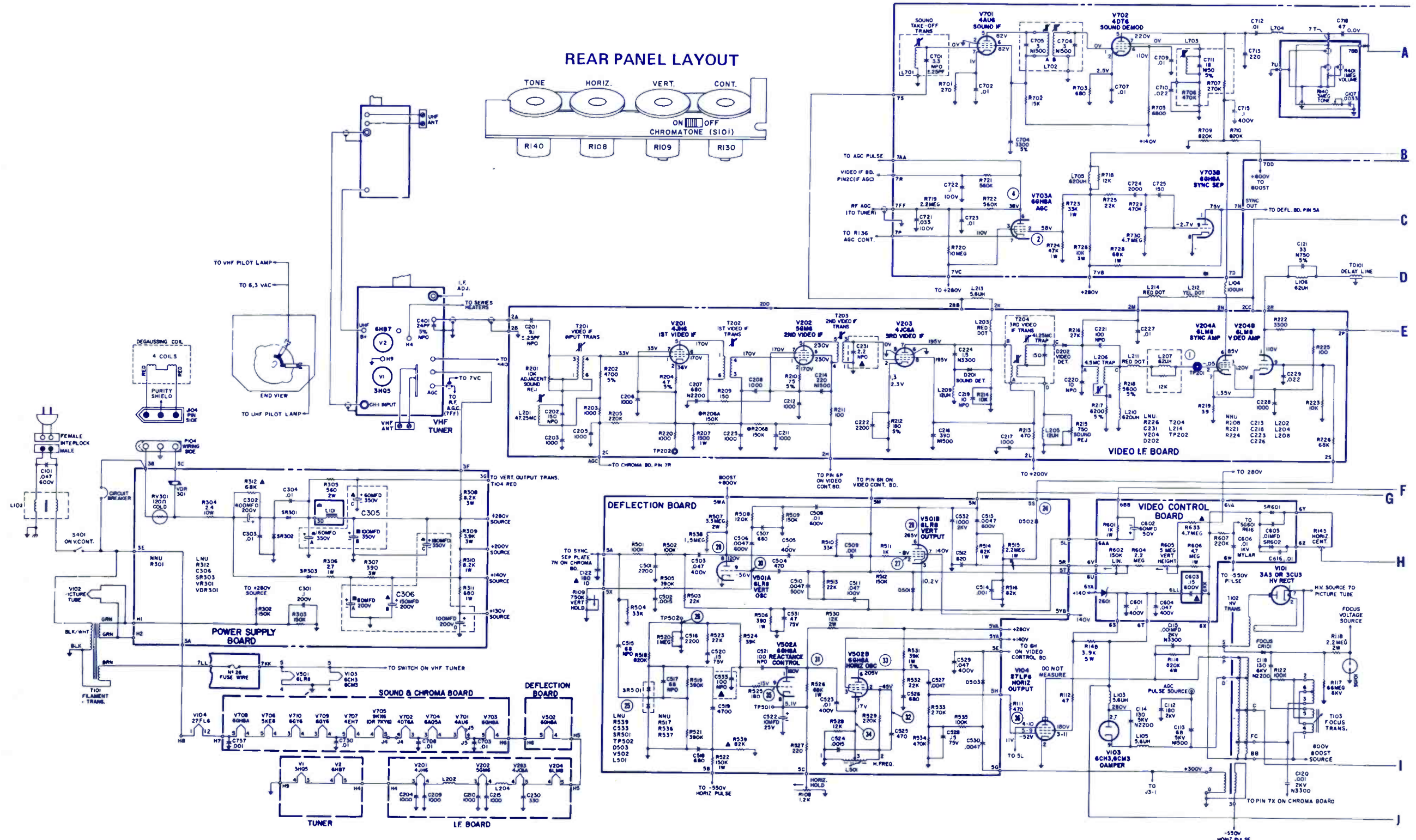
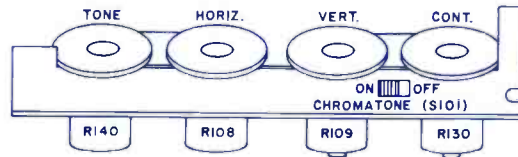
VR41	1K, horiz hold	EVL-52AA00B52
VR42	500Ω, horiz frequency	EVL-52AA00B52
VR43	2M, focus control	EVD-26AS10B26
VR61	10Ω, off/on vol control	EVC-80ML20A14
VR62	1K, contrast	EVL-FOAL17E13
VR63	500K, bright	EVL-FOAL17E13
VR64	1K, APF control	EVL-53AA00B13
CR103	0.01μf-470Ω ±5%	EXA-T103Z471J
CR106	0.01μf-2.2KΩ ±10%	EXA-P103P222
L102	adjacent channel trap coil 47.25MHz	TLI-33051
L103	interstage coupling coil	TLI-38403
L104	adjacent channel trap coil 39.75MHz	TLI-33051
L105	interstage coupling coil	TLI-38403
L108	peaking coil, 25μh	TLD-02501-5
L110	peaking coil, 125μh	TLD-12501-5
L111	sound trap coil, 41.25MHz	TLI-33758M
L113	peaking coil, 150μh	TLD-15001-5

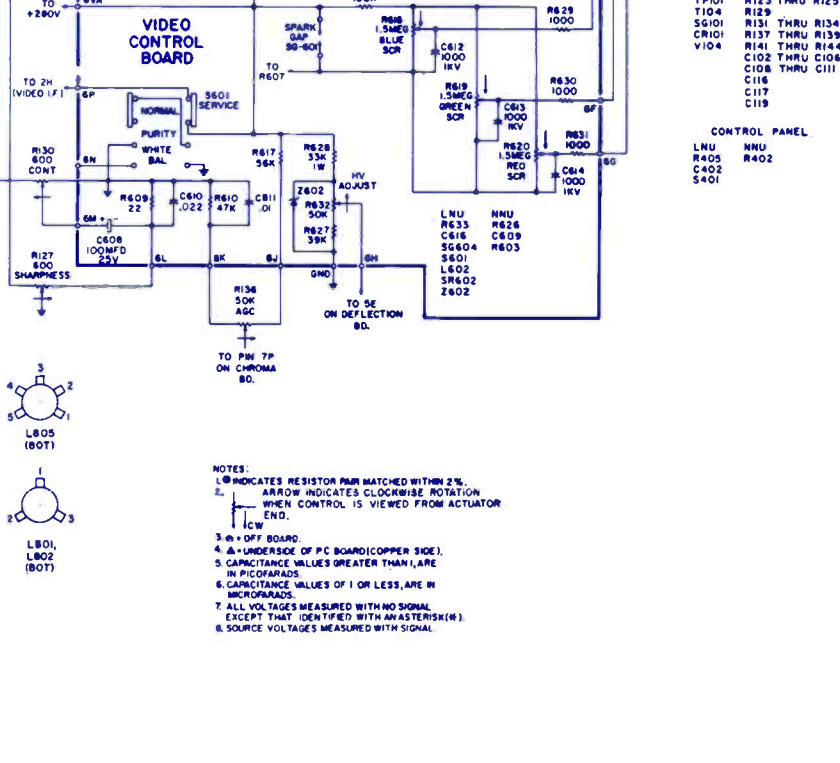
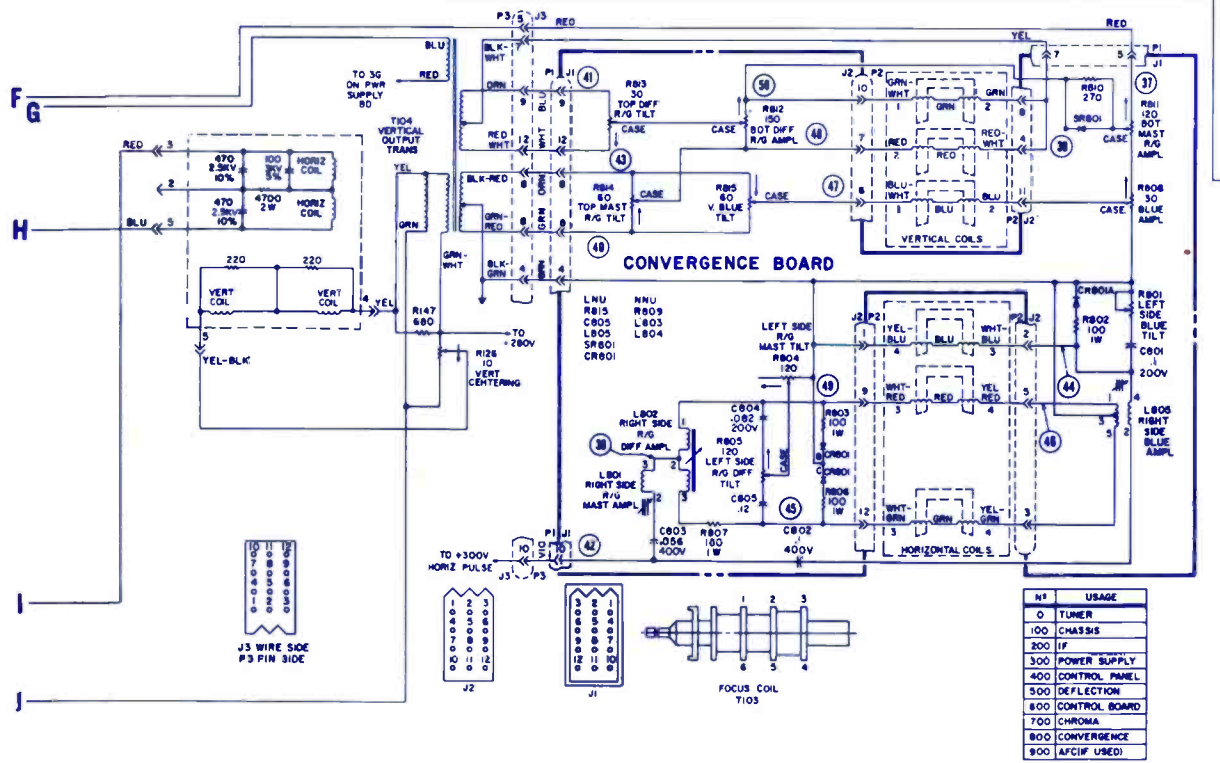
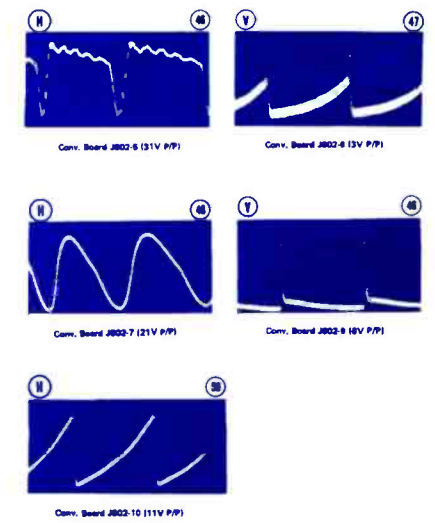
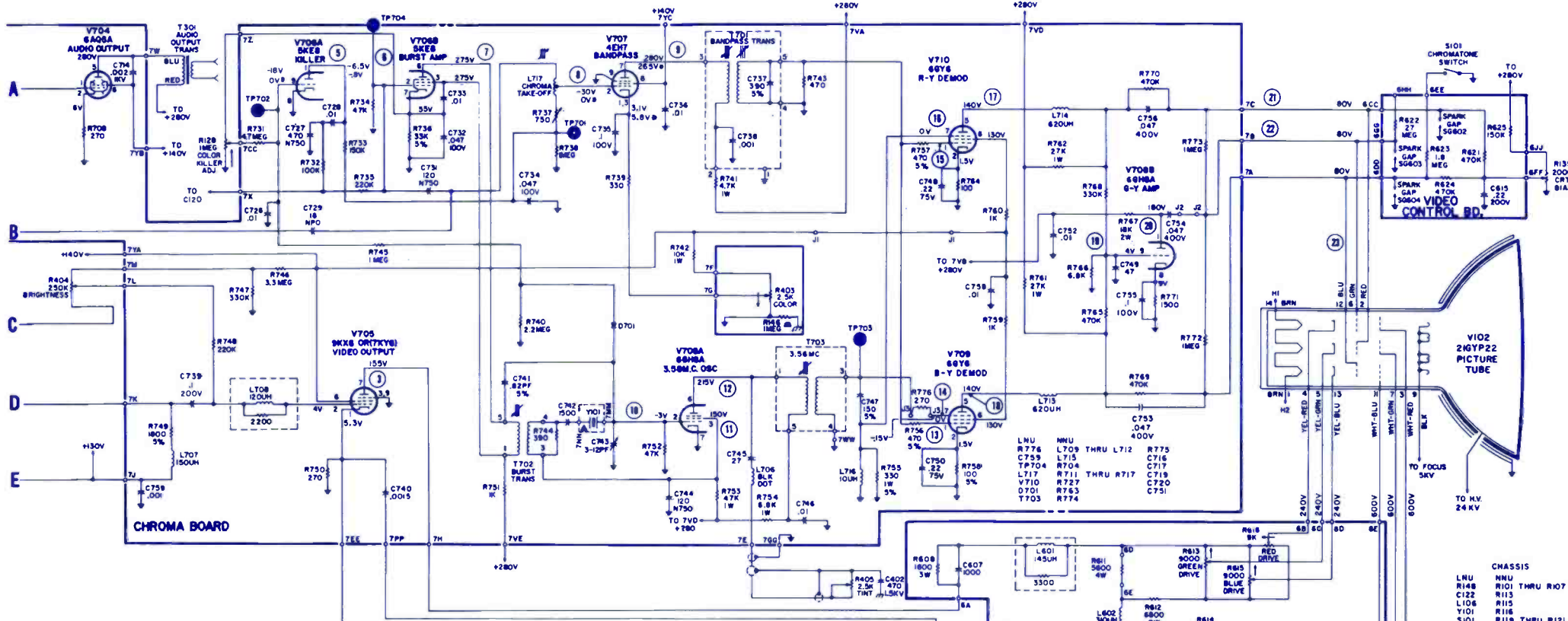
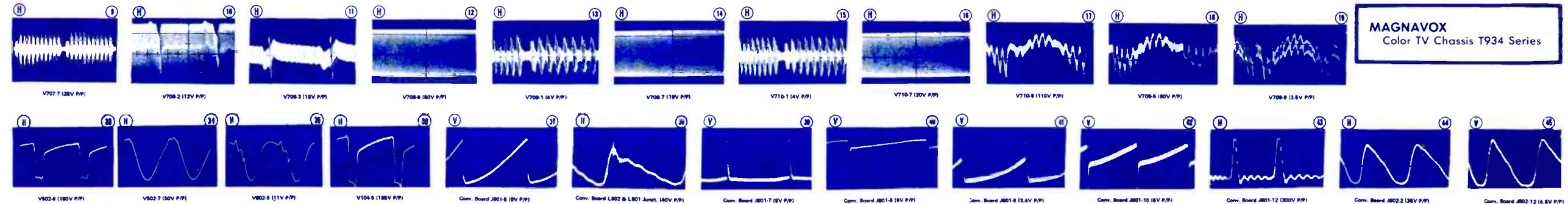
L203	discriminator, primary	TL5-33205
L204	discriminator, secondary	TL5-33206
L402	horiz osc xfmr	TLH-3109
L403	horiz drive xfmr	TLH-3412
L404	horiz width control coil	TLH-3703
L601	deflection yoke	TLY-3361-3D
L602	balun	TLR-39311-1
T301	vert choke	TLV-3308-3
T401	flyback xfmr	TLF-3901-2
T601	power xfmr	TLP-3231-4
VHF tuner		TNT-4651-5
UHF tuner		TNT-86521-H
fuse 0c 0.4a		TSF-5401-1
fuse dc 2a		TSF-5202-6
oc power cord		TSX-155





REAR PANEL LAYOUT





SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
T101	filament xlfomer	320358-2
T102	high voltage xlfomer	361351-1
T103	focus coil	361306-1
T104	vertical output xlfomer	320317-7
T301	audio output xlfomer	320130-5
T701	bandpass xlfomer	361192-1
T702	burst xlfomer	361296-1
T703	3.58 uHz xlfomer	361198-1
TD101	delay line	360949-5
L206	4.5MHz trap	360853-2
L501	horiz freq coil	361269-1
L701	sound take-off coil	360845-2
L702	sound IF coil	360846-3
L703	quad coil	360847-2
L714	peaking coil, 620µH	360853-1
L717	chroma take-off xlfomer def yoke ass'y	360959-4
C118	cer, 130pf, 20%, N2200, 6kv	250475-11
C305A,B,C	elec, 160µf/100µf/60µf, 350v	270071-9
C306C,A,B,D	elec, 100µf/350v; 80µf/150µf/100µf/200v	270071-10
C729	cer, 18pf, 10%, NPO, 500v	250546-1809
C743	cer trim, 3-12pf, N400	250371-4
R117	66M (6kv brkdn) 10%	230161-3
R304	2.4, 10%, 10w WW	240082-11
R108	1200 horiz hold	220146-71
R109	750k vert hold	220146-50
R127	600 shorp	220208-57
R126	10 vert centering	220181-10
R128	1M vert centering	220208-45
R130	600 contrast	220146-29
R135	200K contrast	220208-44
R136	50K AGC adj	220208-55
R140	3M tone	220146-26
R145	5M height	220181-13
R401	1M horiz centering	220135-12
R403	2500 color inc, S401	220232-4
R404	250K bright	220126-82
R405	500 tint	220232-4
R602	150K vert lin	220166-21
R605	5M height	220166-22
R613	9000 gm drive	220166-23
R615	9000 blu drive	220166-24
R618	9000 rd drive	220166-25
R620	1.5M rd screen	220166-18
R737	750 chroma tilt adj	220217-10
R811	120 bottom R/G most amplitude	220167-13
R812	150 bottom diff, R/G tilt	220167-12
R813	30 top diff R/G tilt	220167-11
R814	top most R/G tilt	220167-10
CR101	focus rectifier	530132-1
Z601	zener diode	530073-1020
Z602	zener diode	530073-1016
VDR301	varistor	230175-2
	cir brkr	180723-2

NOTES:
1. Ⓜ INDICATES RESISTOR PAIR MATCHED WITHIN 2%.
2. Ⓜ ARROW INDICATES CLOCKWISE ROTATION.
3. WHEN CONTROL IS VIEWED FROM ACTUATOR END.
4. 3 & 4 - OFF BOARD.
5. Δ - UNDERSIDE OF P.C BOARD (COPPER SIDE).
6. CAPACITANCE VALUES GREATER THAN 1, ARE IN PICOFARADS.
7. ALL VOLTAGES MEASURED WITH NO SIGNAL EXCEPT THAT IDENTIFIED WITH AN ASTERISK (*).
8. SOURCE VOLTAGES MEASURED WITH SIGNAL.

NO	USAGE
0	TUNER
100	CHASSIS
200	IF
300	POWER SUPPLY
400	CONTROL PANEL
500	DEFLECTION
600	CONTROL BOARD
700	CHROMA
800	CONVERGENCE
900	AFC/IF (USED)

MAGNAVOX

TV Chassis T928 Series

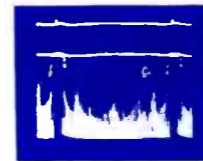
ELECTRONIC
TECHNICIAN / DEALER



V302-1 (TPV) 3V P/P



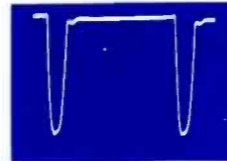
V303-2 (CRT) 50V P/P



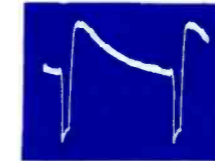
V401-2 70V F/P



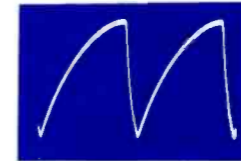
V401-1 50V P/P



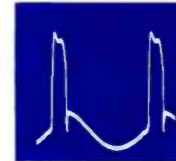
V401-1 50V P/P



D3 Cathode 11V P/P



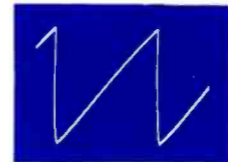
Junction R439 & R444 11V F/P



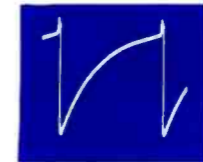
V403-1 30V P/P



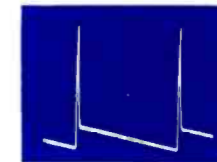
V404-9 80V P/P



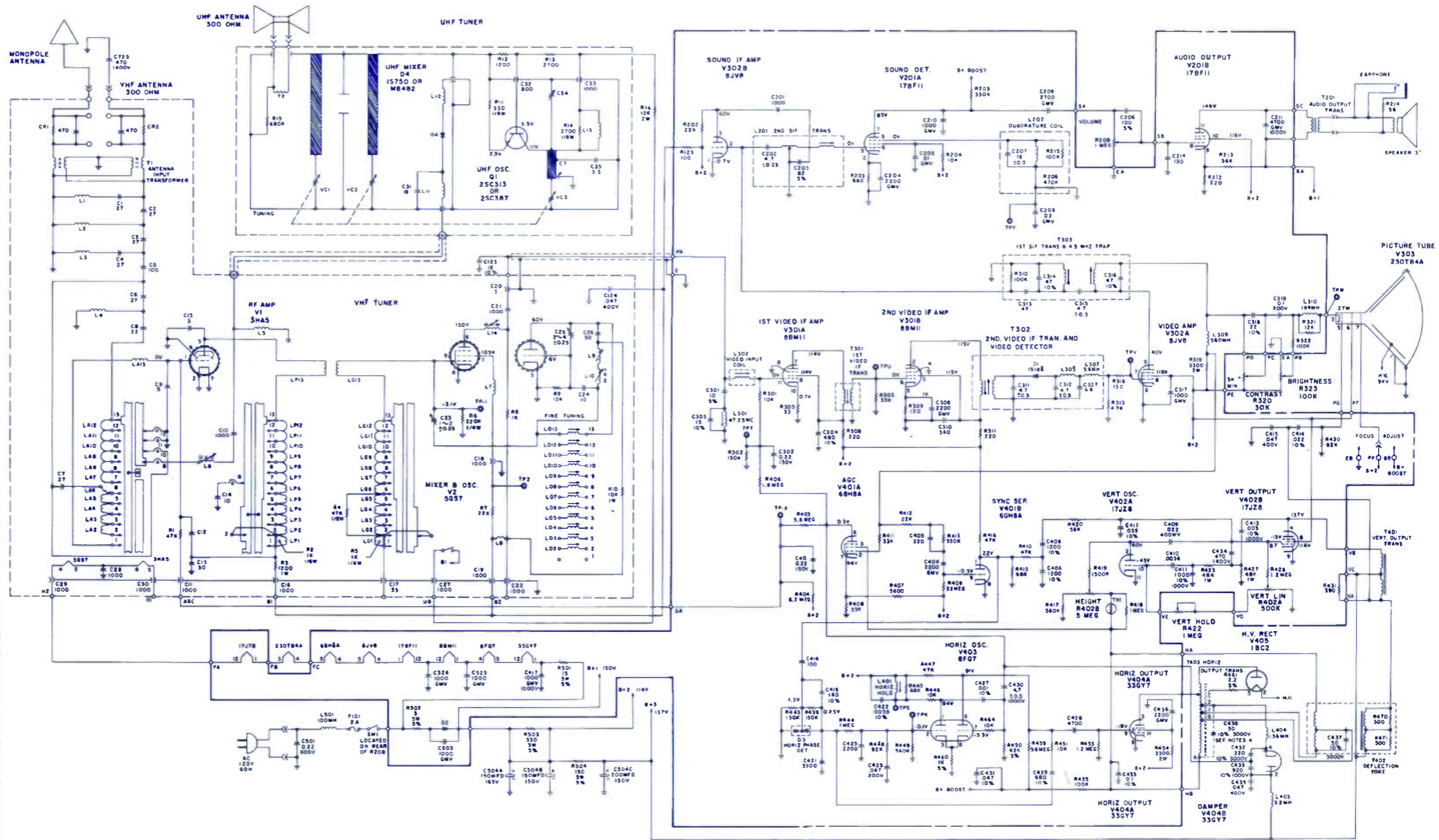
V402-6 18V P/P



V402-10 125V P/P

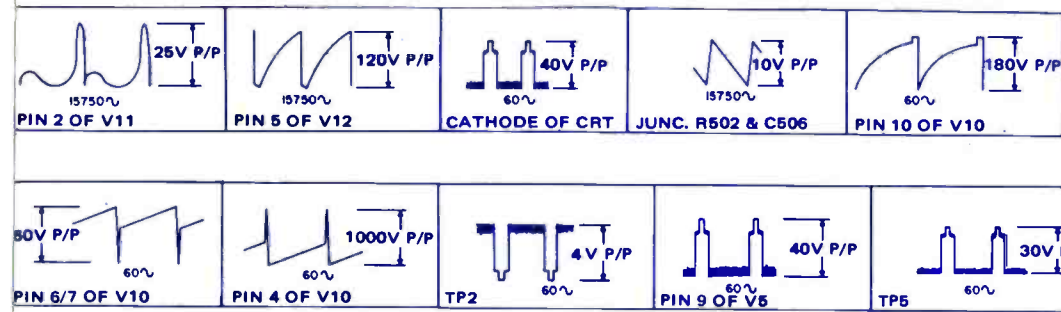


V402-4 600V P/P

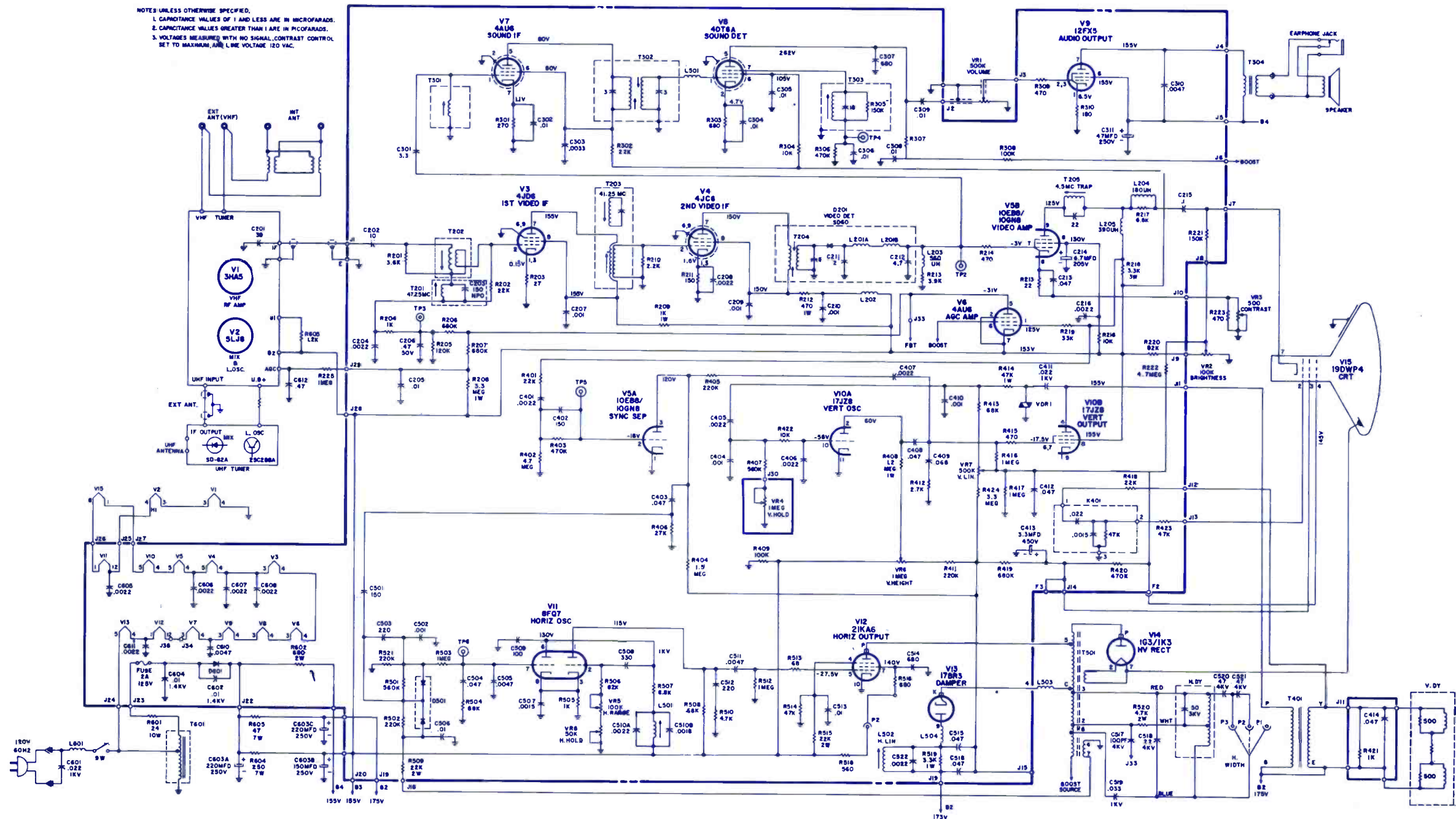


SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
T201	audio output xformer	32B009-1
T303	1st sound IF xformer & 4.5MHz Trap	36B036-1
T401	vert output xformer	32B010-1
T402	deflection yoke	36B041-1
T403	horiz output xformer	36B029-1
L201	2nd sound IF coil	36B030-1
L202	quad coil	36B031-1
L301	47.25MHz trap	36B032-1
L307	5.6μh peaking coil	36B035-3
L309	560μh peaking coil	36B040-1
L310	184μh peaking coil	36B040-2
L401	horiz hold coil	36B039-1
L404	horiz w coil	36B038-1
L501	100μh ac line filter	32B008-1
C504A,B,C	elect. 150/150/200μf; 165/150/150v	27B032-1
R503	330Ω, 5%, 5w(WW)	2400B0-161
R504	150Ω, 5%, 5w(WW)	2400B0-153
R208	1M, off-on vol	22B014-1
R320	30K, contrast (5K minimum)	22B015-3
R323	100K, bright	22B015-1
R402A	500K, vert lin	22B013-1
R402B	5M, vert hold	22B013-1
R422	1M, vert hold fuse, 2a, 125v	22B015-2
D3	horiz AFC dual diode	18B018-1
TH1	therm, 1M	53B007-1
	VHF tuner	34B002-1
	UHF tuner	34B003-1

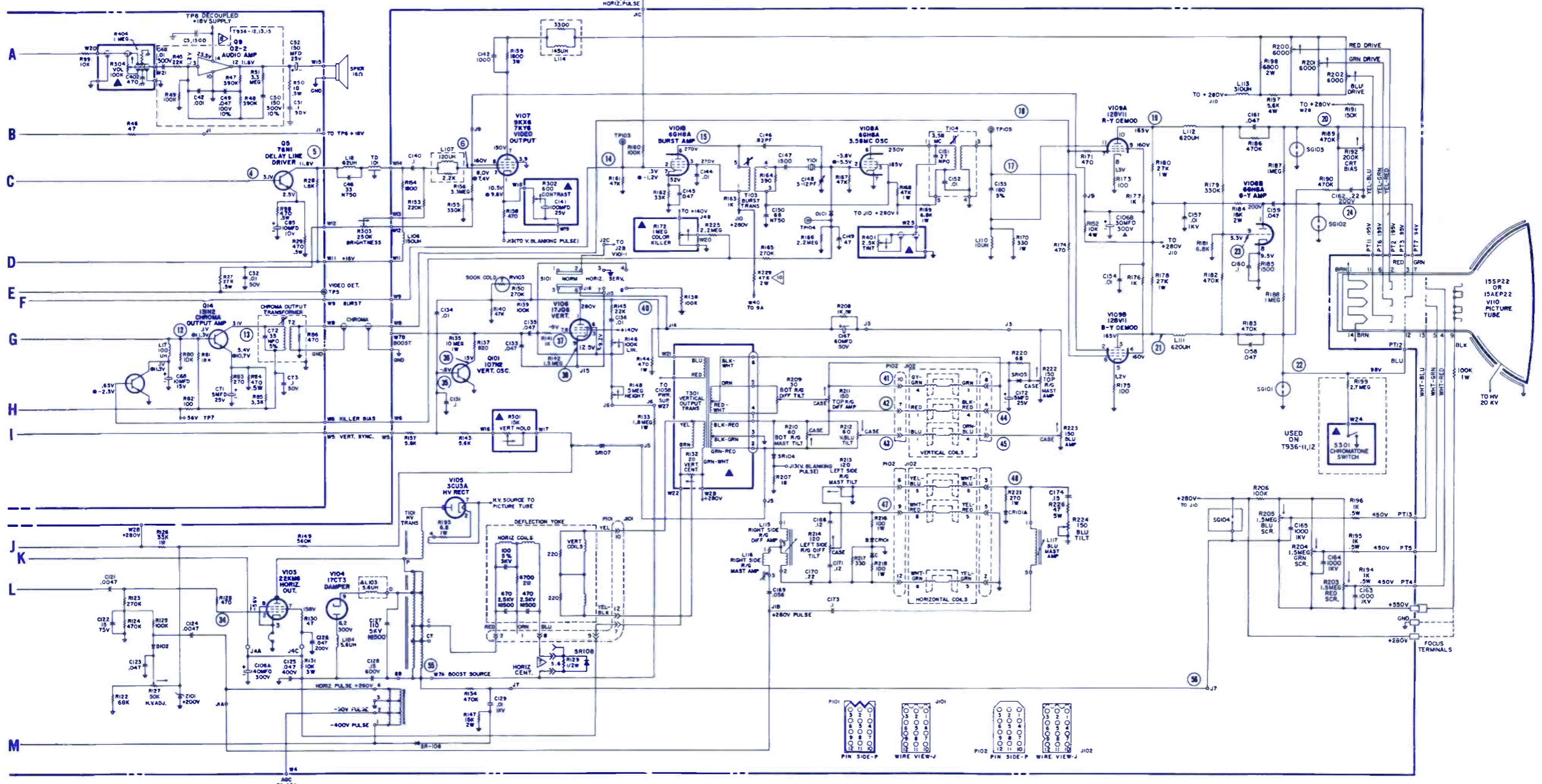
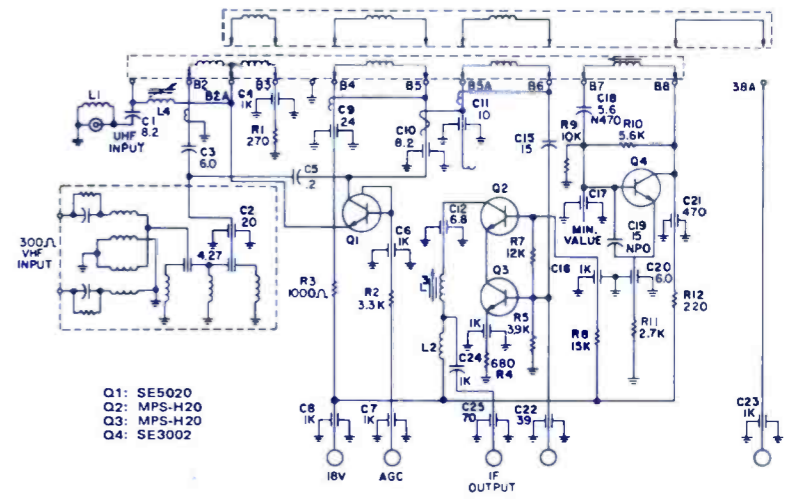
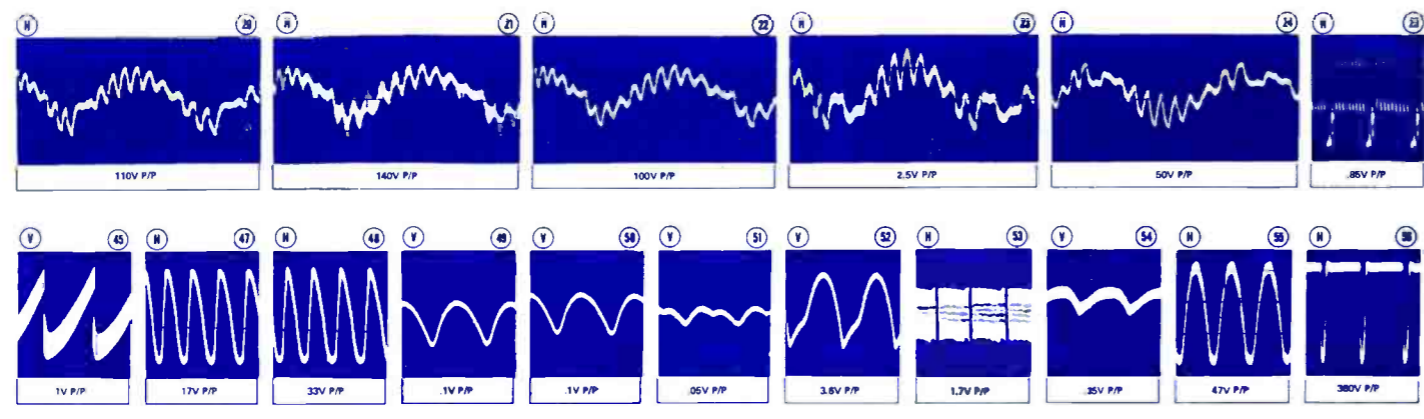
SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L203	560μh peaking coil	36A023-12
L204	180μh peaking coil	36A023-15
L205	390μh peaking coil	36A023-13
L501	horiz osc coil	36A023-9
L502	horiz lin coil	36A023-10
L601	line choke	36A023-16
T203	video IF xformer	36A023-3
T205	4.5MHz trap	36A023-5
T301	sound input xformer	36A023-6
T302	sound IF xformer	36A023-7
T303	quad coil	36A023-8
T304	audio output xformer	32A006-1
T401	vert output xformer	32A007-1
T501	horiz output xformer	32A007-1
T601	power xformer	30A005-1
	deflection yoke	36A037-1
C203	cer, 150pf, 5%, 500v (NPO)	25X023-1515
C602	cer, .01μf, GMV, 1400v	25X016-1030
C603	elect, 220/220/150μf, 250v	27A010-1
R601	2.4, 10%, 10w metal oxide	23A004-9
R603	47, 10%, 7w metal oxide	23A004-11
R604	250, 10%, 7w metal oxide	23A004-10
VR1	500K, off-on-volume	22A006-1
VR2	100K, bright	22A006-2
VR3	500, contrast	22A006-3
VR4	1M, vert hold	22A006-4
VR5	100K, horiz range	22A006-5
VR-6	1M, vert lin	Part of VR5
VR7	1M, height	Part of VR5
VR8	50K, horiz hold	22A006-6
VDR	varistor	23A002-2
	fuse	18A008-1
	VHF tuner	34A002-1
	UHF tuner	34A003-1

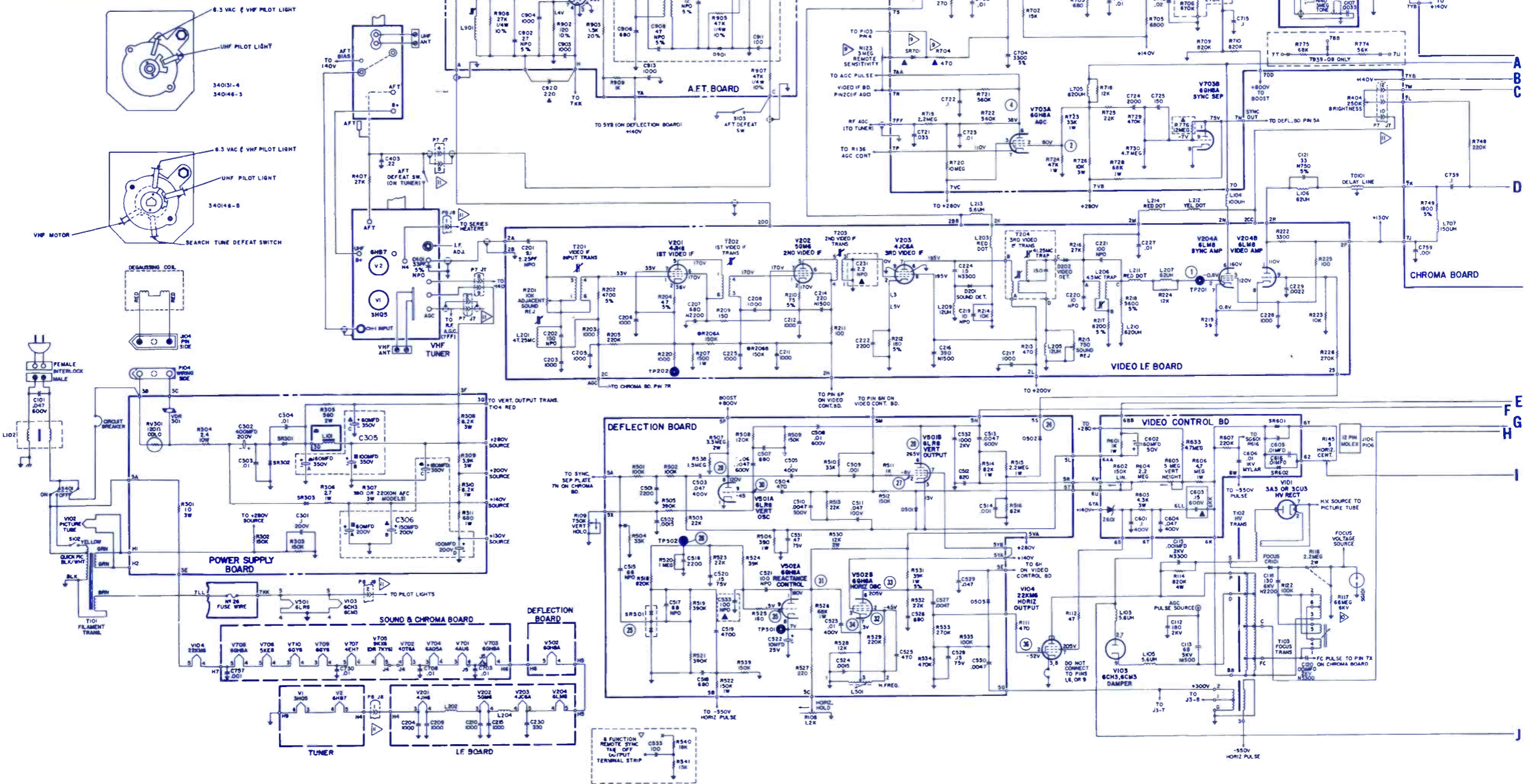
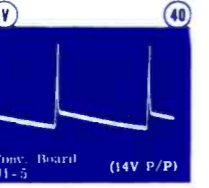
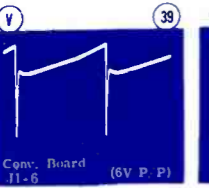
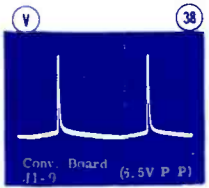
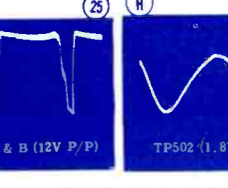
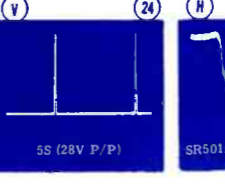
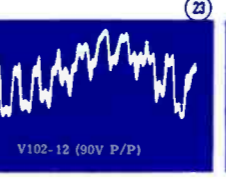
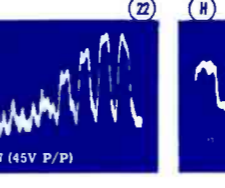
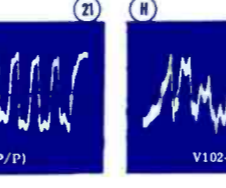
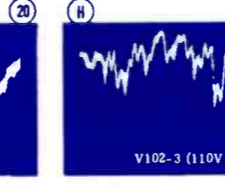
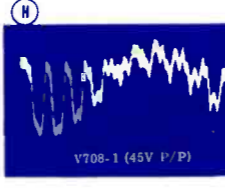
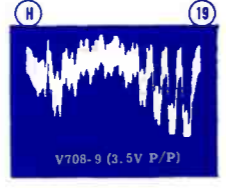
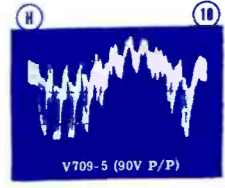
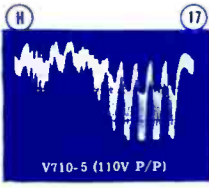
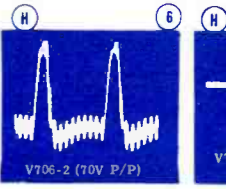
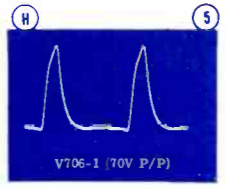
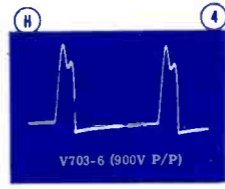
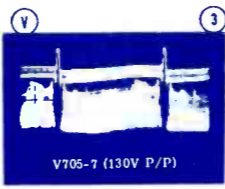
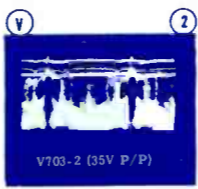
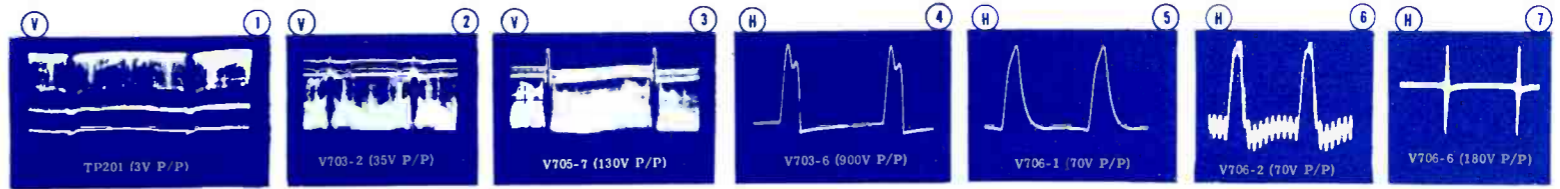


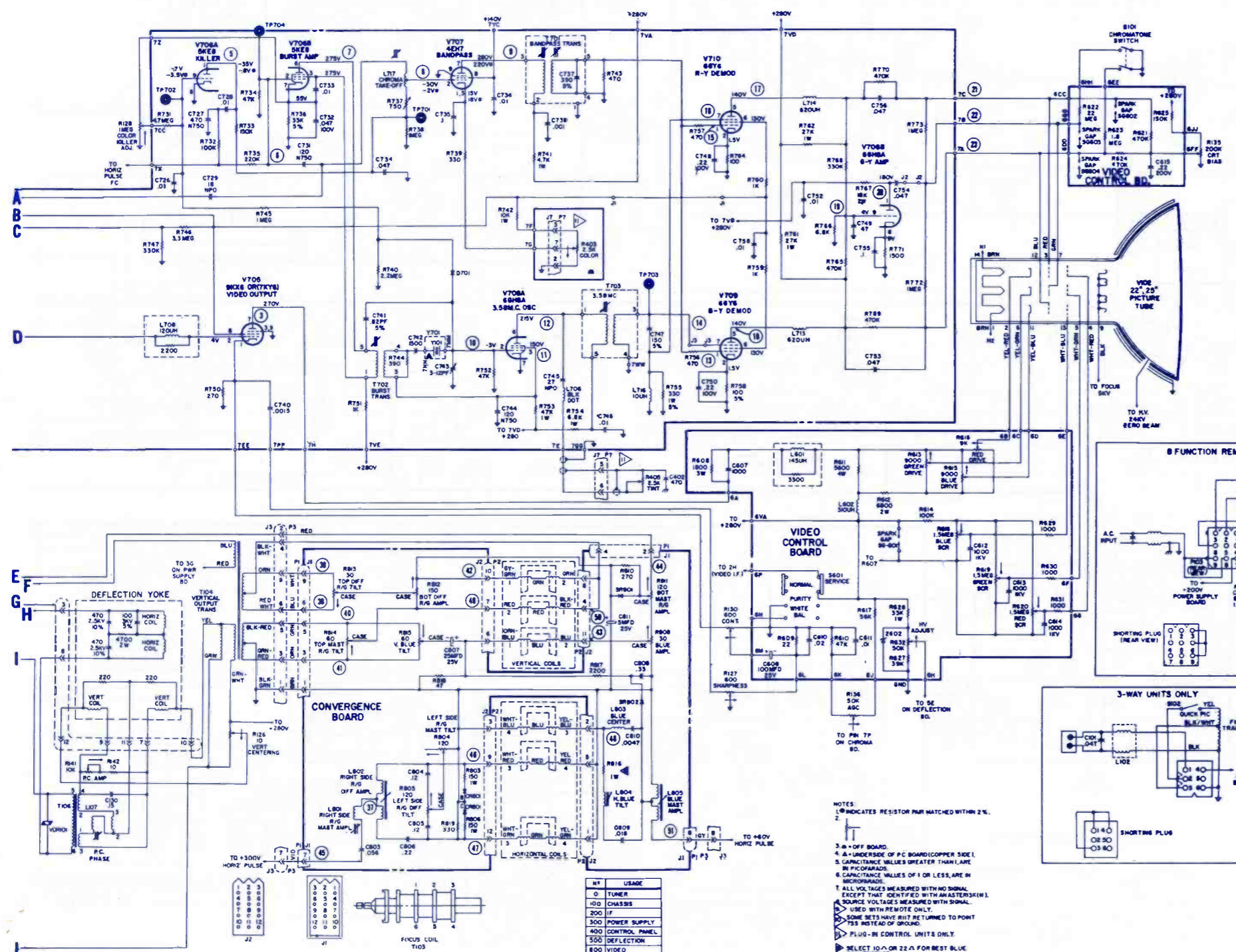
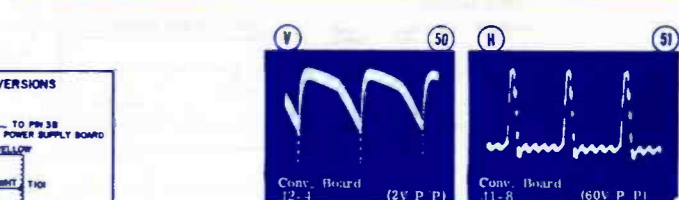
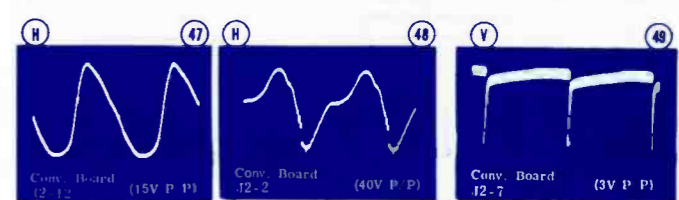
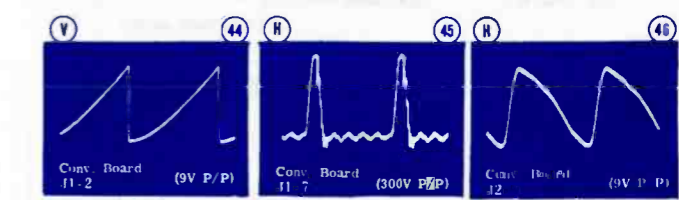
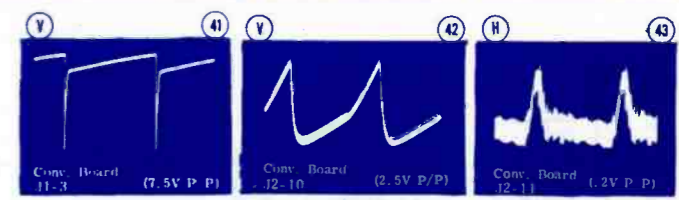
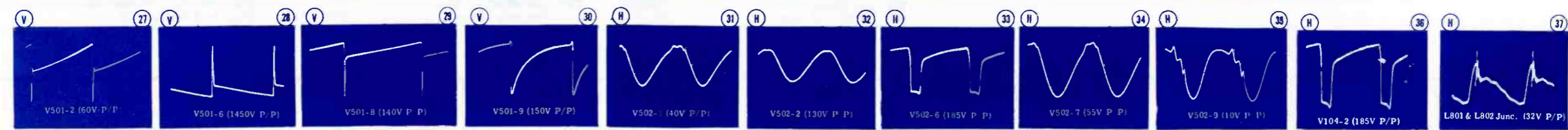
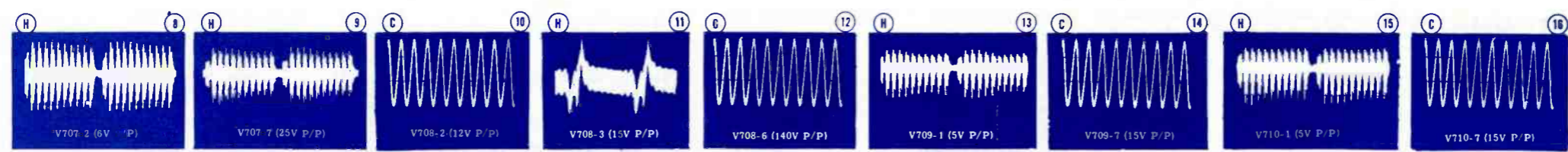
NOTES UNLESS OTHERWISE SPECIFIED:
1. CAPACITANCE VALUES OF 1 AND LESS ARE IN MICROFARADS.
2. CAPACITANCE VALUES GREATER THAN 1 ARE IN PICOFARADS.
3. VOLTAGES MEASURED WITH NO SIGNAL, CONTRAST CONTROL SET TO MAXIMUM, ANT. LINE VOLTAGE 120 VAC.



VHF TUNER SCHEMATIC

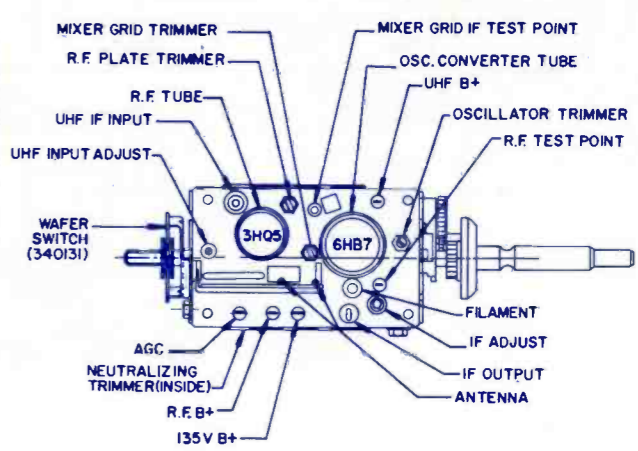






NO	USAGE
0	TUNER
100	CHASSIS
200	POWER SUPPLY
300	CONTROL PANEL
400	DEFLECTION
500	VIDEO
600	CHROMA
700	CONVERGENCE
800	CONVERGENCE
900	A/T/F. USED

NOTES:
 1. INDICATES RESISTOR PAIR MATCHED WITHIN 2%.
 2. 3. a - OFF BOARD.
 4. a - UNDERSIDE OF P.C. BOARD (COPPER SIDE).
 5. CAPACITANCE VALUES GREATER THAN 1 ARE IN MICROFARADS.
 6. CAPACITANCE VALUES OF 1 OR LESS ARE IN PICOFARADS.
 7. ALL VOLTAGES MEASURED WITH NO SIGNAL, EXCEPT THAT IDENTIFIED WITH AN ASTERISK (*).
 8. SOURCE VOLTAGES MEASURED WITH SIGNAL.
 9. USED WITH REMOTE ONLY.
 10. SOME SETS HAVE RHT RETURNED TO POINT '7'S INSTEAD OF GROUND.
 11. PLUG-IN CONTROL UNITS ONLY.
 12. SELECT 10-0 OR 22-0 FOR BEST BLUE CONVERGENCE.

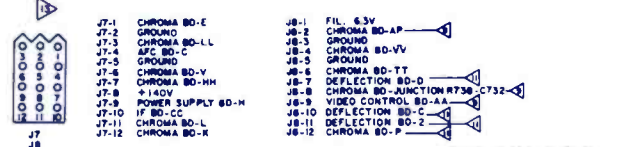


MAGNAVOX
Color TV Chassis
T940

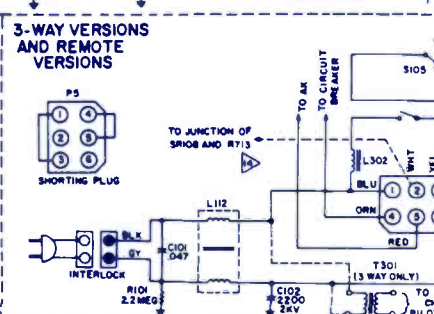
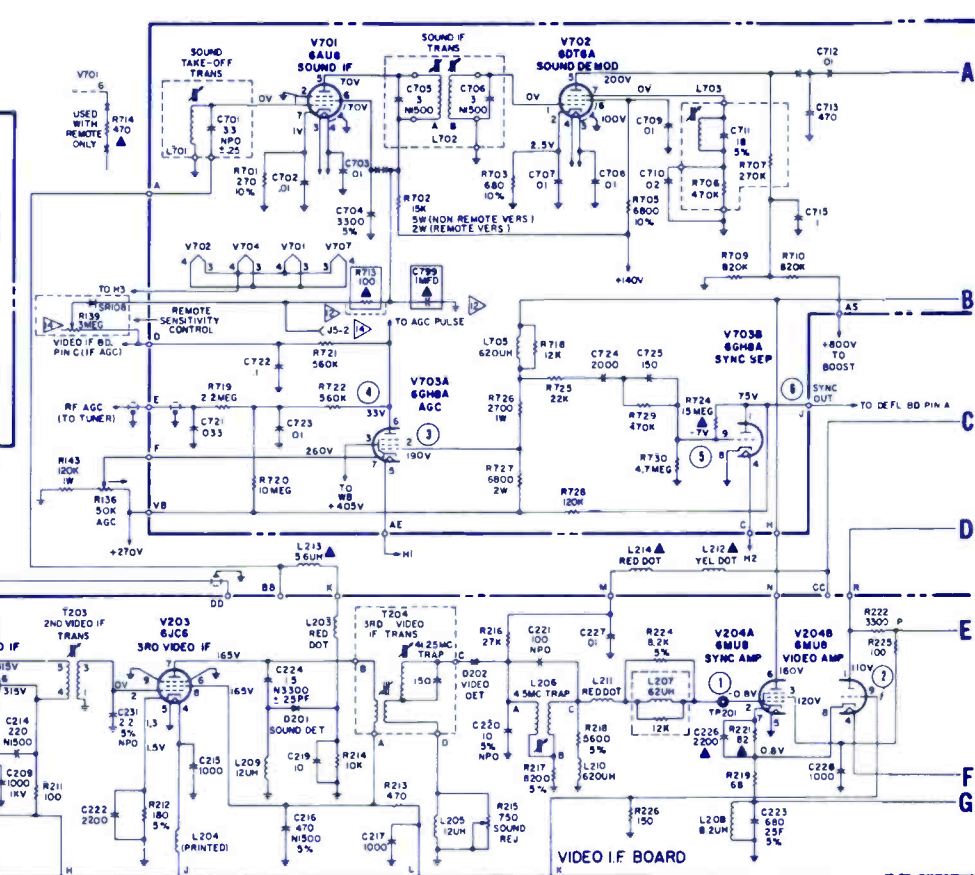
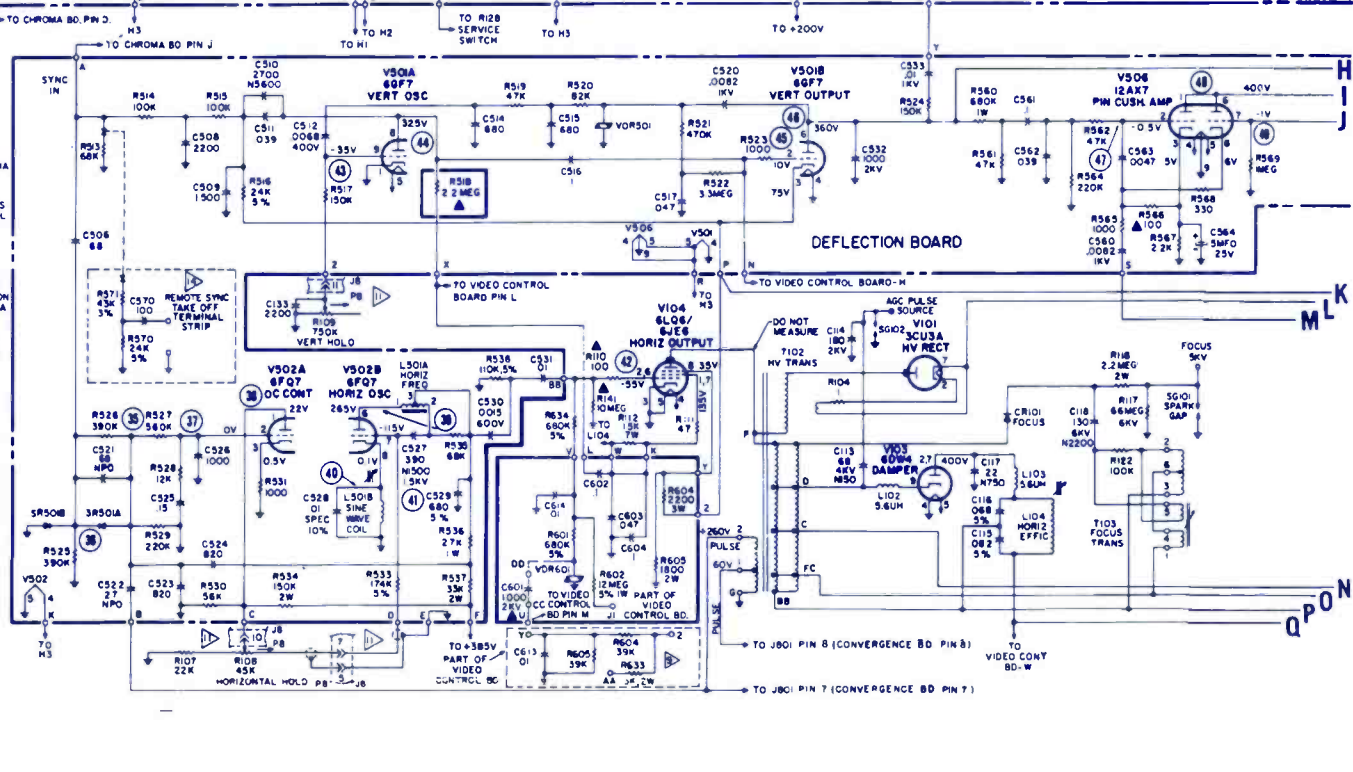
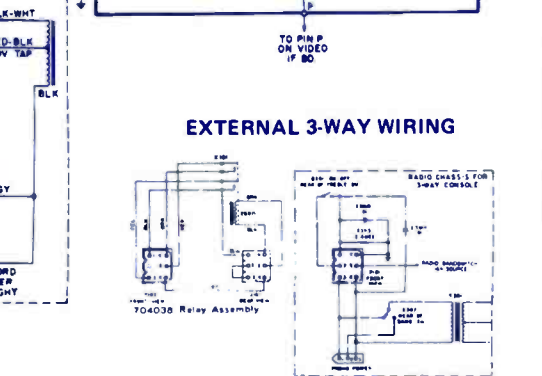
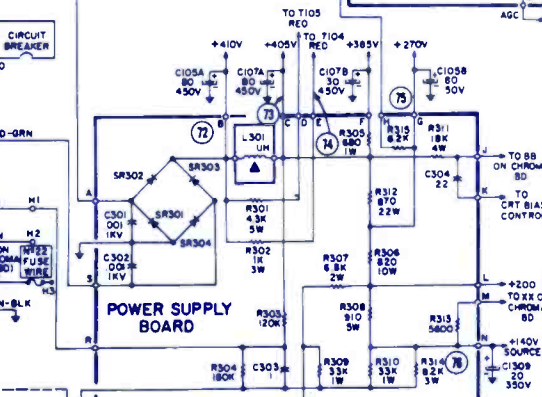
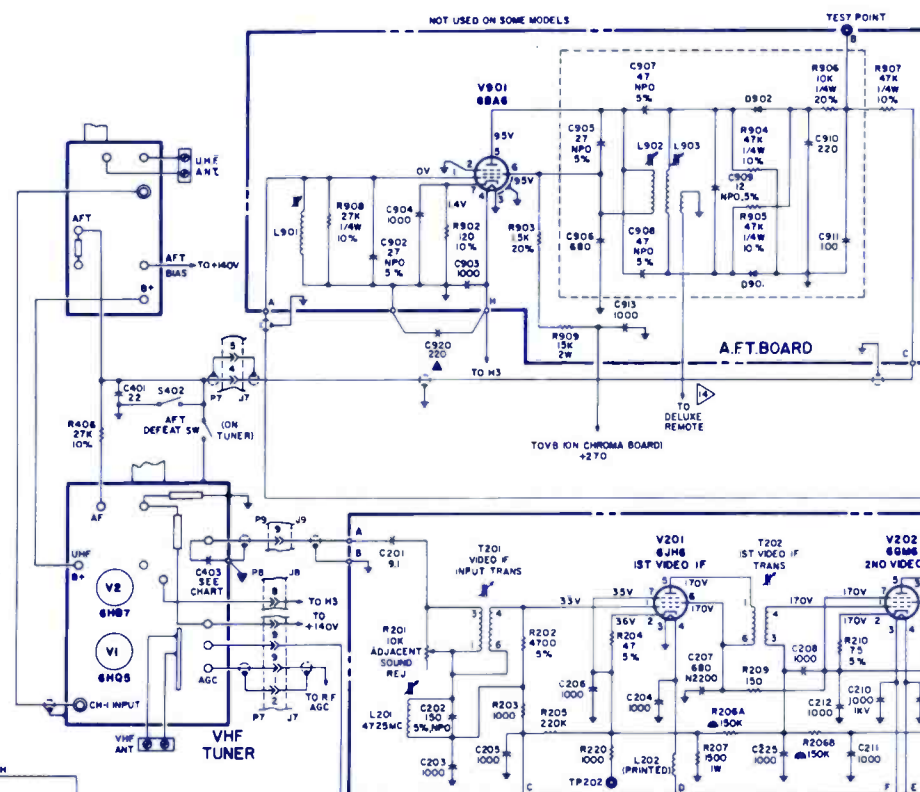
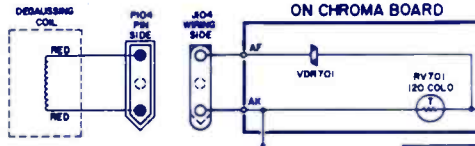
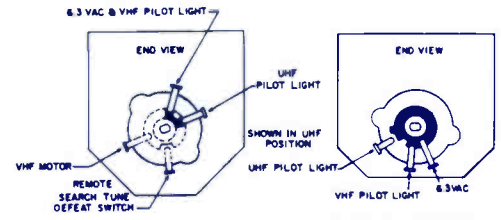
ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL DESCRIPTION	MAGNAVOX PART NO.
T1011---power xformer	300251-5
T102---horiz output xformer	381353-1
T103---focus xformer	381308-1
T104---vert output xformer	320317-8
T105---audio output xformer	320130-5
T106---pincushion xformer	381134-3
T202---1st video IF xformer	380951-8
T203---2nd video IF xformer	380951-5
T701---bandpass xformer	381093-2
T702---burst xformer	381094-2
T703---3.58MHz osc xformer	381198-2

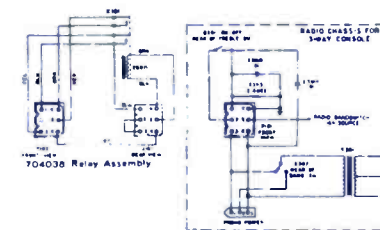
L104---horiz efficiency coil	381022-3
L112---line choke	381250-1
L301---filter choke	320124-9
L501---horiz freq coil	380980-3
L701---sound take-off coil	380845-2
L703---4.5MHz quad coil	380847-2
L712---reac coil	380983-3
L717---chroma take-off coil	380959-5
deflection yoke	381348-1
C105---elect, 80/80µf, 450v; 20µf, 350v	270071-12
C105---elect 80/80µf, 450v	(text audio versions) 270071-13
C107---elect 80/30/50, 450v	270071-7
C130---elect 20µf, 450v; 20/20µf, 350v	270023-42
C130---elect 20µf, 450; 20µf, 350v	270023-43
C528---paper, .01µf, 10%, 500v	250484-1
(spec. lowdrift)	
C570---mica, 100pf, 10%, 550v	250224-430
RA23---27K, 10%, 25w	230157-79
R117---86M, 10% (8KV brkdown)	230161-3
R308---820, 10%, 10W (ww)	240082-71
R312---870, 10%, 22W (ww)	240088-7
R603---15K, 10%, 7W (metal film)	230197-1539
R606A,B---1.5M, 10%, 1W	
(matched within 2%)	230145-100



VHF TUNER	V1	V2	C403
340X56	6M85	6M87	33PF
340X37	6Q85	6C86	8.2PF



EXTERNAL 3-WAY WIRING



R904---47K, 10%, 25W
 R108---45K, horiz hold (T940-15)
 R108---45K, horiz hold (all others)
 R109---750K, vert hold (T940-15)
 R109---750K, vert hold (all others)
 R128---10, vert centering
 R130---800, contr (T940-15)
 R130---800, contr (all others)
 R131---1M, color killer
 R132---8K, preference
 R138---50K, AGC
 R138---100, sharpness

230157-82
 220232-22
 220148-09
 220232-23
 220148-50
 220181-1
 220232-24
 220148-29
 220208-34
 220148-74
 220208-33
 220208-58

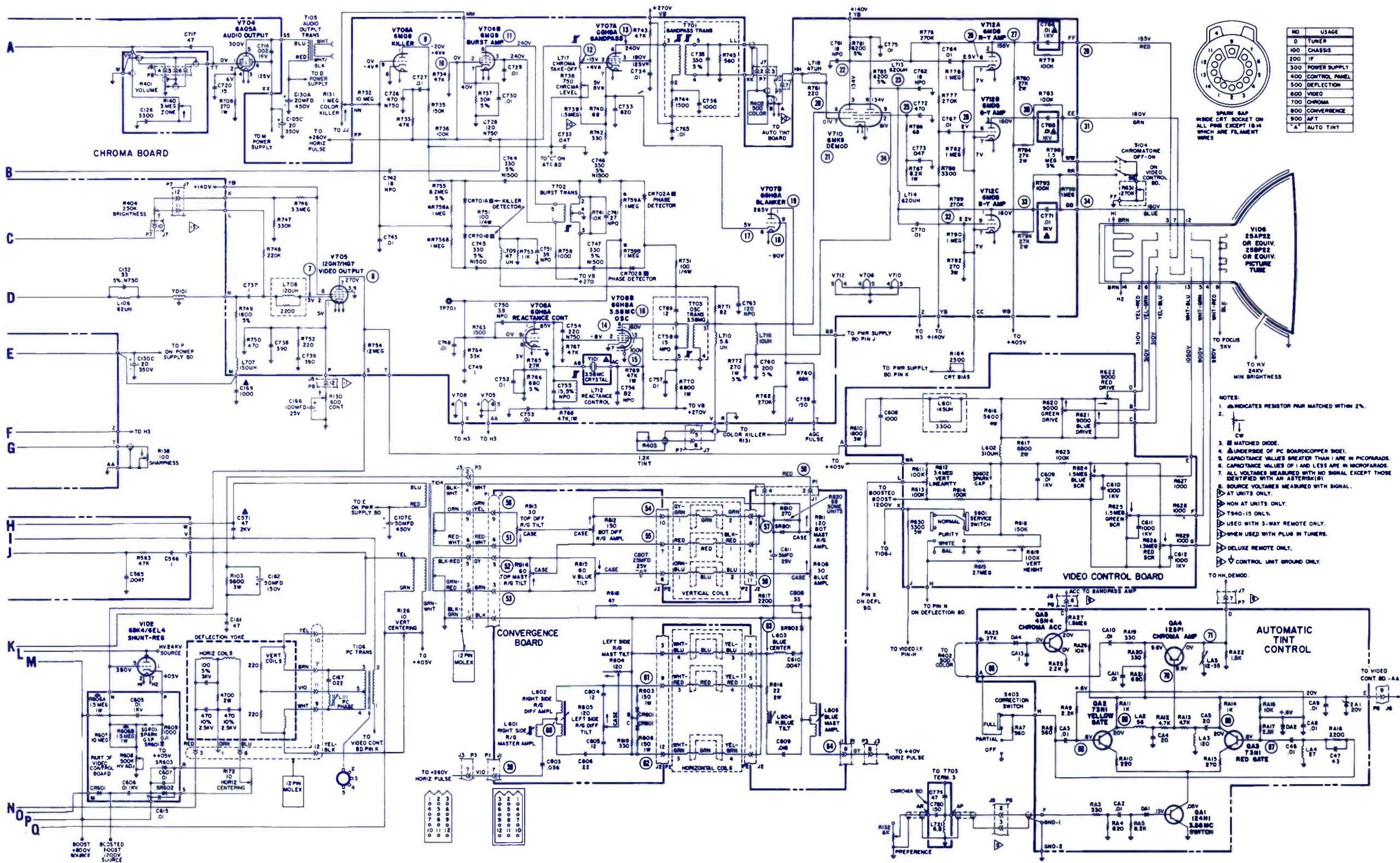
R139---3M, remote sen
 R140---3M, tone
 R104---2500, CRT bias
 R172---10, horiz centering
 R201---10K, adj sound rej
 R215---750, sound rej
 R404---250K, bright, (T940-03,04,05,16)
 R404---250K, bright (all others)
 R608---500K, high volt adjust
 R612---3.4M, vert lin
 R619---100K, vert height
 R620---9K, grn dr

220208-51
 220148-26
 220181-11
 220181-12
 220182-4
 220188-4
 220232-39
 220232-19
 220186-26
 220186-19
 220186-20
 220186-23

R621---9K, blu dr
 R822---9K, red dr
 R825---1.5M, grn screen
 R831---270K, chroma tone adjust
 R738---750, chroma level
 R805---120, r/g differential tilt (ww)
 R813---30, r/g differential tilt (ww)
 R815---80, blu tilt (ww)
 QA1---NPN silicon trans (124N1)
 QA2---NPN silicon trans (73N1)
 QA3---NPN silicon trans (73N1)
 QA4---PNP silicon trans (125P1)

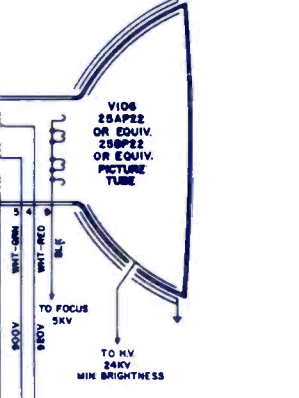
220188-24
 220188-25
 220188-18
 200183-24
 220217-10
 220187-13
 220187-11
 220187-10
 610124-1
 610073-1
 610073-1
 610125-1

MAGNAVOX
 Color TV Chassis T940



NO	USAGE
0	TUNER
100	CHASSIS
200	IF
300	POWER SUPPLY
400	CONTROL PANEL
500	DEFLECTION
600	VIDEO
700	CHROMA
800	CONVERGENCE
900	AFT
"A"	AUTO TINT

SPARK GAP
 INSIDE CRT SOCKET ON
 ALL PINS EXCEPT 1&4
 WHICH ARE FILAMENT
 WIRES



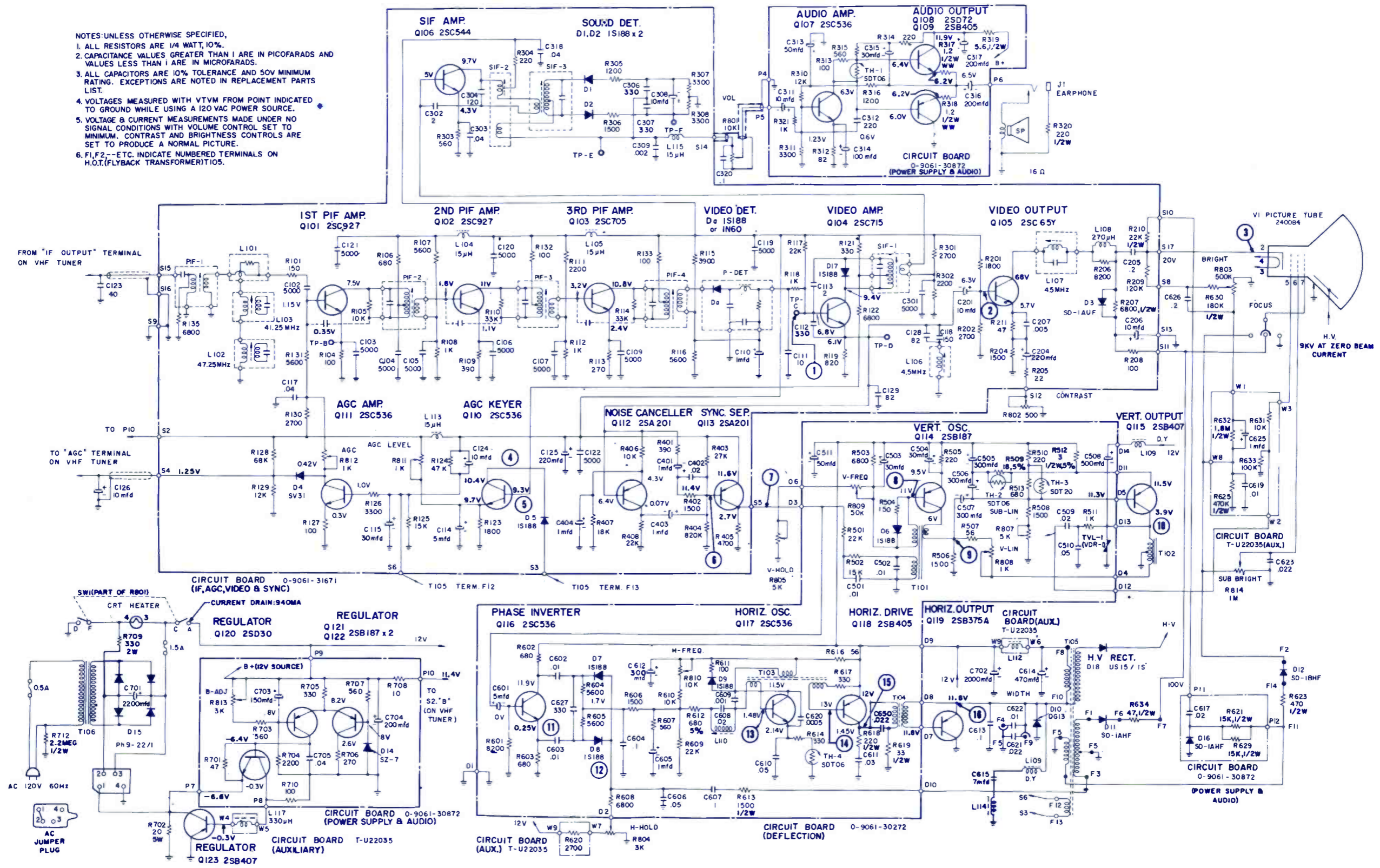
- NOTES:
- INDICATES RESISTOR PAIR MATCHED WITHIN 2%.
 - CW
 - MATCHED DIODE.
 - UNDERSIDE OF PC BOARD/COPPER SIDE.
 - CAPACITANCE VALUES GREATER THAN 1 ARE IN MICROFARADS.
 - CAPACITANCE VALUES OF 1 AND LESS ARE IN MICROFARADS.
 - ALL VOLTAGES MEASURED WITH NO SIGNAL EXCEPT THOSE IDENTIFIED WITH AN ASTERISK (*).
 - SOURCE VOLTAGES MEASURED WITH SIGNAL.
 - AT UNITS ONLY.
 - NON AT UNITS ONLY.
 - T940-15 ONLY.
 - USED WITH 3-WAY REMOTE ONLY.
 - WHEN USED WITH PLUS IN TUNERS.
 - DELUXE REMOTE ONLY.
 - CONTROL UNIT GROUND ONLY.

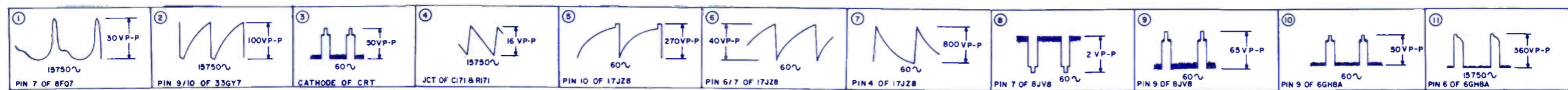
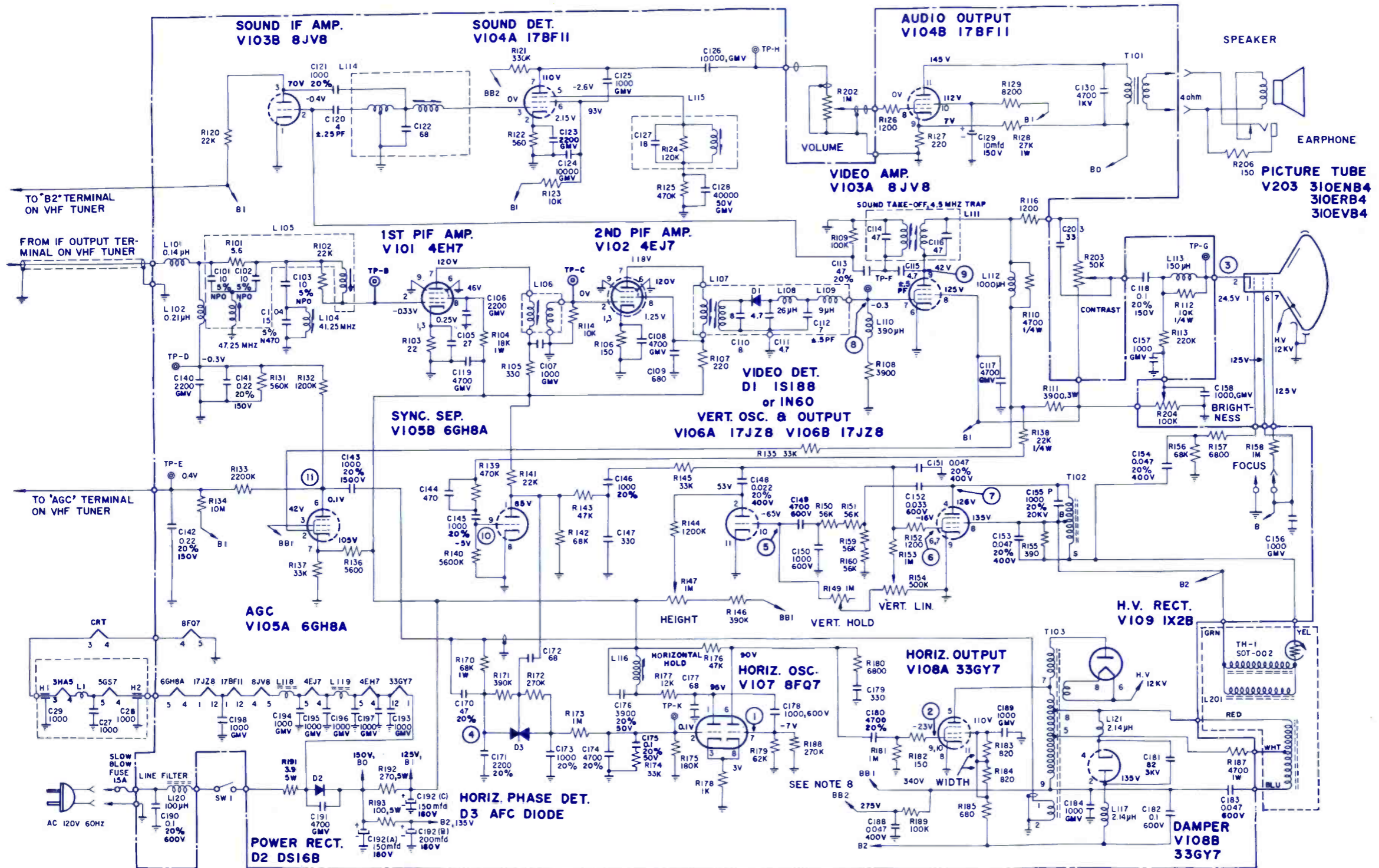
MAGNAVOX
TV Chassis T941 Series

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L109	deflection yoke	36B047-2
L110	horiz stability coil	36B056-14
L112	horiz filter coil	36B056-15
T101	vert oscillator xformer	32B021-1
T102	vert output coil	32B010-2
T103	horiz oscillator xformer	32B021-2
T104	horiz driver xformer	32B021-3
T105	horiz output xformer	36B056-17
T106	power xformer	30B006-1
R801	10K, vol On-Off	22B016-25
R802	500Ω contrast	22B016-24
R803	500K, bright	22B016-23
R804	3K, horiz hold	22-B016-22
R805	5K, vert hold	22B016-21
R807	5K, sub-linearity	22B016-29
R808	1K, vert linearity	22B016-27
R809	50K, horiz frequency	22B016-13
R810	10K, AGC level	22B016-8
R811	1K, AGC level	22B016-27
R812	1K, AGC	22B016-28
R814	1M, sub-bright	22B016-26
D10	damp diode	53B017-1
D12	focus rectifier	53B010-10
TH1	thermistor	23B008-1
TH4	thermistor	23B008-1
TVL1	VDR	23B011-1
	0.5 amp fuse (ac)	18B031-2
	1.5 amp fuse (dcl)	18B031-1
	UHF tuner	34B006-1
	VHF tuner	34B005-1

- NOTES: UNLESS OTHERWISE SPECIFIED,
 1. ALL RESISTORS ARE 1/4 WATT, 10%.
 2. CAPACITANCE VALUES GREATER THAN 1 ARE IN PICOFARADS AND VALUES LESS THAN 1 ARE IN MICROFARADS.
 3. ALL CAPACITORS ARE 10% TOLERANCE AND 50V MINIMUM RATING. EXCEPTIONS ARE NOTED IN REPLACEMENT PARTS LIST.
 4. VOLTAGES MEASURED WITH VTVM FROM POINT INDICATED TO GROUND WHILE USING A 120 VAC POWER SOURCE.
 5. VOLTAGE & CURRENT MEASUREMENTS MADE UNDER NO SIGNAL CONDITIONS WITH VOLUME CONTROL SET TO MINIMUM. CONTRAST AND BRIGHTNESS CONTROLS ARE SET TO PRODUCE A NORMAL PICTURE.
 6. F1, F2, ETC. INDICATE NUMBERED TERMINALS ON H.O.T. (FLYBACK TRANSFORMER) I/O'S.

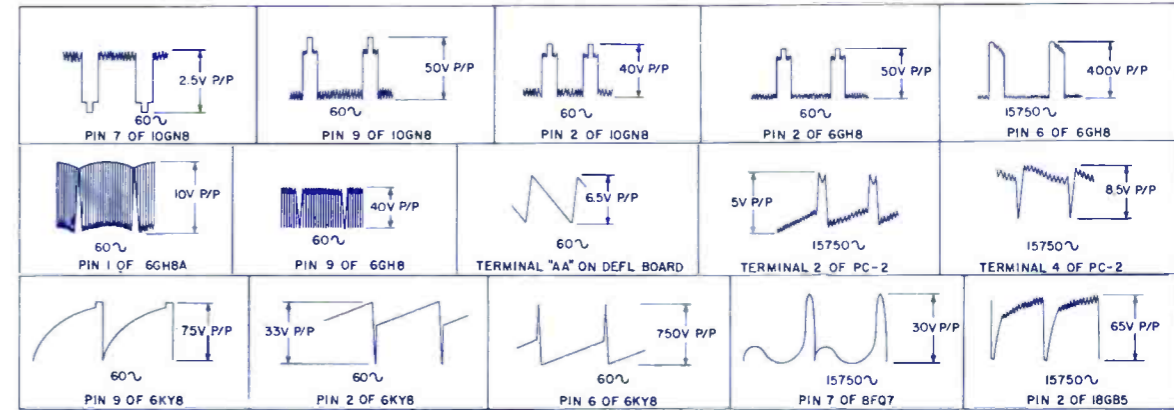




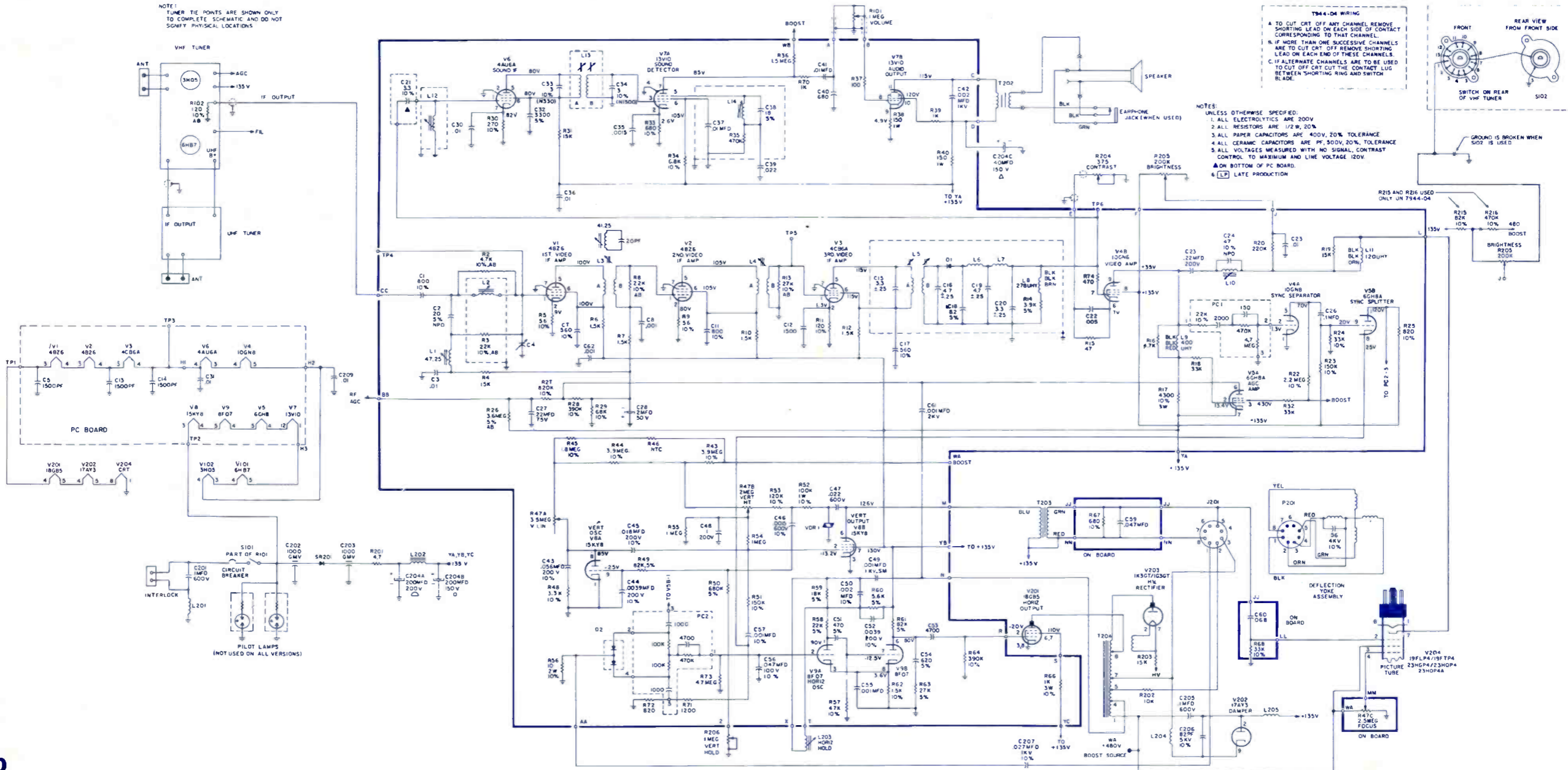
MAGNAVOX

TV Chassis T944 Series

ELECTRONIC TECHNICIAN / DEALER



NOTE: TUNER TIE POINTS ARE SHOWN ONLY TO COMPLETE SCHEMATIC AND DO NOT SIGNIFY PHYSICAL LOCATIONS

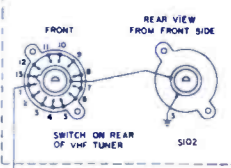


T944-D4 WIRING

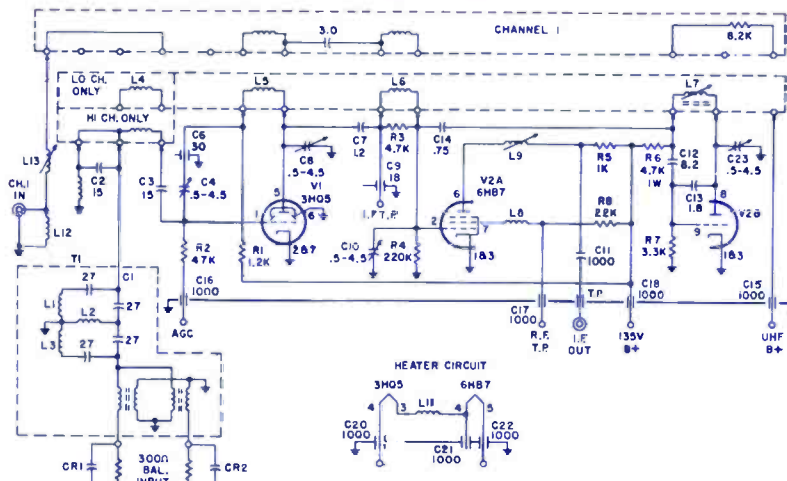
A. TO CUT CRT OFF ANY CHANNEL REMOVE SHORTING LEAD ON EACH SIDE OF CONTACT CORRESPONDING TO THAT CHANNEL.

B. IF MORE THAN ONE SUCCESSIVE CHANNELS ARE TO CUT CRT OFF REMOVE SHORTING LEAD ON EACH END OF THESE CHANNELS.

C. IF ALTERNATE CHANNELS ARE TO BE USED TO CUT OFF CRT CUT THE CONTACT LUG BETWEEN SHORTING RING AND SWITCH BLADE.



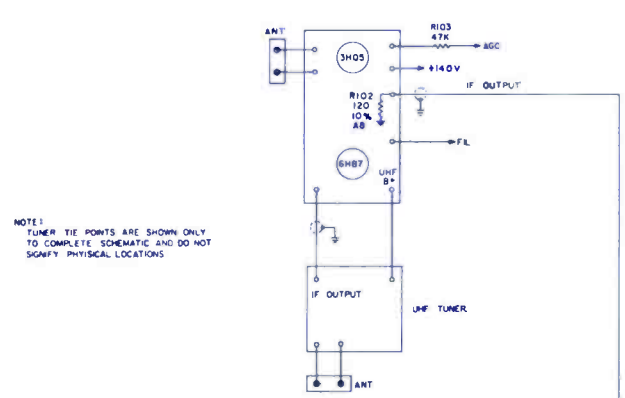
- NOTES:
- UNLESS OTHERWISE SPECIFIED:
 - ALL ELECTROLYTICS ARE 200V
 - ALL RESISTORS ARE 1/2 W, 20%
 - ALL PAPER CAPACITORS ARE 400V, 20% TOLERANCE
 - ALL CERAMIC CAPACITORS ARE PF, 500V, 20% TOLERANCE
 - ALL VOLTAGES MEASURED WITH NO SIGNAL, CONTRAST CONTROL TO MAXIMUM AND LINE VOLTAGE 120V
 - ▲ ON BOTTOM OF PC BOARD.
 - ◻ LATE PRODUCTION



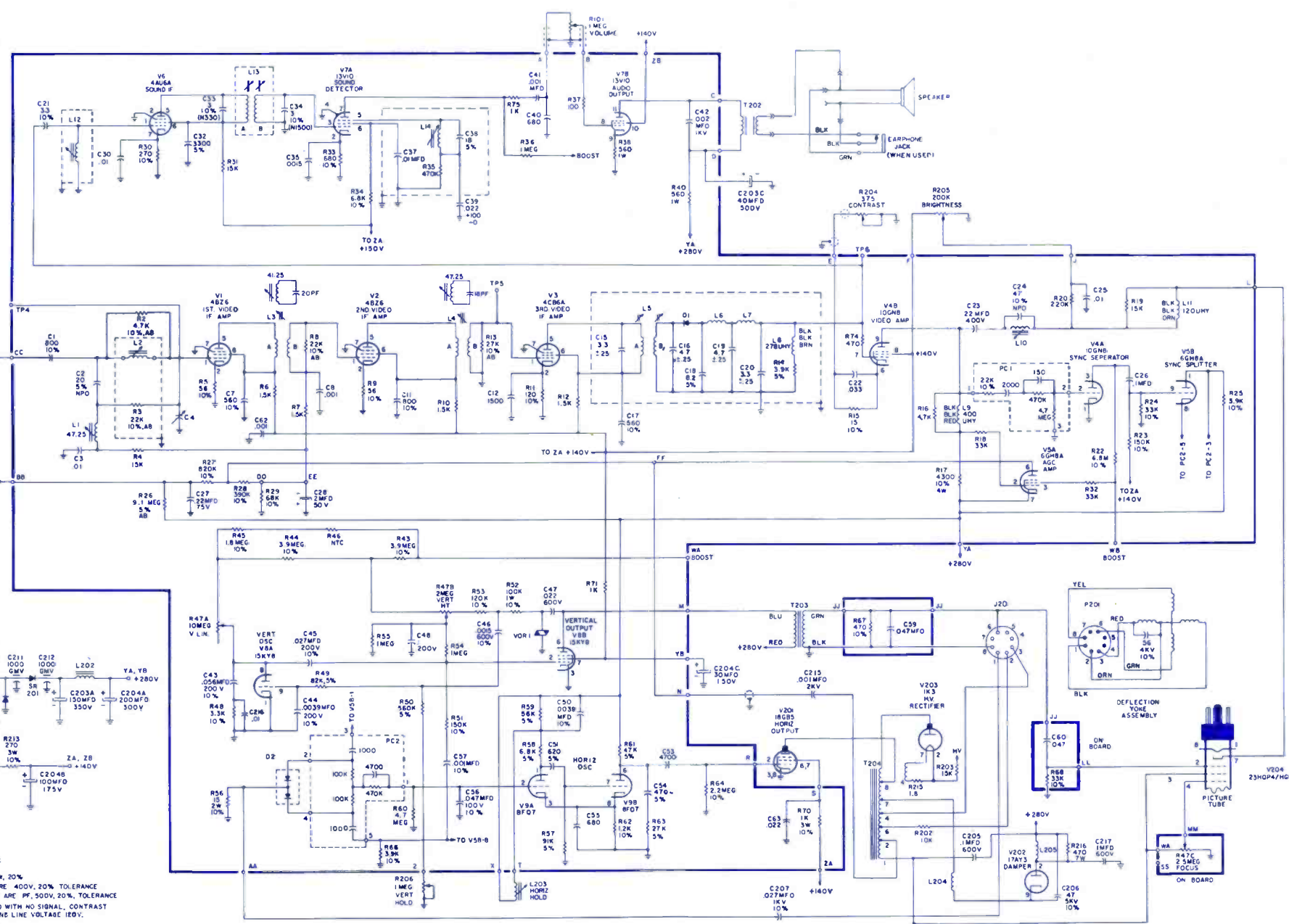
340165 VHF TUNER SCHEMATIC

SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L4	2nd IF xformer	361170-2
L11	120μh peaking coil	360853-8
L12	sound take-off coil	360845-1
L13	sound IF xformer	360846-3
L201	line radiation choke	361075-1
L202	reactance choke	320348-1
L203	horiz osc coil	361171-2
T202	audio output xformer	320348-1
T203	vert output xformer	320345-1
K206	1M v hold	220208-50
PC1	sync separator pac	250526-2
PC2	horiz AFC pac	250377-1
VDR1	voltage dependent resistor	230167-2
	circuit brkr	180723-3
	VHF tuner	340165-1
	UHF tuner	340141-5

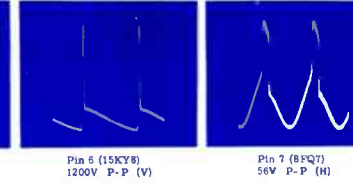
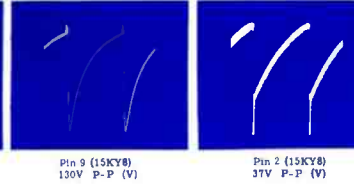
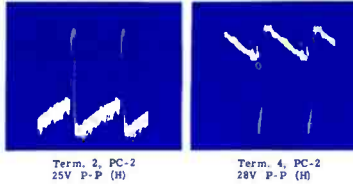
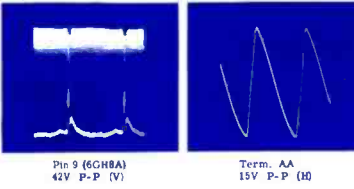
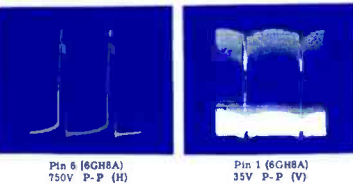
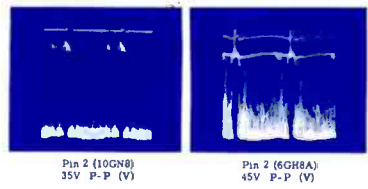
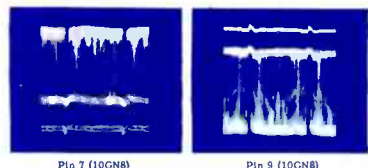
T204	horiz output xformer	361294-1
	def yoke	361304-2
C202	elec. 150μf, 200v	27007-17
C203	elec. 150/350v, 40/300v, & 100/200v	270071-14
C204	elec. 200/300v, 100/175v, & 30/150v	270071-16
R46	therm NTC	230130-2
R201	4.7, 7w WW	240081-19
R216	470, 10%, 7w glass	230197-4719
R47	10Mv lin, 2Mv height, 2.5M focus	220218-2
R101	1M volume-on-off	220135-31
R204	375Ω contrast	220232-10
R205	200K bright	220208-48



NOTE: TUNER TIE POINTS ARE SHOWN ONLY TO COMPLETE SCHEMATIC AND DO NOT SHOW PHYSICAL LOCATIONS



- NOTES:
1. ALL RESISTORS ARE 1/2 W, 20%
 2. ALL PAPER CAPACITORS ARE 400V, 20% TOLERANCE
 3. ALL CERAMIC CAPACITORS ARE PF, 500V, 20% TOLERANCE
 4. ALL VOLTAGES MEASURED WITH NO SIGNAL, CONTRAST CONTROL TO MAXIMUM AND LINE VOLTAGE 100V.
 5. EP - EARLY PRODUCTION.
 6. LP - LATE PRODUCTION.



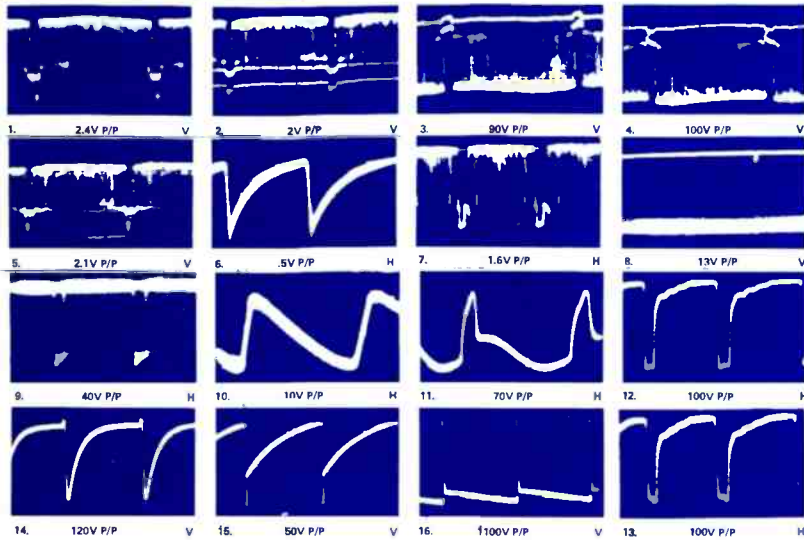
(V): Vertical Sweep Rate

(H): Horizontal Sweep Rate

MAGNAVOX

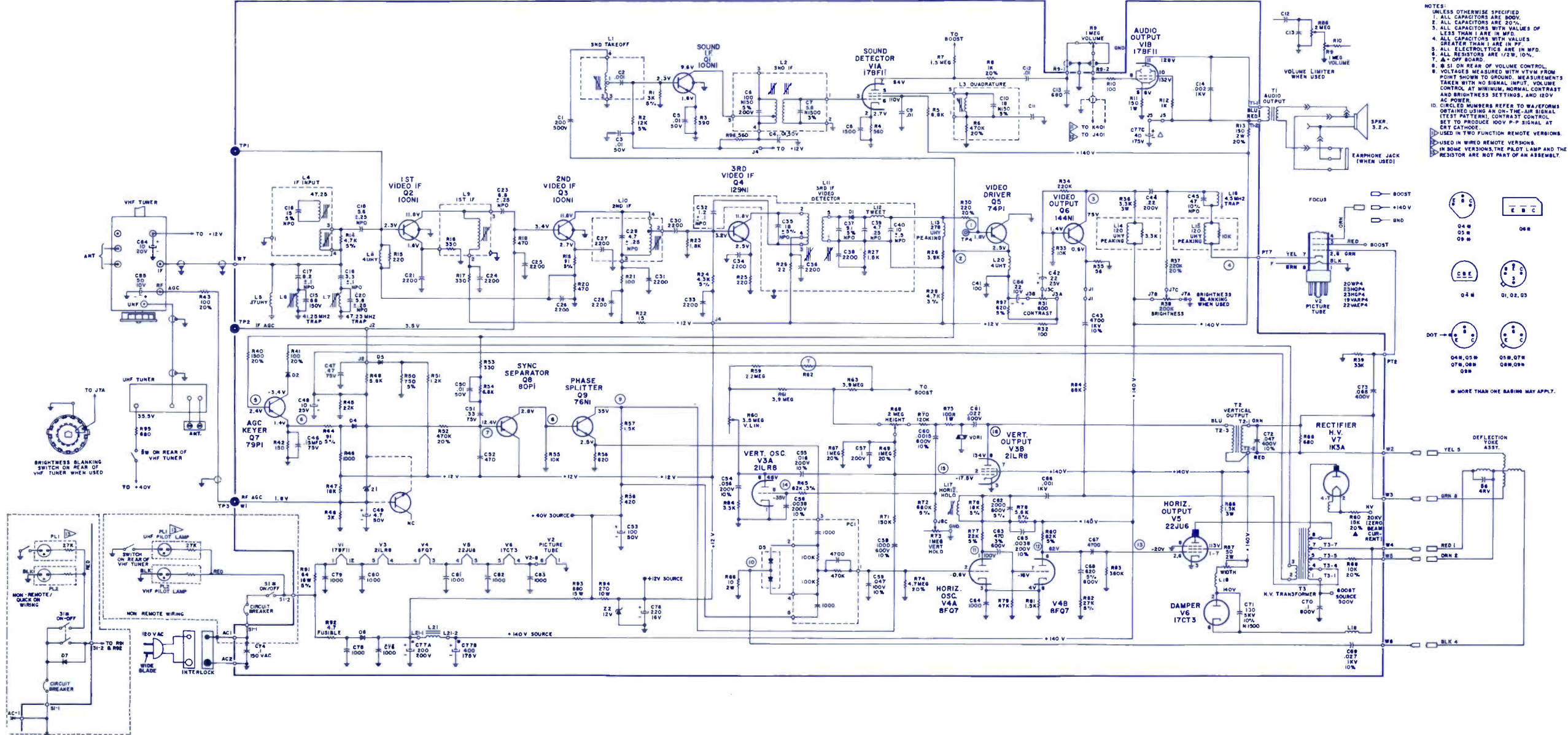
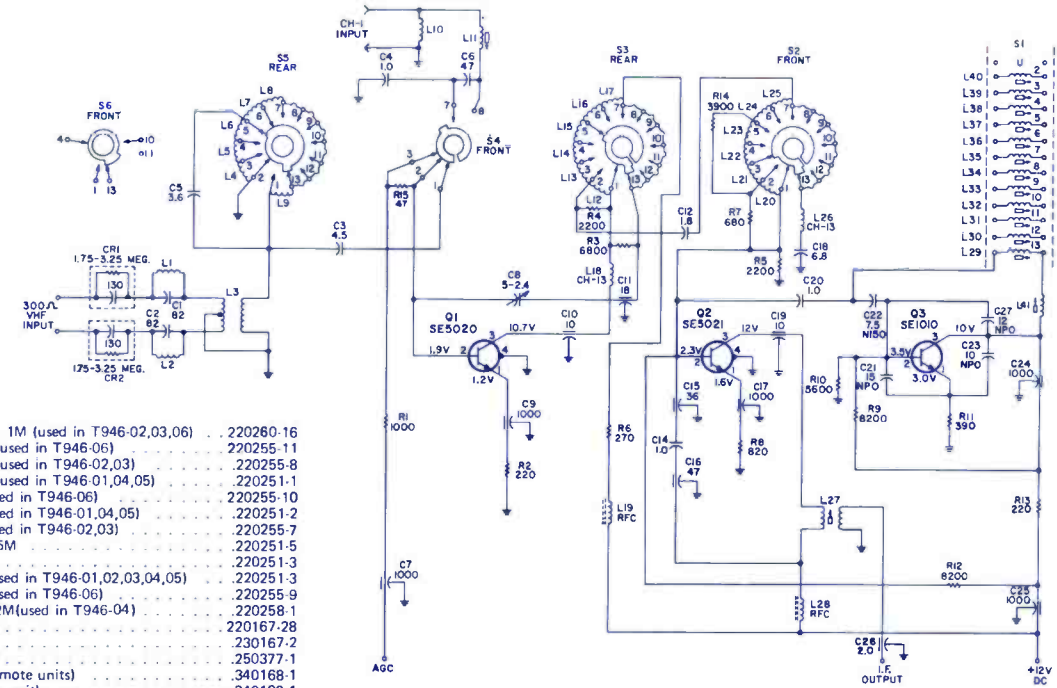
TV Chassis
T946 Series

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

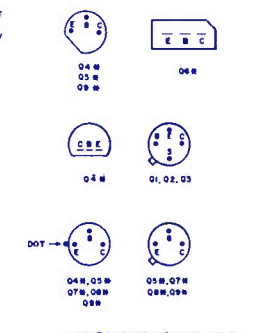


SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L1	sound take-off coil	361344-1
L2	sound interstage xformer	361369-1
L3	quadrature coil	360847-2
L6	41.25MHz trap coil	361381-1
L16	4.5MHz trap coil	360851-1
L21	filter choke	320367-1
T1	audio output xformer	320368-1
T2	vert output xformer	320369-1
T3	horiz output xformer	361373-1
	deflection yoke	361377-1
C1	silver mica, 200pf, 20%, 500v	250366-537
C77	200µf, 200v, 400/40µf, 175v electrolytic	270099-12
R62	thermistor	230130-2
R92	4.7, 10%, fusible	240098-1
R9	volume, w/switch, 1M (used in T946-01,04,05)	220247-7008

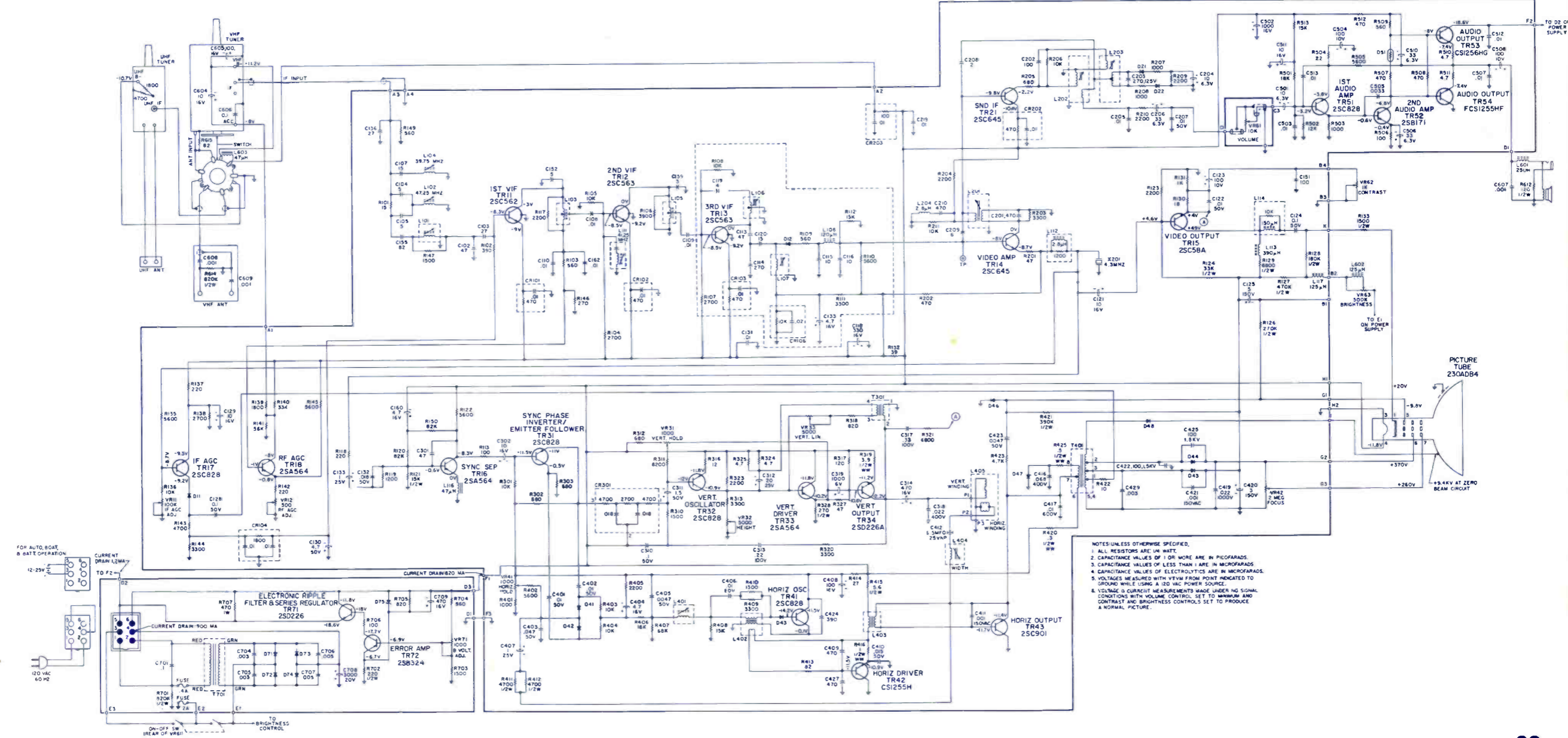
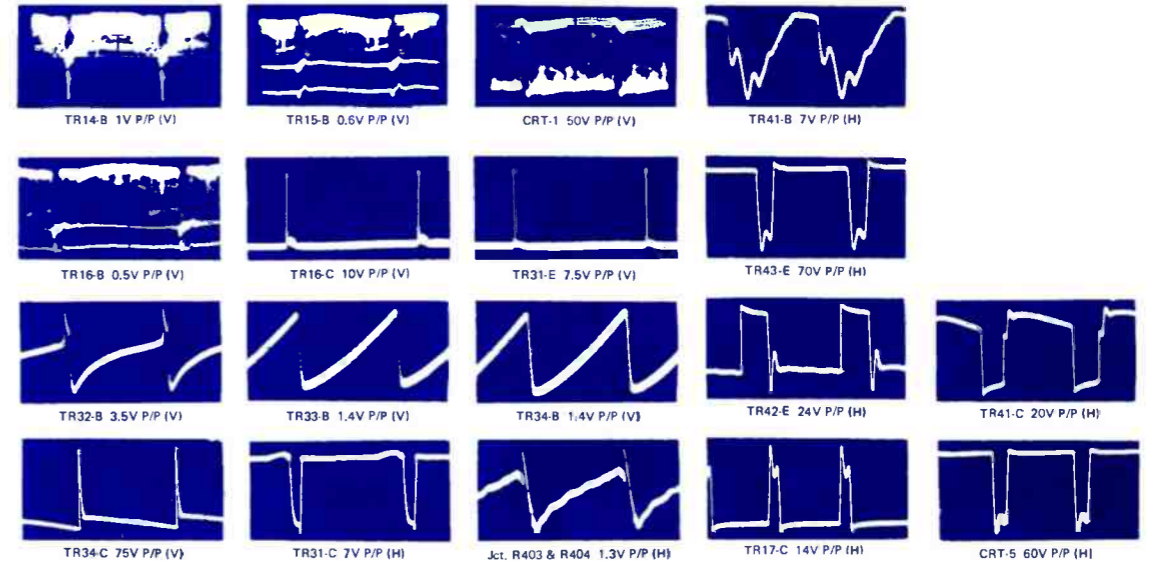
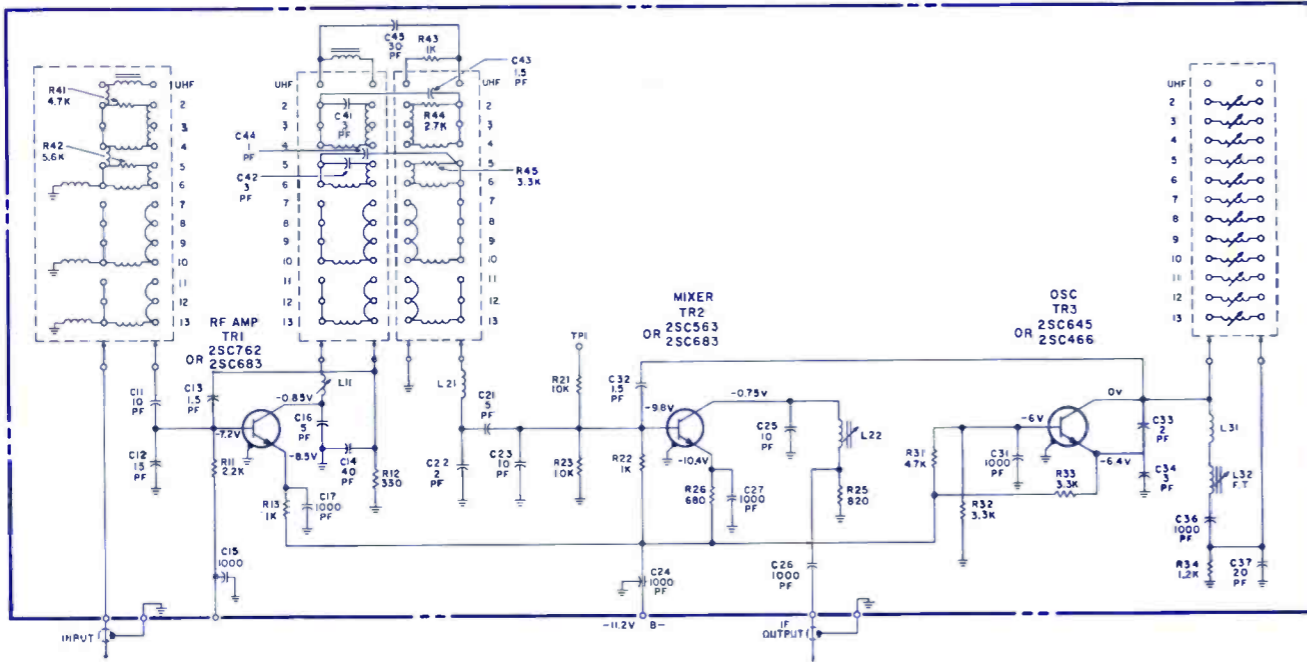
R9	volume, w/switch, 1M (used in T946-02,03,06)	220260-16
R31	contrast, 600Ω (used in T946-06)	220255-11
R31	contrast, 600Ω (used in T946-02,03)	220255-8
R31	contrast, 600Ω (used in T946-01,04,05)	220251-1
R38	bright, 200K (used in T946-06)	220255-10
R38	bright, 200K (used in T946-01,04,05)	220251-2
R38	bright, 200K (used in T946-02,03)	220255-7
R60	vert linearity, 3.5M	220251-5
R68	height 2M	220251-3
R73	vert hold, 1M (used in T946-01,02,03,04,05)	220251-3
R73	vert hold, 1M (used in T946-06)	220255-9
R86	volume limiter, 2M (used in T946-04)	220258-1
R87	width, 50	220167-28
VDR1	varistor	230167-2
PC1	packaged circuit	250377-1
	VHF tuner (non-remote units)	340168-1
	UHF tuner (remote unit)	340189-1
	circuit breaker	180723-7003



- NOTES:
- UNLESS OTHERWISE SPECIFIED ALL CAPACITORS ARE 50V.
 - ALL CAPACITORS ARE 20%.
 - ALL CAPACITORS WITH VALUES OF LESS THAN 1 ARE IN MFD.
 - ALL CAPACITORS WITH VALUES GREATER THAN 1 ARE IN PFD.
 - ALL ELECTROLYTICS ARE IN MFD.
 - ALL RESISTORS ARE 1/2W, 10%.
 - AT OFF BOARD.
 8. S1 ON REAR OF VOLUME CONTROL.
 - VOLTAGES MEASURED WITH VTVM FROM POINT SHOWN TO GROUND. MEASUREMENTS TAKEN WITH NO SIGNAL INPUT. VOLUME CONTROL AT MINIMUM, NORMAL CONTRAST AND BRIGHTNESS SETTINGS, AND 120V AC POWER.
 - CIRCLED NUMBERS REFER TO WAVEFORMS OBTAINED USING AN ON-THE-AIR SIGNAL (TEST PATTERN). CONTRAST CONTROL SET TO PRODUCE 100V P-P SIGNAL AT CRT CATHODE.
 - USED IN TWO FUNCTION REMOTE VERSIONS.
 - IN SOME VERSIONS THE PILOT LAMP AND RESISTOR ARE NOT PART OF AN ASSEMBLY.



VHF TUNER SCHEMATIC DIAGRAM



NOTES: UNLESS OTHERWISE SPECIFIED:
 1. ALL RESISTORS ARE 1/4 WATT.
 2. CAPACITANCE VALUES OF 1 OR MORE ARE IN PICOFARADS.
 3. CAPACITANCE VALUES OF LESS THAN 10 ARE IN MICROFARADS.
 4. CAPACITANCE VALUES OF ELECTROLYTICS ARE IN MICROFARADS.
 5. VOLTAGES MEASURED WITH VTVM FROM POINT INDICATED TO GROUND WHILE USING A 120 VAC POWER SOURCE.
 6. VOLTAGE & CURRENT MEASUREMENTS MADE UNDER NO SIGNAL CONDITIONS WITH VOLUME CONTROL SET TO MINIMUM AND CONTRAST AND BRIGHTNESS CONTROLS SET TO PRODUCE A NORMAL PICTURE.

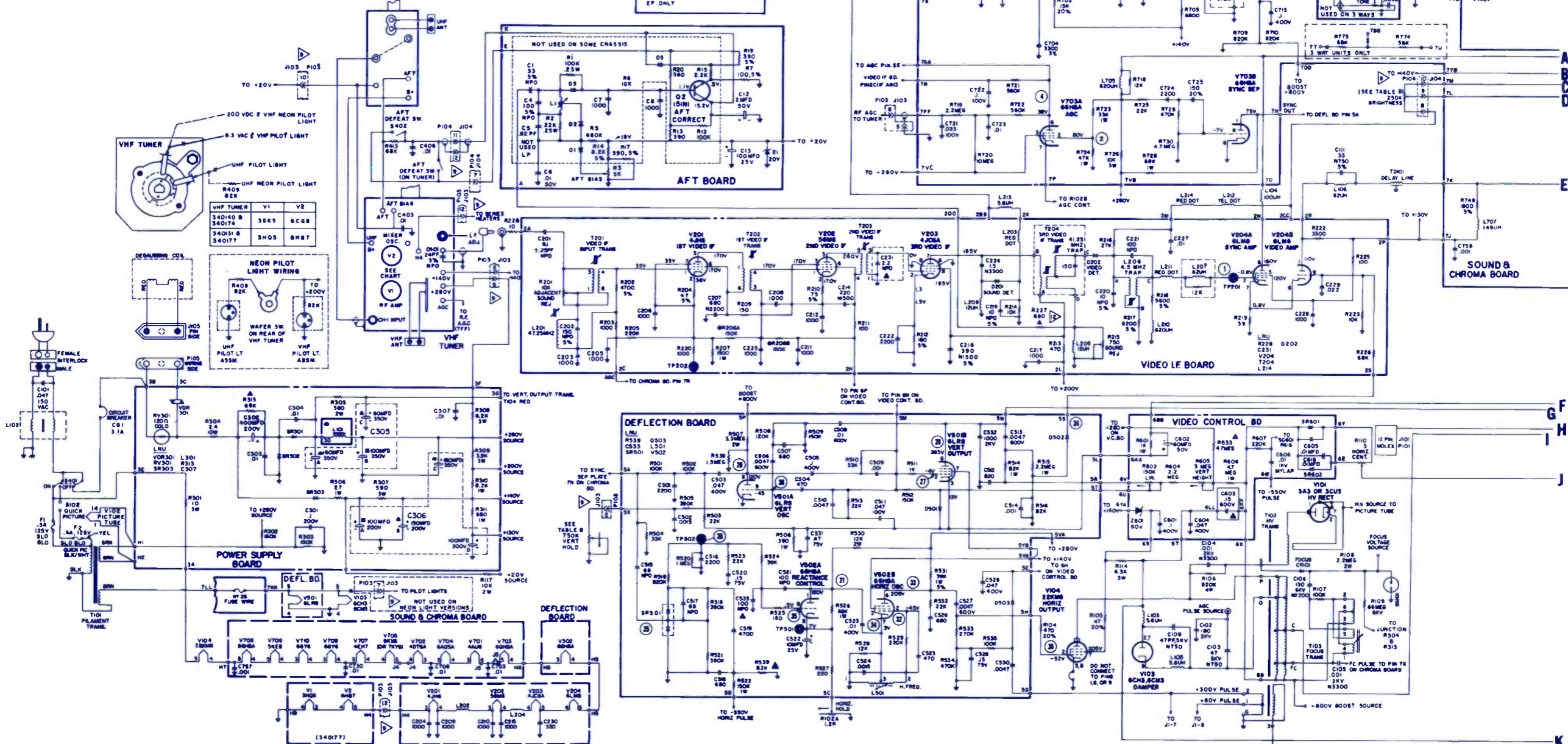
SYM80L	DESCRIPTION	MAGNAVOX PART NO.
L1	—discriminator coil	361384-1
L101	—filter choke	320124-1008
L501	—horiz frequency coil	361269-1
L701	—4.5MHz sound take-off coil	360845-2
L702	—sound IF coil	360846-3
L703	—quadrature coil	360847-2
L717	—chroma take-off coil	360959-4
T101	—filament xformer	320359-4
T102	—high voltage (horiz output) xformer	361383-2
T103	—focus coil	361306-1

T104	—vert output xformer	320374-4
T301	—audio output xformer	320130-16
T701	—bandpass xformer	361192-1
T702	—burst xformer	361296-1
T703	—3.58MHz ATC chassis	361296-2
T703	—3.58MHz Osc xformer	361198-1
C305	—elect, 160/100/60µf, 350v	270071-22
C306	—elect, 180µf, 350v, 150/100/100µf, 250v	270071-20
R3	—5K AFT bias	220217-13
R102A	—1200, H Hold (T950-01-05, 08-13)	220248-5
R102A	—1200, H Hold (T950-06, 07)	220146-71
R102B	—50K, AGC (T950-01-05, 08-13)	220248-5

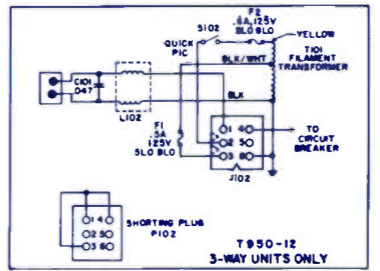
R102B	—50K, AGC (T950-06, 07)	220208-55
R103A	—1M, color killer (T950-01, 03, 04, 06-08, 10-13)	220208-45
R103A	—1M, color killer (T950-02, 05, 09)	220248-7
R1158	—600, sharpness (T950-01-05, 8-10)	220248-6
R1158	—600, sharpness (T950-06, 07, 11-13)	220208-57
R118	—600, contrast (T950-01, 02, 03, 06, 07, 13)	220146-29
R120	—200K CRT bias	220208-44
R122	—250K, bright (T950-01, 02, 03, 13)	220146-49
R123	—250K, preference (T950-01, 02)	220146-78
R215	—750, sound rejection	220166-4

R404	—250K, bright (T950-04, 05, 08, 09, 10, 11)	220146-49
R404	—250K, bright (T950-06, 07, 12)	220232-19
R406	—750K, V. Hold (T950-04, 05, 08, 09, 10, 11)	220146-50
R406	—750K, V. Hold (T950-12)	220232-23
R407	—600, contrast (T950-04, 05, 08, 09, 10, 11)	220146-29
R407	—600, contrast (T950-12)	220232-24
R602	—150K, V. Lin	220166-21
R603	—50K, height	220166-22
R632	—50K, high voltage adj	220193-25
R737	—750, chroma tilt	220217-10
CR101	—focus rectifier	530132-1
CB1	—circuit breaker, 3.1a	180723-2

F1	—fuse, 5a, 125v, slow blow	180157-17
F2	—fuse, 6a, 125v, slow blow	180948-5060
RV301	—thermistor, 120 (cold)	230170-3
VDR101	—varistor	230173-3
VDR301	—varistor	230175-2



- NOTES
 1. UNLESS OTHERWISE SPECIFIED:
 1. INDICATES RESISTOR MATCHED WITHIN 2%
 2. ARROW INDICATES CLOCKWISE ROTATION WHEN CONTROL IS VIEWED FROM ACTUATOR END.
 3. - OF BOARD.
 4. - UNDERSIDE OF PCB BOARD (COPPER SIDE).
 5. CAPACITANCE VALUES GREATER THAN 1µF ARE IN PICOFARADS.
 6. CAPACITANCE VALUES OF 1 OR LESS ARE IN MICROFARADS.
 7. ALL VOLTAGES MEASURED WITH NO SIGNAL EXCEPT THAT IDENTIFIED WITH AN ASTERISK (*).
 8. SOURCE VOLTAGES MEASURED WITH SIGNAL.
 9. SELECT I/O A OR 22µA FOR BEST BLUE CONVERGENCE.
 10. RESISTORS ARE 10% .5WATT.
 11. AFT UNITS ONLY.
 12. CAPACITORS ARE 10% .500V.
 13. NON-3 WAY UNITS, USE 220PF.
 14. 3-WAY UNITS, USE 1500PF.
 15. EP - EARLY PRODUCTION.



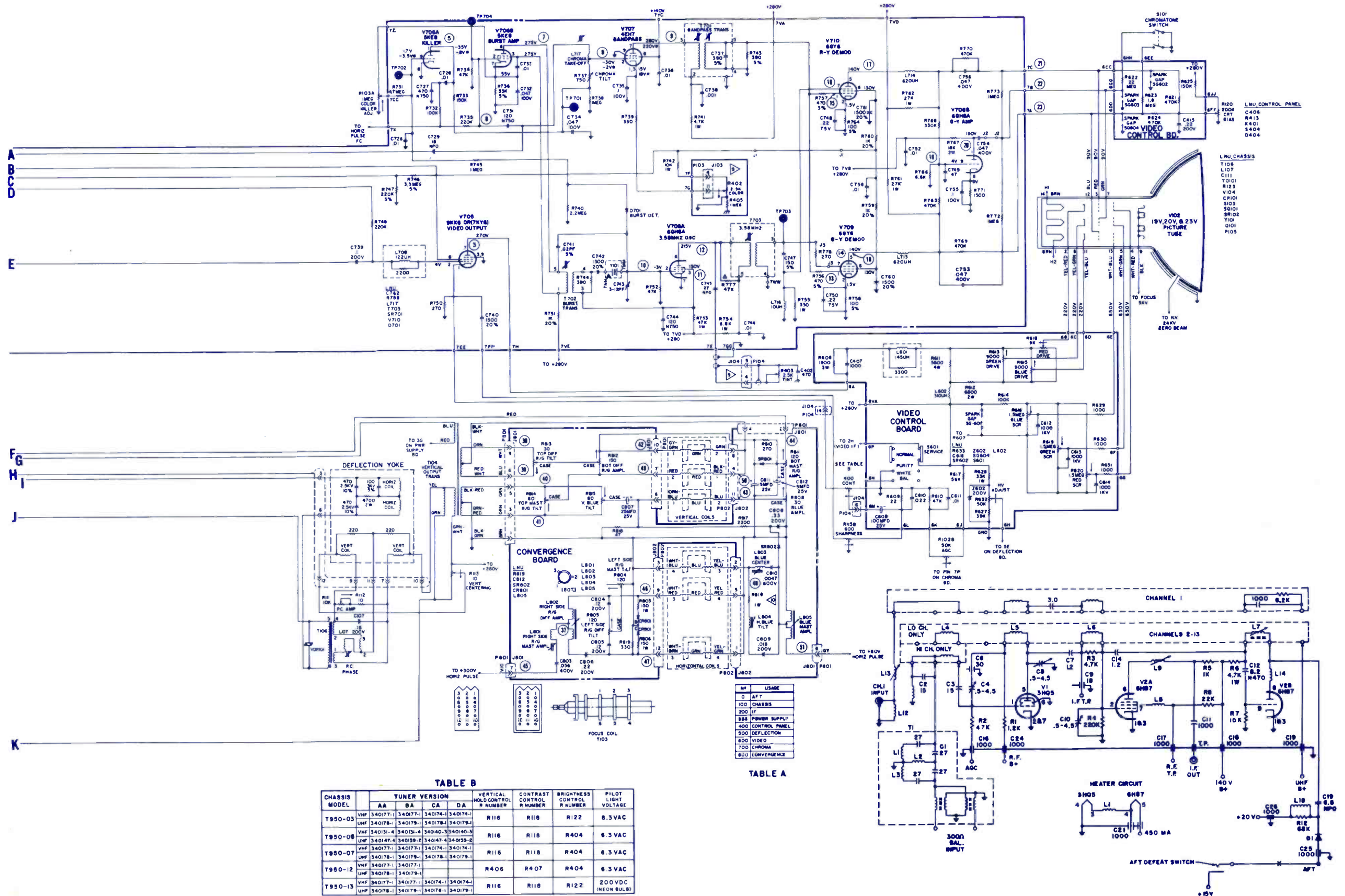
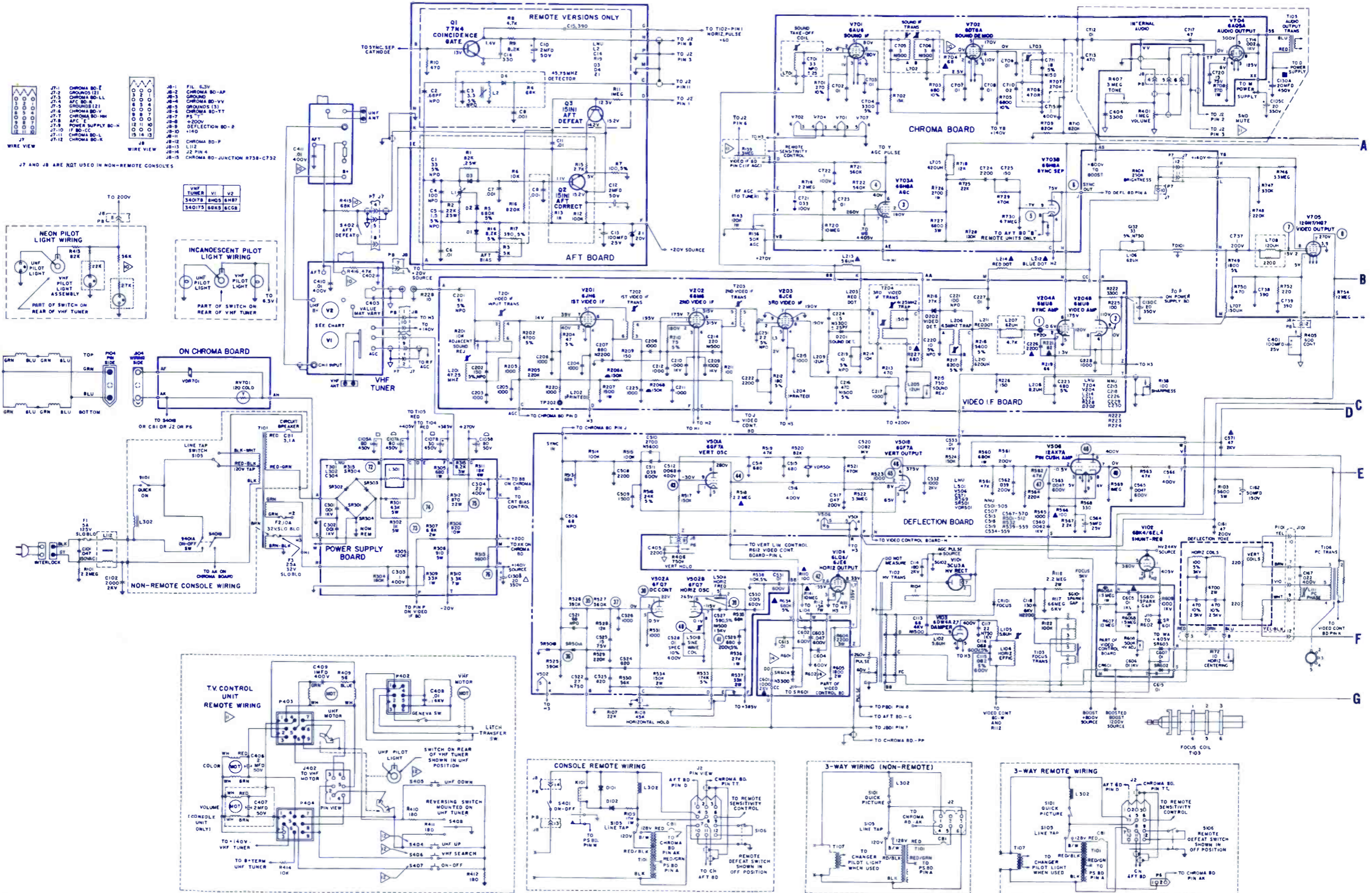


TABLE B

CHASSIS MODEL	TUNER VERSION				VERTICAL HOLD CONTROL R NUMBER	CONTRAST CONTROL R NUMBER	BRIGHTNESS CONTROL R NUMBER	PILOT LIGHT VOLTAGE
	AA	BA	CA	DA				
T950-03	VHF 340177-1	340177-1	340174-1	340174-1	R116	R118	R122	6.3 VAC
	UHF 340178-1	340178-1	340178-1	340178-1				
T950-06	VHF 340131-4	340131-4	340140-3	340140-3	R116	R118	R404	6.3 VAC
	UHF 340147-4	340159-2	340147-4	340159-2				
T950-07	VHF 340177-1	340177-1	340174-1	340174-1	R116	R118	R404	6.3 VAC
	UHF 340178-1	340178-1	340178-1	340178-1				
T950-12	VHF 340177-1	340177-1			R406	R407	R404	6.3 VAC
	UHF 340178-1	340178-1						
T950-13	VHF 340177-1	340177-1	340174-1	340174-1	R116	R118	R122	200 VDC (NEON BULB)
	UHF 340178-1	340178-1	340178-1	340178-1				

TABLE A

HT	USAGE
0	AFT
100	CHASSIS
200	IF
300	POWER SUPPLY
400	CONTROL PANEL
500	DEFLECTION
600	VIDEO
700	CHROMA
800	CONVERGENCE



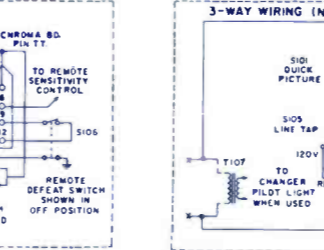
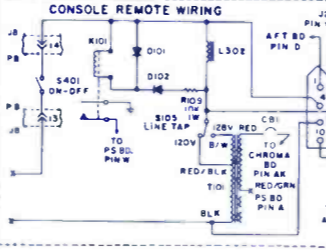
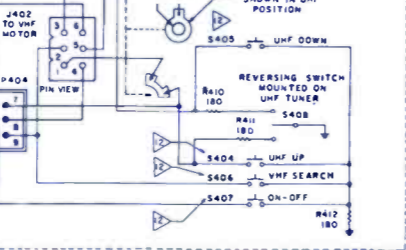
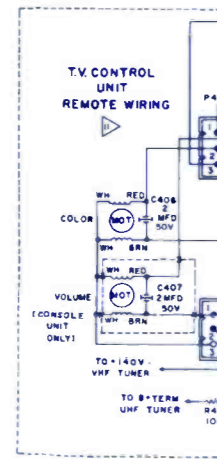
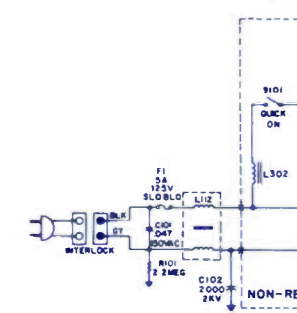
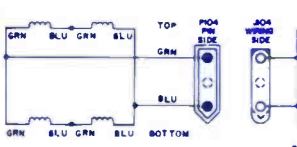
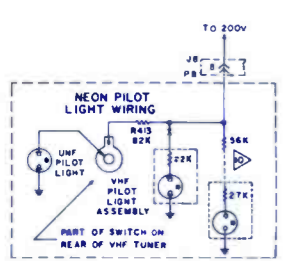
WIRE VIEW

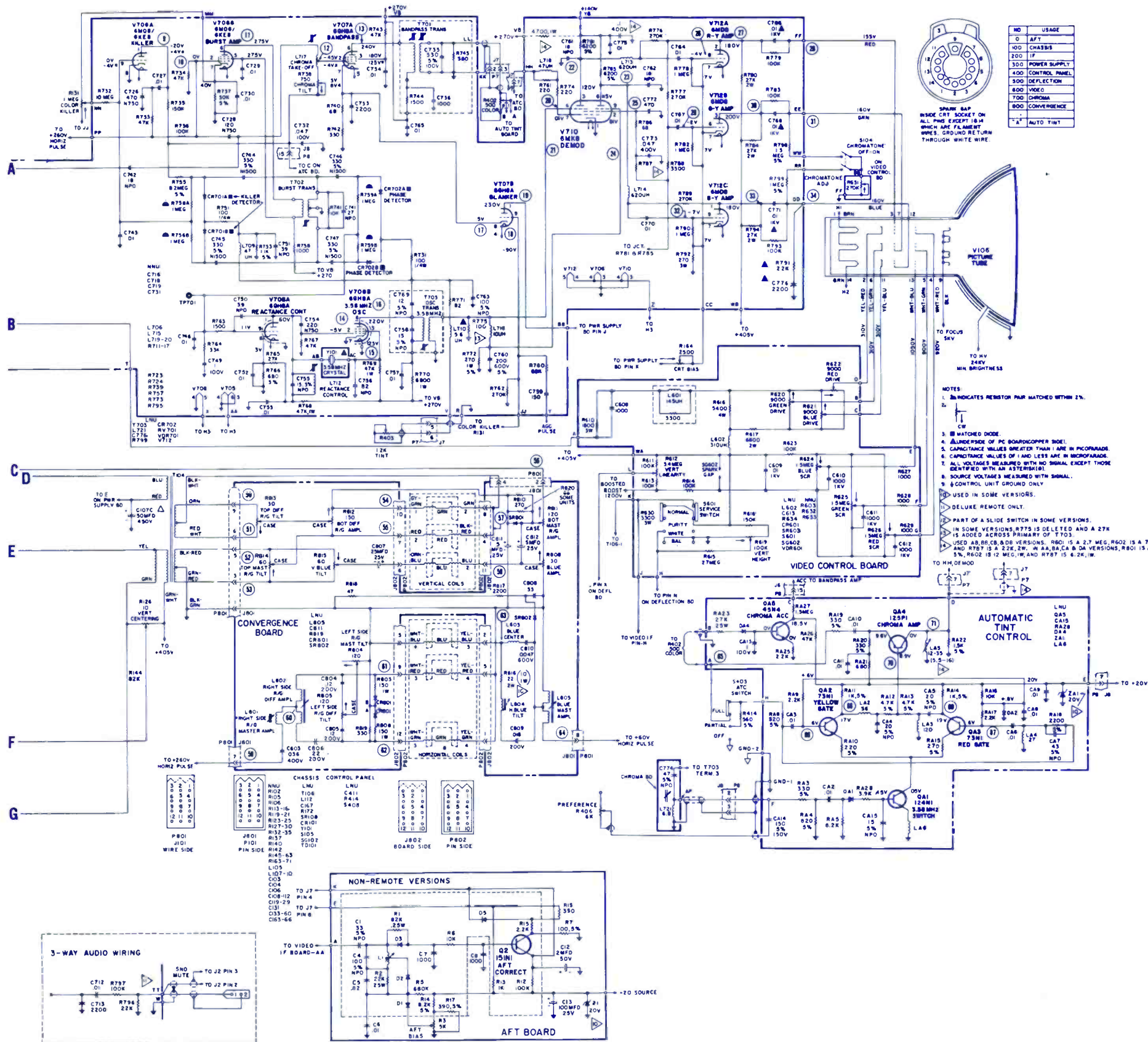
J7-1	CHROMA BO-E
J7-2	CHROMA BO-L
J7-3	CHROMA BO-V
J7-4	CHROMA BO-VV
J7-5	CHROMA BO-VT
J7-6	CHROMA BO-VV
J7-7	CHROMA BO-VV
J7-8	CHROMA BO-VV
J7-9	CHROMA BO-VV
J7-10	CHROMA BO-VV
J7-11	CHROMA BO-VV
J7-12	CHROMA BO-VV

J7 AND J8 ARE NOT USED IN NON-REMOTE CONSOLES

WIRE VIEW

J8-1	FIL 6.3V
J8-2	CHROMA BO-AP
J8-3	CHROMA BO-VV
J8-4	CHROMA BO-VV
J8-5	CHROMA BO-VV
J8-6	CHROMA BO-VV
J8-7	CHROMA BO-VV
J8-8	CHROMA BO-VV
J8-9	CHROMA BO-VV
J8-10	CHROMA BO-VV
J8-11	CHROMA BO-VV
J8-12	CHROMA BO-VV
J8-13	CHROMA BO-VV
J8-14	CHROMA BO-VV
J8-15	CHROMA BO-VV





SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L1	-Discriminator Coil	361384-1
L2	-detector coil	361332-1
L103	-RF choke, 5.6μh	360676-5
L104	-horiz efficiency coil	361022-5
L201	-47.25 trap transformer	360951-4
L301	-filter choke	320124-9
L501	-sine wave/horiz frequency	360960-3
L701	-sound take-off coil	360845-2
L702	-sound IF coil	360846-3
L703	-quad coil	360847-2
L712	-reactance coil	360963-3
L714	-peaking coil, 620μh	360853-11
L717	-chroma take-off	360959-5
T101	-power xformer	300251-5
T102	-high voltage xformer	361375-2
T103	-focus xformer	361306-1
T104	-vert output xformer	320317-10
T105	-audio output xformer	320130-5
T202	-first IF xformer	360951-6
T701	-bandpass xformer	361093-2
T702	-burst xformer	361094-2
T703	-3.58 oscillator xformer	361198-2
	-deflection yoke	361380-1
C105	-elect, 80/80μf, 450v, 20μf, 350v	270071-12
C105	-elect, 80/80μf, 450v	270071-13
C107	-elect, 80/30/50μf, 450v	270071-21
C130	-elect, 20μf, 450v, 20/20μf, 350v	270023-42
C130	-elect, 20μf, 450v, 20μf, 350v	270023-43
C529	-silver mica, 680pf, 5%, 500v	250364-350
C735	-silver mica, 330pf, 5%, 100v	250607-3315
R112	-15K, 10%, 7w, metal oxide	230197-1539
R306	-820, 10%, 10w, WW	240082-71
R312	-870, 10%, 22w, WW	240088-7
R3	-AFT bias, 5K	220217-13
R108	-horiz hold, 45K	220146-79
R126	-vert centering, 10	220181-1
R131	-color killer, 1M	220208-34
R136	-AGC, 50K	220208-33
R164	-CRT bias, 2500	220181-11
R172	-horiz centering, 10	220181-12
R201	-adjacent sound, 10K	220182-5
R215	-sound reject, 750	220166-4
R608	-H V adjust, 500K	220166-26
R612	-vert lin, 3.4M	220166-19
R619	-height, 100K	220166-20
R631	-chromatone adj, 270K	220193-24
CB1	-circuit breaker, 3.1a	180723-2
F1	-fuse, 5n, 125v, sio blo	180157-19
F2	-fuse, 10a, 32v, sio blo	180948-3100
F3	-fuse, 25a, 32v, sio blo	180157-42
RV701	-therm, 120 cold	230170-3
TD101	-delay line	361364-1
VCR501	-varistor	230167-5
VDR701	-varistor	230175-2
Y101	-3.58MHz	530314-5

MAGNAVOX

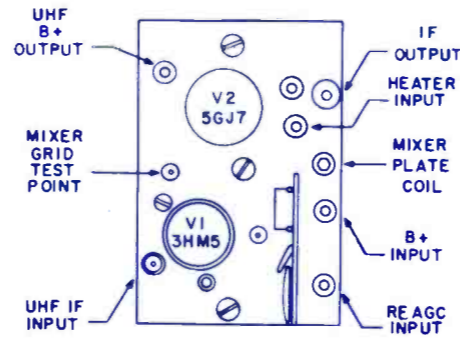
TV Chassis
T949 Series

ELECTRONIC TECHNICIAN / DEALER **TEKFAX**

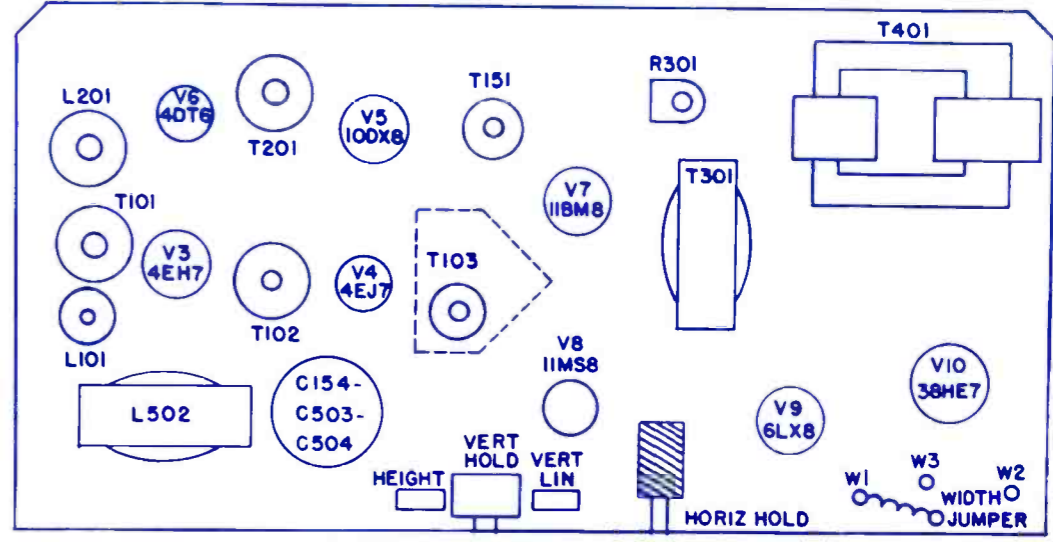
SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L101	—47.25MHz trap coil	36C011-2
L103	—peaking coil	36C011-13
L201	—quad coil	36C011-8
L401	—horiz osc coil	36C011-17
T101	—VIF xformer	36C011-3
T102	—VIF xformer	36C011-4
T103	—VIF xformer	36C011-5
T151	—sound take-off xformer	36C011-6
T201	—SIF xformer	36C011-7
T202	—audio output xformer	32C001-1
T301	—vert output xformer	36C011-18
T401	—horiz output xformer	36C011-19
T402	—deflection yoke	25X009-1219
C412	—ceramic, 120pf, 10%, 5kv	27C020-1
C504	—electrolytic, 250µf 200µf 10µf, 180v	23C004-2
R410	—1000, 10%, 2w, metal oxide	22C007-2
R154	—contrast, 20K	

R157	—bright, 200K	22C007-3
R209	—vol, (includes switch) 1M	22C007-1
R301	—AGC, 1K	22C007-7
R354	—vert hold, 1.5M	22C007-4
R350	—vert lin, 2M	22C007-6
R360	—height, 500K	22C007-5
Z102	—VIF pac	25C027-1
Z201	—SIF pac	25C027-2
Z203	—SIF pac	25C027-3
Z301	—sync sep pac	25C027-4
Z302	—vert int pac	25C027-5
Z402	—horiz osc pac	25C027-6
Z501	—isolation pac	25C026-1
D101	—germanium diode	53C001-1
D401	—dual diode	53C008-1
D501	—silicon diode	53C005-3
M3	—UHF tuner	34C002-3
M4	—VHF tuner	34C002-2
X501	—2a fuse	18C014-1

VHF TUNER LAYOUT



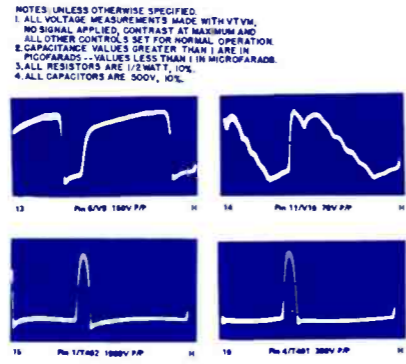
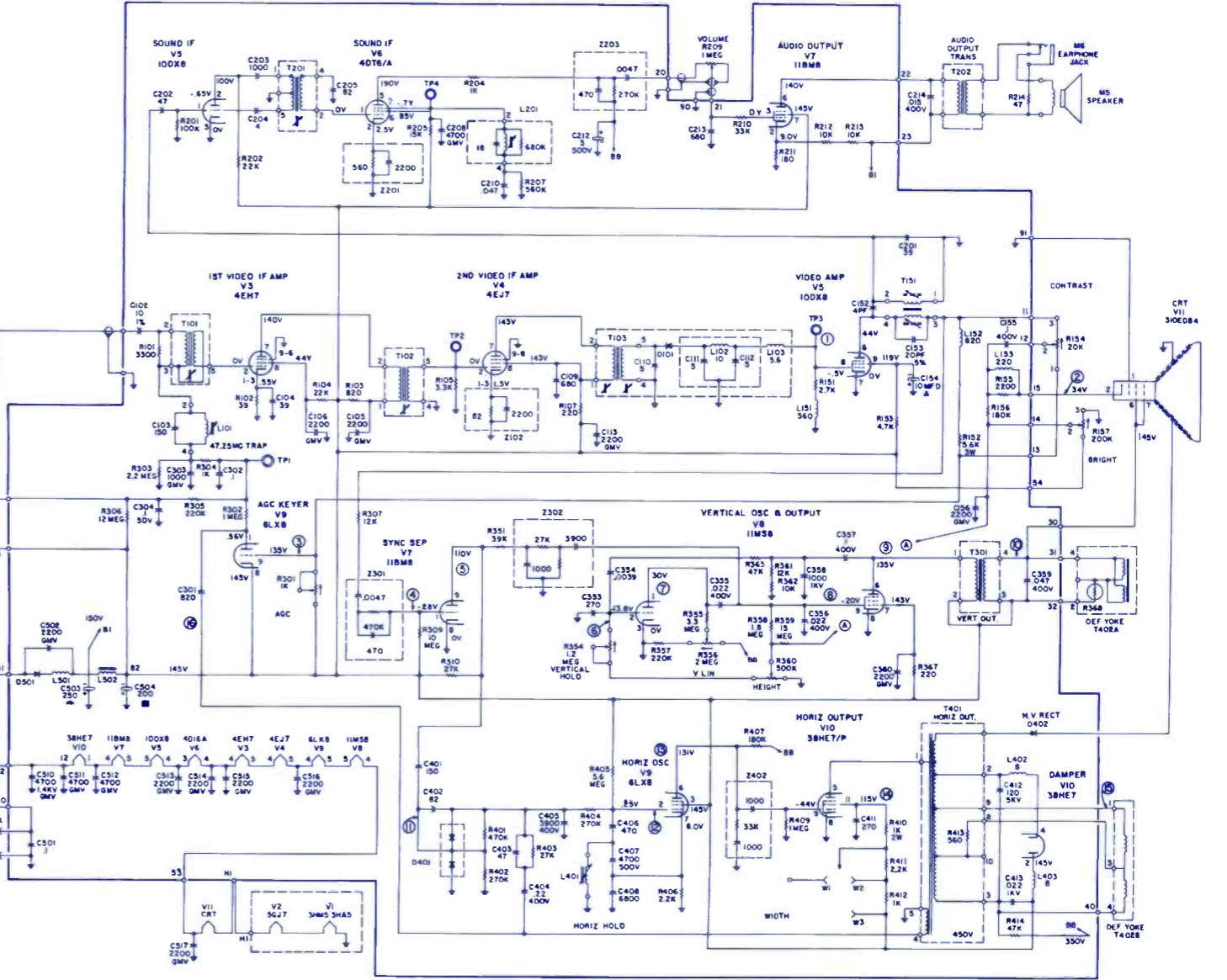
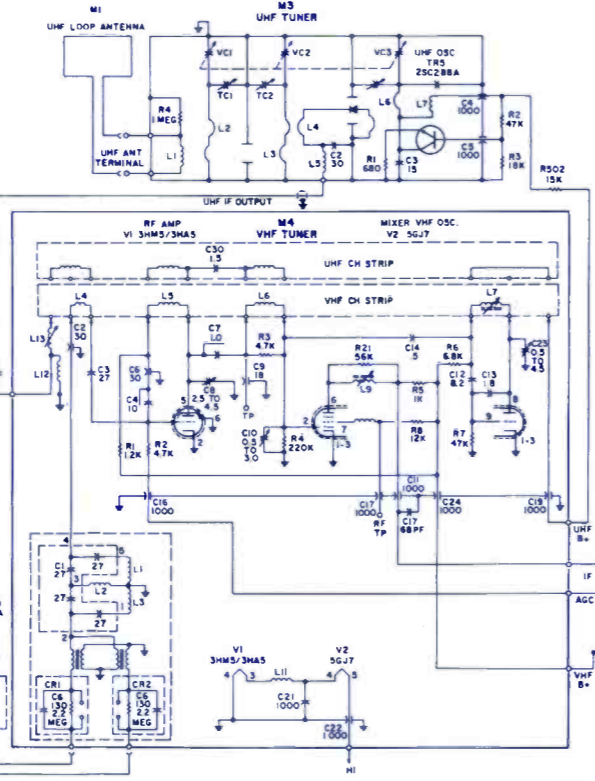
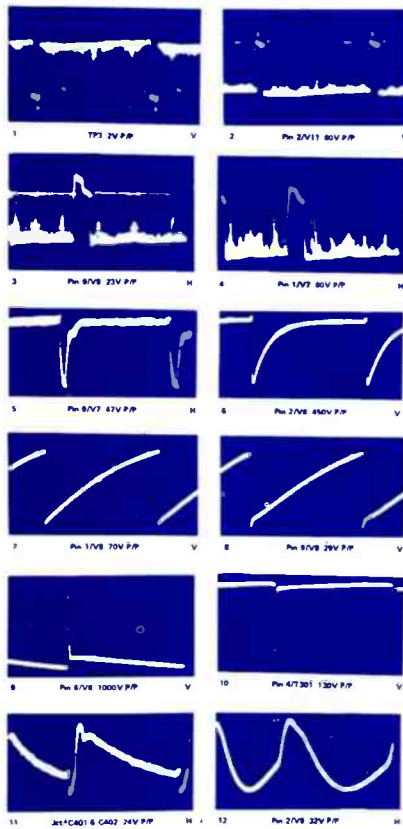
CIRCUIT BOARD TOP LAYOUT



WAVEFORMS

Waveforms measured with signal, controls set for normal operation, and 5.5 VDC at TP1.

V=Vertical Sweep Rate H=Horizontal Sweep Rate



NOTES: UNLESS OTHERWISE SPECIFIED:
1. ALL VOLTAGE MEASUREMENTS MADE WITH VTVM.
2. NO SIGNAL APPLIED, CONTRAST AT MAXIMUM AND ALL OTHER CONTROLS SET FOR NORMAL OPERATION.
3. CAPACITANCE VALUES GREATER THAN 1µ ARE IN MICROFARADS - VALUES LESS THAN 1µ IN PICOFARADS.
4. ALL RESISTORS ARE 1/2WATT, 10%.

NOTES:

VOLTAGE MEASUREMENTS

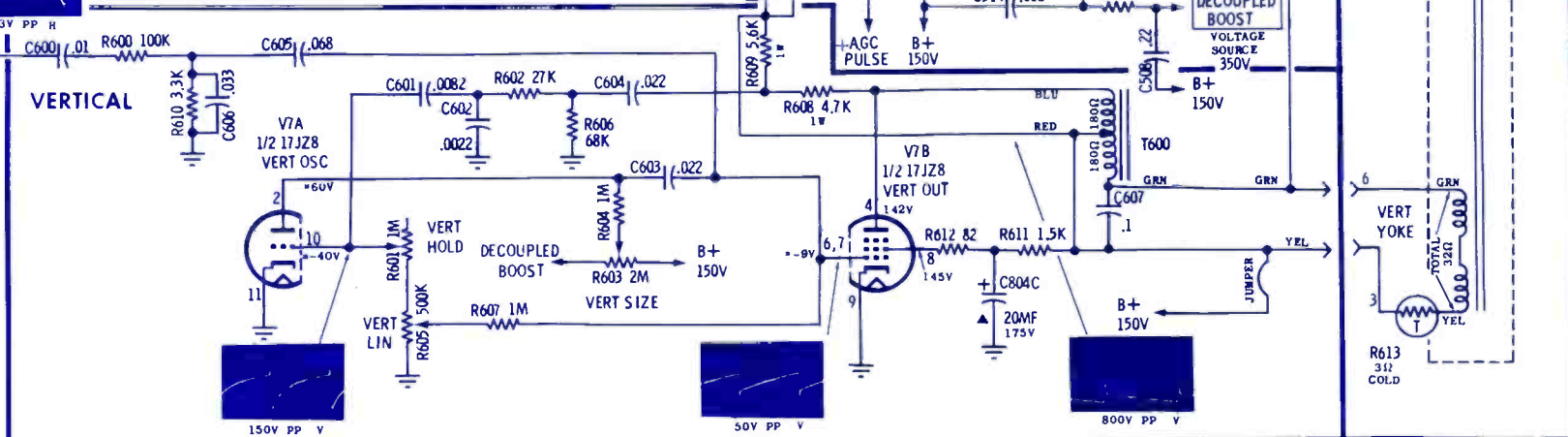
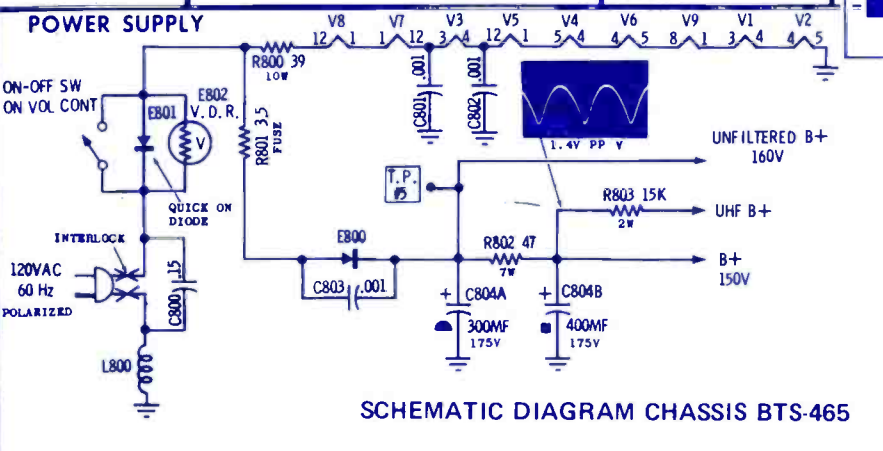
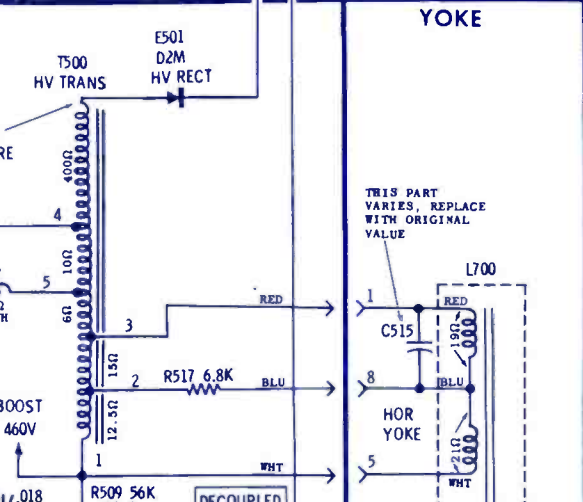
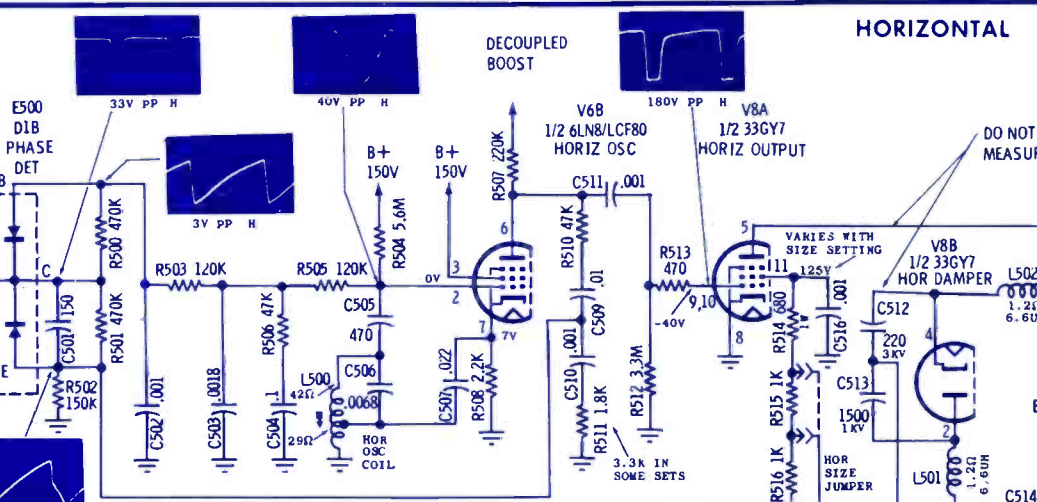
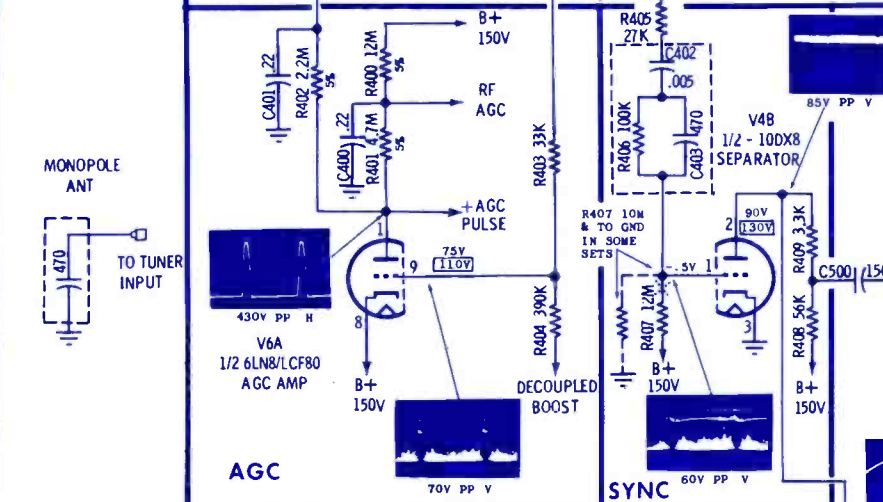
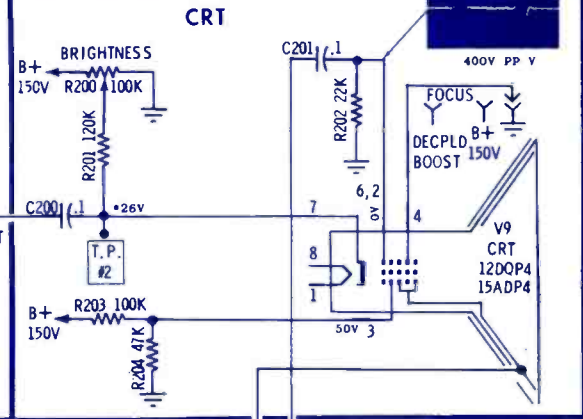
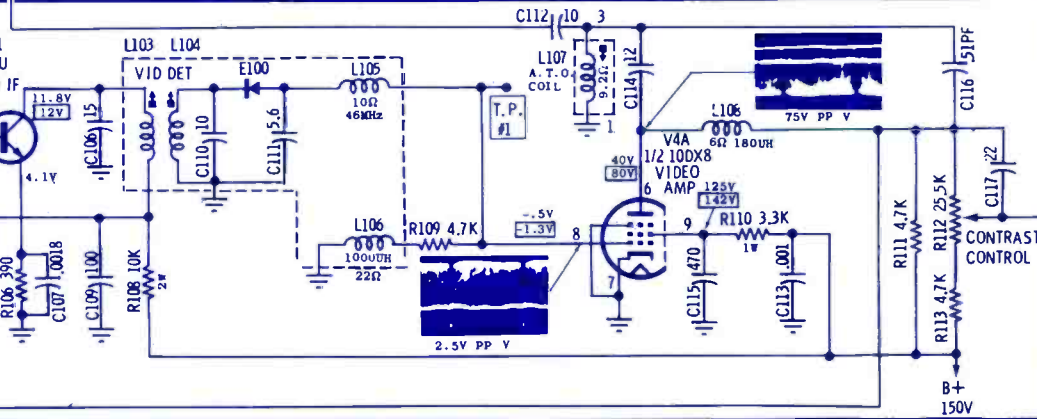
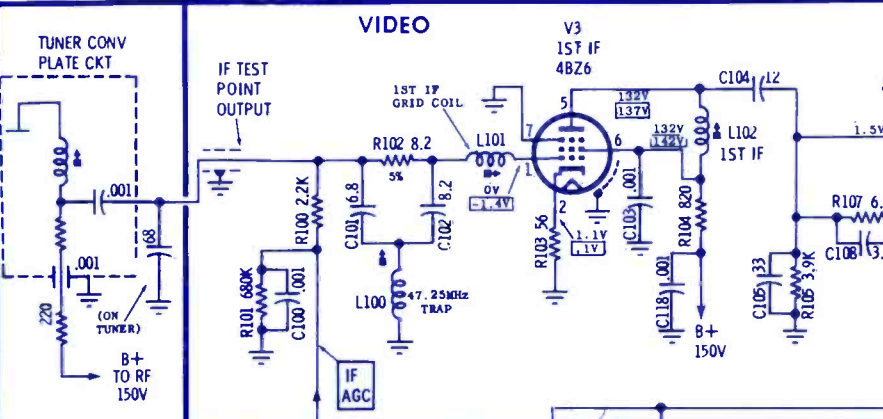
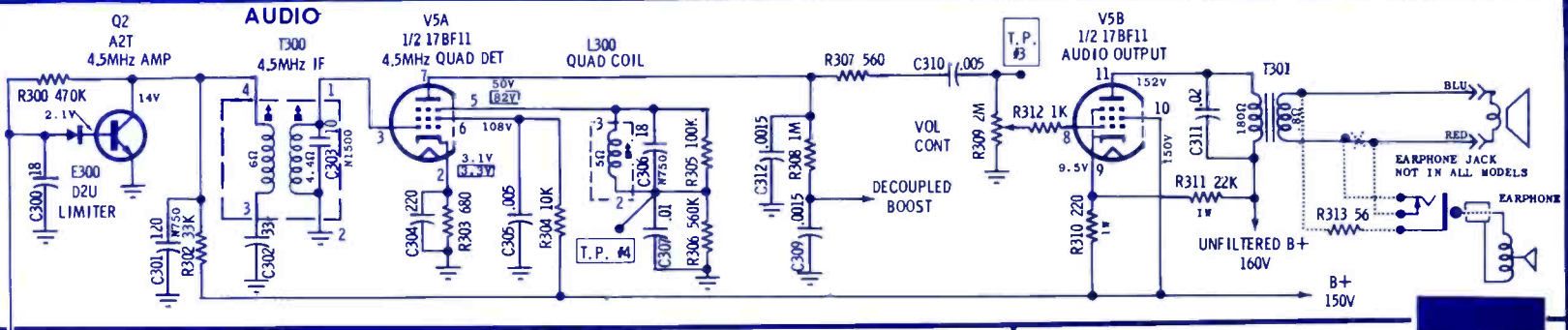
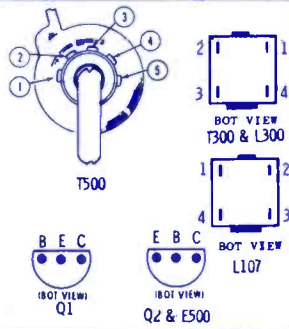
- TAKEN FROM POINT INDICATED TO CHASSIS WITH A VTVM. $\pm 20\%$
- LINE VOLTAGE MAINTAINED AT 120V AC.
- TAKEN WITH CONTRAST CONTROL AT MINIMUM AND ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. WHERE TWO VOLTAGES ARE SHOWN, VOLTAGE ABOVE BOX - WITH NO SIGNAL INPUT, TUNER ON CHANNEL WITH LEAST NOISE AND ANTENNA TERMINALS SHORTED. VOLTAGE IN BOX - WITH TUNER ON STRONG STATION AND OUTSIDE ANTENNA.

WAVEFORM MEASUREMENTS

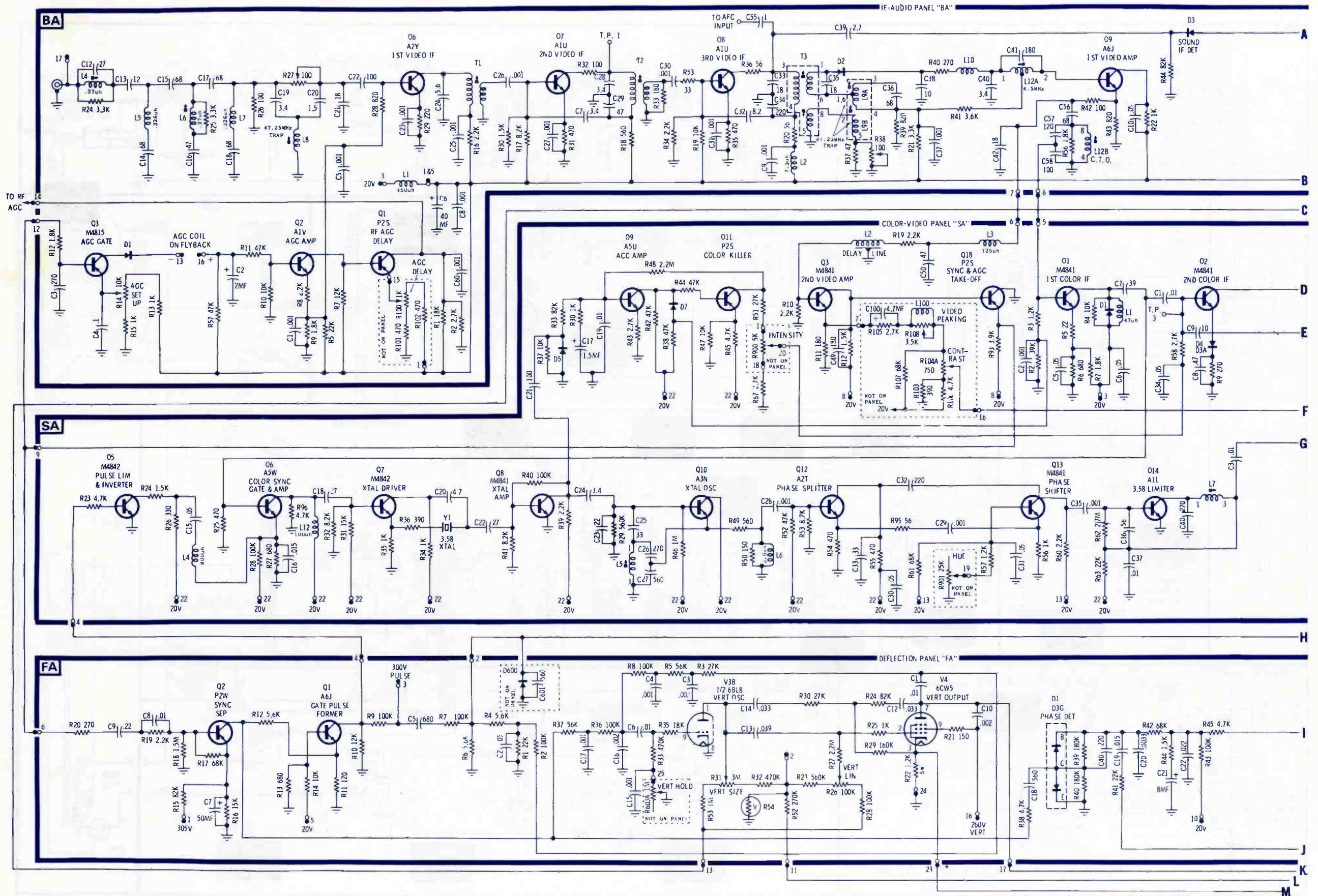
- TAKEN FROM POINT INDICATED TO CHASSIS WITH A WIDE-BAND OSCILLOSCOPE.
- OSCILLOSCOPE SYNCED NEAR SWEEP RATE INDICATED.
- TAKEN WITH STRONG SIGNAL, CONTRAST CONTROL AT MAXIMUM: ALL OTHER CONTROLS IN NORMAL OPERATING POSITION.

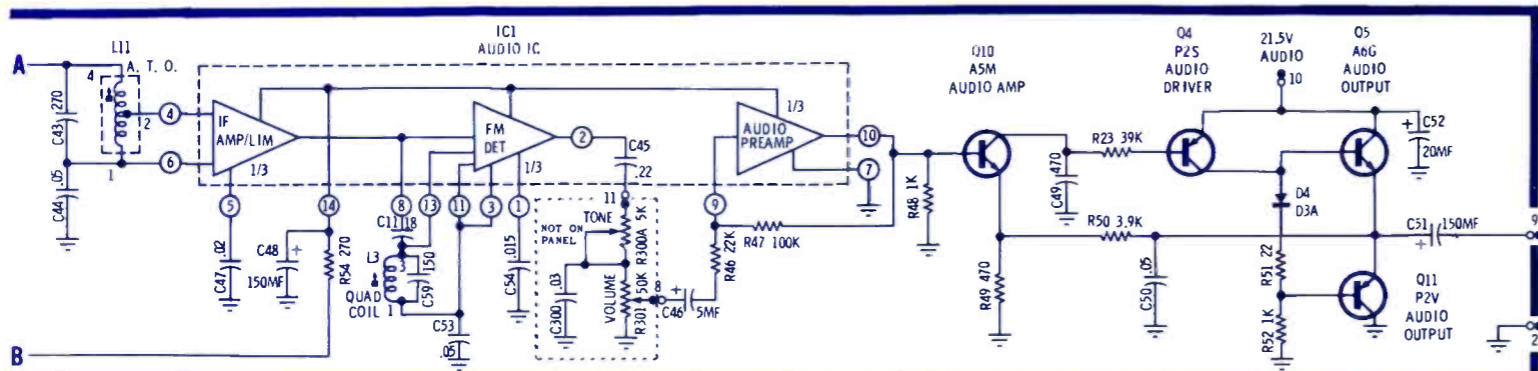
*INDICATED VOLTAGE VARIES WITH CONTROL SETTINGS. UNLESS OTHERWISE SPECIFIED, CAPACITOR VALUES LESS THAN ONE IN MF, ALL OTHERS IN PF. CAPACITANCE VALUES ONLY ARE SHOWN ON SCHEMATIC DIAGRAM. REFER TO PARTS LIST.

RESISTORS ARE 10% $1/2W$.



SCHEMATIC DIAGRAM CHASSIS BTS-465





IMPORTANT NOTES:

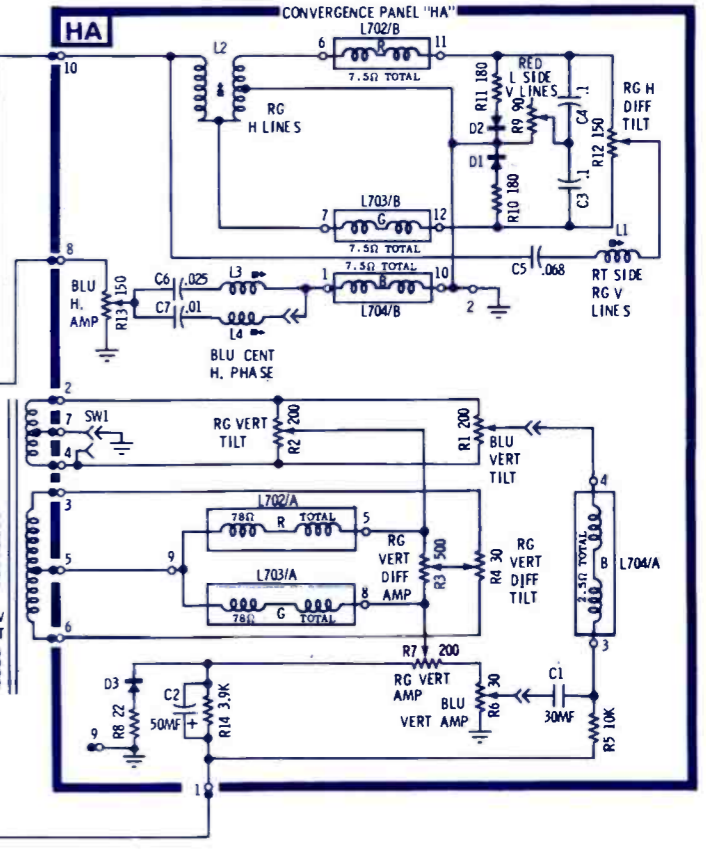
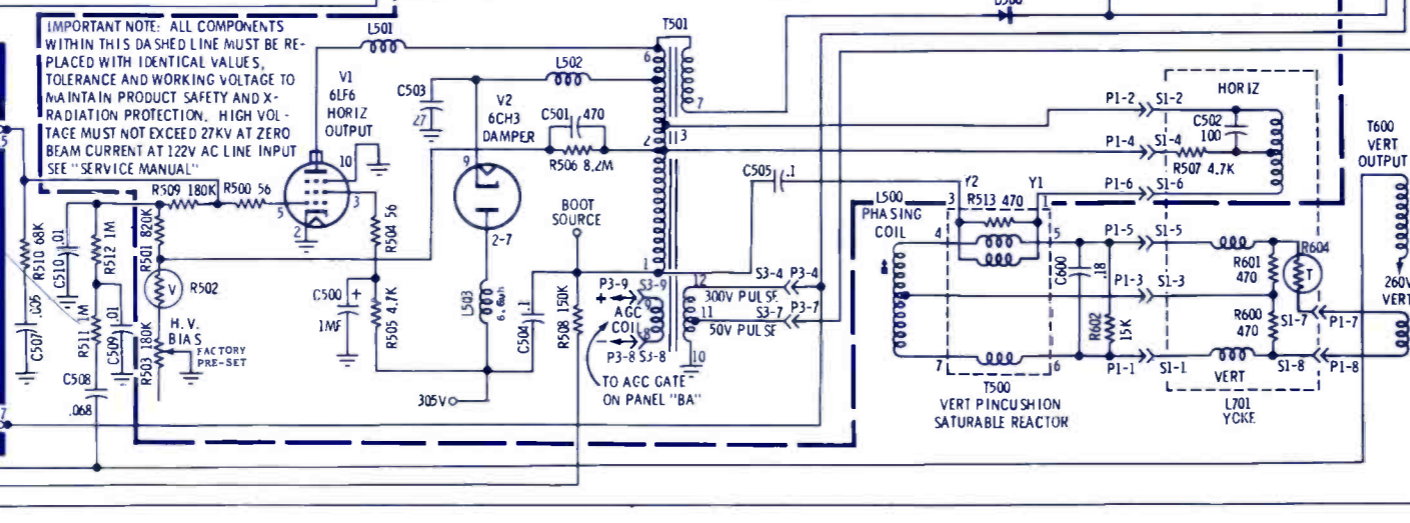
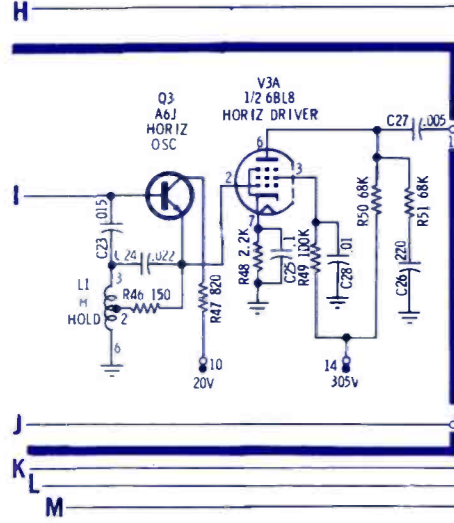
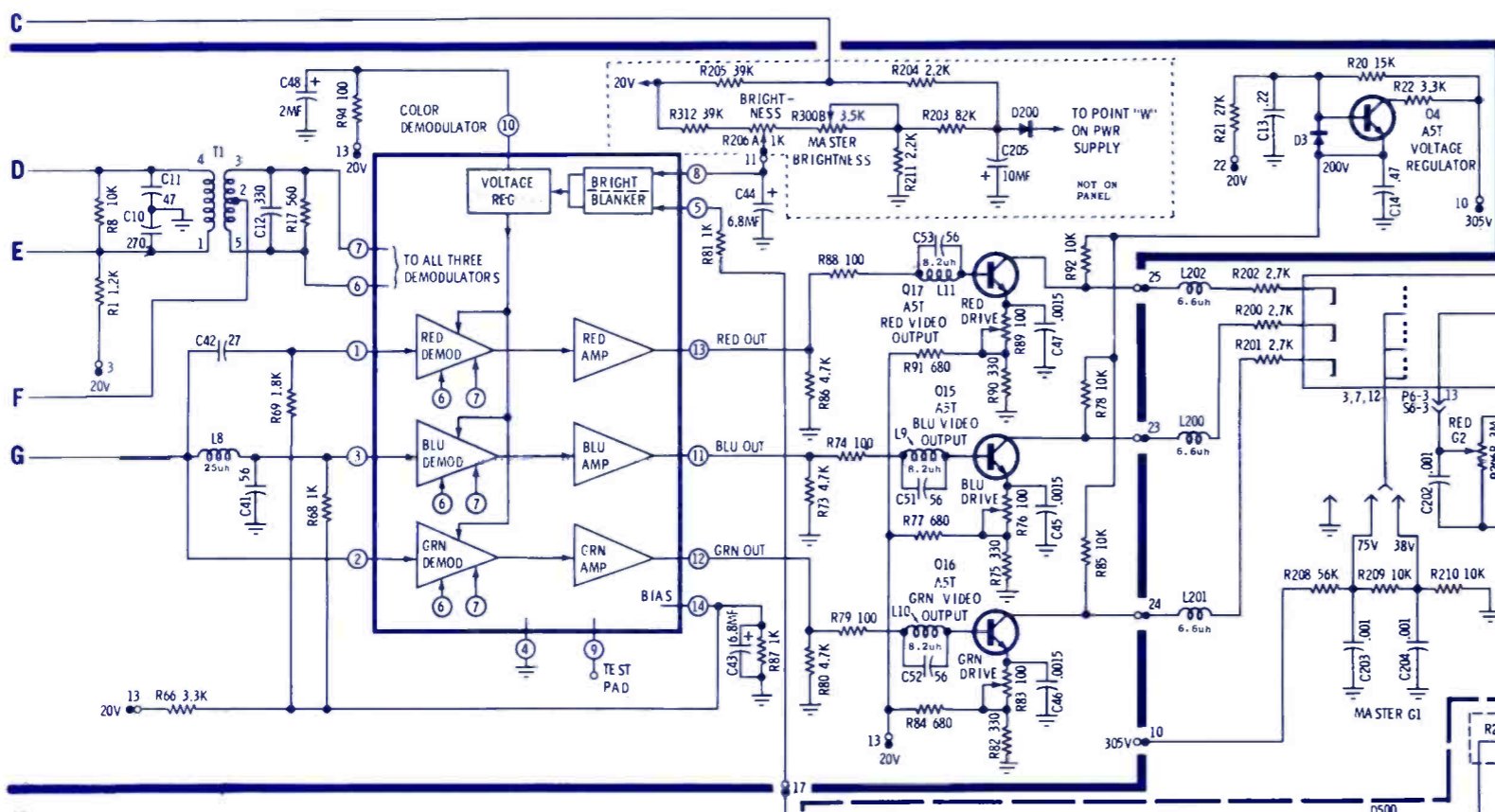
PANEL DESCRIPTION & COMPONENT IDENTIFICATION: EACH PANEL IS ASSIGNED A LETTER DESIGNATION (I.E., BA) WHICH IDENTIFIES THE PANEL. SEE CHART BELOW.

PANEL CODING	PANEL FUNCTION
BA	IF - AUDIO
FA	DEFLECTION
HA	CONVERGENCE
KA	AFC (AFT)
SA	COLOR - VIDEO
ZA	D.C. REGULATOR

EACH COMPONENT IS IDENTIFIED WITH A REFERENCE NUMBER AND PREFIX LETTER (I.E., L20) WHICH IS RELATED TO LEGEND ON THE PANELS. ALL "ON" PANEL COMPONENTS ARE IDENTIFIED BY ONE OR TWO DIGIT NUMBERS (1 THRU 99).

ALL "OFF" PANEL COMPONENTS ARE IDENTIFIED BY A 3 DIGIT NUMBER, WHICH VARIES WITH CIRCUIT ASSOCIATION AS INDICATED BELOW.

ASSOCIATED CIRCUIT	REFERENCE DESIGNATION
IF & VIDEO	100 - 199
PIX TUBE	200 - 299
AUDIO	300 - 399
AGC - SYNC	400 - 499
HORIZ & HI VOLTAGE	500 - 599
VERTICAL	600 - 699
CONVERGENCE	700 - 799
POWER SUPPLY	800 - 899
COLOR CIRCUIT	900 - 999



MOTOROLA
Color TV Chassis
TS-930

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL DESCRIPTION	MOTOROLA PART NO.
LA-20---1st IF coil	24X90243A10
LA-28---2nd IF coil	24X90243A11
LA-39---3rd IF coil	24X90243A12
LA-42---sound det coil: 12μh	24X90243A30
LA-54---video det coil	24X90243A11
LB-2---4.5MHz coil	24X90243A17
LC-16---chroma input coil	24X90243A22
LC-34---2nd bandpass coil: 47μh	24X90243A21

LD-27---killer phase shift coil: 68μh	24X90243A24
LD-52---3.58MHz output coil: 1.0μh	24X90243A23
LD-63---demod phase shift coil: 10μh	24X90243A20
LD-74---3.58MHz trap, fixed: 680μh	24X90243A07
TA-59---4.5MHz trap	24X90243A09
TB-20---ratio det xfmr	24X90243A18
TC-14---burst xfmr	24X90243A14
TC-29---bandpass xfmr	24X90243A15
RD-38---reactance: 400Ω	18X90245A12

CRF-4---horiz phase det	48X90235A01
CRF-40---HV regulator	48X90233A04
LE-30---peak coil: 82μh	24X90243A22
LE-37---peak choke: 120μh	24X90243A05
LE-49---plate peak coil: 220μh	24X90243A06
LF-24---horiz osc coil	24X90243A07
RE-54---vert lin (inc RE-55, RE-56)	18X90245A09
RE-55---gm drive (p/o RE-54)	
RE-56---blu drive (p/o RE-54)	

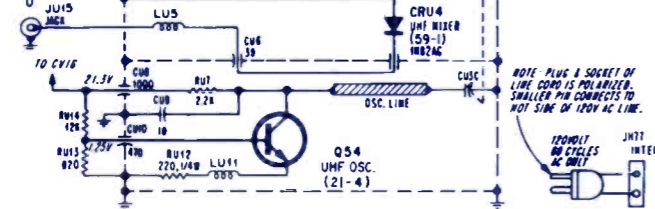
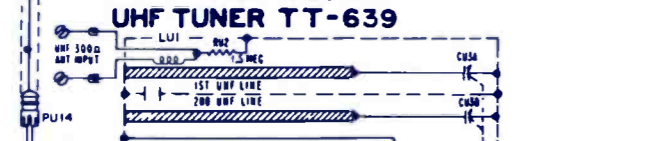
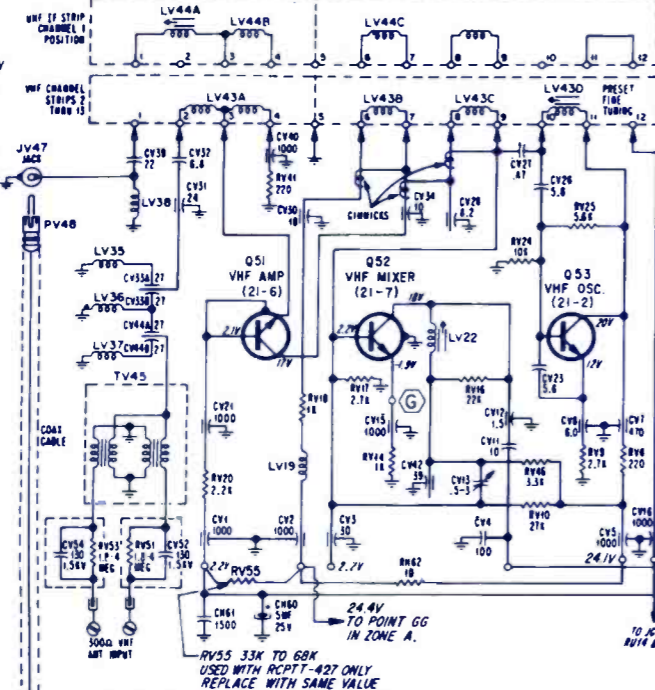
VOLTAGE READING WITH SIGNAL
THE DC VOLTAGE LISTED FOR EACH STAGE WAS TAKEN WITH AN AVERAGE SIGNAL LEVEL. THESE VOLTAGES WILL VARY WITH DIFFERENT SIGNAL LEVELS, PROGRAM INFORMATION AND CONTROL ADJUSTMENTS. VOLTAGES LISTED ON SCHEMATIC DIAGRAM WERE TAKEN WITH NO SIGNAL INPUT. SEE SCHEMATIC NOTES.

EMITTER	BASE	COLLECTOR
Q1	5.0	6.5
Q2	2.0	2.6
Q3	3.35	4
Q4	1.25	1.8
Q5	3.15	3.8
Q6	0.25	0.8
Q7	6.6	6.4
Q8	0.5	1.4
Q9	3.2	2.1
Q10	3.3	3.9
Q11	5.1	5.4
Q12	21	24
Q13	4.1	4.85
Q14	11.0	11.8
Q15	6.4	6.8
Q16	0	0.8
Q17	1.8 (S)	0 (p) (10)
Q18	8.5	9.0
Q19	23.0	22.5
Q20	21.8	22.2
Q21	21.8	22.2
Q22	6.0	6.6
Q23	1.5	2.1
Q24	1.5	2.2
Q25	12.1	20

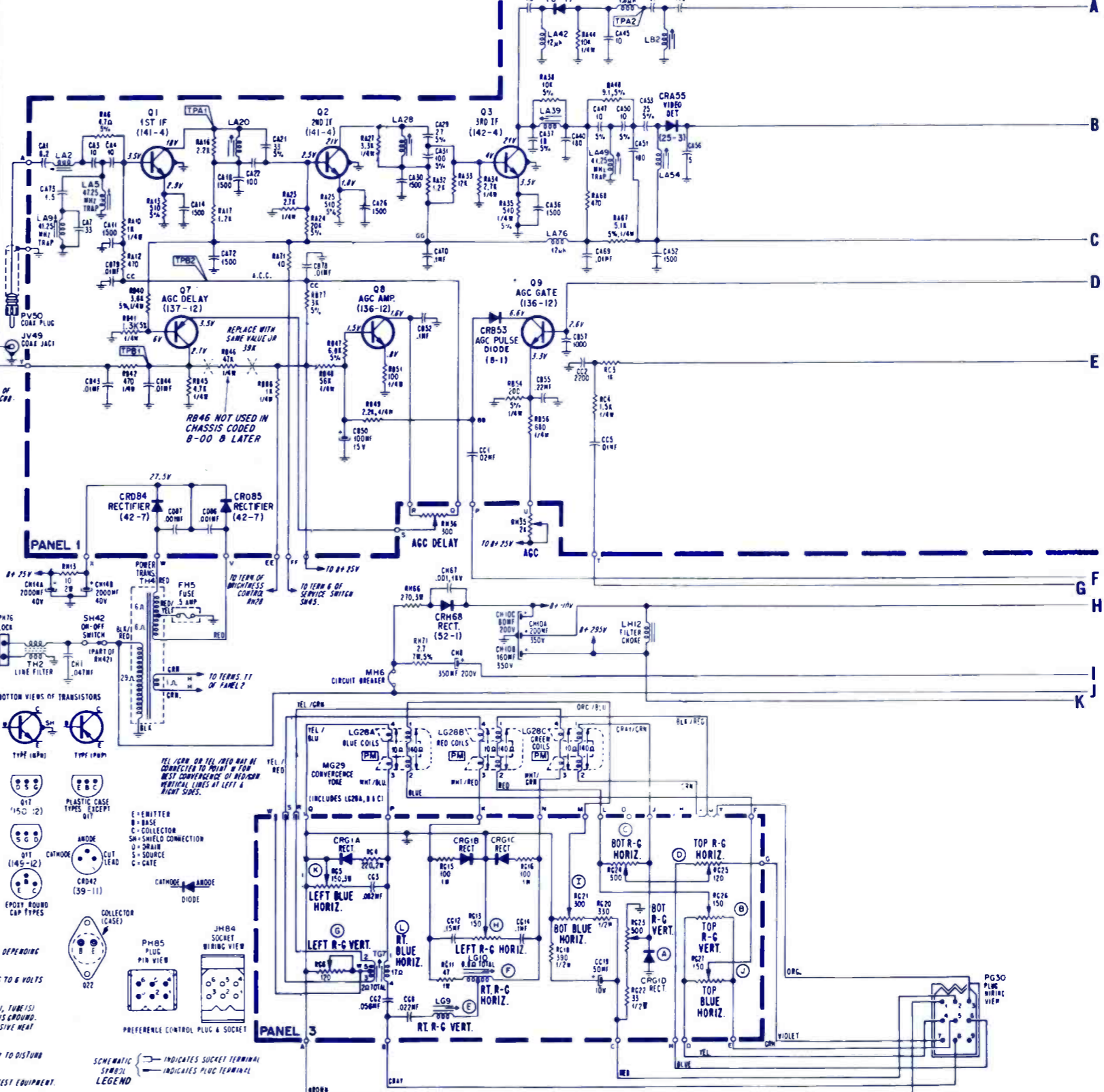
V2 (11A F9)	V4 (8A C10) (CRT)
1	0.38
2	120
3	23
4	50
5	FIL
6	FIL
7	16
8	12.5
9	230
10	300
11	E
12	FIL
13	420
14	FIL

*DEPENDS ON FOCUS TA USED.
*VARIES WITH SCREEN CONTROL.

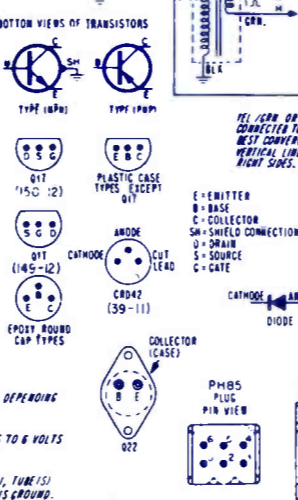
VHF TUNER CPTT OR RCPTT-427



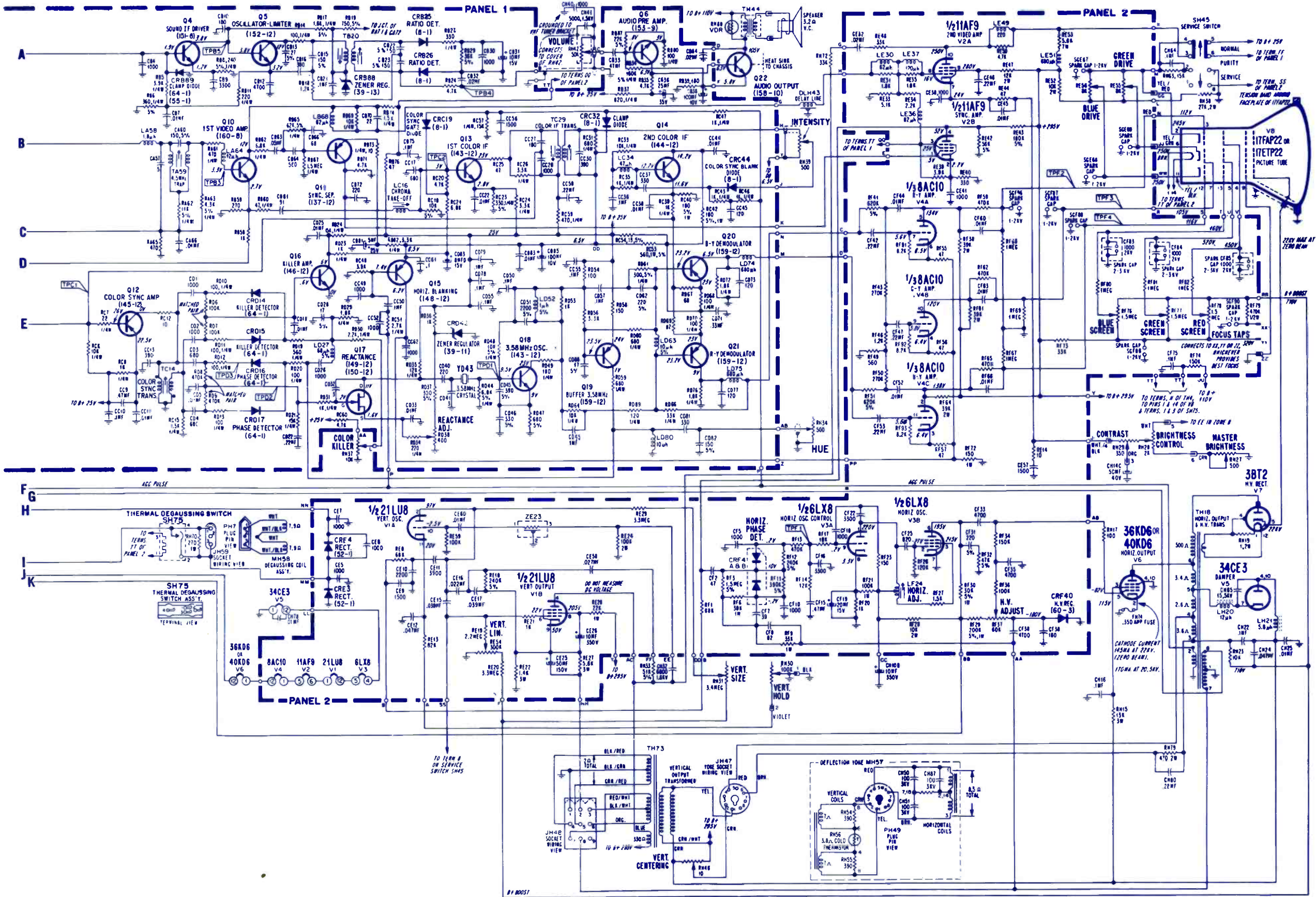
NOTE: NUMBERS IN PARENTHESIS, I.E., (145-12), ARE TRANSISTOR IDENTIFICATION NUMBERS THAT ALSO APPEAR ON THE TRANSISTOR BODY. IN SOME CASES, THE IDENTIFICATION NUMBER MAY BE THE LATTER PORTION OF A COMPLETE NUMBER ON THE TRANSISTOR.



SCHEMATIC NOTES
* CHASSIS GROUND. RESISTOR VALUES 1/2WATT, 10% CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED. RESISTANCE VALUES OF COILS LESS THAN 100 OHMS NOT SHOWN.
#1 INDICATES CYCLES PER SECOND.
#2 INDICATES WAVEFORM NOTES.
DC VOLTAGES TAKEN WITH VFM, WITH RESPECT TO CHASSIS GROUND. AT 120V AC LINE. WAVEFORMS & P-P VOLTAGES MAY VARY, DEPENDING ON CALIBRATION OF TEST EQUIPMENT & PARTS TOLERANCES.
VOLTAGES TAKEN ON UNUSED UHF CHANNEL WITH VOLUME CONTROL AT MIN, BRIGHTNESS & CONTRAST CONTROLS AT MIN. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL PRODUCING 5 TO 6 VOLTS AGC AT TEST POINT TP#2. CONTRAST, BRIGHTNESS CONTROLS SET FOR NORMAL PICTURE.
TRANSISTOR CAUTION
TO AVOID DAMAGE TO TRANSISTORS, DO NOT ARC AND 2ND ANODE LEAD TO CHASSIS GROUND. * DO NOT TURN SET ON WITH TRANSISTORS, TUBE(S) OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASURE. USE VFM ON R X 100 RANGE OR HIGHER. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS.
AGC CAUTION
DO NOT DISTURB FACTORY SETTING OF AGC CONTROL. IF AGC ADJUSTMENT IS REQUIRED, REFER TO SERVICE NOTES. IF NECESSARY TO DISTURB AGC ADJUSTMENT, MARK ROTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING.
† COMPONENT NOT MOUNTED ON PANELS.
WARNING: * USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ELECTRICAL SHOCK & DAMAGE TO TEST EQUIPMENT. * ARC 2ND ANODE ONLY TO PICTURE TUBE OAG OR DAC GROUNDING SPRING. # CHASSIS IS CONNECTED DIRECTLY TO POWER LINE



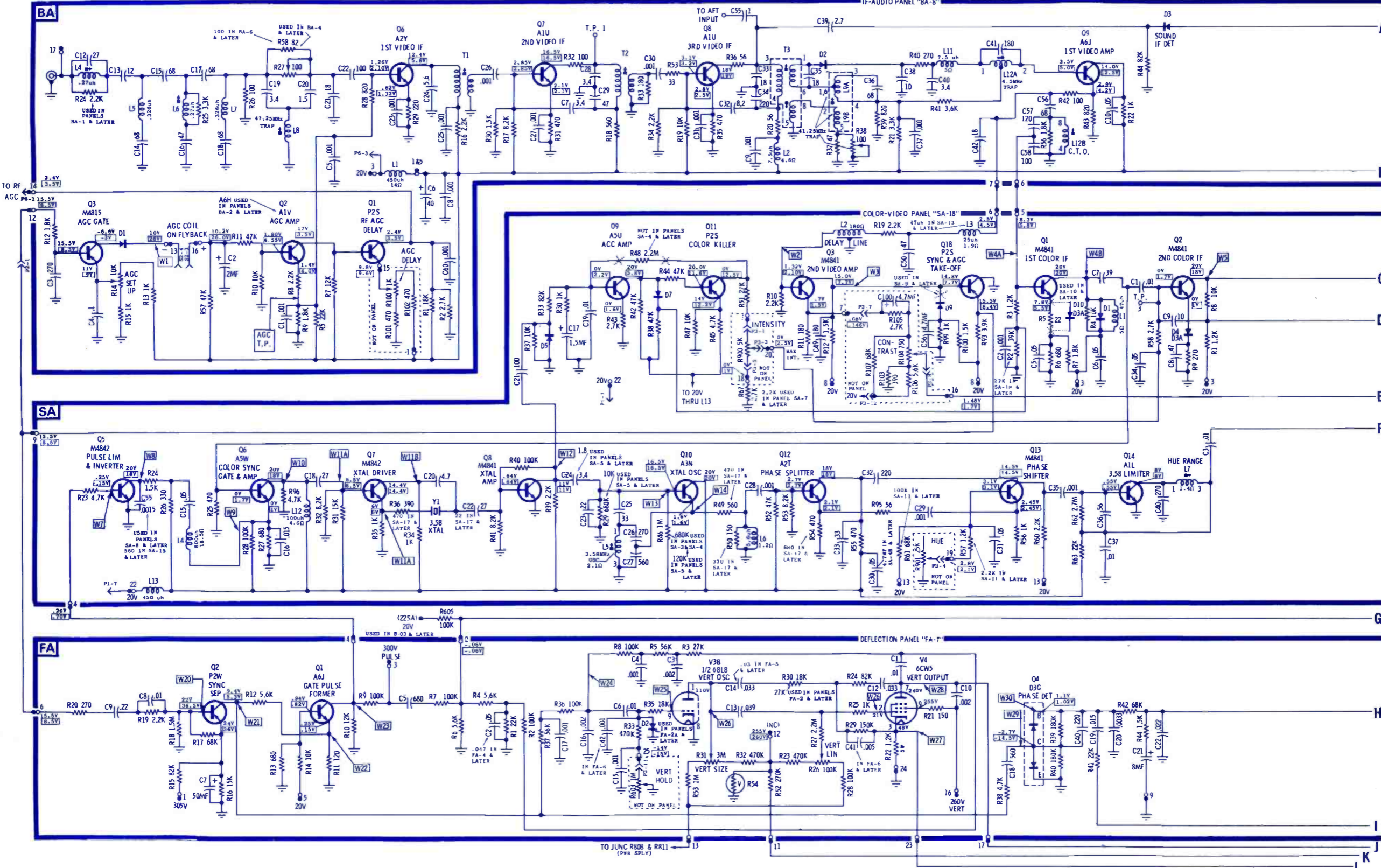
- | | | | | | | | |
|-------------------------------------|-------------|--------------------------------------|-------------|-------------------------------------|-------------|------------------------------|-------------|
| RF-37---HV adj | 18X90245A11 | RH-39---intensity: 500 | 18X90245A08 | SH-45---sw. service | 40X90246A01 | RH-71---2.7, 10%, 7w, WW | 17X90267A03 |
| RF-76---blu scr (inc RF-77 & RF-78) | 18X90245A10 | TH-18---horiz output xformer | 24X90257A03 | TH-2---lin fil | 24X90243A04 | RH-72---bright, master: 500Ω | 18X90245A05 |
| RG-5---left blu horiz, 150Ω, 3w | 18X90245A17 | CH-10---200/250v, 180/350v, 20/200v, | 23X90285A01 | TH-4---power | 25X90244A04 | RH-31---vert size, 3.4M | 18X90245A02 |
| RG-23---top R-G vert, 500Ω | 18X90245A15 | 10/305v elec | | TH-44---audio output | 25X90244A03 | RH-35---AGC, 2K | 18X90245A03 |
| RG-26---bot R-G vert, 150Ω, 1w | 18X90245A14 | CH-14---2000/40v, 2000/40v, 50/40v, | 23X90285A03 | TH-73---vert output | 25X90244A02 | RH-36---AGC delay, 300Ω | 18X90245A08 |
| RH-28---bright: 2K | 18X90245A18 | 50/40v elec | | DLH-43---coil, delay line | 24X90243A01 | RH-37---color killer, 10K | 18X90245A04 |
| RH-29---contrast: 350 | 18X90245A20 | FH-5---fuse: 5 amp | 65X90236A02 | MH-57---yoke, defl: 80°; incl: plug | 24X90243A29 | RH-46---vert con, 10Ω | 18X90245A01 |
| RH-30---vert hold: 100K | 18X90245A19 | FH-74---fuse: .35amp | 65X90236A01 | RH-56---therm: 3.8Ω cold (in yoke) | 6X90268A02 | | |
| RH-34---hue: 500 | 18X90245A08 | MH-6---cir brkr | 80X90247A01 | RH-69---varistor | 6X90268A01 | | |

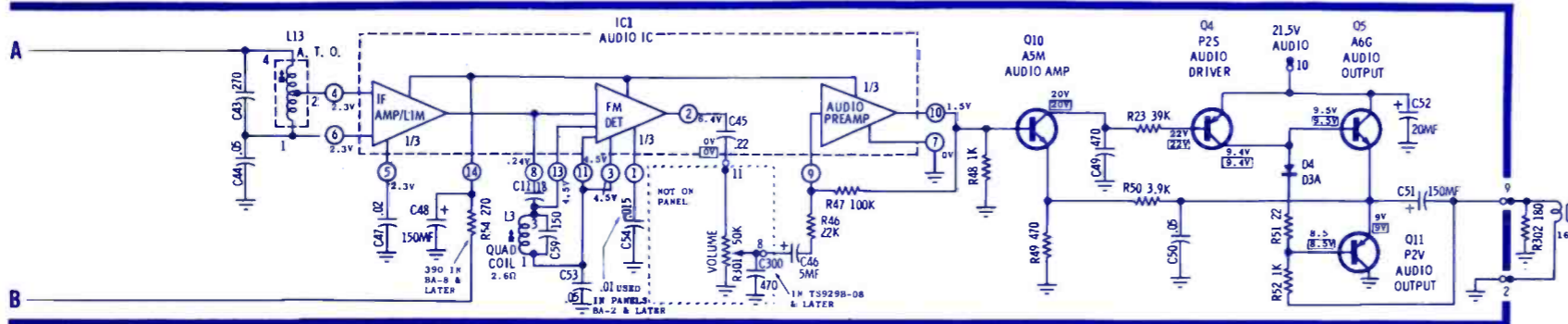


MOTOROLA

Color TV Chassis
TS-929

ELECTRONIC TECHNICIAN/DEALER **TEKFAKX**





IMPORTANT NOTES

PANEL DESCRIPTION & COMPONENT IDENTIFICATION: EACH PANEL IS ASSIGNED A LETTER DESIGNATION (A-K) WHICH IDENTIFIES THE PANEL. SEE CHART BELOW.

PANEL CODING	PANEL FUNCTION	PANEL CODING	PANEL FUNCTION
BA	IF AUDIO	RA	ALC/LEFT
CA	COLOR VIDEO WITH INSTA. MATIC DRIVE	SA	COLOR VIDEO WITHOUT INSTA. MATIC DRIVE
FA	SELECTIVE TUNING	TA	TEST POINT
GA	CONVERGENCE	VA	VERT. DRIVE

EACH COMPONENT IS IDENTIFIED WITH A REFERENCE NUMBER AND A PREFIX LETTER (A-K) WHICH IS RELATED TO LEGEND ON PANELS ALL "ON" PANEL COMPONENTS ARE IDENTIFIED BY ONE OR TWO DIGIT NUMBERS (1 THRU 99).

ALL "OFF" PANEL COMPONENTS ARE IDENTIFIED BY A 3 DIGIT NUMBER, WHICH VARIES WITH CIRCUIT ASSOCIATION AS INDICATED BELOW.

ASSOCIATED CIRCUIT	REFERENCE DESIGNATION
IF & VIDEO	100-199
RF TUBE	200-299
AUDIO	300-399
AGC/SVC	400-499
HORIZ & H VOLTAGE	500-599
VERTICAL	600-699
CORRECTION	700-799
POWER SUPPLY	800-899
COLOR CIRCUIT	900-999

1. VOLTAGE MEASUREMENTS: LISTED ON SCHEMATIC IN ORDER SHOWN.

2. WAVEFORM MEASUREMENTS: COLOR WAVEFORMS TAKEN WITH A COLOR BAR GENERATOR PROVIDING A SIGNAL OF STANDARD GATED RAINBOW (10 BAR) TYPE. COLOR BAR PATTERN RECEIVER ADJUSTED FOR NORMAL VIEWING AS IN TRANSMITTED AIR SIGNAL AND THE COLOR BAR GENERATOR OUTPUT ADJUSTED FOR APPROXIMATELY 5V DC MEASURED AT BASE OF 1ST VIDEO AMP (9A PANEL).

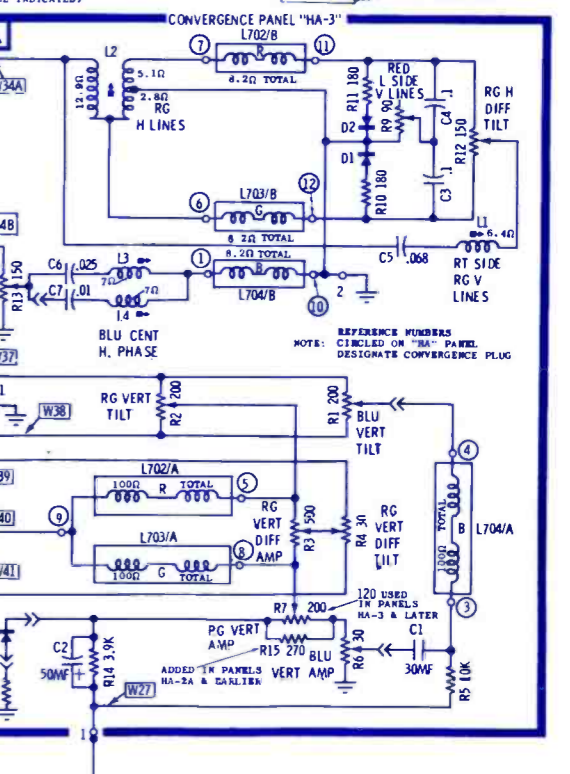
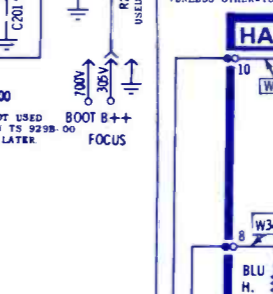
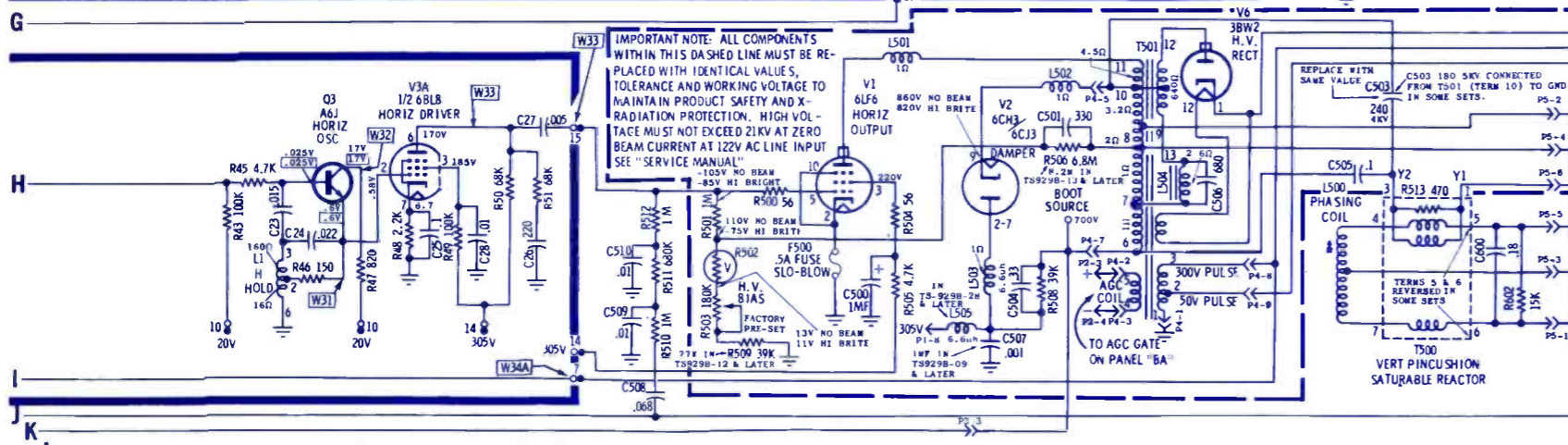
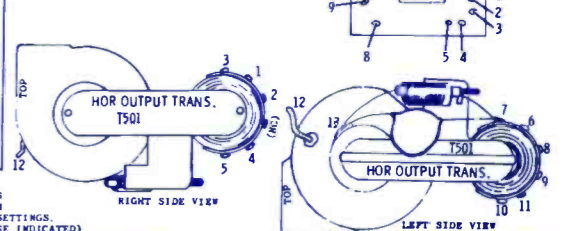
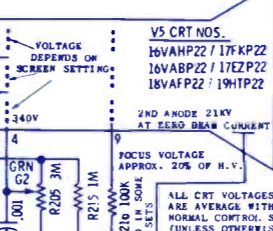
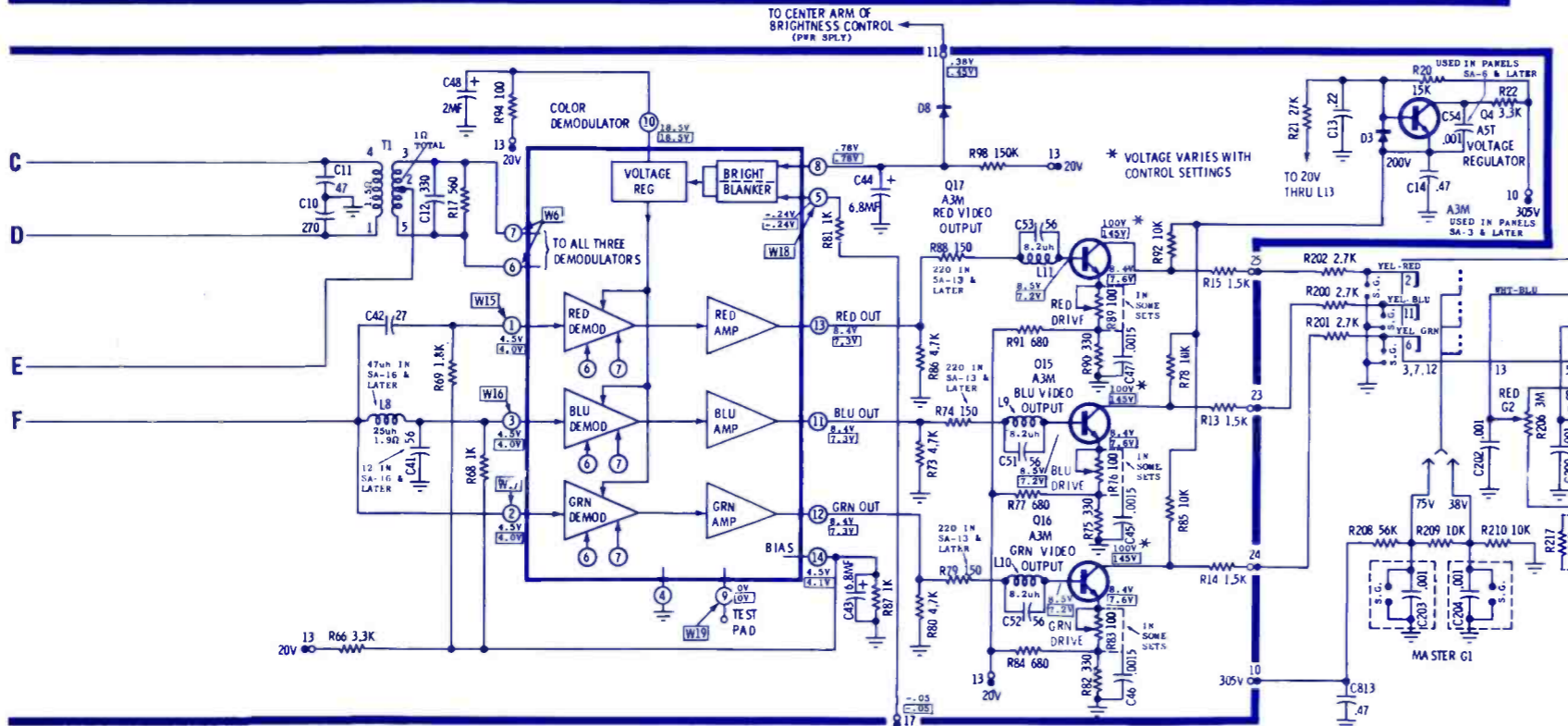
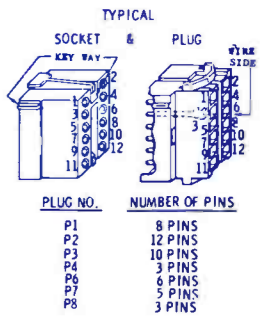
NOTE: THE PEAK TO PEAK COLOR SIGNAL AT THE BASE OF Q5 CAN VARY AND IS DEPENDENT ON THE AGC SETTINGS OF A GIVEN RECEIVER. THE 5V DC READING IS GIVEN AS A REFERENCE. THE PEAK TO PEAK WAVEFORM MEASUREMENTS SHOWN ON THE SCHEMATIC ARE RELATED DIRECTLY TO THE 1.3 VOLT P-P MEASURED AT BASE OF Q5.

3. ALL VIDEO AND COLOR WAVEFORMS TAKEN WITH A WIDEBAND SCOPE AND A PROBE WITH LOW INPUT CAPACITY. SHAPE AND PEAK TO PEAK AMPLITUDES MAY VARY DEPENDING ON CALIBRATION AND TYPE OF TEST EQUIPMENT USED, AND CONTROL SETTINGS.

4. THE OUTPUT WAVEFORMS OF THE IC COLOR DEMODULATOR CAN BE OBSERVED AT THE COLLECTOR OF THE VIDEO OUTPUT TRANSISTORS Q15A (RED), Q15B (GREEN), AND Q15C (BLUE) OR TERMINALS 25, 24, AND 23 ON PANEL SA.

CONNECT SCOPE TO TERMINAL 25A (GREEN) COLOR HUE CONTROL TO PLACE THE 10TH BAR OF THE COLOR BAR GENERATOR TO MAXIMUM NEGATIVE. DO NOT ADJUST HUE CONTROL FOR SUBSEQUENT READINGS. OBSERVE WAVEFORM AT TERMINAL 25A (BLUE). THE 6TH BAR SHOULD BE AT MAXIMUM NEGATIVE. OBSERVE WAVEFORM AT TERMINAL 25A (RED). THE 3RD BAR SHOULD BE AT MAXIMUM NEGATIVE.

UNLESS OTHERWISE SPECIFIED: CAPACITOR VALUES LESS THAN ONE IN MF, ALL OTHERS IN PF. CAPACITANCE VALUES ONLY ARE SHOWN ON SCHEMATIC DIAGRAM. FOR COMPLETE DESCRIPTION OF CAPACITORS, REFER TO PARTS LIST. RESISTORS ARE 10% UNLESS OTHERWISE INDICATED.



IMPORTANT NOTE: ALL COMPONENTS WITHIN THIS DASHED LINE MUST BE REPLACED WITH IDENTICAL VALUES, TOLERANCE AND WORKING VOLTAGE TO MAINTAIN PRODUCT SAFETY AND X-RADIATION PROTECTION. HIGH VOLTAGE MUST NOT EXCEED 21KV AT ZERO BEAM CURRENT AT 122V AC LINE INPUT. SEE "SERVICE MANUAL" FOR FURTHER INFORMATION.

REFERENCE NUMBERS CIRCLED ON "HA" PANEL DESIGNATE CONVERGENCE PLUG

OLYMPIC
Color TV Chassis
CT400

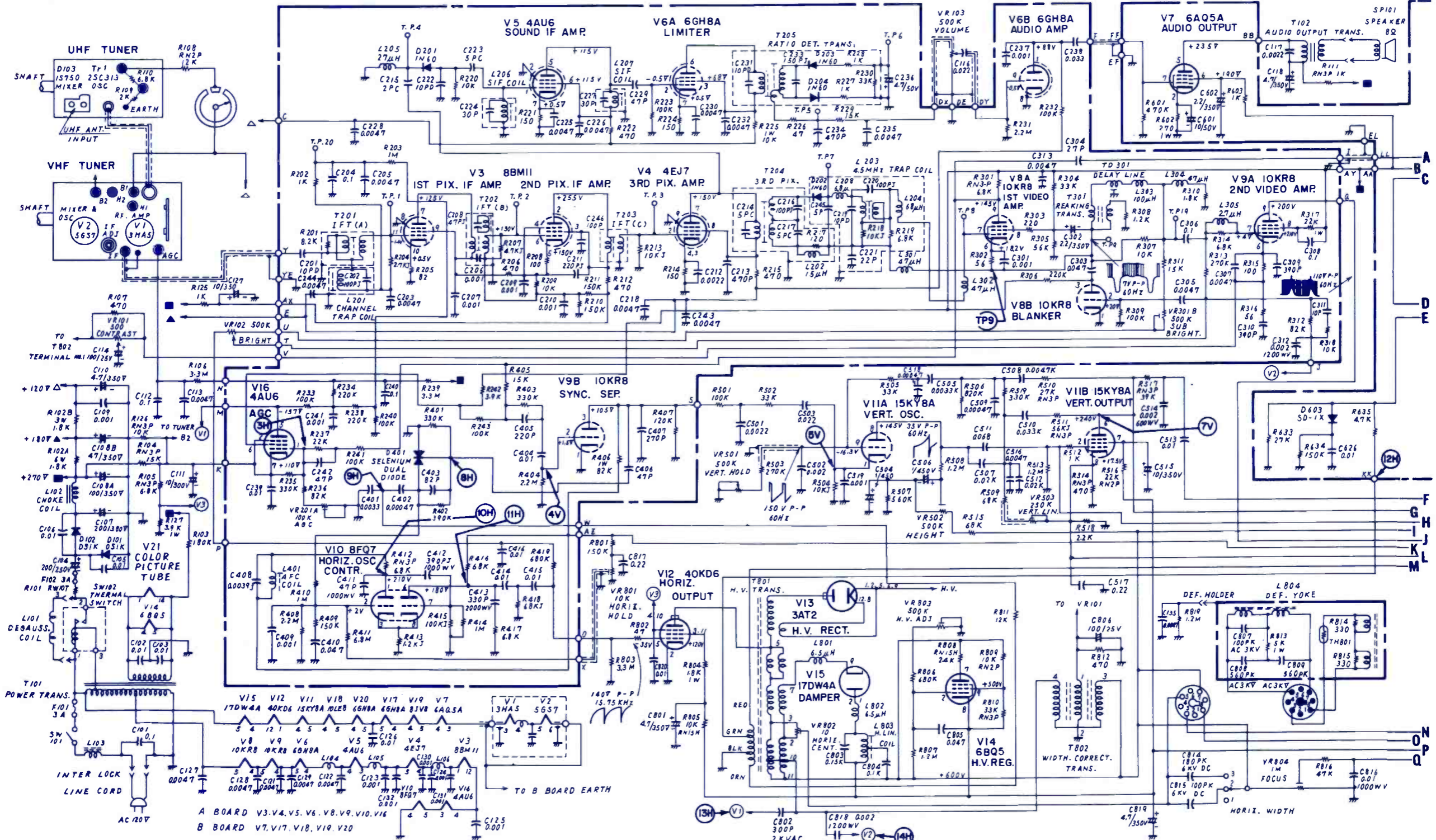
ELECTRONIC TECHNICIAN / DEALER *TEKFAK*

SYMBOL	DESCRIPTION	OLYMPIC PART NO.
C814	---ccd 180pf, ±10%, 6kVdc	COJ 61495
C815	---ccd 200pf ±10% 6kVdc	COJ 61494
R805	---10K ±10% 15W	REJ 61488
R808	---2.4K ±10% 7.5W	REJ 61489
VR101	---500Ω contr	PTJ 61470
VR102	---500K bright	PTJ 61469
VR103	---500K volume	PTJ 60207
VR104	---500Ω color	PTJ 61467
VR105	---1.2K tint	PTJ 61468
VR106	---5K drive	PTJ 61475
VR107	---5K drive	PTJ 61475
VR108	---500K red grid	PTJ 61478
VR109	---500K grn grid	PTJ 61478
VR110	---500K blu grid	PTJ 61478
VR501	---500K vert hold	PTJ 61478
VR502	---500K vert height	PTJ 61478
VR503	---250K vert lin	PTJ 61477
VR801	---10K horiz hold	PTJ 61476

VR802	---10Ω horiz center	PTJ 61474
VR803	---500K h.v. adjust	PTJ 61478
VR804	---1M focus	PTJ 61417
VR805	---10Ω vert cent	PTJ 61474
L102	---filter choke p/s	CKJ 60181
L103	---line filter choke	CKJ 61456
L803	---horiz lin coil	CLJ 61461
L804	---def yoke ass'y	CLJ 61439
T101	---power xformer	TRJ 61443
T102	---audio output xformer	TRJ 60182
T103	---peaking xformer	TRJ 61453
T801	---HV trans. ass'y	TRJ 61442
T802	---width correction trans	TRJ 61462
T803	---vert output xformer	TRJ 61441
VR701	---100Ω left blu horiz	PTJ 61481
VR705	---300 top R/G, vert	PTJ 61484
VR707	---120 top R/G, horiz	PTJ 61482
VR201A	---100K AGC	PTJ 51473
VR202A	---500K color killer	PTJ 61473

VR301B	---500K sub bright	PTJ 61471
L203	---4.5MHz trao coil	CLJ 60188
L204	---inductor, 68μh	CLJ 60443
L206	---1st sound, IF coil	CLJ 60189
L207	---2nd sound, IF coil	CLJ 60189
L401	---AFC coil	CLJ 61460
T201	---IF trans (A)	TRJ 60183
T202	---IF trans (B)	TRJ 60185
T203	---IF trans (C)	TRJ 60186
T204	---3rd pix IF trans	TRJ 60187
T205	---ratio det trans	TRJ 33241
T0301	---delay line	DLJ 60199
L605	---reactance cont coil	CLJ 61447
L606	---color phase coil	CLJ 61458
L607	---color phase coil	CLJ 61457
T601	---1st band pass trans	TRJ 60195
T602	---burst phase trans†	TRJ 61446
T603	---3.58MHz osc	TRJ 61445
	conv yoke ass'y	CLJ 61440

A - BOARD



A BOARD V3, V4, V5, V6, V8, V9, V10, V16
B BOARD V7, V17, V18, V19, V20

OLYMPIC
TV Models 9P44/
9P45/9P46/9P54

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL	DESCRIPTION	OLYMPIC PART NO.
VR101	500Ω variable, picture power	PTJ33393
VR102	500K variable, volume sw, power on-off	PTJ33392
VR103	1M variable, vert hold	PTJ33383
VR108	100K variable, bright	PTJ80110
VR104	1M, 500K & 500K variable	PTJ80111
VR105	vert height, vert lin	PTJ80111
VR107	horiz hold	PTJ80111
R101	5Ω, 10%, 10w	REJ33209
C103	250μf + 200μf + 50μf 200v	COJ33413
T101	speaker output	TRJ33387
T102	vert output	TRJ80103
T103	high voltage xformer	TRJ80105
T201	IF xformer A	CLJ33416

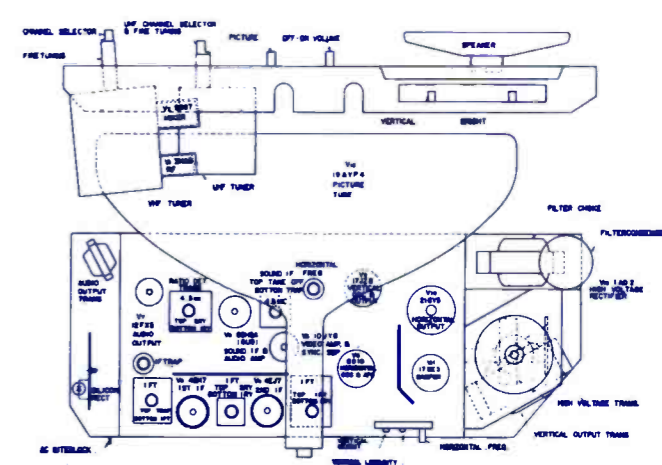
T202	IF xformer B	CLJ33418
T203	IF xformer C	CLJ33417
T204	sound IF xformer	TRJ33022
T205	ratio det	TRJ33241
L102	choke coil assy	CKJ33385
L201	choke coil	CKJ81291
L202	choke coil	CKJ81291
L203	inductor 47Ω	
L204	inductor 180Ω	
L205	inductor 330Ω	
L206	inductor 390Ω	
L207	choke coil	CKJ81290
L209	trap coil	CLJ81289
L210	inductor 5.8μh	
L301	AFC coil	CLJ33390

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V 1	3HA5	440KΩ	0Ω			75KΩ	0Ω	0Ω					
V 2	5G57	11KΩ	75KΩ	0Ω			75KΩ	90KΩ	0Ω	200KΩ			
V 3	4EH7	33Ω	150KΩ	33Ω			0Ω	75KΩ	75KΩ	0Ω			
V 4	4EJ7	68Ω	0Ω				0Ω	75KΩ	83KΩ	0Ω			
V 5	10JY8	0Ω	1.8MΩ	130KΩ			1.850Ω	840KΩ	75KΩ	78KΩ			
V 6	6GH8A	150KΩ	2.5Ω	83KΩ			83KΩ	150Ω	0Ω	2.2MΩ			
V 7	12FX5	150Ω	500KΩ				400KΩ	75KΩ	75KΩ				
V 8	8B10(A)	1.2KΩ	900KΩ	83KΩ	180KΩ	150KΩ	1.2KΩ	700KΩ	300KΩ	40KΩ	0Ω		
V 9	17JZ8		1.3KΩ	NC	75KΩ	NC	1.6MΩ	1.6MΩ	75KΩ	0Ω	1.3MΩ	0Ω	
V10	21GY5		NC	75KΩ	0Ω	950KΩ	NC	75KΩ	NC	950KΩ	0Ω	75KΩ	
V11	17BE3		NC	NC	75KΩ	NC	NC	950KΩ	NC	NC	75KΩ	NC	
V12	19AYP4		85KΩ	950KΩ	1MΩ	NC	85KΩ	200KΩ					
V13	1AD2												

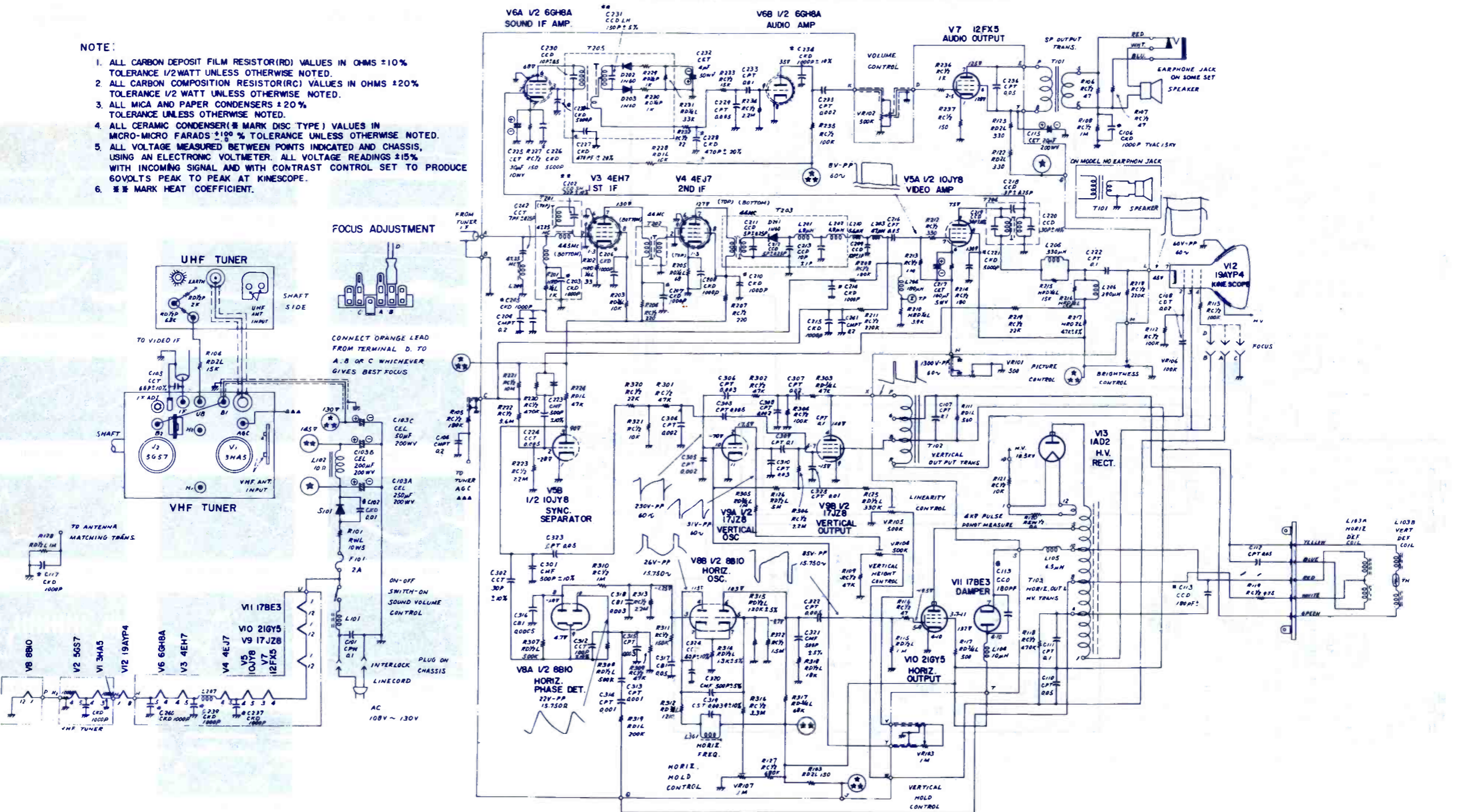
NC NO CONNECTION
 *1 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF PICTURE.
 *2 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VOLUME.
 *3 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL HEIGHT.
 *4 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL LINEA.
 *5 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF VERTICAL HOLD.
 *6 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF BRIGHTNESS.

TUBE LAYOUT



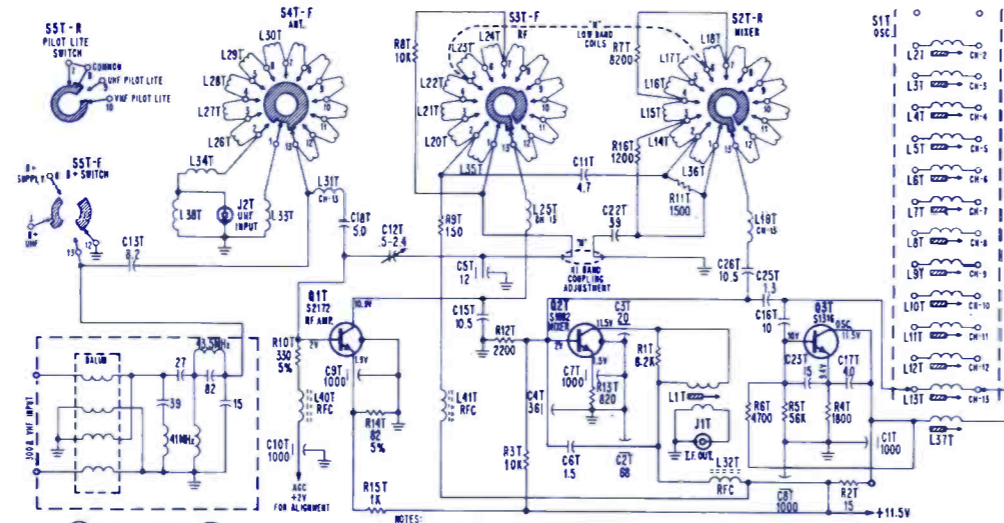
NOTE:

- ALL CARBON DEPOSIT FILM RESISTOR(RD) VALUES IN OHMS ±10% TOLERANCE 1/2WATT UNLESS OTHERWISE NOTED.
- ALL CARBON COMPOSITION RESISTOR(RC) VALUES IN OHMS ±20% TOLERANCE 1/2 WATT UNLESS OTHERWISE NOTED.
- ALL MICA AND PAPER CONDENSERS ±20% TOLERANCE UNLESS OTHERWISE NOTED.
- ALL CERAMIC CONDENSER(MARK DISC TYPE) VALUES IN MICRO-MICRO FARADS ±10% TOLERANCE UNLESS OTHERWISE NOTED.
- ALL VOLTAGE MEASURED BETWEEN POINTS INDICATED AND CHASSIS, USING AN ELECTRONIC VOLTMETER. ALL VOLTAGE READINGS ±15% WITH INCOMING SIGNAL AND WITH CONTRAST CONTROL SET TO PRODUCE 60VOLTS PEAK TO PEAK AT KINESCOPE.
- MARK HEAT COEFFICIENT.



SYMBOL DESCRIPTION PHILCO-FORD PART NO.

C103	—3000/25V,1000/25V,500/25V B+	30-2616-4
D106	—damper	34-8057-15
D110	—hi-volt rectifier	34-8053-6
F1	—lamp AC line/fast blow	45-2656-71
F2	—2.5a (fast blow) PW4	45-2656-70
L4	—xformer, 4.5mc trap	32-4905-1
L5	—xformer, sound takeoff	32-4901-1
L7	—choke 40MHz	32-4837-1
L9	—47.25Hz trap	32-4652-78
L10	—41.25Hz trap	32-4652-80
L12	—47.25Hz trap	32-4652-78
L21	—xformer, horiz drive	32-10086-1
L101	—choke, vert output	32-10087-1
L102	—horiz hold	32-4924-1
L103	—xformer, horiz output	32-10085-1
L105	—choke, B+ filter	32-4857-1
L106	—choke, B+ filter	32-4857-1
N1	—RC network, vert int	30-6067-1
R74	—1/1w-WW, vert bias	66-9104360
R75	—33/1w-WW, vert	66-8334360
S102	—switch funct	42-2159-12
T101	—power	32-10089-1
T102	—audio driver	32-10090-1
VR1	—3K, det bias	33-5628-4
VR4	—100Ω, vert lin	33-5629-2
VR5	—12Ω, vert bias	33-5629-1
VR101	—30K, contrast	33-5624-8
VR102	—25K, off-on-volume	33-5623-25
VR103	—250K, bright	33-5623-24
VR104	—500Ω, vert hold	33-5624-9
VR105	—vert height	33-5624-10
Tuner VHF TT-203C		76-13955-5
Tuner UHF TT-152C		76-13827-4
Yoke		32-9748-1



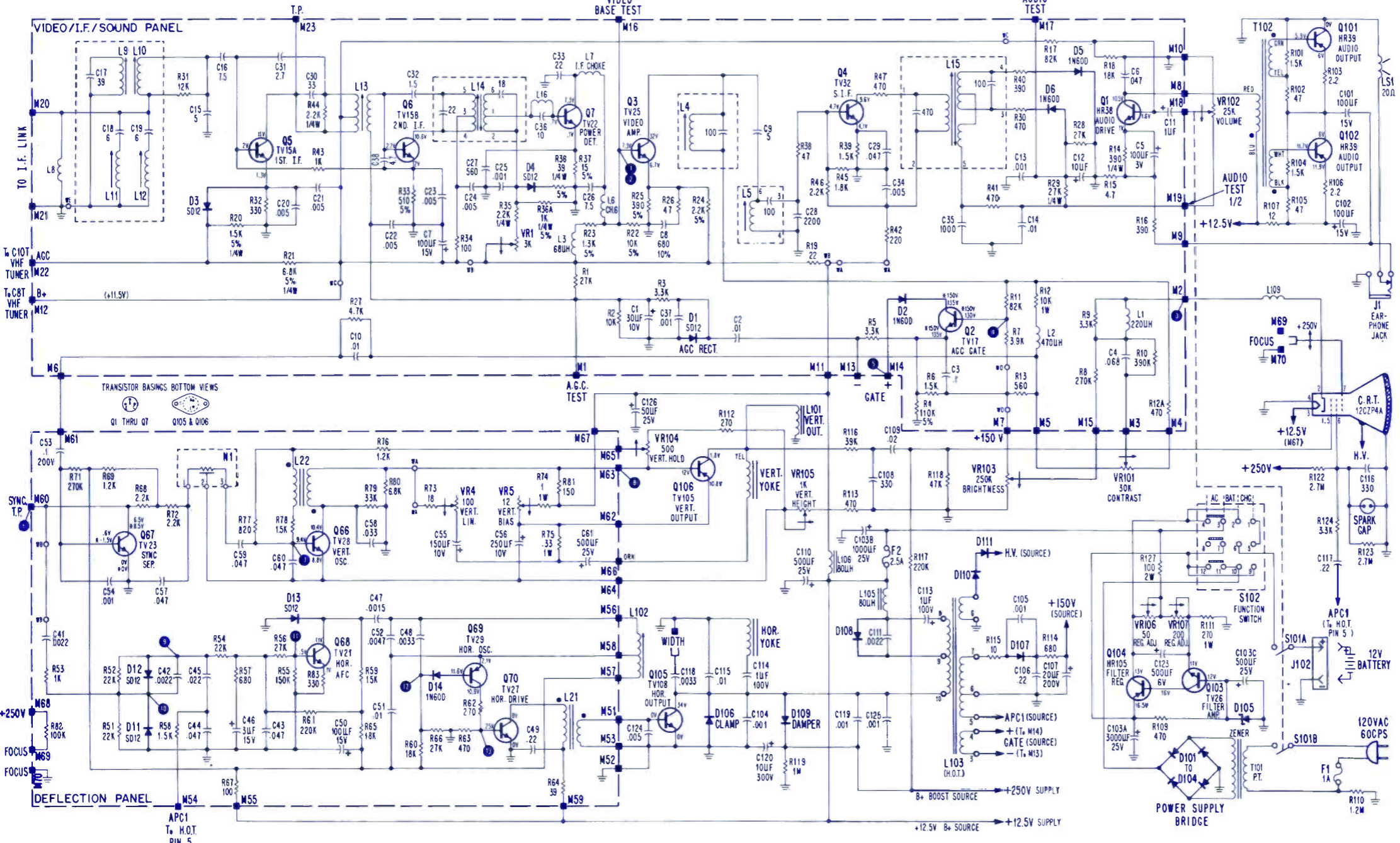
TT203C Tuner

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

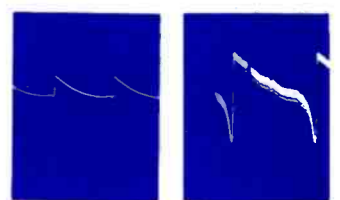
PHILCO-FORD
TV Chassis 18CT24



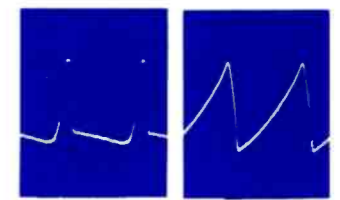
1 4.95V p/p 60Hz
2 4.95V p/p 15,750Hz
3 40.5V p/p 60Hz
4 3.8V p/p 60Hz
5 12.5V p/p 60Hz



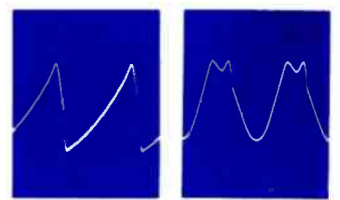
6 22V p/p 60Hz
7 2V p/p 60Hz



8 4.8V p/p 15,750Hz
9 6V p/p 15,750Hz



10 5.9V p/p 15,750Hz
11 26V p/p 15,750Hz

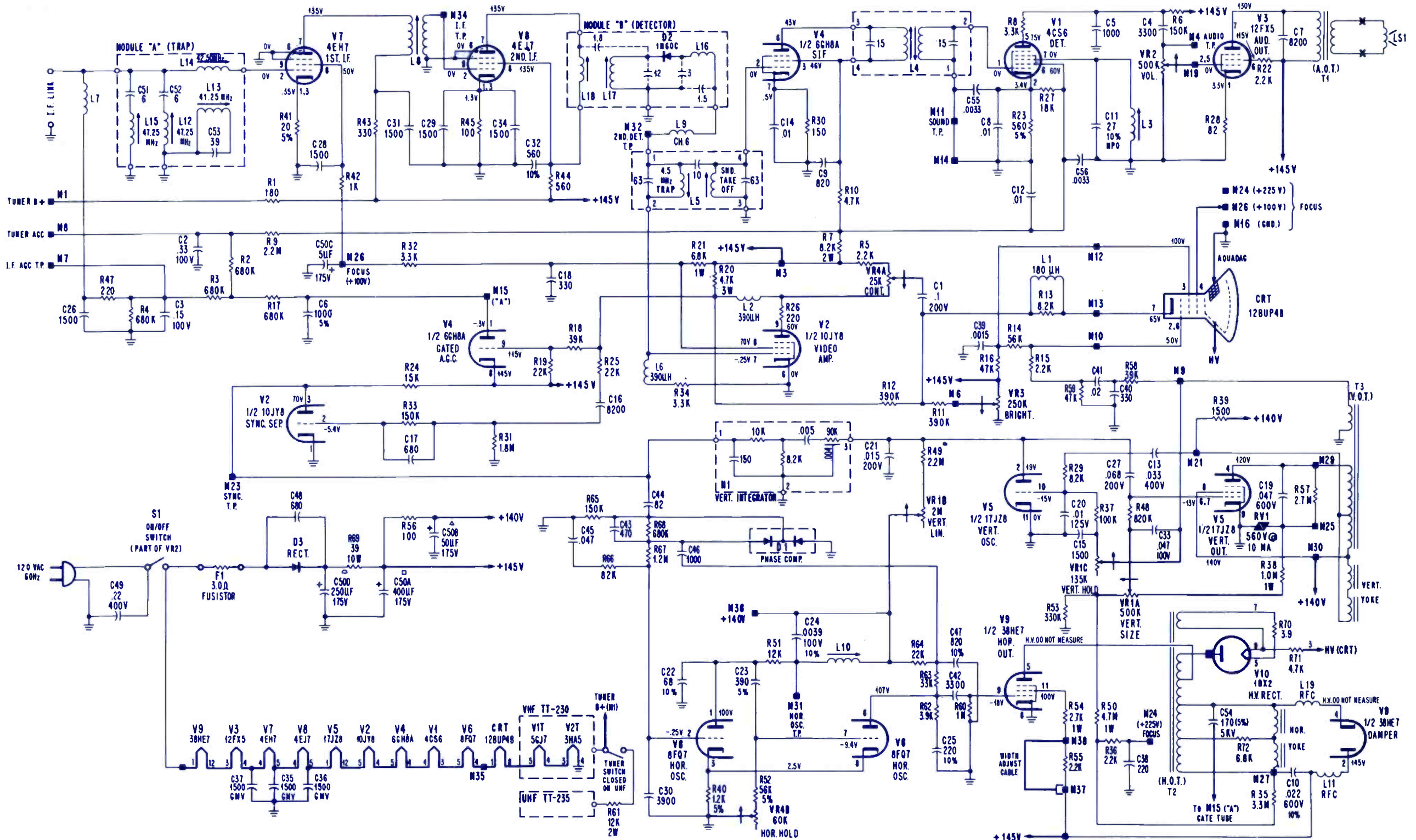


12 1.2V p/p 15,750Hz

SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C50A-D	400µf/175v, 50µf/175v, 5µf/175v, 250µf/175v, B+ filters	30-2616-12
L3	quad. snd. det.	32-4876-1
L5	4.5MHz trap & sound take-off	32-4888-13
L7	tuner cplg	32-4652-101
L10	horiz stabilizer	32-4654-3
L12	47.25MHz trap	32-4652-78

L13	41.25MHz trap	32-4652-80
L15	47.25MHz trap	32-4652-78
L17	video det coil	32-4652-79
N1	vert integrator	30-6030-12
R20	4.7K, 3w, video plate	33-3451-8
RV1	varistor, 560v @ 10µh vert out	33-1373-6
T1	audio output	32-10115-1
T2	horiz output	32-10008-9

T3	vert output	32-10012-11
VR1 A-B-C	500K v size, 2M v, lin, 135K v hold	33-5637-1
VR2	500K, volume & on-off sw	33-5634-3
VR3	250K, bright	33-5631-13
VR4A-B	25K, cont, 60K, h hold	33-5637-2
	tuner, UHF TT235	76-14186-1
	tuner, VHF TT230	76-14185-1
	yoke & cable	76-14198-1



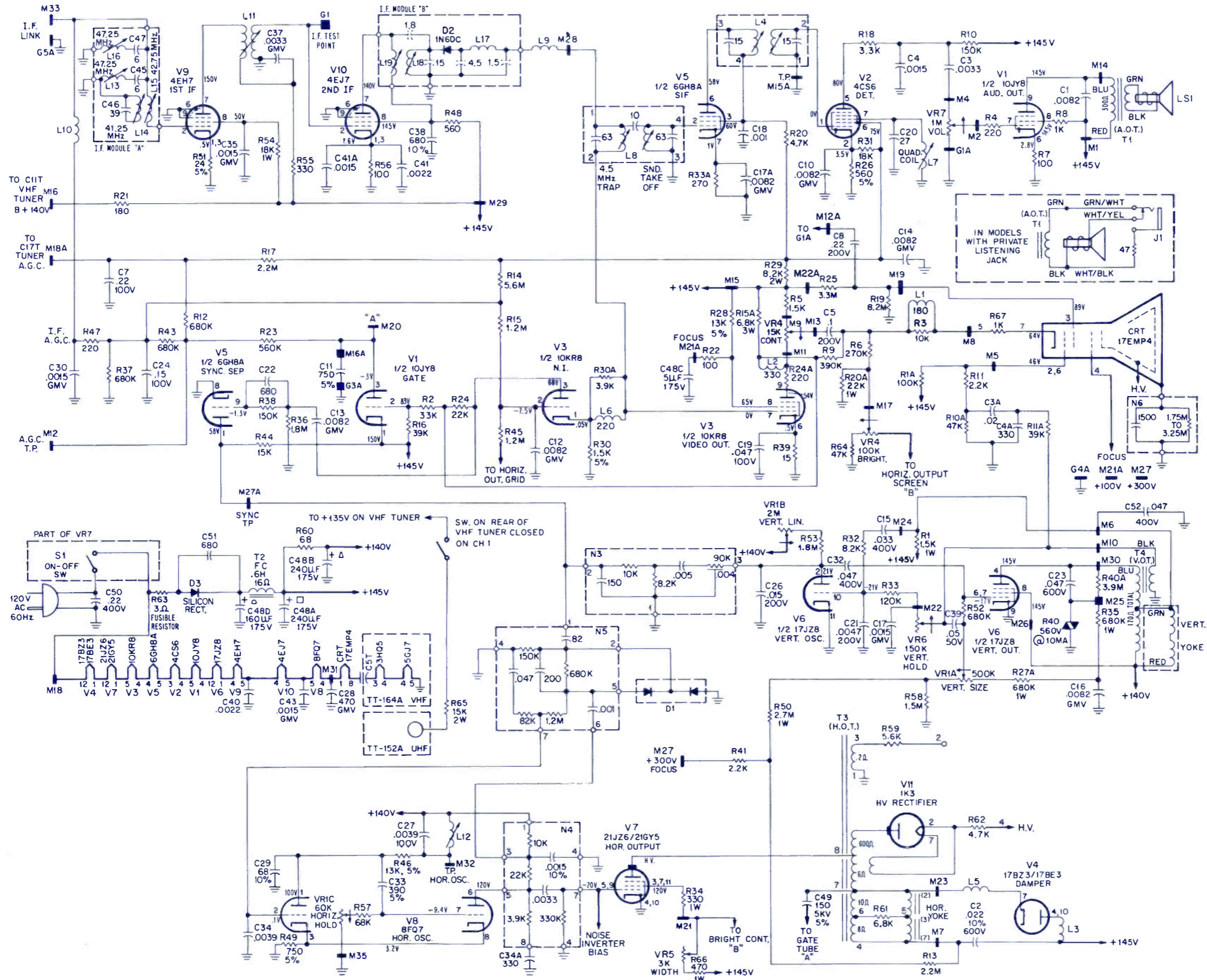
SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C48A-D	160/240/240/5 @ 175v B+ filters	30-2601-33
L7	quad, snd det	32-4876-1
LB	MHz trap & snd take-off	32-4688-13
L12	horiz stabilizer	32-4754-3
L13	47.25MHz trap	32-4652-78
L14	41.25MHz trap	32-4652-80
L17	40MHz det choke	32-4837-1

N3	vert integrator	30-6030-12
N5	phase comp	30-6035-2
N6	CRT isolation	30-6058-2
R15A	6.8K 3w video plate	33-1363-46
R40	varistor vert yoke	33-1373-6
R63	3Ω fusible resistor	33-1381-5
T1	audio output	32-10013-2
T2	filter choke	32-10118-4
T3	horiz output	32-10008-7

T4	vert output	32-10012-6
VR1A-C	500K V size 2M lin. 60K H. hold	33-5595-8
VR4A-B	100K bright 15K contrast	33-5618-17
VR5	3K width	33-5620-1
VR6	150K vert hold	33-5619-9
VR7	1M vol-on-off, w/cb	33-5634-5
VIF det assy w/comp (module "B")		38-10302
Tuner, UHF TT152		76-13827-1
Tuner, VHF TT164A		76-13579-7

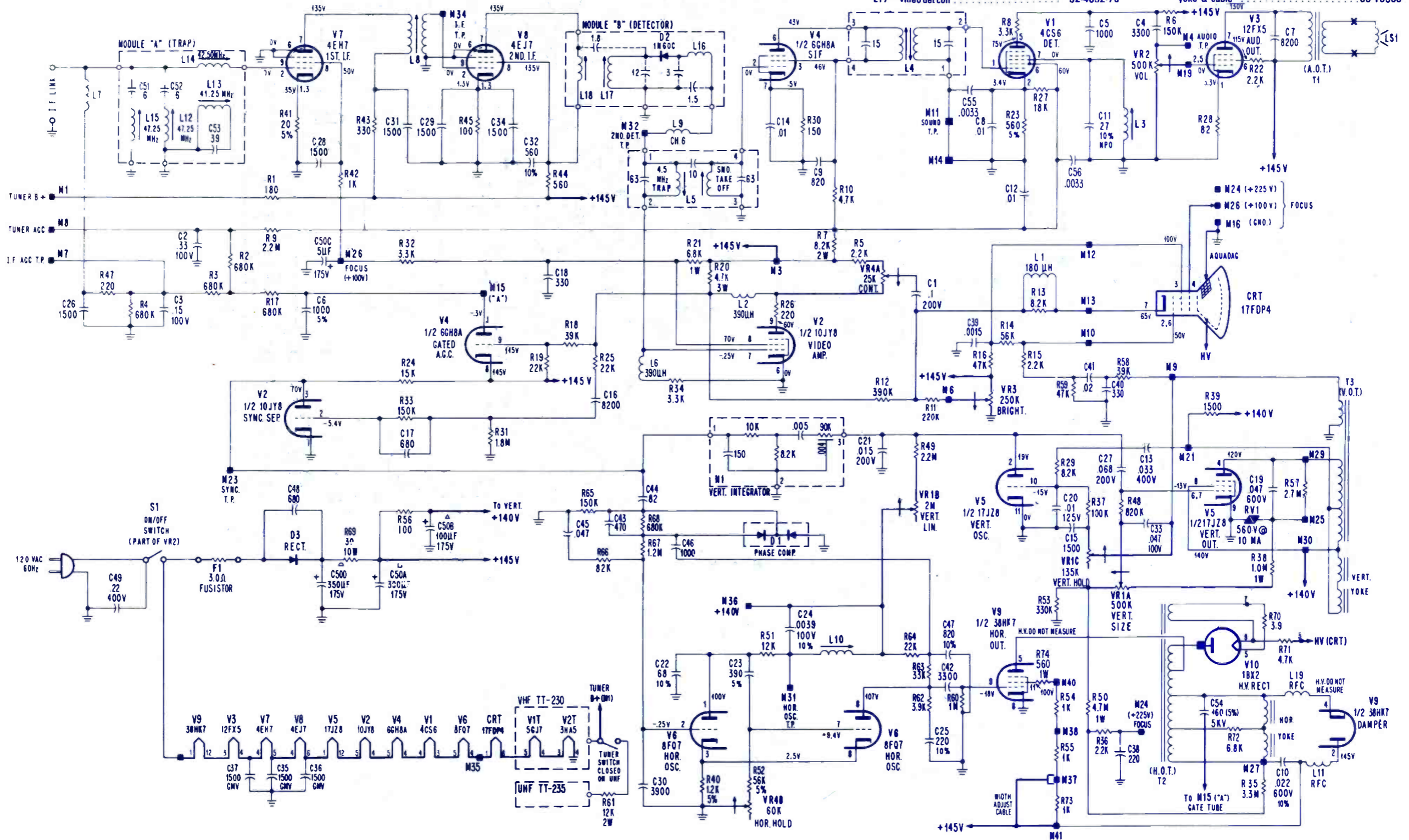
ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

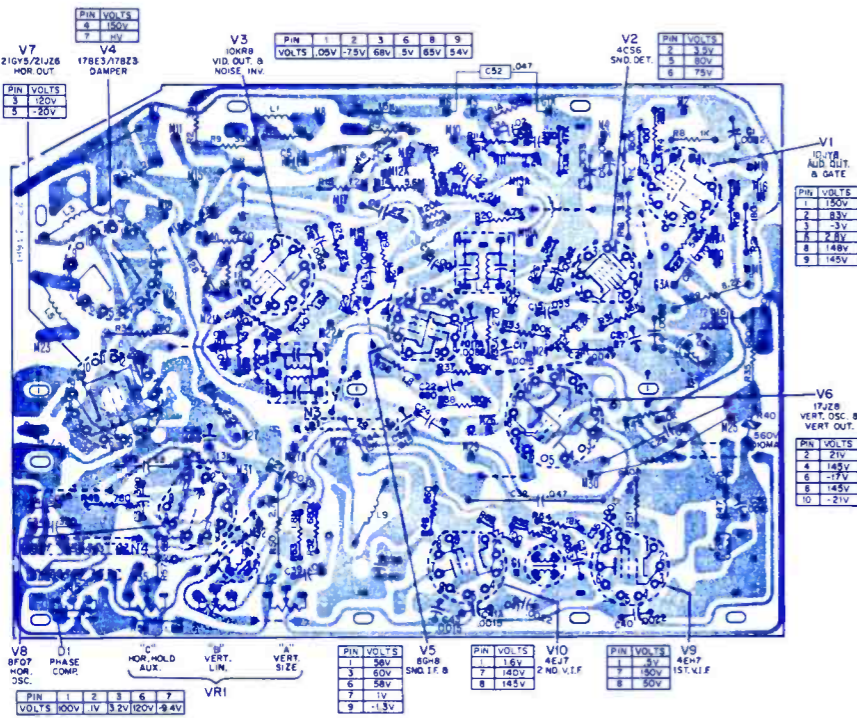
PHILCO-FORD
TV Chassis 20P22



SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C4	3300pf, audio cplg	30-1294-42
C50A-D	300μf/175v, 100μf/175v, 5μf/175v, 350μf/175v, B+ filters	30-2818-17
L1	180μh, CRT cathode	32-4802-10
L2	390μh, vid. amp. plate	32-4802-14
L3	quad snd det	32-4878-1
L4	sound IF	32-4745-12
L5	4.5MHz trap & sound take-off	32-4888-13
L7	tuner cplg	32-4852-101
L10	horiz stabilizer	32-4754-3
L15	47.25MHz trap	32-4852-78
L17	video det coil	32-4852-79

M1	vert. integrator	30-8030-12
RV1	varistor, 580v @ 10ma vert out	33-1373-8
F1	3.0Ω fusistor	33-1381-5
T1	audio output	32-10115-1
T2	horiz output	32-10008-10
T3	vert output	32-10012-12
VR1 A,B,C	500K v size, 2M v lin 135K v hold	33-5873-1
VR2	500K, volume & on-off sw	33-5834-3
VR3	250K bright	33-5831-13
VR4A-B	25K cont, 80K, h hold	33-5837-2
	tuner, UHF TT235	78-14188-1
	tuner, VHF TT230	78-14185-1
	yoke & cable	38-10588

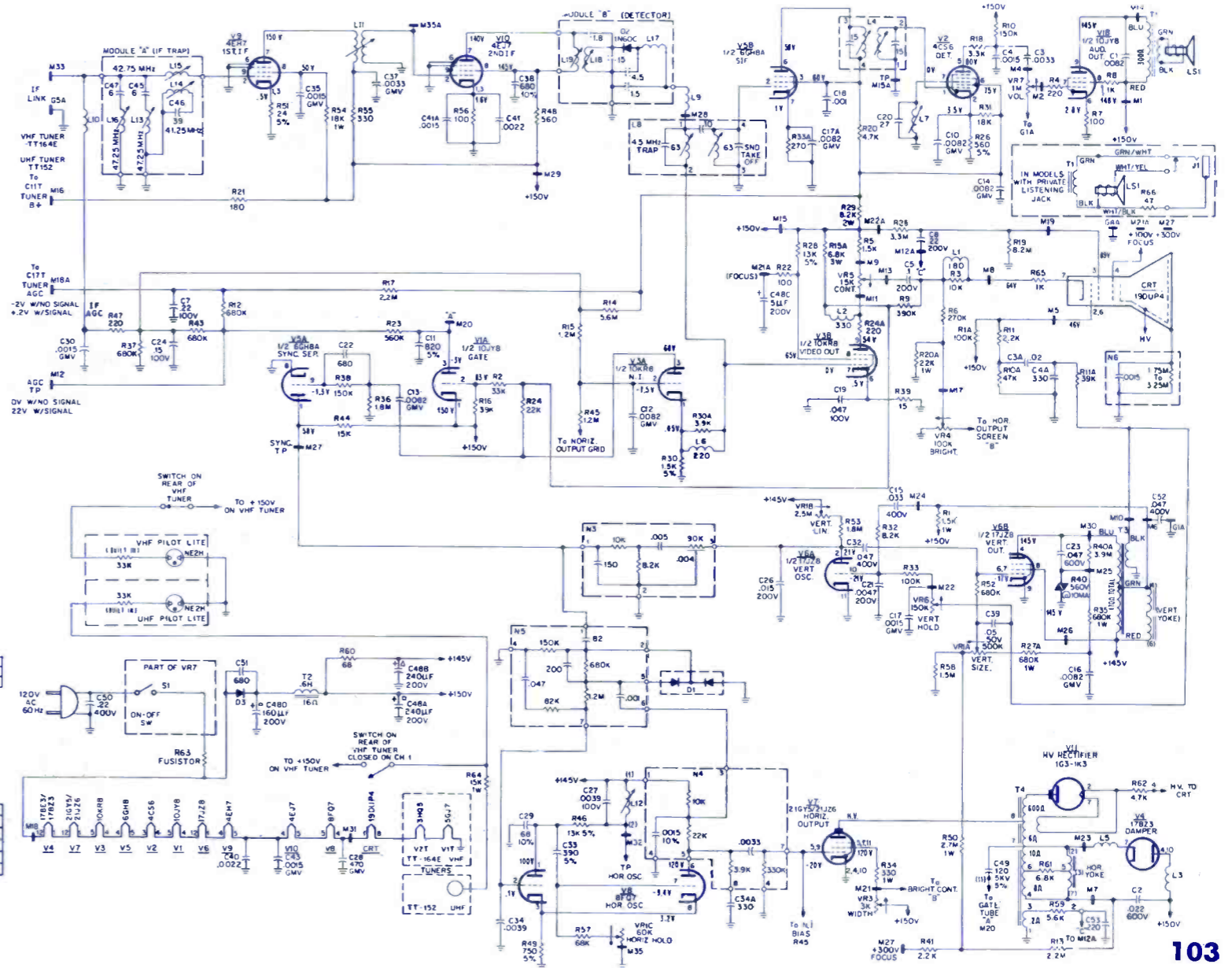
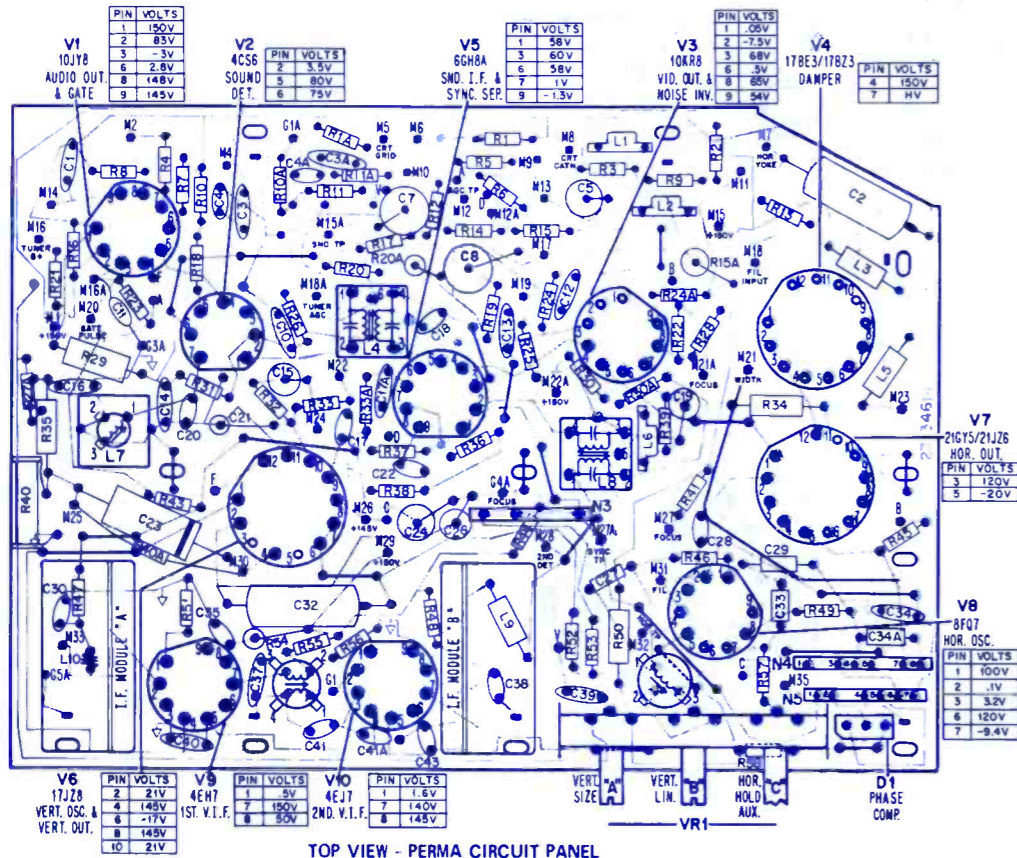




SYMBOL DESCRIPTION PHILCO-FORD PART NO.

- C48 - 240/240/160/5μf @200v, B+ filter 30-2601-33
- D1 - phase comp 34-8037-1
- D2 - 2nd det. 34-8022-6
- D3 - rect, silicon 34-8054-7
- L1 - 180μh, plate series 32-4762-7
- L2 - 330μh, plate shunt 32-4762-20
- L7 - quad, snd det. 32-4876-1
- L8 - 4.5MHz trap & S.T.O. 32-4688-13
- L10 - tuner cplg 32-4652-96
- L12 - horiz stab 32-4754-3
- L13 - 47.25MHz trap 32-4652-78
- L15 - 47.25MHz trap 32-4852-79
- L18 - video det. 32-4652-79
- N3 - vert int. 30-6030-12
- N4 - horiz osc 30-6057-1
- N5 - phase comp 30-6035-2

- N6 - isolation, CRT 30-6058-2
- R40 - varistor, 560v @ 10ma 33-1373-6
- R63 - 3Ω, fusistor 33-1383-5
- S1 - on-off (part of VR-7)
- T1 - audio otp 32-10013-2
- T2 - B+ filter otp 32-10118-1
- T3 - vert otp 32-10012-5
- T4 - horiz otp 32-10008-7
- VR1 - 500K, vert size, 2.5M, vert lin, 60K, horiz hold 33-5595-8
- VR3 - 3K, width 33-5620-1
- VR4 - 100K, bright 33-5605-36
- VR5 - 15K, contrast 33-5605-38
- VR6 - 150K, vert hold 33-5605-37
- VR7 - 1M, on-off vol panel, fusistor 76-11072-11
- tuner, UHF, TT152E 76-13872-2
- tuner, VHF, TT162A 76-13579-6
- yoke ass'y 76-14170-1



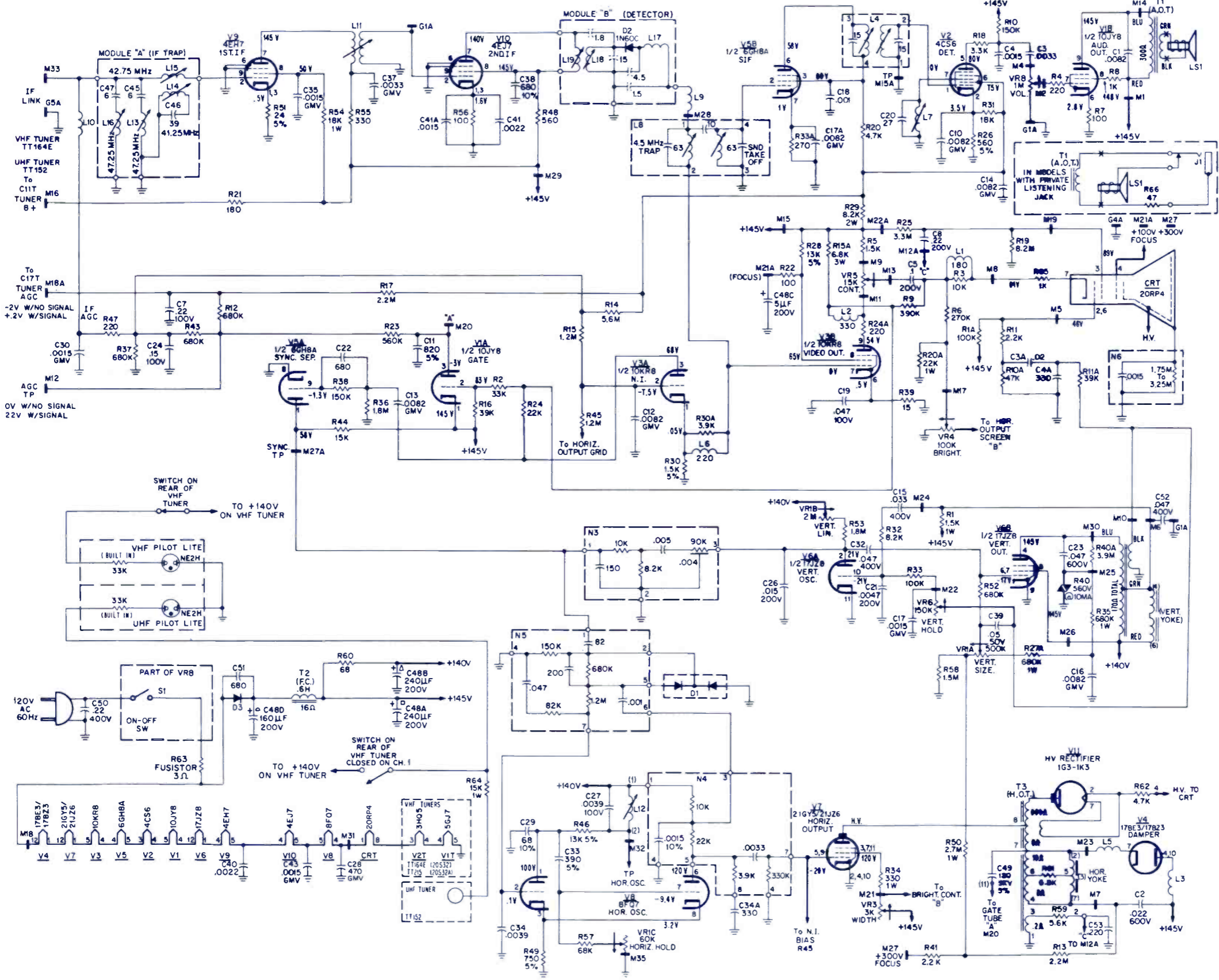
PHILCO-FORD
TV Chassis 20S32/A

ELECTRONIC TECHNICIAN / DEALER *TEKFA*X

SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C48	240/240/160/5µf @200v 8+ filter	30-2601-33
L1	180µh, plate series	32-4762-7
L2	330µh, plate shunt	32-4762-20
L7	quad snd det	32-4876-1
L8	4.5MHz trap & STO	32-4688-13
L12	horiz stab	32-4754-3
N3	vert int	30-6030-12
N4	horiz osc	30-6057-1
N5	phase comp	30-6035-2
N6	isolation, CRT	30-6058-2

RS	15K, contrast	33-5595-8
R14	5.6M AGC delay	
R23	560K, AGC	
R27A	680K, vert bias	33-1381-5
R40	varistor, 560v @10µa	33-1373-6
R63	fusistor	33-1381-5
T1	audio output	32-10013-4
T2	B+ filter choke	32-10118-2
T3	horiz output	32-10008-7
T4	vert output	32-10012-6
VR1A-C	50K vert size, 2M vert lin, 60K horiz aux	

VR3	3K width	33-5620-1
VR4	15K contrast	33-5623-13
VR5	100K, bright	33-5623-15
VR6	40K horiz hold	33-5623-12
VR7	150K vert hold	33-5623-14
VR8	1M, volume (20S32A)	33-5634-9
PW	panel ass'y w/cump	38-10543
VIF	det panel-less comp	27-10561-4
VIF	panel-less comp	27-10561-9
tuner	UHF, TT152	76-1387-1
tuner	VHF, TT215 (20S32A)	76-14150-1
yoke	& cable ass'y	76-14170-1



SYMBOL DESCRIPTION PHILCO-FORD PART NO.

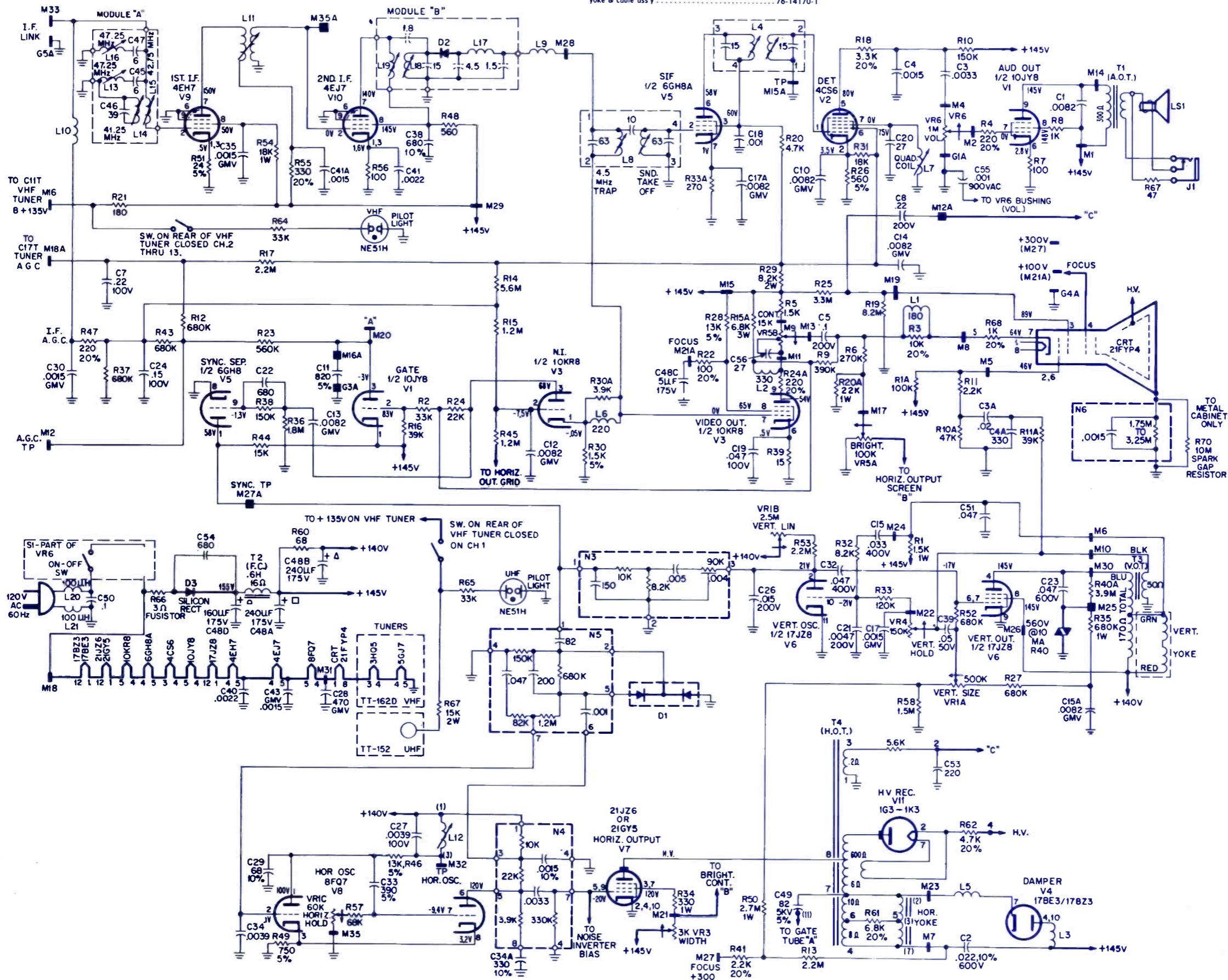
C48	—240/240/160/5μf @200v B+ filter	30-2601-33
L3	—choke, 60MHz, damper pll	32-4112-62
L6	—220μh, noise inv.	30-4762-25
L7	—quad, snd det	32-4876-1
L10	—tuner cplg	32-4652-96
L12	—horiz stab	32-4754-3
L14	—41.25MHz trap	32-4652-80

L18	—video det	32-4652-79
N3	—vert int	30-6030-12
N4	—horiz osc	30-6057-1
N5	—phose comp	30-6035-2
N6	—isolation, CRT	30-6058-2
R40	—varistor, 560v @10ma	33-1373-6
R66	—fusistor	33-1381-5
T1	—audio output	32-10013-4
T2	—B+ filter output	32-10118-3

T3	—vert output	32-10012-10
T4	—horiz output	32-1008-7
VR1	—500K vert size, 2m vert lin 60K horiz hold	33-5595-8
VR3	—3K width	33-5620-4
VR4	—150K vert hold	33-5623-22
VR5	—100K, bright 15K contrast	33-5618-32
VR6	—1M, vol-on-off	33-5634-6
	tuner UHF, TT152	76-13827-1
	tuner VHF, TT162D	76-13945-5
	yoke & cable ass'y	76-14170-1

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

PHILCO-FORD
TV Chassis 20T33



PHILCO-FORD

Color TV Chassis
19T60B

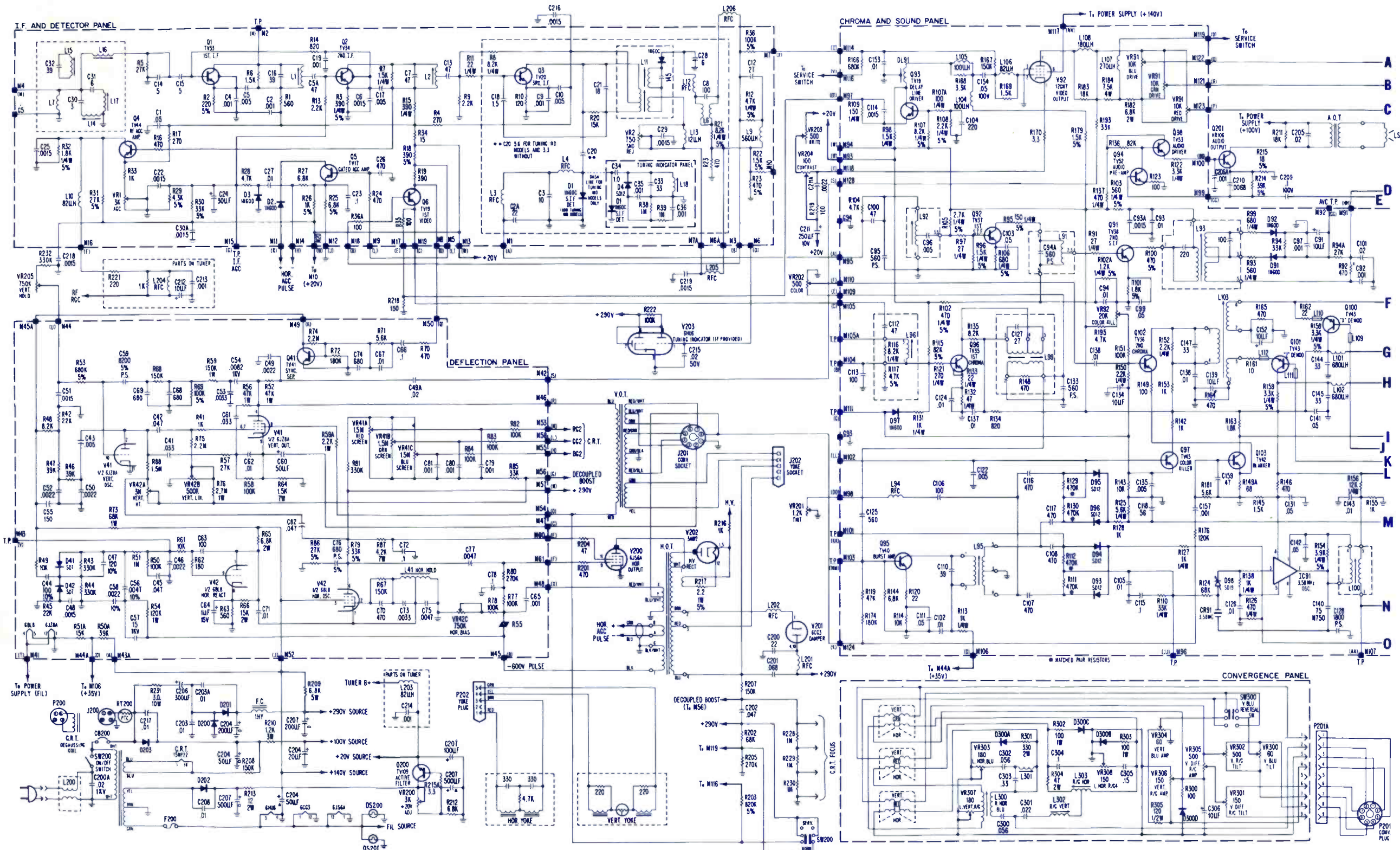
ELECTRONIC TECHNICIAN / DEALER **TEKFA**X

SYMBOL DESCRIPTION PHILCO-FORD PART NO.

C204	— 200µf, 50µf, 50µf, 20µf	30-2616-15
C207	— 500µf/500µf/200µf/100µf	30-2616-14
CB200	— circuit brkr	42-2136-6
IC91	— 3.58MHz osc	46-6002-4
J202	— def yoke	41-4385-4
L9	— peaking det	32-4762-13
L10	— RF AGC	32-4762-3
L41	— horiz hold	32-4891-2
L91	— snd interstage	32-4936-2
L92	— S.T.O.	32-4936-1
L93	— snd det	32-4928-1
L94	— tint control	32-4942-1
L95	— burst	32-4931-1

L96	— chroma take-off	32-4878-3
L99	— bandpass	32-4929-1
L301	— horiz blu shape	32-4881-4
P200	— degaussing coil & cable ass'y	32-4896-13
PS200	— degaussing	33-1386-1
RV55	— horiz bias	33-1379-2
VR1	— 3K, RF AGC emit	33-5628-7
VR2	— 750Ω, 4I.25MHz trap	33-5628-3
VR41A-C	— 1.5M, CRT screens	33-5595-20
VR42	— A-vert, ht., B-vert. lin., C-horiz bias	33-5627-3
VR93	— 250K, CRT bias	33-5628-12
VR201	— 750Ω, vert hold	33-5631-14
VR202	— 25K, volume	33-5634-1
VR203	— 1.2K, tint	33-5631-5

VR204	— 100Ω, contrast	33-5631-7
VR205	— 500Ω, bright	33-5631-22
VR206	— 500Ω, color	33-5631-3
VR303	— 180Ω, L horiz blu	33-5609-13
VR305	— 500Ω, V diff R/G amp	33-5609-14
VR307	— 180Ω, L vert R/G	33-5609-13
A.O.T.	— Audio out	32-10119-1
F.C.	— filter choke	32-10095-2
H.O.T.	— horiz out	32-10092-2
P.T.	— power	32-10096-1
V.O.T.	— vert out	32-10117-2
chroma ass'y, w/comp		38-10478
defl ass'y, w/comp		38-10569
tuner, VHF (TT-181)		76-14100-1
tuner, UHF (TT-152C)		76-13827-4



TRANSISTOR MEASUREMENTS (USE X100 SCALE)

	Coll. to Gnd.		Emit. to Gnd.		Base to Gnd.		Coll. to Emit.		Coll. to Base		Base to Emit.	
	+	-	+	-	+	-	(-) (+)	(-) (+)	(-) (+)	(-) (+)	(+) (-)	(+) (-)
Q1	880		230		970		(800) 1.1K		(950) 1.1K		(970) 1.6K	
Q2	750		430		1.4K		(820) 1.2K		1K 5.8K		1K 5.5K	
Q3	580		120		1K		(700) 710		(900) 2.2K		(920) 1.9K	
Q4	1.1K		500		1.3K		(2.2K) 1.2K		(3K) 870		(1.2K) 880	
Q5	INF.		1.2K		1.2K		(2.3K) INF.		(750) INF.		(800) 1.9K	
Q6	260		1.1K		790		(1.4K) 1.3K		(800) 4K		(760) 4.9K	
Q41	30K		0		860		(21K) 23K		(760) 100K		(850) 100K	
Q91	550		2K		525		(2.5K) 880		(30) 30		(900) 2.5K	
Q92	690		790		925		(1.5K) 1.5K		(850) 1.6K		(900) 1.8K	
Q93	1.2K		300		1K		(1.4K) 1.4K		(770) 3K		(2.2K) 840	
Q94	2.2K		100		1.1K		(16K) 2.4K		(850) 90K		(870) 50K	
Q95	13K		11K		4.5K		(810) 8.5K		(1.1K) 1.2K		(830) 2.4K	
Q96	1.4K		70		1.3K		(840) 1.3K		(1K) 5K		(1K) 3.7K	
Q97	1.4K		2.4K		2.5K		(4.1K) 4.3K		(760) INF.		(850) INF.	
Q98	810		6.7K		2.2K		(8K) 1.9K		(850) 16K		(870) 45K	
Q99	530		80		800		(620) 620		(810) 1.4K		(820) 1K	
Q100	3.9K		540		800		(2.2K) 4.5K		(640) 5.1K		(690) 2K	
Q101	3.8K		540		800		(2.2K) 4.4K		(640) 5.1K		(690) 2K	
Q102	1.3K		180		1.3K		1.4K 1.5K		(890) 9K		(930) 7.2K	
Q103	2.2K		78		790		(1.8K) 2.3K		(650) 8K		(690) 6K	
Q200	1.4K		290		950		(1K) 860		(550) 2.2K		(580) 3K	
Q201	INF.		200		740		(2.9K) INF.		(690) INF.		(710) 10K	

Resistance measurements of transistors in circuit (power off).

All measurements are in ohms and taken with a B & K Model 175 VTVM with an allowable tolerance of ±20%.

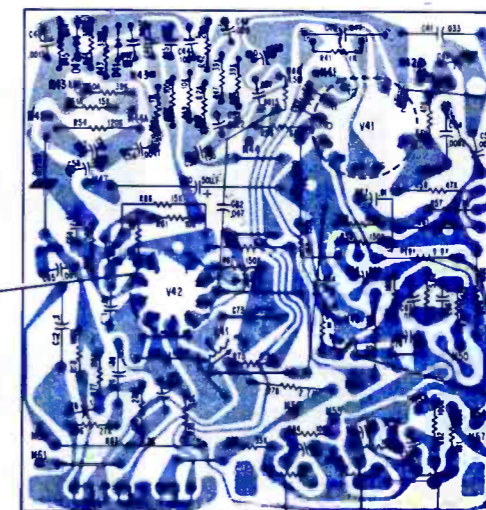
TRANSISTOR VOLTAGES

	E	B	C
Q1	.45V	1.15V	18.8V
Q2	1.16V	1.86V	18.5V
Q3	1.79V	2.41V	14.5V
Q4	17.9V	18.2V	1.1V
Q5	17.5V	15V	21.4V
Q6	10V	4.9V	4.2V
Q41	0V	.5V	23V
Q91	10.4V	11V	14V
Q92	6.3V	7V	9.8V
Q93	3.9V	4.5V	14.3V
Q94	0V	.55V	9.2V
Q95	3.2V	-.025V	36V
Q96	.18V	.88V	17.5V
Q97	.1V	-.6V	20V
Q98	7.1V	9.2V	19V
Q99	.68V	1.34V	18V
Q100	1.05V	1.37V	13V
Q101	1.08V	1.37V	13V
Q102	.43V	.15V	20V
Q103	.43V	-.33V	9V
Q200	20.2V	21V	28.2V
Q201	.56V	1.18V	112V

I.C. 91	
1	11V
3	1.52V
4	0V
5	1.52V
7	11V
8	11.45V

TUBE VOLTAGES

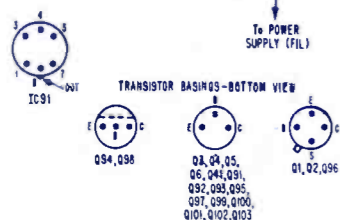
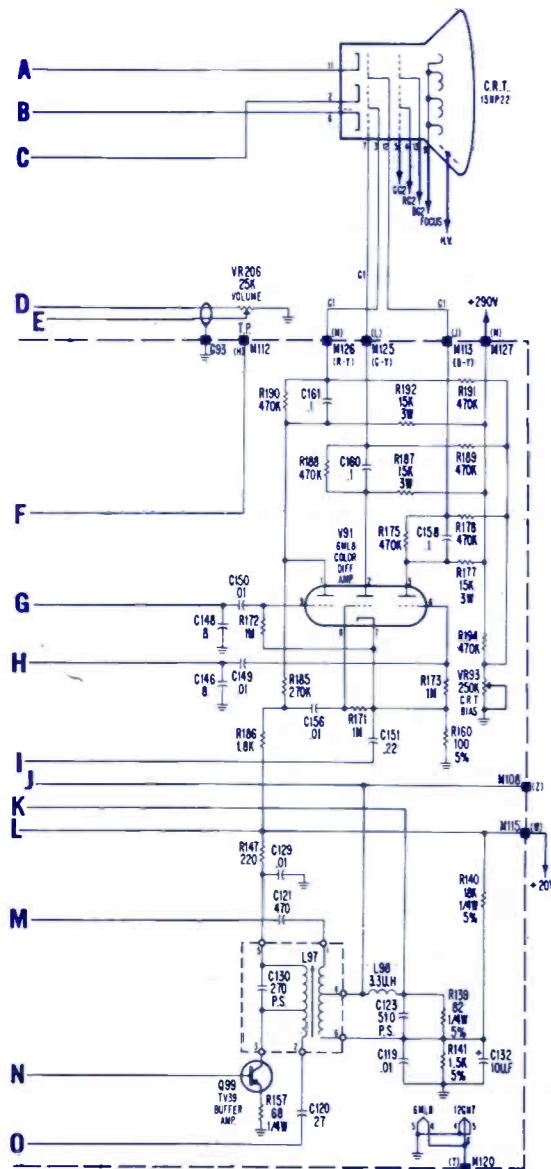
PIN NO.	V41	V42	V91	V92	V200	V201
	6JZ8	6BL8	6ML8	12GN7	6JS6	6CG3
1	0V	84V	185V	26V	FIL	FIL
2	88V	-36V	153V	24V	0V	-
3	0V	145V	183V	0V	110V	-
4	278V	FIL	FIL	FIL	0V	295V
5	0	FIL	FIL	FIL	-59V	-
6	58V	172V	0	FIL	-	-
7	58V	.17V	2.5V	248V	-	DO NOT MEASURE
8	282V	4.3V	.35V	145V	-	-
9	93V	.15V	.3V	0V	-59V	-
10	-19V	-	-	-	0V	295V
11	0V	-	-	-	110V	-
12	0V	-	-	-	FIL	FIL



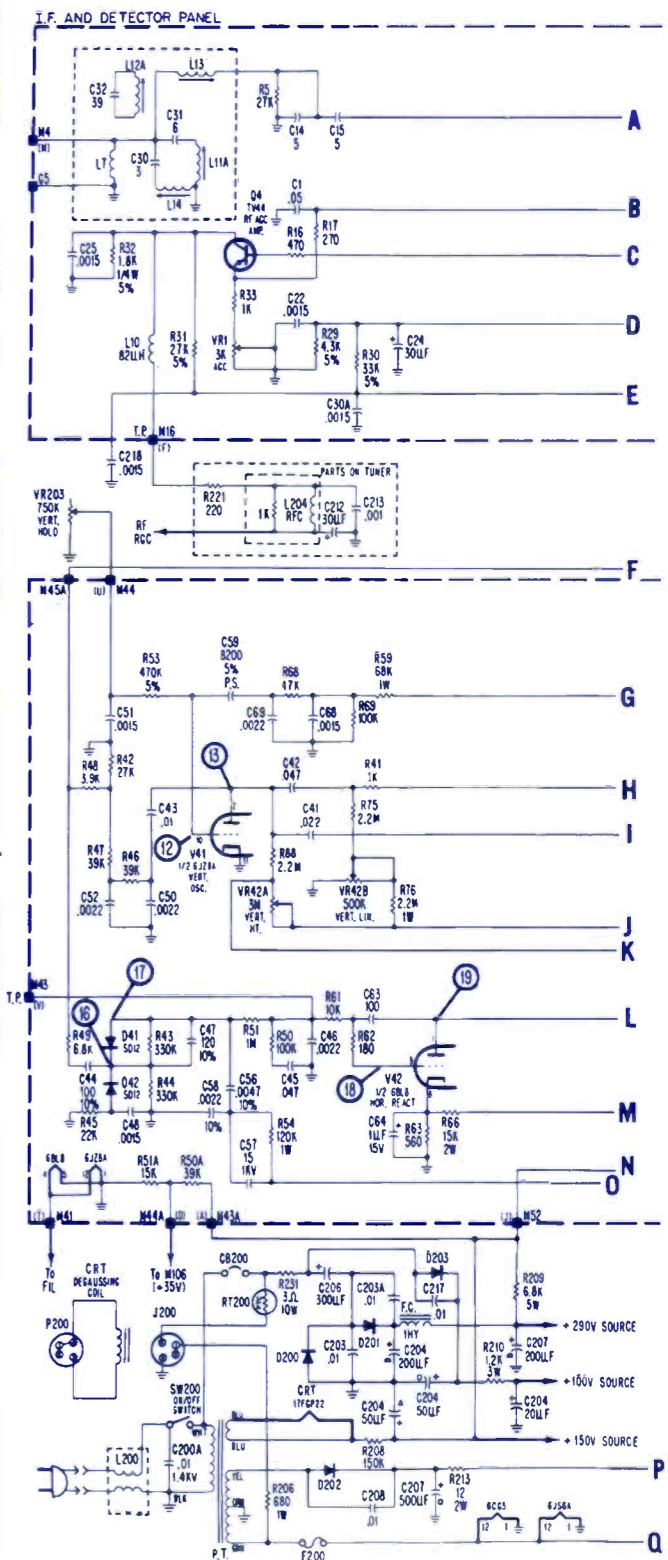
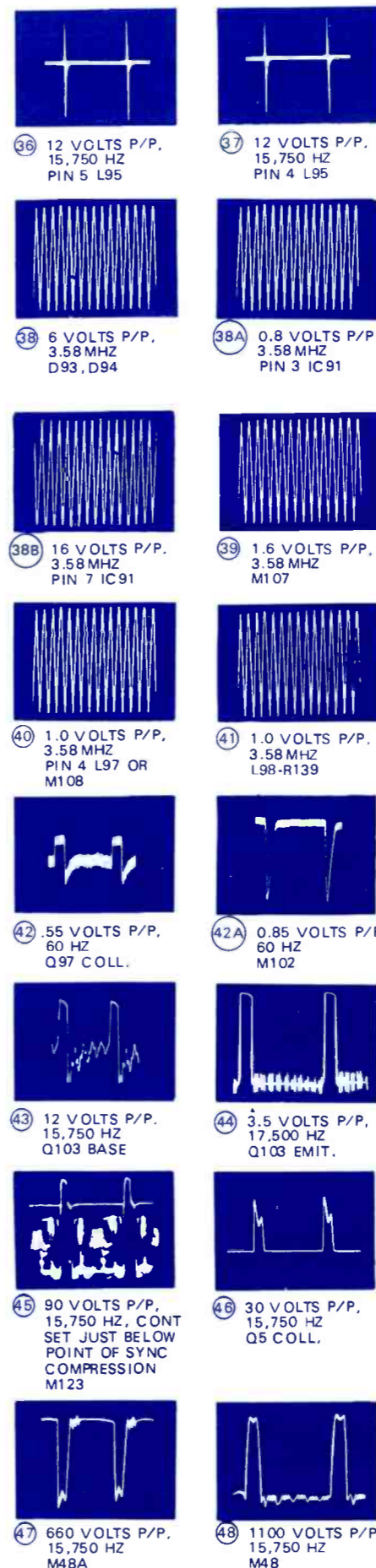
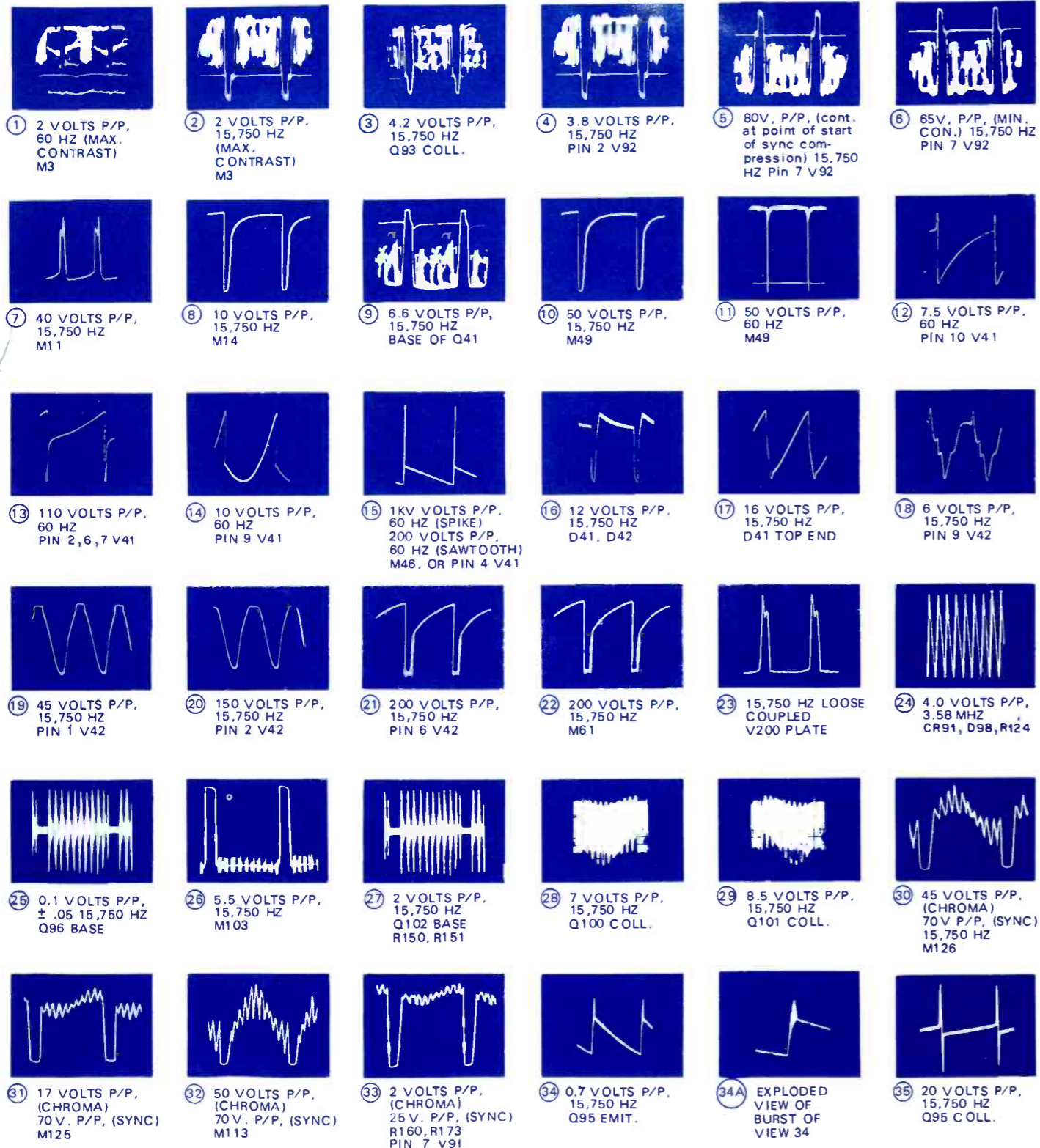
BOTTOM VIEW
P1 DEFLECTION PANEL

V42
4BL8
HOR. OSC. &
HOR. REACT.

PHILCO-FORD
Color TV Chassis 19FT60B



These waveforms were taken with the receiver AGC control adjusted for an approximate peak-to-peak output of two volts at the video detector, using an air signal. Do not reset AGC control when using color bar generator. All monochrome voltages taken with average air signal and all chroma voltages taken with a color bar generator connected to the antenna input terminals. The chroma peak-to-peak voltages were taken with the chroma control set for 0.3V peak-to-peak at center tap of chrome control or M110 and the tint control set for proper color bars (approximately mid-range), all other controls set for normal viewing. The frequencies shown are those of the waveforms. . . .not the sweep rate of the oscilloscope. All voltages taken with a wide band scope having a 5MHz bandwidth similar to B&K Model 1450. Line voltage 120V.

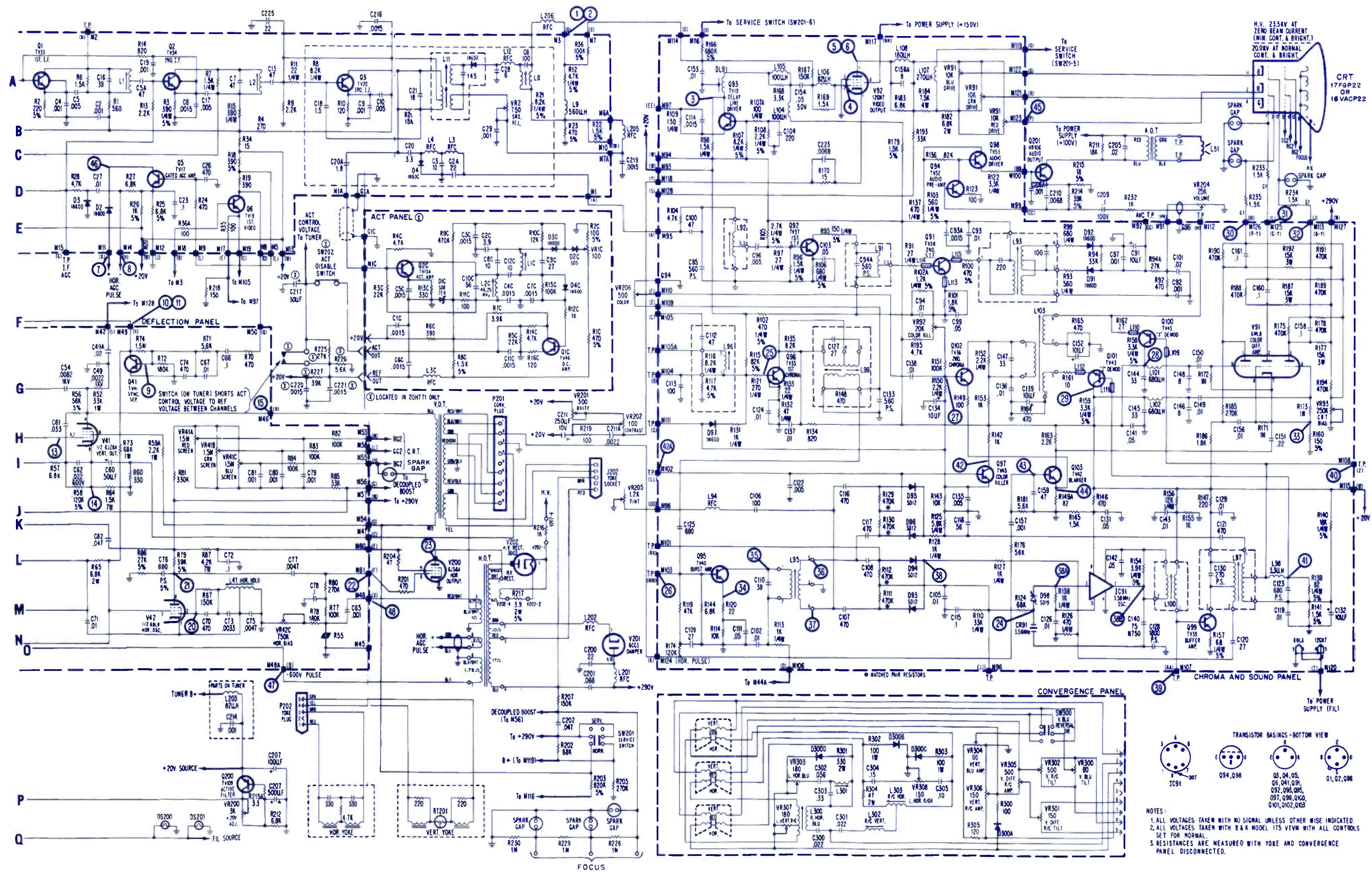


PHILCO-FORD Color TV
Chassis 20HT70/20HT71

SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C204A	200 μ f/350v	30-2616-15
C204B	50 μ f/200v	30-2616-15
C204C	50 μ f/200v	30-2616-15
C204D	20 μ f/200v	30-2616-15
C207A	500/100v	30-2616-14
C207B	500/100v	30-2616-14
C207C	200/100v	30-2616-14
C207D	400/100v	30-2616-14
CB200	circuit breaker	42-2136-6
F200	no 36 wire 1 in filament pwr	

L41	horiz hold coil	32-4891-2
L91	sound interstage coil	32-4936-2
L93	sound ratio det coil	32-4928-1
L94	tint control	32-4685-44
L96	chroma take off coil	32-4878-3
R195	4.7K color killer control	
RT200	degaussing thermistor	33-1386-1
RV55	horiz bias varistor	33-1379-2
SW200	on/off	42-2167-1
ACT	audio output	32-10119-1
FC	filter choke	32-10095-2
VOT	vertical output	32-10117-3

HOT	horiz output	32-10132-1
PT	power	32-10096-2
VR91	video drive control	33-5632-1
VR92	color killer control	33-5628-6
VR93	CRT bias control	33-5628-12
VR201	brightness control	33-5631-22
VR202	contrast control	33-5631-7
VR203	vertical control	33-5631-4
VR204	volume control	33-5631-25
VR205	tint control	33-5631-5
VR206	color control	33-5631-3
yoke		76-14118-4



TRANSISTOR BASING - BOTTOM VIEW

IC91
Q94, Q98
Q5, Q4, Q5, Q6, Q41, Q91, Q92, Q95, Q96, Q97, Q98, Q99, Q101, Q102, Q103

NOTES:
1. ALL VOLTAGES TAKEN WITH NO SIGNAL UNLESS OTHERWISE INDICATED.
2. ALL VOLTAGES TAKEN WITH B & K MODEL 175 VTVM WITH ALL CONTROLS SET FOR NORMAL.
3. RESISTANCES ARE MEASURED WITH YOKE AND CONVERGENCE PANEL DISCONNECTED.

TUBE RESISTANCES

TUBE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12
V41	VERT. OUT/OSC	F	*3.75M	-	17K	-	*2.5M	*2.5M	20K	1.6K	*900K	0	F
V42	HORIZ. OSC/REACT.	10%	*1.85M	12K	F	F	50K	0	580	*1.4M			
V81	COL. OR DIFF. AMP.	30K	30K	30K	F	F	1.1M	150	*1.1M	350K			
V82	VIDEO OUTPUT	200	*25K	200	F	F	22K	12K	22K	12K			
V200	HORIZ. OUTPUT	0	0	20K	0	*900K	-	-	-	*900K	0	20K	0
V201	DAMPER	0	-	-	18K	-	-	-	-	18K	-	0	0

*RX1000

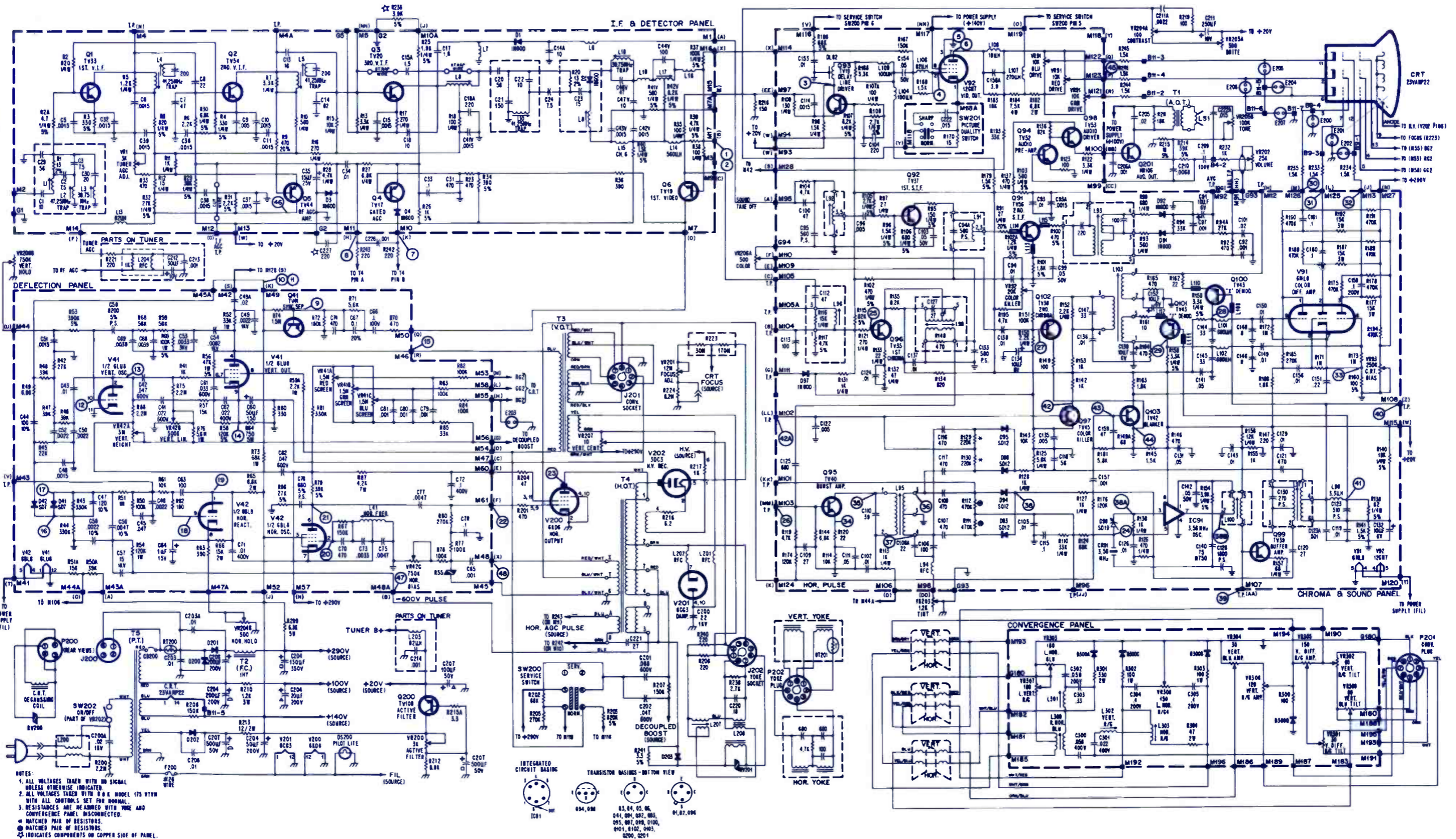
METER B&K 120
SCALE = RX1000
RX10000

SYMBOL DESCRIPTION PHILCO-FORD PART NO.

C204A-200µf/200v electrolytic	30-2616-11
C204B-150µf/350v electrolytic	30-2616-11
C204C-20µf/200v electrolytic	30-2616-11
C204D-50µf/50v electrolytic	30-2616-11
C207A-500µf/50v +20v electrolytic	30-2616-10
C207B-500µf/50v +20v electrolytic	30-2616-10
C207C-100µf/50v +20v electrolytic	30-2616-10
C8200-power, ac	42-2136-6
IC91-3.58MHz oscillator	46-5002-4
L4-1horiz hold	32-4891-2
L91-sound interstage	32-4936-2

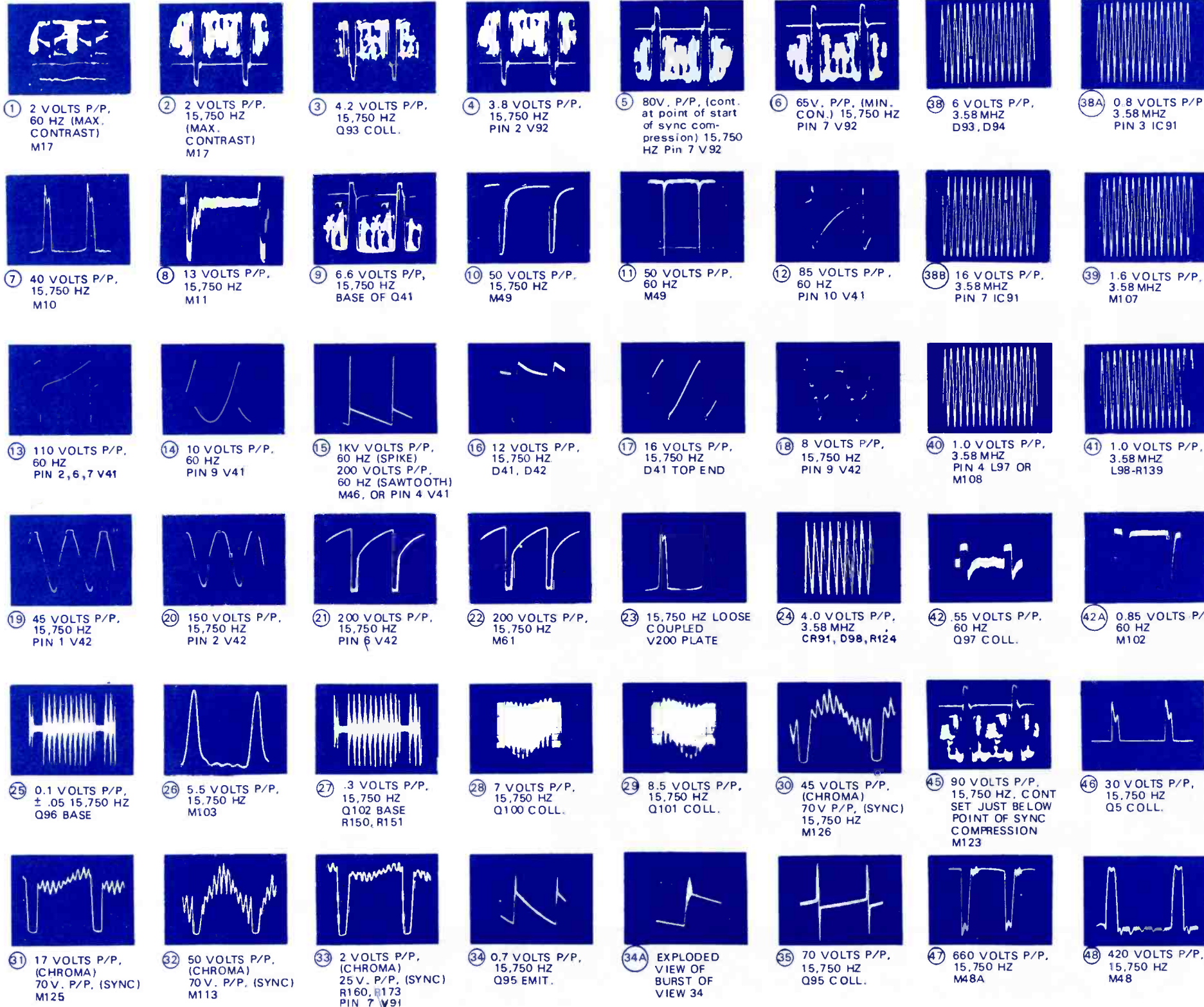
L93-sound ratio detector	32-4928-1
L94-tint control	32-4942-1
L96-chroma t o	32-4878-3
L99-chroma bandpass	32-4929-1
RT200-degaussing thermistor	33-1376-6
RT201-vert damping	32-0292
RV55-horiz bias	33-1379-2
T1-audio output xformer	32-10119-3
T2-filter choke	32-10095-3
T3-vert output xformer	32-10080-4
T4-horiz output xformer	32-10130-1
T5-power xformer	32-10131-1

VR42-A-vert height, B-lin, C-bias	33-5627-3
VR92-color killer	33-5628-6
VR93-CRT bias	33-5628-12
VR201-12M, focus adjustment	33-5631-24
VR202-25K, volume	33-5634-17
VR203-1.2K, tint	33-5623-20
VR204A-500n, horiz hold	33-5636-16
VR204B-100n, contrast	33-5636-16
VR205A-100K, tone	33-5644-3
VR205B-500n, bright	33-5644-3
tuner, VHF TT 180D	76-140996V
yoke assembly	76-14236-1



OSCILLOSCOPE WAVEFORM PATTERNS

These waveforms were taken with the receiver AGC control adjusted for an approximate peak-to-peak output of two volts at the video detector, using an air signal. Do not reset AGC control when using color bar generator. All monochrome voltages taken with average air signal and all chroma voltages taken with a color bar generator connected to the antenna input terminals. The chroma peak-to-peak voltages were taken with the chroma control set for 0.3V peak-to-peak at center tap of chrome control or M110 and the tint control set for proper color bars (approximately mid-range), all other controls set for normal viewing. The frequencies shown are those of the waveforms... not the sweep rate of the oscilloscope. All voltages taken with a wide band scope having a 5MHz bandwidth similar to B&K Model 1450. Line voltage 120V.



LINE VOLTAGE - 120 VAC
 AIR SIGNAL - FOR MONOCHROME SIGNALS
 COLOR BAR GEN. - B&K 1245 - FOR COLOR SIGNALS
 ACTIVE FILTER AT 20 VDC

PHILCO-FORD
Color TV Chassis
20QT74

B & K METER 175
 A.G.C. FULL CLOCKWISE
 ACTIVE FILTER +20 VDC @ M13
 LINE VOLTAGE 120 VAC

TRANSISTOR VOLTAGES NO SIGNAL

TRANSISTOR	FUNCTION	E	B	C
Q1	1ST V.I.F.	1.7	2.6	14.6
Q2	2ND V.I.F.	2.7	3.3	12.8
Q3	3RD V.I.F.	3.1	3.75	14.5
Q4	GATED AGC	17	16.75	21
Q5	RF AGC	8	13.2	1.2
Q6	1ST VIDEO	1.5	1.2	12.6
Q41	SYNC SEP	0	-1.3	42
Q91	2ND S.I.F.	11	11.6	14
Q92	1ST S.I.F.	6	6.8	10.4
Q93	DELAY DRIVER	3.6	4.2	14.6
Q94	AUD PRE AMP	0	.58	2.4
Q95	BURST AMP	4.8	0	39
Q96	1ST CHROMA	.2	.92	17.5
Q97	COLOR KILLER	0	-.1	20
Q98	AUD DRIVER	1.8	2.4	20
Q99	BUFF AMP	.86	1.5	17.5
Q100	X DEMOD	1.6	1.40	12.6
Q101	Z DEMOD	1.4	1.44	12.6
Q102	2ND CHROMA	.52	0	20
Q103	BLANKER	.52	-1.34	6.6
Q201	AUD. OUTPUT	.64	1.18	108
Q200	ACTIVE FILTER	19.7	20.5	28

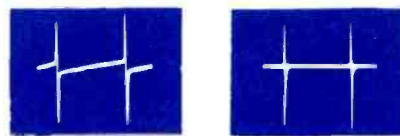
TRANS.	FUNCTION	E TO GRD.	B TO GRD.	C TO GRD.	C TO E (- +)	C TO B (- +)	B TO E (- +)
Q1	1ST V.I.F.	330	1150	1100	1450 (1250)	2300 (1500)	1500 (1500)
Q2	2ND V.I.F.	330	2100	1050	1400 (1350)	6.5K (1785)	1.8K (5.6K)
Q3	3RD V.I.F.	270	1700	675	950 (950)	3.1K (1.5K)	1.6K (3K)
Q4	GATED AGC	1100	1175	35K	35K (2K)	39K (1.4K)	1.4K (1.9K)
Q5	RF AGC	350	1500	1530	1875 (2.5K)	1.7K (3.6K)	1650 (1450)
Q6	1ST VIDEO	250	1K	1050	1.3K (1.3K)	4.5K (1.3K)	1.2K (4K)
Q41	SYNC SEP.	0	1475	25K	25K (22K)	190K (1350)	1450 (170K)
Q91	2ND S.I.F.	1.8K	450	1350	3.1K (3.3K)	1.5K (1.3K)	1.5K (2.4K)
Q92	1ST S.I.F.	680	1K	600	1375 (1375)	1875 (1375)	1550 (1.8K)
Q93	DELAY & DRIVER	300	1475	1030	1350 (1350)	3K (1.4K)	1425 (2.3K)
Q94	AUD. PRE AMP	100	1725	2800	450K (18K)	*50K (1.5K)	1550 (42K)
Q95	BURST AMP	10K	4.5K	13K	5K (15K)	20K (1450)	1.5K (18K)
Q96	1ST CHROMA	69	1.8K	1050	4.6K (1100)	4.6K (1725)	1825 (3.6K)
Q97	COLOR KILLER	2.9K	3.2K	1380	6K (4.4K)	*220K (1.4K)	1.5K (20K)
Q98	AUD. DRIVER	6K	2.8K	780	3.2K (7K)	19K (1.5K)	1550 (30K)
Q99	BUFF AMP	75	1175	450	550 (500)	1.4K (1350)	1125 (1125)
Q100	X DEMOD	470	1.2K	1450	4K (1.8K)	4K (1.3K)	1950 (1950)
Q101	Z DEMOD	480	1.2K	3.6K	4K (2K)	4.8K (1.3K)	1375 (1360)
Q102	2ND CHROMA	182	2K	1350	1580 (1550)	10K (1725)	1750 (8.2K)
Q103	BLANK	82	1800	2750	2.8K (2K)	8K (1650)	1.7K (5.5K)
Q201	AUD. OUTPUT	18	1.3K	28K	*40K (3.4K)	*40K (1.1K)	1250 (10K)
Q200	ACTIVE FILTER	245	1350	3.4K	4K (1450)	3.3K (1050)	1100 (3.4K)

*RX 10000
 RX 100

TRANSISTOR RESISTANCES

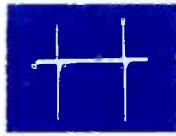
OSCILLOSCOPE WAVEFORM PATTERNS

These waveforms were taken with the receiver AGC control adjusted for an approximate peak-to-peak output of two volts at the video detector, using an air signal. Do not reset AGC control when using color bar generator. All monochrome voltages taken with average air signal and all chroma voltages taken with a color bar generator connected to the antenna input terminals. The chroma peak-to-peak voltages were taken with the chroma control set for 0.5V peak-to-peak at Pin 2 of V40 and the tint control set for proper color bars (approximately mid-range), all other controls set for normal viewing. The frequencies shown are those of the waveforms.....not the sweep rate of the oscilloscope. All voltages taken with a wide band scope having a 5MHz bandwidth similar to B&K Model 1450.

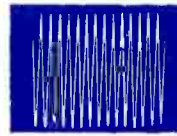


37 230 VOLTS P/P, 15,750 HZ

38 70 VOLTS P/P, 15,750 HZ



39 70 VOLTS P/P, 15,750 HZ



40 17 VOLTS P/P, 3.58 MHz



1 2 VOLTS P/P, 60 HZ (MAX. CONTRAST)



2 2 VOLTS P/P, 15,750 HZ (MAX. CONTRAST)



3 65 VOLTS P/P, 15,750 HZ



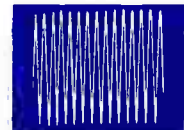
4 0.2 VOLTS P/P, 15,750 HZ



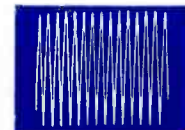
5 2.8 VOLTS P/P, 15,750 HZ



6 2.5 VOLTS P/P, 15,750 HZ



41 105 VOLTS P/P, 3.58 MHz



42 9 VOLTS P/P, 3.58 MHz



7 165 V. P/P, (MAX. CON.) 15,750 HZ



8 65 V. P/P, (MIN. CON.) 15,750 HZ



9 30 VOLTS P/P, 15,750 HZ



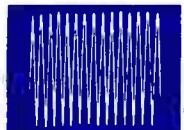
10 35 VOLTS P/P, 15,750 HZ



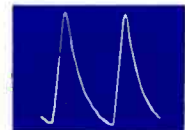
11 50 VOLTS P/P, 15,750 HZ



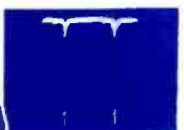
12 45 VOLTS P/P, 15,750 HZ



43 11 VOLTS P/P, 3.58 MHz



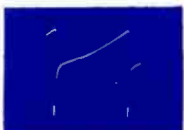
44 130 VOLTS P/P, 15,750 HZ



13 45 VOLTS P/P, 60 HZ



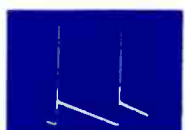
14 57 VOLTS P/P, 60 HZ



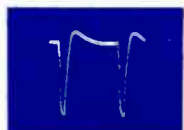
15 130 VOLTS P/P, 60 HZ



16 14 VOLTS P/P, 60 HZ



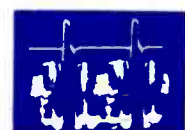
17 900 VOLTS P/P, 60 HZ (SPIKE)
150 VOLTS P/P, 60 HZ (SAWTOOTH)



18 8.5 VOLTS P/P, 15,750 HZ



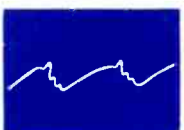
45 80 VOLTS P/P, 15,750 HZ



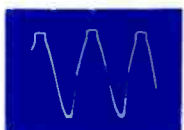
46 135 VOLTS P/P, 15,750 HZ (MAX. CONTRAST)



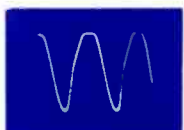
19 17 VOLTS P/P, 15,750 HZ



20 5.5 VOLTS P/P, 15,750 HZ



21 50 VOLTS P/P, 15,750 HZ



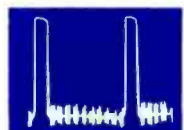
22 140 VOLTS P/P, 15,750 HZ



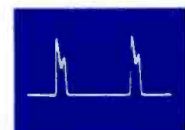
23 180 VOLTS P/P, 15,750 HZ



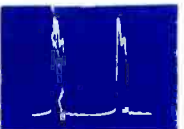
24 170 VOLTS P/P, 15,750 HZ



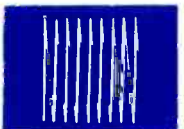
47 13 VOLTS P/P, 15,750 HZ



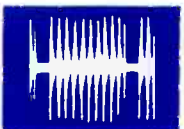
48 28 VOLTS P/P, 15,750 HZ



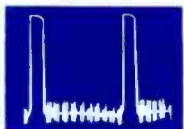
25 15,750 HZ LOOSE COUPLED



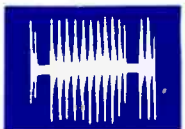
26 12 VOLTS P/P, 3.58 MHz



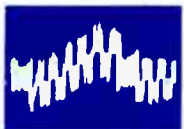
27 2.5 VOLTS P/P, 15,750 HZ



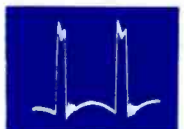
28 60 VOLTS P/P, 15,750 HZ



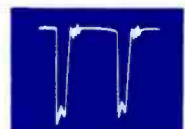
29 .5 VOLTS P/P, 15,750 HZ



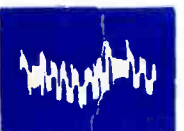
30 15 VOLTS P/P, 15,750 HZ



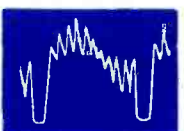
49 640 VOLTS P/P, 15,750 HZ



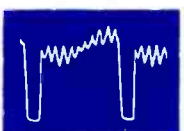
50 520 VOLTS P/P, 15,750 HZ



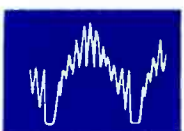
31 20 VOLTS P/P, 15,750 HZ



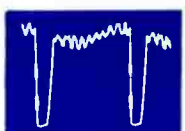
32 90 VOLTS P/P, (CHROMA)
70 V. P/P, (SYNC)
15,750 HZ



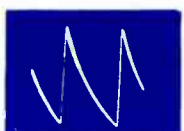
33 30 VOLTS P/P, (CHROMA)
70 V. P/P, (SYNC)
15,750 HZ



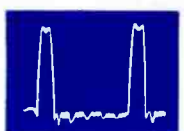
34 85 VOLTS P/P, (CHROMA)
70 V. P/P, (SYNC)
15,750 HZ



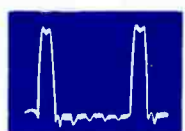
35 2 VOLTS P/P, (CHROMA)
5 V. P/P, (SYNC)
15,750 HZ



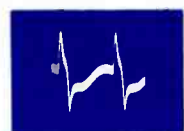
36 6 VOLTS P/P, 15,750 HZ



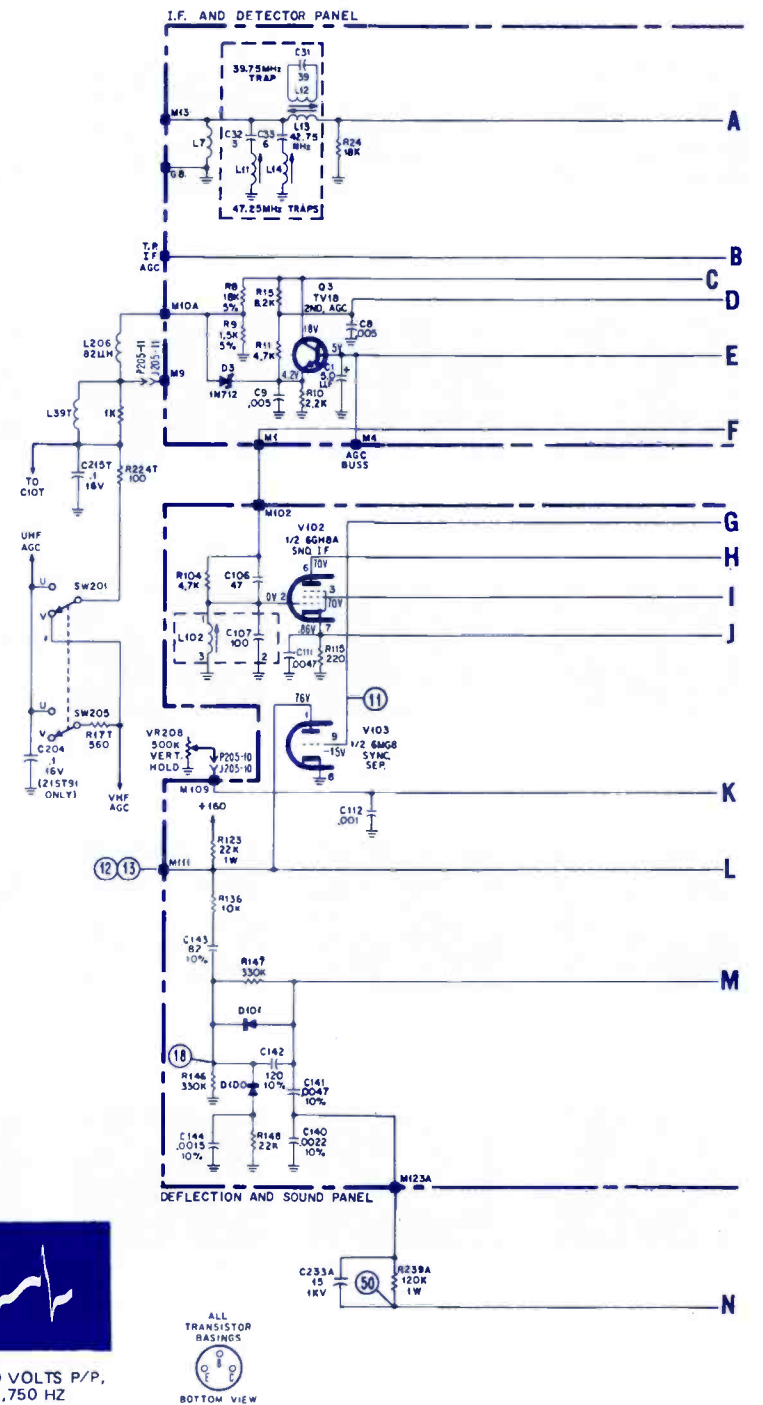
51 1000 VOLTS P/P, 15,750 HZ



52 360 VOLTS P/P, 15,750 HZ

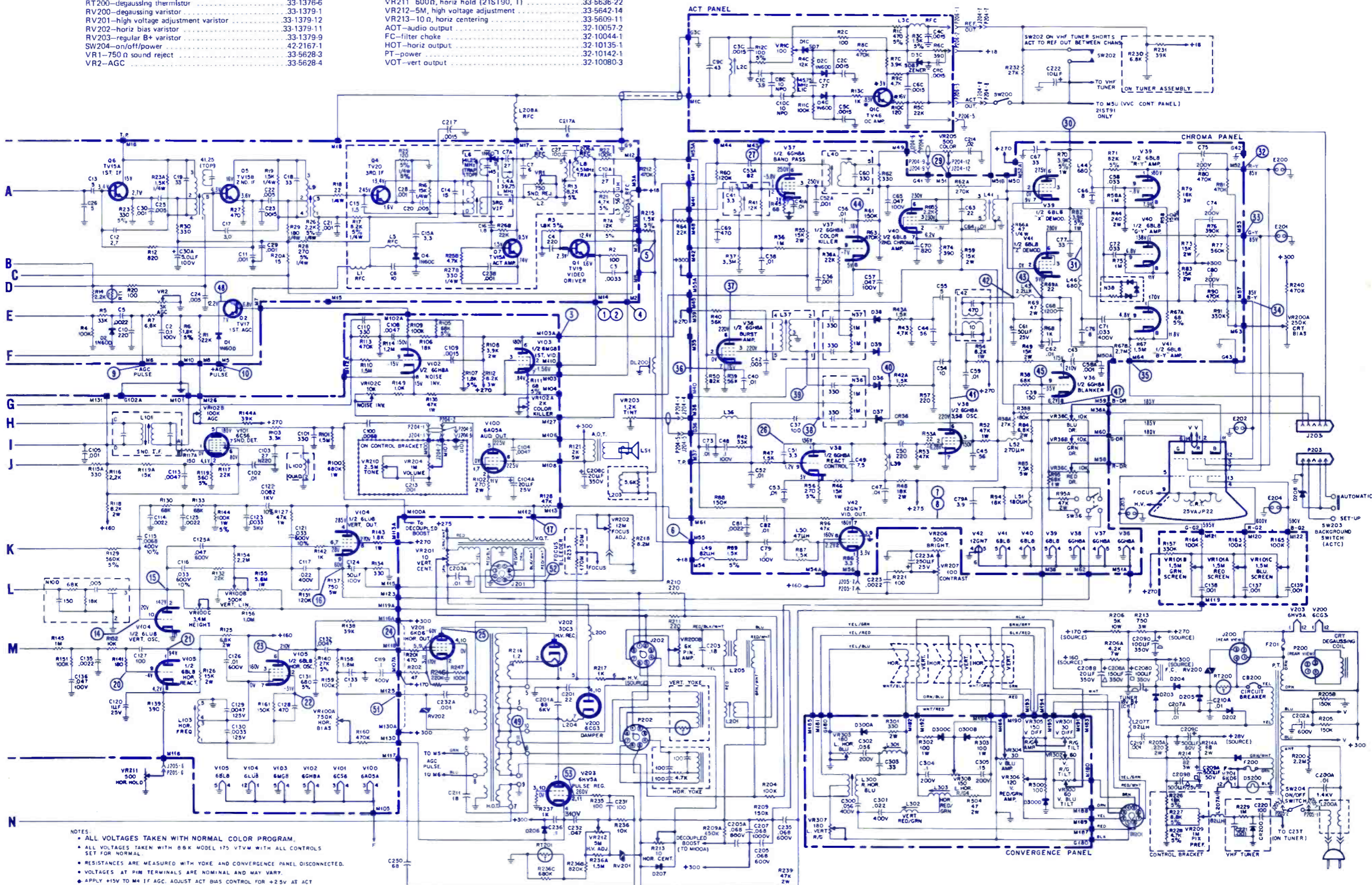


53 30 VOLTS P/P, 15,750 HZ



PHILCO-FORD
Color TV Chassis
21ST90,T/21ST91

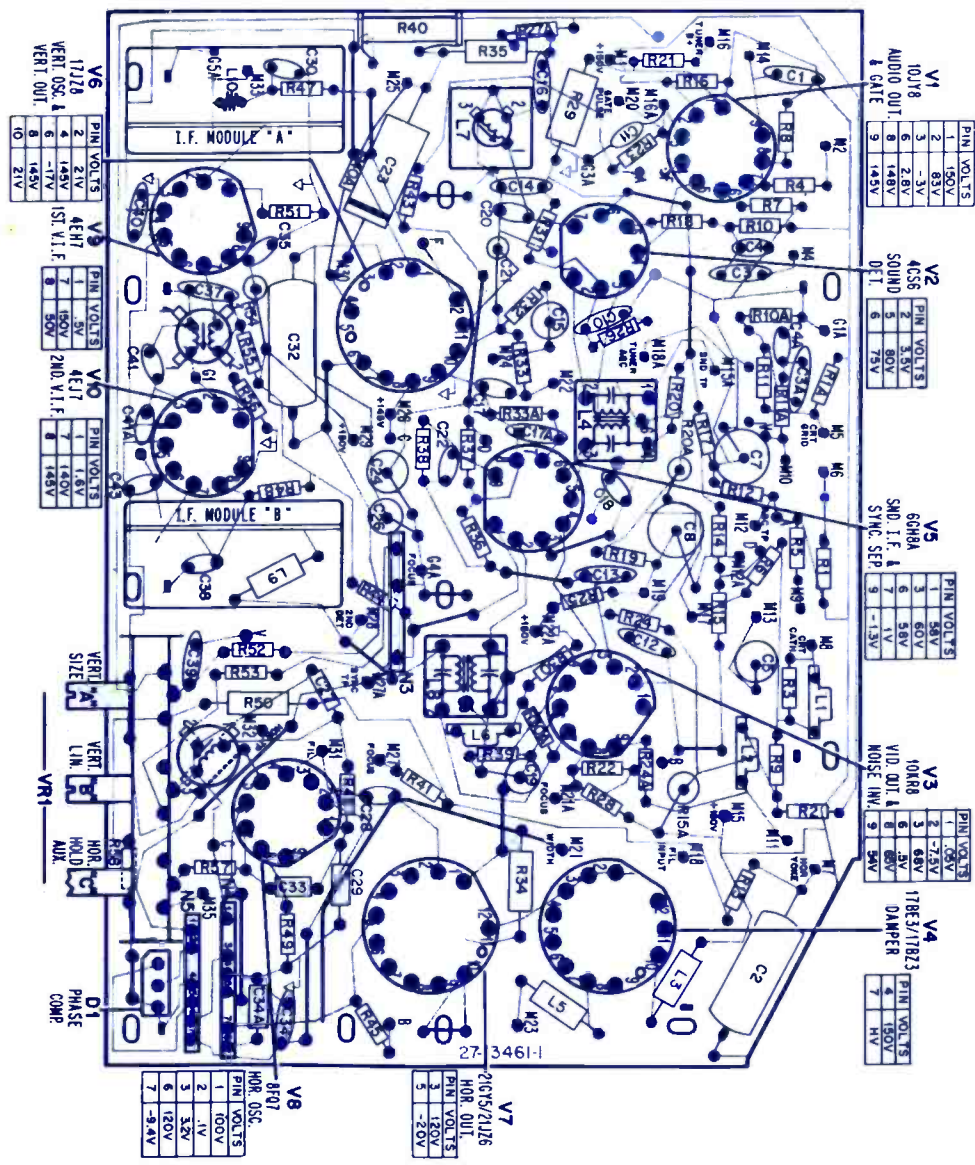
SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.	
C208	150-20-20-100/350v B+ filter	30-2616-21	VR36-A-green drive, H-blue drive, C-red drive
C209	500-500, 500 150v 100/350v B+ filter	30-2622-2	VR100-A-horiz bias, B-vert linearity, C-height
CR200	varactor, picture preference	34-8057-21	VR102-A-color killer, B-AGC, C-noise inverter
D208	zener, background	34-8057-32	VR201-10n, vert center
L8	x-former, 4.5MHz trap	32-4869-1	VR202-12M, focus adjustment
L36	tint control	32-4112-63	VR203-1.2K, tint (21ST90, T)
L39	reactance	32-4877-1	VR203-1.2K, tint (21ST91)
L100	quadrature	32-4876-1	VR204-1M, volume (21ST90, T)
L103	horiz frequency	32-4891-1	VR204-1M, volume (21ST91)
N36	phase detector	30-8055-1	VR206-500n, brightness (21ST90, T)
N38	matrix	30-6055-1	VR206-500n, brightness (21ST91)
N100	vert integrator	30-6030-16	VR207-100n, contrast (21ST90, T)
RT1	AGC comp thermistor	33-1376-8	VR207-100n, contrast (21ST91)
RT200	degaussing thermistor	33-1376-6	VR208-500K, vert hold (21ST90, T)
RV200	degaussing varistor	33-1379-1	VR208-500K, vert hold (21ST91)
RV201	high voltage adjustment varistor	33-1379-12	VR209-1M, picture quality (21ST91)
RV202	horiz bias varistor	33-1379-11	VR211-500n, horiz hold (21ST90, T)
RV203	regular B+ varistor	33-1379-9	VR212-5M, high voltage adjustment
SW204	on/off/power	42-2167-1	VR213-10n, horiz centering
VR1	750 sound reject	33-5628-3	AOT-audio output
VR2	AGC	33-5628-4	FC-filter choke
			HOT-horiz output
			PT-power
			VOT-vert output



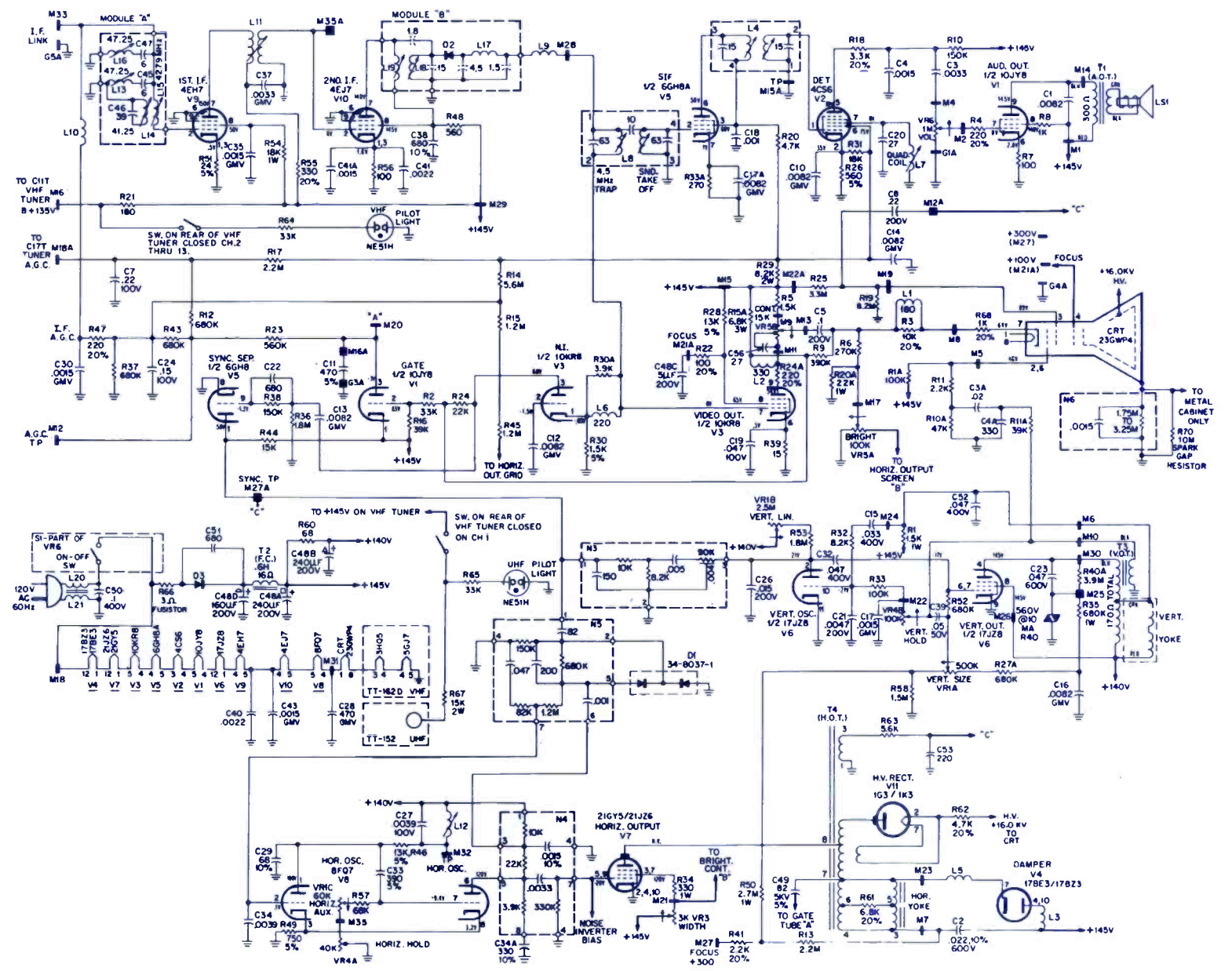
NOTES:
 • ALL VOLTAGES TAKEN WITH NORMAL COLOR PROGRAM.
 • ALL VOLTAGES TAKEN WITH 88K MODEL 175 VTVM WITH ALL CONTROLS SET FOR NORMAL.
 • RESISTANCES ARE MEASURED WITH YOKE AND CONVERGENCE PANEL DISCONNECTED.
 • VOLTAGES AT PIN TERMINALS ARE NOMINAL AND MAY VARY.
 • APPLY +15V TO M4 IF AGC ADJUST ACT BUS CONTROL FOR +2.5V AT ACT OUTPUT TEST POINT (YELLOW LEAD)

SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C48	---240/240/160/5μf @ 200v B+ filter	30-2616-13
D1	---phase comp	34-8037-1
D2	---2nd det	34-8022-6
D3	---rect. silicon	34-8054-7
L7	---quad snd. det	32-4876-1
L8	---4.5MHz trap & STO	32-4688-13
L12	---horiz stab	32-4754-3
L13	---47.25MHz trap	32-4652-78
L14	---41.25MHz trap	32-4652-80
L16	---47.25MHz trap	32-4652-78
L17	---40MHz trap, 2nd det	32-4837-1
L18	---video detector	32-4652-79
L20	---choke, AC line	32-4857-1
L21	---choke, AC line	32-4857-1
N3	---vert int	30-6030-12
N4	---horiz osc	30-6057-1

N5	---phase comp	30-6035-2
N6	---isolation, CRT	30-6058-2
R40	---varistor, 560v @ 10μ a	33-1373-6
R66	---3Ω, fusistor	33-1381-5
S1	---on-off (part of VR7)	
T1	---audio output	32-10013-3
T2	---B+ filter output	32-10118-2
T3	---vert output	32-10012-6
T4	---horiz output	32-10008-7
VR1	---500K vert size, 2.5M vert lin 60K horiz aux	33-5595-8
VR3	---3K width	33-5620-1
VR4	---40K horiz hold 100K, vert hold	33-5618-33
VR5	---100K, bright, 15K contrast	33-5618-32
VR6	---1M, volume & switch	33-5634-6
	tuner, UHF, TT152	76-13827-1
	tuner, VHF, TT162D	76-13945-5

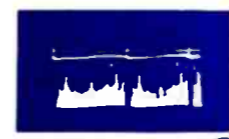


TOP VIEW - PERMA CIRCUIT PANEL - 20V35 CHASSIS





V105 PIN 2
KINESCOPE GRID
VERTICAL RATE 80V P-P



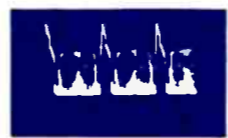
R224 & C246 JUNCTION
(ZONE 4A PW200 BOARD)
VERTICAL RATE 110V P-P



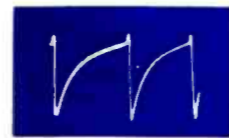
V205B PIN 9
VIDEO AMPLIFIER PLATE
HORIZONTAL RATE 110V P-P



V205B PIN 9
VIDEO AMPLIFIER PLATE
VERTICAL RATE 110V P-P



V205A PIN 2
AGC GRID
HORIZONTAL RATE 80V P-P



V206B PIN 9
VERTICAL OSCILLATOR GRID
VERTICAL RATE 180V P-P



V206A PIN 2
VERTICAL OUTPUT GRID
VERTICAL RATE 28V P-P



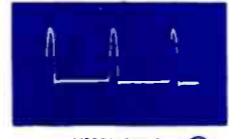
V201B PIN 1
SYNC PLATE
VERTICAL RATE 60V P-P



V201B PIN 1
SYNC PLATE
HORIZONTAL RATE 60V P-P



TP-3
SECOND DETECTOR
VERTICAL RATE 2V P-P



V203B PIN 3
AGC PLATE
HORIZONTAL RATE 420V P-P



V207-7
HORIZ OSC GRID
30V P-P HORIZ. RATE

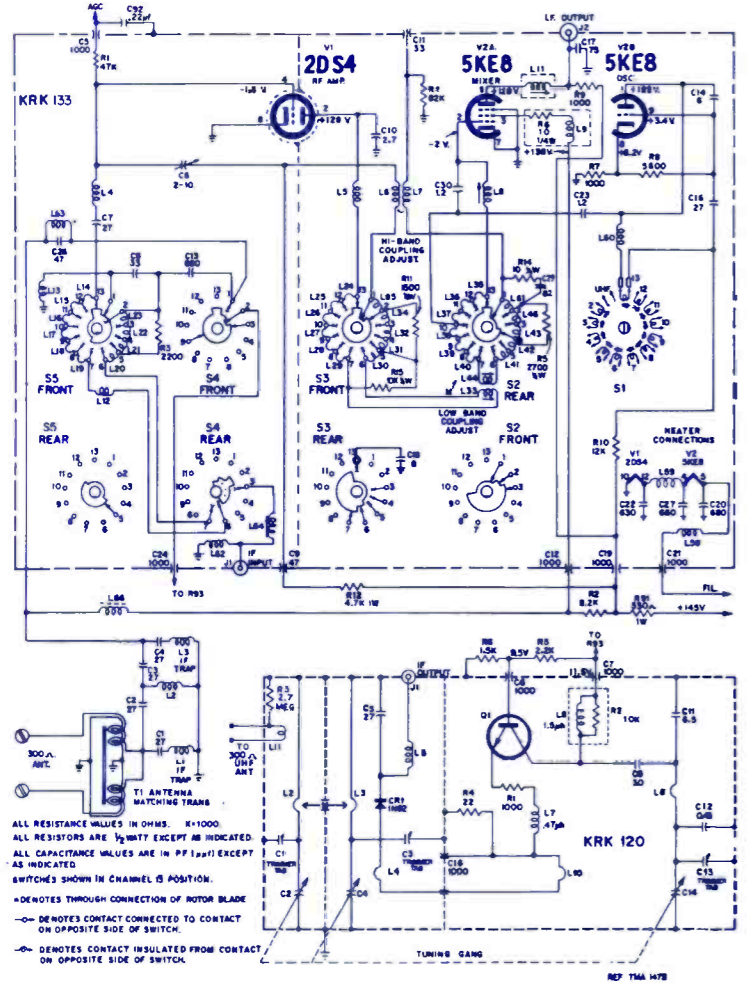


SR201 CATHODE JUNCTION
HORIZONTAL PHASE DETECTOR
HORIZONTAL RATE 12V P-P

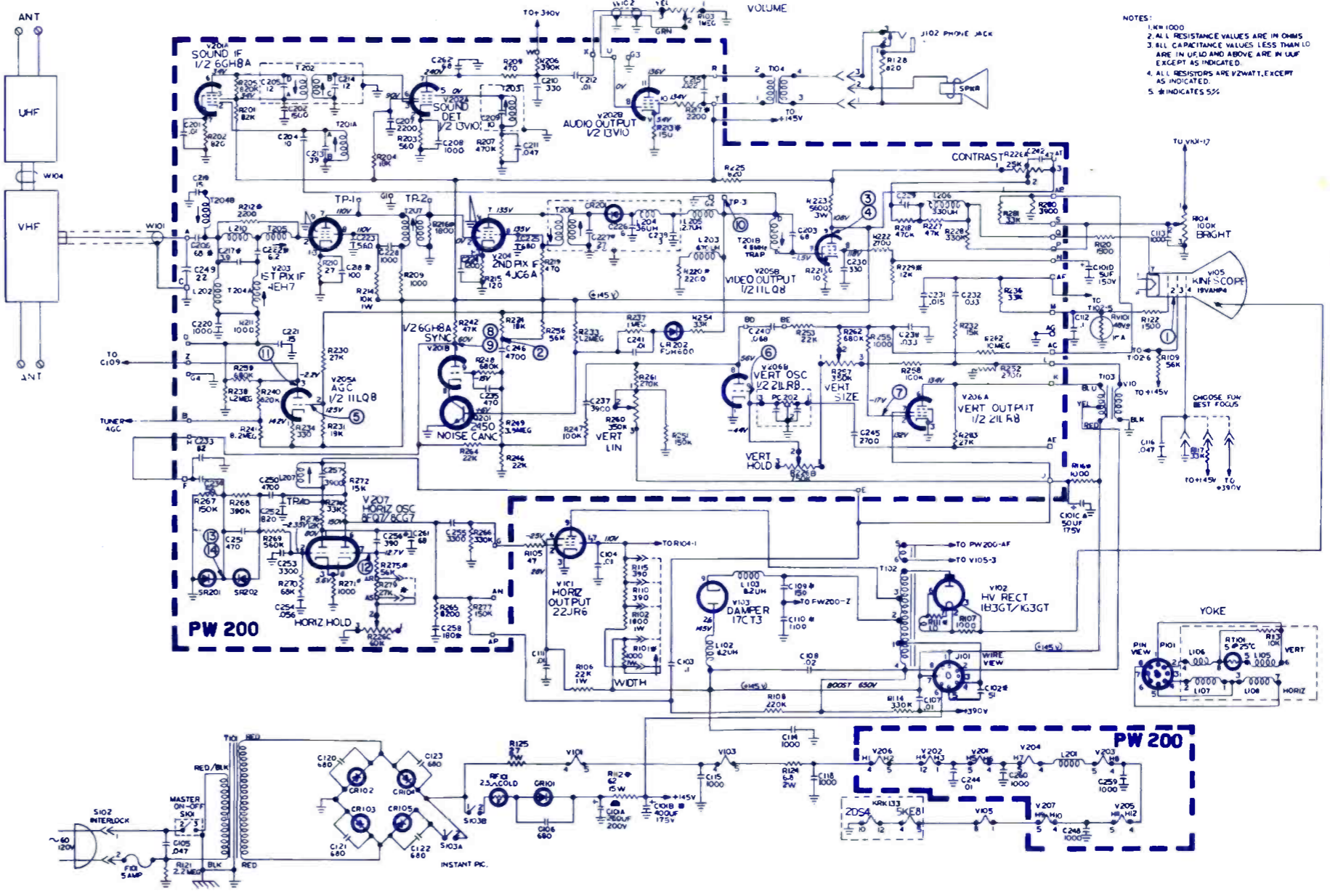


SR201 ANODE
HORIZONTAL PHASE DETECTOR
HORIZONTAL RATE 15V P-P

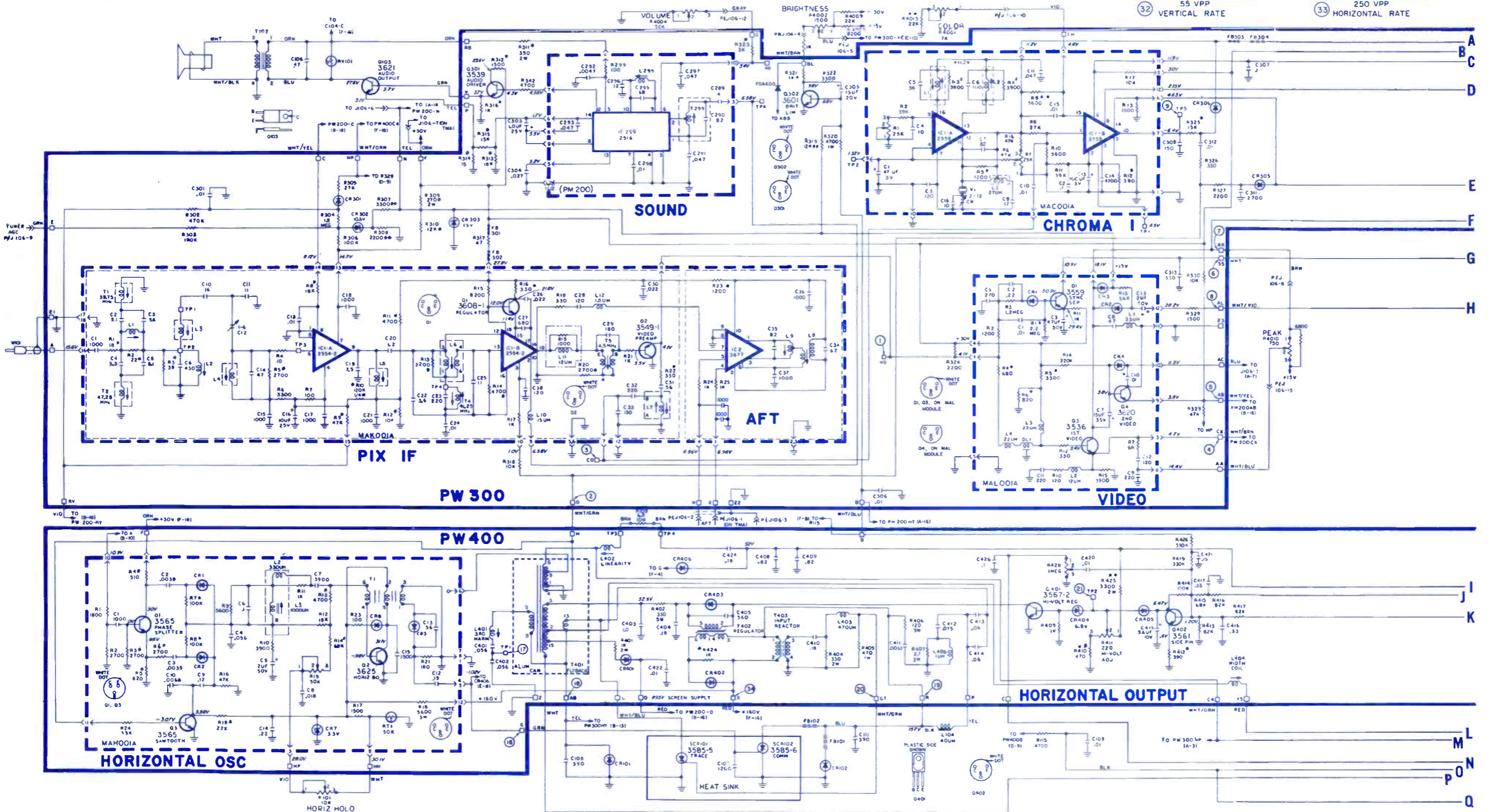
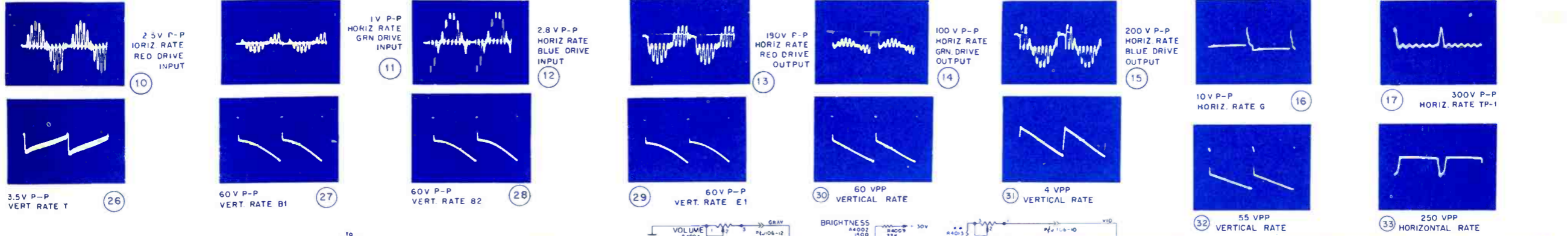
TUNER SCHEMATIC

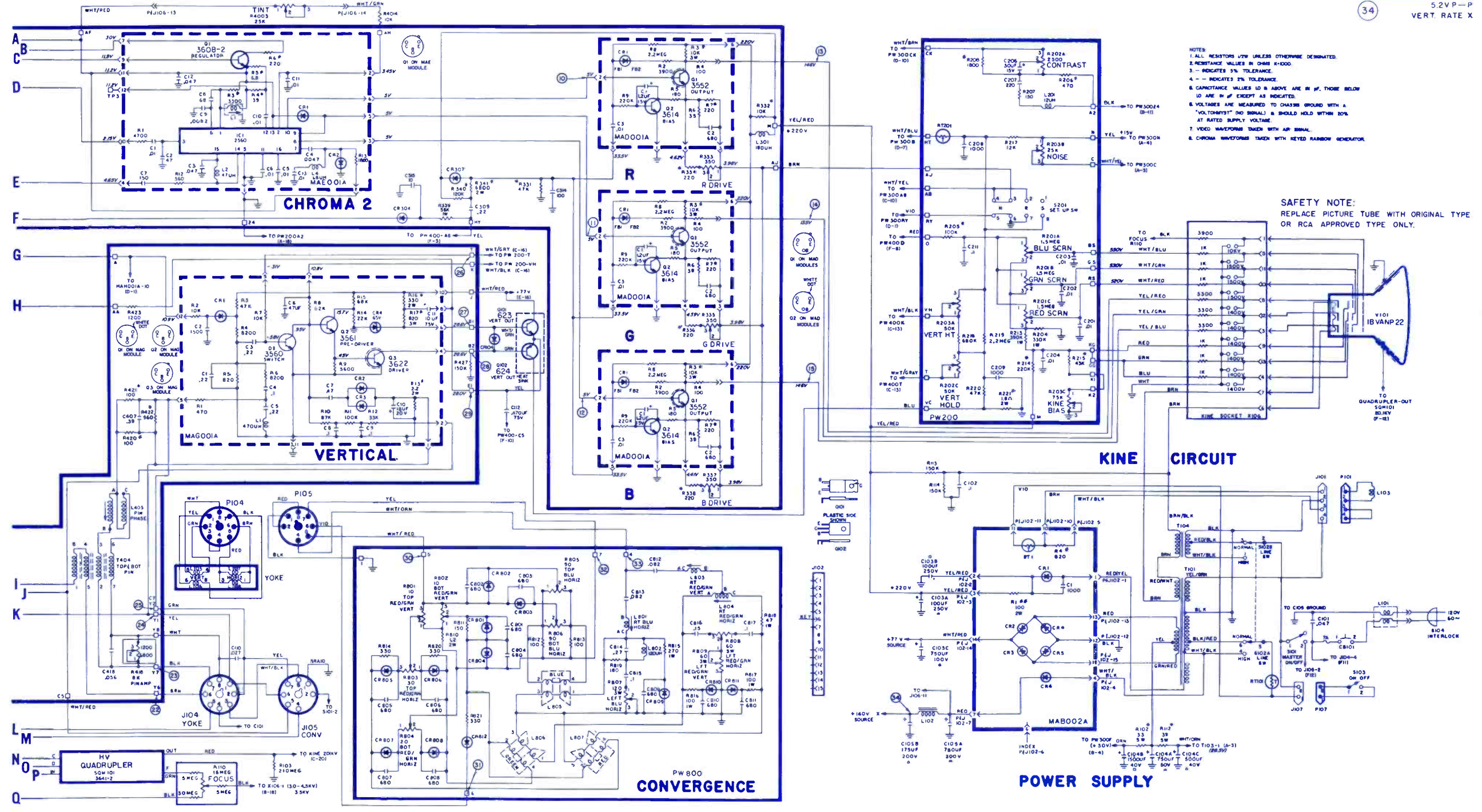
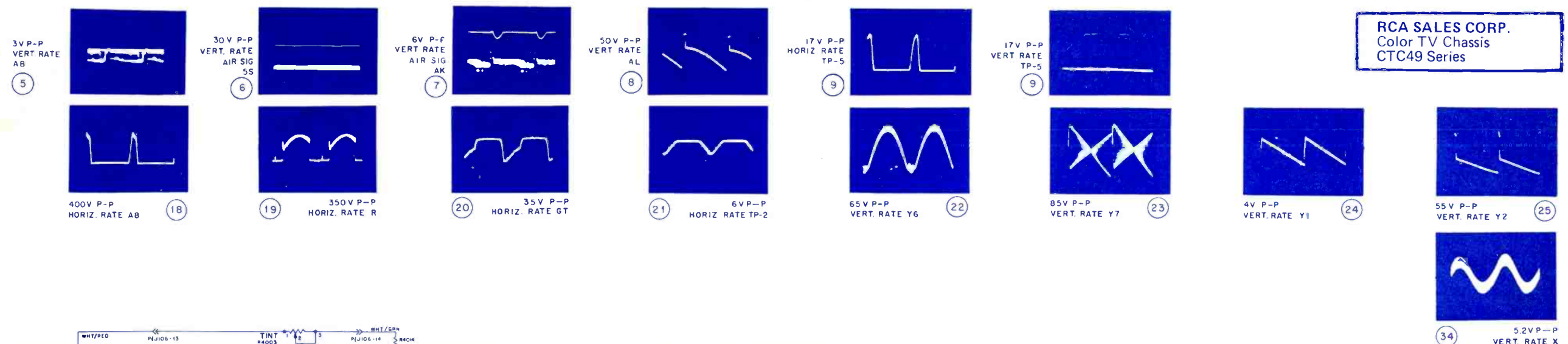


ALL RESISTANCE VALUES IN OHMS. K=1000
ALL CAPACITANCE VALUES ARE IN PF UNLESS INDICATED
RESISTORS ARE 1/2WATT EXCEPT AS INDICATED
CAPACITORS ARE 50V UNLESS INDICATED
SWITCHES SHOWN IN CHANNEL B POSITION.
-○- DENOTES THROUGH CONNECTION OF MOTOR BLADE
-○- DENOTES CONTACT CONNECTED TO CONTACT ON OPPOSITE SIDE OF SWITCH.
-○- DENOTES CONTACT INSULATED FROM CONTACT ON OPPOSITE SIDE OF SWITCH.



NOTES:
1. K=1000
2. ALL RESISTANCE VALUES ARE IN OHMS
3. ALL CAPACITANCE VALUES LESS THAN 100 ARE IN UF AND ABOVE ARE IN UUF EXCEPT AS INDICATED.
4. ALL RESISTORS ARE 1/2WATT, EXCEPT AS INDICATED.
5. # INDICATES 5%.



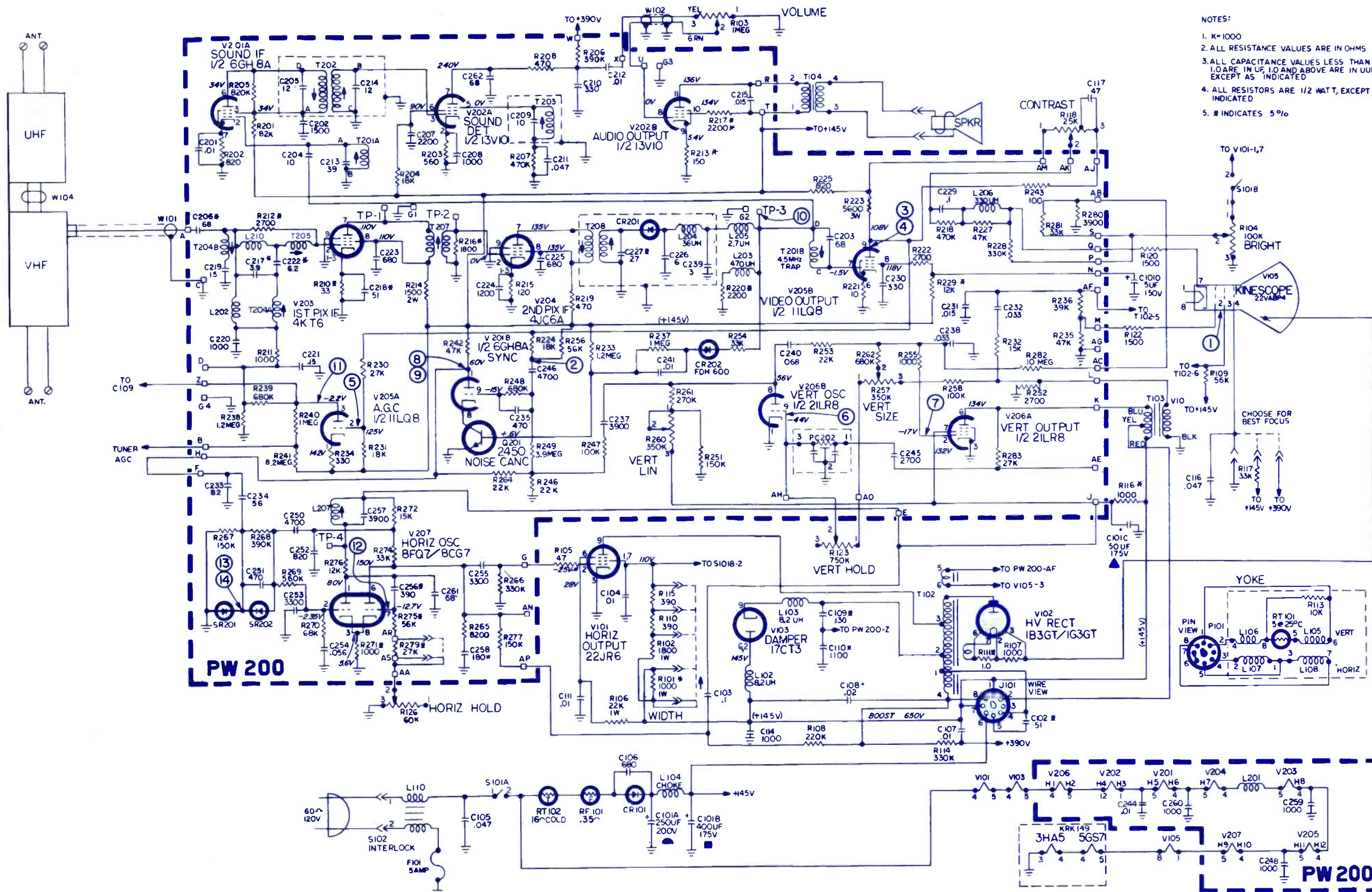


- NOTES:
1. ALL RESISTORS 1/2W UNLESS OTHERWISE DESIGNATED.
2. RESISTANCE VALUES IN OHMS X-1000.
3. - INDICATES 5% TOLERANCE.
4. - - INDICATES 2% TOLERANCE.
5. CAPACITANCE VALUES 10 & ABOVE ARE IN μ F, THOSE BELOW 10 ARE IN PF EXCEPT AS INDICATED.
6. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOL-TOR-TEST" (NO SIGNAL) & SHOULD HOLD WITHIN 50% AT RATED SUPPLY VOLTAGE.
7. VIDEO WAVEFORMS TAKEN WITH AIR SIGNAL.
8. CHROMA WAVEFORMS TAKEN WITH KEYED RAINBOW GENERATOR.

SAFETY NOTE:
REPLACE PICTURE TUBE WITH ORIGINAL TYPE
OR RCA APPROVED TYPE ONLY.

C101A—250µf 100v., elect.	114845
C101B—400µf 100v., elect.	114845
C101C—50µf 100v., elect.	114845
C101D—5µf 100v., elect.	114845
L102—8.2µh	107385
L110—Line choke	114293
L207—Stabilizer	114486
R118—Control contrast	131033

R123—Control vert hold	118701
R126—Control horiz hold	131012
R260—Control vert lin	121223
RF101—0.35Ω, fuseable	124263
RT102—Thermistor-16Ωcold	114480
T102—xformer-horiz output	131105
T103—xformer-vert output	131032
T104—xformer-audio output	124275
RT101—Thermistor-Temp comp	118375
Yoke-Deflection	125226



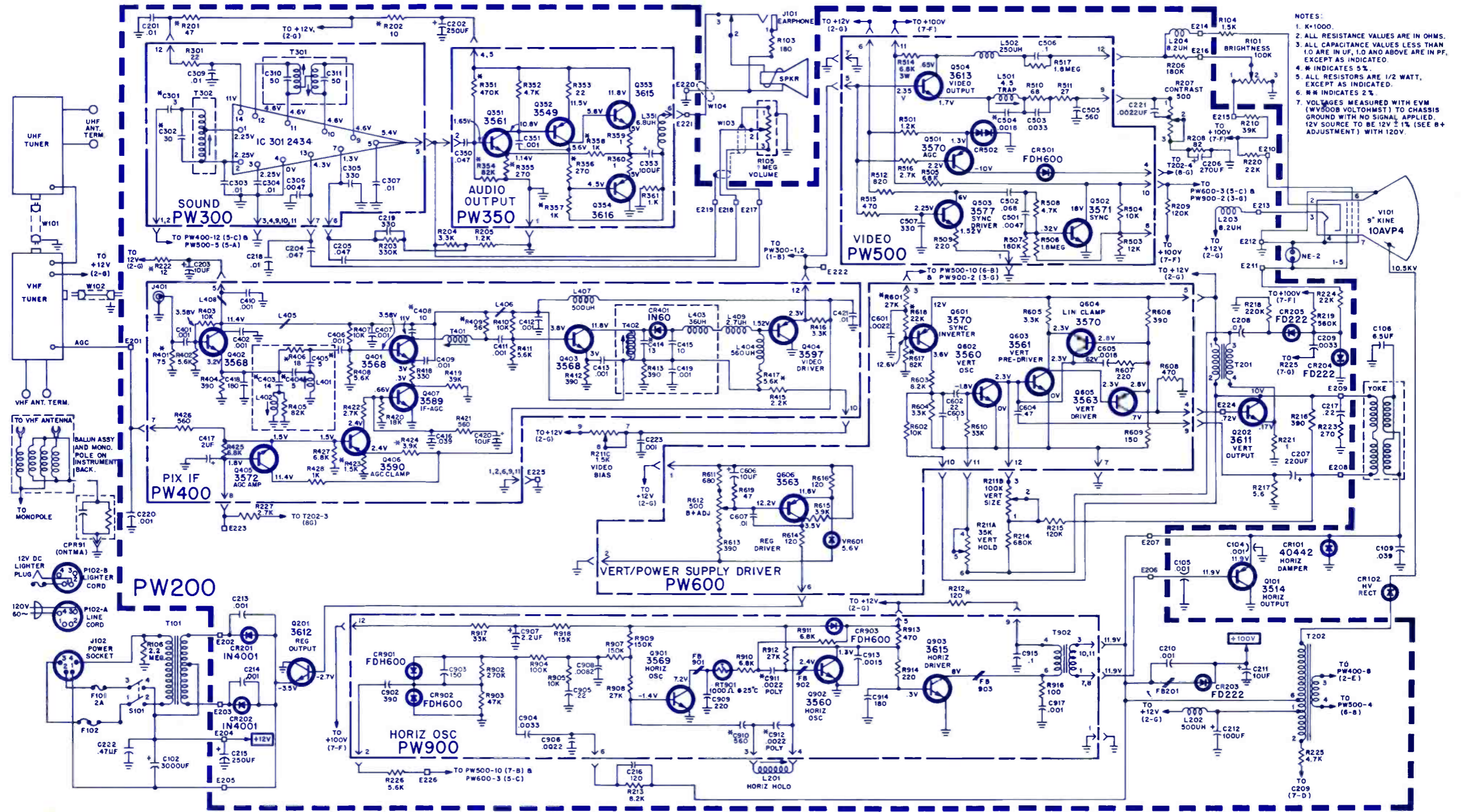
- NOTES:
1. K=1000
 2. ALL RESISTANCE VALUES ARE IN OHMS
 3. ALL CAPACITANCE VALUES LESS THAN 1.0 ARE IN UF, 1.0 AND ABOVE ARE IN UUF EXCEPT AS INDICATED
 4. ALL RESISTORS ARE 1/2 WATT, EXCEPT AS INDICATED
 5. # INDICATES 5%

CR101—diode-horiz. damper	119719
F101—fuse-glass, 2 amp	132488
F102—fuse-glass, 1/4 amp	132489
L201—coil-horiz. hold	125129
L202—coil-width choke	116058
L203—coil-peaking, 8.2 μh	131229
R207—resistor-control contrast	132554
R211—resistor-control, v hold/v size/bias	131794
T101—x-former-power	132557
T201—x-former-vert output	132556
T202—x-former-high voltage	132556
IC301—circuit-integrated sound	126871
T301—x-former, discriminator	126738
T302—x-former, sound take off	129707
CR401—crystal-1N60	112526
L401—coil-47.25 trap	128458
L402—coil-41.25 trap	128458
T402—x-former, IF output	129706
L501—coil-4.5 trap	128457
L502—coil-peaking 250 μh	119742
VR601—diode-zener	132865
RT901—thermister-1000Ω cold	132866
T902—x-former, horiz. driver	132848
yoke-deflection	132559

BOARD PIN VOLTAGE MEASUREMENTS

PW300			PW350			PW400			PW500			PW600			PW900		
Pin No.	In	Out	Pin No.	In	Out	Pin No.	In	Out	Pin No.	In	Out	Pin No.	In	Out	Pin No.	In	Out
1	2.11v	2.11v	1	0v	0v	1	0v	0v	1	0v	0v	1	11.9v	0v	1	0v	0v
2	2.11v	2.11v	2	5.66v	5.66v	2	0v	0v	2	NC	NC	2	0v	0v	2	20v	5.66v
3	0v	0v	3	NC	NC	3	NC	NC	3	NC	NC	3	20/25v	0v	3	1.36v	NC
4	0v	0v	4	12v	12v	4	NC	NC	4	1.57v	1.56v	4	.78v	NC	4	1.38v	NC
5	5.7v	0v	5	12v	12v	5	11.8v	12v	5	2.36v	2.34v	5	12.1v	0v	5	12.1v	12.5v
6	1.39v	0v	6	.1v	0v	6	0v	0v	6	12.1v	12.1v	6	-3.5v	-2.18v	6	11.8v	12.4v
7	4.65v	NC	7	2.49v	0v	7	2.49v	0v	7	0v	0v	7	0v	0v	7	11.9v	12.3v
8	.71v	NC	8	3.18v	13.6v	8	10.5v	NC	8	NC	NC	8	NC	NC	8	11.9v	12.3v
9	0v	0v	9	0v	0v	9	1.2v	0v	9	.05v	0v	9	.05v	0v	9	7.86v	12.5v
10	0v	0v	10	11.4v	12v	10	20v	46.5v	10	10.3v	0v	10	10.3v	0v	10	11.9v	12.5v
11	0v	0v	11	0v	11v	11	99v	109v	11	-.56v	0v	11	-.56v	0v	11	11.9v	12.5v
12	11.4	12	12	1.48v	.7v	12	27.8v	28.3v	12	.63v	0v	12	.63v	0v	12	90v	11.8v

Voltages are measured to chassis ground with a "Volt Ohmst" WV500A (No signal). Voltages above are shown with that respective board removed (out) and (in) place. 12v source should measure 12v with 120 VAC applied ±1%. See B+ adjustment.

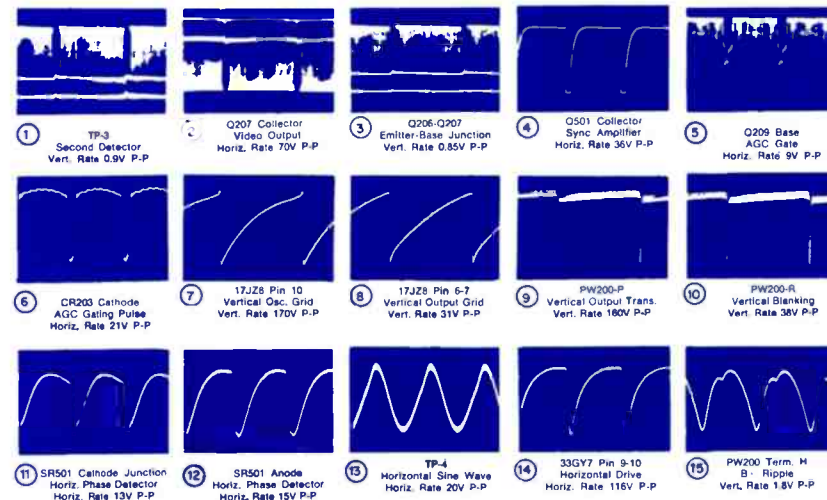


- NOTES:
- * 1000.
 - ALL RESISTANCE VALUES ARE IN OHMS.
 - ALL CAPACITANCE VALUES LESS THAN 1.0 ARE IN UF, 1.0 AND ABOVE ARE IN PF, EXCEPT AS INDICATED.
 - # INDICATES 5%.
 - ALL RESISTORS ARE 1/2 WATT, EXCEPT AS INDICATED.
 - ** INDICATES 2%.
 - VOLTAGES MEASURED WITH EVM (WV500B VOLTOHMST) TO CHASSIS GROUND WITH NO SIGNAL APPLIED. 12V SOURCE TO BE 12V ± 1% (SEE B+ ADJUSTMENT) WITH 120V.

RCA VICTOR

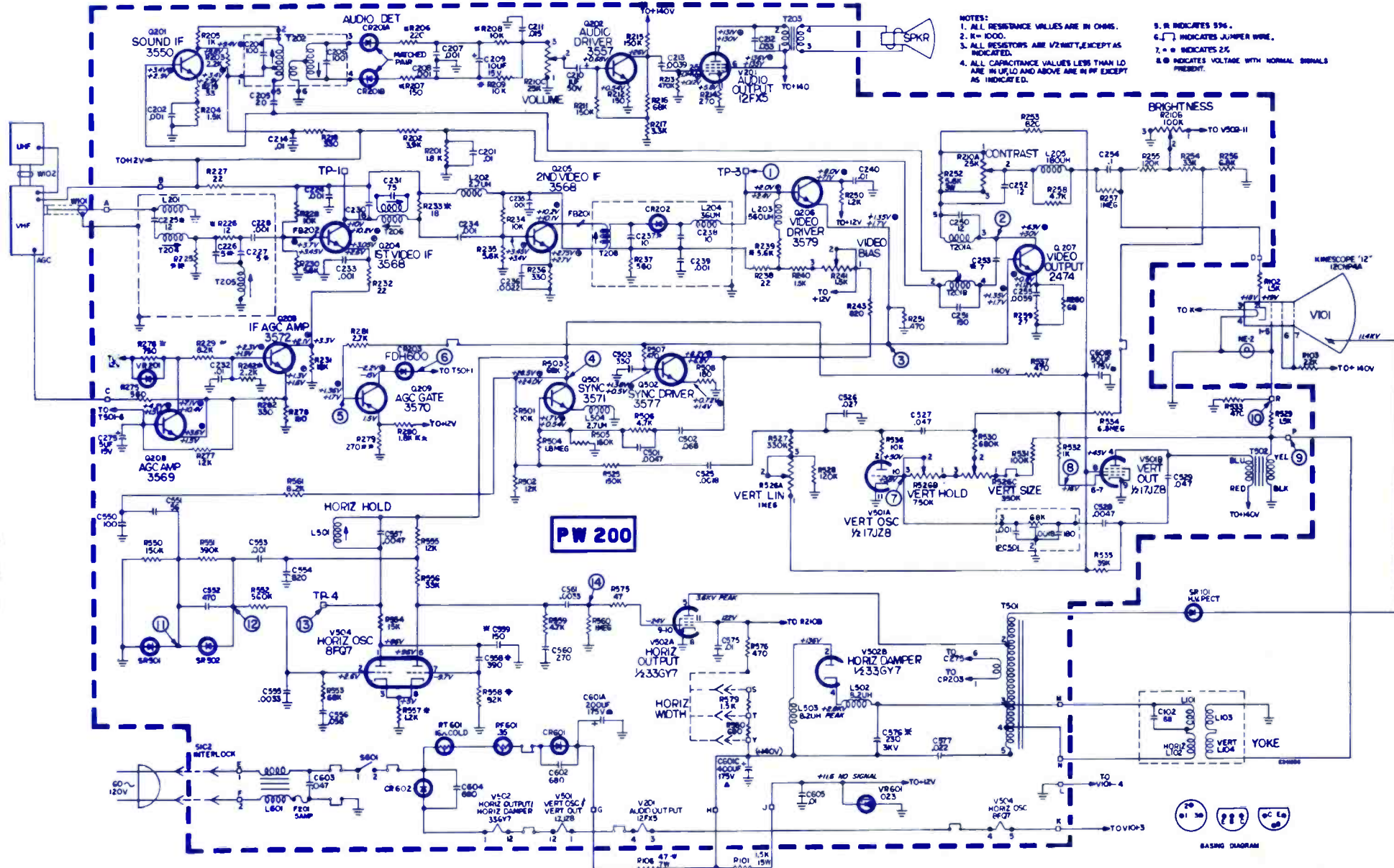
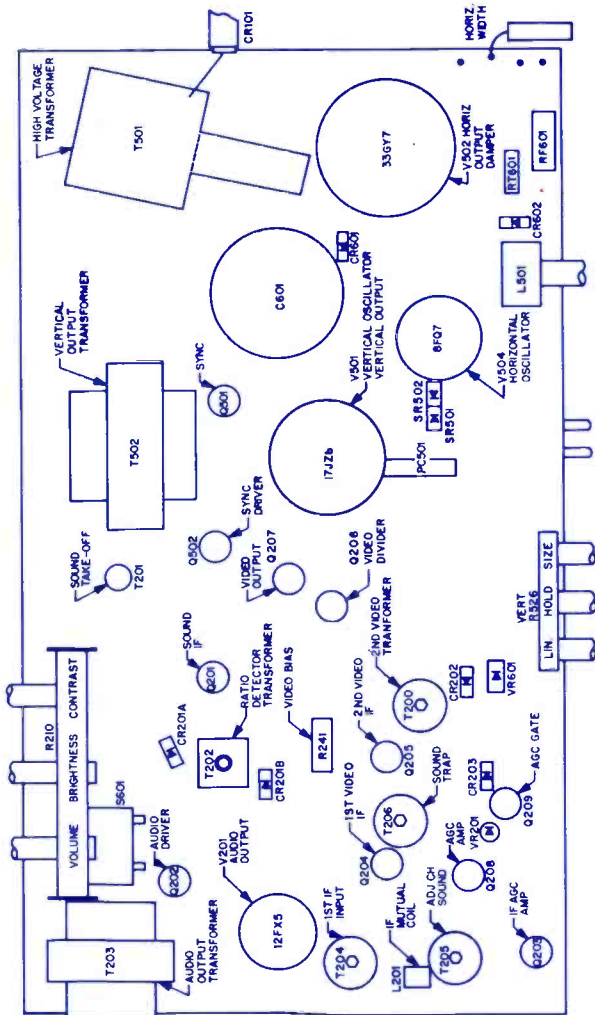
TV Chassis
KCS169X Series

ELECTRONIC
TECHNICIAN / DEALER

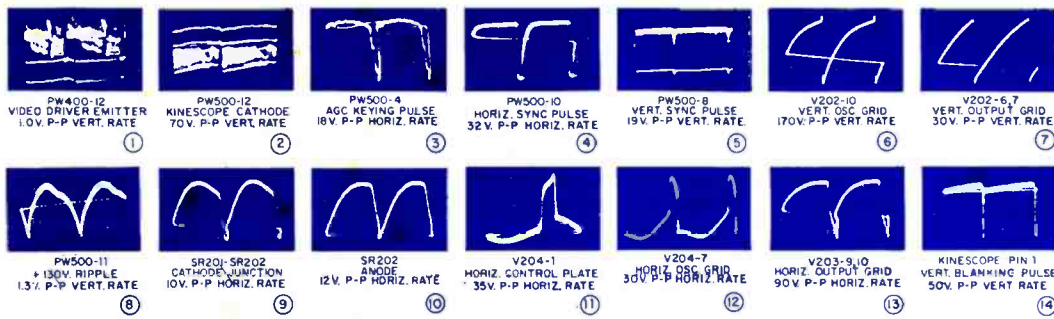


SYMBOL	DESCRIPTION	RCA VICTOR PART NO.
C601	3 section electrolytic	125989
C601A	200µf, 175v	118969
C601B	50µf, 175v	114314
C601C	400µf, 175v	107463
F201	Fuse—5a	125129
L201	RF	127043
L202	2.7µh	127043
L501	horiz hold	125129
L502	RF Choke	107385
L503	RF Choke	107385
L601	reactor—filter	125120
R101	1500Ω 15w	121229
R106	47Ω 5%, 7w, WW	125123
R210	control, contrast/bright/vol	122768
R241	control, video bias	125122
R526	control, vert lin vert size vert hold	125122
RF601	fuse—0.35Ω	124263
RT601	therm—16Ω cold	128492
T201	audio trap-band pass	125114
T202	ratio det	125115
T203	audio output	113097
T204	IF input	113097
T205	IF input	116115
T206	1st pix IF	116116
T208	2nd pix IF	129708
T501	horiz output	125117
T502	vert output	125117
Yoke	deflection	130636

Chassis Layout



NOTES:
1. ALL RESISTANCE VALUES ARE IN OHMS.
2. K=1000.
3. ALL RESISTORS ARE 1/2WATT UNLESS AS INDICATED.
4. ALL CAPACITANCE VALUES LESS THAN 10 ARE IN PICO AND ABOVE ARE IN PPF EXCEPT AS INDICATED.
5. R IN INDICATES 5%.
6. J INDICATES JUMPER WIRE.
7. +0 INDICATES 2%.
8. @ INDICATES VOLTAGE WITH NORMAL SIGNALS PRESENT.



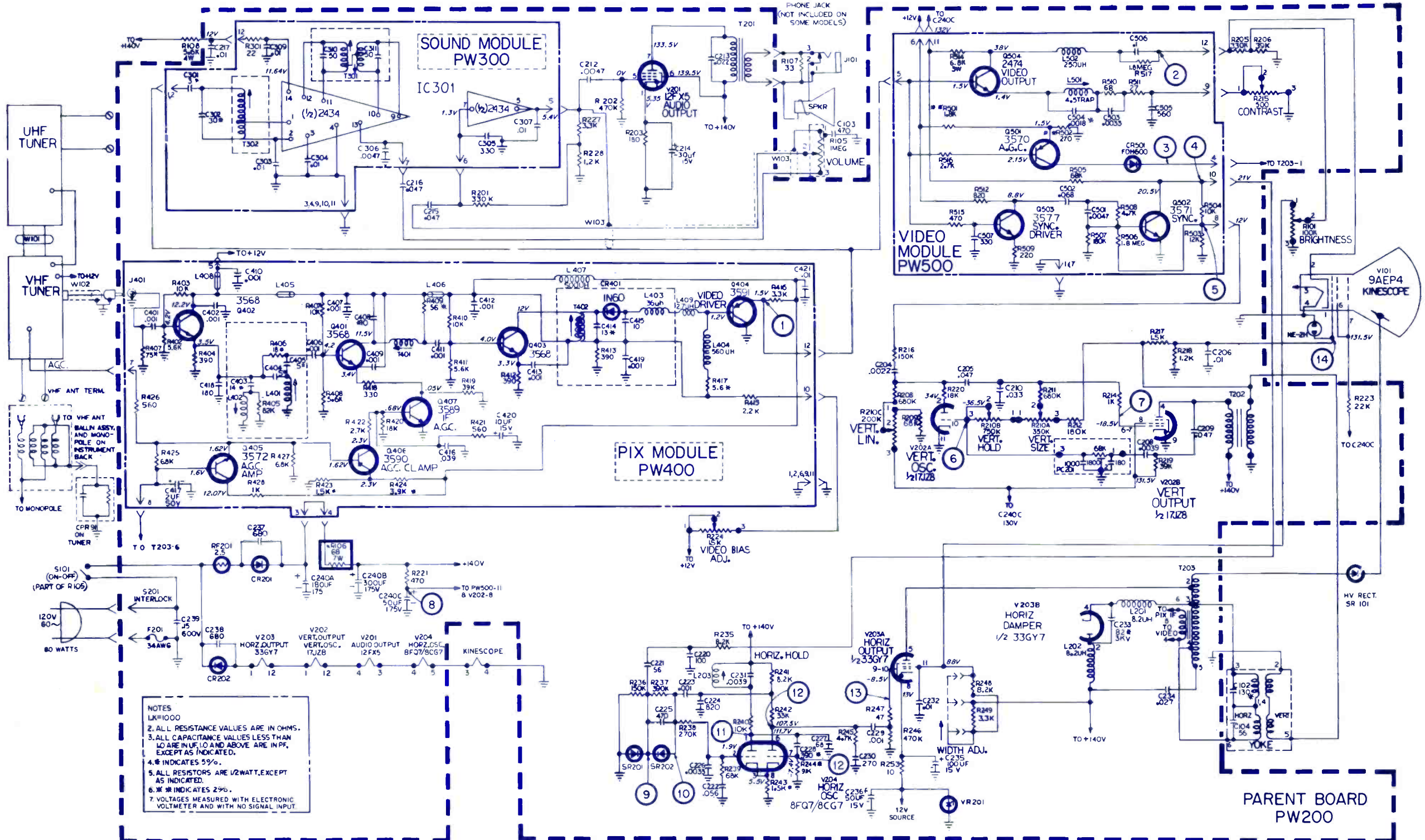
PW200 PARENT BOARD ASSEMBLY AND CHASSIS SIGNAL WAVEFORMS

Q404 - trans-video driver	129699
Q405 - trans-AGC amp	125140
Q406 - trans-IF, AGC	129697
Q407 - trans-IF, AGC	129698
Q501 - trans-AGC	125142
Q502 - trans-sync	125141
Q503 - trans-sync driver	125139
Q504 - trans-video output	116081
R106 - resistor-68Ω, 5%, 7w, WW	129753
R210 - resistor-control, vert, size, hold	128297
R215 - resistor-control, contrast	128297
R224 - resistor-control, video bias	128499
RF201 - resistor-fuse, 2.5Ω cold	128952
T201 - x-former, audio output	128473
T202 - x-former, vertical output	128468
T203 - x-former, horiz. output	128754
T301 - x-former, det.	126738
T302 - x-former, sound take off	129707
T401 - x-former, IF interstage	128458
T402 - x-former, IF output	129706
yoke-def	128480

ELECTRONIC TECHNICIAN / DEALER **TEKFA**

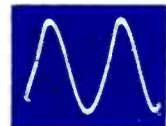
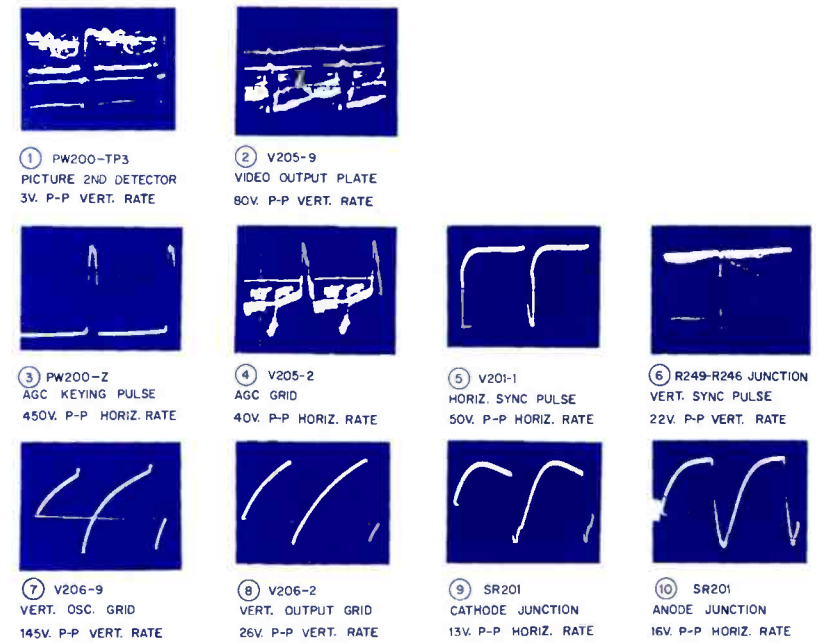
RCA VICTOR
TV Chassis
KCS176 Series

SYMBOL	DESCRIPTION	RCA VICTOR PART NO.		
L202	coil-82mh		128573	
L203	coil-horiz hold		125129	
L403	coil-36mh		116056	
L404	coil-peaking, 560mh		129705	
Q401	transistor-IF		125144	
Q402	trans-IF		125144	
Q403	trans-IF		125144	
C240	3 section elec	128459		
C240A	18μf, 175v	128459		
C240B	15μf, 175v	128459		
C240C	3μf, 175v	128459		
IC301	circuit-integrated	126871		



NOTES
 1. K=1000
 2. ALL RESISTANCE VALUES ARE IN OHMS.
 3. ALL CAPACITANCE VALUES LESS THAN 10 ARE IN UF, 10 AND ABOVE ARE IN PF, EXCEPT AS INDICATED.
 4. * INDICATES 5%.
 5. ALL RESISTORS ARE 1/2WATT, EXCEPT AS INDICATED.
 6. ** INDICATES 2%.
 7. VOLTAGES MEASURED WITH ELECTRONIC VOLTMETER AND WITH NO SIGNAL INPUT.

SYMBOL	DESCRIPTION	RCA VICTOR PART NO.
C101A	4 section elect 250 μ f, 200v	129099
C101B	650 μ f, 175v	129099
C101C	50 μ f, 175v	129099
C101D	10 μ f, 150v	129099
C226	6pf \pm 0.5pf 500v, NPO cer	121225
C261	68pf 20% 500v NPO cer	109232
L102	8.2 μ h	107285
L202	AGC	114315
L203	470 μ h	124271
L205	2.7 μ h	107483
L207	stabilizer	114486
L210	RF	114314
R112	39 Ω 5%, 10w WW	124272
R226	control, contrast, vert/ horiz hold	121222
R257	control, vert size	121223
R260	control, vert lin	121944
R275	62K 5% 1/2w film	233094
RF101	therm fuse, 0.35 Ω 1.1a	124263
T102	horiz output	124462
T103	vert output	127812
T104	audio output	124275
T201	4.5MHz	114489
T202	sound, IF	118411
T203	quad	118410
T204	47.25MHz trap	113097
T205	video IF grid	113097
	thermistor - temp. comp	118375
	yoke - deflection	124256
	VHF tuner, KRK 148A	
	UHF tuner, KRK 152A	



11 PW200-TP4
HORIZ. CONTROL PLATE
20V. P-P HORIZ. RATE



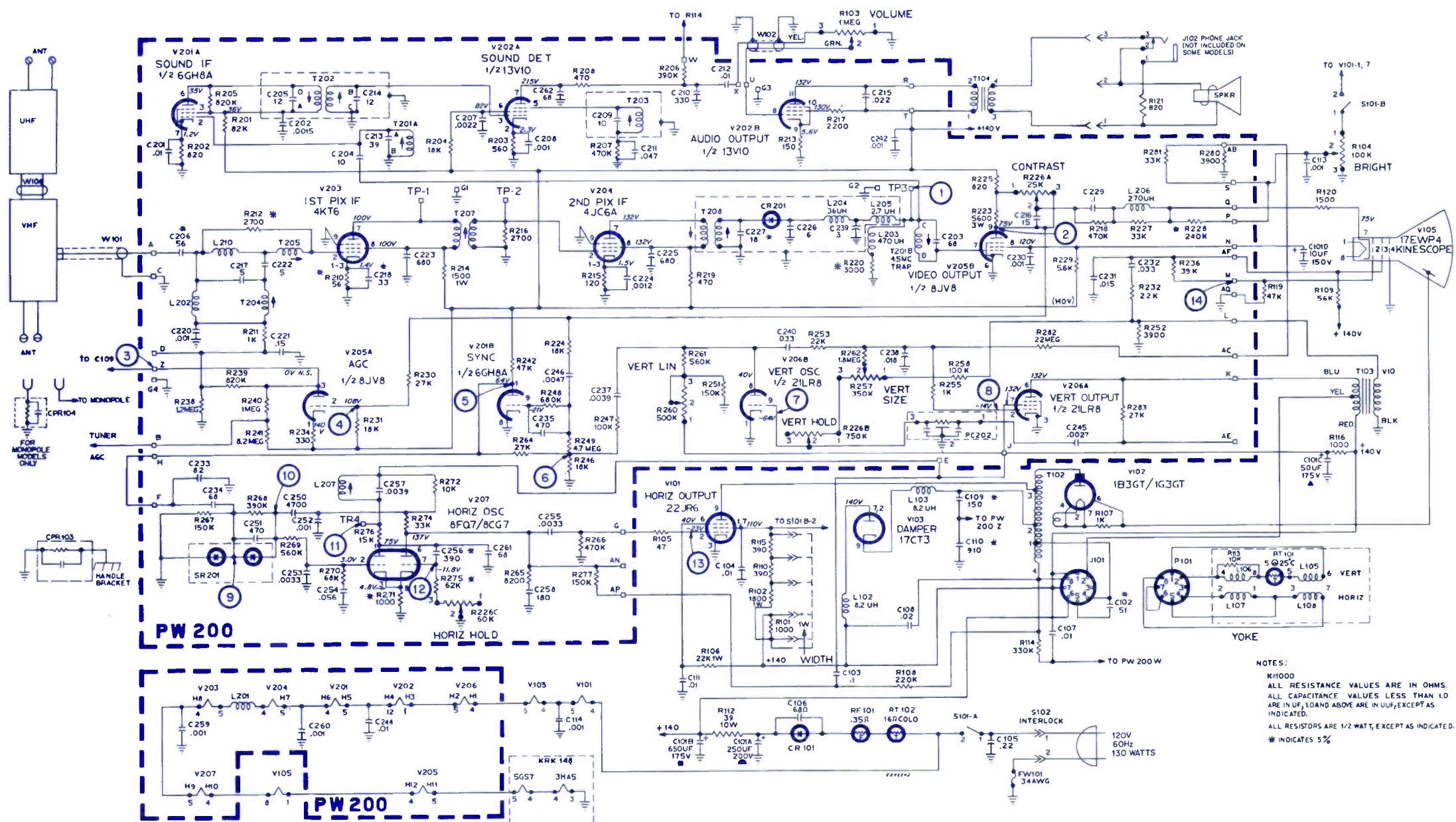
12 V207-7
HORIZ. OSC. GRID
34V. P-P HORIZ. RATE



13 PW200-G
HORIZ. OUTPUT GRID
120V. P-P HORIZ. RATE



14 PW200-M
VERT. BLANKING PULSE
60V. P-P VERT. RATE

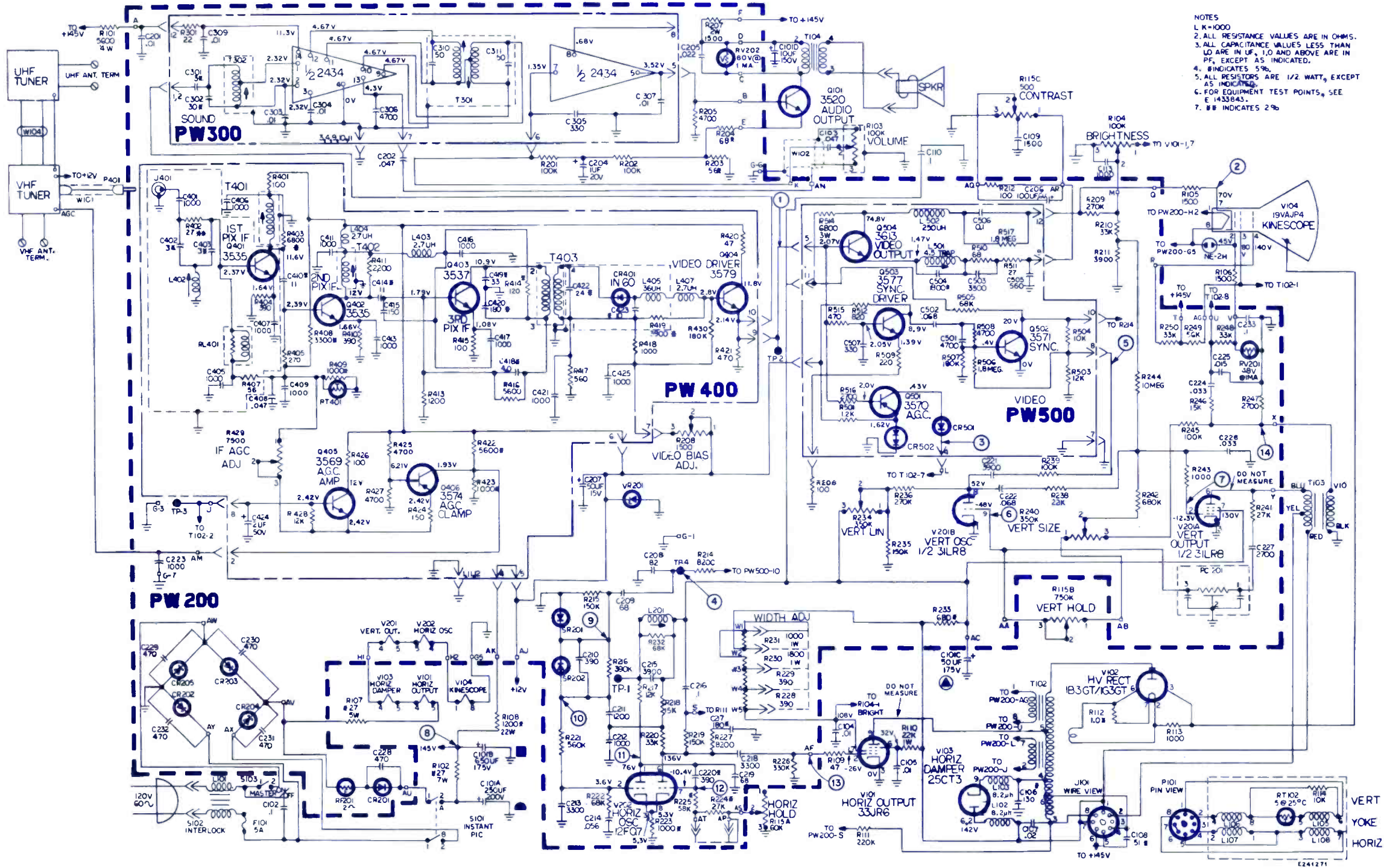


NOTES:
K=1000
ALL RESISTANCE VALUES ARE IN OHMS.
ALL CAPACITANCE VALUES LESS THAN 1.0
ARE IN UF, LOADS ABOVE ARE IN UUF, EXCEPT AS
INDICATED.
ALL RESISTORS ARE 1/2 WATT, E EXCEPT AS INDICATED.
* INDICATES 5%

C101	—capacitor—4 section elect	129099
C101A	—250µf, 200v	129099
C101B	—650µf, 175v	129099
C101C	—50µf, 175v	129099
C101D	—10µf, 150v	129099
F101	—fuse—5a	118969
IC301	—circuit—integrated, sound	129871
L101	—choke—line	114293
L103	—choke—RF, 8.2µh	107385
L201	—coil—40MHz	125129
L402	—coil—47.25 trap	131655
L404	—coil—RF choke, 2.7µh	129703

L501	—coils—IF, 4.5 trap	128457
PW300	—circuit—sound module	129702
PW400	—circuit—video IF module	131952
PW500	—circuit—video module	131951
R102	—27Ω 10%, 3w, film	129693
R115	—control, contrast, vert hold, horiz hold	131795
R208	—control video bias	129146
R234	—control vert lin	121223
R240	—control video size	121223
R429	—control AGC	126347
R514	—6.8K 10%, 3w, film	105662
RF201	—fuse—resistor	121086

RL401	—coil—RF choke	131791
RT401	—therm—4300Ω cold	124813
RV201	—varistor—48v, 1ma	118506
RV202	—varistor—80v, 1mo	131652
T102	—xformer—horiz output	131956
T103	—xformer—vert output	131633
T104	—xformer—audio output	129715
T301	—xformer—deductor	126738
T302	—xformer—discriminator, snd take off	129707
T401	—coil—IF	131465
T403	—xformer—IF	131656
RT101	—yoke—deflection	124245



NOTES
1. K=1000
2. ALL RESISTANCE VALUES ARE IN OHMS.
3. ALL CAPACITANCE VALUES LESS THAN 10 ARE IN UF, 1.0 AND ABOVE ARE IN PF, EXCEPT AS INDICATED.
4. # INDICATES 5%.
5. ALL RESISTORS ARE 1/2 WATT, EXCEPT AS INDICATED.
6. FOR EQUIPMENT TEST POINTS, SEE E 1433643.
7. #B INDICATES 2%.
E241271



1 1.5V P-P VERTICAL RATE



2 50V P-P VERTICAL RATE



3 23V P-P HORIZONTAL RATE



4 27V P-P HORIZONTAL RATE



5 18V P-P VERTICAL RATE



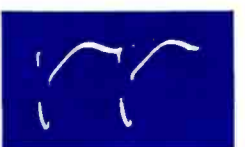
6 160V P-P VERTICAL RATE



14 300V P-P VERTICAL RATE



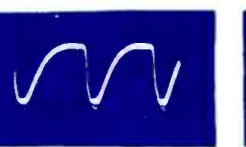
13 110V P-P HORIZONTAL RATE



12 35V P-P HORIZONTAL RATE



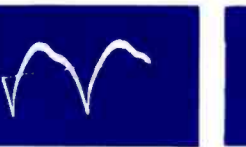
11 45V P-P HORIZONTAL RATE



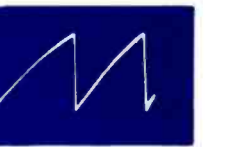
10 13V P-P HORIZONTAL RATE



9 10V P-P HORIZONTAL RATE



8 1.0V P-P VERTICAL RATE



7 25V P-P VERTICAL RATE

RCA VICTOR

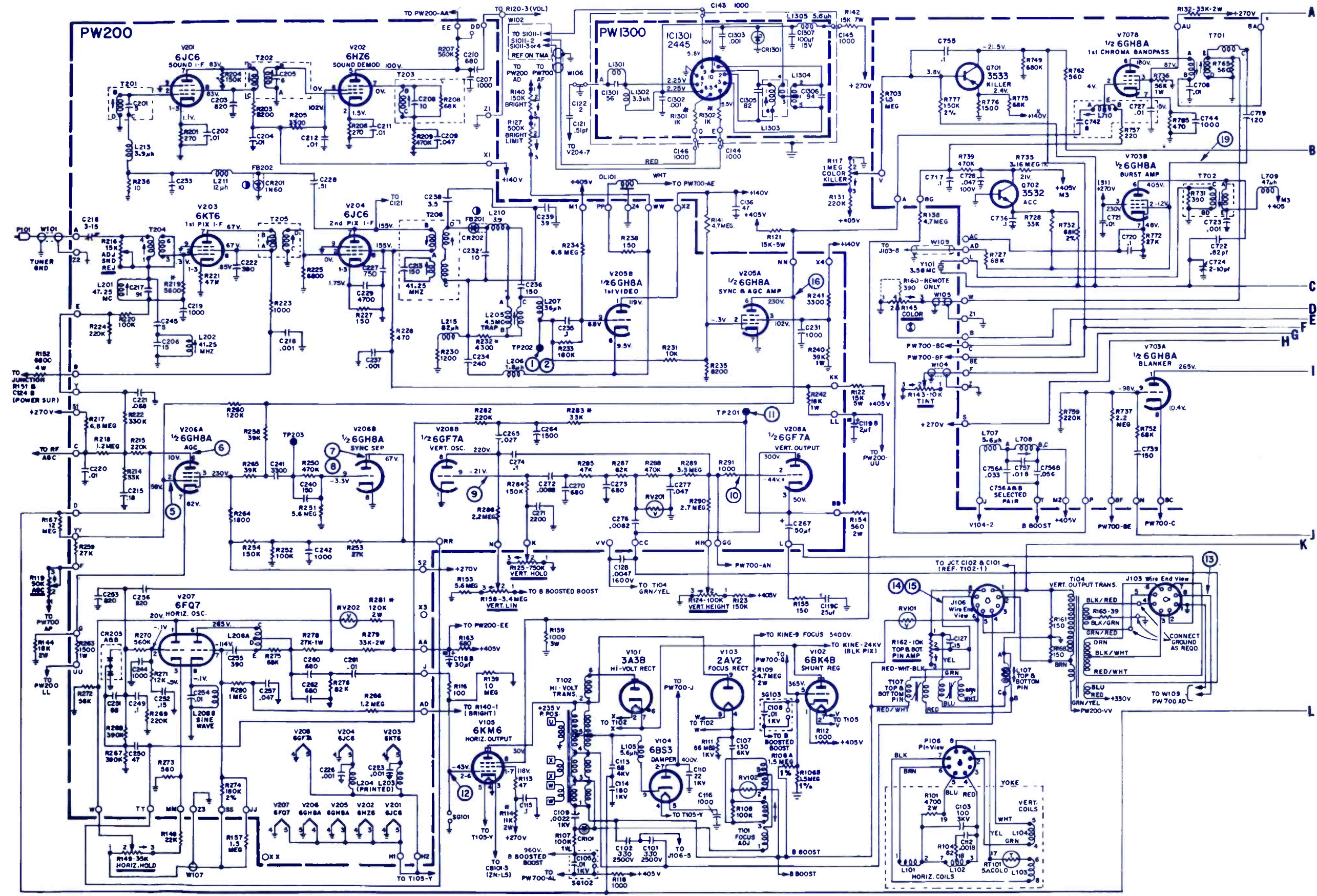
Color TV Chassis
CTC27X Series

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

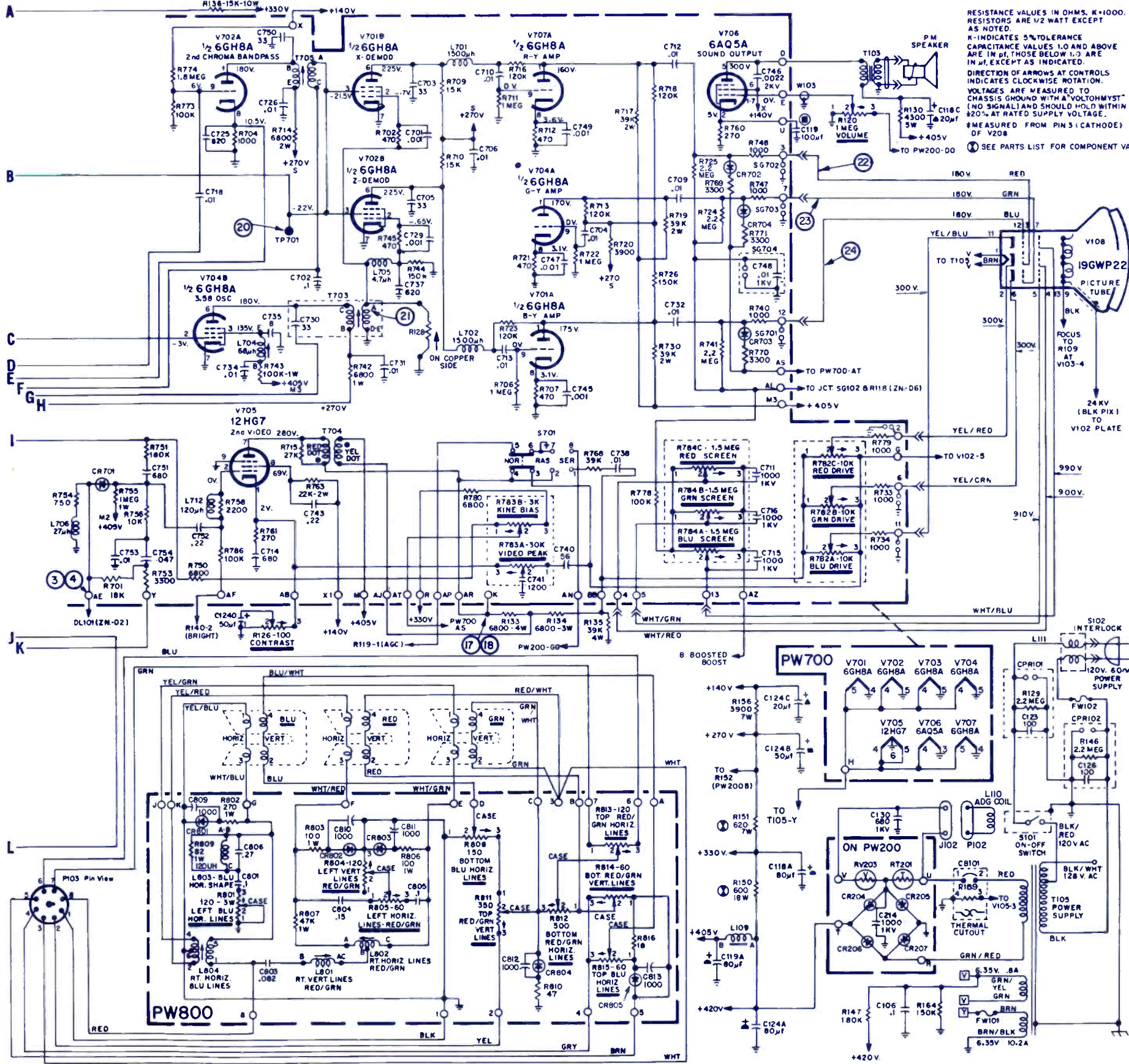
SYMBOL	DESCRIPTION	RCA VICTOR PART NO.
C118	---3 sec elec	118503
C118A	---80µf, 450v	118503
C118B	---30µf, 450v	118503
C118C	---20µf, 450v	118503
C119	---3 sec elec	115869
C119A	---80µf, 450v	115869
C119B	---2µf, 350v	115869
C119C	---25µf, 25v	115869

CB101	---brkr cir	121719
CPR101	---capristor—100pf, 2.2M	115438
CPR102	---capristor—100pf, 2.2M	115438
DL101	---line-delay	121554
IC1301	---cir, int	122199
L111	---AC line fil	115828
L208	---horiz sine wave	118508
L708	---horiz eff	114152
R105	---contr hi voltage adj	112842

R117	---contr color killer	112841
R119	---contr AGC	118558
R124	---contr, vert height	112178
R125	---contr, vert hold	114018
R126	---contr, cont	118557
R127	---contr, bright	112842
R140	---contr, horiz hold	114018
R151	---750Ω, 10%, 7w	121552
R162	---contr, top & bot pin amp	118558



R782---contr, rd/gm/blu drive	121575	T103---audio	118979
R783---contr, video peak	121588	T104---vert output	118980
RT201---therm, 120°C cold	107191	T105---power	116553
RV101---var, 175v at 1 ma	114707	T201---sound IF	117382
RV102---var, 870v at 1 ma	112876	T203---quad	117383
RV201---var 870v at 1 ma	112876	T701---1st chroma bandpass	121558
RV202---var, 110v at 1 ma	114862	T702---burst amp	121557
RV203---var, 20v at 67ma	116534	T703---3.58 osc	121559
T101---focus adj	113999	T705---2nd chroma bandpass	121556
T102---hi voltage	116564	Y101---crystal 3.58MHz	105330



RESISTANCE VALUES IN OHMS, K=1000.
RESISTORS ARE 1/2 WATT EXCEPT AS NOTED.
K-INDICATES 5% TOLERANCE
CAPACITANCE VALUES 1.0 AND ABOVE ARE IN μ F, THOSE BELOW 1.0 ARE IN μ F, EXCEPT AS INDICATED.
DIRECTION OF ARROWS AT CONTROLS INDICATES CLOCKWISE ROTATION.
VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMYST" (NO SIGNAL) AND SHOULD HOLD WITHIN $\pm 20\%$ AT RATED SUPPLY VOLTAGE.
*MEASURED FROM PIN 5 (CATHODE) OF V208
① SEE PARTS LIST FOR COMPONENT VALUE.

AGC ADJUSTMENT

Turn the AGC control clockwise until the picture begins to bend or otherwise distort, and then retard the control slightly below the point where the distortion is eliminated. Change channels and observe the AGC performance on a strong, local broadcast. Retard the AGC control again if the picture does not immediately reappear when changing channels. For precise adjustment of AGC, connect the oscilloscope probe to the picture detector output (test point TP202 on PW200) and adjust for 4 volts peak to peak while tuned to a strong, local broadcast.

AUTOMATIC FINE TUNING (AFT)

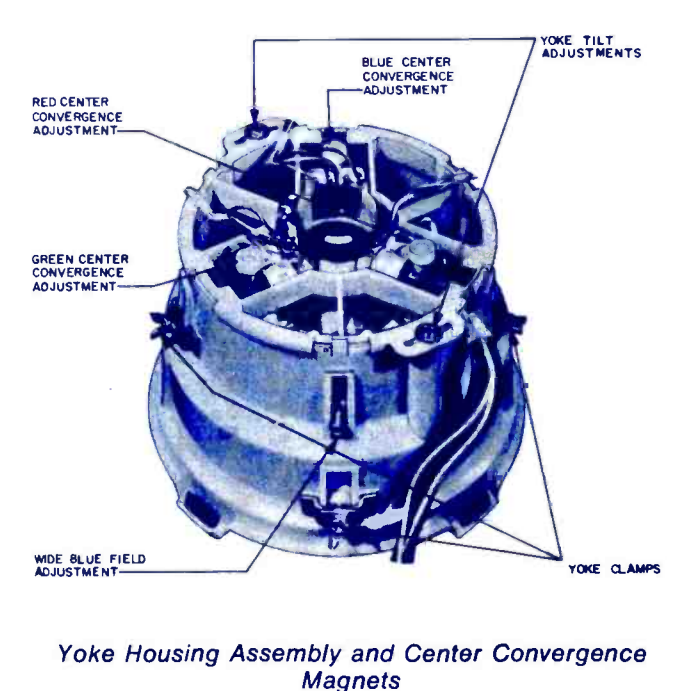
The CTC 27X is equipped with AFT which will maintain the local oscillator within ± 10 Kc of optimum frequency. The circuit is designed to correct fine tuning errors and oscillator drift up to 1 Mc on either side of crossover. Errors greater than 1 Mc are compounded rather than corrected by this circuit design. For this reason, AFT is automatically defeated when the VHF fine tuning knob is depressed by the automatic defeat switch, S6, mounted on the front plate of the VHF tuner.

A manual AFT defeat switch, S1011, is mounted on the rear of the brightness control. To defeat the AFT for UHF tuning, this knob must be pulled out. Since the switch defeats AFT for both VHF and UHF, it must be pushed in for automatic fine tuning operation on either VHF or UHF.

The AFT circuit board, PW1300, is shown below. Alignment specifications and servicing techniques for the system is contained in the Color Alignment Data which is a supplement to this data.

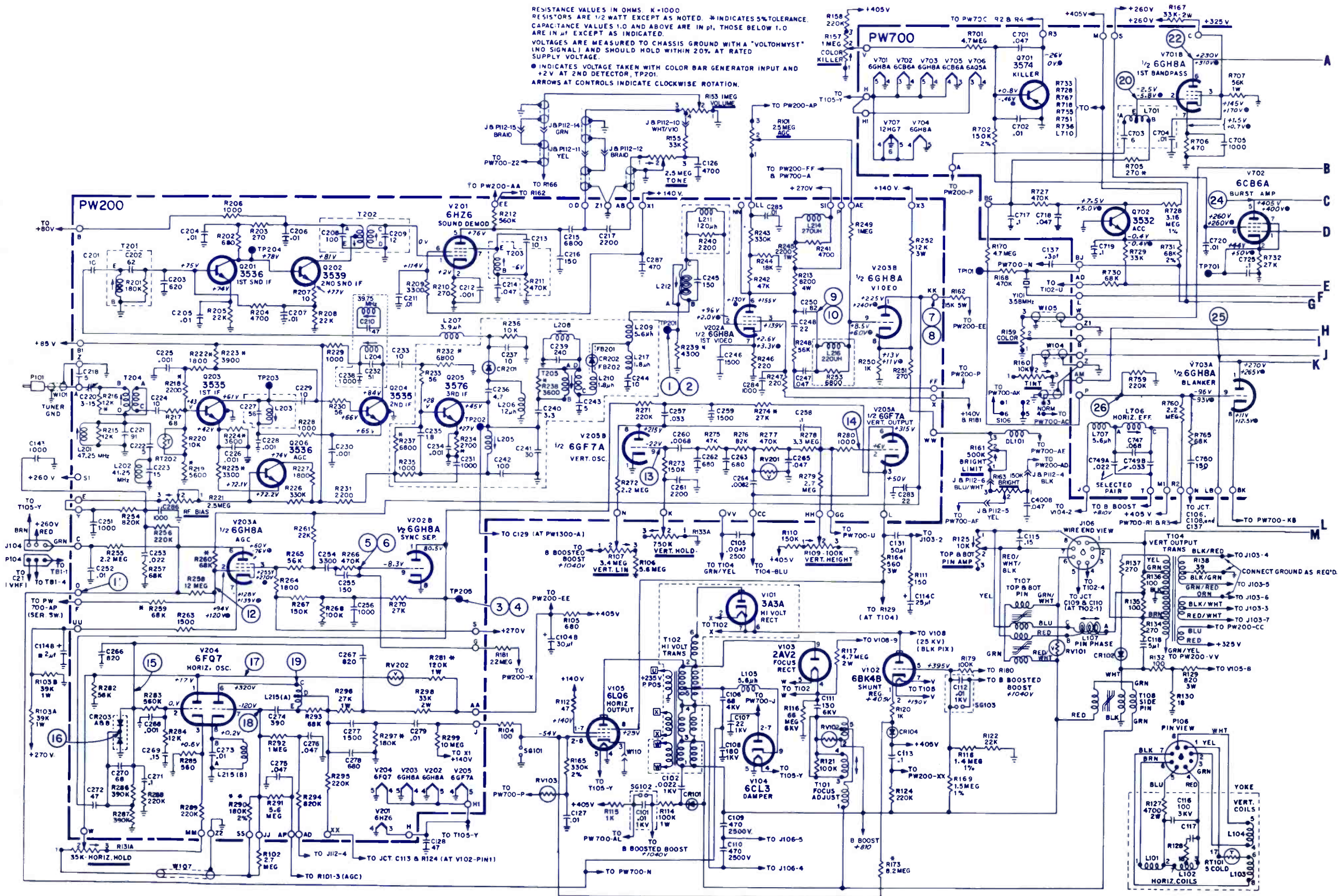
WIDE BLUE FIELD CORRECTION

The wide blue field adjustment is set at the factory. When adjustment is necessary due to the blue field overscanning the red and green, loosen the yoke thumbscrews then tighten the "wide blue field" screw to reduce the width of the blue field. This positions the yoke vertically for proper blue beam scan.

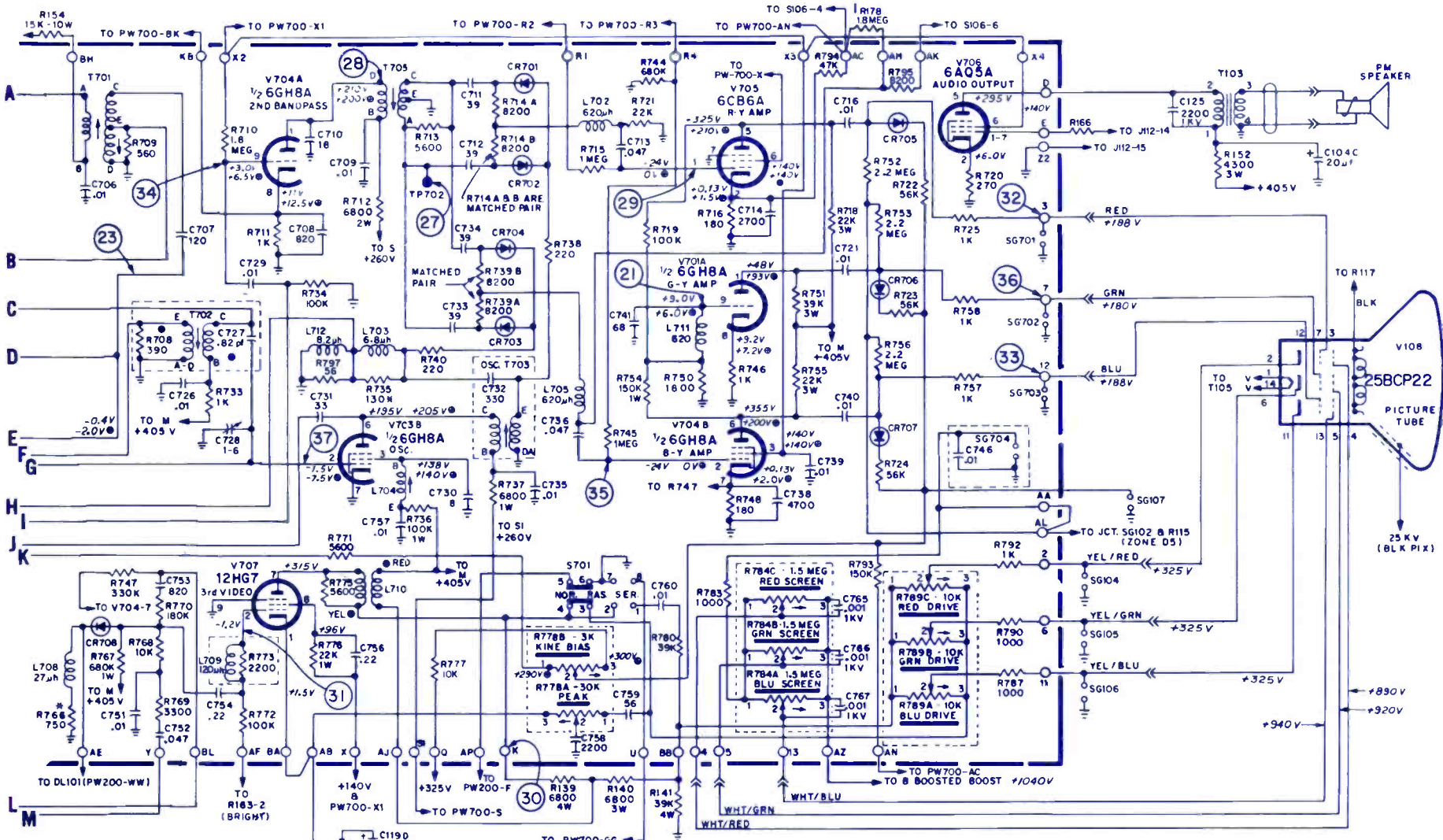


Yoke Housing Assembly and Center Convergence Magnets

RESISTANCE VALUES IN OHMS, K=1000.
RESISTORS ARE 1/2 WATT EXCEPT AS NOTED. *INDICATES 5% TOLERANCE.
CAPACITANCE VALUES 1.0 AND ABOVE ARE IN μ F, THOSE BELOW 1.0
ARE IN μ F EXCEPT AS INDICATED.
VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMST" (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE.
● INDICATES VOLTAGE TAKEN WITH COLOR BAR GENERATOR INPUT AND +2 V AT 2ND DETECTOR, TP201.
ARROWS AT CONTROLS INDICATE CLOCKWISE ROTATION.

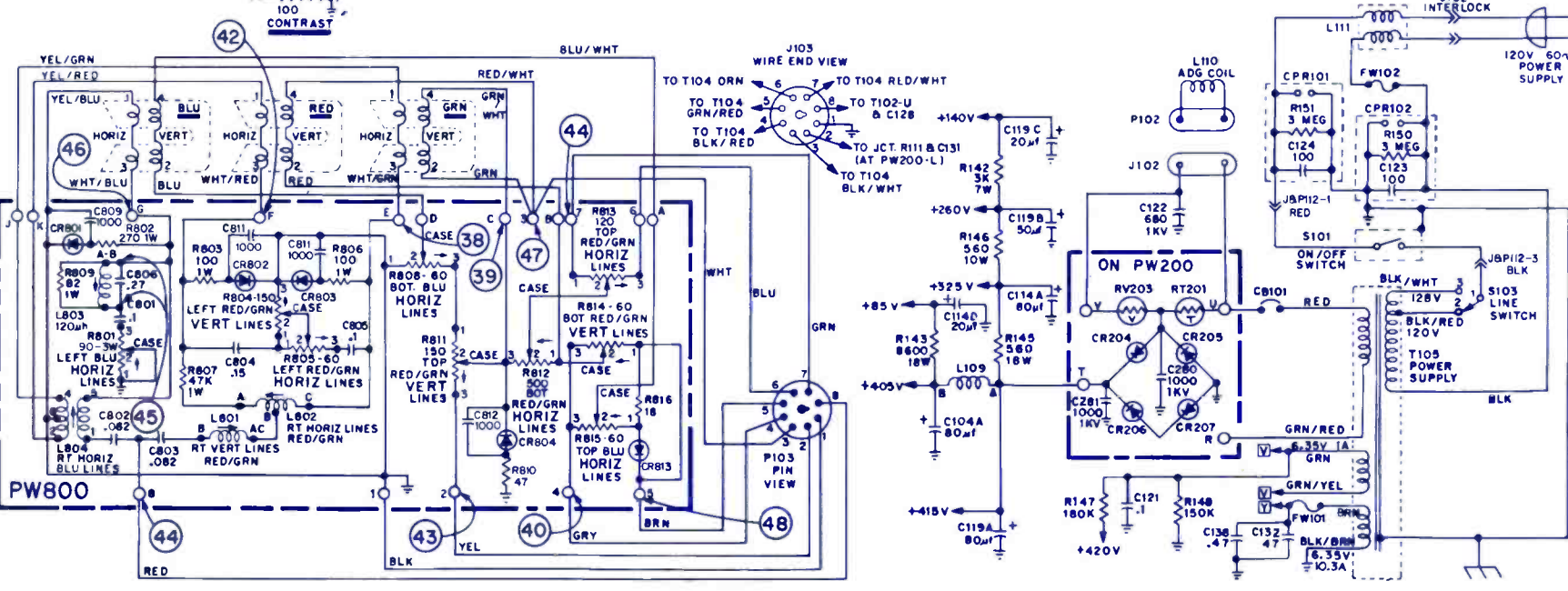
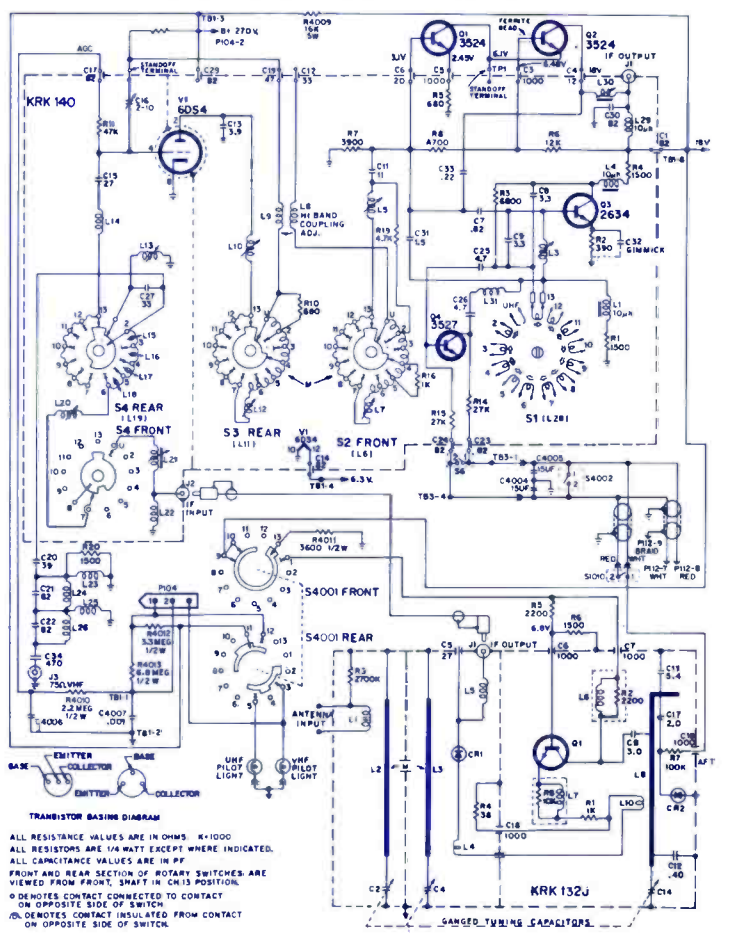


SYMBOL	DESCRIPTION	RCA PART NO.
C104	3 section elect.	116503
C104A	80µf, 450v	116503
C104B	20µf, 450v	116503
C104C	30µf, 150v	116503
C114	4 section elect.	124665
C114A	80µf, 450v	124665
C114B	25µf, 25v	124665
C114C	2µf, 25v	124665
C114D	20µf, 20v	124665
C119	4 section elect.	123491
C119A	80µf, 450v	123491
C119B	50µf, 450v	123491
C119C	20µf, 250v	123491
C119D	150µf, 25v	123491
DL101	line-delay	128258
FW101	fuse-No. 26 wire	102792
IC1301	cir-integrated	126604
L208	4.125MHz trap	124804
L212	4.5MHz trap	124810
L215	horiz sine wave	116506
L704	osc screen	121591
L706	horiz eff	122918
L710	x-former - 3rd video output	121589
L1303	AFTC disc pri	122213



L1304	AFTC disc sec	122203
PW200	cir-printed pix	131045
PW700	cir-printed chroma	131007
PW800	cir-printed convergence	127031
Q201	1st sound	124753
Q202	2nd sound	124756
Q203	1st IF	124757
Q204	2nd IF	124757
Q205	3rd IF	124754
Q206	AGC	124753
Q701	killer	124755
Q702	ACC	123941
R101	control AGC	124669
R103	39K matched pair	127039
R107	control, vert lin	114020
R109	control, vert height	121716
R131	control, horiz/tone	131059
R133	control vert/contrast	131058
R157	control, color killer	112841
R159	control color	131060
R160	control tint	131057
R161	control, brightness limit	112842
R221	control, RF bias	126667
R766	75015%, 1/2w, film	229700
R778	control, kinescope bias, peaking	121588
RT201	therm-120Ω cold	107191
RT202	therm-4300Ω at 25° C	124813
RV101	175v, at 6ma	114707
RV102	870v, at 6ma	112876
RV103	250v, at 6ma	124811
RV201	870v, at 6ma	112876
RV202	110v, at 6ma	114862
RV203	8v, at 15ma	126424
T101	coil-focus adj	131999
T102	high-voltage	131567
T103	audio	130620
T104	vert output	119828
R105	power	126489
T203	quad	124709
T701	1st band pass	124761
T702	burst	124764
T703	3.58MHz osc	121559
T705	2nd bandpass	124760
Y101	crystal-3.58MHz	105330
RT101	therm-temp comp yoke-deflection	114742

KRK 140/132 VHF/UHF TUNER SCHEMATIC DIAGRAM

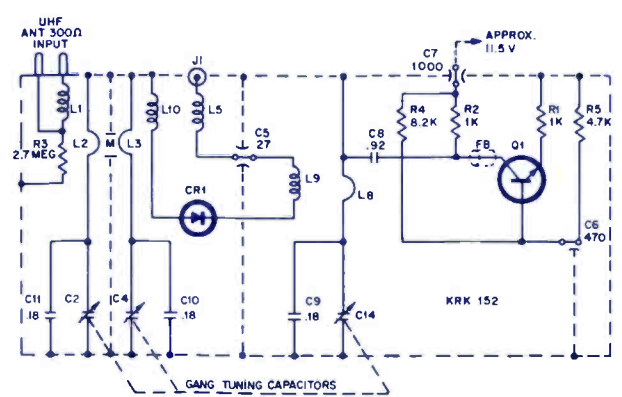
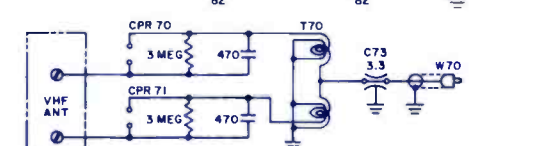
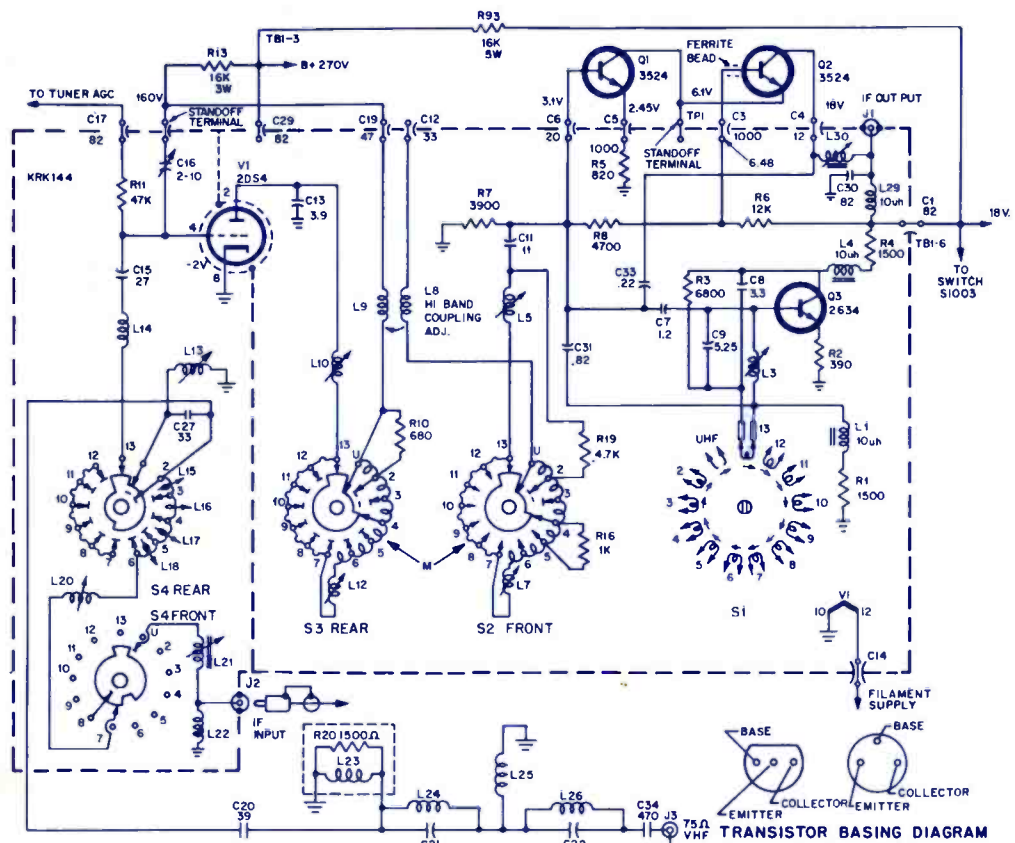


SYMBOL	DESCRIPTION	RCA PART NO.
C105	4 sec elect	130821
C105A	200µf, 200v	130821
C105B	175µf, 175v	130821
C105C	40µf, 300v	130821
C105D	200µf, 10v	130821
C106A	200µf, 350v	126340
C106B	150µf, 350v	126340
C8101	brkr cir	130077
CR401	damp	120818
CR402	video bias	119596
DL701	Delay-line	130109
F101	Fuse-7a	120785
L109	choke	112829
L113	choke, 1.8µh	109248
L201	41.25MHz	121564
L202	47.25MHz	124803
L299	discriminator	130121

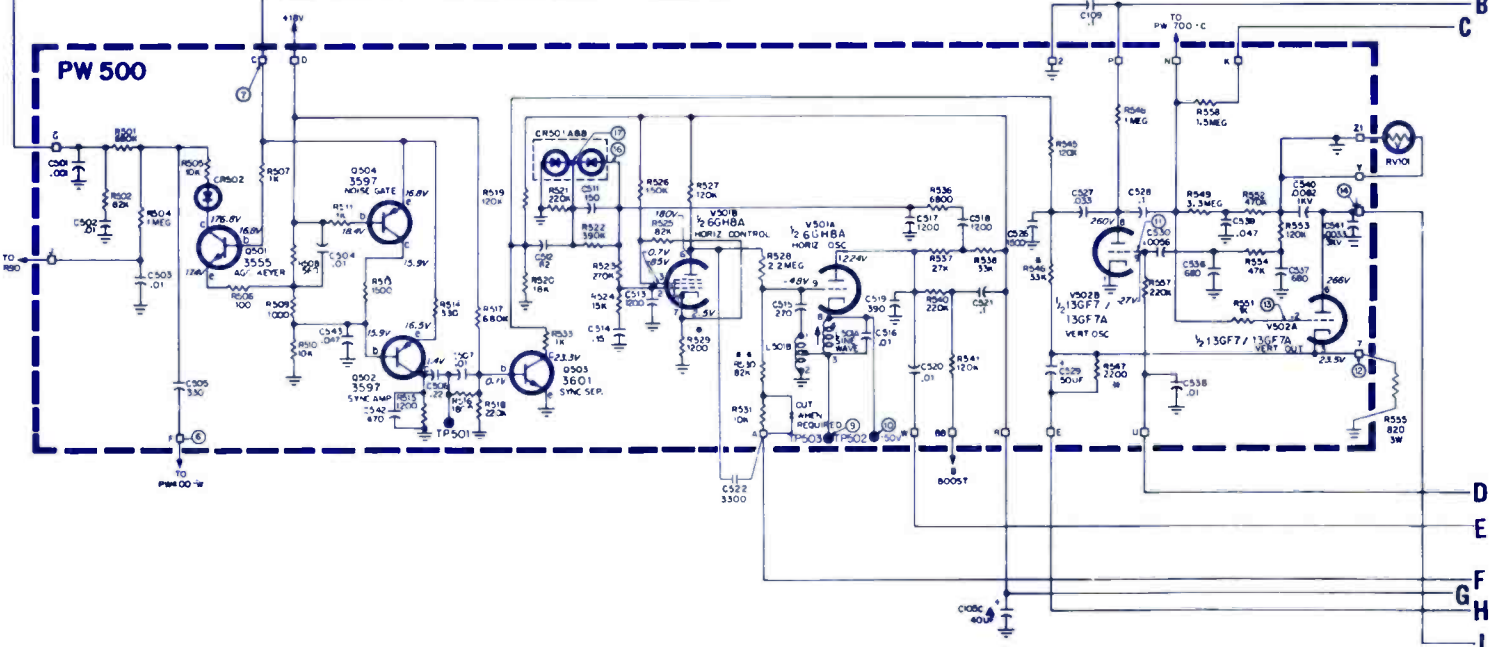
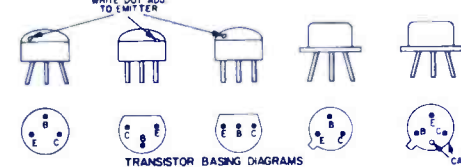
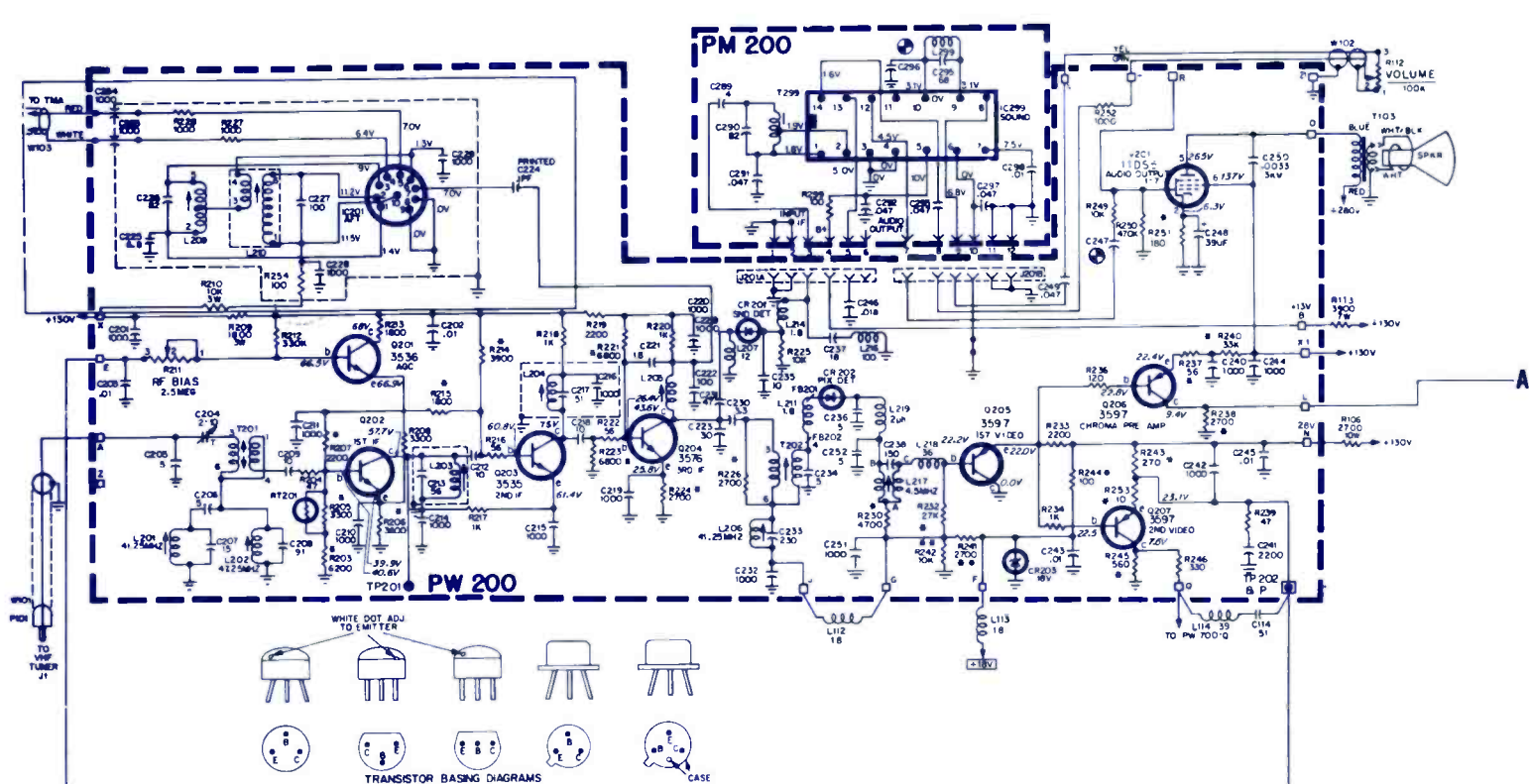
L401	horiz eff	129453
L501	horiz	109947
L703	6.2µh	130105
L706	620µh	109257
L709	reg mutual	115427
Q201	AGC	124753
Q202	1st pix IF	124757
Q203	2nd pix IF	124757
Q204	3rd pix IF	124754
Q205	1st video	130139
Q206	chroma pre-amp	130139
Q207	2nd video	130139
Q501	AGC keyer	126713
Q502	sync amp	130139
Q503	sync sep	129899
Q504	noise gate	130139
Q701	killer	124755
Q702	ACC	123941
R110	control, tint/bright/color CTC 41A	130621

R110	control, tint, bright, color CTC 41XP	130622
R420	control, contrast/vert hold/horiz hold	130108
R421	control, bright limiter	125076
R701	control, killer/vert height/vert lin	130107
RT102	thermistor - 250Ω cold	127227
RT103	thermistor - 16Ω cold	131164
RT201	thermistor - 4300Ω cold	128413
RV401	varistor - hold down	124811
RV701	varistor - degauss	126424
T102	horiz output	130093
T103	audio output	130091
T104	vert output	130092
T105	filament	130090
T299	input	130120
T701	burst	130104
T702	1st chroma	130100
T703	oscillator	121559
RT101	thermistor - temp. comp., 3.8Ω	115942
yoke	deflection	131786

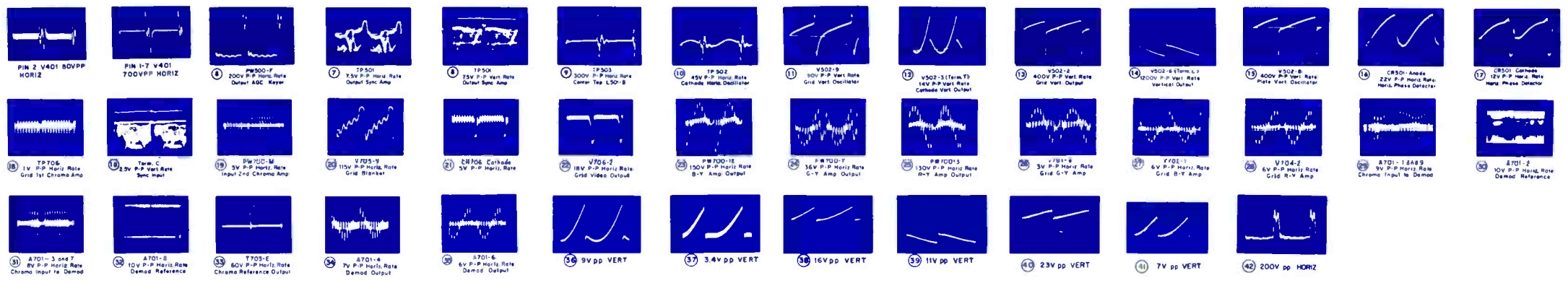
TUNER SCHEMATIC DIAGRAM



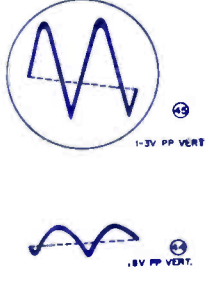
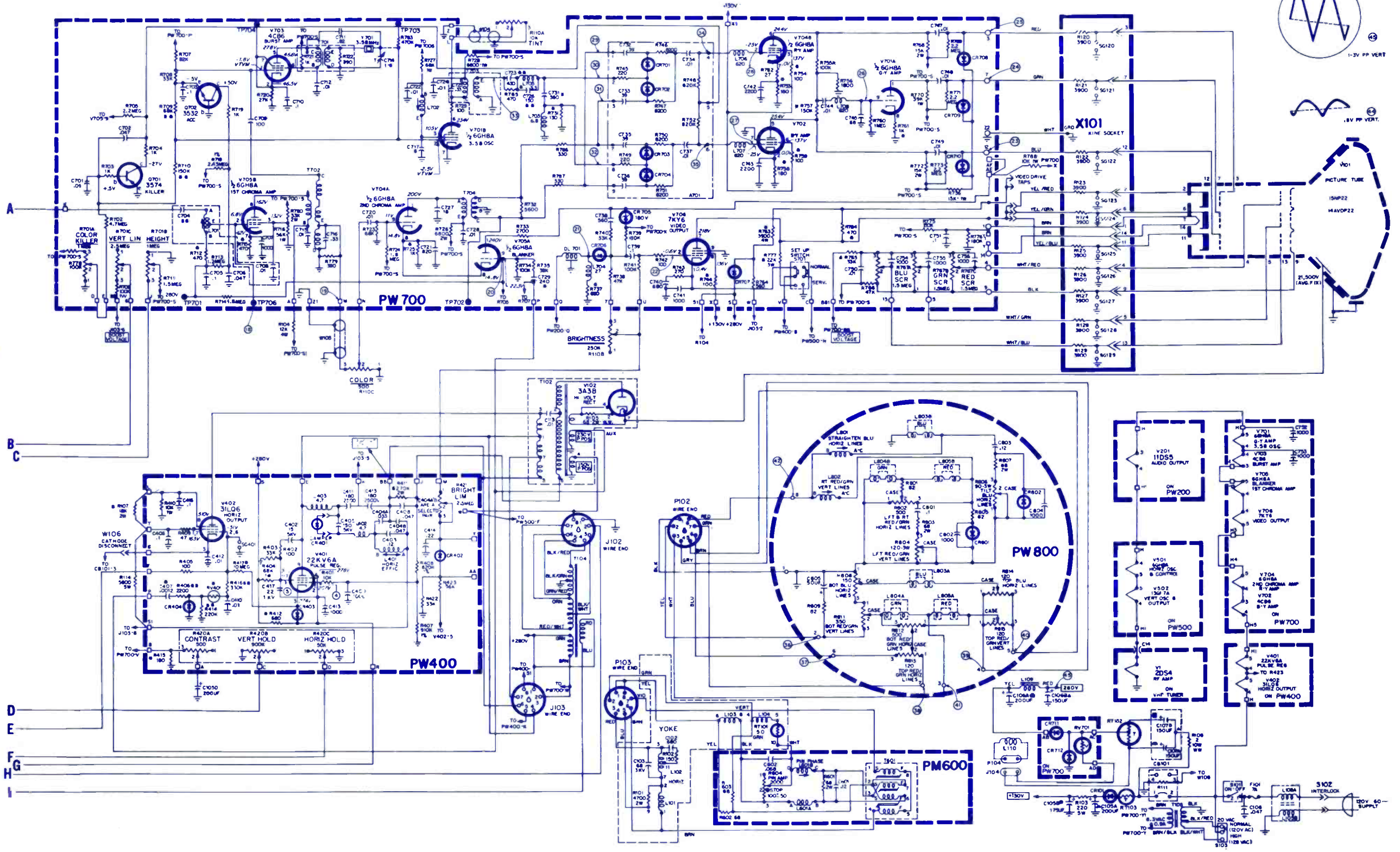
NOTES:
 ALL RESISTANCE VALUES ARE IN OHMS. K=1000
 ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE INDICATED
 ALL CAPACITANCE VALUES ARE IN PF.
 FRONT AND REAR SECTION OF ROTARY SWITCHES ARE VIEWED FROM FRONT, SHAFT IN CH. 13 POSITION
 ○ DENOTES CONTACT CONNECTED TO CONTACT ON OPPOSITE SIDE OF SWITCH.
 ⊗ DENOTES CONTACT INSULATED FROM CONTACT ON OPPOSITE SIDE OF SWITCH.



RCA VICTOR
Color TV Chassis CTC41 Series

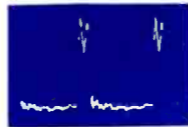


NOTES:
 1. RESISTANCE VALUE IN OHMS UNLESS NOTED.
 2. RESISTORS ARE 1/2 WATT EXCEPT AS NOTED.
 3. B INDICATES 5% TOLERANCE-REPLACE ONLY WITH APPROVED PART.
 4. B B INDICATES 2% TOLERANCE.
 5. CAPACITANCE VALUES 1% ARE ABOVE ARE IN PW THOSE BELOW ARE IN LIF EXCEPT AS INDICATED.
 6. INDUCTOR VALUES IN OHMS EXCEPT AS INDICATED.
 7. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A VOLTOHMIST (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE. TUNER TO 15M POSITION.
 8. ALL TUNER SWITCHES ARE SHOWN IN CHANNEL 13 POSITION.



RCA VICTOR
Color TV Chassis
CTC43 Series

ELECTRONIC TECHNICIAN / DEALER *TEKFAK*



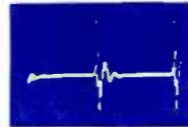
6 PW500-F
200V P-P Horiz. Rate
Output AGC Keyer



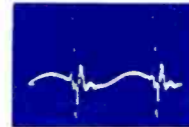
7 TP501
7.5V P-P Horiz. Rate
Output Sync Amp



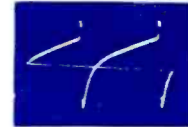
8 TP501
7.5V P-P Vert. Rate
Output Sync Amp



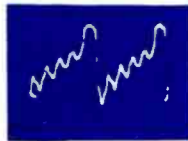
9 TP503
300V P-P Horiz. Rate
Center Top L501-B



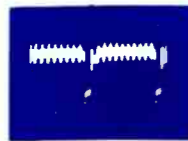
10 TP502
45V P-P Horiz. Rate
Cathode Horiz. Oscillator



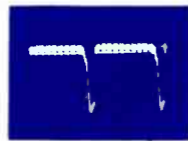
11 V502-9
90V P-P Vert. Rate
Grid Vert. Oscillator



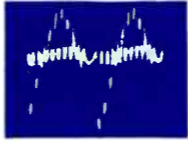
20 V705-9
115V P-P Horiz. Rate
Grid Blanker



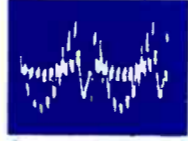
21 CR706 Cathode
5V P-P Horiz. Rate



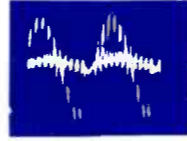
22 V706-2
18V P-P Horiz. Rate
Grid Video Output



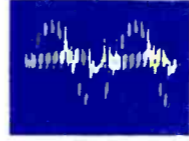
23 PW700-12
150V P-P Horiz. Rate
B-Y Amp Output



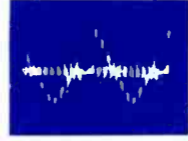
24 PW700-7
36V P-P Horiz. Rate
G-Y Amp Output



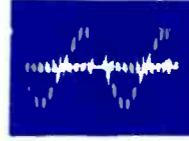
25 PW700-3
130V P-P Horiz. Rate
R-Y Amp Output



26 V701-9
3V P-P Horiz. Rate
Grid G-Y Amp



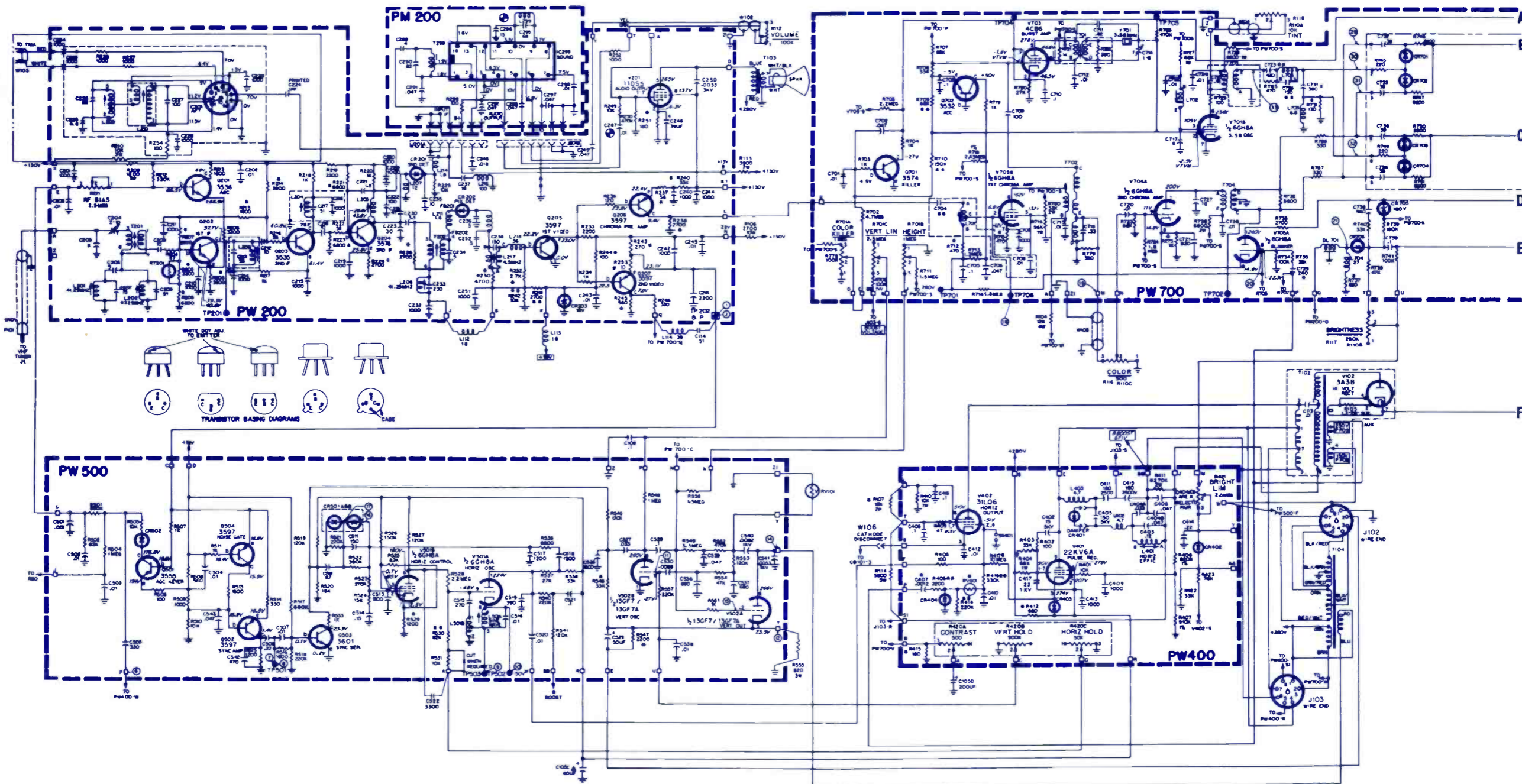
27 V702-1
6V P-P Horiz. Rate
Grid B-Y Amp

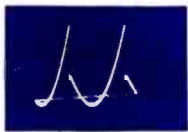


28 V704-2
6V P-P Horiz. Rate
Grid R-Y Amp

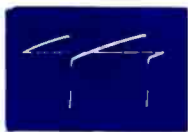


29 A701-1 and 9
9V P-P Horiz. Rate
Chroma Input to Demod

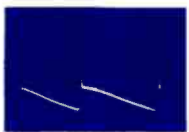




12 V502-3 (Term. T) 14V P-P Vert. Rate Cathode Vert. Output



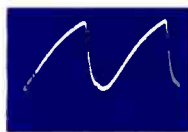
13 V502-2 400V P-P Vert. Rate Grid Vert. Output



14 V502-6 (Term. L) 1200V P-P Vert. Rate Vertical Output



15 V502-8 400V P-P Vert. Rate Plate Vert. Oscillator



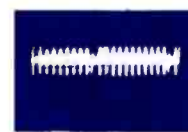
16 CR501 Anode 2.2V P-P Horiz. Rate Horiz. Phase Detector



17 CR501 Cathode 12V P-P Horiz. Rate Horiz. Phase Detector



18 Term. C 2.5V P-P Vert. Rate Sync Input



18 TP706 1V P-P Horiz. Rate Grid 1st Chroma Amp



19 PW700-M 5V P-P Horiz. Rate Input 2nd Chroma Amp



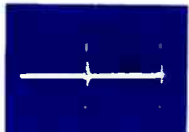
30 A701-2 10V P-P Horiz. Rate Demod Reference



31 A701-3 and 7 8V P-P Horiz. Rate Chroma Input to Demod



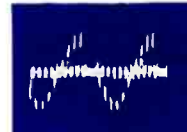
32 A701-8 10V P-P Horiz. Rate Demod Reference



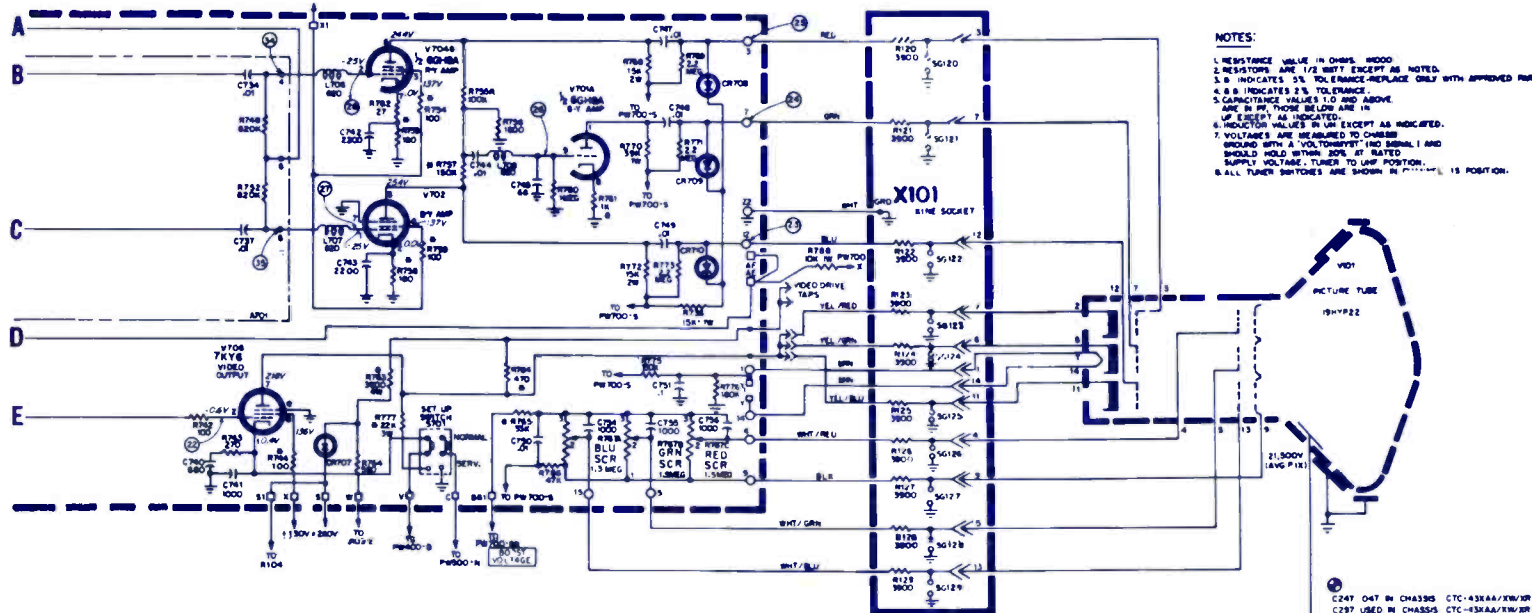
33 T703-E 60V P-P Horiz. Rate Chroma Reference Output



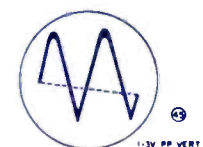
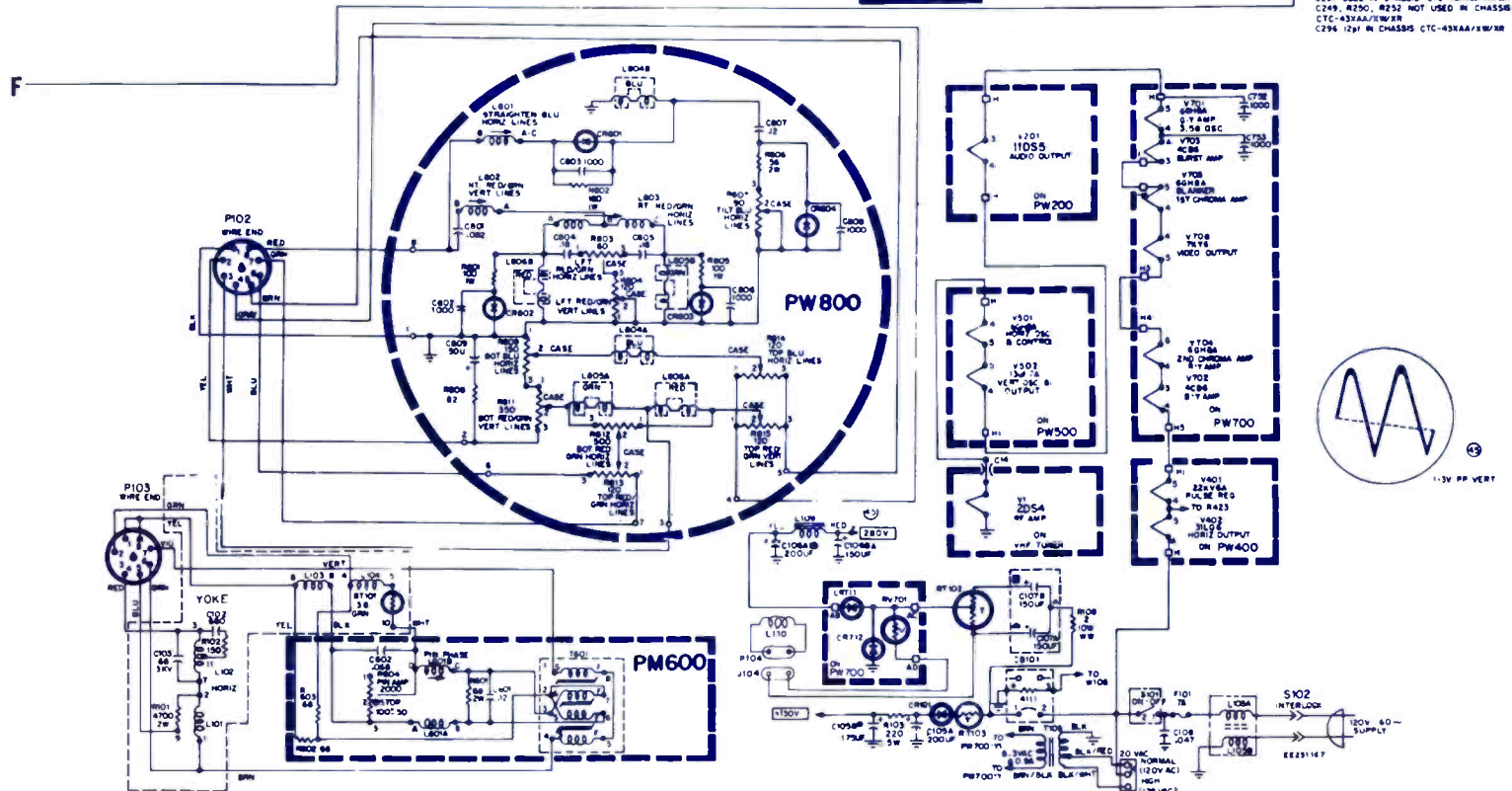
34 A701-4 7V P-P Horiz. Rate Demod Output



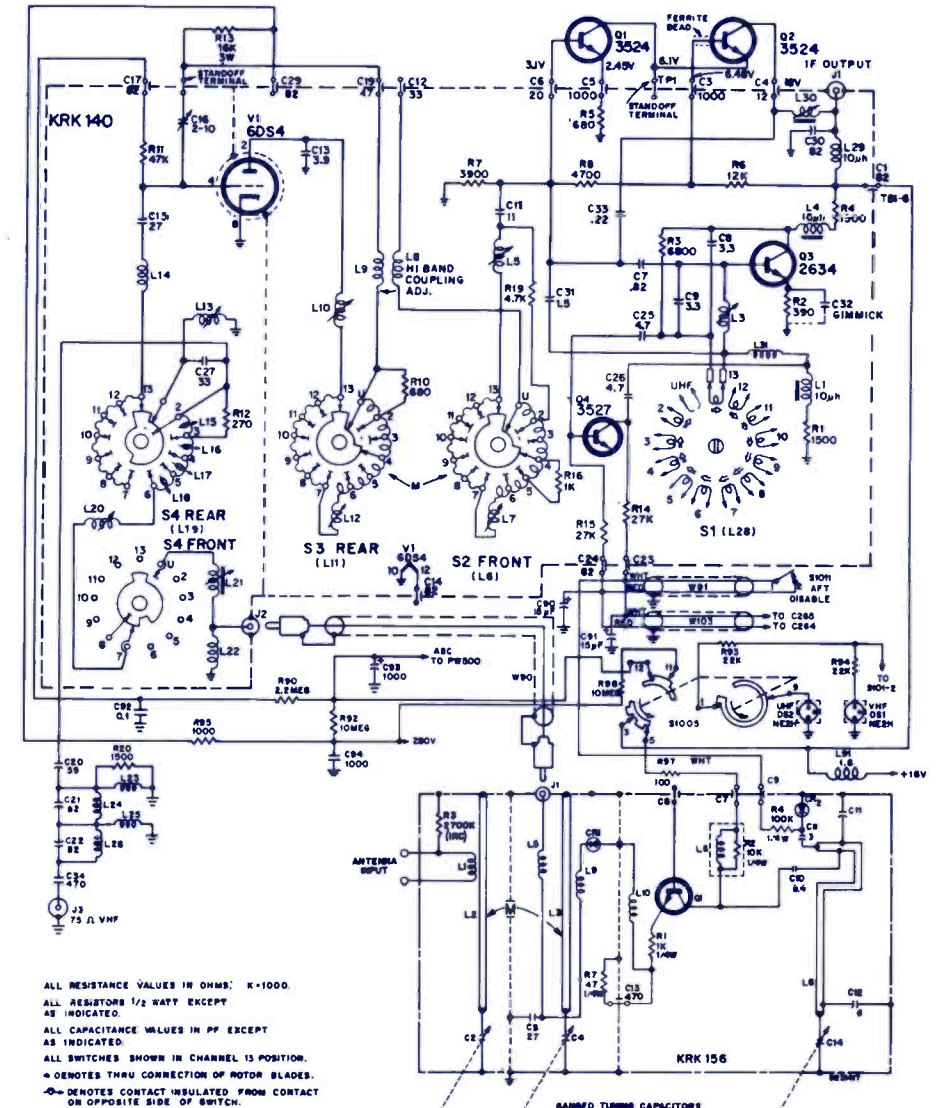
35 A701-6 6V P-P Horiz. Rate Demod Output



NOTES:
1. RESISTANCE VALUE IN OHMS, UNLESS NOTED.
2. RESISTORS ARE 1/2 WATT EXCEPT AS NOTED.
3. B INDICATES 5% TOLERANCE-REPLACE ONLY WITH APPROVED PART.
4. B INDICATES 3% TOLERANCE.
5. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN PP, THOSE BELOW ARE IN 1% UNLESS OTHERWISE INDICATED.
6. INDUCTOR VALUES IN MH EXCEPT AS INDICATED.
7. VOLTAGES ARE MEASURED TO CHASSIS UNLESS OTHERWISE INDICATED.
8. VOLTAGE SHOULD HOLD WITH 50% OF RATED SUPPLY VOLTAGE, TUNED TO UNIP POSITION.
9. ALL TUNER SWITCHES ARE SHOWN IN CHANNEL 15 POSITION.



SYMBOL	DESCRIPTION	RCA VICTOR PART NO.
C105	4 section electrolytic	130821
C105A	200µf, 200v	130821
C105B	175µf, 175v	130821
C105C	400µf, 300v	130821
C105D	200µf, 10v	130821
C106	2 section electrolytic	126340
C106A	200µf, 350v	126340
C106B	150µf, 350v	126340
C107	2 section electrolytic	130769
C107A	150µf, 175v	130769
C107B	150µf, 175v	130769
CB101	breaker-circuit	130077
CR401	damp	120818
CRM1	module-color	130058
FI01	Fuse-7o	120785
IC201	circuit-integ. AFT, CTC, 43XT, XU, XR	130130
IC299	circuit-integ. CTC 43A, XT, XU	130122
IC299	integ sound, CTC 43XR	130751
L105	AC line filter	126602
L299	discriminator	130121
L401	horiz eff	129453
L501	horiz	109947
L702	osc strength	121591
L709	reg mutual	115427
Q201	AGC	124753
Q202	1st pix 1F	124757
Q204	3rd pix 1F	124754
Q205	1st video	130139
Q206	chroma preamp	130139
Q207	2nd video	130139
Q501	AGC keyer	126712
Q502	sync amp	130139
Q503	sync sep	129899
Q504	noise gate	130139
Q701	killer	124755
Q702	occ	123941
R106	2700Ω 10%, 10w, film	130082
R108	2Ω 10%, 10w, WW	126360
R130	910,000Ω 5%, 1/2w, special CTC 43XR	131041
R420	control, contrast/vert hold/horiz hold	130108
R421	control, bright limiter	125076
R701	control, killer/vert height/vert lin	130107
R767	control, blue/green/red screen	126763
RT102	therm 240Ω cold	127227
RT103	therm 17Ω cold	131164
RT201	therm 4300Ω cold	124813
RV401	varistor hold down	124811
RV501	varistor 635v	130147
RV701	varistor degauss	126424
RV1101	varistor	130042
T102	horiz output	131044
T103	audio output	120822
T104	vert output	130092
T105	filament	130624
T105	filament	130090
T701	burst	130104
T703	oscillator	121559
T704	2nd chromo	130101
T1101	driver	130041
RT101	therm. temp comp, 3.8Ω	115942
	yoke deflection	131772

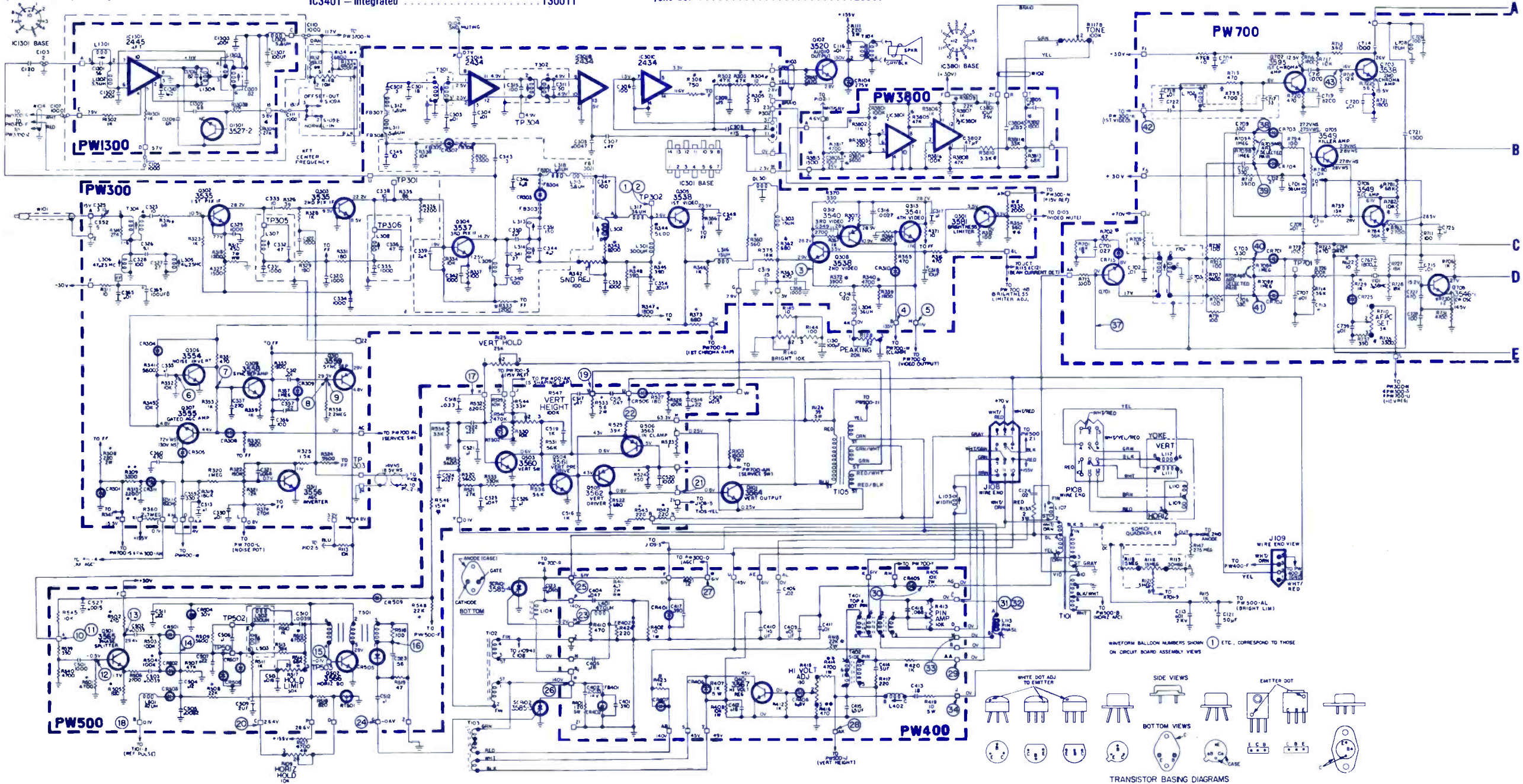
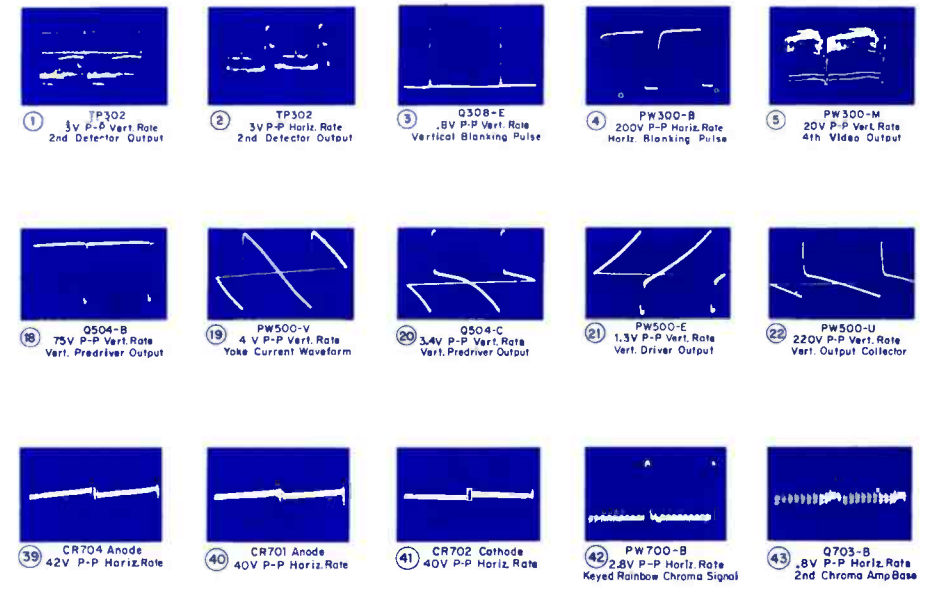


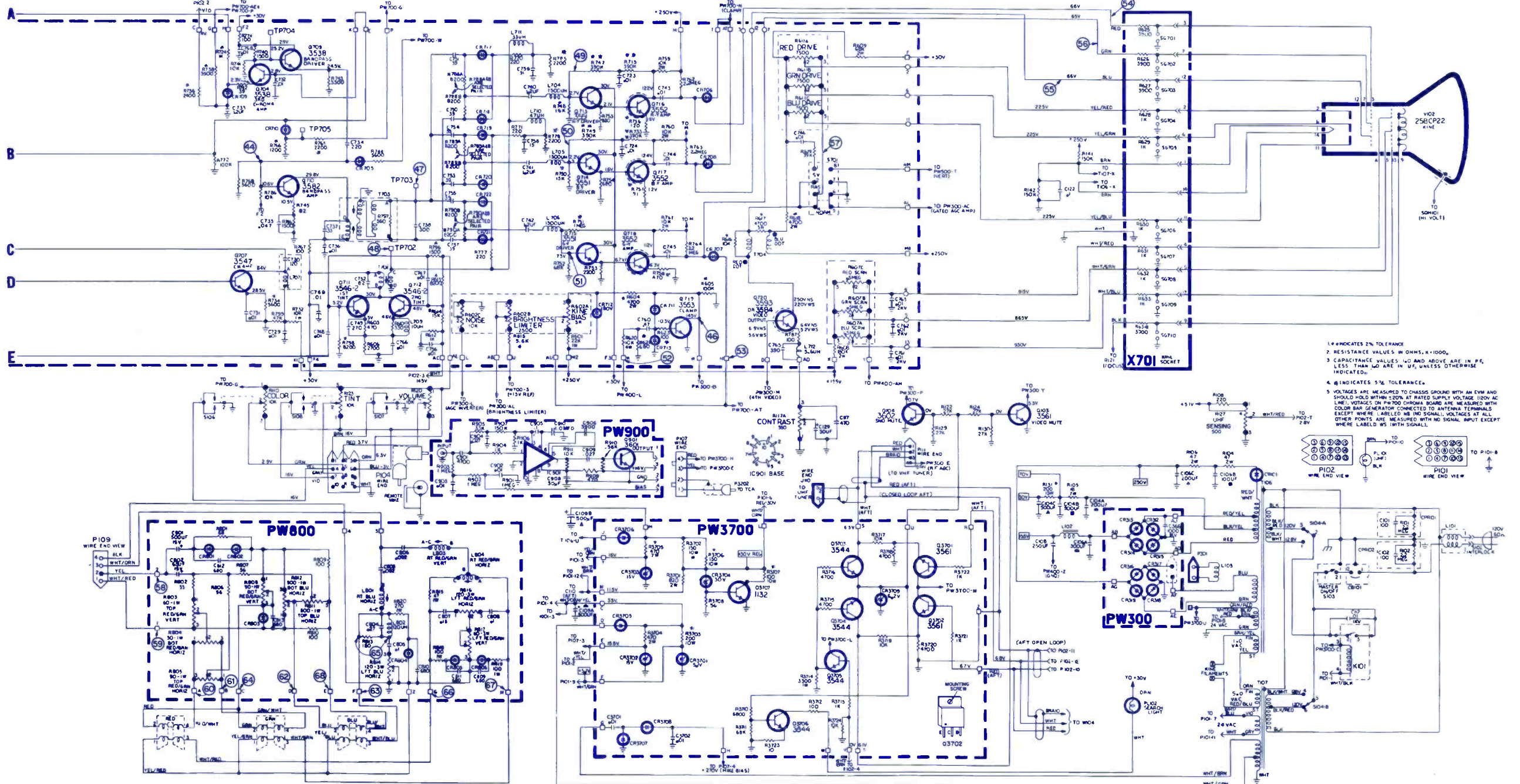
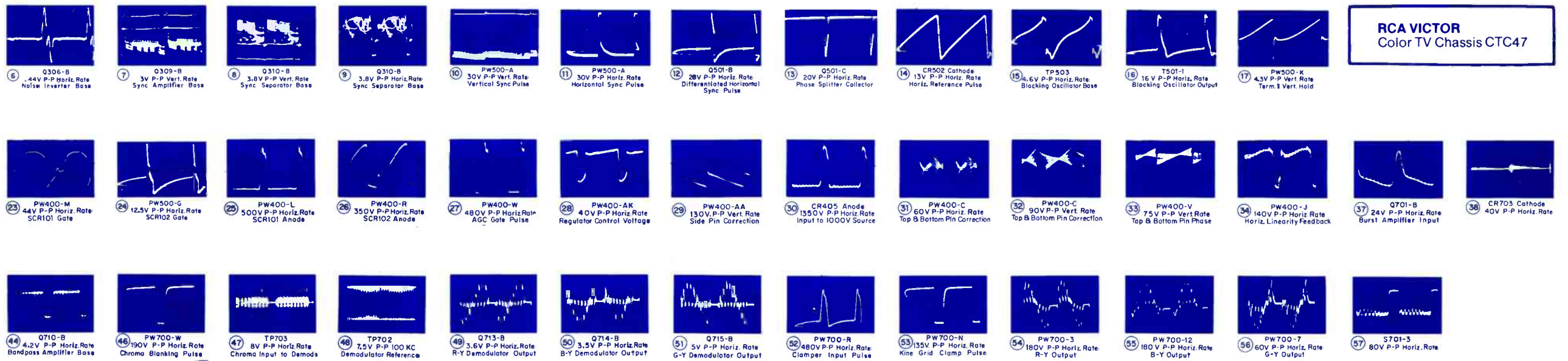
ALL RESISTANCE VALUES IN OHMS; K=1000.
ALL RESISTORS 1/2 WATT EXCEPT AS INDICATED.
ALL CAPACITANCE VALUES IN PP EXCEPT AS INDICATED.
ALL SWITCHES SHOWN IN CHANNEL 15 POSITION.
• DENOTES THRU CONNECTION OF MOTOR BLADES.
◊ DENOTES CONTACT INSULATED FROM CONTACT ON OPPOSITE SIDE OF SWITCH.

SYMBOL	DESCRIPTION	RCA VICTOR PART NO.
C104	3 section elect	129911
C104A	200µf, 125v	129911
C104B	500µf, 100v	129911
C104C	500µf, 35v	129911
C106	3 section elect	129910
C106A	300µf, 175v	129910
C106B	100µf, 300v	129910
C106C	200µf, 300v	129910
C109	2 section elect	129913
C109A	500µf, 50v	129913
C109B	500µf, 60v	129913
R109	control, horiz hold	129921
R110	control, color	129918
R116	control, focus	129925
R177A	control, contrast	129916
R117B	control, tone	129916
R120	control volume	129919
R123	control, tint	129918
R125	control, vert hold	129922
R127	control, UHF sensing	129923
R128	control, peaking	129924

R140	control, brightness	130150
R148	control, AFT cent. freq.	129917
R342	control, sound rej	126780
R413	control, pin amp	129756
C3805	0.15µf, 10%, 75v, mylar	120056
CPR101	capristor, 100pf/2.2M	115436
CR104	zener, 275v	126854
CR301	zener, 15v	126852
CR304	50 P.I.V., 100ma	125528
CR406	regulatory recovery	125844
CR706	clamp	125844
CR718	r-v demod	112524
CR802	50 P.I.V. 600ma	125528
CR3201	20 P.I.V. 100ma	130046
CR3206	2 P.I.V., 100ma	126856
CR3210	50 P.I.V., 100ma	126321
CR3705	1a, 100 P.I.V.	129755
CRM1	cir module, tint	130058
CRM2	cir module, color	130058
CRM3	cir module, volume	130058
DL301	line delay	126870
FB303	ferrite	116761
IC901	integrated, remote preamp	127166
IC3401	integrated	130011

IC3403	integrated	130014
IC3801	integrated	129821
L101	choke	126602
L103	width	128126
L315	5.6µh	109171
L704	1500µh	121561
L706	1500µh	121561
R415	control, HV adj	126782
R517	control, horiz hold limiter	129757
R547	control, vert height	126772
R602	control, noise/bright limiter/bias	130016
R607	control, blu/grn/rd screens	126763
R710	control, AFPC set	126781
R803	control, top rd/grn vert	126777
R805	control, top rd/green horiz	127029
R814	control, left blu horiz	116555
R817	control, left rd/grn vert	114627
RT501	therm-50K cold	116109
RT502	therm-100K cold	126911
RV3201	varistor, 12v, 1ma	130042
SOM	quad, hi voltage	130026
T101	hi voltage	130029
T103	regulator	126733
T104	audio output	126737
T106	power	129891
T301	sound input	119618
T701	burst	126740
T702	tint	130012
T703	bandpass	126736
Y101	crystal, 3.58µh	105330
	yokey def	129956

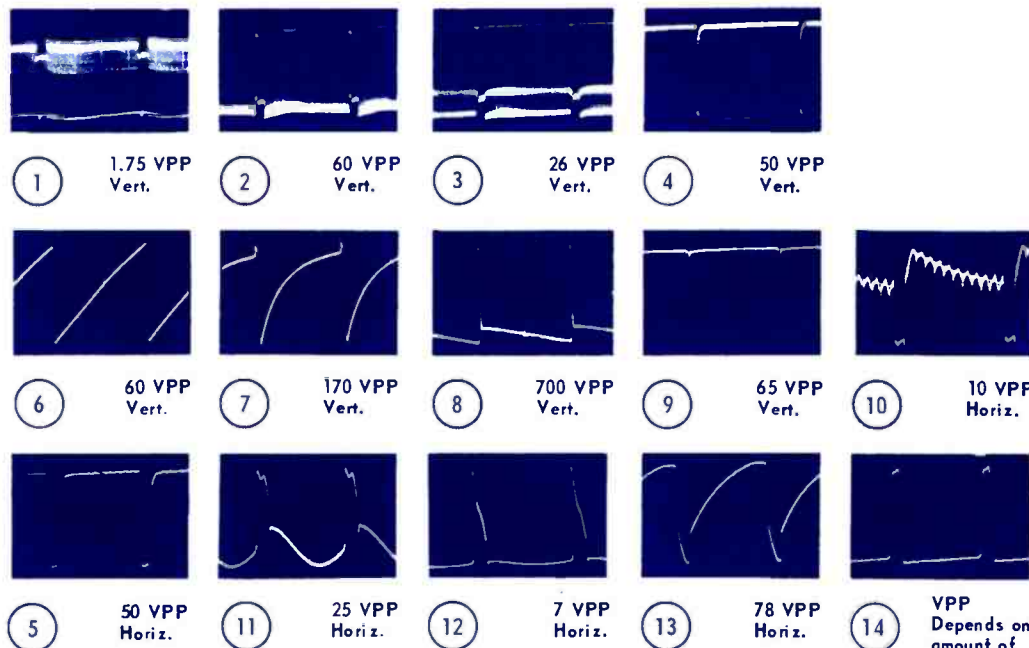




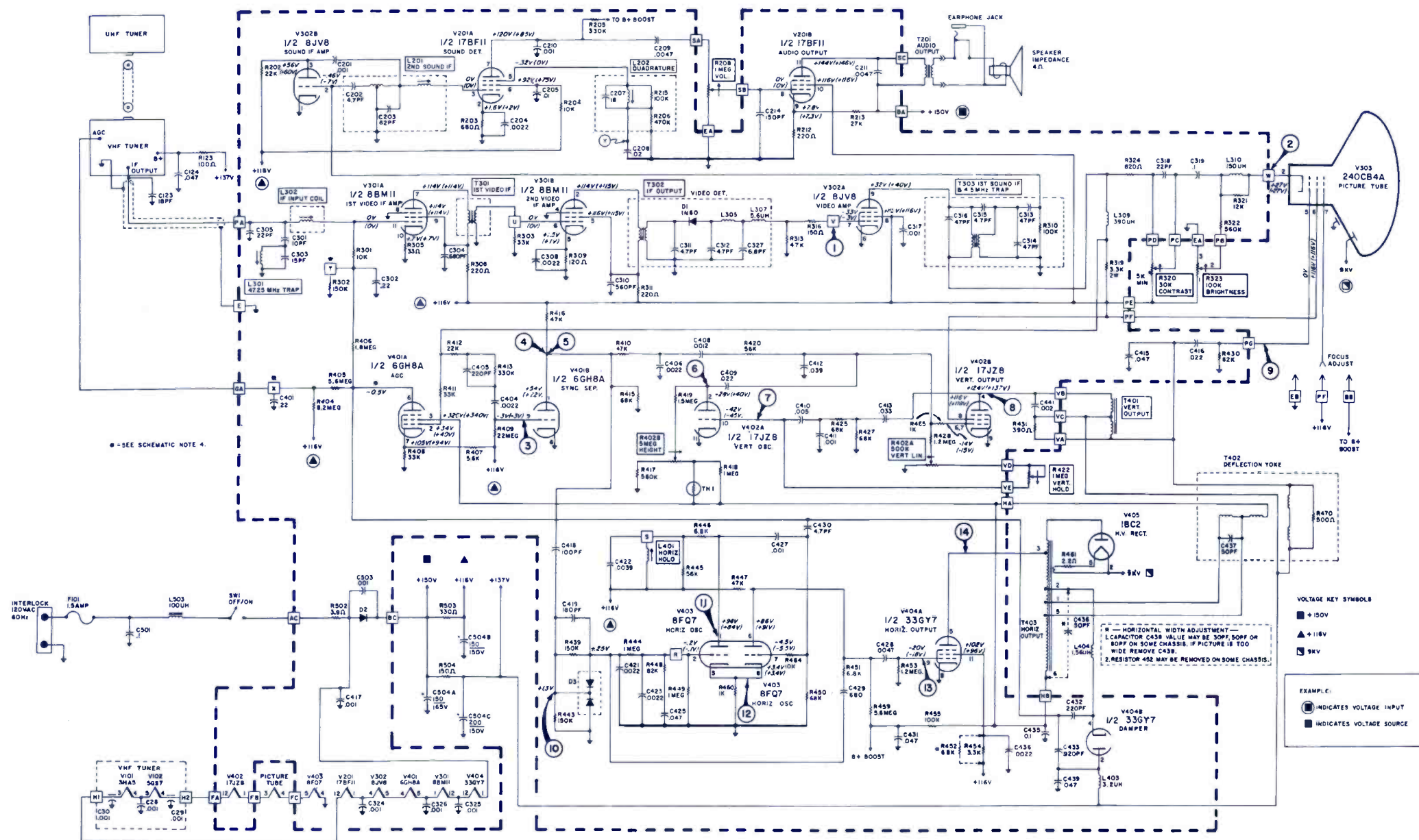
1. * INDICATES 2% TOLERANCE
2. RESISTANCE VALUES IN OHMS, K=1000.
3. CAPACITANCE VALUES IN AND ABOVE ARE IN P.F. LESS THAN 100 ARE IN P.F. UNLESS OTHERWISE INDICATED.
4. # INDICATES 5% TOLERANCES.

VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH AN EVM AND SHOULD HOLD WITHIN 5% AT RATED SUPPLY VOLTAGE (100V AC LINE). VOLTAGES ON PW700 CHROMA BOARD ARE MEASURED WITH COLOR BAR GENERATOR CONNECTED TO ANTENNA TERMINALS EXCEPT WHERE LABELED IN (NO SIGNAL). VOLTAGES AT ALL OTHER POINTS ARE MEASURED WITH NO SIGNAL INPUT EXCEPT WHERE LABELED IN (WITH SIGNAL).





SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C504A	150/165v electrolytic	41-31041-2
C504B	150/150v electrolytic	41-31041-2
C504C	200/150v electrolytic	41-31041-2
R502	3.9-5w WW resistor	36-31036-2
R503	330-5w WW resistor	36-31036-4
R504	150-5w WW resistor	36-31036-3
TH1	thermistor	38-31-38-1
L202	quadrature coil	50-31050-17
L301	47.25MHz trap coil	50-31050-23
L302	1st video IF coil	50-31050-20
L309	peaking coil-390 μh	50-31050-28
L310	peaking coil-150 μh	50-31050-27
L403	filter	50-31050-18
L503	line filter	50-31050-29
T201	audio output xformer	56-31056-3
T301	1st video IF xformer	50-31050-21
T302	IF output xformer	50-31050-22
T303	1st sound IF & 4.5MHz trap	57-31057-2
T401	vert output xformer	56-31056-4
T402	deflection yoke	51-31050-2
T403	horiz output xformer	50-31050-16
R208	1M-volume	37-31037-6
R320	30K-contrast	37-31037-9
R323	100K-bright	37-31037-7
R402A	500K-vert linearity	37-31037-10
R402B	5M-height	37-31037-10
R422	1M-vert hold	37-31037-8
F101	fuse-1.5a	29-31029-2
D1	diode-video detector-1N60	50-31050-22
	UHF tuner	54-31053-2
	VHF tuner	54-31054-2



SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C10S	4 section elect	41-31041-1
A	300/175V	
B	400/150v	
C	4/150v	
D	20/150v	
R100	5.5 10w	36-31036-1
R304	60 7w	35-31035-4
L200	47.25MHz trap	50-31050-7
L350	quad	50-31050-12
L450	horiz stabilizer	50-31050-15
L500	horiz choke	50-31050-6
T200	IF input	50-31050-8
T201	1st IF	50-31050-9
T250	video output	50-31050-10
T300	sound take off/4.5MHz trap	57-31057-1
T350	sound IF	50-31050-13

T351	audio output	56-31056-2
T400	vert output	56-31056-1
R300	600Ω contrast	37-31037-4
R350	1M vol	37-31037-1
R400	3M vert height	37-31037-1
R410	500K vert lin	37-31037-1
R420	1.2M vert hold	37-31037-1
R450	50K horiz frequency	37-31037-2
R550	L.5M bright	37-31037-5
R600	50K AGC	37-31037-2
D250	diode video detector	1N60
D451	diode horiz AFC	13-31014-2
F100	fuse 1.2a chemical	29-31029-1
Q60	transistor keyed AGC	13-21013-1 or -2
SW101	switch ON/OFF	part of R350
	-yoke deflection	51-31051-1
	-UHF	54-31053-1
	-VHF	54-31054-1

VOLTAGE MEASUREMENT CONDITIONS UNLESS OTHERWISE SPECIFIED.

1. Voltages measured to chassis using VTVM.
2. AC power source 120 volt, 60 hertz (cycle) line.
3. Voltage readings in brackets () taken with no signal, antenna terminals shorted together, tuner on unused channel, brightness control at minimum and contrast R600 set to provide -.5V at tie point J252.
4. Voltage readings not in brackets taken using a color bar generator (rainbow bar pattern) as a signal source. Brightness control at maximum and contrast control adjusted for 60 V.P.P. voltage at tie point J550. AGC voltage at tie point J252 was approximately +9V.
5. Voltage values shown are average readings. Variations may be observed due to normal production tolerances.

the input antenna terminals, providing a gated rainbow bar pattern.

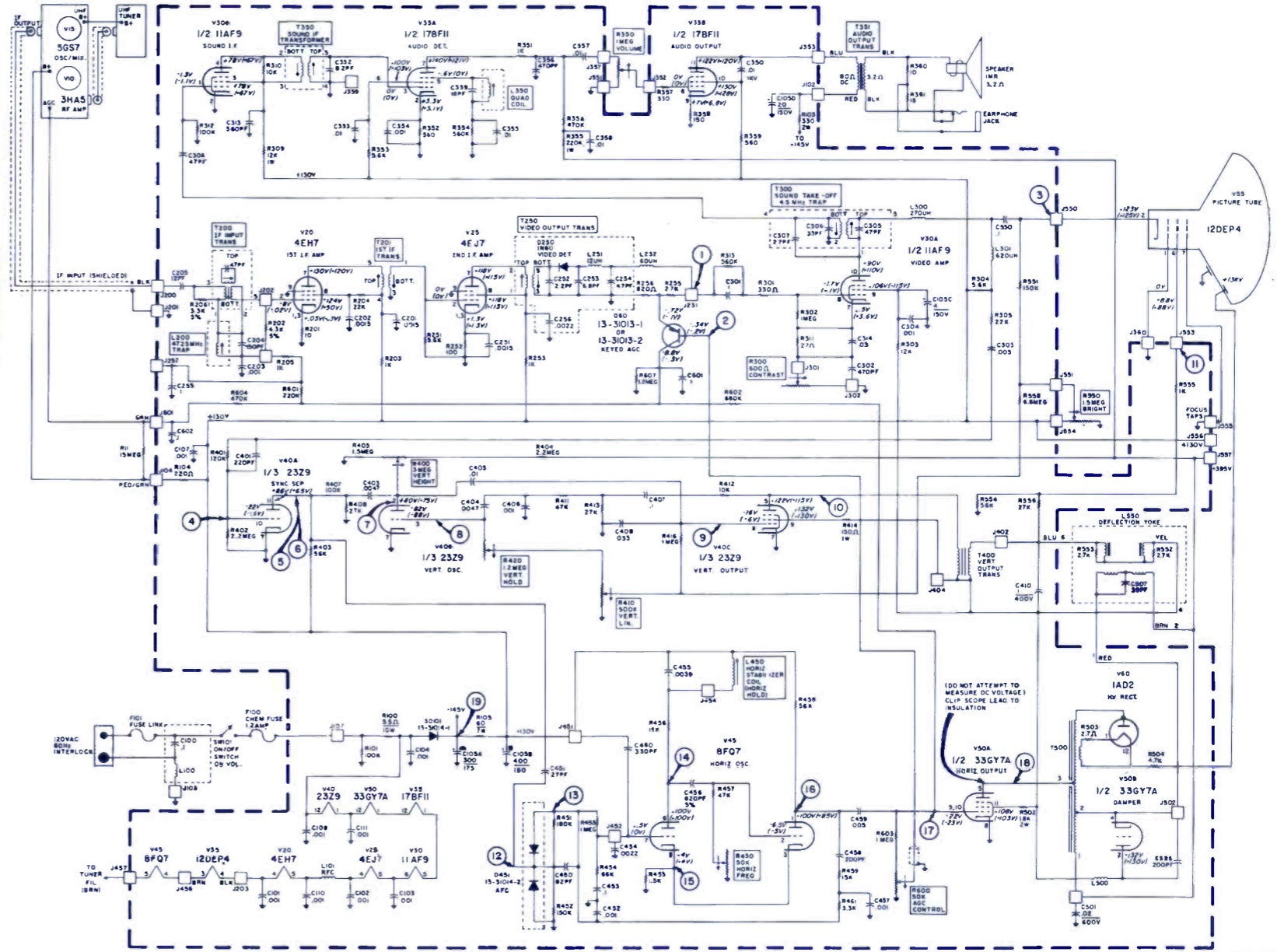
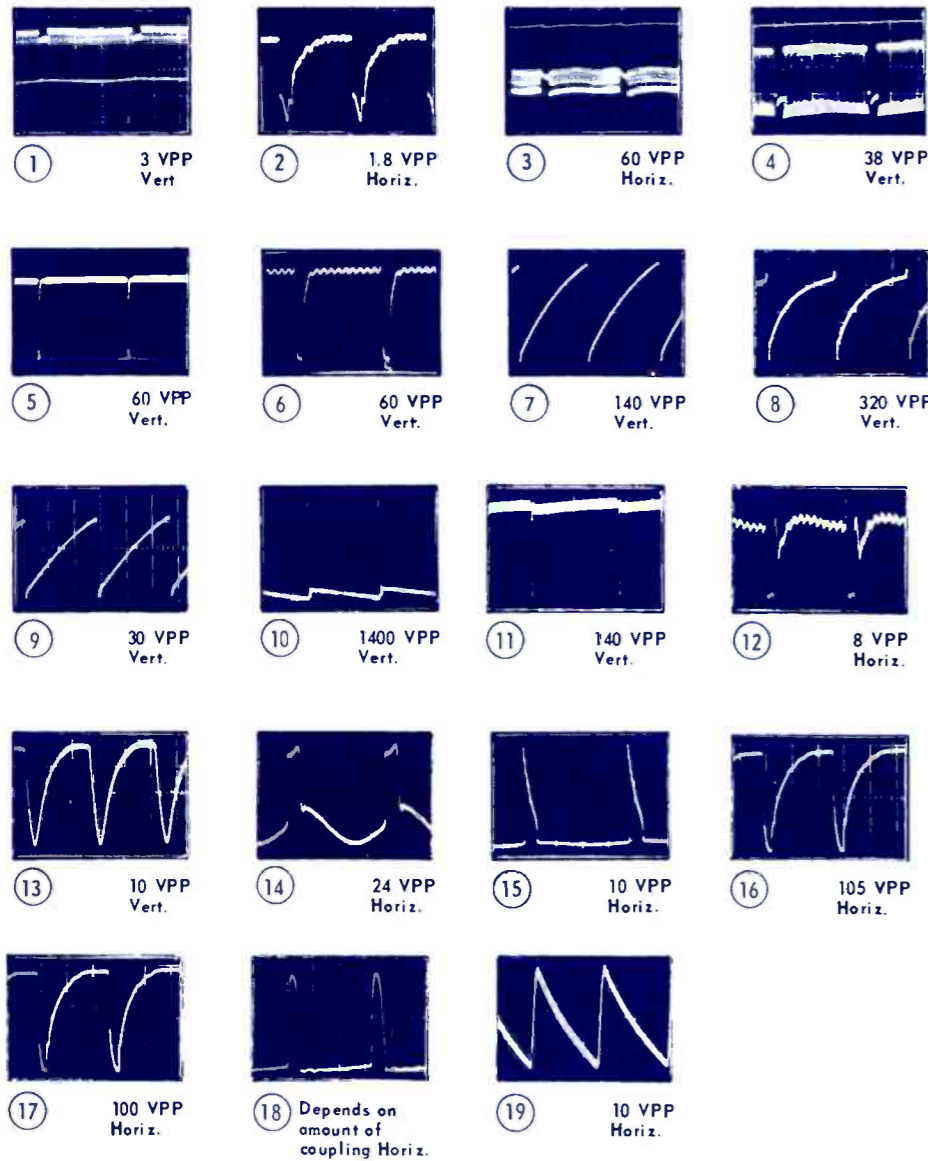
2. Brightness and contrast controls adjusted for 60 V.P.P. voltage at tie point J550 to set up reference level for all others. AGC voltage at tie point J252 was approximately +9V.
3. Waveforms measured with respect to chassis using a wide band oscilloscope. (Other type oscilloscopes may alter waveform shapes or amplitudes.)
4. The terms *Vert.* or *Horiz.* refer to scope frequency used.
5. VPP refers to peak to peak voltage.

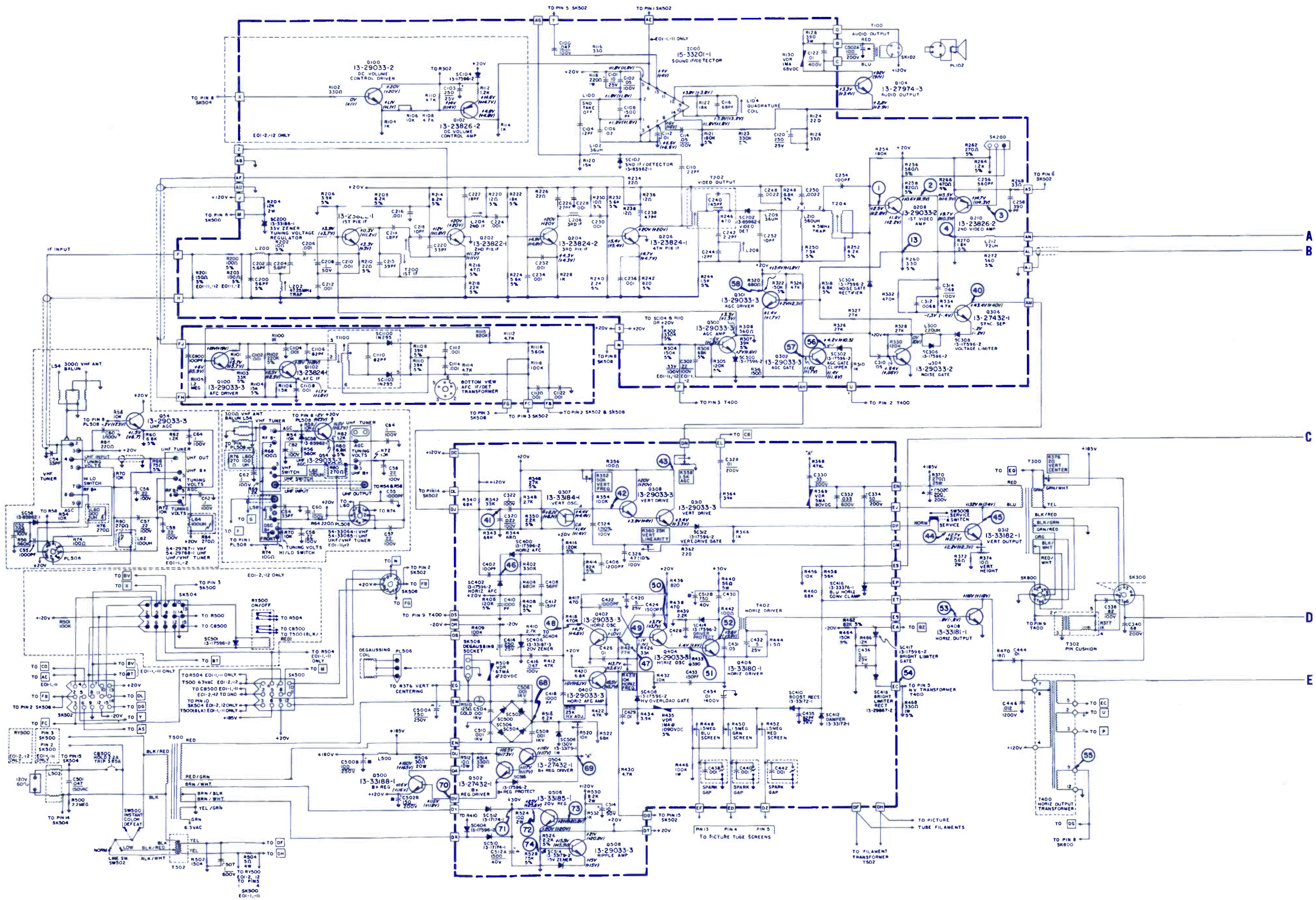
GENERAL SCHEMATIC NOTES

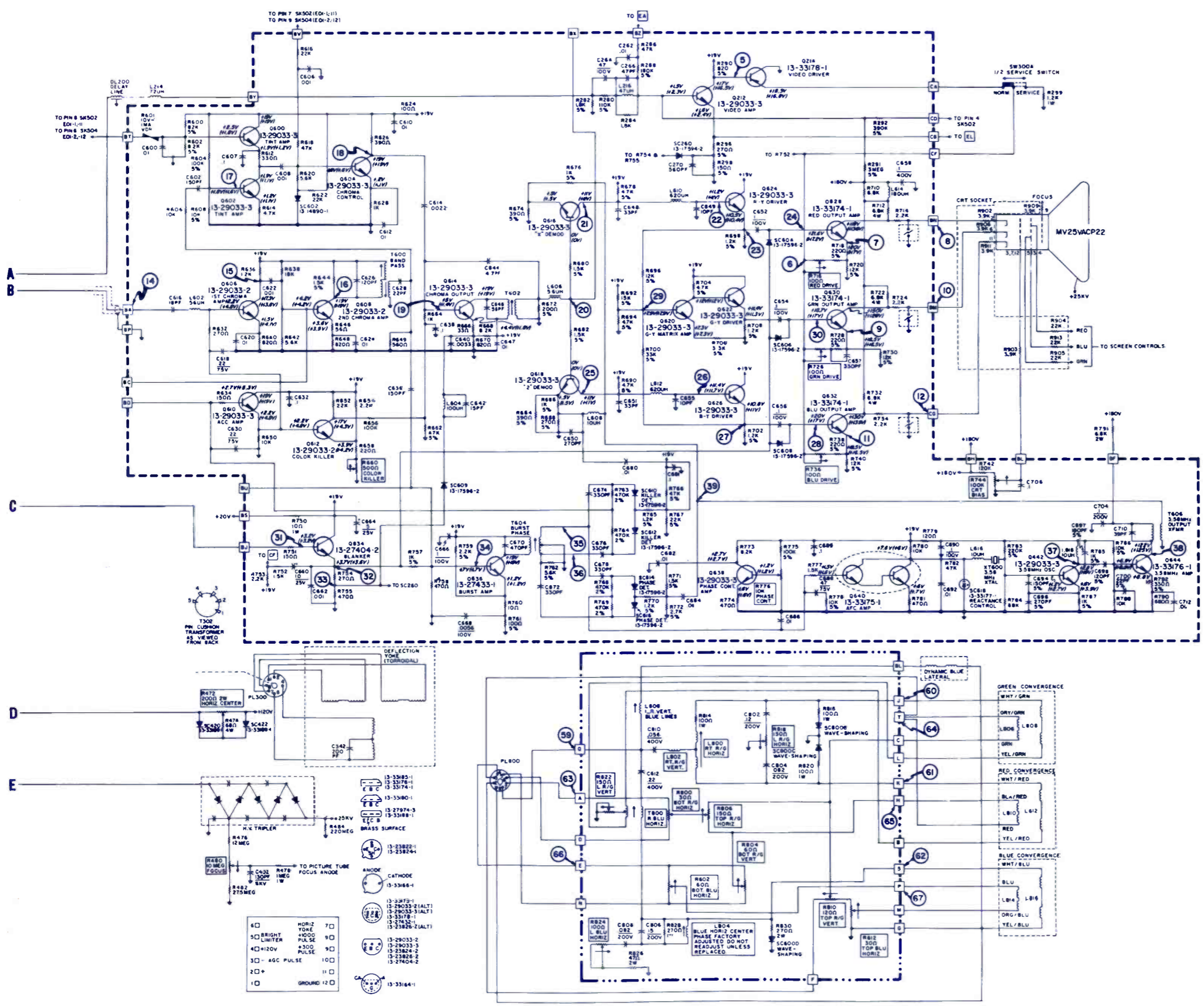
1. All capacitors are in microfarads unless otherwise specified.
2. Arrows on controls indicate direction of clockwise rotation.
3. All resistors are 1/2 Watt unless otherwise specified.
4. Squared letters on printed circuit indicate tie points corresponding with those shown on actual printed board top layout.
5. (- -) denotes printed board area.

WAVEFORM MEASUREMENT CONDITIONS

1. Waveforms taken using a color bar generator, connected to







SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C101	elect - 10/25v (-7, -8, -17, -18)	41-29270-6
C103	elect - 250/25v (-8, -14, -18)	41-29270-12
C435	82pf - ZSP - 2kv	43-11028-19
C500	elect - 2 section	41-33274-1
	A - 750/250v	
	B - 100/250v	
C501	.047/150Voc (-7, -8, -17, -18)	45-29668-7
C502	elect - 3 section	41-33316-1
	A - 100/200v	
	B - 150/200v	
	C - 200/200v	
C512	elect - 2 section	41-33043-1
	A - 1500/40v	
	B - 750/40v	
R130	VDR - 1ma - 68vdc (-7, -8, -17, -18)	38-15257-20
R369	VDR - 50ma - 80vdc	38-15257-19
R370	270Ω - 25w	36-92898-56
R372	8.2Ω - 2w	36-14764-68
R435	VDR - 1ma - 1090vdc - 5%	38-29959-2
R440	56Ω - 5w - WW	36-92898-57
R474	68Ω - 4w	35-92495-33
R504	5Ω - 4w	36-62454-18
R506	30Ω - 20w	36-92898-58
R508	VDR - 67ma - 20vdc	38-17072-2
R510	thermistor - 125Ω, cold	38-17071-4
R512	10Ω - 10w	36-62455-25
R601	VDR - 10v - 1ma	38-15257-21
L102	tweet - 36μh	50-16103-46
L104	quad	50-33195-1
L200	link	50-23828-1
L202	47.25 MHz trap	57-23877-6
L214	RF choke - 72μh	50-16103-45
L500	choke - filter	56-33084-1
L502	choke - power line	50-29833-1
L610	filter - 620μh	50-17593-1
L804	blue horiz center phase	50-17850-1
R18	25K - vol (-7, -13, -17)	37-33097-1
R20	10K - color (-7, -13, -17)	37-33035-4
R22	10K - tint (-7, -13, -17)	37-33035-6
R24	2K - vert hold	37-33098-2
R26	180K - bright	37-33035-5
R28	2K - horiz hold	33-33098-2
R30	1K - contrast	37-33035-3
R32	10K tone	37-33035-2
R34	1K sharpness	37-33035-3
R100	10K - audio dc limiter (-8, -14, -18)	37-23063-4
R154	1K - audio driver limiter (-13, -14)	37-14576-5
R352	50K - vert frequency	37-23063-3
R358	1.5K AGC	37-33036-2
R360	25K vert lin	37-33036-2
R374	10Ω vert height	37-16021-26
R376	10Ω vert cent	37-16021-26
R472	200Ω - 2w, horiz center	37-16021-25
R480	10M focus	37-17320-5
R518	25K HV adjust	37-33036-2
R660	500Ω - color killer	37-33040-1
R716	100Ω - red drive	37-33036-1
R736	100Ω - blue drive	37-33036-1
R744	100K - CRT bias	37-33040-1
R776	10K phase	37-23063-4
R802	60Ω - bot. blue horiz	37-16021-2
R818	150Ω - left R/G horiz	37-16021-7
SC200	33v Zener	13-33186-1
SC304	diode	13-17596-5
SC400	horiz AFC - 1N4092	13-15465-1
SC410	boost rectifier	13-33172-1
SC412	damp	13-33172-1
SC414	horiz driver protect	13-17596-4
SC416	blue horiz conv clamp	13-33376-1
SC417	bright limiter gate	13-17596-4
SC418	bright limiter rectifier	13-29867-2
SC420	horiz centering	13-33189-1
SC502	rectifier, power	13-17174-1
SC618	varactor - reactance cont	18-33177-1
C8500	circuit breaker	29-29563-7
DL200	delay line	32-16108-2
	- VHF (-7, -8)	54-29767-1
	- VHF (-13, -14, -17, -18)	54-33064-1
	- deflection	51-29978-1

SYLVANIA

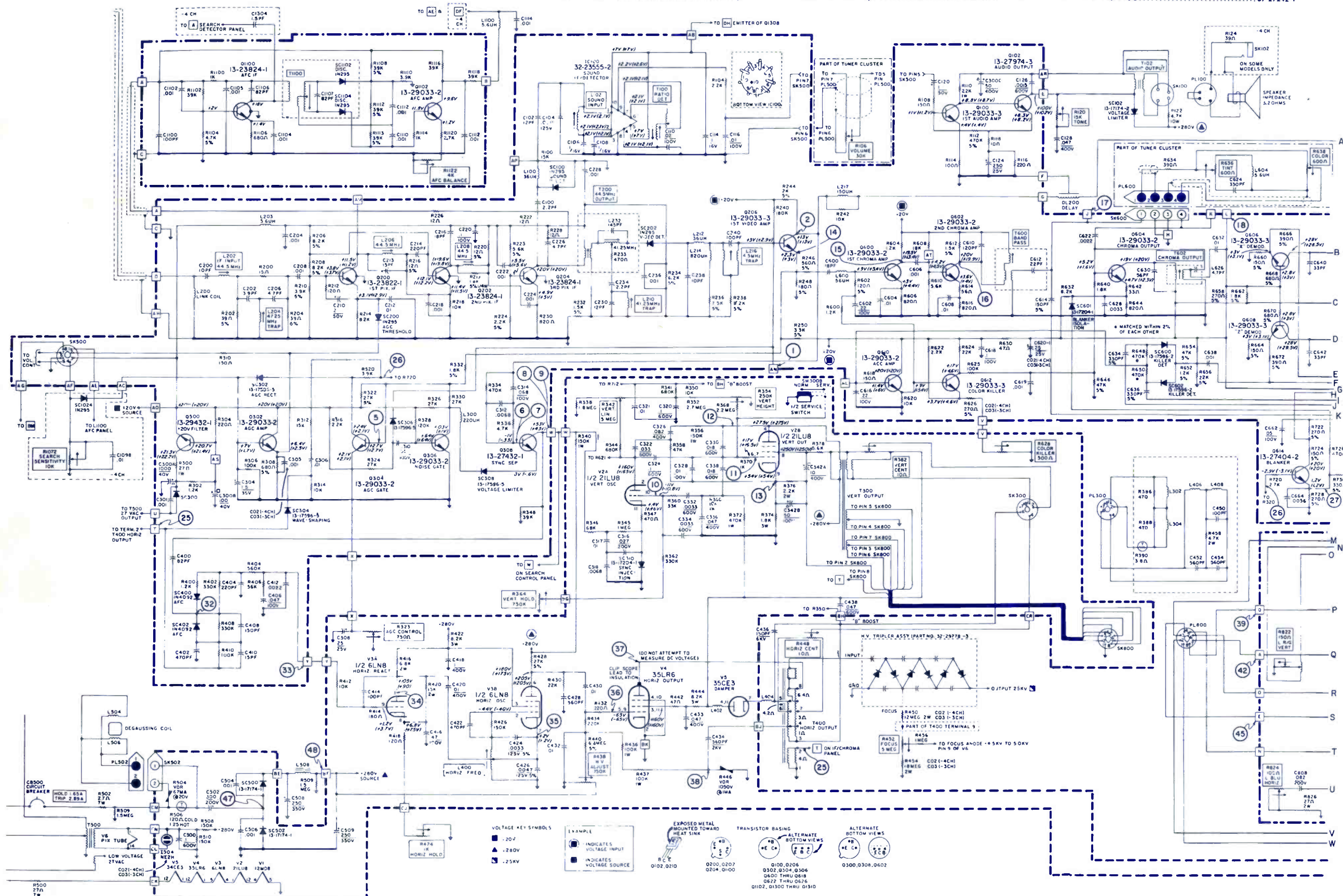
Color TV
Chassis D14-3-4

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C300	3 sec elect	41-29788-1
C300A	1000/40v 3 sec elect	41-29788-1
C300B	100/40v 4 sec elect	41-29788-1
C300C	50/400v 3 sec elect	41-29788-1
C342	2 sec elect	41-27344-1
C342A	2 sec elect 10/400v	41-27344-1
C342B	2 sec elect 50/100v	41-27344-1
L102	sound input	57-23832-2
L400	horiz freq	50-23508-1
L402	5.6µh RF choke	50-15904-4

L500	Choke - power line	50-29833-1
L606	620µh	50-17593-1
T100	ratio det	57-23547-1
T102	audio output	56-16018-10
T200	44.5MHz output	57-29831-1
T300	vert output	56-29826-1
T400	horiz output	50-29644-1
T500	power	55-29827-1
T600	band pass	50-27405-1
T602	chroma output	50-29658-1
T604	burst	50-27406-1
T606	3.58MHz output	50-29784-1

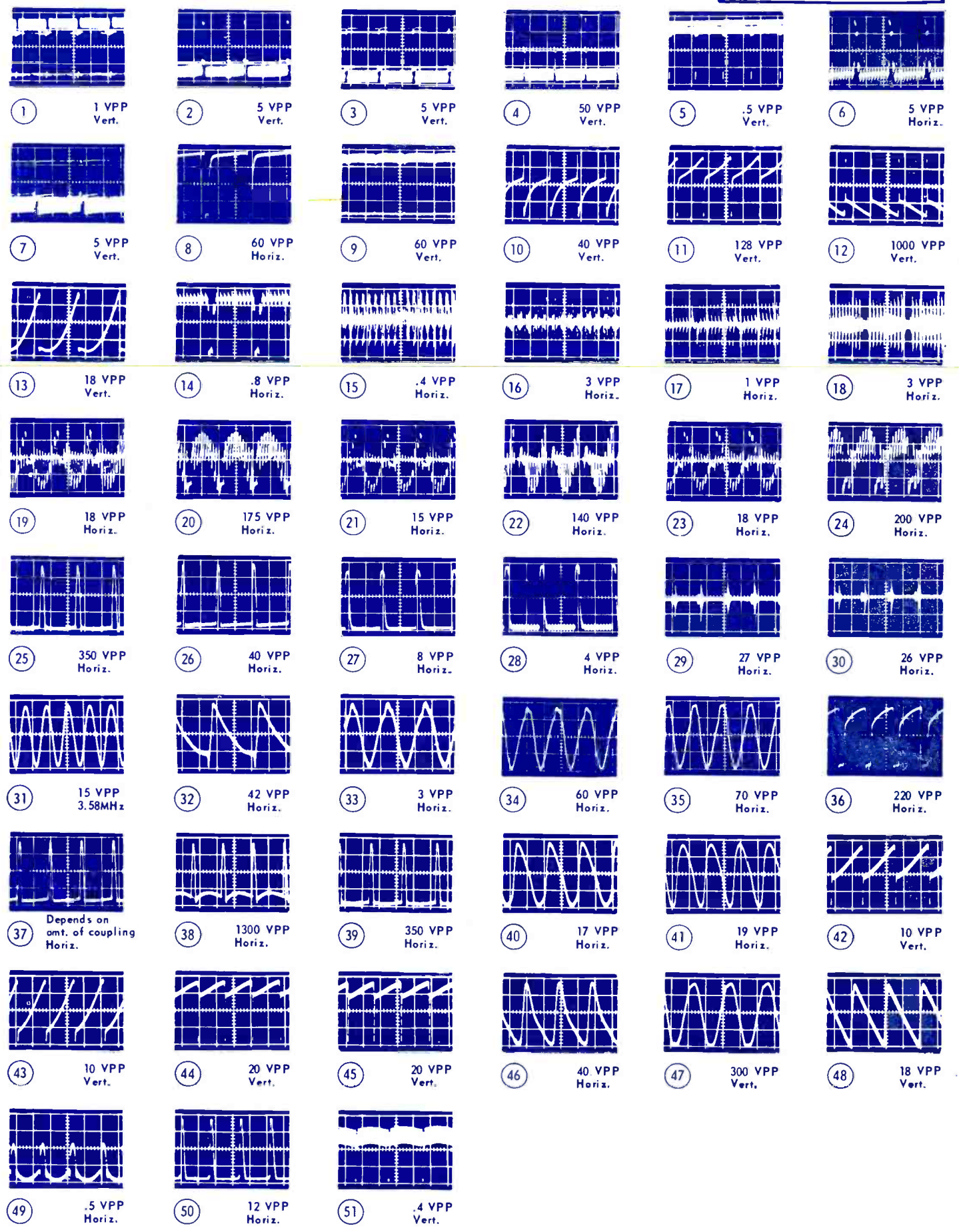
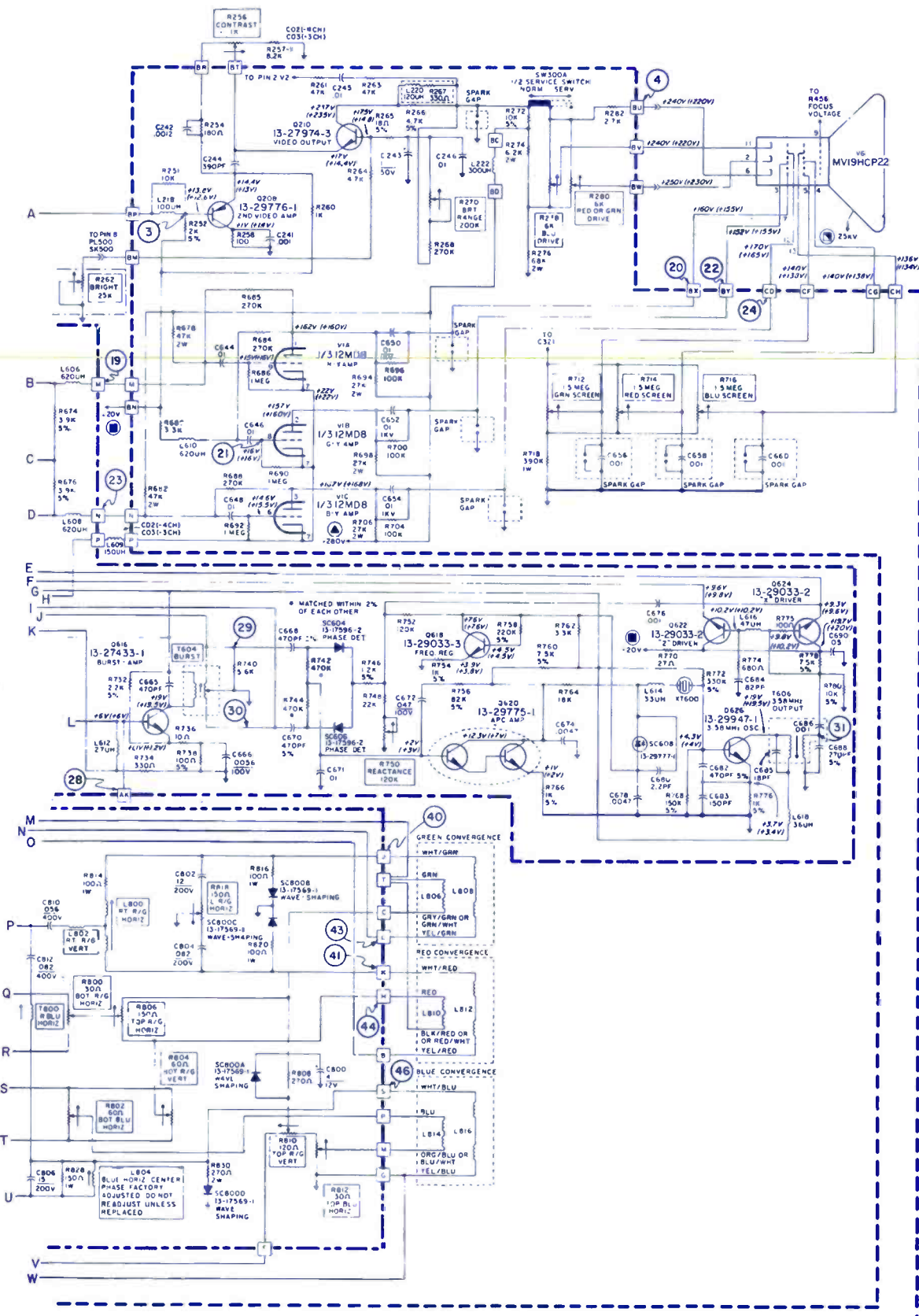
R106	30K-volume (-3ch.)	37-29779-1
R106	30K-volume (-4ch.)	37-29785-101
R120	15K - tone	37-2742-23
R256	1K - contrast	37-2742-17
R262	25K - bright	37-29783-2
R270	200K bright range	37-29755-1
R323	750 AGC	37-29755-2
R342	5M vert lin	37-29832-1
R354	250K - vert height	Part of R342
R364	750K - vert hold	37-2742-2
R382	10-vert centering	37-29831-1
R424	1K - horiz hold	37-2742-1

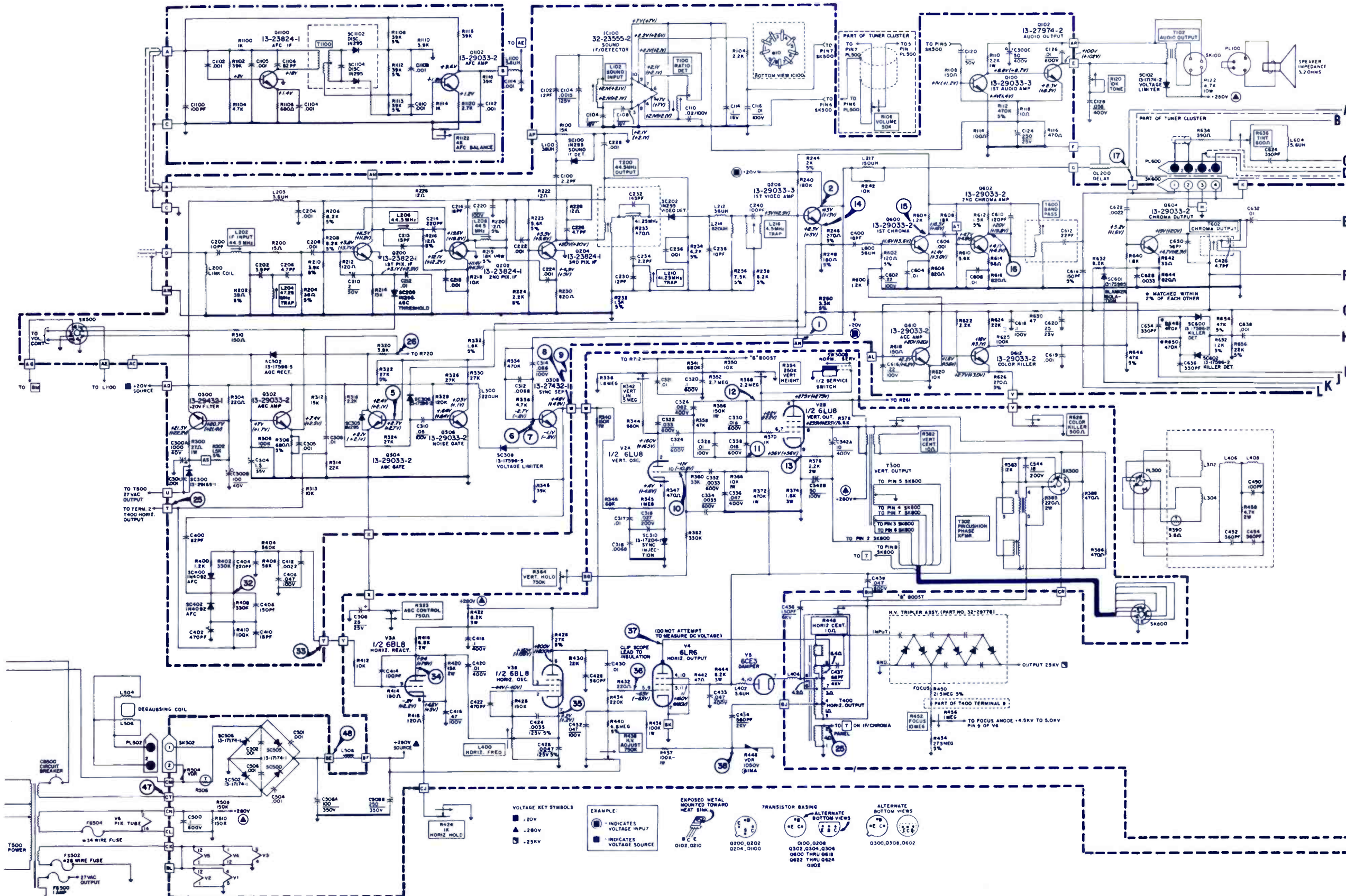


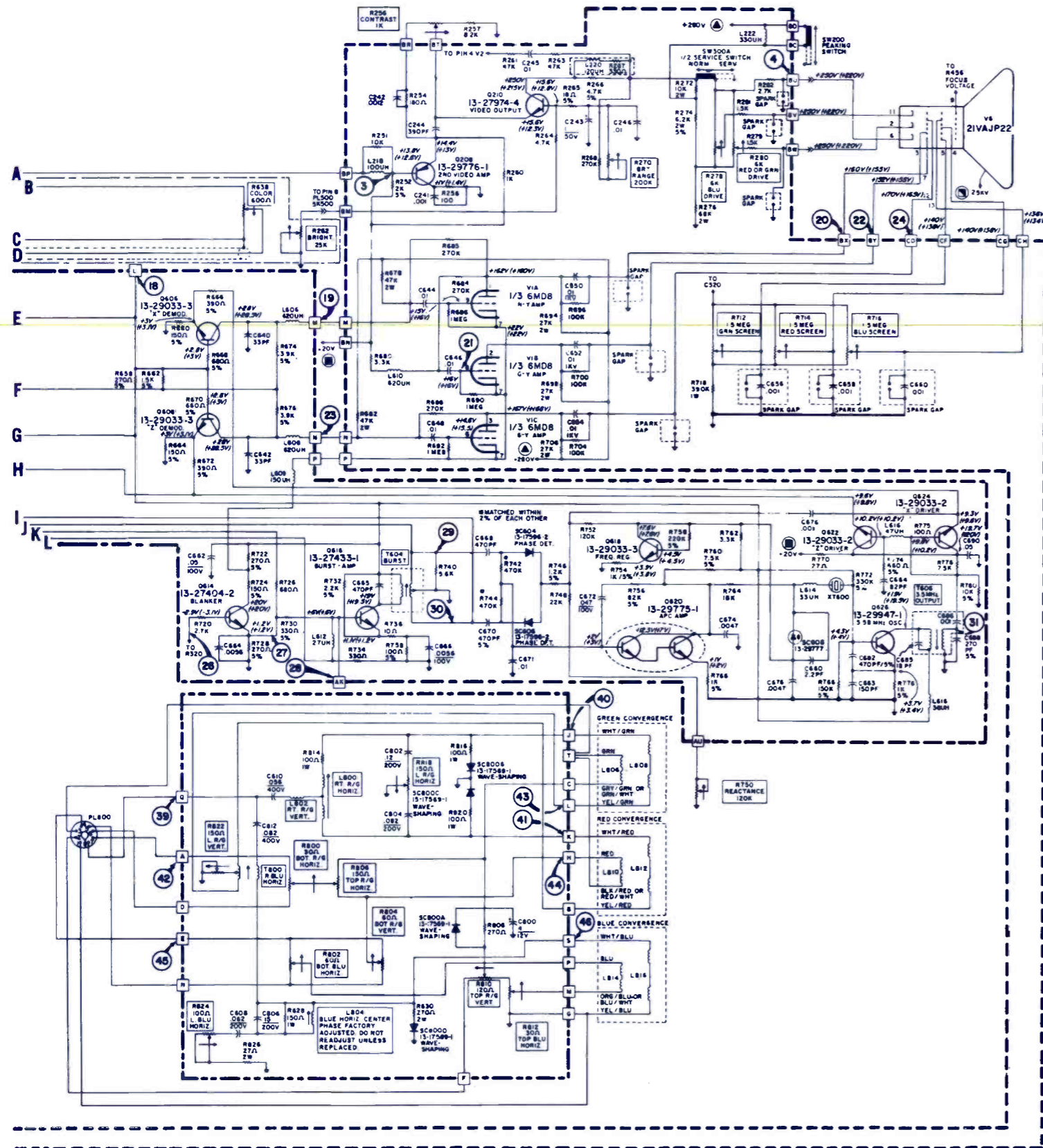
- R438—750K-HV adjust.....37-29541-1
- R448—10-horiz centering.....37-17320-4
- R452—5M - focus.....37-29755-2
- R628—500 - color killer.....37-29440-105
- R636—600 - tint (-4 Ch.).....37-29755-3
- R712—1.5M - green screen.....37-14576-11
- R750—120K - reactance.....37-27242-15
- R1072—10K - sensitivity.....37-14576-7
- R1122—4K - AFC balance.....29-29563-6
- CB500—circuit breaker.....32-23216-1
- DL200—delay line.....

WAVEFORMS

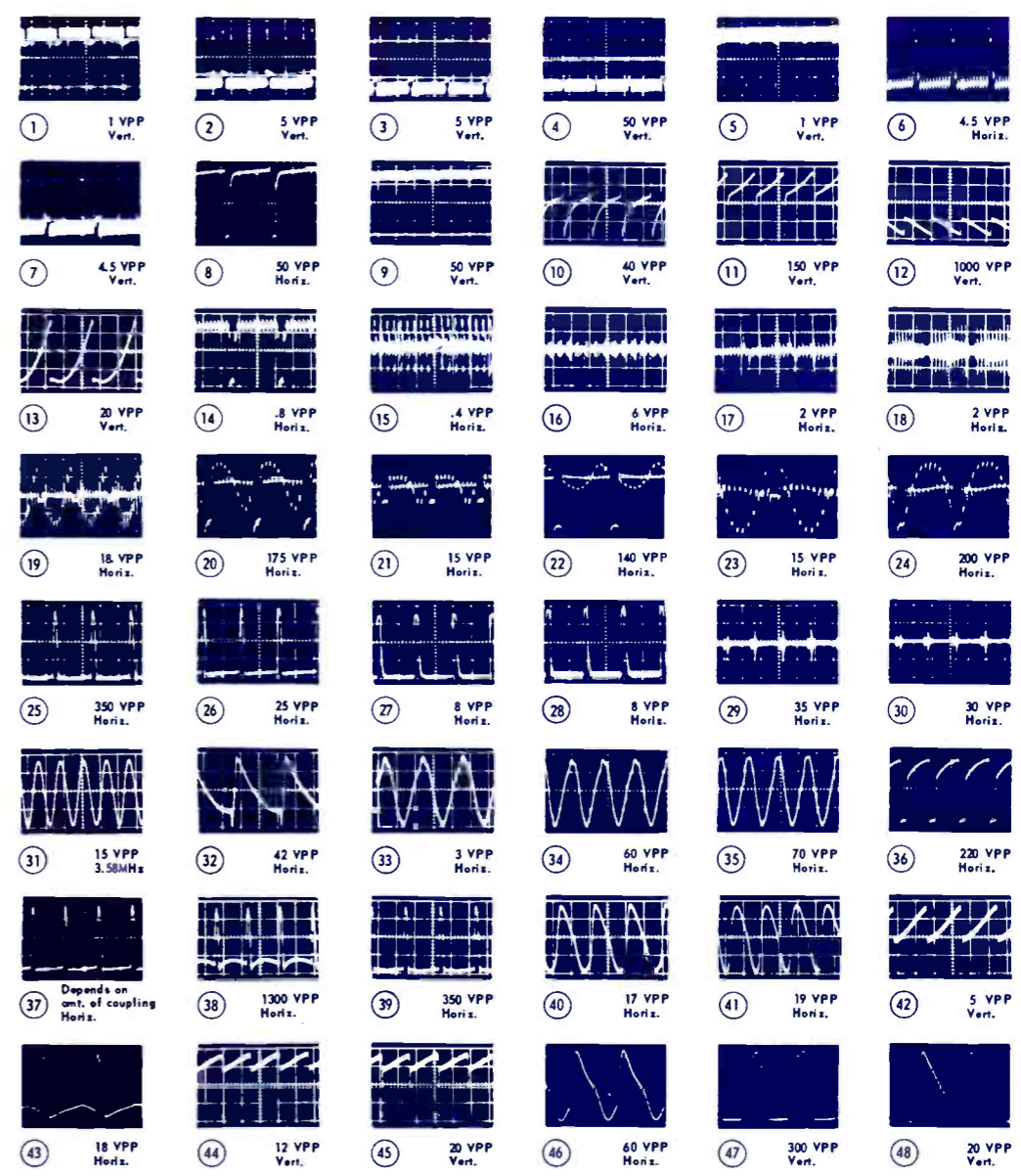
SYLVANIA
Color TV Chassis D14-3-4







SYMBOL	DESCRIPTION	SYLVANIA PART NO.		
C300-3	section electrolytic	41-29788-1	R106-30K-volume (-1 CH)	37-15536-15
A	-1000/40v		R106-30K-volume (-2 CH)	37-29779-3
B	-100/40v		R120-10K-tone	37-27242-23
C	-50/400v		R256-1K-contrast	37-27242-17
			R262-25K-bright	37-29783-2
C509-2	section electrolytic	41-33341-1	R270-200K-brightness range	37-29755-1
A	-100/350v		R323-750-AGC	37-29755-2
B	-250/350v		R342-5M-vert linearity	37-29832-1
R446	VDR-1ma@1050v	38-29959-1	R364-750K-vert hold	37-27242-2
R504	VDR-67ma@20v	38-17071-2	R382-10-vert centering	37-29831-1
R506	thermistor-120Ω cold, 1.25Ω hot	38-17071-4	R424-1K-horiz hold	37-27242-1
L102	sound input	57-23832-2	R448-10-horiz centering	37-29541-1
L400	horiz frequency	50-23508-1	R452-10M-focus	part of R323
L402	5.6μH-RF choke	50-15904-4	R628-500-color killer	37-17320-5
T100	ratio detector	57-23547-1	R636-600-tint	37-29673-1
T102	audio output	56-16018-11	R638-600-color	37-29673-1
T300	vert output	56-29826-1	R712-1.5M-green screen	37-29755-3
T400	horiz output	50-29664-1	R714-1.5M-red screen	part of R712
T500	power (-1 CH)	55-33165-1	R716-1.5M-blue screen	part of R712
T500	power (-2 CH)	55-33165-2	R750-120K-reactance	37-14576-11
T600	bandpass	50-27405-1	T500-120K-reactance	29-23918-1
T602	chroma output	50-29658-1	T600-bandpass	51-29986-1
T604	burst	50-27406-1	T602-chroma output	54-29184-4
			UHF (-2 CH) yoke deflection	51-29986-1
			UHF (-1 CH)	54-29184-2

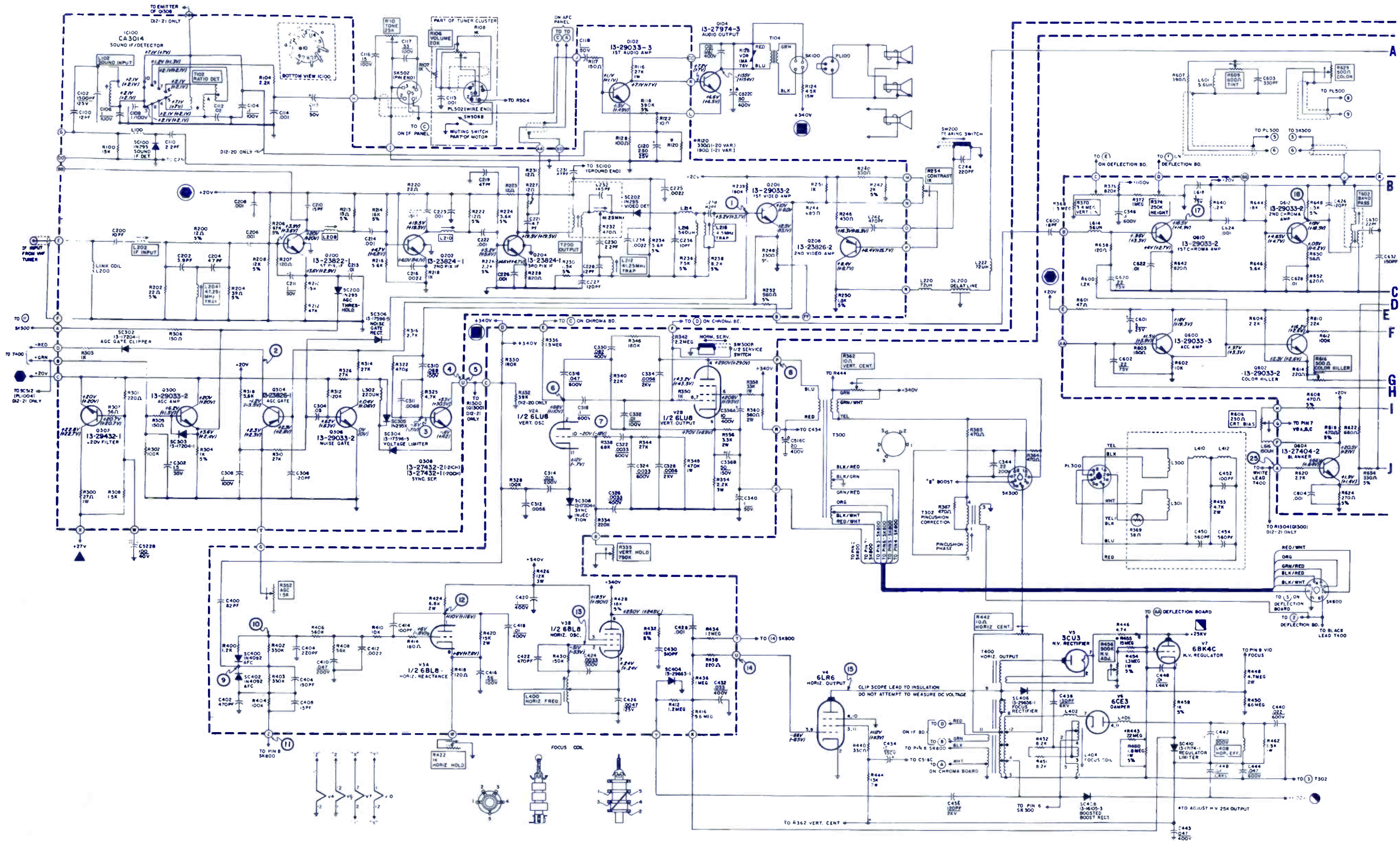


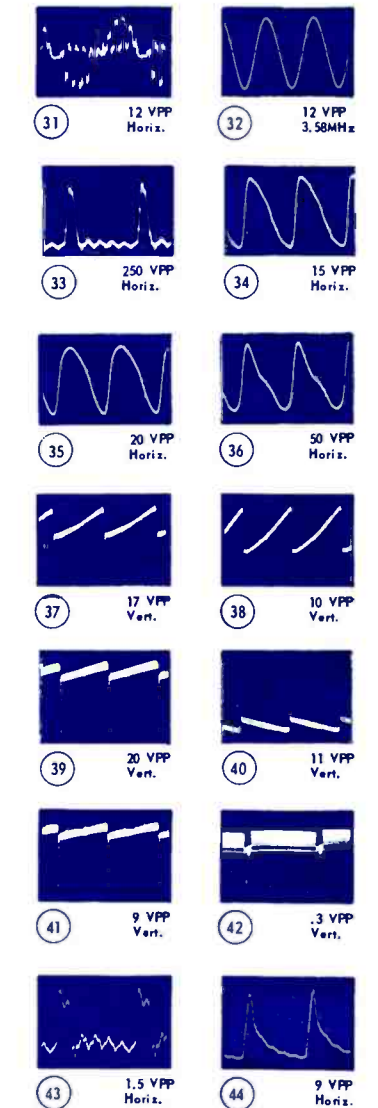
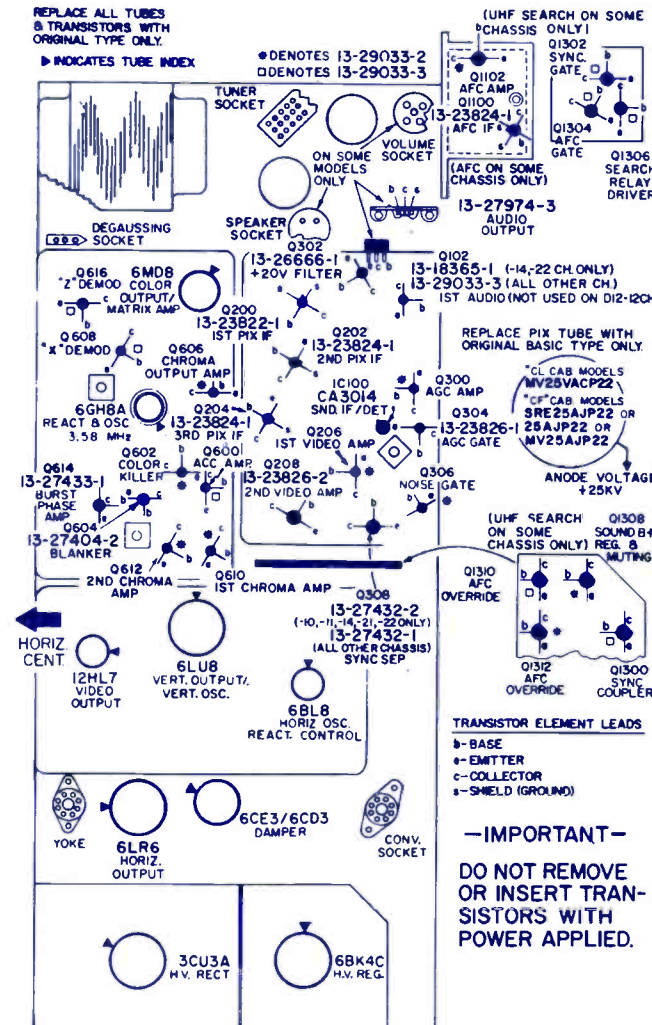
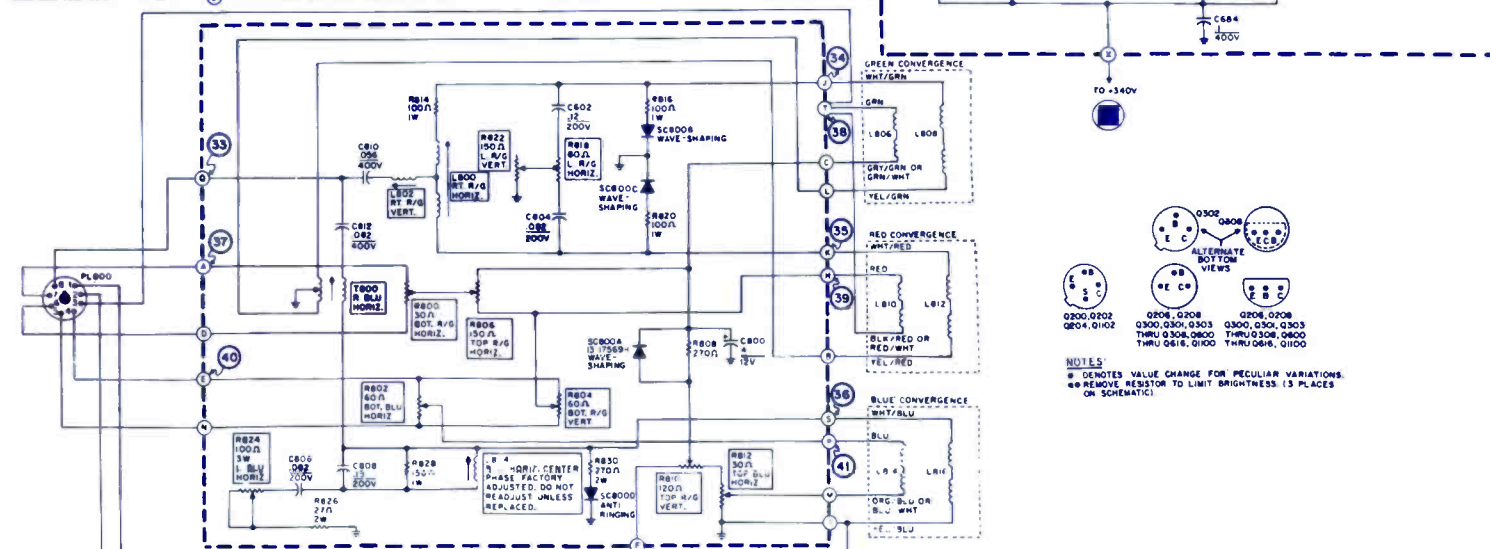
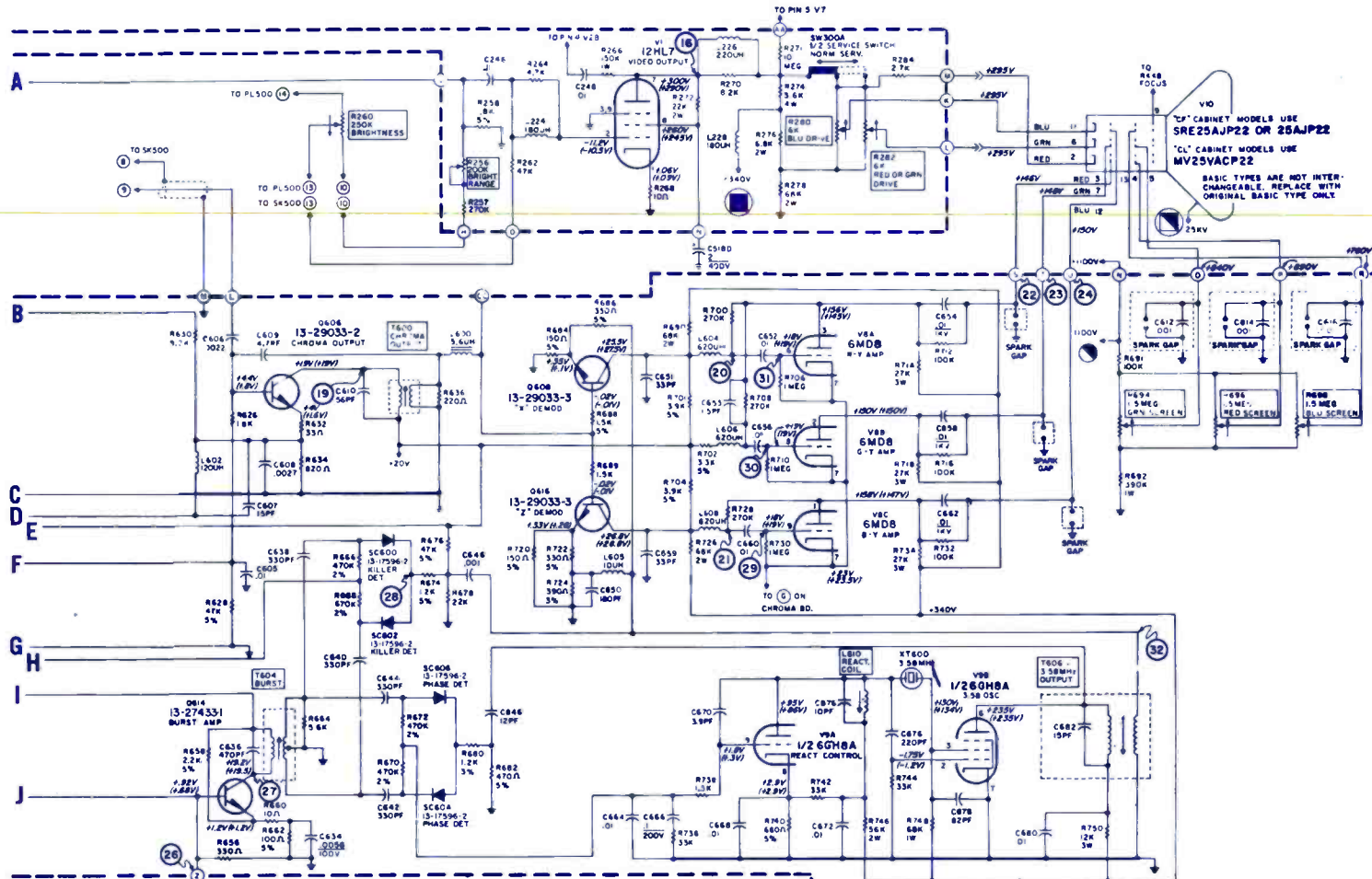
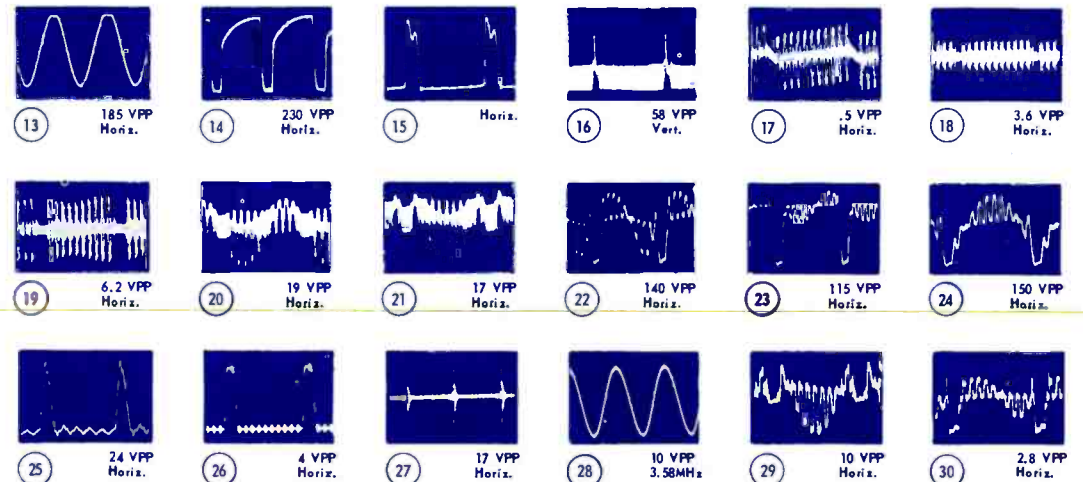
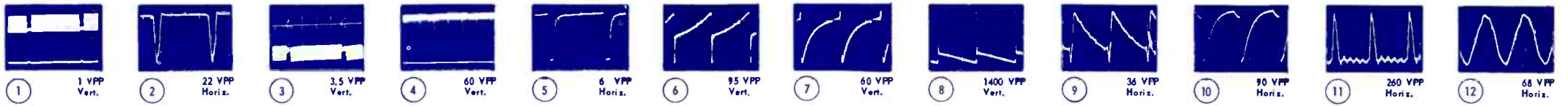
SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C336A	10/400v elect	41-27344-1
C336B	50/150v elect	41-27344-1
C518A	100/400v elect	41-27418-1
C518B	100/400v elect	41-27418-1
C518C	20/400v elect	41-27418-1
C518D	20/400v elect	41-27418-1

C522A	1000/40v elect	41-27421-1
C522B	100/40v elect	41-27421-1
C522C	50/400v elect	41-27421-1
R124	4.5K 15w	36-92898-51
R126	VDR, 1ma, 76v	38-15257-18
R274	5.6K 4w	35-92495-71
R444	13K 7w	35-92495-54
R514	VDR, 67ma, 20vdc	38-17072-1
R516	thermistor 125n, cold	38-17071-1
L102	sound input	57-23832-2

L202	44.5MHz IF input	57-23827-1
L204	47.25MHz trap	57-23827-2
L218	4.5MHz trap	50-16238-5
L400	horiz frequency	50-23508-1
L404	focus coil	50-27845-1
L408	horiz efficiency	50-23507-1
L600	5.6 μh	50-15904-4
L610	reactance coil	50-16185-3
T102	ratio detector	57-23547-1
T104	audio output	56-16018-9
T200	44.5MHz output	57-23831-1
T300	vert output	56-17559-6
T400	horiz output	50-27415-1
T500	power xformer	55-27416-3
T600	chroma output	50-29658-1
T602	band pass	50-27405-1
T604	burst	50-27406-1
SC100	IF sound detector 1N295	13-85962-1
SC400	SC402-horiz AFC 1N4092	13-15465-1
SC406	focus rectifier	13-29656-1
R110	25K tone	37-27242-8

R254	1K contrast	37-27242-12
R260	250K bright (-20)	37-29782-7
R260	250K bright (-21)	37-23479-47
R280	6K blue drive	37-11632-18
R335	750K vert hold	37-27242-6
R352	1.5K AGC	37-11632-18
R362	10n vert center	37-16021-17
R370	3.4M vert linearity	37-29755-6
R422	1K horiz hold	37-27242-12
R442	10n horiz center	37-17539-3
R456	500K HV	37-16020-27
R606	250 CRT bias	37-16020-30
R609	600 tint (-21)	37-29440-102
R616	500n color killer	37-29755-6
R629	500n color (-20)	37-29783-5
R629	500n color (-21)	37-29440-101
CB500	circuit breaker	29-23918-1
	tuner UHF	54-29184-4
	tuner VHF (-20)	54-23858-13
	tuner VHF (-21)	54-23858-12
	yoke deflection	51-29986-2





NOTES:
 * DENOTES VALUE CHANGE FOR REGULAR VARIATIONS
 ** REMOVE RESISTOR TO LIMIT BRIGHTNESS IN PLACES ON SCHEMATIC

—IMPORTANT—
 DO NOT REMOVE OR INSERT TRANSISTORS WITH POWER APPLIED.

SYLVANIA

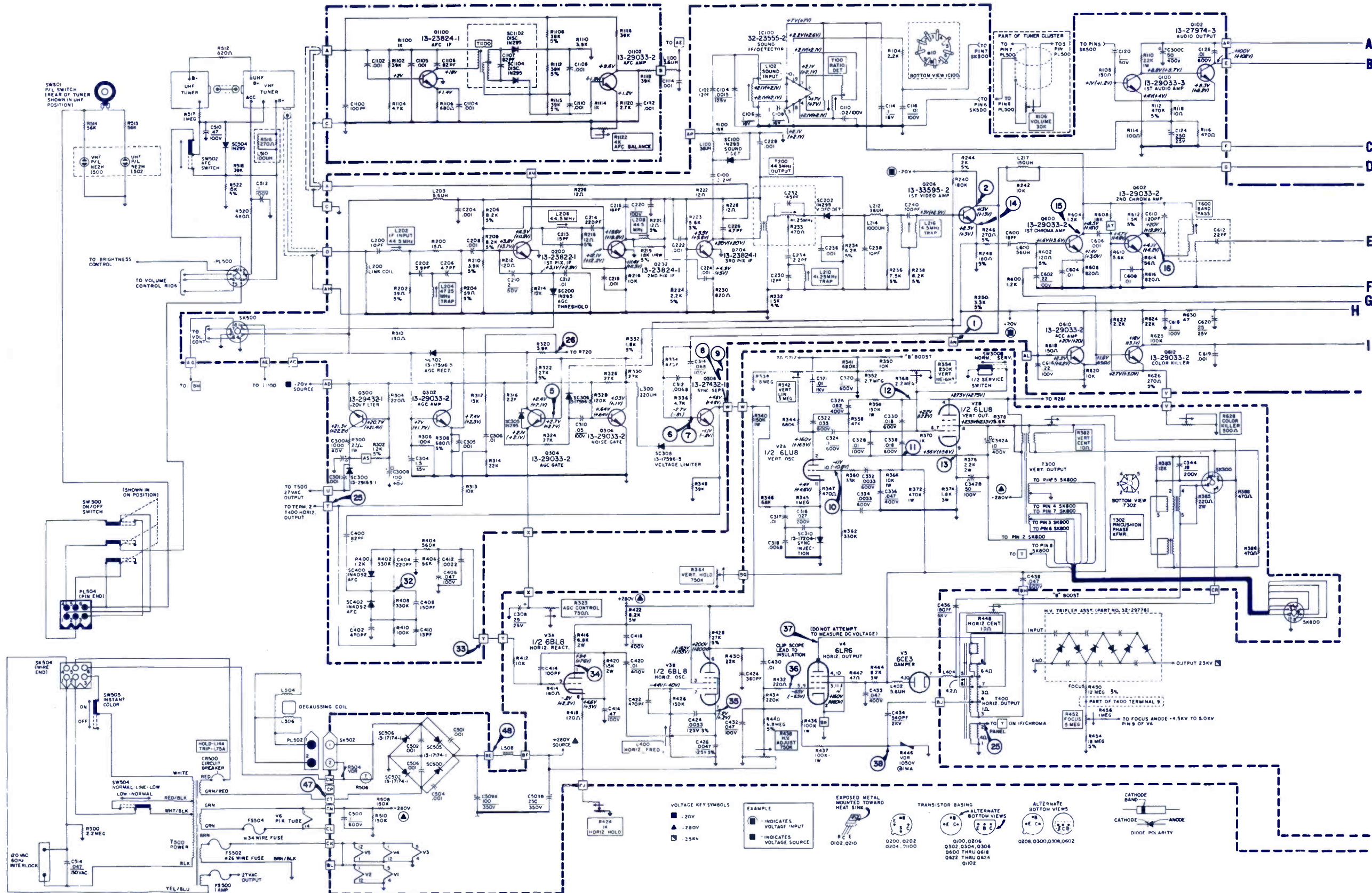
Color TV Chassis
D16-2

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C300A	1000/40v electrolytic	41-29269-16
C300B	100/40v electrolytic	41-29269-16
C300C	50/400v electrolytic	41-29269-16
C342A	10/400v electrolytic	41-27344-1
C342B	50/100v electrolytic	41-27344-1
C509A	100/350v electrolytic	41-33341-1
C509B	250/350v electrolytic	41-33341-1
R446	VDR 1050v @ 1m	38-29959-1
R504	VDR 67m @ 20v	38-17071-2
R506	thermistor, 120n cold 1.25n hot	38-17071-4

L400	horiz freq	50-23508-1
L508	filter B+ choke	56-17568-6
T100	ratio detector	57-23547-1
T102	audio output	56-16018-11
T300	vert output	56-29826-1
T400	horiz output	50-29864-1
T500	power	55-33165-2
T600	bandpass	50-27405-1
T602	chroma output	50-29658-1
T604	burst	50-27406-1
T606	3.58MHz output	50-29784-1

R106	30K - volume	37-29779-2
R120	10K - tone	37-27242-24
R256	1K - contrast	37-27242-25
R262	25K - bright	37-29783-8
R270	200K - bright range	37-29755-1
R323	750m - AGC	37-29755-2
R342	5M - vert linearity	37-29832-1
R354	250K - vert height	37-29832-1
R364	750K - vert height	37-27242-6
R382	10n - vert centering	37-29831-1
R424	1K - horiz hold	37-27242-12



ZENITH

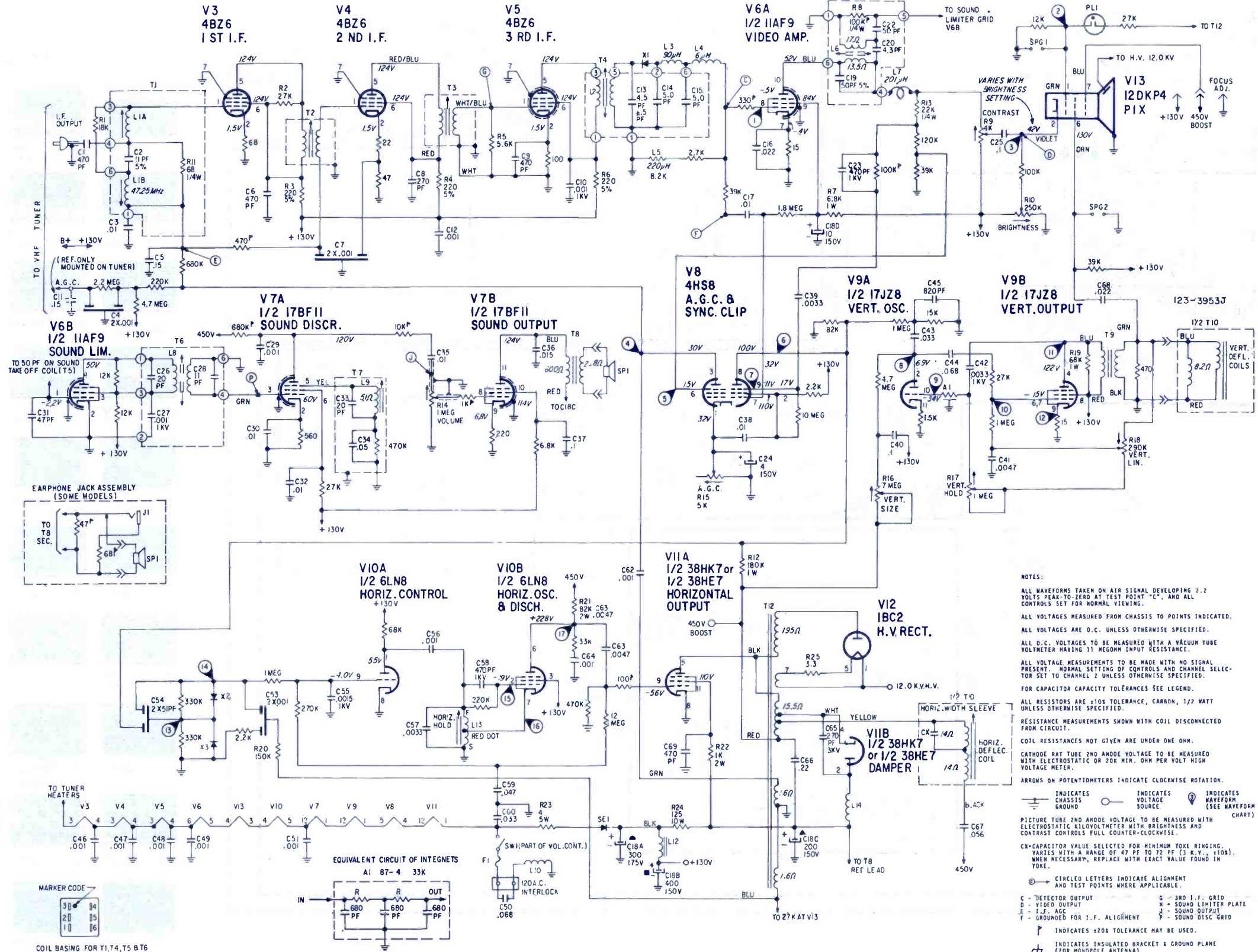
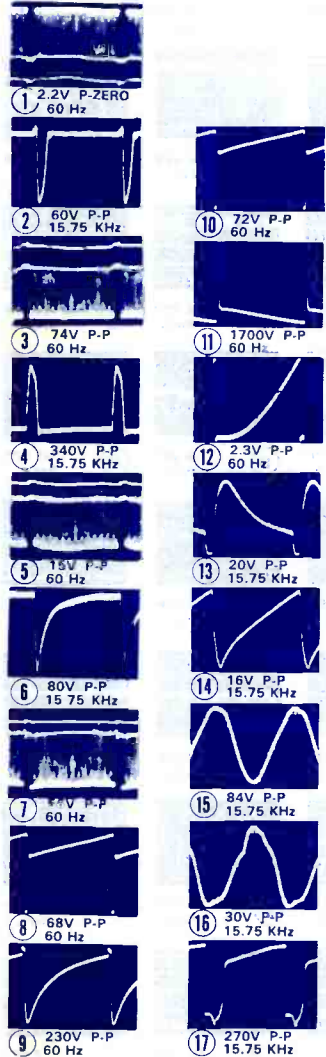
TV Chassis 13A12

ELECTRONIC TECHNICIAN / DEALER TEKFAK

SYMBOL	DESCRIPTION	ZENITH PART NO.
C18A	300µf elect. cap. 175v	
C18B	400µf elect. cap. 150v	
C18C	200µf elect. cap. 150v	22-5857
C18D	10µf elect. cap. 150v	
C53	2 x .001µf disc. cap. 10%, 500v	22-21
C54	2 x 51pf disc. cap. 15%, 500v	22-25
R3	220Ω resistor, 5%, 1/2w	63-7236
R9	4K contrast control	63-8222

R10	250K bright control	63-8221
R14	1M vol control	63-8219
R16	7M vert size control	63-6433
R17	1M vert hold control	63-8170
R18	290K vert lin control	63-0327
R24	125Ω resistor 10%, 10w	63-6348
L4	choke coil	20-2004
L6	sound take-off coil xformer	95-2712
L8	intercarrier coil xformer	95-2713
L10	line filter coil	20-1424
L12	filter choke	95-2703

L13	horiz osc coil	5-56875
T1	1st IF and trap coil xformer	95-2708
T5	sound take-off coil xformer	95-2712
T7	quad coil xformer	5-83648
T8	sound output xformer	95-2706
T9	vert output xformer	95-2859
T10	yoke	5-83177 or 95-2779
T12	horiz sweep xformer & bracket assembly	5-82908 or 5-83539
A1	integrator	87-4
F1	1.8a fuse	136-65
SW1	ON-OFF switch	63-8219



NOTES:

ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 2.2 VOLTS PEAK-TO-ZERO AT TEST POINT "C", AND ALL CONTROLS SET FOR NORMAL VIEWING.

ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.

ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT. NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.

FOR CAPACITOR CAPACITY TOLERANCES SEE LEGEND.

ALL RESISTORS ARE ±10% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.

RESISTANCE MEASUREMENTS SHOWN WITH COIL DISCONNECTED FROM CIRCUIT.

COIL RESISTANCES NOT GIVEN ARE UNDER ONE OHM.

CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K MIN. OHM PER VOLT HIGH VOLTAGE METER.

ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.

INDICATES CHASSIS GROUND

INDICATES VOLTAGE SOURCE

INDICATES WAVEFORM (SEE WAVEFORM CHART)

PICTURE TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC KILOVOLT METER WITH BRIGHTNESS AND CONTRAST CONTROLS FULL COUNTER-CLOCKWISE.

CR-CAPACITOR VALUE SELECTED FOR MINIMUM YOKE RINGING. VARIES WITH A RANGE OF 47 PF TO 72 PF (3 R.V., ±10%). WHEN NECESSARY, REPLACE WITH EXACT VALUE FOUND IN YOKE.

CIRCLED LETTERS INDICATE ALIGNMENT AND TEST POINTS WHERE APPLICABLE.

C - DETECTOR OUTPUT

D - VIDEO OUTPUT

E - I.F. AGC

F - GROUNDING FOR I.F. ALIGNMENT

G - 3RD I.F. GRID

H - VIDEO LIMITER PLATE

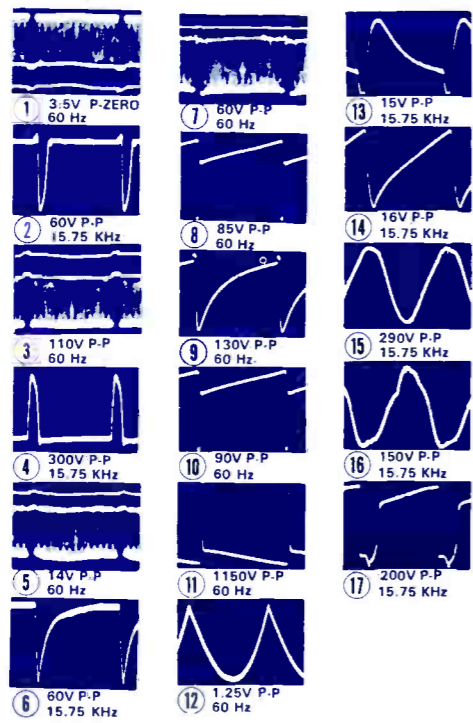
X - SOUND LIMITER SOURCE

Y - SOUND OUTPUT

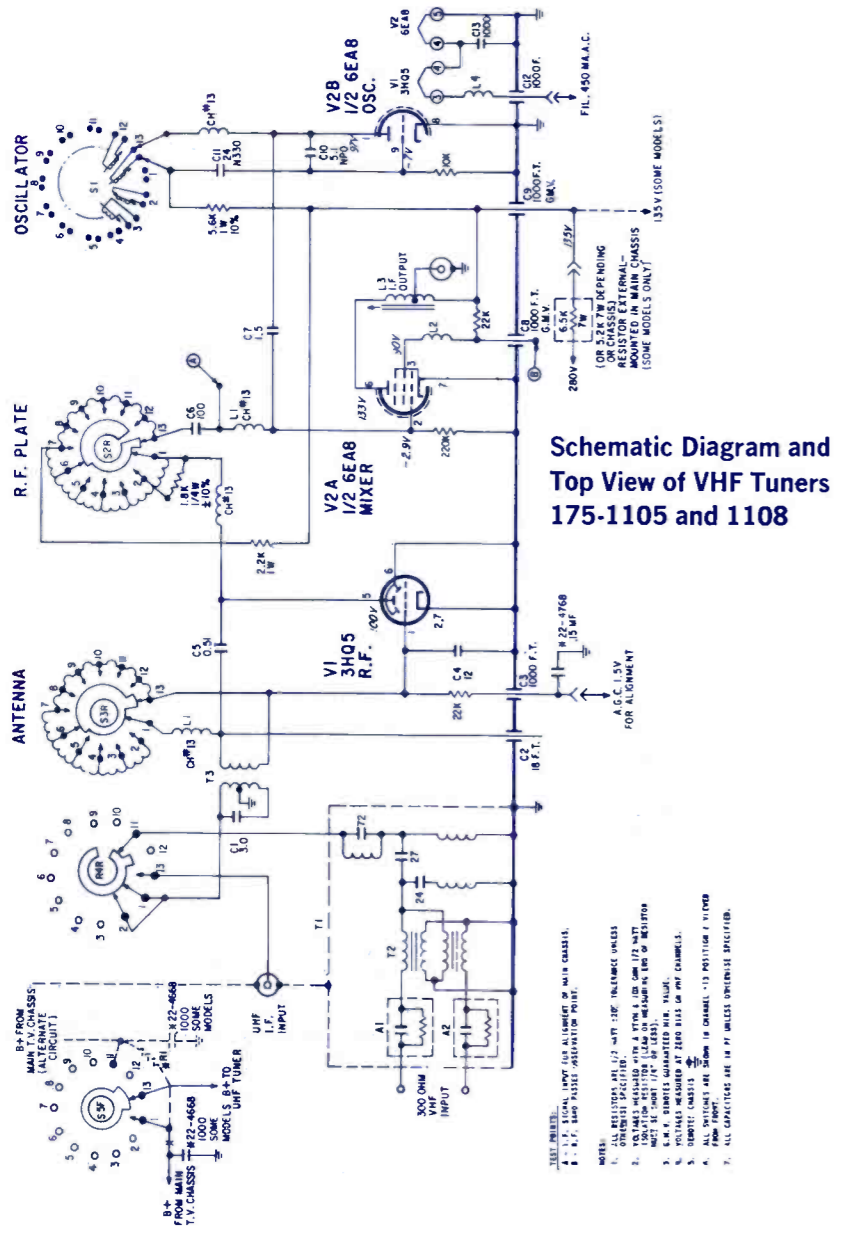
Z - SOUND DISC GRID

INDICATES ±20% TOLERANCE MAY BE USED.

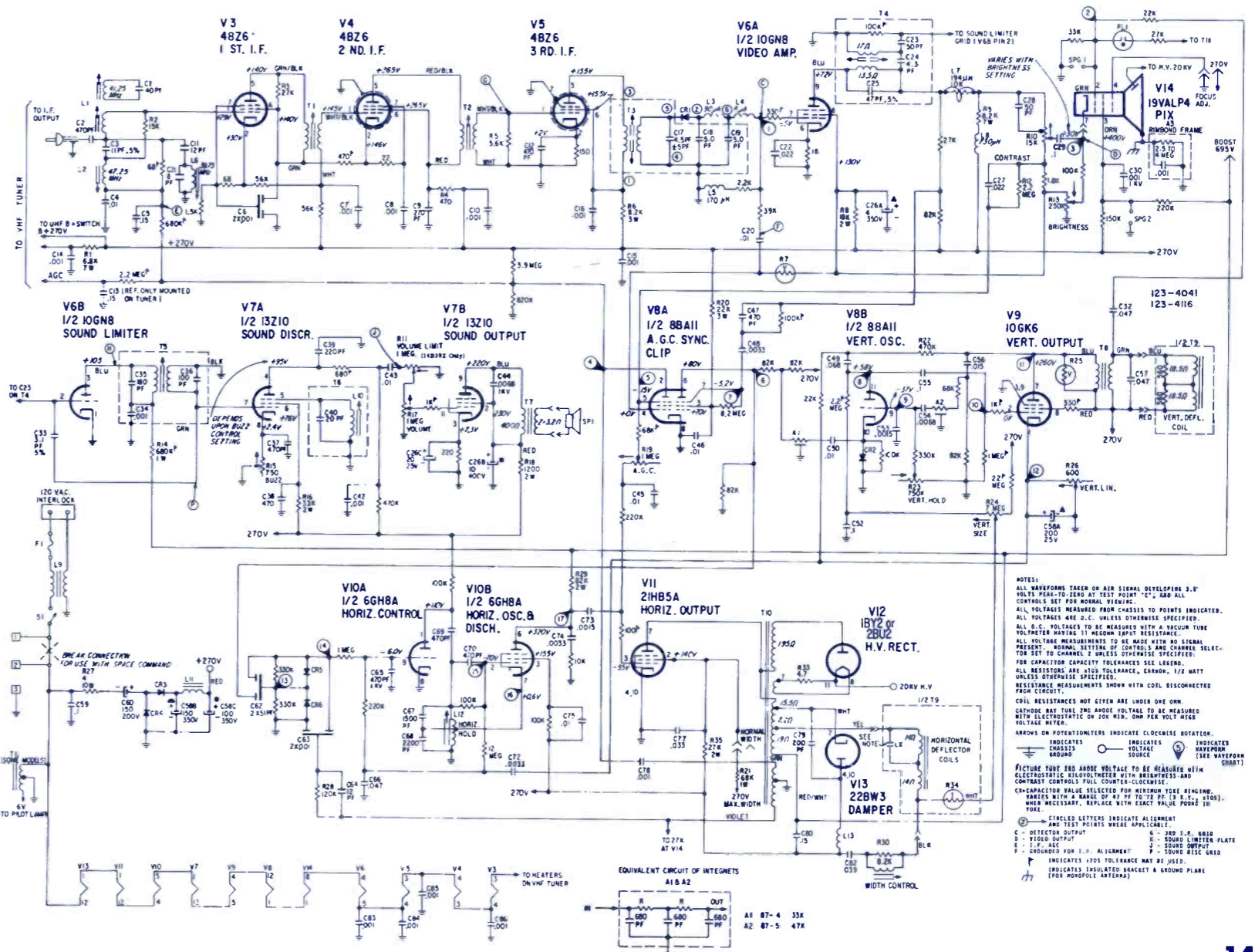
INDICATES INSULATED BRACKET & GROUND PLANE (FOR MONOPOLE ANTENNA)



SYMBOL	DESCRIPTION	ZENITH PART NO.
C26A	4 μf electrolytic, 350v	22-2744
C26B	10 μf electrolytic, 400v	22-2744
C26C	20 μf electrolytic, 25v	22-2744
C58A	200 μf electrolytic, 25v	22-5268
C58B	150 μf electrolytic, 350v	22-5268
C58C	100 μf electrolytic, 350v	22-5268
R7	voltage dependent resistor	63-5314
R10	15K contrast control	63-6491
R11	1M vol limit (14B39Z)	63-7569
R13	250K bright control	63-6489
R15	750Ω buzz control	63-6489
R17	1M vol control & switch	63-6349
R19	1M, AGC	63-4833
R23	750K vert hold control	63-7185
R24	7M vert size control	63-6433
R25	varistor	63-7447
R26	600Ω vert lin control	63-6488
T4	sound take-off coil assembly	S-74446
T5	intercarrier coil assembly	S-74445
T6	quad coil assembly wiring	S-75409
T7	audio output xformer	95-2675
T8	vert output xformer	95-2333
T9	yoke	95-2899
T10	horiz sweep xformer	S-87025
T11	filament autotransformer	95-2560
L9	line choke	95-2884
L10	quad coil winding assembly	S-74682
L11	filter choke	95-1805
L12	horiz oscillator	S-56877
L14	width coil	S-87006
A1	integrator	87-4
A2	integrator	87-5
F1	fuse, 1.8a (pigtail)	136-65



**Schematic Diagram and
Top View of VHF Tuners
175-1105 and 1108**



NOTES:
 ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 3" VFLY FROM TO ZERO AT TEST POINT "C", AND ALL CONTROLS SET FOR NORMAL VIEWING.
 ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL A.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 1% MEDIUM INPUT RESISTANCE.
 ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT - NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.
 FOR CAPACITOR CAPACITY TOLERANCES SEE LISTING.
 ALL RESISTORS ARE 5% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
 RESISTANCE MEASUREMENTS SHOWN WITH COIL DISCONNECTED FROM CIRCUIT.
 COIL RESISTANCES NOT GIVEN ARE UNDER ONE OHM.
 CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC 500K ΩR. OHM PER VOLT HIGH VOLTAGE METER.
 ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
 INDICATES CHASSIS GROUND.
 INDICATES VOLTAGE SOURCE.
 INDICATES WATERSHED (SEE WAVEFORM CHART).
 PICTURE TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC 500K ΩR. OHM PER VOLT HIGH VOLTAGE METER.
 CONTRAST CONTROLS FULL COUNTER-CLOCKWISE.
 CH-CAPACITOR VALUE SELECTED FOR WIDEVIEW TUBE MEASUREMENTS WITH A RANGE OF 41 PF TO 72 PF (3.5-11.0K). WHEN NECESSARY, REPLACE WITH EXACT VALUE FOUND IN TUBE.
 CIRCLED LETTERS INDICATE ALIGNMENT AND TEST POINTS WHERE APPLICABLE.
 C - DETECTOR OUTPUT
 D - VIDEO OUTPUT
 E - I.F. AGC
 F - SOUND OUTPUT
 G - 100Ω FOR I.F. ALIGNMENT
 H - SOUND DISC GRID
 I - INDICATES 1% TOLERANCE PARTS TO BE USED.
 J - INDICATES INSULATED BRACKET & GROUND PLANE (FOR PARALLEL ANTENNA)

ZENITH

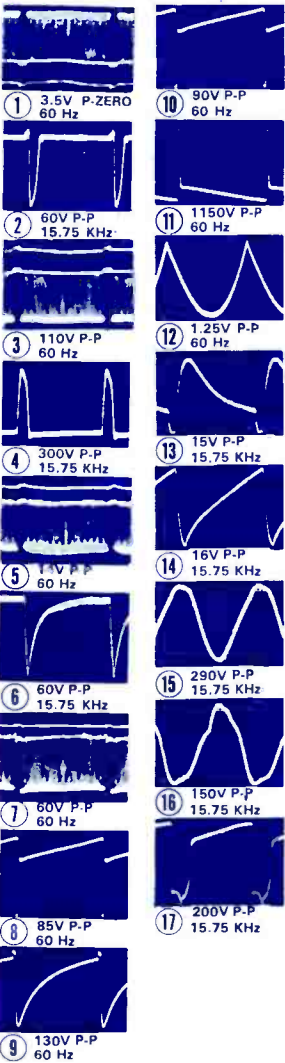
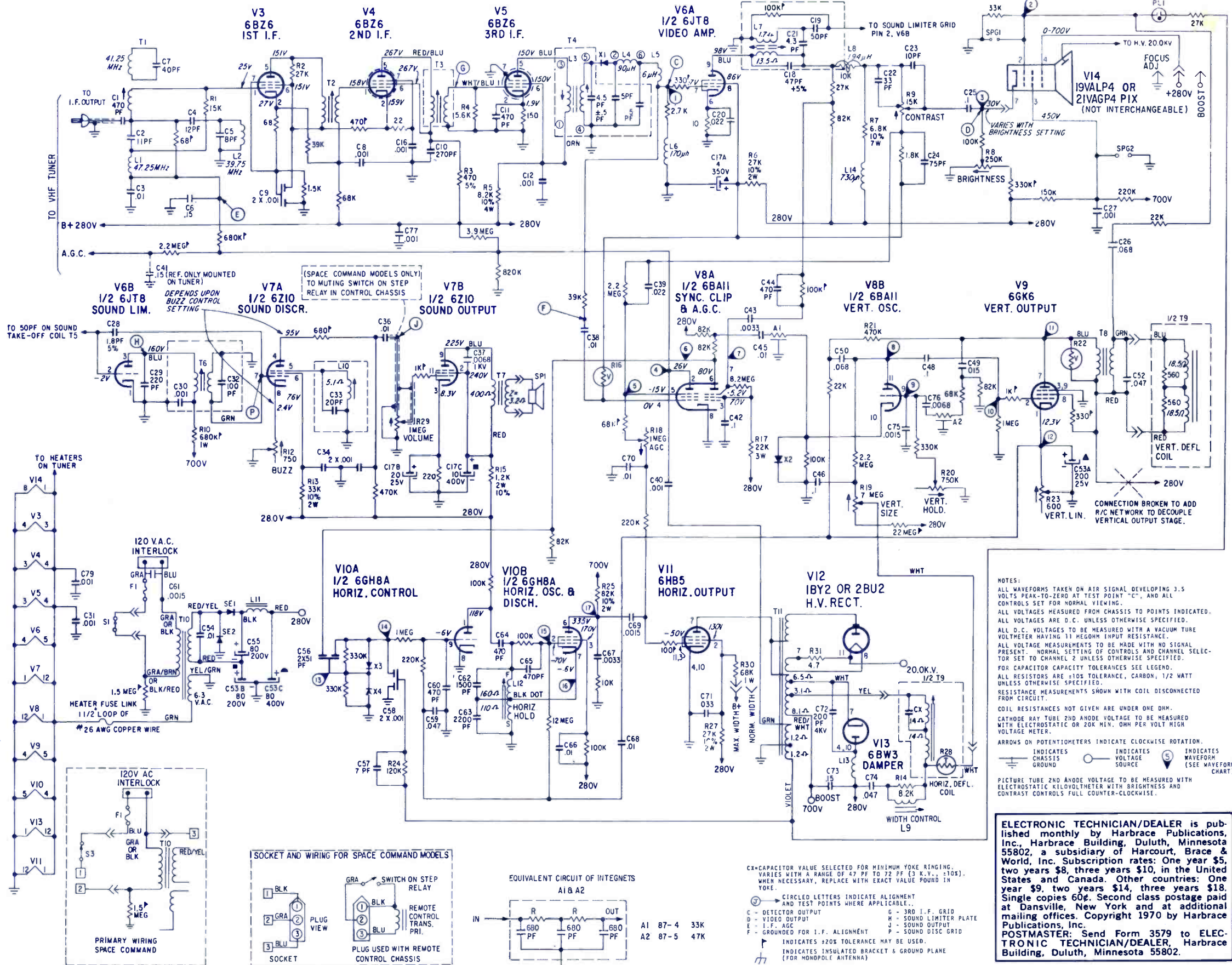
TV Chassis
14B36

ELECTRONIC TECHNICIAN / DEALER **TEKFAK**

SYMBOL	DESCRIPTION	ZENITH PART NO.
C17A	4 MFD electrolytic cap	22-2744
C17B	20 MFD electrolytic cap	22-2744
C17C	10 MFD electrolytic cap	22-2744
C53A	200 MFD electrolytic cap	22-3863
C53B	80 MFD electrolytic cap	22-3863
C53C	80 MFD electrolytic cap	22-3863
R8	250K Ω bright control	63-6489
R9	15K contrast control	63-6491

R12	750 Ω buzz control	63-8719
R16	voltage dependent resistor	63-6058
R18	1M AGC control	63-4833
R19	7M vert size control	63-6433
R20	750K vert hold control	63-7185
R22	voltage dependent resistor	63-7447
R23	600 Ω vert lin control	63-8720
R28	thermal resistor mounted in yoke	63-5187
R29	1M volume control	63-0349

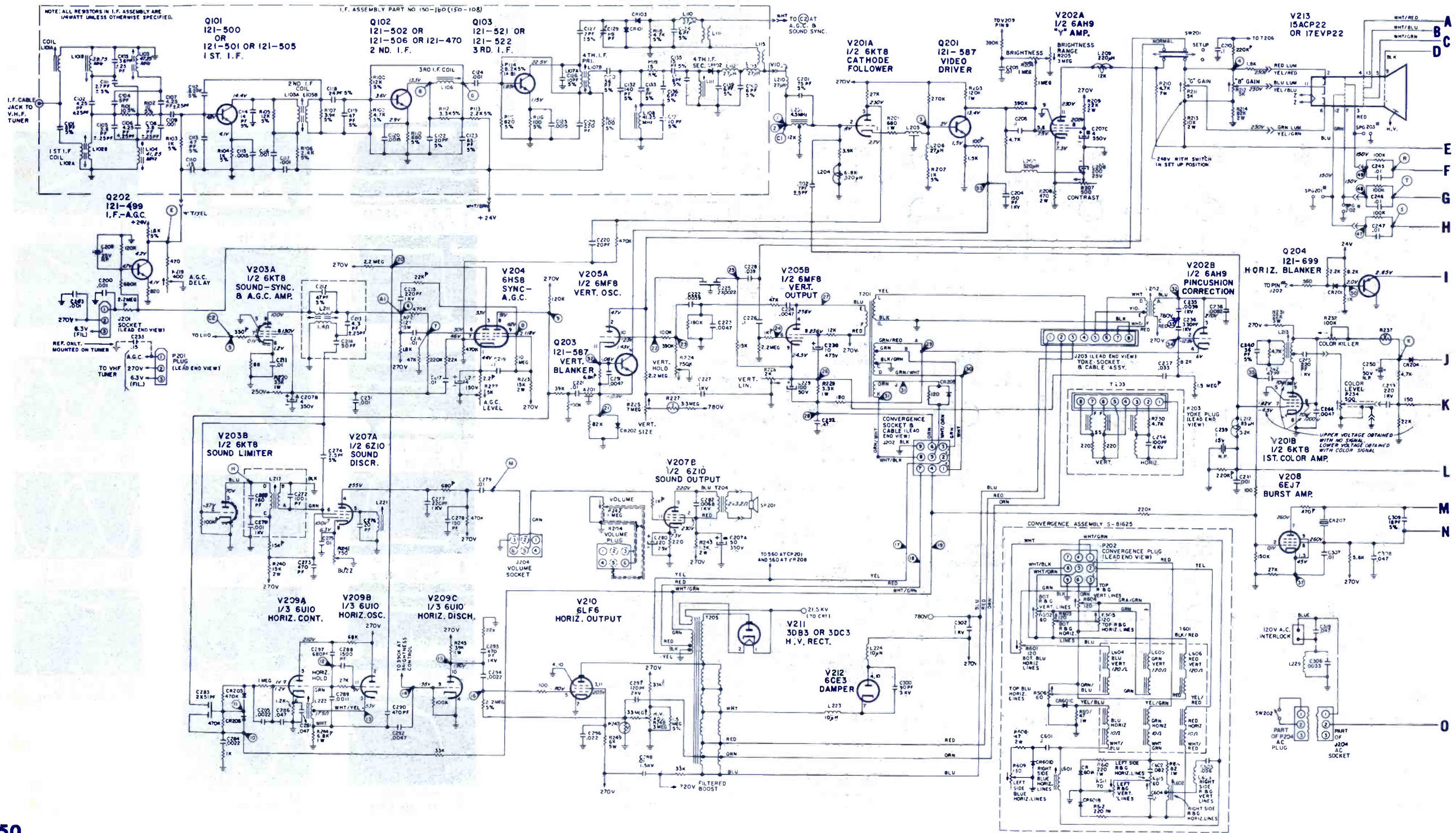
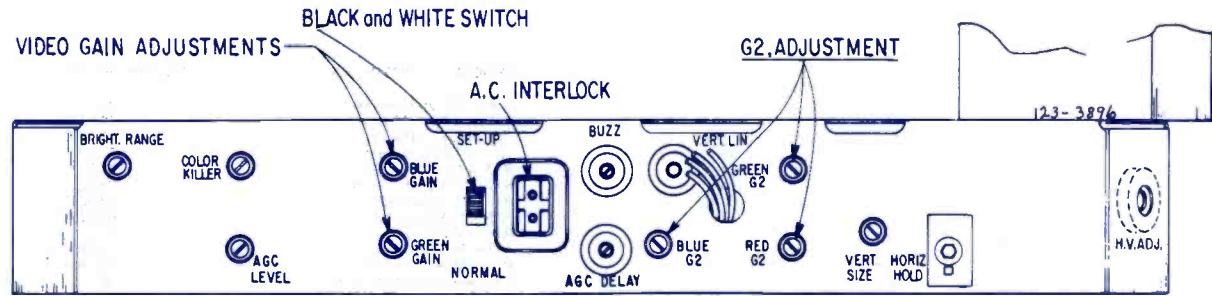
L12	horiz osc coil	S-56877
T5	sound take off coil	S-74446
T7	audio output trans	95-2893
T8	vert output trans	95-2333
T9	yoke	95-2899
T10	power trans	95-2200
T11	horiz sweep trans	S-87025
A1	integrator	87-4
A2	integrator	87-5



NOTES:
 ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 3.5 VOLTS PEAK-TO-ZERO AT TEST POINT "C", AND ALL CONTROLS SET FOR NORMAL VIEWING.
 ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.
 ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT. NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.
 FOR CAPACITOR CAPACITY TOLERANCES SEE LEGEND.
 ALL RESISTANCES ARE $\pm 10\%$ TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
 RESISTANCE MEASUREMENTS SHOWN WITH COIL DISCONNECTED FROM CIRCUIT.
 COIL RESISTANCES NOT GIVEN ARE UNDER ONE OHM.
 CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K MIN. OHM PER VOLT HIGH VOLTAGE METER.
 ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
 INDICATES CHASSIS GROUND INDICATES VOLTAGE SOURCE INDICATES WAVEFORM (SEE WAVEFORM CHART)

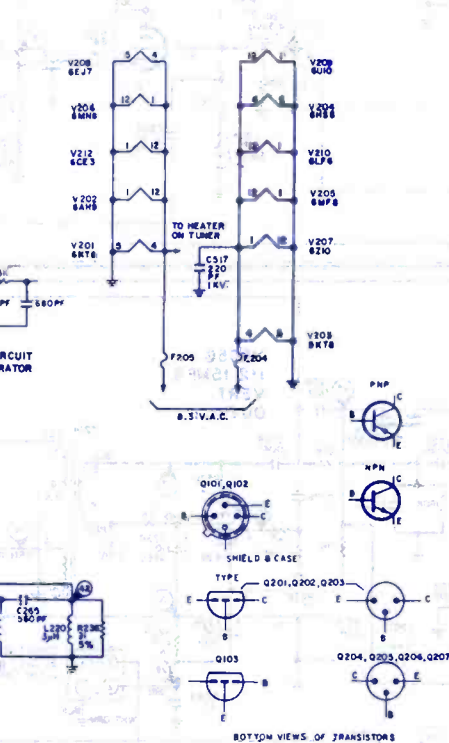
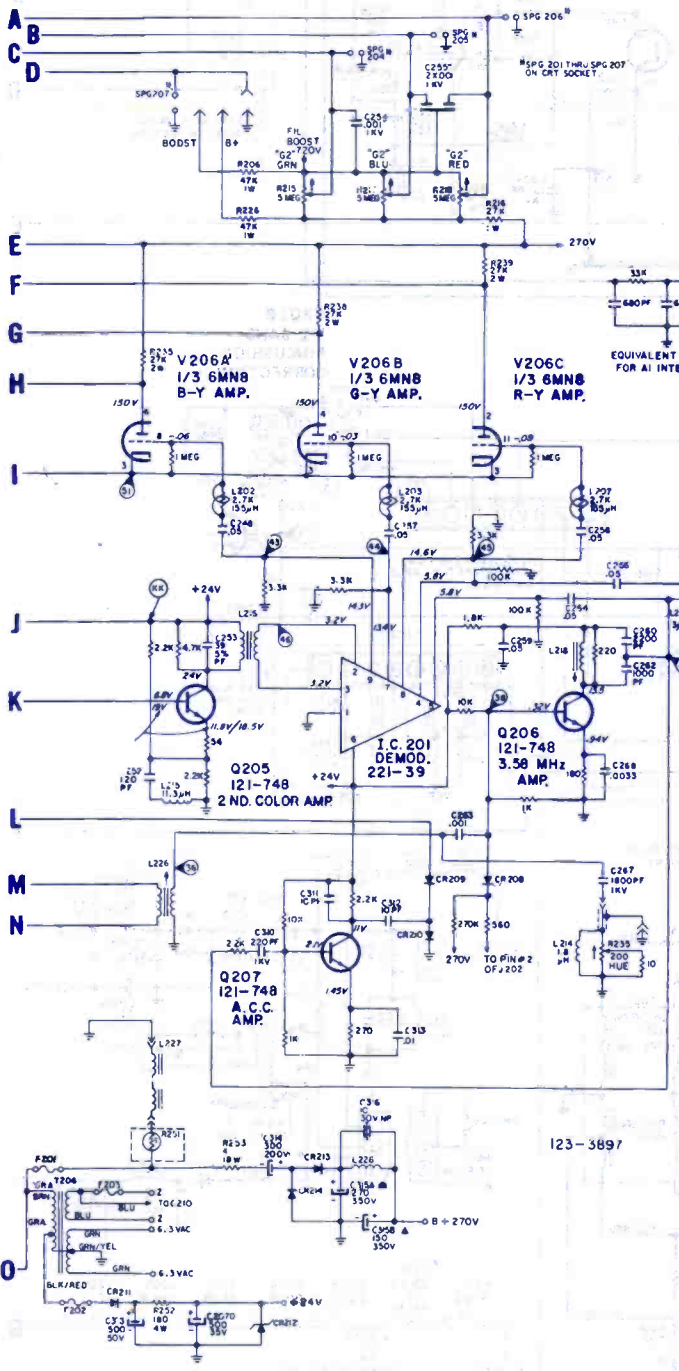
ELECTRONIC TECHNICIAN/DEALER is published monthly by Harbrace Publications, Inc. Harbrace Building, Duluth, Minnesota 55802, a subsidiary of Harcourt, Brace & World, Inc. Subscription rates: One year \$5, two years \$8, three years \$10, in the United States and Canada. Other countries: One year \$9, two years \$14, three years \$18. Single copies 60¢. Second class postage paid at Dansville, New York and at additional mailing offices. Copyright 1970 by Harbrace Publications, Inc. POSTMASTER: Send Form 3579 to ELECTRONIC TECHNICIAN/DEALER, Harbrace Building, Duluth, Minnesota 55802.

SYMBOL	DESCRIPTION	ZENITH PART NO.
C128	1.9 PF trimmer cap 500v	22-5478
C207A	50µf elect cap 350v	22-5714
C207B	4µf elect cap 350v	22-5714
C207C	4µf elect cap 350v	22-5714
C207D	500µf elect cap 35v	22-5714
C209	1µf elect cap NP 20% 25v	22-4909
C239	2µf elect cap NP 20% 15v	22-4902
C250	1µf elect cap NP 50v	22-3618
C297	12-pf disc cap 10% 2kv	22-5710
C315A	270µf elect cap 350v	11-5748
C315B	150µf elect cap 350v	22-5748
R204	1M bright control	83-7974
R205	3M bright range control	83-7977
R207	500Ω contrast control	83-7975
R211	5K gm gain control	83-8334
R215	5M G2 gm control	83-8978
R217	5M G2 blu control	83-8977
R219	400Ω AGC delay control	83-7982



ZENITH
Color TV Chassis 12A10C15

- | | | | |
|---|---------|---|---------|
| R222 - 5K AGC level control | 83-7976 | L205 - delay line winding ass'y | S-80475 |
| R224 - 750Ω vert hold control | 83-7973 | L211 - sound take-off coil ass'y | S-77414 |
| R225 - 7M vert size control | 83-8433 | L218 - 2nd color amp plate coil | S-83210 |
| R227 - thermistor | 83-8824 | L218 - collector coil ass'y | S-81327 |
| R228 - 2K vert lin control | 83-7983 | L221 - quad coil ass'y | S-80411 |
| R232 - 100K color killer control | 83-7978 | L222 - horiz osc coil ass'y | S-77584 |
| R234 - 500Ω color level control | 83-7981 | L223 - spook choke coil | 20-2005 |
| R235 - 200Ω hue control | 83-7980 | L228 - 3.58MHz burst amp plate coil winding ass'y | S-80781 |
| R237 - voltage dependent resistor | 83-7143 | L228 - filter choke | 95-2690 |
| R241 - 750Ω buzz control | 83-8487 | T201 - vert opt xformer | 95-2887 |
| R242 - 1M volume control & ac switch | 83-7979 | T202 - pincushion coil winding ass'y | S-77784 |
| R247 - voltage dependent resistor | 83-7858 | T203 - def yoke | 95-2696 |
| R248 - 3M high voltage control | 83-7828 | T204 - sound opt xformer | 95-2888 |
| R249 - 8K resistor 10% 5w | 83-5011 | T205 - horiz sweep xformer | S-81812 |
| R251 - thermistor degausser | 83-7156 | T208 - filament xformer | 95-2891 |
| L101A,B - 39.75MHz trap & link coil ass'y | 20-1658 | A201 - integrator | 87-7 |
| L104 - 41.25MHz input trap coil ass'y | 20-1659 | F201 - 2a bel-fuse | 136-88 |
| L108 - 41.25MHz trap coil ass'y | 20-1657 | F202 - .35a bel-fuse | 136-75 |
| L201 - 4.5MHz trap coil winding ass'y | S-77669 | | |

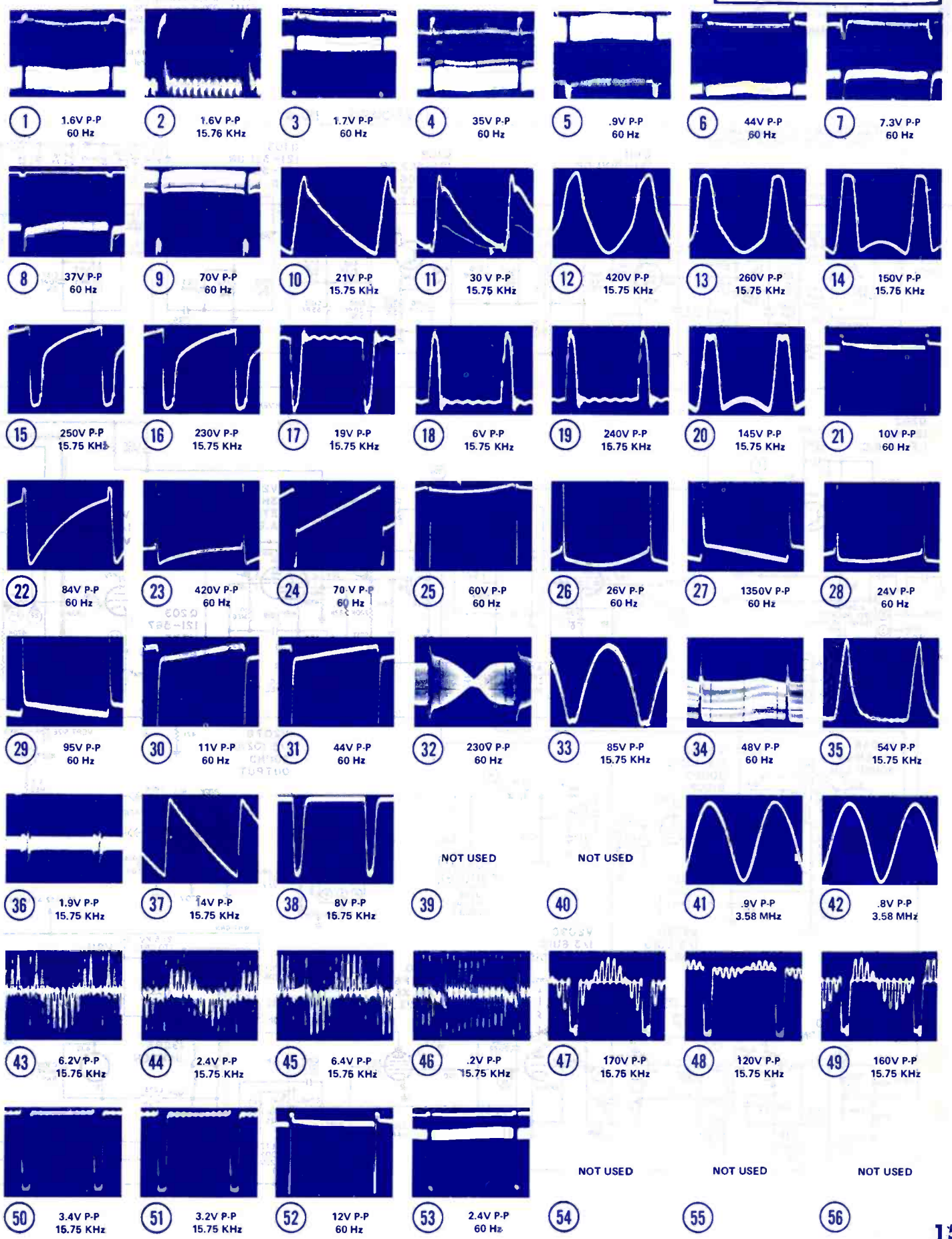


NOTES:
PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. THE HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE GRIDS OF THE PICTURE TUBE DEPEND UPON THE HUE SETTING.
ACCURACY OF FINE TUNING IS IMPORTANT WHEN VIEWING WAVEFORMS. ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.
ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.
RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
ALL RESISTORS ARE ±10% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
COIL RESISTANCE NOT GIVEN UNDER ONE OHM.
ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED. FOR CAPACITOR TOLERANCE SEE LEGEND.
CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHMS MIN. PER VOLT HIGH VOLTAGE METER.
ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
E INDICATES ALIGNMENT & TEST POINT.
PF = PICOFARAD. MHZ = MEGAHERTZ = MEGACYCLE PER SECOND.
P INDICATES ±20% MAY BE USED. V INDICATES VOLTAGE SOURCE.
G INDICATES CHASSIS GROUND. C INDICATES CONNECTORS.

② INDICATES WAVEFORM CHECK POINTS. (SEE WAVEFORM CHART)

TEST POINTS:
A1 SOUND-SYNC-A.G.C. AMP OUTPUT
B SECOND I.F. COLLECTOR
C1 PICTURE DETECTOR OUTPUT
C2 SYNC SOUND DETECTOR OUTPUT
E 1F-A.G.C.
G 3RD I.F. ALIGNMENT POINT
M SOUND LIMITER PLATE
K } SHORT TEST POINTS
KXKJTKK TO OPEN COLOR CHANNEL

M SOUND OUTPUT
Q A.C.C. VOLTAGE
R R-Y GRID OF CRT
S B-Y GRID OF CRT
T G-Y GRID OF CRT



ZENITH

Color TV
Chassis 12A8C14

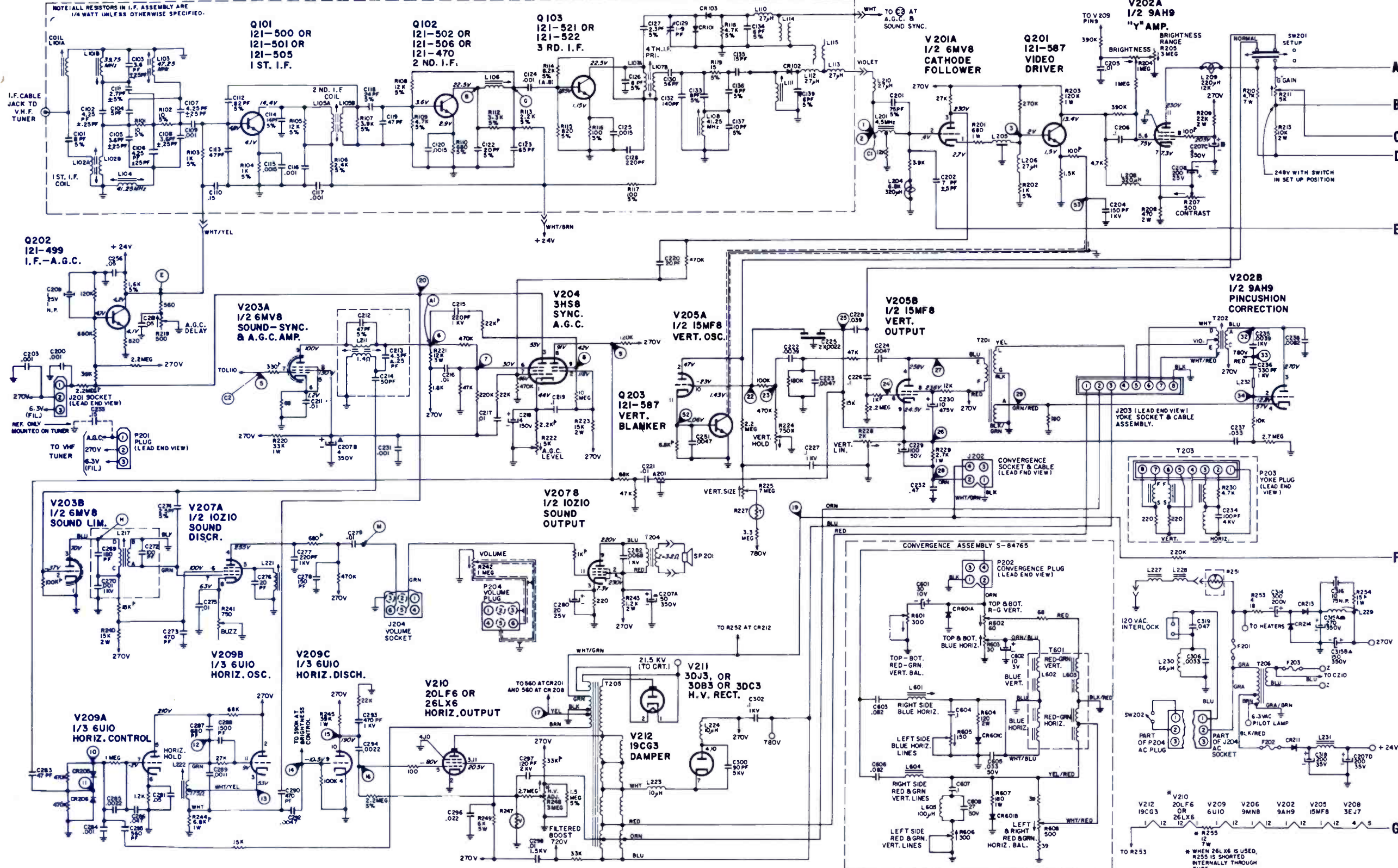
ELECTRONIC TECHNICIAN / DEALER **TEKFAKX**

SYMBOL	DESCRIPTION	ZENITH PART NO.
C207A	50µf elect cap 350v	22-5910
C207B	4µf elect cap 350v	22-5910
C207C	4µf elect cap 350v	22-5910
C207D	200µf elect cap 35v	22-5910
C315A	270µf elect cap 350v	22-5746
C315B	150µf elect cap 350v	22-5746
C316	10µf elect cap (NP) 75v	22-6008
R204	1M bright control	63-7974
R205	3M bright control	63-7977
R207	500Ω contrast control	63-7975
R217	5M G2 blu control	63-6977
R218	5M G2 red control	63-6978

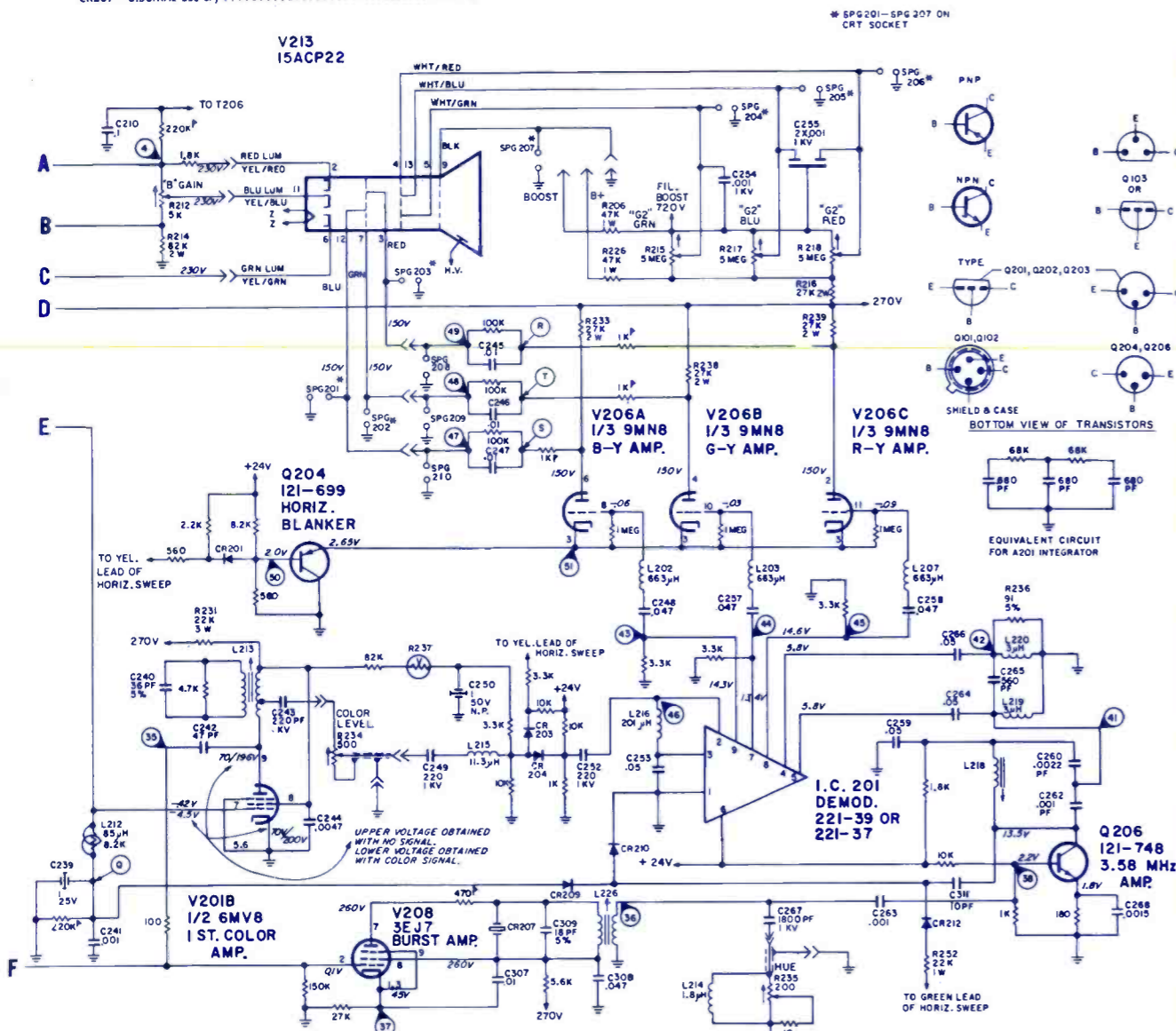
R219	500Ω AGC delay control	62-8543
R222	5K AGC level control	63-7976
R224	750K vert hold control	63-7973
R225	7M vert size control	63-6433
R227	thermistor	63-6824
R228	2K vert lin control	63-7983
R234	500Ω color level control	63-7981
R235	200Ω hue control	63-7980
R237	voltage div resistor	63-7143
R242	1M volume control & AC sw	63-7979
R247	volt div resistor	63-7658
R248	3M high volt control	63-7628
R251	therm (degasser)	63-7156
L101A	39.75MHz trap & link coil ass'y	20-1658

L101B	39.75MHz trap & link coil ass'y	20-1658
L103	47.25MHz trap coil ass'y	20-1659
L105A	2nd IF coil ass'y	20-1661
L105B	2nd IF coil ass'y	20-1661
L108	41.25MHz trap coil ass'y	20-1657
L201	4.5MHz trap coil	5-77669
L205	delay line	5-80475
L211	sound take-off coil	5-74414
L217	intercarrier coil	5-74445
L219	peak coil	20-2056
L221	quad coil	5-80480
L222	horiz osc coil	5-81595
L226	3.51MHz burst amp plate coil	5-80791
L231	filter choke (+24v)	95-2733

I.F. SUB-CHASSIS 150-160



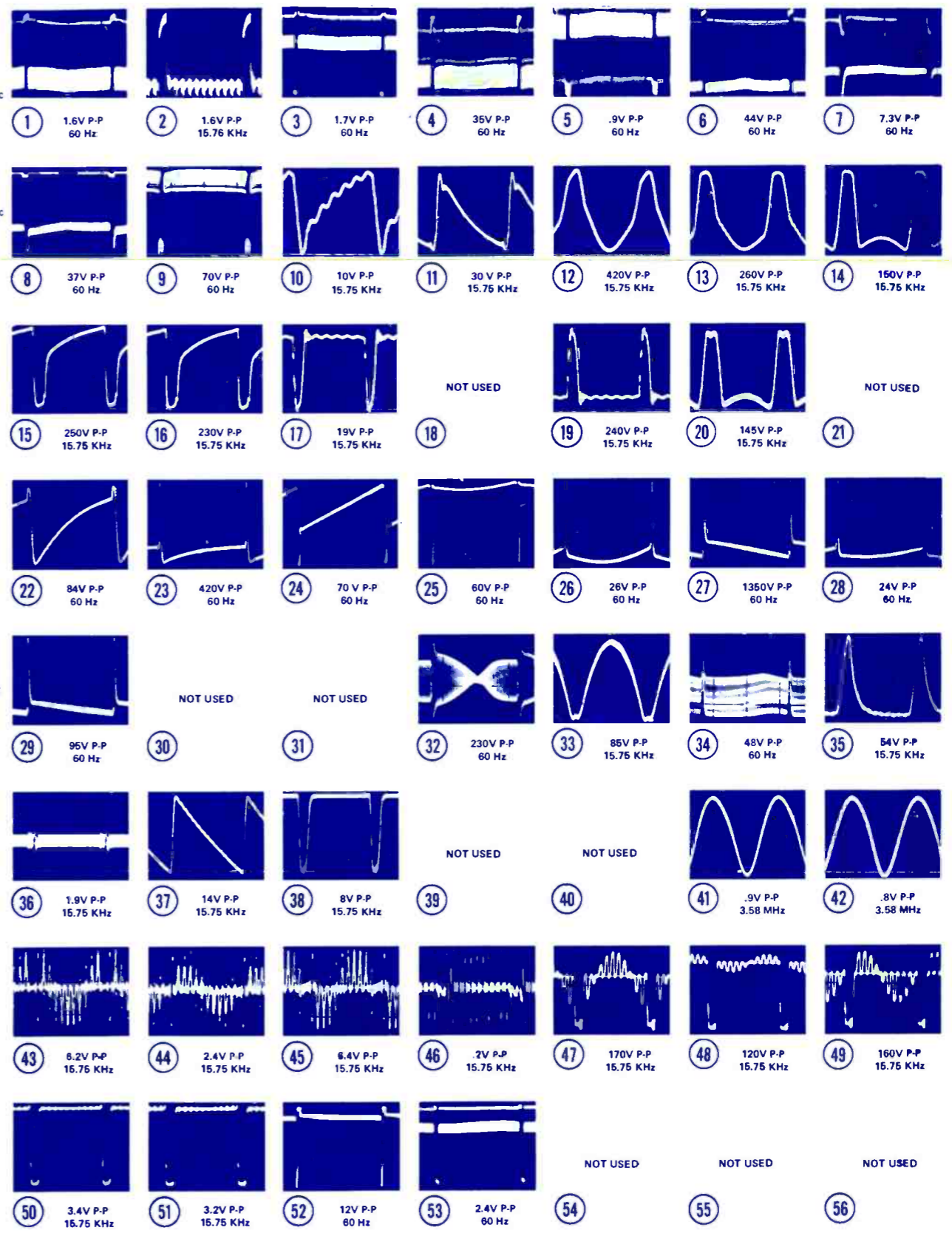
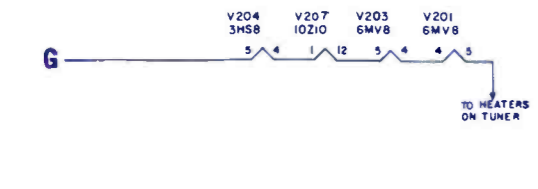
- L605—peaking coil.....20-2021
- T201—vert output xformer.....95-2764
- T202—pincushion coil ass'y.....5-77784
- T203—def yoke.....95-2781
- T204—sound optl xformer.....95-2688
- T205—horiz sweep xformer.....5-84801
- T206—filament xformer.....95-2763
- A201—integrator unit.....87-7
- F201—.27 amp bel-fuse.....136-76
- F202—.35 amp bel-fuse.....136-75
- F203—heater fuse line 2 1/2" min loop of no. 24
- AWG copper wire.....91-2061
- SW201—B/W set up sw.....85-994
- CR207—3.58MHz osc cry.....103-152

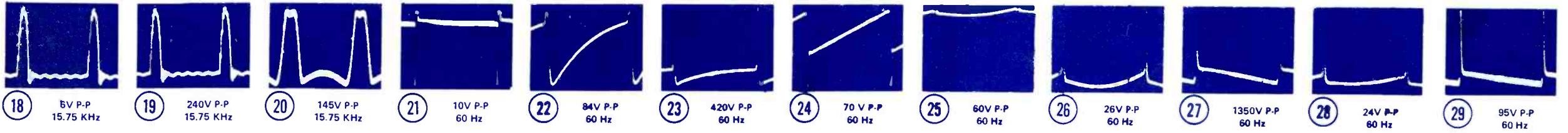
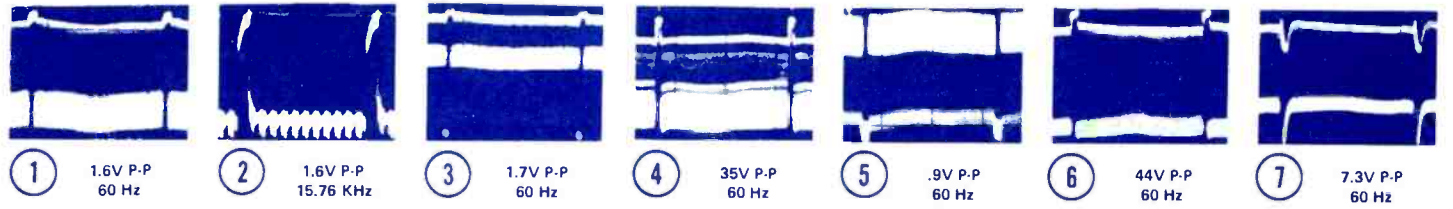


TEST POINTS
 A1 SOUND—SYNC—A, G.C. AMP. OUTPUT
 B 2 ND. I.F. ALIGNMENT POINT
 C1 PICTURE DETECTOR OUTPUT
 C2 SYNC SOUND DETECTOR OUTPUT
 E I.F.—A.G.C.
 G 3 RD. I.F. ALIGNMENT POINT
 M SOUND LIMITER PLATE
 M SOUND OUTPUT
 Q A.C.C. VOLTAGE
 R R-Y GRID OF CRT
 S B-Y GRID OF CRT
 T G-Y GRID OF CRT

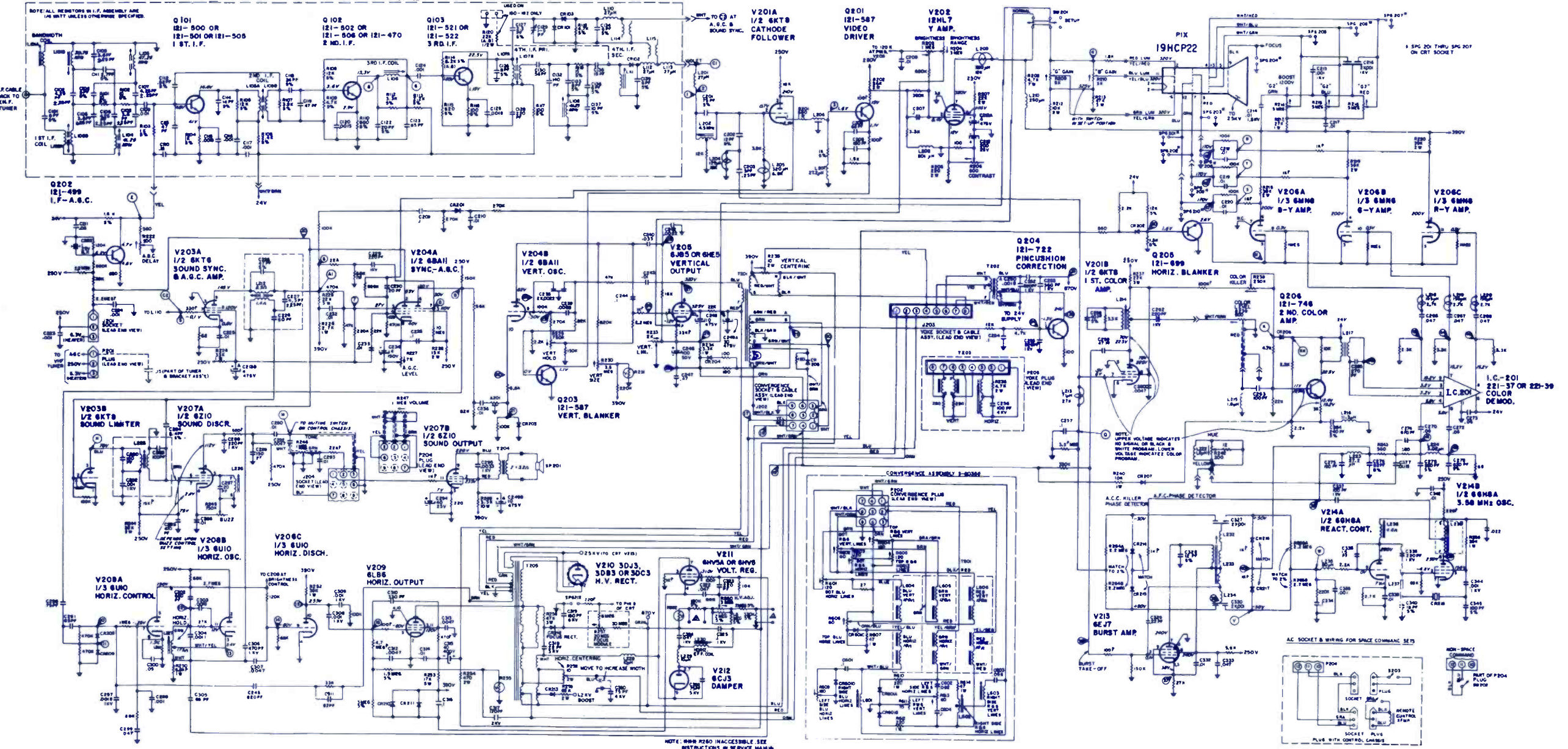
NOTES:
 PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. THE HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE GRIDS OF THE PICTURE TUBE DEPEND UPON THE HUE SETTING.
 ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.
 ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.
 RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
 ALL RESISTORS ARE ±10% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
 COIL RESISTANCE NOT GIVEN UNDER ONE OHM.
 ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 FOR CAPACITOR TOLERANCE, SEE LEGEND.
 CATHODE RAY TUBE 2 ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHMS MIN. PER VOLT HIGH VOLTAGE METER.
 ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
 (E) → INDICATES ALIGNMENT & TEST POINT.
 PF = PICO FARAD MHz = MEGAHERTZ μH = MICROHENRY
 ⚡ INDICATES ± 20% MAY BE USED. ○ INDICATES VOLTAGE SOURCE
 ⊕ INDICATES CHASSIS GROUND → INDICATES CONNECTORS
 ② INDICATES WAVEFORM (SEE PAGE SHOWING WAVEFORMS)

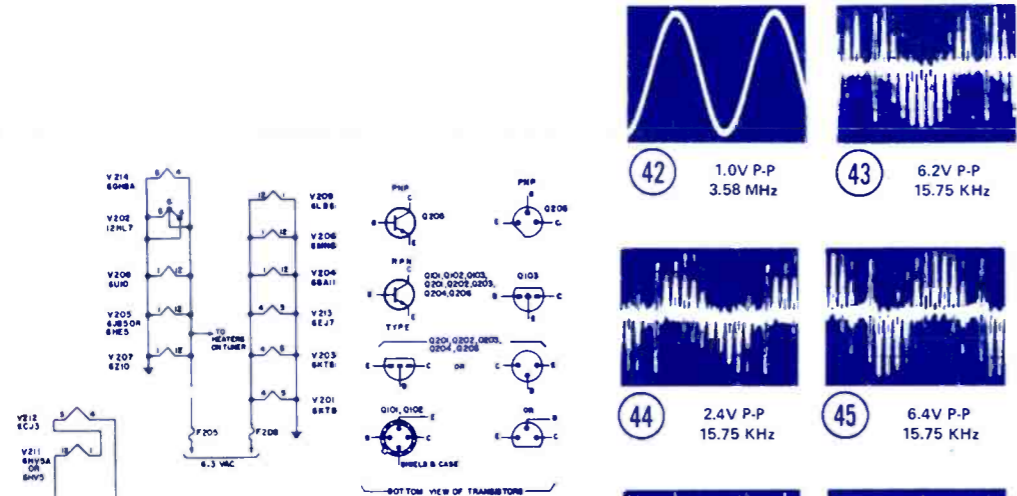
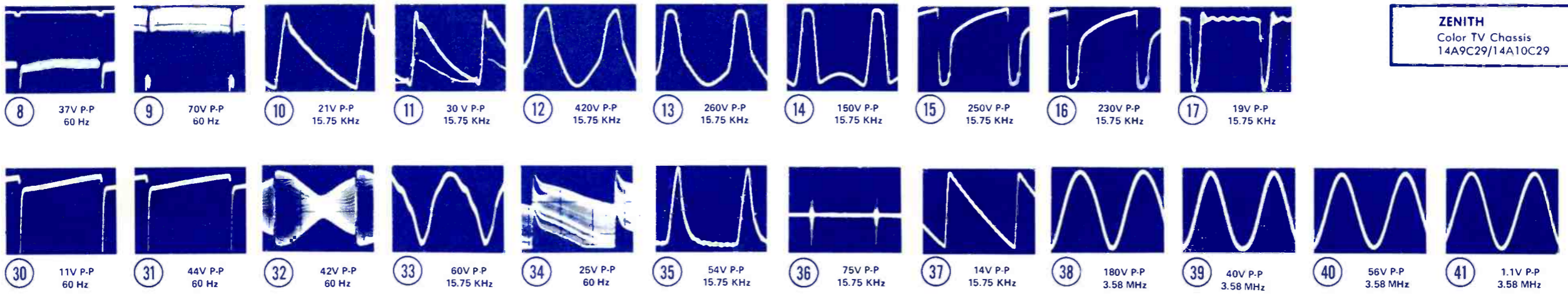
123-4023



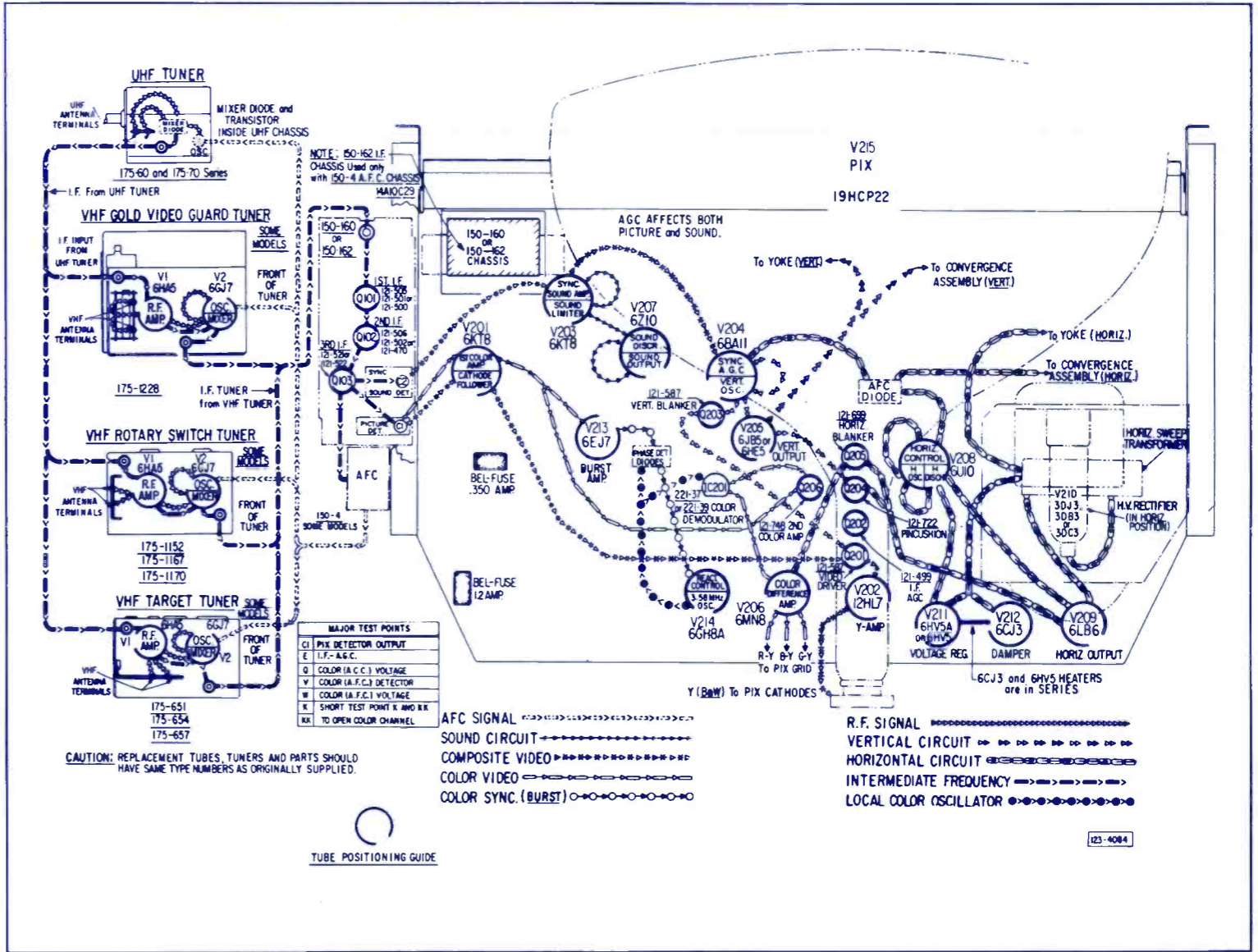
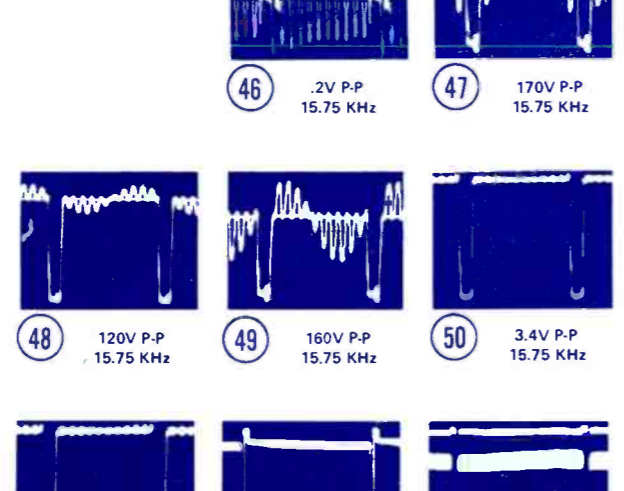


I.F. SUB-CHASSIS 150-160 OR 150-162

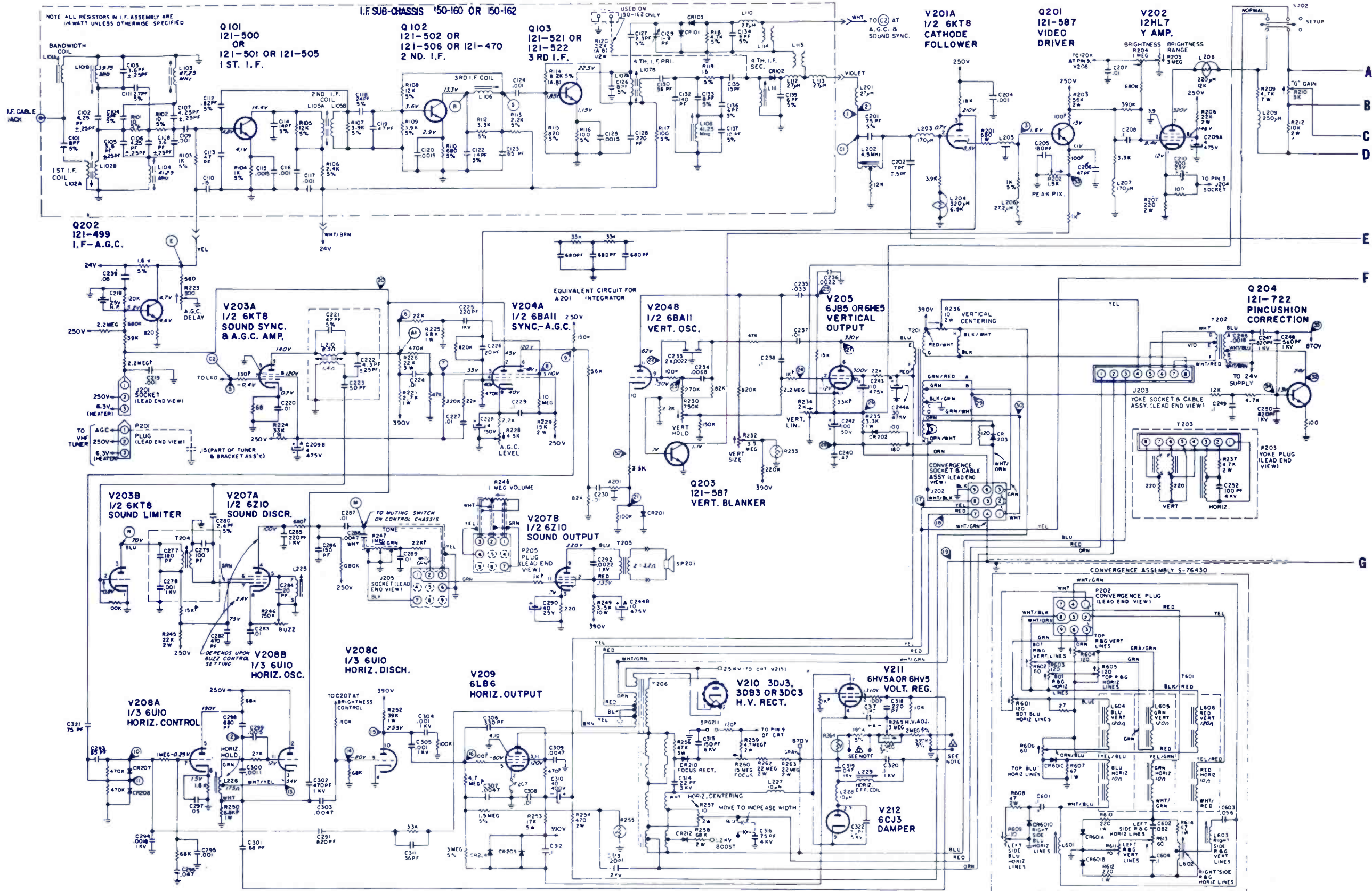


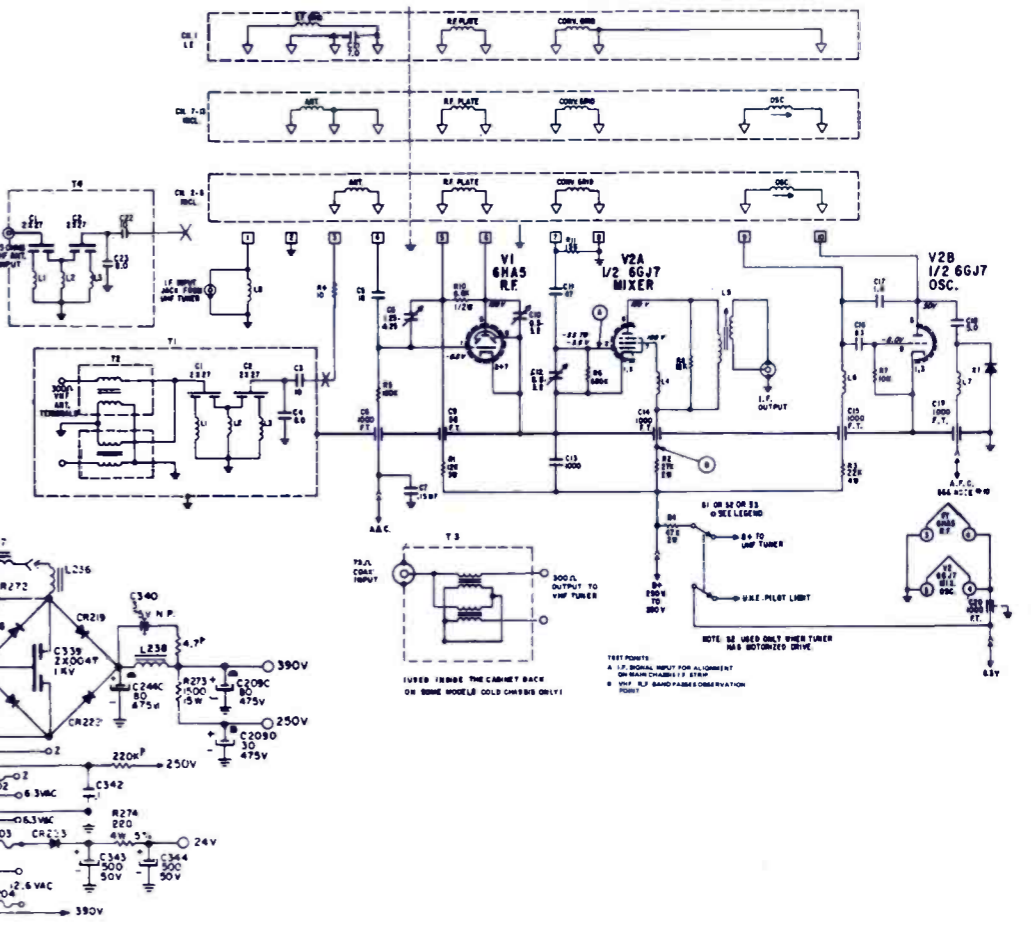
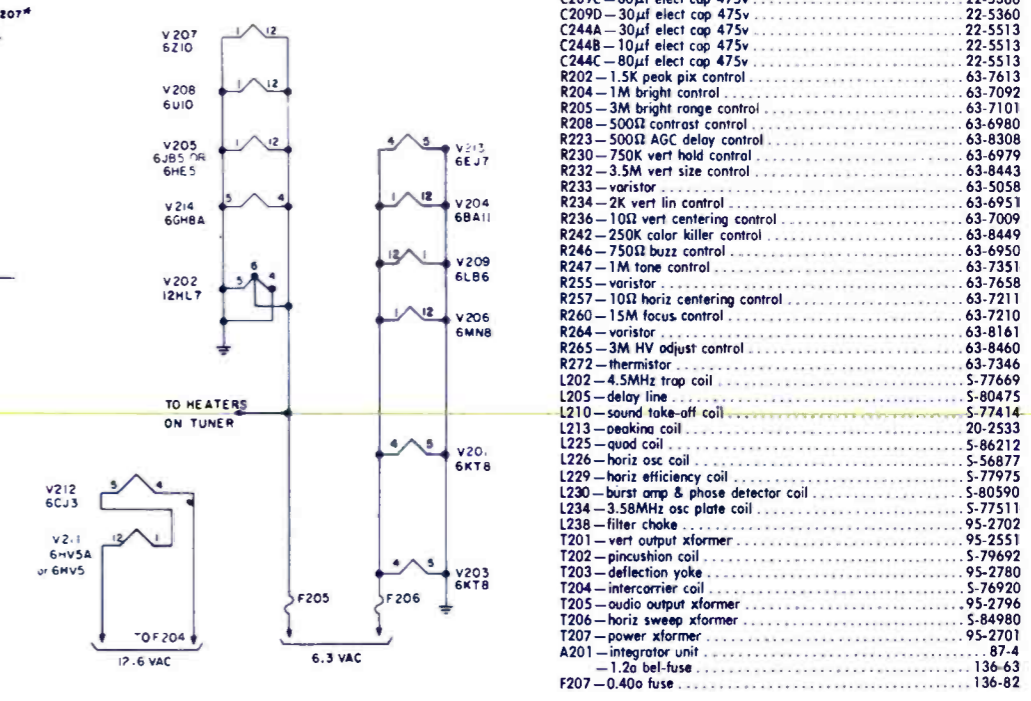
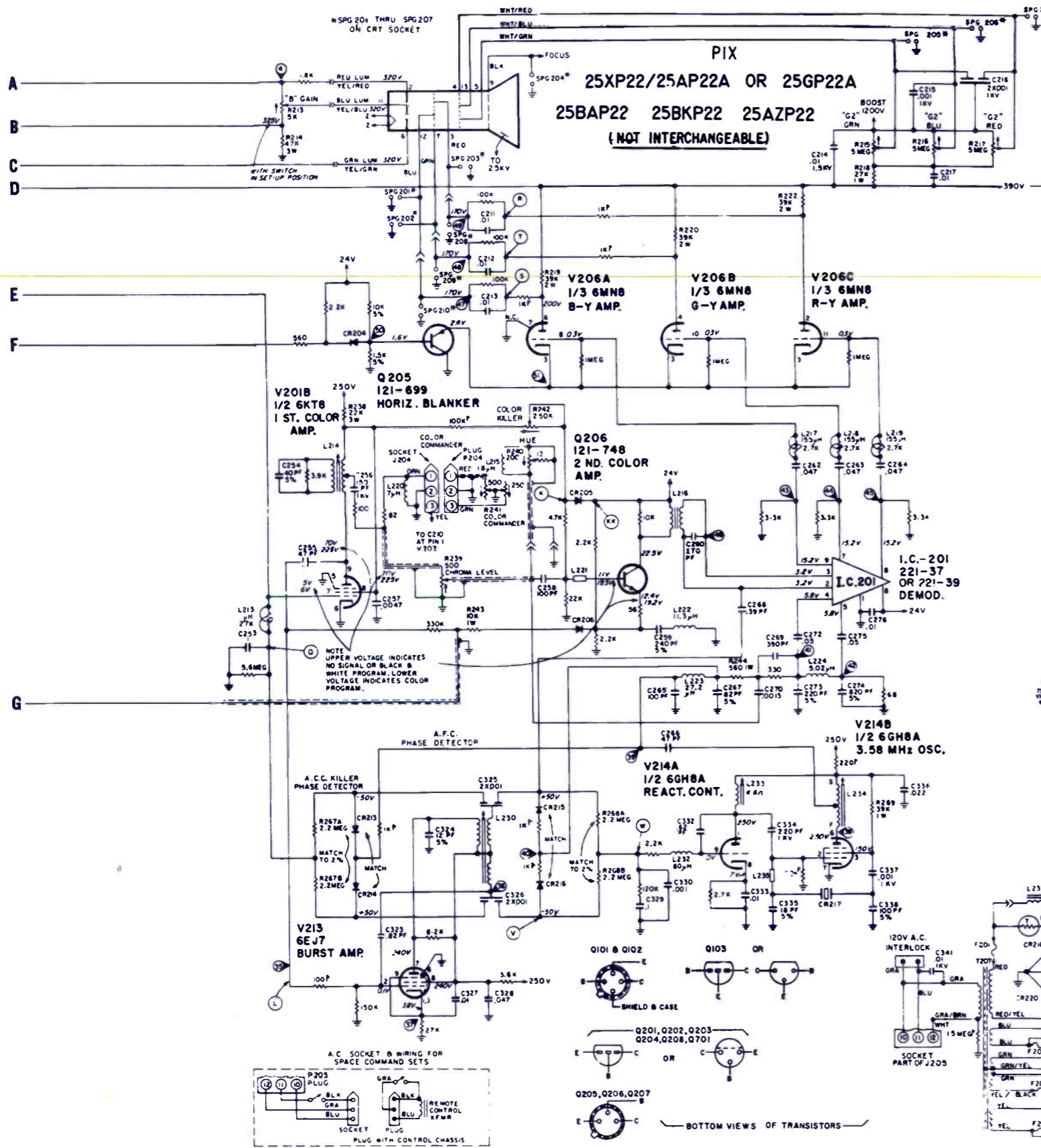


NOTES:
PHOTOGRAPHS TAKEN ON A STANDARD BATED RAINBOW COLOR BAR SIGNAL, THE RUC SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE GRIDS OF THE PICTURE TUBE DEPEND UPON THE RUC SETTING.
ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLT METER HAVING 11 MEGOHM INPUT RESISTANCE.
ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.
RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
ALL RESISTORS ARE ±10% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
COIL RESISTANCE NOT GIVEN UNDER ONE OHM.
ALL CAPACITOR VALUES IN MICROBARADE UNLESS OTHERWISE SPECIFIED. FOR CAPACITOR TOLERANCE SEE LEGEND.
CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20A OHMS MIN. PER VOLT HIGH VOLTAGE METER.
ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
○ INDICATES ALIGNMENT & TEST POINT.
P-P = PICTURE DETECTOR OUTPUT
F INDICATES ± 20% MAY BE USED.
⊕ INDICATES CHASSIS GROUND. ⊕ INDICATES WAVEFORM CHECK POINTS. (SEE WAVEFORM CHART)
TEST POINTS:
A1 SOUND-SYNC-A.G.C. AMP. N SOUND OUTPUT
B SECOND I.F. COLLECTOR Q A.G.C. VOLTAGE
C PICTURE DETECTOR OUTPUT R R-Y GRID OF CRT
D SYNC. SOUND DETECTOR OUTPUT S B-Y GRID OF CRT
E I.F.-A.G.C. T G-Y GRID OF CRT
F 3RD I.F. ALIGNMENT V COLOR A.F.C. DETECTOR
G SOUND LIMITER PLATE W COLOR A.F.C. VOLTAGE
H SHORT TEST POINTS
K 1/8 IN. TO OPEN COLOR CHANNEL



SYMBOL	DESCRIPTION	ZENITH PART NO.
C213A	4µf electrolytic cap 475v	22-5360
C213B	4µf elect cap 475v	22-5360
C213C	80µf elect cap 475v	22-5360
C213D	30µf elect cap 475v	22-5360
C249A	30µf elect cap 475v	22-5513
C249B	10µf elect cap 475v	22-5513
C249C	80µf elect cap 475v	22-5513
R204	3M bright range control	63-7101
R206	500Ω contrast control	63-6980
R214	5M green G1 control	63-6976
R215	5M blue G1 control	63-6977
R216	5M red G1 control	63-6978
R222	500K AGC delay control	63-8308
R227	7KΩ AGC level control	63-8235
R229	750KΩ vertical hold control	63-6979
R230	3.5M vert size	63-8443
R231	voltage dependent resistor	63-5058
R233	2KΩ vert lin control	63-6951
R235	10Ω vert centering control	63-7009
R238	250KΩ color killer control	63-8449
R245	750Ω buzz control	63-6950
R246	1M tone control	63-7351
R255	voltage dependent resistor	63-7658
R257	20M focus module control	63-7145
R258	10KΩ horiz centering control	63-7211
R260	3M high voltage adjust control	63-8460
R262	voltage dependent resistor	63-8161
R267	voltage dependent resistor	63-7146
R268	therm.	63-7346
L202	4.5MHz coil	5-77669
L206	delay line	5-80475
L212	sound take off coil assy	5-77414
L225	intercarrier coil	5-74445
L226	quad coil	5-80480
L227	horiz osc coil	5-56877
L230	horiz efficiency coil	5-77975
L233	burst amp and phase det coil	5-80590
L236	color freq adjust coil	5-66627
L239	filter choke	95-2702
T201	vert output xformer	95-2643
T203	deflect yoke	95-2647
T204	audio output xformer	95-2640
T206	power xformer	95-2748
A201	integrator	87-4
P203	plug, yoke assembly	43-873
F201	1.2a bel-fuse	136-68
F203	.35a bel-fuse	136-75





SYMBOL	DESCRIPTION	ZENITH PART NO.
C209A	4µf elect cap 475v	22-5360
C209B	4µf elect cap 475v	22-5360
C209C	80µf elect cap 475v	22-5360
C209D	30µf elect cap 475v	22-5360
C244A	30µf elect cap 475v	22-5513
C244B	10µf elect cap 475v	22-5513
C244C	80µf elect cap 475v	22-5513
R202	1.5K peak pix control	63-7613
R204	1M bright control	63-7092
R205	3M bright range control	63-7101
R208	500Ω contrast control	63-6980
R223	500Ω AGC delay control	63-8308
R230	750K vert hold control	63-6979
R232	3.5M vert size control	63-8443
R233	varistor	63-5058
R234	2K vert lin control	63-6951
R236	10Ω vert centering control	63-7009
R242	250K color killer control	63-8449
R246	750Ω color control	63-6950
R247	1M tone control	63-7351
R255	varistor	63-7658
R257	10Ω horiz centering control	63-7211
R260	15M focus control	63-7210
R264	varistor	63-8161
R265	3M HV adjust control	63-8460
R272	thermistor	63-7346
L202	4.5MHz trap coil	5-77669
L205	delay line	5-80475
L210	sound take-off coil	5-77414
L213	peaking coil	20-2533
L225	quod coil	5-86212
L226	horiz osc coil	5-56877
L229	horiz efficiency coil	5-77975
L230	burst amp & phase detector coil	5-80590
L234	3.58MHz osc plate coil	5-77511
L238	filter choke	95-2702
T201	vert output xformer	95-2551
T202	pincushion coil	5-79692
T203	deflection yoke	95-2780
T204	intercarrier coil	5-76920
T205	audio output xformer	95-2796
T206	horiz sweep xformer	5-84980
T207	power xformer	95-2701
A201	integrator unit	87-4
	1.2a bel-fuse	136-63
F207	0.40a fuse	136-82

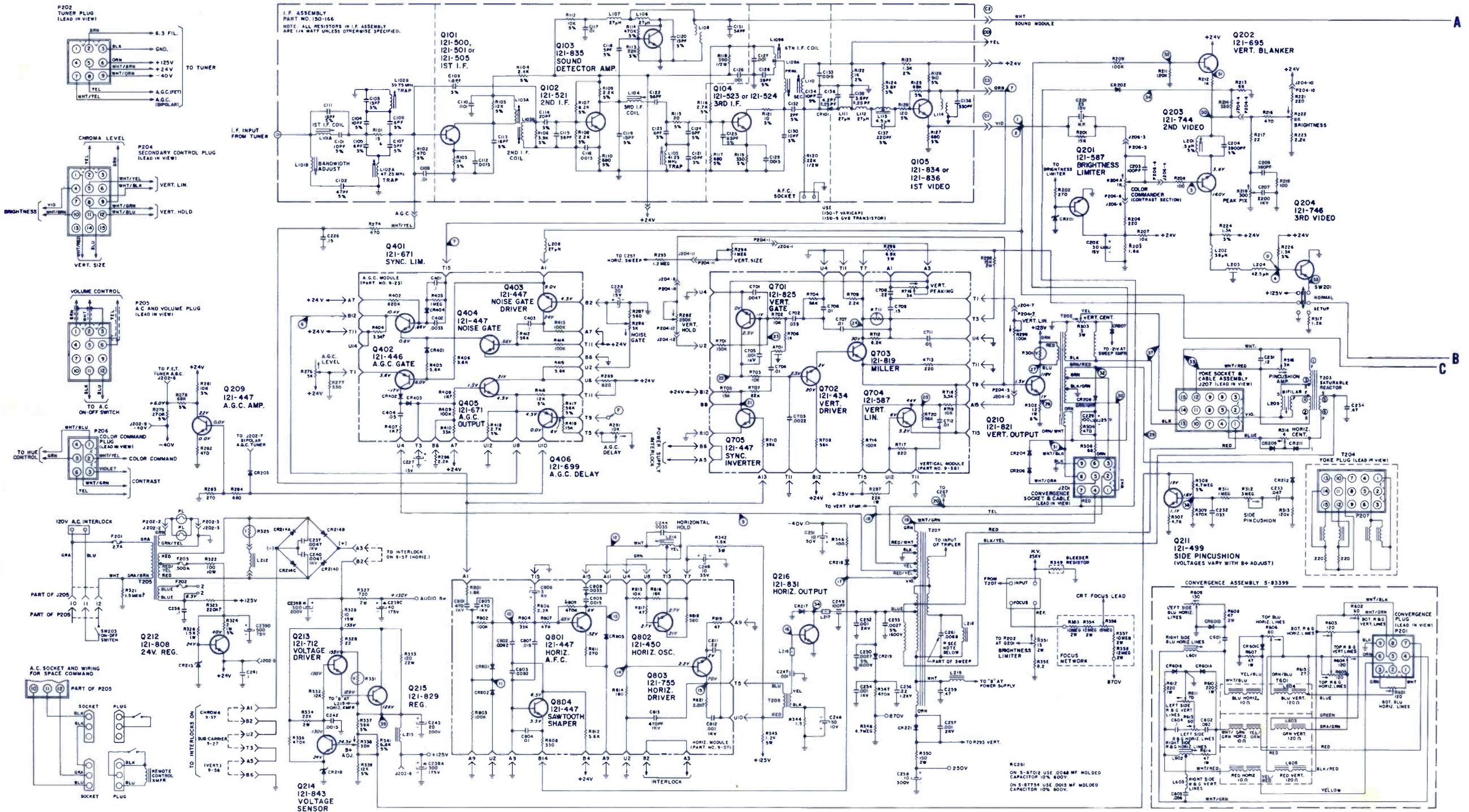
ZENITH

Color TV Chassis
40BC50

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

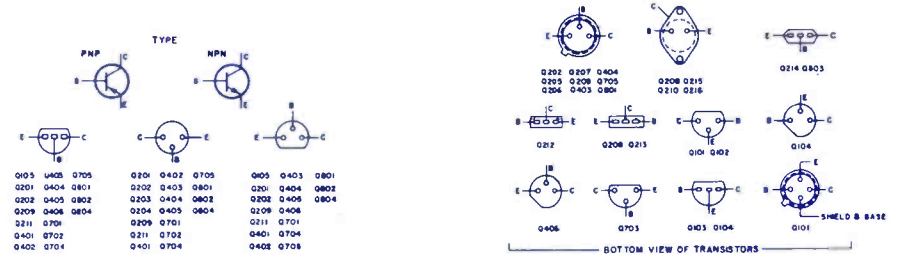
SYMBOL	DESCRIPTION	ZENITH PART NO.
C239A	—300/175v electrolytic capacitor	22-6249
C239B	—300/200v electrolytic capacitor	22-6249
C239C	—40/175v electrolytic capacitor	22-6249
C239D	—500/75v electrolytic capacitor	22-6249
R222	—5K bright control	63-8201
R254	—voltage dependent resistor	63-5440
R276	—5K AGC level control	63-8492
R288	—3K noise gate control	63-8493
R291	—10K AGC delay control	63-8491
R292	—250K vert hold control	63-8698
R294	—1M vert size control	63-8699
R301	—voltage dependent resistor	63-5472
R303	—5 n vert centering control 3W	63-8475
R314	—500n horiz centering control 3W	63-8956
R318	—10K killer threshold control	63-8491
R319	—5K chroma level control	63-8467
R325	—thermistor	63-8687

R331	—voltage dependent resistor	63-5440
R351	—15 n bright limiter control 2W	63-8706
R356	—15M focus control	63-8709
R711	—thermistor	63-8788
R716	—4K vert peaking control	63-8962
R1013	—20K ACC control	63-8576
R1016	—20K ACC control	63-8576
L203	—delay line	S-84882
L214	—horiz oscillator coil	S-56875
L901	—chroma take-off coil	S-85761
T201	—audio output xformer	95-2883
T202	—vert output xformer	95-2915
T204	—deflection yoke	95-2880
T205	—power xformer	95-2878
T206	—horiz driver xformer	95-2895
T1101	—quadrature xformer	95-2789
A701	—integrator unit	87-9
F201	—2.7a bel-fuse	136-76
F203	—0.5a bel-fuse	136-84



ZENITH
Color TV Chassis
40BC50

TEST POINTS	
B	BY-PASS WITH 470PF DURING 4TH I.F. ALIGNMENT.
C1	PICTURE DETECTOR OUTPUT
CC1	BIAS POINT FOR CI ADJUST
C2	SOUND DETECTOR OUTPUT
C3	SYNC DETECTOR OUTPUT
D	BY-PASS WITH 250F 25V ELECTROLYTIC DURING COLOR ALIGNMENT
E	I.F. A.G.C.
G	INPUT TEST POINT FOR 4TH ALIGNMENT
J	A.C.C.
K	TURN COLOR THRESHOLD CONTROL TO MAX. CLOCKWISE POSITION TO OPEN COLOR CHANNELS.
KK	SOUND OUTPUT
M	A.C.C. VOLTAGE
N	R-Y COLOR AMP. PLATE
S	B-Y COLOR AMP. PLATE
T	G-Y COLOR AMP. PLATE
R	BRIGHTNESS LIMITER SET-UP POINTS
RR	POINTS



NOTES:
PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. THE HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE CATHODES OF THE PICTURE TUBE DEPEND ON THE HUE, COLOR LEVEL (CHROMA LEVEL), CONTRAST (COLOR COMMANDER) AND PICTURE PEAKING CONTROLS.

FOR WAVEFORMS 43 THRU 49, TEST POINT "D" MUST BE BY-PASSED WITH A 0.1 MFD CAPACITOR.

ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.

ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.

RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.

ALL RESISTORS ARE 5% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.

COIL RESISTANCE NOT GIVEN UNDER ONE OHM.

ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED. FOR CAPACITOR TOLERANCE, SEE LEGEND.

CATHODE HAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHMS PER VOLT MIN. HIGH VOLTAGE METER. ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.

○ INDICATES ALIGNMENT AND TEST POINT.
PF = PICOFARAD MHz = MEGAHERTZ μm = MICRONENY
□ INDICATES ±20% MAY BE USED. ○ INDICATES VOLTAGE SOURCE
○ INDICATES WAVEFORM CHECK POINTS. (SEE WAVEFORM CHART)
⊥ INDICATES CHASSIS GROUND.
—○— INDICATES MODULE BOARD
→ INDICATES PIN NUMBER ON MODULE BOARD

