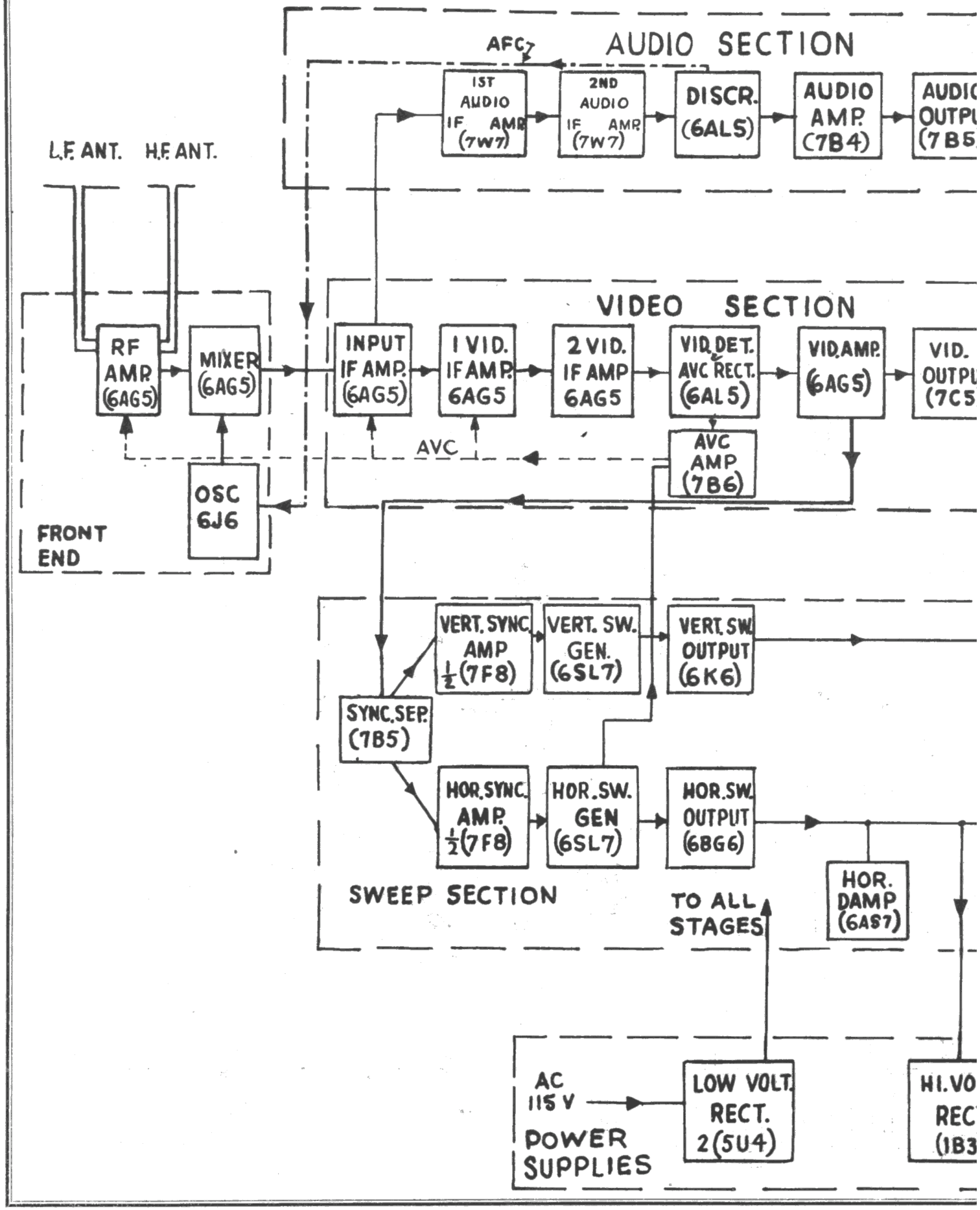
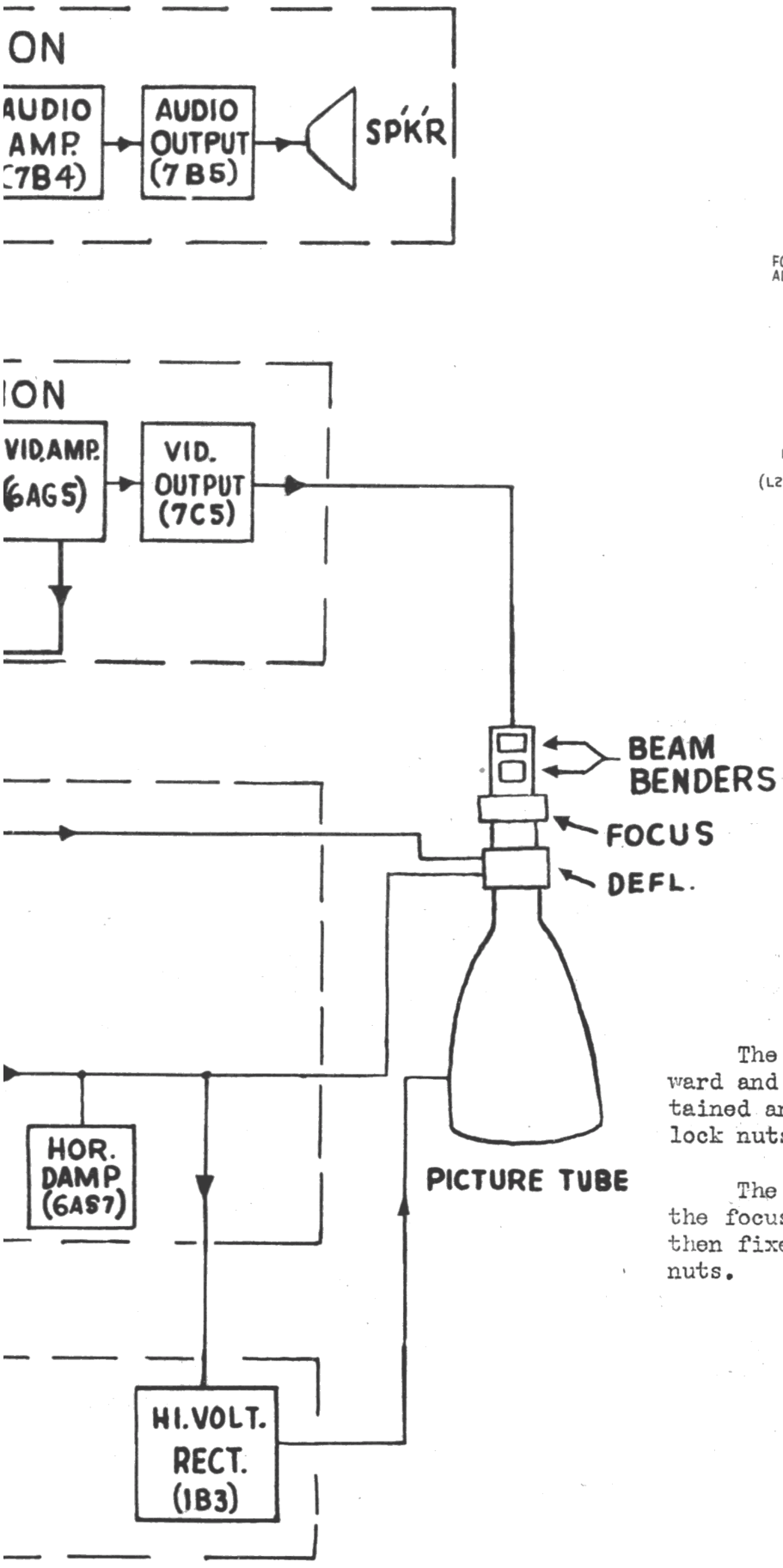
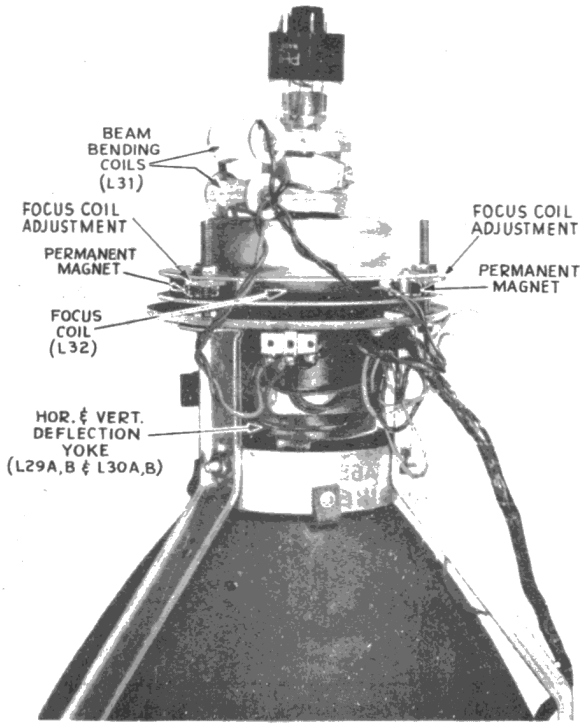

AUDIO SECTION
AFC
1ST AUDIO IF AMP (7W7)
2ND AUDIO IF AMP (7W7)
DISCR. (6AL5)
AUDIO AMP. (7B4)
L.F. ANT.
H.F. ANT.
VIDEO SECTION
RF AMP (6AG5)
MIXER (6AG5)
INPUT IF AMP. (6AG5)
1 VID. IF AMP. 6AG5
2 VID. IF AMP 6AG5
VID. DET. AVC RECT. (6AL5)
VID. AMP. (6AG5)
AVC
AVC AMP (7B6)
OSC 6J6
FRONT END
VERT. SYNC. AMP ½(7F8)
VERT. SW. GEN. (6SL7)
VERT. SW. OUTPUT (6K6)
SYNC. SEP. (7B5)
HOR. SYNC. AMP. ½(7F8)
HOR. SW. GEN (6SL7)
HOR. SW. OUTPUT (6BG6)
HOR. DAMP (6AS7)
SWEEP SECTION
TO ALL STAGES
AC 115 V
POWER SUPPLIES
LOW VOLT. RECT. 2(5U4)

PHILCO CORP.

MODELS 48-1000,48-1000-5,48-1050, 48-1050-5, CODE 125





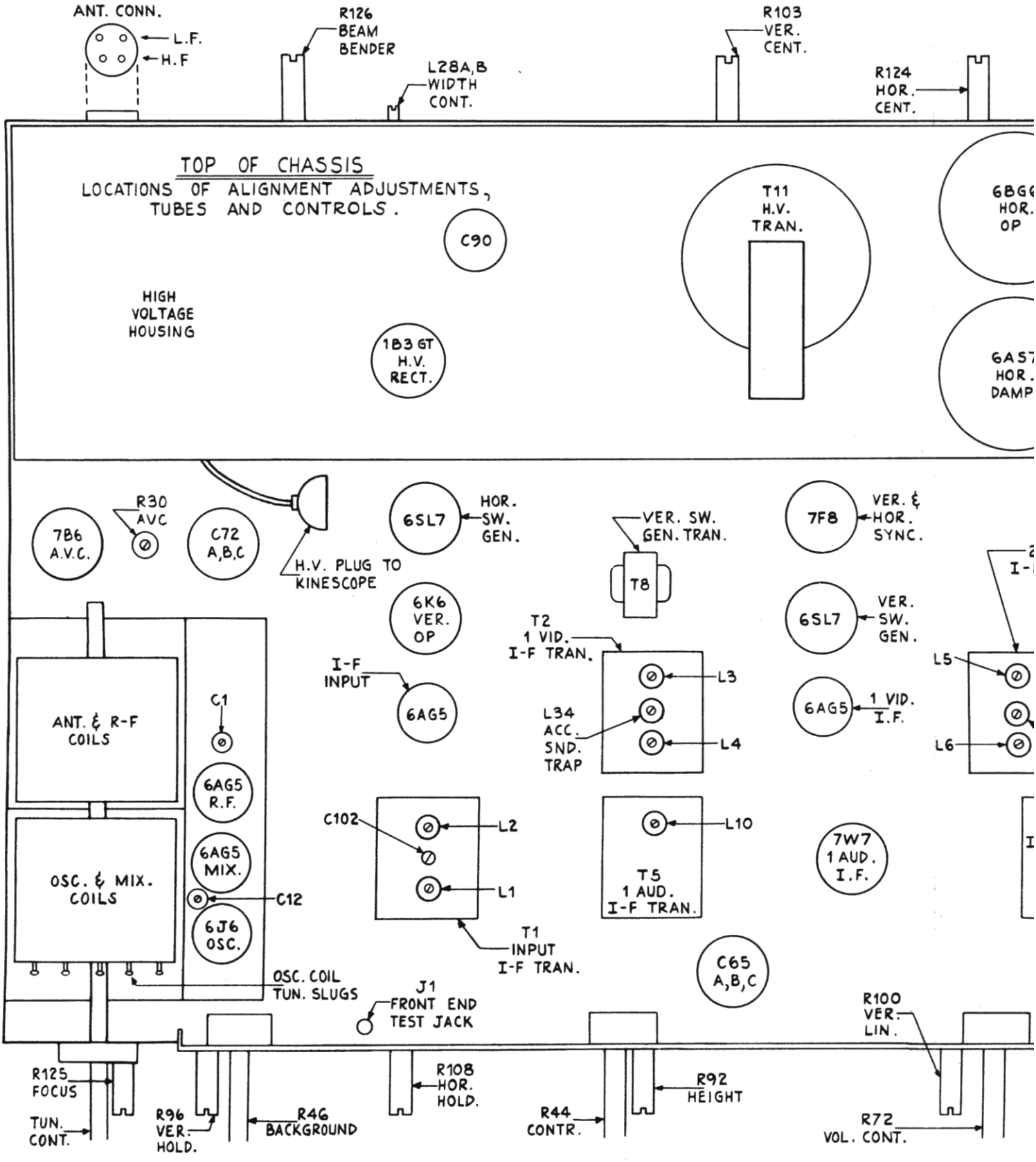
FOCUS ADJUSTMENT

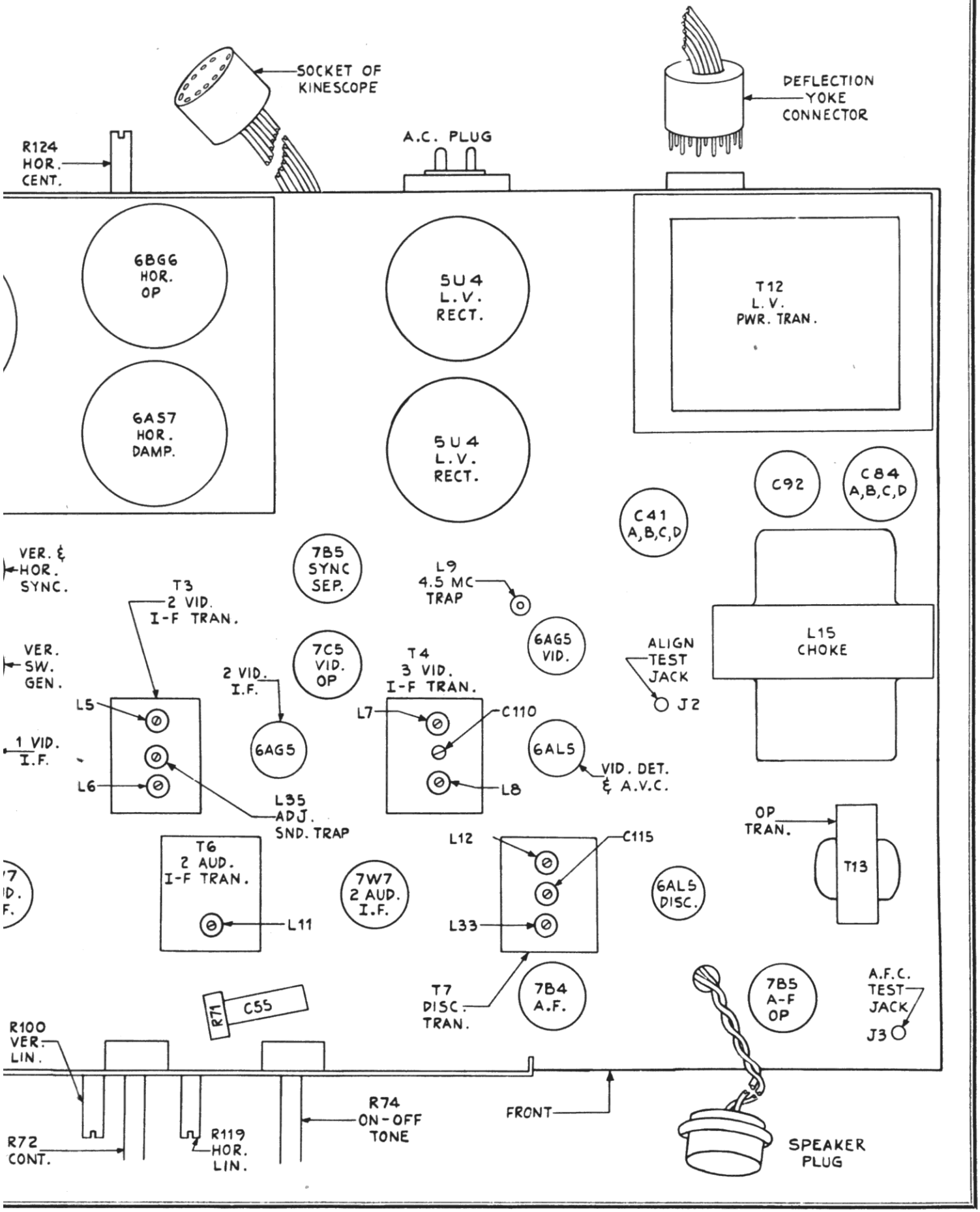
The beam bender coils are moved forward and backward until best results are obtained and are then locked in place by the lock nuts on the coil bands.

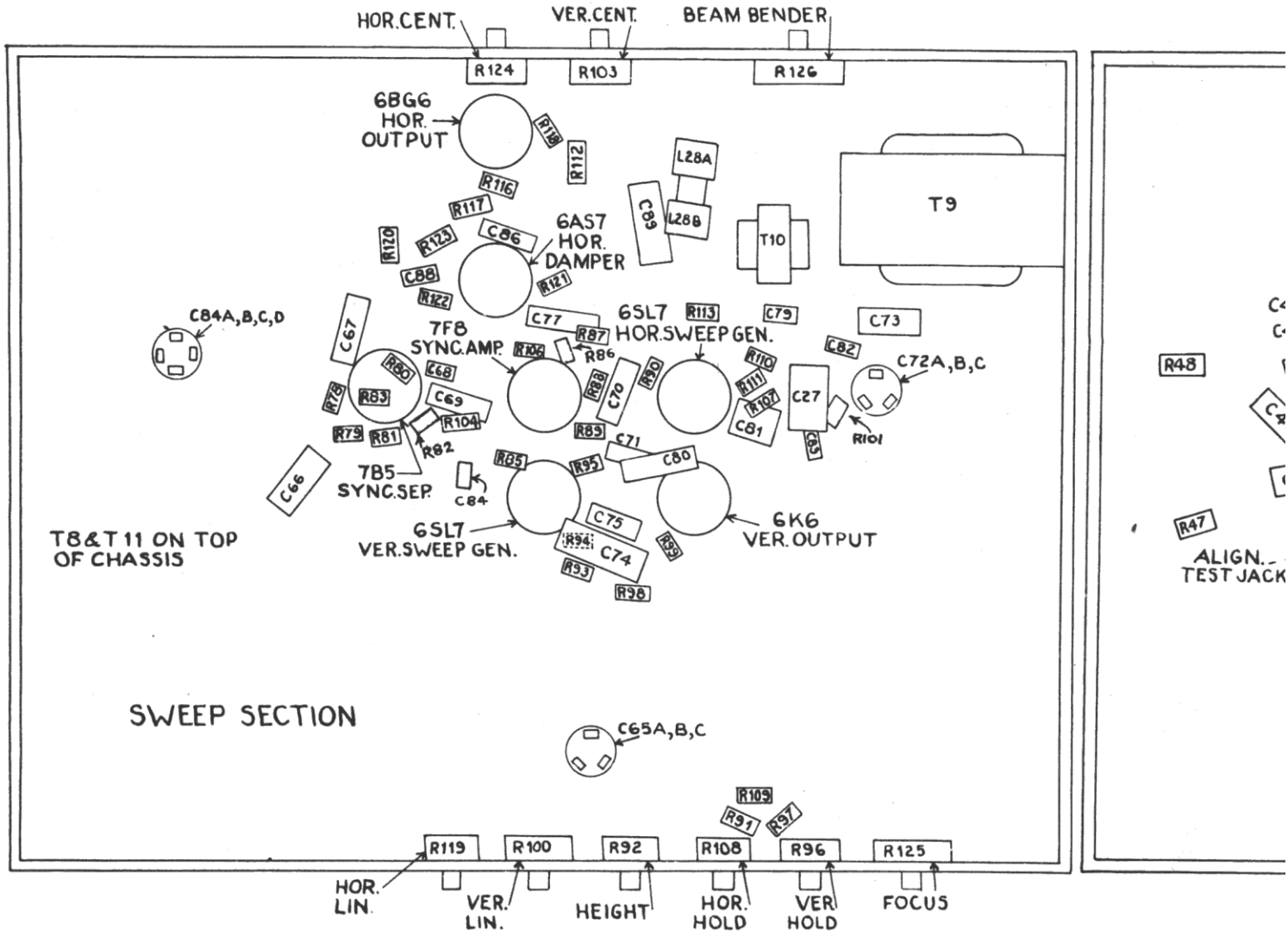
The three knurled nuts are loosened and the focus coil adjusted for best results and then fixed in place by tightening the lock nuts.

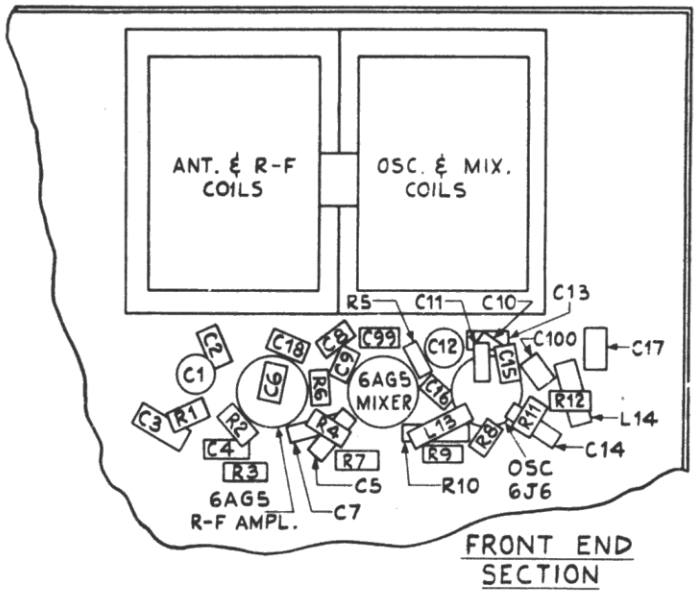
MODELS 48-1000,48-1000-5,48-1050,
48-1050-5, CODE 125

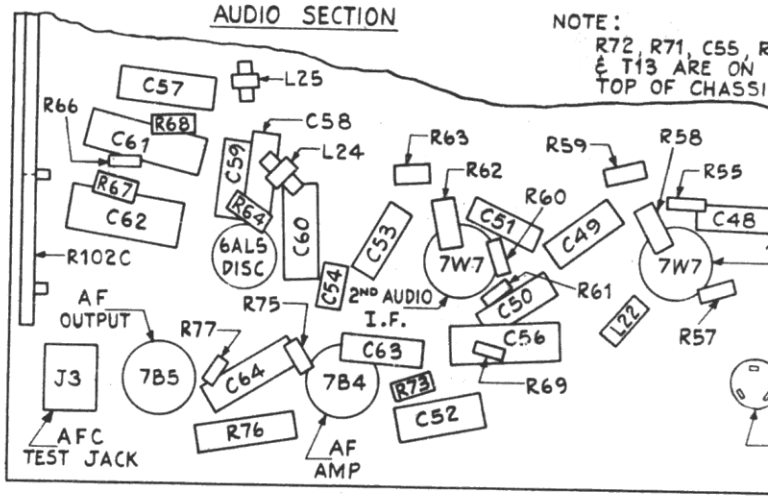
PHILCO CORP.




SOCKET OF KINESCOPE
DEFLECTION YOKE CONNECTOR
R124 HOR. CENT.
A.C. PLUG
6BG6 HOR. OP
6AS7 HOR. DAMP.
5U4 L.V. RECT.
5U4 L.V. RECT.
T12 L.V. PWR. TRAN.
C92
C84 A,B,C,D
C41 A,B,C,D
VER. & HOR. SYNC.
7B5 SYNC SEP.
L9 4.5 MC TRAP
T3 2 VID. I-F TRAN.
6AG5 VID.
ALIGN TEST JACK
J2
L15 CHOKE
VER. SW. GEN.
7C5 VID. OP
T4 3 VID. I-F TRAN.
2 VID. I.F.
L5
L7
C110
1 VID. I.F.
6AG5
6AL5
VID. DET. & A.V.C.
L6
L8
L35 ADJ. SND. TRAP
OP TRAN.
T13
T6 2 AUD. I-F TRAN.
L12
C115
7W7 2 AUD. I.F.
6AL5 DISC.
L11
L33
R71
C55
T7 DISC. TRAN.
7B4 A.F.
7B5 A-F OP
A.F.C. TEST JACK
J3
R100 VER. LIN.
R74 ON-OFF TONE
FRONT
R72 CONT.
R119 HOR. LIN.
SPEAKER PLUG

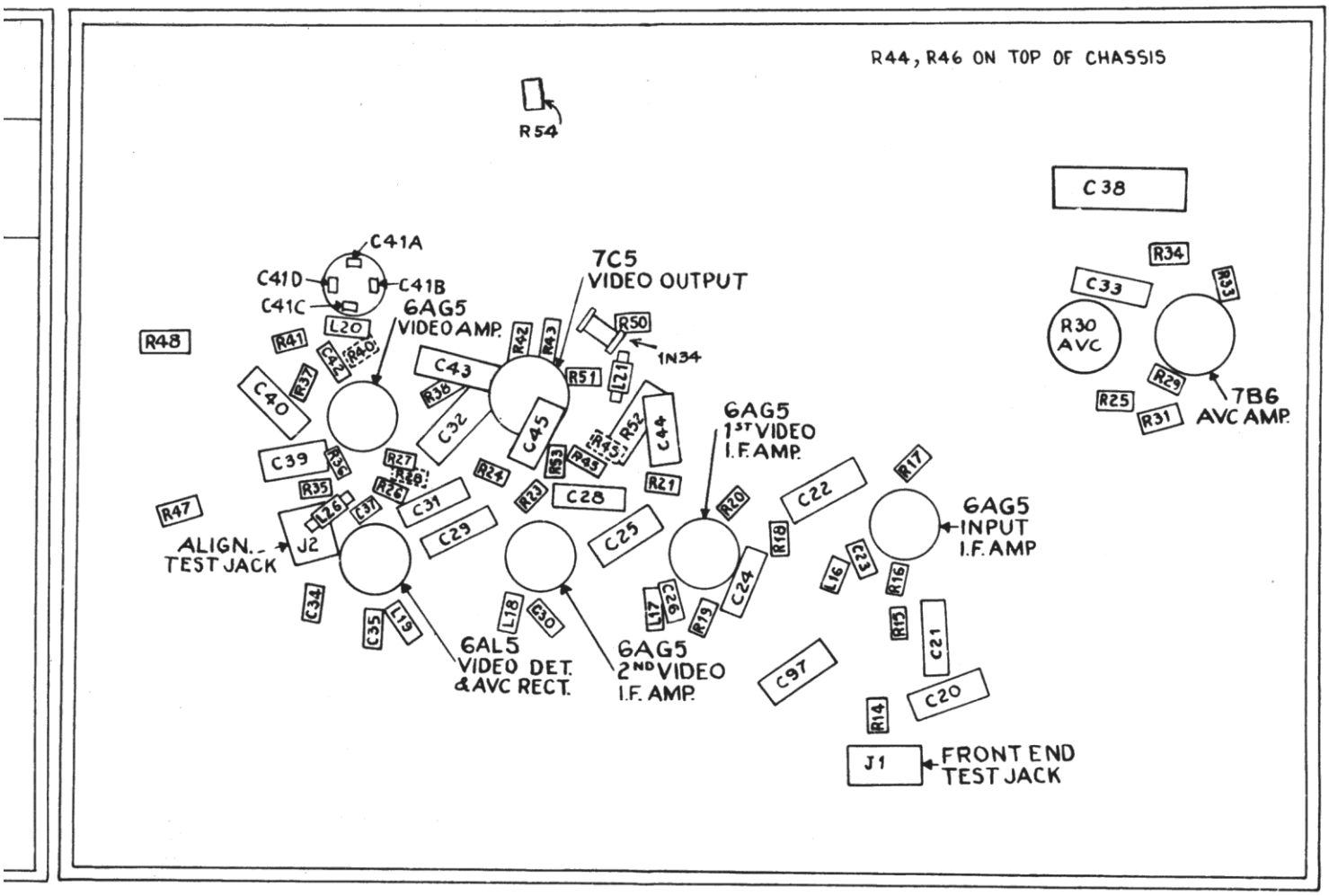

HOR.CENT.
VER.CENT.
BEAM BENDER
R124
R103
R126
6BG6
HOR.
OUTPUT
6AS7
HOR.
DAMPER
T9
T10
L28A
L28B
C84A,B,C,D
7F8
SYNC.AMP.
6SL7
HOR.SWEEP GEN.
C72A,B,C
R101
7B5
SYNC.SEP.
C84
6SL7
VER.SWEEP GEN.
6K6
VER.OUTPUT
T8&T11 ON TOP
OF CHASSIS
SWEEP SECTION
C65A,B,C
R119
R100
R92
R108
R96
R125
HOR.
LIN.
VER.
LIN.
HEIGHT
HOR.
HOLD
VER
HOLD
FOCUS


ANT. & R-F
COILS
OSC. & MIX.
COILS
6AG5
MIXER
6AG5
R-F AMPL.
OSC
6J6
FRONT END
SECTION

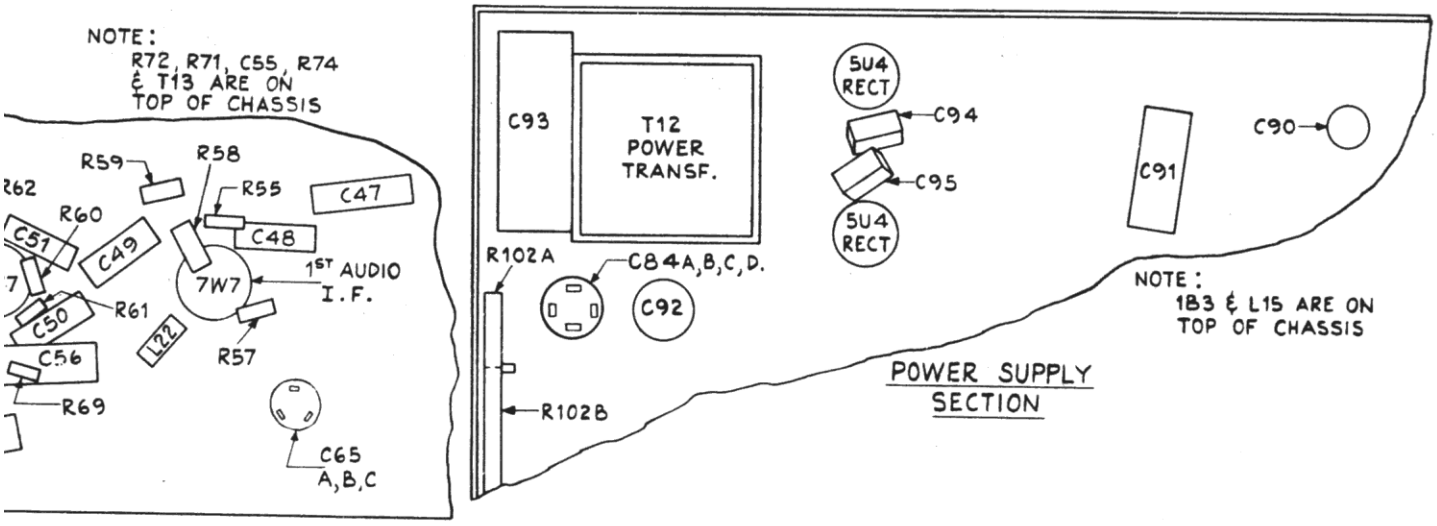

AUDIO SECTION
NOTE:
6AL5
DISC
7W7
7W7
2ND AUDIO
I.F.
AF
OUTPUT
7B5
7B4
J3
AFC
TEST JACK
AF
AMP

PHILCO CORP.

MODELS 48-1000,48-1000-5,48-1050,
48-1050-5 CODE 125



VIDEO SECTION

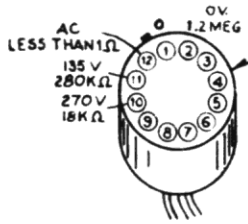


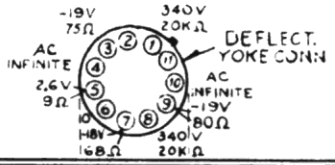
MODELS 48-1000,48-1000-5,48-1050,
48-1050-5, CODE 125

PHILCO CORP.

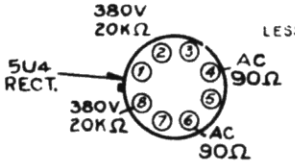
PHILCO 48-1000

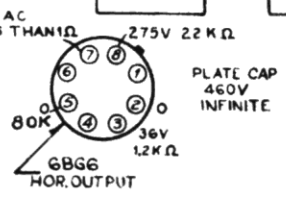
TUBE	PIN											
	1	2	3	4	5	6	7	8	9	10	11	
10BP4 KINESCOPE	0	0	-	-	-	-	-	-	-	270V	135V	
CONNECTOR	340V	-	-19V	AC	2.6V	0	-18V	340V	-19V	AC	-	

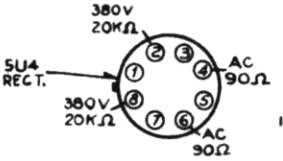


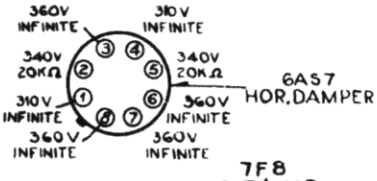


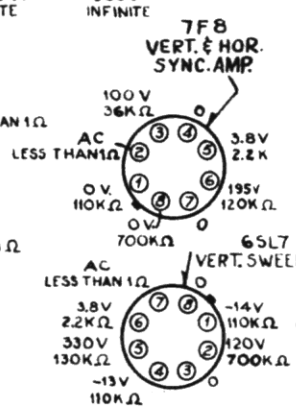
L.V.
POWER TRANS.

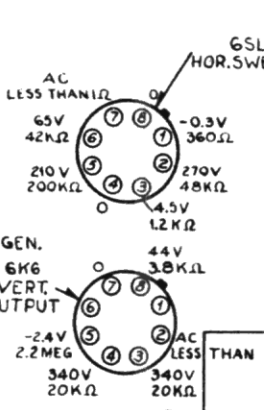


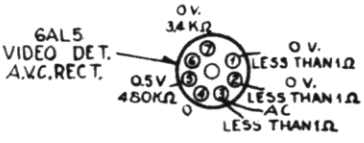


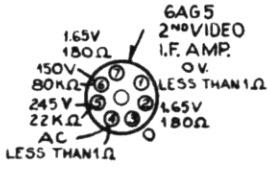


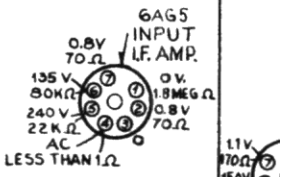


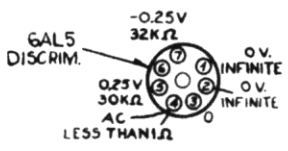


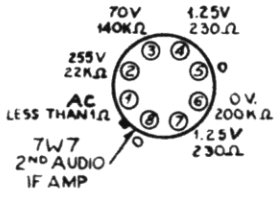


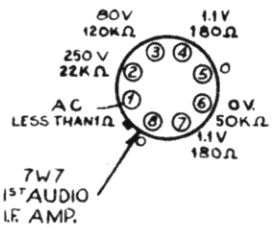


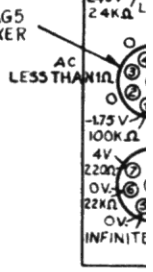


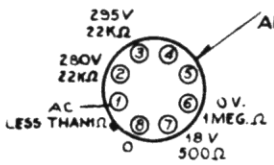


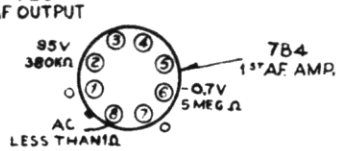












CHASSIS-BOTTOM VIEW

FRONT

PHILCO CORP.

VOLTAGES IN TABULAR FORM ARE TAKEN WITH A 20,000 OHM PER VOLT METER

NOTES:-

VOLTAGES SHOWN ON DRAWING ARE VTVM READINGS.

BLANK PINS SHOW NO CONNECTIONS.

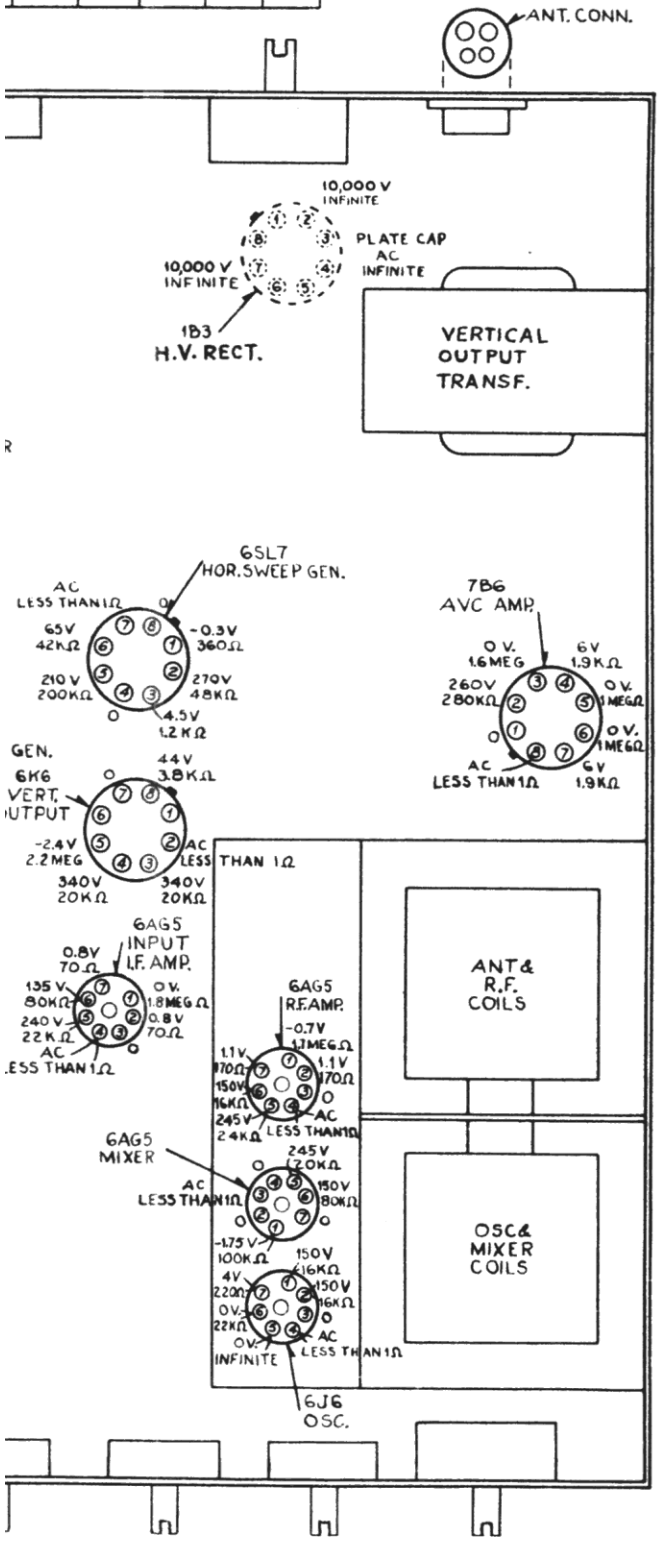
ALL VOLTAGE AND RESISTANCE MEASUREMENTS ARE MADE WITH RESPECT TO CHASSIS GROUND AND WITH A LINE VOLTAGE OF 117 VOLTS.

ALL OPERATING CONTROLS ARE SET AT MAXIMUM COUNTER CLOCKWISE, EXCEPT ON-OFF SWITCH ON TONE CONTROL WHICH IS SET AT "ON" POSITION.

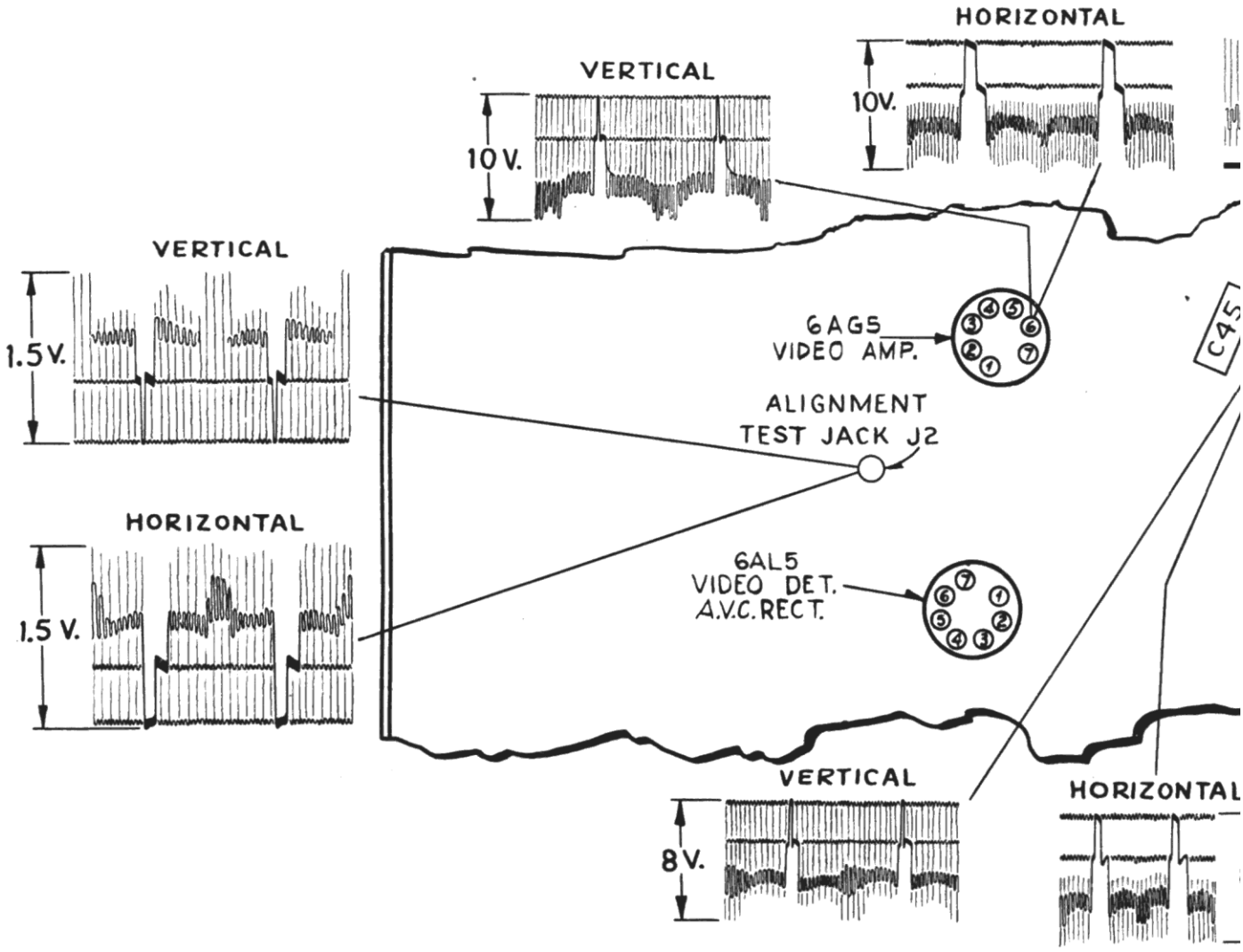
SET IS TUNED ON CHANNEL 3.

ALL SCREW DRIVER ADJUSTMENTS ARE IN NORMAL OPERATING POSITIONS.

8	9	10	11	12
-	-	270V	135V	AC
340V	-19V	AC	-	

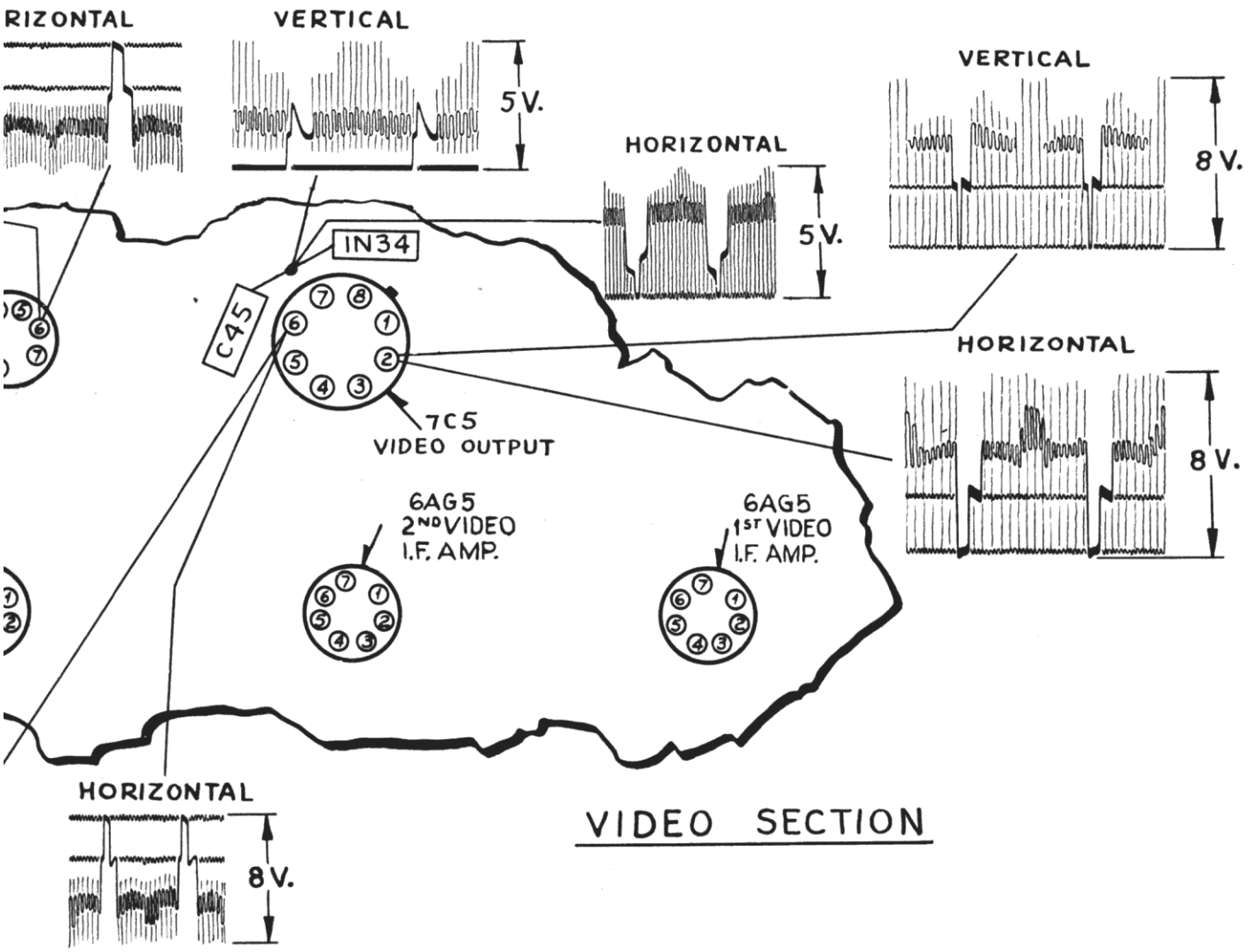


TUBE	PIN 1	2	3	4	5	6	7	8	PLATE CAP.
6A65 RF AMP	0	0.5v	0	AC	245V	150V	0.5V		
6J6 OSC	100V	100V	0	AC	0	0	3.6V		
6AG5 MIXER	-0.6V	100V	0	AC	0	0	3.6V		
6AG5 INPUT IF AMP	0	0.8V	0	AC	340V	135V	0.8V		
6AG5 1st VIDEO IF AMP	0	0.75V	0	AC	235V	125V	0.75V		
6AG5 2nd VIDEO IF AMP	0	1.5V	0	AC	245V	150V	1.5V		
6AL5 VIDEO DET & AVC RECT	0	0	AC	0	0.23V	-	0		
7B6 AVC AMP	0	260V	0	6V	0	0	6V	AC	
6AG5 VIDEO AMP	0	1.5V	0	AC	215V	125V	1.5V		
7C5 VIDEO OUTPUT	0	300V	220V	-	-	0	15V	AC	
7H7 1st AUDIO IF AMP	AC	250	80V	1.1V	0	0	1.1V	0	
7J7 2nd AUDIO IF AMP	AC	255	70V	1.25V	0	0	1.25V	0	
6AL5 DISCRIMINATOR	0	0	0	AC	0.1V	-	-0.1V		
7B4 1st AF AMP	0	95V	-	-	-	-0.76V	0	AC	
7B5 AUDIO OUTPUT	AC	280V	295V	-	-	0	18V	0	
7S5 SYNC SEP.	AC	1.6V	3.0V	-	340V	0	0	0	
7F8 VERT & HOR SYNC AMP.	0	AC	100V	0	3.8V	195V	0	0	
6SL7 VERT SWEEP GEN.	-14V	120V	0	-13V	330V	3.8V	AC	0	
6SL7 HOR. SWEEP GEN.	-0.3V	270V	4.5V	0	210V	65V	AC	0	
6L6 VERT OUTPUT	-	AC	340V	340V	0	-	0	44V	
6BG6 HOR. OUTPUT	-	0	30V	-	0	-	AC	275V	460V
6A57 HOR DAMPER	310V	340V	360V	310V	340V	360V	360V	360V	
5U4 RECT.	-	380V	-	AC	-	AC	-	350V	
5U4 RECT.	-	380V	-	AC	-	AC	-	380V	
1B3 HV.RECT.	-	10000V	-	-	-	-	10000V	-	AC



The waveforms shown were taken with an RCA WO-79A Oscilloscope. This oscilloscope has a wide-band vertical amplifier which is desirable when observing waveforms. An antenna was connected to the receiver and the receiver was tuned to a station on the air at the time.

The voltages given for the different waveforms are those obtained when the input signal is sufficient to produce a 1.5 volt signal at the output of the video detector. All voltages given with reference to waveforms are peak-to-peak voltages. For several test-points, two waveforms are shown, one marked horizontal and the other vertical. These are the same signal, but the oscilloscope is adjusted so that either the horizontal or the vertical sync pulses



VIDEO SECTION

s can be observed. For the horizontal pattern, the oscilloscope sweep is set at half the frequency of the horizontal sync pulses (15,750 cps) and for the ver-

er tical pattern, the oscilloscope sweep is set at half the frequency of the vertical sync pulses (60 cps). This will produce two cycles of each pulse on the

en oscilloscope screen

f The background pattern observed on some of the waveforms is due to the

k- picture content of the signal. This will change with the picture being trans-

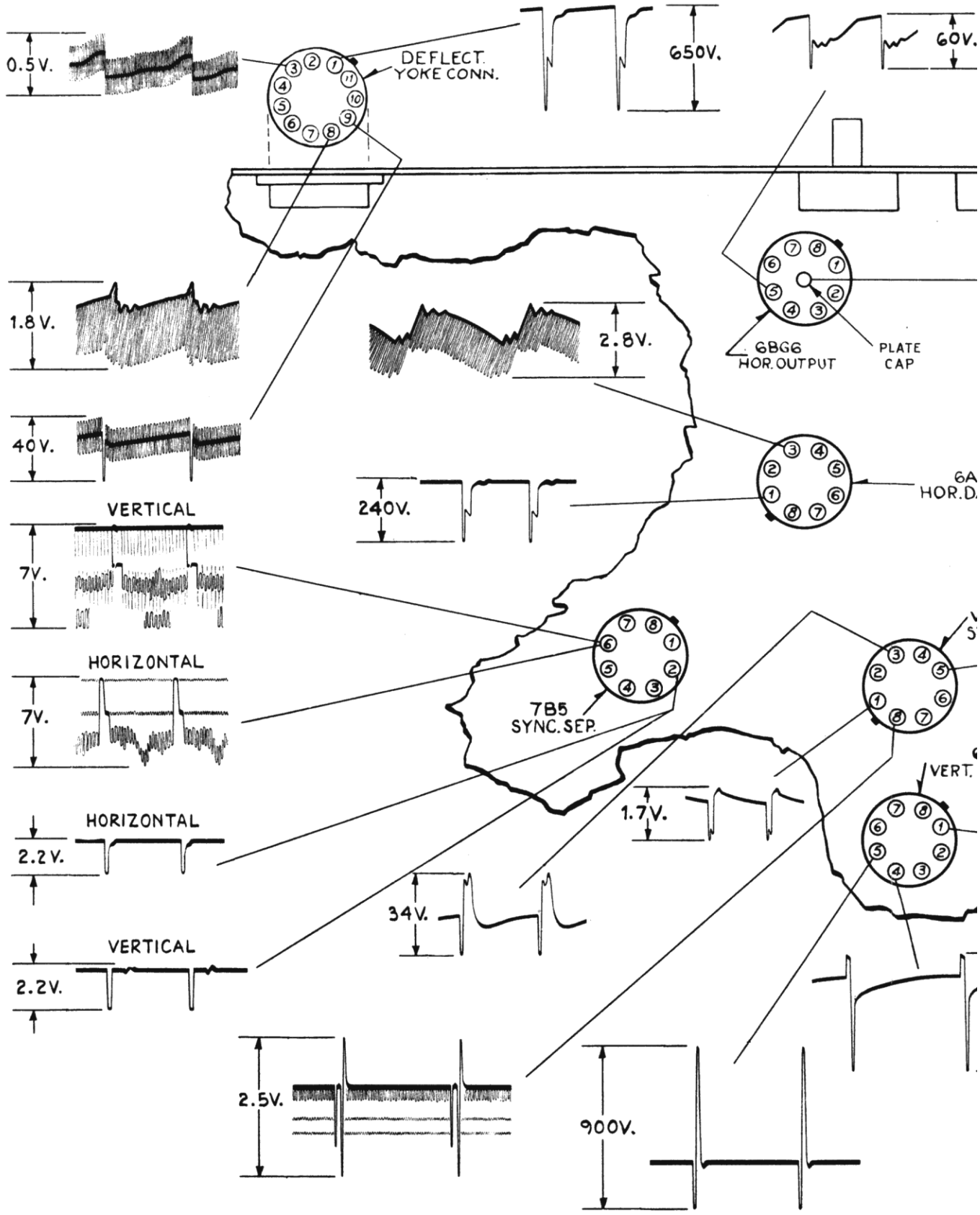
rked mitted at the time, and is not especially significant. As a rule, the sync

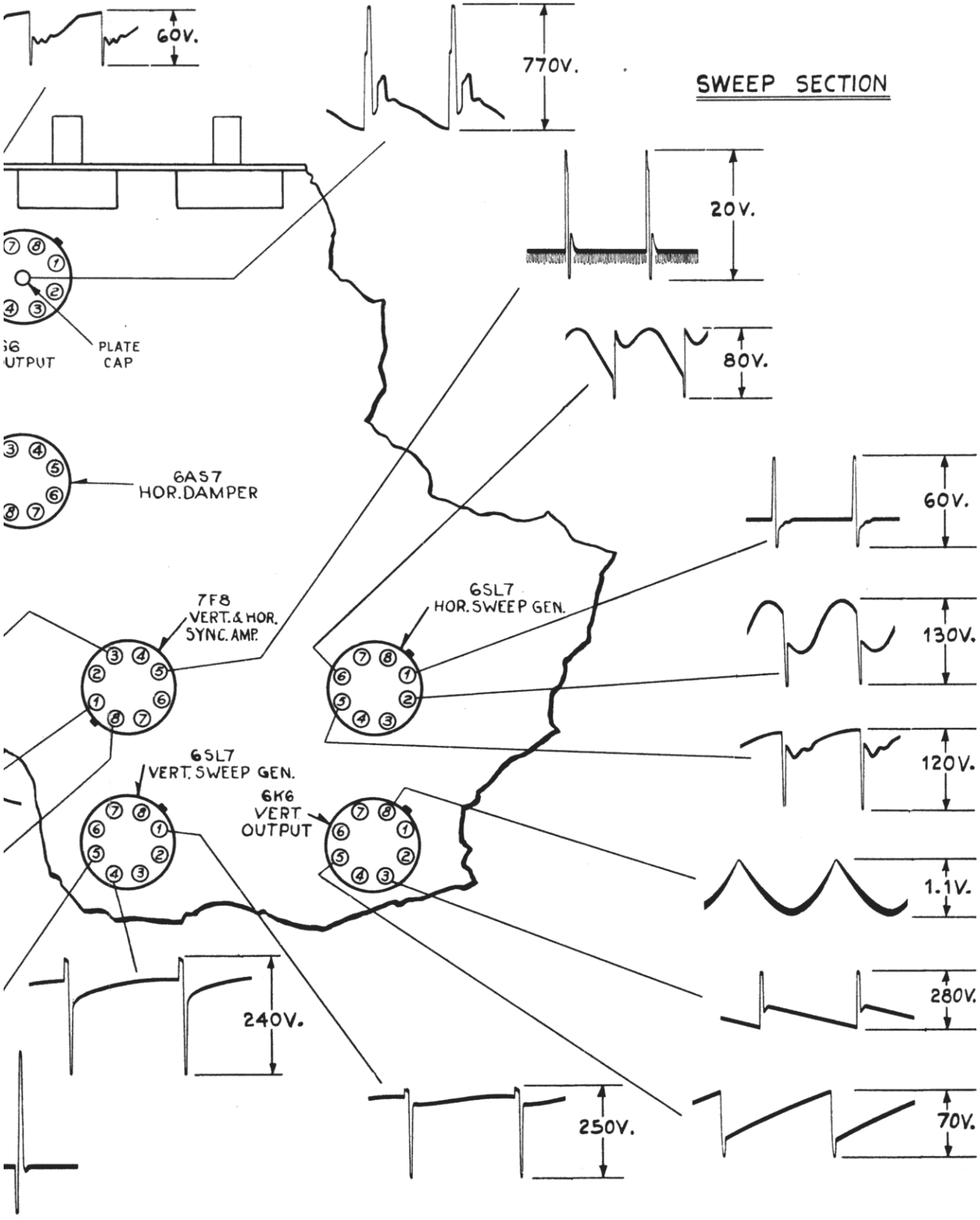
l- pulses and sweep signals at the various points in the circuit will be more

es helpful in the servicing of a television receiver, than the picture signal.

MODELS 48-1000,48-1000-5,48-1050,
48-1050-5, CODE 125

PHILCO CORP.




SWEEP SECTION
60V.
770V.
20V.
80V.
PLATE CAP
6A S7 HOR. DAMPER
7F8 VERT. & HOR. SYNC. AMP.
6SL7 HOR. SWEEP GEN.
6SL7 VERT. SWEEP GEN.
6K6 VERT OUTPUT
60V.
130V.
120V.
1.1V.
280V.
240V.
250V.
70V.

PHILCO CORP. MODELS 48-1000,48-1000-5, 48-1050,48-1050-5, CODE 125

ALIGNMENT PROCEDURE

TEST EQUIPMENT

CATHODE RAY OSCILLOSCOPE - Any good scope will be satisfactory for alignment. However for observing waveforms at the different test points in the receivers, an oscilloscope with a wide-band vertical amplifier response (about 2.5 mc's) should be used.

SWEEP GENERATOR - The signal generator should cover the following range of center frequencies with the indicated sweep widths.

18 - 30 mc with a 10 mc sweep
44 - 88 mc with a 10 mc sweep
174 - 216 mc with a 10 mc sweep
4.5 mc with a 2 mc sweep

The output of the signal generator should be continuously variable with a maximum output of at least 0.1 volt.

A horizontal sweep output from the sweep signal generator to the oscilloscope is desirable.

MARKER SIGNAL GENERATOR

This signal generator should cover the following frequency ranges:

18 - 30 mc
44 - 88 mc
174 -216 mc
2 - 6 mc

The output of this signal generator should be continuously variable with a maximum output of at least 0.1 volt.

Any AM signal generator with an accurate frequency calibration may be used to obtain the marker required for response patterns.

VACCUM TUBE VOLTMETER - A VTVM with a low d-c volt scale of approximately 3 volt and at least a 10-megohm input resistance is desirable. A VTVM with a zero-center movement is useful.

AUDIO I-F ALIGNMENT

1. Set marker generator at 22.1 mc and loosely couple to grid of input IF amp (pin #1 6AG5). Connect VTVM to AFC Test Jack (J3). If necessary to obtain reading unbalance discriminator slightly by adjusting L33.
2. Adjust L12, L11 and L10 (in given order) for maximum reading.
3. Adjust L33 for zero indication.
4. Without changing setting of marker signal generator add AM. Connect scope to Align Test Jack (J2). Adjust accompanying sound trap (L34) for minimum output on scope.
5. Set marker generator for 28.1 mc with modulation and adjust adjacent sound trap (L35) for minimum output on scope.
6. Loosely couple sweep generator to grid of input IF Amp. (pin #1 6AG5), and set it at 22.1 mc with a 2 mc sweep. Also loosely couple marker generator to same point. (Note: Do not directly connect the two generators) Connect scope to AFC Test Jack (J3). Adjust C115 for symmetrical response as shown in Fig. A. If necessary retouch L12 and L33 for proper response.

For alignment waveforms see p. 1-15,16

MODELS 48-1000,48-1000-5, 48-1050,48-1050-5 CODE 125

PHILCO CORP.

VIDEO I.F. ALIGNMENT

1. Set the sweep generator to 25 mc with a 10 mc sweep and connect to grid of 2nd Video IF Amp. (pin #1 6AG5). Loosely couple marker generator to grid of mixer (pin #1 6AG5). Connect vertical input of oscilloscope to the alignment Test Jack (J2). Connect the sweep output of sweep generator to the horizontal input of scope.

2. Adjust C110 to obtain just one peak on response curve.

3. Set marker frequency to 27.1 mc and adjust L7 and L8 for peak.

4. Set marker to 23.25 mc and adjust C110 for a peak.

5. If necessary readjust L7 and L8 for equal peak amplitudes as shown in Fig. B.

6. With scope and marker generator connected as in step 1, connect sweep gen. to grid of 1st Video IF Amp.(pin #1 6AG5). Adjust L5 and L6 to obtain Fig. C.

7. With scope and marker generator connected as in step 1, connect sweep generator to grid of Input IF Amp. (pin 1 6AG5) and adjust L3 and L4 to obtain Fig. D.

8. With the scope and marker generator connected, as in step 1, connect sweep generator to grid of mixer (pin #1 6AG5) and adjust L1, L2 and C102 to obtain Fig. E. It may be necessary to retouch L3 and L4 to obtain this response.

VIDEO TRAP ADJUSTMENT

Connect the scope to the plate of the video output tube (pin #2 7C5). Set marker generator at 4.5 mc with maximum output and connect to grid of video amplifier (pin #1 6AG5). Adjust L9 for minimum signal on scope.

FRONT END ALIGNMENT

1. Set marker generator to sound carrier frequency of channel being aligned and connect to antenna terminals. Connect VTVM to AFC Test Jack (J3). Place a jumper to ground at junction of R68 and C57 to remove AFC from oscillator. Adjust osc. slug for zero indication of VTVM. Important: Use least input signal that will give a readable indication on VTVM.

2. Set tuning control to channel 9. Connect the sweep generator to antenna terminals and set at 189 mc with a 10 mc sweep. Loosely couple the marker generator to the antenna. Adjust C1 and C12 for response shown in Fig. F.

AVC ADJUSTMENT

Set tuning control to channel 9. Set marker generator to 193.25 mc (pix carrier), modulated 30% with 400 cps with 500 uv signal output, and connect to antenna terminals. Connect scope to align test Jack (J2). Adjust R30 for a peak-to-peak signal on scope of 0.6 v.

NOTE:
UNLESS OTHERWISE SPECIFIED,
COND. VALUES ARE IN μf.

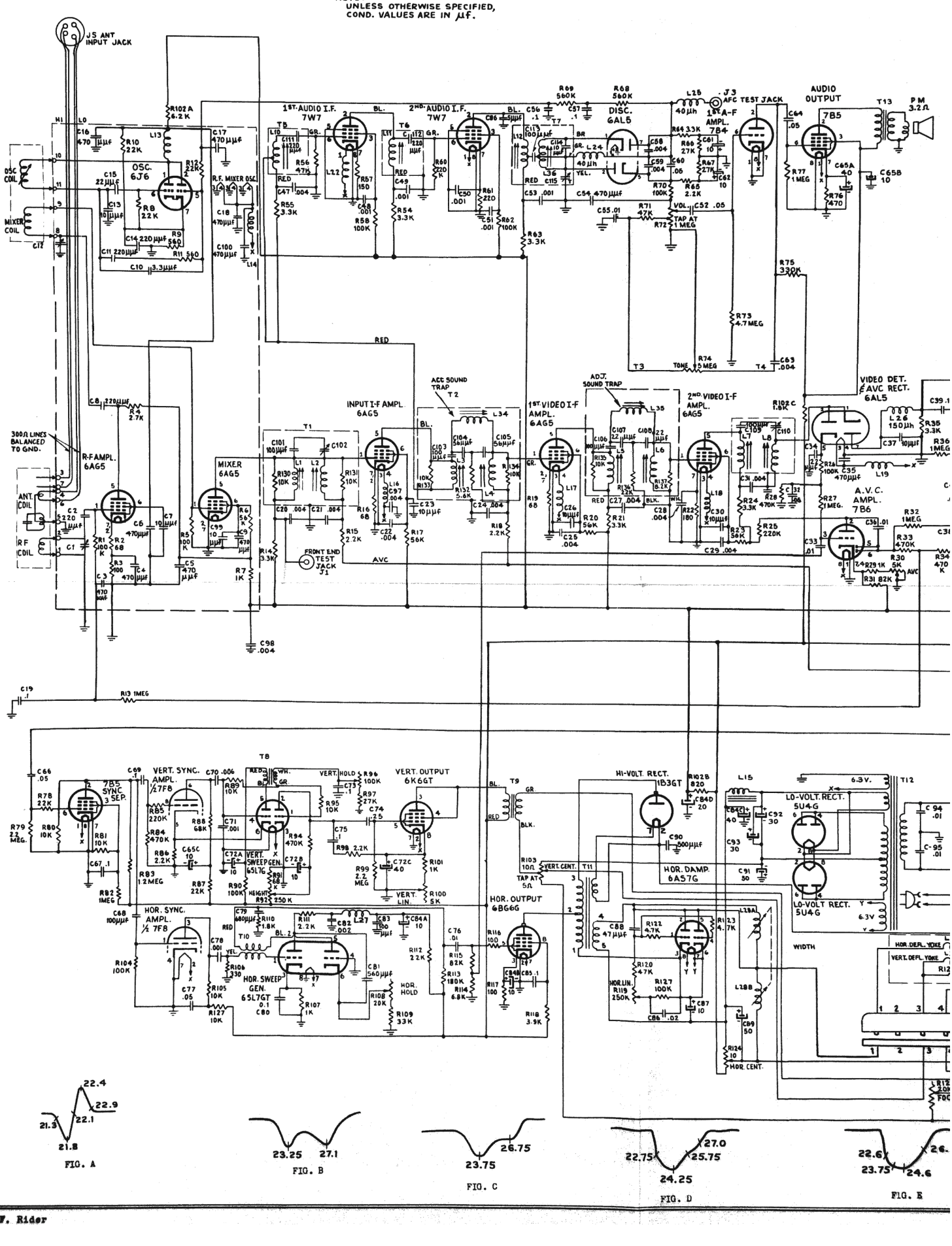


FIG. A

FIG. B

FIG. C

FIG. D

FIG. E

PHILCO CORP.

MODELS 48-1000,48-1000-5,48-1050, 48-1050-5, CODE 125

RWISE SPECIFIED, S ARE IN μf.

Channel No.	Band (mc.)	Video-Carrier Frequency (mc.)	Audio-Carrier Frequency (mc.)	Local-Osc. Frequency (mc.)
1	44-50	45.25	49.75	71.85
2	54-60	55.25	59.75	81.85
3	60-66	61.25	65.75	87.85
4	66-72	67.25	71.75	93.85
5	76-82	77.25	81.75	103.85
6	82-88	83.25	87.75	109.85
7	174-180	175.25	179.75	201.85
8	180-186	181.25	185.75	207.85
9	186-192	187.25	191.75	213.85
10	192-198	193.25	197.75	219.85
11	198-204	199.25	203.75	225.85
12	204-210	205.25	209.75	231.85
13	210-216	211.25	215.75	237.85

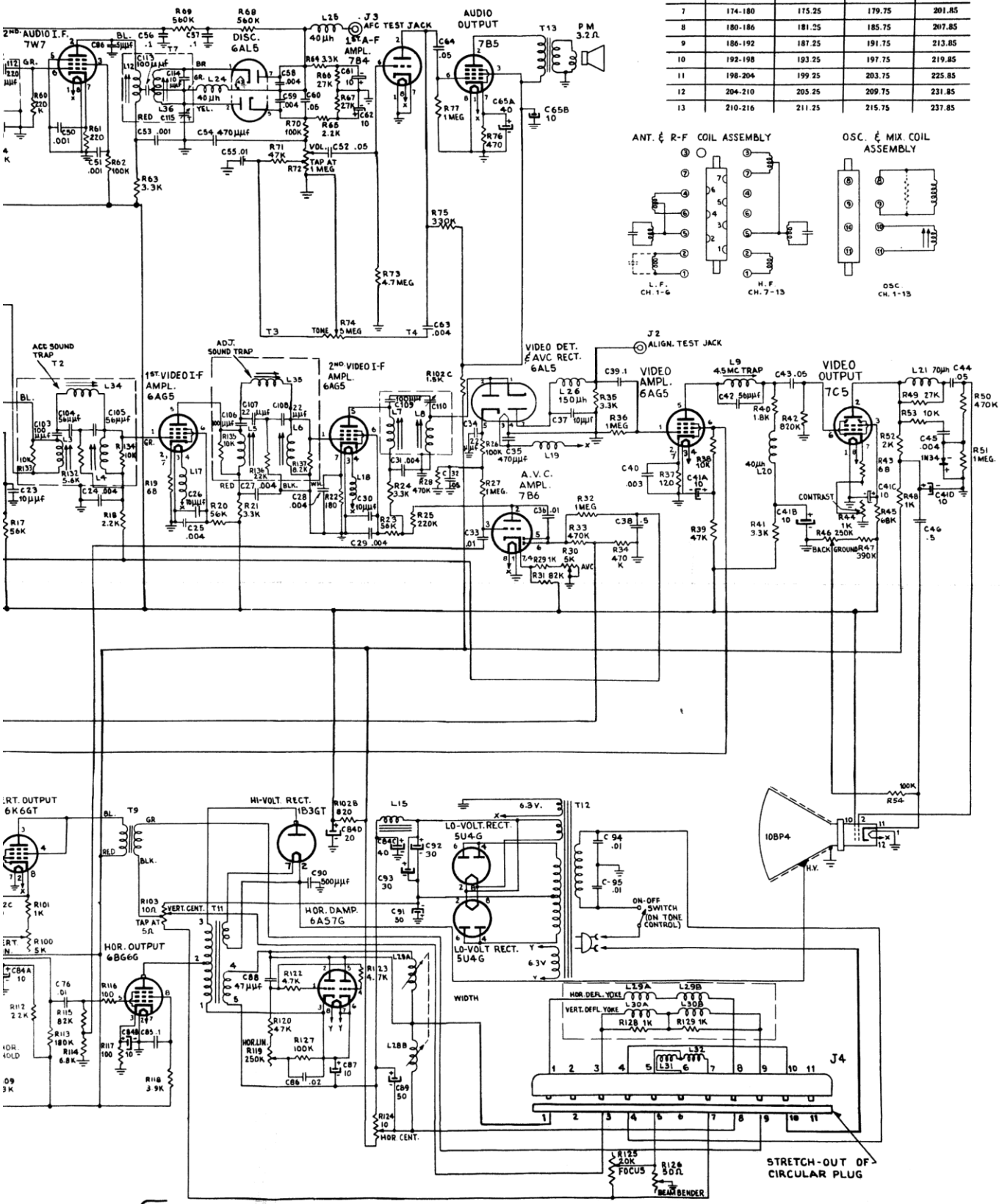


FIG. C

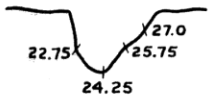


FIG. D

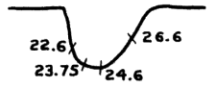


FIG. E

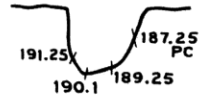


FIG. F

MODEL 48-1000, CODES 121, 125, PRODUCTION CHANGES

PHILCO CORP.

All Model 48-1000 television receivers are code 121 unless a different code number is stamped next to the model number on the rear of the chassis.

To determine the run number of a set, examine the series of numbers stamped in ink on the rear of the chassis. The last digit of the series gives the run number. For instance, if the number is 1111374, the set is run # 4.

CORRECTIONS TO REPLACEMENT PARTS LIST

SECTION 2

C211 should be part no. 61-0120*.

SECTION 3

R303 should be part no. 66-3228540*.
R304 should be part no. 66-1223340.
R307 should be part no. 66-3228540*.
R308 should be part no. 66-5103340*.
R309 should be part no. 66-4108540*.
R310 should be part no. 66-0683340.
R311 should be part no. 66-1103340.
R313 should be part no. 66-4108540*.
R315 should be part no. 66-2108540*.
Z300

Channel 1 osc. turret coil, part no. 32-4128-1, and antenna turret coil, part no. 32-4115-1, are not yet available because Channel 1 has not been released for commercial broadcasting.

SECTION 4

C414 should be part no. 61-0120*.
C416 should be part no. 61-0120*.
R405 should be part no. 66-0683340*.
R408 should be part no. 66-0683340*.
R432 should be part no. 66-0683340*.

SECTION 5

C517 should be part no. 61-0120*.
L503 should be part no. 32-4163 (brown dot), 32-4163-1 (black dot), or 32-4163-2 (red dot).

MISCELLANEOUS

CRT socket should be part no. 27-6229.

ADDITIONS TO REPLACEMENT PARTS LIST

SECTION 4

	Service Part No.
D-c-restorer, crystal, 1N34	54-6001

MISCELLANEOUS

Contact panel, 4-terminal, oscillator coil	76-2678
Contact panel, 7-terminal, aerial coil	76-2664
Dust cover, glass, plain (no etching)	54-7340
Dust cover, glass, etched (PHILCO TELEVISION)	27-5949
Mask, picture tube, plain (no stencil)	54-4451
Mask, picture tube, stencilled (PHILCO TELEVISION)	54-4522
Spring, station-selector knob	56-2351-2

Production Changes — Code 121

ITEM NO.	DESCRIPTION OF CHANGE	FIGURES OF PR-1103 AFFECTED	CHANGE EFFECTIVE	NEW OR ADDED PART NO.	OLD OR REMOVED PART NO.	REASON
1	R419 removed.	17, 27	Run #2		66-3478540	To allow test-signal input at J401.
2	.004-mf. by-pass condenser (C427) added at B+ end of R403.	17, 27	Run #2	61-0179*		To reduce v-i-f oscillation.
3	10-mmf. by-pass condenser (C428) added parallel to C406.	17, 27	Run #2	62-010009001		To reduce v-i-f oscillation.
4	R523 removed.	19, 27	Run #2		66-2105340	To improve vertical sweep.
5	C510 removed.	19, 27	Run #2		30-2417-6	To improve vertical sweep
6	10-mf. condenser (C320) added at plate end of R305.	15, 27	Run #2	30-2417-6		To prevent motorboating on high channels.
7	470-mmf. condenser (C321) added at pin 4 of r-f amplifier.	15, 27	Run #2	62-147001001		To prevent motorboating on high channels.
8	30-mf. condenser (C106) added parallel to C102.	21, 27	Run #3	30-2568-9		To reduce operating temperature of C102.
9	R201 changed to 47,000 ohms.	18, 27	Run #4	66-3473340	66-4228540	To improve a-i-f response.
10	Two 100,000-ohm screen resistors (R222 and R223) added at first and second a-i-f tubes.	18, 27	Run #4	66-4108540 (each)		To improve a-i-f response.
11	R202 changed to 150 ohms.	18, 27	Run #4	66-1153340	66-0683350	To improve a-i-f response.
12	R206 changed to 220 ohms.	18, 27	Run #4	66-1228340	66-1158340	To improve a-i-f response.
13	C207 changed to .004 mf.	18, 27	Run #4	61-0179*	62-147001001	To improve a-i-f response.
14	Discriminator filament choke (L205) added at pin 4 of discriminator.	18, 27	Run #6 and #7	32-4112-4		To reduce harmonic beat.
15	Z401 changed.	17, 27	Run #6 and #7	32-4213	32-4094	Slug tuning to aid in alignment.
16	Z402 changed.	17, 27	Run #6 and #7	32-4213-1	32-4094-1	Slug tuning to aid in alignment.
17	L503 changed.	19, 27	Run #6 and #7	32-4163-2	32-4163-1	To improve width adjustment.

PHILCO CORP. MODEL 48-1000, CODES 121, 125, PRODUCTION CHANGES

Production Changes—Code 121

ITEM NO.	DESCRIPTION OF CHANGE	FIGURES OF PR-1103 AFFECTED	CHANGE EFFECTIVE	NEW OR ADDED PART NO.	OLD OR REMOVED PART NO.	REASON
18	Z202 changed.	18, 27	Run #6 and #7	32-4214	32-4101-1	To improve a-i-f stability.
19	5-mmf. condenser (C223) added at pin 2 of 2nd a-i-f tube.	18, 27	Run #6 and #7	32-1224-5		To improve a-i-f stability.
20	T503 changed.	19, 27	Run #6 and #7	32-8331	32-8305	To reduce high-voltage breakdown.
21	R528 rewired as in figure 2.	19, 26, 27	Run #6 and #7	No change		To improve horizontal-sync stability.
22	R529 changed to 330,000 ohms.	19, 26, 27	Run #6 and #7	66-4333340*	66-4103340*	To improve horizontal-sync stability.
23	R530 changed to 220 ohms.	19, 26, 27	Run #6 and #7	66-1223340*	66-2223340*	To improve horizontal-sync stability.
24	R531 changed to 33,000 ohms and rewired as in figure 2.	19, 26, 27	Run #6 and #7	66-3333340*	66-4563340*	To improve horizontal-sync stability.
25	R532 changed to 25,000 pot. and rewired as in figure 2.	19, 26, 27	Run #6 and #7	33-5539-28	33-5539-13	To improve horizontal-sync stability.
26	R533 changed to 100,000 ohms and rewired as in figure 2.	19, 26, 27	Run #6 and #7	66-4103340*	66-4393340*	To improve horizontal-sync stability.
27	R549 changed to 1800 ohms.	19, 26, 27	Run #6 and #7	66-2183340*	66-2223340*	To improve horizontal-sync stability.
28	R550, 560,000 ohms, added as in figure 2.	19, 26, 27	Run #6 and #7	66-4563340*		To improve horizontal-sync stability.
29	R551, 1000 ohms, added as in figure 2.	19, 26, 27	Run #6 and #7	66-2103340*		To improve horizontal-sync stability.
30	R552, 2200 ohms, added as in figure 2.	19, 26, 27	Run #6 and #7	66-2223340*		To improve horizontal-sync stability.
31	C514A rewired as in figure 2.	19, 26, 27	Run #6 and #7	No change		To improve horizontal-sync stability.
32	C515 changed to .1 mf. and rewired as in figure 2.	19, 26, 27	Run #6 and #7	61-0113*	60-10825401*	To improve horizontal-sync stability.
33	C516 changed to 680 mmf. and rewired as in figure 2.	19, 26, 27	Run #6 and #7	60-10685401*	60-10825401*	To improve horizontal-sync stability.
34	C517 rewired as in figure 2.	19, 26, 27	Run #6 and #7	No change		To improve horizontal-sync stability.
35	C523, 2000 mmf., added as in figure 2.	19, 26, 27	Run #6 and #7	60-20205304*		To improve horizontal-sync stability.
36	C524, 560 mmf., added as in figure 2.	19, 26, 27	Run #6 and #7	60-10565314*		To improve horizontal-sync stability.
37	L504, 60 mh., added as in figure 2.	19, 26, 27	Run #6 and #7	32-4256		To improve horizontal-sync stability.
38	Wiring panel, four-point, added on bottom of chassis, parallel to sides of chassis, between vertical output (6K6GT) socket and C506.	19, 26, 27	Run #6 and #7	12W45661		To improve horizontal-sync stability.
39	R505 changed to 47,000 ohms.	19, 26, 27	Run #6 and #7	66-3473340*	66-4473340*	To improve horizontal-sync stability.

MODEL 48-1000, CODES 121, 125, PRODUCTION CHANGES

PHILCO CORP.

Changes in Production from Run #4 of Code 121 to Run #1 of Code 125

ITEM NO.	DESCRIPTION OF CHANGE	FIGURES OF PR-1103 AFFECTED	CHANGE EFFECTIVE	NEW OR ADDED PART NO.	OLD OR REMOVED PART NO.	REASON
1	R443 changed to 100,000 ohms.	17, 27	Run #1	66-4108540	66-5103340	To increase a-v-c stability.
2	R415 changed to 470,000 ohms.	17, 27	Run #1	66-4473340	66-5473340	To increase a-v-c stability.
3	R203 changed to 100,000 ohms.	18, 27	Run #1	66-4108540	66-3473340	To improve a-i-f performance.
4	R207 changed to 100,000 ohms.	18, 27	Run #1	66-4108540	66-3273340	To improve a-i-f performance.
5	L502 changed.	19, 27	Run #1	76-2622-2	76-2622	To improve focus. See figure 1.
6	R546 changed.	19, 27	Run #1	33-5547-2	33-5546-5	To improve focus. See figure 1.
7	L502 changed.	19, 27	Run #1	76-2622-1	76-2622	To improve focus. See figure 1.
8	R525 changed.	19, 27	Run #1	33-5546-4	33-5546-2	To improve focus. See figure 1.
9	R545 removed.	19, 27	Run #1		66-3105340	To improve focus. See figure 1.

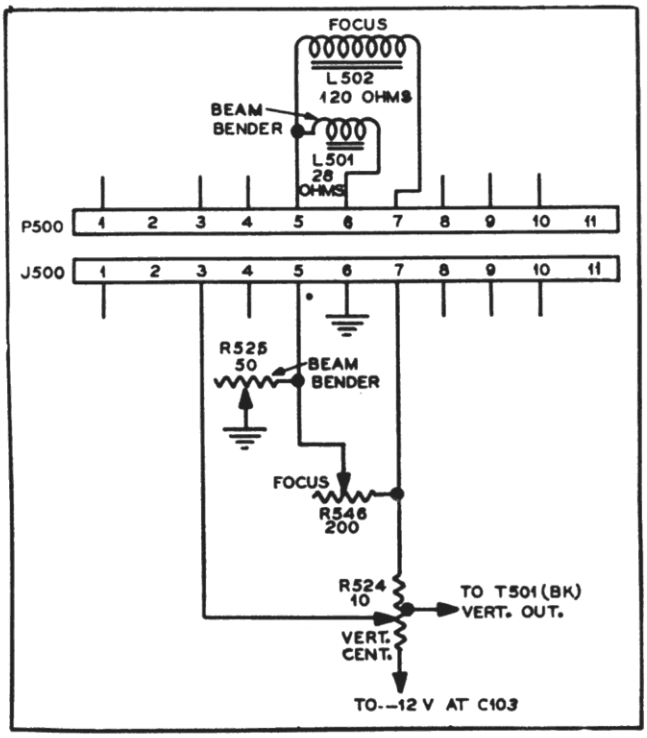


Figure 1. Focus and Beam-Bender Changes

Production Changes—Code 125

ITEM NO.	DESCRIPTION OF CHANGE	FIGURES OF PR-1103 AFFECTED	CHANGE EFFECTIVE	NEW OR ADDED PART NO.	OLD OR REMOVED PART NO.	REASON
1	Discriminator filament choke (L205) added at pin 4 of discriminator.	18, 27	Run #2	32-4112-4*		To reduce harmonic beat.
2	Z401 changed.	17, 27	Run #2	32-4213	32-4094	Slug tuning to aid in alignment.
3	Z402 changed.	17, 27	Run #2	32-4213-1	32-4094-1	Slug tuning to aid in alignment.
4	L503 changed.	19, 27	Run #3	32-4163-2	32-4163-1	To improve width adjustment.
5	Z202 changed.	18, 27	Run #4	32-4214	32-4101-1	To improve a-i-f stability.
6	5-mmf. condenser (C223) added at pin 2 of 2nd a-i-f tube.	18, 27	Run #4	32-1224-5		To improve a-i-f stability.
7	L503 changed.	19, 27	Run #5	32-4163	32-4163-2	To improve width adjustment.
8	T503 changed.	19, 27	Run #5	32-8331	32-8305	To reduce high-voltage breakdown.
9	L503 changed.	19, 27	Run #6	32-4163-2	32-4163	
10	R528 rewired as in figure 2.	19, 26, 27	Run #7	No change		To improve horizontal-sync stability.
11	R529 changed to 330,000 ohms.	19, 26, 27	Run #7	66-4333340*	66-4103340*	To improve horizontal-sync stability.
12	R530 changed to 220 ohms.	19, 26, 27	Run #7	66-1223340*	66-2223340*	To improve horizontal-sync stability.
13	R531 changed to 33000 ohms and rewired as in figure 2.	19, 26, 27	Run #7	66-3333340*	66-4563340*	To improve horizontal-sync stability.
14	R532 changed to 25,000 pot. and rewired as in figure 2.	19, 26, 27	Run #7	33-5539-28	33-5539-13	To improve horizontal-sync stability.
15	R533 changed to 100,000 ohms and rewired as in figure 2.	19, 26, 27	Run #7	66-4103340*	66-4393340*	To improve horizontal-sync stability.
16	R549 changed to 1800 ohms.	19, 26, 27	Run #7	66-2183340*	66-2223340*	To improve horizontal-sync stability.
17	R550, 560,000 ohms, added as in figure 2.	19, 26, 27	Run #7	66-4563340*		To improve horizontal-sync stability.
18	R551, 1000 ohms, added as in figure 2.	19, 26, 27	Run #7	66-2103340*		To improve horizontal-sync stability.
19	R552, 2200 ohms, added as in figure 2.	19, 26, 27	Run #7	66-2223340*		To improve horizontal-sync stability.
20	C514A rewired as in figure 2.	19, 26, 27	Run #7	No change		To improve horizontal-sync stability.
21	C515 changed to .1 mf. and rewired as in figure 2.	19, 26, 27	Run #7	61-0113*	60-10825401*	To improve horizontal-sync stability.
22	C516 changed to 680 mmf. and rewired as in figure 2.	19, 26, 27	Run #7	60-10685401*	60-10825401*	To improve horizontal-sync stability.
23	C517 rewired as in figure 2.	19, 26, 27	Run #7	No change		To improve horizontal-sync stability.
24	C523, 2000 mmf., added as in figure 2.	19, 26, 27	Run #7	60-20205304*		To improve horizontal-sync stability.
25	C524, 560 mmf., added as in figure 2.	19, 26, 27	Run #7	60-10565314*		To improve horizontal-sync stability.
26	L504, 60 mh., added as in figure 2.	19, 26, 27	Run #7	32-4256		To improve horizontal-sync stability.
27	Wiring panel, four-point, added on bottom of chassis parallel to sides of chassis, between vertical-output (6K6GT) socket and C506.	19, 26, 27	Run #7	12W45661		To improve horizontal-sync stability.

MODEL 48-1000, CODES 121, 125, PRODUCTION CHANGES — PHILCO CORP.

Production Changes—Code 125

ITEM NO.	DESCRIPTION OF CHANGE	FIGURES OF PR-1103 AFFECTED	CHANGE EFFECTIVE	NEW OR ADDED PART NO.	OLD OR REMOVED PART NO.	REASON
28	R505 changed to 47,000 ohms.	19, 26, 27	Run #7	66-3473340*	66-4473340*	To improve horizontal-sync stability.
29	R529 changed to 150,000 ohms.	19, 26, 27	Run #8	66-4154340	66-4333340	To remove vertical blackline.
30	R550 removed. See Note.	19, 26, 27	Run #8		66-4563340	To remove vertical blackline.
31	R535 changed to 180,000 ohms.	19, 26, 27	Run #8	66-4183340	66-2683340	To remove vertical blackline.
32	R435 changed to 18,000 ohms.	19, 26, 27	Run #8	66-3183340	66-3823340	To remove vertical blackline.
33	R549 changed to 1,000 ohms.	19, 26, 27	Run #8	66-2103340	66-2183340	To remove vertical blackline.
34	R533 changed to 22,000 ohms.	19, 26, 27	Run #8	66-3223340	66-4103340	To improve horizontal-sync stability.
35	R530 changed to 330 ohms.	19, 26, 27	Run #8	66-1333340	66-1223340	To improve horizontal-sync stability.
36	C525, 560 mmf., added from pin #3 of 6BG6G to ground.	19, 26, 27	Run #8	60-10565414		To remove vertical blackline.

NOTE: In some sets there may be only a 330,000-ohm resistor; later, this resistor was shunted by a 560,000-ohm resistor (R550 above) to bring the resistance down to 270,000 ohms. When available, the 270,000-ohm resistor (Part No. 66-4273340) was used.

Production Changes—Code 125

Run #9 is the same as run #8 except as follows: R529 in run #8 was a 150,000-ohm resistor, Part No. 66-4154340. In run #9 it was changed to a 100,000-ohm resistor, Part No. 66-4104340.

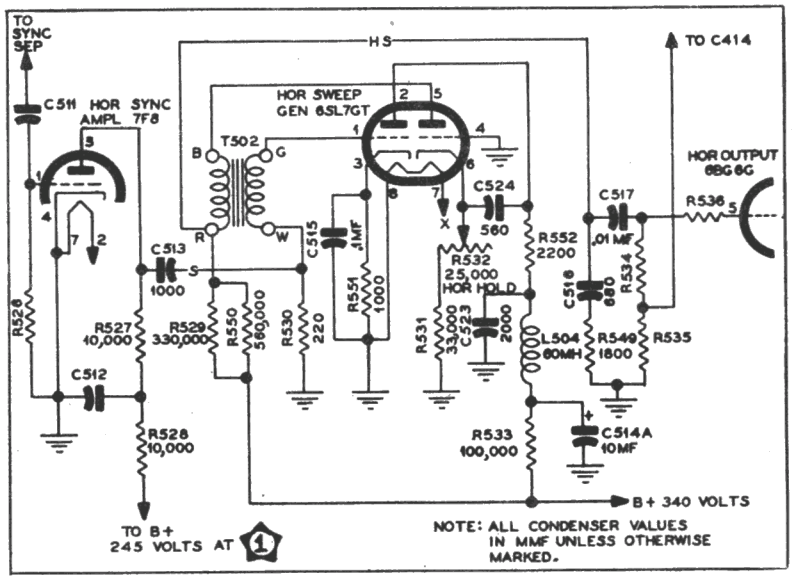


Figure 2. Horizontal-Sweep Changes