

**SENTINEL
MODELS 401, 402,
406 SERIES**

SENTINEL MODEL 402CV

| | | |
|---------------------|--|---|
| TRADE NAME | Sentinel, Models 401, 402, 406 Series | |
| MANUFACTURER | Sentinel Radio Corp., 2100 W. Dempster St., Evanston, Illinois | |
| TYPE SET | Television Receiver | |
| TUBES | Twenty-Three | |
| POWER SUPPLY | 110-120 Volts-60 Cycles AC | RATING: 1.98 Amp. @ 117 Volts AC |
| TUNING RANGE | Channels 2 through 13 | |

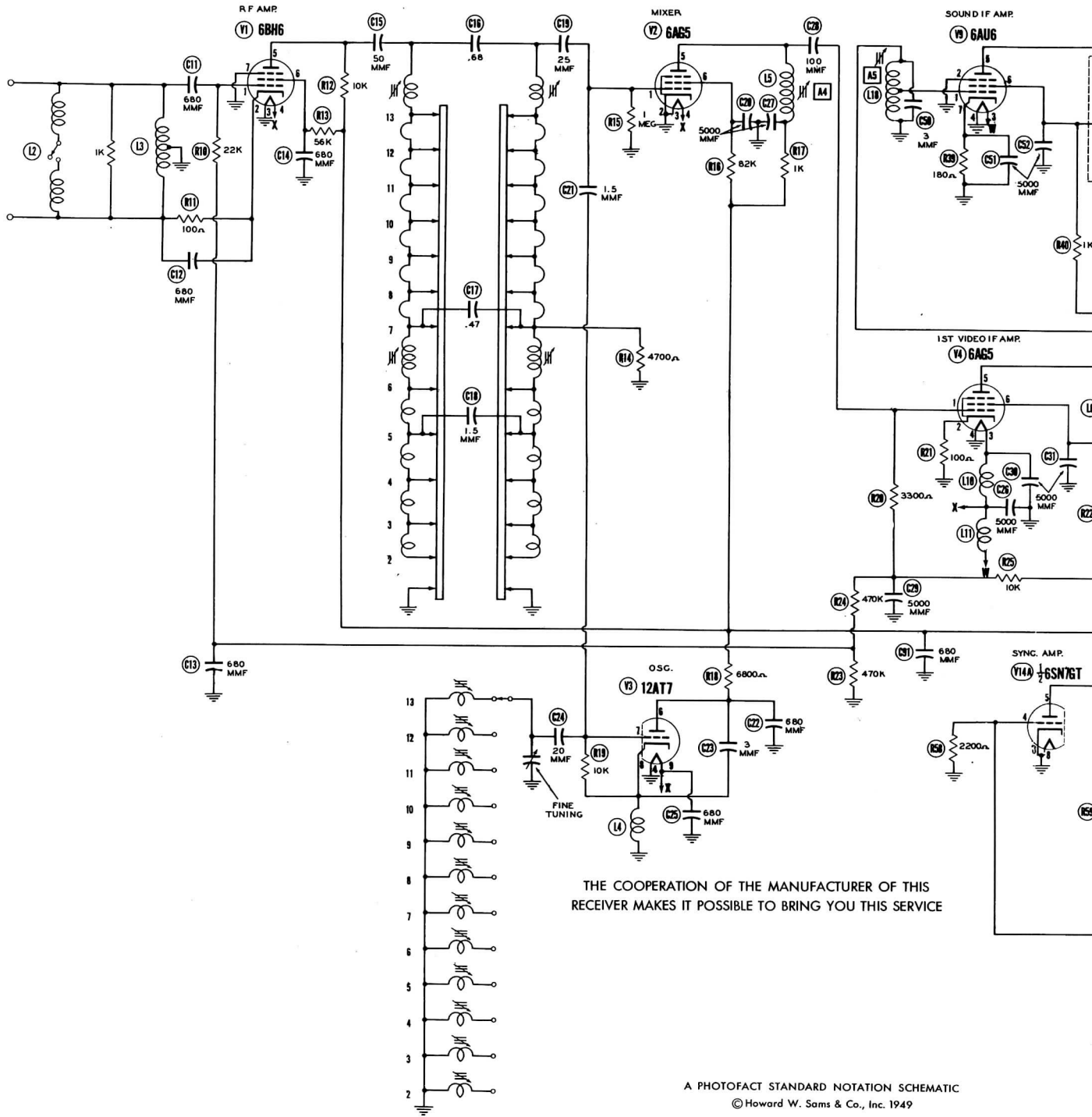
INDEX

| | | | |
|----------------------------------|----------|--|----|
| Alignment Instructions | 5 | Photographs (continued) | |
| Block Diagram | 17 | Chassis-Top View (Sweep) | 11 |
| Horizontal Sweep Adjustments | 18 | RF Tuner | 19 |
| Parts List and Description | 14,15,16 | Resistor Identification (RF-IF) | 9 |
| Photographs | | Resistor Identification (Sweep) | 13 |
| Cabinet-Rear View | 18 | Trans., Inductors & Alignment Identification (RF-IF) | 4 |
| Capacitor Identification (RF-IF) | 8 | Schematic | 2 |
| Capacitor Identification (Sweep) | 12 | Tube Placement Chart (RF-IF) | 7 |
| Chassis-Top View (RF-IF) | 3 | Tube Placement Chart (Sweep) | 6 |
| | | Voltage and Resistance Measurements | 10 |

HOWARD W. SAMS & CO., INC. • Indianapolis 7, Indiana

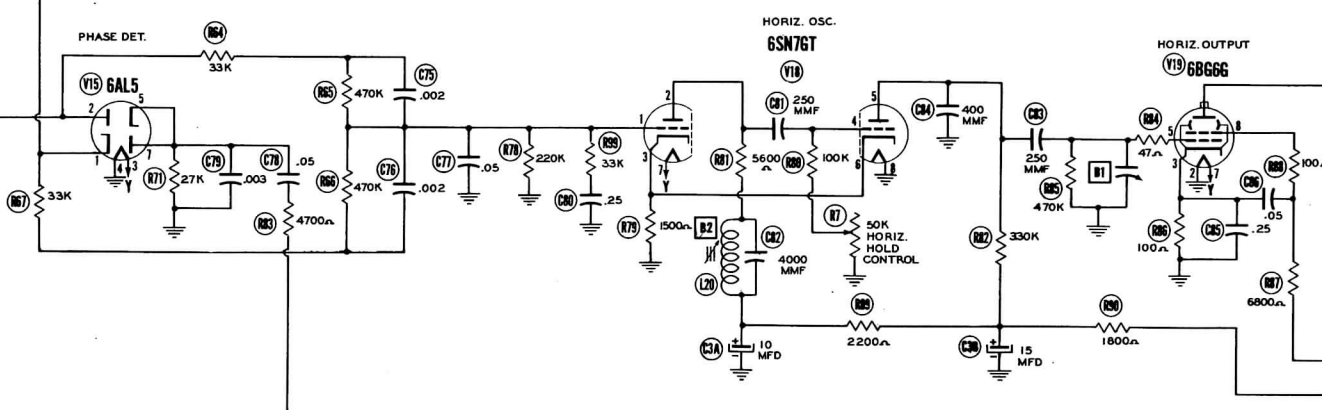
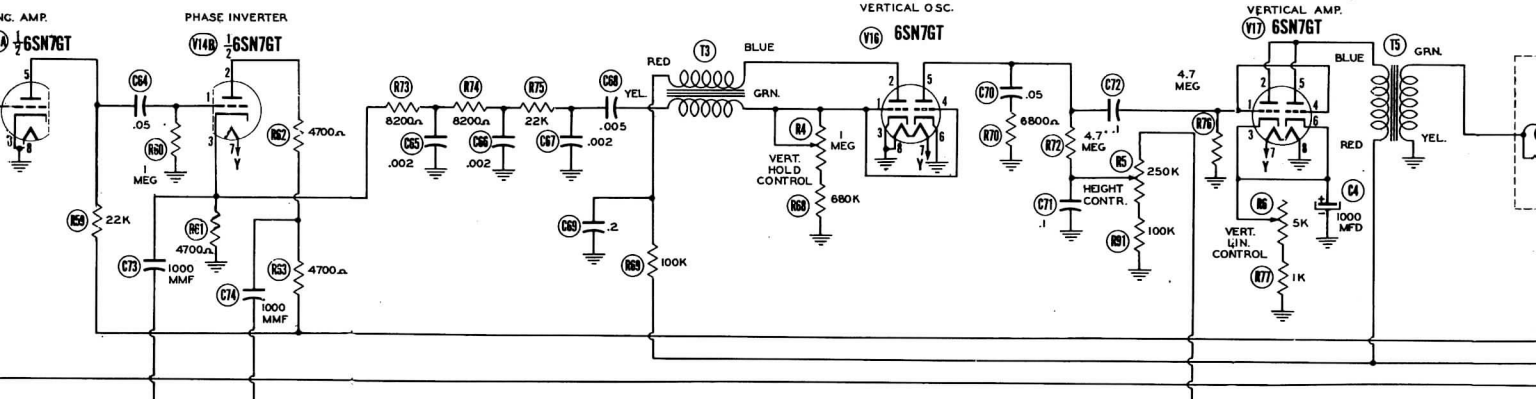
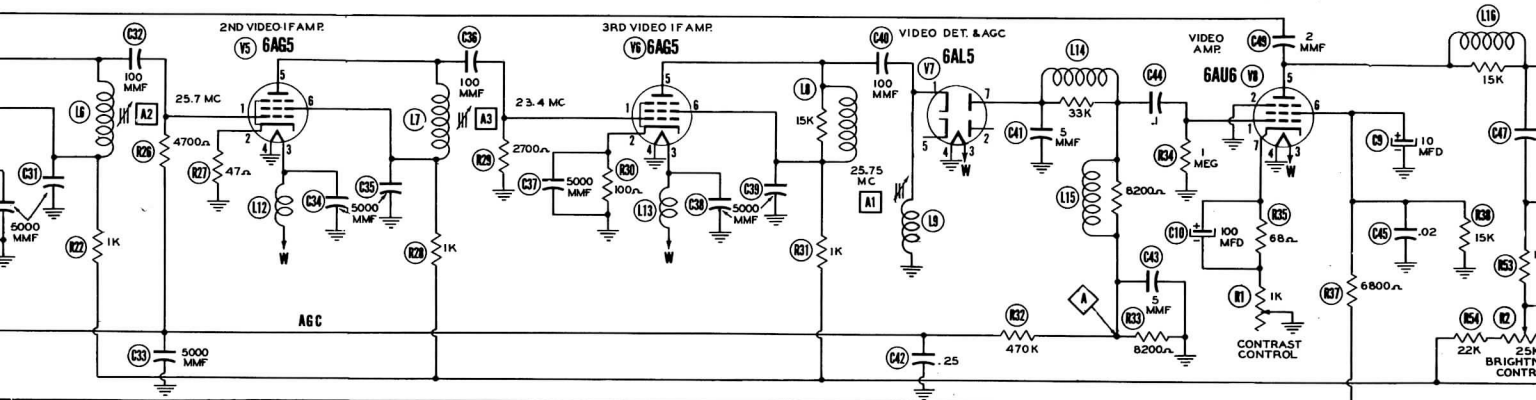
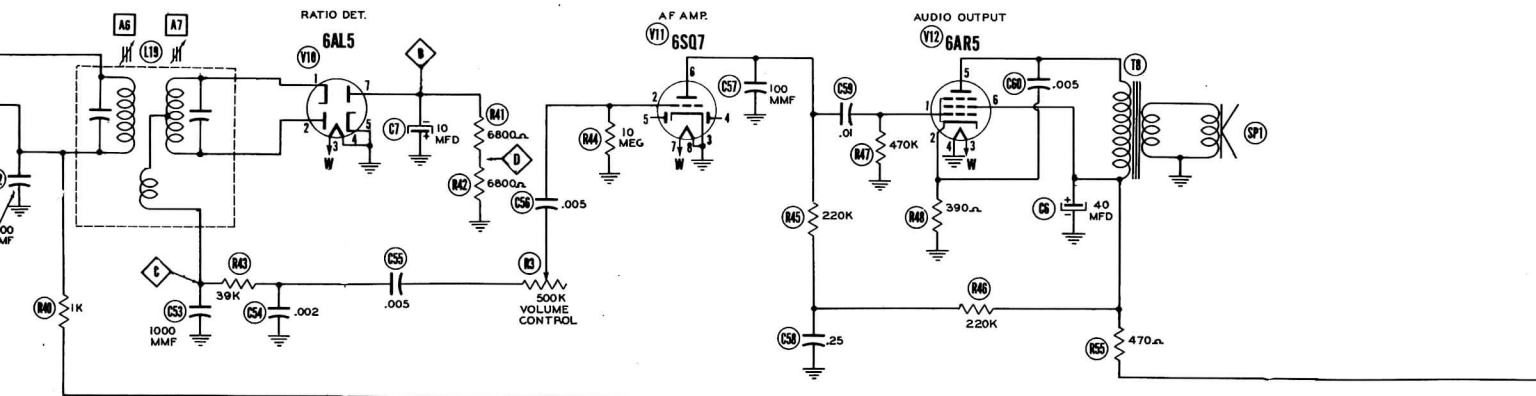
"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed."
"Reproduction or use, without express permission, of editorial or pictorial con-

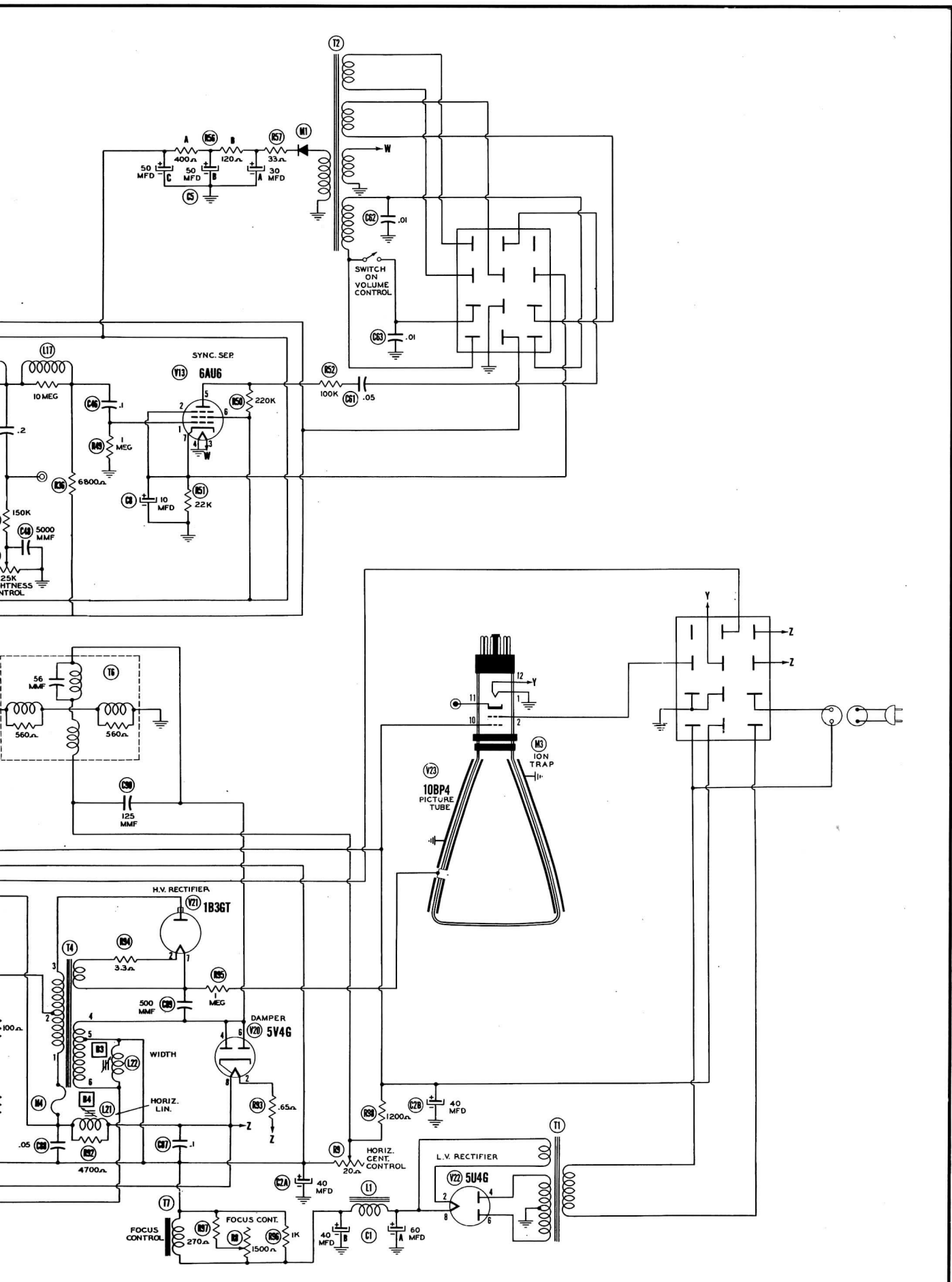
tent, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1949 by Howard W. Sams & Co., Inc., Indianapolis 7, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America
DATE 9/49 4918-9 SET #70 FOLDER 9



THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
 © Howard W. Sams & Co., Inc. 1949

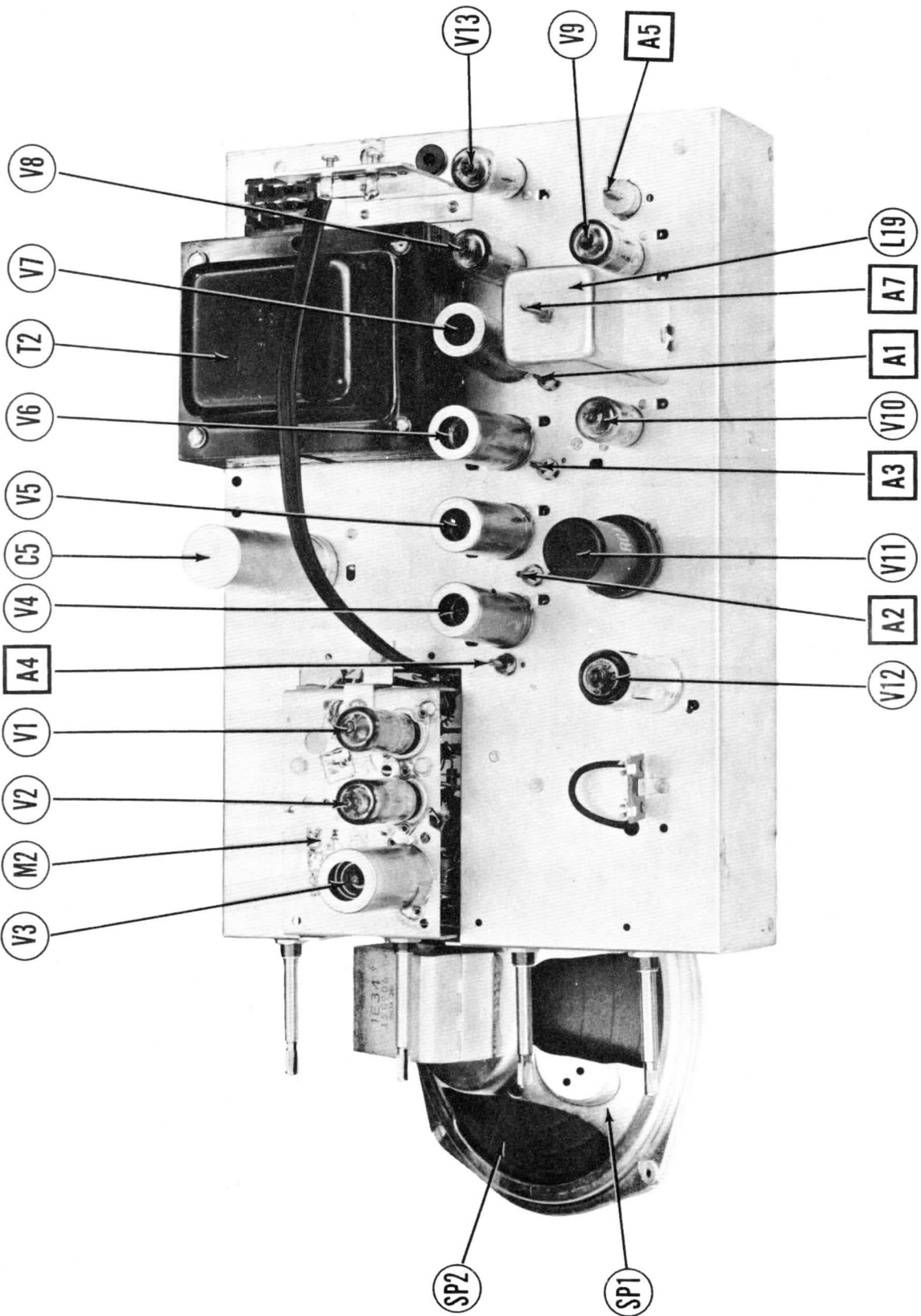


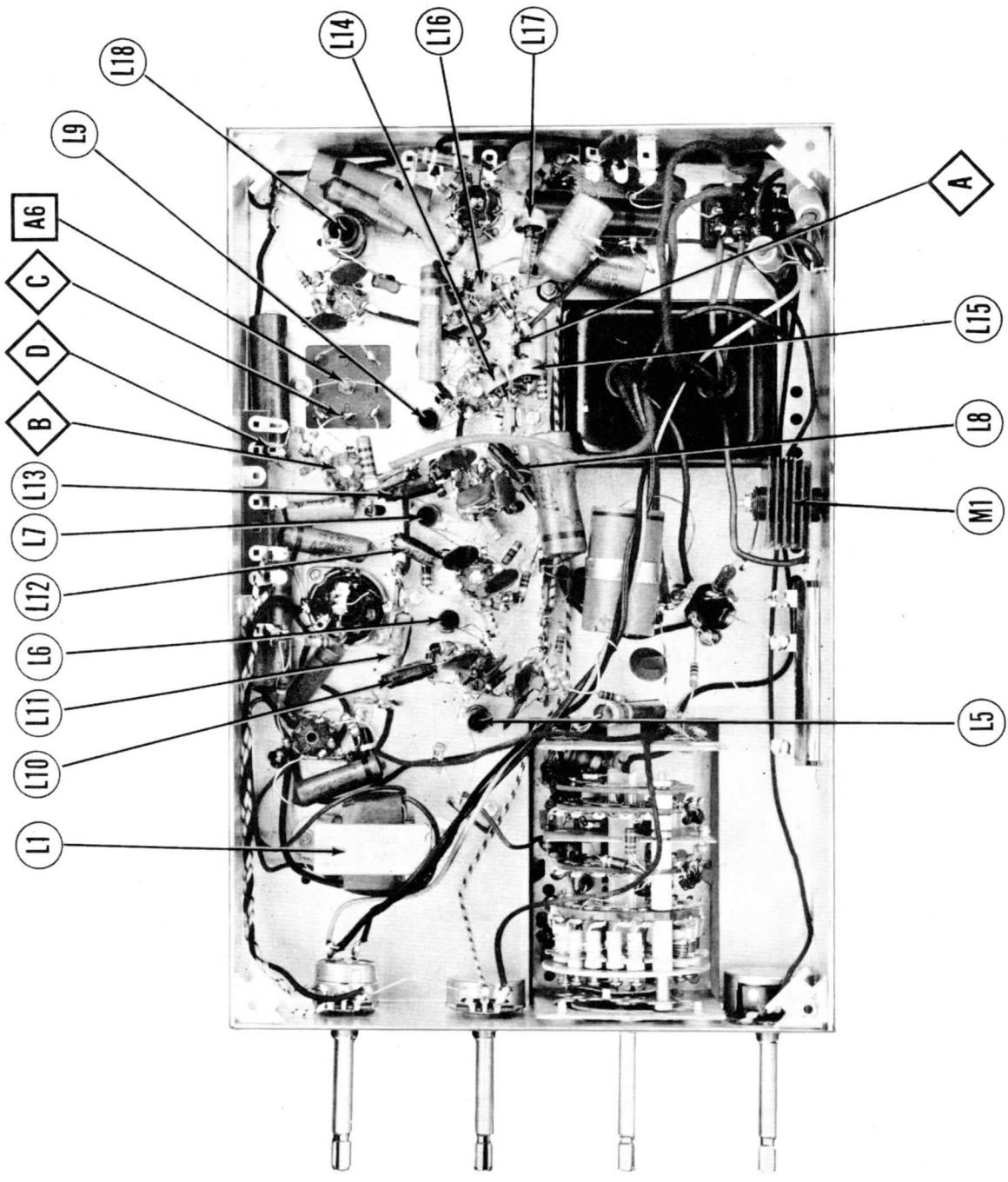


SENTINEL
MODELS 401, 402,
406 SERIES

**SENTINEL
MODELS 401, 402,
406 SERIES**

RF-IF CHASSIS-TOP VIEW

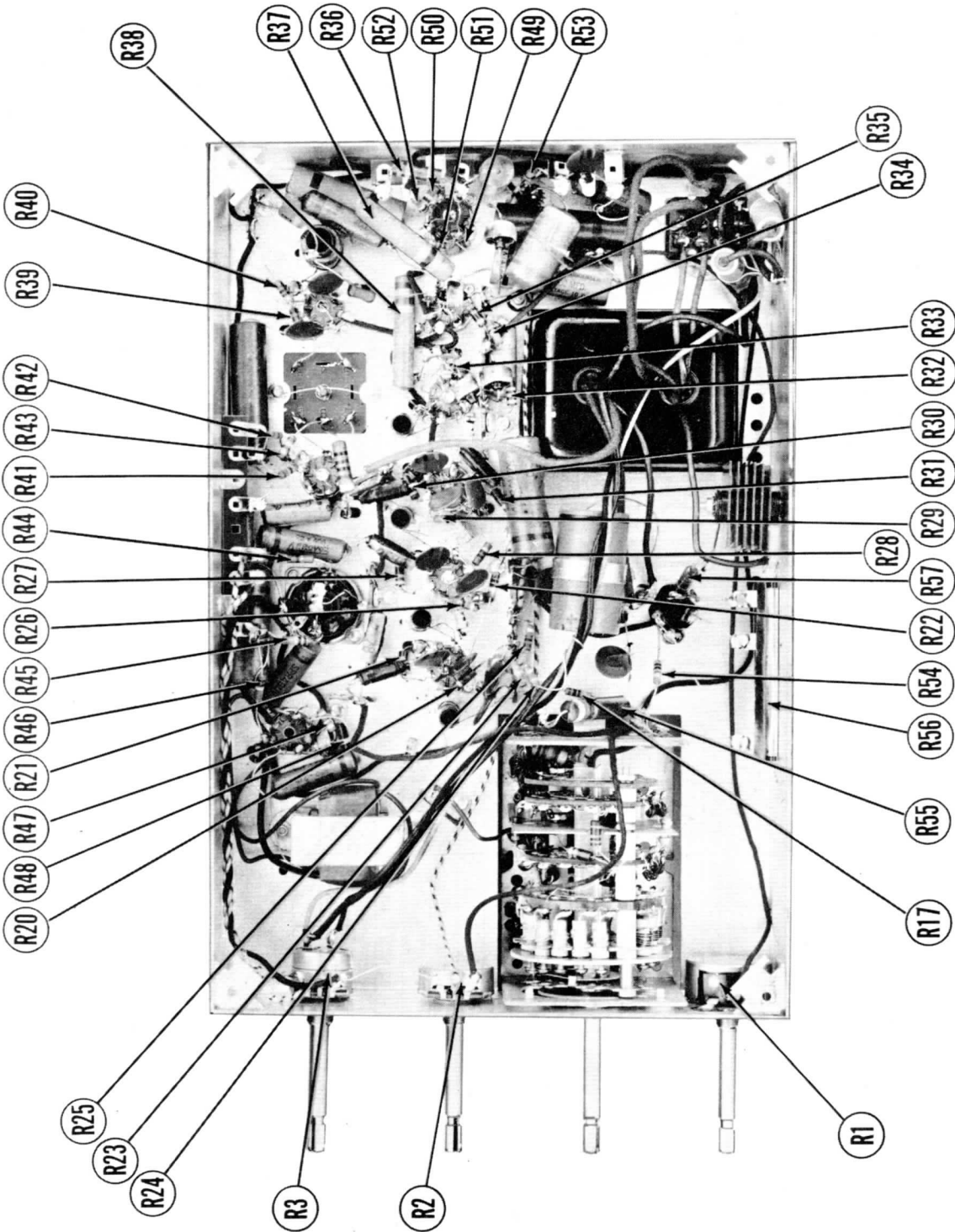


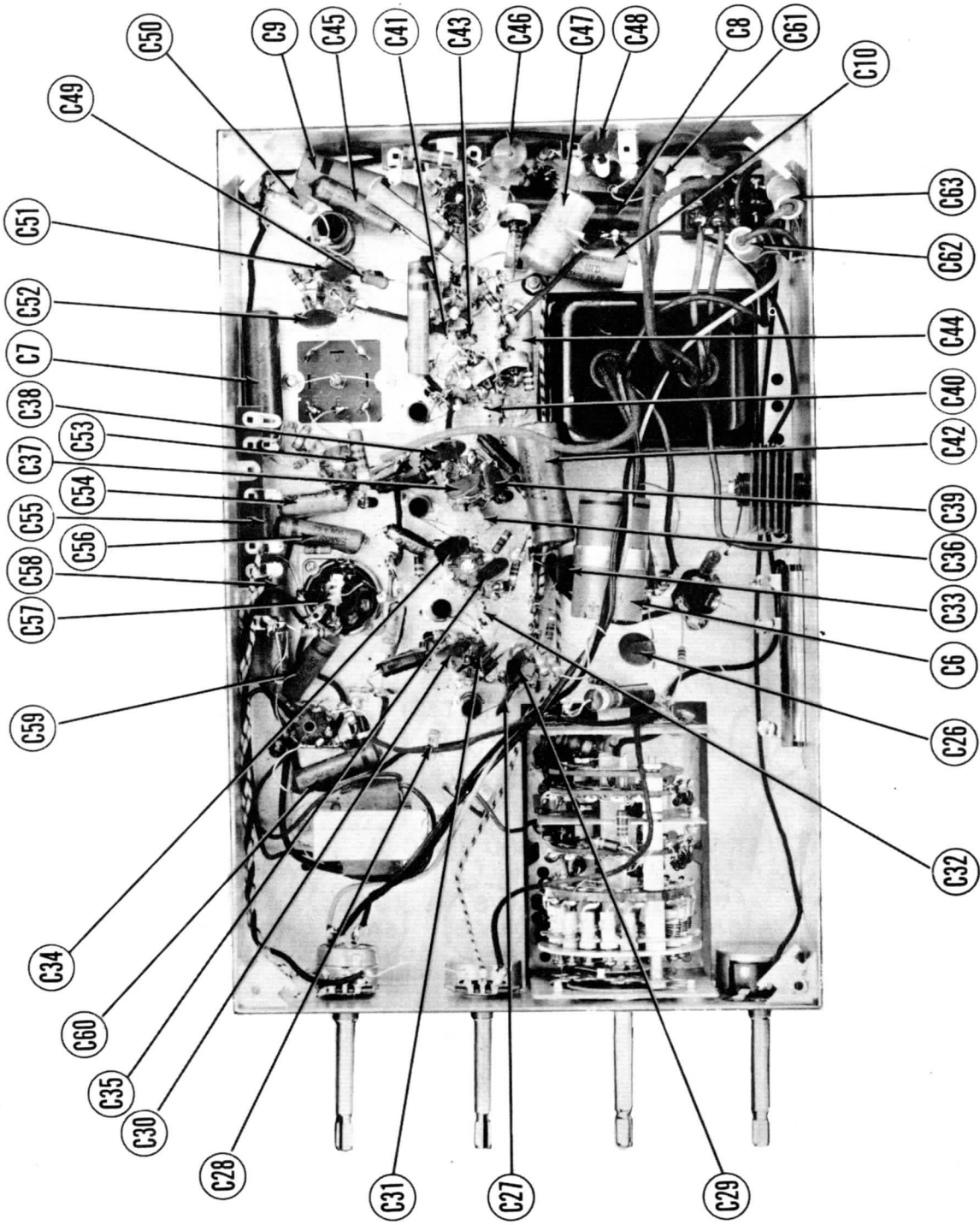


RF-IF CHASSIS - BOTTOM VIEW - TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

**SENTINEL
MODELS 401, 402,
406 SERIES**

RF-IF CHASSIS-BOTTOM VIEW-RESISTOR IDENTIFICATION





RF-IF CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The interconnecting cable between the two chassis must be connected for complete alignment.
If receiver is to be aligned with picture tube removed, remove horizontal oscillator tube (V16) to remove shock hazard.

VIDEO IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Remove local oscillator tube (V3) to prevent erroneous indications.

| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---------------|---|----------------------------|---------|---|--------|--------------------------------|
| 1. | High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis. | 25.75MC (Unmod.) | Any | DC Probe to Point \diamond Common to Chassis. | A1,A2 | Adjust for maximum deflection. |
| 2. | " | 23.4MC | " | " | A3,A4 | " |

OVERALL VIDEO IF RESPONSE CHECK

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---------------|--|---------------------------|----------------------------|---------|---|--------|--|
| 3. | High side to ungrounded tube shield floating over mixer tube 6AG5 (V2). Low side to chassis. | 24MC (10MC Sweep) | 25.75MC 21.25MC | Any | Vert. Amp. to Point \diamond Low side to chassis. | | Check response as per Fig 1. If necessary slightly retouch A1, A2, A3, A4 to correctly position markers. |

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---------------|--|----------------------------|---------|---|--------|--|
| 4. | .01MFD High side to pin 5 (Plate) of 6AU6 (V8). Low side to chassis. | 4.5MC (Unmod.) | Any | DC Probe to Point \diamond Common to Chassis. | A5,A6 | Adjust for maximum deflection. |
| 5. | .01MFD | " | " | DC Probe to Point \diamond Common to Point \diamond | A7 | Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. |

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---------------|--|---------------------------|----------------------------|---------|---|--------|--|
| 4. | .01MFD High side to pin 5 (plate) of 6AU6 (V8). Low side to chassis. | 4.5MC (1MC Sweep) | 4.5MC | Any | Vert. Amp. to Point \diamond Low side to chassis. | A5,A6 | Disconnect stabilizer cap. C7. Adjust for maximum amplitude and symmetry as per Fig 2. |
| 5. | .01MFD | " | " | " | Vert. Amp. to Point \diamond Low side to chassis. | A7 | Reconnect stabilizer cap. C7. Adjust A7 so 10.7MC marker occurs at center of diagonal line. Slightly retouch A6 for maximum amplitude and straightness of diagonal line. |

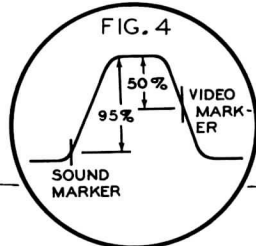
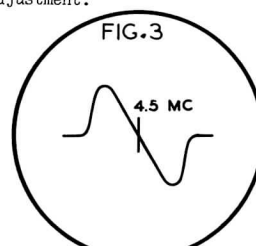
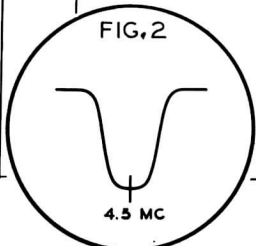
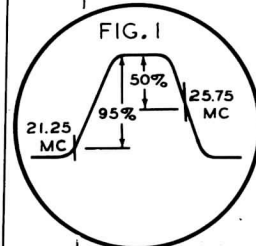
OSCILLATOR ALIGNMENT

The RF Amplifier and mixer adjustments are pre-set at the factory and are very stable, and normally do not require adjustment in the field.
Replace local oscillator tube (V3).

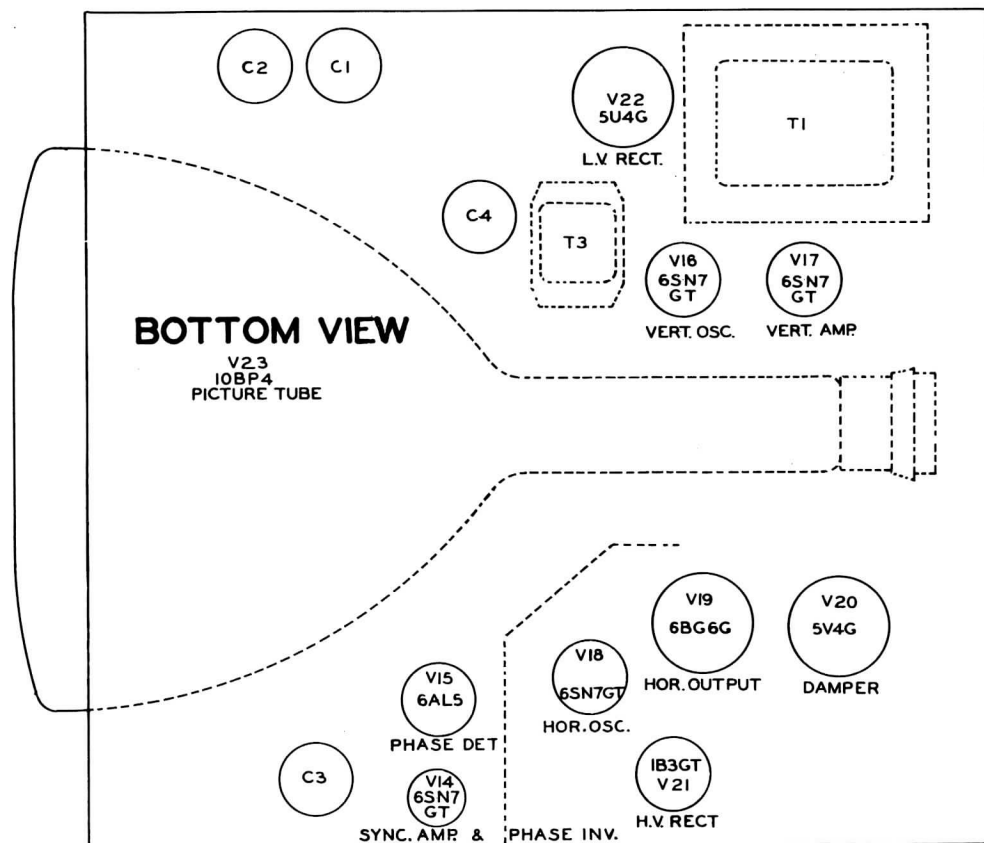
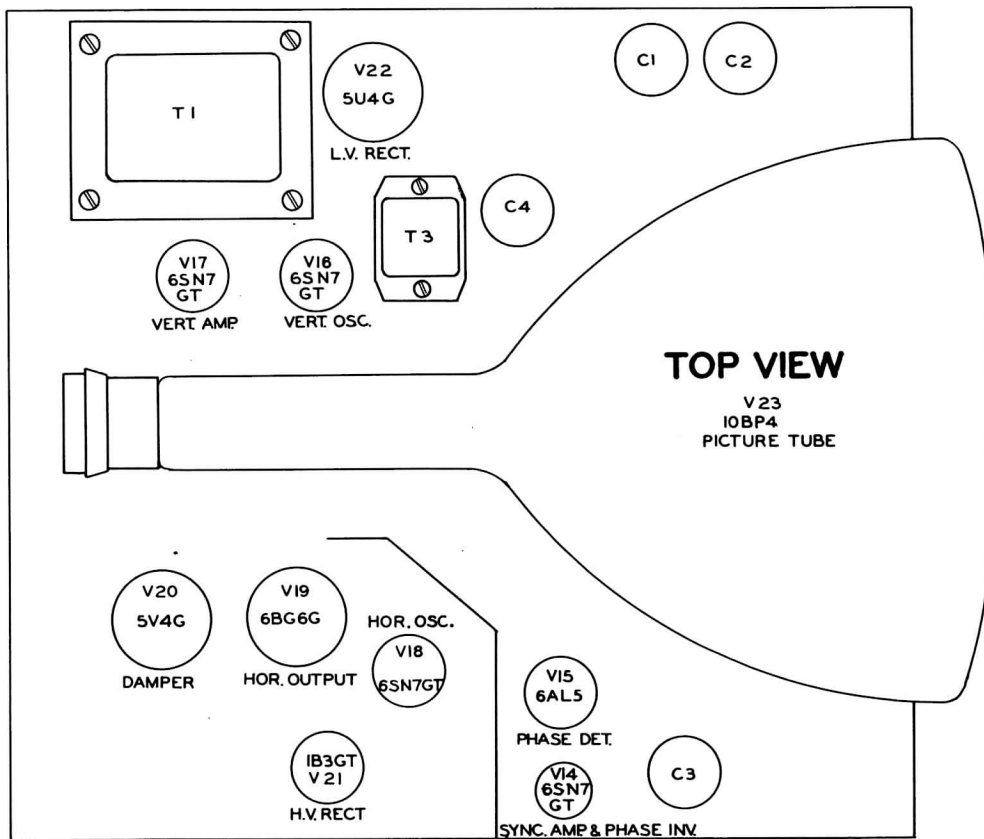
In the event of replacement of the oscillator tube, or oscillator circuit component, complete alignment may not be necessary. Adjustment of A20, which is an overall adjustment may compensate for the change. If it doesn't, complete oscillator realignment is recommended.

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

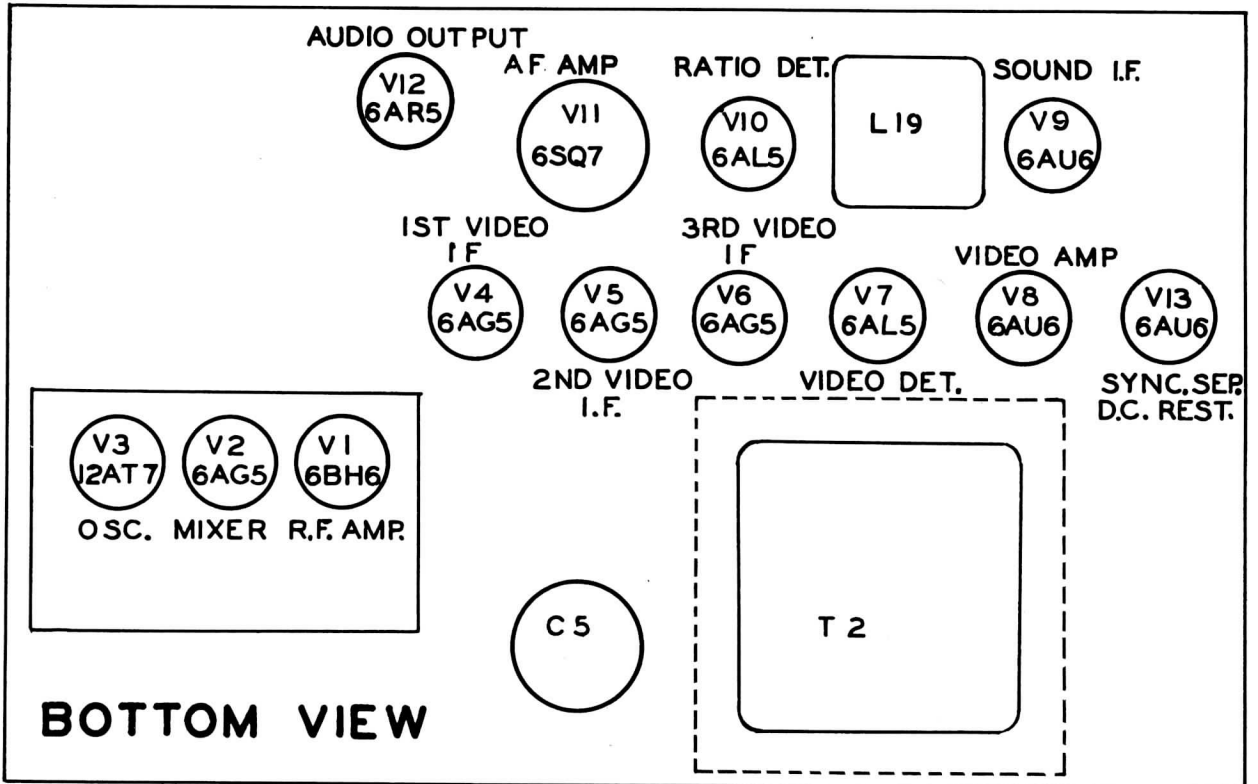
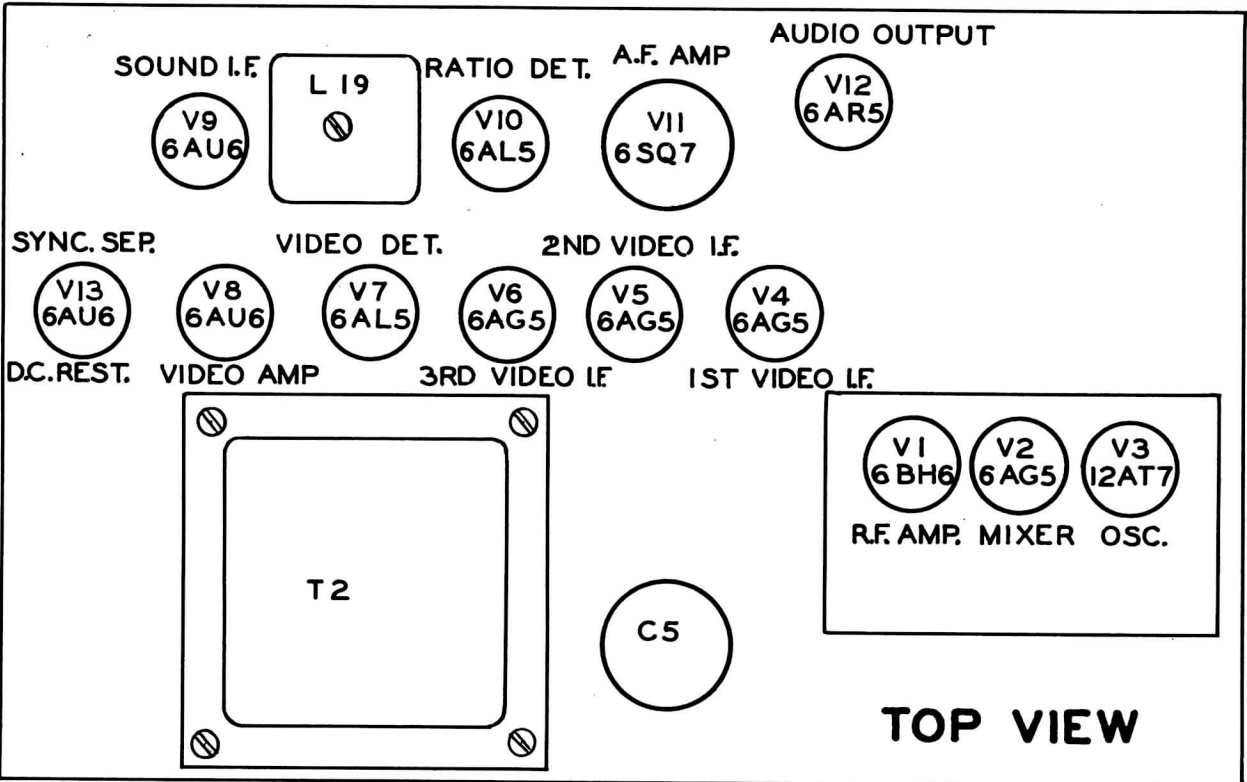
| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---------------|----------------------------------|---------------------------|----------------------------|---------|---|--------|---|
| 6. | Direct Across antenna terminals. | 213MC (10MC Sweep) | 211.25MC 215.75MC | 13 | Vert. Amp. to Point \diamond Low side to chassis. | A8 | Adjust so that markers are properly positioned as per Fig 4. If any channel markers can not be positioned properly it may be necessary to adjust A20. If A20 is adjusted all channels will be affected, and each channel will require readjustment. |
| | | 207MC (10MC Sweep) | 205.25MC 209.75MC | 12 | | A9 | |
| | | 201MC (10MC Sweep) | 199.25MC 203.75MC | 11 | | A10 | |
| | | 195MC (10MC Sweep) | 193.25MC 197.75MC | 10 | | A11 | |
| | | 189MC (10MC Sweep) | 187.25MC 191.75MC | 9 | | A12 | |
| | | 183MC (10MC Sweep) | 181.25MC 185.75MC | 8 | | A13 | |
| | | 177MC (10MC Sweep) | 175.25MC 179.75MC | 7 | | A14 | |
| | | 85MC (10MC Sweep) | 83.25MC 87.75MC | 6 | | A15 | |
| | | 79MC (10MC Sweep) | 77.25MC 81.75MC | 5 | | A16 | |
| | | 69MC (10MC Sweep) | 67.25MC 71.75MC | 4 | | A17 | |
| | | 63MC (10MC Sweep) | 61.25MC 65.75MC | 3 | | A18 | |
| | | 57MC (10MC Sweep) | 55.25MC 59.75MC | 2 | | A19 | |



SENTINEL
MODELS 401, 402,
406 SERIES



TUBE PLACEMENT-SWEEP CHASSIS



TUBE PLACEMENT-RF-IF CHASSIS

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 |
|------|--------|------------------|--------|---------|-----------------|-----------------|------------------|------------|--------|---------|
| V 1 | 6BH6 | - .2VDC | .6VDC | OV | 6.3VAC | 21.0VDC | 150VDC | OV | | |
| V 2 | 6AG5 | -1.2VDC | OV | OV | 6.3VAC | 260VDC | 145VDC | OV | | |
| V 3 | 12AT7 | OV | OV | OV | OV | OV | 21.0VDC | \$. -.8VDC | OV | 6.3VAC |
| V 4 | 6AG5 | -1.8VDC | .4VDC | 6.3VAC | OV | 125VDC | 125VDC | .4VDC | | |
| V 5 | 6AG5 | -.5VDC | .3VDC | 6.3VAC | OV | 125VDC | 125VDC | .3VDC | | |
| V 6 | 6AG5 | OV | 1.2VDC | 6.3VAC | OV | 120VDC | 120VDC | 1.2VDC | | |
| V 7 | 6AL5 | OV | OV | 6.3VAC | OV | OV | OV | -1VDC | | |
| V 8 | 6AU6 | -.6VDC | OV | 6.3VAC | OV | 21.0VDC | 160VDC | 14VDC | | |
| V 9 | 6AU6 | OV | OV | 6.3VAC | OV | 125VDC | 125VDC | 1VDC | | |
| V 10 | 6AL5 | -.2VDC | -.1VDC | 6.3VAC | OV | OV | OV | -.3VDC | | |
| V 11 | 6SQ7 | OV | -.6VDC | OV | OV | OV | 95VDC | 6.3VAC | OV | |
| V 12 | 6AR5 | OV | 15VDC | 6.3VAC | OV | 230VDC | 250VDC | 130VDC | | |
| V 13 | 6AU6 | OV | 4VDC | 6.3VAC | OV | 87VDC | 130VDC | 4VDC | | |
| V 14 | 6SN7GT | OV | 250VDC | 10VDC | OV | 80VDC | OV | 6.3VAC | OV | |
| V 15 | 6SN7GT | OV | 400VDC | 15VDC | OV | 400VDC | 15VDC | 6.3VAC | OV | |
| V 16 | 6AL5 | 1.3VDC | -6VDC | 6.3VAC | OV | -.1VDC | OV | -.1VDC | | |
| V 17 | 6SN7GT | -1.0VDC | 290VDC | OV | -1.0VDC | 4VDC | OV | 6.3VAC | OV | |
| V 18 | 6SN7GT | .5VDC | 420VDC | 18.5VDC | -4.4VDC | 130VDC | 18.5VDC | 6.3VAC | OV | |
| V 19 | 6SQ6G | OV | OV | 5.3VDC | OV | -4VDC | 250VDC | 6.3VAC | 250VDC | TOP CAP |
| V 20 | 5Y4G | OV | 520VDC | 520VDC | 400VDC | 520VDC | 400VDC | 500VDC | | |
| V 21 | 1B3GT | * DO NOT MEASURE | | | | | | | | |
| V 22 | 5U4G | OV | 440VDC | OV | 400VAC | OV | 400VAC | OV | 440VDC | |
| V 23 | 10BP4 | OV | 4VDC | 265VDC | PIN 10 65VDC | PIN 11 65VDC | PIN 12 6.3VAC | | | |

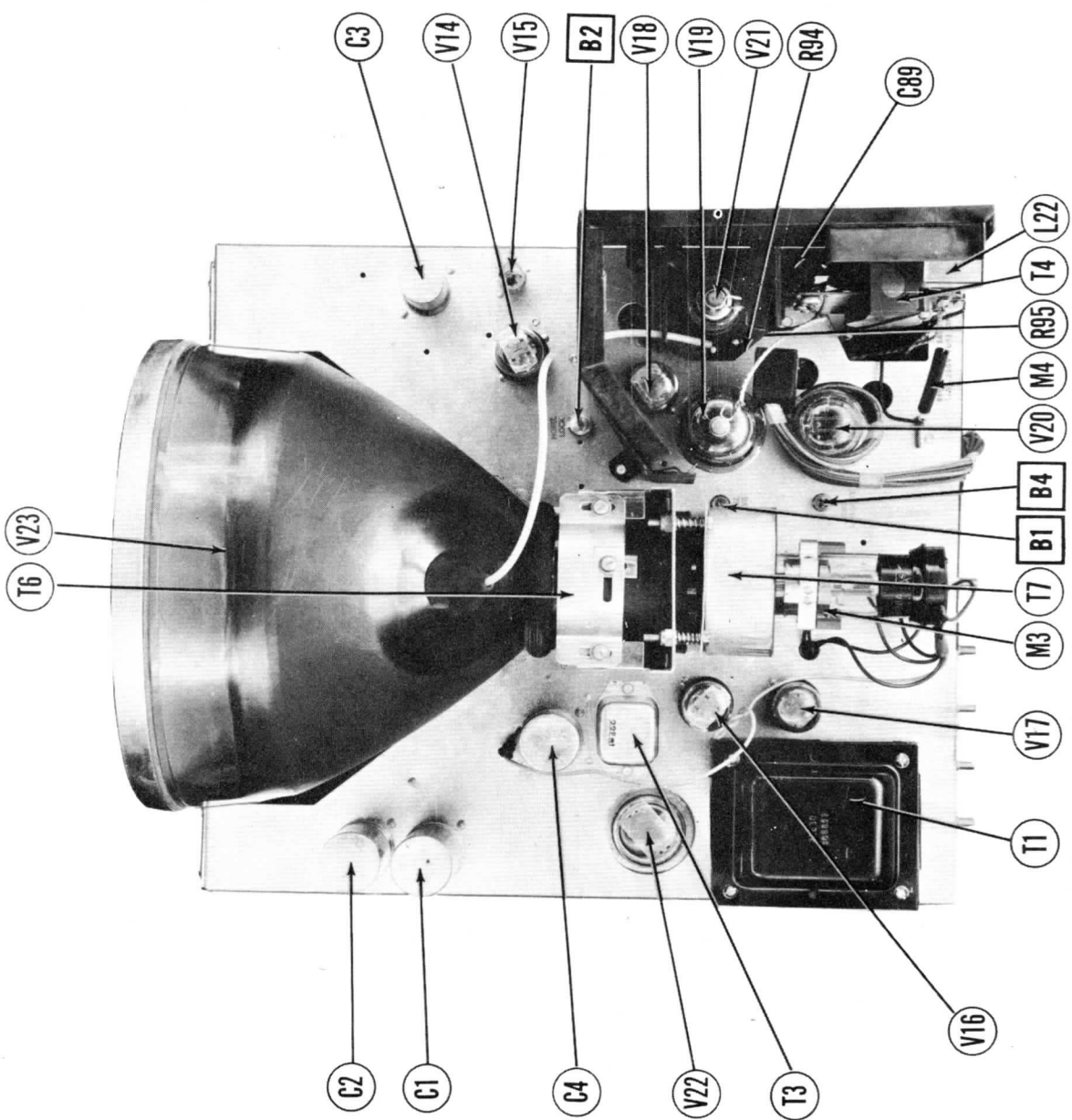
* Do Not Measure.

RESISTANCE READINGS

| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 |
|------|--------|----------|---------|------------------|-----------------|----------------|--------|-------|-------|-----------------|
| V 1 | 6BH6 | 500KΩ | 100Ω | Ω | .1Ω | 11.2KΩ | 160KΩ | Ω | | |
| V 2 | 6AG5 | 1 Meg. | Ω | Ω | .1Ω | 13KΩ | 185KΩ | Ω | | |
| V 3 | 12AT7 | Ω | Ω | Ω | Ω | Ω | 17K | 10KΩ | Ω | .1Ω |
| V 4 | 6AG5 | 310KΩ | 100Ω | .1Ω | Ω | 1.5KΩ | 1.5KΩ | 100Ω | | |
| V 5 | 6AG5 | 310KΩ | 47Ω | .1Ω | Ω | 1.5KΩ | 1.5KΩ | 47Ω | | |
| V 6 | 6AG5 | 2.7KΩ | 100Ω | .1Ω | Ω | 1.5KΩ | 1.5KΩ | 100Ω | | |
| V 7 | 6AL5 | Ω | Inf. | .1Ω | Ω | Inf. | Ω | 8.2KΩ | | |
| V 8 | 6AU6 | 1 Meg. | Ω | .1Ω | Ω | 18KΩ | 18KΩ | 1000Ω | | |
| V 9 | 6AU6 | 1Ω | Ω | .1Ω | Ω | 1.5KΩ | 1.5KΩ | 180Ω | | |
| V 10 | 6AL5 | Inf. | Inf. | .1Ω | Ω | Ω | Ω | 13KΩ | | |
| V 11 | 6SQ7 | Ω | 10 Meg. | Ω | Inf. | Inf. | 1440KΩ | .1Ω | Ω | |
| V 12 | 6AR5 | 470KΩ | 390Ω | .1Ω | Ω | 12.5KΩ | 12KΩ | 550Ω | | |
| V 13 | 6AU6 | 1 Meg. | 22KΩ | .1Ω | Ω | 220KΩ | 500Ω | 22KΩ | | |
| V 14 | 6SN7GT | 1 Meg. | 110KΩ | 5KΩ | 2.2KΩ | 122KΩ | Ω | .1Ω | Ω | |
| V 15 | 6SN7GT | 4.7 Meg. | 1100Ω | 5KΩ | 4.7 Meg. | 1100Ω | 1000Ω | .1Ω | Ω | |
| V 16 | 6AL5 | 750KΩ | 750KΩ | .1Ω | Ω | 30KΩ | Ω | 30KΩ | | |
| V 17 | 6SN7GT | 1.7 Meg. | 1100KΩ | Ω | 1.7 Meg. | 5 Meg. | Ω | .1Ω | Ω | |
| V 18 | 6SN7GT | 220KΩ | 110KΩ | 1.5KΩ | 150KΩ | 430KΩ | 1.5KΩ | .1Ω | Ω | |
| V 19 | 6SQ6G | Inf. | Ω | 100Ω | 15Ω | 470KΩ | 8KΩ | .1Ω | 18KΩ | TOP CAP 200Ω |
| V 20 | 5Y4G | Inf. | 170KΩ | 170KΩ | 240Ω | 170KΩ | 240Ω | 170KΩ | 170KΩ | |
| V 21 | 1B3GT | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | TOP CAP 450Ω |
| V 22 | 5U4G | Inf. | 20KΩ | Inf. | 50Ω | Inf. | 45Ω | Inf. | 20KΩ | |
| V 23 | 10BP4 | Ω | 22KΩ | PIN 10 11.5KΩ | PIN 11 160KΩ | PIN 12 1.1Ω | | | | |

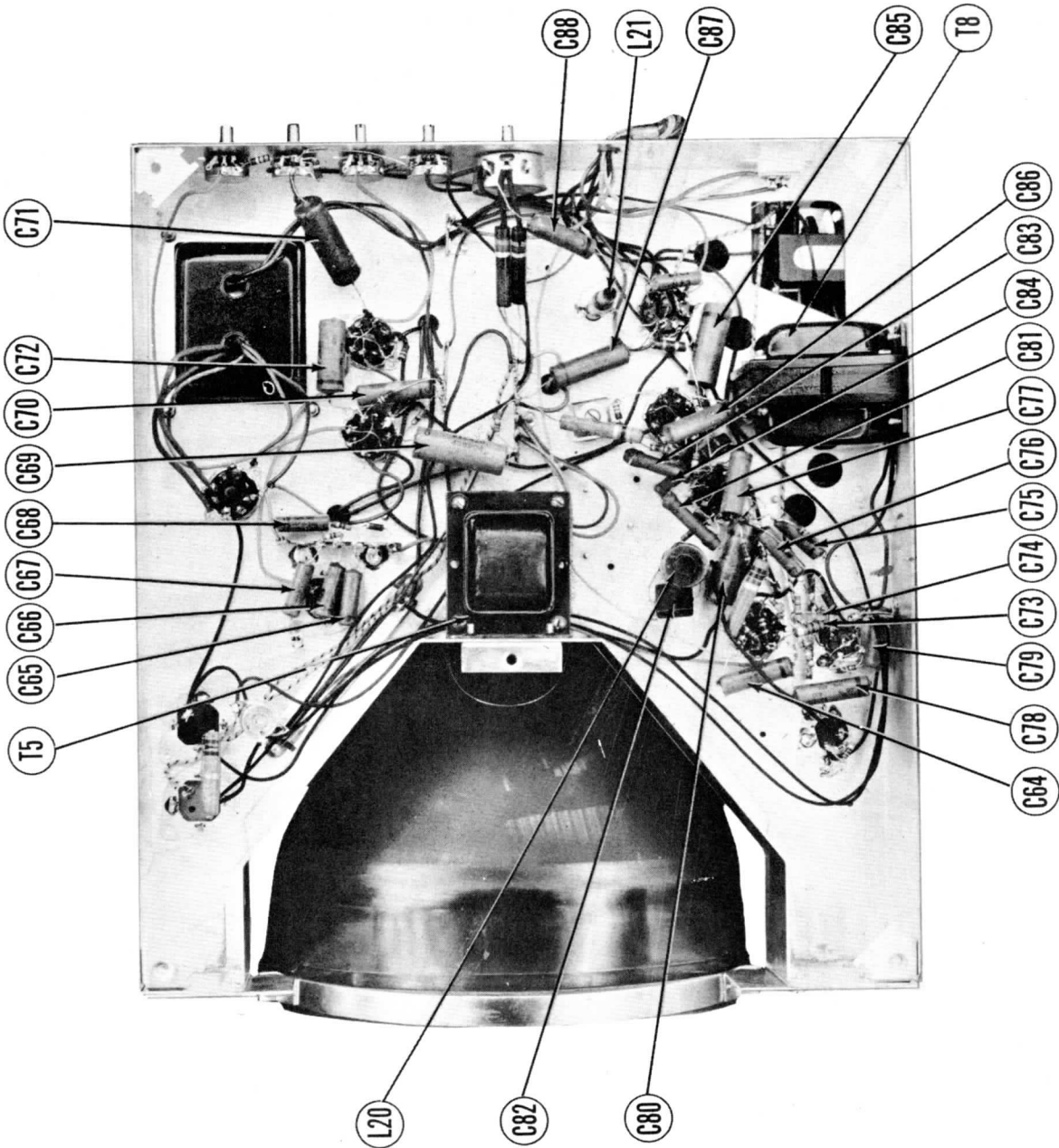
† Measured From Pin 8 Or V22.
 ‡ Measured From Output Of M1.
 † Measured From Pin 8 Or V20.

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.



SWEEP CHASSIS-TOP VIEW

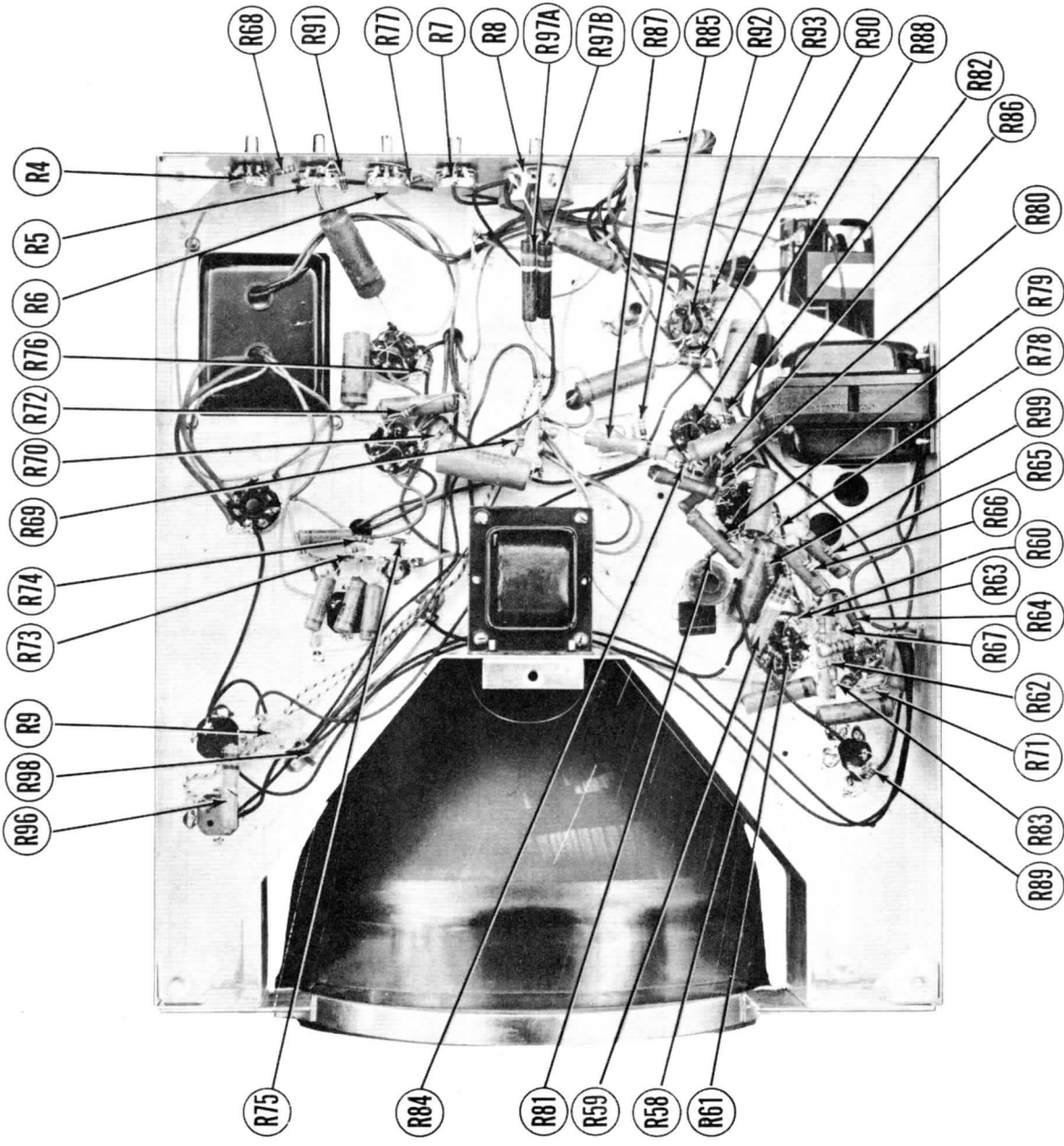
SENTINEL
MODELS 401, 402,
406 SERIES



SWEEP CHASSIS-CAPACITOR IDENTIFICATION

SENTINEL
MODELS 401, 402,
406 SERIES

SWEEP CHASSIS-RESISTOR IDENTIFICATION



PARTS LIST AND

CAPACITORS

TUBES (SYLVANIA or Equivalent)

| ITEM No. | USE | REPLACEMENT DATA | | | RMA BASE TYPE | NOTES |
|----------|-------------------|-------------------|----------------------|---------------------------|------------------------------------|-------|
| | | SENTINEL PART No. | STANDARD REPLACEMENT | CORNELL-DUBILIER PART No. | | |
| V1 | RF Amp. | 6BH6 | 6BH6 | 7CM | | |
| V2 | Mixer | 6AG5 | 6AG5 | 7BD | | |
| V3 | Oscillator | 12AT7 | 12AT7 | 9A | | |
| V4 | 1st Video IF Amp. | 6AG5 | 6AG5 | 7BD | | |
| V5 | 2nd Video IF Amp. | 6AG5 | 6AG5 | 7BD | | |
| V6 | 3rd Video IF Amp. | 6AG5 | 6AG5 | 7BD | | |
| V7 | Video Det.-AGC | 6AL5 | 6AL5 | 6BT | | |
| V8 | Video Amp. | 6AU6 | 6AU6 | 7BK | | |
| V9 | Sound IF Amp. | 6AU6 | 6AU6 | 6BT | | |
| V10 | Ratio Det. | 6AL5 | 6AL5 | 6BT | | |
| V11 | AF Amp. | 6SQ7 | 6SQ7 | 8Q | | |
| V12 | Audio Output | 6AR5 | 6AR5 | 6CC | | |
| V13 | Sync. Sep. | 6AU6 | 6AU6 | 7BK | | |
| V14 | Phase Splitter | 6SN7GT | 6SN7GT | 8BD | | |
| V15 | Phase Det. | 6AL5 | 6AL5 | 6BT | | |
| V16 | Vert. Osc. | 6SN7GT | 6SN7GT | 8BD | | |
| V17 | Vert. Amp. | 6SN7GT | 6SN7GT | 8BD | | |
| V18 | Hor. Osc. | 6SN7GT | 6SN7GT | 8BD | | |
| V19 | Hor. Output | 6BG6G | 6BG6G | 5BT | | |
| V20 | Damper | 5V4G | 5V4G | 5L | | |
| V21 | HV Rectifier | 1B3GT | 1B3GT | 3C | | |
| V22 | LV Rectifier | 5U4G | 5U4G | 5T | | |
| V23A | Picture Tube | 10BP4 | 10BP4 | 12D | Used in models 401 and 402 series. | |
| B | Picture Tube | 12LP4 | 12LP4 | 12D | Used in model 406 series. | |

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

| ITEM No. | RATING | | REPLACEMENT DATA | | | | | IDENTIFICATION CODES AND INSTALLATION NOTES |
|----------|--------|------|-------------------|------------------|---------------------------|---------------|------------------|---|
| | CAP. | VOLT | SENTINEL PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | ERIE PART No. | SPRAGUE PART No. | |
| C1A | 60 | 450 | 25E36 | AFH128J | UP11CJ | | D12114 | ▲ Filter |
| B | 40 | 450 | | | 835 | | | ▲ Filter |
| C2A | 40 | 450 | 25E37 | AF86J | UP4445 | | TVL-64 | ▲ Filter |
| B | 40 | 450 | | | | | | ▲ Filter |
| C3A | 10 | 450 | 25E38 | AF32J | UP1145 | | EL-151 | ■ Decoupling |
| B | 15 | 450 | | | | | | ■ Decoupling |
| C4 | 1000 | 25 | 25E39 | AF200A | UP1M | | D12115 | Vert. Output Cath. Byp. |
| B | 50 | 150 | | | -2E | | | |
| C5A | 50 | 150 | 25E30 | AF888D | UP5515 | | D12112 | ■ Filter |
| B | 50 | 150 | | | BR3015 | | | ▲ Filter |
| C | 50 | 150 | | | | | | Filter |
| C6 | 40 | 300 | 25E31 | PRS450/40 | BR4035 | | TVA-24 | Decoupling |
| C7 | 10 | 25 | 25E8 | PRS25/10 | BR10-25 | | TVA-5 | Stabilizing Cap |
| C8 | 10 | 25 | 25E8 | PRS25/10 | BR10-25 | | TVA-5 | Sync. Sep. Cath. Byp. |
| C9 | 10 | 250 | 25E35 | PRS250/12 | BR1225 | | UT-201 | V Amp. Screen Bypass |
| C10 | 100 | 10 | 25E12 | PR612/100 | BRH151 | | UHC-112 | V Amp. Cath. Bypass |
| C11 | 680 | | | | | GP2K-750 | | RF Coupling |
| C12 | 680 | | | | | GP2K-750 | | RF Cath. Bypass |
| C13 | 680 | | | | | GP2K-750 | | AGC Filter |
| C14 | 680 | | | | | GP2K-750 | | RF Screen Bypass |
| C15 | 50 | | | | | GPLK50 | | RF Coupling |
| C16 | .47 | | | | | | | RF Coupling |
| C17 | 1.5 | | | | | | | RF Coupling |
| C18 | 25 | | | | | NPOK-1.5 | | RF Coupling |
| C19 | 25 | | | | | GPLK-25 | | RF Coupling |
| C20 | 5000 | | | | | | | RF Coupling |
| C21 | 1.5 | | | | | NPOK-1.5 | | Mixer Screen Bypass |
| C22 | 680 | | | | | GP2K-750 | | Osc. Coupling |
| C23 | 3 | | | | | NPOK-3 | | Osc. Plate Bypass |
| C24 | 20 | | | | | GPLK-25 | | Osc. Feedback |
| C25 | 680 | | | | | GP2K-750 | | Osc. Grid Cap †† |
| C26 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | Osc. Fil. Bypass |
| C27 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | |
| C28 | 100 | | 23E11 | 1468-0001 | 5W5T1 | GP1K-100 | 1FM-31 | IF Coupling |
| C29 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | AGC Filter |
| C30 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 1st V IF Fil. Bypass |
| C31 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 1st V IF Decoupling |
| C32 | 100 | | 23E11 | 1468-0001 | 5W5T1 | GP1K-100 | 1FM-31 | IF Coupling |
| C33 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | AGC Filter |
| C34 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 2nd V IF Fil. Bypass |
| C35 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 2nd V IF Decoupling |
| C36 | 100 | | 23E11 | 1468-0001 | 5W5T1 | GP1K-100 | 1FM-31 | IF Coupling |
| C37 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 3rd V IF Cath. Bypass |
| C38 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 3rd V IF Fil. Bypass |
| C39 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | 3rd V IF Decoupling |
| C40 | 100 | | 23E11 | 1468-0001 | 5W5T1 | GP1K-100 | 1FM-31 | IF Coupling |
| C41 | 5 | | 23E28 | 1468-000005 | 5W5V5 | NPOK-5 | MS-55 | V Diode Filter |
| C42 | .25 | 200 | 23E222 | P488-25 | GT2P25 | | TC-2 | AGC Filter |
| C43 | 5 | | 23E28 | 1468-000005 | 5W5V5 | | MS-55 | RF Bypass |
| C44 | .1 | 200 | 23E2014-9 | P288-1 | GT2P1 | NPOK-5 | TM-1 | Video Coupling |
| C45 | .02 | 400 | 23E413 | P488-02 | GT4S2 | | TM-12 | V Amp. Screen Bypass |
| C46 | .1 | 400 | 23E2014-23 | P488-1 | GT4P1 | | TM-1 | Video Coupling |
| C47 | 2 | 400 | 23E2014-22 | P488-22 | GT4P2 | | TC-2 | Video Coupling |
| C48 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | Pic Tube Cath. Dec. |
| C49 | 2 | | 23E21 | | | | | S IF Coupling |
| C50 | 3 | | 23E13 | | | | | Fixed Trimmer |
| C51 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | S IF Cath. Bypass |
| C52 | 5000 | | 23E2025 | 1467-005 | 1D5D5 | GP2M-005 | 1FM-25 | S IF Decoupling |
| C53 | 1000 | | 23E2012 | 1468-001 | 1W5D1 | GP2L-001 | 1FM-21 | Diode Load Cap |
| C54 | .002 | 400 | 23E405 | P688-002 | GT6D2 | GP2M-002 | TM-22 | De-emphasis |
| C55 | .005 | 400 | 23E408 | P688-005 | GT6D5 | GP2M-005 | TM-25 | Audio Coupling |
| C56 | .005 | 400 | 23E408 | P688-005 | GT6D5 | GP2M-005 | TM-25 | Audio Coupling |
| C57 | 100 | | 23E11 | 1468-0001 | 5W5T1 | GP1K-100 | 1FM-31 | AF Plate Bypass |
| C58 | .25 | 200 | 23E222 | P488-25 | GT2P25 | | TC-2 | AF Plate Decoupling |
| C59 | .01 | 400 | 23E411 | P488-01 | GT4S1 | GP2-335-01 | TM-11 | Audio Coupling |
| C60 | .005 | 400 | 23E408 | P688-005 | GT6D5 | GP2M-005 | TM-25 | Output Plate Bypass |

| ITEM No. | RATING | | REPLACEMENT DATA | | |
|----------|--------|-------|-------------------|------------------|---------------------------|
| | CAP. | VOLT | SENTINEL PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. |
| C61 | .05 | 200 | 23E216 | P288-05 | GT285 |
| C62 | .01 | 220AC | 23E250 | P688-01 | GT6S1 |
| C63 | .01 | 220AC | 23E250 | P688-01 | GT6S1 |
| C64 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C65 | .002 | 400 | 23E405 | P688-002 | GT6D2 |
| C66 | .002 | 400 | 23E405 | P688-002 | GT6D2 |
| C67 | .002 | 400 | 23E405 | P688-002 | GT6D2 |
| C68 | .005 | 400 | 23E408 | P688-005 | GT6D5 |
| C69 | .2 | 400 | 23E420 | P488-22 | GT4P2 |
| C70 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C71 | .1 | 600 | 23E618 | P688-1 | GT6P1 |
| C72 | .1 | 400 | 23E418 | P488-1 | GT4P1 |
| C73 | 1000 | | 23E2012 | 1468-001 | 1W5D1 |
| C74 | 1000 | | 23E2012 | 1468-001 | 1W5D1 |
| C75 | .002 | 400 | 23E405 | P688-002 | GT6D2 |
| C76 | .002 | 400 | 23E405 | P688-002 | GT6D2 |
| C77 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C78 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C79 | .005 | 400 | 23E406 | P688-003 | GT6D3 |
| C80 | .25 | 200 | 23E222 | P488-25 | GT2P25 |
| C81 | 250 | | 23E2030-3 | 1468-00025 | 5W5T25 |
| C82 | 4000 | 500 | 23E266 | 1464-004 | 1DR5D4 |
| C83 | 250 | | 23E2030-3 | 1468-00025 | 5W5T25 |
| C84 | 400 | | 23E2030-4 | 1468-0004 | 5W5T4 |
| C85 | .25 | 200 | 23E222 | P488-25 | GT2P25 |
| C86 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C87 | .1 | 400 | 23E418 | P488-1 | GT4P1 |
| C88 | .05 | 400 | 23E416 | P488-05 | GT4S5 |
| C89 | 500 | 1000 | 23E2029 | | |
| C90 | 125 | | 23E2030-7 | | |
| C91 | 680 | | | | |

† Some Models Use 25MMF In This Application
* Not Used In All Models.

| ITEM No. | RATING | | REPLACEMENT DATA | | |
|----------|------------|-------|-------------------|--------------|---------------|
| | RESISTANCE | WATTS | SENTINEL PART No. | IRC PART No. | CLAR PART No. |
| R1 | 1000Ω | 2 | 28E31 | | 43-10 |
| R2A | 25KΩ | 1/2 | 28E32 | Q11-120 | AM-40 |
| B | Shaft | | Not Req. | Not Req. | KSS-3 |
| R3A | 500KΩ | 1/2 | 28E33 | Q13-133 | AM-60 |
| B | Shaft | | Not Req. | Not Req. | KSS-3 |
| C | Switch | | Not Req. | 76-1 | SW-A |
| R4 | 1 Meg. | 1/2 | 28E36 | Q11-137 | M-61 |
| R5 | 250KΩ | 1/2 | 28E45 | Q11-130 | M-55 |
| R6 | 5000Ω | 1/2 | 28E44 | Q11-114 | M-19 |
| R7 | 50KΩ | 1/2 | 28E43 | Q11-123 | M-44 |
| R8 | 1500Ω | 2 | 28E42 | | 10-18 |
| R9 | 20Ω | 2 | 28E49 | | |

| ITEM No. | RATING | | REPLACEMENT DATA | |
|----------|------------|-------|-------------------|--------------|
| | RESISTANCE | WATTS | SENTINEL PART No. | IRC PART No. |
| R10 | 22KΩ | 1/2 | | |
| R11 | 100Ω | 1 | | |
| R12 | 10KΩ | 1 | | |
| R13 | 56KΩ | 1 | | |
| R14 | 4700Ω | 1 | | |
| R15 | 1 Meg. | 1 | | |
| R16 | 82KΩ | 1 | | |
| R17 | 1000Ω | 1 | | |
| R18 | 6800Ω | 1 | | |
| R19 | 10KΩ | 1 | | |
| R20 | 3300Ω | 1 | 27E332 | |
| R21 | 100Ω | 1 | 27E101 | |
| R22 | 1000Ω | 1 | 27E102 | BTS-1000 |
| R23 | 470KΩ | 1 | 27E474 | BTS-470K |
| R24 | 470KΩ | 1 | 27E474 | BTS-470K |
| R25 | 10KΩ | 1 | 27E103 | BTS-10K |
| R26 | 4700Ω | 1 | 27E472 | BTS-4700 |
| R27 | 47Ω | 1 | 27E470 | |
| R28 | 1000Ω | 1 | 27E102 | BTS-1000 |
| R29 | 2700Ω | 1 | 27E272 | BTS-2700 |
| R30 | 100Ω | 1 | 27E101 | |
| R31 | 1000Ω | 1 | 27E102 | BTS-1000 |
| R32 | 470KΩ | 1 | 27E474 | BTS-470K |
| R33 | 8200Ω | 1 | 27E822 | BTS-8200 |
| R34 | 1 Meg. | 1 | 27E105 | BTS-1 Meg. |
| R35 | 68Ω | 1 | 27E680 | BW-8-68 |
| R36 | 6800Ω | 1 | 27E682-3 | BT-6800 |
| R37 | 6800Ω | 1 | 27E682-5 | BT-2-6800 |
| R38 | 15KΩ | 2 | 27E155-5 | BT-2-15K |
| R39 | 180Ω | 2 | 27E181 | |
| R40 | 1000Ω | 2 | 27E102 | BTS-1000 |
| R41 | 6800Ω | 2 | 27E682-2 | BTS-6800 |
| R42 | 6800Ω | 2 | 27E682-2 | BTS-6800 |
| R43 | 39KΩ | 2 | 27E393 | BTS-39K |
| R44 | 10 Meg. | 2 | 27E106 | BTS-10 Meg. |
| R45 | 220KΩ | 2 | 27E224 | BTS-220K |
| R46 | 220KΩ | 2 | 27E224 | BTS-220K |
| R47 | 470KΩ | 2 | 27E474 | BTS-470K |
| R48 | 390Ω | 2 | 27E391-5 | BT-2-390 |
| R49 | 1 Meg. | 2 | 27E105 | BTS-1 Meg. |
| R50 | 220KΩ | 2 | 27E224 | BTS-220K |
| R51 | 22KΩ | 2 | 27E223 | BTS-22K |
| R52 | 100KΩ | 2 | 27E104 | BTS-100K |

DESCRIPTIONS

T.J

| No. | SPRAGUE PART No. | IDENTIFICATION CODES AND INSTALLATION NOTES |
|-----|------------------|---|
| | TM-15 | Func. Coupling |
| | TM-11 | Line Filter |
| | TM-11 | Line Filter |
| | TM-15 | Sym. Coupling |
| 02 | TM-22 | Integrator Net |
| 02 | TM-22 | Integrator Net |
| 02 | TM-22 | Integrator Net |
| 05 | TM-25 | Vert. Osc. Grid Cap |
| | TC-2 | Vert. Osc. Plate Dec. |
| | TM-15 | Vert. Discharge |
| | TM-1 | Vert. Osc. Plate Dec. |
| | TM-1 | Vert. Sweep Coupling |
| 01 | LFM-21 | Hor. Sync. Coupling |
| 01 | LFM-21 | Hor. Sync. Coupling |
| 02 | TM-22 | AFC Filter |
| 02 | TM-22 | AFC Filter |
| 02 | TM-15 | AFC Filter |
| 03 | TM-15 | AFC Feedback |
| 03 | TM-23 | Voltage Divider |
| | TC-2 | AFC Filter |
| 50 | LFM-325 | Hor. Osc. Feedback |
| 50 | MS-24 | Fixed Trimmer |
| | LFM-325 | Hor. Sweep Coupling |
| | LFM-34 | Hor. Discharge |
| | TC-2 | Hor. Output Cath. Byp. |
| | TM-15 | Hor. Output Screen Byp. |
| | TM-1 | Damper Filter |
| | TM-15 | Damper Filter |
| | | H V Filter |
| | | Hor. Def. Coil Shunt* |
| | | RF Bypass |

LS

| INSTALLATION NOTES | |
|--------------------------------|--|
| Contrast Control (Wire Wound) | |
| Brightness Control | |
| Attach to R2A Per Instructions | |
| Volume Control | |
| Attach to R3A Per Instructions | |
| Attach to R3A Per Instructions | |
| Vertical Hold Control | |
| Height Control | |
| Vertical Linearity Control | |
| Horizontal Hold Control | |
| Focus Control (Wire Wound) | |
| Horizontal Centering Control | |

S

| IDENTIFICATION CODES | |
|--|-----|
| RESISTORS ARE ± 10% UNLESS OTHERWISE STATED. | |
| Id | 20% |
| rhode | 20% |
| ate | 20% |
| reen | 20% |
| Coil Shunt | 20% |
| Grid | 20% |
| Screen | 20% |
| Plate Decoup. | 20% |
| Plate | 20% |
| Grid | 20% |
| Ideo IF Grid | |
| Ideo IF Cathode | |
| Ideo IF Decoup. | |
| etwork | 20% |
| etwork | 20% |
| Ideo IF Grid | |
| Ideo IF Cathode | |
| Ideo IF Decoup. | |
| Ideo IF Grid | |
| Ideo IF Cathode | |
| Ideo IF Decoup. | |
| etwork | 20% |
| Det. Diode Load | |
| Amp. Grid | 20% |
| Amp. Cathode | |
| Amp. Plate | |
| Amp. Screen | |
| r | |
| IF Cathode | |
| IF Decoup. | |
| Det. Diode Load | |
| Det. Diode Load | |
| hassis | |
| d | 20% |
| te | 20% |
| te | 20% |
| Grid | |
| Cathode | |
| Sep. Grid | 20% |
| Sep. Plate | 20% |
| Sep. Cathode | |
| Correction | 20% |

RESISTORS (CONT.)

| ITEM No. | RATING | | REPLACEMENT DATA | | IDENTIFICATION CODES |
|----------|------------|-------|-------------------|--------------|----------------------------------|
| | RESISTANCE | WATTS | SENTINEL PART No. | IRC PART No. | |
| R63 | 150KΩ | 1 | 27E154 | BTS-150K | Voltage Divider 20% |
| R54 | 22KΩ | 1 | 27E223 | BTS-22K | Voltage Divider |
| R55 | 470Ω | 2 | 27E471-5 | BW-2-470 | Filter Wire Wound |
| R56A | 400Ω | 2 | 27E1006 | AB-400 | Filter Wire Wound |
| B | 120Ω | 5 | | AB-125 | Filter Wire Wound |
| R57 | 33Ω | 1 | 27E330-3 | | Surge Limiter |
| R58 | 220Ω | 1 | 27E222 | BTS-2200 | Sync. Amp. Grid |
| R59 | 22KΩ | 1 | 27E223-5 | BT-2-22K | Sync. Amp. Plate |
| R60 | 1 Meg. | 1 | 27E105-2 | BTS-1 Meg. | Sync. Phase Inverter Grid |
| R61 | 4700Ω | 2 | 27E472-2 | BTS-4700 | Sync. Phase Inverter Cathode |
| R62 | 4700Ω | 2 | 27E472-2 | BTS-4700 | Sync. Phase Inverter Plate |
| R63 | 4700Ω | 2 | 27E472-2 | BTS-4700 | Sync. Phase Inverter Plate |
| R64 | 33KΩ | 2 | 27E333-2 | BTS-33K | Horiz. AFC Diode Load |
| R65 | 470KΩ | 2 | 27E474-2 | BTS-470K | Horiz. AFC Diode Load |
| R66 | 470KΩ | 2 | 27E474-2 | BTS-470K | Horiz. AFC Diode Load |
| R67 | 33KΩ | 2 | 27E333-2 | BTS-33K | Horiz. AFC Diode Load |
| R68 | 680KΩ | 2 | 27E684-2 | BTS-680K | Vert. Osc. Grid |
| R69 | 100KΩ | 2 | 27E104-2 | BTS-100K | Vert. Osc. Plate Decoup. |
| R70 | 6800Ω | 2 | 27E682-2 | BTS-6800 | Vert. Peaking |
| R71 | 27KΩ | 2 | 27E273-2 | BTS-27K | Phase Det. Cathode |
| R72 | 4.7 Meg. | 2 | 27E475-2 | BTS-4.7 Meg | Vert. Discharge Plate |
| R73 | 8200Ω | 2 | 27E822-2 | BTS-8200 | Integrator |
| R74 | 8200Ω | 2 | 27E822-2 | BTS-8200 | Integrator |
| R75 | 22KΩ | 2 | 27E223-2 | BTS-22K | Integrator |
| R76 | 4.7 Meg. | 2 | 27E475-2 | BTS-4.7 Meg | Vert. Amp. Grid |
| R77 | 1000Ω | 2 | 27E102-2 | BTS-1000 | Vert. Amp. Cathode |
| R78 | 220KΩ | 2 | 27E224-2 | BTS-220K | Horiz. Osc. Grid |
| R79 | 1500Ω | 2 | 27E102-2 | BTS-1500 | Horiz. Osc. Cathode |
| R80 | 100KΩ | 2 | 27E104-2 | BTS-100K | Horiz. Osc. Grid |
| R81 | 5600Ω | 2 | 27E1009-8 | BTS-5600-5% | Horiz. Osc. Plate |
| R82 | 330KΩ | 2 | 27E1009-9 | BTS-330-5% | Horiz. Osc. Plate |
| R83 | 4700Ω | 2 | 27E472-2 | BTS-4700 | Feed Back |
| R84 | 47Ω | 2 | 27E470-2 | | Parasitic Supp. |
| R85 | 470KΩ | 2 | 27E474-2 | BTS-470K | Horiz. Output Grid |
| R86 | 100Ω | 2 | 27E101-3 | BW-1-100 | Horiz. Output Cathode Wire Wound |
| R87 | 6800Ω | 2 | 27E682-5 | BT-2-6800 | Horiz. Output Screen |
| R88 | 100Ω | 2 | 27E101-2 | | Parasitic Supp. |
| R89 | 2200Ω | 2 | 27E222-2 | BTS-2200 | Filter |
| R90 | 1800Ω | 2 | 27E182-3 | BTA-1800 | Filter |
| R91 | 100KΩ | 2 | 27E104-2 | BTS-100K | Voltage Divider |
| R92 | 4700Ω | 2 | 27E472-2 | BTS-4700 | Horiz. Linearity Coil Shunt |
| R93 | 68Ω | 4 | 27E1013 | | Damper Filament (Wire Wound) |
| R94 | 3.3Ω | 4 | 27E1015-4 | BW-1-3.3 | HV Filament (Wire Wound) |
| R95 | 1 Meg. | 2 | 27E105 | | HV Filter |
| R96 | 1000Ω | 2 | 27E102-5 | BW-2-1000 | Filter |
| R97A | 270Ω | 2 | | BW-2-270 | Focus Coil Shunt Wire Wound |
| B | 270Ω | 2 | | BW-2-270 | Focus Coil Shunt Wire Wound |
| R98 | 1200Ω | 11 | 27E1012 | AB-1200 | Filter Wire Wound |
| R99 | 33KΩ | 1 | 27E333-2 | BTS-33K | AFC Filter Network |

SENTINEL
MODELS 401, 402,
406 SERIES

TRANSFORMER (POWER)

| ITEM No. | RATING | | | | REPLACEMENT DATA | | | |
|----------|----------------|-------------------|-------------|--|-------------------|------------------|------------------|----------------|
| | PRI. | SEC. 1 | SEC. 2 | SEC. 3 | SENTINEL PART No. | STANCOR PART No. | CHICAGO PART No. | MERIT PART No. |
| T1 | 117VAC @ 1.35A | 750VCT @ .210 ADC | 5VA @ 3A | | 22E30 | P-61651† | TP-910†† | P-29551† |
| T2 | 117VAC @ .77A | 117VAC @ .035 ADC | 6.3VAC @ 2A | 6.3VAC @ 4A SEC. 4 6.3VAC @ 4.3A | 22E27 | | | |

†† Add series resistor to reduce plate voltage.

TRANSFORMER (SWEEP CIRCUITS)

| ITEM No. | RATING | | REPLACEMENT DATA | | | | NOTES |
|----------|-----------------|--|-------------------|------------------|------------------|----------------|--|
| | DC RESISTANCE | | SENTINEL PART No. | STANCOR PART No. | CHICAGO PART No. | MERIT PART No. | |
| PRI. | SEC. | | | | | | |
| T3 | 170Ω | 950Ω | 22E31 | A-8121 | TBO-1 | A-3000 | Vert. Block Osc. Trans. Hor. Output Trans. |
| T4A | 430Ω Tap @ 185Ω | SEC. 1 80 Tap @ .5Ω SEC. 2 0Ω | 22E34 † | A-8117 | TFB-1 | | |
| B | | | 22E34-2 ‡ | | | | Hor. Output Trans. Vert. Output Trans. Hor. Deflection Yoke Vert. Deflection Yoke Focus Coil |
| T5 | 560Ω | 6.8Ω | 22E33 | A-8115 | TSO-1 | A-3035 | |
| T6A | 142 | | 2E80 | DY-1 | | | |
| B | 68Ω | | | | | | |
| T7 | 245Ω | | 20E424 | | | | |

† Used in 402 series.
‡ Used in 406 series.

TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | RATING | | | | REPLACEMENT DATA | | | | INSTALLATION NOTES |
|----------|-----------|------|---------|-----|-------------------|------------------|------------------|----------------|--------------------|
| | IMPEDANCE | | DC RES. | | SENTINEL PART No. | STANCOR PART No. | CHICAGO PART No. | MERIT PART No. | |
| PRI. | SEC. | PRI. | SEC. | | | | | | |
| T8 | 7200Ω | 3.7Ω | 600Ω | .5Ω | 22E35 | A-3850 | R0-13 | A-2900 | |

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

| ITEM No. | RATING | | REPLACEMENT DATA | | | NOTES |
|-------------|--------------------------------|--------------------|-------------------|--------------------|---------------|---|
| | | | SENTINEL PART No. | JENSEN PART No. | QUAM PART No. | |
| | FIELD RES. | V. C. IMP. | | | | |
| SP1 SP1A | PM PM | 3.7Ω | 1E34 † 1E37 ‡ | ST-117 MOD.P8-T | 8A31 | † Used in 402 series. ‡ Used in 401 and 406 series |
| SP2 SP2A | CONE DIA. 7 1/4" 6" x 9" | V. C. DIA. 3/4" | | | | |

FILTER CHOKE

| ITEM No. | RATINGS | | | REPLACEMENT DATA | | | | INSTALLATION NOTES |
|----------|----------------------|------------------|---------------------------------|-------------------|------------------|------------------|----------------|------------------------------|
| | TOTAL DIRECT CURRENT | D. C. RESISTANCE | INDUCTANCE (0 CURRENT 1000 cps) | SENTINEL PART No. | STANCOR PART No. | CHICAGO PART No. | MERIT PART No. | |
| L1 | .210A | 160Ω | 6.5Henries | 22E32 | C-1721 †† | | C-2991 †† | †† Drill new mounting holes. |

COILS (RF-IF)

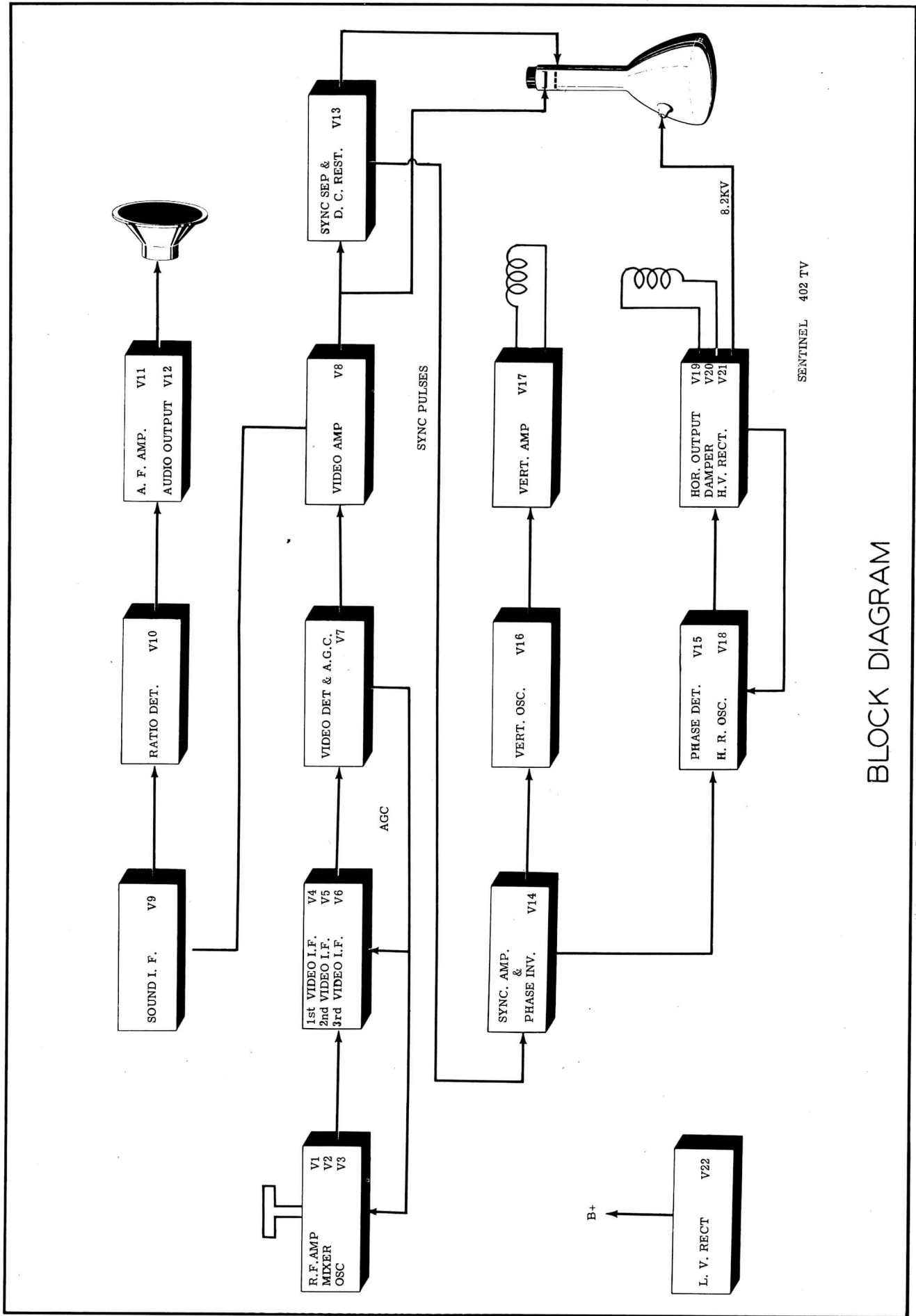
| ITEM No. | USE | DC RES. | | REPLACEMENT DATA | | NOTES |
|----------|----------------------|---------|------|-------------------|-------------------|---|
| | | | | SENTINEL PART No. | MEISSNER PART No. | |
| | | PRI. | SEC. | | | |
| L2 | Ant. Load- ing | 0Ω | | | | For channels 7-13, part of M2. |
| L3 | Ant. Load- ing | 0Ω | | | | For channels 2-6, Part of M2 wound on 1000Ω resistor. |
| L4 | RF Choke | 0Ω | | | | |
| L5 | 1st Video IF | .1Ω | | 20E360 | | |
| L6 | 2nd Video IF | .1Ω | | 20E360 | | |
| L7 | 3rd Video IF | .1Ω | | 20E360 | | |
| L8 | Peaking | 2.5Ω | | 2E79 | | Wound on 15KΩ resistor. |
| L9 | 4th Video IF | .1Ω | | 20E360 | | |
| L10 | Fil. Choke | .1Ω | | 2E78 | | |
| L11 | Fil. Choke | .1Ω | | 2E78 | | |
| L12 | Fil. Choke | .1Ω | | 2E78 | | |
| L13 | Fil. Choke | .1Ω | | 2E78 | | |
| L14 | Peaking | 9Ω | | 20E363-2 | | Wound on 33KΩ resistor. |
| L15 | Peaking | 14.5Ω | | 20E363-4 | | Wound on 8.2KΩ resistor |
| L16 | Peaking | 13.5Ω | | 20E363-3 | | Wound on 15KΩ resistor |
| L17 | Peaking | 13Ω | | 20E363-5 | | Wound on 10Meg. resistor |
| L18 | Sound IF | 4Ω | | 20E361 | | |
| L19 | Ratio Det. Trans. | 3.5Ω | .5Ω | 20E362 | | |
| L20 | Hor. Osc. | 60Ω | | 20E409 | | |
| L21 | Hor. Line- arity | 20Ω | | 20E410 | | |
| L22 | Width Con- trol | .4Ω | | 20E415 | | |

SELENIUM RECTIFIER

| ITEM No. | RATING | REPLACEMENT DATA | | | NOTES |
|----------|---------|-------------------|--|--|-------|
| | CURRENT | SENTINEL PART No. | | | |
| M1 | .035A | 57E3 | | | |

MISCELLANEOUS

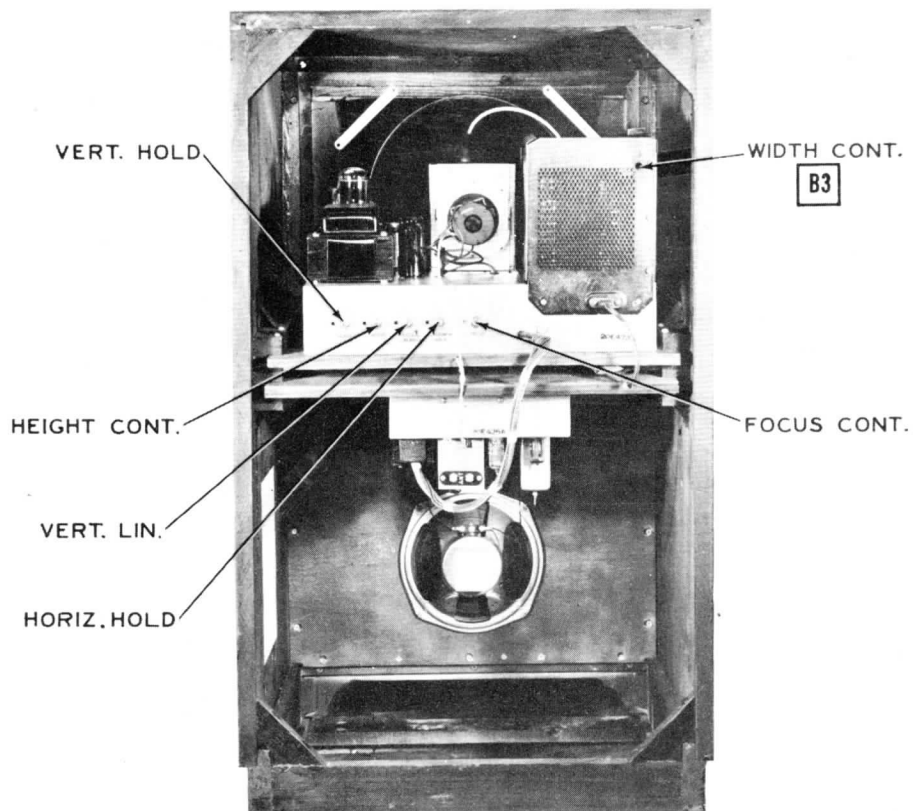
| ITEM No. | PART NAME | SENTINEL PART No. | NOTES |
|------------|--------------|--------------------------------|---|
| M2 | Tuner | 20E364 | Complete |
| M3 | Ion Trap | 15E122 | |
| M4 | Fuse | 40E6 | Type AGC .25A |
| | Safety Glass | 9E16 | For 402 series |
| | Safety Glass | 9E19 | For 401 and 406 series |
| | Knob | 20E427-2 | With pointer for 402 series. |
| | Knob | 37E55 | For 402 series |
| | Knob | 20E477 | With pointer for 401 and 406 series, mahogany |
| | Knob | 37E58-2 | For 401 and 406 series, mahogany |
| | Knob | 20E477-2 | With pointer for 401 and 406 series, blonde |
| | Knob | 37E58-3 | For 401 and 406 series, blonde |
| | Knob Plate | 5E50 | For 401 and 406 series, mahogany |
| Knob Plate | 5E50-2 | For 401 and 406 series, blonde | |



BLOCK DIAGRAM

SENTINEL
MODELS 401, 402,
406 SERIES

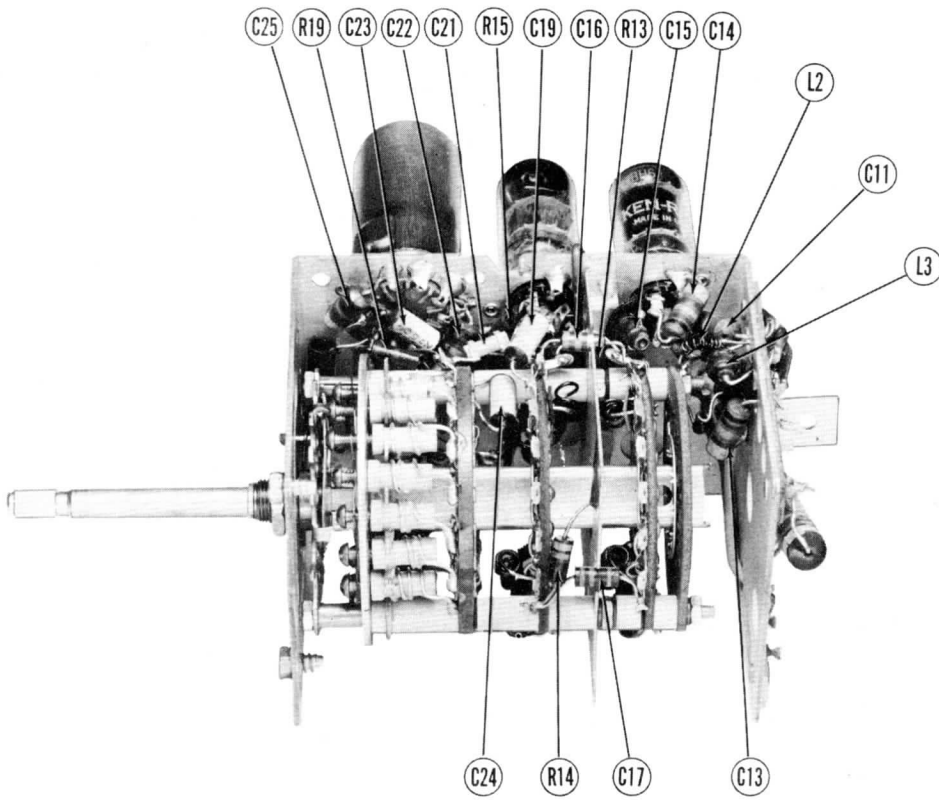
SENTINEL 402 TV



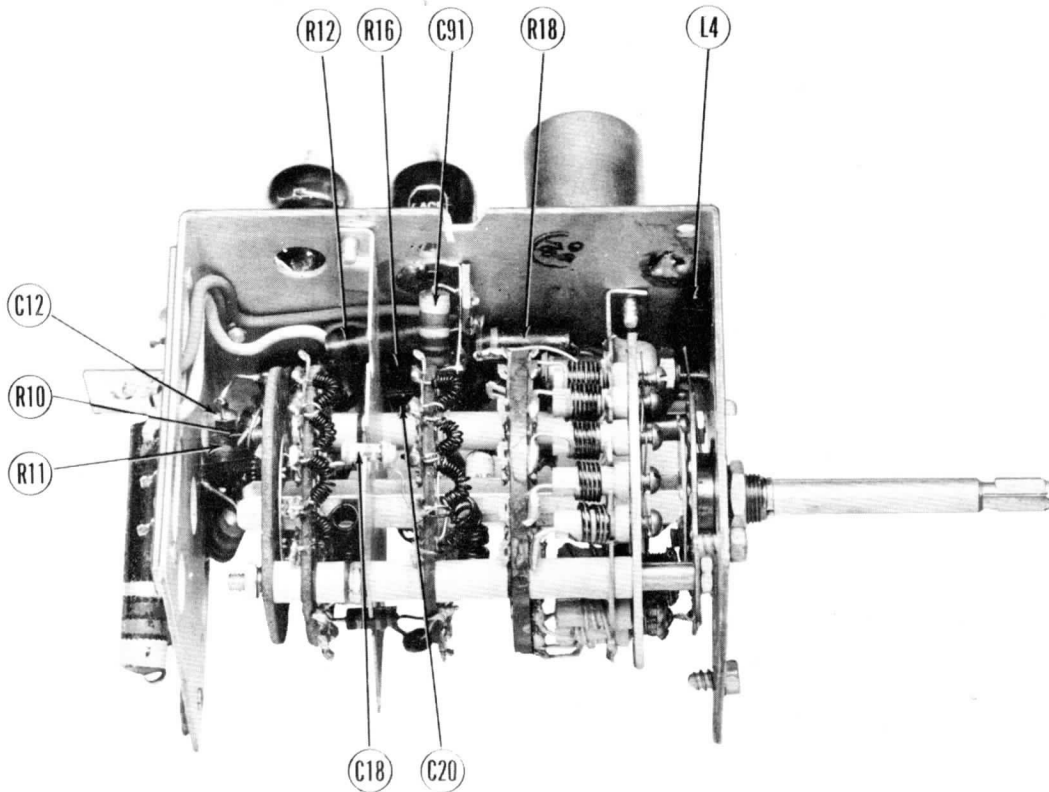
CABINET-REAR VIEW

HORIZONTAL SWEEP ADJUSTMENTS

1. Turn the horizontal drive adjustment (B1) clockwise as far as possible without crowding the right hand side of the test pattern. Insufficient horizontal drive will cause the raster to fall short of filling the mask horizontally. If it is not possible to "hold" the test pattern horizontally by adjustment of the horizontal hold control, set the horizontal hold control at the mid point of its rotation and adjust the horizontal oscillator adjustment slug (B2) until picture "syncs" horizontally.
2. Adjust the horizontal centering control and the width adjustment (B3) until the test pattern fills the mask properly in the horizontal plane.
3. Set the horizontal linearity adjustment (B4) so the test pattern is symmetrical from left to right. Slight readjustment of the horizontal drive (B1) may be necessary when making this adjustment.



RF TUNER-RIGHT SIDE



RF TUNER-LEFT SIDE