

| ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------|----------------------------|------------------|------------------------|-----------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| When complete receiver alignment is to be performed, it is essential that the order given be followed. | | | | | | | | | |
| AM ALIGNMENT | | | | | | | | | |
| 1. | DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | BAND SWITCH POS. | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS | |
| 2. | .1MFD | High side to pin 1 (Grid) of 6BA6 (V2). Low side to chassis. | 455KC (400V Mod.) | AM (center pos.) | Tuning gang fully open | Across voice coil | A1, A2 | Adjust for maximum output. | |
| 3. | .1MFD | High side to pin 7 (Grid) of 6BA6 (V1). Low side to chassis. | 455KC (400V Mod.) | " | " | " | A3, A4 | " | |
| 4. | .1MFD | Loop | 1620KC (400V Mod.) | " | " | " | A5 | " | |
| 5. | .1MFD | Loop | 1400KC (400V Mod.) | " | Tune for max. output | " | A6 | Fasten loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Set dial pointer to 1400KC on dial scale. | |
| FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM | | | | | | | | | |
| If the AM section of the receiver has not been aligned, step 1 of AM alignment must be performed before beginning FM IF alignment. | | | | | | | | | |
| 6. | " | " | " | " | " | DC Probe to Point to Common to chassis. | A8 | Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. Repeat steps 5 and 6. | |
| 7. | " | High side to pin 1 (Grid) of 6BA6 (V2). Low side to chassis. | 10.7MC (Unmod.) | " | " | DC Probe to Point to Common to chassis. | A9 | Adjust for maximum deflection. | |
| 8. | Direct | High side to ungrounded FM ant. terminal. Low side to chassis. | " | " | " | " | A10, All | Adjust for maximum deflection. | |
| 9. | Direct | " | " | " | " | " | All | Solder a 3300Ω resistor across terminals 3 and 4 (secondary) of first FM IF transformer. Adjust signal generator output to give the same reading noted in step 1. Adjust All for maximum deflection. | |
| 10. | Direct | " | " | " | " | " | A10 | Remove the 3300Ω resistor from terminals 3 and 4, and solder it to terminals 1 and 2 (primary) of the same transformer. Set signal gen. output same as in step 9. Adjust A10 for maximum deflection. | |

| | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------|----------------------------|------------------|---------------------------|---------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE | | | | | | | | | |
| Use frequency modulated signal with 60V modulation and 450KC sweep. Use 120V sawtooth voltage in scope for horizontal deflection. See note under VTVM alignment. | | | | | | | | | |
| 5. | DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | BAND SWITCH POS. | RADIO DIAL SETTING | CONNECT SCOPE | ADJUST | REMARKS | |
| 6. | Direct | High side to pin 1 (Grid) of 6BA6 (V2). Low side to chassis. | 10.7MC (450KC Sweep) | FM | Point of non-interference | Vert. Amp. to Point to Low side to chassis. | A7, A9 | Disconnect stabilizer capacitor C2. Adjust A7 and A9 for maximum amplitude and symmetry as per Fig. 1. | |
| 7. | Direct | High side to ungrounded FM ant. terminal. Low side to chassis. | " | " | " | " | A10, All | Adjust for maximum amplitude and symmetry as per Fig. 1. | |
| 11. | Direct | " | " | " | " | Vert. Amp. to Point to Low side to chassis. | A8, A7 | Reconnect capacitor C2. Adjust A8 so 10.7MC occurs at center of pattern as per Fig. 2. Slightly retouch A7 for maximum amplitude and straightness of crossover lines. Continue with step 11. | |
| FM BF ALIGNMENT | | | | | | | | | |
| 12. | " | " | 104.5MC (Unmod.) | " | Tune for max. deflection. | " | A13 | " | |

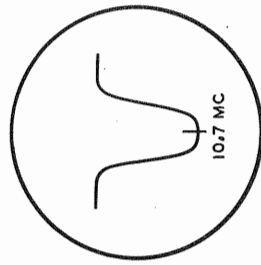


FIG. 1

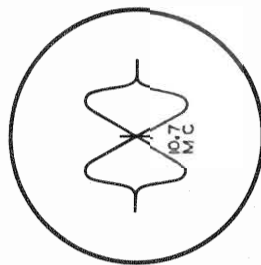


FIG. 2

CORONADO MODELS
94RA1-43-8510B 94RA1-43-8511B



MODEL
94RA1-43-8511B



MODEL
94RA1-43-8510B

| CORONADO MODEL 94RA1-43-8510B | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| TRADE NAME | Coronado, Models 94RA1-43-8510B, 94RA1-43-8511B |
| SUPPLIER | Gamble-Skogmo, Inc., 15 N. 8th St., Minneapolis, Minnesota |
| TYPE SET | AC Operated AM-FM Superheterodyne Receiver with Loop Antenna |
| TUBES (SEVEN) | Types 6BA7 Converter, 6BA6 1st IF Amp., 6BA6 FM 2nd IF Amp., 6AL5 Rat10 Det., 6AV6 DET-AVC-AF, 6V6GT Power Output, 6X5GT Rectifier. |
| POWER SUPPLY | 110-120 Volts AC |
| TUNING RANGE—BROADCAST | 540-1600KC |
| RATING: | .33 Amp. @ 117 Volts AC |
| FREQ. MOD. | 88-108MC |

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

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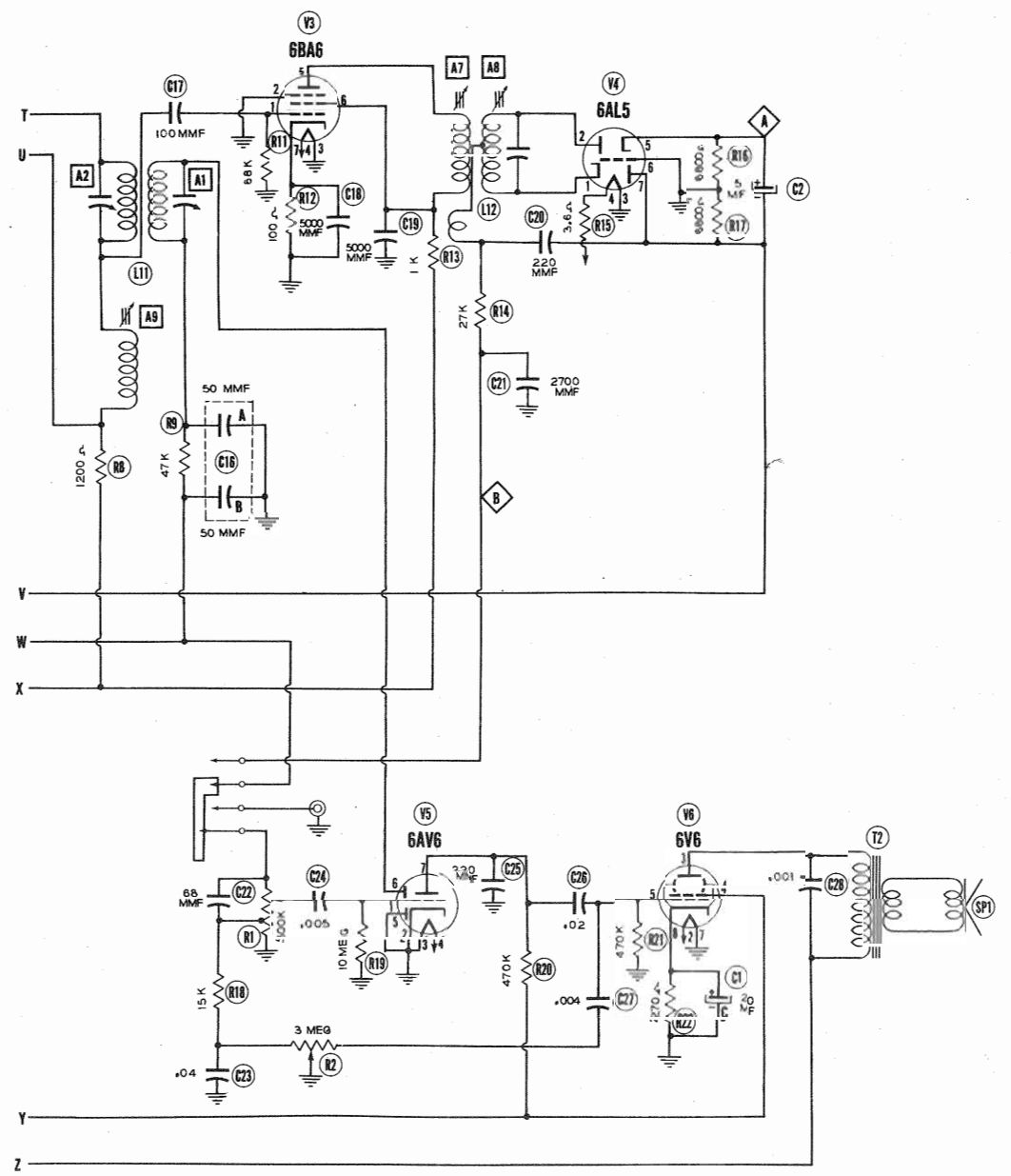
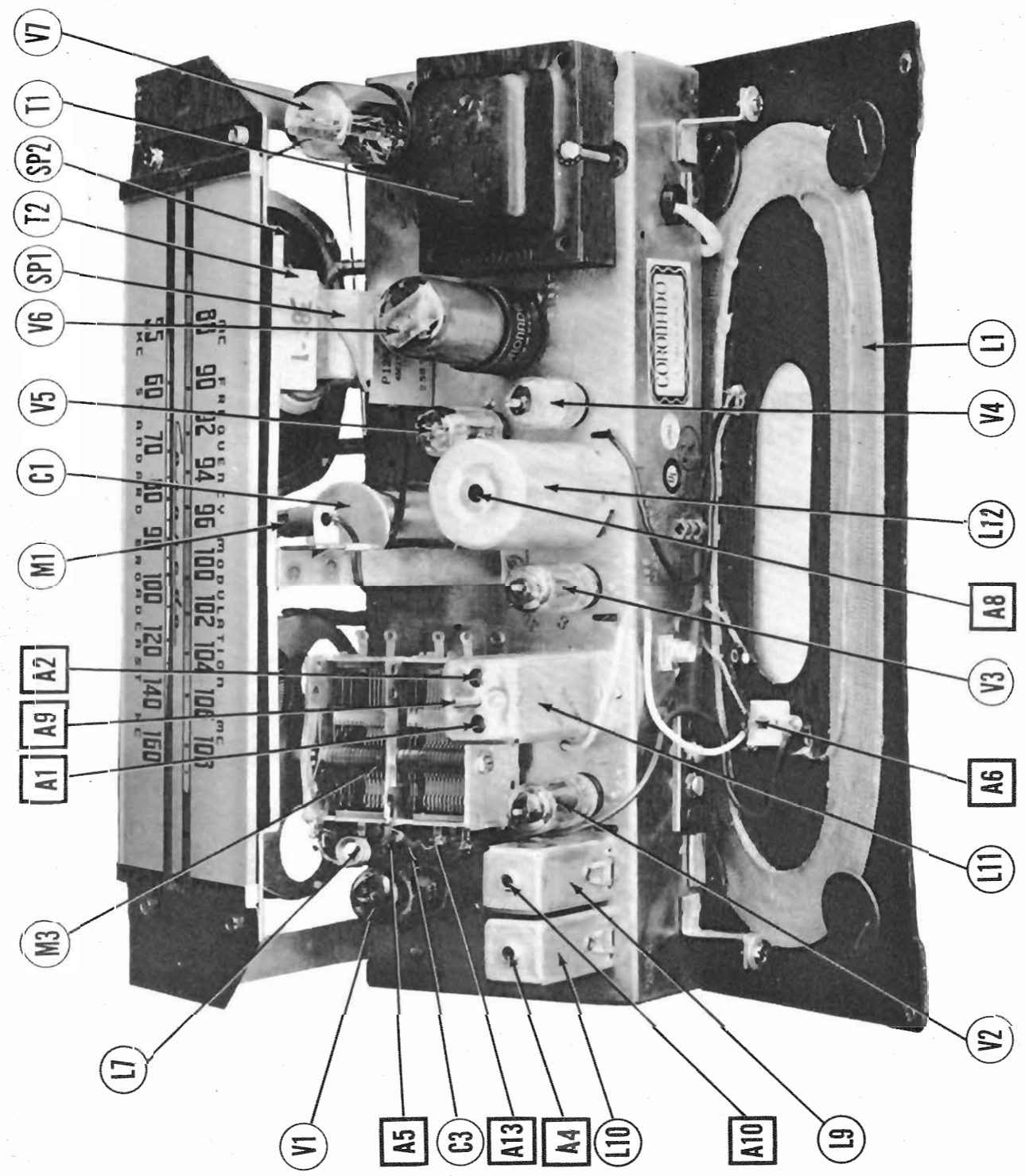
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PHOTOFACT* Folder



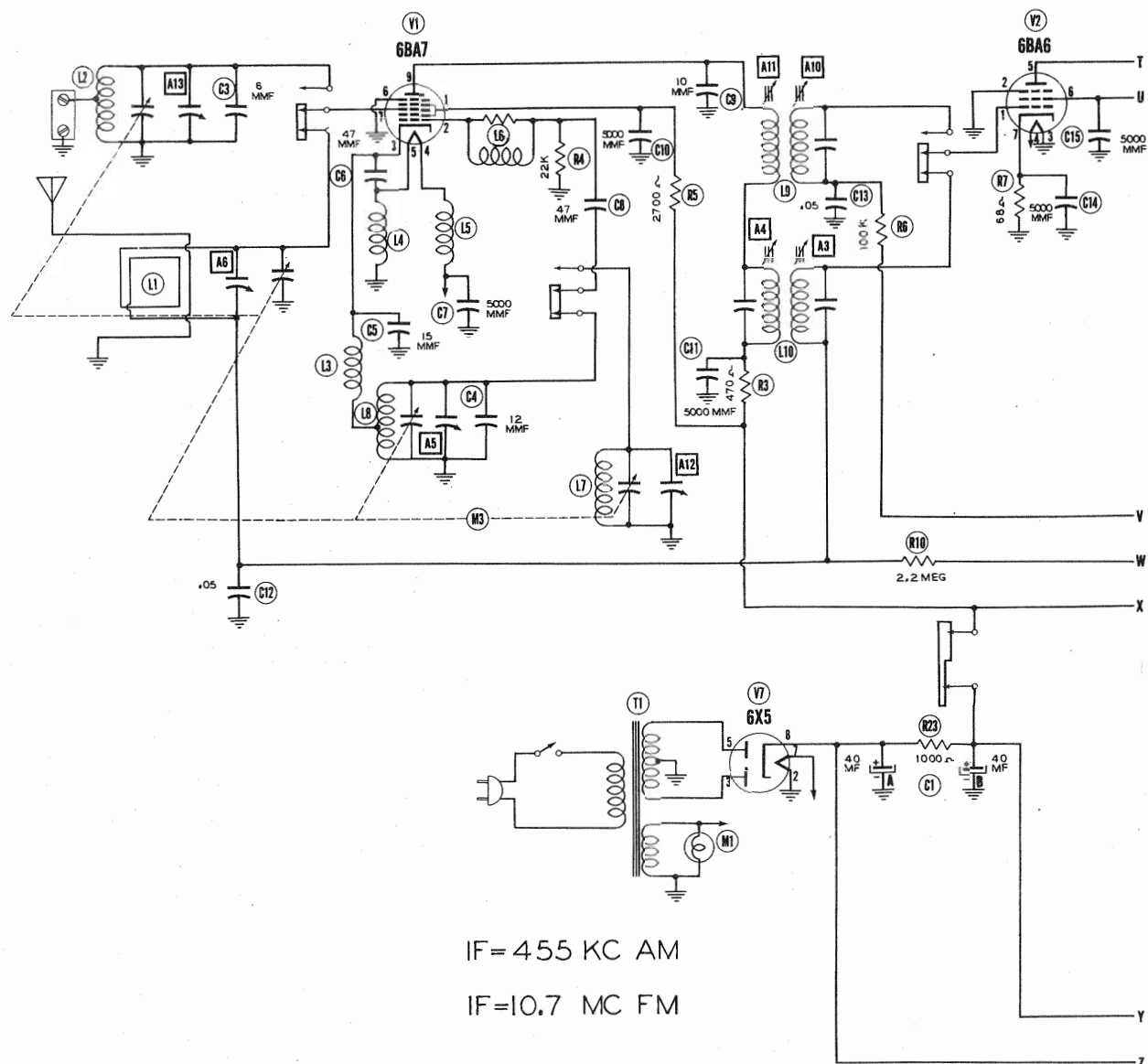
CORONADO MODELS
94RA1-43-8510B 94RA1-43-8511B

CORONADO MODELS
94RA1-43-8510B 94RA1-43-8511B



| RESISTANCE READINGS | | | | | | | | | |
|---------------------|------|--------|-------|-------|-------|-------|-------|-------|-------|
| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
| V1A | 6BA7 | 13.5K | 22K | 22K | 0 | .12 | 0 | 2.75K | 0 |
| V1B | 6BA7 | 13.5K | 22K | 22K | 0 | .12 | 0 | 0 | 11.5K |
| V2 | 6BA6 | 2.75K | 0 | 0 | .12 | 12.2K | 12.2K | 0 | 0 |
| V3 | 6BA6 | 68K | 0 | 0 | .12 | 12.2K | 12.2K | 100 | 0 |
| V4 | 6AL5 | 500K | 500K | 0 | .12 | 6.8K | 0 | 6.8K | 0 |
| V5 | 6AV6 | 10 Meg | 0 | 0 | .12 | 0 | 500K | 1470K | 0 |
| V6 | 6V6 | Inf. | .12 | 1100K | 1100K | 470K | Inf. | 0 | 270 |
| V7 | 6V6 | Inf. | 0 | 1100K | 1100K | 470K | Inf. | .12 | 270 |

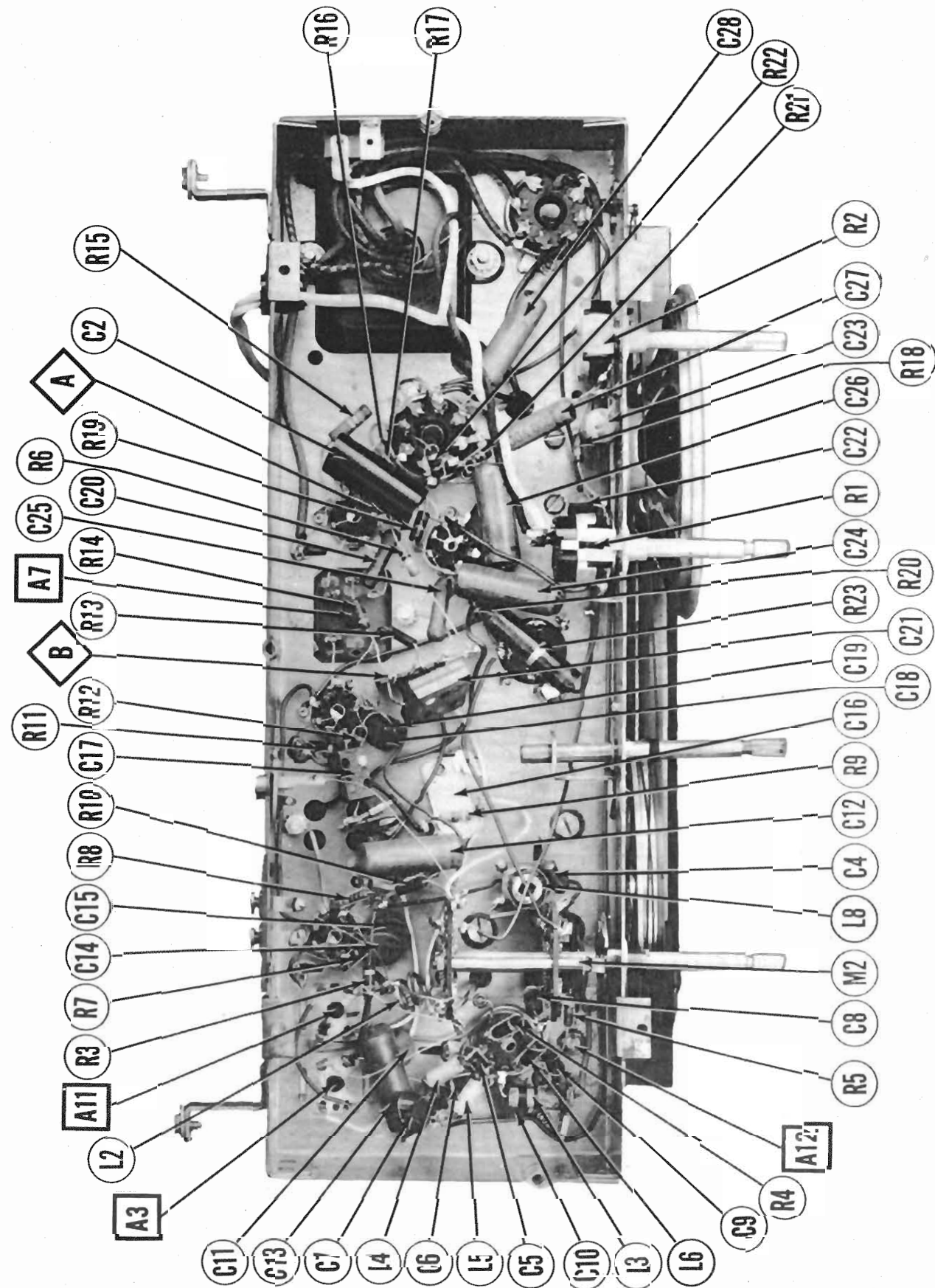
1 Measured from pin 8 of V7
VOLTAGE AND RESISTANCE READINGS TAKEN IN FA POSITION.



| VOLTAGE READINGS | | | | | | | | | |
|------------------|------|---------|----------|--------|--------|--------|---------|---------|--------|
| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
| V1A | 6BA7 | 80VDC | 5-7.5VDC | 0V | 0V | 6.3VAC | 0V | -0.1VDC | 0V |
| V1B | 6BA7 | 80VDC | 5-7.5VDC | 0V | 0V | 6.3VAC | 0V | 0V | 120VDC |
| V2 | 6BA6 | -0.5VDC | 0V | 0V | 6.3VAC | 107VDC | 107VDC | -7VDC | 0V |
| V2A | 6BA6 | 0V | 0V | 0V | 6.3VAC | 100VDC | 100VDC | 1.5VDC | 0V |
| V4 | 6A1A | -2VDC | 1VDC | 0V | 6.3VAC | 0VDC | 0V | -0.5VDC | 0V |
| V6 | 6A1A | -0.5VDC | 0V | 0V | 6.3VAC | 0V | -0.5VDC | 5.0VDC | 0V |
| V6 | 6A1A | 0V | 6.3VAC | 100VDC | 100VDC | 0V | 0V | 0V | 0.1VDC |
| V7 | 6A1A | 0V | 0V | 100VDC | 0V | 100VDC | 0V | 6.3VAC | 100VDC |

STAKEN WITH VACUUM TUBE VOLTMETER
THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of + 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.



PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

| ITEM No. | USE | REPLACEMENT DATA | | RMA BASE TYPE | INSTALLATION NOTES |
|----------|-----------------|-------------------|----------------------|---------------|--------------------|
| | | CORONADO PART No. | STANDARD REPLACEMENT | | |
| V1 | Converter | 6B17 | 6B17 | 8CT | |
| V2 | 1st IF Amp. | 6BA6 | 6BA6 | 7BK | |
| V3 | Ratio Det. Amp. | 6BA6 | 6BA6 | 7BK | |
| V4 | DET.-AFC-AP | 6AV6 | 6AV6 | 7BT | |
| V5 | Power Output | 6V6GT | 6V6GT | 7AC | |
| V6 | Rectifier | 6X5GT | 6X5GT | 6S | |
| V7 | Rectifier | 6X5GT | 6X5GT | 6S | |

PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

| ITEM No. | USE | DC RES. | | REPLACEMENT DATA | |
|----------|-------------------|---------|------|-------------------|-------------------|
| | | PRI. | SEC. | CORONADO PART No. | WEISSNER PART No. |
| L6 | Parasitic Supp. | 02 | | 9A1940 | |
| L7 | FM Osc. | 02 | | 9A2021 | |
| L8 | AM Osc. | 02 | | 9A1997 | 14-1060 |
| L9 | FM 1st IF | 1.52 | .52 | 9A2037 | |
| L10 | AM 1st IF | 122 | 122 | 9A2039 | 16-8679 |
| L11 | AM-FM 2nd IF | 132 | 132 | 9A1999 | |
| L12 | Ratio Det. Trans. | 32 | 32 | 9A2036 | |

1 turn of wire on 102 resistor.

Primary resistance includes FM primary.

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 CAP. VOLT | REPLACEMENT DATA | | ERIE PART No. | SPRAGUE PART No. | IDENTIFICATION CODES AND INSTALLATION NOTES |
|----------|------------------|-------------------|----------------------------------|---------------|------------------|---------------------------------------------|
| | | CORONADO PART No. | AEROVOX CORNEL DUBILIER PART No. | | | |
| C1A | 40 200 | 45X360 | AF96J1A | UF444CC | EL-422* | Filter |
| C1B | 40 150 | | | | | Output Cath. Bypass |
| C2 | 25 100 | 45X361 | SRE150/5 | BR4115 | UT-41 | Stabilizing Cap. Fixed Trimmer |
| C3 | 8 | 47X352 | | | | RF Bypass |
| C4 | 15 | 47X352 | | | | Conv. Fil. Bypass |
| C5 | 47 | 47X357 | 1468-00005 | 5W5Q5 | MS-415 | RF Bypass |
| C6 | 47 | 47X357 | 1467-005 | 10S05 | GPIK-15 | Conv. Fil. Bypass |
| C7 | 5000 | 47X517 | 1468-00006 | 5W5Q5 | GPIK-47 | Conv. Fil. Bypass |
| C8 | 47 | 47X517 | 1468-00006 | 5W5Q5 | GPIK-47 | Conv. Fil. Bypass |
| C9 | 10 | 47X512 | 1468-00001 | SR531 | MS-41 | Osc. Grid Cap. |
| C10 | 5000 | 47X507 | 1467-005 | 10S05 | NPKX-10 | Fixed Trimmer |
| C11 | 5000 | 47X507 | 1467-005 | 10S05 | 811-005 | Conv. Screen Bypass |
| C12 | 15 200 | 866503 | P289-05 | 07285 | 2901 | Conv. Plate Dec. |
| C13 | 55 200 | 866503 | P289-05 | 07285 | TM-15 | AFC Filter |
| C14 | 5000 | 47X507 | 1467-005 | 10S05 | 811-005 | AVC Filter |
| C15 | 5000 | 47X507 | 1467-005 | 10S05 | 811-005 | 1st IF Cathode Bypass |
| C16A | 5000 | 47X112 | 1468-00005 | 5W5Q5 | GPIK-50 | RF Filter |
| C17 | 100 | 47X476 | 1468-0001 | 5W571 | GPIK-100 | IF Filter |
| C18 | 5000 | 47X507 | 1467-005 | 10S05 | 811-005 | 2nd IF Cathode Bypass |
| C19 | 5000 | 47X507 | 1467-005 | 10S05 | 811-005 | 2nd IF Decoupling |
| C20 | 220 | 47X468 | 1468-00025 | 5W5725 | 0P2K-220 | Diode Load Cap. |
| C21 | 2700 | 47X492 | 1467-0025 | 1K5D25 | 0P2K-0027 | De-emphasis |
| C22 | 68 | 47X471 | 1468-000075 | 5W547 | GPIK-68 | Tone Compensation |
| C23 | 54 | B66403 | P488-04 | 07654 | 0P2K-005 | AF Plate Bypass |
| C24 | 505 | 47X468 | 1468-00025 | 5W5725 | 0P2K-220 | Tone Compensation |
| C25 | 220 | 47X468 | 1468-00025 | 5W5725 | 0P2K-220 | Tone Compensation |
| C26 | 52 | B66403 | P488-04 | 07654 | 0P2K-005 | AF Plate Bypass |
| C27 | 504 | B66402 | P088-004 | 07654 | 0P2K-005 | Tone Compensation |
| C28 | 500 | B66402 | P088-004 | 07654 | 0P2K-005 | Tone Compensation |
| C29 | 100 | B66102 | P1088-001 | 07651 | TR-21 | Output Plate Bypass |

* Parallel sections to obtain desired capacity.

CONTROLS

| ITEM No. | RATING RESIST. WATTS | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|----------------------|-------------------|------------------------|--------------------------------|
| | | CORONADO PART No. | IRC CLAROSTAT PART No. | |
| R1A | 500K ± | 36X372 | AT-78 | Volume control, tapped 100K |
| R1B | 500K ± | Not Req. | KSS-3 | Attach to R1A Per Instructions |
| R2A | 50K ± | Not Req. | SA-A | Attach to R1A Per Instructions |
| R2B | 50K ± | Not Req. | KSS-3 | Attach to R2A Per Instructions |

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

| ITEM No. | RATING RESISTANCE WATTS | REPLACEMENT DATA | | IDENTIFICATION CODES |
|----------|-------------------------|-------------------|--------------|--------------------------------|
| | | CORONADO PART No. | IRC PART No. | |
| R3 | 4702 | B84471 | BTS-470 | Conv. Plate Decoupling |
| R4 | 22K | B84223 | BTS-22K | Osc. Grid |
| R5 | 2700 | B84272 | BTS-2700 | Osc. Anode |
| R6 | 100K | B85104 | BTS-100K | AVC Network |
| R7 | 68 | B83680 | BM-4-68 | 1st IF Cathode |
| R8 | 1200 | B85123 | BTS-1200 | 1st IF Decoupling |
| R9 | 27K ± | B83682 | BTS-27K | Diode Filter |
| R10 | 50K ± | B83682 | BTS-50K | AVC Network |
| R11 | 1000 | B84101 | BTS-1000 | 2nd IF IF Grid |
| R12 | 1000 | B85102 | BTS-1000 | 2nd IF IF Cathode |
| R13 | 27K | B85273 | BTS-27K | 2nd IF IF Decoupling |
| R14 | 3.6 | 43X233 | BM-1-3.6 | Rectifier |
| R15 | 6800 | B84682 | BTS-6800 | Ratio Det. Filament Wire Wound |
| R16 | 6800 | B84682 | BTS-6800 | Ratio Det. Diode Load |
| R17 | 15K | B85153 | BTS-15K | Ratio Det. Diode Load |
| R18 | 10 M ± | B85106 | BTS-10 M ± | Tone Compensation |
| R20 | 470K | B85474 | BTS-470K | AF Grid |
| R21 | 470K | B84271 | BM-1-270 | Output Grid |
| R22 | 2700 | B84271 | BM-1-270 | Output Cathode |
| R23 | 1000 | D84102 | BM-2-1000 | Filter |

TRANSFORMER (POWER)

| ITEM No. | RATING | | | REPLACEMENT DATA | | CHICAGO PARTING. |
|----------|---------------|--------|---------------|-------------------|------------------|------------------|
| | PRI. | SEC. 1 | SEC. 2 | CORONADO PART No. | STANCOR PART No. | |
| T1 | 117VAC @ .33A | 320VCT | 6.3VAC @ 2.6A | 530291 | P-6119 T | PH-50 T |

T Add series resistor to reduce plate voltage.

TRANSFORMER (AUDIO OUTPUT)

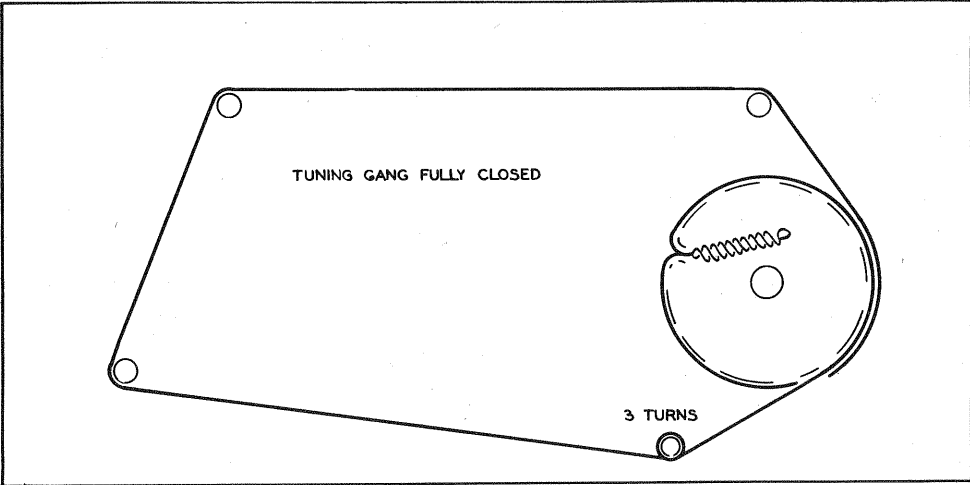
| ITEM No. | RATING IMPEDANCE | RATING DC RES. | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|------------------|----------------|-----------|-------------------|------------------|--------------------|
| | | PRI. SEC. | PRI. SEC. | CORONADO PART No. | STANCOR PART No. | |
| T2 | 17000 | 8.52 | 520 | .62 | A-3877 | A-2930 |
| | | | | Part of 12A493 | | RO-9 |

SPEAKER

| ITEM No. | RATINGS FIELD PH | RATINGS V. C. IMP. | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|------------------|--------------------|-----------|-------------------|-----------------|--------------------|
| | | PRI. SEC. | PRI. SEC. | CORONADO PART No. | JENSEN PART No. | |
| SPL | PH | 3.52 | | 12A493 | ST-105 | |
| SP2 | PH | 3.52 | | | MDR-P5-X | 4A1 |

R F COILS

| ITEM No. | USE | DC RES. | | REPLACEMENT DATA | | INSTALLATION NOTES |
|----------|--------------|---------|------|-------------------|-------------------|--------------------|
| | | PRI. | SEC. | CORONADO PART No. | WEISSNER PART No. | |
| L1 | AV Loop Ant. | 00 | | 9A1940 | | |
| L2 | FM Ant. | 00 | .52 | 9A1956 | | |
| L3 | RF Choke | 2.52 | | 9A2044 | | |
| L4 | Fil. Choke | 00 | | 9A2044 | | |
| L5 | Fil. Choke | 00 | | 9A2044 | | |



DIAL CORD DRIVE