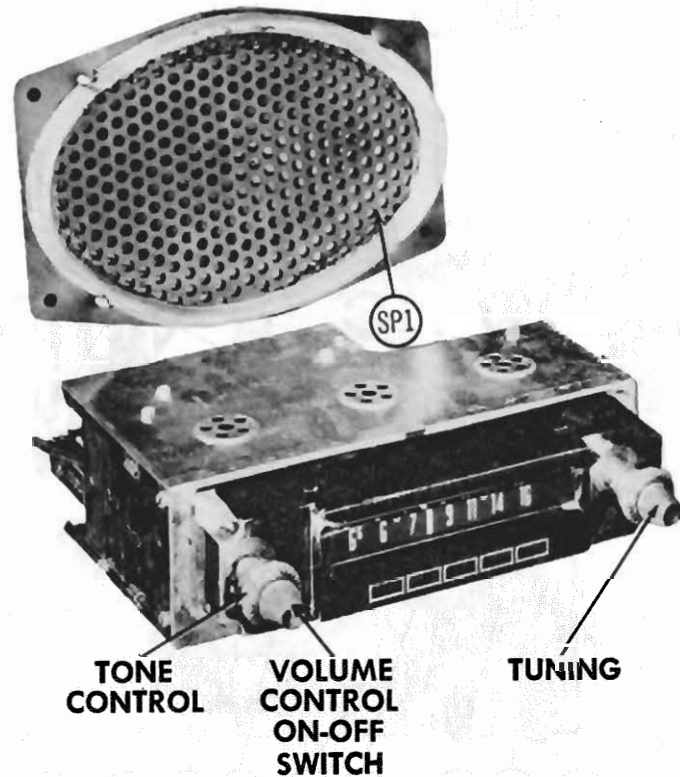




MOPAR
MODELS 613, 614



MOPAR
MODELS 613, 614

TRADE NAME Mopar Model 613 (For 1955 Plymouths P26, P27), 614 (For 1955 Dodges D55, D56)
MANUFACTURER Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
TYPE SET Battery Operated Custom Built AM Superheterodyne Automobile Receiver
TUBES (Six) Types 6BA6 RF Amp., 6BE6 Conv., 6BA6 IF Amp., 6AV6 Det.-AVC-AF Amp., 6AQ5 Output, 6X4 Rectifier

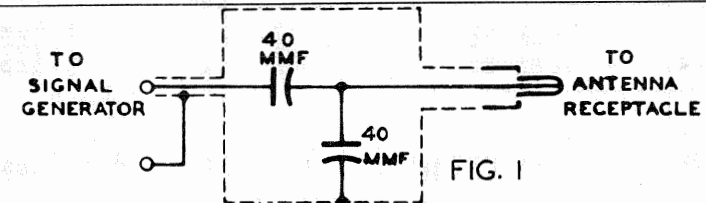
POWER SUPPLY 6 Volt Storage Battery
TUNING RANGE—BROADCAST 540KC-1610KC
RATING 5.9 Amp. @ 6.3 Volts DC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.
Set tone control to high.

| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS |
|---------------|--|----------------------------|--|-------------------|----------------|--|
| 1. .1MFD | High side to pin 7 (grid of 6BE6 (V2)). Low side to chassis. | 455KC (400% Mod) | Extreme high freq. end of dial | Across voice coil | A1, A2, A3, A4 | Adjust for maximum output. |
| 2. Fig. 1 | Thru dummy to ant. receptacle | 1610KC | " | " | A5, A6, A7 | Adjust " |
| 3. " | " | 1400KC | Back core carriage 13/64" from end stop. | " | A8, A9, A10 | Adjust for maximum output (use alignment tool part #66A76278). Repeat steps 2 and 3. Cement cores. |
| 4. | | | Weak station near 1400KC. | | | With receiver installed in car and antenna fully extended, adjust A7 for maximum volume. |

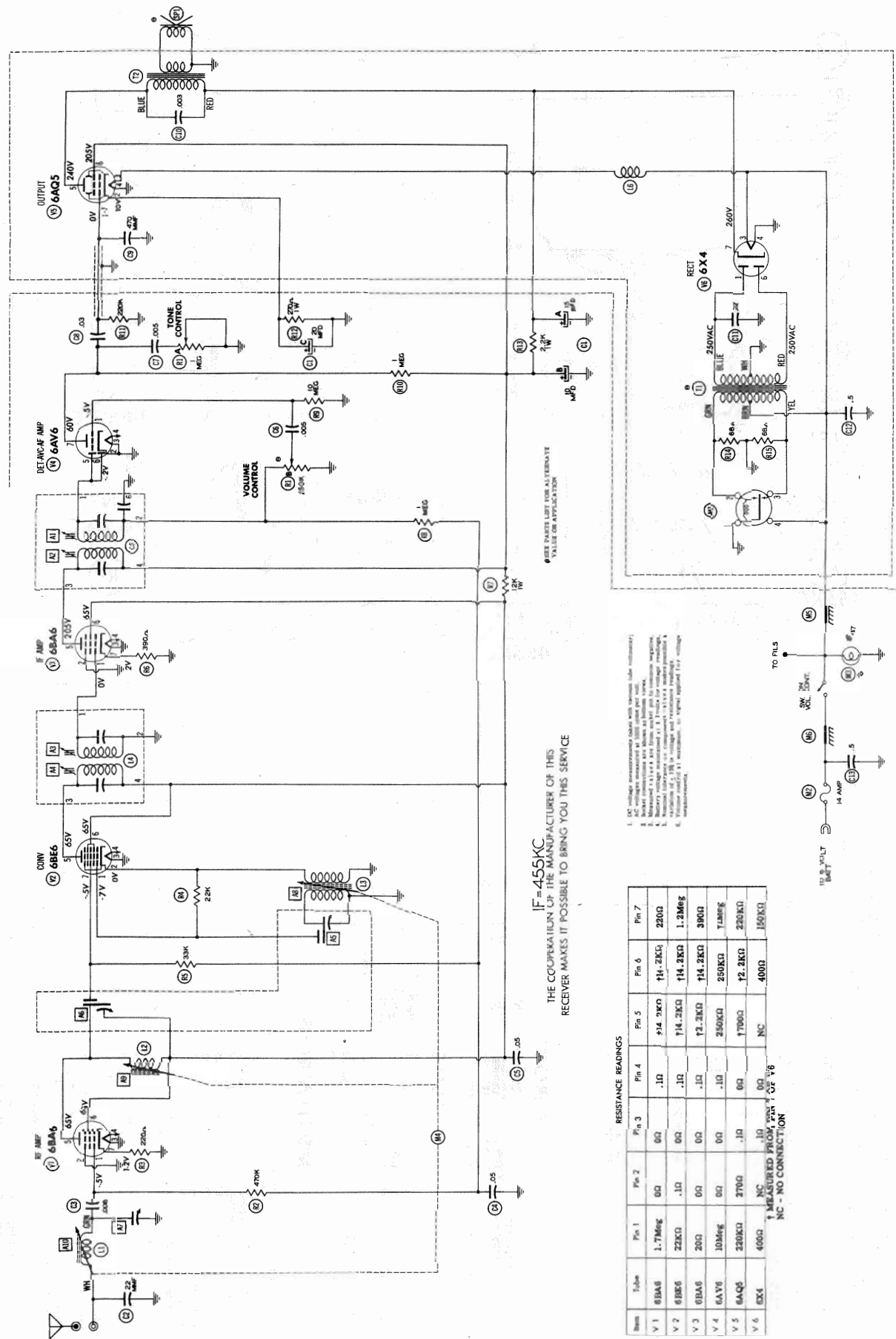
* Remove escutcheon to expose tuner core screws. Back tuner out completely before proceeding with step 2.



HOWARD W. SAMS & CO., INC. • Indianapolis 5, 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."

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RESISTANCE READINGS

| Item | Tubes | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 |
|------|-------|--------|-------|-------|-------|---------|--------|--------|
| V 1 | 6BA6 | 1.7Meg | 0Ω | 0Ω | .1Ω | ±14.2KΩ | 14.2KΩ | 220Ω |
| V 2 | 6BE6 | 22KΩ | .1Ω | 0Ω | .1Ω | 14.2KΩ | 14.2KΩ | 1.2Meg |
| V 3 | 6BA6 | 20Ω | 0Ω | 0Ω | .1Ω | 12.2KΩ | 14.2KΩ | 390Ω |
| V 4 | 6AV6 | 10Meg | 0Ω | 0Ω | .1Ω | 250KΩ | 250KΩ | 11Meg |
| V 5 | 6AQ5 | 220KΩ | 270Ω | .1Ω | 0Ω | 1700Ω | 12.2KΩ | 220KΩ |
| V 6 | 6X4 | 400Ω | NC | 10Ω | 0Ω | NC | 400Ω | 150KΩ |

* MEASURED FROM PIN 1 OF V6
NC - NO CONNECTION

IF=455KC
THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

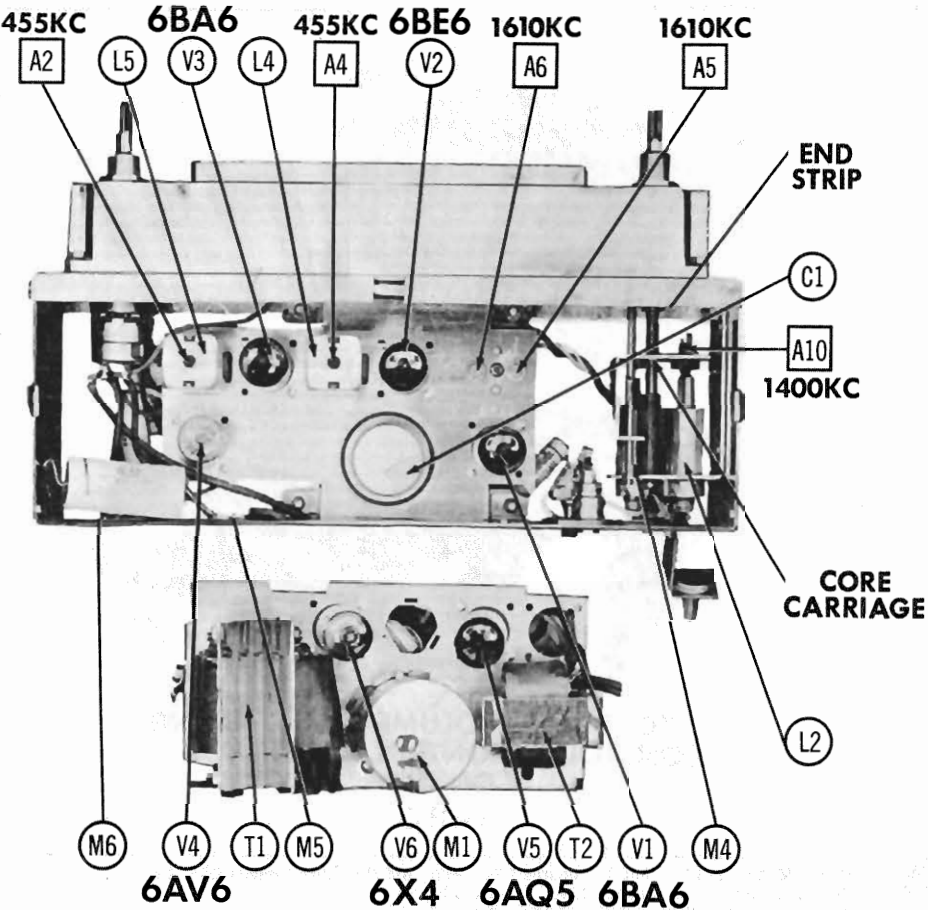
1. All voltage measurements taken with respect to chassis (common).
2. Socket terminals are shown as follows:
3. Battery voltage is shown as 6V.
4. Battery voltage measurement is 1.2V.
5. Resistance values are in ohms, kilohms, and megohms.
6. Resistance values are in ohms, kilohms, and megohms.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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PARTS LIST AND DESCRIPTIONS
 TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

MOPAR
 MODEL 613

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)
 TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE | RATINGS | | | | REPLACEMENT DATA | | | | NOTES |
|----------|-----------|---------|-----------|-------|------------|-------------------|-----------------|----------------|---------------------|-----------------------|
| | | PRI. | SEC. | FIELD | V. C. IMP. | MOTOROLA PART No. | Holden Part No. | Merit Part No. | Thordarson Part No. | |
| T2 | 6KΩ | 3.4Ω | 25B532839 | Z1113 | 3.4Ω | A-2830 | A-3877 | 24851 | S-3X | ① Fabricate mounting. |

SPEAKER

| ITEM No. | RATINGS | REPLACEMENT DATA | | | | NOTES |
|----------|------------|-------------------|---------------|----------------|---------------------|-------|
| | SIZE | MOTOROLA PART No. | QUAM PART No. | Merit Part No. | Thordarson Part No. | |
| SP1 | 6" x 9" 7" | 50C533184 | 69A2 | 7A21 | ① Alternate speaker | |

COILS (RF-IF)

| ITEM No. | USE | DC RES. | | MOTOROLA PART No. | REPLACEMENT DATA | | NOTES |
|----------|-----------|---------|------|-------------------|-------------------|-----------------|--|
| | | PRI. | SEC. | | MEISSNER PART No. | MILLER PART No. | |
| L1 | Ant. Coil | 11.5Ω | | 24B533894 | | | Iron core part #78B533938 Iron core part #78B533938 |
| L2 | RF Coil | 11.5Ω | | 24B533896 | | | |
| L3 | RF Coil | 11.5Ω | | 24B533937 | | | 12-C1 12-C6 |
| L4 | Input IF | 16Ω | | 24C-50003 | BC-352 | BC-355 | |
| L5 | Output IF | 17Ω | | 24K485554 | 16-6770 | | 18 Microhenries |
| L6 | Vib. Bush | 0Ω | | 24A532093 | | | |

VIBRATOR

| ITEM No. | TYPE | INPUT VOLTS/FREQUENCY | REPLACEMENT DATA | | | | NOTES |
|----------|-------------|-----------------------|---------------------------|-------------------|------------------|------------------|-------|
| | | | CORNELL-DUBILIER PART No. | MOTOROLA PART No. | MALLORY PART No. | RADIART PART No. | |
| M1 | Interrupter | 6.3V 115v | 5342 | 48B3333 | 903M | 5342 | |

FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA | | | | NOTES |
|----------|------|--------|-------------------|----------|----------------|---------------|-----------------|
| | | | MOTOROLA PART No. | HOLDER | FUSE | BUSS PART No. | |
| M2 | SFE | 1A 32V | 65X12894 | 9K533466 | 307014 (SFE14) | 155014 | FUSE HOLDER HRI |

MISCELLANEOUS

| ITEM No. | PART NAME | MOTOROLA PART No. | NOTES |
|----------|------------------|-------------------|---|
| M3 | Dial Light | 65X11854 | #47, Model 614 |
| M4 | Dial Light Tuner | 65X12855 | #55, Model 613 |
| M5 | Spark Plate | 77D533235 | Complete, Model 613 |
| M6 | Spark Plate | 77K533236 | Complete, Model 614 |
| A5A6 | Trimmer Cap. | 64K532087 | Dual (Osc. trimmer 43-400MMF) & (RF trimmer capacity and 4.7MMF red capacity) |
| A7 | Trimmer Cap. | 20B532806 | 7.5-75MMF un. It also consists of 4.7MMF fixed capacity and 4.7MMF red capacity |
| | Knob | 38B533005 | Ant. (50-240MMF) |
| | Knob | 38B532949 | Tone - Model 613 |
| | Knob | 1V333109 | On-off-volume & tuning - Model 613 |
| | Crysal | 64K532894 | On-off-volume & tuning - Model 614 |
| | Pointer & Slider | 64K532895 | Model 613 |
| | Pointer & Slider | 1K532802 | Model 613 |
| | Pointer & Slider | 1K532855 | Model 614 |
| | Dial Scale | 34C533008 | Model 613 |
| | Dial Scale | 34C532879 | Model 614 |

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 | | | | NOTES |
|----------|-------------|------|-------------------|--------------------|--------------|------------------|------------------|
| | | | MOTOROLA PART No. | CENTRALAB PART No. | ERE PART No. | MALLORY PART No. | SANGAMO PART No. |
| C1A | 15 | 350 | 23A485677 | | | FP328 | T-455 |
| C1B | 10 | 350 | | | | | |
| C2 | 22 | 25 | 21R120539 | | | | |
| C3 | .006 | 400 | 8R121001 | | | PT928 | IMP6-D6 |
| C4 | .05 | 200 | 8R121005 | DF-503 | | PT415 | IMP2-S5 |
| C5 | .05 | 400 | 8R121587 | DF-503 | | PT415 | IMP4-S5 |
| C6 | .05 | 400 | 8R121787 | 81L-005 | | PT925 | IMP6-D5 |
| C7 | .05 | 400 | 8R121787 | D6-502 | | PT925 | IMP6-D5 |
| C8 | .03 | 400 | 8R121574 | 81L-005 | | PT413 | IMP4-S3 |
| C9 | 470 | 600 | 8R410121 | D6-471 | | UC-5347 | K-1347 |
| C10 | .003 | 600 | 8R121569 | D6-302 | | PT923 | IMP6-D3 |
| C11 | .02 | 1000 | 8R121004 | 81L-003 | | PT1612 | CT10-S2 |
| C12 | .5 | 100 | 8R121666 | | | PT405 | IMP2-P5 |
| C13 | .5 | 100 | 8R121666 | | | PT405 | IMP2-P5 |

CONTROLS

| ITEM No. | RATING RESIST. | WATTS | REPLACEMENT DATA | | | | INSTALLATION NOTES |
|----------|----------------|-------|-------------------|--------------|--------------------|------------------|---------------------|
| | | | MOTOROLA PART No. | IRC PART No. | CLEARSTAT PART No. | MALLORY PART No. | |
| R1A | 1MΩ | 1/2 | 18B532319 | *QJ-683A | | PI-35 | Tone - Panel - Note |
| R1B | 250KΩ | 1/2 | | | | PI-35 | Volume - Rear |
| | C Switch | | | | | K-1 | Attach to R1B |

Note: Model 613 will use an alternate control part #8K532909.
 * CONCENTRUIT EQUIVALENT : K-2 KIT, BASE ELEMENTS & SHAFTS : BL-137 & P12-204 (Panel)
 H13-130 & R1-220 (Rear)
 76-1 SWITCH

RESISTORS

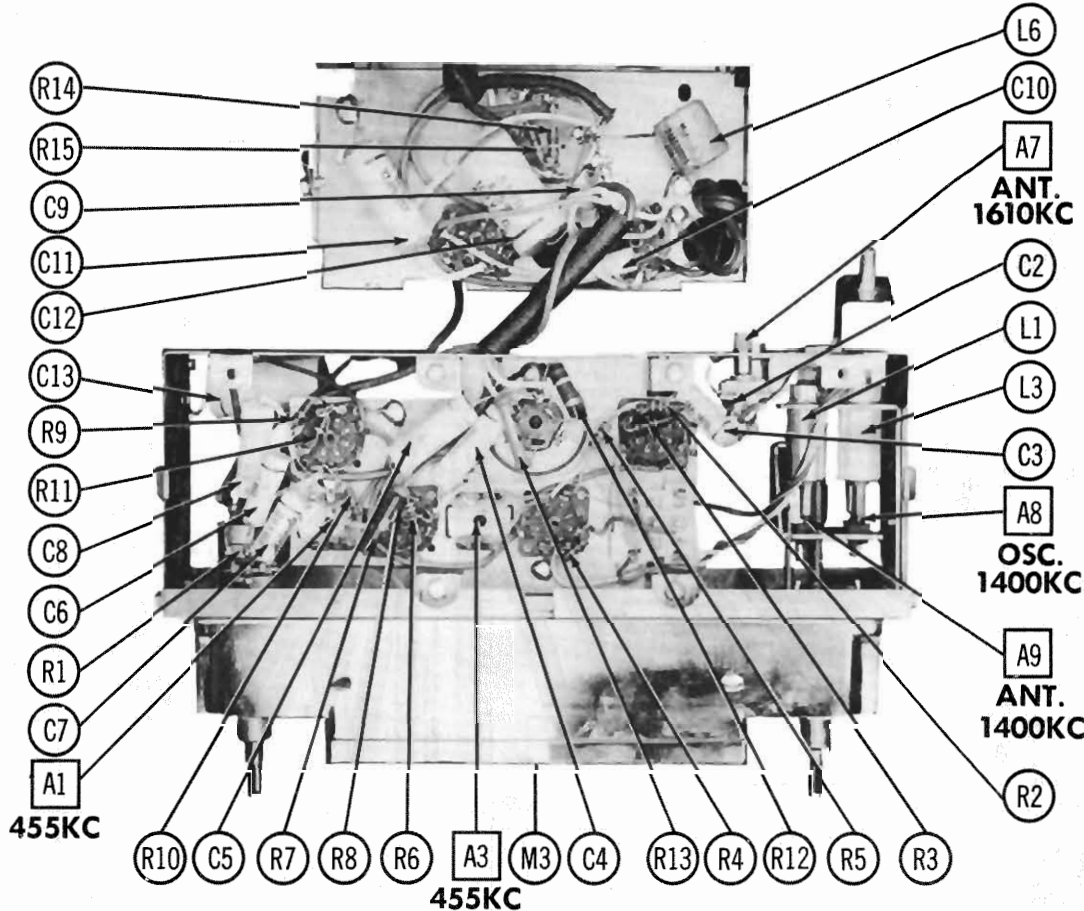
| ITEM No. | RATING OHMS | WATT | REPLACEMENT DATA | | | | NOTES |
|----------|-------------|------|-------------------|--------------|----------|-------------|----------|
| | | | MOTOROLA PART No. | IRC PART No. | ITEM No. | RATING OHMS | WATT |
| R2 | 470KΩ | | 6R6032 | BTS-470K | R9 | 10MΩ | BTS-10MΩ |
| R3 | 220Ω | | 6R6270 | BTS-220 | R10 | 1MΩ | BTS-1MΩ |
| R4 | 22KΩ | | 6R6028 | BTS-22K | R11 | 220KΩ | BTS-220K |
| R5 | 33KΩ | | 6R6012 | BTS-33K | R12 | 270Ω | BTA-270 |
| R6 | 390Ω | | 6R5555 | BTS-390 | R13 | 2200Ω | 6A533220 |
| R7 | 12KΩ | | 6R533221 | BTA-12K | R14 | 68Ω | BTS-68 |
| R8 | 1MΩ | | 6R6004 | BTS-1MΩ | R15 | 68Ω | BTS-68 |

TRANSFORMER (POWER)

| ITEM No. | RATING | | | | REPLACEMENT DATA | | | | Triad PART No. |
|----------|--------|--------|-------|--------|-------------------|-----------------|----------------|---------------------|----------------|
| | PRI. | SEC. | 1 | 2 | MOTOROLA PART No. | Holden Part No. | Merit Part No. | Thordarson Part No. | |
| T1 | 6.3VCT | 400VCT | .031A | SEC. 3 | 25C532631-A | | | | |
| | 6.3V | 400V | .031A | | 25C532631 | | | | |

① Alternate power transformer.

CHASSIS—BOTTOM VIEW



MOPAR
 MODEL 613

MOPAR
 MODEL 613