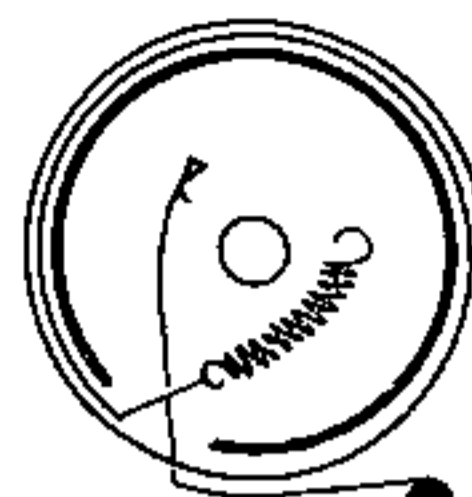
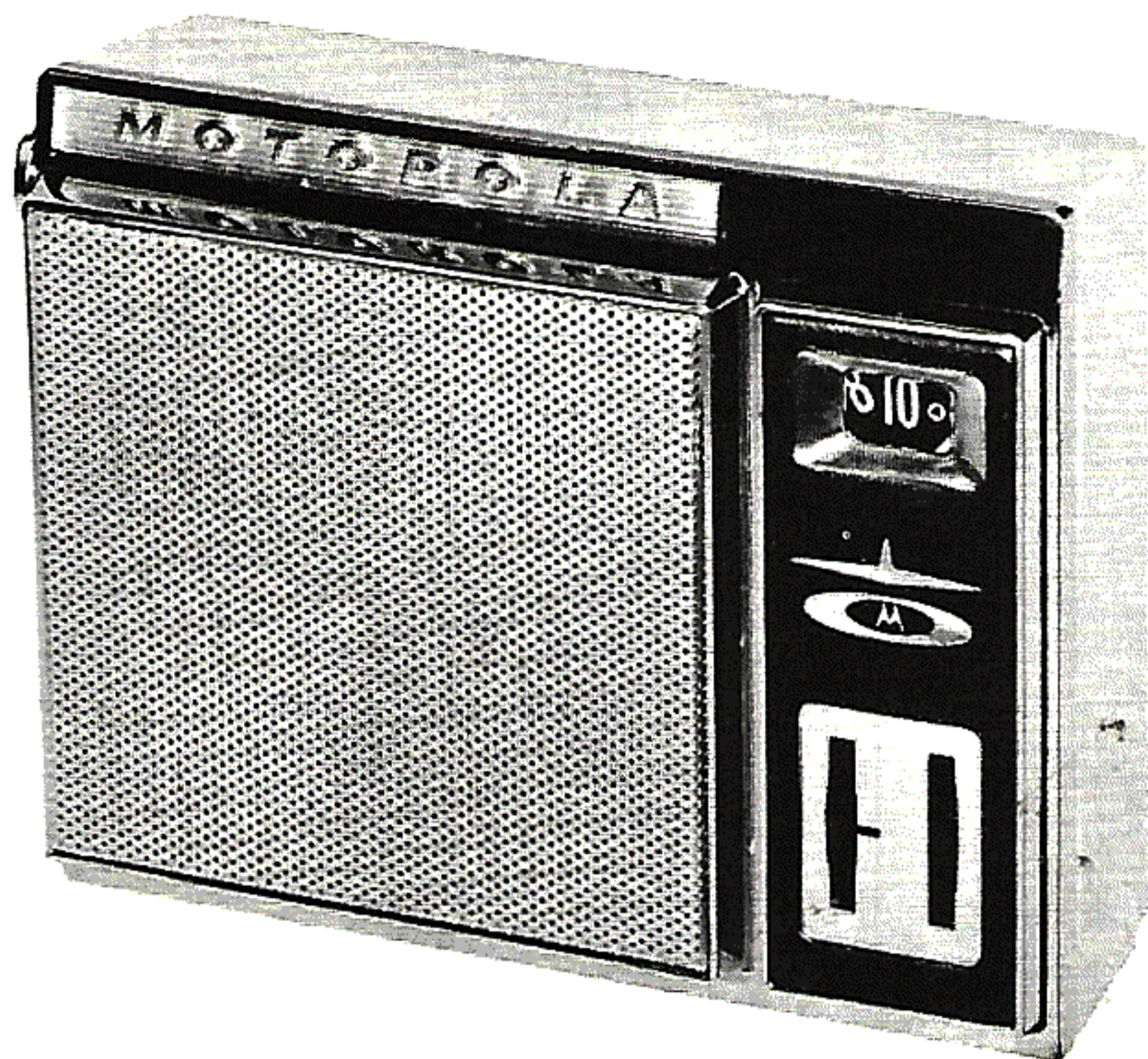


PHOTOFACT® Folder

with CIRCUITRACE™

MOTOROLA MODELS X27E,
X27W (Ch. HS-915)

DIAL CORD STRINGING



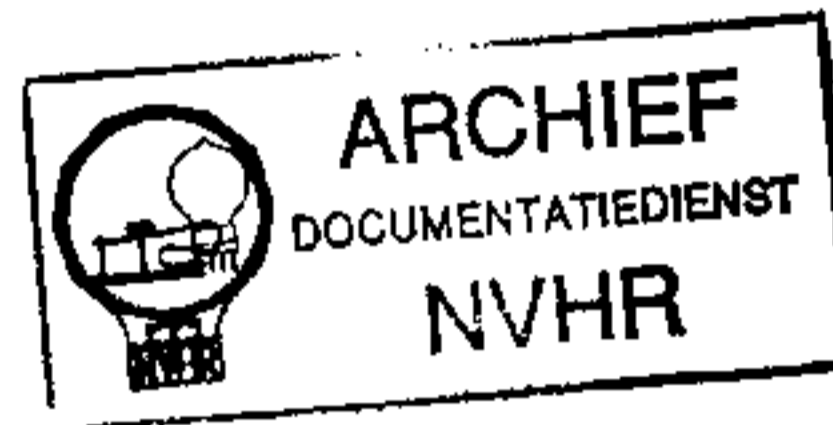
FRONT VIEW

TUNING DRUM FULLY
COUNTERCLOCKWISE

TUNING KNOB

1 1/2 TURNS

Ned. Ver. v. Historie v/d Radio



Met dank aan Jef Bos

X27W (Ch. HS-915)

| | | | |
|------------------------|--|--------|---|
| TRADE NAME | Motorola Models X27E, X27W (CH. HS-915) | | |
| MANUFACTURER | Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois | | |
| TYPE SET | Battery Operated Transistorized Portable AM Receiver | | |
| POWER SUPPLY | 9 Volts DC | RATING | 9MA@9 Volts DC (No Signal, Min. Volume) |
| TUNING RANGE—BROADCAST | 532 - 1620KC | | 15MA@9 Volts DC (Signal, Normal Volume) |

ALIGNMENT INSTRUCTIONS

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.

Suggested Alignment Tools:

- A1 thru A4..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532
- A5, A7..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528

| | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS |
|----|---|----------------------------|---------------------------|--------------------|------------|--|
| 1. | Fashion loop of several turns of wire and radiate signal into loop of receiver. | 455KC (400% Mod.) | Tuning gang fully open. | Across voice coil. | A1, A2, A3 | Adjust for maximum output. |
| 2. | " | 532KC | Tuning gang fully closed. | " | A4 | Adjust for maximum output while rocking tuning gang. |
| 3. | " | 1620KC | Tuning gang fully open. | " | A5 | Adjust for maximum output. Repeat steps 2 and 3. |
| 4. | " | 600KC | 600KC | " | A6 | Adjust for maximum output by moving antenna coil turns along ferrite core. |
| 5. | " | 1400KC | 1400KC | " | A7 | Adjust for maximum output. Repeat steps 4 and 5. |

HOWARD W. SAMS & CO., INC. Indianapolis 6, 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 LF185

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. ©1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



PARTS LIST AND DESCRIPTIONS

TRANSISTORS

| ITEM No. | ORIG. TYPE | USE | REPLACEMENT DATA | | NOTES |
|----------|------------|------------------|------------------|-------------------|-------|
| | | | RCA PART No. | RAYTHEON PART No. | |
| X1 | 2SA52 | Converter | 2N412 | 2N486 | PNP |
| X2 | 2SA49 | 1st IF Amplifier | 2N410 | 2N483 | PNP |
| X3 | 2SA49 | 2nd IF Amplifier | 2N410 | 2N483 | PNP |
| X4 | 2SB54 | AF Amplifier | 2N408 | 2N362 | PNP |
| X5 | 2SB54 | Driver | 2N408 | 2N362 | PNP |
| X6 | 2SB56 | Output | 2N408 | 2N632 | PNP |
| X7 | 2SB56 | Output | 2N408 | 2N632 | PNP |

POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | CURRENT RATING (Measured) | ORIGINAL Part or Type No. | RECTIFIERS | | DIODES | | NOTES |
|----------|---------------------------|---------------------------|--------------|-------------------------|---------------------------|-------------------|----------|
| | | | RCA PART No. | SARKES TARZIAN PART No. | GENERAL ELECTRIC PART No. | RAYTHEON PART No. | |
| X8 | | 48K847311 | | | | 1N60 | Detector |

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING | | REPLACEMENT DATA | | | | | | |
|----------|--------|-------|-------------------|------------------|---------------------------|---------------------------|------------------|------------------|------------------|
| | CAP. | VOLT. | MOTOROLA PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | MALLORY PART No. | PYRAMID PART No. | SPRAGUE PART No. |
| C1 | 30 | 8 | 23C60496A02 | | | | | | |
| C2 | 5 | 6 | 23C60496A03 | | NLW5-15 | MT1-3 | TT6X5 | | TE-1084 |
| C3 | 5 | 6 | 23C60496A03 | | NLW5-15 | MT1-3 | TT6X5 | | TE-1084 |
| C4 | 30 | 8 | 23C60496A02 | | | | | | |
| C5 | 50 | 10 | 23C60496A04 | | | | | | |
| C6 | 50 | 10 | 23C60496A04 | | | | | | |

FIXED CAPACITORS

| ITEM No. | RATING | REMARKS | REPLACEMENT DATA | | | | | |
|----------|--------|---------|------------------|--------------------|---------------------------|------------------|------------------|------------------|
| | | | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELMENCO PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C7 | .05 | | | DA-503 | H-05S5 | | TA-150 | TG-S50 |
| C8 | .01 | | | DM-103 | H-05S1 | | TA-110 | TG-S10 |
| C9 | 7 | | NPO-DI 6.8 | DTZ-6R8 | C10V7C | CCTO-6R8 | CNO-568 | 10TCC-V68 |
| C10 | .02 | | | DA-203 | H-05S2 | | TA-120 | TG-S20 |
| C11 | .02 | | | DA-203 | H-05S2 | | TA-120 | TG-S20 |
| C12 | 7 | | NPO-DI 6.8 | DTZ-6R8 | C10V7C | CCTO-6R8 | CNO-568 | 10TCC-V68 |
| C13 | .02 | | | DA-203 | H-05S2 | | TA-120 | TG-S20 |
| C14 | .02 | | | DA-203 | H-05S2 | | TA-120 | TG-S20 |
| C15 | .002 | | BPD-002 | DM-202 | BYA10D2 | CCD-202 | GP220 | 5HK-D20 |
| C16 | .05 | | | DA-503 | H-05S5 | | TA-150 | TG-S50 |

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | USE | RESISTANCE | REPLACEMENT DATA | | | | |
|----------|-----------------|------------|-------------------|--------------------|--------------------|------------------|------------------|
| | | | MOTOROLA PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. | MALLORY PART No. |
| R1 | Volume & Switch | 5000Ω | 18B60812A01 | | | | |

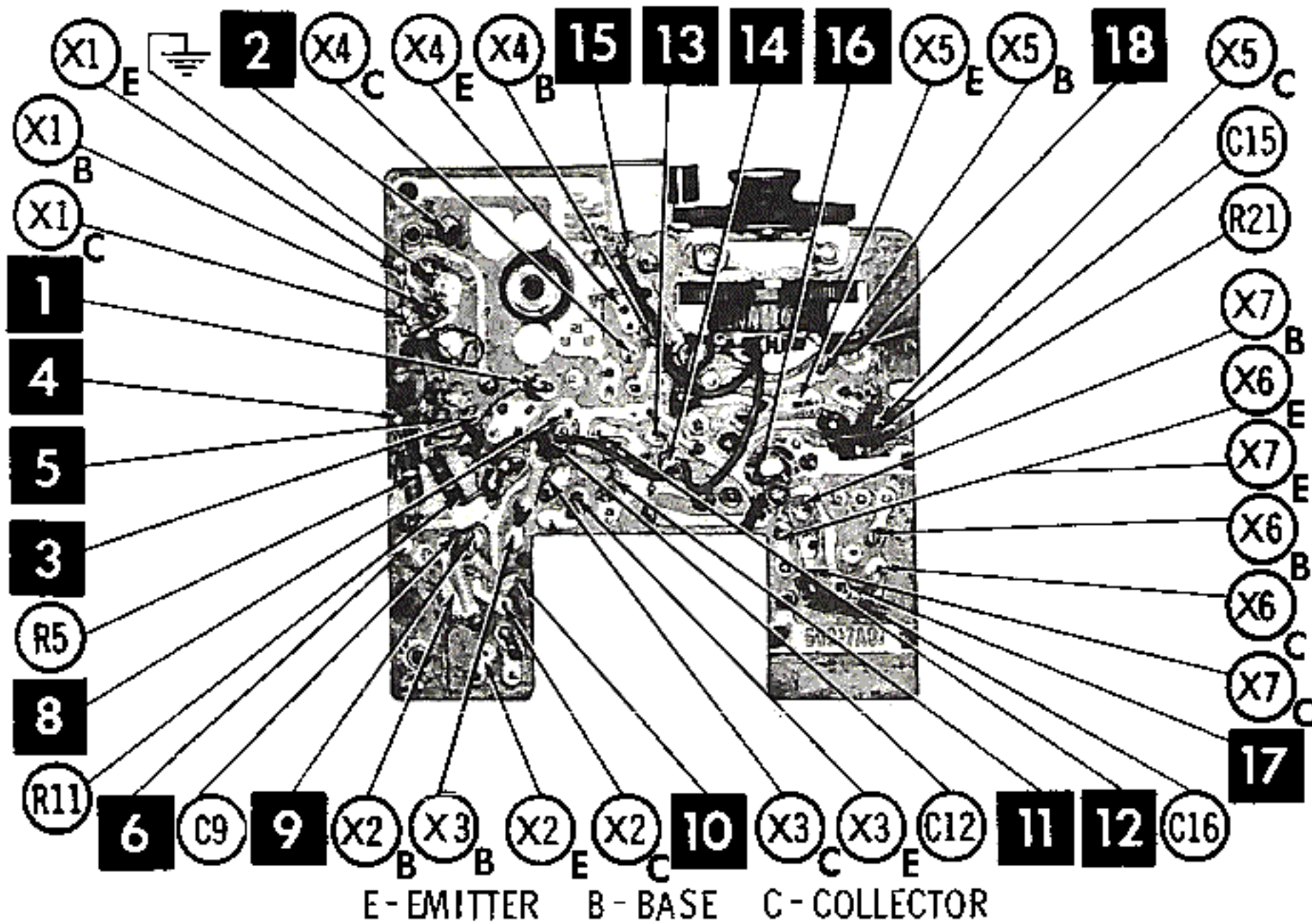
RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | RATING | REPLACEMENT DATA | | | ITEM No. | RATING | REPLACEMENT DATA | | |
|----------|--------|------------------|------------------|---------|----------|--------|------------------|------------------|---------|
| | | IRC PART No. | WORKMAN PART No. | REMARKS | | | IRC PART No. | WORKMAN PART No. | REMARKS |
| R2 | 4700Ω | | | | R11 | 5600Ω | | | |
| R3 | 47K | | | | R12 | 680Ω | | | |
| R4 | 2200Ω | | | | R13 | 1000Ω | | | |
| R5 | 82K | | | | R14 | 3300Ω | | | |
| R6 | 82K | | | | R15 | 68K | | | |
| R7 | 1000Ω | | | | R16 | 680Ω | | | |
| R8 | 680Ω | | | | R17 | 2200Ω | | | |
| R9 | 12K | | | | R18 | 8200Ω | | | |
| R10 | 39K | | | | R19 | 68K | | | |

PRINTED BOARD

A Howard W. Smith CORP. Photo



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | RATING | REPLACEMENT DATA | | | ITEM No. | RATING | REPLACEMENT DATA | | |
|----------|--------|------------------|------------------|---------|----------|-----------|------------------|------------------|-------------|
| | | IRC PART No. | WORKMAN PART No. | REMARKS | | | IRC PART No. | WORKMAN PART No. | REMARKS |
| R20 | 330Ω | | | | R24 | 200Ω Cold | | | #6B60519A01 |
| R21 | 12K | | | | R25 | 10Ω | | | |
| R22 | 390Ω | | | | R26 | 150Ω | | | |
| R23 | 6800Ω | | | | | | | | |

COILS (RF-IF)

| ITEM No. | USE | REPLACEMENT DATA | | | | | NOTES |
|----------|-----------|-------------------|----------------|-----------------|------------------|------------------|-------|
| | | MOTOROLA PART No. | Merit PART No. | Miller PART No. | Stancor PART No. | Workman PART No. | |
| L1 | Loopstick | 24B60660A04 | | | | | |
| L2 | Osc. | 24C60527A01 | | | | | |
| L3 | 1st IF | 24C60513A01 | | | | | |
| L4 | 2nd IF | 24C60513A02 | | | | | |
| L5 | 3rd IF | 24C60513A03 | | | | | |

TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO | REPLACEMENT DATA | | | | | NOTES |
|----------|------------------|-------------------|----------------|------------------|---------------------|----------------|-------|
| | | MOTOROLA PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. | |
| T1 | PRI. 2 SEC. 1 | 25B60484A01 | | | TR-40 | | |

TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE | | REPLACEMENT DATA | | | | | NOTES |
|----------|-----------|------|-------------------|----------------|------------------|---------------------|----------------|-------|
| | PRI. | SEC. | MOTOROLA PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. | |
| T2 | 2500Ω CT | 6-8Ω | 25B60489A01 | | | | | |

SPEAKER

| ITEM No. | TYPE | | | REPLACEMENT DATA | | NOTES |
|----------|--------|-------|------------|-------------------|---------------|-------|
| | SIZE | FIELD | V. C. IMP. | MOTOROLA PART No. | QUAM PART No. | |
| SP1 | 2 1/4" | PM | 6-8Ω | 50B6055A01 | 22A06ZB | |

BATTERIES

| ITEM No. | VOLTAGE | MOTOROLA PART No. | REPLACEMENT DATA | | | | | | NOTES |
|----------|---------|-------------------|------------------|-----|----------|-----|---------|--------|-------|
| | | | BURGESS | | EVEREADY | | MALLORY | | |
| | | | "A" | "B" | "A" | "B" | "A" | "B" | |
| M1 | 9V | | | P6M | | 226 | | M-1600 | |

MISCELLANEOUS

| ITEM No. | PART NAME | MOTOROLA PART No. | NOTES |
|----------|------------------------------|---------------------------|--------|
| M2 | Tuning Cap. Printed Board | 19B60499A01 1V60030A94 | 2 Gang |

CABINETS & CABINET PARTS

(When Ordering, Specify Model, Chassis & Color)

| NAME | PART NO. | |
|----------------|-------------|------------|
| Dial Scale | 34B60753A01 | |
| Dial Crystal | 61A60719A01 | |
| Knob, Tuning | 36B646312 | |
| Knob, Volume | 36B60755A01 | |
| Cabinet Back | 1V60030A81 | Model X27E |
| Cabinet Back | 1V60030A82 | Model X27W |
| Carrying Strap | 55A60782A01 | |

WIRING DATA

General-use Unshielded Hook-up Wire
 Use BELDEN No. 8530 (Solid 22AWG) Available
 8524 (Stranded 22AWG) in
 8570 (Stranded 26AWG) 12 Colors

CHASSIS—TOP VIEW

