

# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

For Supplier Address See PHOTOFACT Index



Elgin Model R-5500  
8-Track Stereo

## OPERATING INSTRUCTIONS

Connect the cabinet sections with the four-prong connector, and move AC/DC switch to appropriate position.

Insert cartridge until it locks and turns unit on.

Set operating controls as desired.

Press program selector to play desired tracks, or allow unit to select tracks automatically.

Remove cartridge to turn unit off.

ELGIN MODEL R-5500

## DISASSEMBLY

### Mechanism Section

Remove cabinet back held by six Phillips screws.  
Remove three push-on-type knobs.

Remove four screws holding mechanism to cabinet

front. Disconnect speaker and remove mechanism.

### Speaker And Power Supply Section

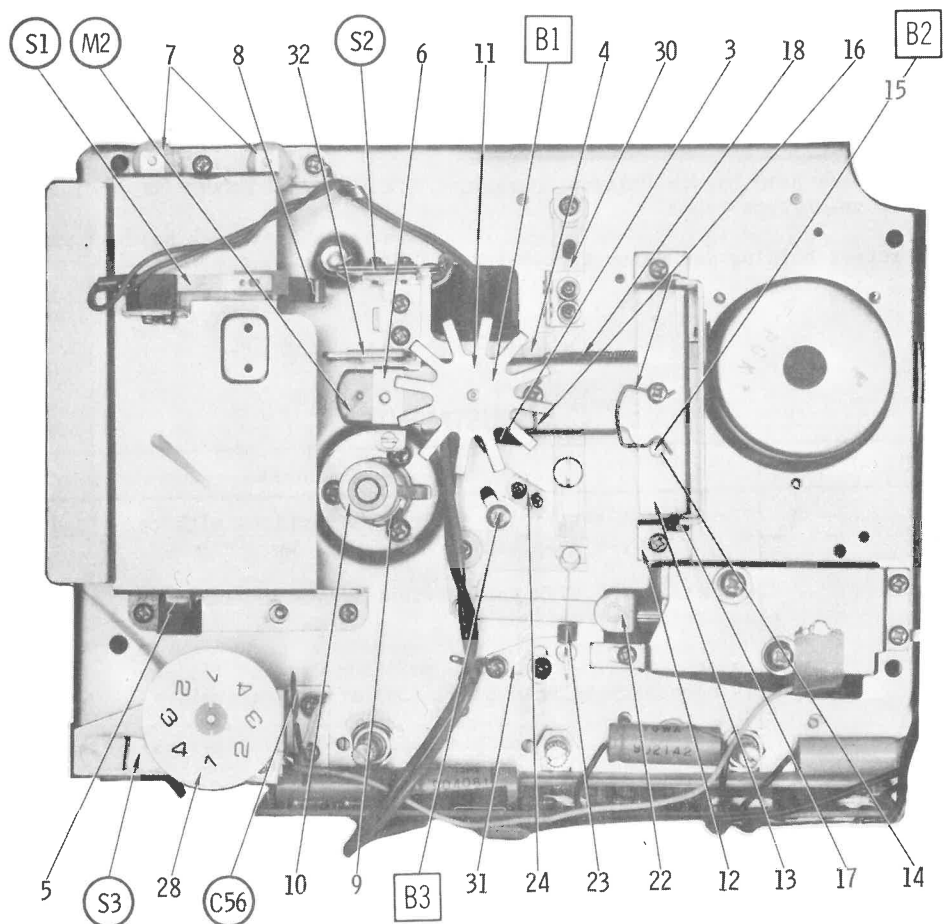
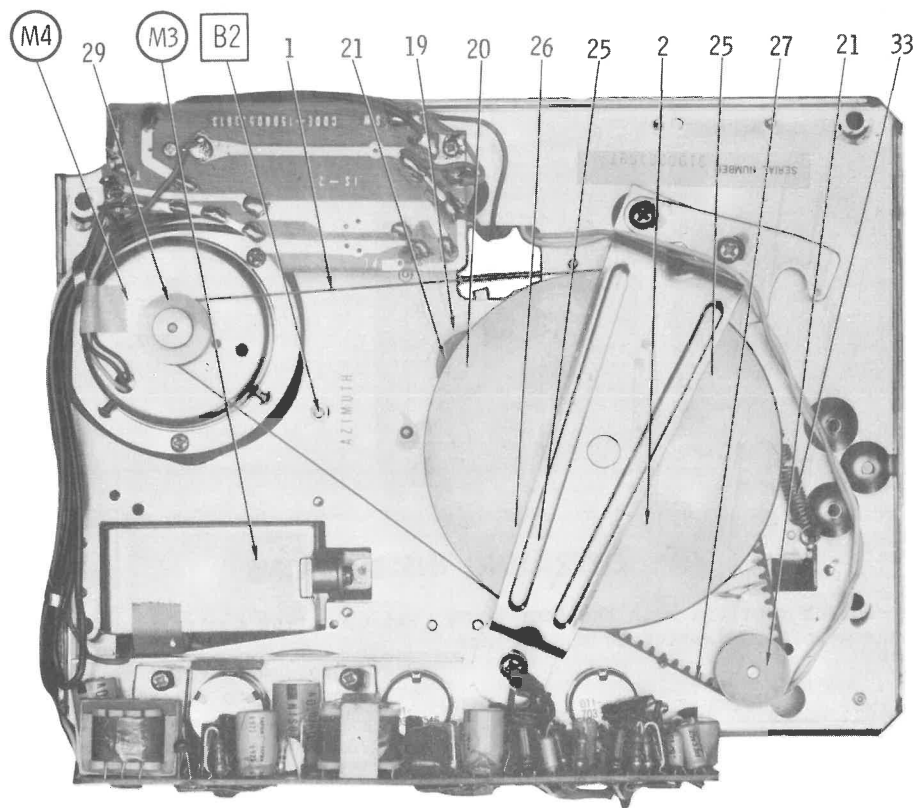
Remove cabinet back held by six Phillips Screws.

## ADJUSTMENTS

| ADJUST                 | REMARKS  |
|------------------------|--|
| Head Height            | Play a test cartridge, follow instructions with cartridge, and adjust B1 for proper response.  |
| Head Azimuth           | Connect an AC VTVM across right output. Play a test cartridge and adjust B2 for maximum.   |
| Plunger Return Tension | Loosen mounting screw and position Bracket (31) until 12 ounces of tension is necessary to hold Slide (30) at full travel.                                 |
| Belt Tension           | Loosen screw, B3, and pivot Arm (26) for 1/4-inch slack in Belt (27).  |
| Head Arm Tension       | Loosen mounting screws and move Bracket (12) until Arm (6) is parallel to Guide (32) and the front edge of Arm (6) is even with the center of the capstan. |

**HOWARD W. SAMS & CO., INC.** Indianapolis, Indiana 46206

© 1970 Howard W. Sams & Co., Inc. Printed in U. S. of America C1253



## TROUBLE CHART

| SYMPTOM                            | REMARKS  |
|------------------------------------|--|
| Capstan does not rotate.           | Belt (1) dirty, worn, or broken.<br>Assembly (10) binding.<br>Motor defective or not supplied with power.  |
| Track-shift mechanism inoperative. | Switch (S2) dirty<br>Cam (3) binding or worn.<br>Pawl (4) worn.<br>Arm (6) binding.<br>Solenoid (M3) defective or not supplied with power.<br>Cartridge defective.<br>Spring (23) broken or missing. |
| Wow or Flutter.                    | Belt (1) dirty or worn.<br>Capstan dirty or binding.<br>Cartridge defective.<br>Motor defective.   |
| Sound weak or distorted.           | Head dirty, misaligned, or defective.<br>Cartridge defective.<br>Amplifiers defective.   |
| Tape is pulled from cartridge.     | Cartridge defective.<br>Capstan dirty or scored.   |

ELGIN MODEL R-5500

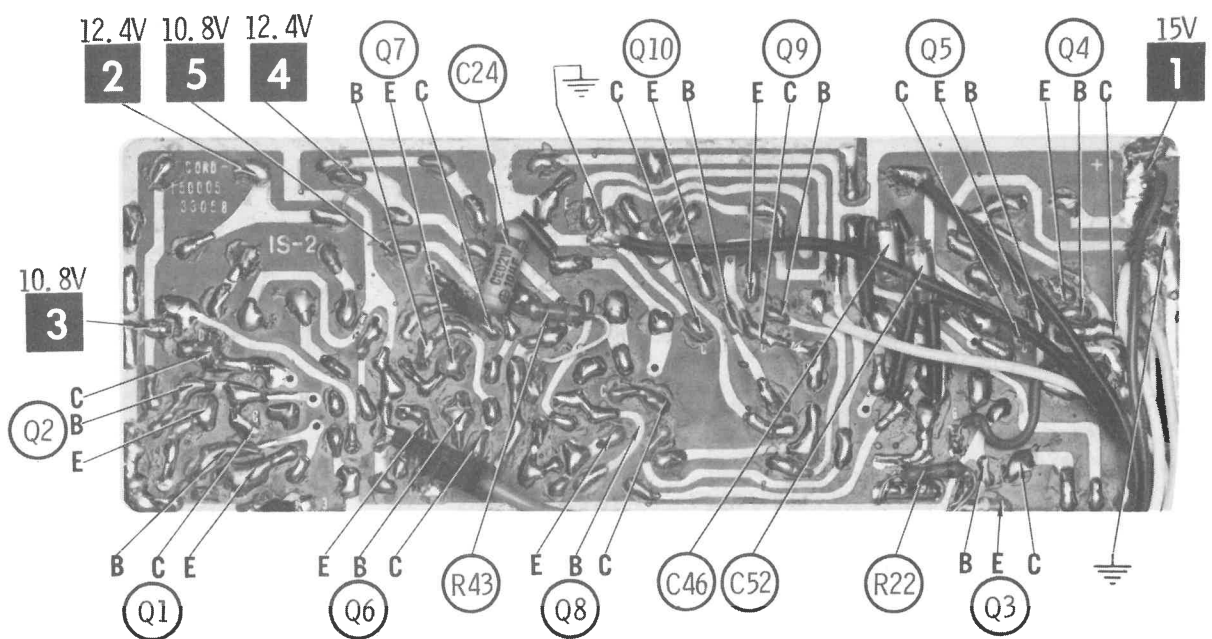
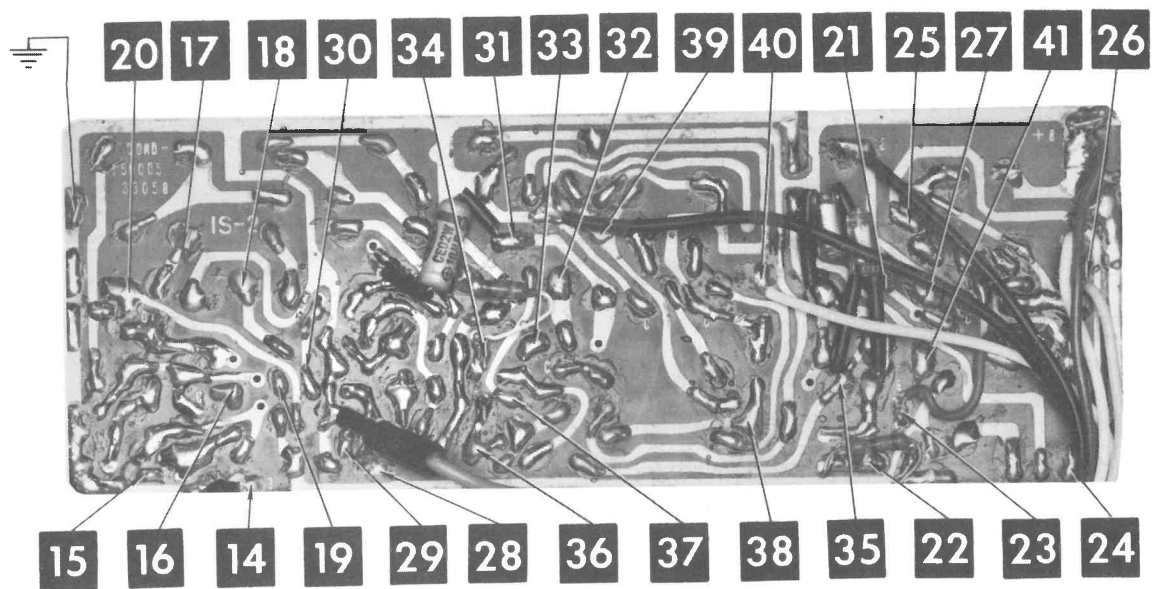
## CLEANING    LUBRICATING    HEAD DEMAGNETIZING

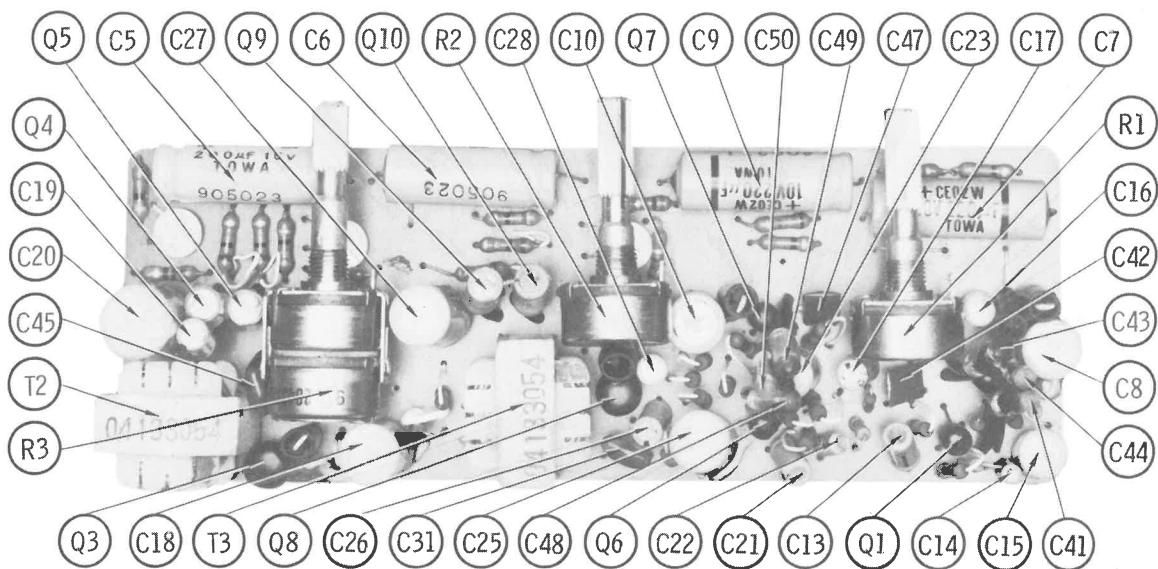
Refer to "General Servicing Information" on page 4.

## MECHANICAL PARTS LIST

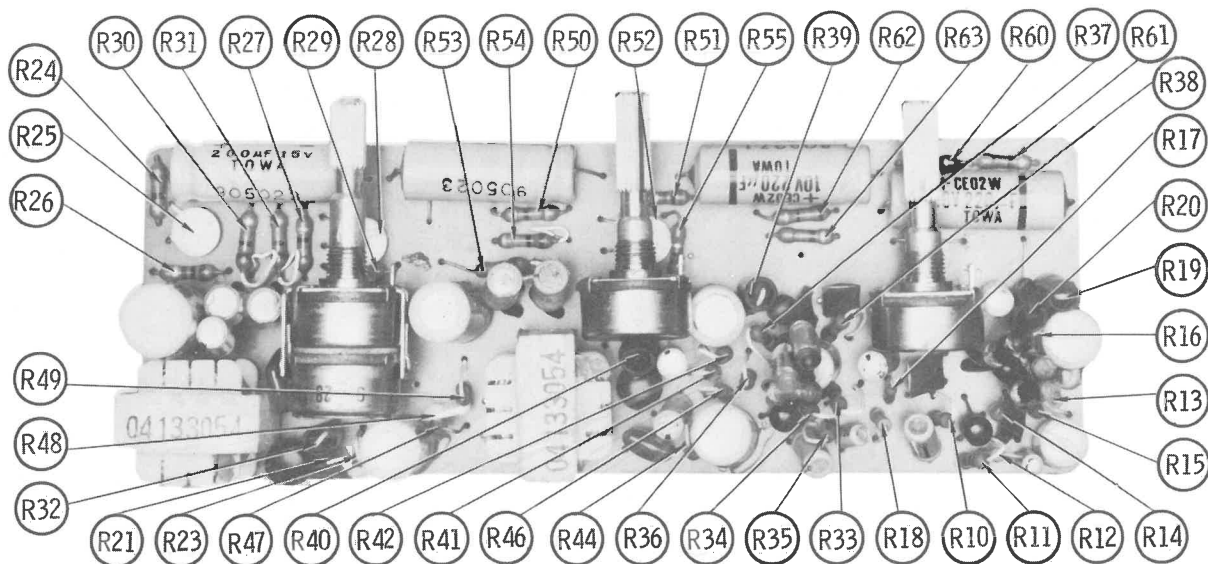
| REF. NO. | PART NO.    | DESCRIPTION                         | REF. NO. | PART NO.    | DESCRIPTION                  |
|----------|-------------|-------------------------------------|----------|-------------|------------------------------|
| 1        | 56291280289 | Drive Belt                          | 18       | 53636946393 | Head Arm Tension Spring      |
| 2        | 54856049116 | Flywheel and Capstan Shaft Assembly | 19       | 51362647939 | Cam Shaft Bushing            |
| 3        | 50850932872 | Channel Selector Cam                | 20       | 51345047938 | Cam Shaft                    |
| 4        | (1)         | Pawl                                | 21       | 90140880325 | Plastic Pulley (2 used)      |
| 5        | (2)         | Arm Assembly                        | 22       | 51106647927 | Plunger Assembly             |
| 6        | 90119480288 | Head Mounting Arm Ass'y.            | 23       | 53621947921 | Tension Spring               |
| 7        | 55444046412 | Plastic Cartridge Roller            | 24       | 51101647920 | Cam Stop                     |
| 8        | 51122945914 | Leaf Spring                         | 25       | 55462080328 | Plastic Pulley (2 used)      |
| 9        |             | Tape Guard                          | 26       | 50114549611 | Pulley Arm                   |
| 10       | 54819046379 | Flywheel Shaft Housing              | 27       | 55990980329 | Channel Indicator Drive Belt |
| 11       | 50034546641 | Height Adjust Rotor                 | 28       | 52022347910 | Channel Indicator Dial       |
| 12       | 50134180287 | Head Arm Pivot Bracket              | 29       | 51352946381 | Motor Pulley                 |
| 13       | 50126146405 | Head Arm Mounting Bracket           | 30       | 50136547934 | Cam Actuator Slide           |
| 14       | 50605746397 | Azimuth Adjust Spring               | 31       | 50114547906 | Slide Adjust Bracket         |
| 15       | 50509146398 | Azimuth Adjust Screw                | 32       | 90121246800 | Tape Guide Assembly          |
| 16       | 50745746396 | Lock Spring (2 used)                | 33       | (3)         | Arm Assembly Spring          |
| 17       | 51114046403 | Head Arm Mounting Bearing (2 used)  |          |             |                              |

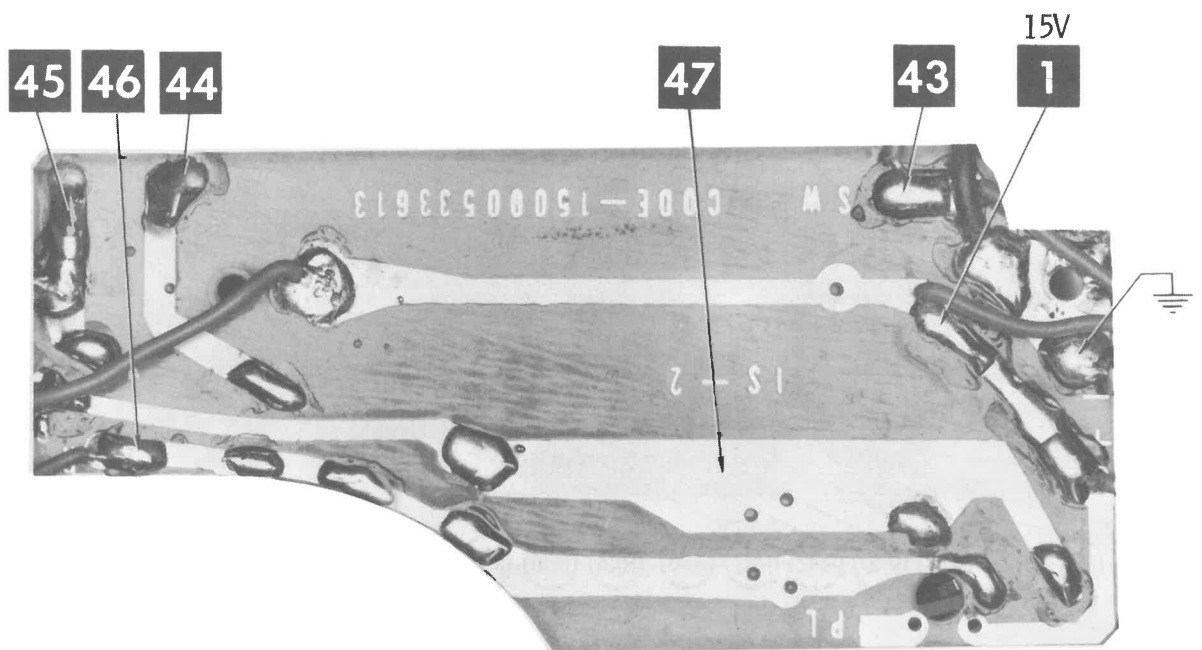
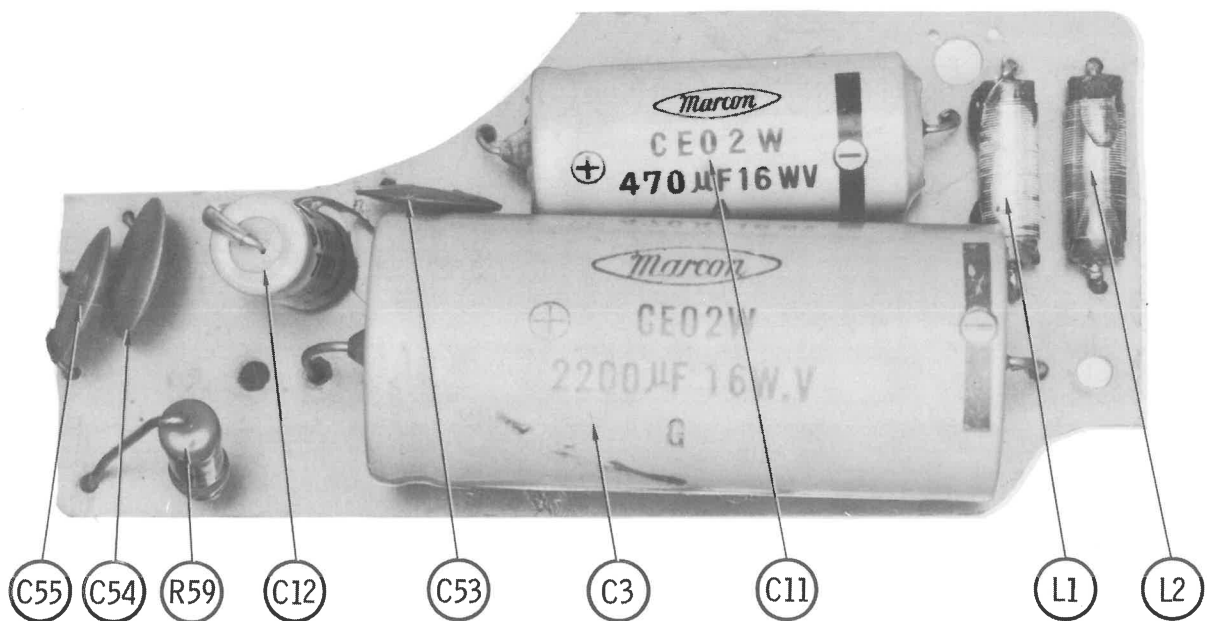
- (1) Part of Ref. No. 30.  
 (2) May contain Part No. 90140847942.  
 (3) Not used with Part No. 90140847942.

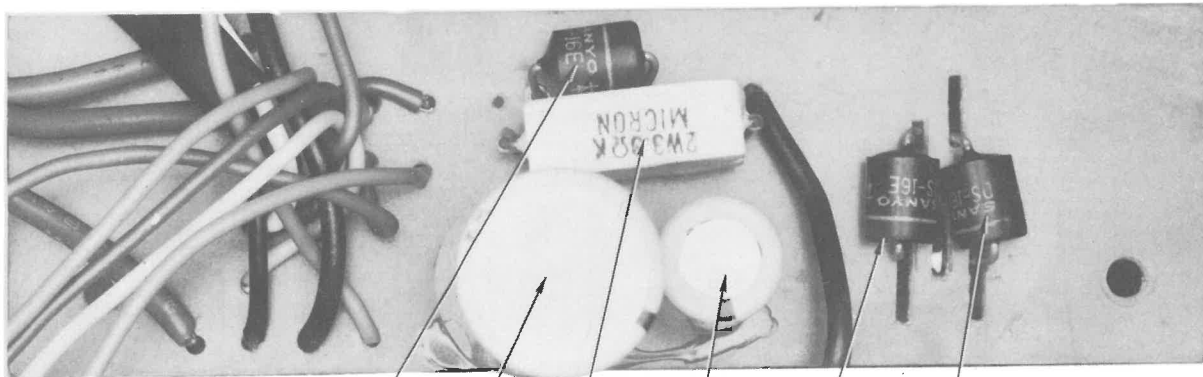




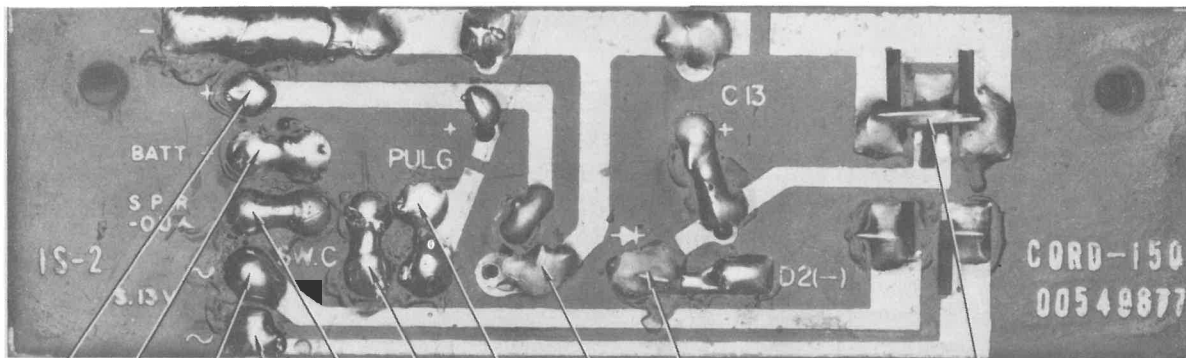
ELGIN MODEL R-5500







X3 C2 R56 C1 X2 X1



9 10 7 6 42 11 12 13 8

# PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

## WIRING DATA

|  |  |
|--|--|
| General-use Unshielded Hook-up Wire .....      | Use BELDEN No. 8530 (Solid) Available in 12 Colors<br>8524 (Stranded) Available in 12 Colors                       |
| Power Cord .....                               | Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft.<br>17109 (Plastic) or 17129 (Rubber) - 9 Ft.              |
| Low-loss Shielded Lead (Interconnecting) ..... | Use BELDEN No. 8401 or 8421  |
| Phono Pick-up Arm Cable .....                  | Use BELDEN No. 8430 (Two Conductor-Unshielded)<br>8429 (Two Conductor-Shielded)<br>8419 (Three Conductor-Shielded) |

## TRANSISTORS

| ITEM No. | TYPE No.  | FUNCTION | REPLACEMENT DATA |                           |                                  |                   |              |                   |
|----------|-----------|----------|------------------|---------------------------|----------------------------------|-------------------|--------------|-------------------|
|          |           |          | MFGR. PART No.   | GENERAL ELECTRIC PART No. | INTERNATIONAL RECTIFIER PART No. | MOTOROLA PART No. | RCA PART No. | SYLVANIA PART No. |
| Q1       | 693GT (1) | Preamp   | 16207190405      | GE-20                     | TR-21                            | HEP54             | SK3020       | ECG 123A          |
| Q2       | 693FS (1) | AF Amp   |                  | GE-20                     | TR-21                            | HEP54             | SK8020       | ECG 123A          |
| Q3       | 536FS (2) | Driver   |                  | GE-20                     | TR-21                            | HEP56             | SK3020       | ECG 123A          |
| Q4       | 2SB405    | Output   |                  | GE-2                      | TR-14                            | HEP254            | SK3004       | ECG 158           |
| Q5       | 2SB405    | Output   |                  | GE-2                      | TR-14                            | HEP254            | SK3004       | ECG 158           |
| Q6       | 693GT (1) | Preamp   | 16207190405      | GE-20                     | TR-21                            | HEP54             | SK3020       | ECG 123A          |
| Q7       | 693FS (1) | AF Amp   |                  | GE-20                     | TR-21                            | HEP54             | SK3020       | ECG 123A          |
| Q8       | 536FU (2) | Driver   |                  | GE-20                     | TR-21                            | HEP56             | SK3020       | ECG 123A          |
| Q9       | 2SB405    | Output   |                  | GE-2                      | TR-14                            | HEP254            | SK3004       | ECG 158           |
| Q10      | 2SB405    | Output   |                  | GE-2                      | TR-14                            | HEP254            | SK3004       | ECG 158           |

(1) Some versions may use type 1368C(D), Part #16171191368. (2) Some versions may use type 1229H, Part #16146191229.

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | MFGR. PART OR TYPE No. | REPLACEMENT RECTIFIERS & DIODES |                                  |                    | REPLACEMENT RECTIFIERS | NOTES |
|----------|------------------------|---------------------------------|----------------------------------|--------------------|------------------------|-------|
|          |                        | GENERAL ELECTRIC PART No.       | INTERNATIONAL RECTIFIER PART No. | SYLVANIA PART No.  | RCA PART No.           |       |
| X1       | 16501190016 (DS16E)    | GE-504A                         | 8D4 or 5A4-D                     | ECG 116 or ECG 117 | SK3030 or SK3031       |       |
| X2       | 16501190016 (DS16E)    | GE-504A                         | 8D4 or 5A4-D                     | ECG 116 or ECG 117 | SK3030 or SK3031       |       |
| X3       | 16501190016 (DS16E)    | GE-504A                         | 8D4 or 5A4-D                     | ECG 116 or ECG 117 | SK3030 or SK3031       |       |
| X4       | 16501190016 (DS16E)    | GE-504A                         | 8D4 or 5A4-D                     | ECG 116 or ECG 117 | SK3030 or SK3031       |       |

## ELECTROLYTIC CAPACITORS

| ITEM No. | RATING |      | REPLACEMENT DATA |                  |                    |                           |                           |                  |                  |
|----------|--------|------|------------------|------------------|--------------------|---------------------------|---------------------------|------------------|------------------|
|          |        |      | PART No.         | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C1       | 100    | 25V  | 12314191006      | CRE623A          | EA30-100           | PC100-25                  | MT1-23.5                  | MTV100CK25       | TE-1211          |
| C2       | 1000   | 16V  | 12313191007      | PRS1230          | EA15-1000          | WBR1000-16                | QT1-32                    | TC1501A          | TL-1166.5        |
| C3       | 2200   | 16V  |                  | PRS1240          |                    | WBR2000-16                | QT1-33                    | TC1520A          | TL-1167.5        |
| C5       | 200    | 15V  | 12303192206      | BCD20200         |                    | PC200-16                  | MT1-23                    | MTV200CK15       | TE-1164          |
| C6       | 200    | 15V  | 12303192206      | BCD20200         |                    | PC200-16                  | MT1-23                    | MTV200CK15       | TE-1164          |
| C7       | 220    | 10V  | 12302192206      | BCD20200         |                    | PC200-16                  | MT1-23                    | MTV200CK15       | TE-1164          |
| C8       | 100    | 10V  | 12312191006      | BCD10100         | EP15-100           | PC100-16                  | MT1-19                    | MTV100CD10       | TE-1135          |
| C9       | 220    | 10V  | 12302192206      | BCD20200         |                    | PC200-16                  | MT1-23                    | MTV200CK15       | TE-1164          |
| C10      | 100    | 10V  | 12312191006      | BCD10100         | EP15-100           | PC100-16                  | MT1-19                    | MTV100CD10       | TE-1135          |
| C11      | 470    | 16V  | 12313194706      | PRS1220          | EA15-500           | WBR500-35                 | QT1-30A                   | TC1505A          | TL-1166          |
| C12      | 33     | 16V  | 12303193305      | BCD15035         |                    | PC30-35                   | MT1-16                    | MTA35D15         | TE-1159          |
| C13      | 5      | 10V  | 12312194704      | BCD25005         | EP15-5             | PC5-100                   | MT1-3                     | MTV5CB50         | TE-1127          |
| C14      | .5     | 10V  | 12312394703      | BCD50001         |                    | PC1-100                   | MT1-1                     | MTV1CB50         | TE-1120          |
| C15      | 3 3    | 25V  | 12312193304      | BCD50003         | EP30-2             | PC5-100                   | MT1-3                     | MTV3CB50         | TL-1302          |
| C16      | 10     | 16V  | 12302191005      | BCD25010         | EP15-10            | PC10-50                   | MT1-5                     | MTV10CB50        | TE-1155          |
| C17      | 10     | 16V  | 12302191005      | BCD25010         | EP15-10            | PC10-50                   | MT1-5                     | MTV10CB50        | TE-1155          |
| C18      | 220    | 6.3V | 12311192206      | BCD6200          | EA6-250            | PC200-16                  | MT1-23                    | MTV200CK10       | TE-1104          |
| C19      | 2      | 10V  | 12312391004      | BCD50002         | EP15-2             | PC2-100                   | MT1-1                     | MTV2CB50         | TE-1121          |
| C20      | 500    | 10V  | 12312194706      | BCD15500         | EA15-500           | PC500-16                  | QT1-30A                   | MTV500DN15       | TL-1141          |
| C21      | 5      | 10V  | 12312194704      | BCD25005         | EP15-5             | PC5-100                   | MT1-3                     | MTV5CB50         | TE-1127          |
| C22      | .5     | 10V  | 12312394703      | BCD50001         |                    | PC1-100                   | MT1-1                     | MTV1CB50         | TE-1120          |
| C23      | 3.3    | 25V  | 12312193304      | BCD50003         | EP30-2             | PC5-100                   | MT1-3                     | MTV3CB50         | TL-1302          |
| C24      | 10     | 10V  | 12302191005      | BCD25010         | EP15-10            | PC10-50                   | MT1-5                     | MTV10CB50        | TE-1155          |
| C25      | 220    | 6.3V | 12311192206      | BCD6200          | EA6-250            | PC200-16                  | MT1-23                    | MTV200CK10       | TE-1104          |
| C26      | 2      | 10V  | 12312391004      | BCD50002         | EP15-2             | PC2-100                   | MT1-1                     | MTV2CB50         | TE-1121          |
| C27      | 500    | 10V  | 12312194706      | BCD15500         | EA15-500           | PC500-16                  | QT1-30A                   | MTV500DN15       | TL-1141          |
| C28      | 10     | 16V  | 12302191005      | BCD25010         | EP15-10            | PC10-50                   | MT1-5                     | MTV10CB50        | TE-1155          |



## PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

### CAPACITORS

| ITEM No. | RATING | REMARKS | REPLACEMENT DATA    |                       |                                  |                     |                     |                     |
|----------|--------|---------|---------------------|-----------------------|----------------------------------|---------------------|---------------------|---------------------|
|          |        |         | AEROVOX<br>PART No. | CENTRALAB<br>PART No. | CORNELL-<br>DUBILIER<br>PART No. | ELMENCO<br>PART No. | MALLORY<br>PART No. | SPRAGUE<br>PART No. |
| C41      | 100    |         |                     | CPR-100J              | CD6FC101K03                      | DM-10-101K          | SX310               | MS-31               |
| C42      | .01    |         |                     | CK-103                | HOY101ZV103P                     | CCD-103             | TA110               | TG-S10              |
| C43      | 1000   |         | TTP-01              | CPR-1000J             | CD19F102J500                     | DM-19-102J          | SX210               | 424ME1001J501       |
| C44      | 100    |         |                     | CPR-100J              | CD6FC101K03                      | DM-10-101K          | SX310               | MS-31               |
| C45      | .15    |         | DBE6P15             |                       | DPMS4P15                         | 4DP-4-154           | PVC6015             | 4PS-P115            |
| C46      | 300    |         |                     | CPR-300J              | CD15FD301K03                     | DM-15-301K          | SX330               | MS-33               |
| C47      | .01    |         | TTP-01              | CK-103                | HOY101ZV103P                     | CCD-103             | TA110               | TG-S10              |
| C48      | 100    |         |                     | CPR-100J              | CD6FC101K03                      | DM-10-101K          | SX310               | MS-31               |
| C49      | 1000   |         |                     | CPR-1000J             | CD19F102J500                     | DM-19-102J          | SX210               | 424ME1001J501       |
| C50      | 100    |         |                     | CPR-100J              | CD6FC101K03                      | DM-10-101K          | SX310               | MS-31               |
| C51      | .15    |         | DBE6P15             |                       | DPMS4P15                         | 4DP-4-154           | PVC6015             | 4PS-P115            |
| C52      | 300    |         |                     | CPR-300J              | CD15FD301K03                     | DM-15-301K          | SX330               | MS-33               |
| C53      | .04    |         |                     | DD-403                |                                  |                     | GP140               |                     |
| C54      | .04    |         |                     | DD-403                |                                  |                     | GP140               |                     |
| C55      | .04    |         |                     | DD-403                |                                  |                     | GP140               |                     |
| C56      | .04    |         |                     | DD-403                |                                  |                     | GP140               |                     |

### CONTROLS (All wattages 1/2 watt, or less, unless listed)

| ITEM No. | FUNCTION      | RESIST-<br>ANCE | REPLACEMENT DATA               |                       |                       |                     |                     |
|----------|---------------|-----------------|--------------------------------|-----------------------|-----------------------|---------------------|---------------------|
|          |               |                 | MFGR.<br>PART No.              | CENTRALAB<br>PART No. | CLAROSTAT<br>PART No. | CTS-IRC<br>PART No. | MALLORY<br>PART No. |
| R1       | Volume, Left  | 5000            | 01170046546<br>(011-703-46546) |                       |                       |                     |                     |
| R2       | Volume, Right | 5000            | 01170046546<br>(011-703-46546) |                       |                       |                     |                     |
| R3A      | Tone, Left    | 10K             | 01428033056<br>(014-283-33056) |                       |                       |                     |                     |
| B        | Tone, Right   | 10K             |                                |                       |                       |                     |                     |

ELGIN MODEL R-5500

### RESISTORS (Power and Special)

| ITEM No. | RATING                  | REPLACEMENT DATA    |                   | ITEM No. | RATING                  | REPLACEMENT DATA    |                   |
|----------|-------------------------|---------------------|-------------------|----------|-------------------------|---------------------|-------------------|
|          |                         | WORKMAN<br>PART No. | MFGR.<br>PART No. |          |                         | WORKMAN<br>PART No. | MFGR.<br>PART No. |
| R25      | 40 (Cold)<br>Thermistor |                     | 16639090400       | R48      | 40 (Cold)<br>Thermistor |                     | 16639090400       |
| R28      | 40 (Cold)<br>Thermistor |                     | 16639090400       | R52      | 40 (Cold)<br>Thermistor |                     | 16639090400       |

### COILS (RF-IF)

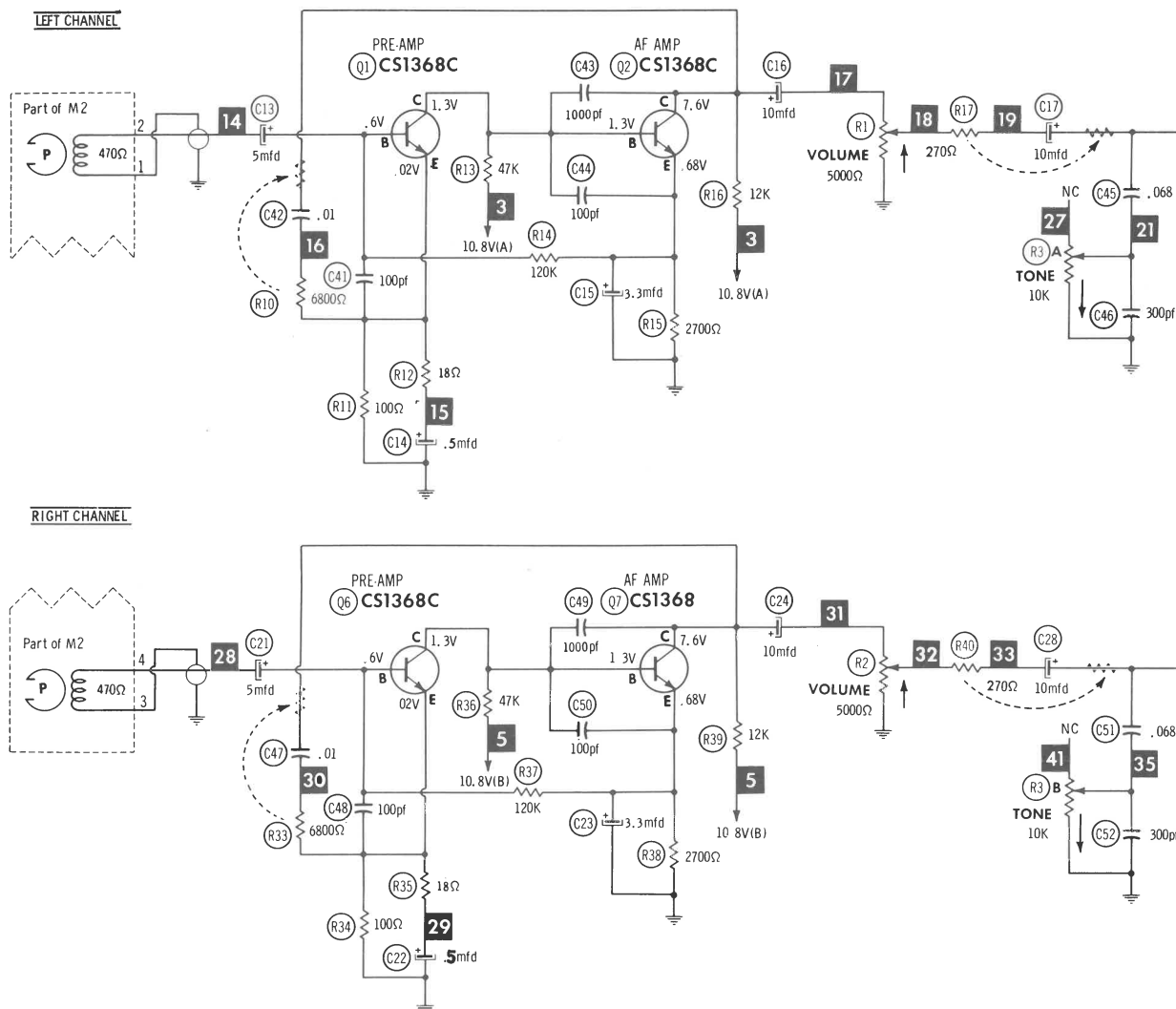
| ITEM No. | USE        | REPLACEMENT DATA |                      |                    |                     |
|----------|------------|------------------|----------------------|--------------------|---------------------|
|          |            | PART No.         | MEISSNER<br>PART No. | MILLER<br>PART No. | WORKMAN<br>PART No. |
| L1       | Hash Choke | 00089040448      |                      | 74F476AP           | T819                |
| L2       | Hash Choke | 00089040448      |                      | 74F476AP           | T819                |

### TRANSFORMER (Power)

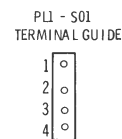
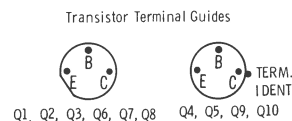
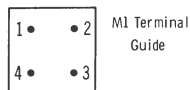
| ITEM No. | RATING              |                       | REPLACEMENT DATA  |                   |                     |                        |                   | NOTES |
|----------|---------------------|-----------------------|-------------------|-------------------|---------------------|------------------------|-------------------|-------|
|          | PRI.                | SEC. 1                | MFGR.<br>PART No. | MERIT<br>PART No. | STANCOR<br>PART No. | THORDARSON<br>PART No. | TRIAD<br>PART No. |       |
| T1       | 117VAC @<br>.075AMP | 24VAC CT @<br>.125ADC | 10043133055       |                   |                     |                        | F-116X            |       |

(CONTINUED ON PAGE 44)

**NOTE: DEMAGNETIZE HEADS AFTER SERVICING**



--- Denotes chassis  
 --- Denotes ground (Measurement reference unless otherwise indicated)  
 --- Indicates connection used in some versions.  
 --- Indicates connection not used in some versions.  
 \* Omitted in some versions.  
 e See parts list.  
 Values shown in ( ) are used in some applications.  
 Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.  
 Supply voltage maintained at rated value for measurements.  
 Voltage and resistance measured with VTVM or equivalent meter,  
 no signal applied and controls adjusted for normal operation.  
 Controls viewed from actuator end. Arrow indicates clockwise rotation.  
 Numbers assigned to terminals may not be found on the unit.  
 Transistor resistances vary widely. No resistance measurements taken.



A PHOTOFACT STANDARD NOTATION SCHEMATIC  
 with **CIRCUITRACE**  
 © Howard W. Sams & Co., Inc. 1970

## 43



## PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

### TRANSFORMER (Driver)

| ITEM No. | TURNS RATIO |        |        | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|-------------|--------|--------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. 1 | SEC. 2 | MFGR. PART No.   | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 3.2         | 1      | 1      | 10204133054      |                |                  |                     |                |       |
| T3       | 3.2         | 1      | 1      | 10204133054      |                |                  |                     |                |       |

### SPEAKER

| ITEM No. | TYPE    |    |        | REPLACEMENT DATA |               | NOTES |
|----------|---------|----|--------|------------------|---------------|-------|
|          |         |    |        | MFGR. PART No.   | QUAM PART No. |       |
| SP1      | 4" X 6" | PM | 8 ohms | 03322233060      | 46A1Z10       |       |
| SP2      | 4" X 6" | PM | 8 ohms | 03322233060      | 46A1Z10       |       |

### BATTERIES

| ITEM No. | VOLTAGE   | MFGR. PART No. | REPLACEMENT DATA |                | NOTES       |
|----------|-----------|----------------|------------------|----------------|-------------|
|          |           |                | EVEREADY         | MALLORY        |             |
| M1       | 12V Total | UM-1           | 1050 or E95      | M13R or MN1300 | 8 Required. |

### TAPE HEADS

| ITEM No. | MEASURED   |                        |            | PART No.    | NORTRONICS PART No. | DESCRIPTION         |
|----------|------------|------------------------|------------|-------------|---------------------|---------------------|
|          | INDUCTANCE | BIAS/ERASE VOLTS (RMS) | BIAS FREQ. |             |                     |                     |
| M2       | 360mh      |                        |            | 13331145911 | 5800 & QK-66        | 8-Track Stereo Play |

### MISCELLANEOUS

| ITEM No. | PART NAME             | PART No.    | NOTES                      |
|----------|-----------------------|-------------|----------------------------|
| M3       | Solenoid              | 06200033370 | Head Shift                 |
| M4       | Motor                 | 06003032521 | Tape Transport             |
| S1       | Switch                | 04851045912 | Power, On/Off              |
| S2       | Switch                |             | Automatic Program Selector |
| S3       | Switch                | 51113047913 | Manual Program Selector    |
| S4       | Switch                | 04311045518 | AC/DC                      |
|          | Printed Circuit Board | 15000033058 | Amplifier                  |
|          | Printed Circuit Board | 15000049877 | Power Supply               |

### CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

| ITEM                    | PART No.    | ITEM                     | PART No.    |
|-------------------------|-------------|--------------------------|-------------|
| Cabinet Front, Left     | 21030010328 | Handle, Carrying         | 23042033321 |
| Cabinet Front, Right    | 21030010241 | Button, Channel Selector | 27512049960 |
| Cabinet Back, Right     | 20040010240 | Knob, Control (3 used)   | 27010049732 |
| Cabinet Back, Left      | 20040010239 | Knob, Slide Switch       | 34600045318 |
| Battery Compartment Lid | 20340032448 |                          |             |