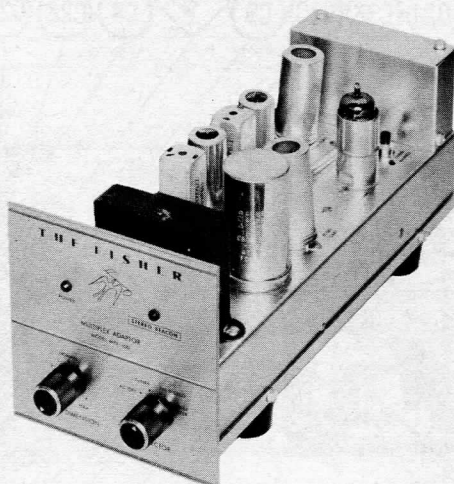




|              |                                                                 |        |                                 |
|--------------|-----------------------------------------------------------------|--------|---------------------------------|
| TRADE NAME   | Fisher Model MPX-100                                            |        |                                 |
| MANUFACTURER | Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y. |        |                                 |
| TYPE SET     | AC Operated 5 Tube FM Stereo Multiplex Adapter                  |        |                                 |
| POWER SUPPLY | 105 — 120 Volts AC, 60 Cycles                                   | RATING | 22 Watts, .2 Amp. @117 Volts AC |

## ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

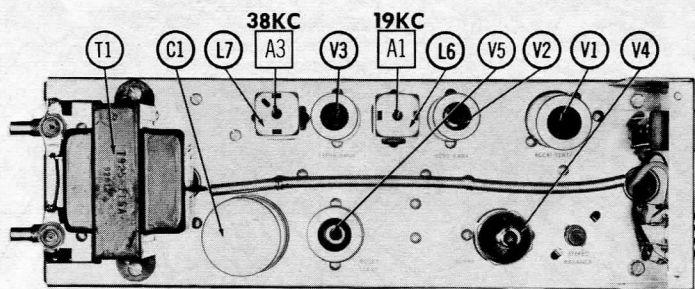
## MULTIPLEX ADAPTER ALIGNMENT

Allow 20-minute warmup for adapter and generator.

Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #5097, 8727  
WALSCO #2515

| SIGNAL GENERATOR                                                             | INDICATOR                                                    | ADJUST | REMARKS                                                           |
|------------------------------------------------------------------------------|--------------------------------------------------------------|--------|-------------------------------------------------------------------|
| 1. Inject 19KC signal + .01% into multiplex input jack, low side to chassis. | Vert. Amp. of Scope to point $\Delta$ , low side to chassis. | A1, A2 | Adjust for maximum deflection. Adjust scope for 2-cycle waveform. |
| 2. "                                                                         | Vert. Amp. to point $\Delta$ , low side to chassis.          | A3, A4 | Adjust for maximum deflection of 4-cycle waveform.                |



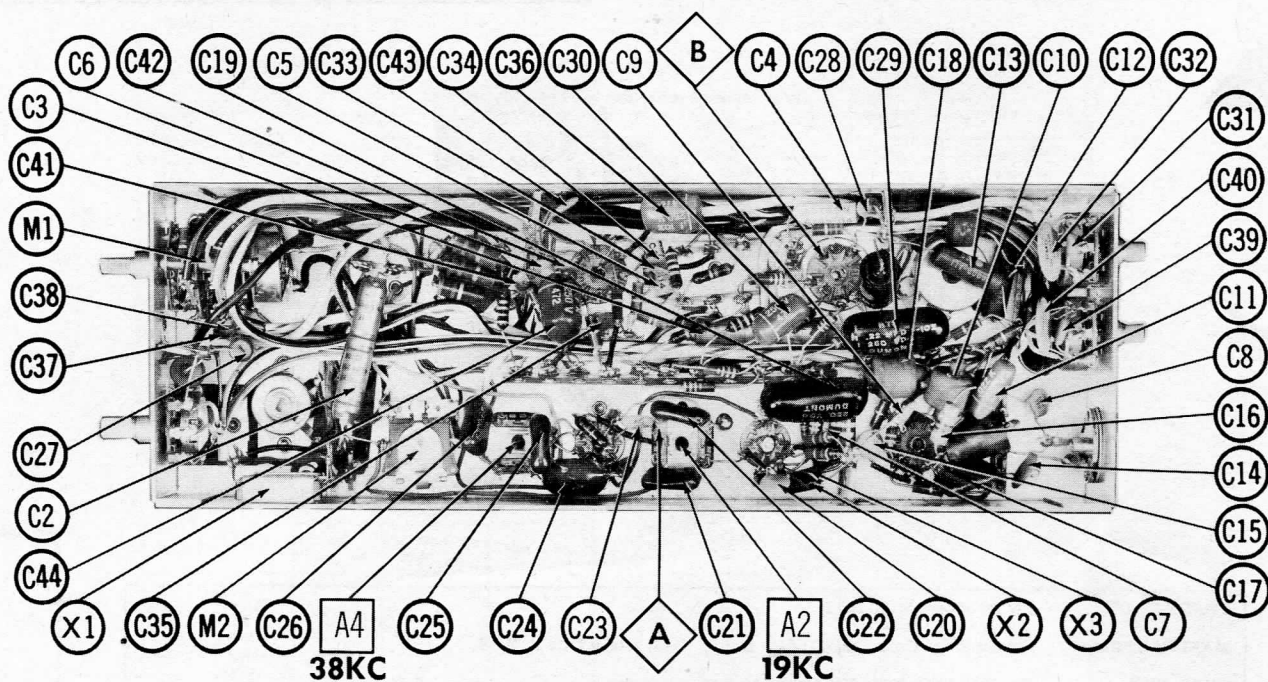
## HOWARD W. SAMS &amp; CO., INC. Indianapolis 6, Indiana



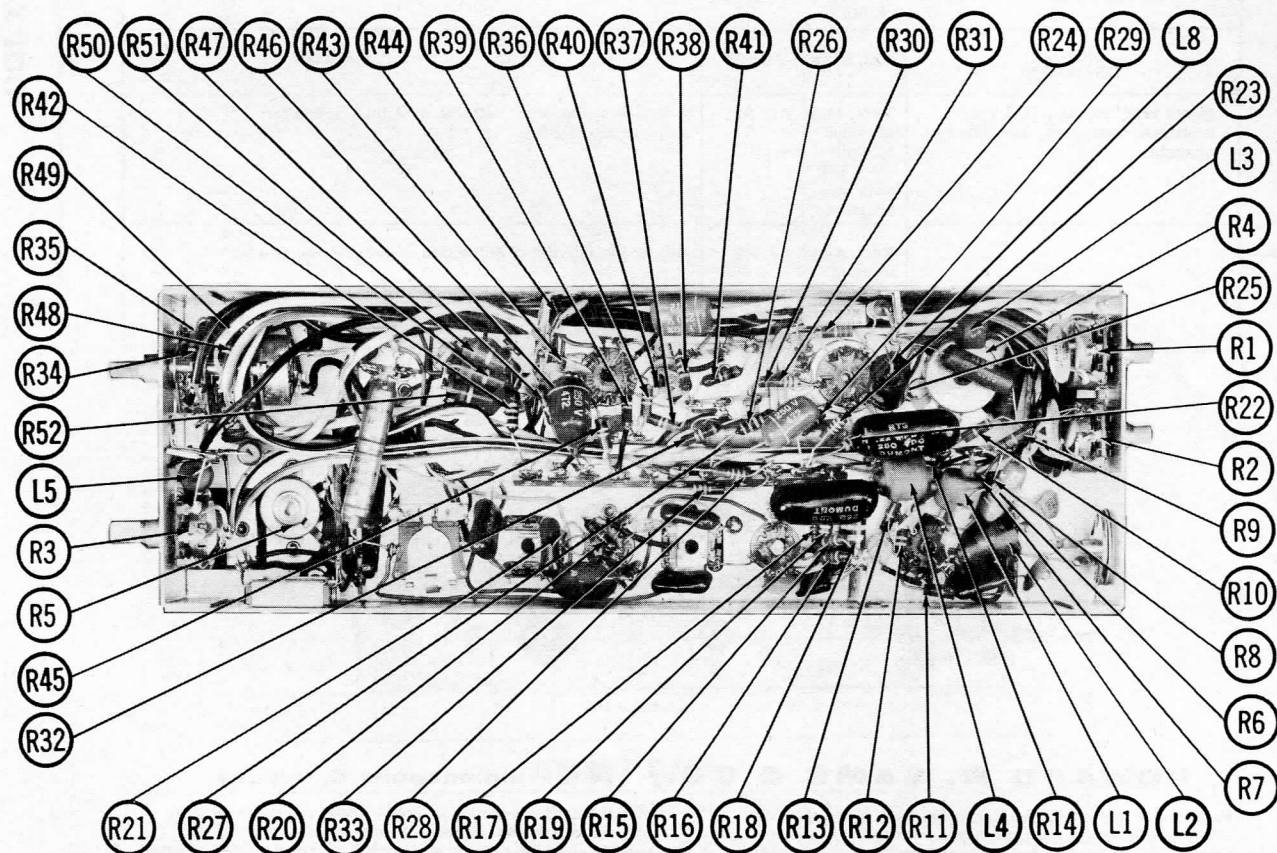
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement LZ307

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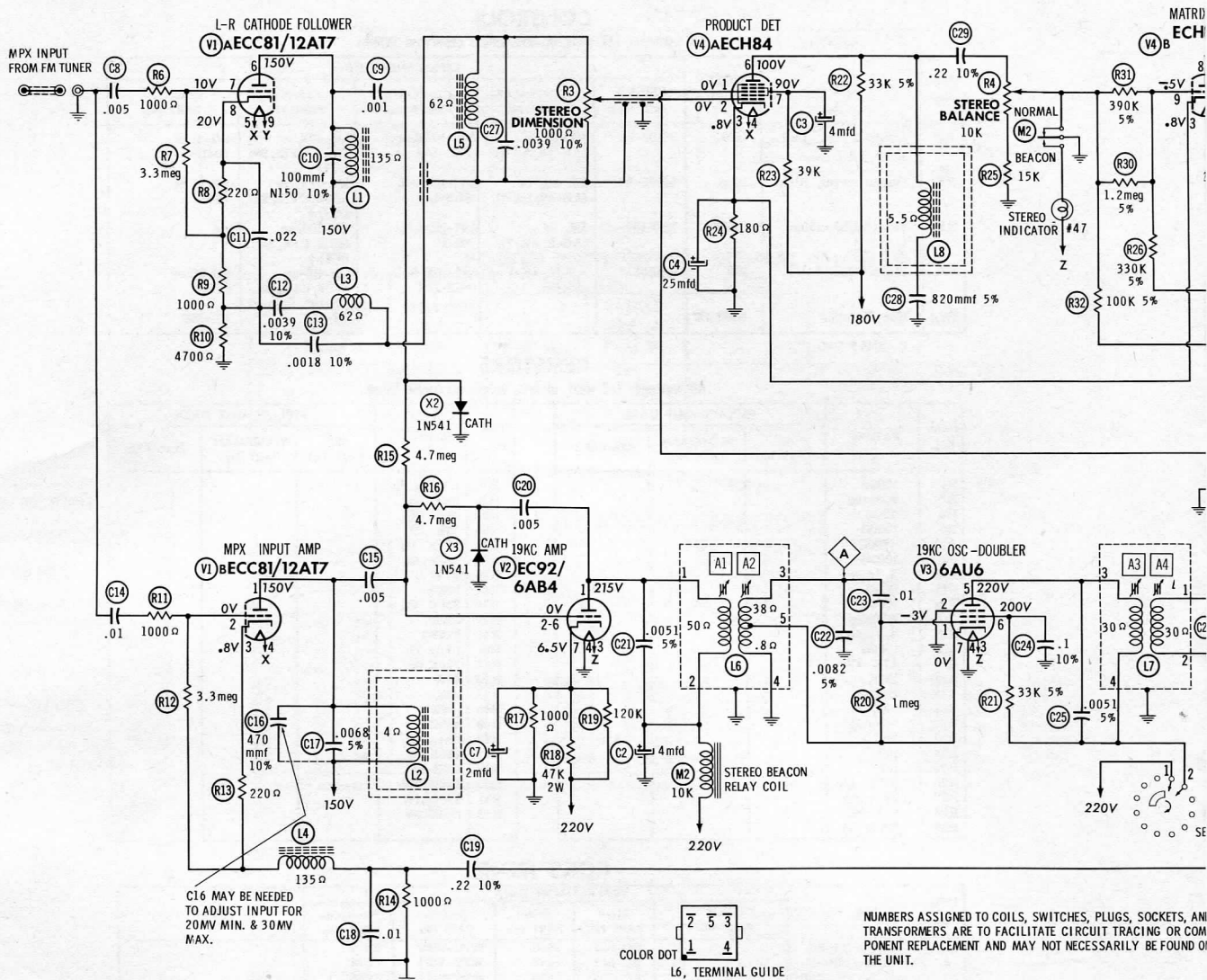


CHASSIS BOTTOM VIEW-ALIGNMENT, CAPACITOR & MISC. IDENT.



CHASSIS BOTTOM VIEW-RESISTOR & INDUCTOR IDENT.





RESISTANCE READINGS

| ITEM | TUBE    | Pin 1  | Pin 2  | Pin 3 | Pin 4 | Pin 5  | Pin 6  | Pin 7  | Pin 8 | Pin 9 |
|------|---------|--------|--------|-------|-------|--------|--------|--------|-------|-------|
| V1   | 6X12AT7 | †7200Ω | 3.3meg | 1500Ω | FIL   | FIL    | †7200Ω | 3.3meg | 6500Ω | FIL   |
| V2   | 6AECH84 | †11K   | NC     | FIL   | FIL   | NC     | 2.4meg | 1000Ω  |       |       |
| V3   | 6AU6    | 1meg   | 0Ω     | FIL   | FIL   | †1500Ω | †35K   | .8Ω    |       |       |
| V4   | 6AECH84 | 30Ω    | 300Ω   | 180Ω  | FIL   | FIL    | †37K   | †42K   | †220K | 180K  |
| V5   | 6X12AT7 | †100K  | 500K   | 2700Ω | FIL   | FIL    | †100K  | 500K   | 2700Ω | FIL   |

ALL MEASUREMENTS TAKEN IN "FM STEREO" POSITION.

† MEASURED FROM OUTPUT OF X1.

NC NO CONNECTION

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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# PARTS LIST AND DESCRIPTION

## TUBES

| AMPEREX        |                                                                     |                                    | GENERAL ELECTRIC |                                  |       | RCA      |                                                 |             | RAYTHEON |     |      | SYLVANIA |     |      |
|----------------|---------------------------------------------------------------------|------------------------------------|------------------|----------------------------------|-------|----------|-------------------------------------------------|-------------|----------|-----|------|----------|-----|------|
| ITEM No.       | USE                                                                 | TYPE                               | ITEM No.         | USE                              | TYPE  | ITEM No. | USE                                             | TYPE        | ITEM No. | USE | TYPE | ITEM No. | USE | TYPE |
| V1<br>V2<br>V3 | Cathode Follower-Input Amp.<br>19KC Amplifier<br>19KC Osc. -Doubler | ECC81/12AT7<br>6AB4/ EC92)<br>6AU6 | V4               | Product Detector-<br>Matrix Amp. | ECH84 | V5       | Left Channel AF Amp. -<br>Right Channel AF Amp. | ECC83/12AX7 |          |     |      |          |     |      |

## POWER RECTIFIERS & SIGNAL DIODES

| ITEM No. | CURRENT RATING ( Measured ) | ORIGINAL Part or Type No. | RECTIFIERS   |                         | DIODES | NOTES                                            |
|----------|-----------------------------|---------------------------|--------------|-------------------------|--------|--------------------------------------------------|
|          |                             |                           | RCA PART No. | SARKES TARZIAN PART No. |        |                                                  |
| X1       | .040A                       | B250C75 †                 | 1N1763 *     | 2F4 *                   |        | † Bridge Type, Selenium<br>* Silicon, 4 Required |
| X2       |                             | 1N541                     |              |                         |        | 19KC Amp. Bias                                   |
| X3       |                             | 1N541                     |              |                         |        | 19KC Amp. Bias                                   |

## ELECTROLYTIC CAPACITORS

| ITEM No.           | RATING                  |                          | REPLACEMENT DATA |                  |                           |                           |                  |                  |                  |
|--------------------|-------------------------|--------------------------|------------------|------------------|---------------------------|---------------------------|------------------|------------------|------------------|
|                    | CAP.                    | VOLT.                    | FISHER PART No.  | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. | MALLORY PART No. | PYRAMID PART No. | SPRAGUE PART No. |
| C1A<br>B<br>C<br>D | ▲40<br>■40<br>10<br>▲10 | 350<br>350<br>300<br>300 |                  | AFH4-02          | D0032                     | XC4-20                    | FP420.35<br>TC65 | TMQ-4295         | TVLS-4613*       |
| C2                 | 4                       | 250                      |                  | PRSI550          | BBR4-250                  | QT1-2                     | TC697            | TD-4-250         | TVA-1501         |
| C3                 | 4                       | 250                      |                  | PRSI550          | BBR4-250                  | QT1-2                     | TC697            | TD-4-250         | TVA-1501         |
| C4                 | 25                      | 6                        |                  | PTT26            | NLW25-10                  | MT1-10                    | TT6X25           | MLV25-6          | TE-1091          |
| C5                 | 25                      | 6                        |                  | PTT26            | NLW25-10                  | MT1-10                    | TT6X25           | MLV25-6          | TE-1091          |
| C6                 | 25                      | 6                        |                  | PTT26            | NLW25-10                  | MT1-10                    | TT6X25           | MLV25-6          | TE-1091          |
| C7                 | 2                       | 70                       |                  | PRSI705          | NLW2-100                  | MT1-2                     | TT150X2          | MLV2-150         | TE-1401          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## 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. |
| C8       | .005           |         | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B-250            | 5HK-D50          |
| C9       | .001           |         | BPD-001          | DD-102             | BYA10D1                   | CCD-102          | B-210            | 5HK-D10          |
| C10      | 100 N150 10%   |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C11      | .022 250V      |         | P488N-022        | DD-203             | CUB4S22                   | 4DP-2-223        | GEM-4122         | 4TM-S22          |
| C12      | .0039 250V 10% |         | P684CM-0039      |                    | DPMS6D39                  | 6DP-1-392        | JL-239           | 6PS-D39          |
| C13      | .0018 250V 10% |         | V84C6D2-10%      |                    | DPMS6D2                   | 6DP-1-202        | JL-218           | 6PS-D18          |
| C14      | .01            |         | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C15      | .005           |         | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B-250            | 5HK-D50          |
| C16      | 470 10%        |         |                  | D6-471             | 5R5T47                    | CCD-471          | GP347            | 10TS-T47         |
| C17      | .0068 5%       |         | 1464-0068        |                    | 1R5D68                    | CM-35B-682J      | MCJ469           | MS-268           |
| C18      | .01 250V       |         | P488N-01         | D6-103             | CUB4S1                    | 4DP-1-103        | GEM-411          | 4TM-S10          |
| C19      | .22 250V 10%   |         | V84C4P22-10%     |                    | PM4P22                    | 4DP-3-224        |                  | 4TM-P22          |
| C20      | .005           |         | BPD-005          | DD-502             | BYA10D5                   | CCD-502          | B-250            | 5HK-D50          |
| C21      | .0051 5%       |         | 1464-0051        |                    | 1R5D51                    | CM-20B-512J      |                  | MS-251           |
| C22      | .0082 5%       |         | 1464-0082        |                    | 1R5D82                    | CM-35B-822J      | MCJ473           | MS-282           |
| C23      | .01            |         | BPD-01           | DD-103             | BYA10S1                   | CCD-103          | B-110            | 5HK-S10          |
| C24      | .1 250V 10%    |         | V84C4P1-10%      |                    | PM4P1                     | 4DP-3-104        | GEM-1001         | 4TM-P10          |
| C25      | .0051 5%       |         | 1464-0051        |                    | 1R5D51                    | CM-20B-512J      |                  | MS-251           |
| C26      | .0051 5%       |         | 1464-0051        |                    | 1R5D51                    | CM-20B-512J      |                  | MS-251           |
| C27      | .0039 250V 10% |         | P684CM-0039      |                    | DPMS6D39                  | 6DP-1-392        | JL-239           | 6PS-D39          |
| C28      | 820 5%         |         |                  |                    | 5R5T82                    | CM-19B-821J      |                  | MS-382           |
| C29      | .22 250V 10%   |         | V84C4P22-10%     |                    | PM4P22                    | 4DP-3-224        |                  | 4TM-P22          |
| C30      | .1 250V 10%    |         | V84C4P1-10%      |                    | PM4P1                     | 4DP-3-104        | GEM-1001         | 4TM-P10          |
| C31      | .001 10%       |         | DI-1000          | DD-102             | 5R5D1                     | CCD-102          | GP210            | 10TS-D10         |
| C32      | .003 10%       |         | DI-3000          |                    | PM6D3                     | CCD-302          | JL-233           | 10TS-D30         |
| C33      | 16 N75 10%     |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C34      | 100 N150 10%   |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C35      | 100 N150 10%   |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C36      | .1 250V 10%    |         | V84C4P1-10%      |                    | PM4P1                     | 4DP-3-104        | GEM-1001         | 4TM-P10          |
| C37      | 470 10%        |         | DI-470           | DD-471             | 5R5T47                    | CCD-471          | GP347            | 10TS-T47         |
| C38      | 220 10%        |         | DI-220           | DD-221             | L10T22                    | CCD-221          | GP322            | 10TS-T22         |
| C39      | .001 10%       |         | DI-1000          | DD-102             | 5R5D1                     | CCD-102          | GP210            | 10TS-D10         |
| C40      | .003 10%       |         | DI-3000          |                    | PM6D3                     | CCD-302          | JL-233           | 10TS-D30         |
| C41      | 16 N75 10%     |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C42      | 100 N150 10%   |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C43      | 100 N150 10%   |         |                  |                    |                           | *                |                  | 10TCP-T10        |
| C44      | .1 250V 10%    |         | V84C4P1-10%      |                    | PM4P1                     | 4DP-3-104        | GEM-1001         | 4TM-P10          |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.



## PARTS LIST AND DESCRIPTION (CONTINUED)

### CONTROLS

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

| ITEM No. | USE                 | RESIST-ANCE | REPLACEMENT DATA |                         |                     |                                     |                  |
|----------|---------------------|-------------|------------------|-------------------------|---------------------|-------------------------------------|------------------|
|          |                     |             | FISHER PART No.  | CENTRALAB PART No.      | CLAROSTAT PART No.  | CTS-IRC PART No.                    | MALLORY PART No. |
| R1       | Output Level, Left  | 100K        | 50105-8C         | BX-40 or (AB-40, AK-1)  | A47-100K-S, FKS-1/4 | Q11-128, or (BU2, CF13, SSI, DC1) † | SU-41 or (U41)   |
| R2       | Output Level, Right | 100K        | 50105-8C         | BX-40, or (AB-40, AK-1) | A47-100K-S, FKS-1/4 | Q11-128, or (BU2, CF13, SSI, DC1) † | SU-41 or (U41)   |
| R3       | Stereo Dimension    | 1000Ω       | R50-160-105      | B5, or (AB-5, AK-7)     | A47-1000-S, FS-3    | Q11-108, or (BU2, CF6, SSI, DC1) †  | U4               |
| R4       | Stereo Balance      | 10K         | R50103-5         | AB-14, AK-1 or (B-14)   | A47-10K-S, FKS-1/4  | Q11-116 or (BU2, CF9, SSI, DC1) †   | SU-20 or (U20)   |
| R5       | Hum Balance         | 500Ω 2W     |                  |                         |                     | 112-500                             | FL-500           |

† "SNAPTROL"

### 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 |
| R6       | 1000Ω   |                  |                  |         | R30      | 1.2meg 5% |                  |                  |         |
| R7       | 3.3meg  |                  |                  |         | R31      | 390K 5%   |                  |                  |         |
| R8       | 220Ω    |                  |                  |         | R32      | 100K 5%   |                  |                  |         |
| R9       | 1000Ω   |                  |                  |         | R33      | 33K 5%    |                  |                  |         |
| R10      | 4700Ω   |                  |                  |         | R34      | 220K 5%   |                  |                  |         |
| R11      | 1000Ω   |                  |                  |         | R35      | 150Ω 5%   |                  |                  |         |
| R12      | 3.3meg  |                  |                  |         | R36      | 82K       |                  |                  |         |
| R13      | 220Ω    |                  |                  |         | R37      | 82K       |                  |                  |         |
| R14      | 1000Ω   |                  |                  |         | R38      | 330K 5%   |                  |                  |         |
| R15      | 4.7meg  |                  |                  |         | R39      | 100K      |                  |                  |         |
| R16      | 4.7meg  |                  |                  |         | R40      | 2700Ω     |                  |                  |         |
| R17      | 1000Ω   |                  |                  |         | R41      | 1meg 5%   |                  |                  |         |
| R18      | 47K 2W  |                  |                  |         | R42      | 330K 5%   |                  |                  |         |
| R19      | 120K    |                  |                  |         | R43      | 82K       |                  |                  |         |
| R20      | 1meg    |                  |                  |         | R44      | 82K       |                  |                  |         |
| R21      | 33K 5%  |                  |                  |         | R45      | 100K      |                  |                  |         |
| R22      | 33K 5%  |                  |                  |         | R46      | 2700Ω     |                  |                  |         |
| R23      | 39K     |                  |                  |         | R47      | 1meg 5%   |                  |                  |         |
| R24      | 180Ω    |                  |                  |         | R48      | 220K 5%   |                  |                  |         |
| R25      | 15K     |                  |                  |         | R49      | 150K 5%   |                  |                  |         |
| R26      | 330K 5% |                  |                  |         | R50      | 2700Ω 1W  |                  |                  |         |
| R27      | 100K 5% |                  |                  |         | R51      | 2700Ω 1W  |                  |                  |         |
| R28      | 33K 5%  |                  |                  |         | R52      | 1500Ω 1W  |                  |                  |         |
| R29      | 220K 5% |                  |                  |         |          |           |                  |                  |         |

### COILS (RF-IF)

| ITEM No. | USE               | REPLACEMENT DATA |                |                 |                  |                  | NOTES |
|----------|-------------------|------------------|----------------|-----------------|------------------|------------------|-------|
|          |                   | FISHER PART No.  | Merit PART No. | Miller PART No. | Stancor PART No. | Workman PART No. |       |
| L1       | RF Choke (10MH)   |                  | BC-553         | 4540            | RTC-9169         | T879             |       |
| L2       | RF Choke (10MH)   |                  | BC-553         | 4540            | RTC-9169         | T879             |       |
| L3       | RF Choke (5.25MH) |                  | BC-552         | 4538            | RTC-9167         | T844             |       |
| L4       | RF Choke (10MH)   |                  | BC-553         | 4540            | RTC-9169         | T879             |       |
| L5       | RF Choke (5.25MH) |                  | BC-552         | 4538            | RTC-9167         | T844             |       |
| L6       | 19KC IF           | ZZ50210-12       |                |                 |                  |                  |       |
| L7       | 38KC IF           | ZZ50210-11       |                |                 |                  |                  |       |
| L8       | RF Choke (20MH)   |                  |                | 6308            | RTC-9254         | T883             |       |

### TRANSFORMER (POWER)

| ITEM No. | RATING     |              |            | REPLACEMENT DATA |                |                  |                     |                | NOTES |
|----------|------------|--------------|------------|------------------|----------------|------------------|---------------------|----------------|-------|
|          | PRI.       | SEC. 1       | SEC. 2     | FISHER PART No.  | MERIT PART No. | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
|          |            |              |            |                  |                |                  |                     |                |       |
| T1       | 117V @ .2A | 210V @ .040A | 6.3V @ .9A | T-925-115        |                |                  |                     |                |       |
|          | SEC. 3     | SEC. 4       | SEC. 5     |                  |                |                  |                     |                |       |
|          | 6.3V @ .6A |              |            |                  |                |                  |                     |                |       |

### MISCELLANEOUS

| ITEM No. | PART NAME | FISHER PART No. | NOTES                                          |
|----------|-----------|-----------------|------------------------------------------------|
| M1       | Switch    |                 |                                                |
| M2       | Relay     |                 | Function Selector, Power Off-On (Rotary Wafer) |

### WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in 12 Colors  
 8524 (Stranded) Available in 12 Colors  
 Power Cord ..... Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft.  
 17109 (Plastic) or 17129 (Rubber) - 9 Ft.  
 Power Cord (Interlock Type) ..... Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)