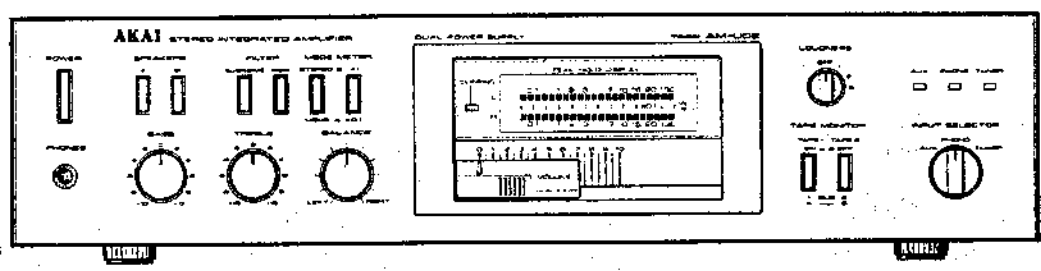
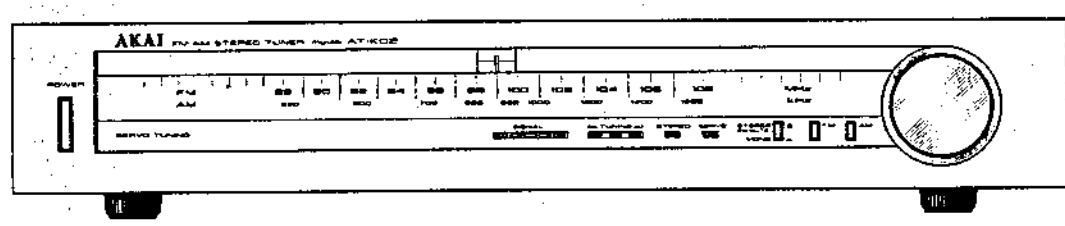


AT-K02  
AM-U02

# AKAI SERVICE MANUAL

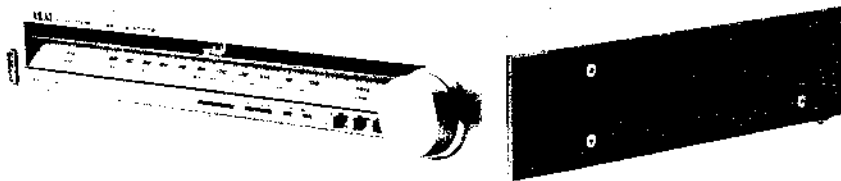


FM AM STEREO TUNER

## MODEL AT-K02

STEREO INTEGRATED AMPLIFIER

## MODEL AM-U02



AT-K02



AM-U02

**FM AM STEREO TUNER**  
**MODEL AT-K02**  
**STEREO INTEGRATED AMPLIFIER**  
**MODEL AM-U02**

**ALSO APPLICABLE TO BLACK PANEL MODEL**

|           |                             |    |
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| SECTION 2 | MODEL AM-U02 SERVICE MANUAL | 15 |
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SECTION 1

**MODEL AT-K02**

**SERVICE MANUAL**

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

## I. TECHNICAL DATA

### FM TUNER SECTION

|                         |                                       |                                                                        |
|-------------------------|---------------------------------------|------------------------------------------------------------------------|
| FREQUENCY RANGE         | 87.5 MHz to 108 MHz                   |                                                                        |
| SENSITIVITY (IHF)       | 1.9 $\mu$ V                           |                                                                        |
| CAPTURE RATIO           | 1.2 dB                                |                                                                        |
| SELECTIVITY (IHF)       | More than 65 dB                       |                                                                        |
| IMAGE REJECTION         | More than 60 dB (98 MHz)              |                                                                        |
| IF REJECTION            | More than 85 dB (98 MHz)              |                                                                        |
| SPURIOUS REJECTION      | More than 85 dB (98 MHz)              |                                                                        |
| AM SUPPRESSION          | 60 dB                                 |                                                                        |
| SIGNAL TO NOISE RATIO   | 73 dB                                 |                                                                        |
| HARMONIC DISTORTION     | MONO<br>STEREO                        | Less than 0.09% (100% modulation)<br>Less than 0.12% (100% modulation) |
| TUNING INDICATOR        | 3 LEDs                                |                                                                        |
| SIGNAL INDICATOR        | 5 LEDs                                |                                                                        |
| MUTING                  | Switchable to ON-OFF                  |                                                                        |
| STEREO SEPARATION       | More than 52 dB (1 kHz)               |                                                                        |
| SUB CARRIER SUPPRESSION | More than 60 dB                       |                                                                        |
| OUTPUT VOLTAGE          | Fixed 1 V (100% modulation)           |                                                                        |
| ANTENNA INPUT IMPEDANCE | 300 ohms balanced, 75 ohms unbalanced |                                                                        |

### AM TUNER SECTION

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| FREQUENCY RANGE       | 520 kHz to 1,605 kHz                                       |
| SENSITIVITY (IHF)     | 150 $\mu$ V/m (bar antenna), 10 $\mu$ V (external antenna) |
| SELECTIVITY (IHF)     | More than 30 dB                                            |
| IMAGE REJECTION       | More than 55 dB (1,000 kHz)                                |
| IF REJECTION          | More than 40 dB                                            |
| SIGNAL TO NOISE RATIO | More than 55 dB                                            |
| OUTPUT VOLTAGE        | 300 mV (30% modulation)                                    |
| ANTENNA               | Built-in ferrite bar antenna                               |

### MISCELLANEOUS

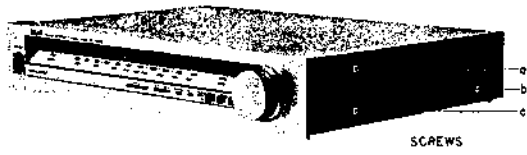
|                    |                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SEMICONDUCTORS     | Transistors: 26, Diodes: 13, LED: 6, ICs: 4                                                                                                                                           |
| POWER REQUIREMENTS | 120 V, 60 Hz for U.S.A. and Canada<br>220 V, 50 Hz for Europe except UK<br>240 V, 50 Hz for UK and Australia<br>110/220/240 V, 50/60 Hz internally switchable for the other countries |
| POWER CONSUMPTION  | 20 W                                                                                                                                                                                  |
| DIMENSIONS         | 440 (W) x 78 (H) x 340 (D) mm (17.3 x 3.1 x 13.4) inches                                                                                                                              |
| WEIGHT             | 4.9 kg (10.8 lbs)                                                                                                                                                                     |

\* For improvement purposes, specifications and design are subject to change without notice.

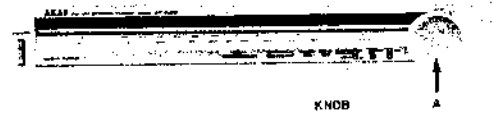
## II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the Photographs. Reassemble in reverse order.

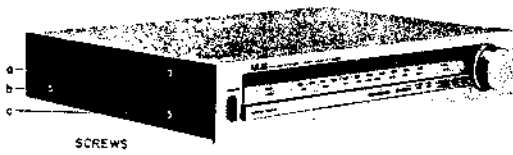
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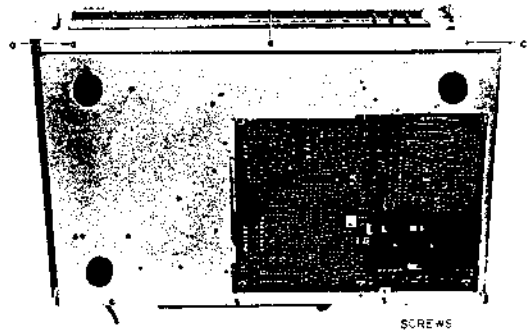
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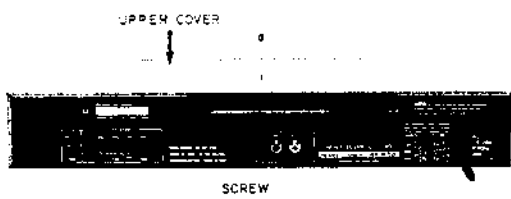
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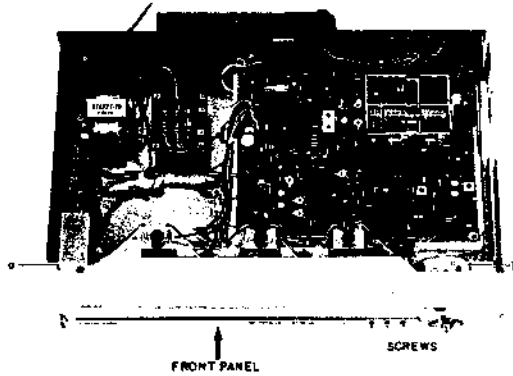
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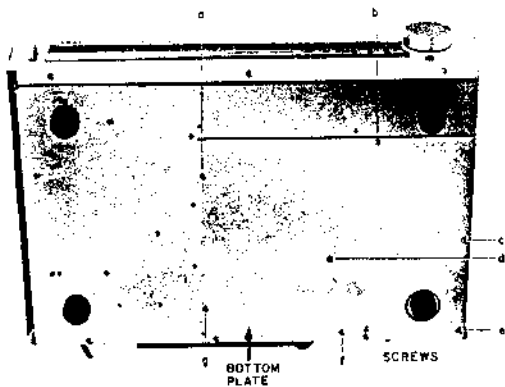
3



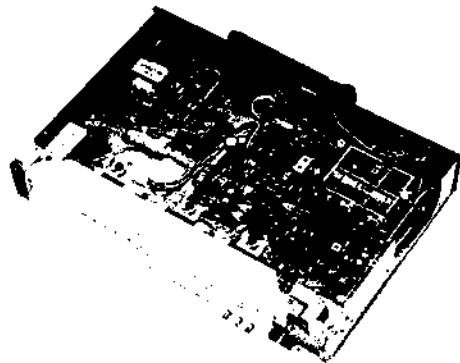
7



4



8



### III. CONTROLS

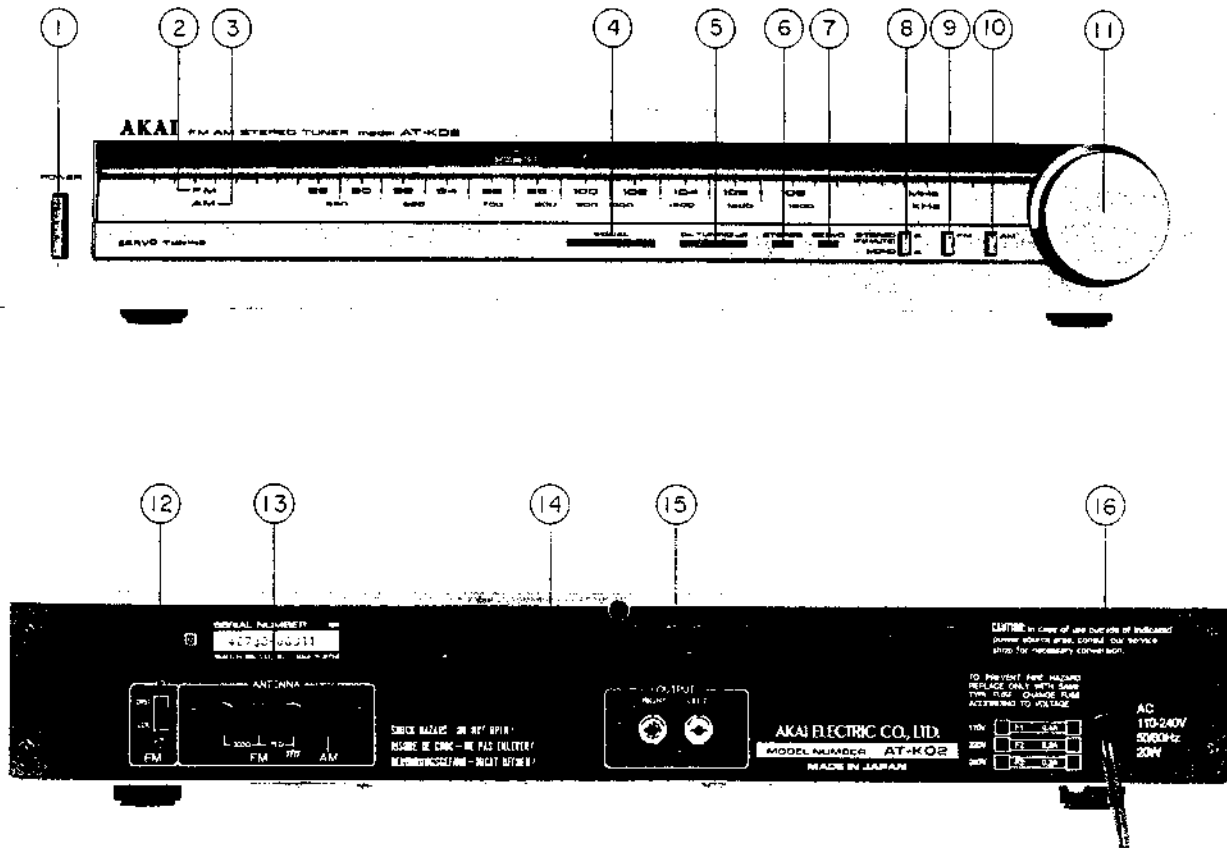


Fig. 1 Controls

- |                               |                                                              |
|-------------------------------|--------------------------------------------------------------|
| 1. POWER SWITCH               | 9. FM SWITCH                                                 |
| 2. FM DIAL SCALE              | 10. AM SWITCH                                                |
| 3. AM DIAL SCALE              | 11. TUNING KNOB                                              |
| 4. SIGNAL STRENGTH INDICATOR  | 12. FM LOC SWITCH                                            |
| 5. FM CENTER TUNING INDICATOR | 13. FM and AM ANTENNA TERMINALS                              |
| 6. FM STEREO LAMP             | 14. AM FERRITE BAR ANTENNA                                   |
| 7. FM SERVO LAMP              | 15. OUTPUT JACKS (Left and Right)                            |
| 8. FM MODE SWITCH             | 16. POWER CORD (Some models have power cord inlets instead.) |

# IV. PRINCIPAL PARTS LOCATION

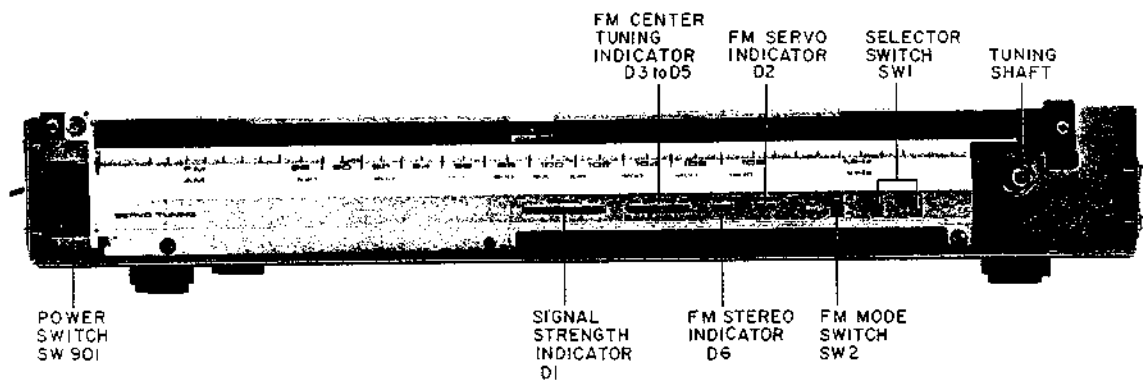


Fig. 2 Front View

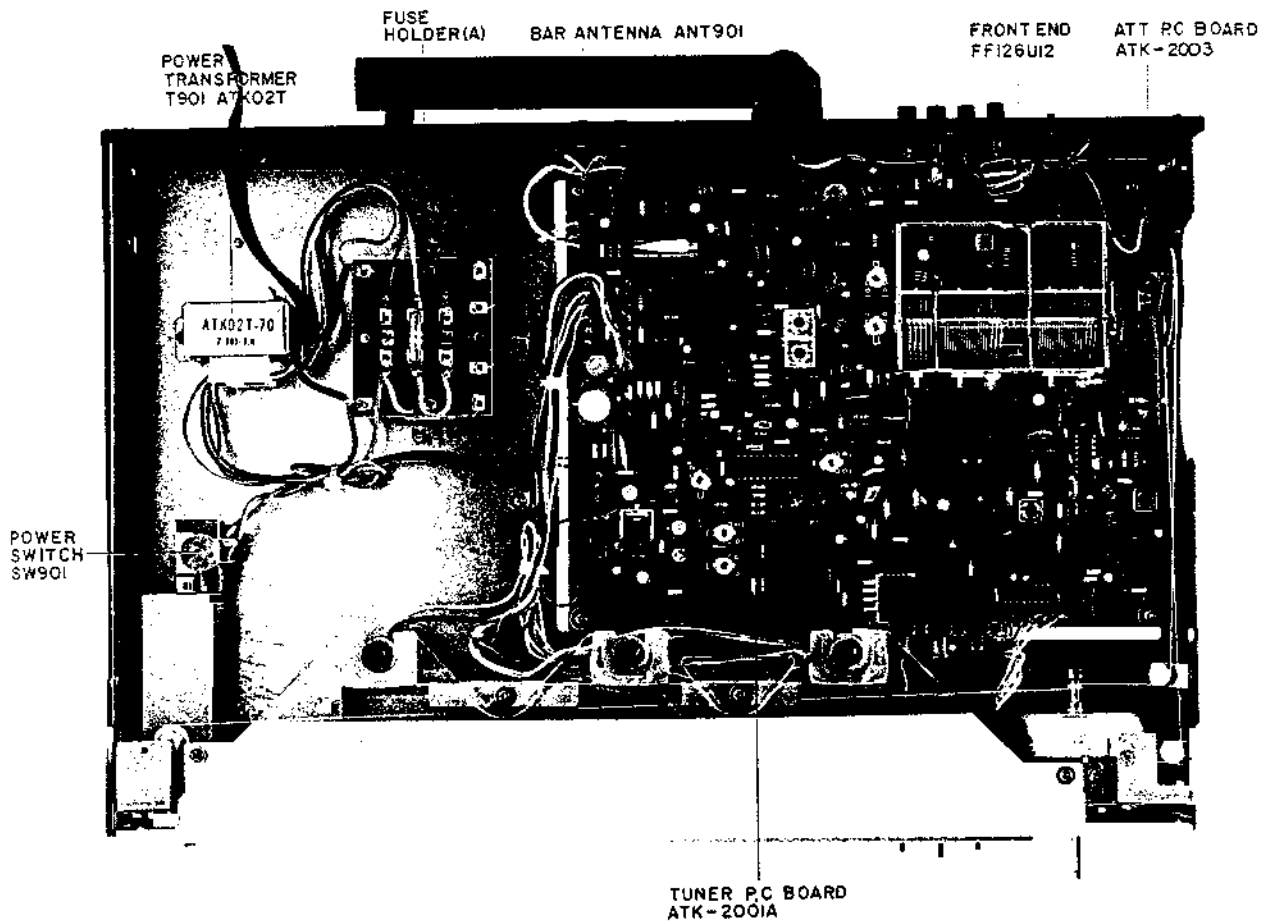


Fig. 3 Top View

## V. VOLTAGE CONVERSION

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110V AREAS : F1 400mA  
220V AREAS : F2 200mA  
240V AREAS : F3 200mA

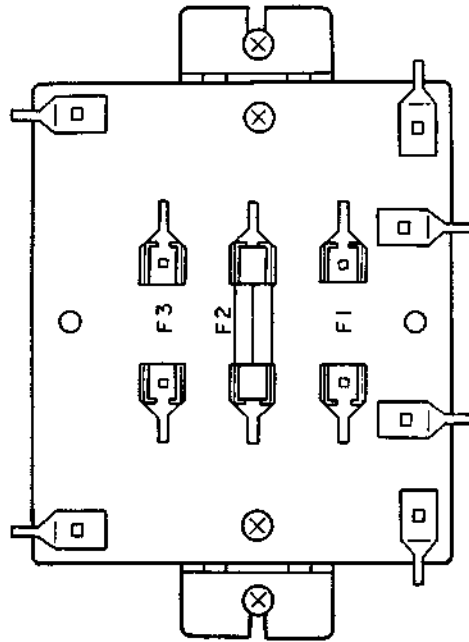
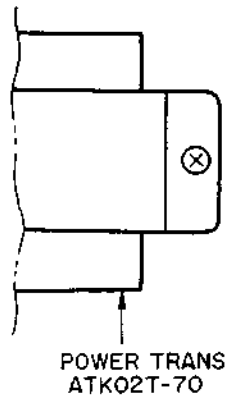


Fig. 4 Fuse Holder (A) (U/T Model)

Models for Canada, USA, Europe, UK and Australia are not equipped with this facility.

Each machine is preset at the factory according to destination but some machines can be set to 110V, 220V or 240V as required.

If voltage change is necessary, this can be accomplished as follows.

- 1) Disconnect AC Power Cord.
- 2) Loosen holding screws and remove upper case.
- 3) Remove existing line voltage fuse in proper fuse holder, explicitly following instructions printed on the rear panel.



# VI. TUNER ADJUSTMENT

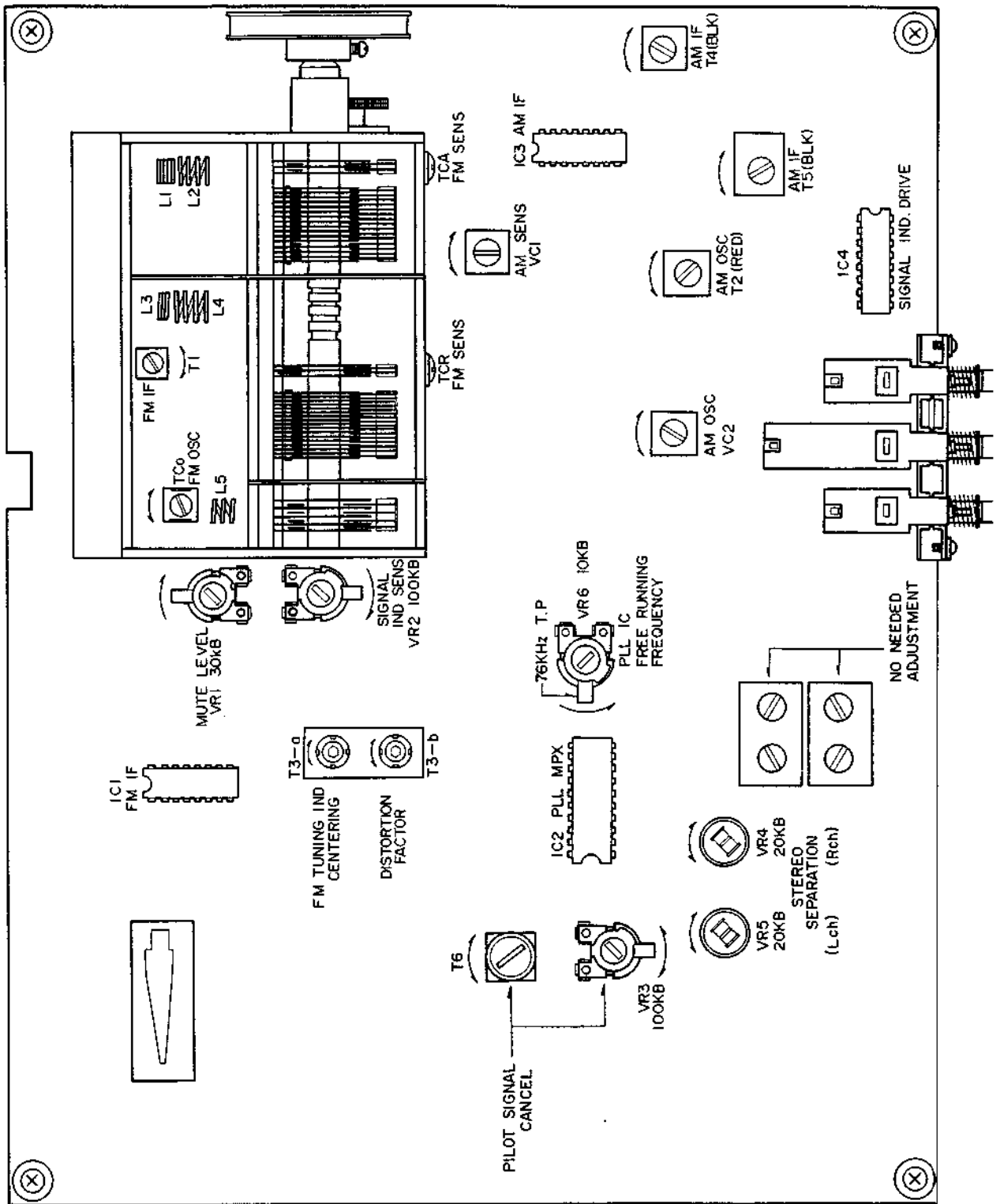


Fig. 5 Tuner P.C Board ATK-301A

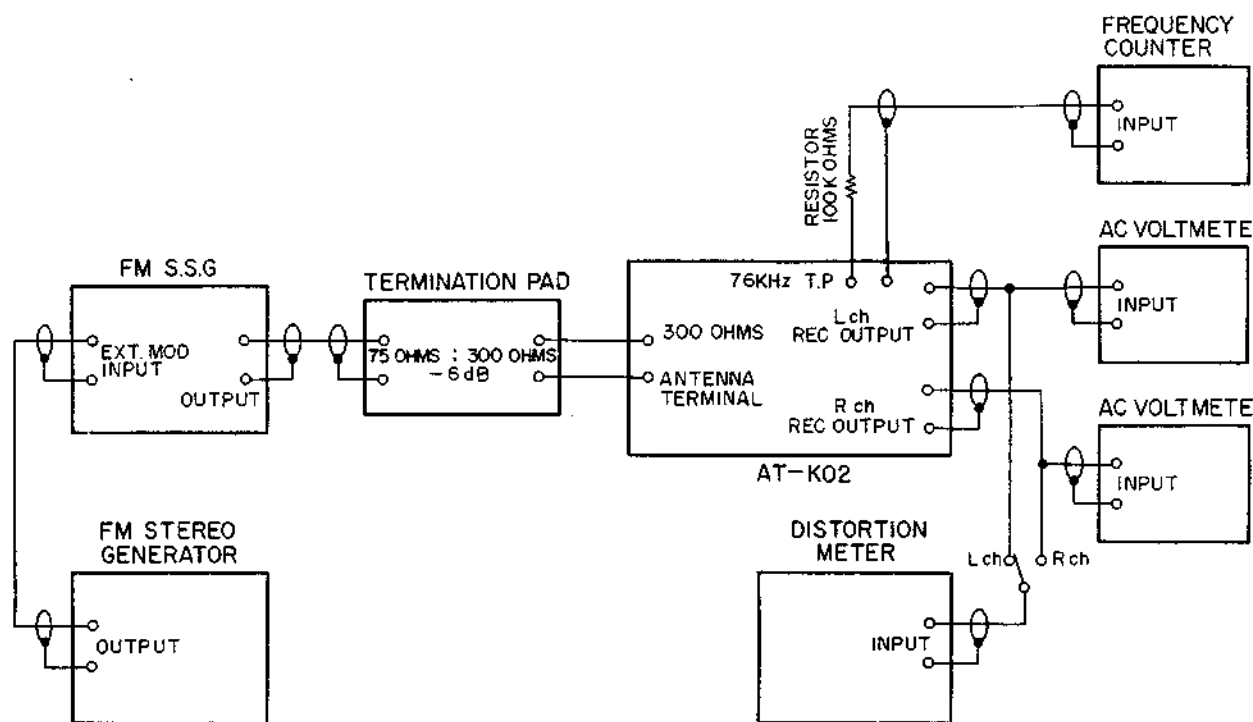


Fig. 6 Instrument Connections

1. FM TUNER SECTION ADJUSTMENT (Refer to Figs. 5, 6)

| Step | Adjustment Item                            | Adjustment Point     | Result                                   | Remarks                                                                              |
|------|--------------------------------------------|----------------------|------------------------------------------|--------------------------------------------------------------------------------------|
| 1    | Front End IF Coil                          | T1 (Front End)       | Maximum Noise Level                      | Selector to FM, and Mode to MONO. Tune in noise only without broadcast interference. |
| 2    | Tuning indicator Centering                 | T3-a                 | Center indication of tuning LEDs         | 98 MHz, 60 dB (mono) input.                                                          |
| 3    | Distortion Factor                          | T3-b                 | Less than 0.09% Distortion Factor        | 98 MHz, 60 dB (mono) input. Less than 0.09% in both channels.                        |
| 4    | Confirmation of Tuning indicator Centering |                      |                                          | If Tuning indicator is not centered, re-adjust Steps 2 and 3 above.                  |
| 5    | High Range Scale indication                | TC0 (Front End)      | Maximum output Minimum Distortion Factor | 108 MHz, 60 dB (mono) input. Scale indicator to 108 MHz. Error: Within $\pm 250$ kHz |
| 6    | Confirmation of Low Range Scale indication |                      | Maximum output Minimum Distortion Factor | 88 MHz, 60 dB (mono) input. Scale indicator to 88 MHz. Error: Within $\pm 250$ kHz   |
| 7    | High Range Sensitivity                     | TCR, TCA (Front End) | Less than 3% Distortion Factor           | 108 MHz, Less than 6 dB (mono) input.                                                |
| 8    | Confirmation of Low Range Scale indication |                      | Less than 3% Distortion Factor           | 88 MHz, Less than 6 dB (mono) input. Refer to NOTES 2, 3.                            |
| 9    | Mute level                                 | VR1 30 k $\Omega$    | No Signal emitted from output            | Mode to STEREO. 98 MHz, 22 dB (mono) input.                                          |

|    |                                           |                  |                 |                                                                                                                    |
|----|-------------------------------------------|------------------|-----------------|--------------------------------------------------------------------------------------------------------------------|
| 10 | PLL IC Free Running Frequency             | VR6 10 kB        | 76.00 kHz       | Frequency Counter to Test Point.<br>Refer to NOTES 4, 5.                                                           |
| 11 | Confirmation of Stereo indicator Lighting |                  |                 | 98 MHz, 60 dB (stereo) input.<br>No lighting of stereo indicator indicates no stereo separation.                   |
| 12 | Pilot Signal Cancel                       | VR3 100 kB<br>L6 | Minimum output  | 98 MHz, 60 dB (stereo) pilot signal only input.                                                                    |
| 13 | Stereo Separation (Left → Right)          | VR5 20 kB        | More than 52 dB | 98 MHz, 60 dB (stereo) Lch input.<br>Minimum output of Rch.                                                        |
| 14 | Stereo Separation (Right → Left)          | VR4 20 kB        | More than 52 dB | 98 MHz, 60 dB (stereo) Rch input.<br>Minimum output of Lch.                                                        |
| 15 | Signal indicator Sensitivity              | VR2 100 kB       |                 | 98 MHz, 50 dB (mono) input. Adjust VR2 to a point where 5th LED of SIGNAL INDICATOR lights up.<br>Refer to NOTE 6. |

Chart-1

- NOTES:
1. Set the FM ANTENNA ATT. switch to DIST.
  2. When the specified sensitivity of 6 dB cannot be obtained at the two frequency points, 88 MHz and 108 MHz repeat adjustment as in Step 7.
  3. When the distortion factor of the sensitivity still does not comply with the data specifications, adjust by turning the Front End FM IF coil (T1) core but not more than 1/2 turn.
  4. When connecting a frequency counter, connect from TP via a 100 kohms resistor.
  5. The free Running Frequency of the PLL IC must be an exactly 76.00 kHz.
  6. The 5th LED lights up at 50 dB but when the attenuator is decreased 2 dB it is extinguished.

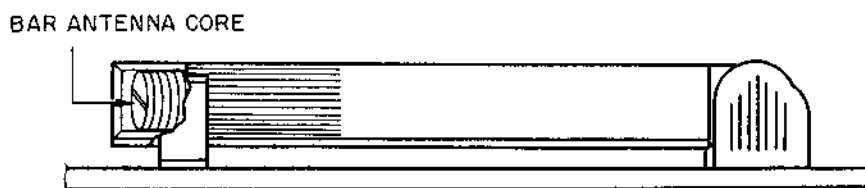


Fig. 7 Bar Antenna

## 2. AM TUNER SECTION ADJUSTMENT (Refer to Figs. 5, 7)

| Step | Adjustment Item             | Adjustment Point                         | Result                                      | Remarks                                                     |
|------|-----------------------------|------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
| 1    | Low Range Scale indication  | T2 (RED)                                 | Maximum Output                              | Selector to AM.<br>530 kHz 50 dB input.<br>Error: Within 2% |
| 2    | Low Range Sensitivity       | T4 (BLK)<br>T5 (BLK)<br>Bar Antenna Core | Maximum Output<br>Minimum Distortion Factor | 530 kHz 50 dB input.<br>Less than 10% Distortion Factor     |
| 3    | High Range Scale indication | VC 2                                     | Maximum Output                              | 1,600 kHz 50 dB input.<br>Error: Within 2%                  |
| 4    | High Range Sensitivity      | VC 1                                     | Maximum Output<br>Minimum Distortion Factor | 1,600 kHz 50 dB input.<br>Less than 10% Distortion Factor   |

Chr t-2

NOTE: For best results, repeat Steps 1 through 4 two or three times.

## VII. TUNING CORD THREADING

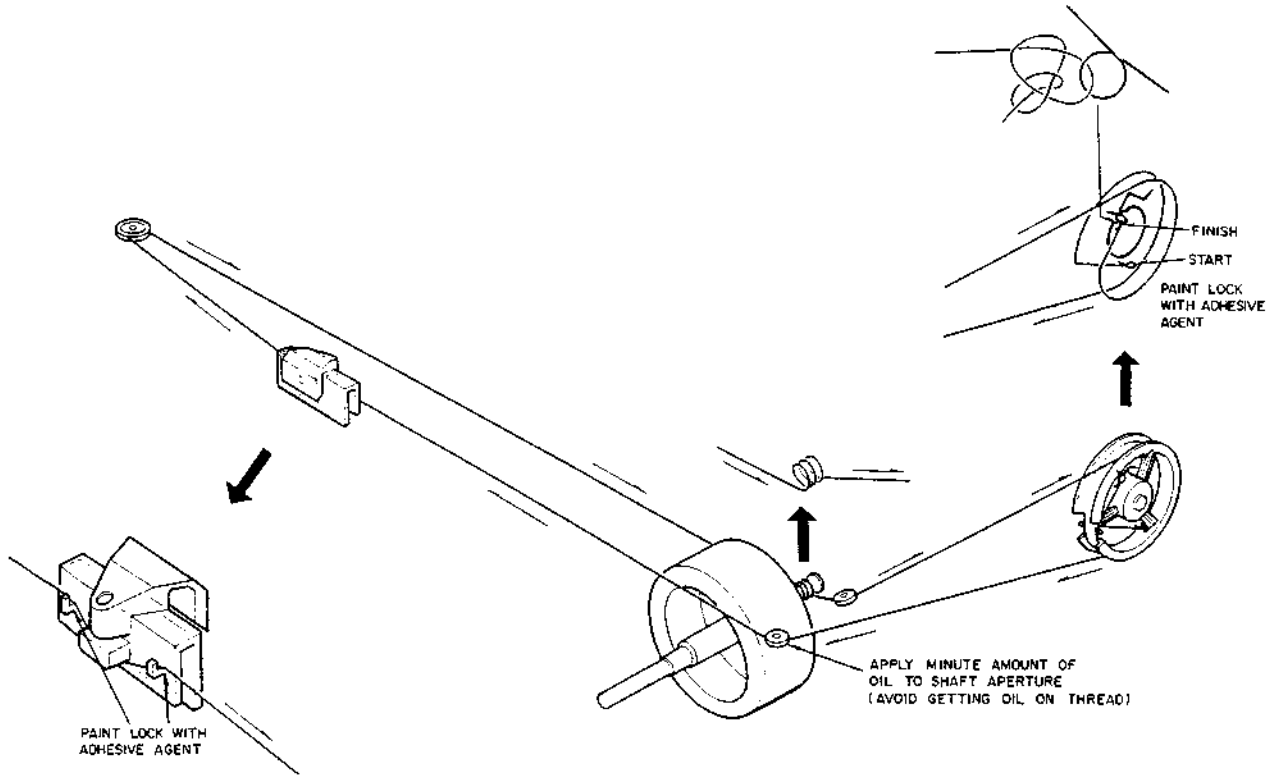


Fig. 8 Tuning Cord Threading

## VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

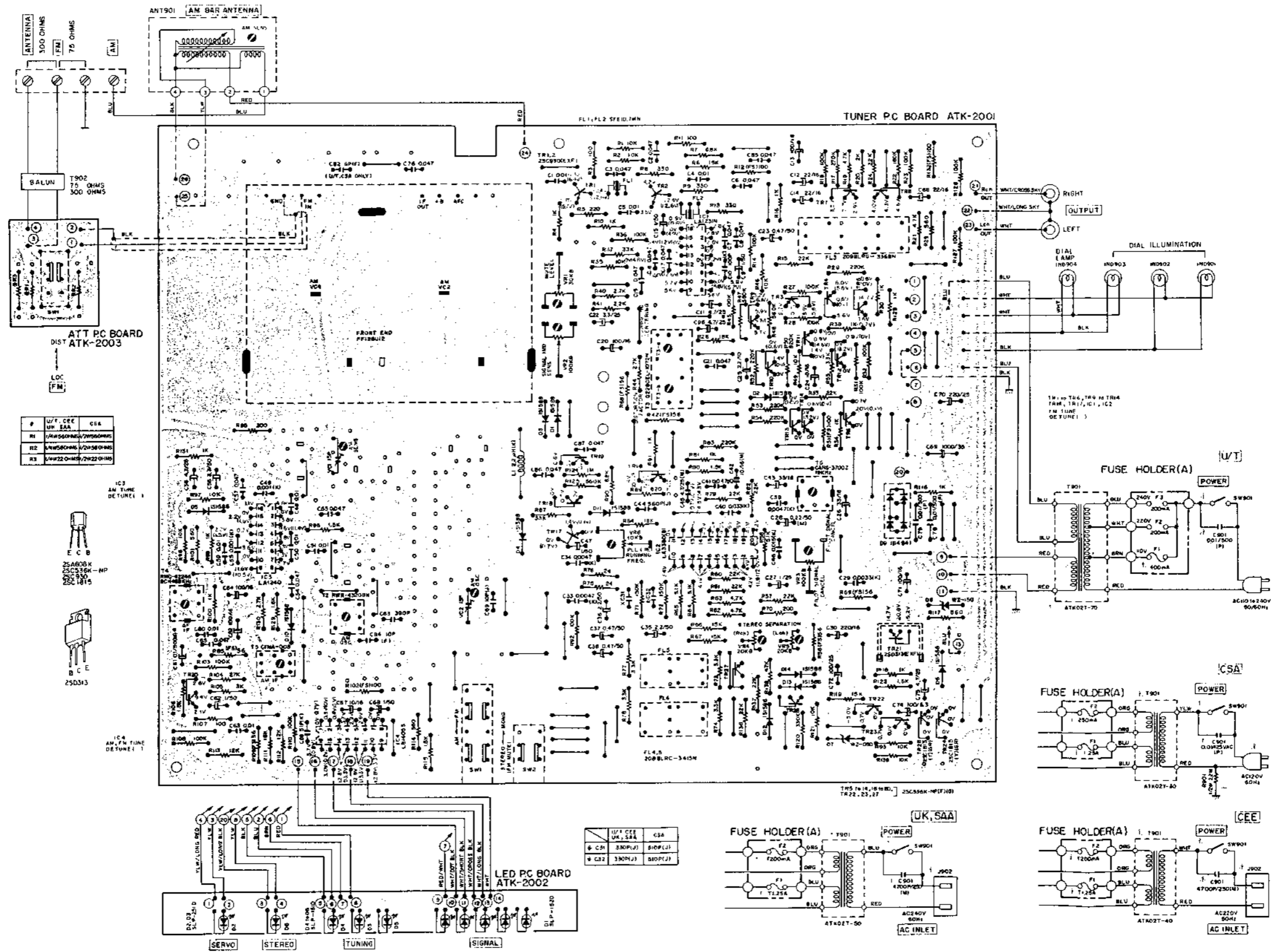
### 1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

| P.C Board Title | Number of P.C Board |
|-----------------|---------------------|
| Tuner P.C Board | ATK-2001A           |
| LED P.C Board   | ATK-2002            |
| ATT P.C Board   | ATK-2003            |

Chart-3

## 2. COMPOSITION OF VARIOUS P.C BOARDS

Tuner P.C Board ATK-2001A, LED P.C Board ATK-2002 and ATT P.C Board ATK-2003





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SECTION 2

**MODEL AM-U02  
SERVICE MANUAL**

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

## I . TECHNICAL DATA

### POWER AMPLIFIER SECTION

|                                         |           |                                                                                                                      |
|-----------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------|
| RATED OUTPUT POWER<br>2-CHANNELS DRIVEN |           | 26 watts per channel, minimum RMS, at 8 ohms from 20 to 20,000 Hz with no more than 0.01% total harmonic distortion. |
| POWER BANDWIDTH (IHF)                   |           | 6 Hz to 60 kHz/8 ohms (Total harmonic distortion: 0.1%)                                                              |
| SIGNAL TO NOISE RATIO (IHF)             | PHONO     | Better than 75 dB                                                                                                    |
|                                         | AUX       | Better than 95 dB                                                                                                    |
| RESIDUAL NOISE                          |           | Less than 0.5 mV at 8 ohms                                                                                           |
| CHANNEL SEPARATION (IHF)                | PHONO     | Better than 55 dB at 1,000 Hz                                                                                        |
| DAMPING FACTOR                          |           | More than 45 (1 kHz, 8 ohms)                                                                                         |
| OUTPUT                                  | SPEAKERS  | A, B (4 to 16 ohms)/A+B (8 to 16 ohms)                                                                               |
|                                         | HEADPHONE | 4 to 16 ohms                                                                                                         |

### PRE AMPLIFIER SECTION

|                             |                           |                                                                                                                                                                       |
|-----------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INPUT SENSITIVITY/IMPEDANCE | PHONO                     | 3 mV/47 kohms                                                                                                                                                         |
|                             | AUX                       | 150 mV/100 kohms                                                                                                                                                      |
|                             | TUNER                     | 150 mV/100 kohms                                                                                                                                                      |
|                             | TAPE MONITOR              | PIN: 150 mV/100 kohms<br>DIN: 150 mV/100 kohms                                                                                                                        |
| OUTPUT LEVEL/IMPEDANCE      | TAPE REC                  | PIN: 150 mV/1 kohm<br>DIN: 30 mV/30 kohms                                                                                                                             |
|                             | PRE OUTPUT                | 1 V/1 kohm                                                                                                                                                            |
| FREQUENCY RESPONSE          | PHONO (RIAA EQUALIZATION) | 30 Hz to 15 kHz +0.5 dB, -0.5 dB                                                                                                                                      |
|                             | TUNER, AUX, TAPE MONITOR  | 10 Hz to 40 kHz +0 dB, -2 dB                                                                                                                                          |
| TONE CONTROL                | BASS                      | ±8.5 dB at 100 Hz                                                                                                                                                     |
|                             | TREBLE                    | ±8.5 dB at 10 kHz                                                                                                                                                     |
|                             | LOUDNESS CONTROL          | 1: +3 dB at 100 Hz, +2.5 dB at 10 kHz<br>2: +6.5 dB at 100 Hz, +5.0 dB at 10 kHz<br>3: +10 dB at 100 Hz, +9.5 dB at 10 kHz<br>(Volume control set at -30 dB position) |
| FILTER                      | HIGH                      | -3 dB at 10 kHz                                                                                                                                                       |
|                             | SUBSONIC                  | -3 dB at 18 Hz                                                                                                                                                        |

### MISCELLANEOUS

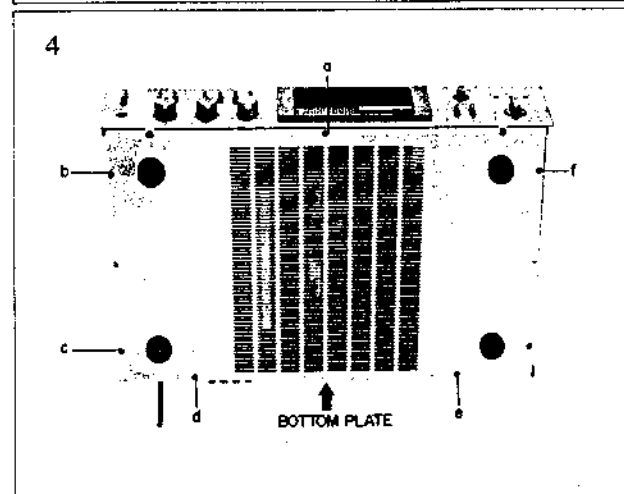
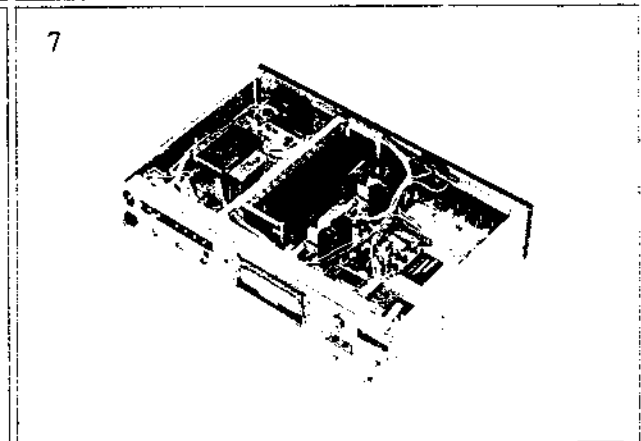
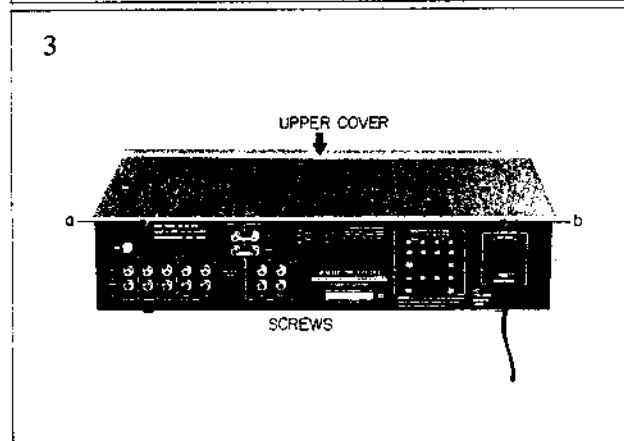
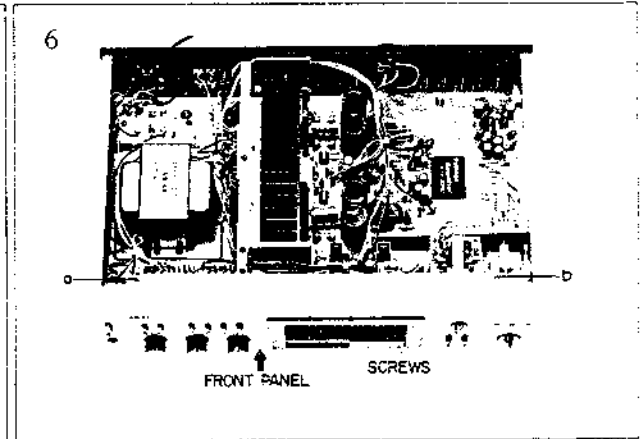
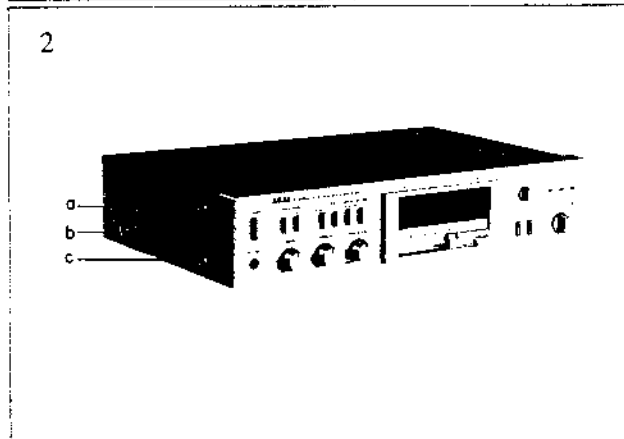
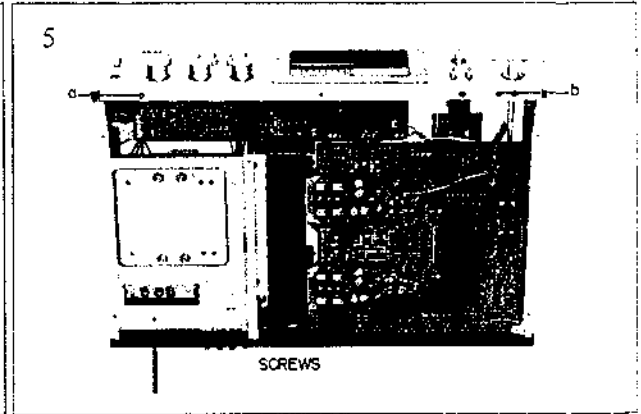
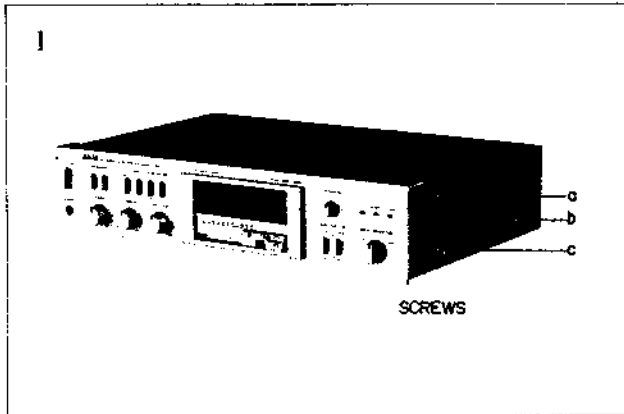
|                    |                                                                                                                                                                                      |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SEMICONDUCTORS     | Transistors: 16. Diodes: 19, ICs: 9                                                                                                                                                  |
| POWER REQUIREMENTS | 120 V, 60 Hz for U.S.A. and Canada<br>220 V, 50 Hz for Europe except UK and Australia<br>240 V, 50 Hz for UK and Australia<br>110/220/240 V, 50/60 Hz Switchable for other countries |
| POWER CONSUMPTION  | 140 W                                                                                                                                                                                |
| DIMENSIONS         | 440 (W) x 105 (H) x 300 (D) mm (17.3" x 4.1" x 11.8")                                                                                                                                |
| WEIGHT             | 7.8 kg (17.2 lbs)                                                                                                                                                                    |

\* For improvement purposes, specifications and design are subject to change without notice.



## II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.



### III. CONTROLS

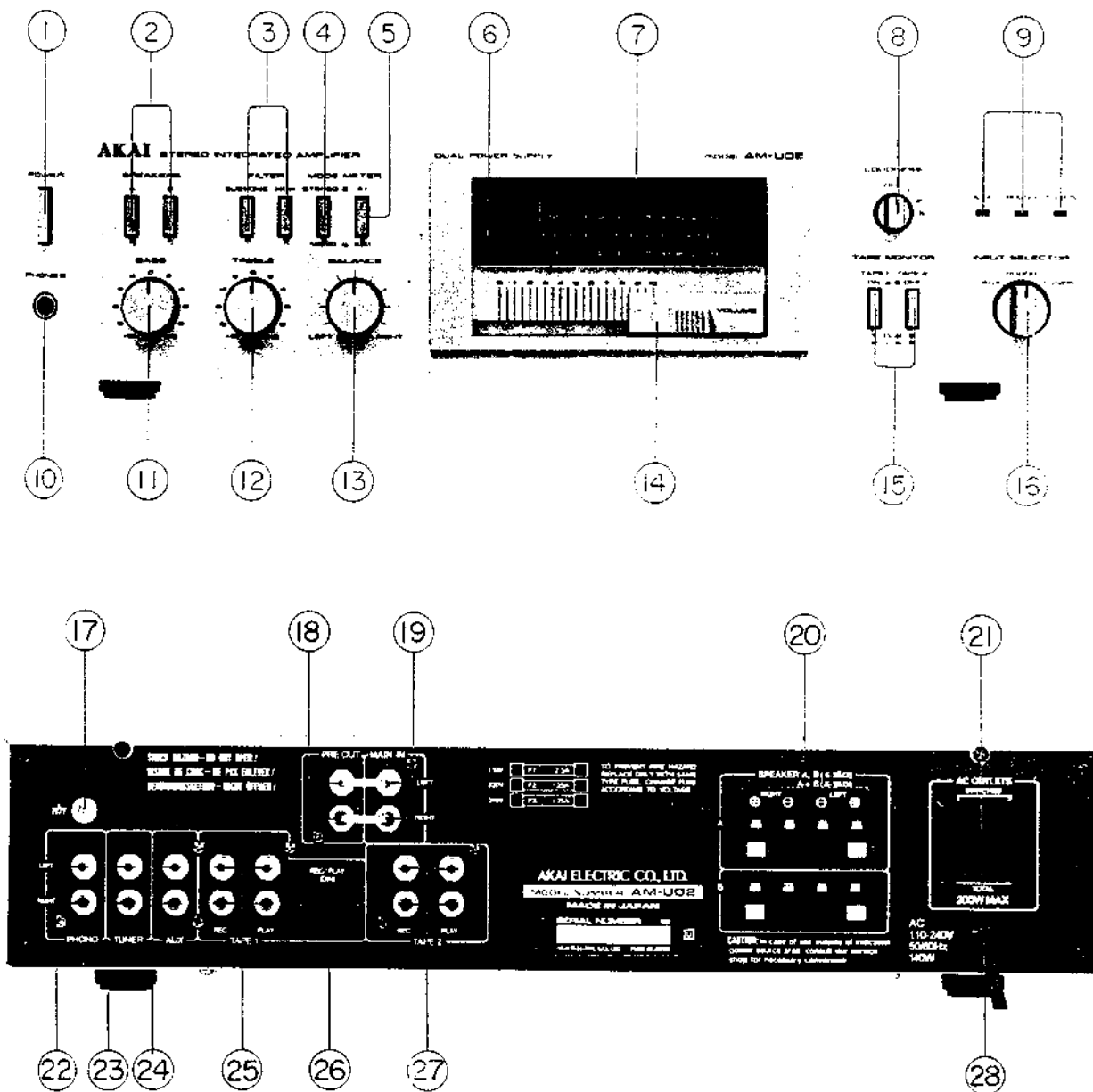


Fig. 1 Controls

- |                                     |                                                                                                                        |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 1. POWER SWITCH                     | 16. INPUT SELECTOR                                                                                                     |
| 2. SPEAKER SYSTEM SELECTOR SWITCHES | 17. GROUND TERMINAL                                                                                                    |
| 3. FILTER SWITCHES                  | 18. PRE-OUT TERMINALS                                                                                                  |
| 4. MODE SELECTOR                    | 19. MAIN-IN TERMINALS                                                                                                  |
| 5. METER SWITCH                     | 20. A AND B SYSTEM SPEAKER TERMINALS                                                                                   |
| 6. CLIPPING INDICATOR               | 21. EXTRA AC OUTLETS (Some models are not equipped with this facility.)                                                |
| 7. FLD BAR METER                    | 22. PHONO TERMINALS                                                                                                    |
| 8. LOUDNESS SWITCH                  | 23. TUNER TERMINALS                                                                                                    |
| 9. INPUT SELECTOR INDICATOR         | 24. AUX TERMINALS                                                                                                      |
| 10. HEADPHONE JACK                  | 25. TAPE 1 SYSTEM REC/PLAY TERMINALS                                                                                   |
| 11. BASS CONTROL                    | 26. TAPE 1 SYSTEM DIN JACK                                                                                             |
| 12. TREBLE CONTROL                  | 27. TAPE 2 SYSTEM REC/PLAY TERMINALS                                                                                   |
| 13. STEREO BALANCE CONTROL          | 28. AC CORD (Some models are equipped with an AC Inlet instead of an AC cord. Connect with an appropriate power cord.) |
| 14. VOLUME CONTROL                  |                                                                                                                        |
| 15. TAPE MONITOR SWITCHES           |                                                                                                                        |

# IV. PRINCIPAL PARTS LOCATION

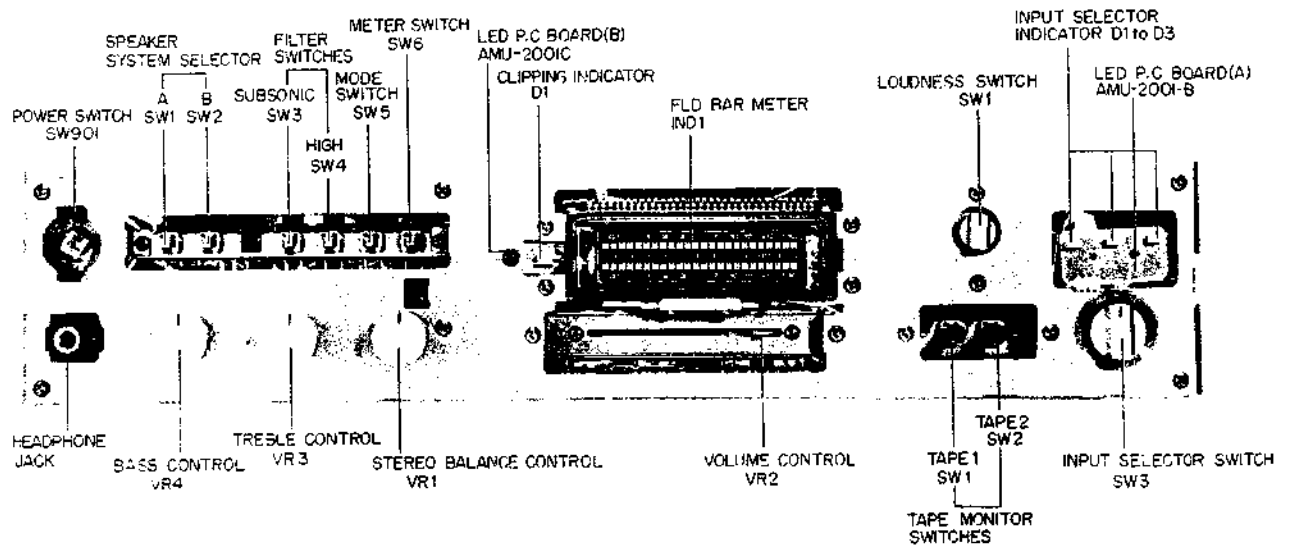


Fig. 2 Front View

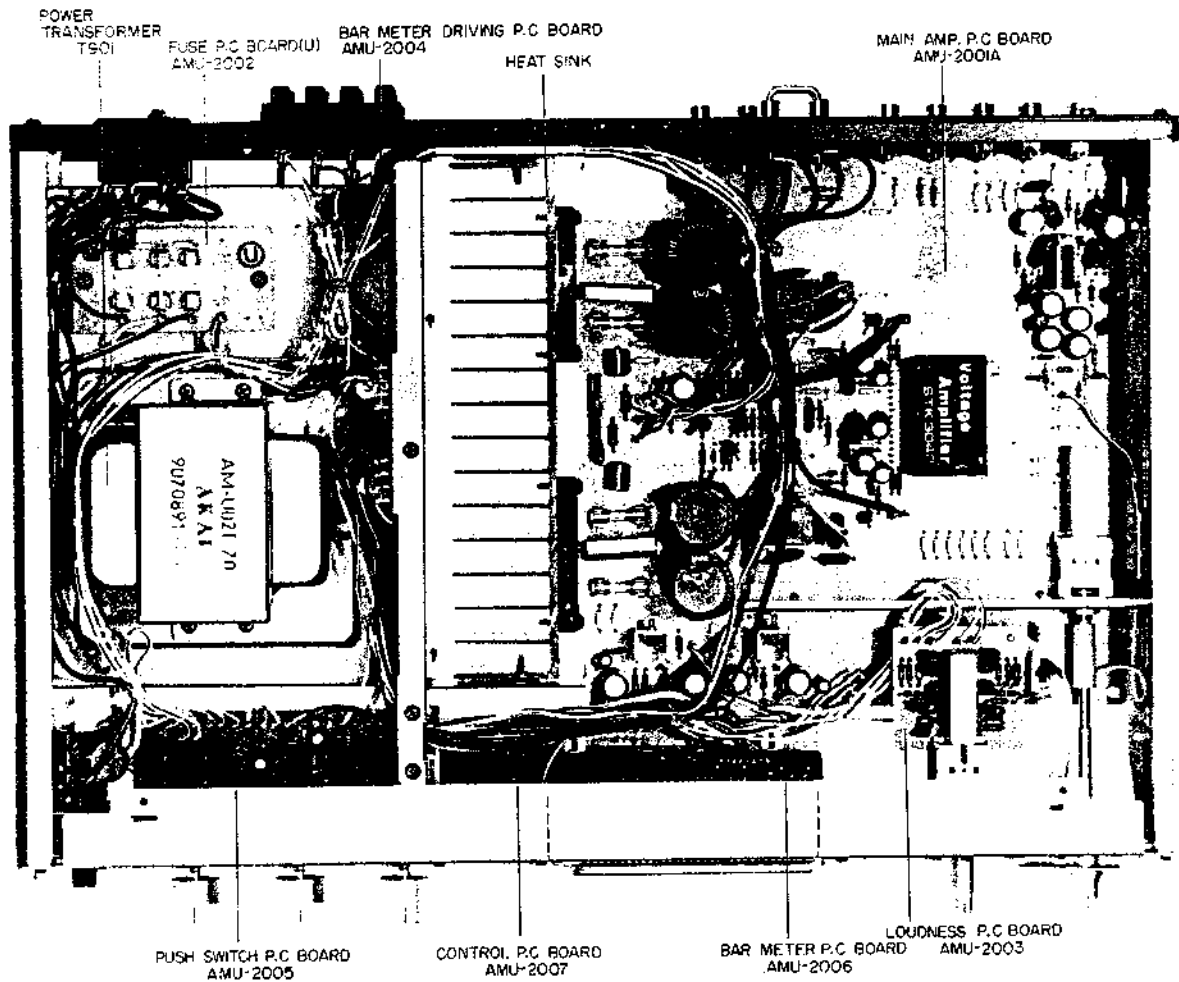


Fig. 3 Top View

## V. VOLTAGE CONVERSION

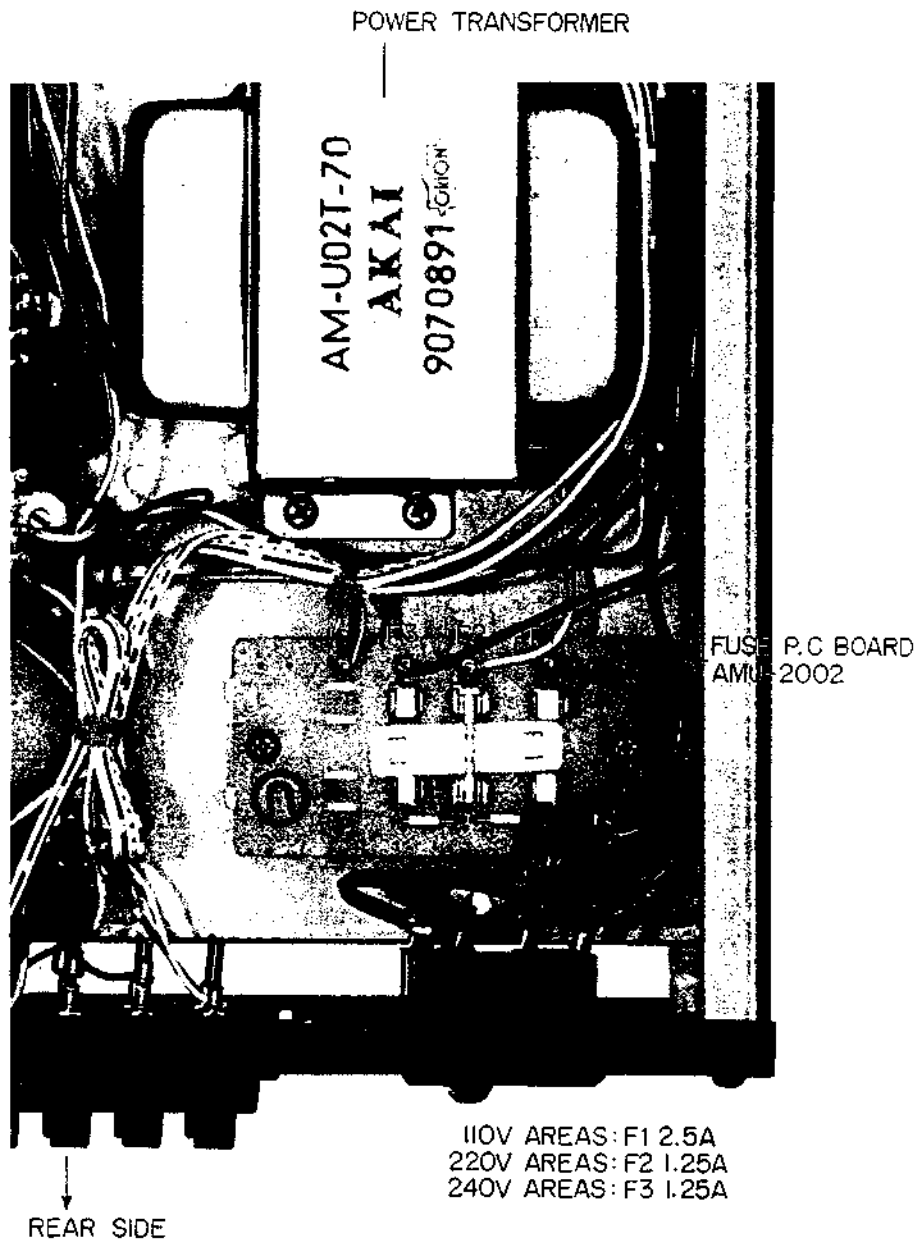


Fig. 4 Voltage Conversion (U/T Model)

Models for Canada, USA, Europe, UK, JPN and Australia are not equipped with this facility.

Each machine is preset at the factory according to destination but some machines can be set to 110 V, 220 V or 240 V as required.

If voltage change is necessary, this can be accomplished as follows.

- 1) Disconnect AC Power Cord.
- 2) Loosen holding screws and remove upper cover.
- 3) Remove existing line voltage fuse and insert required line voltage fuse in proper fuse holder, explicitly following instructions printed on rear panel.

# VI. LEVEL DIAGRAM

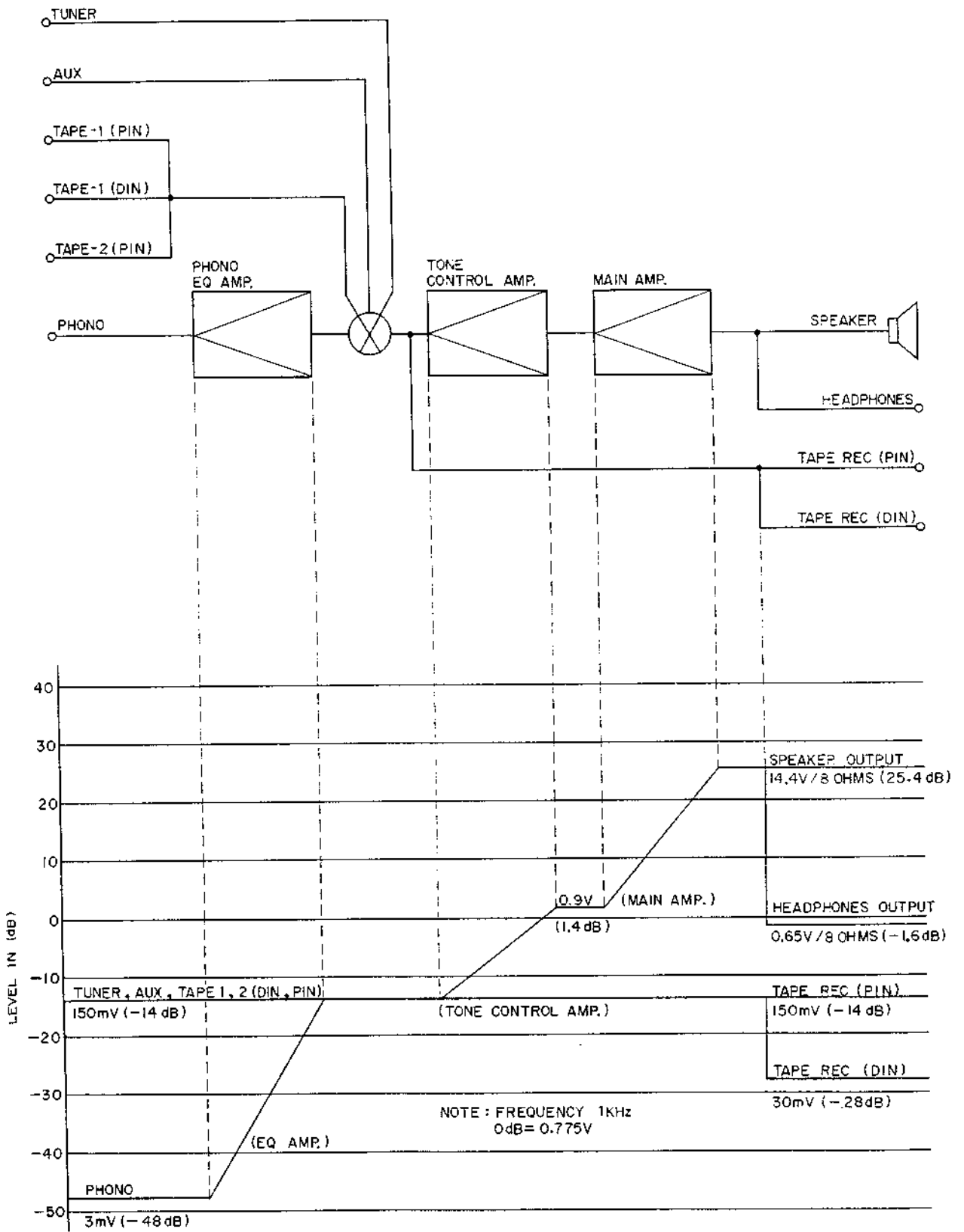


Fig. 5 Level Diagram

## VII. AMPLIFIER ADJUSTMENT

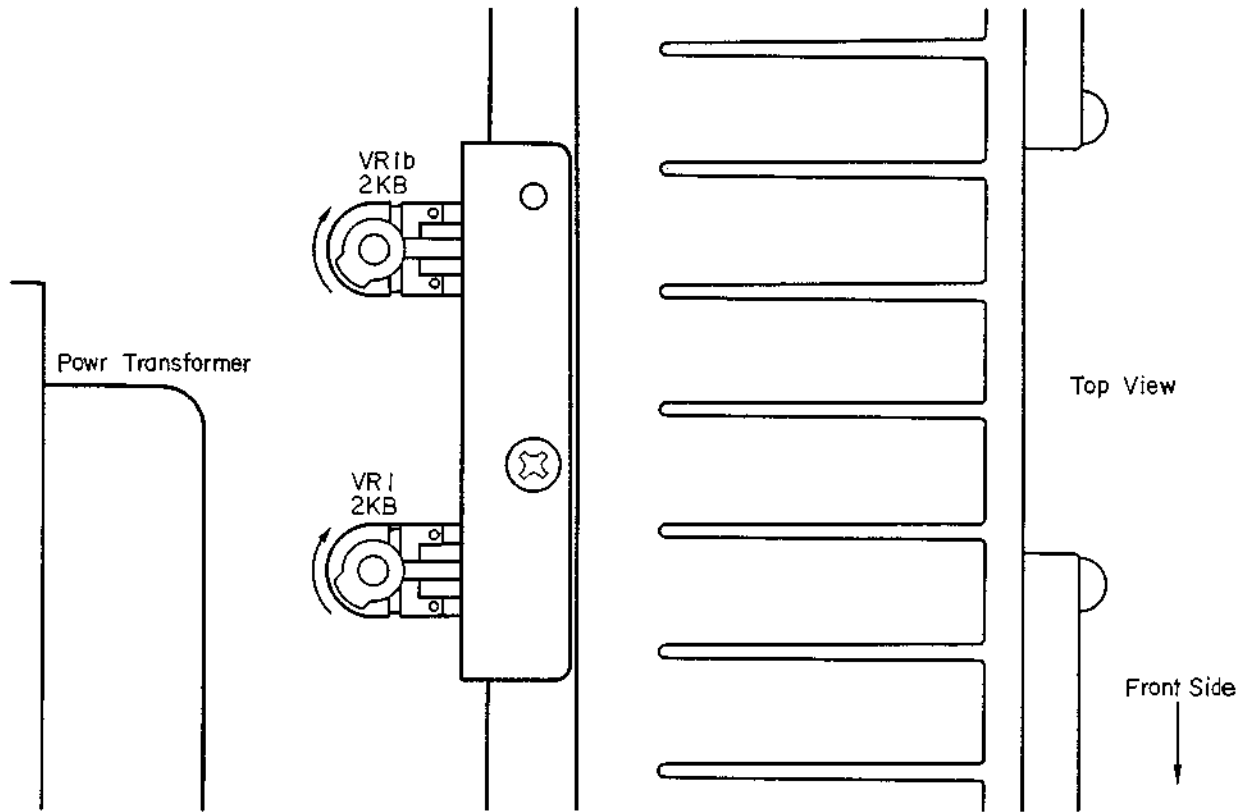


Fig. 6 Bar Meter Driving P.C Board AMU-2004

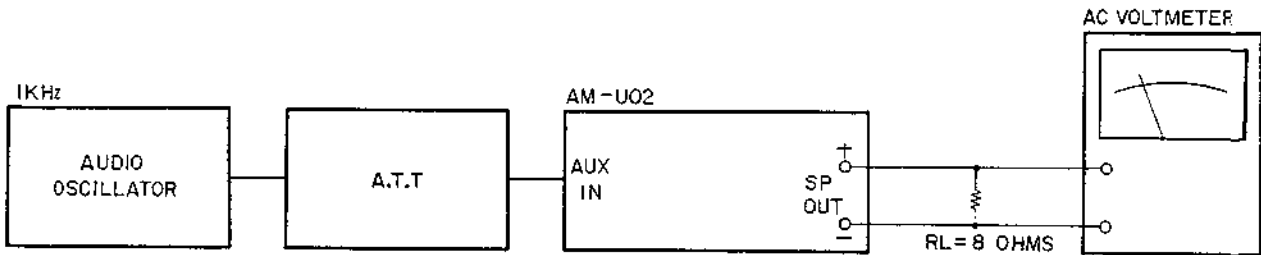


Fig. 7 Instrument Connections

### METER SENSITIVITY ADJUSTMENT

(Refer to Figs. 6, 7)

The Meter range switch should be set to "x1".

Feeding in 1 kHz from audio oscillator, adjustment the VOLUME knob so as to make the voltage at both ends of the RL (8 ohms) 8.9 V.

Also, adjust VR 1 (2 kB, L-ch) and VR 2 (2 kB, R-ch) to the point where the 10 watts indicator will start lighting up.

## VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

### I. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

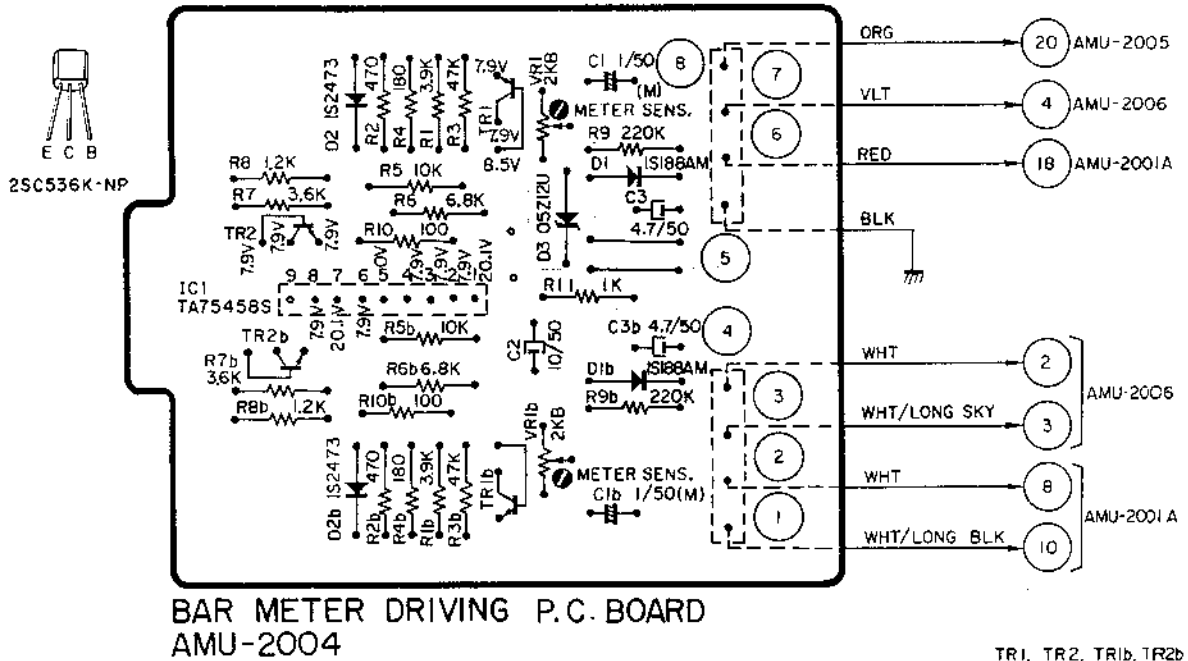
| P.C Board Title             | P.C Board Number |
|-----------------------------|------------------|
| Main Amp. P.C Board         | AMU-2001A        |
| LED P.C Board (A)           | AMU-2001B        |
| LED P.C Board (B)           | AMU-2001C        |
| Fuse P.C Board              | AMU-2002         |
| Loudness P.C Board          | AMU-2003         |
| Bar Meter Driving P.C Board | AMU-2004         |
| Push Switch P.C Board       | AMU-2005         |
| Bar Meter P.C Board         | AMU-2006         |
| Control P.C Board           | AMU-2007         |

Chart-1

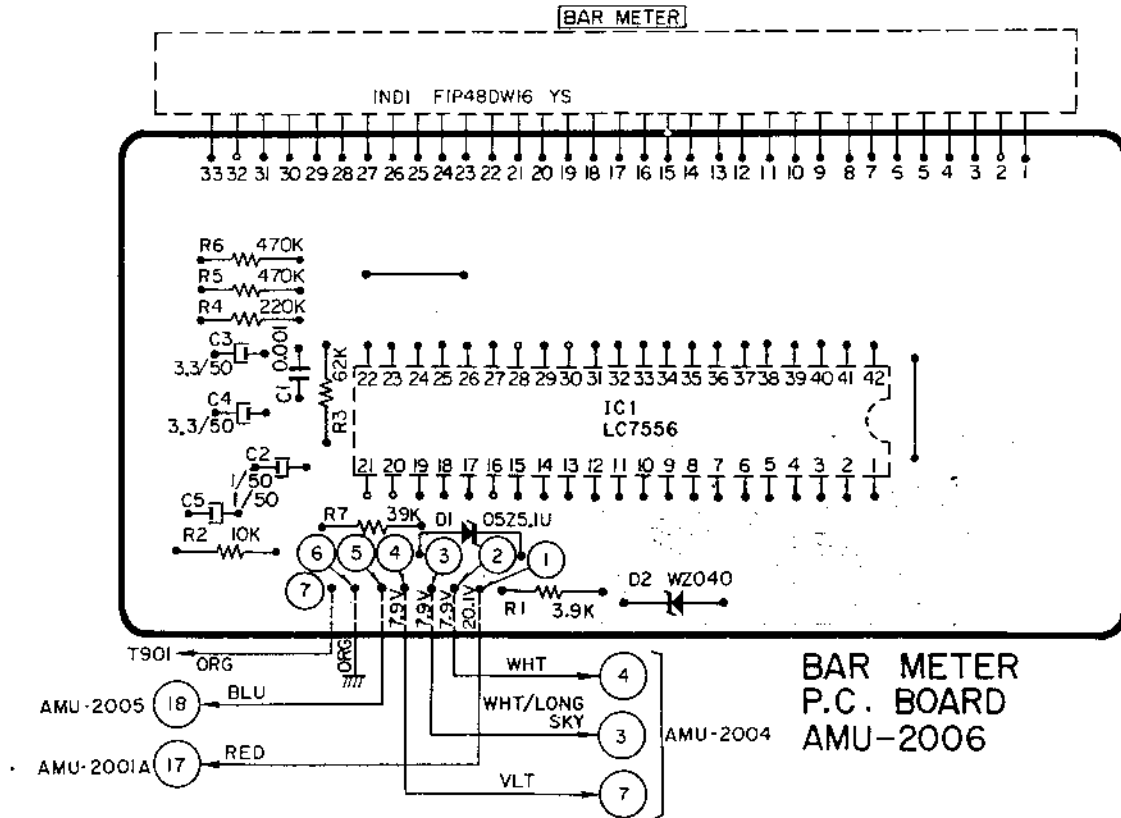




2) Bar Meter Driving P.C Board AMU-2004



3) Bar Meter P.C Board AMU-2006





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SECTION 3

**PARTS LIST**

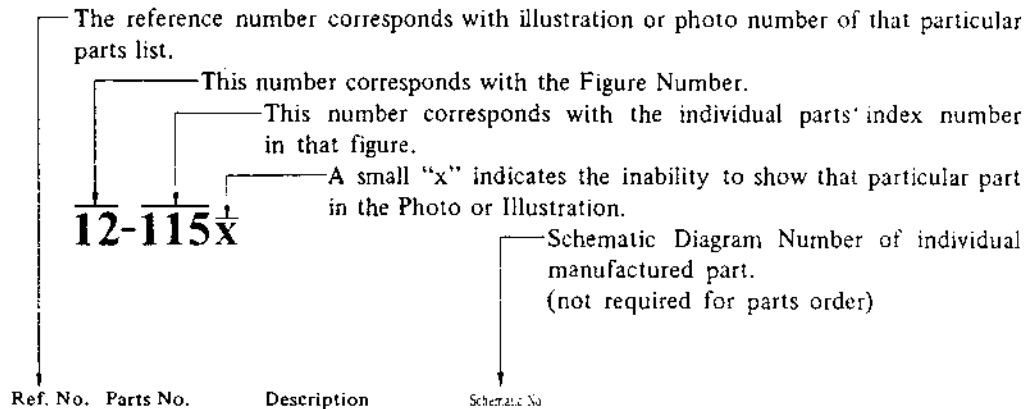
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Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

## HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read list.



| Ref. No.                  | Parts No. | Description                | Schematic No. |
|---------------------------|-----------|----------------------------|---------------|
| <b>FLYWHEEL BLOCK #13</b> |           |                            |               |
| 12-115x                   | 800425    | Flywheel Block Assy. Comp. | RD-113        |
| 12-116                    | 244506    | Flywheel Only              | RD-115        |
| 12-117x                   | 244754    | Felt, Flywheel             | RD-115        |
| 12-118                    | 251324    | Main Metal Case            | RD-116        |
| 12-119                    | 253080    | Main Metal                 | RD-117        |

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.  
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

### CAUTION:

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Service Manual (Basic Parts List) may be partially changed, please use this parts list for all future reference.

**WARNING:** Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

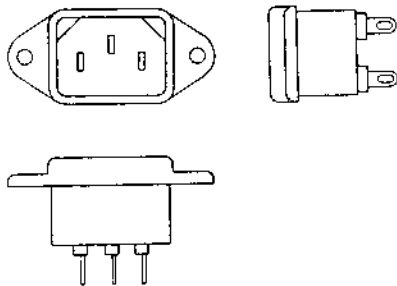
**AVERTISSEMENT:** Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

## AC INLET SYSTEM

This model is equipped with an AC INLET SYSTEM. Please refer to the AC INLET SYSTEM CHART below for the specific type. By the AC INLET SYSTEM, AC (mains) cord can be connected to and disconnected from the model because the model is provided with socket exclusively for AC (mains) cord on its main body. Please note, however, that certain models are not equipped with this system and has a built-in AC (mains) cord as before.

### AC INLET SYSTEM CHART

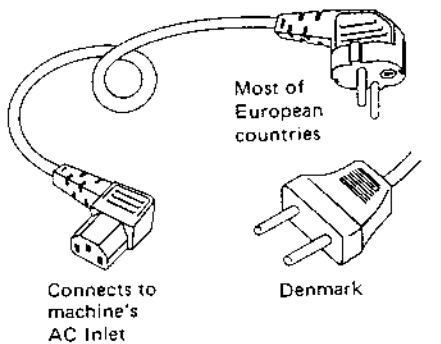
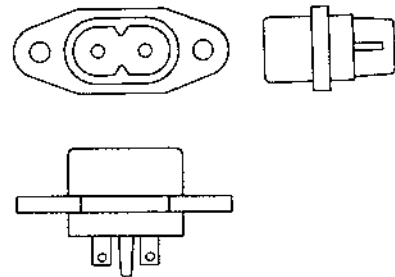
#### CLASS I



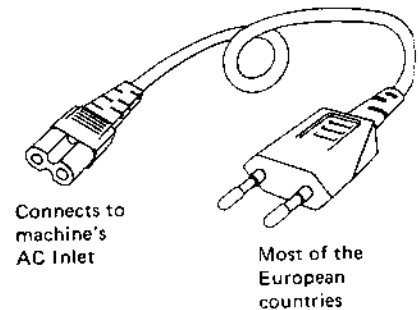
Picture 1  
AC INLET  
to be  
installed  
on machines

#### CLASS II

☐ This mark indicating double insulation will be attached to machine's rear panel



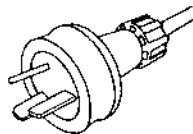
Picture 2  
AC (mains)  
cord



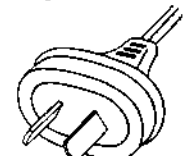
U.K.



U.K.



Australia  
differs according  
to wall socket



Australia  
differs according  
to wall socket

#### Parts List for AC (mains) Cord Set

| Standard |      | Description             | Type of AC Inlet | Parts No. |
|----------|------|-------------------------|------------------|-----------|
| Class I  | CEE  | Cord Set CEE (3 cores)  | 3P               | EW30293   |
|          | BEAB | Cord Set BEAB (3 cores) | 3P               | EW30294   |
|          | SAA  | Cord Set SAA (3 cores)  | 3P               | EW30296   |
|          | U/T  | Cord Set U/T (3 cores)  | 3P               | EW30246   |
| Class II | CEE  | Cord Set CEE (2 cores)  | 2P               | EW63844   |
|          | BEAB | Cord Set BEAB (2 cores) | 2P               | EW30295   |
|          | SAA  | Cord Set SAA (2 cores)  | 2P               | EW30291   |
|          | U/T  | Cord Set U/T (2 cores)  | 2P               | EW30299   |

# I. MODEL AT-K02

## I. RECOMMENDED SPARE PARTS LIST

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| Parts No. | Description                             | Notes          |
|-----------|-----------------------------------------|----------------|
| BA320245  | Tuner PCB Comp. AT-K02 (CEE)            | (CEE, UK, SAA) |
| BA320244  | Tuner PCB Comp. AT-K02 (CSA)            | (CSA, AAL)     |
| BA320243  | Tuner PCB Comp. AT-K02 (U/T)            |                |
| BT322217  | △ Power Trans. AT-K02T-30               | (CSA, AAL)     |
| BT322206  | △ Power Trans. AT-K02T-40               | (CEE)          |
| BT322218  | △ Power Trans. AT-K02T-50               | (UK, SAA)      |
| BT322177  | △ Power Trans. AT-K02T-70               | (U/T)          |
| BT307204  | AM-IF Trans. CFMA-008                   |                |
| BT293398  | AM-IF Trans. RMC-42246BCH 468 kHz       |                |
| EC204671  | △ Ceramic/C. DD31-6E 0.01μF (P) 500WV   | (U/T)          |
| EC314688  | △ Ceramic/C. DE7150 FZ 0.01μF (P) 125WV | (CSA, AAL)     |
| EC301320  | △ MP/C. 4700PF (M) 250WV                | (CEE, UK, SAA) |
| EC616342  | Trimmer/C. CTY122D33 15PF               |                |
| ED322247  | LED SLP-151D                            |                |
| ED322184  | LED SLP-152D                            |                |
| ED322215  | LED SLP-251D                            |                |
| ED557447  | Silicon Diode 1S1588                    |                |
| ED322238  | Silicon Stack 1B4B41                    |                |
| ED315367  | Zener Diode WZ-050                      |                |
| ED237960  | Zener Diode WZ-150                      |                |
| EE322245  | Bar Ant                                 |                |
| EE322242  | Front End FFJ26U12                      |                |
| EF309392  | △ Fuse 1.25A 125V                       | (CSA, AAL)     |
| EF315334  | △ Fuse 250mA 125V                       | (CSA, AAL)     |
| EF309389  | △ Fuse 400mA 250V                       | (U/T)          |
| EF300588  | △ Fuse (EAWK)                           | (CEE, UK, SAA) |
| EF602550  | △ Fuse (SEMKO T Type) 1.25AT 250V       | (CEE, UK, SAA) |
| EI293185  | IC LA-1240                              |                |
| EI315491  | IC LB1405S                              |                |
| EI322248  | IC LA1231N                              |                |
| EI322185  | IC LA3380 (B)                           |                |
| EJ301513  | △ Inlet 2P                              | (CEE, UK, SAA) |
| EL322236  | Lamp (Cord Type) 8V 300mA (400mmx2)     |                |
| EL322234  | Lamp (Cord Type) 8V 50mA (350mmx2)      |                |
| EO322239  | DET Coil Q228CEL-1072N                  |                |
| EO322241  | MPX Coil CANS-3700Z                     |                |
| EO307186  | OSC Coil RWR-43208N                     |                |
| EO539820  | Peaking Coil 2.2μH (K)                  |                |
| ER307201  | Ceramic Filter SFE10.7mm                |                |
| ER322181  | Low Pass Filter 208BLRC-3415N           |                |
| ER322237  | Low Pass Filter 209BLRG-3368N           |                |

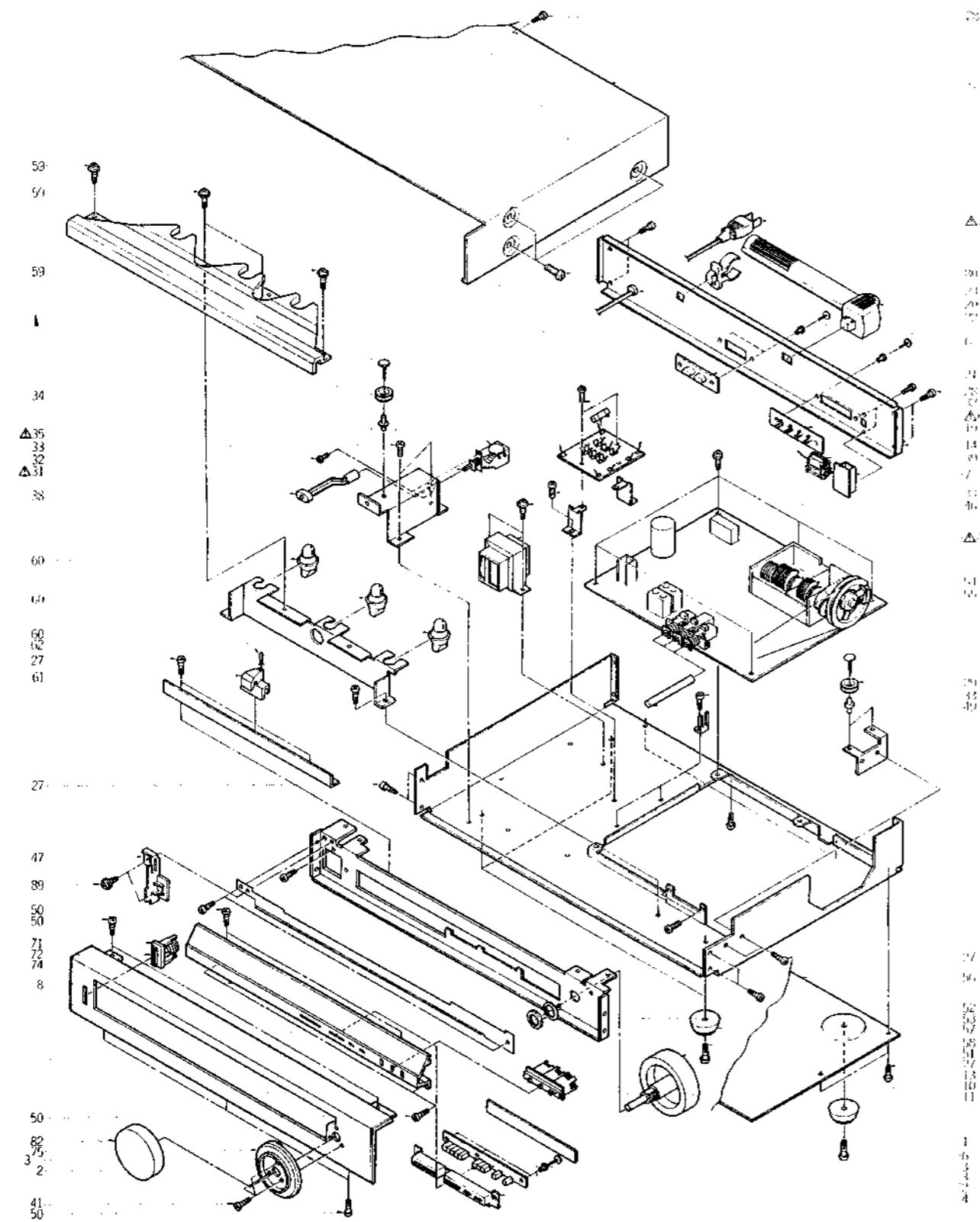
| Parts No. | Description                              | Notes               |
|-----------|------------------------------------------|---------------------|
| ES310839  | △ Push SW. SDG1P-E 5A/80A 250V           | (U/T, CEE, UK, SAA) |
| ES665875  | △ Push SW. SDG1P-J TV-3 UL/CSA           | (CSA, AAL)          |
| ES322243  | Push SW. JK2108                          |                     |
| ES324238  | Slide SW. SSB02204                       |                     |
| ET322244  | Transistor 2SA608K-NP (F) (G)            |                     |
| ET307234  | Transistor 2SC1815 (Y) (GR)              |                     |
| ET316643  | Transistor 2SC536K-NP (F) (G)            |                     |
| ET618873  | Transistor 2SC930 (E) (F)                |                     |
| EV604438  | Semi-Fixed/Vol. V10K8-4-2 B10K           |                     |
| EV593368  | Semi-Fixed/Vol. V10K8-4-2 B30K           |                     |
| EV550023  | Semi-Fixed/Vol. V10K8-4-2 100K (B)       |                     |
| EV551452  | Semi-Fixed/Vol. (Solid Type) SR19R 22K B |                     |
| EW306428  | △ AC Cord (U/T)                          |                     |
| EW305691  | △ AC Cord CUL                            | (CSA, AAL)          |
| EW302995  | △ AC Cord SET BEAB 2 Cores               | (UK)                |
| EW315767  | △ AC Cord SET CEE 2 Cores                | (CEE)               |
| EW322401  | △ AC Cord SET SAA 2 Cores                | (SAA)               |

## 2. TUNER P.C BOARD (ATK-2001A) BLOCK

| Symbol No. | Parts No. | Description                                       | Schematic No. | Symbol No. | Parts No. | Description                                                | Schematic No. |
|------------|-----------|---------------------------------------------------|---------------|------------|-----------|------------------------------------------------------------|---------------|
| 2-1        | BA320243  | Tuner PCB Comp.<br>AT-K02 (U/T)                   | ATK-2001A, B  | 2-R109     | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                           | 35-11-30      |
| 2-2        | BA320244  | Tuner PCB Comp.<br>AT-K02 (CSA)<br>(CSA, AAL)     | ATK-2001A, B  | 2-R132     | ER307196  | Carbon/R. F 1/4W<br>100 ohms (J)                           | 35-11-25      |
| 2-3        | BA320245  | Tuner PCB Comp.<br>AT-K02 (CEE)<br>(CEE, UK, SAA) | ATK-2001A, B  | 2-C31      | EC513990  | Styrol/C. (Vert.)<br>330PF (J) 50WV<br>(U/T, CEE, UK, SAA) | 24-11-3       |
| 2-IC1      | EI322248  | IC LA1231N                                        | 45-8-113      | 2-C31      | EC672287  | Styrol/C. (Vert.)<br>510PF (J) 50WV<br>(CSA, AAL)          | 24-11-3       |
| 2-IC2      | EI322185  | IC LA3380 (B)                                     | 45-8-113      | 2-C32      | EC513990  | Styrol/C. (Vert.)<br>330PF (J) 50WV<br>(U/T, CEE, UK, SAA) | 24-11-3       |
| 2-IC3      | EI293185  | IC LA-1240                                        | 45-8-220      | 2-C42      | EC313534  | NP/C.                                                      |               |
| 2-IC4      | EI315491  | IC LB1405S                                        | 45-8-365      | 2-C32      | EC672287  | Styrol/C. (Vert.)<br>510PF (J) 50WV<br>(CSA, AAL)          | 24-17-31      |
| 2-TR1,2    | ET618873  | Transistor 2SC930 (E)(F)                          | 45-1-185      | 2-C44      | EC435690  | Styrol/C. (Vert.)<br>560PF (J) 50WV                        | 24-11-3       |
| 2-TR3,4    | ET322244  | Transistor 2SA608K-NP<br>(F) (G)                  | 45-1-375      | 2-C45      | EC315335  | NP/C. 4.7μF (M) 25WV                                       | 24-11-3       |
| 2-TR5to14  | ET316643  | Transistor 2SC536K-NP<br>(F) (G)                  | 45-1-362      | 2-C83      | EC514001  | Styrol/C. (Vert.)<br>390PF (J) 50WV                        | 24-17-31      |
| 2-TR16to20 | ET316643  | Transistor 2SC536K-NP<br>(F) (G)                  | 45-1-362      | 2-4        | EE322242  | Front End FF126U12                                         | 24-11-3       |
| 2-TR21     | ET452534  | Transistor 2SD313(E)(F)                           | 45-1-105      | 2-5        | ZS325495  | Tapping Screw, #2 BR<br>3x6                                | 57-2-53       |
| 2-TR22,23  | ET316643  | Transistor 2SC536K-NP<br>(F) (G)                  | 45-1-362      |            |           |                                                            |               |
| 2-TR24,25  | ET307234  | Transistor 2SC1815<br>(Y) (GR)                    | 45-1-299      |            |           |                                                            |               |
| 2-TR27     | ET316643  | Transistor 2SC536K-NP<br>(F) (G)                  | 45-1-362      |            |           |                                                            |               |
| 2-TR28     | ET322244  | Transistor 2SA608K-NP<br>(F) (G)                  | 45-1-375      |            |           |                                                            |               |
| 2-D1to6    | ED557447  | Silicon Diode 1S1588                              | 45-3-22       |            |           |                                                            |               |
| 2-D7       | ED315367  | Zener Diode WZ-050                                | 45-6-67       |            |           |                                                            |               |
| 2-D8       | ED237960  | Zener Diode WZ-150                                | 45-6-67       |            |           |                                                            |               |
| 2-D9       | ED322238  | Silicon Stack 1B4B41                              | 45-2-97       |            |           |                                                            |               |
| 2-D10to14  | ED557447  | Silicon Diode 1S1588                              | 45-3-22       |            |           |                                                            |               |
| 2-DVC1,2   | EC616342  | Trimmer/C. CTY122D33<br>15PF                      | 24-2-32       |            |           |                                                            |               |
| 2-SW1,2,3  | ES322243  | Push SW. JK-2108                                  | 25-5-359      |            |           |                                                            |               |
| 2-VR1      | EV593368  | Semi-Fixed/Vol.<br>V10K8-4-2 B30K                 | 36-10-250     |            |           |                                                            |               |
| 2-VR2,3    | EV550023  | Semi-Fixed/Vol.<br>V10K8-4-2 100K (B)             | 36-10-250     |            |           |                                                            |               |
| 2-VR4,5    | EV551452  | Semi-Fixed/Vol. (Solid<br>Type) SR19R 22kΩ        | 36-19-10      |            |           |                                                            |               |
| 2-VR6      | EV604438  | Semi-Fixed/Vol.<br>V10K8-4-2 B10K                 | 36-10-250     |            |           |                                                            |               |
| 2-L1       | EO539820  | Peaking Coil 2.2μH (K)                            | 23-1-187      |            |           |                                                            |               |
| 2-T2       | EO307186  | OSC Coil RWR-43208N                               | 23-4-47       |            |           |                                                            |               |
| 2-T3       | EO322239  | DET Coil<br>Q228CEL-1072N                         | 23-1-383      |            |           |                                                            |               |
| 2-T4       | BT293398  | AM-IF Trans.<br>RMC-42246BCH 468kHz               | 23-1-276      |            |           |                                                            |               |
| 2-T5       | BT307204  | AM-IF Trans. CFMA-008                             | 53-1-131      |            |           |                                                            |               |
| 2-T6       | EO322241  | MPX Coil CANS-3700Z                               | 23-1-386      |            |           |                                                            |               |
| 2-FL1,2    | ER307201  | Ceramic Filter<br>SFE10.7mm                       | 53-1-132      |            |           |                                                            |               |
| 2-FL3      | ER322237  | Low Pass Filter<br>209BLRG-3368N                  | 23-1-384      |            |           |                                                            |               |
| 2-FL4,5    | ER322181  | Low Pass Filter<br>208BLRC-3415N                  | 23-1-385      |            |           |                                                            |               |
| 2-R12      | ER322591  | Carbon/R. F 1/4 WS<br>100 ohms (J)                | 35-11-30      |            |           |                                                            |               |
| 2-R42      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                  | 35-11-30      |            |           |                                                            |               |
| 2-R51      | ER322591  | Carbon/R. F 1/4WS<br>100 ohms (J)                 | 35-11-30      |            |           |                                                            |               |
| 2-R56      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                  | 35-11-30      |            |           |                                                            |               |
| 2-R68      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                  | 35-11-30      |            |           |                                                            |               |
| 2-R69      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                  | 35-11-30      |            |           |                                                            |               |
| 2-R85      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                  | 35-11-30      |            |           |                                                            |               |
| 2-R102     | ER322591  | Carbon/R. F 1/4WS<br>100 ohms (J)                 | 35-11-30      |            |           |                                                            |               |



### 3. FINAL ASSEMBLY BLOCK



### FINAL ASSEMBLY BLOCK

| Ref. No.                          | Parts No. | Description                                      | Schematic No.  |
|-----------------------------------|-----------|--------------------------------------------------|----------------|
| <b>LED P.C BOARD BLOCK</b>        |           |                                                  |                |
| 3-1                               | ED322184  | LED SLP-152D                                     | 45-15-40       |
| 3-2                               | ED322215  | LED SLP-251D                                     | 45-15-39       |
| 3-3                               | ED322247  | LED SLP-151D                                     | 45-15-41       |
| 3-4                               | SE322190  | LED Escutcheon                                   | ATK-2021       |
| 3-5x                              | SE322191  | LED Escutcheon (BL)                              | ATK-2021       |
| 3-6                               | ZW698308  | Nylon Rivet (NRB) 3x5.5 (Black)                  | 2-1-51         |
| <b>ATTENUATOR P.C BOARD BLOCK</b> |           |                                                  |                |
| 3-7                               | ES324238  | Slide SW. SSB02204                               | 25-1-185       |
| <b>SCALE PANEL BLOCK</b>          |           |                                                  |                |
| 3-8                               | SP322182  | Scale Panel (A)                                  | ATK-2016, 2017 |
| 3-9x                              | SP322183  | Scale Panel (A-BL)                               | ATK-2016, 2017 |
| 3-10                              | SE322188  | Escutcheon (B)                                   | ATK-2019       |
| 3-11                              | SB322186  | Button (B)                                       | ATK-2018       |
| 3-12x                             | SB322187  | Button (B-BL)                                    | ATK-2018       |
| 3-13                              | ZG322189  | Spring (B)                                       | ATK-2020       |
| <b>REAR PANEL BLOCK</b>           |           |                                                  |                |
| 3-14                              | SP322168  | Rear Panel (U/T-1)                               | ATK-2007       |
| 3-15x                             | SP322170  | Rear Panel (CSA-1)                               | ATK-2007       |
| 3-16x                             | SP322169  | Rear Panel (AAL-1)                               | ATK-2007       |
| 3-17x                             | SP322171  | Rear Panel (CEE-1)                               | ATK-2008       |
| 3-18x                             | SP322172  | Rear Panel (UK, SAA-1)                           | ATK-2008       |
| 3-19                              | EJ603685  | Antenna Terminal Plate 4P                        | 32-1-52        |
| 3-20                              | EE322245  | Bar Ant                                          | 55-1-62        |
| 3-21                              | EJ322246  | 2P Pin Jack                                      | 32-1-108       |
| 3-22                              | ZW281463  | Nylon Rivet (NRB) 3x6.5 (Black)                  | 2-1-51         |
| 3-23                              | EZ631945  | Strain Relief SR-4N-4 (U/T, CSA, AAL)            | 2-7-49         |
| 3-24                              | EW306428  | AC Cord (U/T)                                    | 26-1-64        |
| 3-25x                             | EW305691  | AC Cord CUL (CSA, AAL)                           | 26-3-15        |
| 3-26x                             | EJ301513  | Inlet 2P (CEE, UK, SAA)                          | 31-1-200       |
| <b>ASSEMBLY BLOCK</b>             |           |                                                  |                |
| 3-27                              | ZS325495  | Tapping Screw, #2 BR 3x6                         |                |
| 3-28                              | ZS308846  | Tapping Screw, #2 BR 3x8 (Oval Neck)             | 1-1-69         |
| 3-29                              | MR308836  | Pulley                                           | 13-2-40        |
| 3-30x                             | ES665875  | Push SW. SDG1P-J TV-3 UL/CSA (CSA, AAL)          | 25-5-199       |
| 3-31                              | ES310839  | Push SW. SDG1P-E 5A/80A 250V (U/T, CEE, UK, SAA) | 25-5-310       |
| 3-32                              | ZS379350  | Screw, pan 3x6                                   |                |
| 3-33                              | ZS306021  | S-Tight Screw, pan 3x6                           |                |
| 3-34                              | MZ307170  | Pulley                                           | 13-2-39        |
| 3-35                              | EC204671  | Ceramic/C. DD31-6E 0.01µF (P) 500WV (U/T)        | 24-5-66        |
| 3-36x                             | EC314688  | Ceramic/C. DE7150 FZ 0.01µF (P) 125W (CSA, AAL)  | 24-5-87        |
| 3-37x                             | EC301320  | MP/C. 4700PF (M) 250WV (CEE, UK, SAA)            | 24-9-122       |
| 3-38                              | TC309268  | Push Rod                                         | CF-6005        |
| 3-39                              | BT444137  | Balun Trans. 75 ohm-300 ohm                      | 23-1-129       |
| 3-40                              | ZS297641  | Tapping Screw, #2, bind 3x8 W=10                 |                |
| 3-41                              | ZS462194  | Tapping Screw, #2 pan 3x8 (W=8)                  |                |
| 3-42                              | BT322177  | Power Trans. AT-K02T-70 (U/T)                    | 38-4-777       |
| 3-43x                             | BT322217  | Power Trans. AT-K02T-30 (CSA, AAL)               | 38-4-778       |
| 3-44x                             | BT322206  | Power Trans. AT-K02T-40 (CEE)                    | 38-4-779       |
| 3-45x                             | BT322218  | Power Trans. AT-K02T-50 (UK, SAA)                | 38-4-780       |
| 3-46                              | ZS315511  | S-Tight Screw, pan 3x6 Cut Point                 | 1-1-72         |
| 3-47                              | MS322192  | Scale Guide                                      | ATK-2022       |
| 3-48x                             | MS322193  | Scale Guide (BL)                                 | ATK-2022       |
| 3-49                              | SZ322214  | Tube (A)                                         | ATK-2036       |
| 3-50                              | ZS447840  | Tapping Screw, #2 BR 3x8                         |                |

| Ref. No.                    | Parts No. | Description                                    | Schematic No. |
|-----------------------------|-----------|------------------------------------------------|---------------|
| 3-51                        | TA322249  | Tuning Wheel Assy                              | 9-3-51        |
| 3-52                        | ZW436026  | Washer (SPC) D9.2x15x0.5t                      | 7-1-56        |
| 3-53                        | ZW554624  | E Jack Nut                                     | 9-3-52        |
| 3-54                        | TA322250  | Dial Wheel Assy                                | 1-2-1         |
| 3-55                        | TA307160  | Dial String TK-1064 D0.5                       | ATK-2030      |
| 3-56                        | SP322202  | Bottom Plate                                   | PC-2032       |
| 3-57                        | SA311742  | Circular Foot                                  |               |
| 3-58                        | ZS565942  | Tapping Screw, #2 pan 4x8                      |               |
| 3-59                        | ZS225134  | Tapping Screw #2, pan 3x10 W=8                 |               |
| 3-60                        | EL322236  | Lamp (Cord Type) 8V 300mA (400mmx2)            | 28-2-83       |
| 3-61                        | TA320234  | Pointer Part AT-K02                            | ATK-2038      |
| 3-62                        | EL322234  | Lamp (Cord Type) 8V 50mA (350mmx2)             | 18-2-82       |
| 3-63                        | EF309389  | Fuse 400mA 250V (U/T)                          | 39-1-64       |
| 3-64x                       | EF309392  | Fuse 1.25A 125V (CSA, AAL)                     | 39-1-65       |
| 3-65x                       | EF315334  | Fuse 250mA 125V (CSA, AAL)                     | 39-1-65       |
| 3-66x                       | EF602550  | Fuse (SEMKO T Type) 1.25AT 250V (CEE, UK, SAA) | 39-1-53       |
| 3-67x                       | EF300588  | Fuse (EAWK) (CEE, UK, SAA)                     | 39-1-60       |
| <b>FRONT PANEL BLOCK</b>    |           |                                                |               |
| 3-68                        | BD320250  | Front Panel BLK AT-K02                         | ATK-2052      |
| 3-69x                       | BD320251  | Front Panel BLK AT-K02-BL                      | ATK-2052      |
| 3-70x                       | BD320268  | Front Panel BLK AT-K02-S                       | ATK-2052      |
| 3-71                        | SE322578  | Escutcheon (A)                                 | ATK-2013      |
| 3-72                        | SB322576  | Button (A)                                     | ATK-2012      |
| 3-73x                       | SB322577  | Button (A-BL)                                  | ATK-2012      |
| 3-74                        | ZG322579  | Spring (A)                                     | ATK-2014      |
| 3-75                        | TA322204  | Tuning Knob Cover (A)                          | ATK-2032      |
| 3-76x                       | TA322205  | Tuning Knob Cover (A-BL)                       | ATK-2032      |
| <b>FINAL ASSEMBLY BLOCK</b> |           |                                                |               |
| 3-77                        | BC322209  | Upper Cover (A)                                | ATK-2034      |
| 3-78x                       | BC322212  | Upper Cover (B) (AAL)                          | ATK-2034      |
| 3-79x                       | BC322210  | Upper Cover (A-BL)                             | ATK-2034      |
| 3-80                        | ZS322570  | S-Tight Screw, bind 4x8                        |               |
| 3-81x                       | ZS322580  | S-Tight Screw, bind 4x8 (AAL, BL)              |               |
| 3-82                        | SK322207  | Tuning Knob (A)                                | 1T K-2033     |
| 3-83x                       | SK322208  | Tuning Knob (A-BL)                             | 1T K-2033     |
| 3-84x                       | SK324433  | Tuning Knob (B) (S)                            | 1T K-2041     |
| 3-85x                       | ZW305013  | Pop Rivet D3.2 (AAL)                           | 1-6-9         |
| 3-86x                       | EW315767  | AC Cord Set CEE 2 Cores (CEE)                  | 16-3-72       |
| 3-87x                       | EW302995  | AC Cord Set BEAB 2 Cores (UK)                  | 16-3-57       |
| 3-88x                       | EW322401  | AC Cord Set SAA 2 Cores (SAA)                  | 16-3-77       |
| 3-89                        | ZS498273  | Tapping Screw #2, BR 3x8 W=8                   |               |

When ordering parts, please quote Parts Number, Description and Model Number.

## II. MODEL AM-U02

### 1. RECOMMENDED SPARE PARTS LIST

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| Parts No. | Description                             | Notes          |
|-----------|-----------------------------------------|----------------|
| BA320192  | Main Amp PCB Comp. AM-U02               |                |
| BA320136  | Main Amp PCB Comp. AM-U02 (CEE)         |                |
| BA320135  | Main Amp PCB Comp. AM-U02 (CSA)         |                |
| BA319362  | Main Amp PCB Comp. AM-U02 (JPN)         |                |
| BT323582  | △ Power Trans. AM-U02T-10               | (JPN)          |
| BT322572  | △ Power Trans. AM-U02T-20               | (AAL)          |
| BT322573  | △ Power Trans. AM-U02T-30               | (CSA)          |
| BT322574  | △ Power Trans. AM-U02T-40               | (CEE)          |
| BT322575  | △ Power Trans. AM-U02T-50               | (UK, SAA)      |
| BT322571  | △ Power Trans. AM-U02T-70               | (U/T)          |
| EC321302  | △ Ceramic/C. E 0.01μF (Z) 250VAC        | (U/T, JPN)     |
| EC204671  | △ Ceramic/C. DD31-6E 0.01μF (P) 500WV   | (U/T)          |
| EC314688  | △ Ceramic/C. DE7150 FZ 0.01μF (P) 125WV | (CSA, AAL)     |
| EC301320  | △ MP/C. 4700PF (M) 250WV                | (CEE, SAA, UK) |
| EC320307  | Elect./C. 6800μF 40WV                   |                |
| ED562386  | Germanium Diode 1S188AM                 |                |
| ED322772  | LED SLP-155D-01                         |                |
| ED322773  | LED SLP-255D-01                         |                |
| ED214457  | Silicon Diode 1S2472                    |                |
| ED316143  | Silicon Diode 1S2473-HS                 |                |
| ED322589  | Silicon Stack 3D4B41                    |                |
| ED322810  | Zener Diode WZ-040                      |                |
| ED557111  | Zener Diode WZ-210                      |                |
| ED323530  | Zener Diode 05Z-12U                     |                |
| ED322774  | Zener Diode 05Z5.1U                     |                |
| EF306949  | △ Fuse 1.25A 250V                       | (U/T)          |
| EF311839  | △ Fuse 1.6A 250V                        | (U/T, JPN)     |
| EF306956  | △ Fuse 2.5A 125V                        | (CSA, AAL)     |
| EF306951  | △ Fuse 2.5A 250V                        | (JPN)          |
| EF306954  | △ Fuse 2A 125V                          | (CSA, AAL)     |
| EF306950  | △ Fuse 2A 250V                          | (JPN)          |
| EF300583  | △ Fuse (EAK) 1.25AT                     | (CEE, UK, SAA) |
| EF300581  | △ Fuse (EAK) 2AT                        | (CEE, UK, SAA) |
| EF300579  | △ Fuse (EAK) 3.15AT                     | (CEE, UK, SAA) |
| EI322791  | IC LC7556                               |                |
| EI322583  | IC STK-0030                             |                |
| EI322587  | IC STK-3042                             |                |
| EI322588  | IC TA7136AP                             |                |
| EI322599  | IC TA75458S                             |                |
| EJ301199  | Headphone Jack 3P64M                    |                |
| EM322584  | Bar Meter FIP48DW16YS                   |                |

| Parts No. | Description                                         | Notes          |
|-----------|-----------------------------------------------------|----------------|
| EO650823  | Phase Compensation Coil 2.2 $\mu$ H (K)             |                |
| ES315159  | $\Delta$ Push SW. SDG1P (JPN)                       |                |
| ES310839  | $\Delta$ Push SW. SDG1P-E 5A/80A 250V               | (CEE, SAA, UK) |
| ES665875  | $\Delta$ Push SW. SDG1P-J TV-3 UL/CSA               | (CSA, AAL)     |
| ES655806  | $\Delta$ Push SW. SDG1P-J TV3 CSA                   | (U/T)          |
| ES324348  | Push SW. J-K2091                                    |                |
| ES324344  | Push SW. J-K2102                                    |                |
| ES322586  | Rotary Slide SW. SRZW43N                            |                |
| ES322776  | Rotary Slide SW. SRZW44S                            |                |
| ET322778  | Transistor 2SA608K-NP (E) (F) (G)                   |                |
| ET322244  | Transistor 2SA608K-NP (F) (G)                       |                |
| ET322598  | Transistor 2SB632K (E) (F)                          |                |
| ET322775  | Transistor 2SC536K-NP (E) (F) (G)                   |                |
| ET310148  | Transistor 2SD612K (E) (F)                          |                |
| EV322789  | Semi-Fixed/Vol. V10K8-1-2 2k $\Omega$               |                |
| EV324345  | Single-Axial 2-Throw/Vol. V16L4G3N 100k $\Omega$ x2 |                |
| EV324346  | Single-Axial 2-Throw/Vol. V16L4G3N 250k $\Omega$ x2 |                |
| EV322781  | 2-Throw Slide/Vol. MDV3B001-250k $\Omega$ x2        |                |
| EW306427  | $\Delta$ AC Cord (JPN)                              |                |
| EW306428  | $\Delta$ AC Cord (U/T)                              |                |
| EW305691  | $\Delta$ AC Cord CUL                                | (CSA, AAL)     |

## 2. MAIN AMP P.C BOARD (AMU-2001A) BLOCK

| Symbol No. | Parts No. | Description                                        | Schematic No. |
|------------|-----------|----------------------------------------------------|---------------|
| 2-1        | BA320192  | Main Amp PCB Comp.<br>AM-U02 (U/T)                 | AMU-2001A     |
| 2-2        | BA319362  | Main Amp PCB Comp.<br>AM-U02 (JPN)                 | AMU-2001A     |
| 2-3        | BA320135  | Main Amp PCB Comp.<br>AM-U02 (CSA)                 | AMU-2001A     |
| 2-4        | BA320136  | Main Amp PCB Comp.<br>(CSA, AAL) AM-U02 (CEE)      | AMU-2001A     |
| 2-IC1      | EI322588  | IC TA7136AP (CEE, UK, SAA)                         | 45-8-414      |
| 2-IC2      | EI322587  | IC STK-3042-AL                                     | 45-8-416      |
| 2-TR1      | ET322775  | Transistor 2SC536K-NP<br>(E) (F) (G)               | 45-1-362      |
| 2-TR2,3    | ET322778  | Transistor 2SA608K-NP<br>(E) (F) (G)               | 45-1-375      |
| 2-TR4to6   | ET322775  | Transistor 2SC536K-NP<br>(E) (F) (G)               | 45-1-362      |
| 2-TR7      | ET322244  | Transistor 2SA608K-NP<br>(F) (G)                   | 45-1-375      |
| 2-TR8,9    | ET322778  | Transistor 2SA608K-NP<br>(E) (F) (G)               | 45-1-375      |
| 2-TR10     | ET310148  | Transistor 2SD612K<br>(E) (F)                      | 45-1-308      |
| 2-TR11     | ET322598  | Transistor 2SB632K (E) (F)                         | 45-1-374      |
| 2-D1to3    | ED316143  | Silicon Diode 1S2473-HS                            | 45-3-53       |
| 2-D4       | ED214457  | Silicon Diode 1S2472                               | 45-3-41       |
| 2-D5,6     | ED322589  | Silicon Stack 3D4B41                               | 45-2-96       |
| 2-D7,8     | ED557111  | Zener Diode WZ-210                                 | 45-6-67       |
| 2-D9       | ED214457  | Silicon Diode 1S2472                               | 45-3-41       |
| 2-L1       | EO650823  | Phase Compensation Coil<br>2.2μH (K)               | 23-1-239      |
| 2-J1       | EJ698051  | Din Jack                                           | 31-1-158      |
| 2-J2,3     | EJ293365  | Pin Jack 4P                                        | 31-1-197      |
| 2-J4       | EJ293376  | Pin Jack 6P                                        | 31-1-198      |
| 2-SW1,2    | ES324344  | Push SW. J-K2102                                   | 25-5-383      |
| 2-SW3      | ES322586  | Rotary Slide SW.<br>SRZW43N                        | 25-6-189      |
| 2-R4       | ER317686  | Metal Oxide Film/R.<br>1/4WS 1K (F)                | 35-17-20      |
| 2-R5       | ER322293  | Metal Film/R. 1/4W<br>464K (F)                     | 35-17-20      |
| 2-R6       | ER322294  | Metal Film/R. 1/4W<br>37.4K (F)                    | 35-17-20      |
| 2-R30      | ER322590  | Cement/R. (Metal Plate)<br>5W (0.47+0.47) ohms (K) | 35-16-84      |
| 2-R33,34   | ER311673  | Metal Oxide Film/R. 2W<br>3.3K (K)                 | 35-15-8       |
| 2-R48      | ER324337  | Carbon/R. F 1/4WS<br>56 ohms (J)                   | 35-11-30      |
| 2-R49,50   | ER322787  | Carbon/R. F 1/4WS<br>10 ohms (J)                   | 35-11-36      |
| 2-C3       | EC324379  | NP/C. 2.2μF (M) 50WV                               | 24-17-36      |
| 2-C7       | EC322788  | Styrol/C. 6970PF(J) 50WV                           | 24-11-18      |
| 2-C8       | EC322800  | Styrol/C. 2040PF(J) 50WV                           | 24-11-18      |
| 2-C10      | EC324376  | NP/C. 1μF (M) 50WV                                 | 24-17-36      |
| 2-C13      | EC324379  | NP/C. 2.2μF (M) 50WV                               | 24-17-36      |
| 2-C22      | EC322290  | Solid Aluminum/C.<br>3.3μF (M) 25WV                | 24-19-3       |
| 2-C23,24   | EC326583  | Metalized Mylar/C. (Vert.)<br>0.047μF (K) 400WV    | 24-16-29      |
| 2-C33to36  | EC320307  | Elect./C. 6800μF 40WV                              | 24-12-63      |
| 2-5        | ZS447840  | Tapping Screw, #2 BR 3x8                           |               |
| 2-6        | ZS498273  | Tapping Screw, #2, BR 3x8<br>W=8                   |               |
| 2-7        | ZS422076  | Screw, pan 3x5                                     |               |

## 3. CONTROL P.C BOARD (AMU-2007) BLOCK

| Symbol No. | Parts No. | Description                                   | Schematic No. |
|------------|-----------|-----------------------------------------------|---------------|
| 3-IC1      | EI322588  | IC TA7136AP                                   | 45-8-414      |
| 3-VR1      | EV324346  | Single-Axial 2-Throw/Vol.<br>V16L4G3N 250kZx2 | 36-22-65      |
| 3-VR2      | EV322781  | 2-Throw Slide/Vol.<br>MDV3B001-250kBX2        | 36-27-8       |
| 3-VR3,4    | EV324345  | Single-Axial 2-Throw/Vol.<br>V16L4G3N 100kCx2 | 36-22-64      |
| 3-C2       | EC324376  | NP/C. 1μF (M) 50WV                            | 24-17-36      |
| 3-C4       | EC324376  | NP/C. 1μF (M) 50WV                            | 24-17-36      |
| 3-C7       | EC323260  | NP/C. 10μF (M)<br>16WV                        | 24-17-36      |
| 3-1        | ZS422076  | Screw, pan 3x5                                |               |

#### 4. BAR METER P.C BOARD (AMU-2006) BLOCK

| Symbol No. | Parts No. | Description           | Schematic No. |
|------------|-----------|-----------------------|---------------|
| 4-IC1      | EI322791  | IC LC7556             | 45-8-425      |
| 4-D1       | ED322774  | Zener Diode 05Z5.1U   | 45-6-76       |
| 4-D2       | ED322810  | Zener Diode WZ-040    | 45-6-67       |
| 4-IND1     | EM322584  | Bar Meter FIP48DW16YS | 59-1-2        |
| 4-1        | ZS422076  | Screw, pan 3x5        |               |

#### 6. LOUDNESS P.C BOARD (AMU-2003) BLOCK

| Symbol No. | Parts No. | Description                 | Schematic No. |
|------------|-----------|-----------------------------|---------------|
| 6-SW1      | ES322776  | Rotary Slide SW.<br>SRZW44S | 25-6-188      |
| 6-C2       | EC321173  | Styrol/C. 180PF (J) 50WV    | 24-11-14      |
| 6-C3       | EC306988  | Styrol/C. 330PF (J) 50WV    | 24-11-14      |

#### 5. BAR METER DRIVE P.C BOARD (AMU-2004) BLOCK

| Symbol No. | Parts No. | Description                          | Schematic No. |
|------------|-----------|--------------------------------------|---------------|
| 5-IC1      | EI322599  | IC TA75458S                          | 45-8-415      |
| 5-TR1,2    | ET322775  | Transistor 2SC536K-NP<br>(E) (F) (G) | 45-1-362      |
| 5-D1       | ED562386  | Germanium Diode<br>1S188AM           | 45-3-24       |
| 5-D2       | ED316143  | Silicon Diode 1S2473-HS              | 45-3-53       |
| 5-D3       | ED323530  | Zener Diode 05Z-12U                  | 45-6-76       |
| 5-VR1      | EV322789  | Semi-Fixed/Vol.<br>V10K8-1-2 2kB     | 36-10-255     |
| 5-C1       | EC657044  | NP/C. (Vert. Type)<br>1μF (M) 50WV   | 24-17-26      |
| 5-1        | ZS325495  | Tapping Screw, #2 BR 3x6             |               |

#### 7. PUSH SW. P.C BOARD (AMU-2005) BLOCK

| Symbol No. | Parts No. | Description                           | Schematic No. |
|------------|-----------|---------------------------------------|---------------|
| 7-SW1 to 6 | ES324348  | Push SW. J-K2091                      | 25-3-384      |
| 7-R1       | ER511288  | Metal Oxide Film/R. 1W<br>180 ohm (K) | 35-15-10      |
| 7-C3       | EC324378  | Solid Aluminum/C.<br>0.33μF (M) 25WV  | 24-19-3       |

# INDEX

## 1. MODEL AT-K02

| Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BA320243  | 2-1                   | ED322184  | 3-1                   | ER322591  | 2-R12                 | EW322401  | 3-88x                 | TA322205  | 3-76x                 |
| BA320244  | 2-2                   | ED322215  | 3-2                   | ER322591  | 2-R51                 | EZ631945  | 3-23                  | TA322249  | 3-51                  |
| BA320245  | 2-3                   | ED322238  | 2-D9                  | ER322591  | 2-R102                | MR308836  | 3-29                  | TA322250  | 3-54                  |
| BC322209  | 3-77                  | ED322247  | 3-3                   | ER324337  | 2-R42                 | MS322192  | 3-47                  | TC309268  | 3-38                  |
| BC322210  | 3-79x                 | ED557447  | 2-D1to6               | ER324337  | 2-R56                 | MS322193  | 3-48x                 | ZG322189  | 3-13                  |
| BC322212  | 3-78x                 | ED557447  | 2-D10to14             | ER324337  | 2-R68                 | MZ307170  | 3-34                  | ZG322579  | 3-74                  |
| BD320250  | 3-68                  | EE322242  | 2-4                   | ER324337  | 2-R69                 | SA311742  | 3-57                  | ZS225134  | 3-59                  |
| BD320251  | 3-69x                 | EE322245  | 3-20                  | ER324337  | 2-R85                 | SB322186  | 3-11                  | ZS297641  | 3-40                  |
| BD320268  | 3-70x                 | EF300588  | 3-67x                 | ER324337  | 2-R109                | SB322187  | 3-12x                 | ZS306021  | 3-33                  |
| BT293398  | 2-T4                  | EF309389  | 3-63                  | ES310839  | 3-31                  | SB322576  | 3-72                  | ZS308846  | 3-28                  |
| BT307204  | 2-T5                  | EF309392  | 3-64x                 | ES322243  | 2-SW1,2,3             | SB322577  | 3-73x                 | ZS315511  | 3-46                  |
| BT322177  | 3-42                  | EF315334  | 3-65x                 | ES324238  | 3-7                   | SE322188  | 3-10                  | ZS322570  | 3-80                  |
| BT322206  | 3-44x                 | EF602550  | 3-66x                 | ES665875  | 3-30x                 | SE322190  | 3-4                   | ZS322580  | 3-81x                 |
| BT322217  | 3-43x                 | EI293185  | 2-IC3                 | ET307234  | 2-TR24,25             | SE322191  | 3-5x                  | ZS325495  | 2-5                   |
| BT322218  | 3-45x                 | EI315491  | 2-IC4                 | ET316643  | 2-TR5to14             | SE322578  | 3-71                  | ZS325495  | 3-27                  |
| BT444137  | 3-39                  | EI322185  | 2-IC2                 | ET316643  | 2-TR16to20            | SK322207  | 3-82                  | ZS379350  | 3-32                  |
| EC204671  | 3-35                  | EI322248  | 2-IC1                 | ET316643  | 2-TR22,23             | SK322208  | 3-83x                 | ZS447840  | 3-50                  |
| EC301320  | 3-37x                 | EJ301513  | 3-26x                 | ET316643  | 2-TR27                | SK324433  | 3-84x                 | ZS462194  | 3-41                  |
| EC313534  | 2-C42                 | EJ322246  | 3-21                  | ET322244  | 2-TR3,4               | SP322168  | 3-14                  | ZS498273  | 3-89                  |
| EC314688  | 3-36x                 | EJ603685  | 3-19                  | ET322244  | 2-TR28                | SP322169  | 3-16x                 | ZS565942  | 3-58                  |
| EC315335  | 2-C45                 | EL322234  | 3-62                  | ET452531  | 2-TR21                | SP322170  | 3-15x                 | ZW281463  | 3-22                  |
| EC435690  | 2-C44                 | EL322236  | 3-60                  | ET618873  | 2-TR1,2               | SP322171  | 3-17x                 | ZW305013  | 3-85x                 |
| EC513990  | 2-C31                 | EO307186  | 2-T2                  | EV550023  | 2-VR2,3               | SP322172  | 3-18x                 | ZW436026  | 3-52                  |
| EC513990  | 2-C32                 | EO322239  | 2-T3                  | EV551452  | 2-VR4,5               | SP322182  | 3-8                   | ZW554624  | 3-53                  |
| EC514001  | 2-C83                 | EO322241  | 2-T6                  | EV593368  | 2-VR1                 | SP322183  | 3-9x                  | ZW698308  | 3-6                   |
| EC616342  | 2-DVC1,2              | EO539820  | 2-L1                  | EV604438  | 2-VR6                 | SP322183  | 3-9x                  |           |                       |
| EC672287  | 2-C31                 | ER307196  | 2-R132                | EW302995  | 3-87x                 | SP322202  | 3-56                  |           |                       |
| EC672287  | 2-C32                 | ER307201  | 2-FL1,2               | EW305691  | 3-25x                 | SZ322214  | 3-49                  |           |                       |
| ED237960  | 2-D8                  | ER322181  | 2-FL4,5               | EW306428  | 3-24                  | TA307160  | 3-55                  |           |                       |
| ED315367  | 2-D7                  | ER322237  | 2-FL3                 | EW315767  | 3-86x                 | TA320234  | 3-61                  |           |                       |
|           |                       |           |                       |           |                       | TA322204  | 3-75                  |           |                       |

## 2. MODEL AM-U02

| Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BA319362  | 2-2                   | ED562386  | 5-D1                  | ES322776  | 6-SW1                 | SP319998  | 8-64                  | ZS463353  | 8-36                  |
| BA320135  | 2-3                   | EF300579  | 8-59x                 | ES324344  | 2-SW1,2               | SP319999  | 8-70x                 | ZS468101  | 8-91                  |
| BA320136  | 2-4                   | EF300581  | 8-60x                 | ES324348  | 7-SW1to6              | SP322526  | 8-4                   | ZS498273  | 2-6                   |
| BA320192  | 2-1                   | EF300583  | 8-58x                 | ES655806  | 8-25                  | SP322527  | 8-7x                  | ZS522865  | 8-13                  |
| BT322571  | 8-42                  | EF300583  | 8-63x                 | ES665875  | 8-27x                 | SP322528  | 8-6x                  | ZS565942  | 8-99                  |
| BT322572  | 8-45x                 | EF306949  | 8-53                  | ET310148  | 2-TR10                | SP322529  | 8-8x                  | ZW265983  | 8-95x                 |
| BT322573  | 8-44x                 | EF306950  | 8-56x                 | ET322244  | 2-TR7                 | SP322530  | 8-9x                  | ZW270088  | 8-83                  |
| BT322574  | 8-46x                 | EF306951  | 8-54x                 | ET322598  | 2-TR11                | SP322560  | 8-97                  | ZW270123  | 8-38                  |
| BT322575  | 8-47x                 | EF306954  | 8-57x                 | ET322775  | 2-TR1                 | SP322561  | 8-100                 | ZW305013  | 8-22x                 |
| BT323582  | 8-43x                 | EF306954  | 8-62x                 | ET322775  | 2-TR4to6              | SP322562  | 8-102x                | ZW322110  | 8-39                  |
| EC204671  | 8-29x                 | EF306956  | 8-55x                 | ET322775  | 5-TR1,2               | SP322563  | 8-101x                | ZW324157  | 8-92x                 |
| EC301320  | 8-32x                 | EF311839  | 8-61                  | ET322778  | 2-TR2,3               | SP323583  | 8-5x                  | ZW324158  | 8-93x                 |
| EC306988  | 6-C3                  | EI322583  | 8-1                   | ET322778  | 2-TR8,9               | SZ322544  | 8-84                  | ZW324159  | 8-94x                 |
| EC314688  | 8-31x                 | EI322587  | 2-IC2                 | EV322781  | 3-VR2                 | SZ322545  | 8-87                  | ZW324161  | 8-96x                 |
| EC320307  | 2-C33to36             | EI322588  | 2-IC1                 | EV322789  | 5-VR1                 | TA322261  | 8-40                  | ZW413267  | 8-49                  |
| EC321173  | 6-C2                  | EI322588  | 3-IC1                 | EV324345  | 3-VR3,4               | TA322534  | 8-68                  | ZW616004  | 8-88                  |
| EC321302  | 8-30x                 | EI322599  | 5-IC1                 | EV324346  | 3-VR1                 | TA322535  | 8-71x                 | ZW652408  | 8-11                  |
| EC322290  | 2-C22                 | EI322791  | 4-IC1                 | EW305691  | 8-18x                 | TA322536  | 8-69                  | ZW698308  | 8-35                  |
| EC322788  | 2-C7                  | EJ293365  | 2-J2,3                | EW306427  | 8-17x                 | TA322537  | 8-72x                 | ZW698308  | 8-52                  |
| EC322800  | 2-C8                  | EJ293376  | 2-J4                  | EW306428  | 8-16x                 | TA322546  | 8-85                  |           |                       |
| EC323260  | C7                    | EJ296853  | 8-19x                 | EZ225145  | 8-21                  | TA322547  | 8-86x                 |           |                       |
| EC324376  | 2-C10                 | EJ301199  | 8-41                  | EZ631945  | 8-15                  | TA646773  | 8-37                  |           |                       |
| EC324376  | 3-C2                  | EJ322581  | 8-12                  | SA311742  | 8-98                  | ZG322566  | 8-78                  |           |                       |
| EC324376  | 3-C4                  | EJ322582  | 8-14                  | SB322557  | 8-76                  | ZG322579  | 8-75                  |           |                       |
| EC324378  | 7-C3                  | EJ325358  | 8-10                  | SB322558  | 8-77x                 | SG308846  | 8-51                  |           |                       |
| EC324379  | 2-C3                  | EJ554578  | 8-23                  | SB322576  | 8-73                  | ZS322402  | 8-89                  |           |                       |
| EC324379  | 2-C13                 | EJ698051  | 2-J1                  | SB322577  | 8-74x                 | ZS322570  | 8-103                 |           |                       |
| EC326583  | 2-C23,24              | EM322584  | 4-IND1                | SE322538  | 8-79                  | ZS322580  | 8-104x                |           |                       |
| EC657044  | 5-C1                  | EO650823  | 2-L1                  | SE322539  | 8-80x                 | ZS325495  | 5-1                   |           |                       |
| ED214457  | 2-D4                  | ER311673  | 2-R33,34              | SE322549  | 8-67                  | ZS325495  | 8-24                  |           |                       |
| ED214457  | 2-D9                  | ER317686  | 2-R4                  | SE322559  | 8-66                  | ZS422076  | 2-7                   |           |                       |
| ED316143  | 2-D1to3               | ER322293  | 2-R5                  | SE322578  | 8-65                  | ZS422076  | 3-1                   |           |                       |
| ED316143  | 5-D2                  | ER322294  | 2-R6                  | SK319996  | 8-81                  | ZS422076  | 4-1                   |           |                       |
| ED322589  | 2-D5,6                | ER322590  | 2-R30                 | SK319997  | 8-82x                 | ZS422076  | 8-33                  |           |                       |
| ED322772  | 8-34                  | ER322787  | 2-R49,50              | SK322550  | 8-105                 | ZS424056  | 8-48                  |           |                       |
| ED322773  | 8-90                  | ER324337  | 2-R48                 | SK322551  | 8-106x                | ZS434250  | 8-50x                 |           |                       |
| ED322774  | 4-D1                  | ER511288  | 7-R1                  | SK322553  | 8-107                 | ZS447840  | 2-5                   |           |                       |
| ED322810  | 4-D2                  | ES310839  | 8-28x                 | SK322554  | 8-108x                | ZS447840  | 8-3                   |           |                       |
| ED323530  | 5-D3                  | ES315159  | 8-26x                 | SK322555  | 8-109                 | ZS462802  | 8-2                   |           |                       |
| ED557111  | 2-D7,8                | ES322586  | 2-SW3                 | SK322556  | 8-110x                | ZS463353  | 8-20x                 |           |                       |

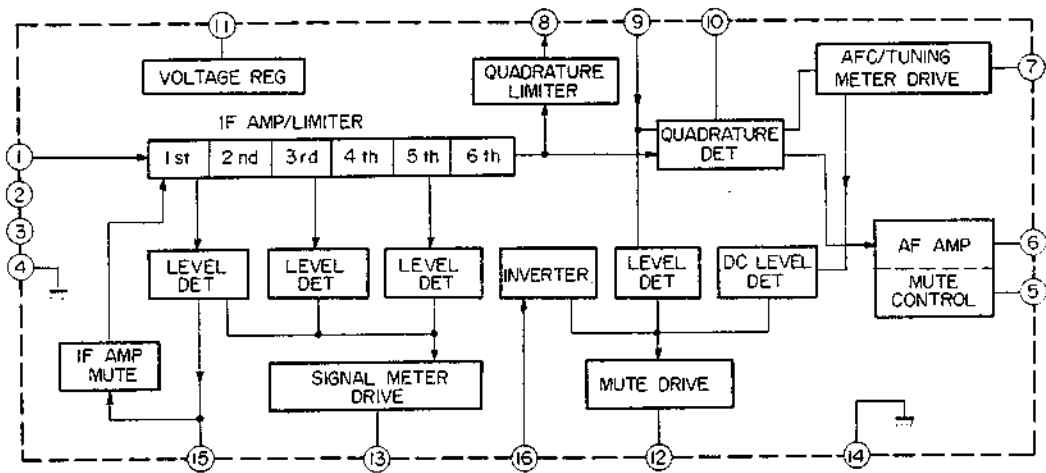
SECTION 4

# SCHEMATIC DIAGRAM

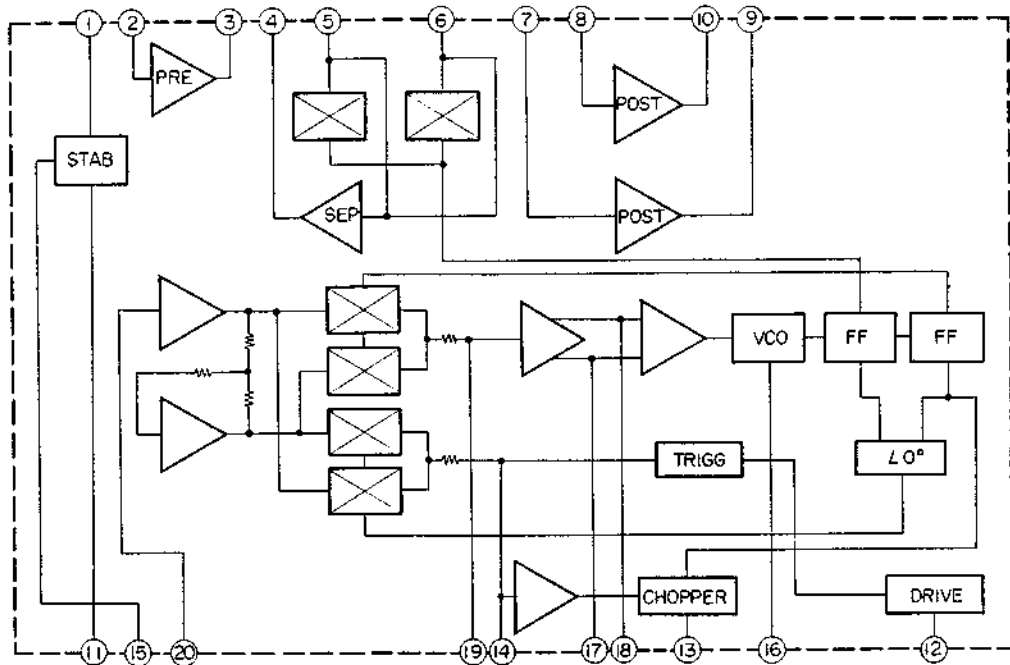
1. SCHEMATIC DIAGRAM OF ICs
2. AT-K02 NO. 1582437A SCHEMATIC DIAGRAM
3. AM-U02 NO. 1582436A SCHEMATIC DIAGRAM

MODEL AT-K02

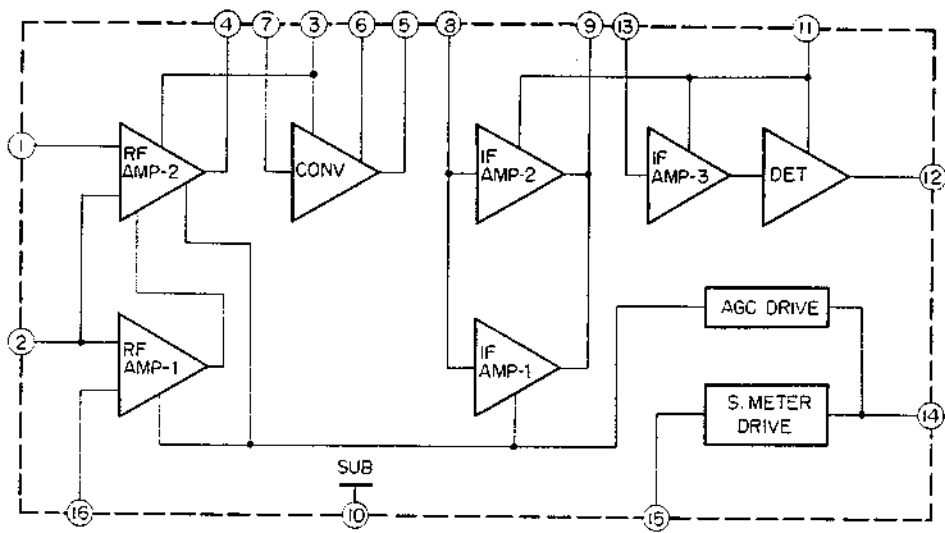
LA1231



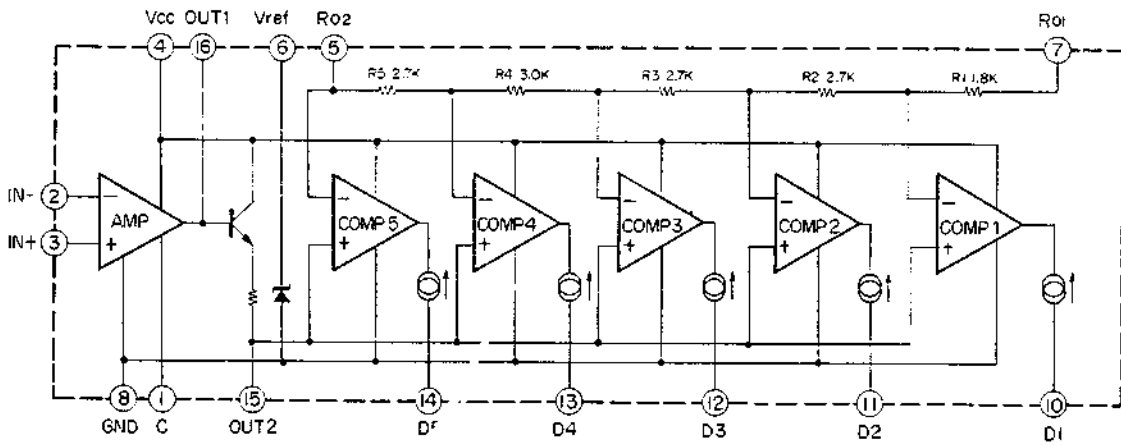
LA3380



LA1240



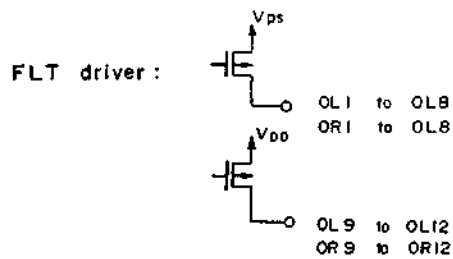
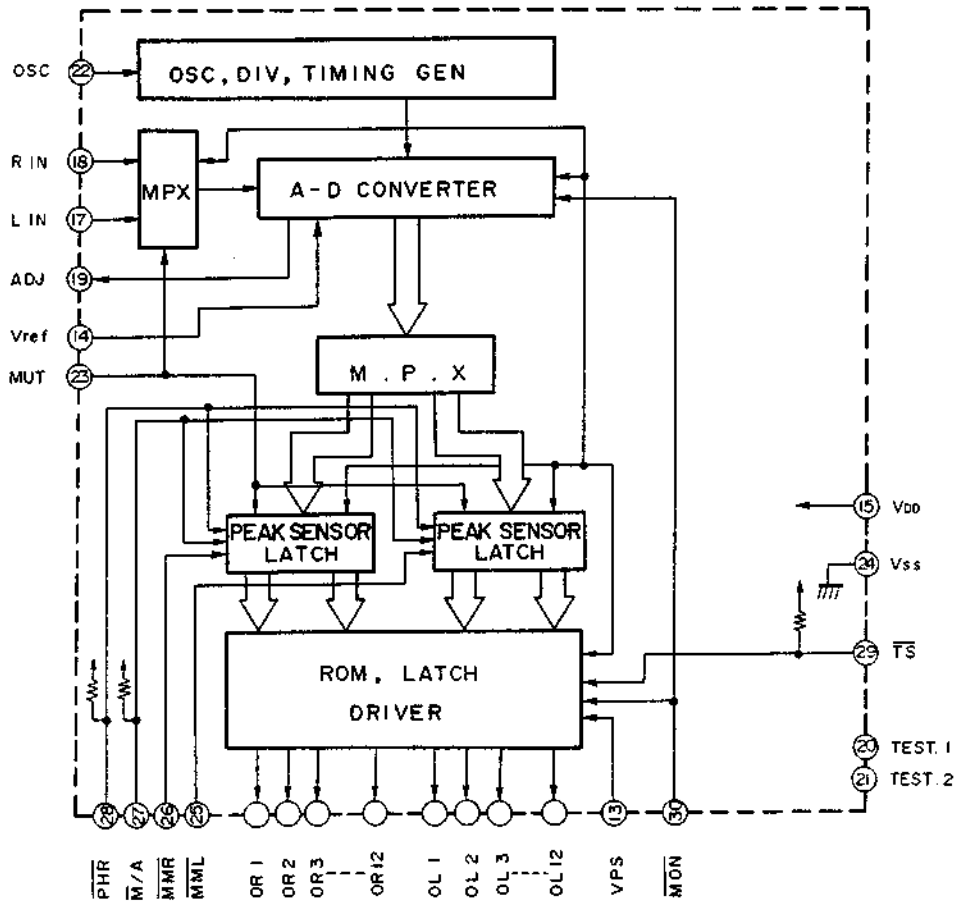
LB1405S



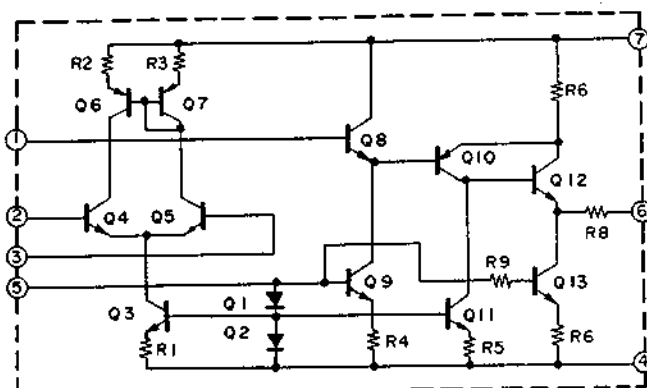


MODEL AM-U02

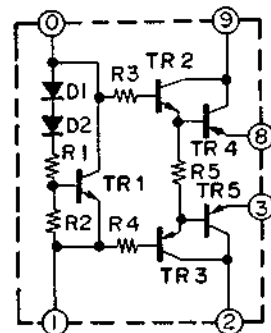
LC7556



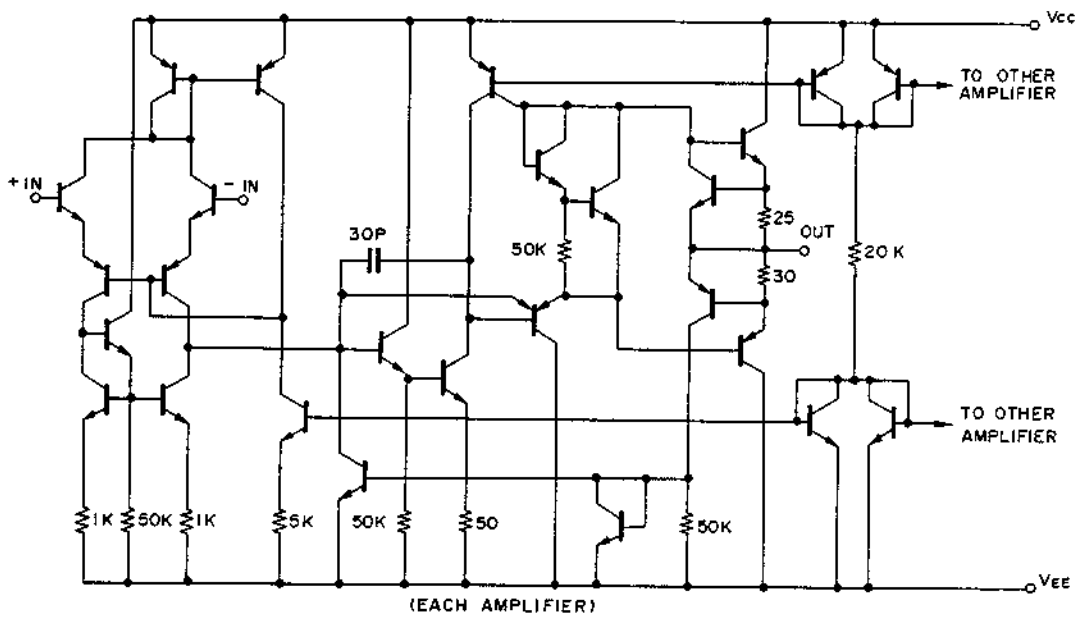
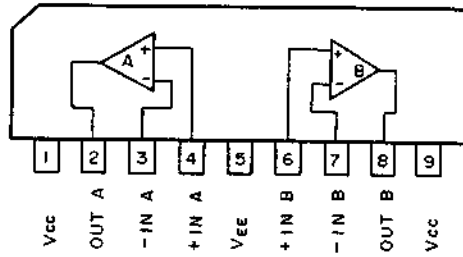
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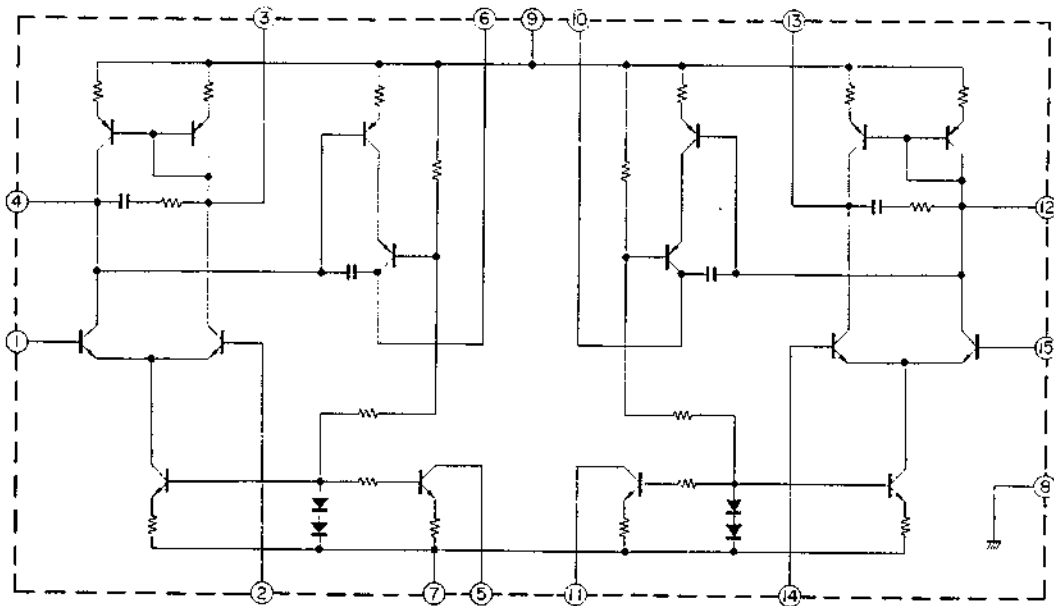
STK-0030

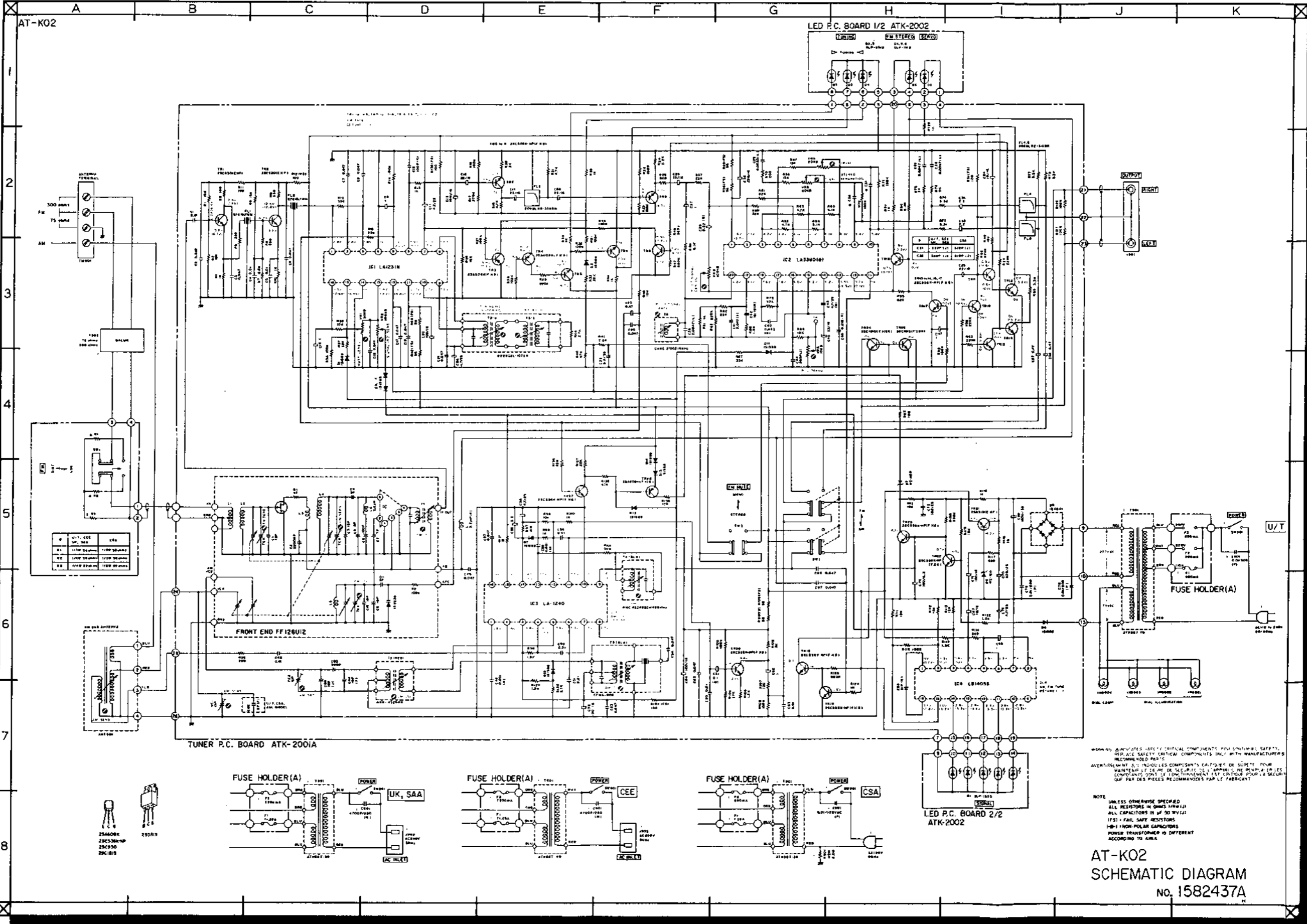


TA75458S

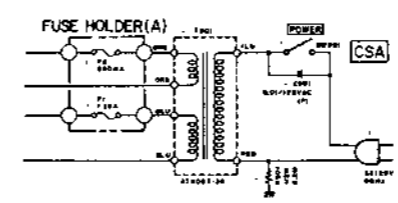
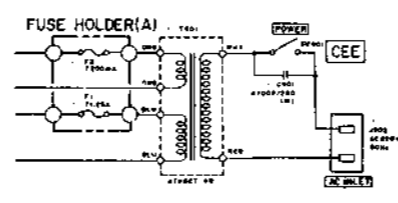
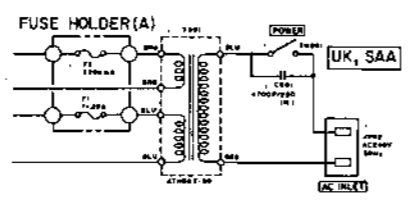
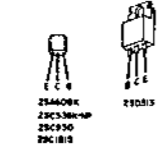


STK-3042L



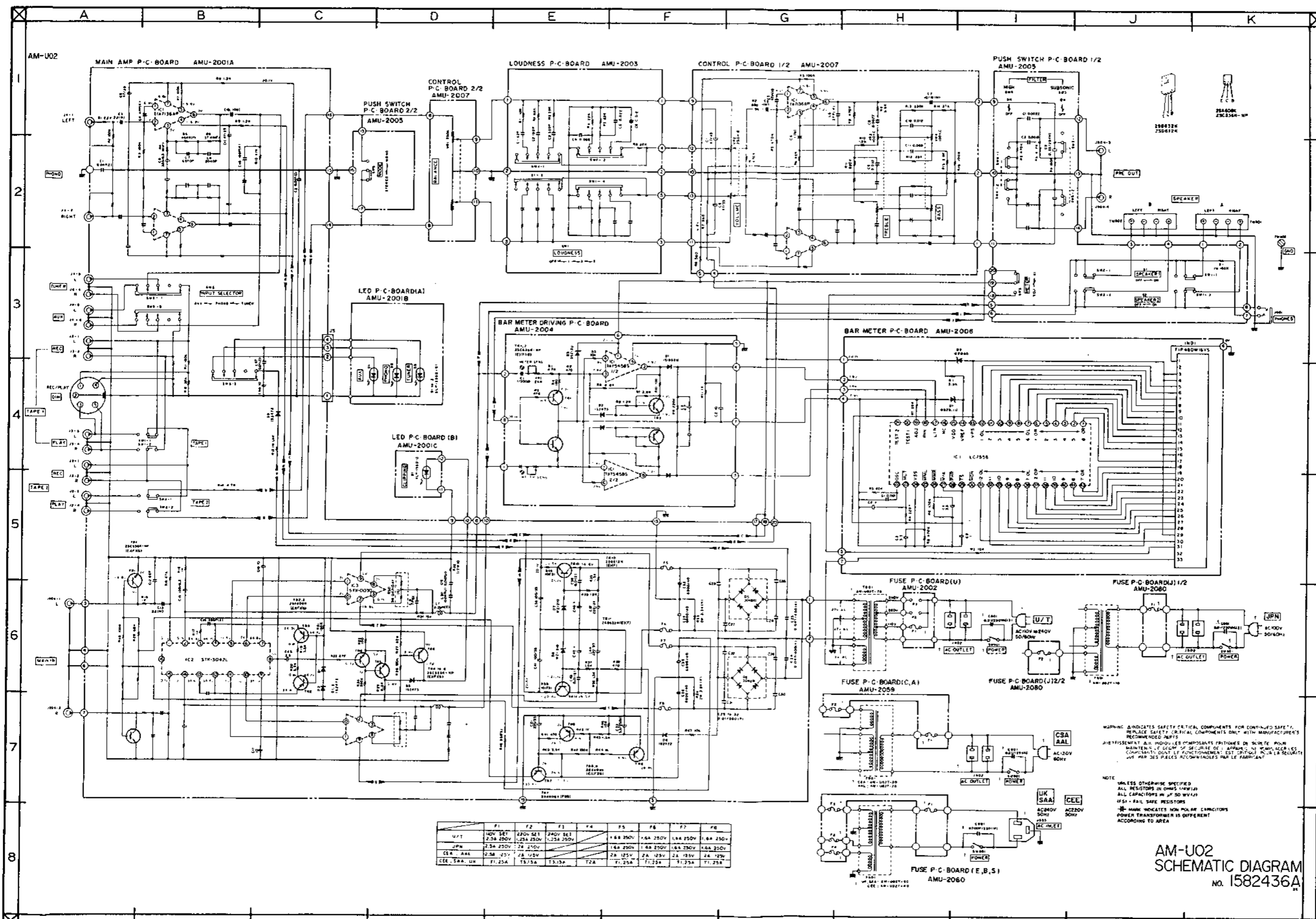


| Q  | VAL. RES  | CR        |
|----|-----------|-----------|
| Q1 | 100K 1/2W | 100K 1/2W |
| Q2 | 100K 1/2W | 100K 1/2W |
| Q3 | 100K 1/2W | 100K 1/2W |
| Q4 | 100K 1/2W | 100K 1/2W |



NOTE: UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 5% TOLERANCE. ALL CAPACITORS IN  $\mu$ F 50 VDC. (F) = FUSE SAFETY RESISTORS. (H) = NON-POLAR CAPACITORS. POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA.

AT-K02  
SCHEMATIC DIAGRAM  
No. 1582437A



|              | F1        | F2       | F3         | F4 | F5        | F6        | F7        | F8        |
|--------------|-----------|----------|------------|----|-----------|-----------|-----------|-----------|
| U/T          | 10V 5E1   | 220V 5E1 | 240V 5E1   |    | 1.68 250V | 1.6A 250V | 1.6A 250V | 1.6A 250V |
| JPN          | 2.5A 250V | 2A 250V  | 1.25A 250V |    | 1.6A 250V | 1.6A 250V | 1.6A 250V | 1.6A 250V |
| CSA          | 2.5A 250V | 2A 250V  | 1.25A 250V |    | 1.6A 250V | 1.6A 250V | 1.6A 250V | 1.6A 250V |
| CEE, SAA, UK | 1.25A     | 1.5A     | 1.5A       | 2A | 1.25A     | 1.25A     | 1.25A     | 1.25A     |

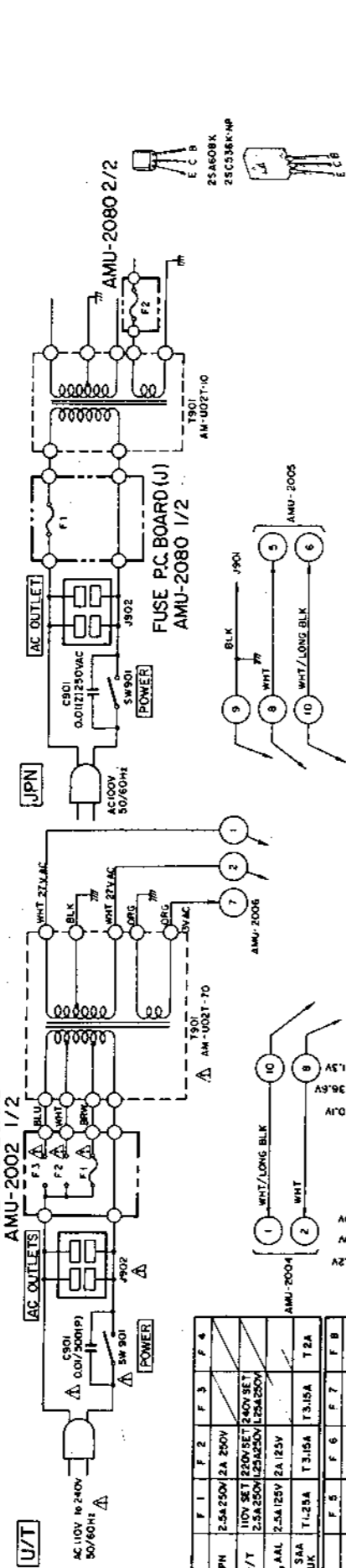
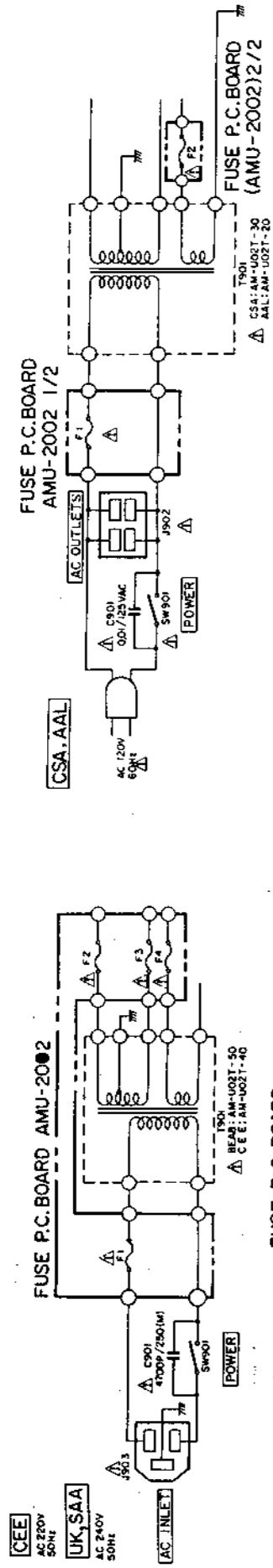
WARNING: INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.  
 AVERTISSEMENT: EN INDIQUE LES COMPOSANTS CRITIQUES EN SCIEUR POUR MAINTENIR LE NIVEAU DE SECURITE DE L'APPAREIL. NE REMPLACEZ LES COMPOSANTS QU'AVEC LE FONCTIONNAIRE EST CRITIQUE POUR LA SECURITE. NE REMPLACEZ QUE LES PIECES RECOMMANDEES PAR LE FABRICANT.

NOTE: UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN OHMS (1/4W/1/2W) ALL CAPACITORS IN μF (50V/50V) #FS - FAIL SAFE RESISTORS \* MARK INDICATES NON POLAR CAPACITORS POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

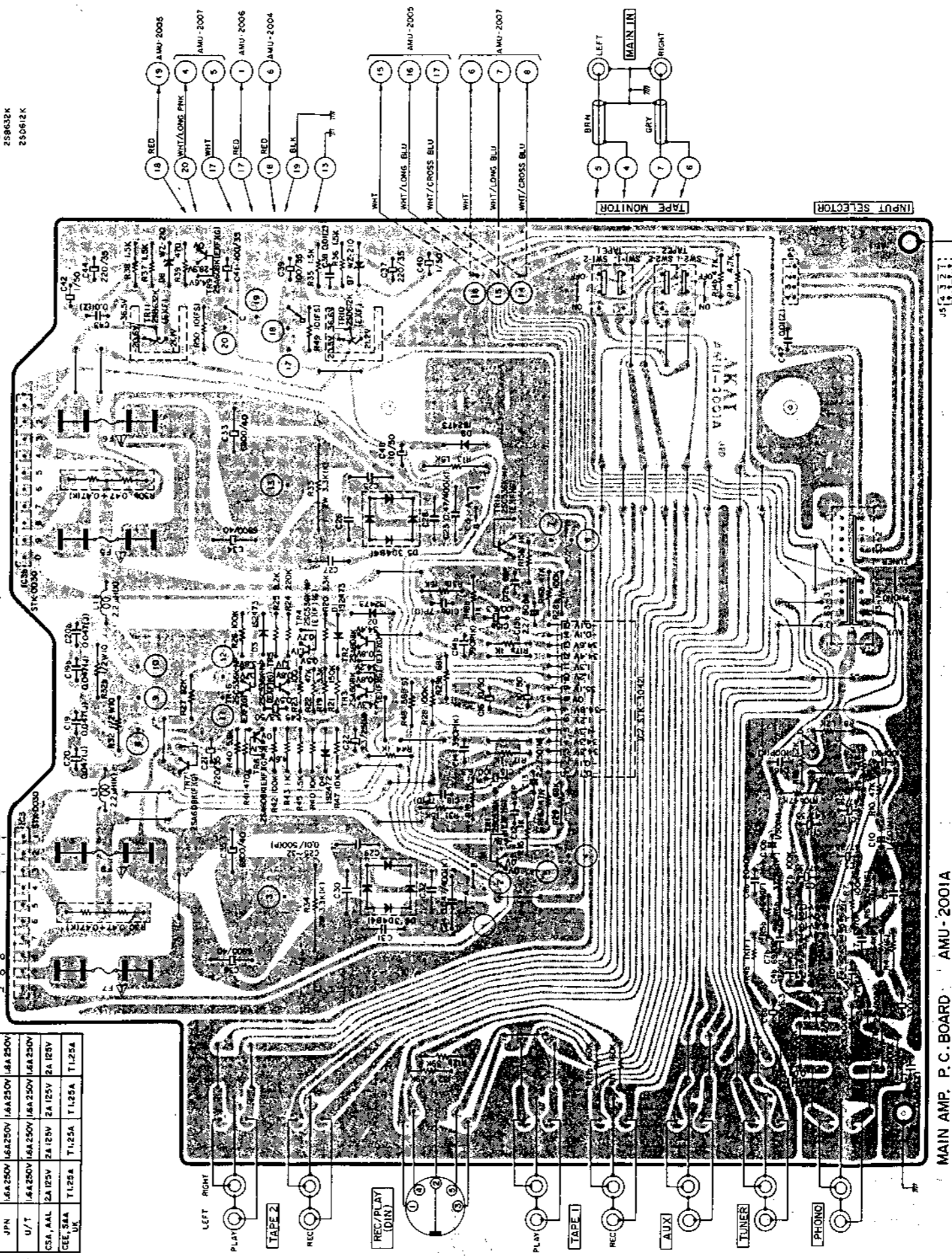
AM-U02 SCHEMATIC DIAGRAM No. 1582436A

# COMPOSITION OF VARIOUS P.C BOARDS

Main Amp. P.C Board AMU-2001A (3ED) and LED P.C Board (A)/(B) AMU-2001B/C

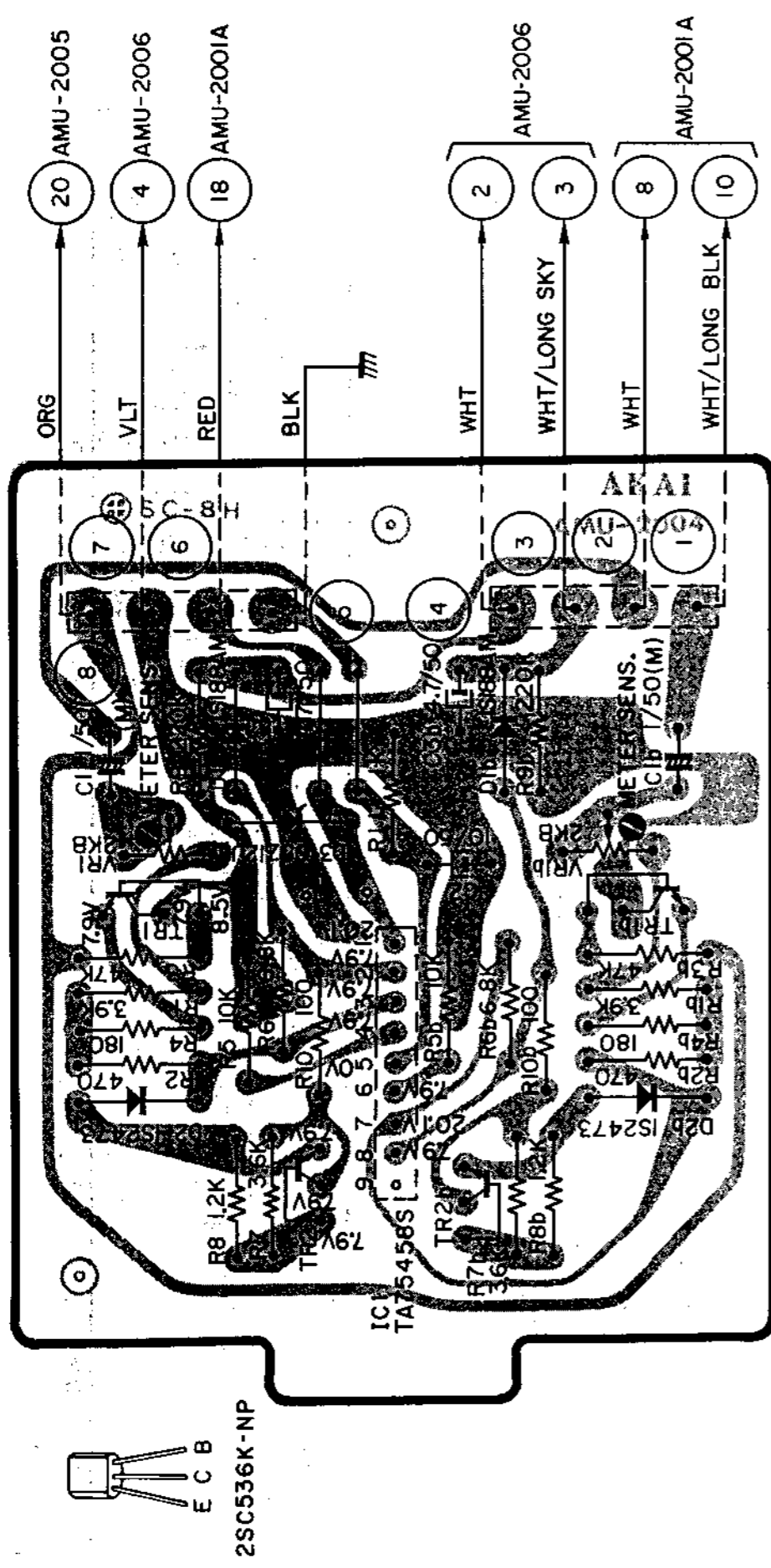


|          | F 1                                 | F 2               | F 3 | F 4 |
|----------|-------------------------------------|-------------------|-----|-----|
| JPN      | 2.5A 250V 2A 250V                   |                   |     |     |
| UK, SAA  | 100V SET 250V SET 250V SET 250V SET |                   |     |     |
| CSA, AAL | 2.5A 125V 2A 125V                   |                   |     |     |
| CEE, SAA | T1.25A T1.25A T1.5A T1.5A           | T2A               |     |     |
| UK       |                                     |                   |     |     |
|          | F 5                                 | F 6               | F 7 | F 8 |
| JPN      | .6A 250V .6A 250V .6A 250V .6A 250V | .6A 250V .6A 250V |     |     |
| U/T      | .6A 250V .6A 250V .6A 250V .6A 250V | .6A 250V .6A 250V |     |     |
| CSA, AAL | 2A 125V 2A 125V 2A 125V 2A 125V     | 2A 125V 2A 125V   |     |     |
| CEE, SAA | T1.25A T1.25A T1.25A T1.25A         | T1.25A T1.25A     |     |     |
| UK       |                                     |                   |     |     |



WARNING: INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS  
 AVERTISSEMENT: IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

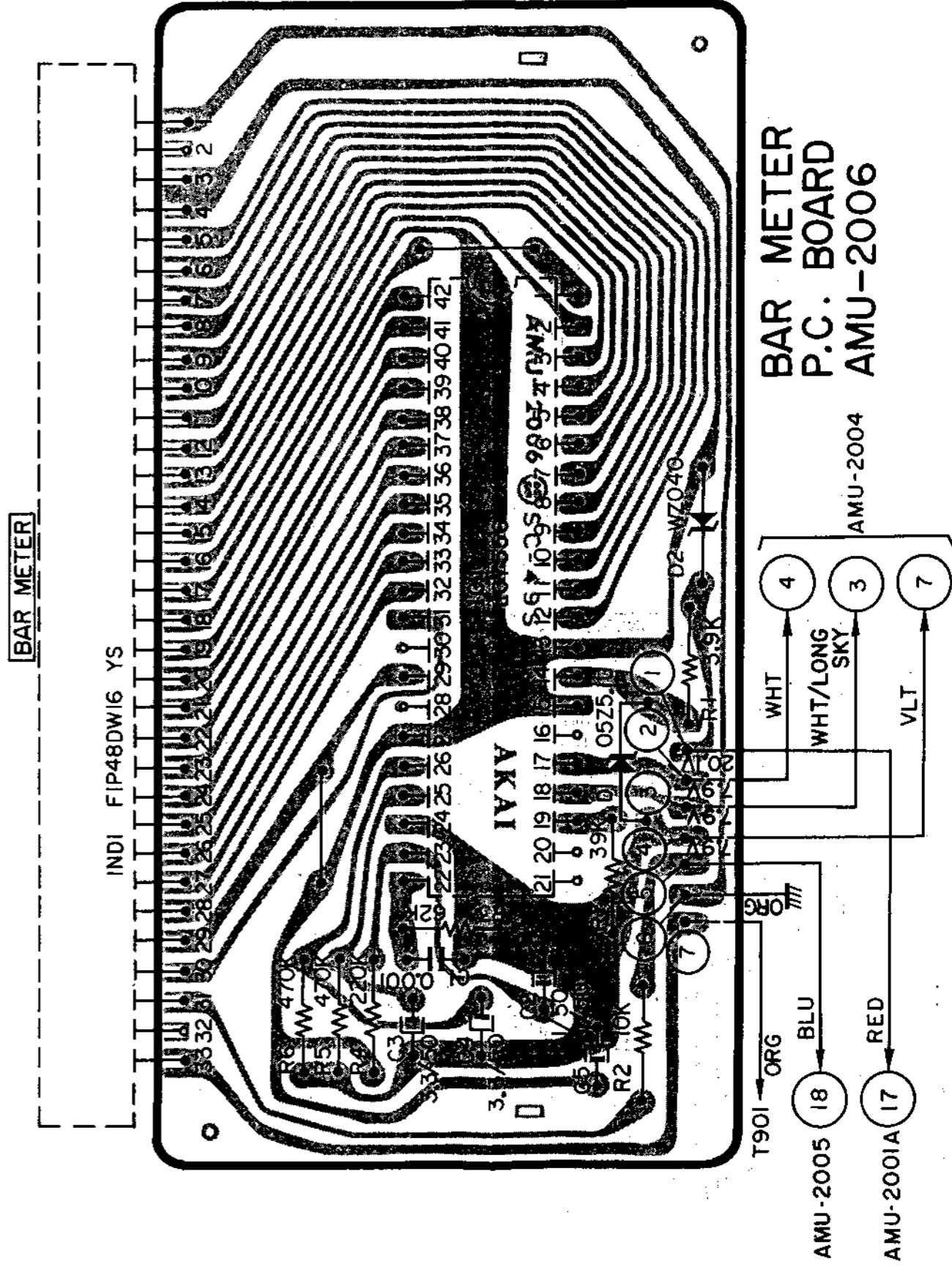
Bar Meter Driving P.C Board AMU-2004



BAR METER DRIVING P.C. BOARD  
 AMU-2004

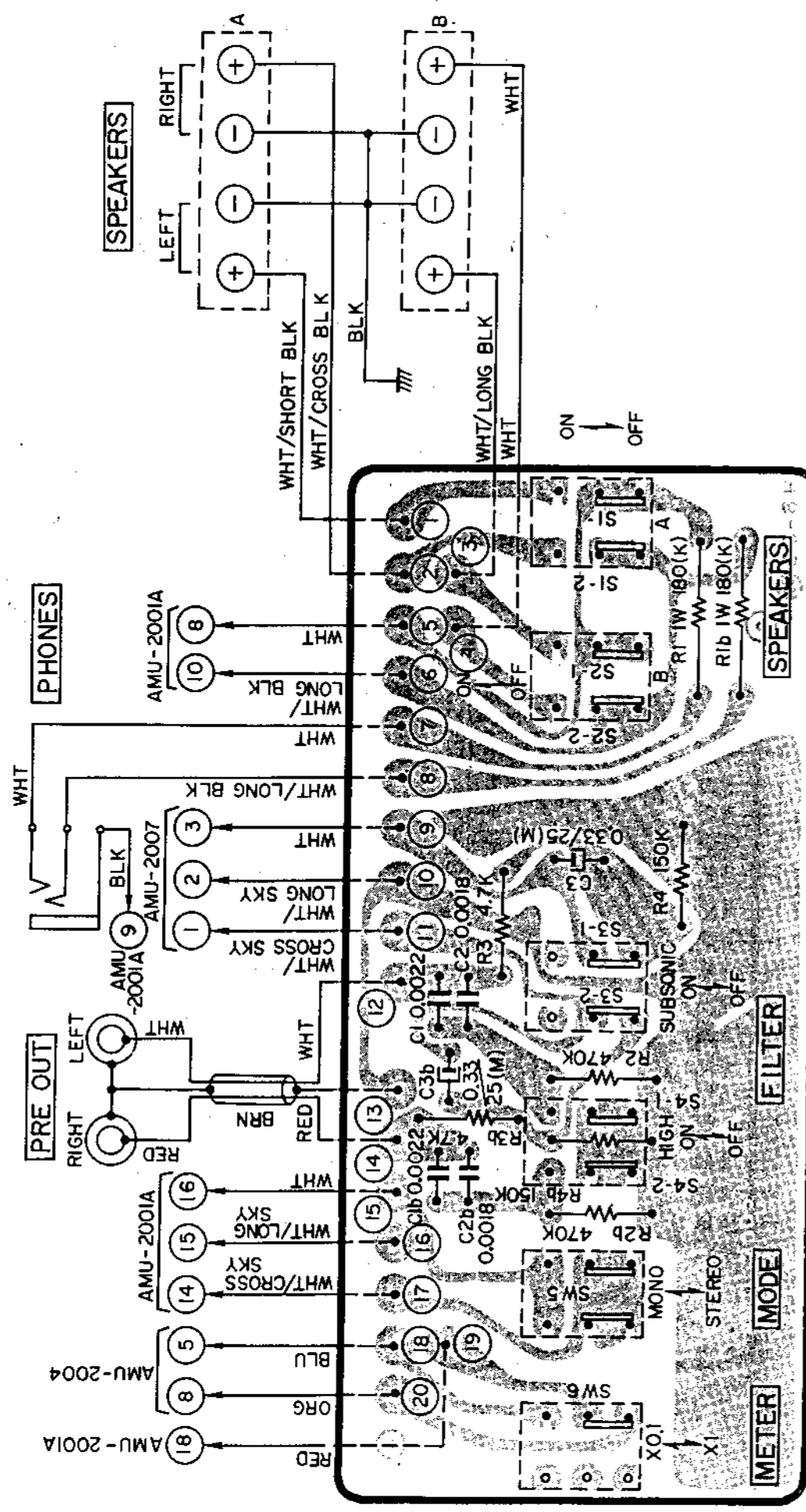
TR1, TR2, TR1B, TR2B  
 2SC536K-NP (EXF)(G)

Bar Meter P.C Board AMU-2006





Push Switch P.C Board AMU-2005



PUSH SWITCH P.C BOARD  
AMU-2005

Loudness P.C Board AMU-2003 and Control P.C Board AMU-2007

