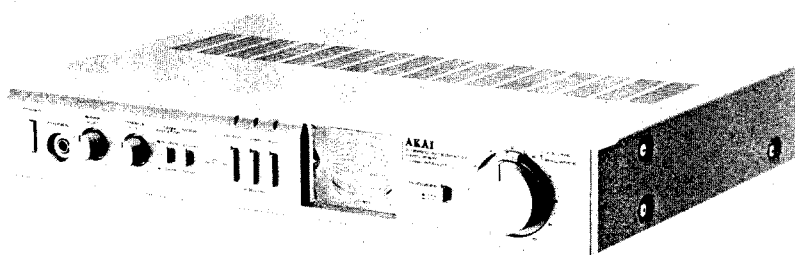


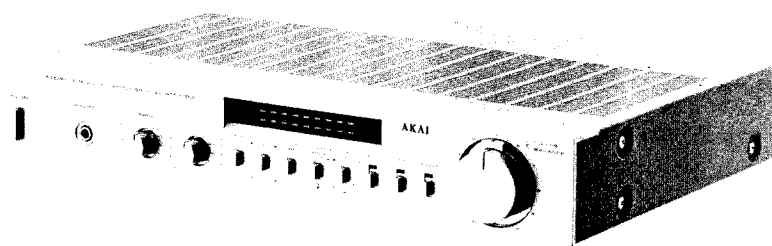
AT-K11/L



AT-K22/L



AM-U11



AM-U22

FM AM STEREO TUNER
AT-K11/L
MODEL AT-K22/L
STEREO INTEGRATED AMPLIFIER
AM-U11
MODEL AM-U22

THIS MANUAL IS APPLICABLE TO BOTH SILVER AND BLACK PANEL MODELS

| | | |
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SECTION 1

SERVICE MANUAL

MODEL AT-K11/L, AT-K22/L

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

I. TECHNICAL DATA

1. MODEL AT-K11/L

FM TUNER SECTION

| | |
|--|-----------------------|
| TUNING FREQUENCY RANGE | 87.5 MHz to 108.0 MHz |
| USABLE SENSITIVITY (IHF) (300 ohms) | 1.9 μ V |
| CAPTURE RATIO | 1.3 dB |
| SELECTIVITY (IHF) (400 kHz) | 60 dB |
| IMAGE REJECTION | 55 dB |
| IF REJECTION | 85 dB |
| SPURIOUS REJECTION | 85 dB |
| AM SUPPRESSION | 60 dB |
| SUB CARRIER SUPPRESSION | 60 dB |
| S/N (MONO/STEREO) | 70 dB/65 dB |
| T.H.D. (MONO/STEREO) | 0.1%/0.15% |
| STEREO SEPARATION (1 kHz) | 45 dB |
| MUTING LEVEL (INPUT LEVEL) | 22 dB |

AM TUNER SECTION (MW FOR AT-K11L)

| | |
|---|----------------------|
| TUNING FREQUENCY RANGE | 525 kHz to 1,605 kHz |
| USABLE SENSITIVITY (IHF) BAR ANTENNA | 100 μ V/m |
| EXTERNAL ANTENNA | 10 μ V |
| SELECTIVITY (IHF) | 30 dB |
| IMAGE REJECTION | 48 dB |
| IF REJECTION | 33 dB |
| S/N | 50 dB |
| T.H.D. | 0.3% |

LW TUNER SECTION (AT-K11L ONLY)

| | |
|---|--------------------|
| TUNING FREQUENCY RANGE | 135 kHz to 350 kHz |
| USABLE SENSITIVITY (IHF) BAR ANTENNA | 200 μ V/m |
| EXTERNAL ANTENNA | 17 μ V |
| SELECTIVITY (IHF) | 30 dB |
| IMAGE REJECTION | 45 dB |
| IF REJECTION | 33 dB |
| S/N | 50 dB |
| T.H.D. | 0.3% |

OUTPUT SECTION

| | |
|----------------------------|--|
| OUTPUT LEVEL FM(100% MOD.) | 775 mV |
| AM(30% MOD.) | 250 mV |
| OUTPUT IMPEDANCE | 3.3 kohms |
| POWER REQUIREMENTS | 120 V, 60 Hz for U.S.A. and Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK and Australia 110 V/220 V/240 V, 50/60 Hz internally switchable for other countries. |
| DIMENSIONS | 440(W) x 78(H) x 333(D) mm (17.3 x 3.1 x 13.1 inches) |
| WEIGHT | 4.6 kg (10.1 lbs) |

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

2. MODEL AT-K22/L

FM TUNER SECTION

| | |
|--|-----------------------|
| TUNING FREQUENCY RANGE | 87.5 MHz to 108.0 MHz |
| USABLE SENSITIVITY (IHF) (300 ohms) | 1.9 μ V |
| CAPTURE RATIO | 1.3 dB |
| SELECTIVITY (IHF) (400 kHz) | 65 dB |
| IMAGE REJECTION | 56 dB |
| IF REJECTION | 90 dB |
| SPURIOUS REJECTION | 85 dB |
| AM SUPPRESSION | 60 dB |
| SUB CARRIER SUPPRESSION | 60 dB |
| S/N (MONO/STEREO) | 73 dB/65 dB |
| T.H.D. (MONO/STEREO) | 0.1%/0.15% |
| STEREO SEPARATION (1 kHz) | 45 dB |
| MUTING LEVEL (INPUT LEVEL) | 22 dB |

AM TUNER SECTION (MW FOR AT-K22L)

| | |
|--------------------------------|----------------------|
| TUNING FREQUENCY RANGE | 525 kHz to 1,605 kHz |
| USABLE SENSITIVITY (IHF) (BAR) | 100 μ V/m |
| SELECTIVITY (IHF) | 30 dB |
| IMAGE REJECTION | 48 dB |
| IF REJECTION | 33 dB |
| S/N | 50 dB |
| T.H.D. | 0.3% |

LW TUNER SECTION (AT-K22L ONLY)

| | |
|--------------------------|--------------------|
| TUNING FREQUENCY RANGE | 135 kHz to 350 kHz |
| USABLE SENSITIVITY (IHF) | |
| BAR ANTENNA | 200 μ V/m |
| EXTERNAL ANTENNA | 17 μ V |
| SELECTIVITY (IHF) | 30 dB |
| IMAGE REJECTION | 45 dB |
| IF REJECTION | 33 dB |
| S/N | 50 dB |
| T.H.D. | 0.3% |

OUTPUT SECTION

| | | |
|--------------------|---------------|--|
| OUTPUT LEVEL | FM(100% MOD.) | 775 mV |
| | AM(30% MOD.) | 250 mV |
| OUTPUT IMPEDANCE | | 3.3 kohms |
| POWER REQUIREMENTS | | 120 V, 60 Hz for U.S.A. and Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK and Australia 110 V/220 V/240 V, 50/60 Hz internally switchable for other countries. |
| DIMENSIONS | | 440(W) \times 78(H) \times 290(D) mm (17.3 \times 3.1 \times 11.4 inches) |
| WEIGHT | | 4.5 kg (9.9 lbs) |

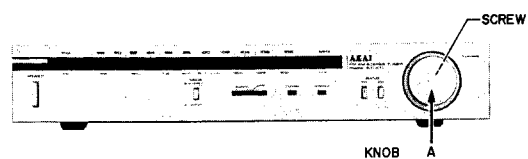
* For improvement purposes, specifications and design are subject to change without notice.

II. DISMANTLING OF UNIT

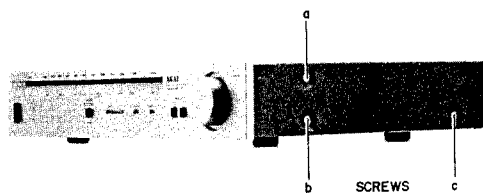
1. MODEL AT-K11/L

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

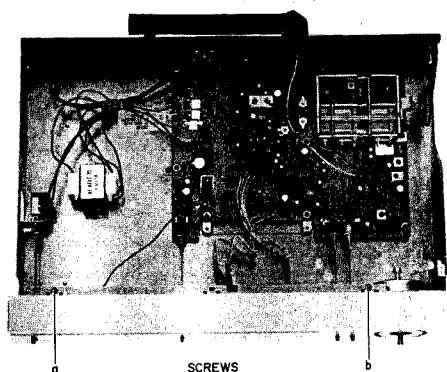
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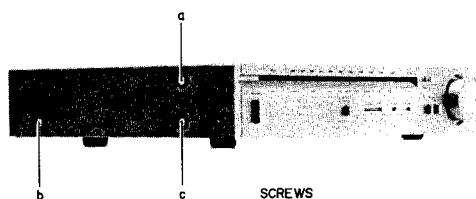
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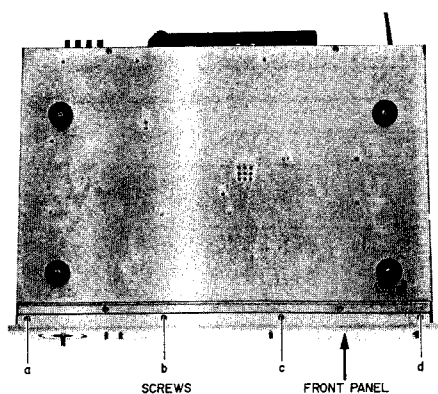
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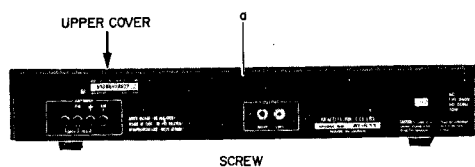
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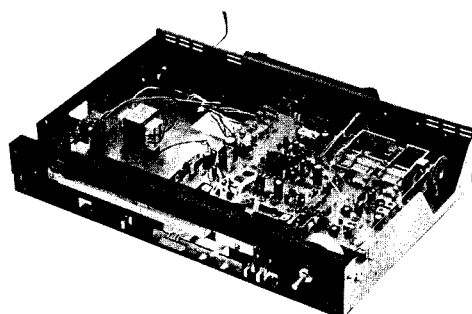
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3

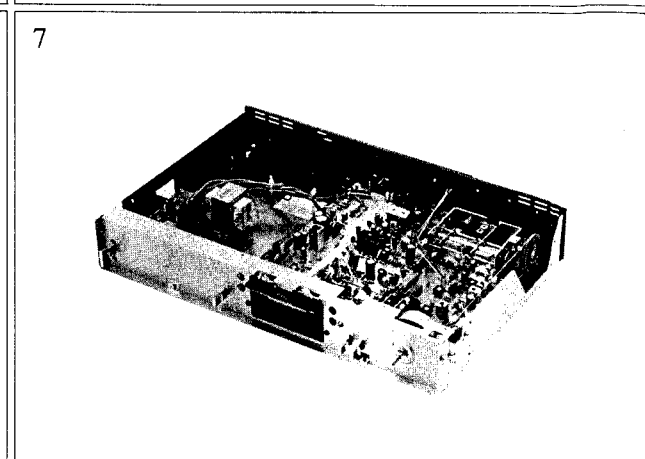
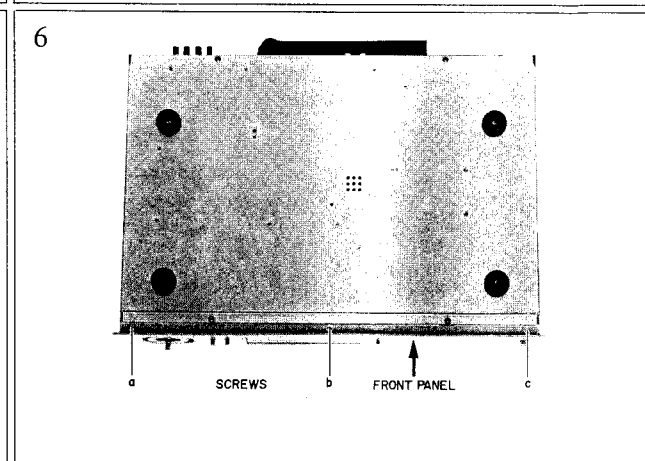
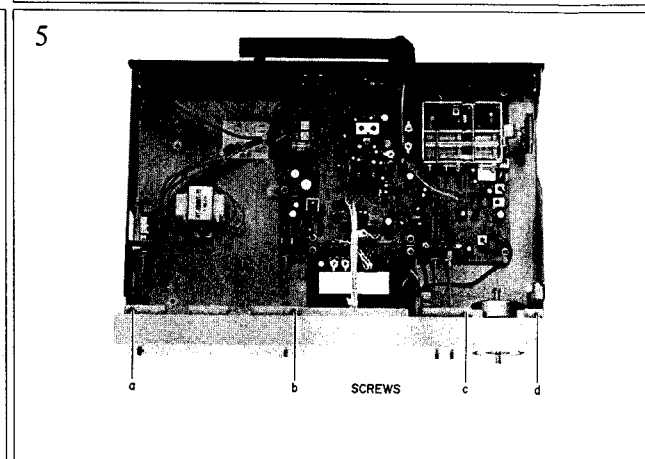
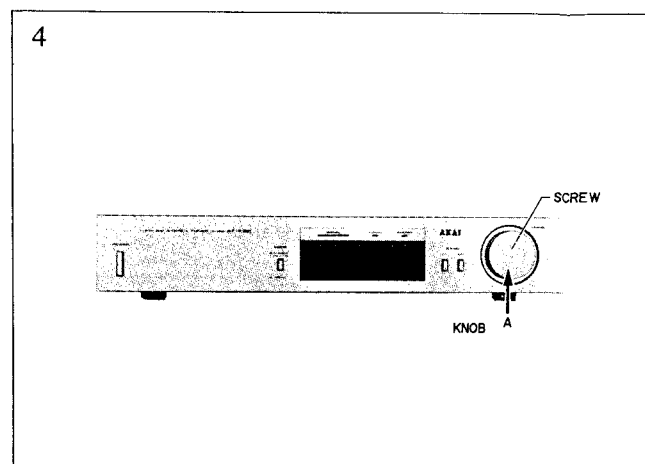
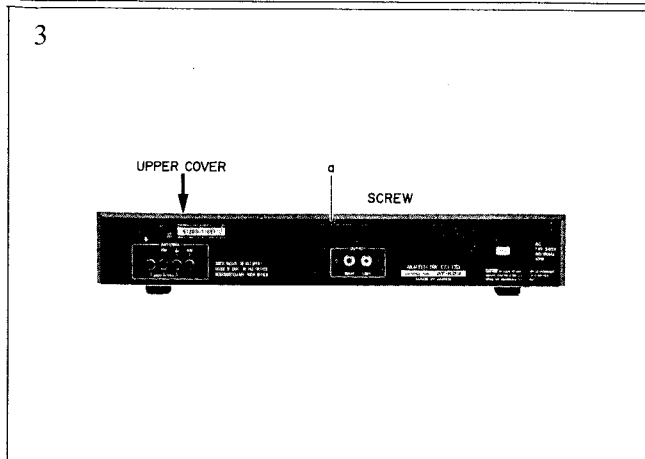
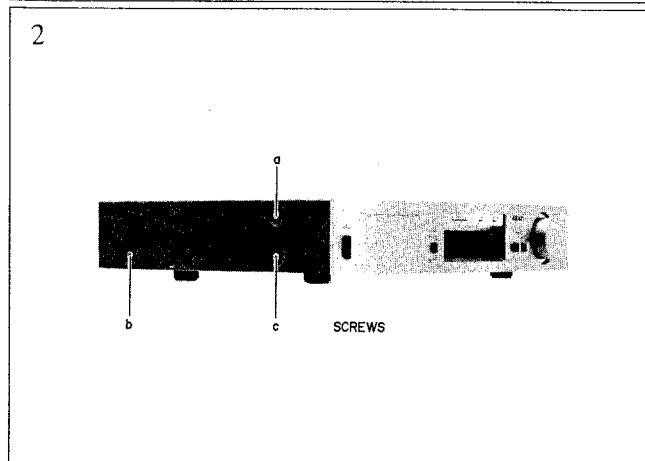
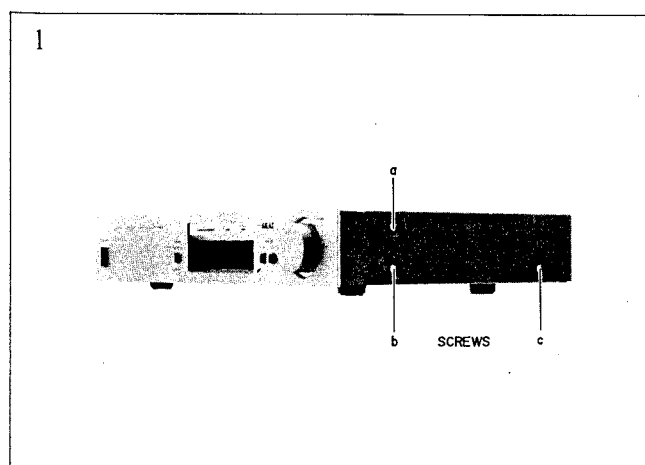


7



2. MODEL AT-K22/L

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



III. CONTROLS

1. MODEL AT-K11/L

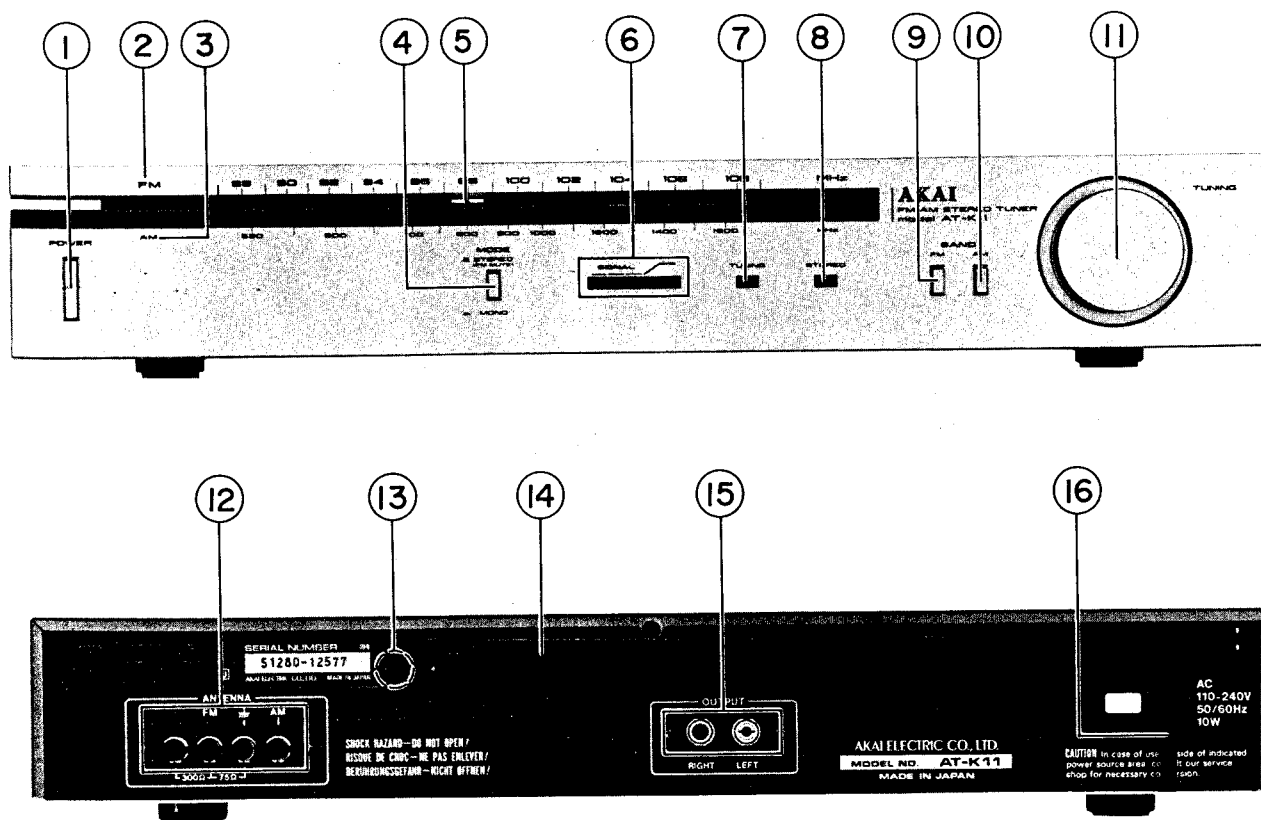


Fig. 1 Controls (AT-K11/L)

- | | |
|------------------------------|---|
| 1. POWER SWITCH | 9. FM SWITCH (AT-K11) |
| 2. FM DIAL SCALE (AT-K11) | FM/AM BANK SELECTOR (AT-K11L) |
| 3. AM DIAL SCALE (AT-K11) | 10. AM SWITCH (AT-K11) |
| FM DIAL SCALE (AT-K11L) | MW/LW BAND SELECTOR (AT-K11L) |
| 4. FM MODE SELECTOR | 11. TUNING KNOB |
| 5. FREQUENCY INDICATOR | 12. FM AND AM ANTENNA TERMINALS |
| 6. SIGNAL STRENGTH INDICATOR | 13. AM ANTENNA (ANT) SELECTOR (AT-K11 L ONLY) |
| 7. FM TUNING INDICATOR | 14. AM FERRITE BAR ANTENNA |
| 8. FM STEREO INDICATOR | 15. OUTPUT JACKS (RIGHT AND LEFT) |
| | 16. AC CORD (CEE, SAA AND UK: AC INLET) |

2. MODEL AT-K22/L

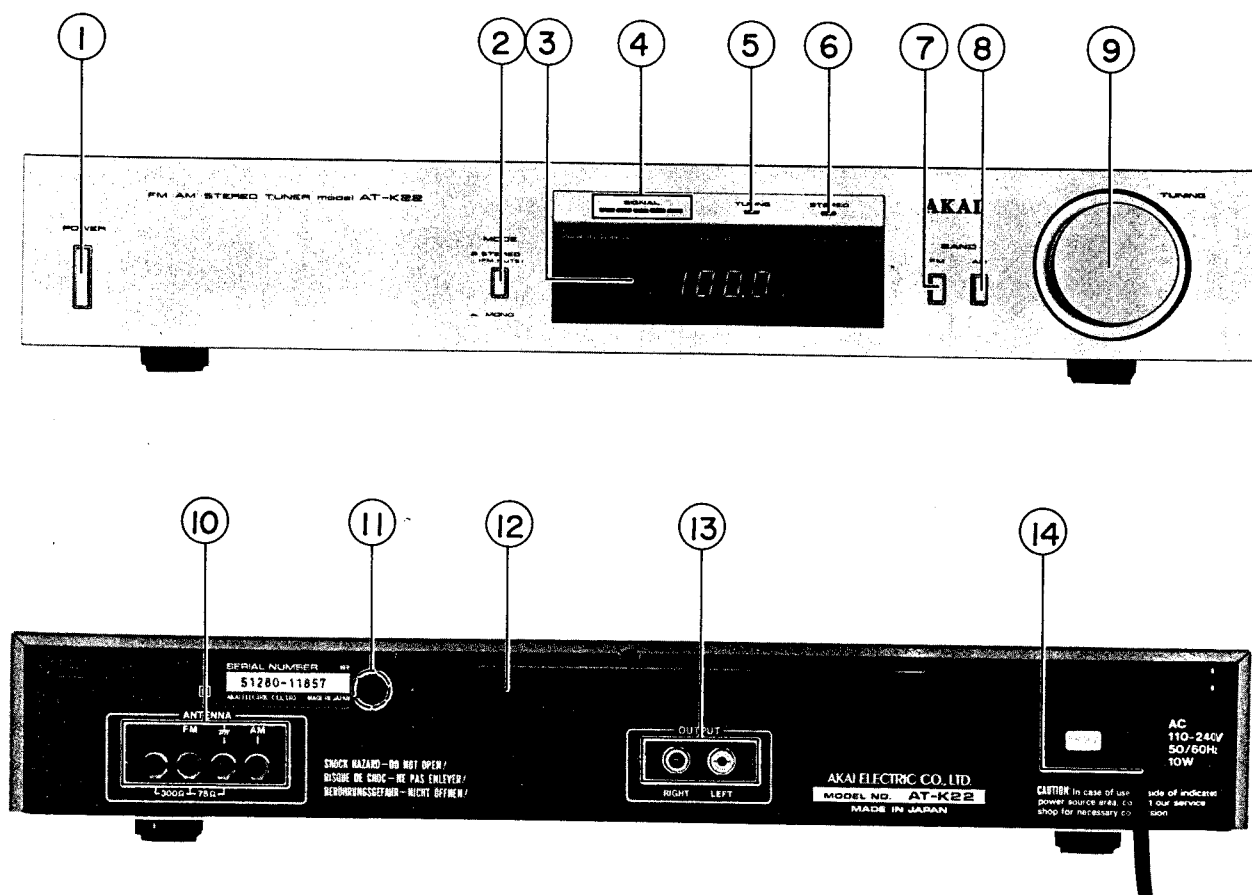


Fig. 2 Controls (AT-K22/L)

- | | |
|-------------------------------|--|
| 1. POWER SWITCH | 8. AM SWITCH (AT-K22) |
| 2. FM MODE SWITCH | MW/LW BAND SELECTOR (AT-K22L) |
| 3. DIGITAL LED DISPLAY | 9. TUNING KNOB |
| 4. SIGNAL STRENGTH INDICATOR | 10. FM AND AM ANTENNA TERMINALS |
| 5. FM TUNING INDICATOR | 11. AM ANTENNA (ANT) SELECTOR (AT-K22L ONLY) |
| 6. FM STEREO INDICATOR | 12. AM FERRITE BAR ANTENNA |
| 7. FM SWITCH (AT-K22) | 13. OUTPUT JACKS (RIGHT AND LEFT) |
| AM/FM BAND SELECTOR (AT-K22L) | 14. AC CORD (CEE, SAA AND UK: AC INLET) |

IV. PRINCIPAL PARTS LOCATION

1. MODEL AT-K11/L

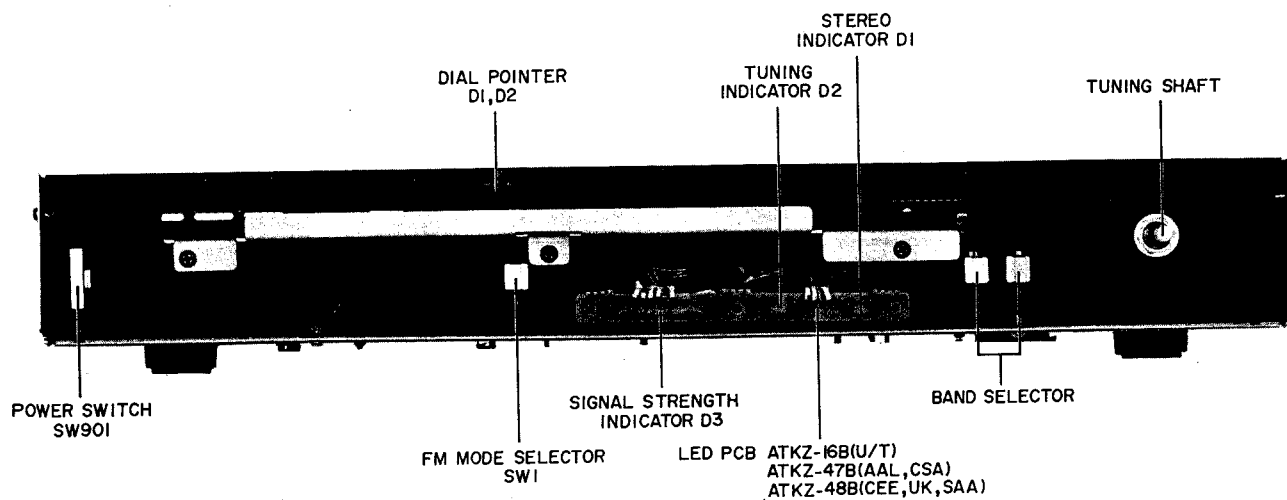


Fig. 3 Front View

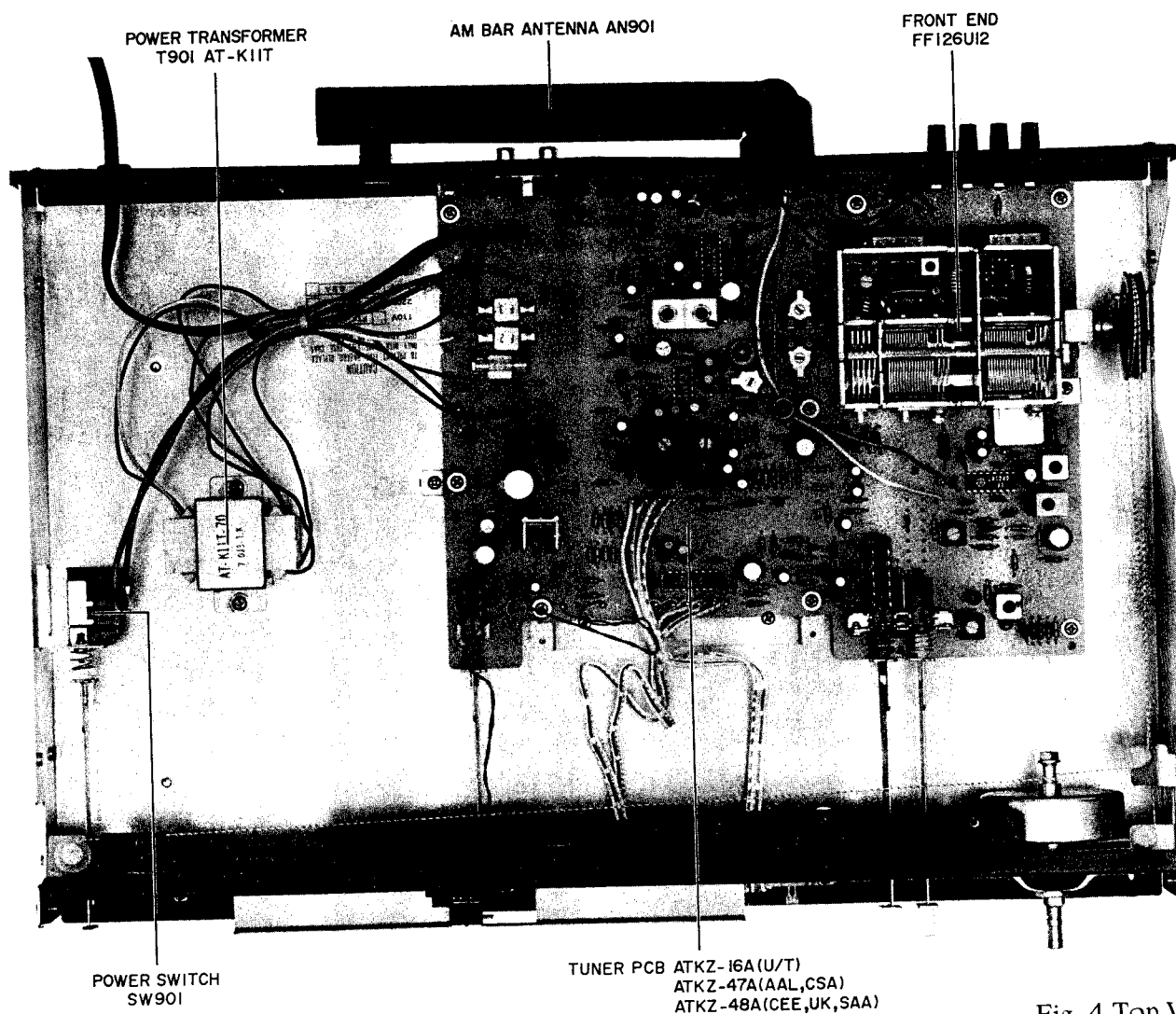


Fig. 4 Top View

2. MODEL AT-K22/L

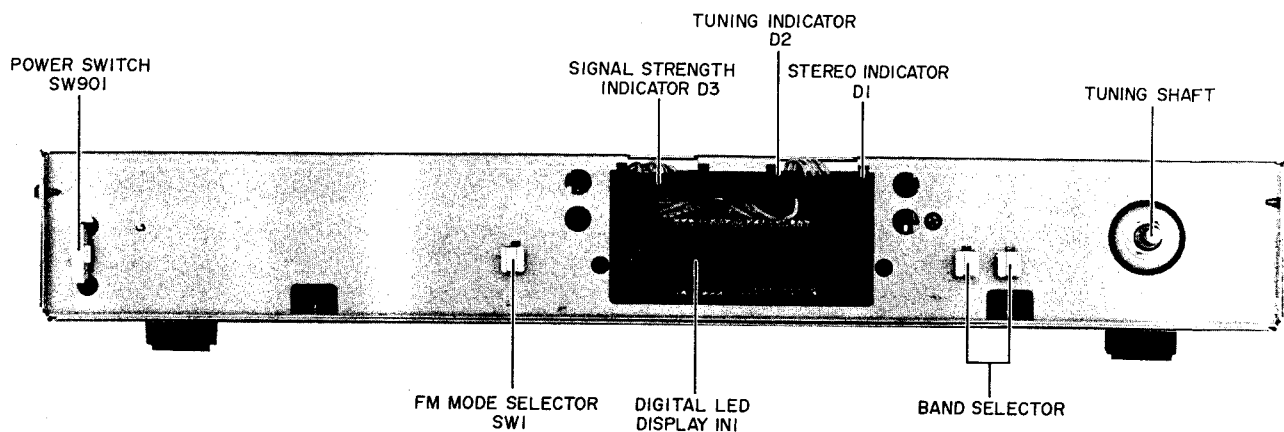


Fig. 5 Front View

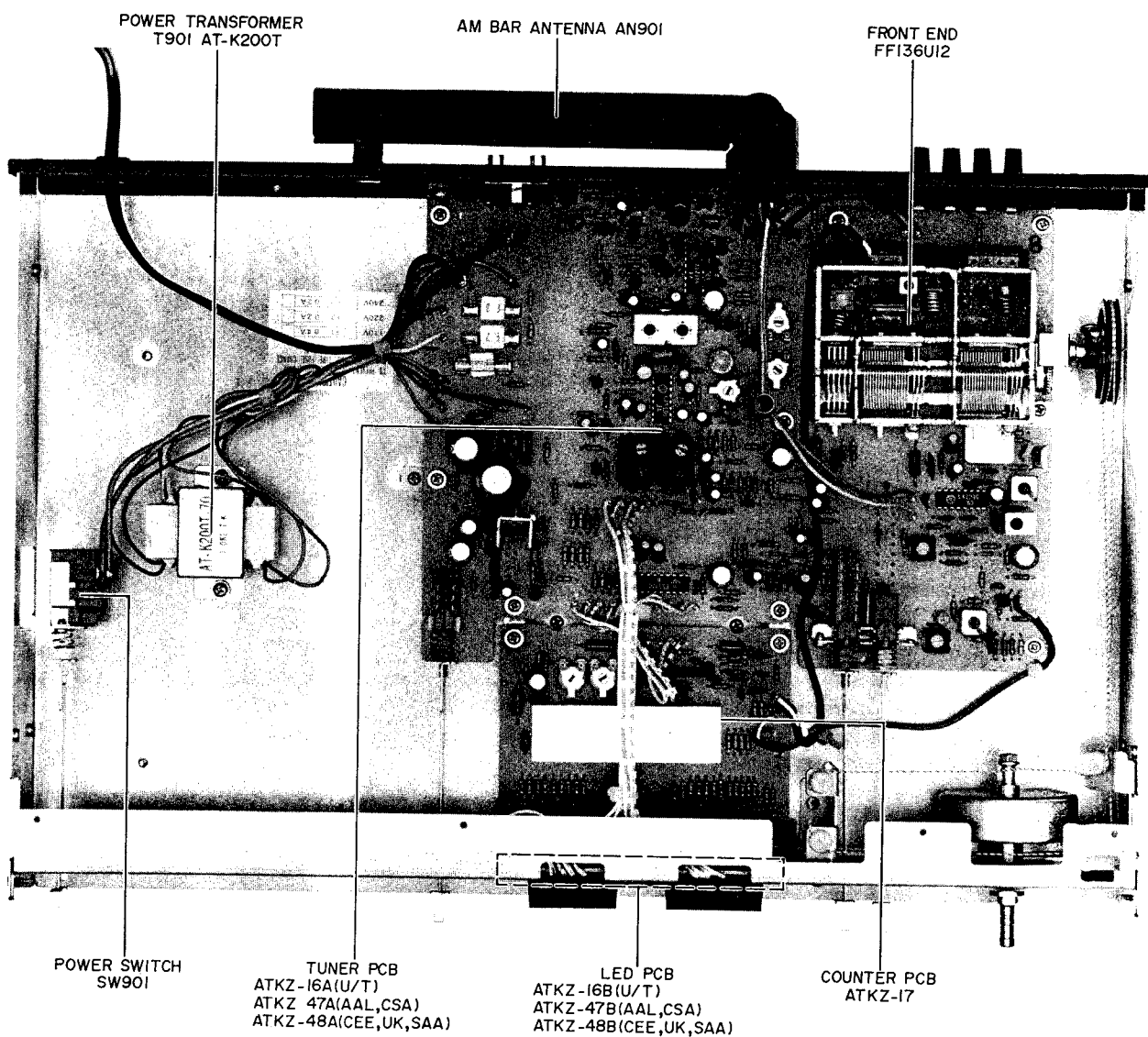


Fig. 6 Top View

V. VOLTAGE CONVERSION

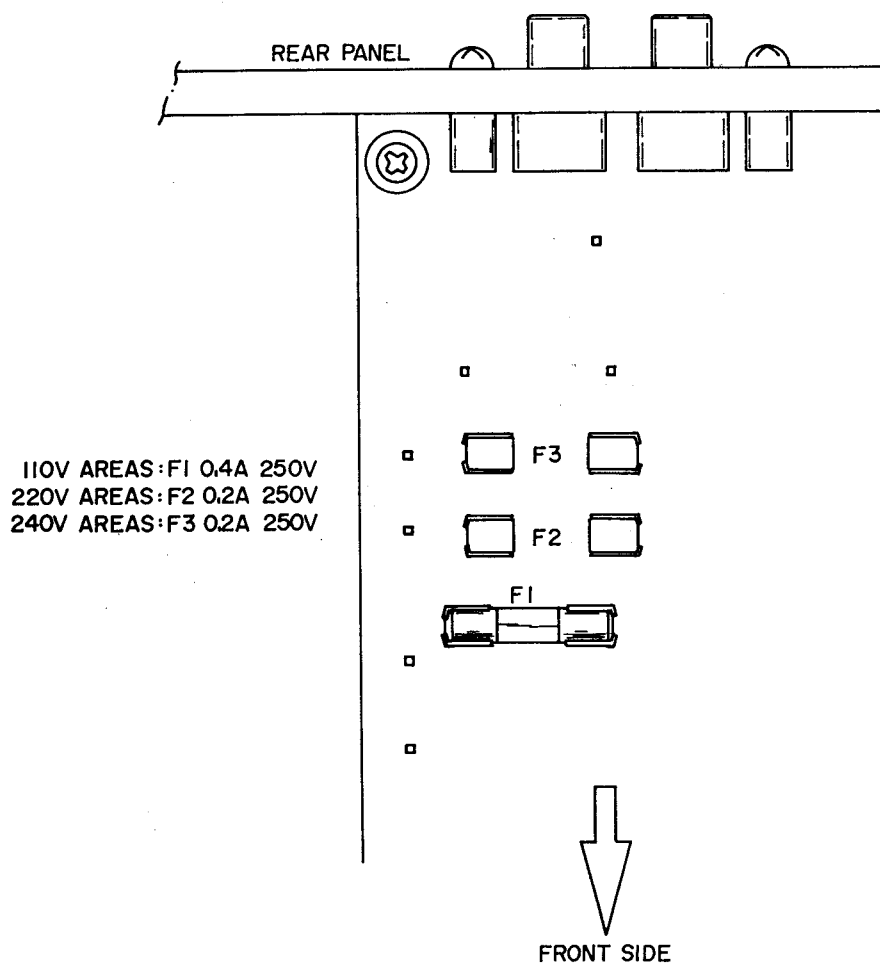


Fig 7 Voltage Conversion (U/T Model Only)

Models for Canada, U.S.A., 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 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 case.
- 3) Remove existing Line Voltage Fuse and insert required Line Voltage Fuse in proper fuse holder. Follow markings explicitly.

VI. TUNER ADJUSTMENTS

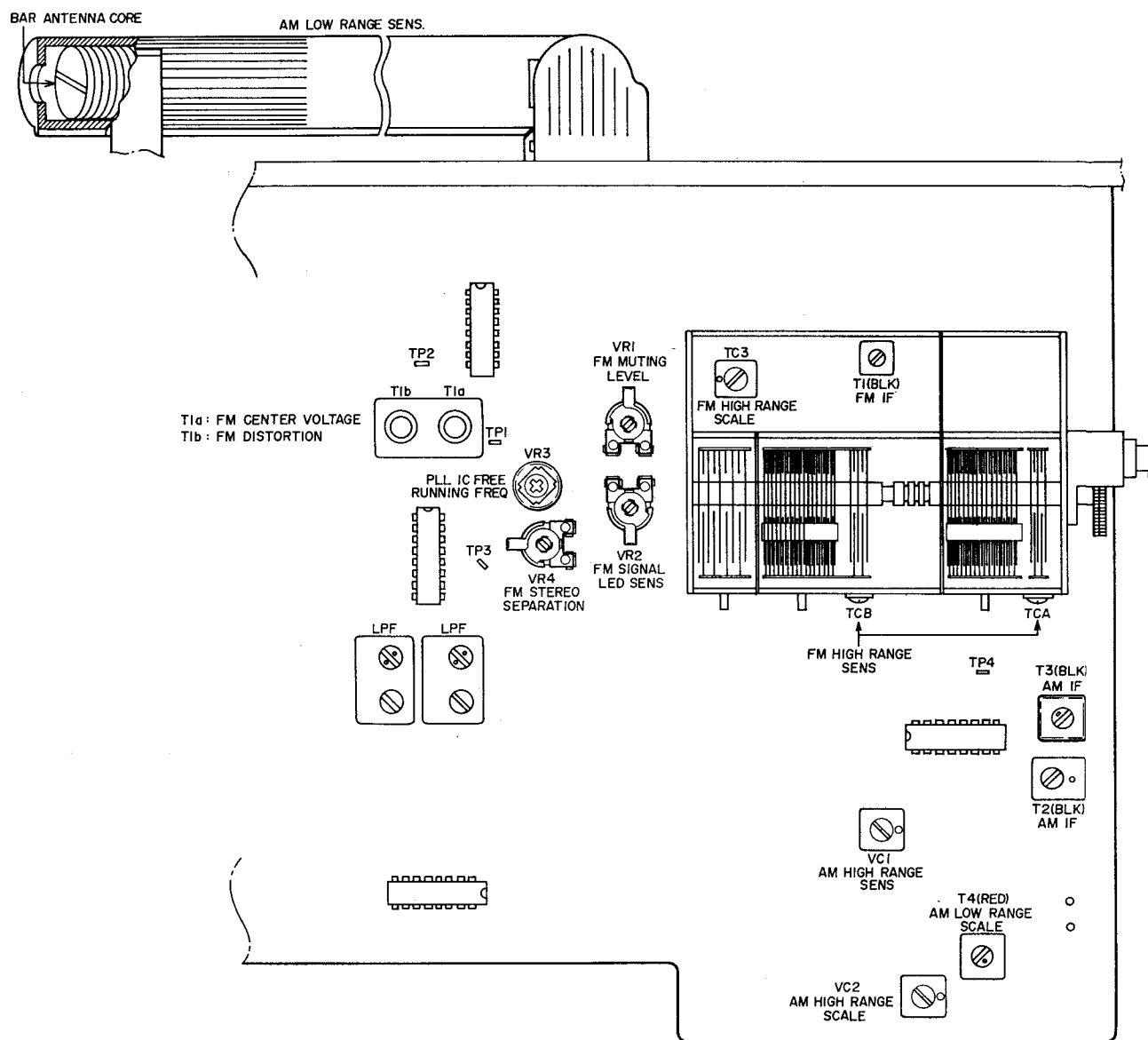


Fig. 8 Tuner P.C Board

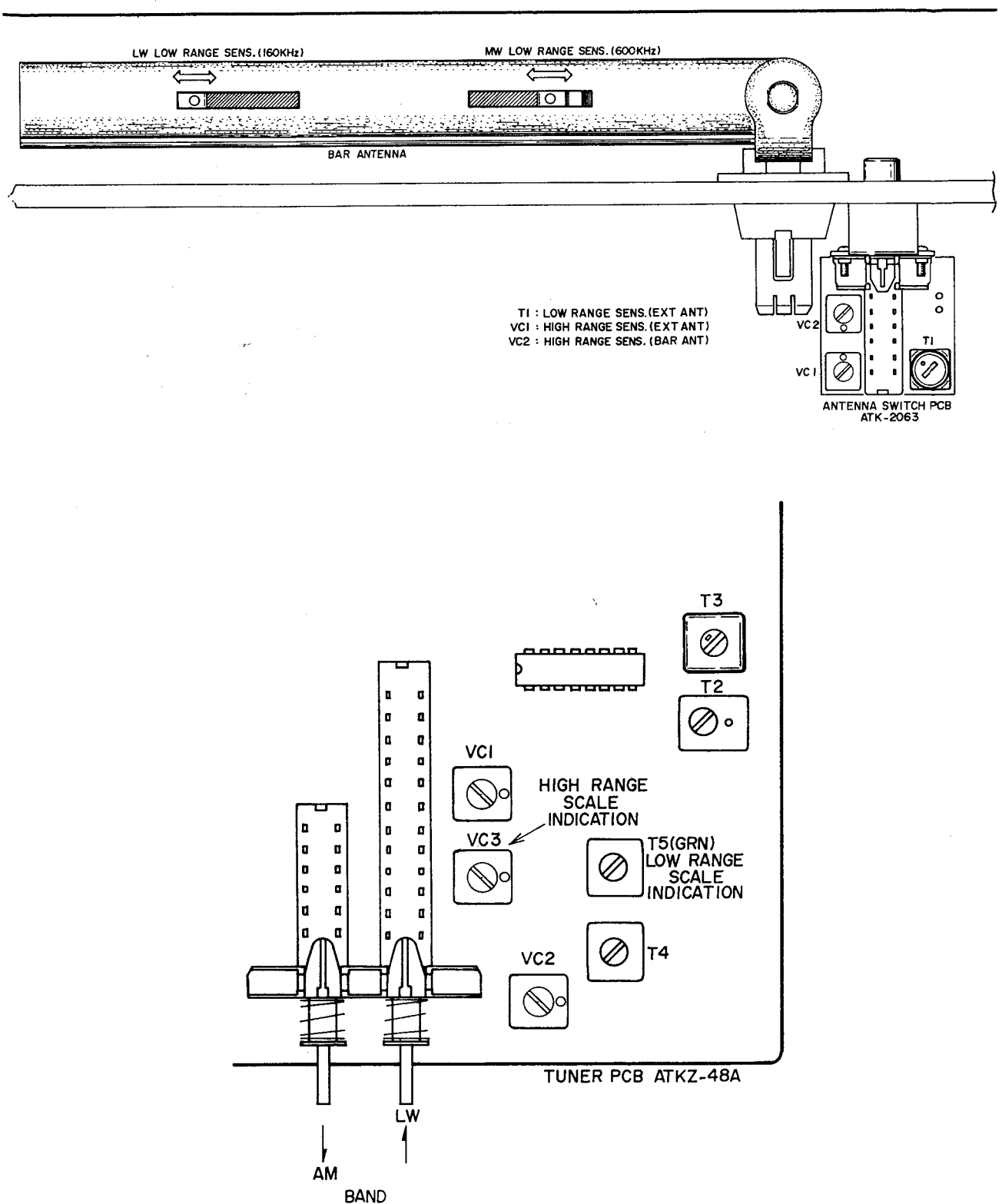


Fig. 9 Tuner P.C Board ATKZ-48A and Antenna Switch P.C Board ATK-2063 (AT-K11L and AT-K22L)

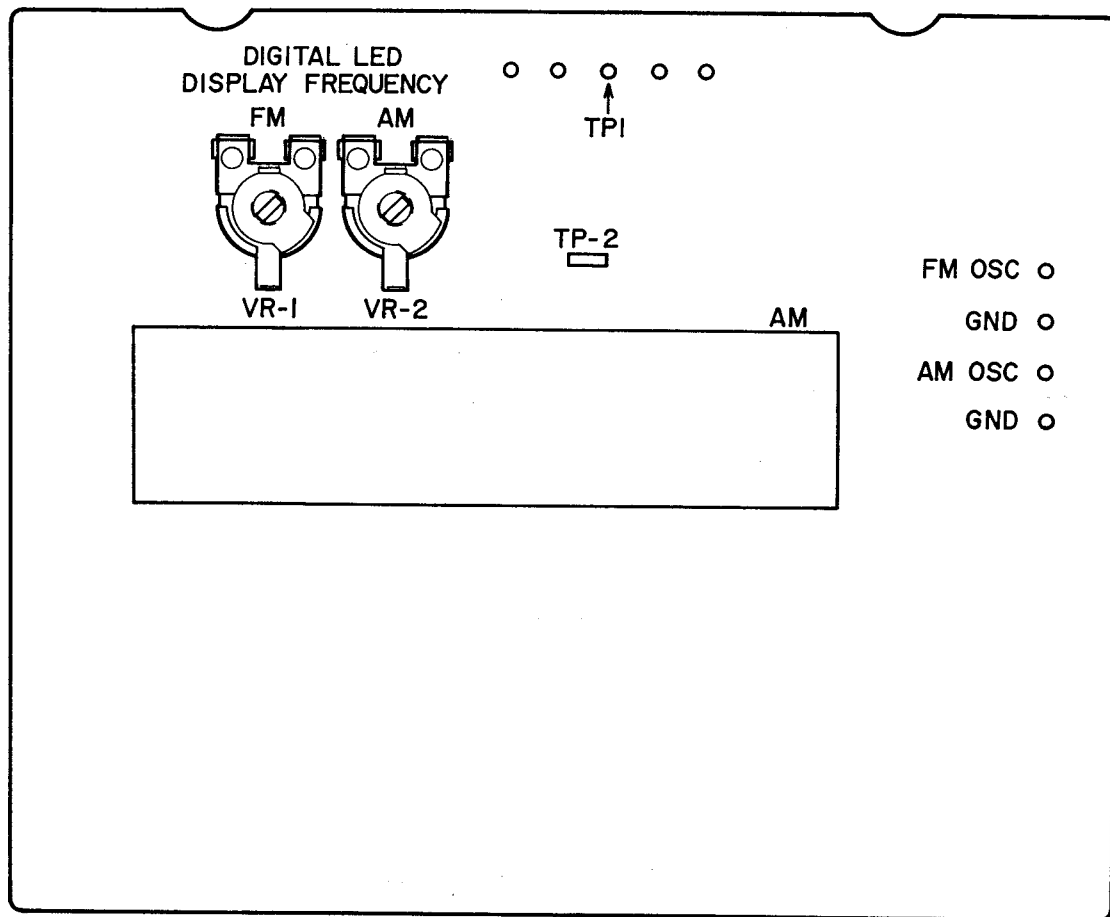


Fig. 10 Counter P.C Board ATKZ-17

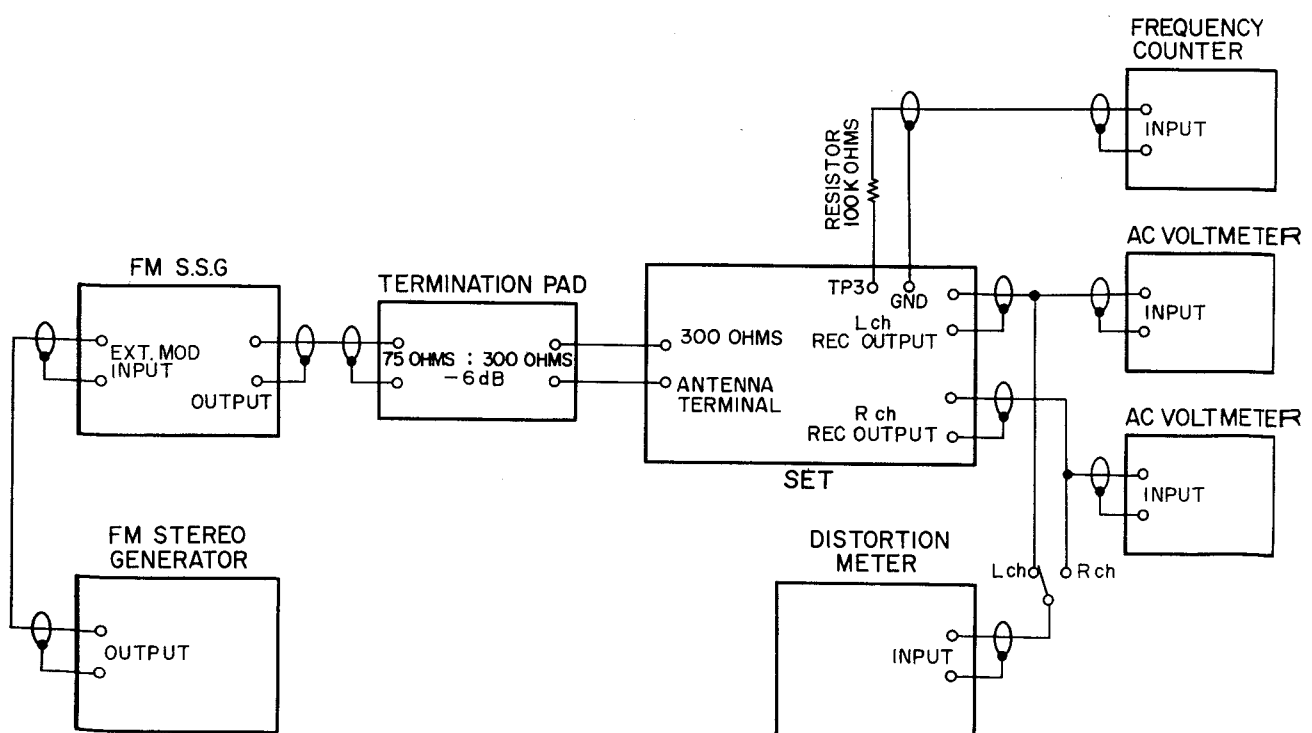


Fig. 11 Instrument Connections

1. FM SECTION ADJUSTMENTS (Refer to Figs. 8, 10, 11)

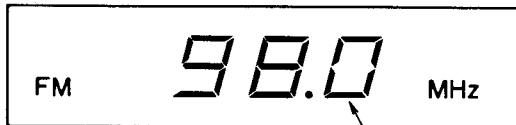
Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 8).

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|---|--|---|--|
| 1 | Front-end IF Coil | T1 (BLK) (Front-end) | Maximum Noise Level | BAND switch to FM, and MODE to MONO. Turns only noise without interference from broadcasting. |
| 2 | Center Voltage | T1-a | Centered Tuning Meter Indication | Connect a Center Tuning Meter between TP1 and TP2. (See Note 1) Turns only noise without interference from broadcasting. |
| 3 | Distortion Factor | T1-b | Distortion Factor: Less than 0.1% | 98 MHz, 60 dB, 1 kHz (mono 100%) input. Less than 0.1% in both channels. |
| 4 | | | | Readjust in Steps 2 and 3. |
| 5 | Confirmation of Output Level • | | 0 dBm \pm 3 dB | 98 MHz, 60 dB, 1 kHz (mono 100%) input. |
| 6 | Signal LED Sensitivity | VR2 (30 K) | | 98 MHz, 50 dB input. Adjust VR2 to a point where 5th LED of SIGNAL LED lights up. (See Note 2) |
| 7 | Digital LED Display Frequency (AT-K22/L Only) | VR1 (10 KB) Counter P.C Board (Fig. 10) | | Apply a 98 MHz, 60 dB input. Short TP1 to GND on the Counter P.C Board. Adjust VR1 until 3rd numeral display becomes stable position. (See Note 3) |
| 8 | High Range Scale Indication | TC3 (Front-end) | (Model AT-K11/L) Maximum Output Minimum Distortion Factor | 108 MHz, 60 dB, 1 kHz (mono 100%) input. Scale indicator to 108 MHz. Error: Within \pm 250 kHz. |
| | | | (Model AT-K22/L) | Turn tuning knob fully clockwise. Display 108 MHz by adjusting TC3. |
| 9 | High Range Sensitivity | TCA, TCB (Front-end) | Distortion Factor: Less than 3% | MODE switch to MONO. 108 MHz, Less than 6 dB, 1 kHz (mono) input. |
| 10 | Confirmation of Low Range Sensitivity | | Distortion Factor: Less than 3% | 88 MHz, Less than 6 dB, 1 kHz (mono) input. (See Notes 4 and 5) |
| 11 | Muting Level | VR1 (30 K) | 22 dB \pm 6 dB | MODE switch to STEREO. 98 MHz, 22 dB, 1 kHz (mono 100%) input. Adjust VR1 until the output signal is reduced to zero. Vary the SSG output by \pm 6 dB and check muting operation. |
| 12 | PLL IC Free Running Frequency | VR3 (4.7 K) | 19 kHz \pm 50 Hz | Connect a Frequency Counter between TP3 and GND on the Tuner P.C Board. (See Note 6) |
| 13 | Stereo Separation (Left→Right) | VR4 (500) | More than 45 dB | 98 MHz, 60 dB, 1 kHz (stereo 100%) Lch input. Minimum output of Rch. |
| 14 | Stereo Separation (Right→Left) | VR4 (500) | More than 45 dB | 98 MHz, 60 dB, 1 kHz (stereo 100%) Rch input. Minimum output of Lch. |

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|--|------------------|---------------------------------------|---|
| 15 | Confirmation of Stereo Distortion Factor | | Distortion Factor: Less than 0.15% | 100 MHz, 60 dB, 1 kHz (stereo 100%) input. If distortion exceeds 0.15%, first check according to Steps 2, 3, 12, 13 and 14, and then re-adjust according to Step 1. |

Notes:

1. For the Center Meter should be used the tuning meter and the like available as a part of the other models.
2. The 5th LED lights up at 50 dB but when the attenuator is decreased 2 dB it is extinguished.
- 3.



The optimum point of adjustment is when the indicated figure stops flashing.

4. When the specified sensitivity of 6 dB cannot be obtained at the two frequency points, 88 MHz and 108 MHz, repeat the adjustment as described in Step 9.
5. When the sensitivity distortion factor still does not comply with the data specifications, adjust by turning the Front-end IF Coil core, but not more than 1/2 turn.
6. When connecting a Frequency Counter, connect from TP via a 100 kohms resistor. (Refer to Fig. 11)

2. AM (AT-K11L and AT-K22L: MW) SECTION ADJUSTMENTS (Refer to Figs. 8, 9, 10, 12)

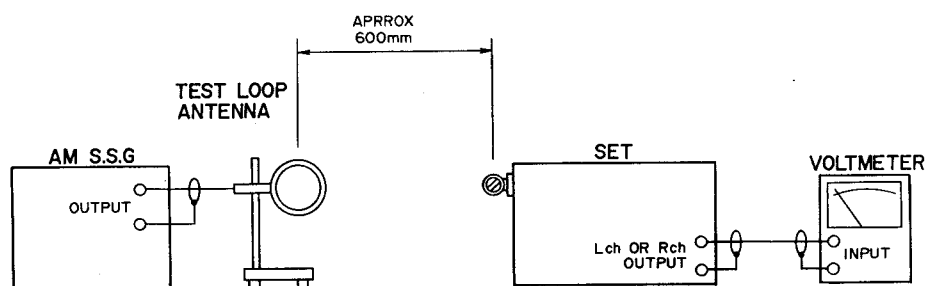


Fig. 12 Instrument Connections For AM(MW) Section Adjustments and Steps 1 to 4 of LW Section Adjustments

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 8)

* Model AT-K11L and AT-K22L: ANTENNA SELECTOR to INT.

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|---|--|--|---|
| 1 | Digital LED Display Frequency (AT-K22/L Only) | VR2 (10 KB) Counter P.C Board (Fig. 10) | | Apply a 1,000 kHz, 50 dB input. Short TP1 to GND, and TP2 to GND on the Counter P.C Board. Adjust VR2 until 4th numeral display becomes stable position. (See Note 1) |
| 2 | AM IF Coil | T2 (BLK) T3 (BLK) | Maximum Output | 1,000 kHz, 50 dB, 400 Hz (30%) input. |
| 3 | Low Range Scale Indication | T4 (RED) | (Model AT-K11/L) Maximum Output | 530 kHz, 50 dB, 400 Hz (30%) input. Scale indicator to 530 kHz. Error: Within 2% |
| | | | (Model AT-K22/L) | Turn tuning knob fully counterclockwise. Display 515 kHz by adjusting T4. |
| 4 | High Range Scale Indication | VC2 | (Model AT-K11/L) Maximum Output | 1,600 kHz, 50 dB, 400 Hz (30%) input. Scale indicator to 1,600 kHz. Error: Within 2% |
| | | | (Model AT-K22/L) | Turn tuning knob fully clockwise. Display 1,650 kHz by adjusting VC2. |
| 5 | Low Range Sensitivity | Bar Antenna Core AT-K11, K22: Fig. 8 AT-K11L, K22L: Fig. 9 | Maximum Output Distortion Factor: Less than 10% | 600 kHz, 50 dB, 400 Hz (30%) input. |
| 6 | High Range Sensitivity | VC1 | Maximum Output Distortion Factor: Less than 10% | 1,600 kHz, 50 dB, 400 Hz (30%) input. |

Notes:

1.



The optimum point of adjustment is when the indicated figure stops flashing.

2. For best result, repeat Steps 2 through 6 two or three times.

3. LW SECTION ADJUSTMENTS (AT-K11L and AT-K22L Only; Refer to Figs. 9, 12, 13)

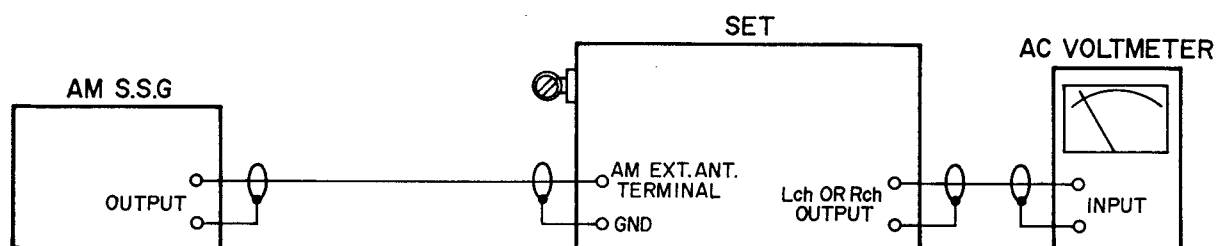


Fig. 13 Instrument Connections For Steps 5 and 6 of LW Section Adjustments

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 9).

* BAND SELECTOR to LW

ANTENNA SELECTOR to INT.

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|---------------------------------------|---|---|---|
| 1 | High Range Scale Indication | VC3 | (AT-K11L) Maximum Output | 340 kHz, 50 dB, 400 Hz (30%) input. Scale indicator to 340 kHz. Error: Within 2% (Refer to Fig. 12) |
| | | | (AT-K22L) | Turn tuning knob fully clockwise. Display 350 kHz by adjusting VC 3. |
| 2 | Low Range Scale Indication | T5 (GRN) | (AT-K11L) Maximum Output | 150 kHz, 50 dB, 400 Hz (30%) input. Scale indicator to 150 kHz. Error: Within 2% (Refer to Fig. 12) |
| | | | (AT-K22L) | Turn tuning knob fully counter-clockwise. Display 135 kHz by adjusting T5. |
| 3 | Low Range Sensitivity (Bar Antenna) | Bar Antenna Core (Fig. 9) | Maximum Output Distortion Factor: Less than 10% | 160 kHz, 50 dB, 400 Hz (30%) input. (Refer to Fig. 12) |
| 4 | High Range Sensitivity (Bar Antenna) | VC2 Antenna Switch P.C Board (Fig. 9) | Maximum Output Distortion Factor: Less than 10% | 300 kHz, 50 dB, 400 Hz (30%) input. (Refer to Fig. 12) |
| 5 | Low Range Sensitivity (EXT. Antenna) | T1 Antenna Switch P.C Board (Fig. 9) | Maximum Output Distortion Factor: Less than 10% | ANTENNA SELECTOR to EXT. 160 kHz, 20 dB, 400 Hz (30%) input. (Refer to Fig. 13) |
| 6 | High Range Sensitivity (EXT. Antenna) | VC1 Antenna Switch P.C Board (Fig. 9) | Maximum Output Distortion Factor: Less than 10% | 300 kHz, 20 dB, 400 Hz (30%) input. (Refer to Fig. 13) |

VII. TUNING CORD THREADING

1. MODEL AT-K11/L

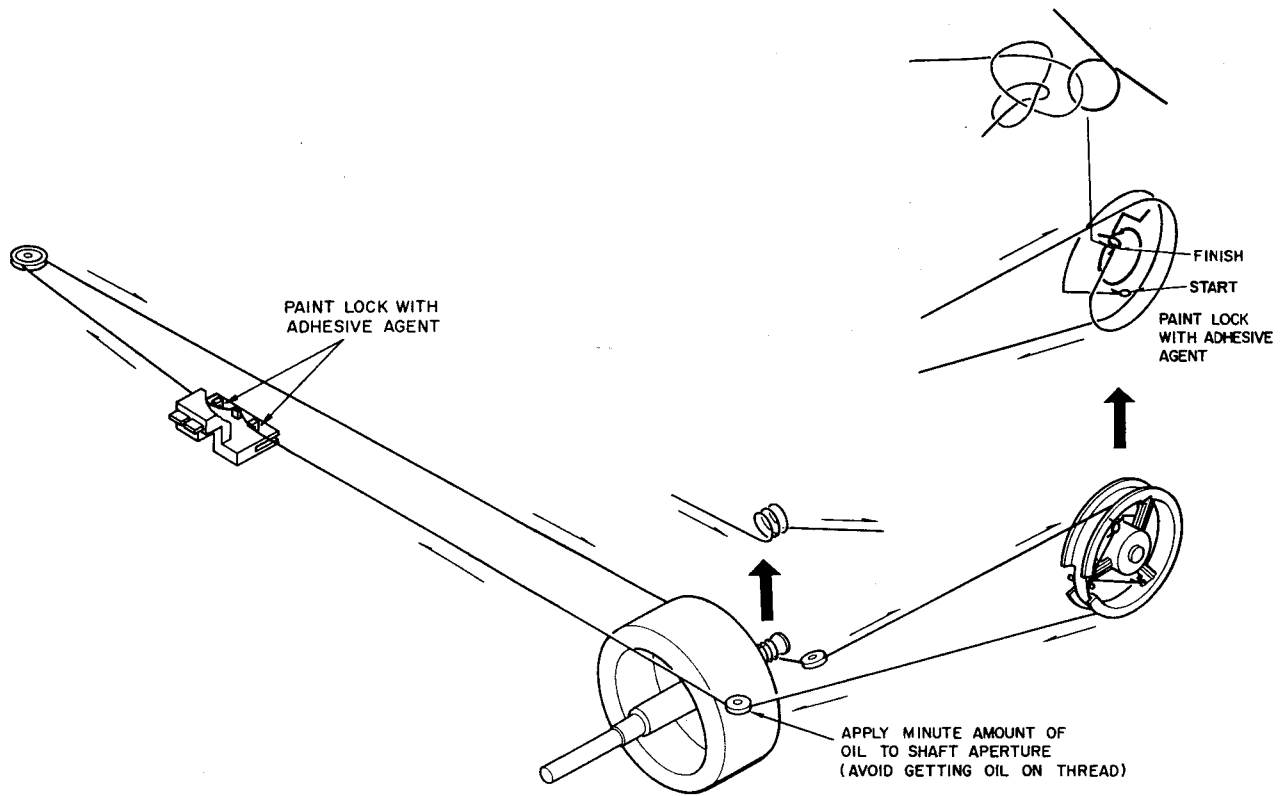


Fig. 14 Tuning Cord Threading (AT-K11/L)

2. MODEL AT-K22/L

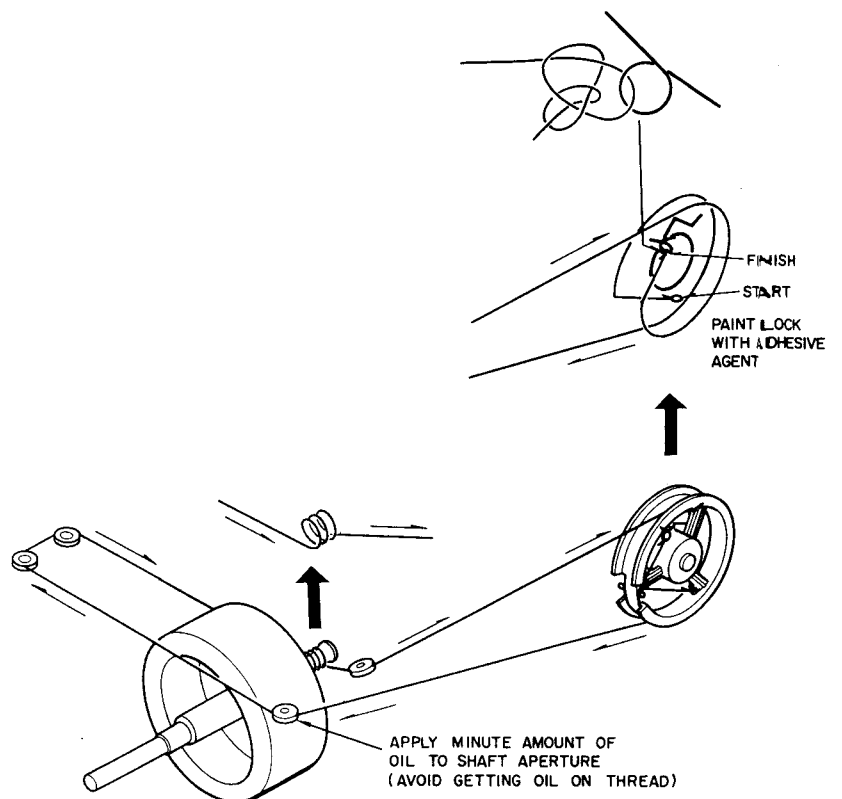


Fig. 15 Tuning Cord Threading (AT-K22/L)

VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

1) Model AT-K11

| P.C Board Title | P.C Board Number |
|-----------------|--|
| Tuner P.C Board | ATKZ-16A (U/T) ATKZ-47A (AAL, CSA) ATKZ-48A (CEE, SAA) |
| LED P.C Board | ATKZ-16B (U/T) ATKZ-47B (AAL, CSA) ATKZ-48B (CEE, SAA) |

2) Model AT-K11L

| P.C Board Title | P.C Board Number |
|--------------------------|------------------|
| Tuner P.C Board | ATKZ-48A |
| LED P.C Board | ATKZ-48B |
| Antenna Switch P.C Board | ATK-2063 |

3) Model AT-K22

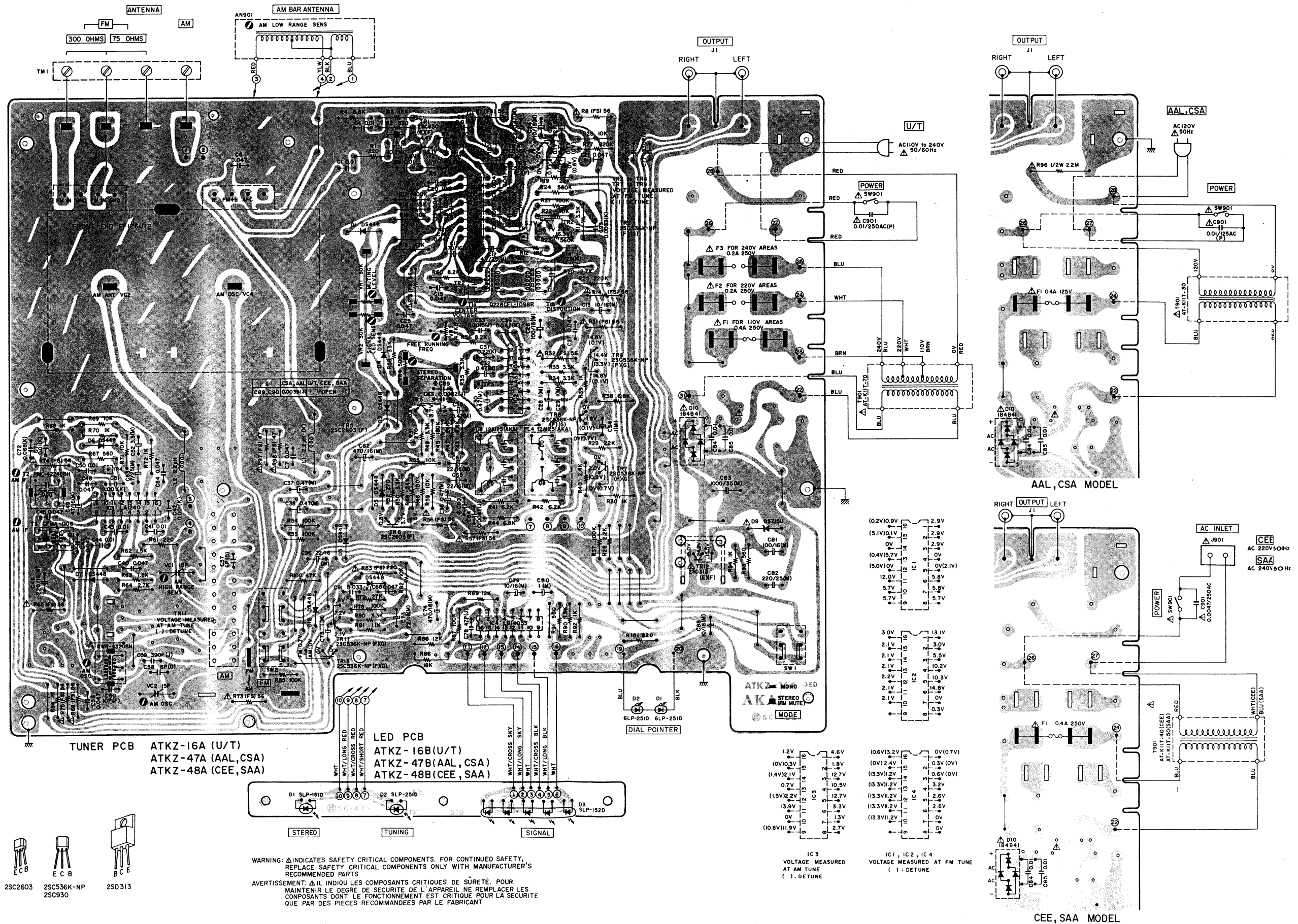
| P.C Board Title | P.C Board Number |
|-------------------|--|
| Tuner P.C Board | ATKZ-16A (U/T) ATKZ-47A (AAL, CSA) ATKZ-48A (CEE, SAA) |
| LED P.C Board | ATKZ-16B (U/T) ATKZ-47B (AAL, CSA) ATKZ-48B (CEE, SAA) |
| Counter P.C Board | ATKZ-17 |

4) Model AT-K22L

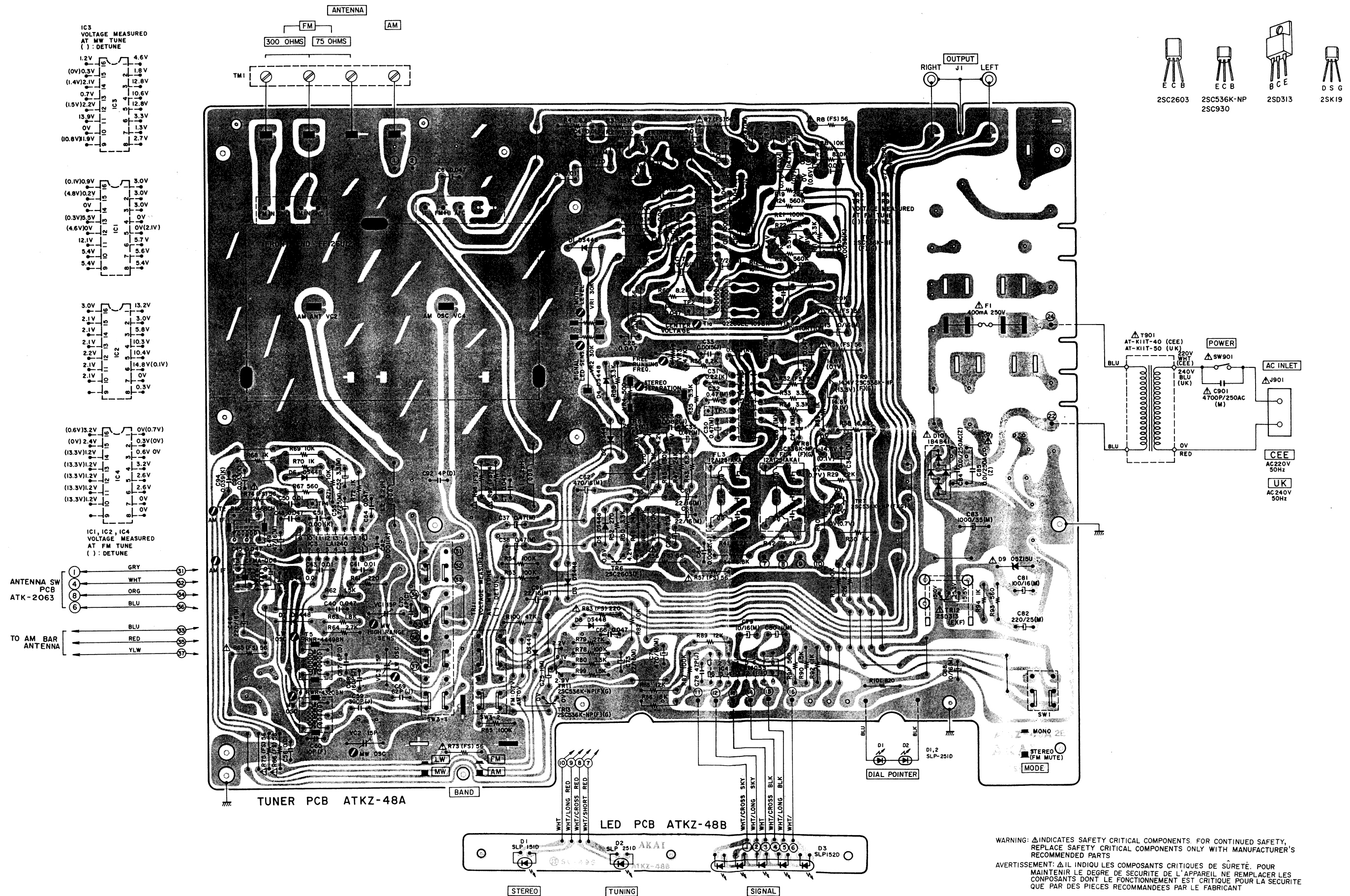
| P.C Board Title | P.C Board Number |
|--------------------------|------------------|
| Tuner P.C Board | ATKZ-48A |
| LED P.C Board | ATKZ-48B |
| Counter P.C Board | ATKZ-17 |
| Antenna Switch P.C Board | ATK-2063 |

2. COMPOSITION OF VARIOUS P.C BOARDS

1) MODEL AT-K11 Tuner P.C Board ATKZ-16A (U/T), ATKZ-47A (AAL, CSA), ATKZ-48A (CEE, SAA) and LED P.C Board ATKZ-16B (U/T), ATKZ-47B (AAL, CSA), ATKZ-48B (CEE, SAA)



2) MODEL AT-K11L Tuner P.C Board ATKZ-48A and LED P.C Board ATKZ-48B



ANTENNA
FM 300 OHMS 75 OHMS
AM

AM BAR ANTENNA
AM LOW RANGE SENS

COUNTER PCB
ATKZ-17

OUTPUT
RIGHT J1 LEFT

POWER
AC 110V to 240V
50/60Hz.

U/T

LED PCB
ATKZ-16A (U/T)
ATKZ-47A (AAL, CSA)
ATKZ-48A (CEE, SAA)

TUNER PCB
ATKZ-16A (U/T)
ATKZ-47A (AAL, CSA)
ATKZ-48A (CEE, SAA)

LED PCB
ATKZ-16B (U/T)
ATKZ-47B (AAL, CSA)
ATKZ-48B (CEE, SAA)

COUNTER PCB
ATKZ-17

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 SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACEZ LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

25C2603
25C536K-NP
25C930

25D313
25K19

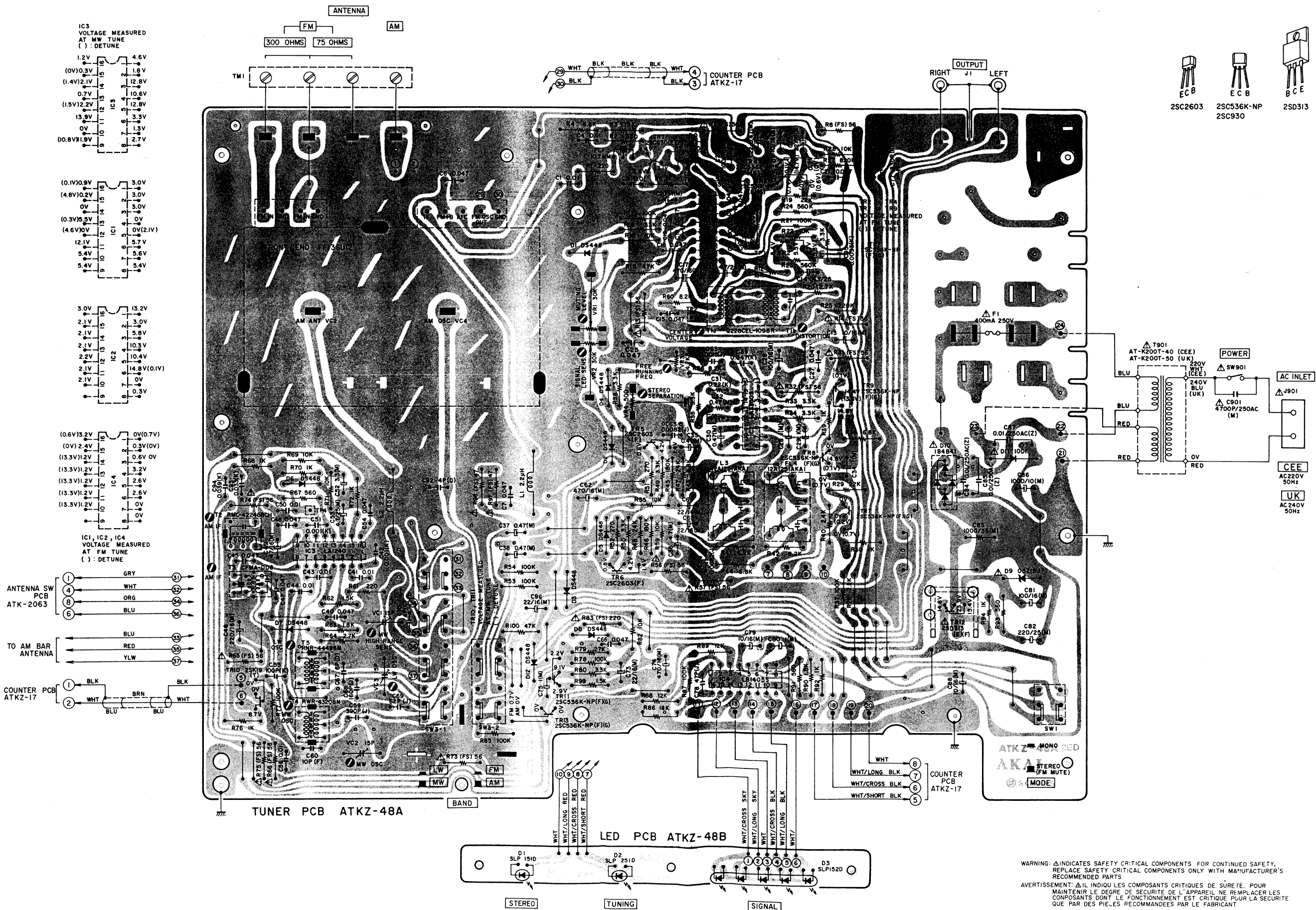
25C536K-NP
25C930

25D313
25K19

STEREO
TUNING
SIGNAL

CEE, SAA MODEL

4) MODEL AT-K22L Tuner P.C Board ATKZ-48A and LED P.C Board ATKZ-48B



26

SECTION 2

SERVICE MANUAL

MODEL AM-U11, AM-U22

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

I . TECHNICAL DATA

1. MODEL AM-U11

POWER AMPLIFIER SECTION

| | |
|-------------------------------|--|
| RATED POWER OUTPUT | 20 watts per channel, minimum RMS, at 8 ohms from 40 Hz to 20,000 Hz with no more than 0.3% total harmonic distortion. |
| POWER BANDWIDTH (IHF -3 dB) | 10 Hz to 40 kHz/8 ohms (Total harmonic distortion: 0.3%) |
| SIGNAL TO NOISE RATIO (IHF-A) | |
| PHONO | 70 dB |
| AUX | 90 dB |
| RESIDUAL NOISE (8 OHMS) | 1.3 mV |
| CHANNEL SEPARATION (IHF) | Better than 50 dB at 1 kHz |
| DAMPING FACTOR | More than 30 (1 kHz, 8 ohms) |
| OUTPUT | |
| SPEAKERS | 4 to 16 ohms |
| HEADPHONES | 4 to 16 ohms |

PREAMPLIFIER SECTION

| | |
|---|--|
| INPUT SENSITIVITY/IMPEDANCE | |
| PHONO | 3 mV/47 kohms |
| AUX | 150 mV/100 kohms |
| TUNER | 150 mV/100 kohms |
| TAPE | 150 mV/100 kohms |
| OUTPUT LEVEL/IMPEDANCE | |
| TAPE REC | (PIN) 150 mV/2 kohms (DIN) 30 mV/80 kohms |
| FREQUENCY RESPONSE | |
| PHONO | ±1 dB (30 Hz to 15,000 Hz) |
| TUNER, AUX, TAPE | 10 Hz to 50 kHz +0, -3 dB |
| TONE CONTROL | |
| BASS | ±8 dB (100 Hz) |
| TREBLE | ±6 dB (10 kHz) |
| LOUDNESS CONTROL (VOLUME SET AT -30 dB POSITION) | +10 dB (100 Hz), +6 dB (10 kHz) |
| PHONO MAX INPUT (1 kHz) | 120 mV |
| POWER REQUIREMENT | 120 V, 60 Hz for U.S.A. and Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK and Australia 110-120 V/220 V/240 V, 50/60 Hz internally switchable for the other countries. |
| DIMENSIONS | 440(W) × 75(H) × 322(D) mm (17.3 × 3.0 × 12.7 inches) |
| WEIGHT | 5.8 kg (12.8 lbs) |

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

2. MODEL AM-U22

POWER AMPLIFIER SECTION

| | |
|---|---|
| RATED POWER OUTPUT (2-channel Driven) | 25 watts per channel, minimum RMS, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion. |
| POWER BANDWIDTH (IHF -3 dB) | 8 Hz to 50 kHz/8 ohms (Total harmonic distortion: 0.1%) |
| SIGNAL TO NOISE RATIO (IHF-A) PHONO AUX | 80 dB 95 dB |
| RESIDUAL NOISE (IHF-A) | 180 μ V/8 ohms |
| CHANNEL SEPARATION (IHF) | Better than 55 dB at 1 kHz |
| DAMPING FACTOR | More than 50 (1 kHz, 8 ohms) |
| OUTPUT SPEAKERS HEADPHONE | 4 to 16 ohms 4 to 16 ohms |

PREAMPLIFIER SECTION

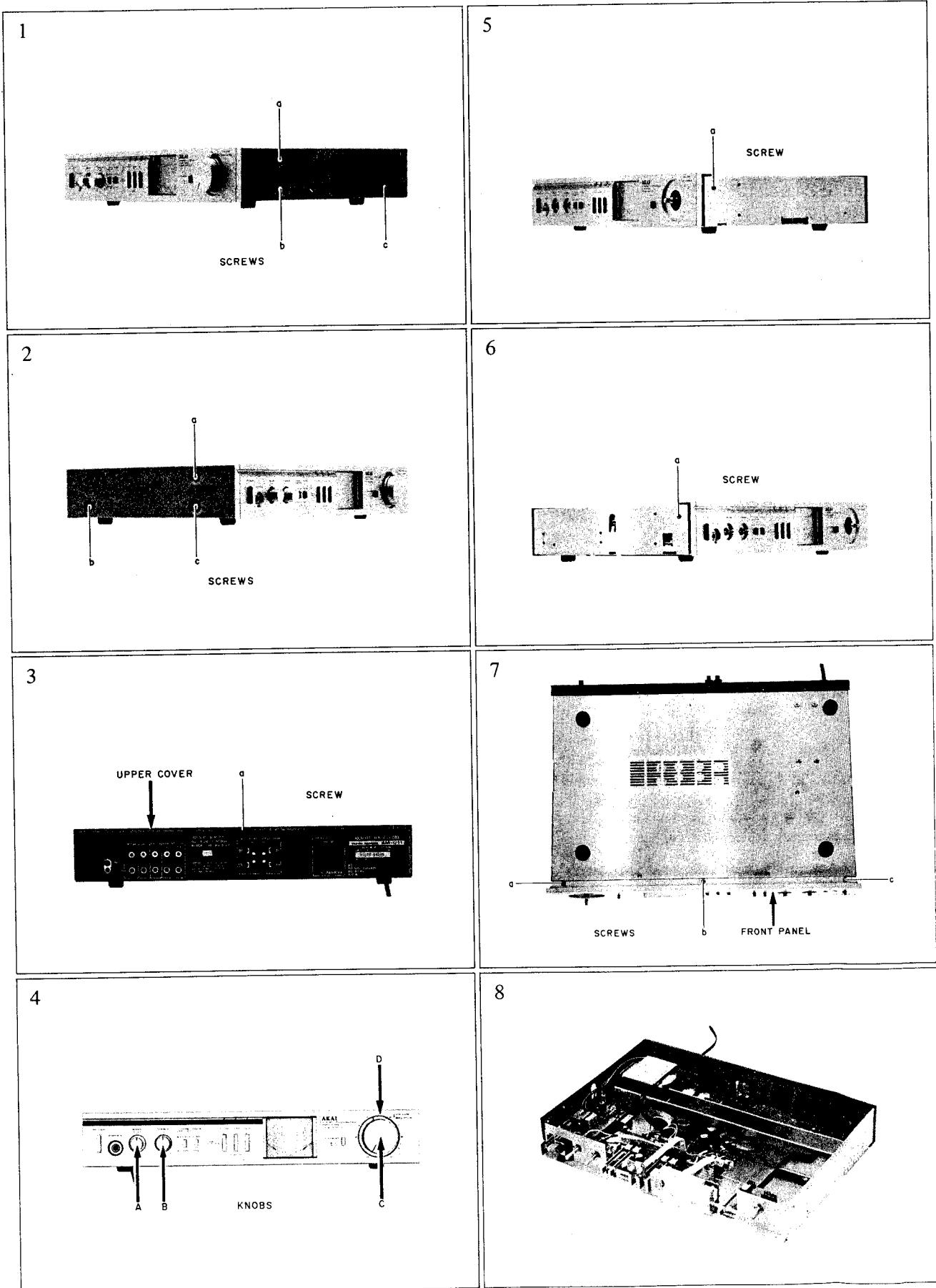
| | |
|--|--|
| INPUT SENSITIVITY/IMPEDANCE PHONO AUX TUNER TAPE | 3 mV/47 kohms 150 mV/33 kohms 150 mV/33 kohms 150 mV/33 kohms |
| OUTPUT LEVEL/IMPEDANCE TAPE REC | 150 mV/47 kohms |
| FREQUENCY RESPONSE PHONO (RIAA DEVIATION) TUNER, AUX, TAPE | ± 0.3 dB (20 Hz to 20,000 Hz) 6 Hz to 100 kHz ± 0 to -3 dB |
| TONE CONTROL BASS TREBLE | ± 8 dB (100 Hz) ± 8 dB (10 kHz) |
| PHONO MAX INPUT (1 kHz) | MM: 120 mV |
| POWER REQUIREMENT | 120 V, 60 Hz for U.S.A. and Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK and Australia 110 V/220 V/240 V, 50/60 Hz internally switchable for other countries. |
| DIMENSIONS | 440(W) x 78(H) x 290(D) mm (17.3 x 3.1 x 11.4 inches) |
| WEIGHT | 5.6 kg (12.3 lbs) |

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

II. DISMANTLING OF UNIT

1. MODEL AM-U11

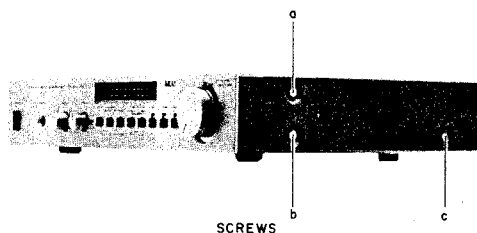
In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.



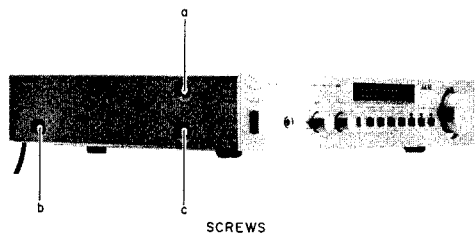
2. MODEL AM-U22

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

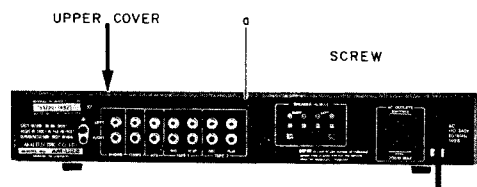
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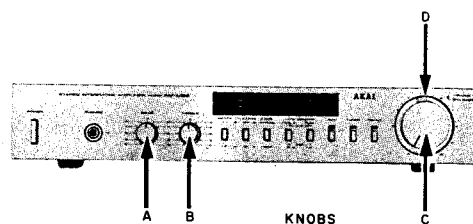
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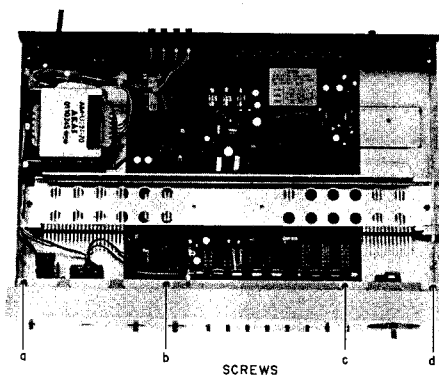
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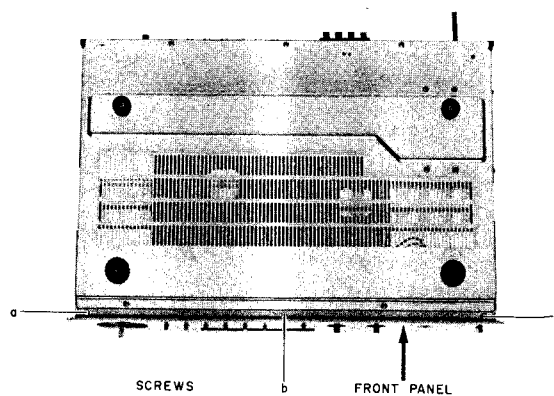
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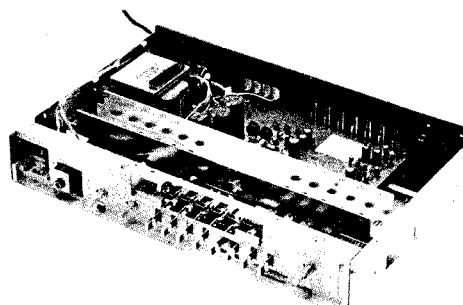
5



6



7



III. CONTROLS

1. MODEL AM-U11

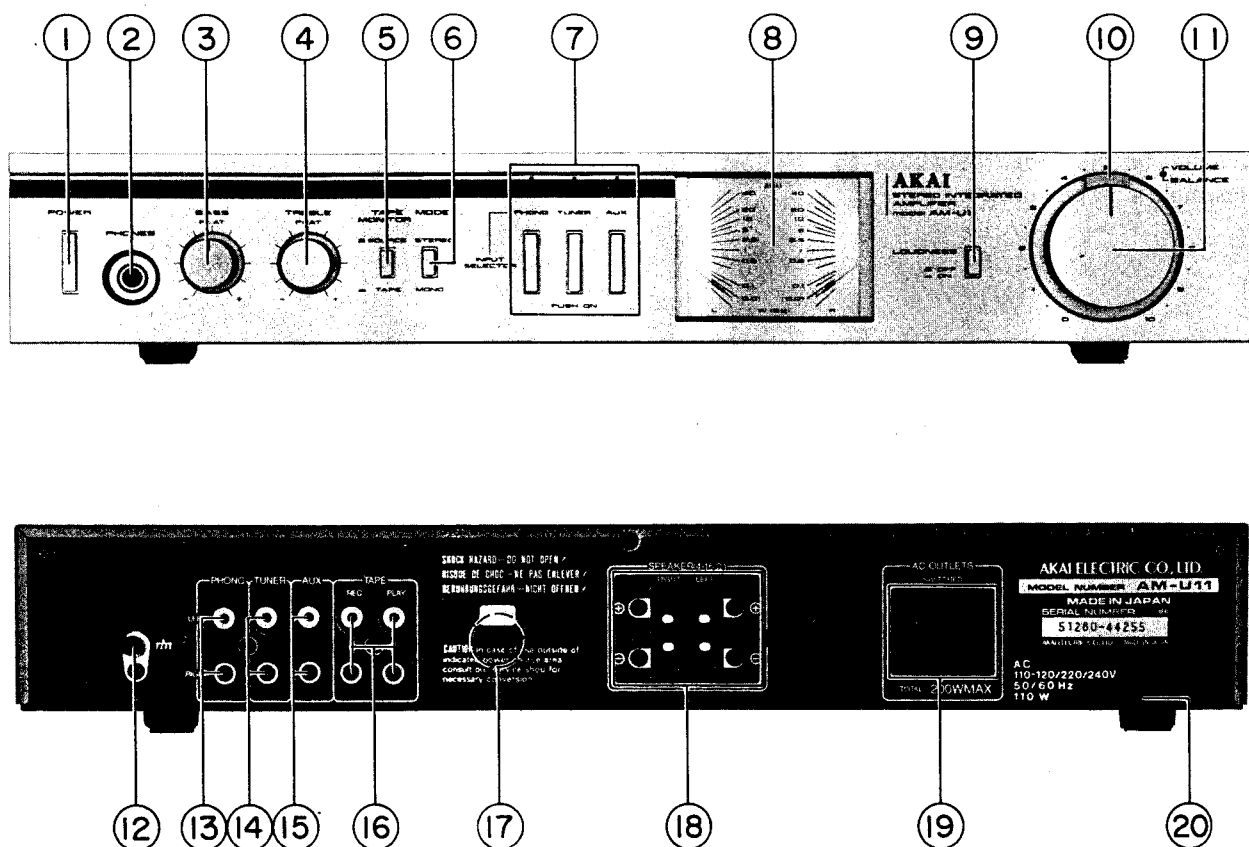


Fig. 1 Controls (AM-U11)

- | | |
|---|---|
| 1. POWER SWITCH | 11. VOLUME CONTROL |
| 2. HEADPHONE JACK (PHONES) | 12. GROUND TERMINAL ($\text{---}\text{ }\text{---}$) |
| 3. BASS CONTROL | 13. PHONO JACKS |
| 4. TREBLE CONTROL | 14. TUNER JACKS |
| 5. TAPE MONITOR SELECTOR | 15. AUX JACKS |
| 6. MODE SELECTOR | 16. TAPE SYSTEM REC/PLAY JACKS |
| 7. INPUT SELECTOR SWITCHES AND INDICATORS | 17. DIN JACK (CEE, UK, SAA ONLY) |
| 8. OUTPUT METER | 18. SPEAKER TERMINALS |
| 9. LOUDNESS SWITCH | 19. AC OUTLETS (U/T, AAL, CSA ONLY) |
| 10. STEREO BALANCE CONTROL | 20. AC CORD (CEE, UK, SAA: AC INLET) |

2. MODEL AM-U22

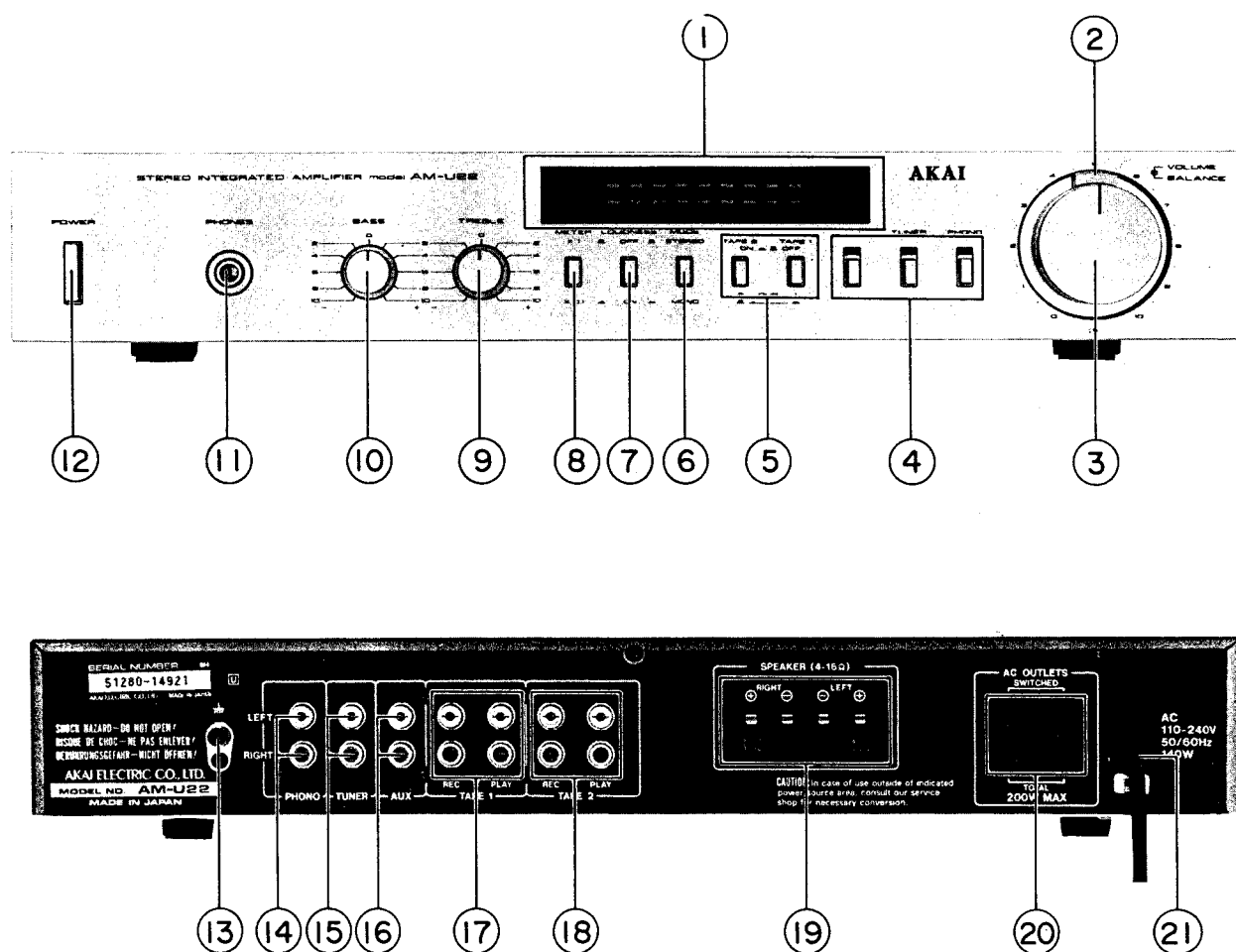


Fig. 2 Controls (AM-U22)

- | | |
|----------------------------------|--------------------------------------|
| 1. LED BAR METER | 12. POWER SWITCH |
| 2. STEREO BALANCE CONTROL | 13. GROUND TERMINAL |
| 3. VOLUME CONTROL | 14. PHONO JACKS |
| 4. INPUT SELECTOR AND INDICATORS | 15. TUNER JACKS |
| 5. TAPE MONITOR SWITCHES | 16. AUX JACKS |
| 6. MODE SWITCH | 17. TAPE 1 SYSTEM REC/PLAY JACKS |
| 7. LOUDNESS SWITCH | 18. TAPE 2 SYSTEM REC/PLAY JACKS |
| 8. METER SWITCH | 19. SPEAKER TERMINALS |
| 9. TREBLE CONTROL | 20. AC OUTLETS (U/T, AAL, CSA ONLY) |
| 10. BASS CONTROL | 21. AC CORD (CEE, UK, SAA: AC INLET) |
| 11. HEADPHONE JACK (PHONES) | |

IV. PRINCIPAL PARTS LOCATION

1. MODEL AM-U11

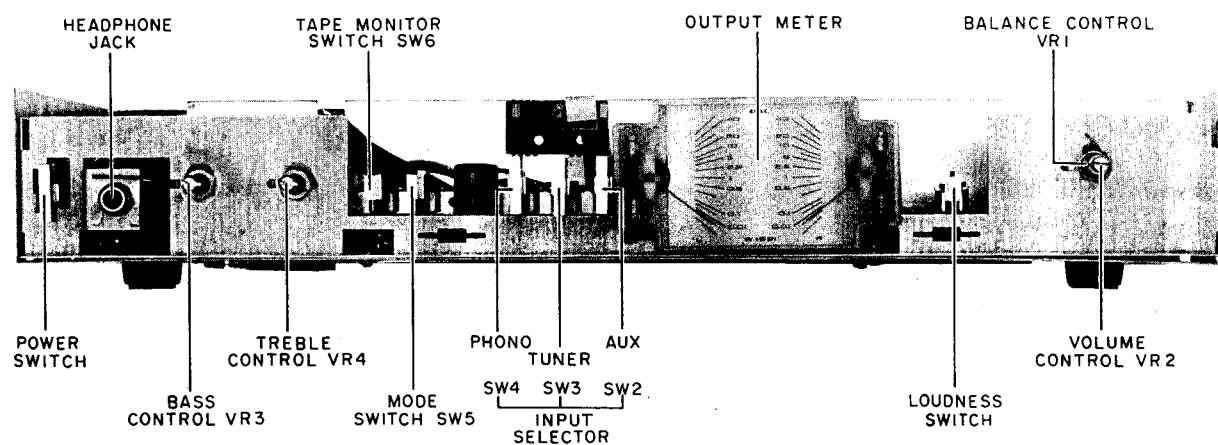


Fig. 3 Front View

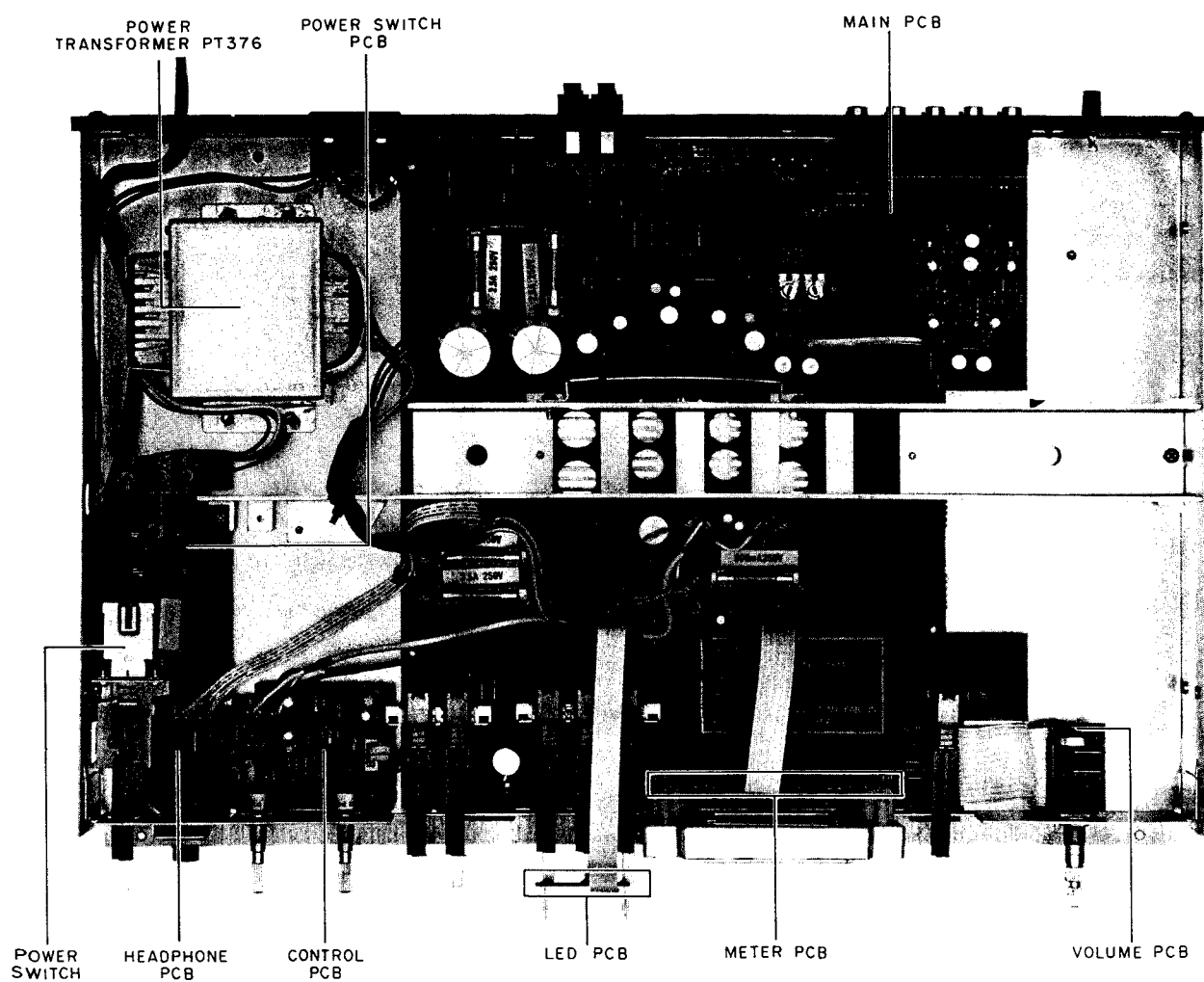


Fig. 4 Top View

2. MODEL AM-U22

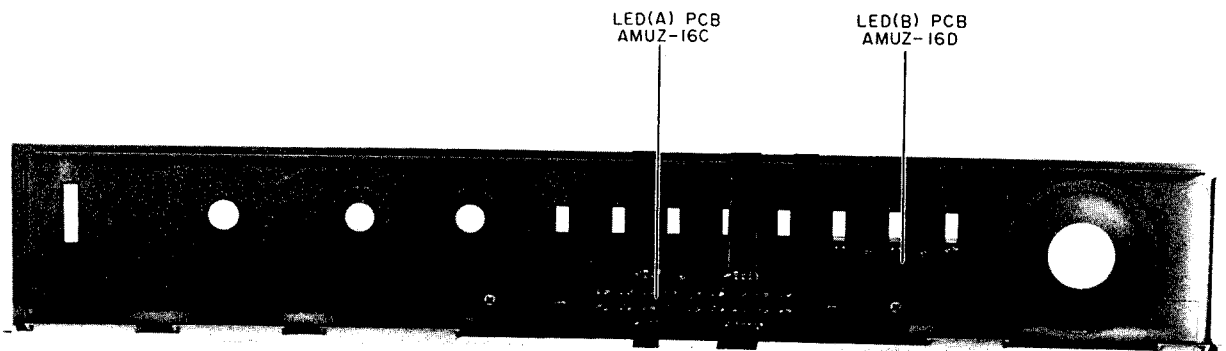


Fig. 5 Back View of Front Panel

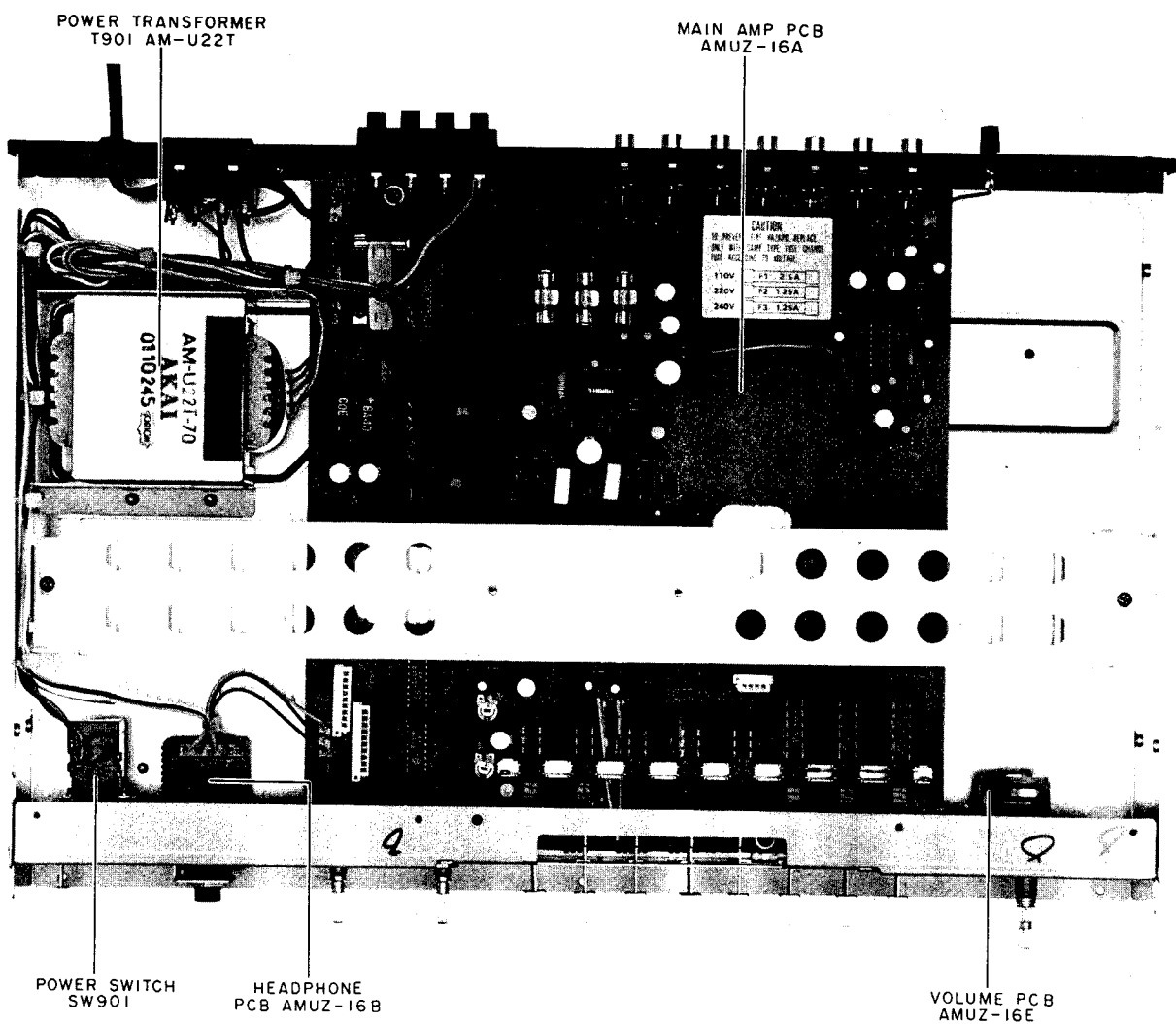


Fig. 6 Top View

V. VOLTAGE CONVERSION

1. MODEL AM-U11

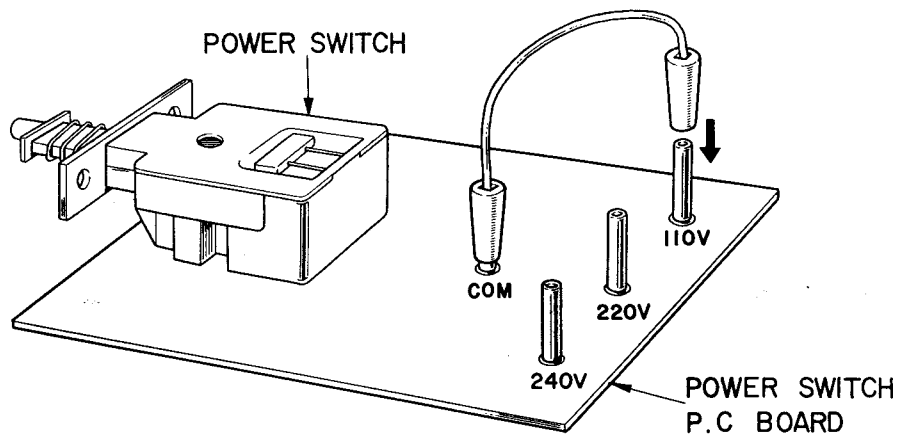


Fig. 7 Voltage Conversion (U/T Model Only)

This machine can be set to 110–120 V, 220 V or 240 V as required. Each machine is preset at the factory according to destination. However, if voltage change is necessary, this can be accomplished as follows:

1. Disconnect Power Cord.
2. Loosen holding screws and remove upper cover.
3. Remove Line Voltage wire and fit onto proper pins, explicitly following the printed instructions.

2. MODEL AM-U22

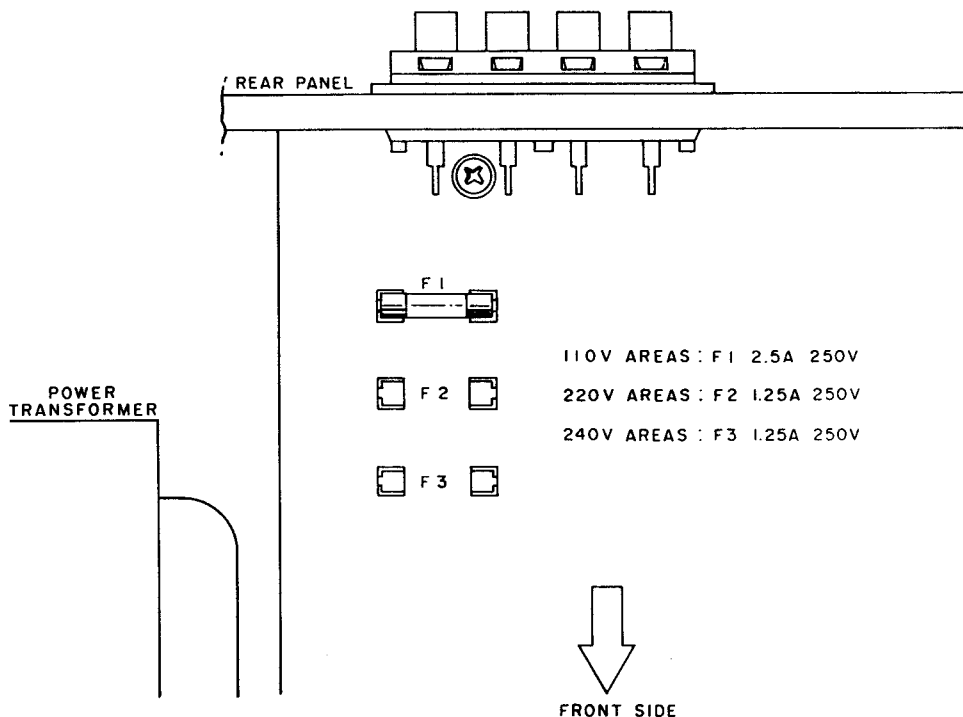


Fig. 8 Voltage Conversion (U/T Model Only)

Models for Canada, U.S.A., 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 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. Follow markings explicitly.

VI. AMPLIFIER ADJUSTMENT

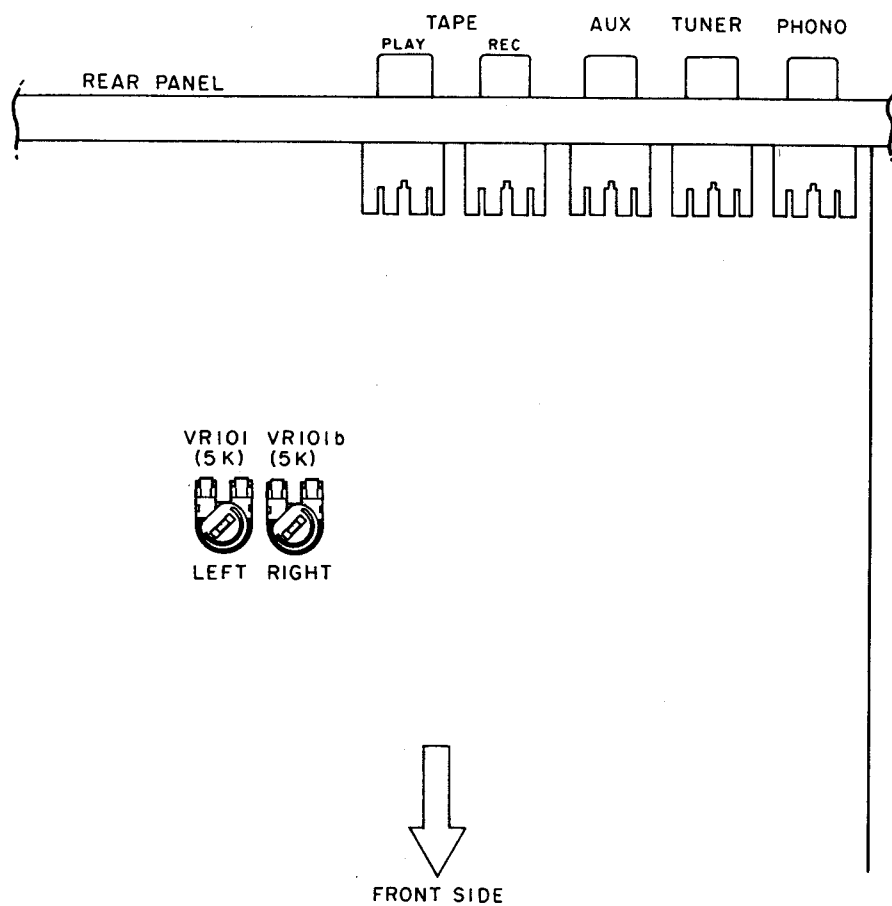


Fig. 9 Main P.C Board (AM-U11)

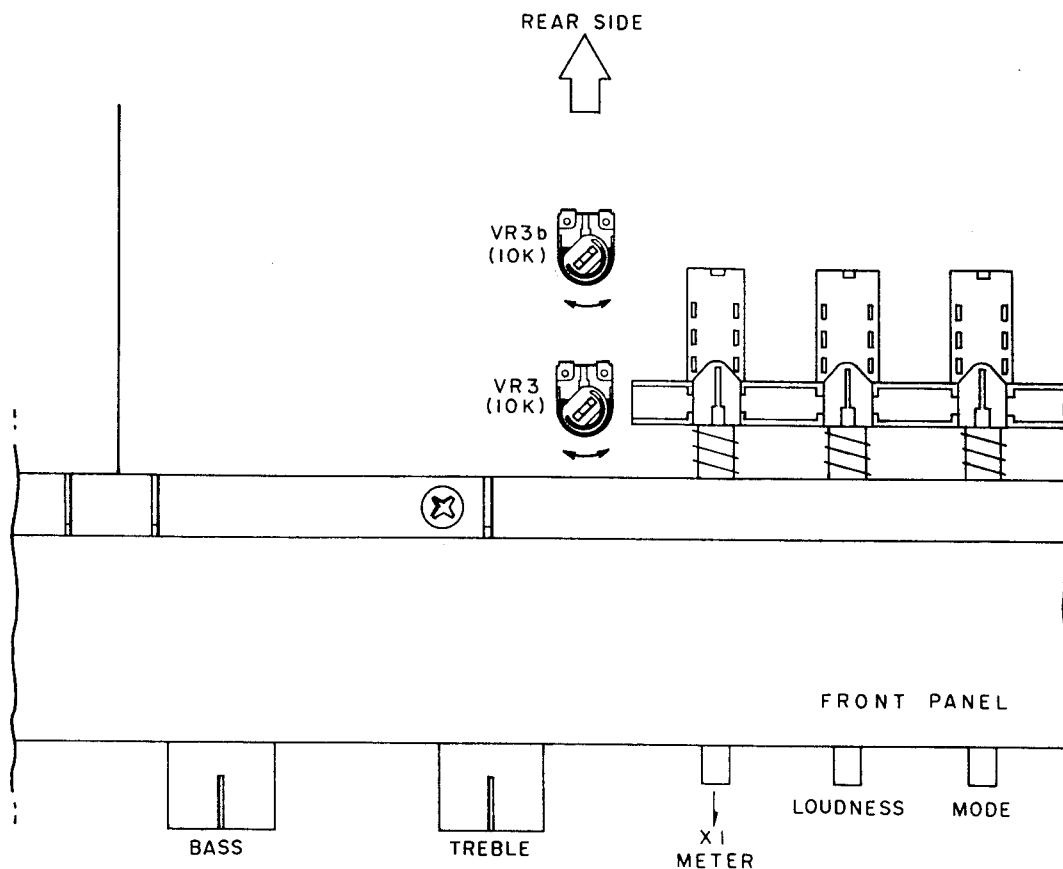


Fig. 10 Main Amp P.C Board AMUZ-16A (AM-U22)

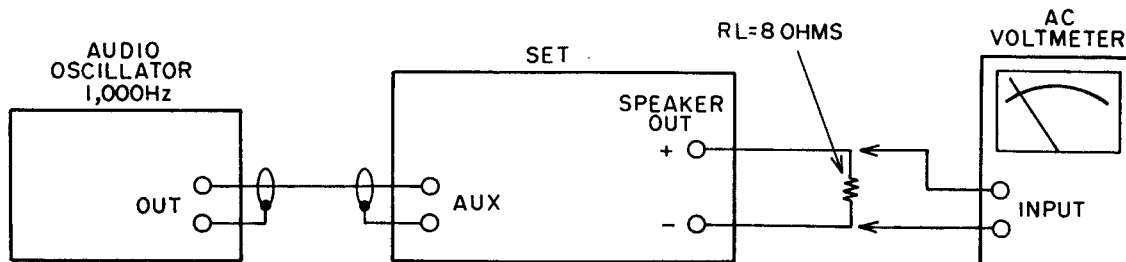


Fig. 11 Instrument Connections

1. POWER METER SENSITIVITY ADJUSTMENT

1) Model AM-U11 (Refer to Figs. 9, 11)

Connect the load resistors ($RL=8$ ohms) to Speaker terminals. Then apply a 1 kHz signal to the AUX input terminals, adjusting the input level so as to obtain the rated output voltage level (12.65 V) at both ends of the load resistor. Adjust VR101 (left channel) and VR101b (right channel) until the Lever Meter reads 20W.

2) Model AM-U22 (Refer to Figs. 10, 11)

Set the Meter Range switch to "x1", and connect the load resistors ($RL=8$ ohms) to Speaker terminals. Then apply a 1 kHz signal to the AUX input terminals, adjusting the input level so as to obtain the rated output voltage level (8.94 V) at both ends of the load resistor.

Adjust VR3 (left channel) and VR3b (right channel) on the Main Amp P.C Board so that the 7th LED (10 watts) in the Power Meter lights up.

VII. CLASSIFICATION OF VARIOUS P.C BOARDS

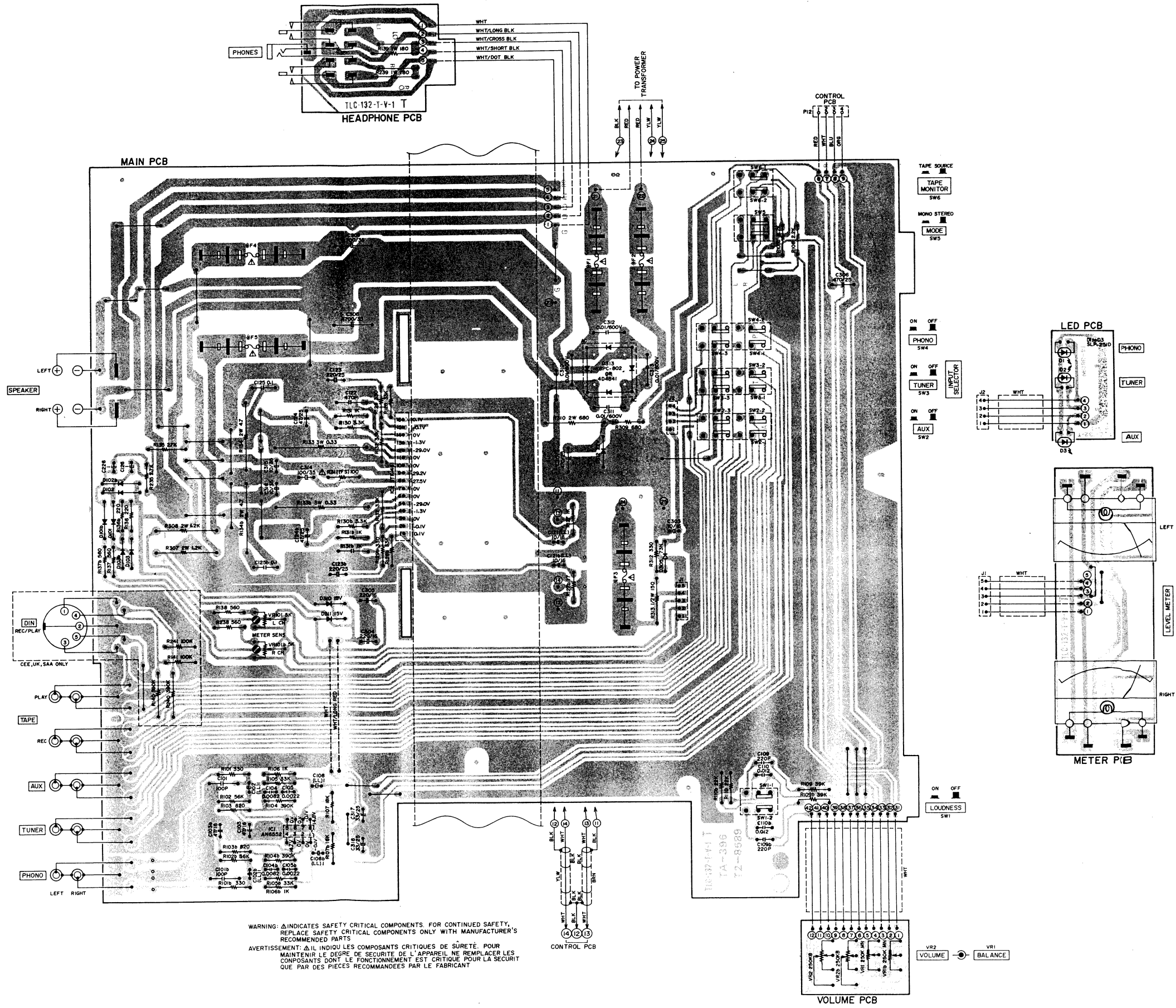
1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

Model AM-U22

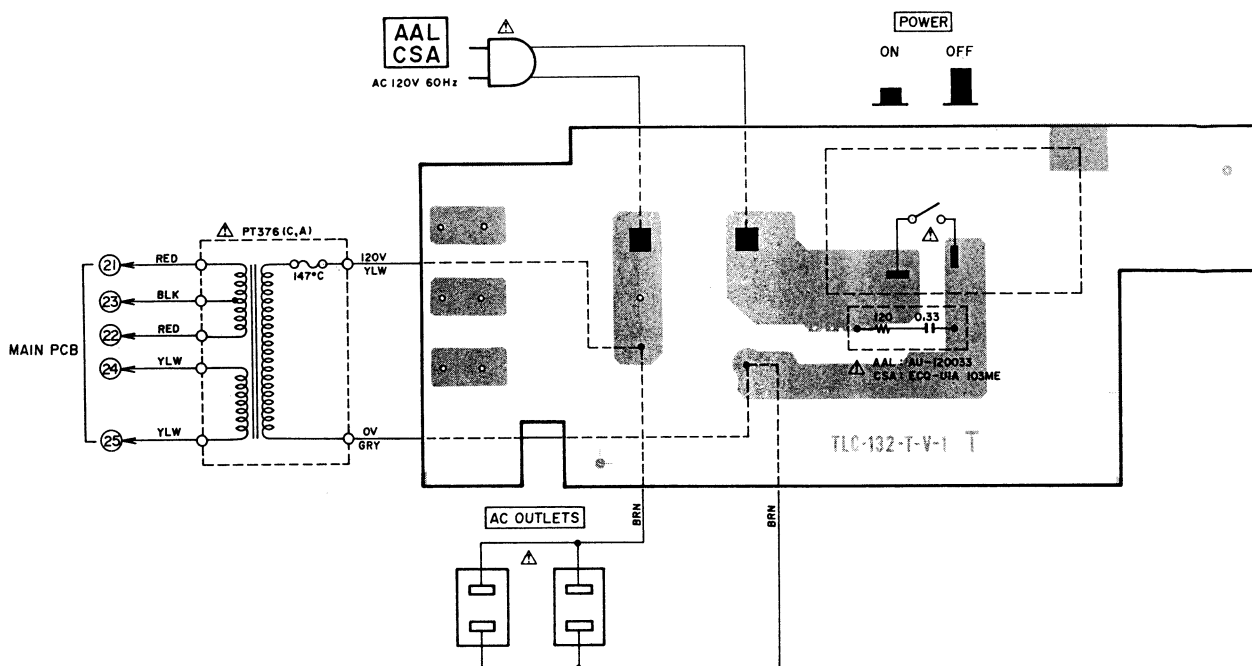
| P.C Board Title | P.C Board Number |
|--------------------------|------------------|
| Main Amp P.C Board | AMUZ-16A |
| Headphone Jack P.C Board | AMUZ-16B |
| LED (A) P.C Board | AMUZ-16C |
| LED (B) P.C Board | AMUZ-16D |
| Volume P.C Board | AMUZ-16E |

2. COMPOSITION OF VARIOUS P.C BOARDS

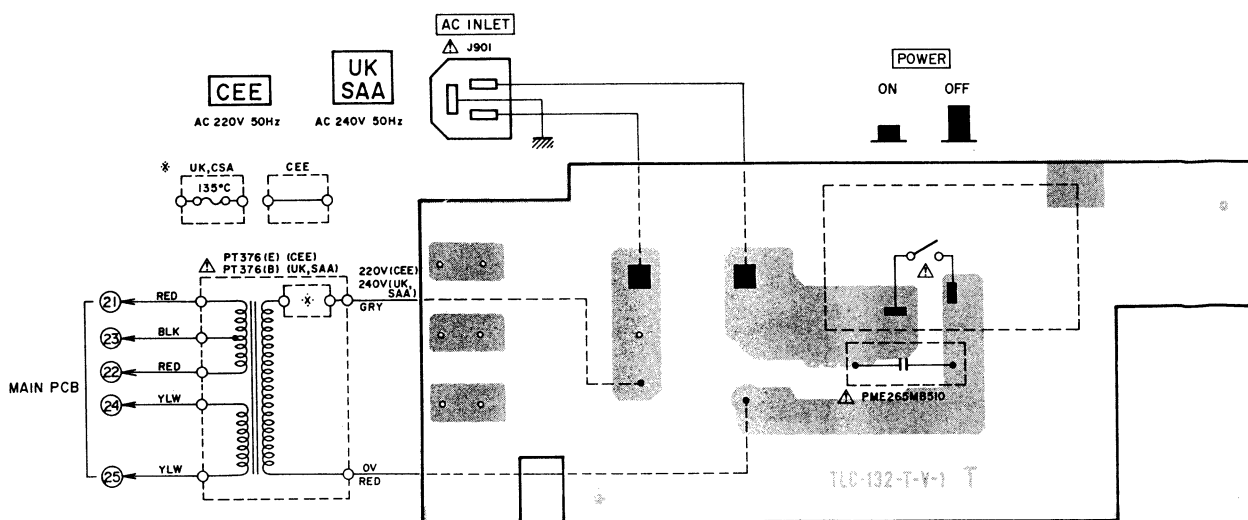
1) Model AM-U11 Main P.C Board, Headphone P.C Board, LED P.C Board, Meter P.C Board and Volume P.C Board



4) Model AM-U11 Power Switch P.C Board (AAL, CSA)



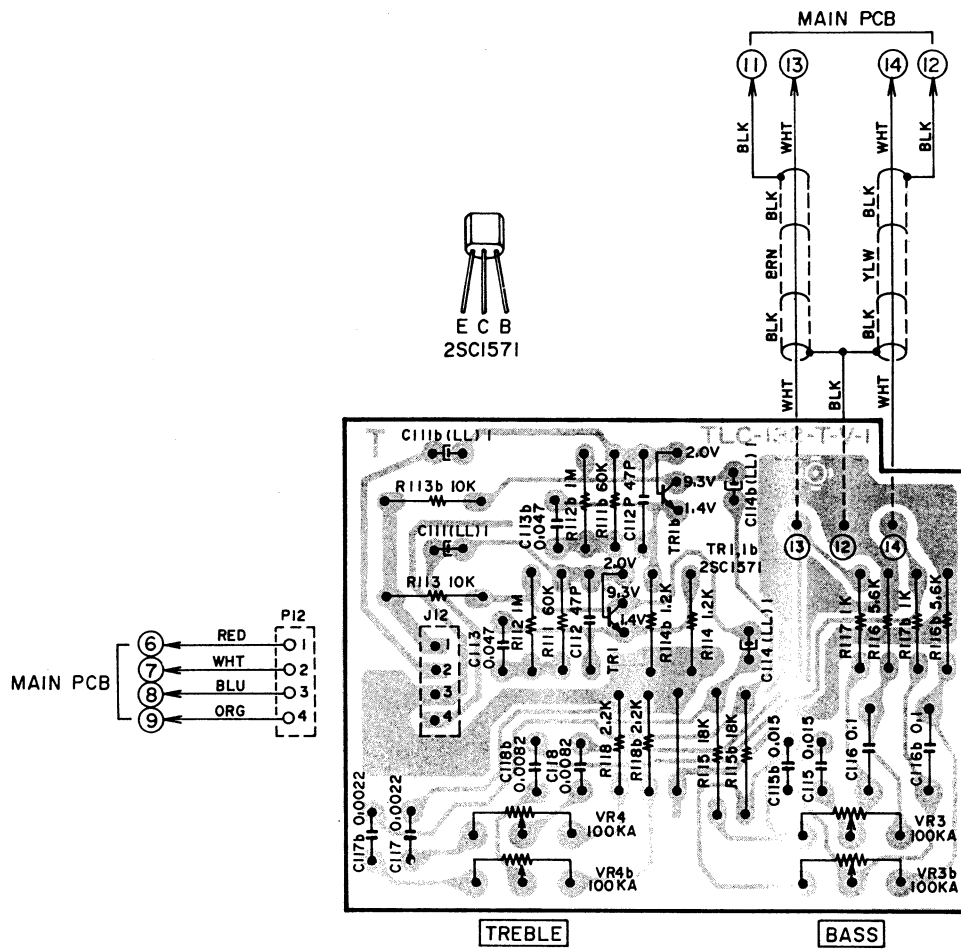
5) Model AM-U11; Power Switch P.C Board (CEE, UK, SAA)



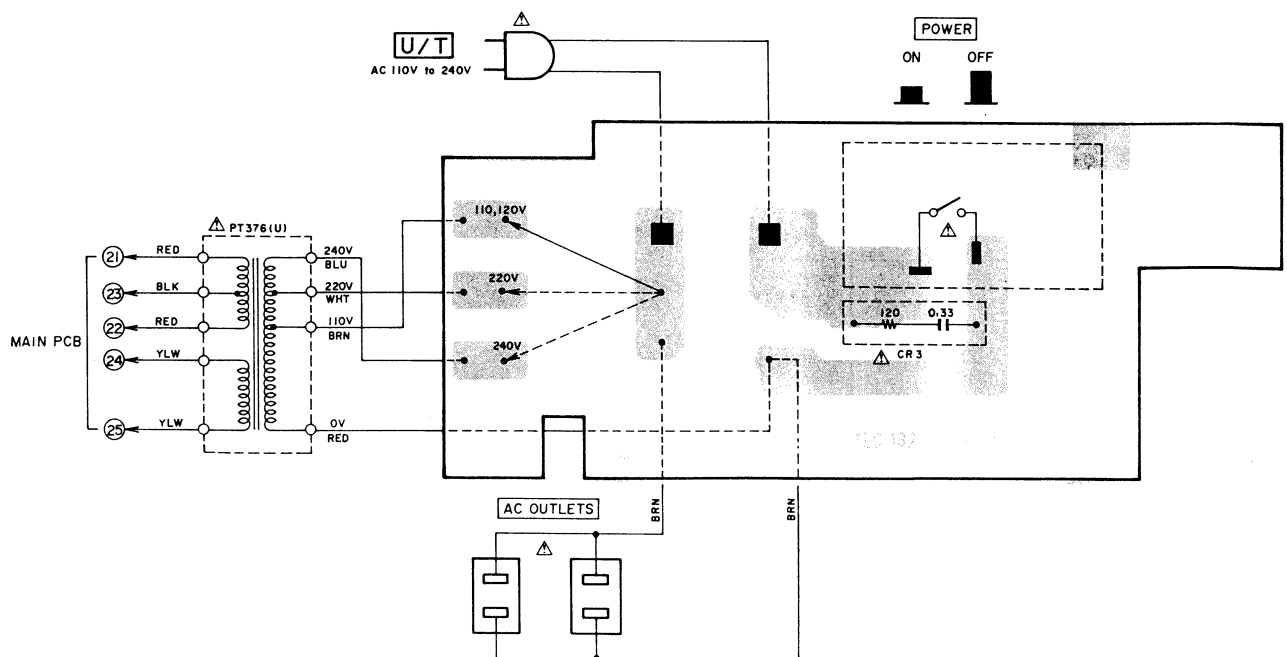
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL NE REMPLACEZ LES COMPOSANTS DON'T LE FONCTIONNEMENT EST CRITIQUE QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

2) Model AM-U11 Control P.C Board



3) Model AM-U11 Power Switch P.C Board (U/T)

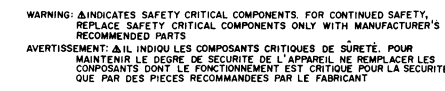


WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

6) Model AM-U22;
Main Amp P.C Board AMUZ-16A, Headphone Jack P.C Board AMUZ-16B, LED (A) P.C Board AMUZ-16C, LED (B) P.C Board AMUZ-16D and Volume P.C Board AMUZ-16E

Model AM-U22;
Main Amp P.C Board AMUZ-16A, Headphone Jack P.C Board AMUZ-16B, LED (A) P.C Board AMUZ-16C, LED (B) P.C Board AMUZ-16D and Volume P.C Board AMUZ-16E



SECTION 3

PARTS LIST

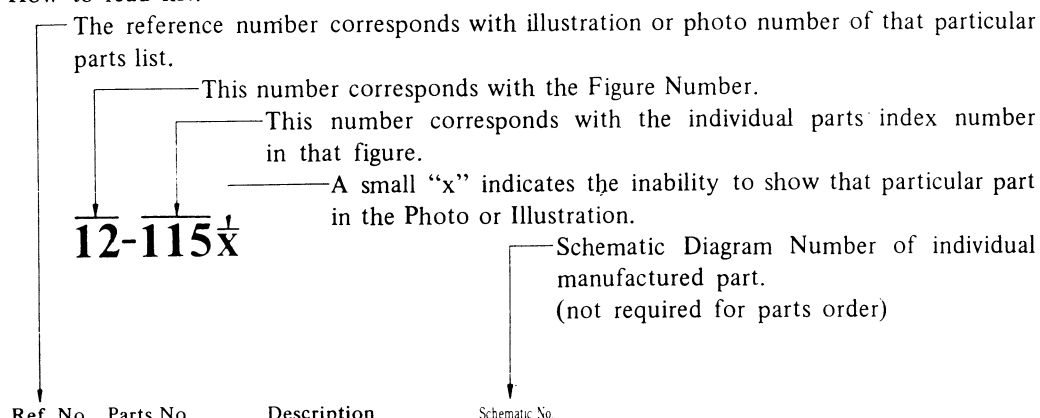
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| 2. ANTENA SW P.C BOARD (ATK-2063) BLOCK | 55 |
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| 4. FINAL ASSEMBLY BLOCK | 55 |
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| 2. TUNER P.C BOARD (ATKZ-16A/47A/48A) BLOCK | 57 |
| 3. COUNTER P.C BOARD (ATKZ-17) BLOCK | 57 |
| 4. ASSEMBLY BLOCK | 58 |
| 5. FINAL ASSEMBLY BLOCK | 60 |
| IV. MODEL AT-K22L | 61 |
| 1. TUNER P.C BOARD (ATKZ-48A) BLOCK | 61 |
| 2. ANTENA SW P.C BOARD (ATK-2063) BLOCK | 61 |
| 3. POWER SW BLOCK | 61 |
| 4. REAR PANEL BLOCK | 61 |
| 5. FINAL ASSEMBLY BLOCK | 61 |
| V. MODEL AM-U11 | 62 |
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| 3. ASSEMBLY BLOCK | 64 |
| 4. FINAL ASSEMBLY BLOCK | 66 |
| VI. MODEL AM-U22 | 67 |
| 1. RECOMMENDED SPARE PARTS LIST | 67 |
| 2. MAIN AMP P.C (AMUZ-16A/23A/32A) BLOCK | 68 |
| 3. ASSEMBLY BLOCK | 69 |
| 4. FINAL ASSEMBLY BLOCK | 70 |
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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.



FLYWHEEL BLOCK #13

| | | | |
|---------|--------|----------------------------|---------|
| 12-115x | 800425 | Flywheel Block Assy. Comp. | RDG #13 |
| 12-116 | 244506 | Flywheel Only | RD 233 |
| 12-117x | 244754 | Felt, Flywheel | RD 275 |
| 12-118 | 251324 | Main Metal Case | RD 236 |
| 12-119 | 253080 | Main Metal | RD 237 |

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: △ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMEMNDED PARTS.

AVERTISSEMENT: △ IL INDIQU 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.

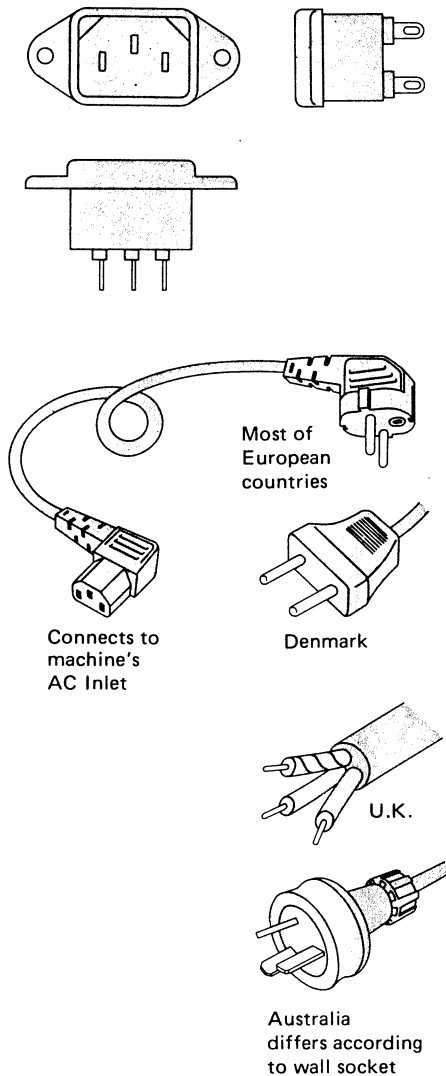
AC INLET SYSTEM

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

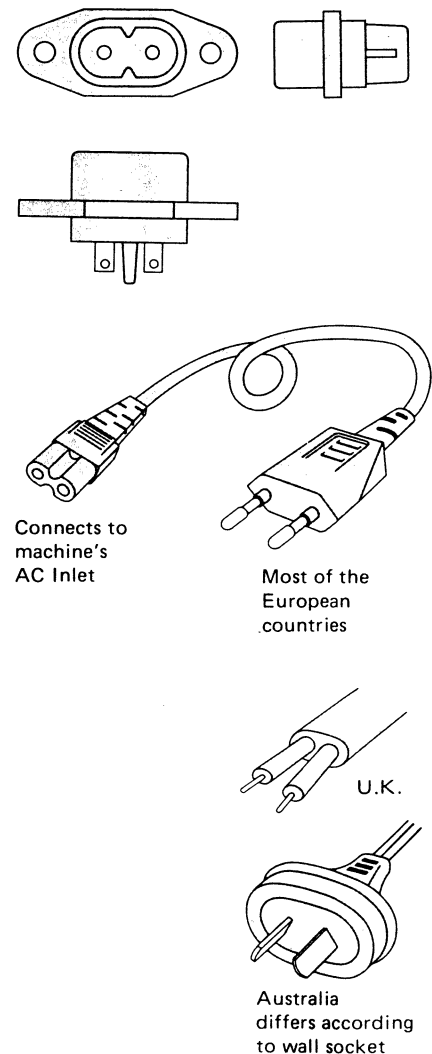
CLASS I



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

Parts List for AC (mains) Cord Set

| Standard | | Description | Type of AC Inlet | Parts No. |
|----------|-----|------------------------|------------------|-----------|
| Class I | CEE | Cord Set CEE (3 cores) | 3P | EW302993 |
| | UK | Cord Set UK (3 cores) | 3P | EW302994 |
| | SAA | Cord Set SAA (3 cores) | 3P | EW302996 |
| | U/T | Cord Set U/T (3 cores) | 3P | EW302646 |
| Class II | CEE | Cord Set CEE (2 cores) | 2P | EW638144 |
| | UK | Cord Set UK (2 cores) | 2P | EW302995 |
| | SAA | Cord Set SAA (2 cores) | 2P | EW302991 |
| | U/T | Cord Set U/T (2 cores) | 2P | EW302899 |

I. MODEL AT-K11

1. RECOMMENDED SPARE PARTS LIST

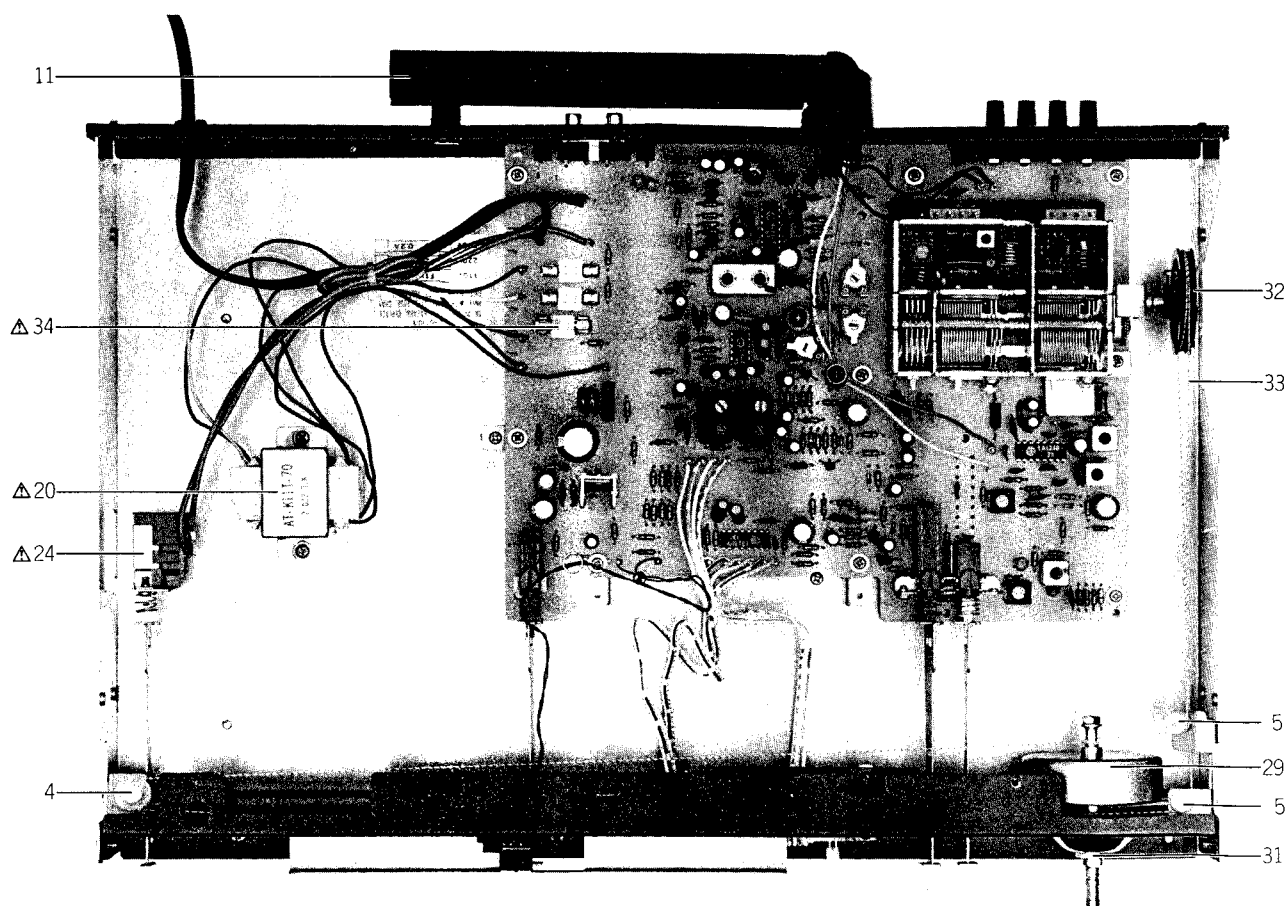
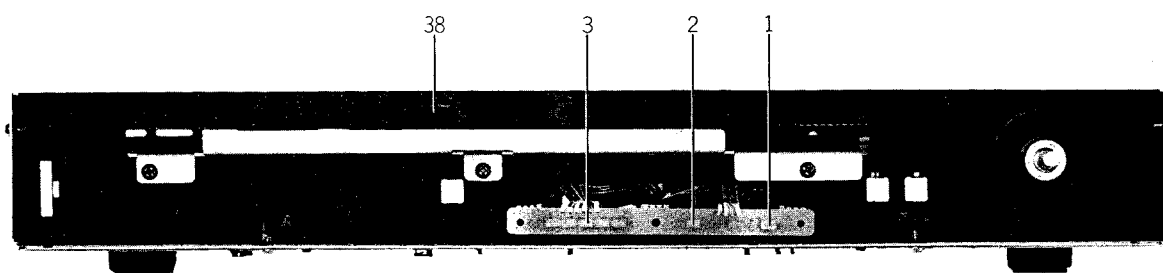
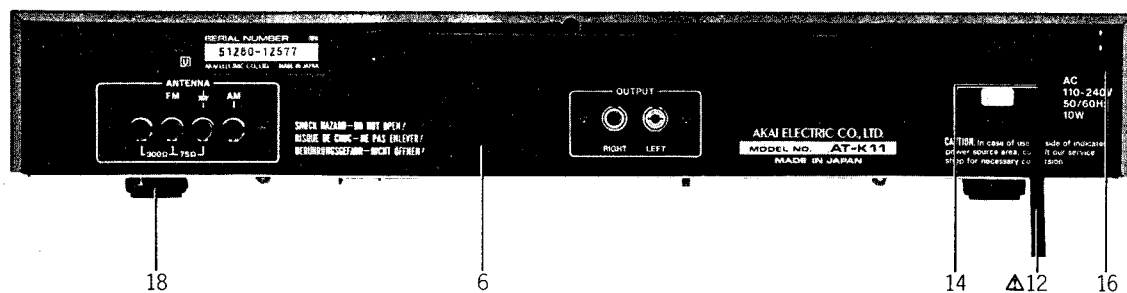
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| Parts No. | Description | Notes |
|-----------|--------------------------------|---------------|
| BT201517 | △ TRANS POWER AT-K11T-30 | CSA, AAL |
| BT201518 | △ TRANS POWER AT-K11T-40 | CEE |
| BT201519 | △ TRANS POWER AT-K11T-50 | SAA |
| BT201520 | △ TRANS POWER AT-K11T-70 | U/T |
| EC616342 | C S-FIX HCTY122D33 1.5-16 | |
| ED322247 | D LED SLP-151D RED | |
| ED322184 | D LED SLP-152D RED | |
| ED322215 | D LED SLP-251D GRN | |
| ED200469 | D SILICON H DS448 FA1 F10 | |
| ED200469 | D SILICON H DS448 FA1 F10 | |
| ED322238 | D SILICON 1B4B41 100/1.0A | |
| ED323216 | D ZENER H 05Z15 U | |
| EE322242 | FRONT END FF126U12 87-108MC | |
| EF300590 | △ FUSE EAWK T 250V 0.40A | CEE, SAA |
| EF308933 | △ FUSE TSC A 250V 0.20A | U/T |
| EF309389 | △ FUSE TSC A 250V 0.40A | U/T |
| EF308848 | △ FUSE TSC 125V 0.40A | CSA, AAL |
| EI322248 | IC LA1231N | |
| EI293185 | IC LA1240 | |
| EI650597 | IC LA3350S | |
| EI315491 | IC LB1405S | |
| EO328854 | COIL DET2 Q228CEL-1098R | |
| EO328137 | COIL FIX 2 NI-0036 2.2UH | |
| EO307186 | COIL OSC 2 RWR-4308N 160UH | |
| ER293398 | COIL IFT RMC-42246BCH 468KHZ | |
| ER307204 | FILTER CE CFMA-008 0.468MHZ | |
| ER307201 | FILTER CE SFE10.7MM-Z 10.7 MHZ | |
| ER328855 | FILTER LC LP 12A1251 AKAI | |
| ES310839 | △ SW PUSH SDG1P-E 01-1 E | U/T, CEE, SAA |
| ES665875 | △ SW PUSH SDG1P-J 01-1 UC | CSA, AAL |
| ES201979 | SW PUSH SUF12 2-02-02N | |
| ES201948 | SW PUSH SUF22 2 THROW | |
| ET200506 | TR 2SC2603 F | |
| ET316643 | TR 2SC536K-NP F,G | |
| ET618873 | TR 2SC930 E, F | |
| ET452531 | TR 2SD313 E, F | |
| EV427858 | R S-FIX H SR19R 3P 0.15W 472 | |
| EV593368 | R S-FIX H V10K8-4-2 3P 303 | |
| EV499375 | R S-FIX H V10K8-4-2 3P 501 | |

2. TUNER P.C BOARD (ATKZ-16A/47A/48A) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|--------------|--------------------------------------|
| 2-1 | BAA3008A020A | TUNER PC BLK AT-K11 (U)(U/T) |
| 2-2 | BAA3008A020B | TUNER PC BLK AT-K11 (C) (CSA,AAL) |
| 2-3 | BAA3008A020C | TUNER PC BLK AT-K11 (E) (CEE,SAA) |
| 2-4 | EE322242 | FRONT END FF126U12 87-108MC |
| 2-IC1 | EI322248 | IC LA1231N |
| 2-IC2 | EI650597 | IC LA3350S |
| 2-IC3 | EI293185 | IC LA1240 |
| 2-IC4 | EI315491 | IC LB1405S |
| 2-TR1 | ET618873 | TR 2SC930 E,F |
| 2-TR2 to 4 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR5,6 | ET200506 | TR 2SC2603 F |
| 2-TR7 to 9 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR11 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR12 | ET452531 | △ TR 2SD313 E,F |
| 2-TR13 | ET316643 | TR 2SC536K-NP F,G |
| 2-D1 to 8 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-D9 | ED323216 | △ D ZENER H 05Z15 U |
| 2-D10 | ED322238 | △ D SILICON 1B4B41 100/1.0A |
| 2-D12 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-J1 | EJ323227 | PIN J T5727-A P 2P |
| 2-SW1 | ES201979 | SW PUSH SUF12 2-02-02N |
| 2-SW2 | ES201948 | SW PUSH SUF22 2 THROW |
| 2-VR1,2 | EV593368 | R S-FIX H V10K8-4-2 3P 303 |
| 2-VR3 | EV427858 | R S-FIX H SR19R 3P 0.15W 472 |
| 2-VR4 | EV499375 | R S-FIX H V 10K8-4-2 3P 501 |
| 2-L1,2 | EO328137 | COIL FIX 2 NI-0036 2.2UH |
| 2-T1 | EO328854 | COIL DET2 Q228CEL-1098R |
| 2-T2 | ER293398 | COIL IFT RMC-42246 BCH 468.0KHZ |
| 2-T3 | ER307204 | FILTER CE CFMA-008 0.468MHZ |
| 2-T4 | EO307186 | COIL OSC 2 RWR-43208N 160UH |
| 2-FL1,2 | ER307201 | FILTER CE SFE 10.7MM-Z 10.7MHZ |
| 2-FL3,4 | ER328855 | FILTER LC LP 12A1251 AKAI |
| 2-VC1,2 | EC616342 | C S-FIX H CTY122D33 1.5-16 |
| 2-R7,8 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R13,14 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R31,32 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R56,57 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R65,66 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R73 to 75 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R83 | ER324185 | △ R CB H SNP FS RDS 1/4W 221J |
| 2-R96 | ER669328 | R SD 1/2W 225J |
| 2-R97,98 | ER324480 | △ R CB H SNP FS RDS 1/4W 470J |
| 2-C33 | EC328862 | C STY V F05 CQF09 152J 50DC |
| 2-C57,58 | EC200928 | C CE V F05 SL 6R0D 50DC |
| 2-C59 | EC314996 | C STY V SNP CQFS 391J 50DC |
| 2-C76,77 | EC328856 | C STY V F05 CQF09 331K 50DC |
| 2-TM1 | EJ309941 | TERMINAL W/SCREW UB-1059 P 4P |

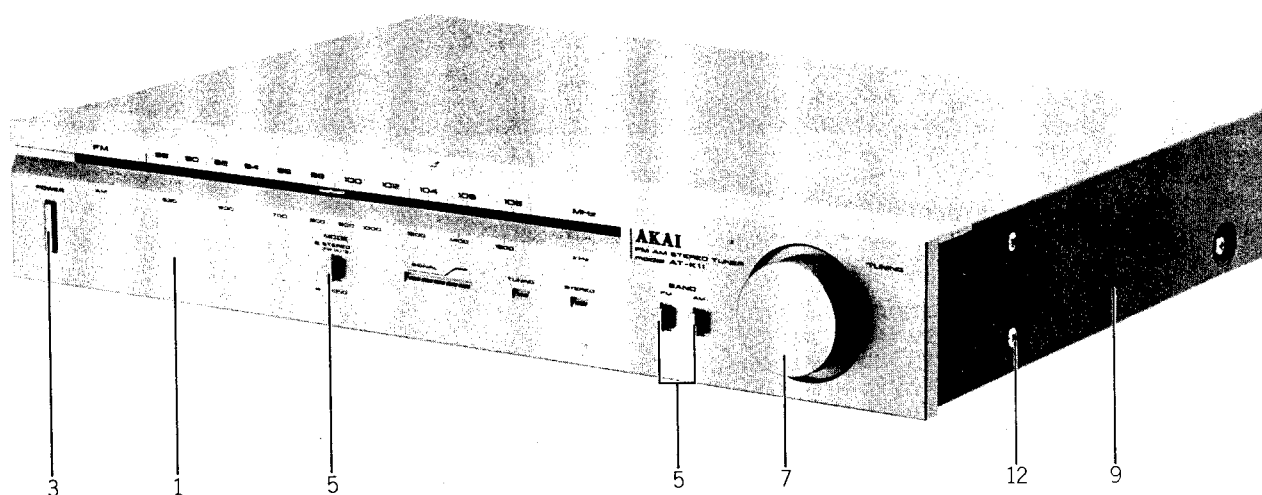
3. ASSEMBLY BLOCK



ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------------------------|-----------|---|
| LED P.C BOARD BLOCK | | |
| 3-1 | ED322247 | D LED SLP-151D RED |
| 3-2 | ED322215 | D LED SLP-251D GRN |
| 3-3 | ED322184 | D LED SLP-152D RDD |
| ROLLER ANGLE (A) BLOCK | | |
| 3-4 | MZ307170 | PULLEY |
| ROLLER ANGLE (B) BLOCK | | |
| 3-5 | MR308836 | PULLEY |
| REAR PANEL BLOCK | | |
| 3-6 | SP329253H | REAR PANEL AT-K11 (U) |
| 3-7x | SP329253J | REAR PANEL AT-K11 (C) |
| 3-8x | SP329253K | REAR PANEL AT-K11 (A) |
| 3-9x | SP329253L | REAR PANEL AT-K11 (E) |
| 3-10x | SP329253M | REAR PANEL AT-K11 (S) |
| 3-11 | EE200184 | ANT BAR AT-K200 MW |
| 3-12 | EW306428 | △ AC CORD 2 CORES KP-205A, VFF UCJ (U/T) |
| 3-13x | EW305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (CSA,AAL) |
| 3-14 | EZ631945 | STRAIN RELIEF SR-4N-4 (U/T CSA,AAL) |
| 3-15x | EJ301513 | △ SOCKET INLET S-I6453 E 2P (CEE, SAA) |
| ASSEMBLY BLOCK | | |
| 3-16 | ZS319460 | T2BR 30x06 STL BZN PROJEC- TION |
| 3-17x | ZS325495 | T2BR 30x06 STL CMT |
| 3-18 | SA311742 | ROUND FOOT |
| 3-19x | ZS463094 | T2BID40x08STL CMT |
| 3-20 | BT201520 | △ TRANS POWER AT-K11T-70 (U/T) |
| 3-21x | BT201517 | △ TRANS POWER AT-K11T-30 (CSA, AAL) |
| 3-22x | BT201518 | △ TRANS POWER AT-K11T-40 (CEE) |
| 3-23x | BT201519 | △ TRANS POWER AT-K11T-50 (SAA) |
| 3-24 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U/T, CEE,SAA) |
| 3-25x | EX665875 | △ SW PUSH SDG1P-J 01-1 UC (CSA,AAL) |
| 3-26x | EC320548 | △ C CE V F 103Z 250AC (U/T) |
| 3-27x | EC314688 | △ C CE V FZ 103P 125AC (CSA, AAL) |
| 3-28x | EC330307 | △ C MMY V ECQUF 472M 250AC (CEE, SAA) |
| 3-29 | TA328846 | TUNING WHEEL |
| 3-30x | ZW436026 | PW92x150x050STL CMT |
| 3-31 | ZW270191 | E JACK NUT SPCC CMT |
| 3-32 | TA322250 | DIAL WHEEL ASSY |
| 3-33 | TA201961 | DIAL STRING TK-1064 (BLACK) D0.5 |
| 3-34 | EF309389 | △ FUSE TSC A 250V 0.40A (U/T) |
| 3-35x | EF308933 | △ FUSE TSC A 250V 0.20A (U/T) |
| 3-36x | EF308848 | △ FUSE TSC 125V 0.40A (CSA, AAL) |
| 3-37x | EF300590 | △ FUSE EAWK T 250V 0.40A (CEE, SAA) |
| 3-38 | TAB201457 | POINTER PART BQ606-32800B |
| 3-39x | EW315767 | △ AC CORD 2 CORES KP-419C/ KS-15 E (CEE) |
| 3-40 | EW322401 | △ AC CORD 2 CORES KP-560/ S-15 S (SAA) |

4. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--------------------------------------|
| 4-1 | SP201020A | FRONT PANEL AT-K11 |
| 4-2x | SP201020B | FRONT PANEL AT-K11-BL |
| 4-3 | SB316498 | BUTTON (B) |
| 4-4x | SB316499 | BUTTON (B-BL) |
| 4-5 | SB329581A | BUTTON |
| 4-6x | SB329581B | BUTTON (BL) |
| 4-7 | SK322207 | TUNING KNOB (A) |
| 4-8x | SK322208 | TUNING KNOB (A-BL) |
| 4-9 | BC322209 | UPPER COVER (A) (U/T,CSA,CEE,SAA) |
| 4-10x | BC322210 | UPPER COVER (A-BL) |
| 4-11x | BC322212 | UPPER COVER (B) |
| 4-12 | ZS322570 | ST BID40x08STL NI3 |
| 4-13x | ZS322580 | ST BID40x08STL BNI (AAL,BL) |
| 4-14x | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 4-15x | ZW305013 | RV POP32 |

II. MODEL AT-K11L

*The composite parts of Model AT-K11L, except for those which have been changed as per the List below, are identical to those of Model AT-K11 Therefore, when ordering parts for this tape deck, please utilize Model AT-K11 Parts List.

1. TUNER P.C BOARD (ATKZ-48A) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------|-----------------------------|
| 1-1 | BAA3008C020A | TUNER PC BLK AT-K11L |
| 1-SW3 | ES200829 | SW PUSH SUF22 2 THROW |
| 1-T5 | EO201252 | COIL OSC2 RNR-44498N 600 UH |
| 1-C67 | EC200928 | C CE V F05 SL 6R0D 50DC |
| 1-C68 | EC201253 | C STY V F05 CQF09 161J 50DC |
| 1-C70 | EC200930 | C CE V F05 SL 4R0D 50DC |
| 1-C92 | EC200930 | C CE V F05 SL 4R0C 50DC |

2. ANTENA SW P.C BOARD (ATK-2063) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------------|
| 2-SW1 | ES319168 | SW PUSH SUF12 2-04-02N |
| 2-L1 | EO485278 | COIL FIX1 FL05H 220UH K |
| 2-T1 | EO324453 | COIL VARI2 RUR-44313N |
| 2-VC1 | EC616342 | C S-FIX H CTY122D33 1.5-16 |
| 2-VC2 | EC616342 | C S-FIX H CTY 122D33 1.5-16 |

3. REAR PANEL BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---|
| 3-1 | SP329253P | REAR PANEL AT-K11L (E) |
| 3-2 | SP329253Q | REAR PANEL AT-K11L (B,S) |
| 3-3 | EE200810 | ANT BAR AT-K22L LW/MW |
| 3-4 | EJ301513 | △ SOCKET INLET S-16453 E 2P (CEE,UK) |
| 3-5 | SK607127 | PUSH KNOB (A) |

4. FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 4-1 | BT330409 | △ TRANS POWER AT-K11LT-40 (CEE) |
| 4-2 | BT330410 | △ TRANS POWER AT-K11LT-50 (UK) |
| 4-3 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (CEE,UK) |
| 4-4 | EC330307 | △ C MMY V ECQUF 472M 250AC (CEE,UK) |
| 4-5 | EF300590 | △ FUSE EAWK 250V 0.40A (CEE,UK) |
| 4-6 | SP201020C | FRONT PANEL AT-K11L |
| 4-7 | SP201020D | FRONT PANEL AT-K11L-BL |
| 4-8 | EW315767 | △ AC CORD 2 CORES KP-419/ KS-15 E (CEE) |
| 4-9 | EW302995 | △ AC CORD 2 CORES VN-0112 B (UK) |

III. MODEL AT-K22

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 |
|-----------|--------------------------------|---------------|
| BT328843 | △ TRANS POWER AT-K200T-30 | CSA, AAL |
| BT328844 | △ TRANS POWER AT-K200T-40 | CEE |
| BT328845 | △ TRANS POWER AT-K200T-50 | SAA |
| BT328842 | △ TRANS POWER AT-K200T-70 | U/T |
| EC616342 | C S-FIX H CTY122D33 1.5-16 | |
| ED322247 | D LED SLP-151D RED | |
| ED322184 | D LED SLP-152D RED | |
| ED322215 | D LED SLP-251D GRN | |
| ED200469 | D SILICON H DS448 FA1 F10 | |
| ED200469 | D SILICON H DS 448 FA1 F10 | |
| ED322238 | D SILICON 1B4B41 100/1.0A | |
| ED224526 | D SILICON 10D1 100/1.0A | |
| ED309959 | D ZENER H HZ5 C3 | |
| ED323216 | D ZENER H 05Z15 U | |
| ED325080 | D ZENER H 05Z9.1 L | |
| EE325737 | FRONT END FF136U12 87-108MC | |
| EF300590 | △ FUSE EAWK T 250V 0.40A | CEE, SAA |
| EF308933 | △ FUSE TSC A 250V 0.20A | U/T |
| EF309389 | △ FUSE TSC A 250V 0.40A | U/T |
| EF308848 | △ FUSE TSC 125V 0.40A | CSA, AAL |
| EI322248 | IC LA1231N | |
| EI293185 | IC LA1240 | |
| EI650597 | IC LA3350S | |
| EI315491 | IC LB1405S | |
| EI328850 | IC LC7259 | |
| EI328849 | IC M54459L | |
| EI323231 | OSC X'TAL 4MHZ | |
| EM328848 | IND LE SL-1713W CHARACTER | |
| EO328854 | COIL DET2 Q228CEL-1098R | |
| EO328137 | COIL FIX 2 NI-0036 2.2UH | |
| EO328137 | COIL FIX 2 NI-0036 2.2UH | |
| EO307186 | COIL OSC 2 RWR-4308N 160UH | |
| ER293398 | COIL IFT RMC-42246BCH 468KHZ | |
| ER307204 | FILTER CE CFMA-008 0.468MHZ | |
| ER307201 | FILTER CE SFE10.7MM-Z 10.7 MHZ | |
| ER328855 | FILTER LC LP 12A1251 AKAI | |
| ES310839 | △ SW PUSH SDG1P-E 01-1 E | U/T, CEE, SAA |
| ES665875 | △ SW PUSH SDG1P-J 01-1 UC | CSA, AAL |
| ES201979 | SW PUSH SUF12 2-02-02N | |
| ES201948 | SW PUSH FUF22 2 THROW | |
| ET323232 | TR FET 2SK9Y | |
| ET200506 | TR 2SC2603 F | |
| ET316171 | TR 2SC536K-NP E, F | |
| ET316643 | TR 2SC536K-NP F, G | |
| ET618873 | TR 2SC930 E, F | |
| ET618873 | TR 2SC930 E, F | |
| ET452531 | TR 2SD313 E, F | |
| EV427858 | R S-FIX H SR19R 3P 0.15W 472 | |
| EV604438 | R S-FIX H V 10K8-4-2 3P 103 | |
| EV593368 | R S-FIX H V10K8-4-2 3P 303 | |
| EV499375 | R S-FIX H V10K8-4-2 3P 501 | |

2. TUNER P.C BOARD (ATKZ-16A/47A/48A) BLOCK

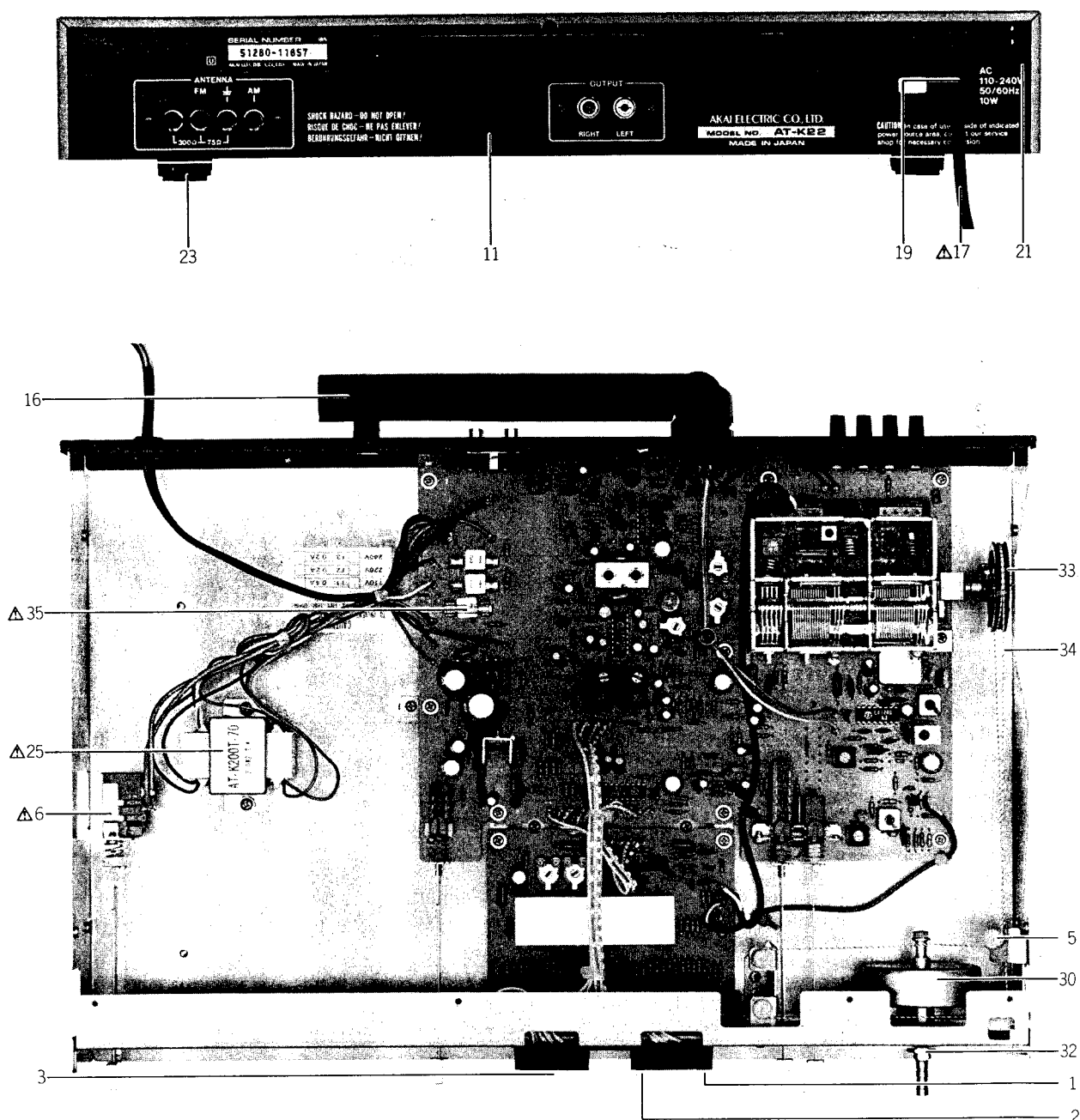
| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|--------------|--------------------------------------|
| 2-1 | BAA3009A050A | TUNER PC BLK AT-K22 (U)(U/T) |
| 2-2 | BAA3009A050B | TUNER PC BLK AT-K22 (C) (CSA,AAL) |
| 2-3 | BAA3009A050C | TUNER PC BLK AT-K22 (E) (CEE,SAA) |
| 2-4 | EE325737 | FRONT END FF136U12 87-108MC |
| 2-IC1 | EI322248 | IC LA1231N |
| 2-IC2 | EI650597 | IC LA3350S |
| 2-IC3 | EI293185 | IC LA1240 |
| 2-IC4 | EI315491 | IC LB1405S |
| 2-TR1 | ET618873 | TR 2SC930 E,F |
| 2-TR2to4 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR5,6 | ET200506 | TR 2SC2603 F |
| 2-TR7to9 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR10 | ET-323232 | TR FET 2SK19 Y |
| 2-TR11 | ET316643 | TR 2SC536K-NP F,G |
| 2-TR12 | ET452531 | △ TR 2SD313 E,F |
| 2-TR13 | ET316643 | TR 2SC536K-NP F,G |
| 2-D1 to 8 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-D9 | ED323216 | △ D ZENER H 05Z15 U |
| 2-D10 | ED322238 | △ D SILICON 1B4B41 100/1.0A |
| 2-D11 | ED224526 | △ D SILICON 10D1 100/1.0A |
| 2-D12 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-J1 | EJ323227 | PIN J T5727-A P 2P |
| 2-SW1 | ES201979 | SW PUSH SUF12 2-02-02N |
| 2-SW2 | ES201948 | SW PUSH SUF22 2 THROW |
| 2-VR1,2 | EV593368 | R S-FIX H V10K8-4-2 3P 303 |
| 2-VR3 | EV427858 | R S-FIX H SR19R 3P 0.15W 472 |
| 2-VR4 | EV499375 | R S-FIX H V 10K8-4-2 3P 501 |
| 2-L1,2 | EO328137 | COIL FIX 2 NI-0036 2.2UH |
| 2-T1 | EO328854 | COIL DET2 Q228CEL-1098R |
| 2-T2 | ER293398 | COIL IFT RMC-42246 BCH 468.0KHZ |
| 2-T3 | ER307204 | FILTER CE CFMA-008 0.468MHZ |
| 2-T4 | EO307186 | COIL OSC 2 RWR-43208N 160UH |
| 2-FL1,2 | ER307201 | FILTER CE SFE 10.7MM-Z 10.7MHZ |
| 2-FL3,4 | ER328855 | FILTER LC LP 12A1251 AKAI |
| 2-VC1,2 | EC616342 | C S-FIX H CTY122D33 1.5-16 |
| 2-R7,8 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R13,14 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R31,32 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R56,57 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R65,66 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R73to75 | ER324337 | △ R CB H SNP FS RDS 1/4W 560J |
| 2-R83 | ER324185 | △ R CB H SNP FS RDS 1/4W 221J |
| 2-R96 | ER669328 | R SD 1/2W 225J |
| 2-R97,98 | ER324480 | △ R CB H SNP FS RDS 1/4W 470J |
| 2-C33 | EC328862 | C STY V F05 CQF09 152J 50DC |
| 2-C57,58 | EC200928 | C CE V F05 SL 6R0D 50DC |
| 2-C59 | EC314996 | C STY V SNP CQFS 391J 50DC |
| 2-C76,77 | EC328856 | C STY V F05 CQF09 331K 50DC |
| 2-TM1 | EJ309941 | TERMINAL W/SCREW UB-1059 P |

4P

3. COUNTER P.C BOARD (ATKZ-17) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|---------------|-----------------------------|
| 3-1 | BA-A3009A070A | COUNTER PC BLK AT-K22 |
| 3-IC1 | EI328849 | IC M54459L |
| 3-IC2 | EI328850 | IC LC7259 |
| 3-TR1 | ET618873 | TR 2SC930 E,F |
| 3-TR2 | ET316171 | TR 2SC536K-NP E,F |
| 3-D1,2 | ED200469 | D SILICON H DS448 FA1 F10 |
| 3-D3 | ED325080 | D ZENER H 05Z9.1 L |
| 3-D4 | ED309959 | D ZENER H HZ5 C3 |
| 3-VR1,2 | EV604438 | R S- FIX H V10K8-4-2 3P 103 |
| 3-L1 to 3 | EO328137 | COIL FIX 2 NI-0036 2.2UH |
| 3-IND1 | EM328848 | IND LE SL-1713W CHARACTER |
| 3-X1 | EI323231 | OSC X'TAL 4MHZ |
| 3-R35 | ER324185 | R CB H SNP FS RDS 1/4W 221J |
| 3-R38 | ER324186 | R CB H SNP FS RDS 1/4W 681J |

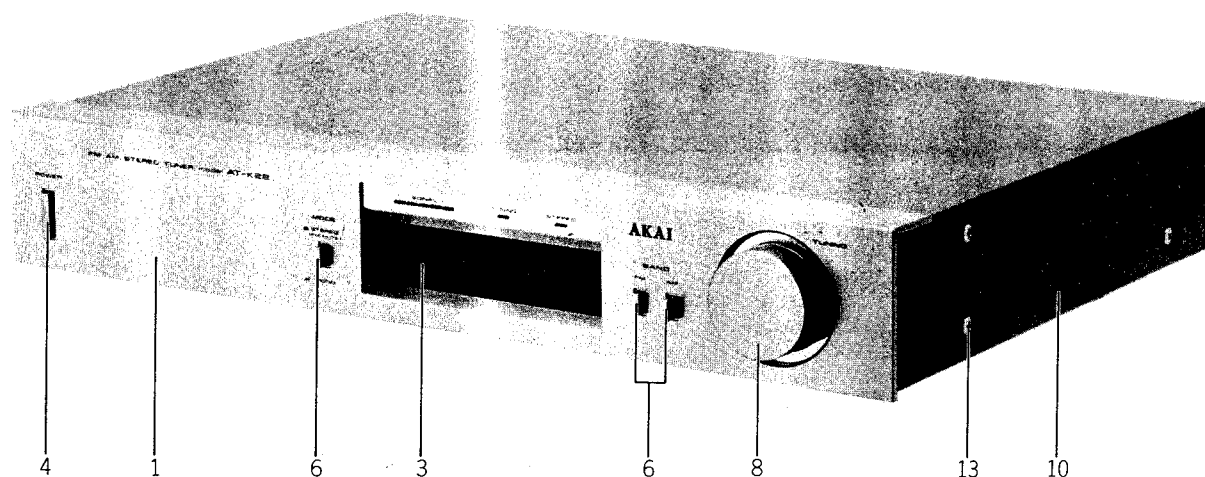
4. ASSEMBLY BLOCK



ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------------------------|-----------|---|
| LED P.C BOARD BLOCK | | |
| 4-1 | ED322247 | D LED SLP-151D RED |
| 4-2 | ED322215 | D LED SLP-251D GRN |
| 4-3 | ED322184 | D LED SLP-152D RED |
| 4-4x | ZW698308 | RV NYL 30x055 BL |
| ROLLER ANGLE (A) BLOCK | | |
| 4-5 | MR308836 | PULLEY |
| POWER SW BLOCK | | |
| 4-6 | ES310839 | △ SW PUSH SDG1 P-E 01-1 E (U/T CEE,SAA) |
| 4-7x | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (CSA, AAL) |
| 4-8x | EC320548 | △ C CE V F 103Z 250AC (U/T) |
| 4-9x | EC314688 | △ C CE V FZ 103P 125AC (CSA, AAL) |
| 4-10x | EC330307 | △ C MMY V ECQUF 472M 250AC (CEE, SAA) |
| REAR PANEL BLOCK | | |
| 4-11 | SP329253A | REAR PANEL AT-K22 (U) |
| 4-12x | SP329253B | REAR PANEL AT-K22 (C) |
| 4-13x | SP329253C | REAR PANEL AT-K22 (A) |
| 4-14x | SP329253D | REAR PANEL AT-K22 (E) |
| 4-15x | SP329253E | REAR PANEL AT-K22 (B,S) |
| 4-16 | EE200184 | ANT BAR AT-K200 MW |
| 4-17 | EW306428 | △ AC CORD 2 CORES KP-205A, VFF UCJ (U/T) |
| 4-18x | EW305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (CSA,AAL) |
| 4-19 | EZ631945 | △ STRAIN RELIEF SR-4N-4 (U/T CSA,AAL) |
| 4-20x | EJ301513 | △ SOCKET INLET S-I6453 E 2P (CEE, SAA) |
| 4-21 | ZS319460 | T2BR 30x06 STL BZN PROJEC- TION |
| 4-22x | ZS325495 | T2BR 30x06 STL CMT |
| 4-23 | SA311742 | ROUND FOOT |
| 4-24x | ZS565942 | T2PAN40x08STL CMT |
| 4-25 | BT328842 | △ TRANS POWER AT-K200T-70 (U/T) |
| 4-26x | BT328843 | △ TRANS POWER AT-K200T-30 (CSA, AAL) |
| 4-27x | BT238844 | △ TRANS POWER AT-K200T-40 (CEE) |
| 4-28x | BT328845 | △ TRANS POWER AT-200T-50 (SAA) |
| 4-29x | ZW698308 | RV NYL30x055 BL |
| 4-30 | TA328846 | TUNING WHEEL |
| 4-31x | ZW436026 | PW92x150x050STL CMT |
| 4-32 | ZW554624 | E JACK NUT SPCC NI3 |
| 4-33 | TA322250 | DIAL WHEEL ASSY |
| 4-34 | TA307160 | DIAL STRING TK-1064 D0.5 |
| 4-35 | EF309389 | △ FUSE TSC A 250V 0.40A (U/T) |
| 4-36x | EF308933 | △ FUSE TSC A 250V 0.20A (U/T) |
| 4-37x | EF308848 | △ FUSE TSC 125V 0.40A (CSA, AAL) |
| 4-38x | EF300590 | △ FUSE EAWK T 250V 0.40A (CEE, SAA) |
| 4-39x | EW315767 | △ AC CORD 2 CORES KP-419C/ KS-15 E (CEE) |
| 4-40x | EW322401 | △ AC CORD 2 CORES KP-560/ S-15 S (SAA) |

5. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|------------|--------------------------------------|
| 5-1 | BDB329241A | FRONT PANEL PART AT-K22 |
| 5-2x | BDB329241B | FRONT PANEL PART AT-K22-BL |
| 5-3 | TA329251 | LED FILTER |
| 5-4 | SB316498 | BUTTON (B) |
| 5-5x | SB316499 | BUTTON (B-BL) |
| 5-6 | SB329581A | BUTTON |
| 5-7x | SB329581B | BUTTON (BL) |
| 5-8 | SK322207 | TUNING KNOB (A) |
| 5-9x | SK322208 | TUNING KNOB (A-BL) |
| 5-10 | BC322209 | UPPER COVER (A)(U/T,CSA,CEE, SAA) |
| 5-11x | BC322212 | UPPER COVER (B) (AAL) |
| 5-12x | BC322210 | UPPER COVER (A-BL) |
| 5-13 | ZS322570 | ST BID40x08STL NI3 |
| 5-14x | ZS322580 | ST BID40x08STL BNI (AAL,BL) |
| 5-15x | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 5-16x | ZW305013 | RV POP32 |

IV. MODEL AT-K22L

*The composite parts of Model AT-K22L, except for those which have been changed as per the List below, are identical to those of Model AT-K22 Therefore, when ordering parts for this tape deck, please utilize Model AT-K22 Parts List.

1. TUNER P.C BOARD (ATKZ-48A) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------|----------------------------------|
| 1-1 | BAA3009C030A | PC TUNER BLK AT-K22L (CEE,UK) |
| 1-SW3 | ES200829 | SW PUSH SUF22 2 THROW |
| 1-T5 | EO201252 | COIL OSC2 RNR-44498N 600 UH |
| 1-C68 | EC201253 | C STY V F05 CQF09 161J 50DC |

2. ANTENA SW P.C BOARD (ATD-2063) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------|
| 2-SW1 | ES319168 | SW PUSH SUF12 2-04-02N |
| 2-L1 | EO485278 | COIL FIX1 FL05H 220μH K |
| 2-T1 | EO324453 | COIL VARI2 RUR-44313N |
| 2-VC1,2 | EC616342 | C S-FIX H CTY122D33 1.5-16 |

3. POWER SW BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------|
| 3-1 | ES310839 | △ SW PUSH SDG1 P-E 01-1 E |
| 3-2 | EC330307 | △ C MMY V ECQUF 472M 250AC |

4. REAR PANEL BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------------|
| 4-1 | SP329253F | REAR PANEL AT-K22L (E) |
| 4-2 | SP329253G | REAR PANEL AT-K22L (B) |
| 4-3 | EE200810 | ANT BAR AT-K22L LW/MW |
| 4-4 | EJ301513 | △ SOCKET INLET S-16453 E 2P |
| 4-5 | SK607127 | PUSH KNOB (A) |

5. FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---|
| 5-1 | BT330411 | △ TRANS POWER AT-K22LT-40 (CEE) |
| 5-2 | BT330413 | △ TRANS POWER AT-K22LT-50 (UK) |
| 5-3 | EF300590 | △ FUSE EAWK T 250V 0.40A (CEE,UK) |
| 5-4 | BDB329241C | FRONT PANEL PART AT-K22L |
| 5-5 | BDB329241D | FRONT PANEL PART AT-K22L-BL |
| 5-6 | TA329251 | LED FILTER |
| 5-7 | EW315767 | △ AC CORD 2 CORES KP-419C/ KS-15 E (CEE) |
| 5-8 | EW302995 | △ AC CORD 2 CORES VM-0112 B (UK) |

V. MODEL AM-U11

1. RECOMMENDED SPARE PARTS LIST

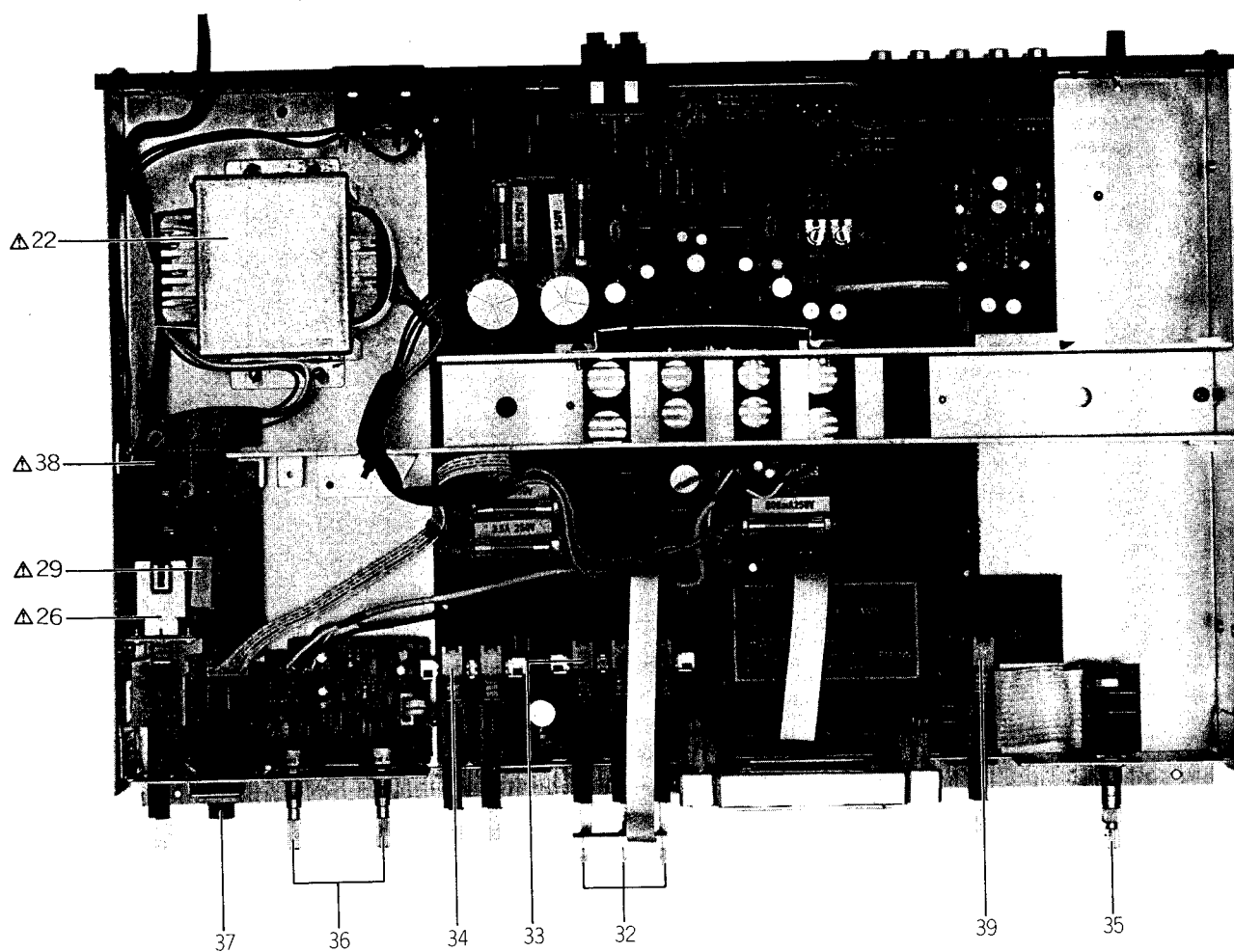
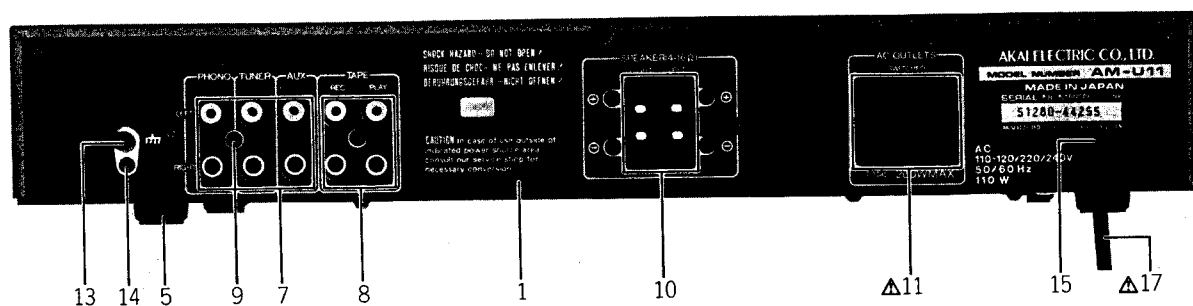
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| Parts No. | Description | Notes |
|-----------|------------------------------|---------------|
| BT704530 | △ TRANS POWER PT-376 (B) | UK, SAA |
| BT704528 | △ TRANS POWER PT-376 (C,A) | CSA, AAL |
| BT704529 | △ TRANS POWER PT-376 (E) | CEE |
| BT704527 | △ TRANS POWER PT-376 (U) | U/T |
| ED379855 | D GERMA H 1N60P | |
| ED322215 | D LED SLP-251D GRN | |
| ED624903 | D SILICON H 1S2473 | |
| ED704547 | D SILICON KBPC802 | |
| ED328486 | D ZENER H HZ15 3 | |
| ED313623 | D ZENER H HZ22 3 | |
| EF300603 | △ FUSE FST3100 T 250V 0.8A | CEE, UK, SAA |
| EF301160 | △ FUSE FST3100 T 250V 2A | CEE, UK, SAA |
| EF300607 | △ FUSE FST3100 T 250V 3.15A | CEE, UK, SAA |
| EF704513 | △ FUSE SS-2 250V 0.8A | CSA, AAL |
| EF704516 | △ FUSE 125V 3.5A | CSA, AAL |
| EF704512 | △ FUSE 120V 0.8A | U/T |
| EF704519 | △ FUSE 250V 2.5A | U/T |
| EF704515 | △ FUSE 250V 3.5A | U/T |
| EF704521 | △ FUSE 250V 3A | CSA, AAL |
| EI213390 | IC NJM4558D | |
| EI704498 | IC STK461 | |
| EJ704536 | △ AC OUTLET UL | U/T, CSA, ALL |
| EJ704505 | HEADPHONE JACK S-G2305 | |
| EM704509 | METER (BL) MG-108U | |
| EM704508 | METER MG-108U | |
| ER704555 | △ R FUSE 1/4W 101 | |
| ER704523 | △ SPARK KILLER CR-3 | U/T |
| ER704525 | △ SPARK KILLER ECQ-U1A 103ME | CSA, AAL |
| ER704526 | △ SPARK KILLER PME265MB51 | CEE, UK, SAA |
| ES310839 | △ SW PUSH SDG1P-E 01-1 E | U/T |
| ES665875 | △ SW PUSH SDG1P-J 01-1 UC | CSA, AAL |
| ES665807 | △ SW PUSH SDG5P-E 02 E | CEE, UK, SAA |
| ES702223 | SW PUSH R2100469 | |
| ES702226 | SW PUSH R2100470 | |
| ES702225 | SW PUSH R2100475 | |
| ET223446 | TR 2SC1571NP G,H | |
| EV305635 | R S-FIX H D8 3P 502 | |
| EV701956 | VR ROTARY 16P20 15A104 | |
| EV701955 | VR ROTARY 16P22 B254Z254 | |

2. AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|-----------|---|
| 2-IC1 | EI213390 | IC NJM4558D |
| 2-IC2 | EI704498 | IC STK461 |
| 2-TR101 | ET223446 | TR 2SC1571NP G,H |
| 2-D101,102 | ED379855 | D GERMA HA 1N60P |
| 2-D103 | ED624903 | D SILICON H 1S2473 |
| 2-D305 | ED624903 | D SILICON H 1S2473 |
| 2-D310,311 | ED328486 | D ZENER H HZ15 3 |
| 2-D312 | ED313623 | D ZENER H HZ22 3 |
| 2-D313 | ED704547 | D SILICON KBPC802 |
| 2-VR101 | EV305635 | R S-FIX H D8 3P 502 |
| 2-R133 | ER704556 | R OMF 3W R33 |
| 2-R134 | ER704557 | R OMF 2W 4R7 |
| 2-R139 | ER558213 | R OMF H 1W 181J |
| 2-R307,308 | ER453565 | R OMF H 2W 122J |
| 2-R310 | ER490814 | R OMF H 2W 681J |
| 2-R311 | ER704555 | △ R FUSE 1/4W 101 |
| 2-C308,309 | EC310846 | C EC V UNB 472M 35DC |
| 2-F1,2 | EF704515 | △ FUSE 250V 3.5A (U/T) |
| 2-F1,2 | EF704516 | △ FUSE 125V 3.5A (CSA, AAL) |
| 2-F1,2 | EF300607 | △ FUSE FST3100 T 250V 3.15A (CEE, UK, SAA) |
| 2-F3 | EF704512 | △ FUSE 250V 0.8A (U/T) |
| 2-F3 | EF704513 | △ FUSE SS-2 250V 0.8A (CSA, AAL) |
| 2-F3 | EF300603 | △ FUSE FST3100 T 250V 0.8A (CEE,UK, SAA) |
| 2-F4,5 | EF704519 | △ FUSE 250V 2.5A (U/T) |
| 2-F4,5 | EF704521 | △ FUSE 250V 3A (CSA,AAL) |
| 2-F4,5 | EF301160 | △ FUSE FST3100 T 250V 2A (CEE, UK, SAA) |

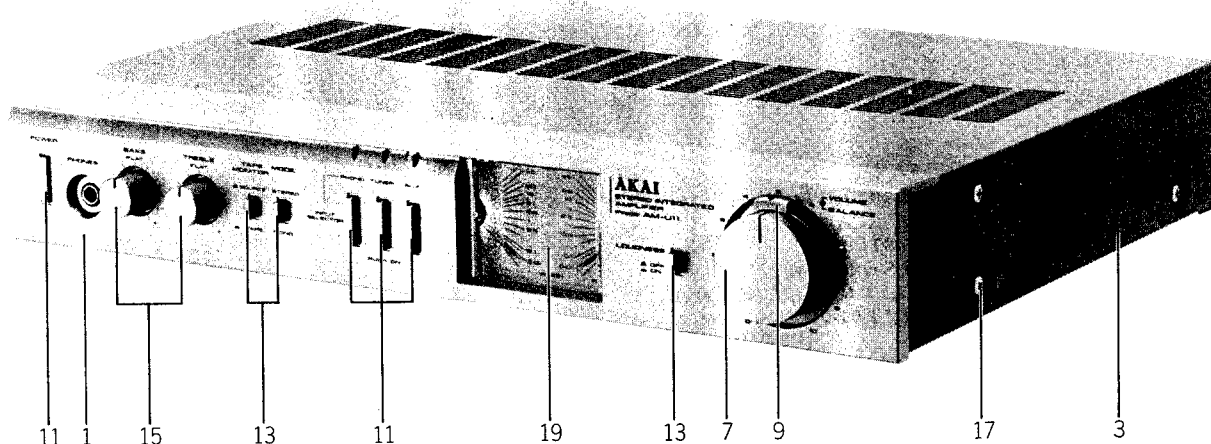
3. ASSEMBLY BLOCK



ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|-----------|---|
| 3-1 | SP701946 | PANEL REAR AM-U11 (U)(U/T) |
| 3-2x | SP701947 | PANEL REAR AM-U11 (C,A) (CSA,AAL) |
| 3-3x | SP701944 | PANEL REAR AM-U11 (E)(CEE) |
| 3-4x | SP701945 | PANEL REAR AM-U11 (B,S) (UK,SAA) |
| 3-5 | SA704495 | FOOT T-G |
| 3-6x | ZS308895 | ST PAN 30x08STL CMT |
| 3-7 | EJ704499 | PIN JACK 6P RCA1796 P269 |
| 3-8 | EJ704500 | PIN JACK 4P RCA1794 P268 |
| 3-9 | ZS463353 | T2BR 30x08STL BNI |
| 3-10 | EJ704506 | SPEAKER J S-Q2367 4P |
| 3-11 | EJ704536 | △ AC OUTLET UL (U/T, CSA,AAL) |
| 3-12x | EJ704511 | DIN JACK 5P 2-01-0128-20 (CEE,UK,SAA) |
| 3-13 | EJ704535 | GND TERMINAL |
| 3-14 | ZS447761 | T2BR 30x06STL BNI |
| 3-15 | EJ704538 | CORD BUSH SR 3P-4 (U/T,CSA AAL) |
| 3-16x | EZ631945 | STAIN RELIEF SR-4N-4 (CEE,UK SAA) |
| 3-17 | EW704531 | △ POWER CORD KP-205A U (U/T) |
| 3-18x | EW704532 | △ POWER CORD KP-10 U,C (CSA, AAL) |
| 3-19x | EW704533 | △ POWER CORD KP-419C C (CEE) |
| 3-20x | EW704534 | △ POWER CORD GTBS-2F B (UK) |
| 3-21x | EW704554 | △ POWER CORD KP-560 S (SAA) |
| 3-22 | BT704527 | △ TRANS POWER PT-376 (U)(U/T) |
| 3-23x | BT704528 | △ TRANS POWER PT-376 (CA) (CSA,AAL) |
| 3-24x | BT704529 | △ TRANS POWER PT-376 (E) (CEE) |
| 3-25x | BT704530 | △ TRANS POWER PT-376 (B) (UK, SAA) |
| 3-26 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U/T) |
| 3-27x | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (CSA, AAL) |
| 3-28x | ES665807 | △ SW PUSH SDG5P-E 02 E (CEE, UK, SAA) |
| 3-29 | ER704523 | △ SPARK KILLER CR-3 (U/T) |
| 3-30x | ER704525 | △ SPARK KILLER ECQ-U1A 103 ME (CSA,AAL) |
| 3-31x | ER704526 | △ SPARK KILLER PME265 MB51 (CEE, UK,SAA) |
| 3-32 | ED322215 | D LED SLP-251D GRN |
| 3-33 | ES702223 | SW PUSH R2100469 |
| 3-34 | ES702226 | SW PUSH R2100470 |
| 3-35 | EV701955 | VR ROTARY 16P22 B254Z254 |
| 3-36 | EV701956 | VR ROTARY 16P20 15A104 |
| 3-37 | EJ704505 | HEADPHONE JACK S-G 2305 |
| 3-38 | EJ704539 | △ VOLTAGE CHANGE WIRE (U/T) |
| 3-39 | ES702225 | SW PUSH R2100475 |

4. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---|
| 4-1 | SP701939 | PANEL FRONT AM-U11 |
| 4-2x | SP701940 | PANEL FRONT AM-U11-BL |
| 4-3 | SP704489 | COVER UPPER (U/T,AAL,CEE, UK,SAA) |
| 4-4x | SP701948 | COVER UPPER (CSA) |
| 4-5x | SP704490 | COVER UPPER (BL) (U/T,AAL, CEE,UK,SAA) |
| 4-6x | SP701949 | COVER UPPER (BL) (CSA) |
| 4-7 | SK704550 | DOUBLE KNOB (UPPER) |
| 4-8x | SK704549 | DOUBLE KNOB (UPPER-BL) |
| 4-9 | SK704552 | DOUBLE KNOB (LOWER) |
| 4-10x | SK704551 | DOUBLE KNOB (LOWER-BL) |
| 4-11 | SB316498 | BUTTON (B) |
| 4-12x | SB316499 | BUTTON (B-BL) |
| 4-13 | SK701941 | KNOB (B) |
| 4-14x | SK701942 | KNOB (B-BL) |
| 4-15 | SK704541 | SINGLE KNOB |
| 4-16x | SK704540 | SINGLE KNOB (BL) |
| 4-17 | ZS322570 | ST BID40x08STL NI3 |
| 4-18x | ZS322580 | ST BID40x08STL BNI |
| 4-19 | EM704508 | METER MG-108U |
| 4-20x | EM704509 | METER (BL) MG-108U |

VI. MODEL AM-U22

1. RECOMMENDED SPARE PARTS LIST

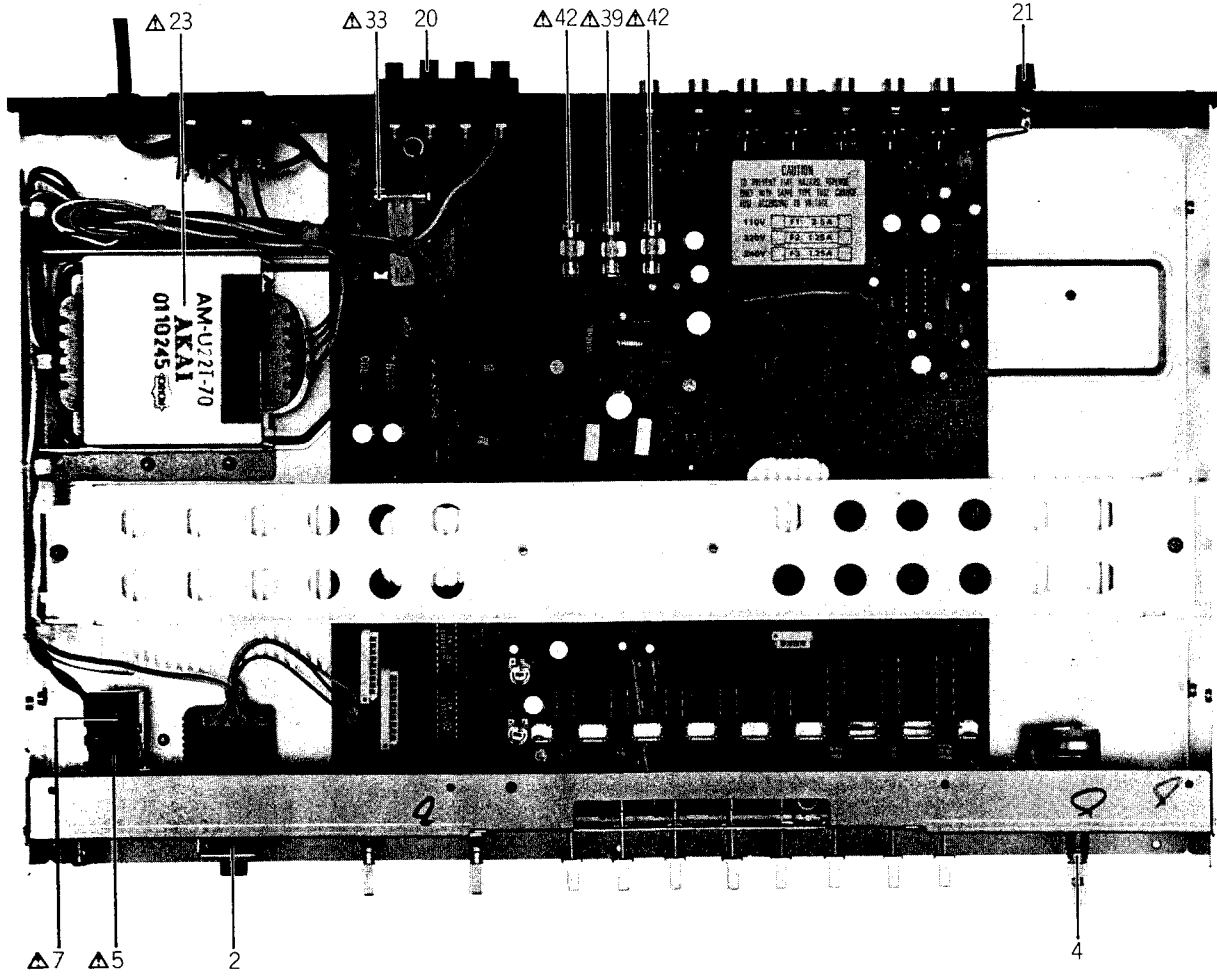
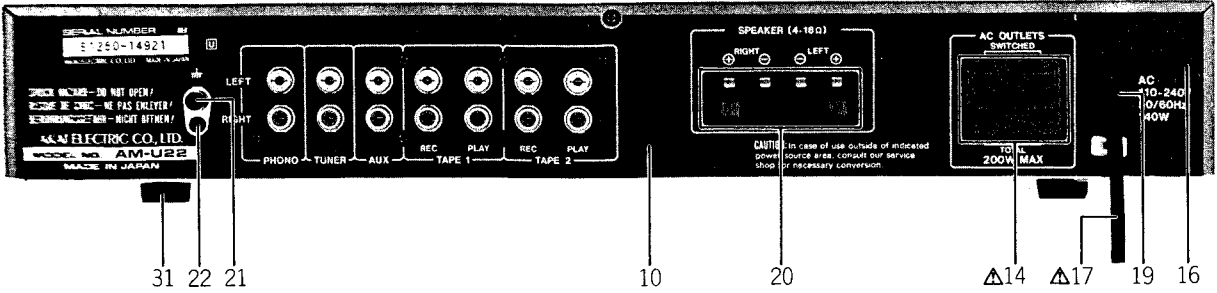
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| Parts No. | Description | Notes |
|-----------|---------------------------------|-------------------|
| BT329606 | △ TRANS POWER AM-U22T-20 | AAL |
| BT329607 | △ TRANS POWER AM-U22T-30 | CSA |
| BT329608 | △ TRANS POWER AM-U22T-40 | CEE |
| BT329609 | △ TRANS POWER AM-U22T-50 | UK, SAA |
| BT329605 | △ TRANS POWER AM-U22T-70 | U/T |
| ED322772 | D LED SLP-155D-01 RED | |
| ED200213 | D SILICON DBA40C-K15 200/2.6A | |
| ED300924 | D SILICON GP08D 200/0.8A | |
| ED200469 | D SILICON H DS448 FA1 F10 | |
| EF602550 | △ FUSE SEMKO T 250V 1.25A | CEE, UK, SAA |
| EF602550 | △ FUSE SEMKO T 250V 1.25A | CEE, UK, SAA |
| EF623125 | △ FUSE SEMKO T 250V 2.5A | CEE, UK, SAA |
| EF690996 | △ FUSE SEMKO T 250V 4A | CEE, UK, SAA |
| EF306949 | △ FUSE TSC A 250V 1.25A | U/T |
| EF306951 | △ FUSE TSC A 250V 2.5A | U/T |
| EF306950 | △ FUSE TSC A 250V 2A | U/T |
| EF306952 | △ FUSE TSC A 250V 4A | U/T |
| EF306956 | △ FUSE TSC 125V 2.5A | CSA, AAL |
| EF306954 | △ FUSE TSC 125V 2A | CSA, AAL |
| EF306957 | △ FUSE TSC 125V 4A | CSA, AAL |
| EF306957 | △ FUSE TSC 125V 4A | CSA, AAL |
| EI697871 | IC LA3122S | |
| EI329612 | IC LB1409 | |
| EI329611 | IC STK463SLY | |
| EO650823 | COIL FIX 2 2.2UH | |
| ES310839 | △ SW PUSH SDG1P-E 01-1 E | U/T, CEE, UK, SAA |
| ES665875 | △ SW PUSH SDG1P-J 01-1 UC | CSA, AAL |
| ES329615 | SW PUSH SUF84 8-THROW | |
| ET293253 | TR 2SC1627 O, Y | |
| EV315416 | R S-FIX H D8 3P 103 | |
| EV324345 | VR ROTARY 16P20x1S 15C104 | |
| EV329572 | VR ROTARY 16P22x0A 1Z254 3BM254 | |

2. MAIN AMP P.C BOARD (AMUZ-16A/23A/32A) BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|--------------|--|
| 2-1 | BAA2005A090A | MAIN AMP PC BLK AM-U22(U) (U/T) |
| 2-2 | BAA2005A090B | MAIN AMP PC BLK AM-U22(C) (CSA, AAL) |
| 2-3 | BAA2005A090C | MAIN AMP PC BLK AM-U22(E) (CEE,UK, SAA) |
| 2-IC1 | EI697871 | IC LA3122S |
| 2-IC2 | EI329612 | IC LB1409 |
| 2-IC3 | EI329611 | IC STK463SLY |
| 2-TR1 | ET293253 | △ TR 2SC1627 O,Y |
| 2-D1 | ED200213 | △ D SILICON DBA40C-K15 200/2.6A |
| 2-D2 | ED300924 | △ D SILICON GP08D 200/0.8A |
| 2-D3 to 6 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-J4,5 | EJ293365 | PIN J T5703-E P 4P |
| 2-J6 | EJ293376 | PIN J T5704-E P 6P |
| 2-SW1 | ES329615 | SW PUSH SUF84 8-THROW |
| 2-VR1, 2 | EV324345 | VR ROTARY 16P20x1S 15C104 |
| 2-VR3 | EV315416 | R S-FIX H D8 3P 103 |
| 2-L1 | EO650823 | COIL FIX 2 2.2UH |
| 2-R8 | ER325269 | △ R CB H SNP FS RDS 1/4W 222J |
| 2-R19 | ER323074 | △ R CB H SNP FS RDS 1/4W 102J |
| 2-R20 | ER329616 | △ R CT P F09 PLATE 3W R47K |
| 2-R21 | ER322591 | △ R CB H SNP FS RDS 1/4W 101J |
| 2-R22 | ER308875 | △ R CB H SNP FS RDS 1/2W 100J |
| 2-R52 | ER200939 | △ R CB H SNP FS RDS 1/4W 181J |
| 2-C16 | EC313532 | C EC V F05 NP 04D 1ROM 50.0DC |
| 2-C31 | EC316190 | C EC V F05 NP 04D 470M 10DC |
| 2-C38,39 | EC320307 | C EC V SNP VN 682 40DC |
| 2-C47 | EC326583 | C MMY V CUT CF921 473K 400DC |

3. ASSEMBLY BLOCK

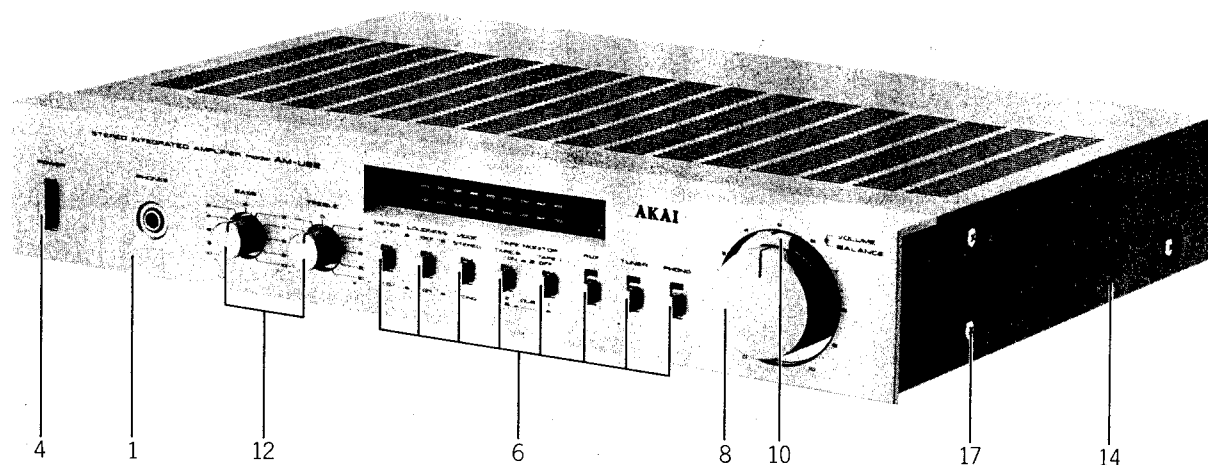


ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|--------------------------------|-----------|---|
| LED (A) P.C BOARD BLOCK | | |
| 3-1x | ED322772 | D LED SLP-155D-01 RED |
| HEADPHONE JACK P.C BOARD BLOCK | | |
| 3-2 | EJ329265 | PHONE J 3P HLJ0315-040 6.3 2C |
| 3-3x | ER308503 | R OMF H FS 1W 181J |
| VOLUME P.C BOARD BLOCK | | |
| 3-4 | EV329572 | VR ROTARY 16P22x0A 1Z254 3BM254 |
| 3-5 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U/T, CEE, UK, SAA) |
| 3-6x | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (CSA, AAL) |
| 3-7 | EC320548 | △ C CE V F 103Z 250AC (U/T) |
| 3-8x | EC314688 | △ C CE V FZ 103P 125AC (CSA, AAL) |
| 3-9x | EC330307 | △ C MMY V ECQUF 472M 250AC (CEE, UK, SAA) |
| REAR PANEL BLOCK | | |
| 3-10 | SP329588A | REAR PANEL AM-U22 (U) |
| 3-11x | SP329588B | REAR PANEL AM-U22 (C,A) |
| 3-12x | SP329588C | REAR PANEL AM-U22 (E) |
| 3-13x | SP329588D | REAR PANEL AM-U22 (B,S) |
| 3-14 | EZ225145 | △ SOCKET OUTLET S-16468 UC 2x2P (U/T, CSA, AAL) |
| 3-15x | EJ296853 | △ SOCKET INLET CM-3 UC EB 3P (CEE, UK, SAA) |
| 3-16 | ZS463353 | T2BR 30x08STL BNI |
| 3-17 | EW306428 | △ AC CORD 2 CORES KP. 205A, VFF UCJ (U/T) |
| 3-18x | EW305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (CSA, AAL) |
| 3-19 | EZ631945 | STRAIN RELIEF SR-4N-4 (U/T, CSA, AAL) |
| 3-20 | EJ322582 | TERMINAL PUSH S-Q2370 S 4P |
| 3-21 | EJ329610 | TERMINAL W/SCREW UB-0067 L 1P |
| 3-22 | ZS447761 | T2BR30x06STL BNI |
| ASSEMBLY BLOCK | | |
| 3-23 | BT329605 | △ TRANS POWER AM-22T-70 (U/T) |
| 3-24x | BT329607 | △ TRANS POWER AM-U22T-30 (CSA) |
| 3-25x | BT329606 | △ TRANS POWER AM-U22T-20 (AAL) |
| 3-26x | BT329608 | △ TRANS POWER AM-U22T-40 (CEE) |
| 3-27x | BT329609 | △ TRANS POWER AM-U22T-50 (UK, SAA) |
| 3-28x | ZS319460 | T2BR30x06STL BZN PROJEC-TION |
| 3-29x | ZS325495 | T2BR30x06STL CMT |
| 3-30x | ZS522865 | T2BR30x12STL BNI |
| 3-31 | SA311742 | ROUND FOOT |
| 3-32x | ZS304022 | ST PAN 40x06STL CMT |
| 3-33 | EF306951 | △ FUSE TSC A 250A 2.5A (U/T) |
| 3-34x | EF306956 | △ FUSE TSC 125V 2.50A (CSA, AAL) |
| 3-35x | EF602550 | △ FUSE SEMKO T250V 1.25A (CEE, UK, SAA) |
| 3-36x | EF306949 | △ FUSE TSC A 250V 1.25A (U/T) |
| 3-37x | EF306957 | △ FUSE TSC 125V 4.00A (CSA, AAL) |
| 3-38x | EF690996 | △ FUSE SEMKO T 250V 4.00A (CEE, UK, SAA) |
| 3-39 | EF306952 | △ FUSE TSC A 250V 4.00A (U/T) |
| 3-40x | EF306957 | △ FUSE TSC 125V 4.00A (CSA, AAL) |

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 3-41x | EF623125 | △ FUSE SEMKO T250V 2.50A (CEE, UK, SAA) |
| 3-42 | EF306950 | △ FUSE TSC A 250V 2.00A (U/T) |
| 3-43x | EF306954 | △ FUSE TSC 125V 2.00A (CSA, AAL) |
| 3-44x | EF602550 | △ FUSE SEMKO T 250V 1.25A (CEE, UK, SAA) |

4. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---|
| 4-1 | SPB329595A | FRONT PANEL AM-U22 PART |
| 4-2x | SPB329595B | FRONT PANEL AM-U22-BL PART |
| 4-3x | TA329604 | PLATE |
| 4-4 | SB316498 | BUTTON (B) |
| 4-5x | SB316499 | BUTTON (B-BL) |
| 4-6 | SB329581A | BUTTON |
| 4-7x | SB329581B | BUTTON (BL) |
| 4-8 | SK200956 | DOUBLE KNOB (UPPER2) |
| 4-9x | SK200958 | DOUBLE KNOB (UPPER2-BL) |
| 4-10 | SK704552 | DOUBLE KNOB (LOWER) |
| 4-11x | SK704551 | DOUBLE KNOB (LOWER-BL) |
| 4-12 | SK329583A | KNOB (A) |
| 4-13x | SK329583B | KNOB (A-BL) |
| 4-14 | SP329585A | UPPER PLATE (A)(U/T,CSA, CEE,UK,SAA) |
| 4-15x | SP329585C | UPPER PLATE (B)(AAL) |
| 4-16x | AP329585B | UPPER PLATE (A-BL) |
| 4-17 | ZS322570 | ST BID40x08STL NI3 |
| 4-18x | ZS322580 | ST BID40x08STL BNI (ALL,BL) |
| 4-19x | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 4-20x | ZW305013 | RV POP32 |

INDEX

1. MODEL AT-K11

| 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. |
|--------------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BAA3008A020A | 2-1 | EF309389 | 3-34 | ER324337 | 2-R31,32 | EW315767 | 3-39x | TA201961 | 3-33 |
| BAA3008A020B | 2-2 | EI293185 | 2-IC3 | ER324480 | 2-R97,98 | EW322401 | 3-40x | TA322250 | 3-32 |
| BAA3008A020C | 2-3 | EI315491 | 2-IC4 | ER328855 | 2-FL3,4 | EZ631945 | 3-14 | TA328846 | 3-29 |
| BC322209 | 4-9 | EI322248 | 2-IC1 | ER669328 | 2-R96 | MR308836 | 3-5 | ZS319460 | 3-16 |
| BC322210 | 4-10x | EI650597 | 2-IC2 | ES201948 | 2-SW2 | MZ307170 | 3-4 | ZS319460 | 4-14x |
| BC322212 | 4-11x | EJ301513 | 3-15x | ES201979 | 2-SW1 | SA311742 | 3-18 | ZS322570 | 4-12 |
| BT201517 | 3-21x | EJ309941 | 2-TM1 | ES310839 | 3-24 | SB316498 | 4-3 | ZS322580 | 4-13x |
| BT201518 | 3-22x | EJ323227 | 2-J1 | ES665875 | 3-25x | SB316499 | 4-4x | ZS325495 | 3-17x |
| BT201519 | 3-23x | EO307186 | 2-T4 | ET200506 | 2-TR5,6 | SB329581A | 4-5 | ZS463094 | 3-19x |
| BT201520 | 3-20 | EO328137 | 2-L1,2 | ET316643 | 2-TR7 to9 | SB329581B | 4-6x | ZW270191 | 3-31 |
| EC200928 | 2-C57,58 | EO328854 | 2-T1 | ET316643 | 2-TR11 | SK322207 | 4-7 | ZW305013 | 4-15x |
| EC314688 | 3-27x | ER293398 | 2-T2 | ET316643 | 2-TR13 | SK322208 | 4-8x | ZW436026 | 3-30x |
| EC314996 | 2-C59 | ER307201 | 2-FL1,2 | ET316643 | 2-TR2 to4 | SP201020A | 4-1 | | |
| EC320548 | 3-26x | ER307204 | 2-T3 | ET452531 | 2-TR12 | SP201020B | 4-2x | | |
| EC328856 | 2-C76,77 | ER324185 | 2-R83 | ET618873 | 2-TR1 | SP329253H | 3-6 | | |
| EC328862 | 2-C33 | ER324337 | 2-R13,14 | EV427858 | 2-VR3 | SP329253J | 3-7x | | |
| EC330307 | 3-28x | ER324337 | 2-R56,57 | EV499375 | 2-VR4 | SP329253K | 3-8x | | |
| EC616342 | 2-VC1,2 | ER324337 | 2-R73 to75 | EV593368 | 2-VR1,2 | SP329253L | 3-9x | | |
| ED200469 | 2-D1 to8 | ER324337 | 2-R65,66 | EW305691 | 3-13x | SP329253M | 3-10x | | |
| ED200469 | 2-D12 | ER324337 | 2-R7,8 | EW306428 | 3-12 | TAB201457 | 3-38 | | |
| ED322184 | 3-3 | | | | | | | | |
| ED322215 | 3-2 | | | | | | | | |
| ED322238 | 2-D10 | | | | | | | | |
| ED322247 | 3-1 | | | | | | | | |
| ED323216 | 2-D9 | | | | | | | | |
| EE200184 | 3-11 | | | | | | | | |
| EE322242 | 2-4 | | | | | | | | |
| EF300590 | 3-37x | | | | | | | | |
| EF308848 | 3-36x | | | | | | | | |
| EF308933 | 3-35x | | | | | | | | |

2. MODEL AT-K11L

| 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. |
|--------------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BAA3008C020A | 1-1 | EF300590 | 4-5 | SK607127 | 3-5 | | | | |
| BT330409 | 4-1 | EJ301513 | 3-4 | SP201020C | 4-6 | | | | |
| BT330410 | 4-2 | EO201252 | 1-T5 | SP201020D | 4-7 | | | | |
| EC200928 | 1-C67 | EO324453 | 2-T1 | SP329253P | 3-1 | | | | |
| EC200930 | 1-C70 | EO48278 | 2-L1 | SP329253Q | 3-2 | | | | |
| EC200930 | 1-C92 | ES200829 | 1-SW3 | | | | | | |
| EC201253 | 1-C68 | ES310839 | 4-3 | | | | | | |
| EC330307 | 4-4 | ES319168 | 2-SW1 | | | | | | |
| EC616342 | 2-VC1,2 | EW302995 | 4-9 | | | | | | |
| EE200810 | 3-3 | EW315767 | 4-8 | | | | | | |

3. MODEL AT-K22

| 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. |
|--------------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BAA3009A050A | 2-1 | ED323216 | 2-D9 | ER324337 | 2-R7,8 | ET618873 | 2-TR1 | SP329253B | 4-12x |
| BAA3009A050B | 2-2 | ED325080 | 3-D3 | ER324337 | 2-R13,14 | ET618873 | 3-TR1 | SP329253C | 4-13x |
| BAA3009A050C | 2-3 | EE200184 | 4-16 | ER324337 | 2-R31,32 | EV427858 | 2-VR3 | SP329253D | 4-14x |
| BAA3009A070A | 3-1 | EE325737 | 2-4 | ER324337 | 2-R56,57 | EV499375 | 2-VR4 | SP329253E | 4-15x |
| BC322209 | 5-10 | EF300590 | 4-38x | ER324337 | 2-R73 to75 | EV593368 | 2-VR1,2 | TA307160 | 4-34 |
| BC322210 | 5-12x | EF308848 | 4-37x | ER324480 | 2-R97,98 | EV604438 | 3-VR1,2 | TA322250 | 4-33 |
| BC322212 | 5-11x | EF308933 | 4-36x | ER328855 | 2-FL3,4 | EW305691 | 4-18x | TA328846 | 4-30 |
| BDB329241A | 5-1 | EF309389 | 4-35 | ER669328 | 2-R96 | EW306428 | 4-17 | TA329251 | 5-3 |
| BDB329241B | 5-2x | EI293185 | 2-IC3 | ES201948 | 2-SW2 | EW315767 | 4-39x | ZS319460 | 4-21 |
| BT238844 | 4-27x | EI315491 | 2-IC4 | ES201979 | 2-SW1 | EW322401 | 4-40x | ZS319460 | 5-15x |
| BT328842 | 4-25 | EI322248 | 2-IC1 | ES310839 | 4-6 | EZ631945 | 4-19 | ZS322570 | 5-13 |
| BT328843 | 4-26x | EI323231 | 3-x1 | ES665875 | 4-7x | MR308836 | 4-5 | ZS322580 | 5-14x |
| BT328845 | 4-28x | EI328849 | 3-IC1 | ET200506 | 2-TR5,6 | SA311742 | 4-23 | ZS325495 | 4-22x |
| EC200928 | 2-C57,58 | EI328850 | 3-IC2 | ET316171 | 3-TR2 | SB316498 | 5-4 | ZS565942 | 4-24x |
| EC314688 | 4-9x | EI650597 | 2-IC2 | ET316643 | 2-TR2 to4 | SB316499 | 5-5x | ZW305013 | 5-16x |
| EC314996 | 2-C59 | EJ301513 | 4-20x | ET316643 | 2-TR11 | SB329581A | 5-6 | ZW436026 | 4-31x |
| EC320548 | 4-8x | EJ309941 | 2-TM1 | ET316643 | 2-TR13 | SB329581B | 5-7x | ZW554624 | 4-32 |
| EC328856 | 2-C76,77 | EJ323227 | 2-J1 | ET316643 | 2-TR7 to9 | SK322207 | 5-8 | ZW698308 | 4-4x |
| EC328862 | 2-C33 | EM328848 | 3-IND1 | ET323232 | 2-TR10 | SK322208 | 5-9x | ZW698308 | 4-29x |
| EC330307 | 4-10x | EO307186 | 2-T4 | ET452531 | 2-TR12 | SP329253A | 4-11 | | |
| EC616342 | 2-VC1,2 | EO328137 | 2-L1,2 | | | | | | |
| ED200469 | 2-D1 to8 | EO328137 | 3-L1 to 3 | | | | | | |
| ED200469 | 2-D12 | EO328854 | 2-T1 | | | | | | |
| ED200469 | 3-D1,2 | ER293398 | 2-T2 | | | | | | |
| ED224526 | 2-D11 | ER307201 | 2-FL1,2 | | | | | | |
| ED309959 | 3-D4 | ER307204 | 2-T3 | | | | | | |
| ED322184 | 4-3 | ER324185 | 2-R83 | | | | | | |
| ED322215 | 4-2 | ER324185 | 3-R35 | | | | | | |
| ED322238 | 2-D10 | ER324186 | 3-R38 | | | | | | |
| ED322247 | 4-1 | ER324337 | 2-R65,66 | | | | | | |

4. MODEL AT-K22L

| 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. |
|--------------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BAA3009C030A | 1-1 | EF300590 | 5-3 | SK607127 | 4-5 | | | | |
| BDB329241C | 5-4 | EJ301513 | 4-4 | SP329253F | 4-1 | | | | |
| BDB329241D | 5-5 | EO201252 | 1-T5 | SP329253G | 4-2 | | | | |
| BT330411 | 5-1 | EO324453 | 2-T1 | TA329251 | 5-6 | | | | |
| BT330413 | 5-2 | EO48278 | 2-L1 | | | | | | |
| EC201253 | 1-C68 | ES200829 | 1-SW3 | | | | | | |
| EC330307 | 3-2 | ES310839 | 3-1 | | | | | | |
| EC616342 | 2-VC1 | ES319168 | 2-SW1 | | | | | | |
| EC616342 | 2-VC2 | EW302995 | 5-8 | | | | | | |
| EE200810 | 4-3 | EW315767 | 5-7 | | | | | | |

5. MODEL AM-U11

| Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Parts No. | Ref. No. & Symbol No. | Part No. | Ref. No. & Symbol No. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|----------|-----------------------|
| BT704527 | 3-22 | EF704521 | 2-F4,5 | ER704555 | 2-R311 | SB316498 | 4-11 | ZS308895 | 3-6x |
| BT704528 | 3-23x | EI213390 | 2-IC1 | ER704556 | 2-R133 | SB316499 | 4-12x | ZS322570 | 4-17 |
| BT704529 | 3-24x | EI704498 | 2-IC2 | ER704557 | 2-R134 | SK701941 | 4-13 | ZS322580 | 4-18x |
| BT704530 | 3-25x | EJ704499 | 3-7 | ES310839 | 3-26 | SK701942 | 4-14x | ZS447761 | 3-14 |
| EC310846 | 2-C308,309 | EJ704500 | 3-8 | ES665807 | 3-28x | SK704540 | 4-16x | ZS463353 | 3-9 |
| ED313623 | 2-D312 | EJ704505 | 3-37 | ES665875 | 3-27x | SK704541 | 4-15 | | |
| ED322215 | 3-32 | EJ704506 | 3-10 | ES702223 | 3-33 | SK704549 | 4-8x | | |
| ED328486 | 2-D310,311 | EJ704511 | 3-12x | ES702225 | 3-39 | SK704550 | 4-7 | | |
| ED379855 | 2-D101,102 | EJ704535 | 3-13x | ES702226 | 3-34 | SK704551 | 4-10x | | |
| ED624903 | 2-D103 | EJ704536 | 3-11 | ET223446 | 2-TR101 | SK704552 | 4-9 | | |
| ED624903 | 2-D305 | EJ704538 | 3-15 | EV305635 | 2-VR101 | SP701939 | 4-1 | | |
| ED704547 | 2-D313 | EJ704539 | 3-38 | EV701955 | 3-35 | SP701940 | 4-2x | | |
| EF300603 | 2-F3 | EM704508 | 4-19 | EV701956 | 3-36 | SP701944 | 3-3x | | |
| EF300607 | 2-F1,2 | EM704509 | 4-20x | EW704531 | 3-17 | SP701945 | 3-4x | | |
| EF301160 | 2-F4,5 | ER453565 | 2-R307,308 | EW704532 | 3-18x | SP701946 | 3-1 | | |
| EF704512 | 2-F3 | ER490814 | 2-R310 | EW704533 | 3-19x | SP701947 | 3-2x | | |
| EF704513 | 2-F3 | ER558213 | 2-R139 | EW704534 | 3-20x | SP701948 | 4-4x | | |
| EF704515 | 2-F1,2 | ER704523 | 3-29 | EW704554 | 3-21x | SP701949 | 4-6x | | |
| EF704516 | 2-F1,2 | ER704525 | 3-30x | EZ631945 | 3-16x | SP704489 | 4-3 | | |
| EF704519 | 2-F4,5 | ER704526 | 3-31x | SA704495 | 3-5 | SP704490 | 4-5x | | |

6. MODEL AM-U22

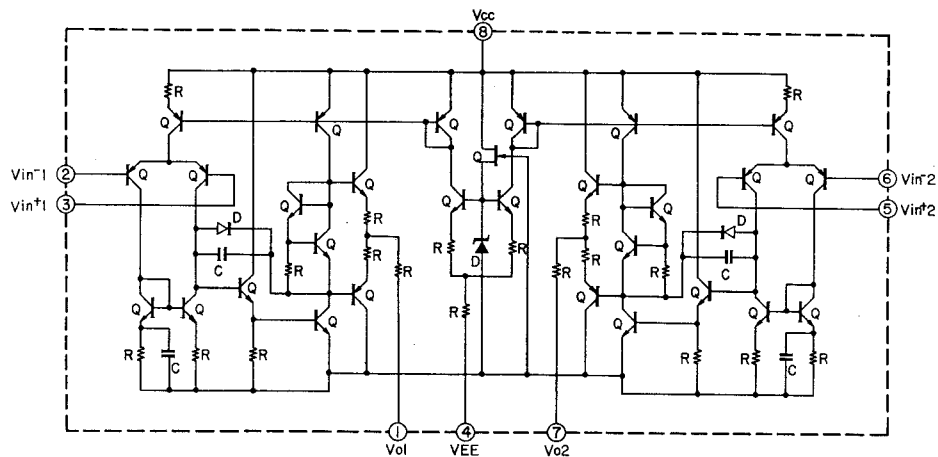
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|--------------|-----------------------|-----------|-----------------------|-----------|-----------------------|------------|-----------------------|-----------|-----------------------|
| BAA2005A090A | 2-1 | EF306950 | 3-42 | EO650823 | 2-L1 | SB316498 | 4-4 | ZS304022 | 3-32x |
| BAA2005A090B | 2-2 | EF306951 | 3-33 | ER200939 | 2-R52 | SB316499 | 4-5x | ZS319460 | 3-28x |
| BAA2005A090C | 2-3 | EF306952 | 3-39 | ER308503 | 3-3x | SB329581A | 4-6 | ZS319460 | 4-19x |
| BT329605 | 3-23 | EF306954 | 3-43x | ER308875 | 2-R22 | SB329581B | 4-7x | ZS322570 | 4-17 |
| BT329606 | 3-25x | EF306956 | 3-34x | ER322591 | 2-R21 | SK200956 | 4-8 | ZS322580 | 4-18x |
| BT329607 | 3-24x | EF306957 | 3-40x | ER323074 | 2-R19 | SK200958 | 4-9x | ZS325495 | 3-29x |
| BT329608 | 3-26x | EF306957 | 3-37x | ER325269 | 2-R8 | SK329583A | 4-12 | ZS447761 | 3-22 |
| BT329609 | 3-27x | EF602550 | 3-44x | ER329616 | 2-R20 | SK329583B | 4-13x | ZS463353 | 3-16 |
| EC313532 | 2-C16 | EF602550 | 3-35x | ES310839 | 3-5 | SK704551 | 4-11x | ZS522865 | 3-30x |
| EC314688 | 3-8x | EF623125 | 3-41x | ES329615 | 2-SW1 | SK704552 | 4-10 | ZW305013 | 4-20x |
| EC316190 | 2-C31 | EF690996 | 3-38x | ES665875 | 3-6x | SPB329595A | 4-1 | | |
| EC320307 | 2-C38,39 | EI329611 | 2-IC3 | ET293253 | 2-TR1 | SPB329595B | 4-2x | | |
| EC320548 | 3-7 | EI329612 | 2-IC2 | EV315416 | 2-VR3 | SP329585A | 4-14 | | |
| EC326583 | 2-C47 | EI697871 | 2-IC1 | EV324345 | 2-VR1,2 | SP329585B | 4-16x | | |
| EC330307 | 3-9x | EJ293365 | 2-J4,5 | EV329572 | 3-4 | SP329585C | 4-15x | | |
| ED200213 | 2-D1 | EJ293376 | 2-J6 | EW305691 | 3-18x | SP329588A | 3-10 | | |
| ED200469 | 2-D3 to 6 | EJ296853 | 3-15x | EW306428 | 3-17 | SP329588B | 3-11x | | |
| ED300924 | 2-D2 | EJ322582 | 3-20 | EZ225145 | 3-14 | SP329588C | 3-12x | | |
| ED322772 | 3-1x | EJ329265 | 3-2 | EZ631945 | 3-19 | SP329588D | 3-13x | | |
| EF306949 | 3-36x | EJ329610 | 3-21 | SA311742 | 3-31 | TA329604 | 4-3x | | |

SECTION 4

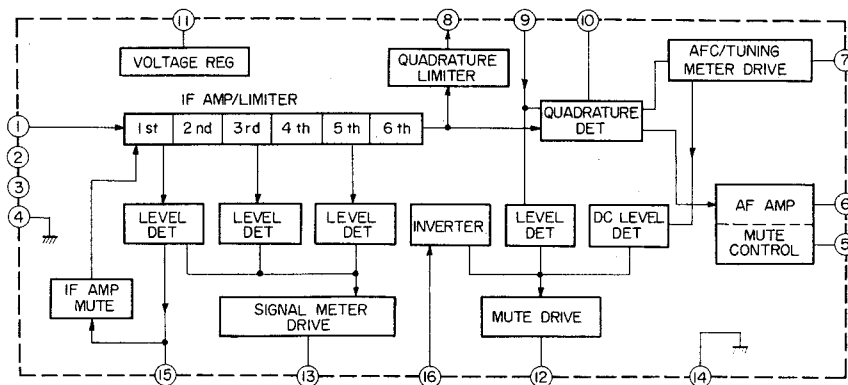
SCHEMATIC DIAGRAM

1. SCHEMATIC DIAGRAM OF ICs
2. AT-K11 NO.162640A SCHEMATIC DIAGRAM
3. AT-K11L NO.162641A SCHEMATIC DIAGRAM
4. AT-K22 NO. 162642A SCHEMATIC DIAGRAM
5. AT-K22L NO. 162643A SCHEMATIC DIAGRAM
6. AM-U11 NO. 1620644A SCHEMATIC DIAGRAM
7. AM-U22 NO. 162645A SCHEMATIC DIAGRAM

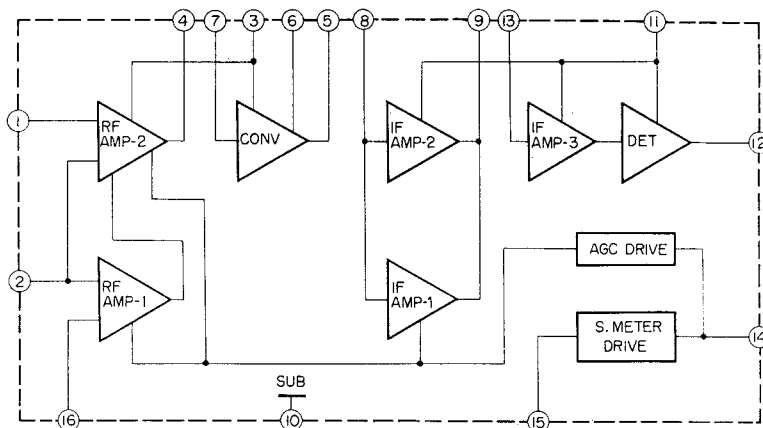
AN6552



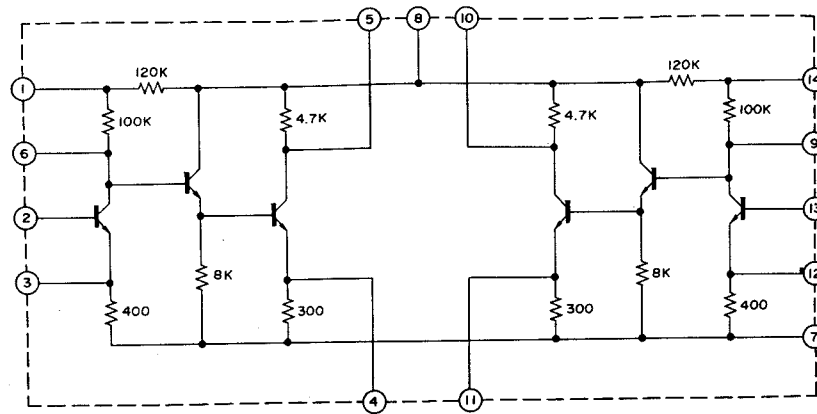
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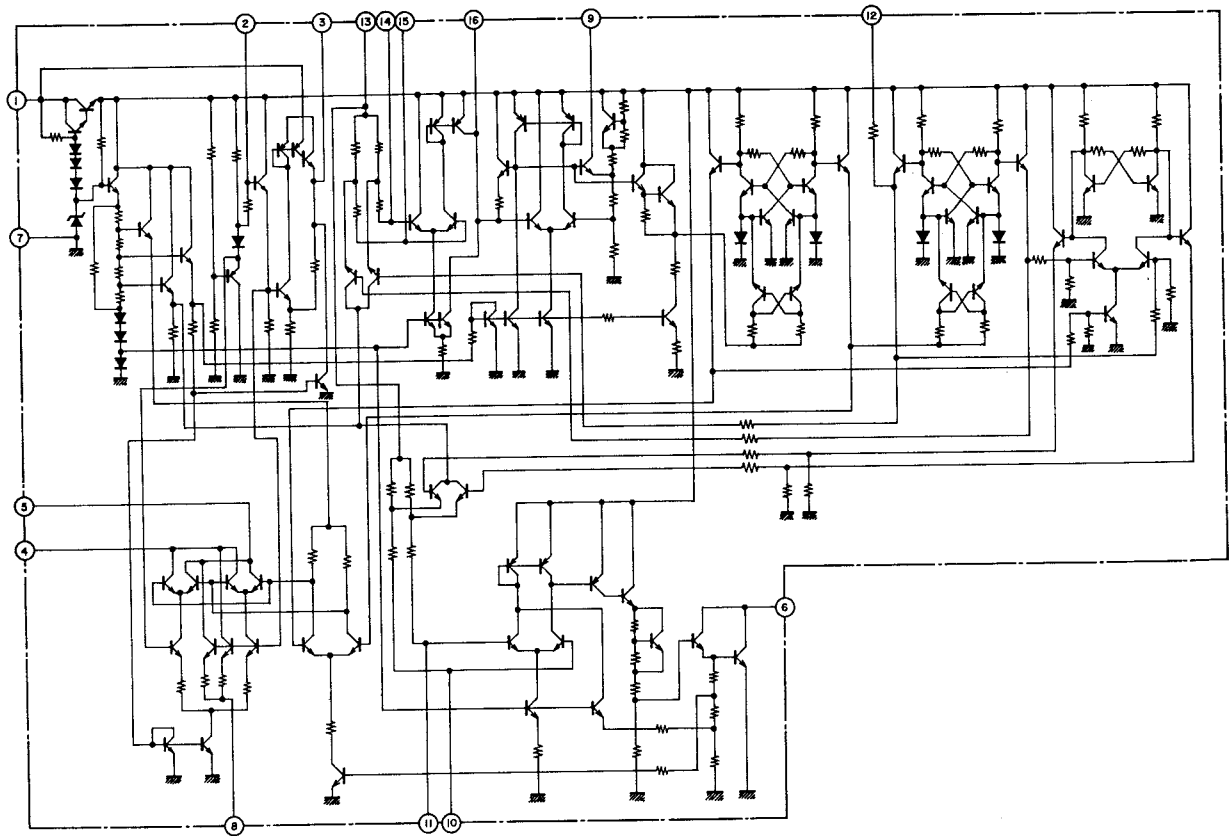
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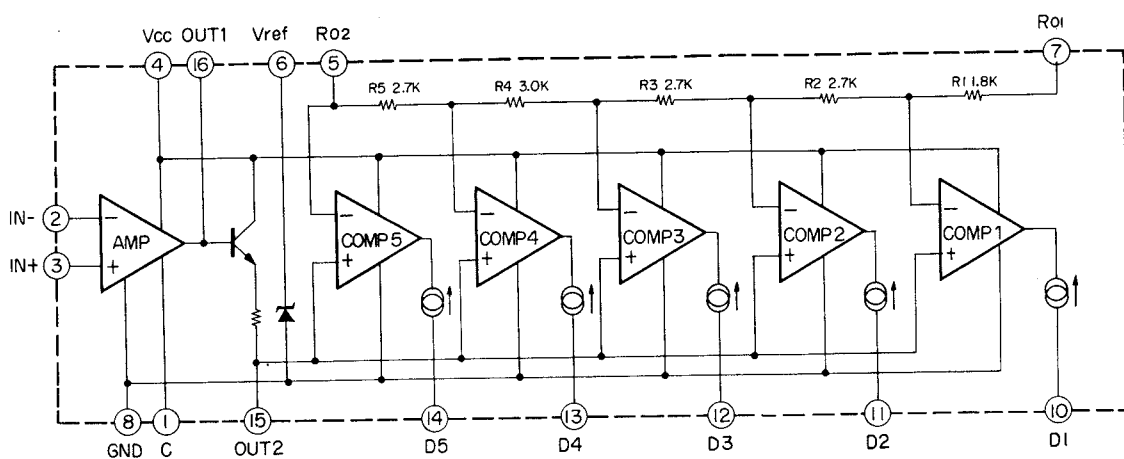
LA3122S



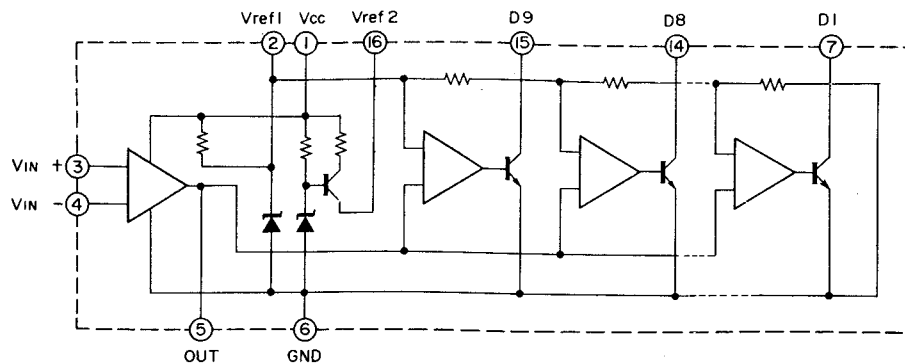
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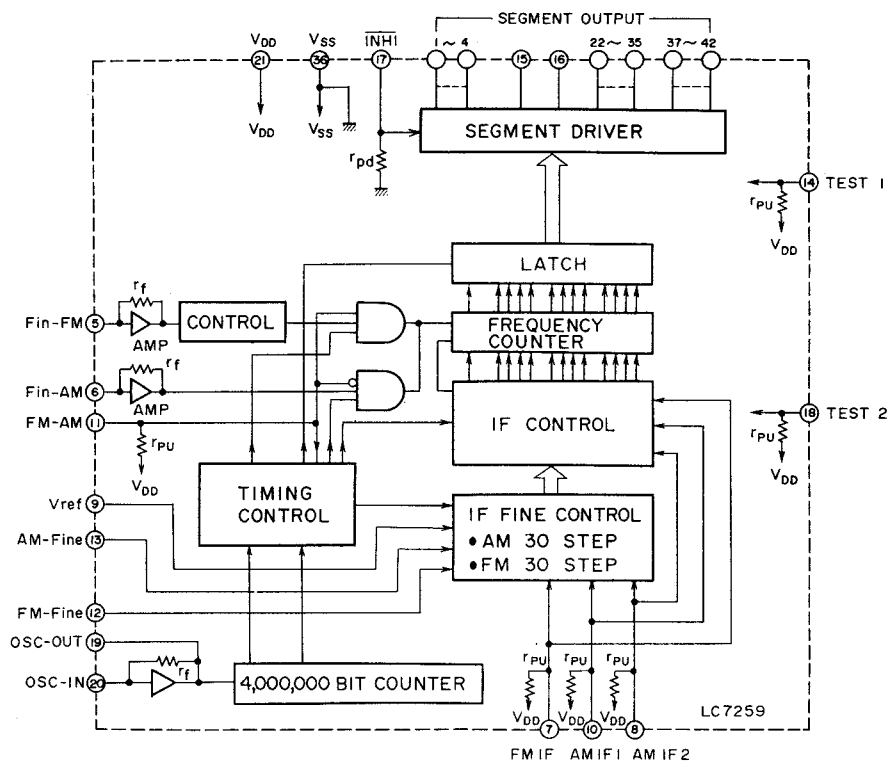
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LB1409

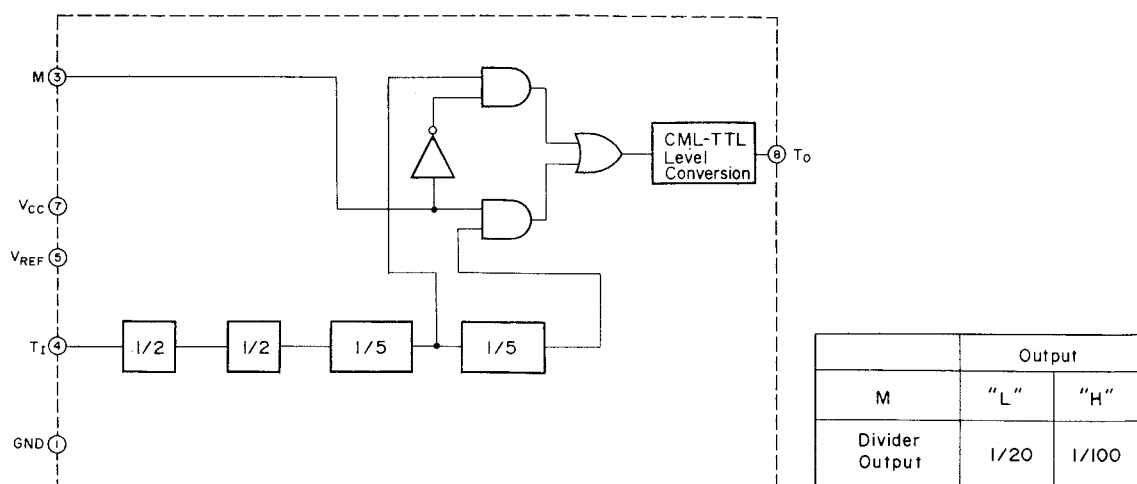


LC7259

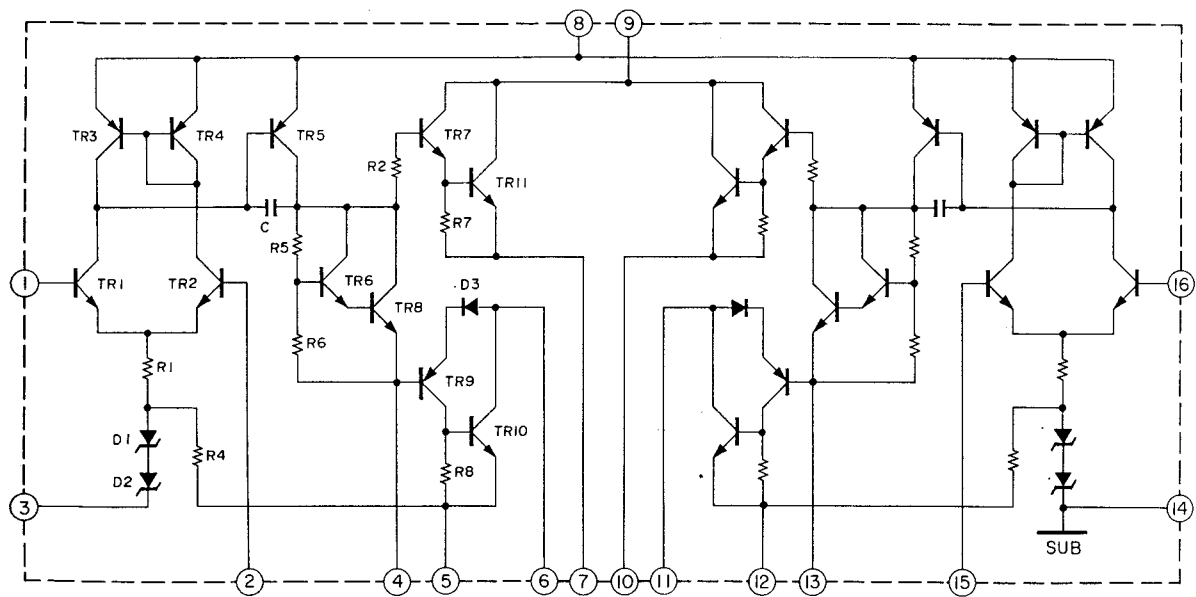


NOTE: rPU is a special-type resistor whose resistance will become the rated value at "H" level, and high at "L" level.

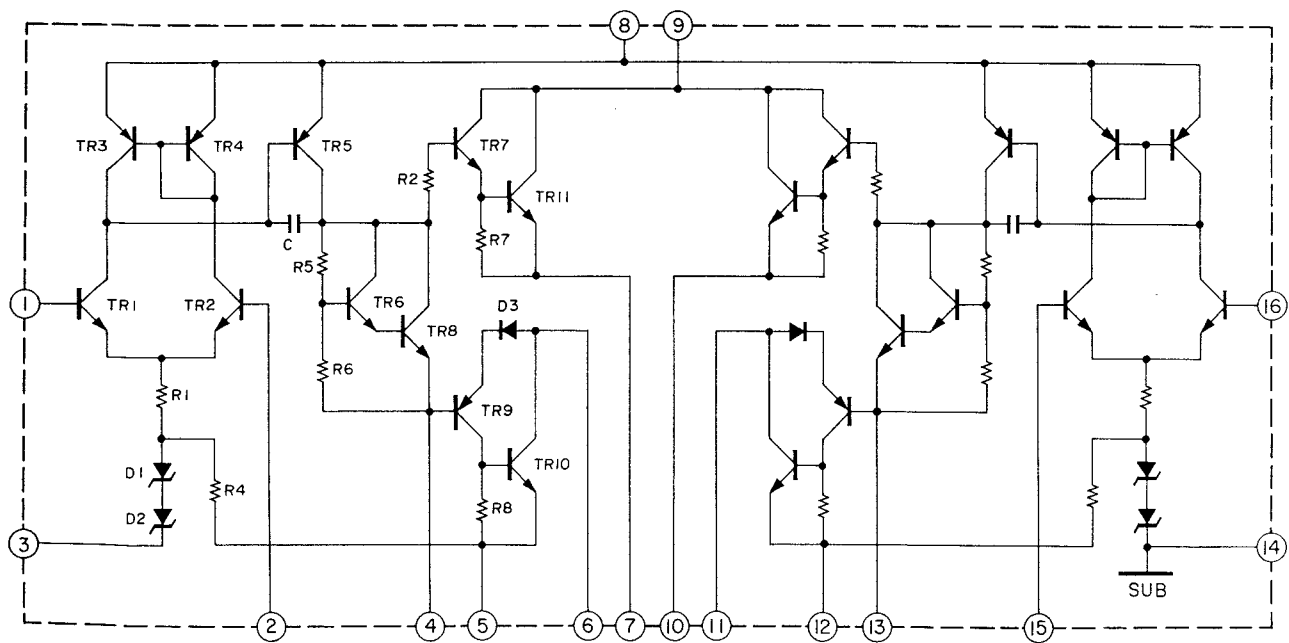
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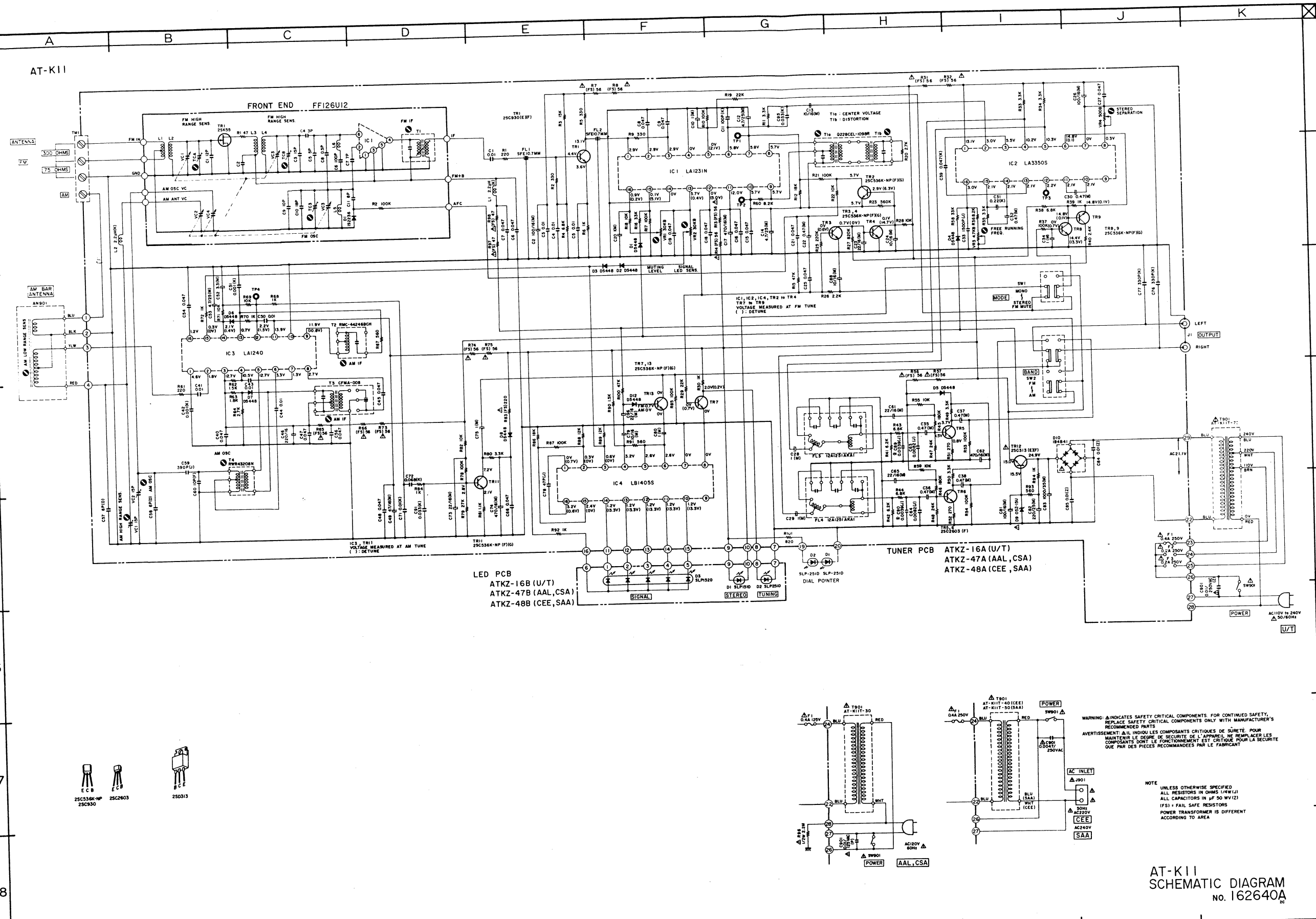
STK461

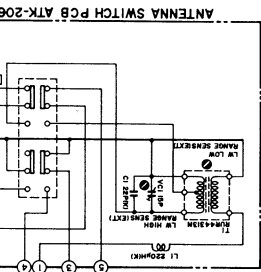
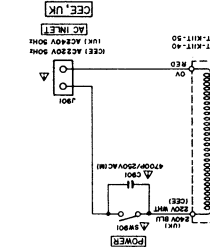
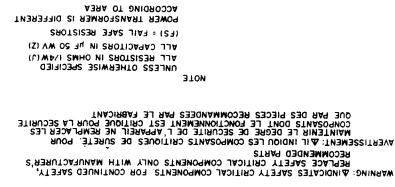


STK-463SLY

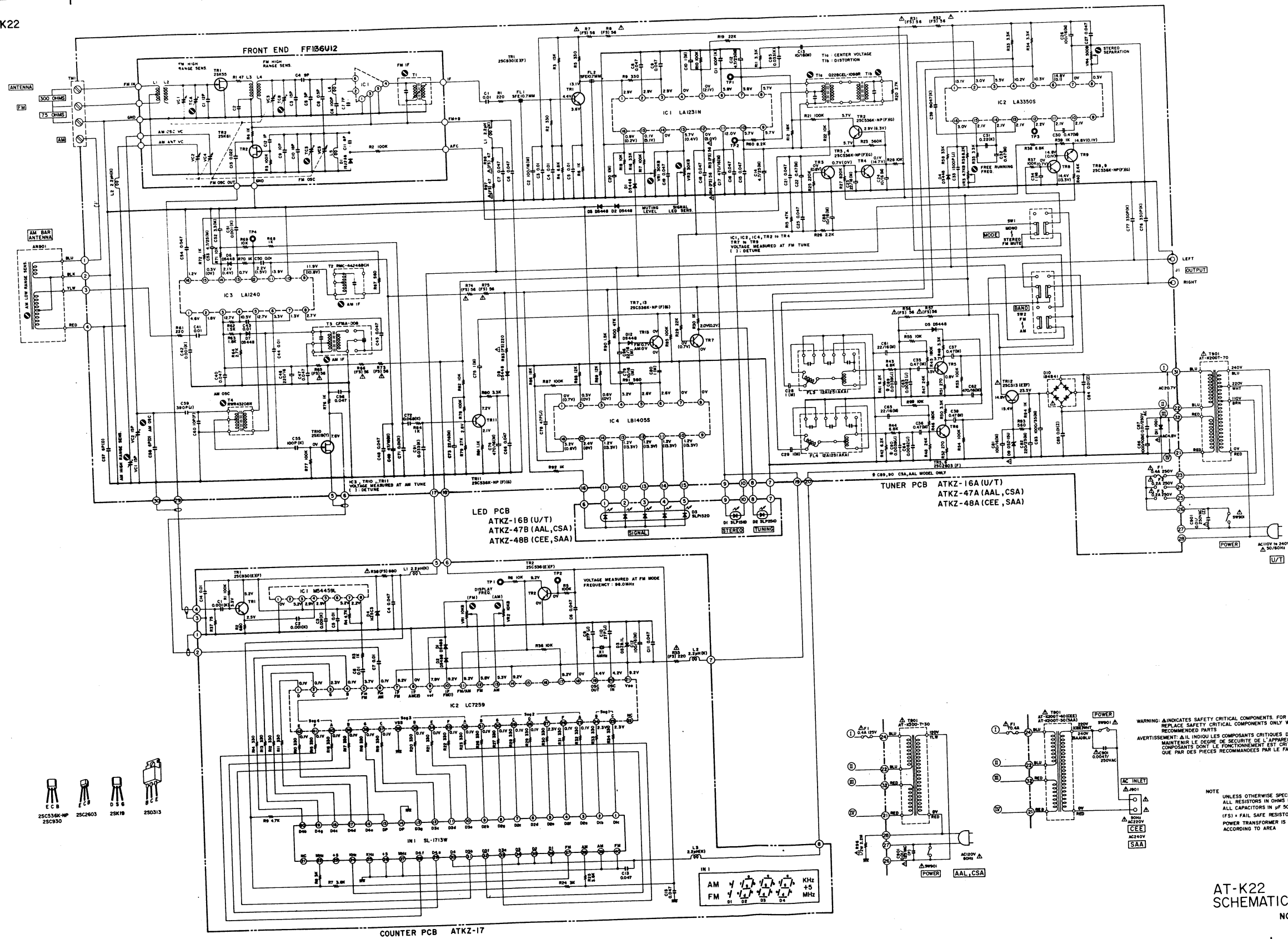


AT-K11



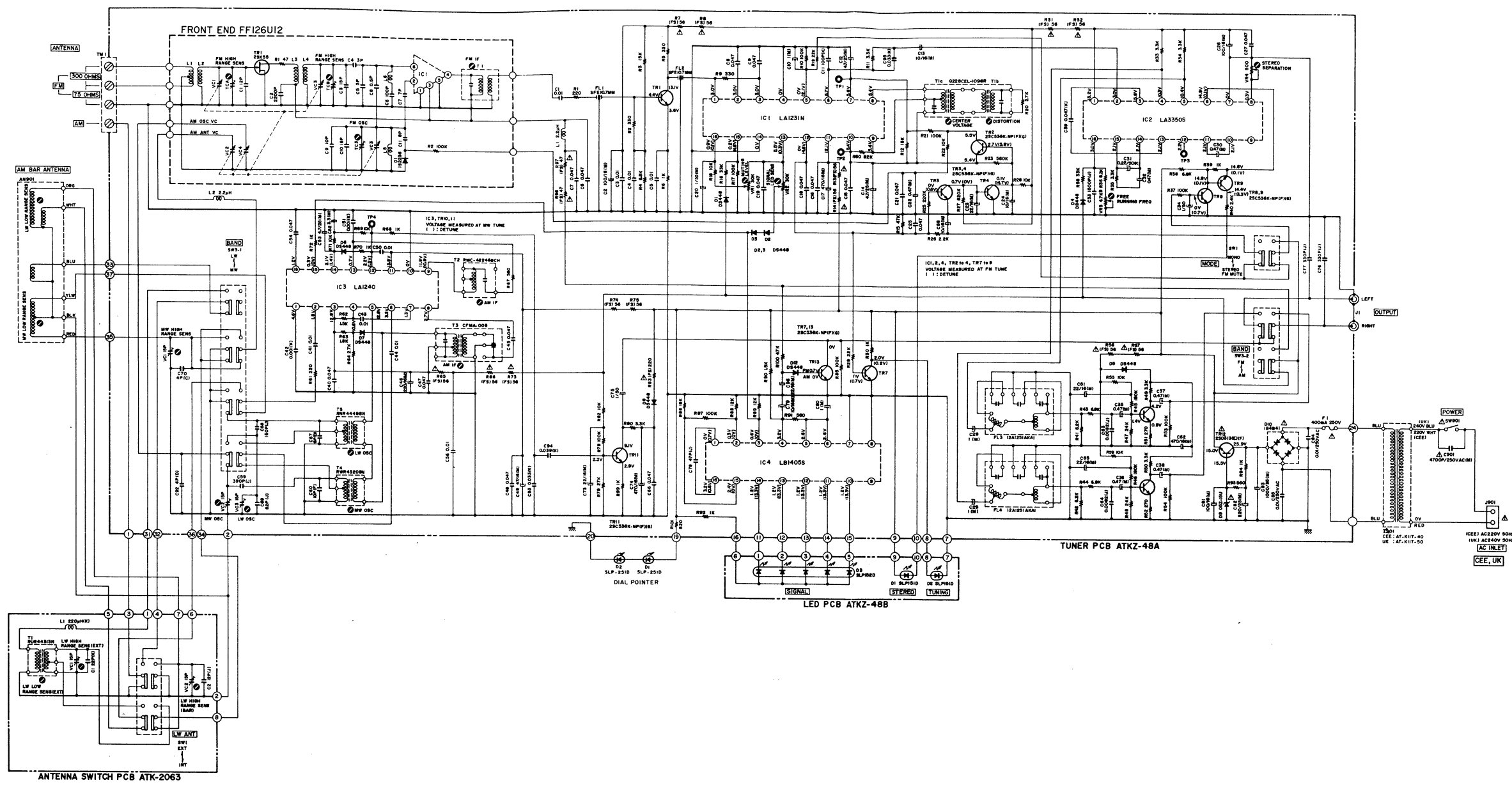


AT-K22



AT-K22
SCHEMATIC DIAGRAM
No. 162642A

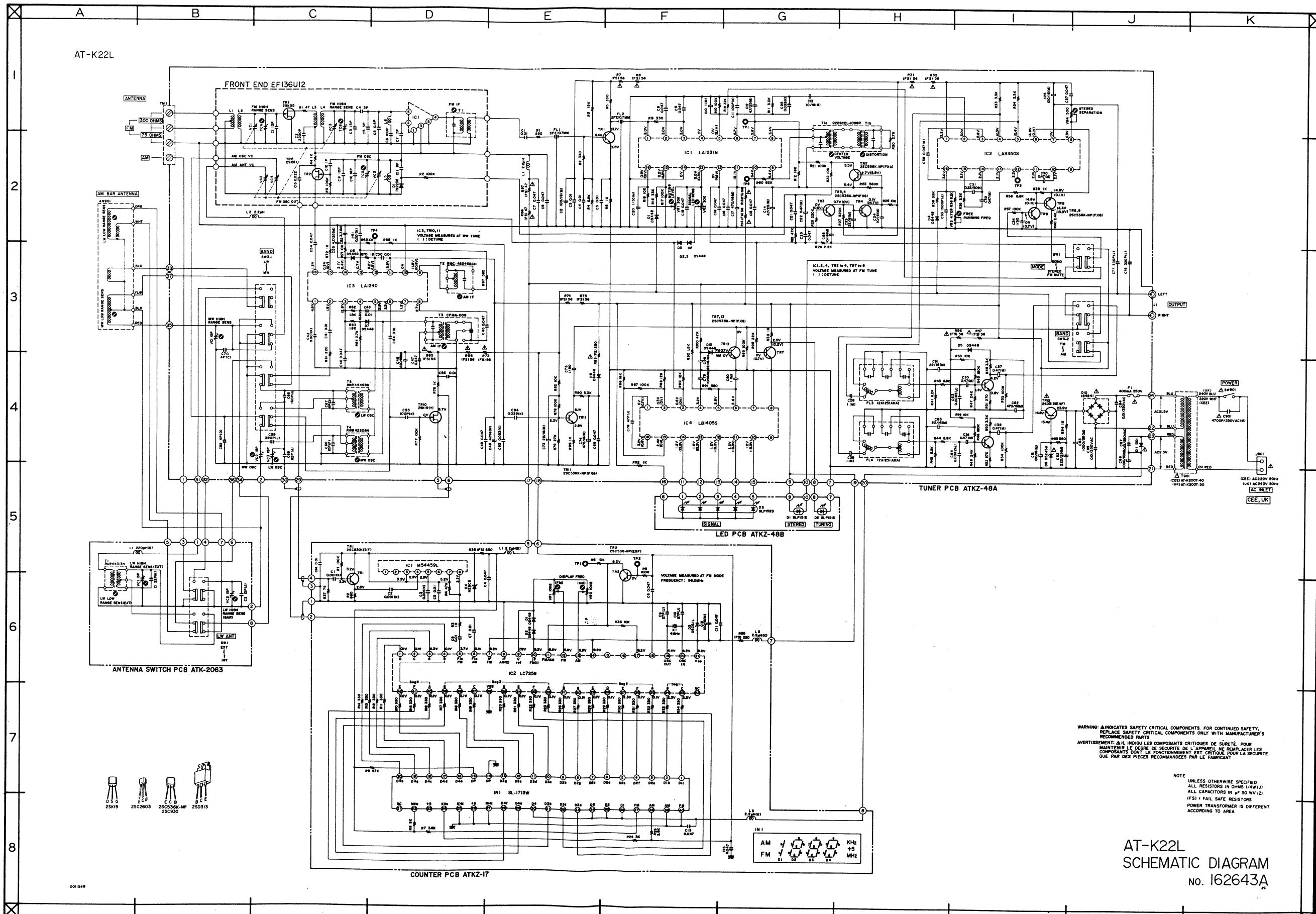
AT-KIIL



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 SURETE DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS (1/4W/1%)
 ALL CAPACITORS IN μ F 50 WV (2)
 (FS) = FAIL SAFE RESISTORS
 POWER TRANSFORMER IS DIFFERENT
 ACCORDING TO AREA

AT-KIIL
 SCHEMATIC DIAGRAM
 NO. 162641 A



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 SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACEZ LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS (1/4W/1%)
ALL CAPACITORS IN μF 50 WV (2)
(F5) = FAIL SAFE RESISTORS
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

AT-K22L
SCHEMATIC DIAGRAM
No. 162643A

