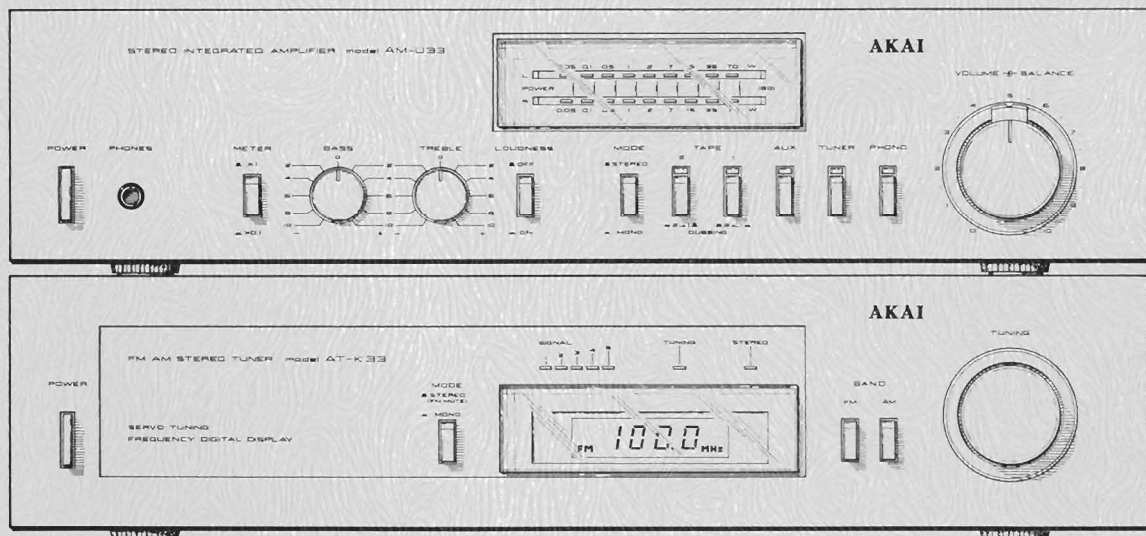


AKAI SERVICE MANUAL



FM AM STEREO TUNER

MODEL **AT-K33/L/J**

STEREO INTEGRATED AMPLIFIER

MODEL **AM-U33/J**

AT-K33/L/J
AM-U33/J

FM AM STEREO TUNER

MODEL AT-K33/L/J

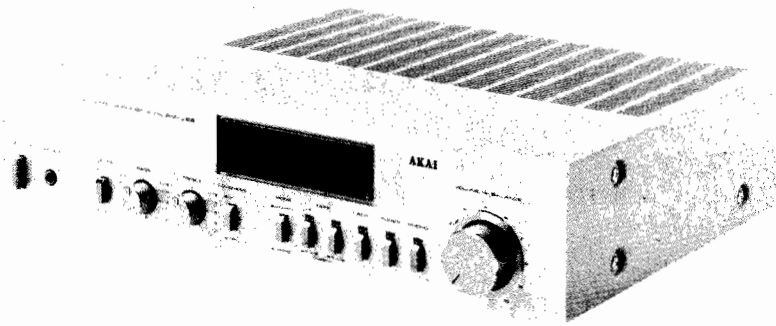
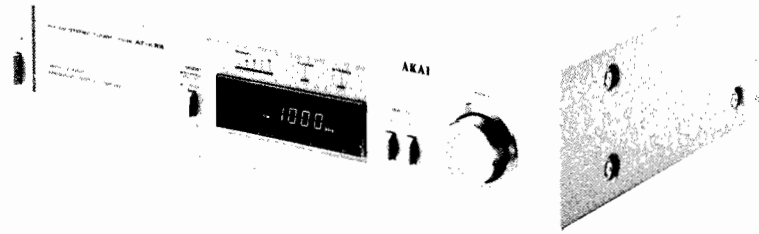
STEREO INTEGRATED AMPLIFIER

MODEL AM-U33/J

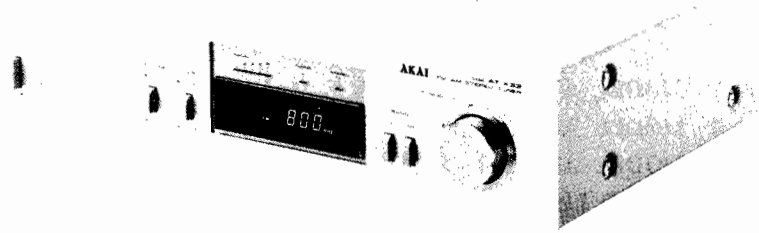
THIS MANUAL IS APPLICABLE TO BOTH SILVER AND BLACK PANEL MODEL

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AM-U33



AM-U33J

SECTION 1

FM AM STEREO TUNER

MODEL **AT-K33/L/J**

SERVICE MANUAL

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

I. SPECIFICATIONS

1. MODEL AT-K33/L

FM TUNER SECTION

| | |
|-------------------------------|-----------------------|
| TUNING FREQUENCY RANGE | 87.5 MHz to 108.0 MHz |
| USABLE SENSITIVITY (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 | 85 dB |
| S/N RATIO (MONO/STEREO) | 73 dB/65 dB |
| T.H.D. (MONO/STEREO) | 0.10%/0.15% |
| STEREO SEPARATION (1 kHz) | 45 dB |
| MUTING LEVEL | 22 dB |

AM TUNER SECTION

MW

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

LW (AT-K33L only)

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

OUTPUT SECTION

| | |
|---|--|
| OUTPUT LEVEL FM (100% MOD.) AM (30% MOD.) | 775 mV 250 mV |
| OUTPUT IMPEDANCE | 3.3 kohms |
| POWER REQUIREMENTS | 120V, 60 Hz for U.S.A. and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/220V/240V, 50/60 Hz internally switchable for other countries. |
| POWER CONSUMPTION | 10W |
| DIMENSIONS | 440(W) x 98(H) x 290(D) mm (17.3 x 3.9 x 11.4 inches) |
| WEIGHT | 5.35 kg (11.8 lbs) |

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

2. MODEL AT-K33J

FM TUNER SECTION

| | |
|-------------------------------|-----------------------------|
| TUNING FREQUENCY RANGE | 76 MHz to 90 MHz |
| USABLE SENSITIVITY (300 ohms) | 1.9 μ V |
| CAPTURE RATIO | 1.3 dB |
| SELECTIVITY | 65 dB |
| IMAGE REJECTION | 60 dB |
| IF REJECTION | 85 dB |
| AM SUPPRESSION | 60 dB |
| S/N RATIO (MONO/STEREO) | 73 dB/65 dB |
| T.H.D. (MONO/STEREO) | 0.08%/0.12% |
| STEREO SEPARATION (1 kHz) | 48 dB |
| FREQUENCY RESPONSE | 20 Hz to 15 kHz, \pm 1 dB |
| MUTING LEVEL | 22 dB |

AM TUNER SECTION

| | |
|------------------------|----------------------|
| TUNING FREQUENCY RANGE | 525 kHz to 1,605 kHz |
| USABLE SENSITIVITY | 100 μ V/m |
| SELECTIVITY | 30 dB |
| IMAGE REJECTION | 48 dB |
| S/N RATIO | 55 dB |
| T.H.D. | 0.3% |

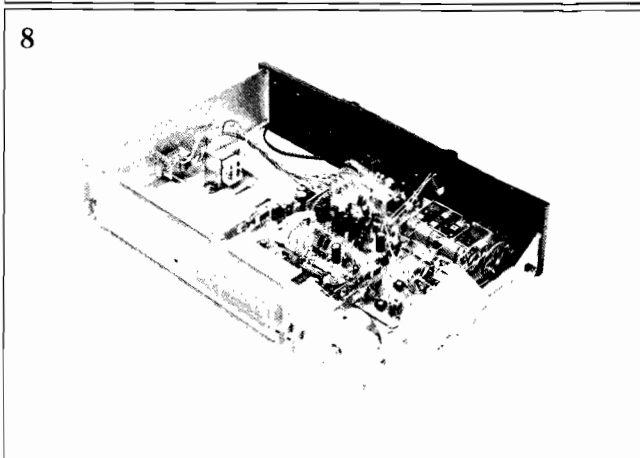
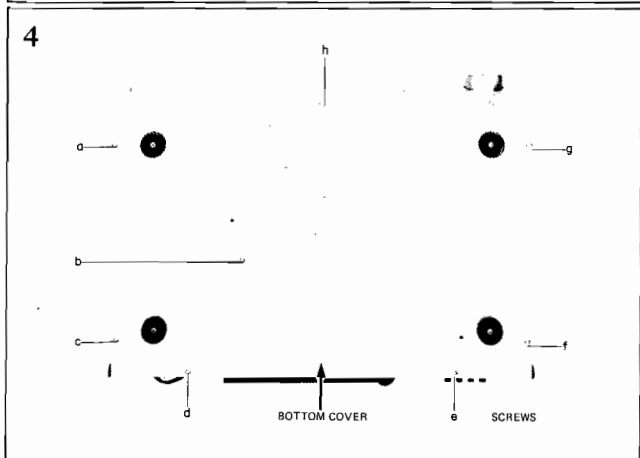
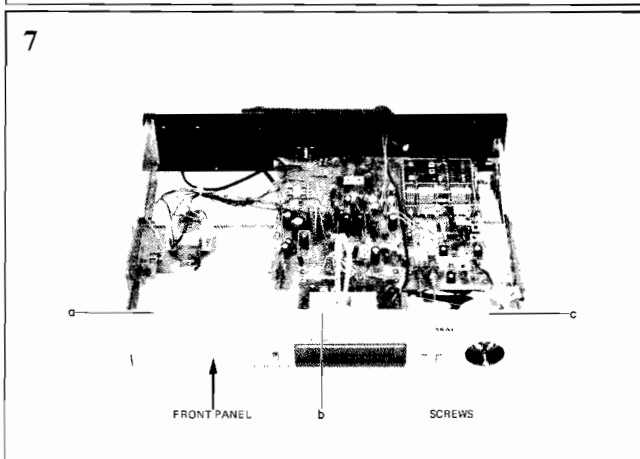
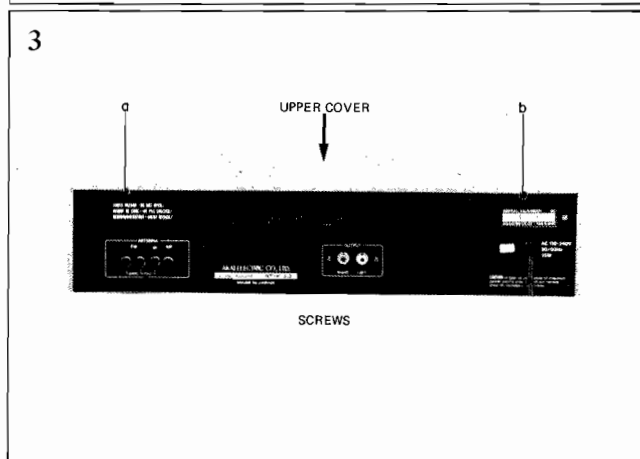
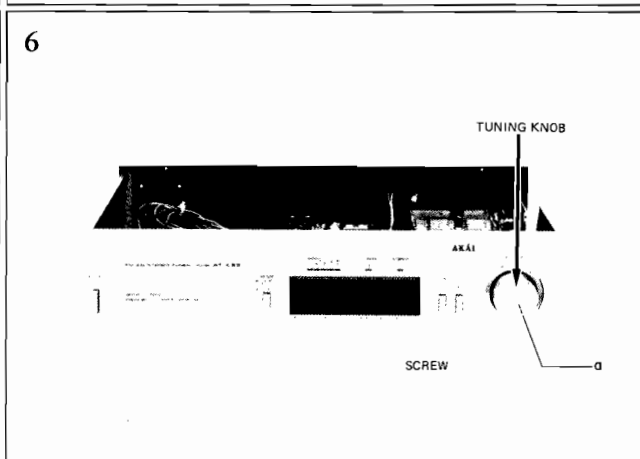
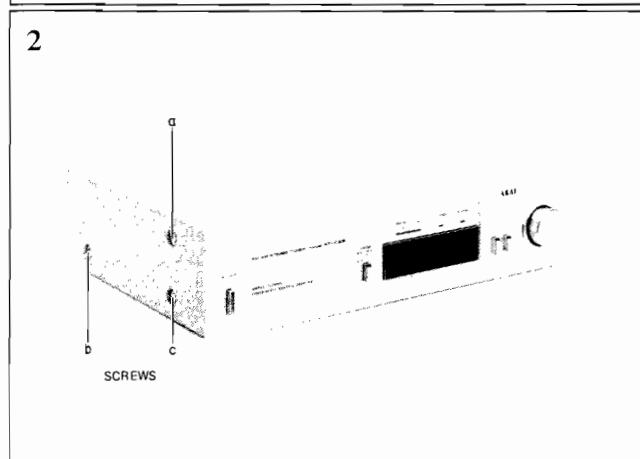
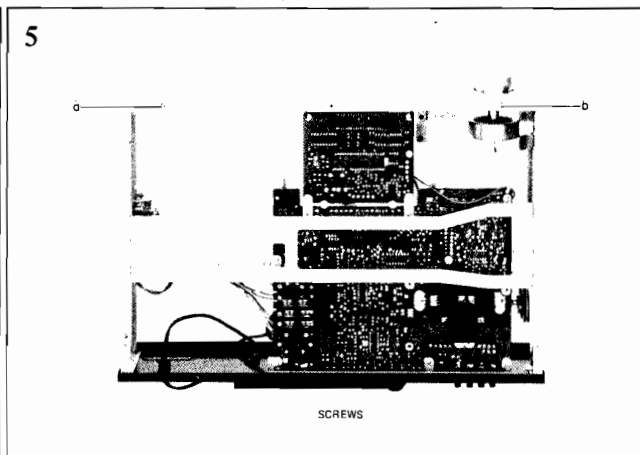
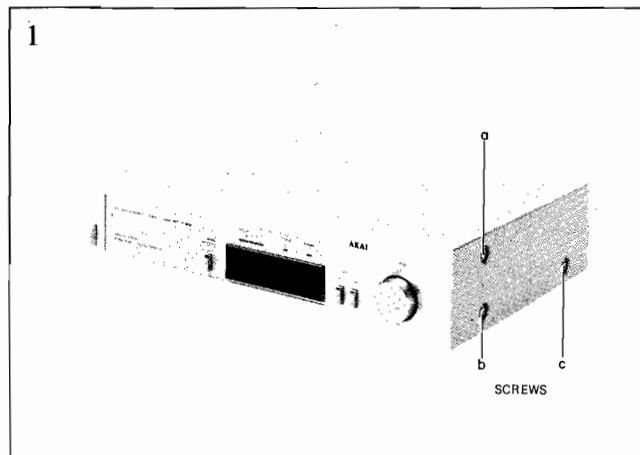
OUTPUT SECTION

| | | |
|-------------------|--|---|
| OUTPUT LEVEL | FM (100% MOD.) AM (30% MOD.) CAL. TONE | 775 mV 250 mV 388 mV |
| POWER REQUIREMENT | | AC 100V, 50/60 Hz |
| POWER CONSUMPTION | | 10W |
| DIMENSIONS | | 440(W) \times 105(H) \times 290(D) mm |
| WEIGHT | | 5.4 kg |

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

II. DISMANTLING OF UNIT

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



III. CONTROLS

AT-K33/J/L

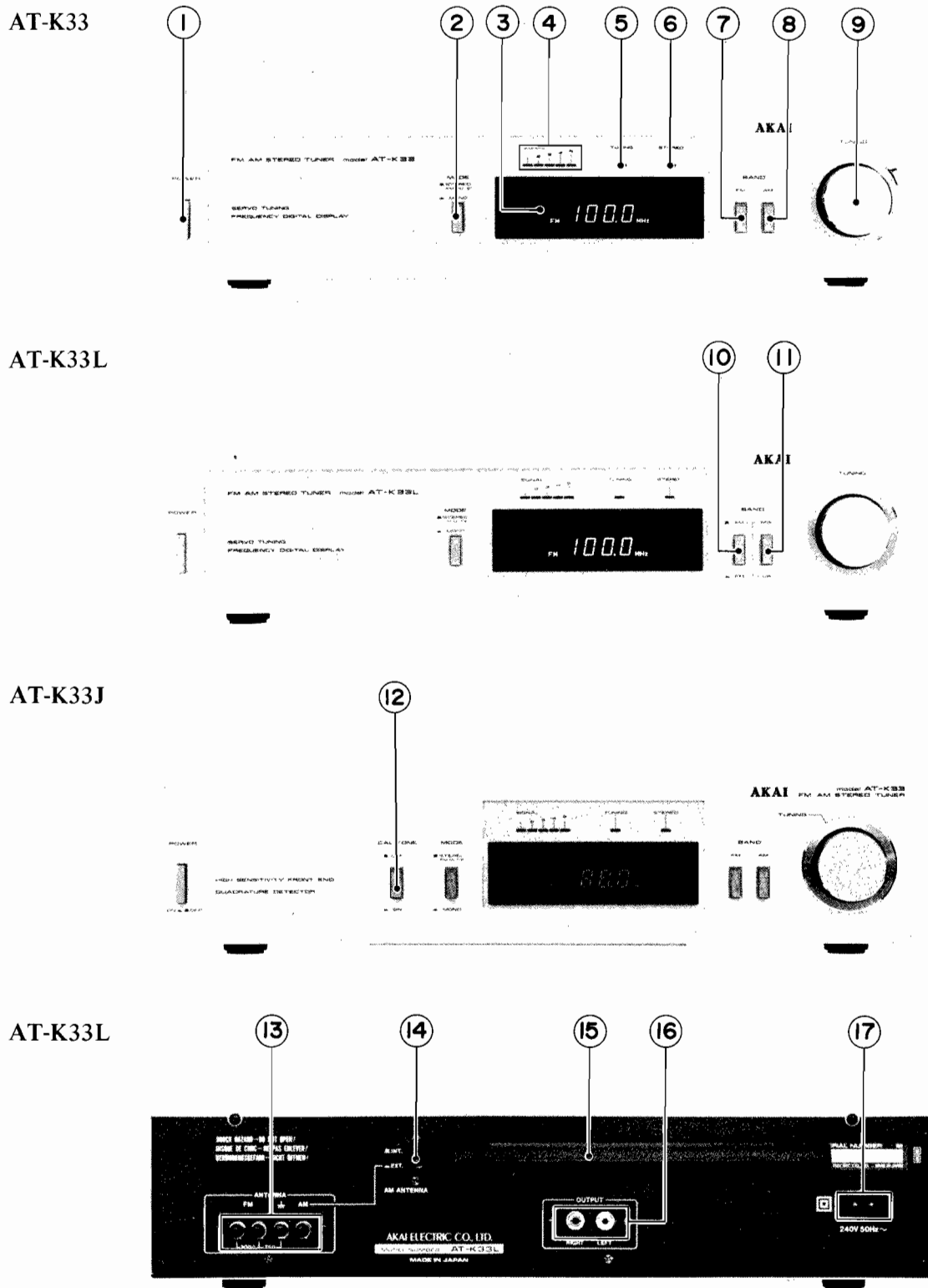


Fig. 1 Controls

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. POWER SWITCH 2. FM MODE SELECTOR 3. DIGITAL LED DISPLAY 4. SIGNAL STRENGTH INDICATORS 5. FM MUTING INDICATOR 6. FM STEREO INDICATOR 7. FM SWITCH (AT-K33/J) 8. AM SWITCH (AT-K33/J) 9. TUNING KNOB | <ol style="list-style-type: none"> 10. AM/FM SELECTOR (AT-K33L Only) 11. MW/LW SELECTOR (AT-K33L Only) 12. CAL TONE SWITCH (AT-K33J Only) 13. FM/AM ANTENNA TERMINALS 14. AM ANTENNA SELECTOR (AT-K33L Only) 15. AM FERRITE BAR ANTENNA 16. OUTPUT JACKS (RIGHT and LEFT) 17. AC INLET (U/T, CSA, AAL, JPN: AC CORD) |
|---|--|

IV. PRINCIPAL PARTS LOCATION

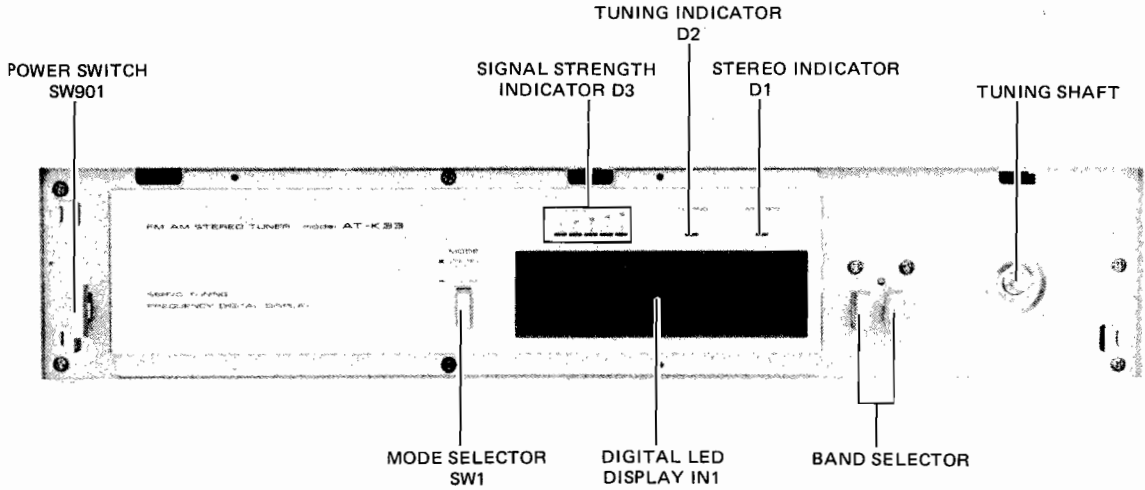


Fig. 2 Front View

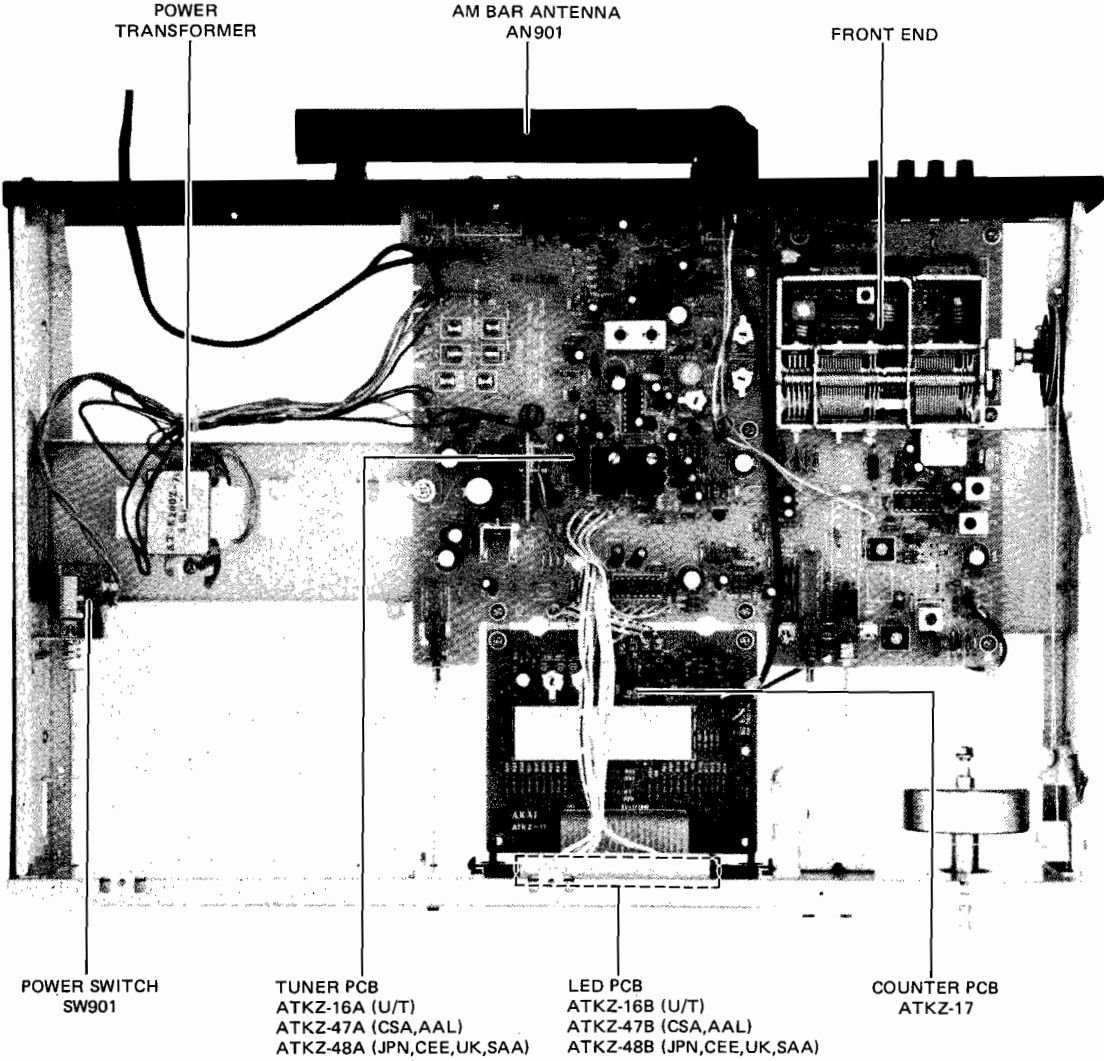


Fig. 3 Top View

V. VOLTAGE CONVERSION

AT-K33/J/L

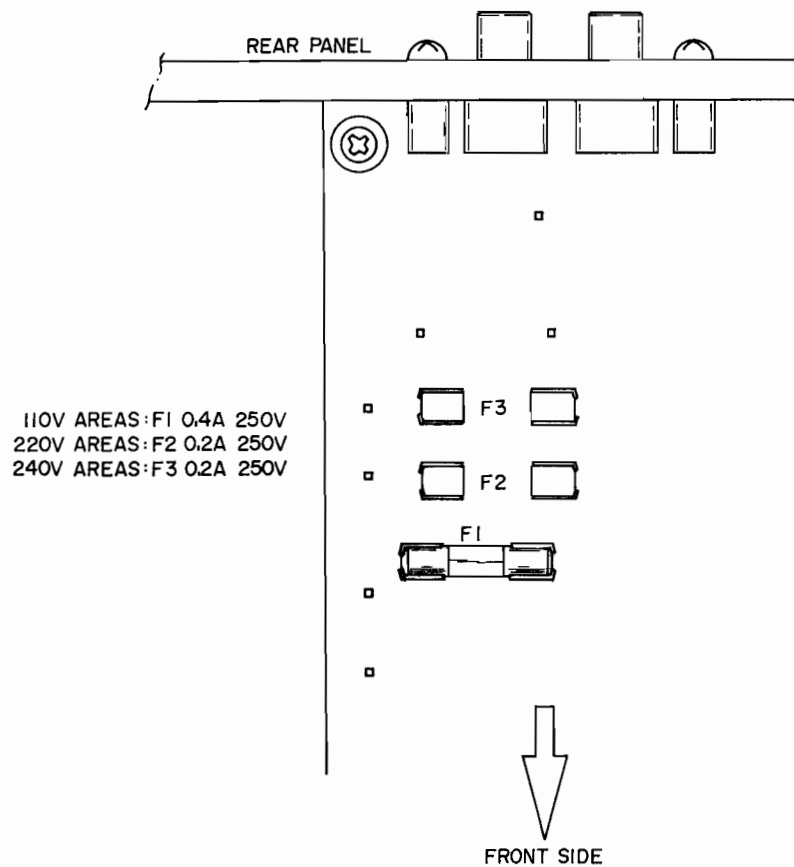


Fig. 4 Voltage Conversion (U/T Model Only)

Model 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 110V, 220V or 240V as required.

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

- 1) Disconnect AC Power Cord.
- 2) Loosen holding screws and remove upper case.
- 3) Remove existing Line Voltage Fuse and insert required Line Voltage Fuse in proper fuse holder. Follow markings explicitly.

VI. TUNER ADJUSTMENTS

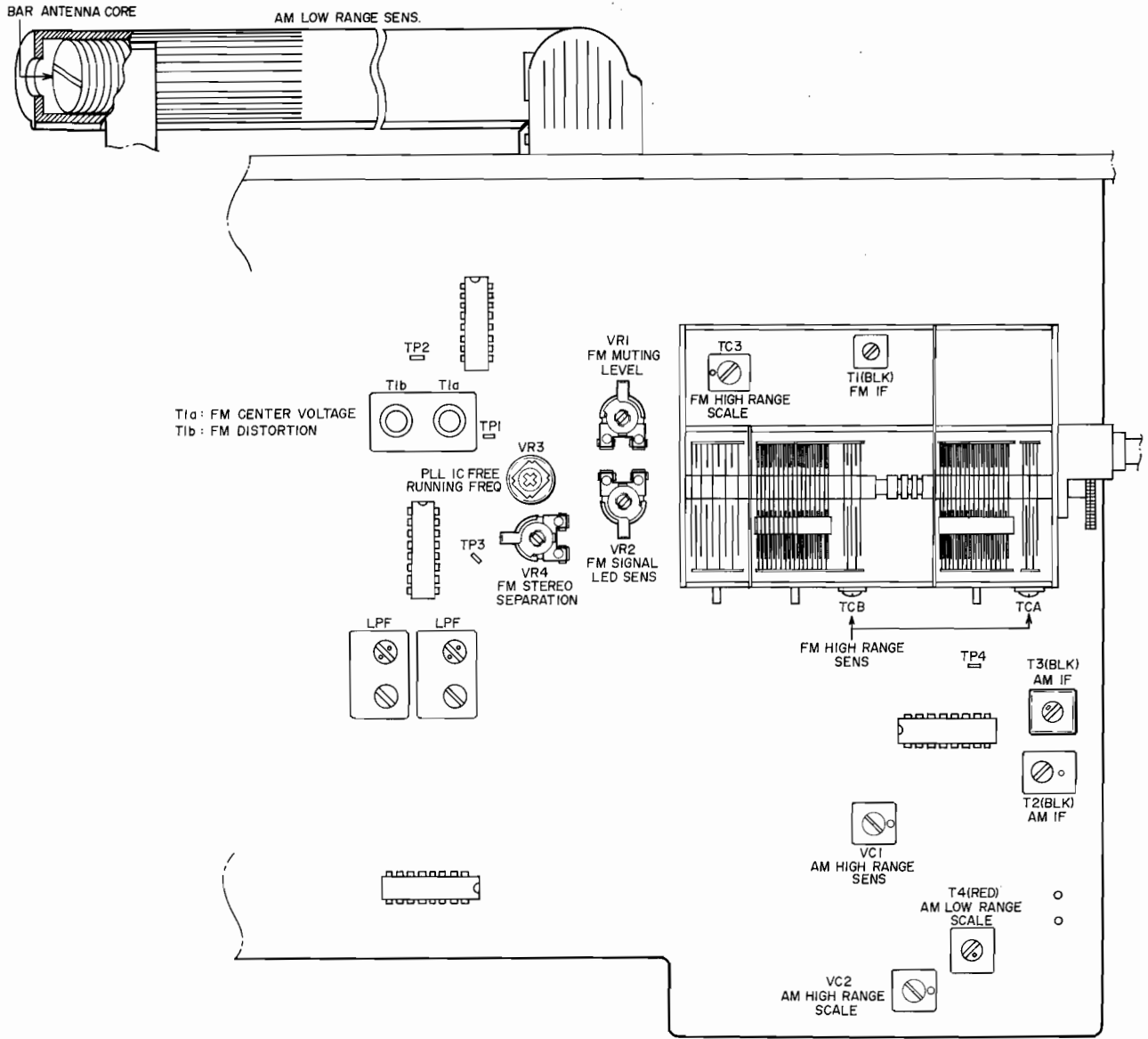


Fig. 5 Tuner P.C Board

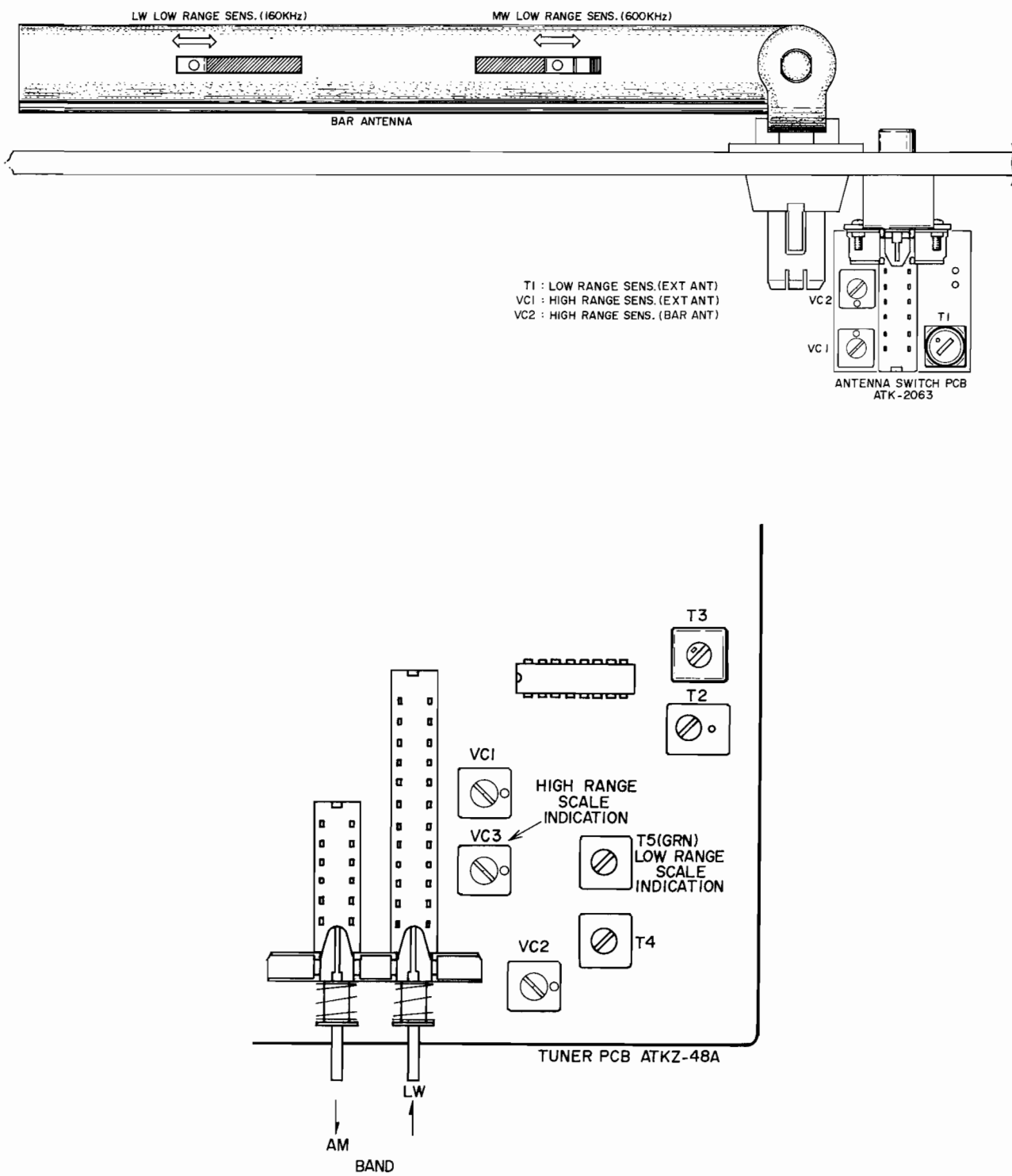


Fig. 6 Tuner P.C Board ATKZ-48A and Antenna Switch P.C Board ATK-2063 (Model AT-K33L)

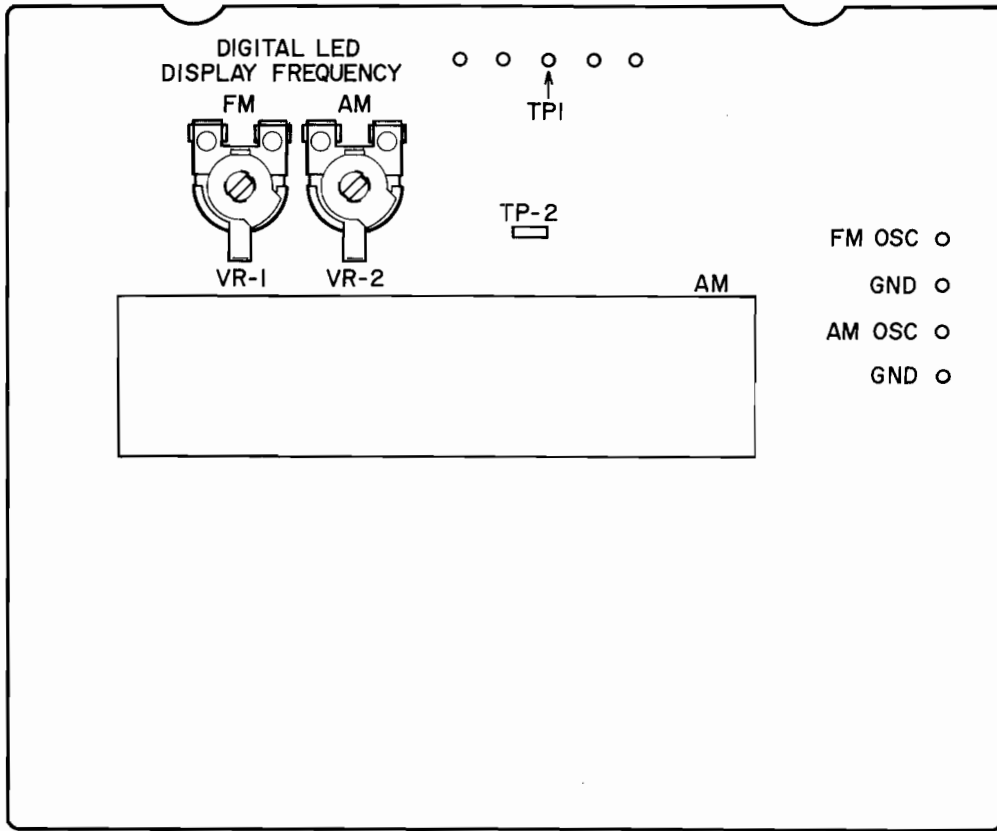


Fig. 7 Counter P.C Board ATKZ-17

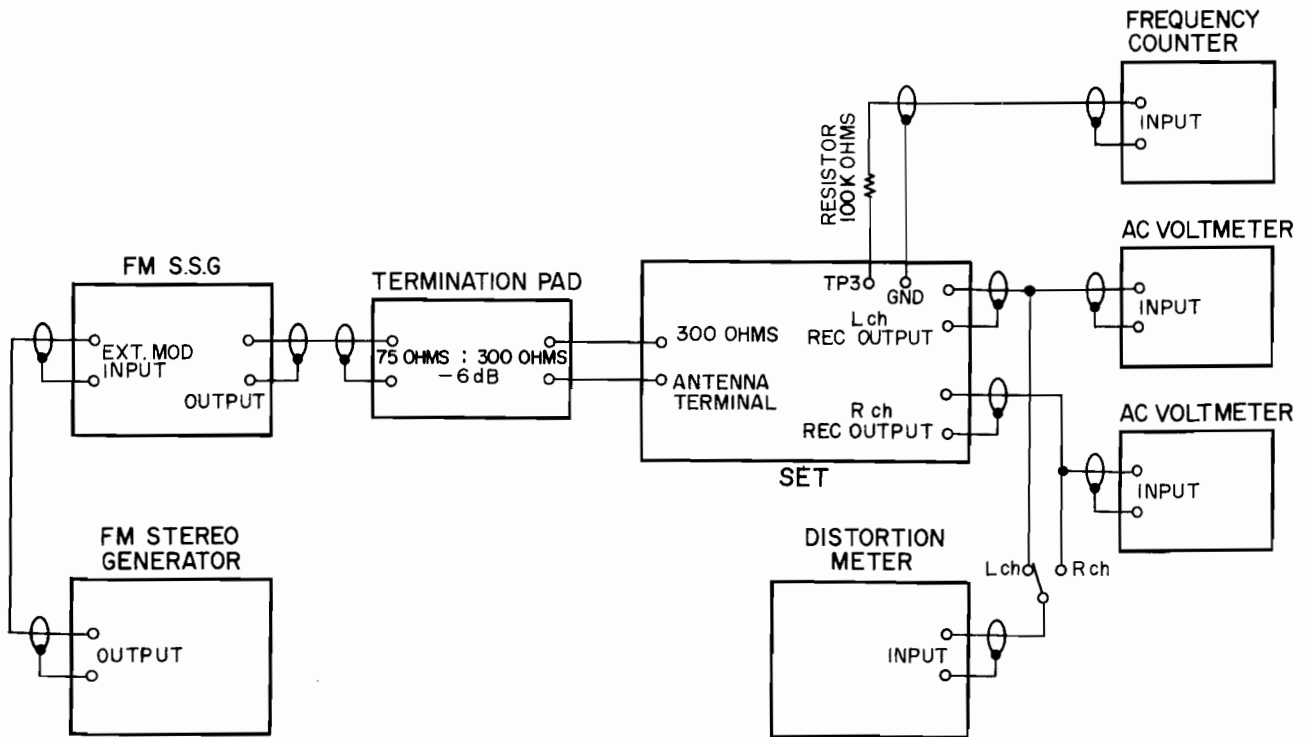


Fig. 8 Instrument Connections

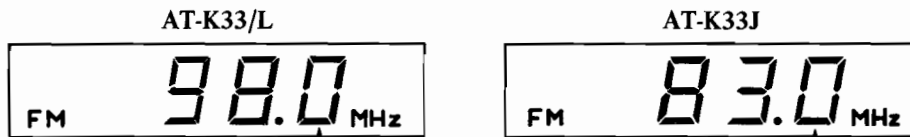
1. FM SECTION ADJUSTMENTS (Refer to Figs. 5, 7, 8)

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 5).

| 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 (AT-K33J: 83 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 (AT-K33J: 83 MHz), 60 dB, 1 kHz (mono 100%) input. |
| 6 | Signal LED Sensitivity | VR2 (30K) | | 98 MHz (AT-K33J: 83 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 | VR1 (10 KB) Counter P.C Board (Fig. 7) | | Apply 98 MHz (AT-K33J: 83 MHz), 60 dB input. Short TP1 to GND on the Counter P.C Board. Adjust VR1 until 3rd numeral display become stable position. (See Note 3) |
| 8 | High Range Scale Indication | TC3 (Front-end) | | Turn tuning knob fully clockwise. Display 108 MHz (AT-K33J: 90 MHz) by adjusting TC3. |
| 9 | High Range Sensitivity | TCA, TCB (Front-end) | Distortion Factor: Less than 3% | MODE switch to MONO. 108 MHz (AT-K33J: 88 MHz), Less than 6 dB, 1 kHz (mono) input. |
| 10 | Confirmation of Low Range Sensitivity | | Distortion Factor: Less than 3% | 88 MHz (AT-K33J: 78 MHz), Less than 6 dB, 1 kHz (mono) input. (See Notes 4 and 5) |
| 11 | Muting Level | VR1 (30K) | 22 dB \pm 6 dB | MODE switch to STEREO. 98 MHz (AT-K33J: 83 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 (4.7K) | 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 \rightarrow Right) | VR4 (500) | More than 45 dB (AT-K33: 48 dB) | 98 MHz (AT-K33J: 83 MHz), 60 dB, 1 kHz (stereo 100%) Lch input. Minimum output of Rch. |

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|--|-----------------------|---|---|
| 14 | Stereo Separation (Right → Left) | VR4 (500) | More than 45 dB (AT-K33J: 48 dB) | 98 MHz (AT-K33J: 83 MHz), 60 dB, 1 kHz (stereo 100%) Rch input. Minimum output of Lch. |
| 15 | Confirmation of Stereo Distortion Factor | | Distortion Factor: Less than 0.15% (AT-K33J: 0.12%) | 100 MHz (AT-K33J: 83 MHz), 60 dB, 1 kHz (stereo 100%) input. If distortion exceeds 0.15% (AT-K33J: 0.12%), first check according to Steps 2, 3, 12, 13 and 14, and then readjust according to Step 1. |
| 16 | CAL Tone Level (AT-K33J) | VR1 (3K) CAL Tone PCB | 388 mV output | CAL Tone Switch to ON. |

- 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 (78) MHz and 108 (88) 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. 8)

2. AM (AT-K33L: MW) SECTION ADJUSTMENTS (Refer to Figs. 5, 6, 7, 9)

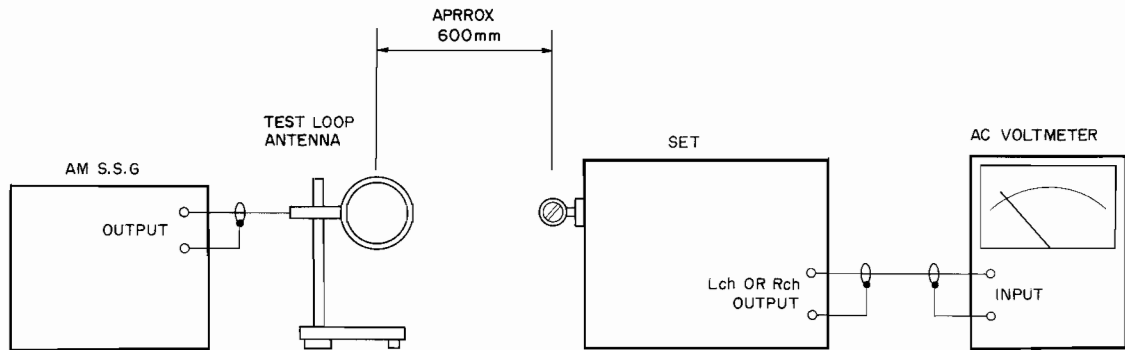


Fig. 9 Instrument Connections for AM (MW) Section Adjustments and Step 3, 4 of LW Section Adjustments

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 5).

* Model AT-K33L: ANTENNA SELECTOR to INT.

| Step | Adjustment Item | Adjustment Point | Result | Remarks |
|------|-------------------------------|---|--|---|
| 1 | Digital LED Display Frequency | VR2 (10KB) Counter P.C Board (Fig. 7) | | 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) | | Turn tuning knob fully counterclockwise. Display 515 kHz by adjusting T4. |
| 4 | High Range Scale Indication | VC2 | | Turn tuning knob fully clockwise. Display 1,650 kHz by adjusting VC2. |
| 5 | Low Range Sensitivity | Bar Antenna Core AT-K33/J: Fig. 5 AT-K33L: Fig. 6 | 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-K33L Only; Refer to Figs. 6, 9, 10)

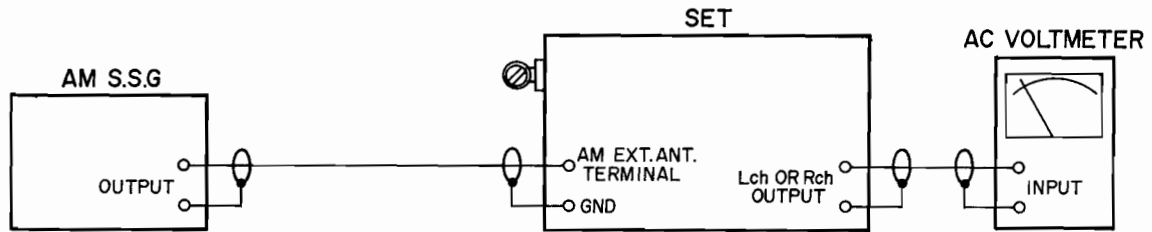


Fig. 10 Instrument Connections
For Steps 5 and 6 of LW Section Adjustments

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board (Fig. 6).

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

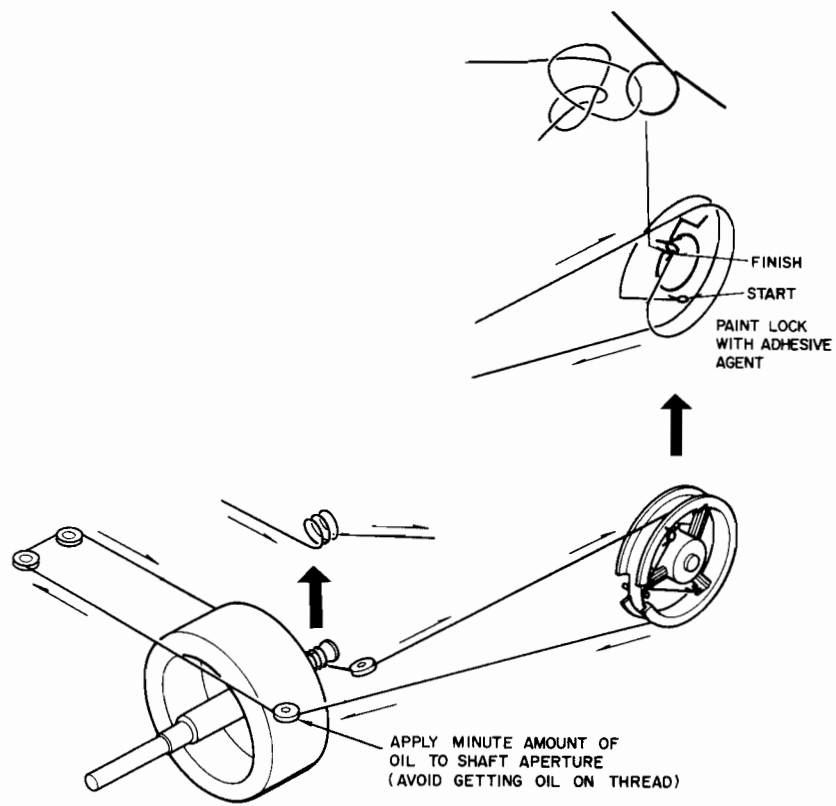


Fig. 11 Tuning Cord Threading

VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

1) Model AT-K33

| P.C Board Title | P.C Board Number | Remarks |
|-------------------|------------------|--------------|
| Tuner P.C Board | ATKZ-16A | U/T |
| Tuner P.C Board | ATKZ-47A | CSA, AAL |
| Tuner P.C Board | ATKZ-48A | CEE, UK, SAA |
| LED P.C Board | ATKZ-16B | U/T |
| LED P.C Board | ATKZ-47B | CSA, AAL |
| LED P.C Board | ATKZ-48B | CEE, UK, SAA |
| Counter P.C Board | ATKZ-17 | |
| Mute P.C Board | ATKZ-328 | |

2) Model AT-K33L

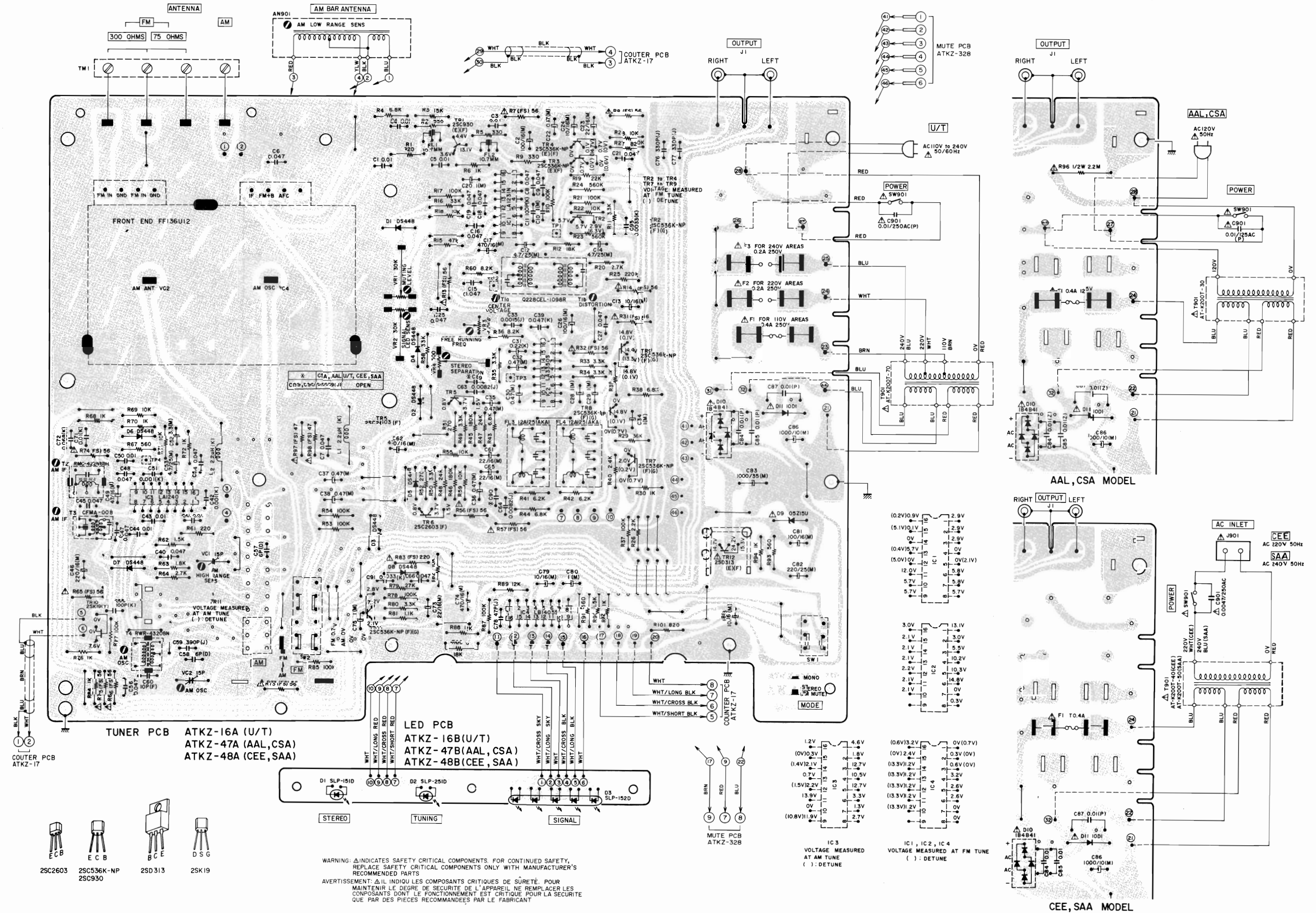
| P.C Board Title | P.C Board Number | Remarks |
|--------------------------|------------------|---------|
| Tuner P.C Board | ATKZ-48A | |
| LED P.C Board | ATKZ-48B | |
| Counter P.C Board | ATKZ-17 | |
| Mute P.C Board | ATKZ-328 | |
| Antenna Switch P.C Board | ATK-2063 | |

3) Model AT-K33J

| P.C Board Title | P.C Board Number | Remarks |
|--------------------|------------------|---------|
| Tuner P.C Board | ATKZ-48A | |
| LED P.C Board | ATKZ-48B | |
| Counter P.C Board | ATKZ-17 | |
| Cal Tone P.C Board | ATKZ-327 | |

2. COMPOSITION OF VARIOUS P.C BOARDS

1) MODEL AT-K33; TUNER P.C BOARD ATKZ-16A (U/T), ATKZ-47A (CSA, AAL), ATKZ-48A (CEE, UK, SAA) and LED P.C BOARD ATKZ-16B (U/T), ATKZ-47B (CSA, AAL), ATKZ-48B (CEE, UK, SAA)

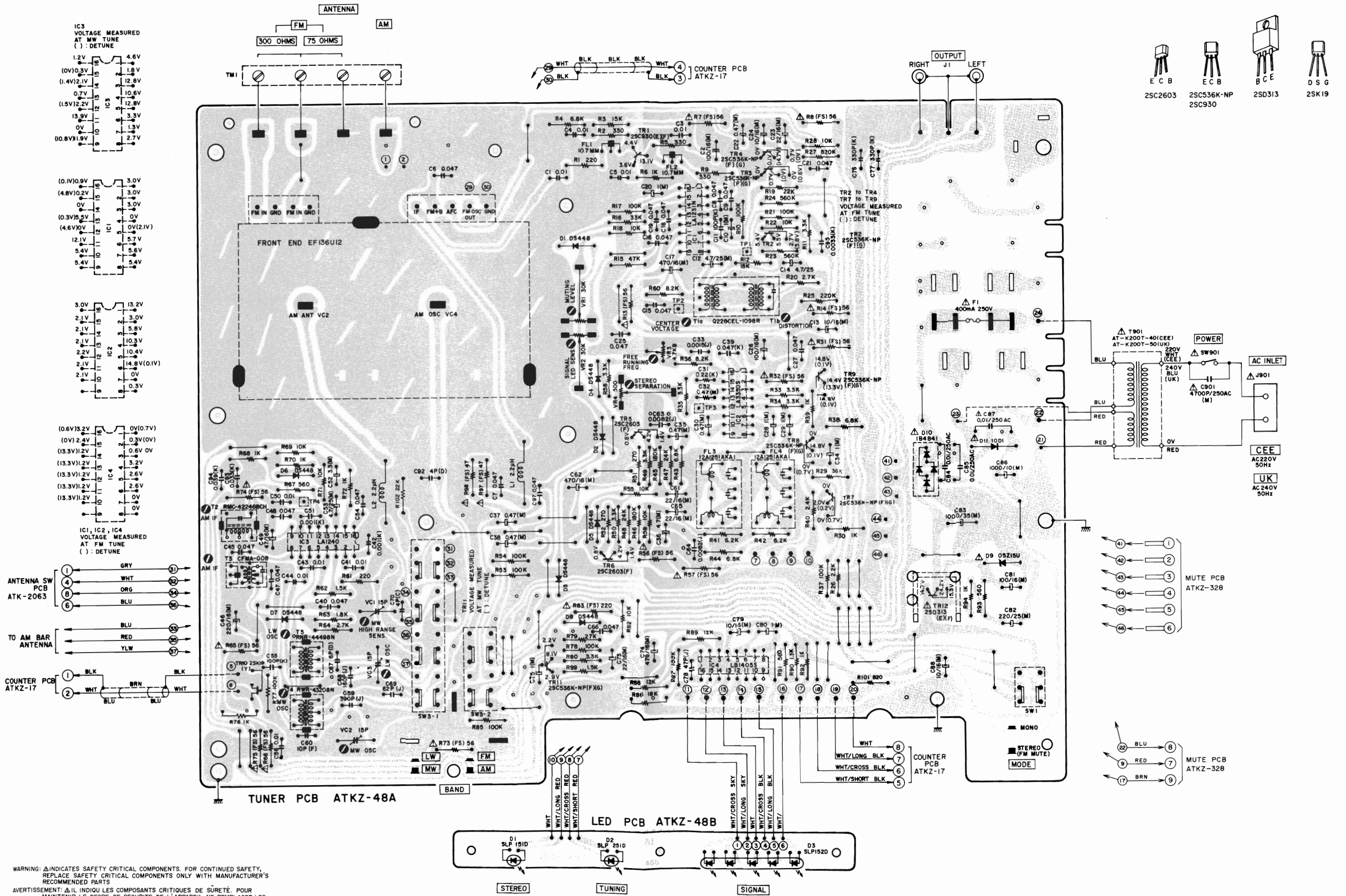


- 2SC2603
- 2SC536K-NP
- 2SD313
- 2SK19

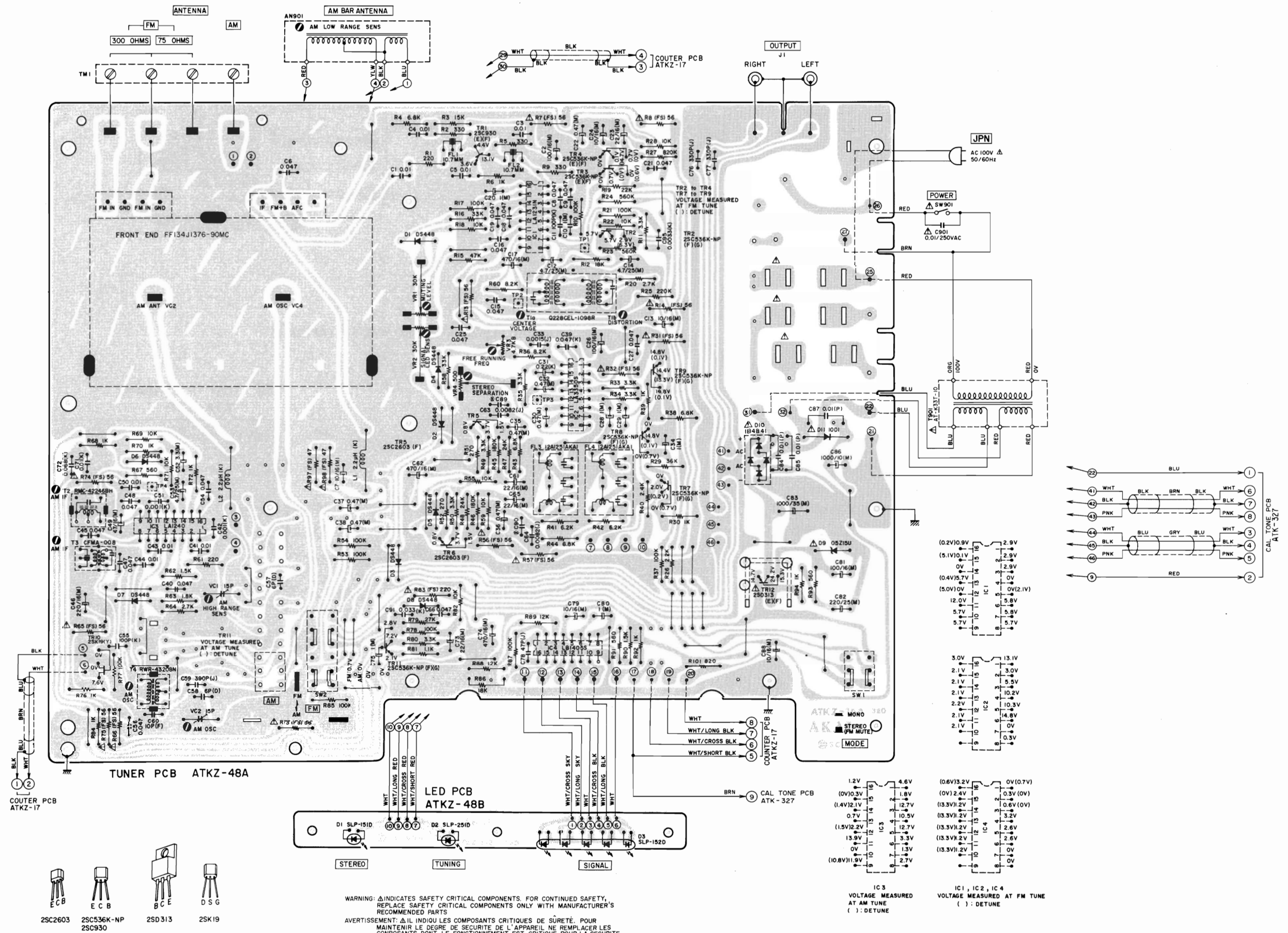
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

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

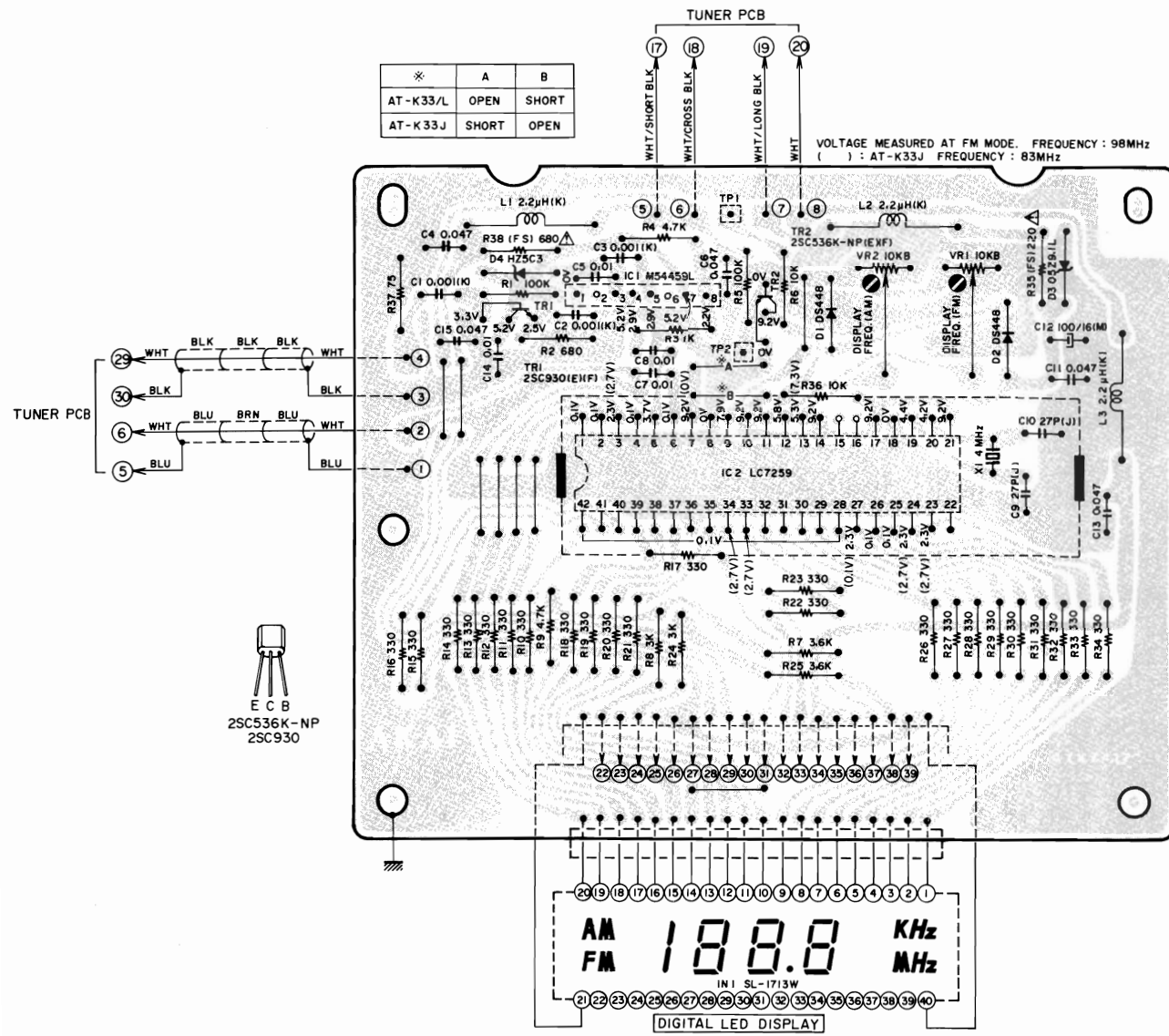
2) MODEL AT-K33L; TUNER P.C BOARD ATKZ-48A and LED P.C BOARD ATKZ-48B



3) MODEL AT-K33J; TUNER P.C BOARD ATKZ-48A and LED P.C BOARD ATKZ-48B

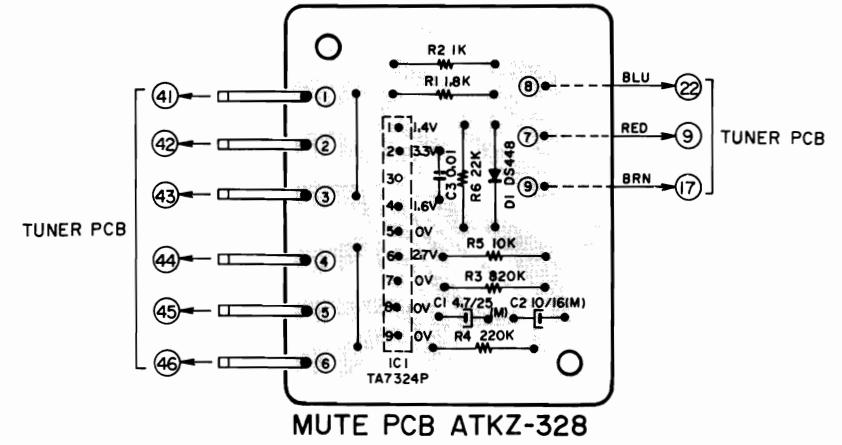


4) COUNTER P.C BOARD ATKZ-17

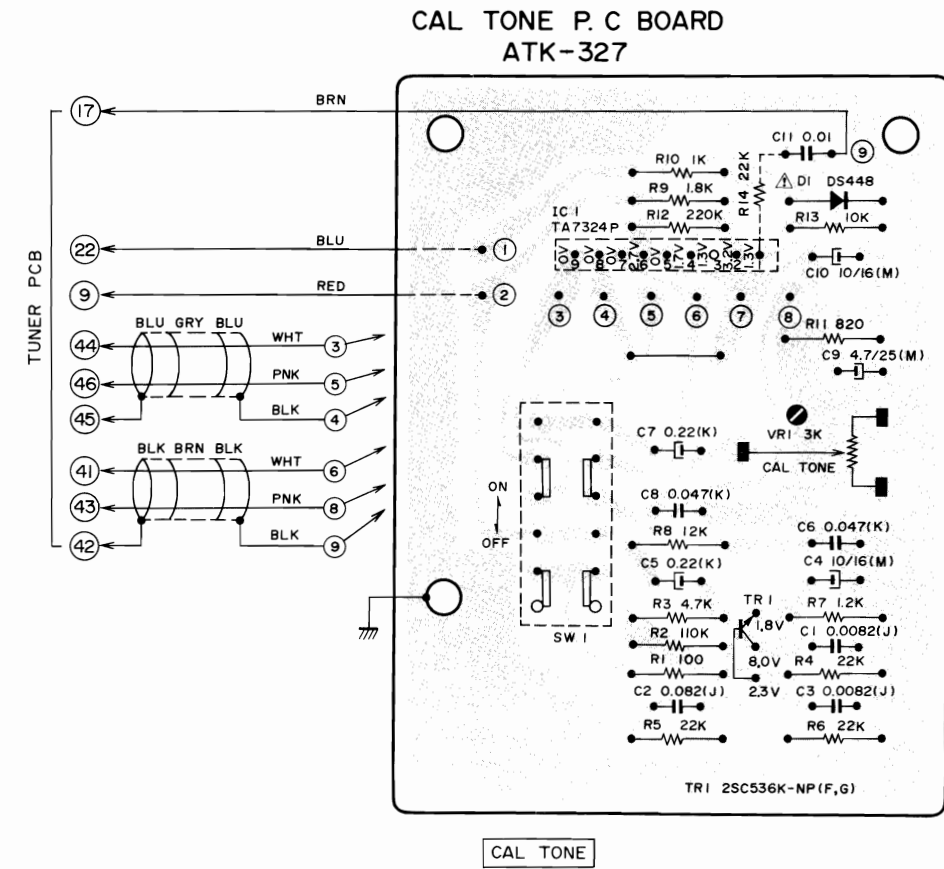


WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: Δ IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

5) MUTE P.C BOARD ATKZ-328 (AT-K33/L)

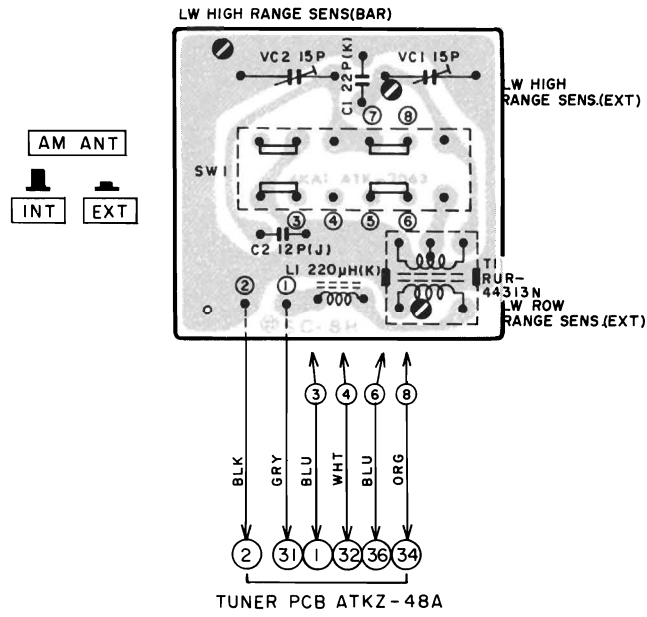
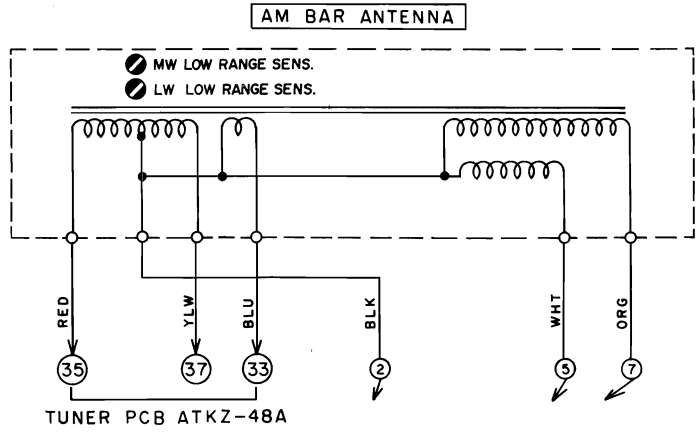


6) CAL TONE P.C BOARD ATK-327 (AT-K33J)



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: Δ IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

7) ANTENNA SWITCH P.C BOARD ATK-2063 (AT-K33L)



SECTION 2

STEREO INTEGRATED AMPLIFIER

MODEL **AM-U33**

SERVICE MANUAL

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

I. SPECIFICATIONS

POWER AMPLIFIER SECTION

| | | |
|-------------------------------|----------------------|---|
| RATED POWER OUTPUT | | 43 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) | | 5 Hz to 70 kHz/8 ohms (Total harmonic distortion: 0.1%) |
| SIGNAL TO NOISE RATIO (IHF-A) | PHONO AUX | 85 dB 102 dB |
| RESIDUAL NOISE (IHF-A) | | 180 μ V/8 ohms |
| CHANNEL SEPARATION (IHF) | | Better than 60 dB at 1 kHz |
| DAMPING FACTOR | | More than 60 (1 kHz, 8 ohms) |
| OUTPUT | SPEAKER HEADPHONE | 4 to 16 ohms 4 to 16 ohms |

PREAMPLIFIER SECTION

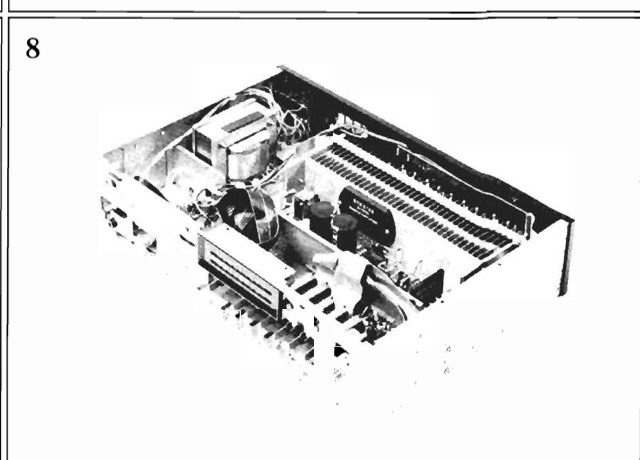
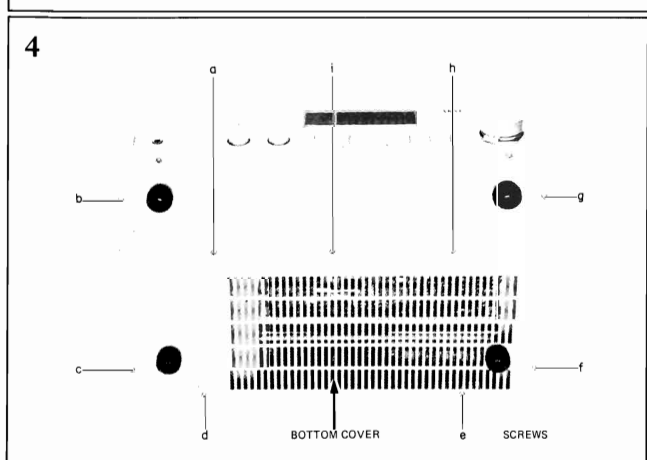
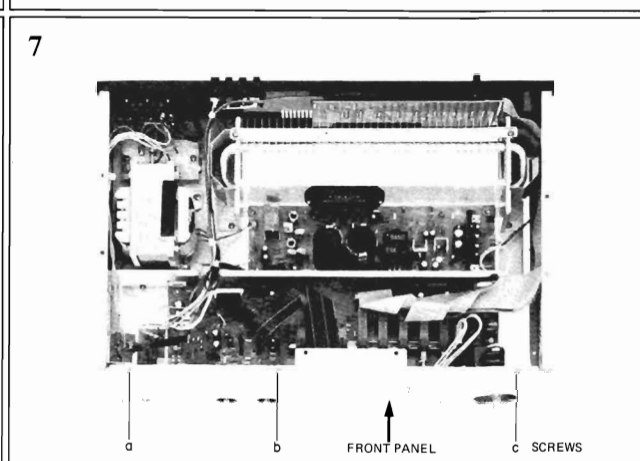
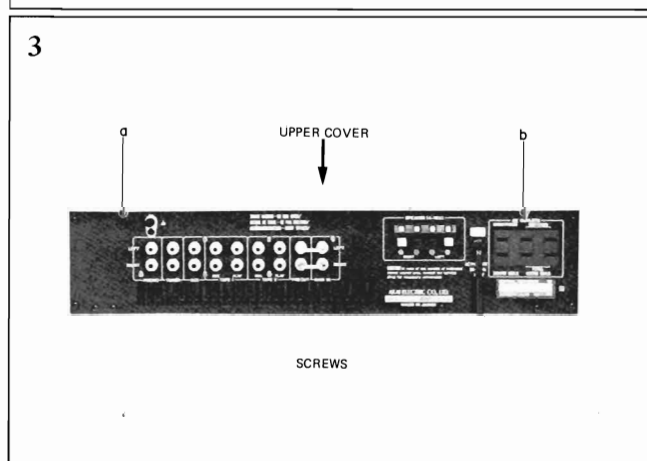
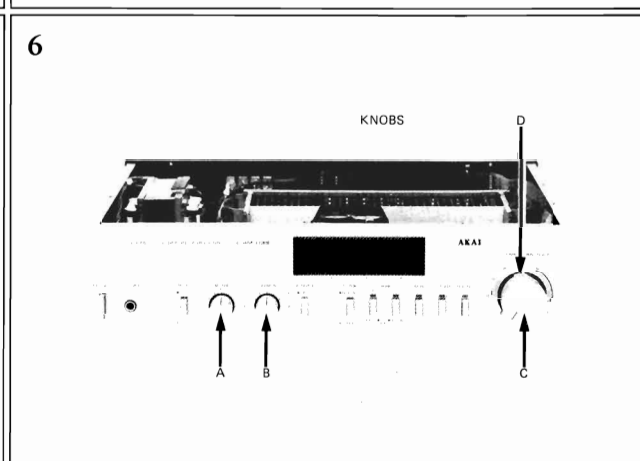
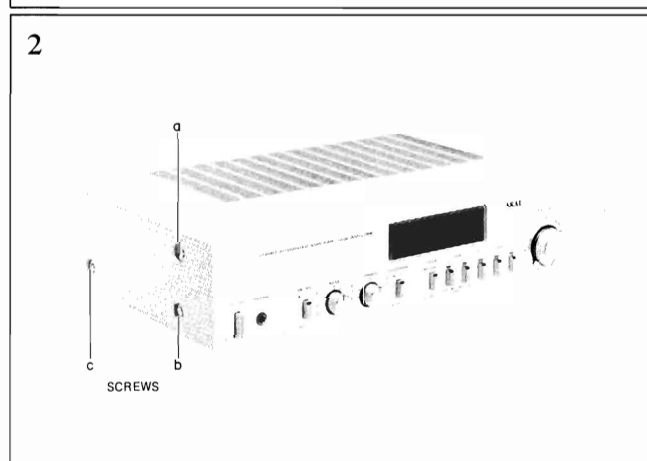
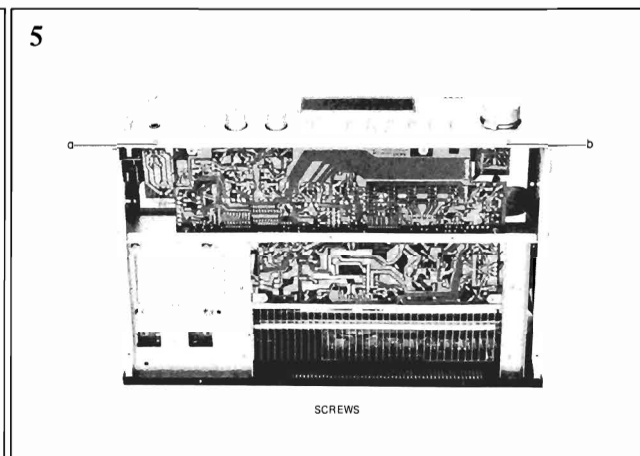
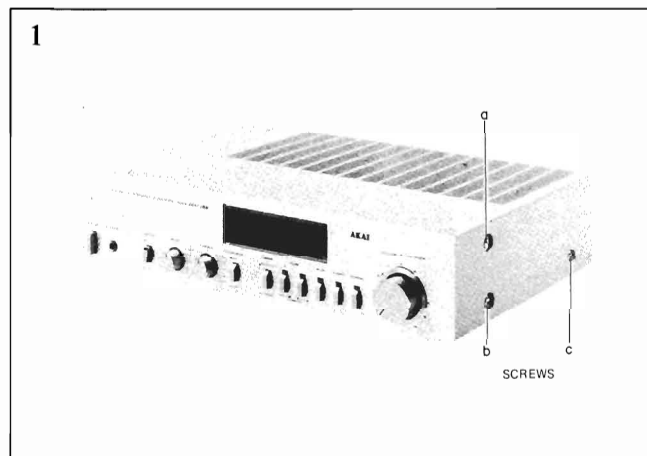
| | | |
|---|--|---|
| INPUT SENSITIVITY/IMPEDANCE | PHONO AUX, TUNER, TAPE | 3 mV/47 kohms 150 mV/100 kohms |
| OUTPUT LEVEL/IMPEDANCE | TAPE REC PRE OUT | 150 mV 1V/600 ohms |
| FREQUENCY RESPONSE | PHONO (RIAA DEVIATION) TUNER, AUX, TAPE | 20 Hz to 20 kHz \pm 0.3 dB 6 Hz to 100 kHz +0 dB, -3 dB |
| TONE CONTROL | BASS TREBLE | \pm 8 dB (100 Hz) \pm 8 dB (10 kHz) |
| LOUDNESS CONTROL (Volume set at -30 dB position) | | +10 dB (100 Hz) +6 dB (10 kHz) |
| PHONO MAX INPUT (1 kHz) | | MM: 200 mV |
| POWER REQUIREMENTS | | 120V, 60 Hz for U.S.A. and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/220V/240V, 50/60 Hz internally switchable for other countries |
| AC OUTLET | | 2 switched, 1 unswitched |
| POWER CONSUMPTION | | 220W (U/T), 300W (CEE), 315W (UK, SAA) |
| DIMENSIONS | | 440(W) \times 105(H) \times 323(D) mm (17.3 \times 4.1 \times 12.6 inches) |
| WEIGHT | | 7.9 kg (17.4 lbs) |

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

II. DISMANTLING OF UNIT

AM-U33

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



III. CONTROLS

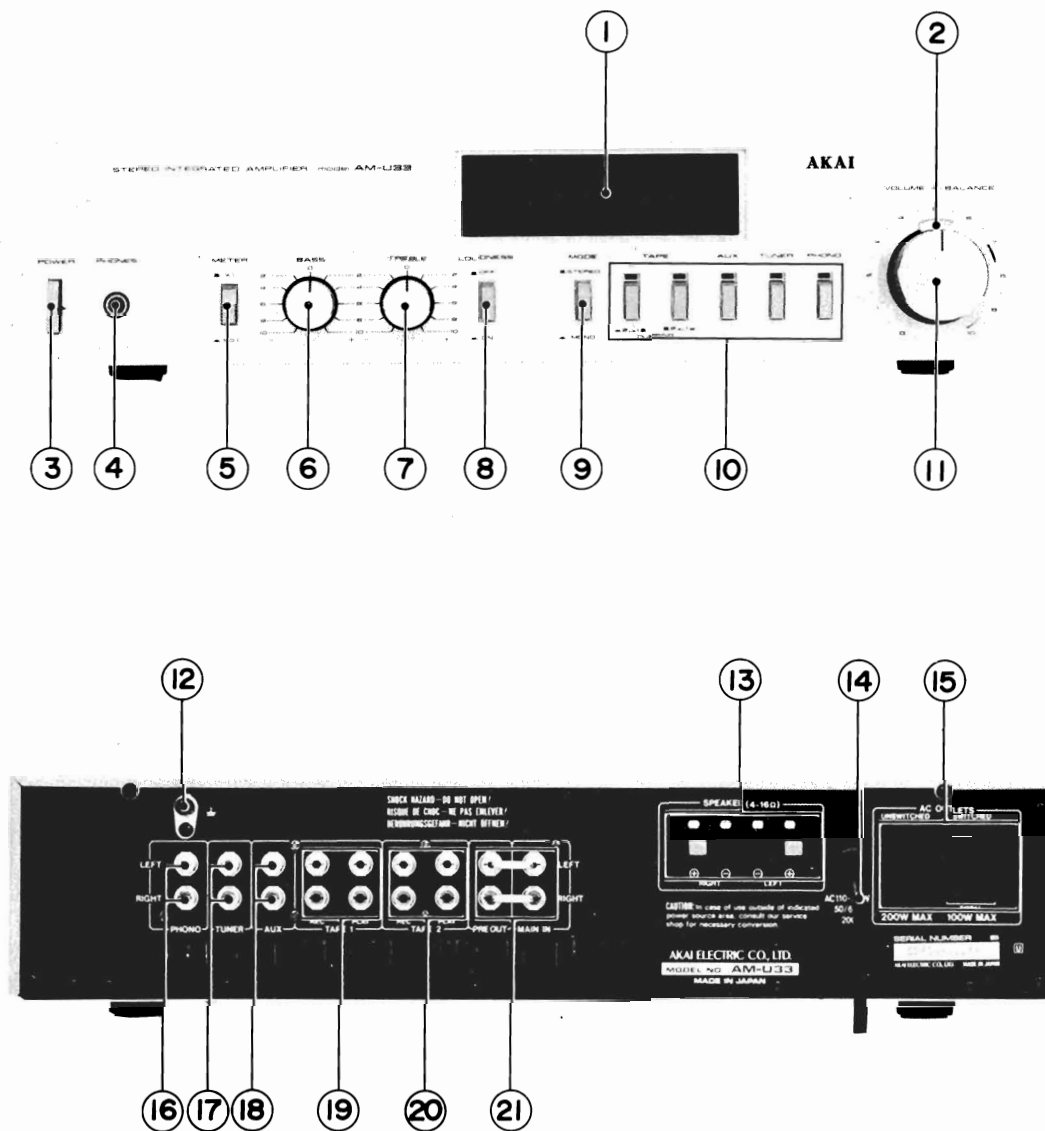



Fig. 1 Controls

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

IV. PRINCIPAL PARTS LOCATION

AM-U33

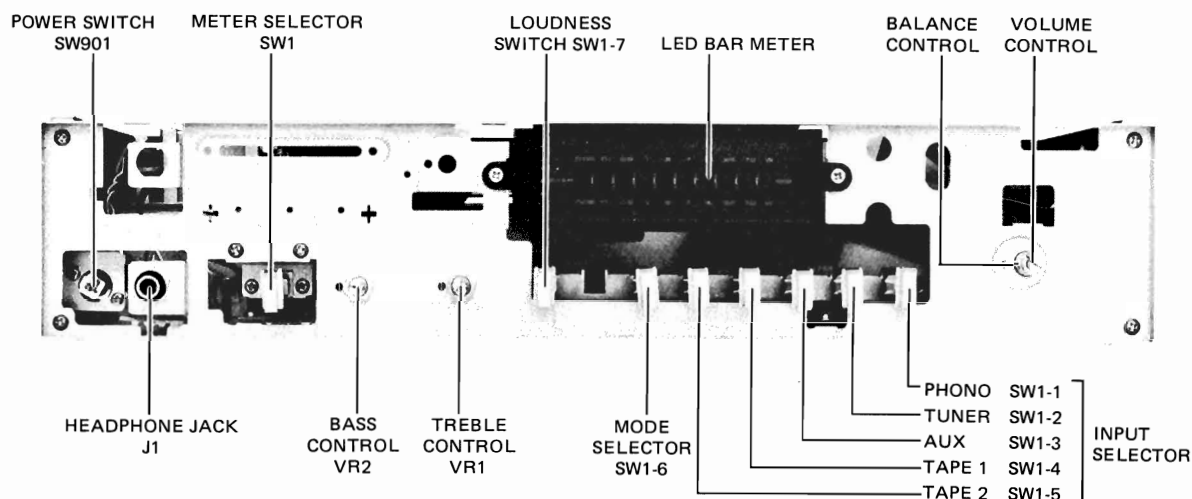


Fig. 2 Front View

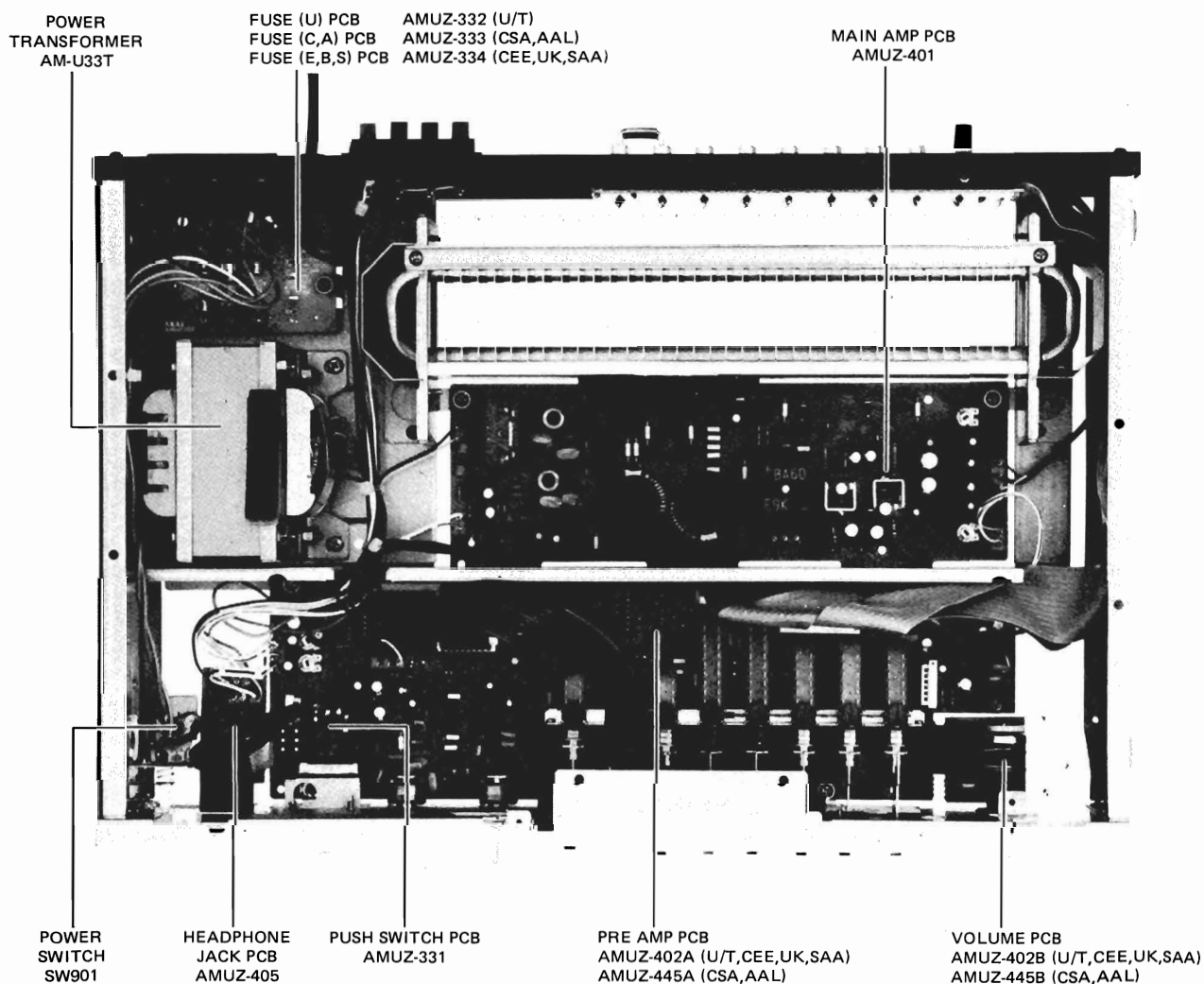


Fig. 3 Top View

V. VOLTAGE CONVERSION

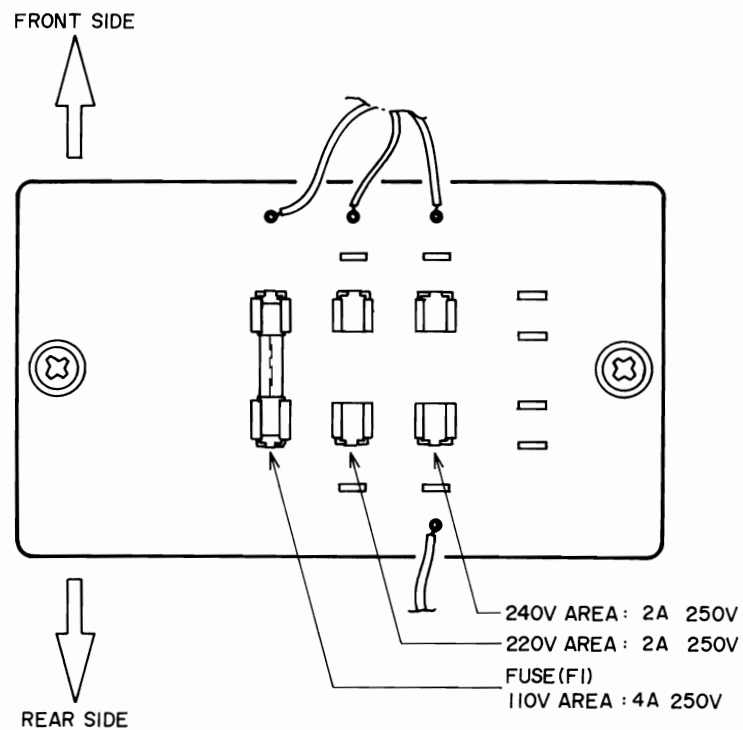


Fig. 4 Voltage Conversion (U/T Model Only)

Models for Canada, U.S.A., Europe, UK, Australia are not equipped with this facility.

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

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

- 1) Disconnect AC Power Cord.
- 2) Loosen holding screws and remove upper cover.
- 3) Remove existing Line Voltage Fuse and insert the required Line Voltage Fuse into the proper fuse holder.

VI. ADJUSTMENTS

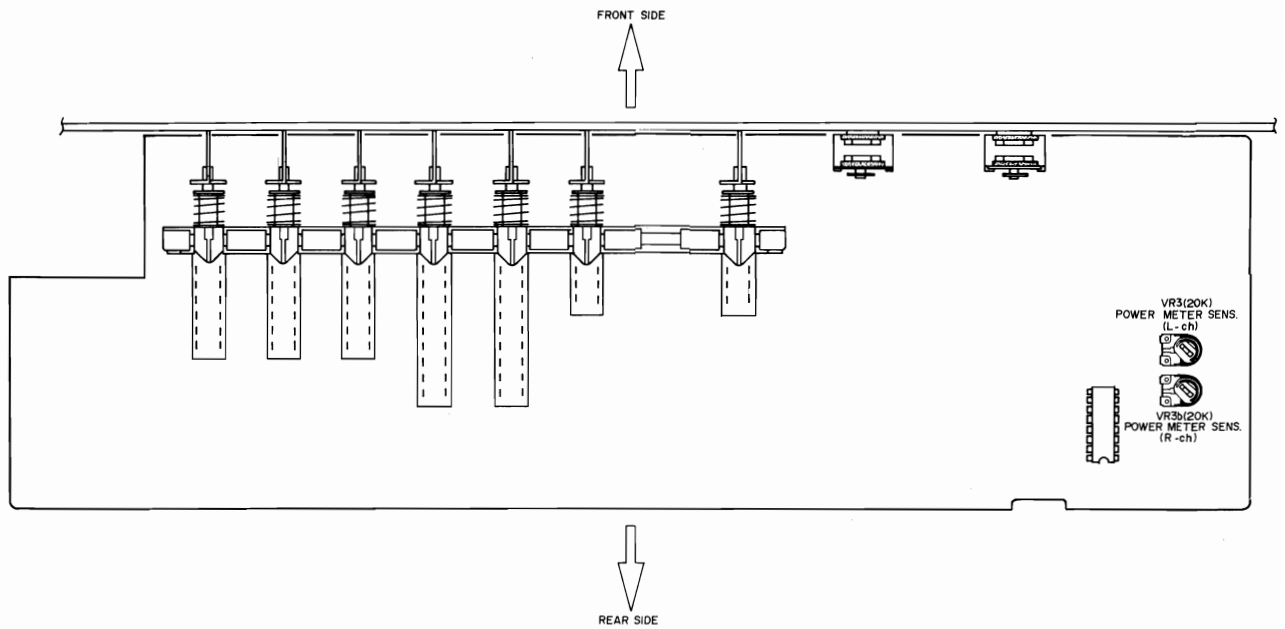


Fig. 5 Pre Amp P.C Board

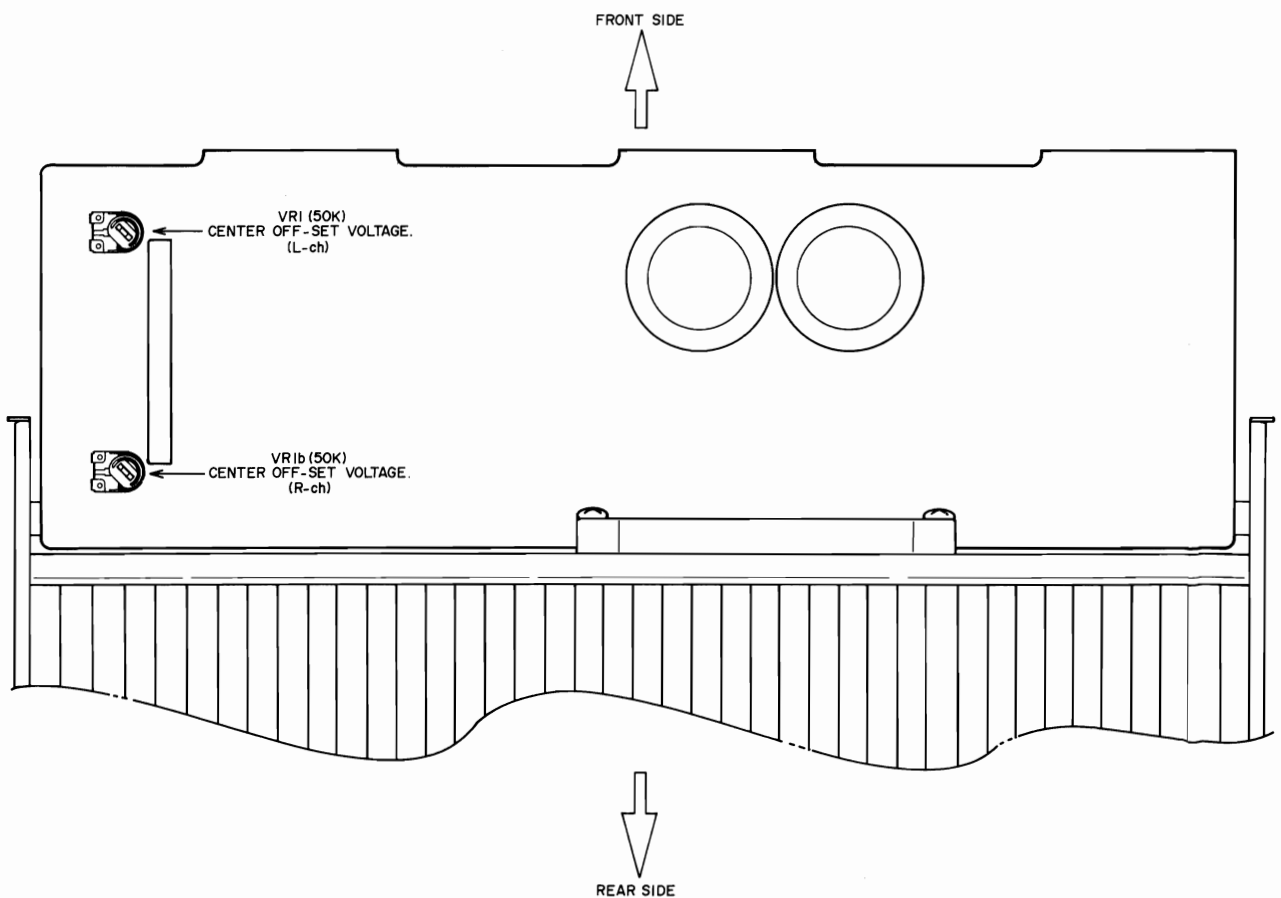


Fig. 6 Main Amp P.C Board

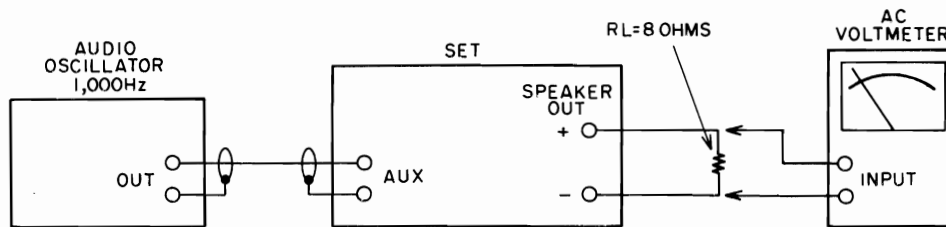


Fig. 7 Instrument Connections for Power Meter Sensitivity Adjustment

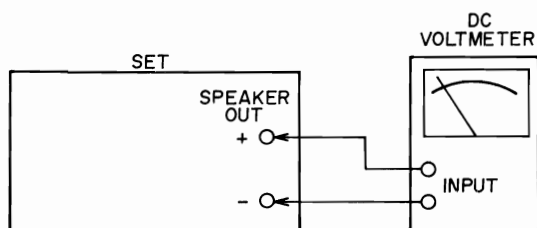


Fig. 8 Instrument Connections for Center Off-set Voltage Adjustment

1. POWER METER SENSITIVITY ADJUSTMENT (Refer to Figs. 5, 7)

Set the Meter Range switch to "x1", and connect the load resistor ($RL=8$ 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 (11V) at both ends of the load resistor.

Adjust VR3 (left channel) and VR3b (right channel) on the Pre Amp P.C Board so that the 7th LED (15 Watts) in the Power Meter light up.

2. CENTER OFF-SET VOLTAGE ADJUSTMENT (Refer to Figs. 6, 8)

Connect the DC Voltmeter or Digital Voltmeter to the speaker terminals. Adjust the VR1 (left channel) and VR1b (right channel) on the Main Amp P.C Board, so that the Voltmeter reads 0 ± 50 mV.

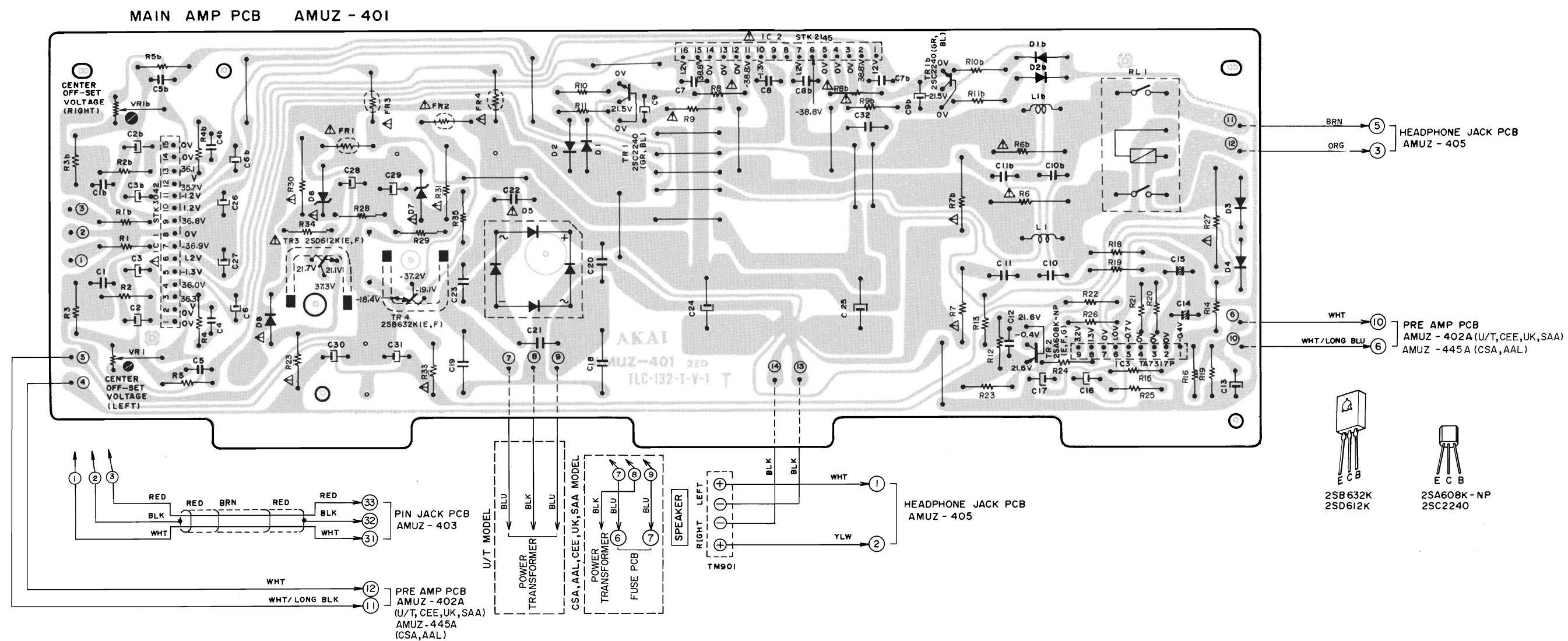
VII. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

| P.C Board Title | P.C Board Number | Remarks |
|--------------------------|------------------|-------------------|
| Main Amp P.C Board | AMUZ-401 | |
| Pre Amp P.C Board | AMUZ-402A | U/T, CEE, UK, SAA |
| Pre Amp P.C Board | AMUZ-445A | CSA, AAL |
| Volume P.C Board | AMUZ-402B | U/T, CEE, UK, SAA |
| Volume P.C Board | AMUZ-445B | CSA, AAL |
| Pin Jack P.C Board | AMUZ-403 | |
| Headphone Jack P.C Board | AMUZ-405 | |
| LED (A) P.C Board | AMUZ-406A | |
| LED (B) P.C Board | AMUZ-406B | |
| Push Switch P.C Board | AMUZ-331 | |
| Fuse (U) P.C Board | AMUZ-332 | U/T |
| Fuse (C, A) P.C Board | AMUZ-333 | CSA, AAL |
| Fuse (E, B, S) P.C Board | AMUZ-334 | CEE, UK, SAA |

2. COMPOSITION OF VARIOUS P.C BOARDS

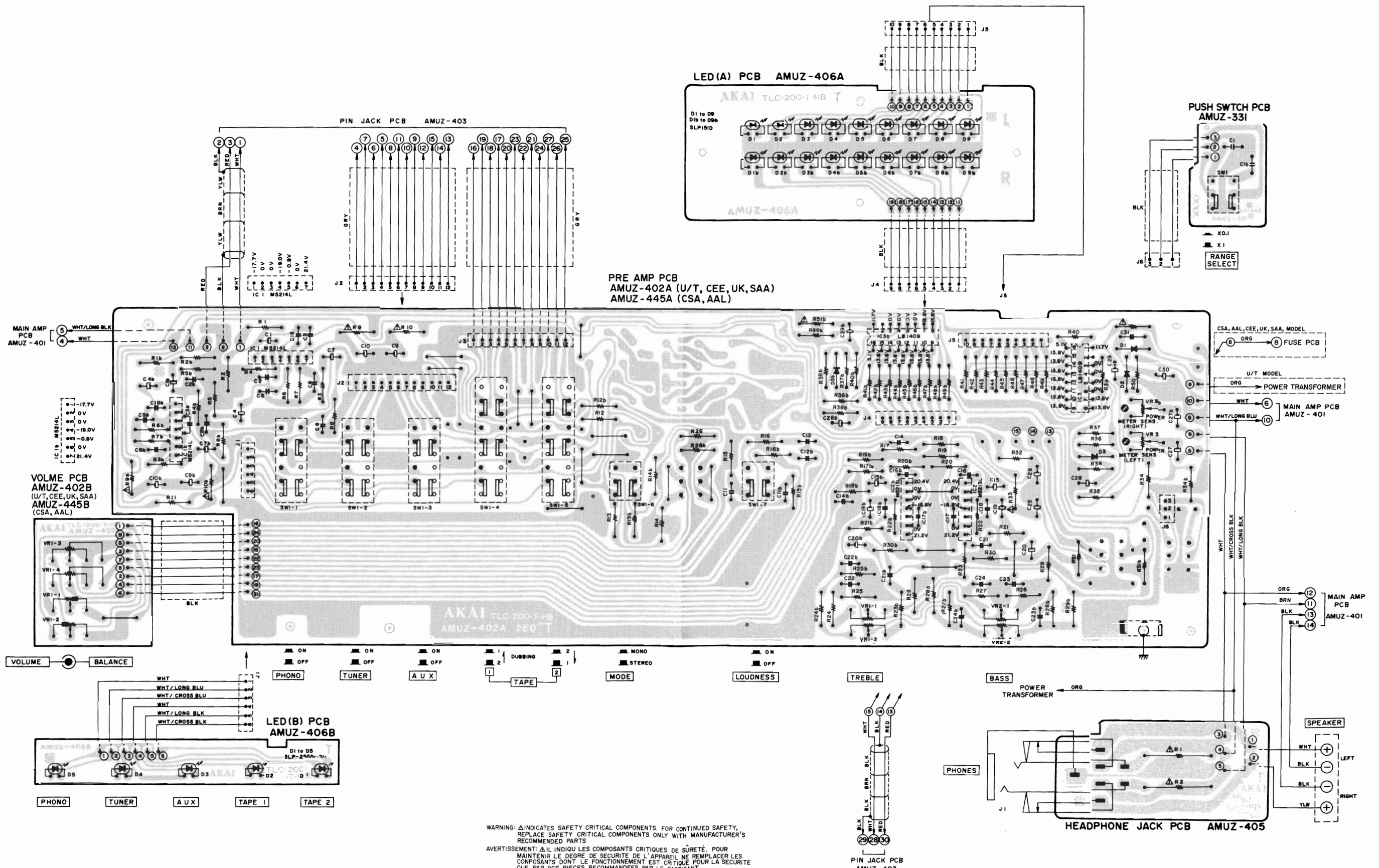
1) MAIN AMP P.C BOARD AMUZ-401 (2ED)



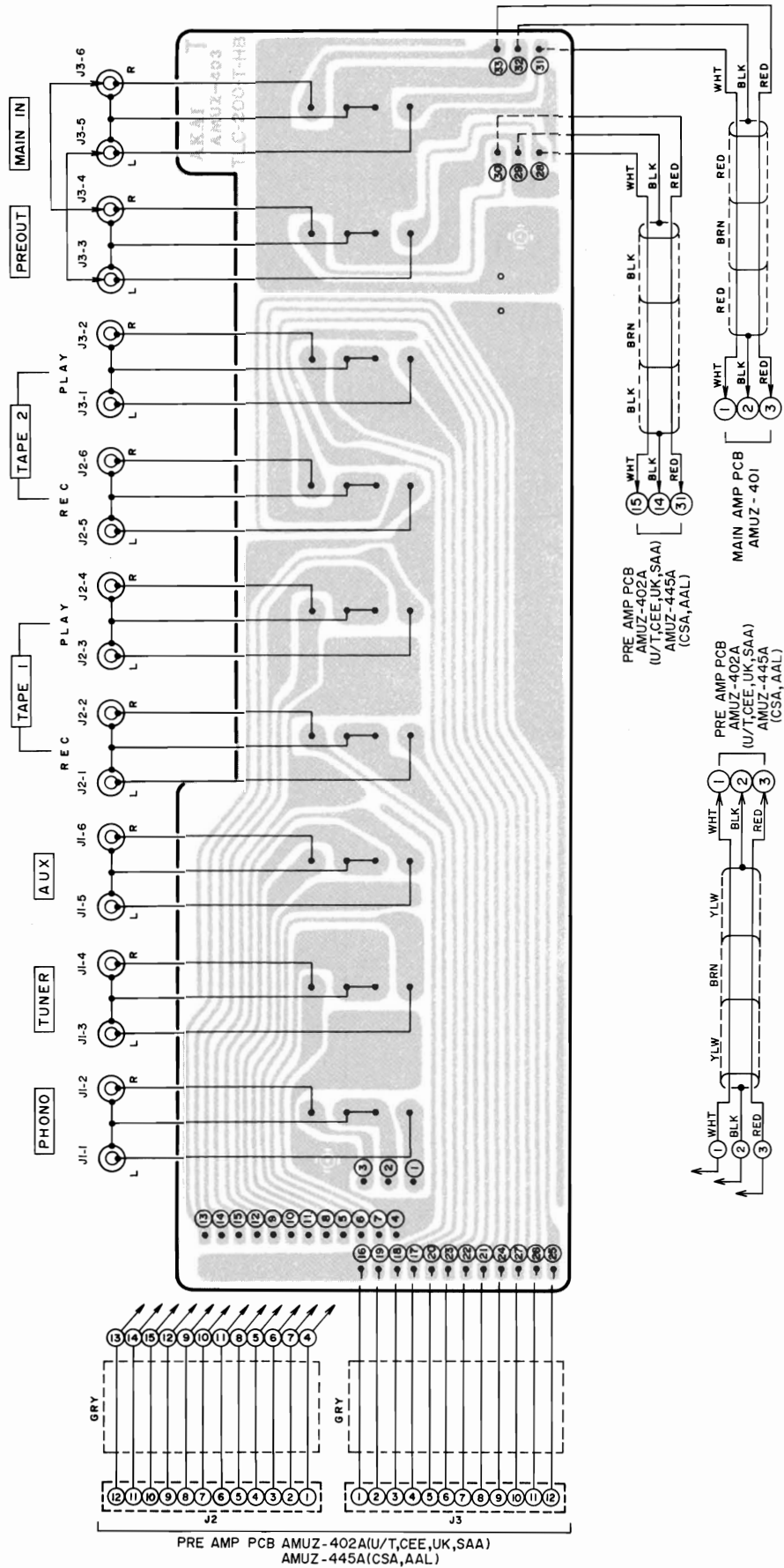
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

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 POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

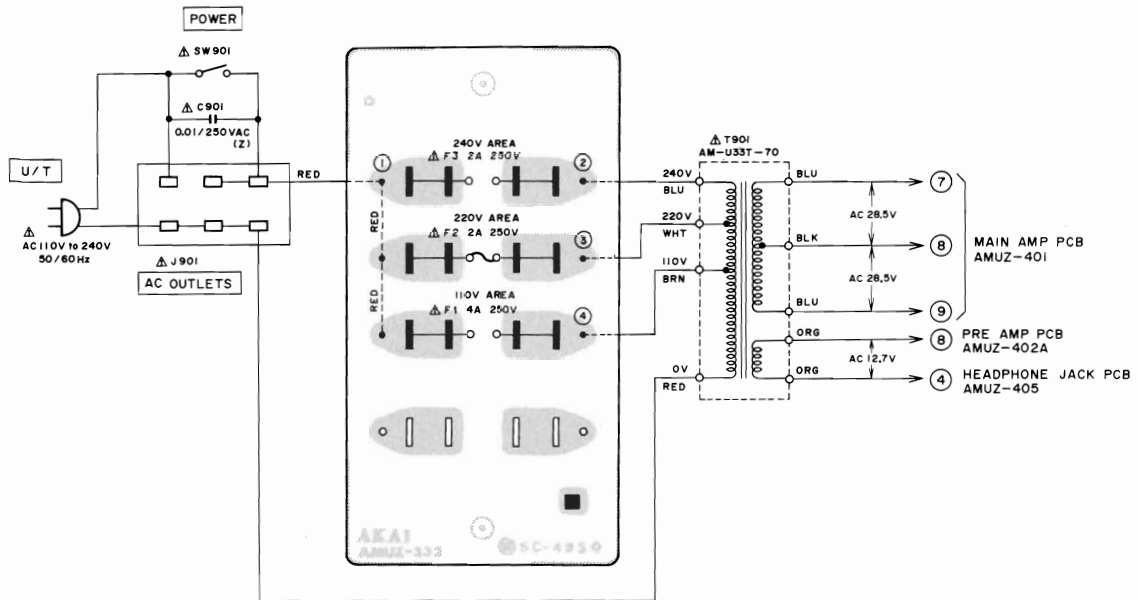
2) PRE AMP P.C BOARD AMUZ-402A 2ED (U/T, CEE, UK, SAA), AMUZ-445A 2ED (CSA, AAL), VOLUME P.C BOARD AMUZ-402B (U/T, CEE, UK, SAA), AMUZ-445B (CSA, AAL), HEADPHONE JACK P.C BOARD AMUZ-405, LED (A) P.C BOARD AMUZ-406A, LED (B) P.C BOARD AMUZ-406B and PUSH SWITCH P.C BOARD AMUZ-331



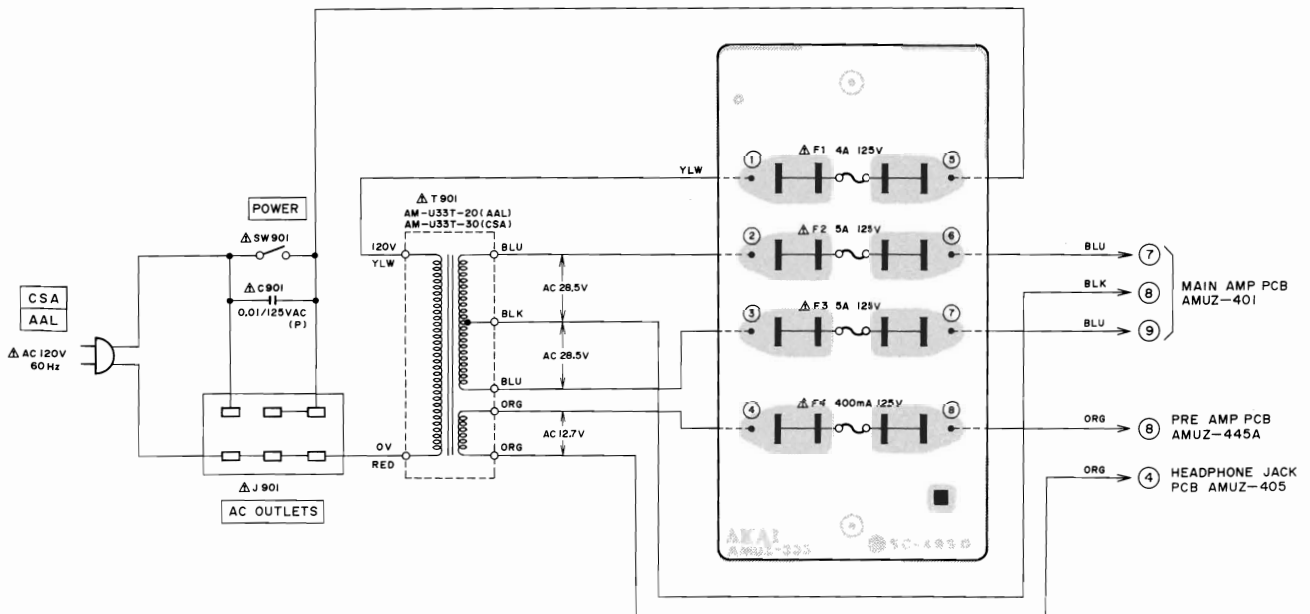
3) PIN JACK P.C BOARD AMUZ-403



4) FUSE (U) P.C BOARD AMUZ-332 (U/T)

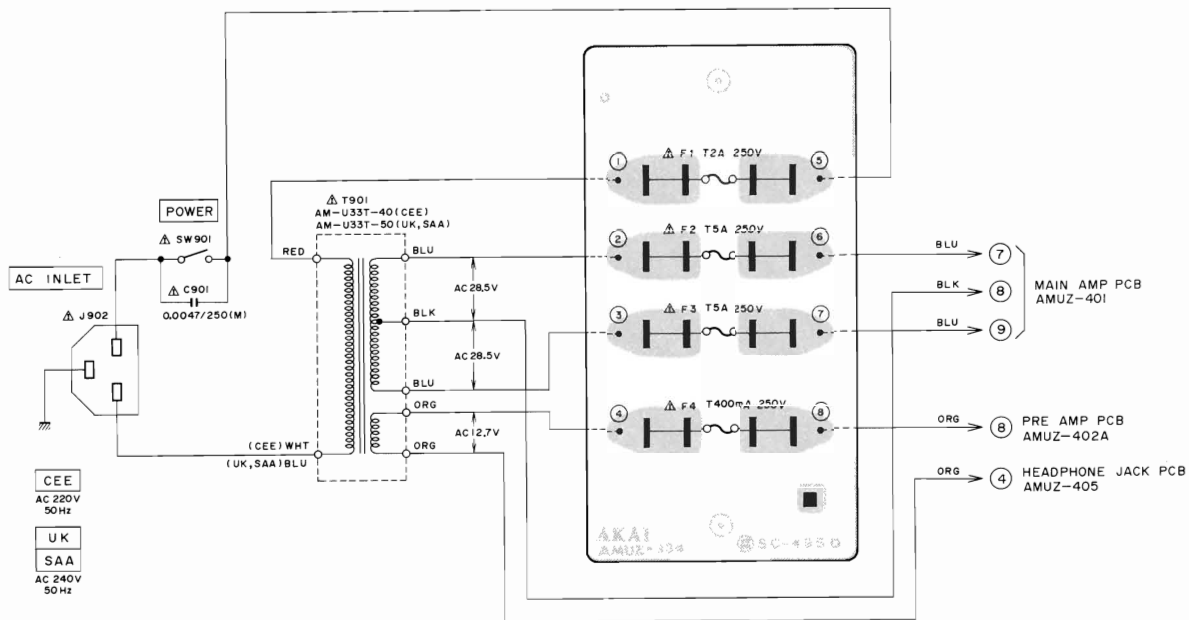


5) FUSE (C, A) P.C BOARD AMUZ-333 (CSA, AAL)



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
 AVERTISSEMENT: Δ IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

6) FUSE (E, B, S) P.C BOARD AMUZ-334 (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 REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

SECTION 3

STEREO INTEGRATED AMPLIFIER

MODEL **AM-U33J**

SERVICE MANUAL

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| | 2. COMPOSITION OF VARIOUS P.C BOARDS | 45 |

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

I. SPECIFICATIONS

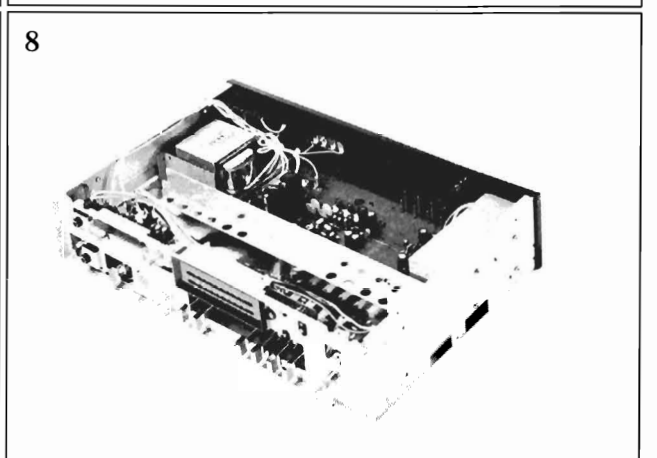
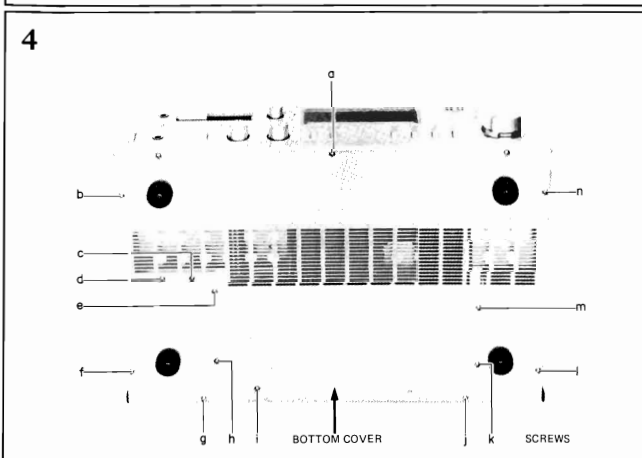
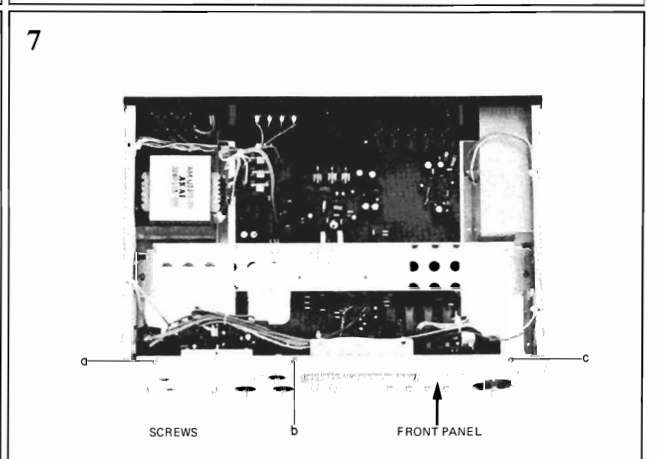
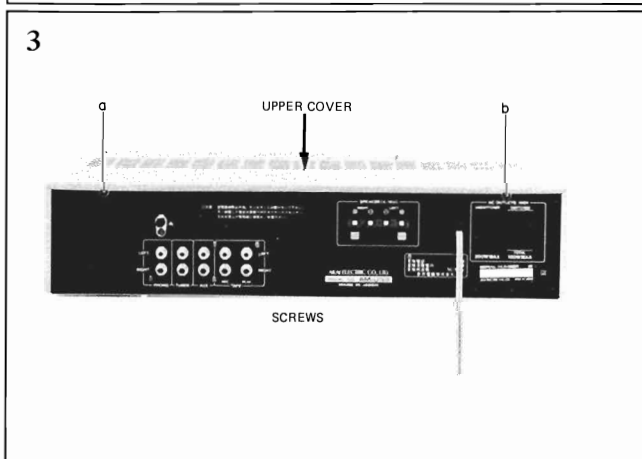
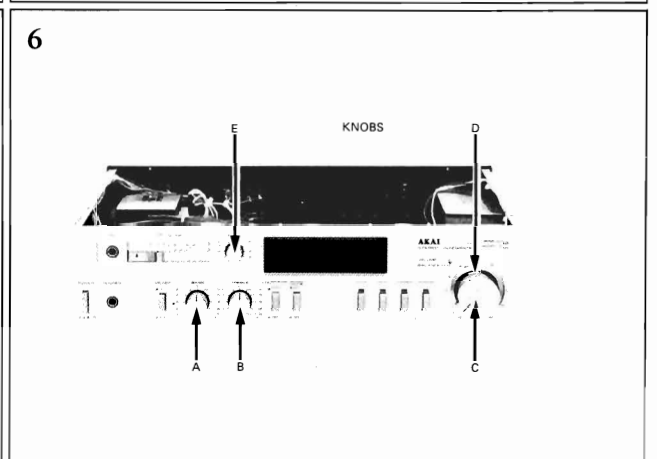
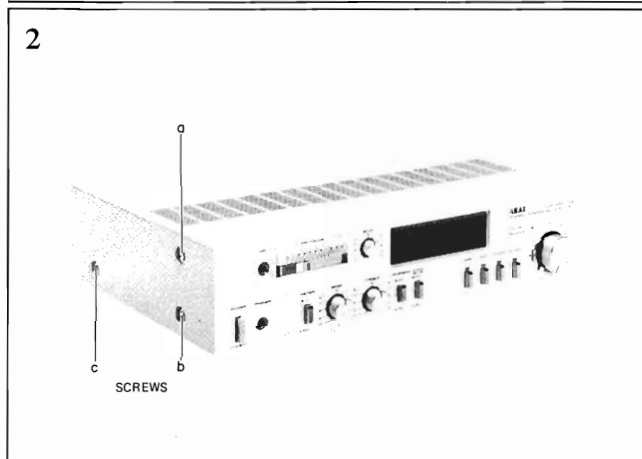
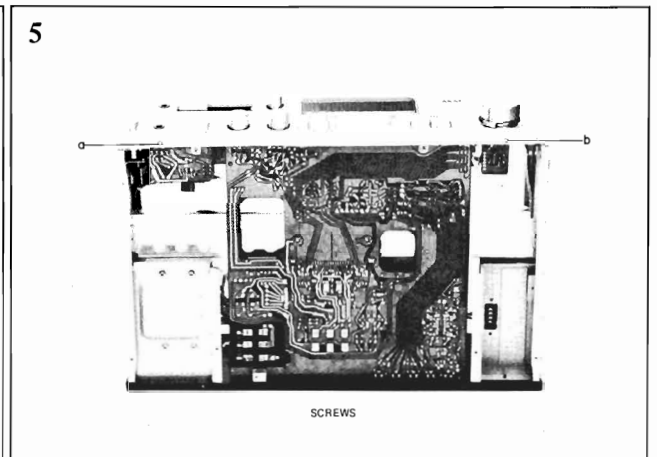
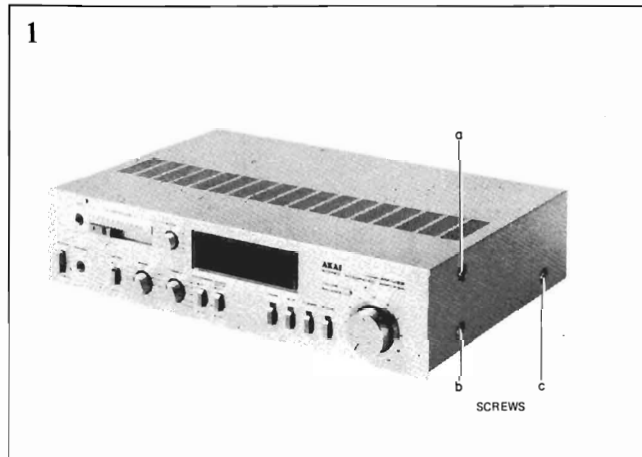
| | | |
|-------------------------------|--|---|
| RATED POWER OUTPUT | | 25 watts per channel, minimum RMS, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion. |
| POWER BANDWIDTH | | 10 Hz to 50 kHz/8 ohms (Total harmonic distortion: 0.1%) |
| SIGNAL TO NOISE RATIO (IHF-A) | PHONO AUX | 82 dB 100 dB |
| CHANNEL SEPARATION (IHF) | | Better than 55 dB at 1 kHz |
| DAMPING FACTOR | | More than 50 (1 kHz, 8 ohms) |
| INPUT SENSITIVITY | PHONO AUX, TUNER TAPE | 3 mV 150 mV 400 mV |
| OUTPUT LEVEL | TAPE REC | 150 mV |
| FREQUENCY RESPONSE | PHONO (RIAA DEVIATION) TUNER, AUX, TAPE | ±0.3 dB 6 Hz to 100 kHz +0 dB, -3 dB |
| TONE CONTROL | BASS TREBLE | ±8 dB (100 Hz) ±8 dB (10 kHz) |
| POWER REQUIREMENT | | AC 100V, 50/60 Hz |
| POWER CONSUMPTION | | 75W |
| DIMENSIONS | | 440(W) × 105(H) × 290(D) mm |
| WEIGHT | | 7.1 kg |

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

II. DISMANTLING OF UNIT

AM-U33J

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



III. CONTROLS

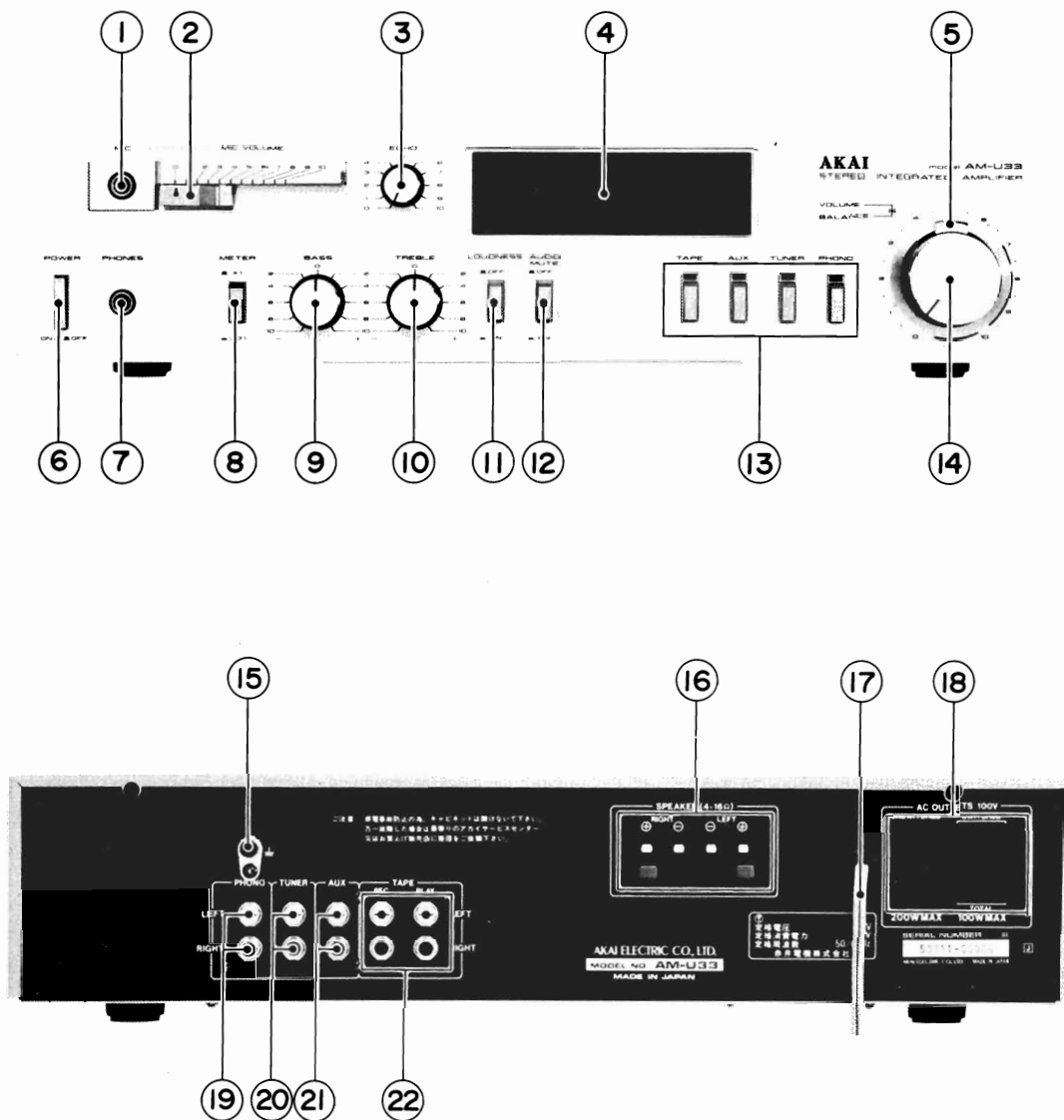


Fig. 1 Controls

- | | |
|----------------------------|---|
| 1. MIC JACK | 12. AUDIO MUTE SWITCH |
| 2. MIC VOLUME CONTROL | 13. INPUT SELECTOR SWITCHES and INDICATOR |
| 3. ECHO CONTROL | 14. VOLUME CONTROL |
| 4. LED BAR METER | 15. GROUND TERMINAL () |
| 5. STEREO BALANCE CONTROL | 16. SPEAKER TERMINALS |
| 6. POWER SWITCH | 17. AC CORD |
| 7. HEADPHONE JACK (PHONES) | 18. AC OUTLETS |
| 8. METER SELECTOR | 19. PHONO JACKS |
| 9. BASS CONTROL | 20. TUNER JACKS |
| 10. TREBLE CONTROL | 21. AUX JACKS |
| 11. LOUDNESS SWITCH | 22. TAPE REC/PLAY |

IV. PRINCIPAL PARTS LOCATION

AM-U33J

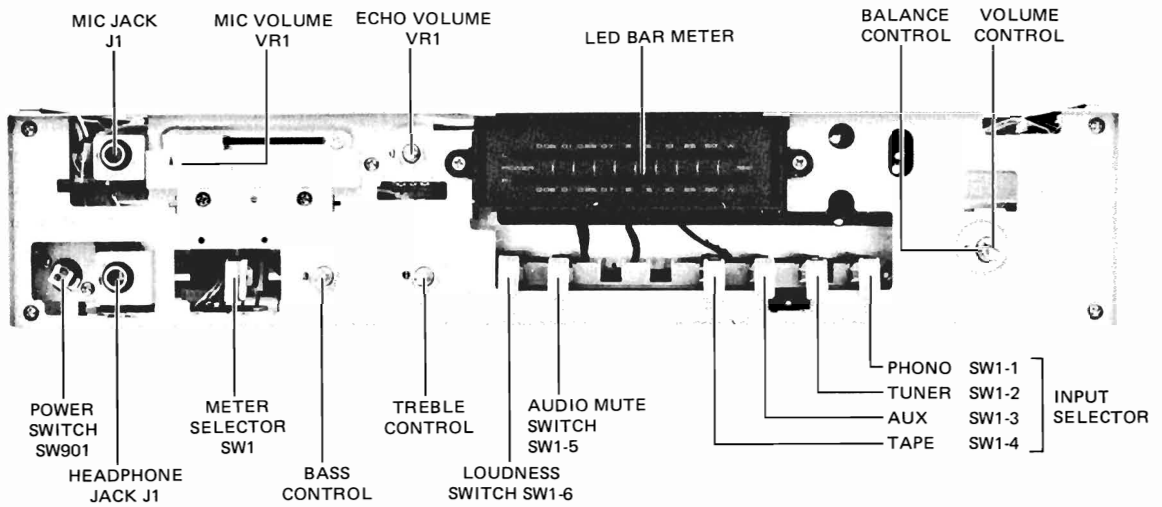


Fig. 2 Front View

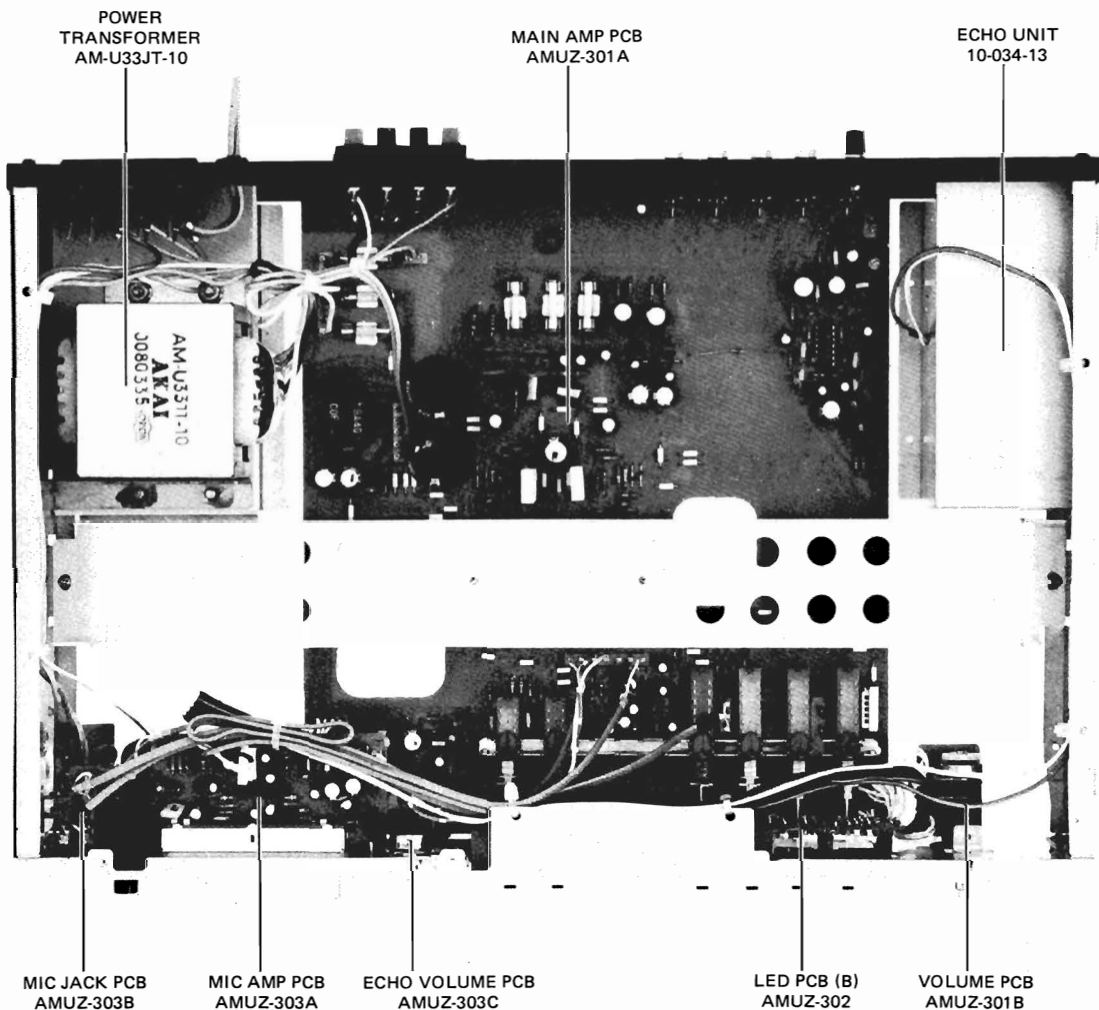


Fig. 3 Top View

V. ADJUSTMENTS

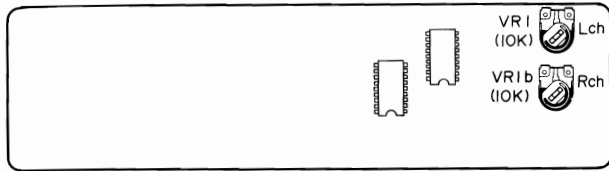


Fig. 4 LED P.C Board (B) AMUZ-302

POWER METER SENSITIVITY

ADJUSTMENT (Refer to Figs. 4, 5)

Set the Meter Range switch to "x1", and connect the load resistors ($R_L=8$ 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 (8.9V) at both ends of the load resistor.

Adjust VR1 (left channel) and VR1b (right channel) on the LED P.C Board (B) so that the 7th LED (10 watts) in the Power Meter lights up.

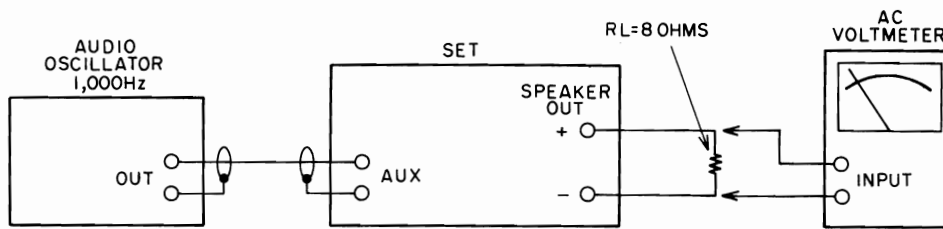


Fig. 5 Instrument Connections

VI. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

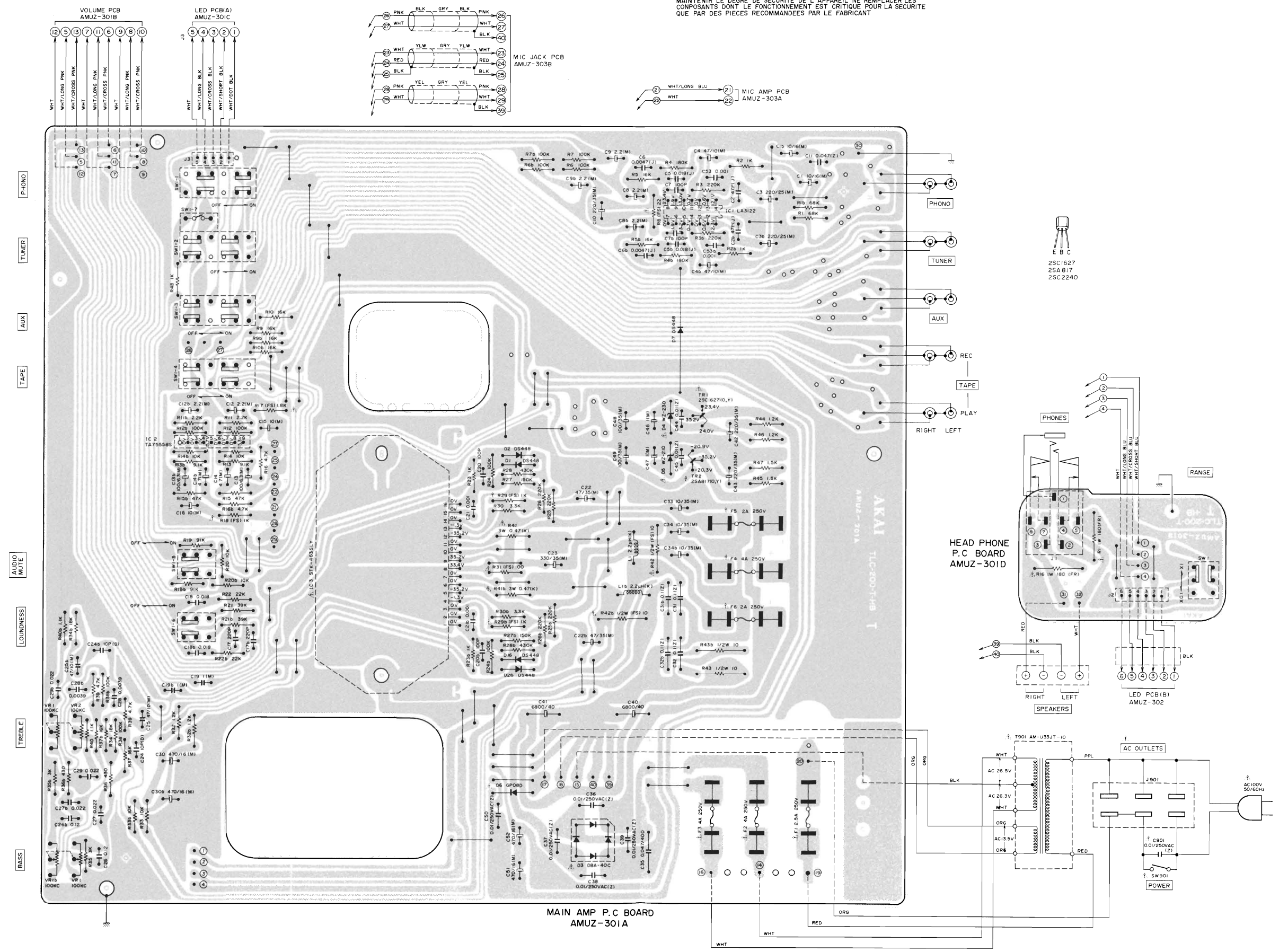
| P.C Board Title | P.C Board Number |
|------------------------|------------------|
| Main Amp P.C Board | AMUZ-301A |
| Volume P.C Board | AMUZ-301B |
| LED P.C Board (A) | AMUZ-301C |
| Headphone P.C Board | AMUZ-301D |
| Interconnect P.C Board | AMUZ-301E |
| LED P.C Board (B) | AMUZ-302 |
| Mic Amp P.C Board | AMUZ-303A |
| Mic Jack P.C Board | AMUZ-303B |
| Echo Volume P.C Board | AMUZ-303C |

2. COMPOSITION OF VARIOUS P.C BOARD

1) MAIN AMP P.C BOARD AMUZ-301A and HEADPHONE P.C BOARD AMUZ-301D

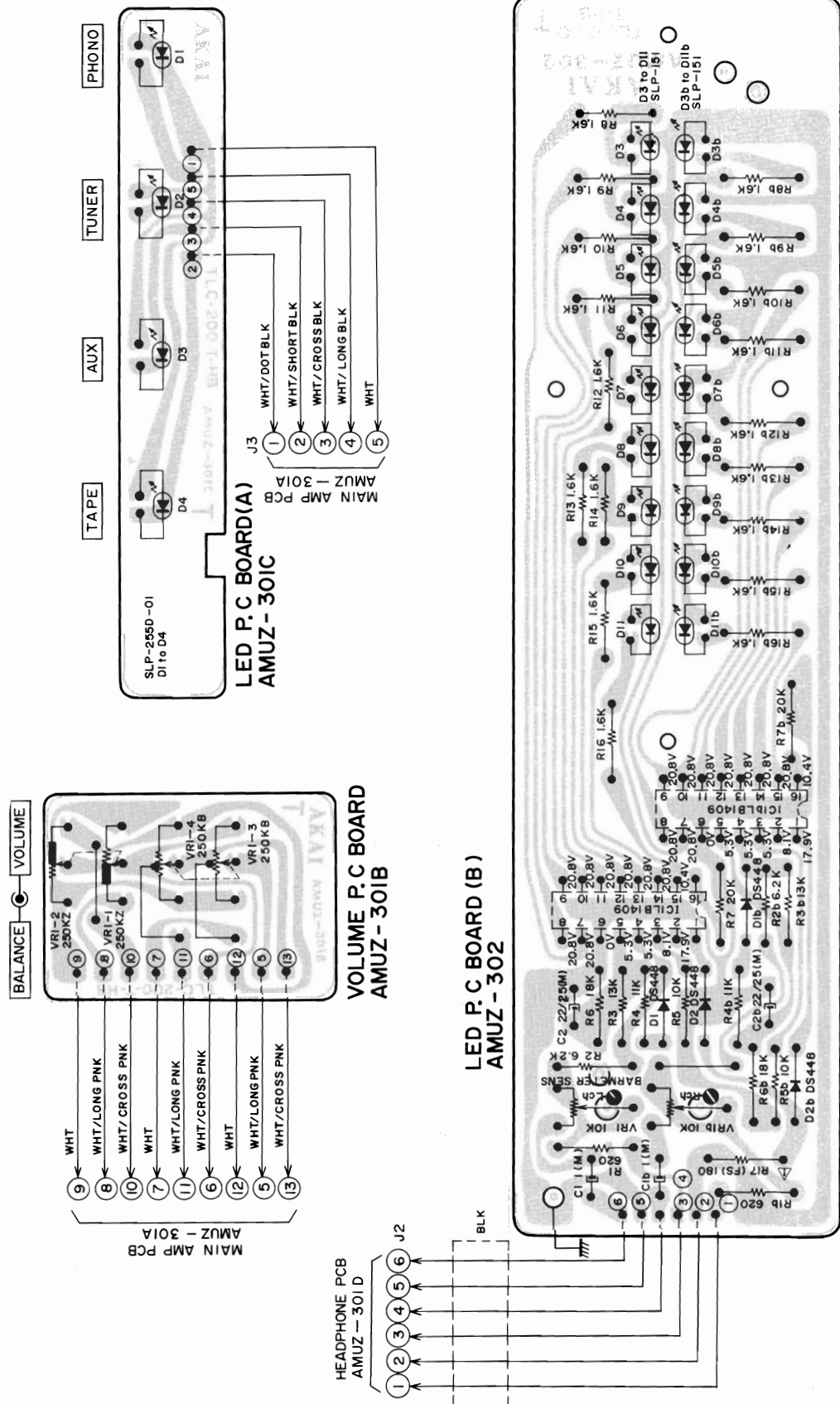
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

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 POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

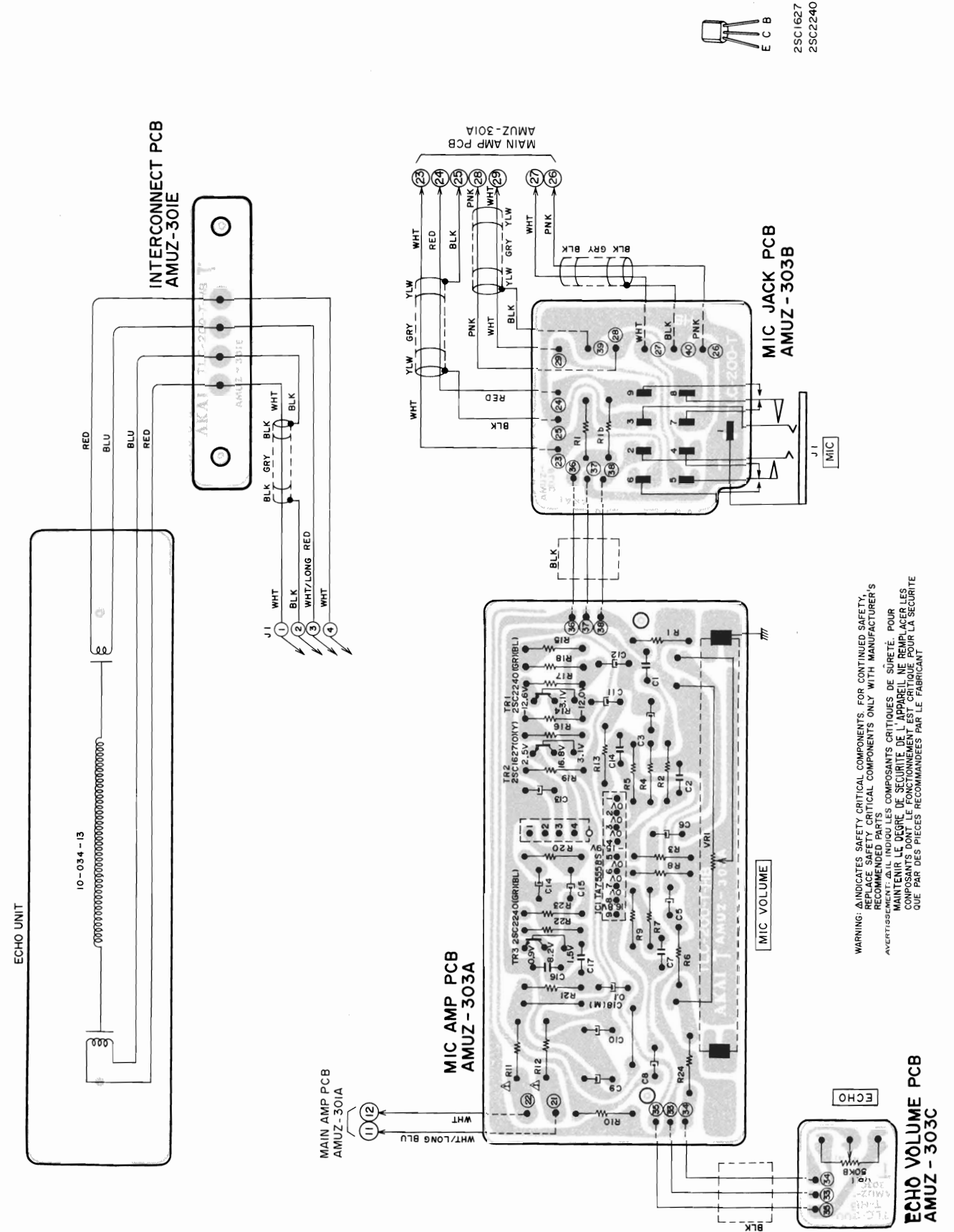


2) VOLUME P.C BOARD AMUZ-301B, LED P.C BOARD (A) AMUZ-301C and LED P.C BOARD (B) AMUZ-302

WARNING: INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: IL 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 POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.



3) MIC AMP P.C BOARD AMUZ-303A, MIC JACK P.C BOARD AMUZ-303B, ECHO VOLUME P.C BOARD AMUZ-303C and INTERCONNECT P.C BOARD AMUZ-301E



E C B
 25C1627
 25C2240

WARNING: INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: 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 POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

ECHO VOLUME PCB
 AMUZ - 303C

SECTION 4

PARTS LIST

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

HOW TO USE THIS PARTS LIST

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

The reference number corresponds with illustration or photo number of that particular parts list.

This number corresponds with the Figure Number.

This number corresponds with the individual parts index number in that figure.

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

12-115x

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

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. Please utilize separate "Common List for Service Parts" for Resistor Parts orders.
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 RECOMMENDED 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.

I. MODEL AT-K33/L/J

1. RECOMMENDED SPARE PARTS

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.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 1-1 | BT328843 | △ TRANS POWER AT-K200T-30 (C,A) |
| 1-2 | BT328844 | △ TRANS POWER AT-K200T-40(E) |
| 1-3 | BT328845 | △ TRANS POWER AT-K200T-50 (B,S) |
| 1-4 | BT328842 | △ TRANS POWER AT-K200T-70(U) |
| 1-5 | BT200953 | △ TRANS POWER AT-K33T-10 (J) |
| 1-6 | EC616342 | C S-FIX H CTY122D33 1.5-16 |
| 1-7 | ED322247 | D LED SLP-151D RED |
| 1-8 | ED322184 | D LED SLP-152D RED |
| 1-9 | ED322215 | D LED SLP-251D GRN |
| 1-10 | ED200469 | D SILICON H DS448 FA1 F10 |
| 1-11 | ED322238 | D SILICON 1B4B41 100/1.0A |
| 1-12 | ED224526 | D SILICON 10D1 100/1.0A |
| 1-13 | ED309959 | D ZENER H HZ5 C3 |
| 1-14 | ED323216 | D ZENER H 05Z15 U |
| 1-15 | ED325080 | D ZENER H 05Z9.1 L |
| 1-16 | EE200184 | ANT BAR AT-K200 MW |
| 1-17 | EE200810 | ANT BAR AT-K22L LW/MW |
| 1-18 | EE200954 | FRONT END FF1341J13 76-90MHZ (J) |
| 1-19 | EE325737 | FRONT END FF136U12 87-108MHZ (EXCEPT J) |
| 1-20 | EF300590 | △ FUSE EAWK T 250V 0.40A (E,B,S) |
| 1-21 | EF308933 | △ FUSE TSC A 250V 0.20A (U) |
| 1-22 | EF309389 | △ FUSE TSC A 250V 0.40A (U) |
| 1-23 | EF308848 | △ FUSE TSC 125V 0.40A (C,A) |
| 1-24 | EI322248 | IC LA1231N |
| 1-25 | EI293185 | IC LA1240 |
| 1-26 | EI650597 | IC LA3350S |
| 1-27 | EI315491 | IC LB1405S |
| 1-28 | EI328850 | IC LC7259 |
| 1-29 | EI328849 | IC M54459L |
| 1-30 | EI323247 | IC TA7324P |
| 1-31 | EI323231 | OSC X'TAL 4MHZ |
| 1-32 | EJ301513 | △ SOCKET INLET S-I6453 E 2P (E,B,S) |
| 1-33 | EM328848 | IND LE SL-1713W CHARACTER |
| 1-34 | ER307204 | FILTER CE CFMA-008 0.468MHZ |
| 1-35 | ER307201 | FILTER CE SFE10.7MM-Z 10.7MHZ |
| 1-36 | ER328855 | FILTER LC LP 12A1251 AKAI |
| 1-37 | ES315159 | △ SW PUSH SDG1P 01-1 J (J) |
| 1-38 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U,E,B,S) |
| 1-39 | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (C,A) |
| 1-40 | ES201979 | SW PUSH SUF12 2-02-02N (EXCEPT L) |
| 1-41 | ES319168 | SW PUSH SUF12 2-04-02N |
| 1-42 | ES200829 | SW PUSH SUF22 2 THROW (L) |
| 1-43 | ES201948 | SW PUSH SUF22 2 THROW (EXCEPT L) |
| 1-44 | ES200955 | SW PUSH 12T-QIS003 2-04-02N |
| 1-45 | ES328851 | SW PUSH 12T-9S420 2-02-02N (L) |
| 1-46 | ET323232 | TR FET 2SK19 Y |
| 1-47 | ET200506 | TR 2SC2603 F |
| 1-48 | ET316171 | TR 2SC536K-NP E,F |
| 1-49 | ET316643 | TR 2SC536K-NP F,G |
| 1-50 | ET618873 | TR 2SC930 E,F |
| 1-51 | EV427858 | R S-FIX H SR19R 3P 0.15W 472 |
| 1-52 | EV604438 | R S-FIX H V10K8-4-2 3P 103 |
| 1-53 | EV323213 | R S-FIX H V10K8-4-2 3P 302 |
| 1-54 | EV593368 | R S-FIX H V10K8-4-2 3P 303 |
| 1-55 | EV499375 | R S-FIX H V10K8-4-2 3P 501 |

2. TUNER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------|--------------|--|
| 2-1 | BAA3010C020A | TUNER PC BLK AT-K33(U) |
| 2-2 | BAA3010A050A | TUNER PC BLK AT-K33J (J) |
| 2-3 | BAA3010C020B | TUNER PC BLK AT-K33(C) (C,A) |
| 2-4 | BAA3010C020C | TUNER PC BLK AT-K33(E) (E,S) |
| 2-5 | BAA3010E030A | TUNER PC BLK AT-K33L |
| TUNER PC BLK | | |
| 2-6 | EE325737 | FRONT END FF136U12 87-108MHZ (EXCEPT J) |
| 2-7 | EE200954 | FRONT END FF134J13 76-90MHZ (J) |
| 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 | ET323232 | TR FET 2SK19 Y |
| 2-TR11 | ET316643 | TR 2SC536K-NP F,G |
| 2-D1to8 | 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-J1 | EJ323227 | PIN J T5727-A P 2P |
| 2-SW1 | ES201979 | SW PUSH SUF12 2-02-02N (EXCEPT L) |
| 2-SW1 | ES328851 | SW PUSH 12T-9S420 2-02-02N (L) |
| 2-SW2 | ES201948 | SW PUSH SUF22 2 THROW (EXCEPT L) |
| 2-SW3 | ES200829 | SW PUSH SUF22 2 THROW (L) |
| 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 V10K8-4-2 3P 501 |
| 2-L1,2 | EO328137 | COIL FIX 2 NI-0036 2.2μH |
| 2-T1 | EO328854 | COIL DET2 Q228CEL-1098R |
| 2-T2 | ER293398 | COIL IFT RMC-42246BCH 468KHZ |
| 2-T3 | ER307204 | FILTER CE CFMA-008 0.468MHZ |
| 2-T4 | EO307186 | COIL OSC 2 RWR-43208N 160μH |
| 2-T5 | EO201252 | COIL OSC2 RNR-44498N 600μH (L) |
| 2-FL1,2 | ER307201 | FILTER CE SFE10.7MM-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-VC3 | EC616342 | C S-FIX H CTY122D33 1.5-16 (L) |
| 2-TM1 | EJ309941 | TERMINAL W/SCREW UB-1059 P 4P |
| 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-R85 | ER324185 | R CB H SNP FS RDS 1/4W 221J |
| 2-R97,98 | ER324480 | R CB H SNP FS RDS 1/4W 470J |
| 2-C33 | EC328862 | C STY V F05 CQF09 152J 50DC |
| 2-C59 | EC314996 | C STY V SNP CQFS 391J 50DC |
| 2-C68 | EC201253 | C STY V F05 CQF09 161J 50DC (L) |
| 2-C76,77 | EC328856 | C STY V F05 CQF09 331K 50DC |
| 2-C84,85 | EC320548 | C CE V F 103Z 250AC |
| 2-C87 | EC320548 | C CE V F 103Z 250AC |

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------------|---------------------------|
| | MUTE PC BLK | |
| 2-IC1 | EI323247 | IC TA7324P |
| 2-D1 | ED200469 | D SILICON H DS448 FA1 F10 |

4. LED P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--------------------|
| 4-D1 | ED322247 | D LED SLP-151D RED |
| 4-D2 | ED322215 | D LED SLP-251D GRN |
| 4-D3 | ED322184 | D LED SLP-152D RED |

3. COUNTER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------|-----------------------------|
| 3-1 | BAA3010C050A | COUNTER PC BLK AT-K33 |
| 3-2 | BAA3010A070A | COUNTER PC BLK AT-K33J |
| 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-L1to3 | EO328137 | COIL FIX 2 NI-0036 2.2μH |
| 3-IN1 | 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 |

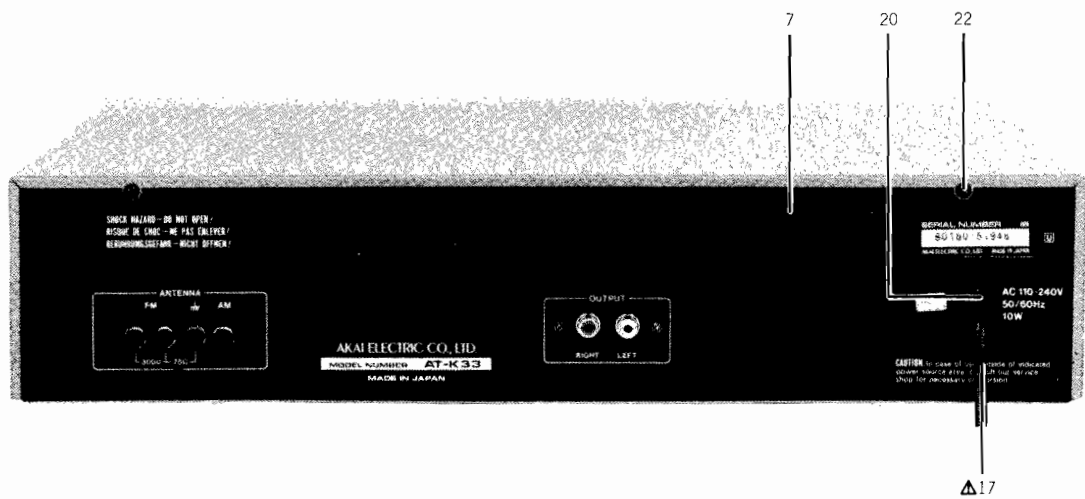
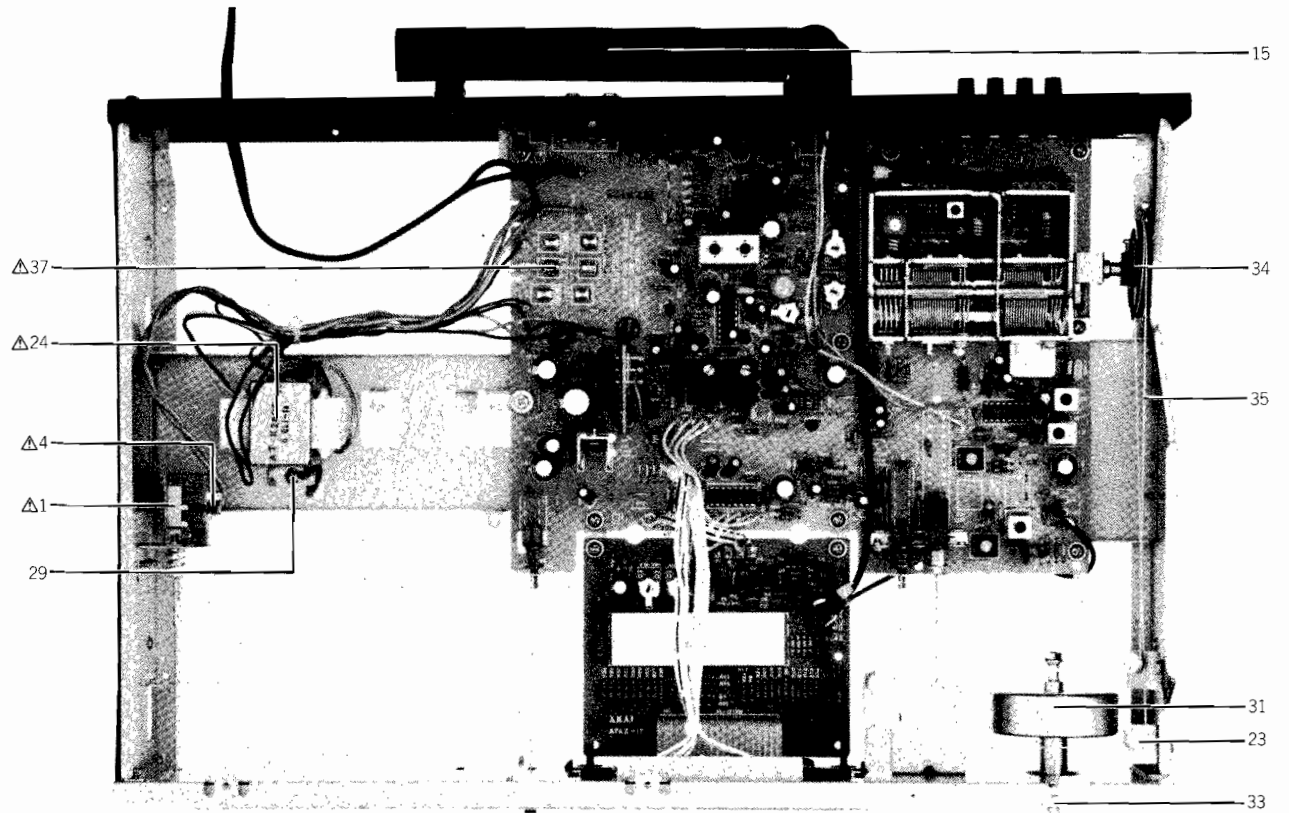
**5. CAL TONE P.C BOARD BLOCK
(AT-K33J ONLY)**

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------------|
| 5-IC1 | EI323247 | IC TA7324P |
| 5-TR1 | ET316643 | TR 2SC536K-NP F,G |
| 5-D1 | ED200469 | D SILICON H DS448 FA1 F10 |
| 5-SW1 | ES200955 | SW PUSH 12T-QIS003 2-04-02N |
| 5-VR1 | EV323213 | R S-FIX H V10K8-4-2 3P 302 |

**6. ANT SW P.C BOARD BLOCK
(AT-K33L ONLY)**

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 6-SW1 | ES319168 | SW PUSH SUF12 2-04-02N |
| 6-L1 | EO485278 | COIL FIX1 FL05H 220 μ H K |
| 6-T1 | EO324453 | COIL VARI2 RUR-44313N |
| 6-VC1,2 | EC616342 | C S-FIX H CTY122D33 1.5 $\frac{1}{16}$ |

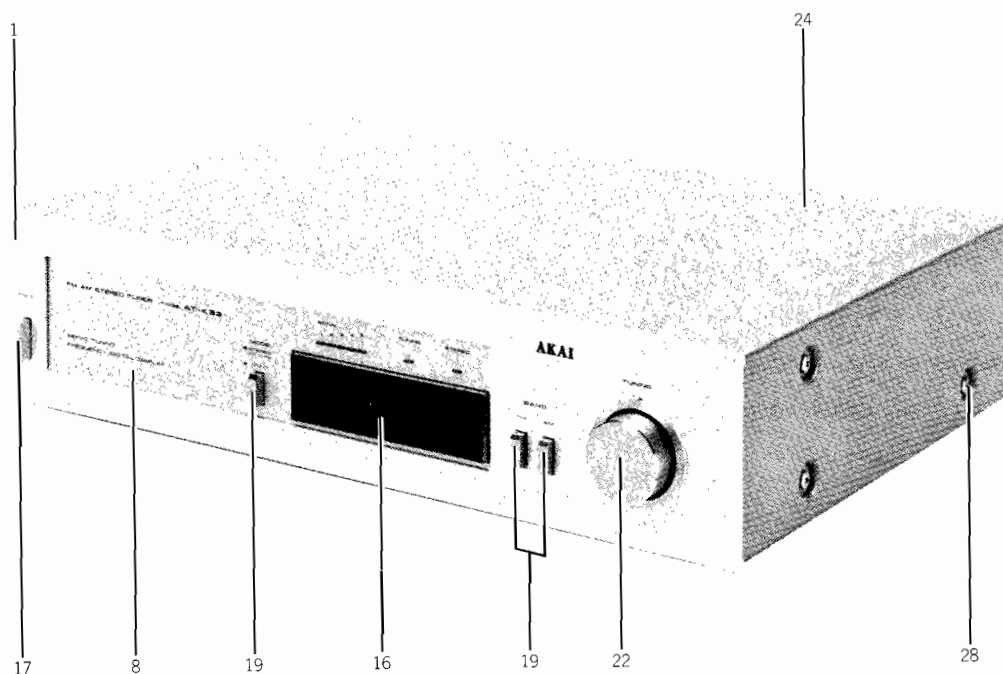
7. ASSEMBLY BLOCK



ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------|-----------|---|
| POWER SW BLK | | |
| 7-1 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U,E,B,S) |
| 7-2x | ES315159 | △ SW PUSH SDG1P 01-1 J (J) |
| 7-3x | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (C,A) |
| 7-4 | EC320548 | △ C CE V F 103Z 250AC (U,J) |
| 7-5x | EC314688 | △ C CE V FZ 103P 125AC (C,A) |
| 7-6x | EC330307 | △ C MMY V ECQUF 472M 250AC (E,B,S) |
| ASSEMBLY BLK | | |
| 7-7 | SP200689B | REAR PANEL AT-K33(U) |
| 7-8x | SP200689A | REAR PANEL AT-K33J |
| 7-9x | SP200689C | REAR PANEL AT-K33(C) |
| 7-10x | SP200689D | REAR PANEL AT-K33(A) |
| 7-11x | SP200689E | REAR PANEL AT-K33(E) |
| 7-12x | SP200689F | REAR PANEL AT-K33(S) |
| 7-13x | SP200689G | REAR PANEL AT-K33L(E) |
| 7-14x | SP200689H | REAR PANEL AT-K33L (B,S) |
| 7-15 | EE200184 | ANT BAR AT-K200 MW |
| 7-16x | EE200810 | ANT BAR AT-K22L LW/MW |
| 7-17 | EW306428 | △ AC CORD 2 CORES KP-205A, VFF UCJ (U) |
| 7-18x | EW306427 | △ AC CORD 2 CORES KP-211, VFF J (J) |
| 7-19x | EW305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (C,A) |
| 7-20 | SZ631945 | STRAIN RELIEF SR-4N-4 |
| 7-21x | EJ301513 | △ SOCKET INLET S-I6453 E 2P (E,B,S) |
| 7-22 | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 7-23 | MR308836 | PULLEY |
| 7-24 | BT328842 | △ TRANS POWER AT-K200T-70(U) |
| 7-25x | BT200953 | △ TRANS POWER AT-K33T-10 (J) |
| 7-26x | BT328843 | △ TRANS POWER AT-K200T-30 (C,A) |
| 7-27x | BT238844 | △ TRANS POWER AT-K200T-40(E) |
| 7-28x | BT328845 | △ TRANS POWER AT-K200T-50 (B,S) |
| 7-29 | ZS315511 | ST PAN30x06STL CMT CUP |
| 7-30x | ZW698308 | RV NYL30x055 BL |
| 7-31 | TA328846 | TUNING WHEEL |
| 7-32x | ZW436026 | PW92x150x050STL CMT |
| 7-33 | ZW554624 | E JACK NUT SPCC NI3 |
| 7-34 | TA322250 | DIAL WHEEL ASSY |
| 7-35 | TA307160 | DIAL STRING TK-1064 D0.5 |
| 7-36x | EF309389 | △ FUSE TSC A 250V 0.40A(U)(F1) |
| 7-37 | EF308933 | △ FUSE TSC A 250V 0.20A (U)(F2,3) |
| 7-38x | EF308848 | △ FUSE TSC 125V 0.40A (C,A)(F1) |
| 7-39x | EF300590 | △ FUSE EAWK T 250V 0.40A (E,B,S)(F1) |
| 7-40x | SP200694 | BOTTOM PLATE |
| 7-41x | SA311742 | ROUND FOOT |
| 7-42x | ZS463094 | T2BID40x08STL CMT |
| 7-43x | ZS447840 | T2BR30x08STL CMT |
| 7-44x | ZW305013 | RV POP32 (A) |
| 7-45x | EW315767 | △ AC CORD 2 CORES KP-419C/KS-15 E (E) |
| 7-46x | EW302995 | △ AC CORD 2 CORES VM-0112 B (B) |
| 7-47x | EW322401 | △ AC CORD 2 CORES KP-560/S-15 S (S) |

8. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|--------------|-----------------------------|
| FRONT PANEL BLK | | |
| 8-1 | BDA3010A020C | FRONT PANEL BLK AT-K33 |
| 8-2x | BDA3010A020D | FRONT PANEL BLK AT-K33-BL |
| 8-3x | BDA3010A100A | FRONT PANEL BLK AT-K33J |
| 8-4x | BDA3010A100B | FRONT PANEL BLK AT-K33J-BL |
| 8-5x | BDA3010E020A | FRONT PANEL BLK AT-K33L |
| 8-6x | BDA3010E020B | FRONT PANEL BLK AT-K33L-BL |
| FINAL ASSEMBLY BLK | | |
| 8-7x | TA200910 | FILTER |
| 8-8 | SP201792A | SUB PANEL (A) |
| 8-9x | SP201792C | SUB PANEL (B) (L) |
| 8-10x | SE201787A | ESCUTCHEON (C) |
| 8-11x | SP201792B | SUB PANEL (A-BL) |
| 8-12x | SP201792D | SUB PANEL (B-BL) (L) |
| 8-13x | SE201787B | ESCUTCHEON (C-BL) |
| 8-14x | TA200911A | INDICATOR (J) |
| 8-15x | TA200911B | INDICATOR (BL) (J) |
| 8-16 | SZ321494 | METER WINDOW |
| 8-17 | SB316498 | BUTTON (B) |
| 8-18x | SB316499 | BUTTON (B-BL) |
| 8-19 | SB200915A | BUTTON |
| 8-20x | SB200915B | BUTTON (BL) |
| 8-21x | ZS325495 | T2BR30x06STL CMT |
| 8-22 | SK200918A | TUNING KNOB |
| 8-23x | SK200918B | TUNING KNOB (BL) |
| 8-24 | SP200921A | UPPER PLATE (A) |
| 8-25x | SP200921B | UPPER PLATE (A-BL) |
| 8-26x | SP200921C | UPPER PLATE (B) (A) |
| 8-27x | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 8-28 | ZS322570 | ST BID40x08STL NI3 |
| 8-29x | ZS322580 | ST BID40x08STL BNI |
| 8-30x | SK607127 | PUSH KNOB (A) (L) |

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

II. MODEL AM-U33

1. RECOMMENDED SPARE PARTS

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.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---|
| 1-1 | BT300267 | △ TRANS POWER AM-U33T-20(A) |
| 1-2 | BT300268 | △ TRANS POWER AM-U33T-30 (C) |
| 1-3 | BT300279 | △ TRANS POWER AM-U33T-40 (E) |
| 1-4 | BT300280 | △ TRANS POWER AM-U33T-50 (B,S) |
| 1-5 | BT300346 | △ TRANS POWER AM-U33T-70 (U) |
| 1-6 | ED322247 | D LED SLP-151D RED |
| 1-7 | ED322773 | D LED SLP-255D-01 GRN |
| 1-8 | ED200749 | D SILICON DBA60E 400/6.0A |
| 1-9 | ED300924 | D SILICON GP08D 200/0.8A |
| 1-10 | ED200469 | D SILICON H DS448 FA1 F10 |
| 1-11 | ED214457 | D SILICON H 1S2472 |
| 1-12 | ED201445 | D ZENER H WZ-187 |
| 1-13 | ED557111 | D ZENER H WZ-210 |
| 1-14 | EF325683 | △ FUSE GGS A 125V 5A (C,A) |
| 1-15 | EF668474 | △ FUSE SEMKO T 250V 0.40A (E,B,S) |
| 1-16 | EF601301 | △ FUSE SEMKO T 250V 2A (E,B,S) |
| 1-17 | EF249851 | △ FUSE SEMKO T 250V 5A (E,B,S) |
| 1-18 | EF306950 | △ FUSE TSC A 250V 2A (U) |
| 1-19 | EF306952 | △ FUSE TSC A 250V 4A (U) |
| 1-20 | EF308848 | △ FUSE TSC 125V 0.40A (C,A) |
| 1-21 | EF306957 | △ FUSE TSC 125V 4A (C,A) |
| 1-22 | EI329612 | IC LB1409 |
| 1-23 | EI200795 | IC M5213L |
| 1-24 | EI201446 | IC M5214L |
| 1-25 | EI300349 | IC STK2145 |
| 1-26 | EI323563 | IC STK3042 |
| 1-27 | EI323564 | IC TA7317P |
| 1-28 | EJ296853 | △ SOCKET INLET CM-3 UCEB 3P (E,B,S) |
| 1-29 | EJ240535 | △ SOCKET OUTLET S-16462 UC 3x2P (U,C,A) |
| 1-30 | EJ322582 | TERMINAL PUSH S-Q2370 S 4P |
| 1-31 | EP323565 | RELAY POWER G2Z-222P-US 2NO 24V |
| 1-32 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U,E,B,S) |
| 1-33 | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (C,A) |
| 1-34 | ES300347 | SW PUSH SUF12 2-02-02S |
| 1-35 | ES300443 | SW PUSH SUF74 7 THROW |
| 1-36 | ET322778 | TR 2SA608K-NP E,F,G |
| 1-37 | ET322598 | TR 2SB632K E,F |
| 1-38 | ET307195 | TR 2SC2240 GR, BL |
| 1-39 | ET310148 | TR 2SD612K E,F |
| 1-40 | EV315414 | R S-FIX H D8 3P 203 |
| 1-41 | EV324345 | VR ROTARY 16P20x1S 15C104 |
| 1-42 | EV329572 | VR ROTARY 16P22x0A 1Z254 |

3BM254

2. MAIN AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|--------------|---------------------------------|
| 2-1 | BAA2006A090A | MAIN AMP PC BLK AM-U33 |
| 2-IC1 | EI323563 | IC STK-3042 |
| 2-IC2 | EI300349 | IC STK-2145 |
| 2-IC3 | EI323564 | IC TA7317P |
| 2-TR1 | ET307195 | TR 2SC2240 GR, BL |
| 2-TR2 | ET322778 | TR 2SA608K-NP E,F,G |
| 2-TR3 | ET310148 | △ TR 2SD612K E,F |
| 2-TR4 | ET322598 | △ TR 2SB632K E,F |
| 2-D1,2 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-D3,4 | ED214457 | D SILICON H 1S2472 |
| 2-D5 | ED200749 | △ D SILICON DBA60-K15 400/6.0A |
| 2-D6 | ED557111 | △ D ZENER H WZ-210 |
| 2-D7 | ED201445 | △ D ZENER H WZ-187 |
| 2-VR1 | EV315413 | R S-FIX H D8 3P 503 |
| 2-RL1 | EP323565 | RELAY POWER G2Z-222P-US 2NO 24V |
| 2-L1 | EO324220 | COIL FIX 2 2.2μH |
| 2-FR1,2 | ER200747 | △ R FUSE ERD2FC 1/4W 68R0G |
| 2-FR3,4 | ER200746 | △ R FUSE ERD2FC 1/4W 1000G |
| 2-R6,7 | ER330470 | △ R CB H F15 RDS 1/2W 100J |
| 2-R8,9 | ER330484 | △ R CB H F10 FS RDS 1/4W 272J |
| 2-R27 | ER303690 | △ R OMF H FS 2W 681J |
| 2-R30,31 | ER330471 | △ R CB H F15 FS FDS 1/2W 222J |
| 2-R32,33 | ER330487 | △ R CB H F10 FS RDS 1/4W 4R7J |
| 2-C14,15 | EC200949 | C EC V F05 NP SM 470M 10DC |
| 2-C18,19 | EC326583 | C MMY V CUT CF921 473K 400DC |
| 2-C20to23 | EC320548 | C CE V F 103Z 250AC |
| 2-C24,25 | EC200811 | C EC V SNP NM 103 50DC |
| 2-C32 | EC320548 | C CE V F 103Z 250AC |

3. PRE AMP (A) P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------|---|
| 3-1 | BAA2006A050A | PC PRE AMP (A) BLK AM-U33(U) (U,E,B,S) |
| 3-2 | BAA2006A050B | PC PRE AMP (A) BLK AM-U33 (C) (C,A) |

PRE AMP PC BLK

| | | |
|----------|----------|----------------------------------|
| 3-IC1 | EI201446 | IC M5214L |
| 3-IC2 | EI200795 | IC M5213L |
| 3-IC3 | EI329612 | IC LB1409 |
| 3-D1 | ED300924 | △ D SILICON GP08D 200/0.8A |
| 3-D2 | ED200469 | △ D SILICON H DS448 FA1 F10 |
| 3-D3 | ED200469 | D SILICON H DS448 FA1 F10 |
| 3-VR1,2 | EV324345 | VR ROTARY 16P20×1S 15C104 |
| 3-VR3 | EV315414 | R S-FIX H D8 3P 203 |
| 3-SW1 | ES300443 | SW PUSH SUF74 7 THROW |
| 3-R9,10 | ER330474 | △ R CB H F10 FS RDS 1/4W 470J |
| 3-R32,33 | ER330474 | △ R CB H F10 FS RDS 1/4W 470J |
| 3-R51 | ER330485 | △ R CB H F10 FS RDS 1/4W 331J |
| 3-C31 | EC320548 | C CE V F 103Z 250AC |

VOLUME PC BLK

| | | |
|-------|----------|------------------------------------|
| 3-VR1 | EV329572 | VR ROTARY 16P22×0A 1Z254 3BM254 |
|-------|----------|------------------------------------|

4. LED (A) P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--------------------|
| 4-D1to9 | ED322247 | D LED SLP-151D RED |

5. LED (B) P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------|
| 5-D1to5 | ED322773 | D LED SLP-255D-01 GRN |

6. HEADPHONE P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------------|
| 6-J1 | EJ329265 | PHONE J 3P HLJ0315-040 6.3 2C |
| 6-R1 | ER658034 | △ R OMF H FS 2W 221J |

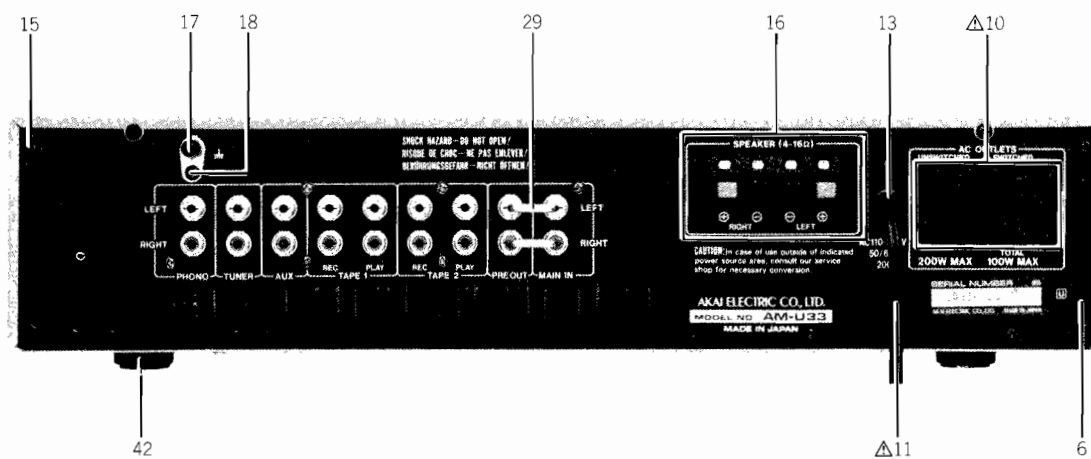
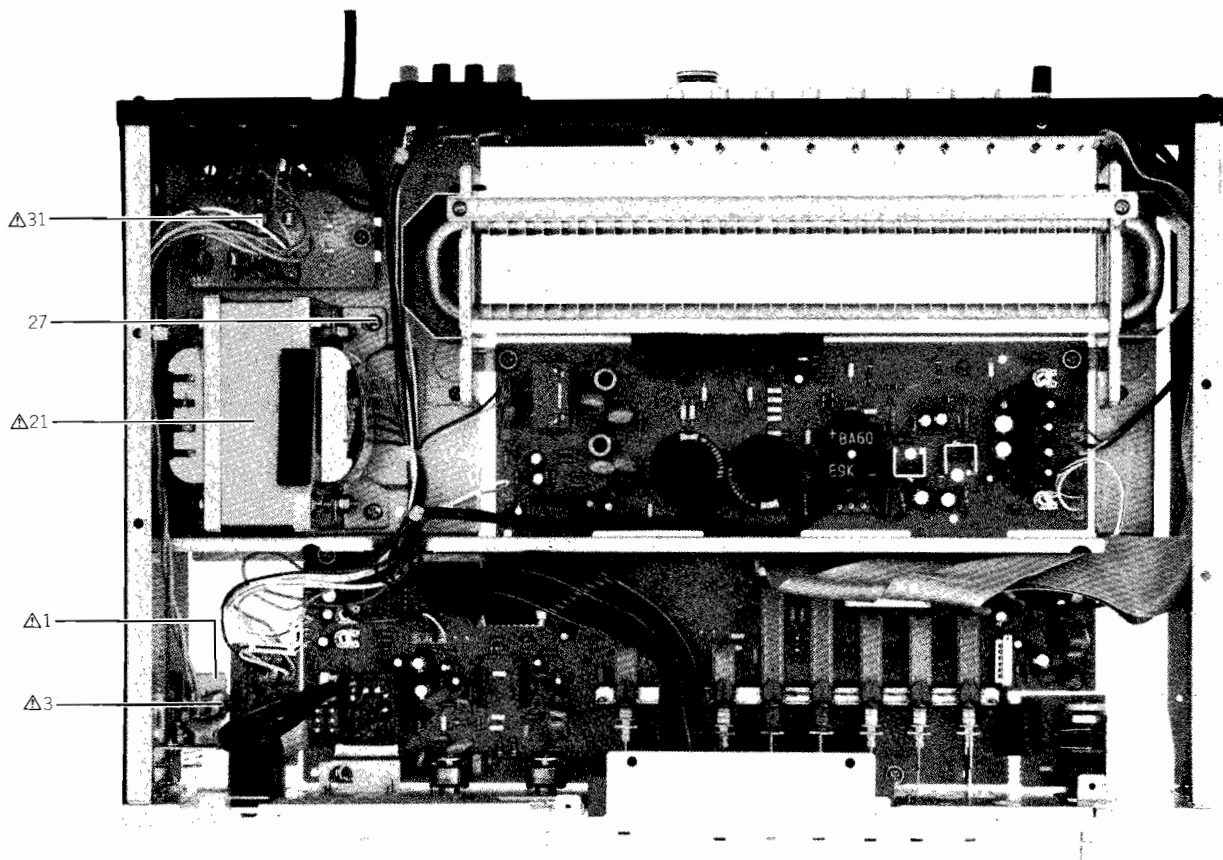
7. RANGE SELECT P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|------------------------|
| 7-SW1 | ES300347 | SW PUSH SUF12 2-02-02S |

8. PIN JACK P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---------------------|
| 8-J1to3 | EJ323144 | PIN J T5718-C P 6P |
| 8-C1,2 | EC551441 | C CE V FZ 103Z 50DC |

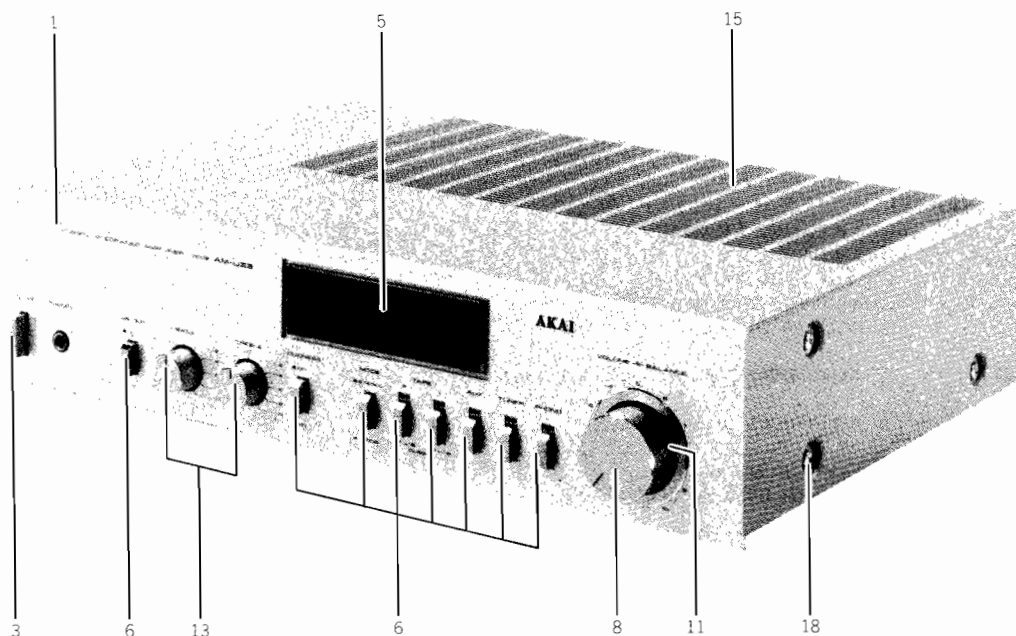
9. ASSEMBLY BLOCK



ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------------------|-----------|--|
| 9-1 | ES310839 | △ SW PUSH SDG1P-E 01-1 E (U,E,B,S) |
| 9-2x | ES665875 | △ SW PUSH SDG1P-J 01-1 UC (C,A) |
| 9-3 | EC320548 | △ C CE V F 103Z 250AC (U) |
| 9-4x | EC314688 | △ C CE V FZ 103P 125AC (C,A) |
| 9-5x | EC330307 | △ C MMY V ECQUF 472M 250AC (E,B,S) |
| REAR PANEL BLK | | |
| 9-6 | SP200701B | REAR PANEL AM-U33(U) |
| 9-7x | SP200701C | REAR PANEL AM-U33 (C,A) |
| 9-8x | SP200701D | REAR PANEL AM-U33 (E) |
| 9-9x | SP200701E | REAR PANEL AM-U33 (B,S) |
| 9-10 | EJ240535 | △ SOCKET OUTLET S-16462 UC 3x2P (U,C,A) |
| 9-11 | EW306428 | △ AC CORD 2 CORES KP-205A, VFF UCJ (U) |
| 9-12x | EW305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (C,A) |
| 9-13 | SZ631945 | STRAIN RELIEF SR-4N-4 |
| 9-14x | EJ296853 | △ SOCKET INLET CM-3 UCEB 3P (E,B,S) |
| 9-15 | ZS463353 | T2BR30x08STL BNI |
| 9-16 | EJ322582 | TERMINAL PUSH S-Q2370 S 4P |
| 9-17 | EJ329610 | TERMINAL W/SCREW UB-0067 L 1P |
| 9-18 | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 9-19x | ZW305013 | RV POP32 (A) |
| ASSEMBLY BLK | | |
| 9-20x | ZS319460 | T2BR30x06STL BZN PROJECTION |
| 9-21 | BT300346 | △ TRANS POWER AM-U33T-70(U) |
| 9-22x | BT300268 | △ TRANS POWER AM-U33T-30(C) |
| 9-23x | BT300267 | △ TRANS POWER AM-U33T-20(A) |
| 9-24x | BT300279 | △ TRANS POWER AM-U33T-40(E) |
| 9-25x | BT300280 | △ TRANS POWER AM-U33T-50 (B,S) |
| 9-26x | ZW413267 | N FRANGE 40STL CMT |
| 9-27 | ZS424056 | PAN40x10STL CMT |
| 9-28x | EZ328570 | CAP 3P INLET (B) |
| 9-29 | EJ326185 | PLUG SHORT PIN UZ-0036 |
| 9-30x | EF306952 | △ FUSE TSC A 250V 4A (F1)(U) |
| 9-31 | EF306950 | △ FUSE TSC A 250V 2A (F2,3)(U) |
| 9-32x | EF306957 | △ FUSE TSC 125V 4A (F1)(C,A) |
| 9-33x | EF325683 | △ FUSE GGS A 125V 5A (F2,3)(C,A) |
| 9-34x | EF308848 | △ FUSE TSC 125V 0.40A (F4)(C,A) |
| 9-35x | EF601301 | △ FUSE SEMKO T 250V 2A (F1)(E,B,S) |
| 9-36x | EF249851 | △ FUSE SEMKO T 250V 5A (F2,3)(E,B,S) |
| 9-37x | EF668474 | △ FUSE SEMKO T 250V 0.40A (F4)(E,B,S) |
| 9-38x | ZW413267 | N FRANGE 40STL CMT |
| 9-39x | SP200714 | BOTTOM PLATE |
| 9-40x | ZS325495 | T2BR30x06STL CMT |
| 9-41x | ZS447840 | T2BR30x08STL CMT |
| 9-42 | SA311742 | ROUND FOOT |
| 9-43x | ZS565942 | T2PAN40x08STL CMT |

10. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|--------------|-----------------------------|
| 10-1 | BDA2006A020A | FRONT PANEL BLK AM-U33 |
| 10-2x | BDA2006A020B | FRONT PANEL BLK AM-U33-BL |
| 10-3 | SB322576 | BUTTON (A) |
| 10-4x | SB322577 | BUTTON (A-BL) |
| 10-5 | SZ321494 | METER WINDOW |
| FINAL ASSEMBLY BLK | | |
| 10-6 | SB200915A | BUTTON |
| 10-7x | SB200915B | BUTTON (BL) |
| 10-8 | SK200651 | DOUBLE KNOB (UPPER-2) |
| 10-9x | SK200652 | DOUBLE KNOB (UPPER-2-BL) |
| 10-10x | ZW260144 | PW61x100x030NYL |
| 10-11 | SK200772A | DOUBLE KNOB (LOWER) |
| 10-12x | SK200772B | DOUBLE KNOB (LOWER-BL) |
| 10-13 | SK200645 | KNOB (A-2) |
| 10-14x | SK200646 | KNOB (A-2-BL) |
| 10-15 | SP200717A | UPPER PLATE (A) |
| 10-16x | SP200717B | UPPER PLATE (A-BL) |
| 10-17x | SP200717C | UPPER PLATE (B) (A) |
| 10-18 | ZS322570 | ST BID40x08STL N13 |
| 10-19x | ZS322580 | ST BID40x08STL BNI |
| 10-20x | ZS319460 | T2BR30x06STL BZN PROJECTION |

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

III. MODEL AM-U33J

1. RECOMMENDED SPARE PARTS

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.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|--------------|------------------------------------|
| 1-1 | BT200932 | △ TRANS POWER AM-U33JT-10 |
| 1-2 | BZA2007A080A | REVERB UNIT BLK AM-U33J |
| 1-3 | EC320307 | C EC V SNP VN 682 40DC |
| 1-4 | ED322247 | D LED SLP-151D RED |
| 1-5 | ED322773 | D LED SLP-255D-01GRN |
| 1-6 | ED200213 | D SILICON DBA40C-K15 200/2.6A |
| 1-7 | ED300924 | D SILICON GP08D 200/0.8A |
| 1-8 | ED301911 | D SILICON H DS448 |
| 1-9 | ED200469 | D SILICON H DS448 FA1 F10 |
| 1-10 | ED557111 | D ZENER H WZ-210 |
| 1-11 | ED200959 | D ZENER H WZ-230 |
| 1-12 | EF306951 | △ FUSE TSC A 250V 2.5A (F1) |
| 1-13 | EF306950 | △ FUSE TSC A 250V 2A (F5,6) |
| 1-14 | EF306952 | △ FUSE TSC A 250V 4A (F2,3,4) |
| 1-15 | EI697871 | IC LA3122S |
| 1-16 | EI329612 | IC LB1409 |
| 1-17 | EI329611 | IC STK463SLY |
| 1-18 | EI200938 | IC TA75558S |
| 1-19 | EJ330544 | PHONO J 3P HLJ0315-010 6.3 2T |
| 1-20 | EJ329265 | PHONE J 3P HLJ0315-040 6.3 2C |
| 1-21 | EJ293365 | PIN J T5703-E P 4P |
| 1-22 | EJ293376 | PIN J T5704-E P 6P |
| 1-23 | EJ240535 | SOCKET OUTLET S-16462 UC 3x2P |
| 1-24 | EJ322582 | TERMINAL PUSH S-Q2370 S 4P |
| 1-25 | EJ329610 | TERMINAL W/SCREW UB-0067 L 1P |
| 1-26 | ER329616 | R CT P F09 PLATE 3W R47K |
| 1-27 | ES315159 | △ SW PUSH SDG1P 01-1 J |
| 1-28 | ES200942 | SW PUSH SUF64M07A 6 THROW |
| 1-29 | ES328851 | SW PUSH 12T-9S420 2-02-02N |
| 1-30 | ET293220 | TR 2SA817 O,Y |
| 1-31 | ET293253 | TR 2SC1627 O,Y |
| 1-32 | ET307195 | TR 2SC2240 GR, BL |
| 1-33 | EV315416 | R S-FIX H D8 3P 103 |
| 1-34 | EV200936 | VR ROTARY 16P10x1B B503 |
| 1-35 | EV324345 | VR ROTARY 16P20x1S 15C104 |
| 1-36 | EV329572 | VR ROTARY 16P22x0A 1Z254 3BM254 |
| 1-37 | EV200937 | VR SLIDE 45P1SV0B B503 |

2. MAIN AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------------------|--------------|------------------------------------|
| 2-1 | BAA2007A040A | PC MAIN AMP BLK AM-U33J |
| MAIN AMP PC BLK | | |
| 2-IC1 | EI697871 | IC LA3122S |
| 2-IC2 | EI200938 | IC TA75558S |
| 2-IC3 | EI329611 | △ IC STK463SLY |
| 2-TR1 | ET293253 | △ TR 2SC1627 O,Y |
| 2-TR2 | ET293220 | △ TR 2SA817 O,Y |
| 2-D1,2 | ED200469 | D SILICON H DS448 FA1 F10 |
| 2-D3 | ED200213 | △ D SILICON DBA40C-K15 200/2.6A |
| 2-D4 | ED200959 | △ D ZENER H WZ-230 |
| 2-D5 | ED557111 | △ D ZENER H WZ-210 |
| 2-D6 | ED300924 | △ D SILICON GP08D 200/0.8A |
| 2-D7 | ED301911 | D SILICON H DS448 |
| 2-J1 | EJ293376 | PIN J T5704-E P 6P |
| 2-J2 | EJ293365 | PIN J T5703-E P 4P |
| 2-SW1 | ES200942 | SW PUSH SUF64M07A 6 THROW |
| 2-VR1,2 | EV324345 | VR ROTARY 16P20x1S 15C104 |
| 2-L1 | EO650823 | COIL FIX 2 2.2μH |
| 2-R8 | ER330481 | △ R CB H F10 FS RDS 1/4W 220J |
| 2-R17 | ER330480 | △ R CB H F10 FS RDS 1/4W 182J |
| 2-R18 | ER330477 | △ R CB H F10 FS RDS 1/4W 102J |
| 2-R29 | ER330477 | △ R CB H F10 FS RDS 1/4W 102J |
| 2-R30 | ER330476 | △ R CB H F10 FS RDS 1/4W 101J |
| 2-R41 | ER329616 | △ R CT P F09 PLATE 3W R47K |
| 2-R42 | ER330470 | △ R CB H F15 FS RDS 1/2W 100J |
| 2-C19 | EC200948 | C EC V F05 NP SM 1R0M 50DC |
| 2-C25 | EC200949 | C EC V F05 NP SM 470M 10DC |
| 2-C35 | EC321088 | C MMY V CF921 473K 400DC |
| 2-C40,41 | EC320307 | C EC V SNP VN 682 40DC |
| 2-C50 | EC320548 | C CE V F 103Z 250AC |
| VR PC BLK | | |
| 2-VR1 | EV329572 | VR ROTARY 16P22x0A 1Z254 3BM254 |
| HEADPHONE PC BLK | | |
| 2-J1 | EJ329265 | PHONE J 3P HLJ0315-040 6.3 2C |
| 2-SW1 | ES328851 | SW PUSH 12T-9S420 2-02-02N |
| 2-R1 | ER308028 | R OMF H SNP FS 1W 181J |

3. MIC AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|-----------|----------------------------------|
| MIC AMP PC BLK | | |
| 3-IC1 | EI200938 | IC TA75558S |
| 3-TR1 | ET307195 | TR 2SC2240 GR, BL |
| 3-TR2 | ET293253 | TR 2SC1627 O, Y |
| 3-TR3 | ET307195 | TR 2SC2240 GR, BL |
| 3-VR1 | EV200937 | VR SLIDE 45P1SV0B B503 |
| 3-R11 | ER330486 | R CB H F10 FS RDS 1/4W 391J |
| 3-R12 | ER330483 | R CB H F10 FS RDS 1/4W 271J |
| MIC JACK PC BLK | | |
| 3-J1 | EJ330544 | PHONE J 3P HLJ0315-010 6.3 2T |
| ECHO VOLUME PC BLK | | |
| 3-VR1 | EV200936 | VR ROTARY 16P10x1B B503 |

4. LED (B) P.C BOARD BLOCK

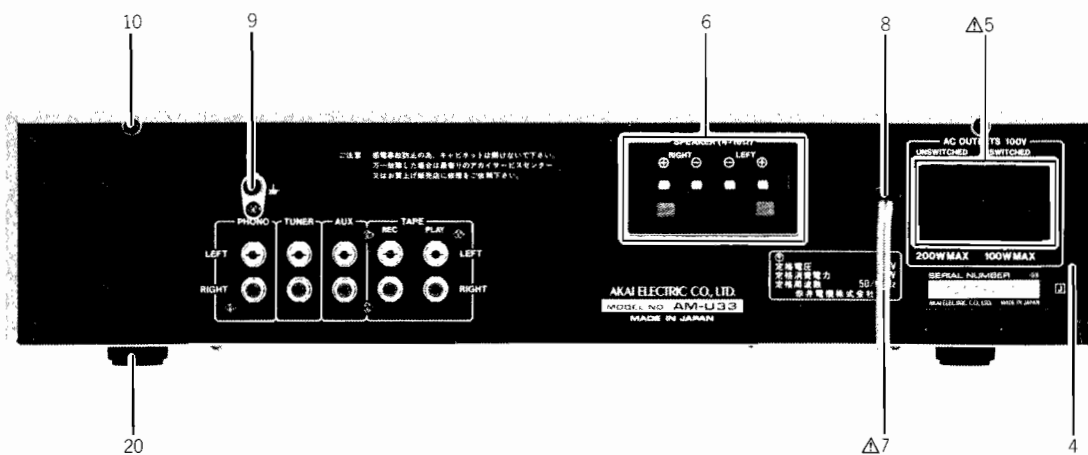
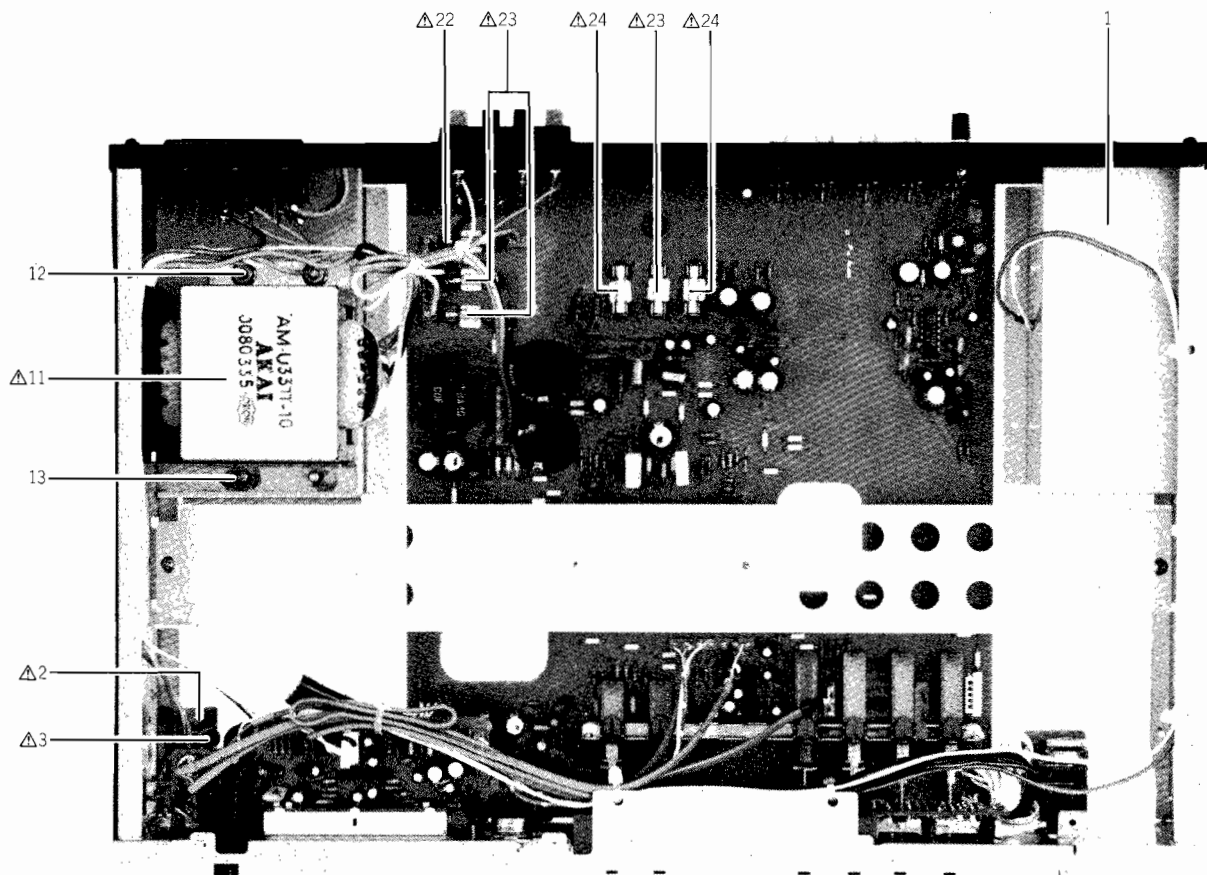
| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------------|
| 4-IC1 | EI329612 | IC LB1409 |
| 4-D1,2 | ED200469 | D SILICON H DS448 FA1 F10 |
| 4-D3to11 | ED322247 | D LED SLP-151D RED |
| 4-VR1 | EV315416 | R S-FIX H D8 3P 103 |
| 4-R17 | ER330479 | △ R CB H F10 FS RDS 1/4W 181J |

ASSEMBLY BLOCK

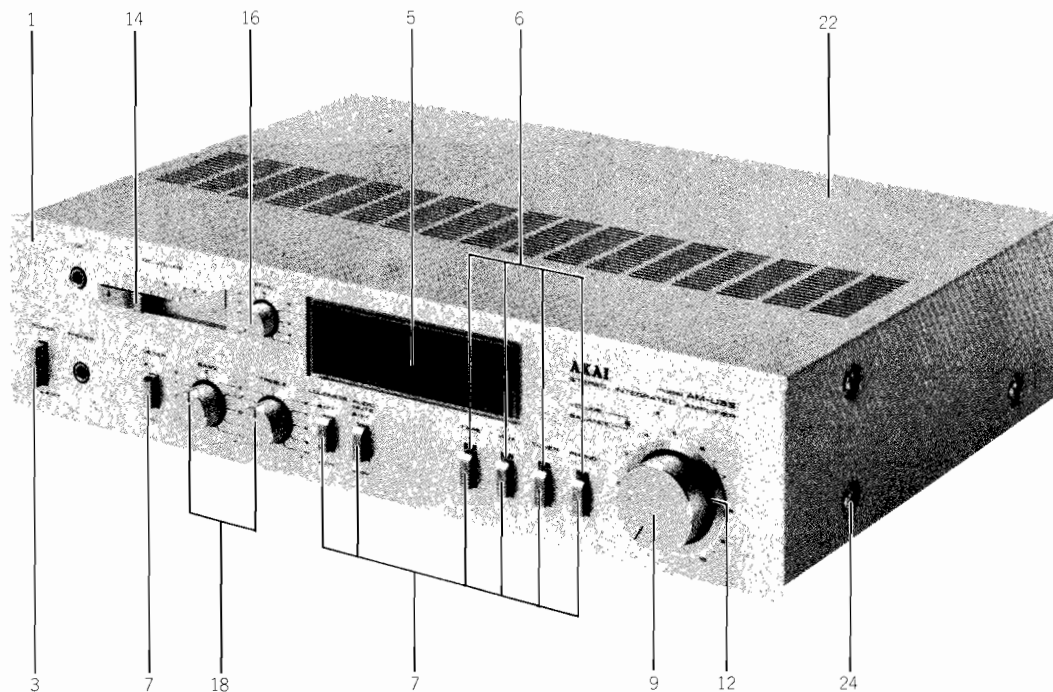
| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------------------|--------------|------------------------------------|
| REVEB UNIT BLK | | |
| 5-1 | BZA2007A080A | REVERB UNIT BLK AM-U33J |
| POWER SW BLK | | |
| 5-2 | ES315159 | △ SW PUSH SDG1P 01-1 J |
| 5-3 | EC320548 | △ C CE V F 103Z 250AC |
| REAR PANEL BLK | | |
| 5-4 | SP200850 | REAR PANEL AM-U33J |
| 5-5 | EJ240535 | △ SOCKET OUTLET S-16462 UC 3x2P |
| 5-6 | EJ322582 | TERMINAL PUSH S-Q2370 S 4P |
| 5-7 | EW306427 | △ AC CORD 2 CORES KP-211, VFF J |
| 5-8 | SZ631945 | STRAIN RELIEF SR-4N-4 |
| 5-9 | EJ329610 | TERMINAL W/SCREW UB-0067 L 1P |
| 5-10 | ZS319460 | T2BR30x06STL BZN PROJECTION |
| ASSEMBLY BLK | | |
| 5-11 | BT200932 | △ TRANS POWER AM-U33JT-10 |
| 5-12 | ZW413267 | N FRANGE 40STL CMT |
| 5-13 | ZS424056 | PAN40x10STL CMT |
| 5-14x | ZS325495 | T2BR30x06STL CMT |
| 5-15x | SZ200770A | MASK |
| 5-16x | SZ200770B | MASK (BL) |
| 5-17x | SP200752 | BOTTOM PLATE |
| 5-18x | ZS325495 | T2BR30x06STL CMT |
| 5-19x | ZS447840 | T2BR30x08STL CMT |
| 5-20 | SA311742 | ROUND FOOT |
| 5-21x | ZS65942 | T2PAN40x08STL CMT |
| 5-22 | EF306951 | △ FUSE TSC A 250V 2.5A (F1) |
| 5-23 | EF306952 | △ FUSE TSC A 250V 4A (F2,3,4) |
| 5-24 | EF306950 | △ FUSE TSC A 250V 2A (F5,6) |

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

5. ASSEMBLY BLOCK



6. FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|--------------|-----------------------------|
| FRONT PANEL BLK | | |
| 6-1 | BDA2007A130A | FRONT PANEL BLK AM-U33J |
| 6-2x | BDA2007A130B | FRONT PANEL BLK AM-U33J-BL |
| 6-3 | SB322576 | BUTTON (A) |
| 6-4x | SB322577 | BUTTON (A-BL) |
| 6-5 | SZ321494 | METER WINDOW |
| LED (A) PC BLK | | |
| 6-6 | ED322773 | D LED SLP-255D-01 GRN |
| FINAL ASSEMBLY BLK | | |
| 6-7 | SB200915A | BUTTON |
| 6-8x | SB200915B | BUTTON (BL) |
| 6-9 | SK200651 | DOUBLE KNOB (UPPER-2) |
| 6-10x | SK200652 | DOUBLE KNOB (UPPER-2-BL) |
| 6-11x | ZW260144 | PW61x100x030NYL |
| 6-12 | SK200772A | DOUBLE KNOB (LOWER) |
| 6-13x | SK200772B | DOUBLE KNOB (LOWER-BL) |
| 6-14 | SK200647 | KNOB (A-2) |
| 6-15x | SK200648 | KNOB (A-2-BL) |
| 6-16 | SK200778A | KNOB |
| 6-17x | SK200778B | KNOB (BL) |
| 6-18 | SK200645 | KNOB (A-2) |
| 6-19x | SK200646 | KNOB (A-2-BL) |
| 6-20x | SZ316376 | KNOB CUSHION (A) |
| 6-21x | SZ316377 | KNOB CUSHION (B) |
| 6-22 | SP200774A | UPPER PLATE (A) |
| 6-23x | SP200774B | UPPER PLATE (A-BL) |
| 6-24 | ZS322570 | ST BID40x08STL NI3 |
| 6-25x | ZS322580 | ST BID40x08STL BNI |
| 6-26x | ZS319460 | T2BR30x06STL BZN PROJECTION |

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

INDEX

1. MODEL AT-K33/L/J

| PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. |
|--------------|----------|-----------|-----------|-----------|----------|-----------|----------|
| BAA3010A050A | 2-2 | ED323216 | 2-D9 | ER324337 | 2-R13,14 | SE201787B | 8-13x |
| BAA3010A070A | 3-2 | ED325080 | 3-D3 | ER324337 | 2-R65,66 | SK200918A | 8-22 |
| BAA3010C020A | 2-1 | EE200184 | 7-15 | ER324480 | 2-R97,98 | SK200918B | 8-23x |
| BAA3010C020B | 2-3 | EE200810 | 7-16x | ER328855 | 2-FL3,4 | SK607127 | 8-30x |
| BAA3010C020C | 2-4 | EE200954 | 2-7 | ES200829 | 2-SW3 | SP200689A | 7-8x |
| BAA3010C050A | 3-1 | EE325737 | 2-6 | ES200955 | 5-SW1 | SP200689B | 7-7 |
| BAA3010E030A | 2-5 | EF300590 | 7-39x | ES201948 | 2-SW2 | SP200689C | 7-9x |
| BDA3010A020C | 8-1 | EF308848 | 7-38x | ES201979 | 2-SW1 | SP200689D | 7-10x |
| BDA3010A020D | 8-2x | EF308933 | 7-37 | ES310839 | 7-1 | SP200689E | 7-11x |
| BDA3010A100A | 8-3x | EF309389 | 7-36x | ES315159 | 7-2x | SP200689F | 7-12x |
| BDA3010A100B | 8-4x | EI293185 | 2-IC3 | ES319168 | 6-SW1 | SP200689G | 7-13x |
| BDA3010E020A | 8-5x | EI315491 | 2-IC4 | ES328851 | 2-SW1 | SP200689H | 7-14x |
| BDA3010E020B | 8-6x | EI322248 | 2-IC1 | ES665875 | 7-3x | SP200694 | 7-40x |
| BT200953 | 7-25x | EI323231 | 3-X1 | ET200506 | 2-TR5,6 | SP200921A | 8-24 |
| BT238844 | 7-27x | EI323247 | 2-IC1 | ET316171 | 3-TR2 | SP200921B | 8-25x |
| BT328842 | 7-24 | EI323247 | 5-IC1 | ET316643 | 2-TR2to4 | SP200921C | 8-26x |
| BT328843 | 7-26x | EI328849 | 3-IC1 | ET316643 | 2-TR7to9 | SP201792A | 8-8 |
| BT328845 | 7-28x | EI328850 | 3-IC2 | ET316643 | 2-TR11 | SP201792B | 8-11x |
| EC201253 | 2-C68 | EI650597 | 2-IC2 | ET316643 | 5-TR1 | SP201792C | 8-9x |
| EC314688 | 7-5x | EJ301513 | 7-21x | ET323232 | 2-TR10 | SP201792D | 8-12x |
| EC314996 | 2-C59 | EJ309941 | 2-TM1 | ET618873 | 2-TR1 | SZ321494 | 8-16 |
| EC320548 | 2-C84,85 | EJ323227 | 2-J1 | ET618873 | 3-TR1 | SZ631945 | 7-20 |
| EC320548 | 2-C87 | EM328848 | 3-IN1 | EV323213 | 5-VR1 | TA200910 | 8-7x |
| EC320548 | 7-4 | EO201252 | 2-T5 | EV427858 | 2-VR3 | TA200911A | 8-14x |
| EC328856 | 2-C76,77 | EO307186 | 2-T4 | EV499375 | 2-VR4 | TA200911B | 8-15x |
| EC328862 | 2-C33 | EO324453 | 6-T1 | EV593368 | 2-VR1,2 | TA307160 | 7-35 |
| EC330307 | 7-6x | EO328137 | 2-L1,2 | EV604438 | 3-VR1,2 | TA322250 | 7-34 |
| EC616342 | 2-VC1,2 | EO328137 | 3-L1to3 | EW302995 | 7-46x | TA328846 | 7-31 |
| EC616342 | 2-VC3 | EO328854 | 2-T1 | EW305691 | 7-19x | ZS315511 | 7-29 |
| EC616342 | 6-VC1,2 | EO485278 | 6-L1 | EW306427 | 7-18x | ZS319460 | 7-22 |
| ED200469 | 2-D1 | ER293398 | 2-T2 | EW306428 | 7-17 | ZS319460 | 8-27x |
| ED200469 | 2-D1to8 | ER307201 | 2-FL1,2 | EW315767 | 7-45x | ZS322570 | 8-28 |
| ED200469 | 3-D1,2 | ER307204 | 2-T3 | EW322401 | 7-47x | ZS322580 | 8-29x |
| ED200469 | 5-D1 | ER324185 | 2-R85 | MR308836 | 7-23 | ZS325495 | 8-21x |
| ED224526 | 2-D11 | ER324185 | 3-R35 | SA311742 | 7-41x | ZS447840 | 7-43x |
| ED309959 | 3-D4 | ER324186 | 3-R38 | SB200915A | 8-19 | ZS463094 | 7-42x |
| ED322184 | 4-D3 | ER324337 | 2-R7,8 | SB200915B | 8-20x | ZW305013 | 7-44x |
| ED322215 | 4-D2 | ER324337 | 2-R73to75 | SB316498 | 8-17 | ZW436026 | 7-32x |
| ED322238 | 2-D10 | ER324337 | 2-R31,32 | SB316499 | 8-18x | ZW554624 | 7-33 |
| ED322247 | 4-D1 | ER324337 | 2-R56,57 | SE201787A | 8-10x | ZW698308 | 7-30x |

2. MODEL AM-U33

| PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. |
|--------------|-----------|-----------|----------|-----------|----------|-----------|----------|
| BAA2006A050A | 3-1 | EF249851 | 9-36x | ER330484 | 2-R8,9 | SP200701B | 9-6 |
| BAA2006A050B | 3-2 | EF306950 | 9-31 | ER330485 | 3-R51 | SP200701C | 9-7x |
| BAA2006A090A | 2-1 | EF306952 | 9-30x | ER330487 | 2-R32,33 | SP200701D | 9-8x |
| BDA2006A020A | 10-1 | EF306957 | 9-32x | ER658034 | 6-R1 | SP200701E | 9-9x |
| BDA2006A020B | 10-2x | EF308848 | 9-34x | ES300347 | 7-SW1 | SP200714 | 9-39x |
| BT300267 | 9-23x | EF325683 | 9-33x | ES300443 | 3-SW1 | SP200717A | 10-15 |
| BT300268 | 9-22x | EF601301 | 9-35x | ES310839 | 9-1 | SP200717B | 10-16x |
| BT300279 | 9-24x | EF668474 | 9-37x | ES665875 | 9-2x | SP200717C | 10-17x |
| BT300280 | 9-25x | EI200795 | 3-IC2 | ET307195 | 2-TR1 | SZ321494 | 10-5 |
| BT300346 | 9-21 | EI201446 | 3-IC1 | ET310148 | 2-TR3 | SZ631945 | 9-13 |
| EC200811 | 2-C24,25 | EI300349 | 2-IC2 | ET322598 | 2-TR4 | ZS319460 | 9-18 |
| EC200949 | 2-C14,15 | EI323563 | 2-IC1 | ET322778 | 2-TR2 | ZS319460 | 9-20x |
| EC314688 | 9-4x | EI323564 | 2-IC3 | EV315413 | 2-VR1 | ZS319460 | 10-20x |
| EC320548 | 2-C20to23 | EI329612 | 3-IC3 | EV315414 | 3-VR3 | ZS322570 | 10-18 |
| EC320548 | 2-C32 | EJ240535 | 9-10 | EV324345 | 3-VR1,2 | ZS322580 | 10-19x |
| EC320548 | 3-C31 | EJ296853 | 9-14x | EV329572 | 3-VR1 | ZS325495 | 9-40x |
| EC320548 | 9-3 | EJ322582 | 9-16 | EW305691 | 9-12x | ZS424056 | 9-27 |
| EC326583 | 2-C18,19 | EJ323144 | 8-J1to3 | EW306428 | 9-11 | ZS447840 | 9-41x |
| EC330307 | 9-5x | EJ326185 | 9-29 | EZ328570 | 9-28x | ZS463353 | 9-15 |
| EC551441 | 8-C1,2 | EJ329265 | 6-J1 | SA311742 | 9-42 | ZS565942 | 9-43x |
| ED200469 | 2-D1,2 | EJ329610 | 9-17 | SB200915A | 10-6 | ZW260144 | 10-10x |
| ED200469 | 3-D2 | EO324220 | 2-L1 | SB200915B | 10-7x | ZW305013 | 9-19x |
| ED200469 | 3-D3 | EP323565 | 2-RL1 | SB322576 | 10-3 | ZW413267 | 9-26x |
| ED200749 | 2-D5 | ER200746 | 2-FR3,4 | SB322577 | 10-4x | ZW413267 | 9-38x |
| ED201445 | 2-D7 | ER200747 | 2-FR1,2 | SK200645 | 10-13 | | |
| ED214457 | 2-D3,4 | ER303690 | 2-R27 | SK200646 | 10-14x | | |
| ED300924 | 3-D1 | ER330470 | 2-R6,7 | SK200651 | 10-8 | | |
| ED322247 | 4-D1to9 | ER330471 | 2-R30,31 | SK200652 | 10-9x | | |
| ED322773 | 5-D1to5 | ER330474 | 3-R9,10 | SK200772A | 10-11 | | |
| ED557111 | 2-D6 | ER330474 | 3-R32,33 | SK200772B | 10-12x | | |

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3. MODEL AM-U33J

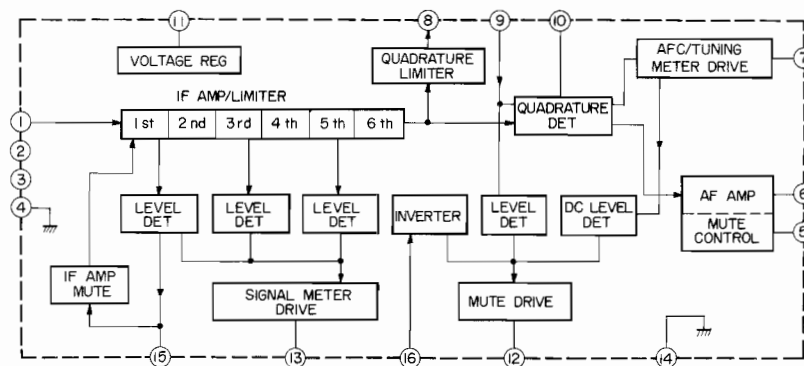
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|--------------|----------|-----------|----------|-----------|----------|-----------|----------|
| BAA2007A040A | 2-1 | EJ293376 | 2-J1 | EW306427 | 5-7 | ZS325495 | 5-14x |
| BDA2007A130A | 6-1 | EJ322582 | 5-6 | SA311742 | 5-20 | ZS325495 | 5-18x |
| BDA2007A130B | 6-2x | EJ329265 | 2-J1 | SB200915A | 6-7 | ZS424056 | 5-13 |
| BT200932 | 5-11 | EJ329610 | 5-9 | SB200915B | 6-8x | ZS447840 | 5-19x |
| BZA2007A080A | 5-1 | EJ330544 | 3-J1 | SB322576 | 6-3 | ZS565942 | 5-21x |
| EC200948 | 2-C19 | EO650823 | 2-L1 | SB322577 | 6-4x | ZW260144 | 6-11x |
| EC200949 | 2-C25 | ER308028 | 2-R1 | SK200645 | 6-18 | ZW413267 | 5-12 |
| EC320307 | 2-C40,41 | ER329616 | 2-R41 | SK200646 | 6-19x | | |
| EC320548 | 2-C50 | ER330470 | 2-R42 | SK200647 | 6-14 | | |
| EC320548 | 5-3 | ER330476 | 2-R30 | SK200648 | 6-15x | | |
| EC321088 | 2-C35 | ER330477 | 2-R18 | SK200651 | 6-9 | | |
| ED200213 | 2-D3 | ER330477 | 2-R29 | SK200652 | 6-10x | | |
| ED200469 | 2-D1,2 | ER330479 | 4-R17 | SK200772A | 6-12 | | |
| ED200469 | 4-D1,2 | ER330480 | 2-R17 | SK200772B | 6-13x | | |
| ED200959 | 2-D4 | ER330481 | 2-R8 | SK200778A | 6-16 | | |
| ED300924 | 2-D6 | ER330483 | 3-R12 | SK200778B | 6-17x | | |
| ED301911 | 2-D7 | ER330486 | 3-R11 | SP200752 | 5-17x | | |
| ED322247 | 4-D3to11 | ES200942 | 2-SW1 | SP200774A | 6-22 | | |
| ED322773 | 6-6 | ES315159 | 5-2 | SP200774B | 6-23x | | |
| ED557111 | 2-D5 | ES328851 | 2-SW1 | SP200850 | 5-4 | | |
| EF306950 | 5-24 | ET293220 | 2-TR2 | SZ200770A | 5-15x | | |
| EF306951 | 5-22 | ET293253 | 2-TR1 | SZ200770B | 5-16x | | |
| EF306952 | 5-23 | ET293253 | 3-TR2 | SZ316376 | 6-20x | | |
| EI200938 | 2-IC2 | ET307195 | 3-TR1 | SZ316377 | 6-21x | | |
| EI200938 | 3-IC1 | ET307195 | 3-TR3 | SZ321494 | 6-5 | | |
| EI329611 | 2-IC3 | EV200936 | 3-VR1 | SZ631945 | 5-8 | | |
| EI329612 | 4-IC1 | EV200937 | 3-VR1 | ZS319460 | 5-10 | | |
| EI697871 | 2-IC1 | EV315416 | 4-VR1 | ZS319460 | 6-26x | | |
| EJ240535 | 5-5 | EV324345 | 2-VR1,2 | ZS322570 | 6-24x | | |
| EJ293365 | 2-J2 | EV329572 | 2-VR1 | ZS322580 | 6-25x | | |

SECTION 5

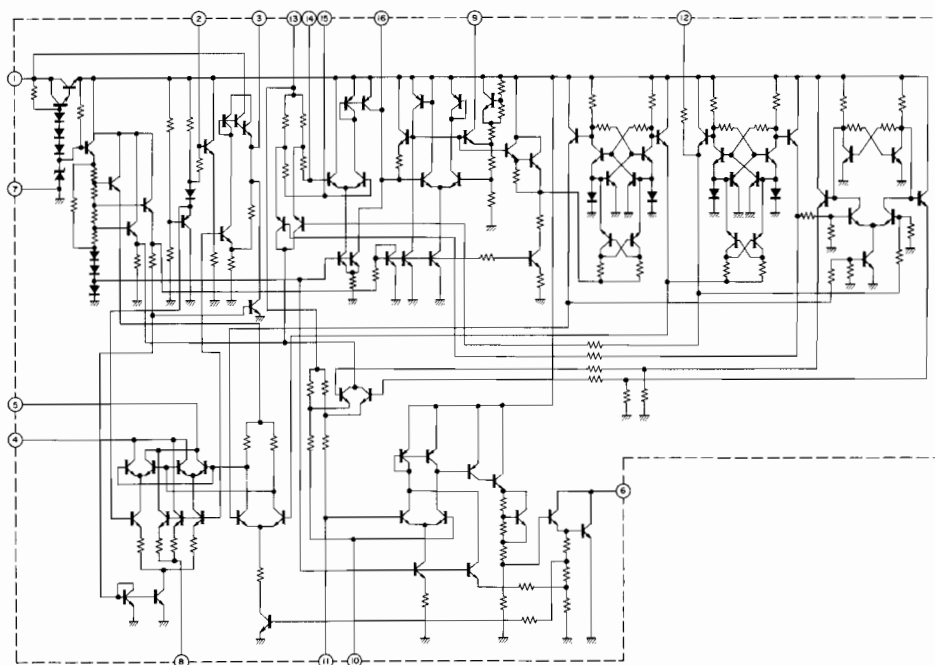
SCHEMATIC DIAGRAM

1. SCHEMATIC DIAGRAM OF ICs
2. AT-K33 NO. 1621058A SCHEMATIC DIAGRAM
3. AT-K33J NO. 1621059A SCHEMATIC DIAGRAM
4. AT-K33L NO. 1621060A SCHEMATIC DIAGRAM
5. AM-U33 NO. 1621061A SCHEMATIC DIAGRAM
6. AM-U33J NO. 1621062A SCHEMATIC DIAGRAM

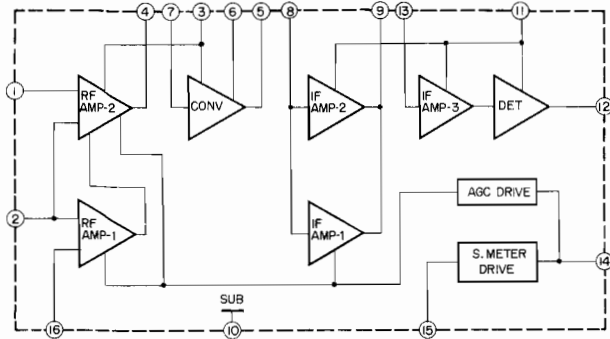
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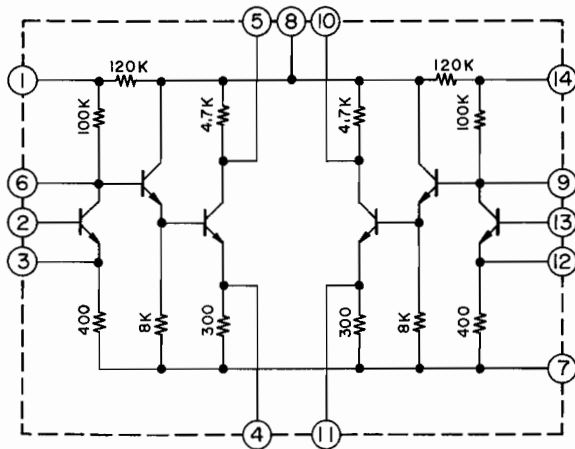
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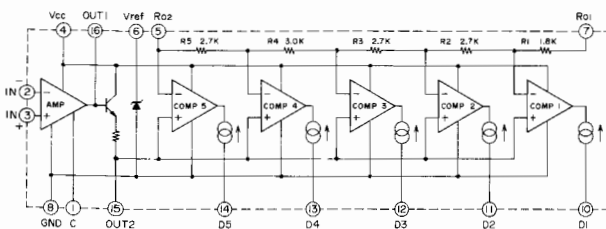
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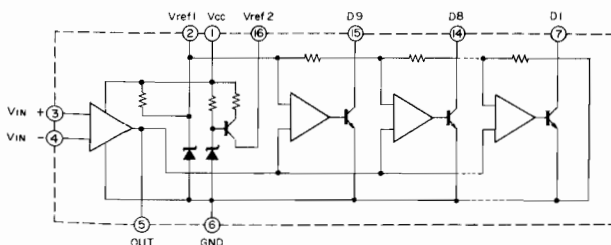
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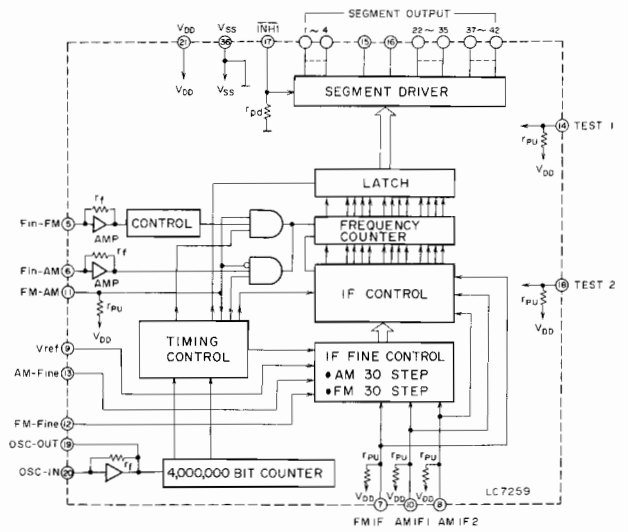
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LB1409

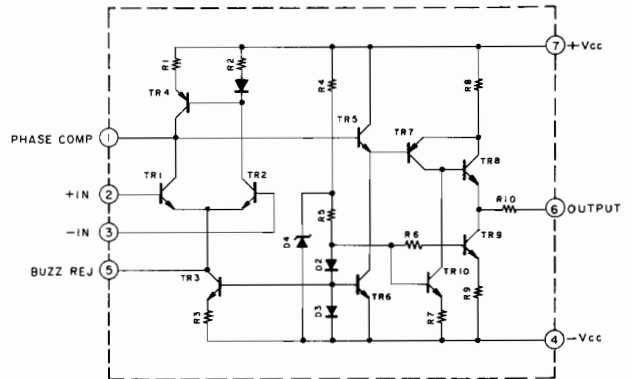


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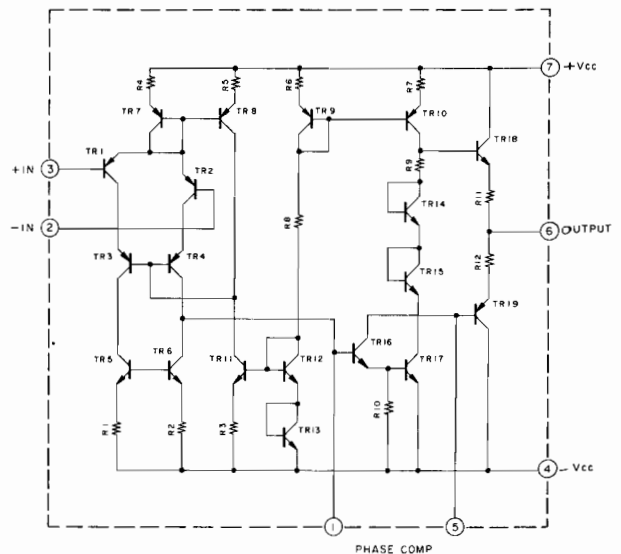


NOTE: rPU is a special-type resistor whose resistance will become the rated value at "H" level, and high at "L" level.

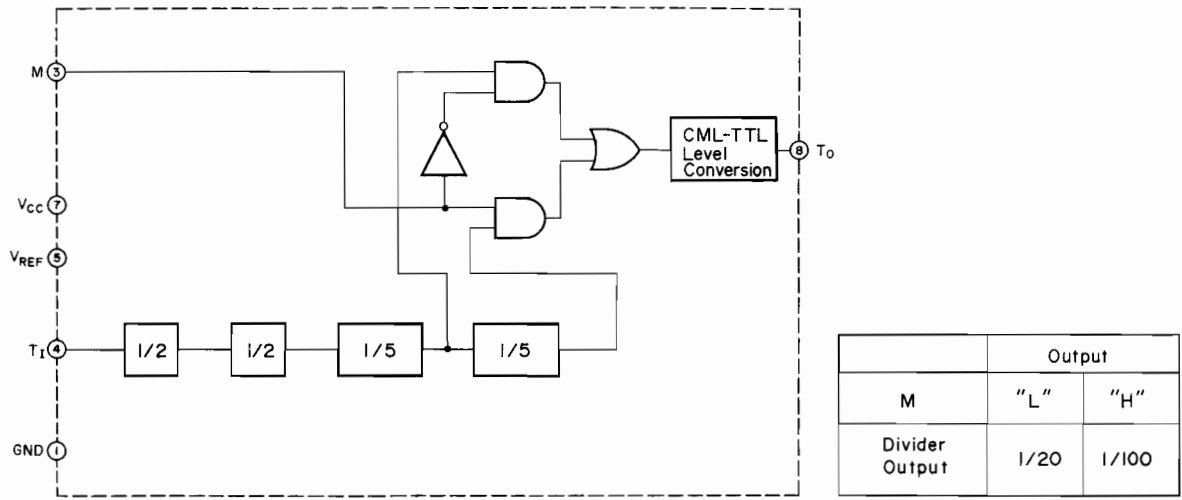
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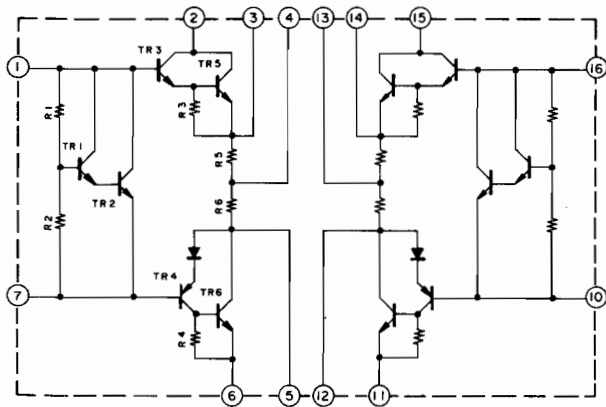
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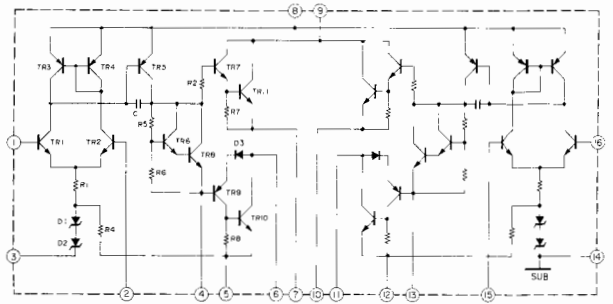
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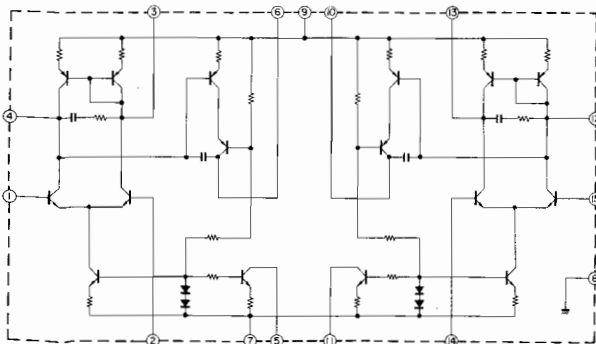
STK2145



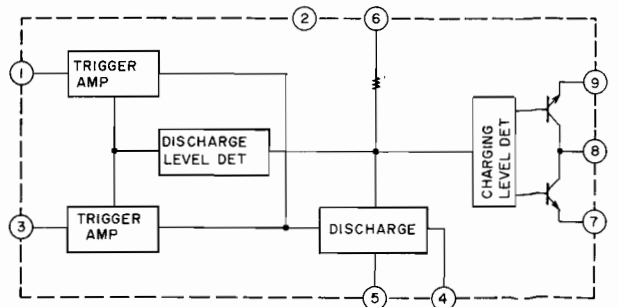
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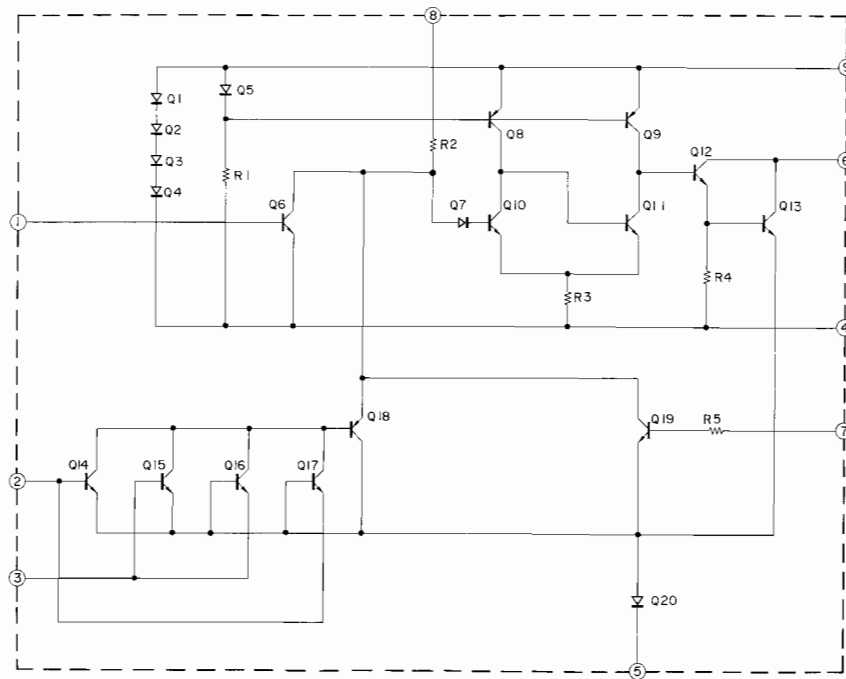
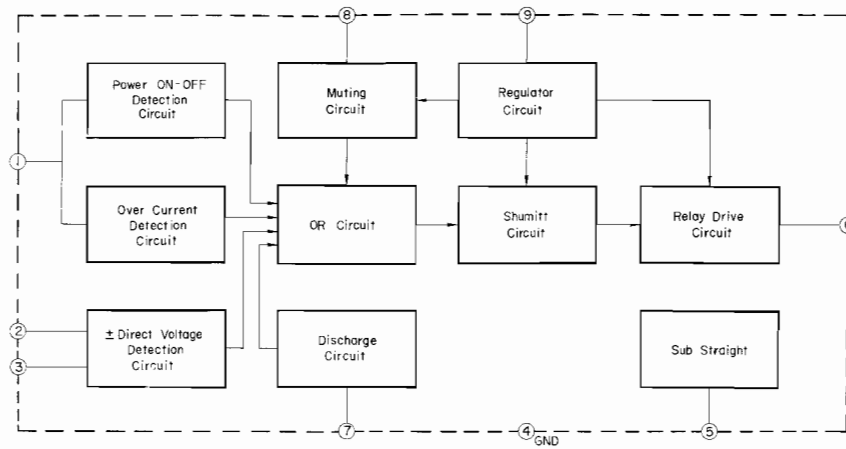
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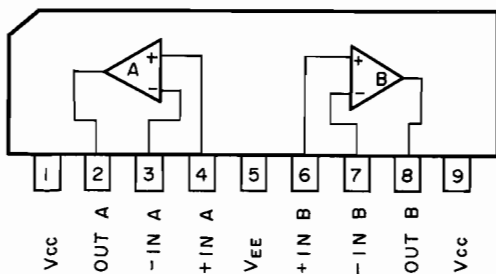
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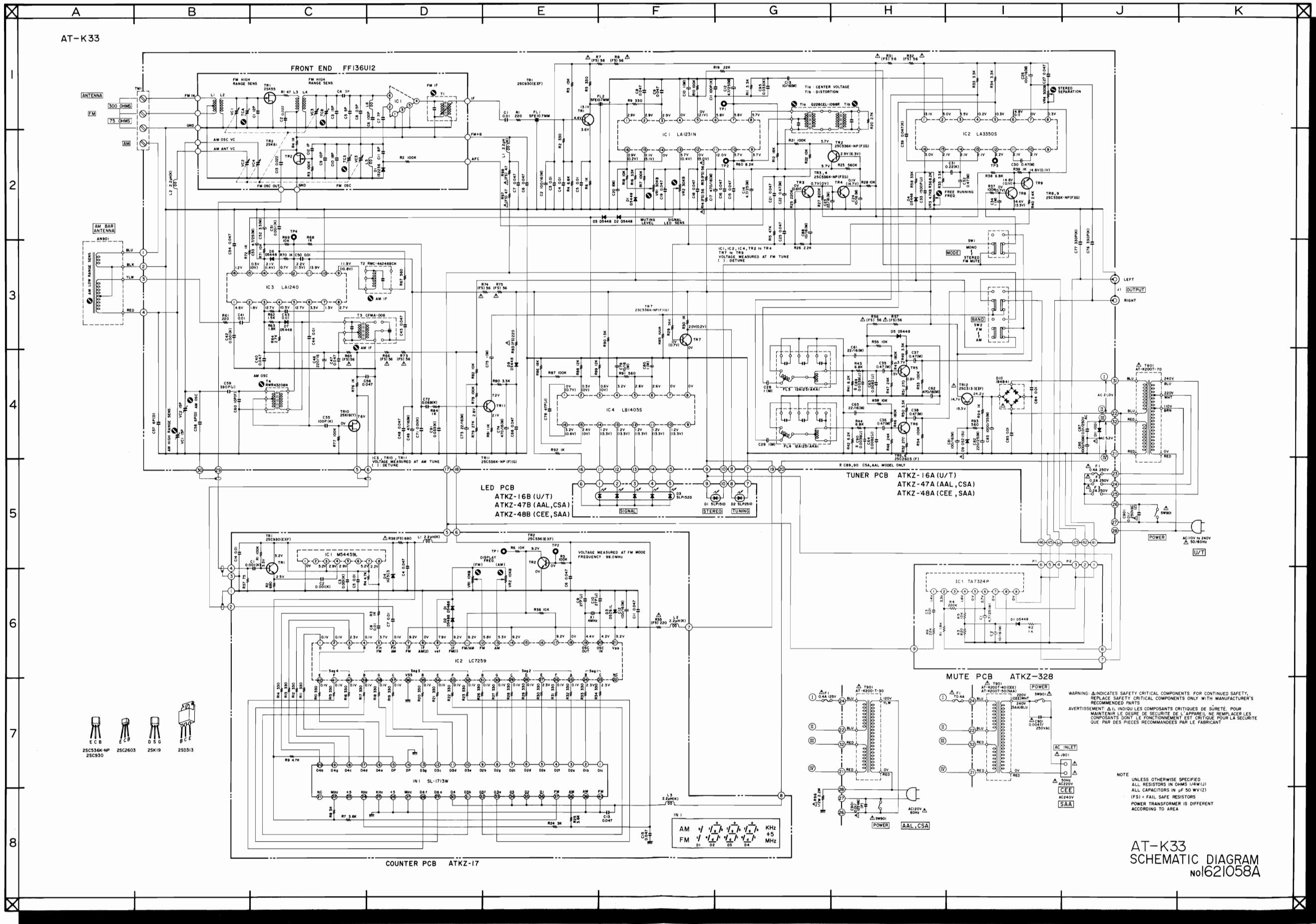


TA7317P

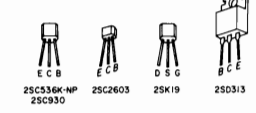


TA75558S





AT-K33



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

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

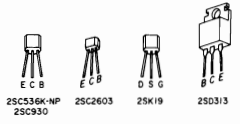
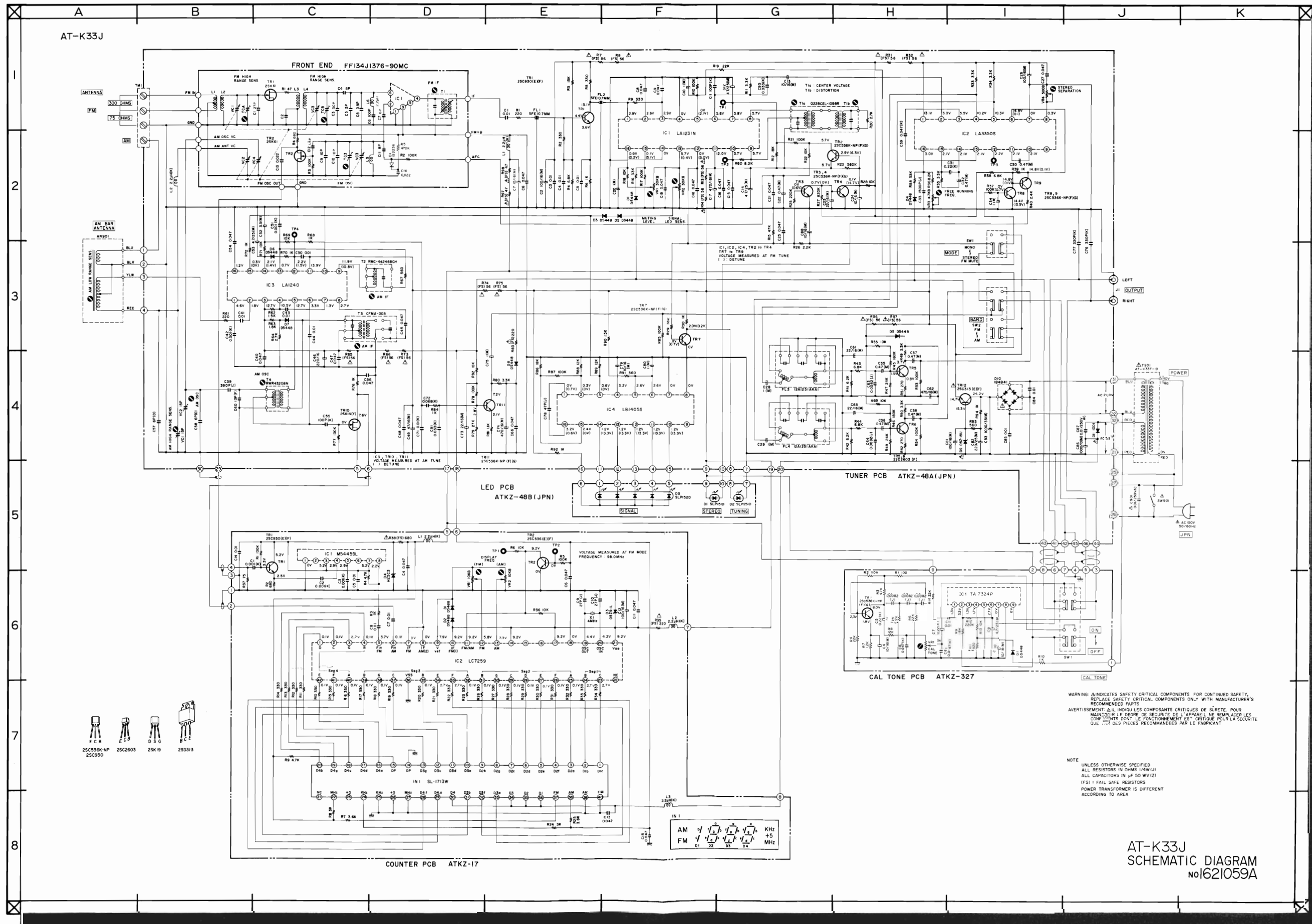
MUTE PCB
 ATKZ-328

COUNTER PCB
 ATKZ-17

WARNING: INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: Δ - INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS SONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE
 UNLESS OTHERWISE SPECIFIED:
 ALL RESISTORS IN OHMS (Ω/W/L)
 ALL CAPACITORS IN μF 50 WV(2)
 (FS) = FAIL SAFE RESISTORS
 POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

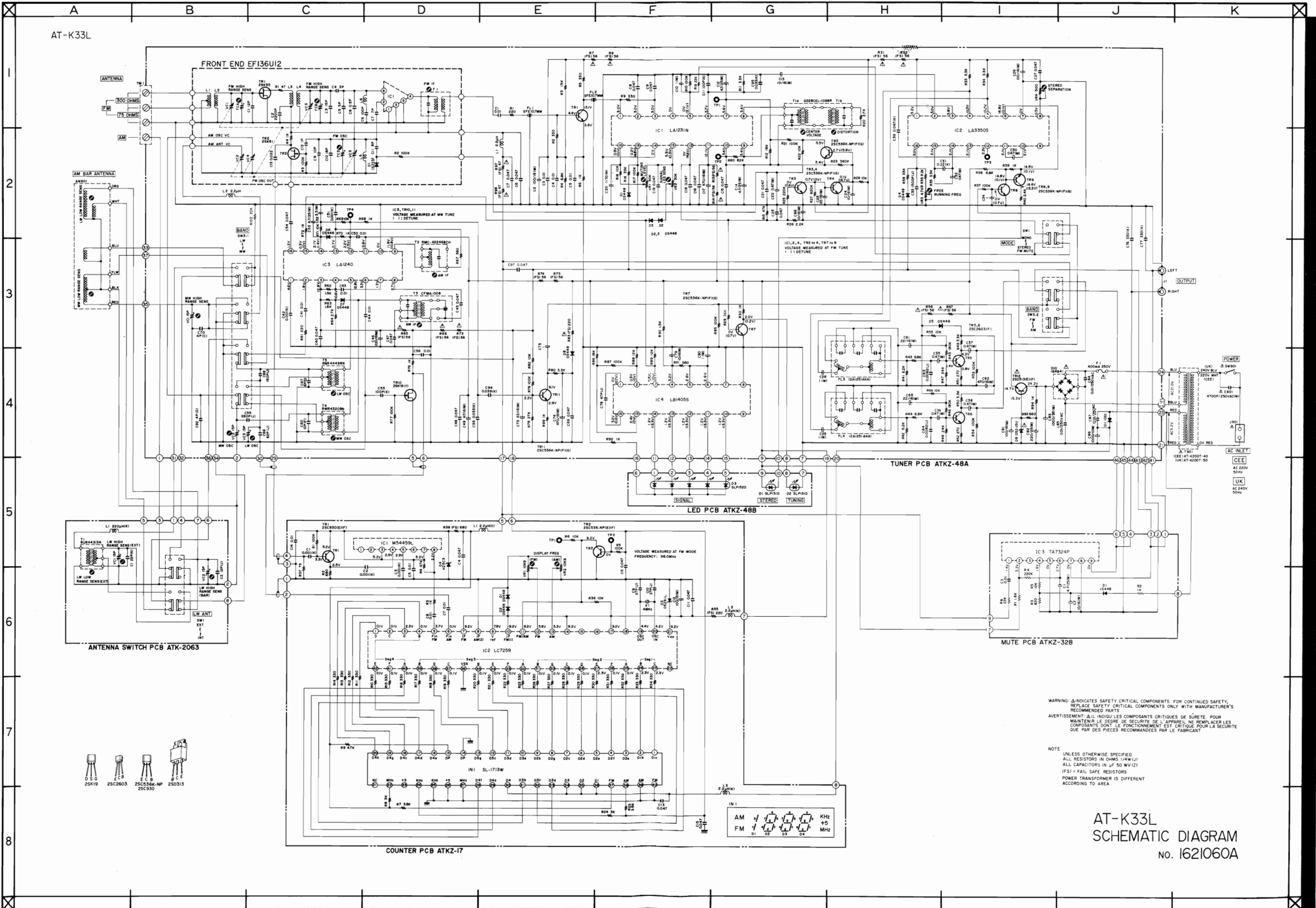
AT-K33
 SCHEMATIC DIAGRAM
 NO.621058A



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 DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS (1/4W/1)
 ALL CAPACITORS IN μF (50 WV/1Z)
 (F3) = FAIL SAFE RESISTORS
 POWER TRANSFORMER IS DIFFERENT
 ACCORDING TO AREA

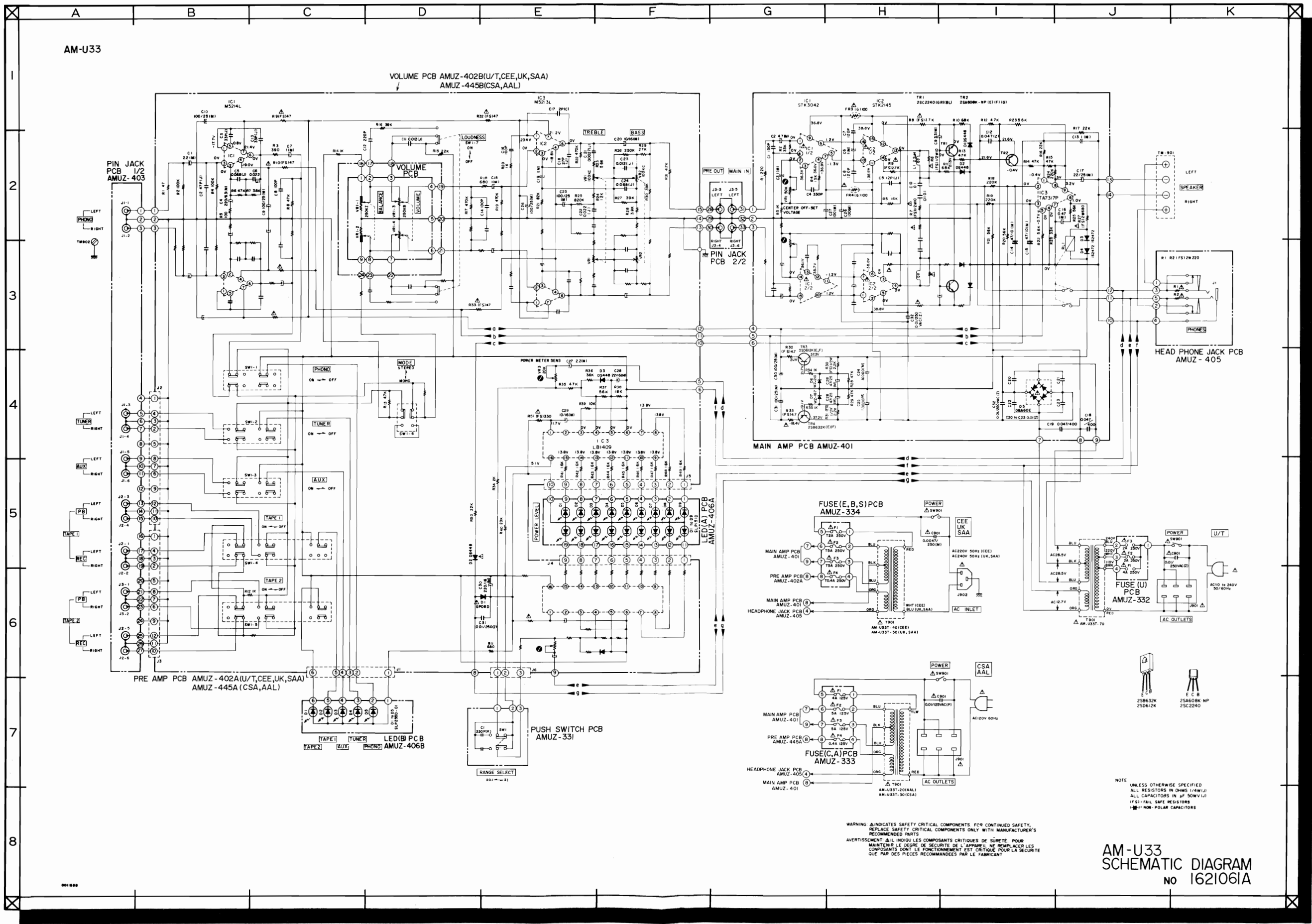
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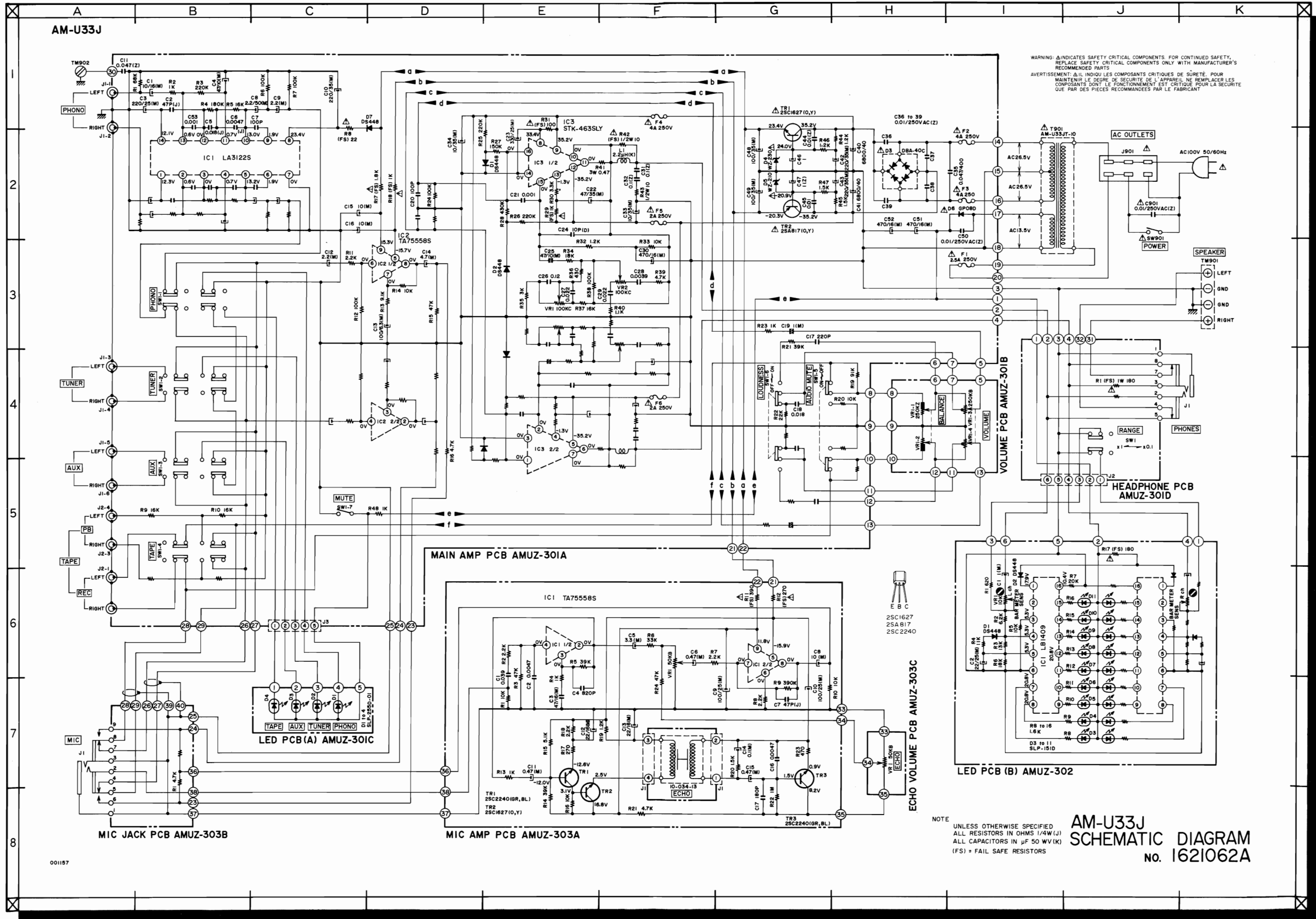


WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT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

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

AT-K33L
 SCHEMATIC DIAGRAM
 No. 1621060A





WARNING: INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER 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 (J), ALL CAPACITORS IN μ F 50 WV (K) (FS) = FAIL SAFE RESISTORS

AM-U33J SCHEMATIC DIAGRAM
 No. 1621062A

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