

AKAI SERVICE MANUAL

STEREO GRAPHIC EQUALIZER

EA-G30 MODEL EA-G90

THIS MANUAL IS ALSO APPLICABLE TO BOTH SILVER AND BLACK PANEL MODELS

I. SPECIFICATIONS

1. MODEL EA-G30

| | |
|---|--|
| CENTER FREQUENCY | 100 Hz/330 Hz/1 kHz/3.3 kHz/10 kHz |
| FREQUENCY CONTROL RANGE | ±12 dB |
| RATED OUTPUT LEVEL | 1 V |
| GAIN (FLAT POSITION) | 0 dB |
| INPUT IMPEDANCE | 47 kohms |
| OUTPUT IMPEDANCE | 500 ohms |
| T.H.D. (FLAT POSITION) | 0.02% |
| FREQUENCY RESPONSE | 20 Hz to 50 kHz ±1 dB |
| S/N (IHF-A) (FLAT POSITION/ROUNDING INPUT) | 95 dB |
| MAX. INPUT VOLTAGE | 7 V |
| CHANNEL CROSSTALK (1 kHz, GROUNDING INPUT) | 70 dB |
| POWER REQUIREMENT | 100V, 50/60 Hz for Japan 120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V-120V/220V-240V, 50/60 Hz switchable for other countries. |
| DIMENSIONS | 440 x 80 x 225 mm (17.3 x 3.1 x 4.4 inches) |
| WEIGHT | 3.2 kg (7.0 lbs) |

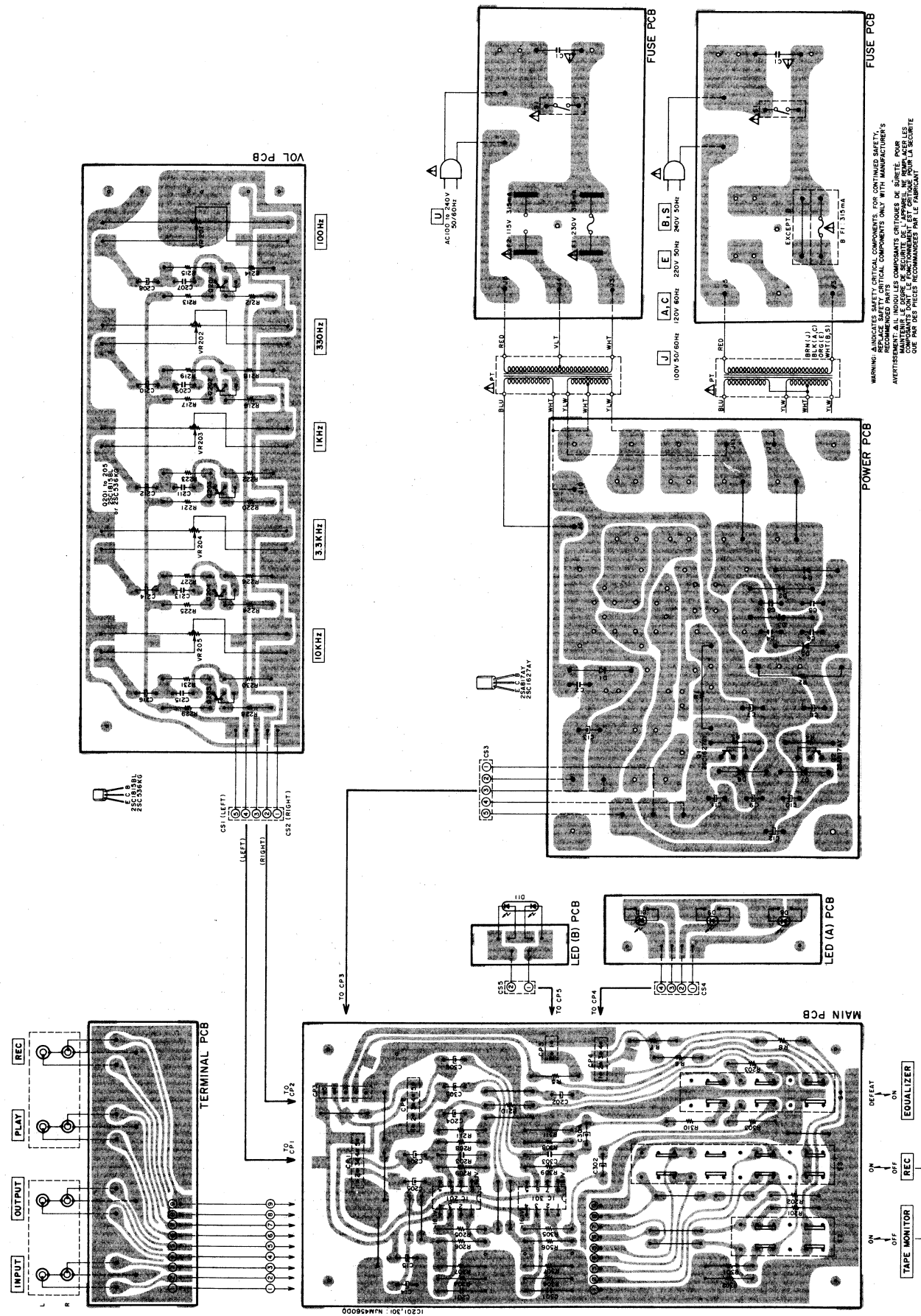
2. MODEL EA-G90

| | |
|---|--|
| CENTER FREQUENCY | 16 Hz/31.5 Hz/63 Hz/125 Hz/250 Hz/500 Hz/ 1 kHz/2 kHz/4 kHz/8 kHz/16 kHz/32 kHz |
| FREQUENCY CONTROL RANGE | ±12 dB/± 6 dB (switchable) |
| RATED OUTPUT LEVEL | 1 V |
| GAIN (FLAT POSITION) | 0 dB |
| INPUT IMPEDANCE | 47 kohms |
| OUTPUT IMPEDANCE | 330 ohms |
| T.H.D. (FLAT POSITION) | 0.005% |
| FREQUENCY RESPONSE | 10 Hz to 20 kHz ±0.5 dB 20 kHz to 100 kHz ±1.5 dB |
| S/N (IHF-A) (FLAT POSITION/ROUNDING INPUT) | 105 dB |
| MAX. INPUT VOLTAGE | 8 V |
| CHANNEL CROSSTALK (1 kHz, GROUNDING INPUT) | 70 dB |
| POWER REQUIREMENT | 100V, 50/60 Hz for Japan 120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/120V/220-240V, 50/60 Hz internally switchable for other countries. |
| DIMENSIONS | 440 x 120 x 303 mm (17.3 x 4.7 x 11.9 inches) |
| WEIGHT | 3.5 kg (7.7 lbs) |

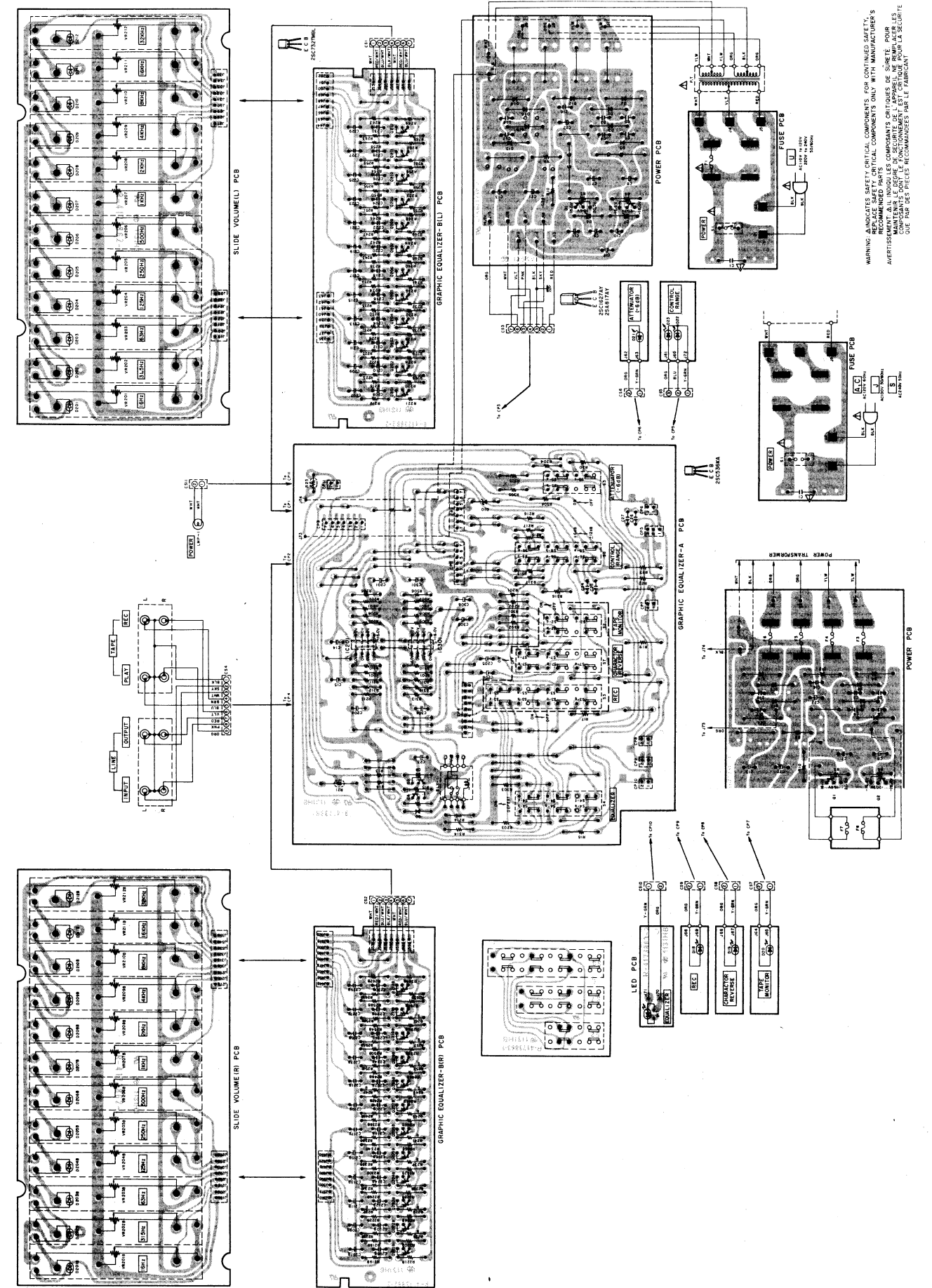
* For improvement purposes, specifications and design are subject to change without notice.

II. COMPOSITION OF VARIOUS P.C BOARDS

1. MODEL EA-G30

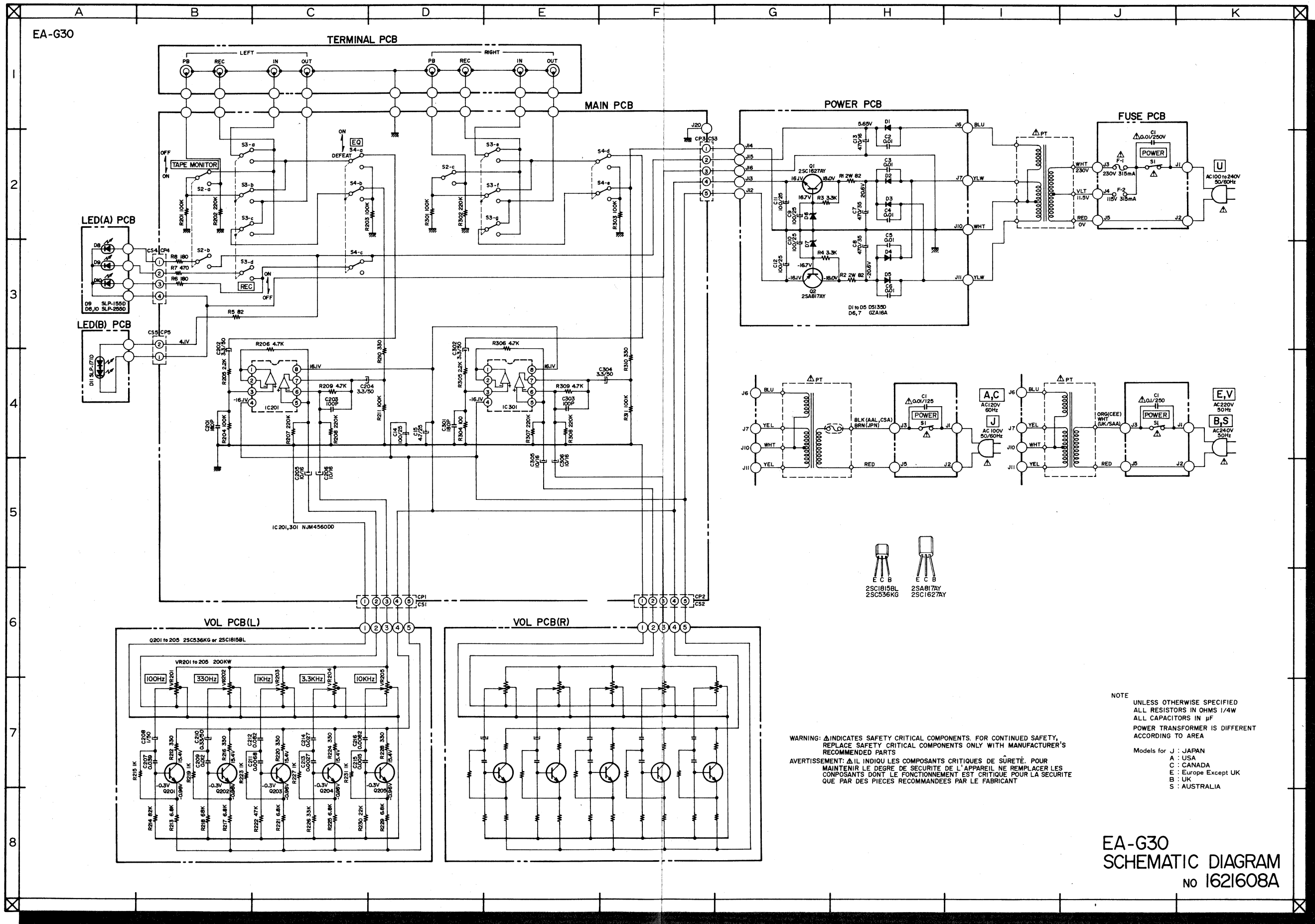


2. MODEL EA-G90



III. SCHEMATIC DIAGRAM

1. MODEL EA-G30



NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W
ALL CAPACITORS IN µF
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

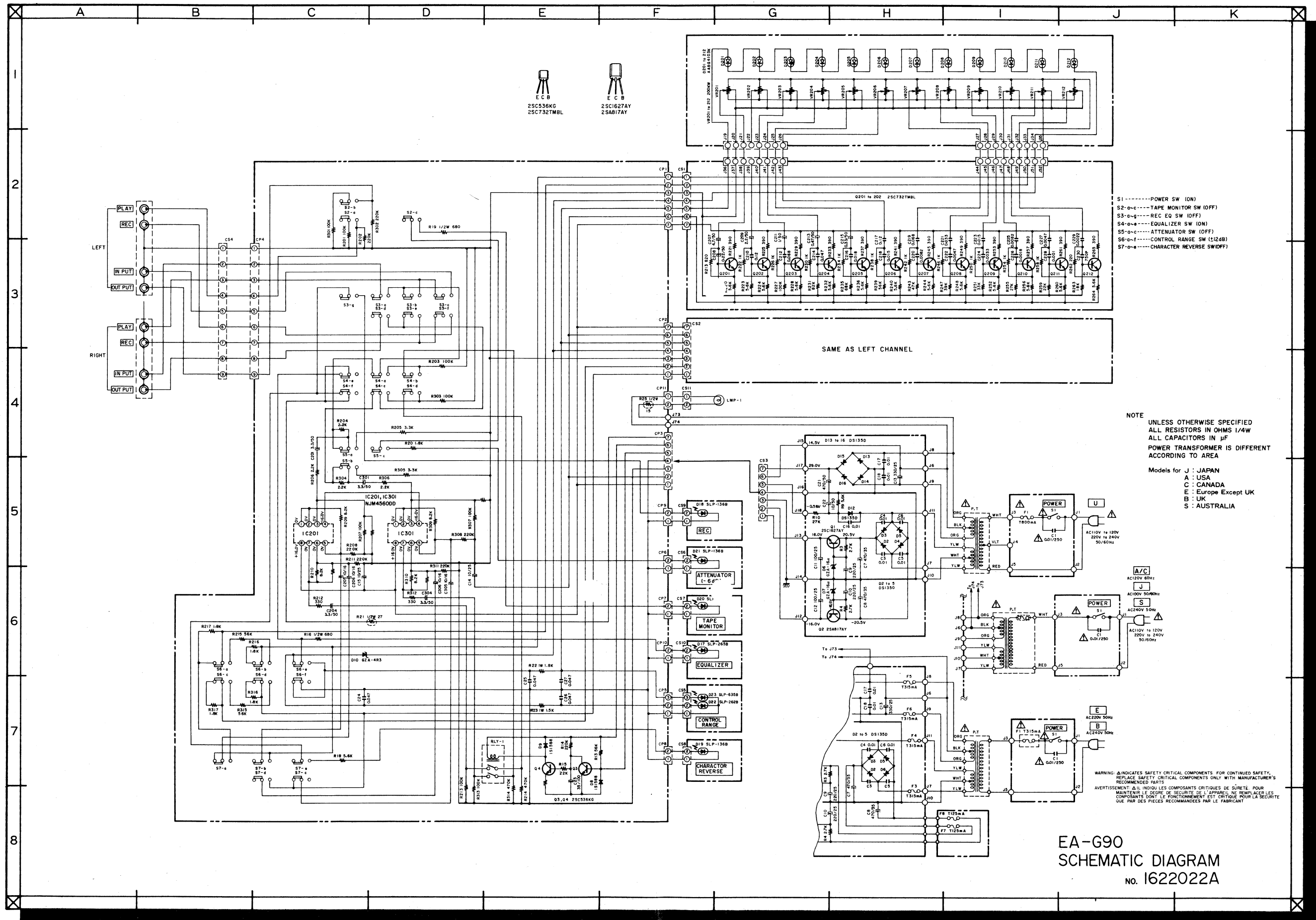
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUÉ 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

Models for J : JAPAN
A : USA
C : CANADA
E : Europe Except UK
B : UK
S : AUSTRALIA

EA-G30
SCHEMATIC DIAGRAM
No 1621608A

2. MODEL EA-G90



- S1-----POWER SW (ON)
- S2-0-----TAPES MONITOR SW (OFF)
- S3-0-----REC EQ SW (OFF)
- S4-0-----EQUALIZER SW (ON)
- S5-0-----ATTENUATOR SW (OFF)
- S6-0-f-----CONTROL RANGE SW (12dB)
- S7-0-----CHARACTER REVERSE SW(OFF)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W
ALL CAPACITORS IN µF
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

- Models for J : JAPAN
A : USA
C : CANADA
E : Europe Except UK
B : UK
S : AUSTRALIA

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 Δ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

EA-G90
SCHEMATIC DIAGRAM
No. 1622022A

IV. PARTS LIST

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

1.MODEL EA-G30

1) MAIN P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--------------------|
| 1-1 | BA706218 | PC MAIN BLK EA-G30 |
| 1-1C201 | EI706220 | IC MJM4560DD |
| 1-1C301 | EI706220 | IC MJM4560DD |
| 1-S2-4 | ES706219 | SW PUSH |

2) VOLUME P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|--------------|-----------|------------------|
| 2-1 | BA706221 | PC VR BLK EA-G30 |
| 2-Q201to205 | ET330225 | TR 2SC1815 BL |
| 2-VR201to205 | EV706222 | VR SLIDE W204 |

3) POWER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-------------------|
| 3-Q1 | ET706214 | TR 2SC1627AY |
| 3-Q2 | ET706215 | TR 2SA817AY |
| 3-D1to5 | ED706216 | D SILICON DS135D |
| 3-D6,7 | ED324936 | D ZENER H 05Z16 Z |
| 3-R1,2 | ER382173 | R OMF H 2W 820K |

4) FUSE P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------|
| 4-S1 | ES706213 | △ SW PUSH (U,E,B,S,V) |
| 4-S1 | ES706305 | △ SW PUSH (J) |
| 4-S1 | ES706306 | △ SW PUSH (C,A) |
| 4-F1,2 | EF706437 | △ FUSE T315MA (U) |
| 4-F1 | EF706417 | △ FUSE T160MA (B) |
| 4-C1 | EC320548 | △ C CE V F 103Z 250AC (U) |
| 4-C1 | EC706419 | △ C CE 103 125AC (J) |
| 4-C1 | EC706422 | △ C CE 103 250AC (C,A) |
| 4-C1 | EC706416 | △ C CE 103 250AC (E,B,S,V) |

5) FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---|
| 5-1 | ED322773 | D LED SLP-255D-01 GRN (D8,10) |
| 5-2 | ED322772 | D LED SLP-155D-01 RED (D9) |
| 5-3 | ED332243 | D LED SLP-171D RED (D11) |
| 5-4 | EI706212 | TERMINAL PLATE 4P |
| 5-5 | BT706211 | △ TRANS POWER EA-G30 (U) |
| 5-6 | BT706308 | △ TRANS POWER EA-G30 (J) |
| 5-7 | BT706309 | △ TRANS POWER EA-G30 (C) |
| 5-8 | BT706310 | △ TRANS POWER EA-G30 (A) |
| 5-9 | BT706311 | △ TRANS POWER EA-G30 (E,V) |
| 5-10 | BT706312 | △ TRANS POWER EA-G30 (B) |
| 5-11 | BT706313 | △ TRANS POWER EA-G30 (S) |
| 5-12 | BD706199 | PANEL FRONT BLK EA-G30 |
| 5-13 | BD706198 | PANEL FRONT BLK EA-G30-BL |
| 5-14 | BD706197 | PANEL FRONT BLK EA-G30-S |
| 5-15 | SK327134 | KNOB (B) (VOLUME) |
| 5-16 | SK327135 | KNOB (B-BL) (VOLUME) |
| 5-17 | SK706202 | KNOB (A) (POWER) |
| 5-18 | SK706203 | KNOB (A-BL) (POWER) |
| 5-19 | SK706204 | KNOB (B) (FUNCTION) |
| 5-20 | SK706205 | KNOB (B-BL) (FUNCTION) |
| 5-21 | ML706207 | LEVER SW (FOR POWER SW) |
| 5-22 | SP706200 | UPPER CASE |
| 5-23 | SP706201 | UPPER CASE (BL) |
| 5-24 | SP706209 | PANEL REAR EA-G30 (U) |
| 5-25 | SP706314 | PANEL REAR EA-G30 (J) |
| 5-26 | SP706315 | PANEL REAR EA-G30 (C,A) |
| 5-27 | SP706316 | PANEL REAR EA-G30 (E,V) |
| 5-28 | SP706317 | PANEL REAR EA-G30 (B,S) |
| 5-29 | SA706208 | FOOT |
| 5-30 | EZ706210 | STRAIN RELIEF 2P-4 (U,J,C,A) |
| 5-31 | EZ706319 | STRAIN RELIEF (E,B,S,V) |
| 5-32 | EW306428 | △ AC CORD CORES KP-205A, VFF UCJ (U) |
| 5-33 | EW706418 | △ AC CORD (J) |
| 5-34 | EW706420 | △ AC CORD (C,A) |
| 5-35 | EW706423 | △ AC CORD (E) |
| 5-36 | EW706415 | △ AC CORD (B) |
| 5-37 | EW706424 | △ AC CORD (S) |

2.MODEL EA-G90

1) MAIN P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|------------------------|
| 1-1 | BA705569 | PC MAIN BLK EA-G90 |
| 1-1C201 | EI706220 | IC MJM4560DD |
| 1-1C301 | EI706220 | IC MJM4560DD |
| 1-Q3,4 | ET316643 | TR 2SC536K-NP F,G |
| 1-D8,9 | ED557447 | D SILICON H 1S1588 |
| 1-D10 | ED705567 | D ZENER GZA4R3 |
| 1-S2-7 | ES705568 | SW PUSH |
| 1-RLY1 | EP705580 | RELAY |
| 1-R21 | ER705583 | △ R FUSE 1/2W 270J |
| 1-R22 | ER327172 | R OMF H SNP FS 1W 182J |
| 1-R23 | ER313515 | R OMF H SNP FS 1W 152J |
| 1-R25 | ER705584 | △ R FUSE 1/2W 150J |

2) VOLUME P.C BOARD BLOCK

| | | |
|----------------------|----------|------------------|
| 2-1 | BA705570 | PC VR BLK EA-G90 |
| 2-D201to212 | ED705585 | D LED AABG4103K |
| 2-VR201to212EV705571 | | VR SLIDE W/LED |

3) B.P.F P.C BOARD BLOCK

| | | |
|-------------|----------|---------------------------|
| 3-1 | BA705572 | PC BPF BLK EA-G90 |
| 3-Q201to212 | ET705586 | TR 2SC732TMBL |
| 3-C230 | EC306420 | C STY V F05 500 751J 50DC |

4) POWER P.C BOARD BLOCK

| | | |
|-----------|----------|------------------------|
| 4-1 | BA705574 | PC POWER BLK EA-G90(U) |
| 4-Q1 | ET706214 | TR 2SC1627AY |
| 4-Q2 | ET706215 | TR2SA817AY |
| 4-D2to5 | ED706216 | D SILICON DS135D |
| 4-D6,7 | ED705590 | D ZENER GZA16U |
| 4-D12to16 | ED706216 | D SILICON DS135D |
| 4-F3,4 | EF706436 | △ FUSE T250MA (E,B) |
| 4-F5,6 | EF706437 | △ FUSE T315MA (E,B) |
| 4-F3to6 | EF706437 | △ FUSE T315MA (V) |
| 4-F7,8 | EF706438 | △ FUSE T125MA (E,B,V) |

5) FUSE P.C BOARD BLOCK

| | | |
|------|----------|----------------------------|
| 5-S1 | ES706213 | △ SW PUSH (U,E,B,S,V) |
| 5-S1 | ES706305 | △ SW PUSH (J) |
| 5-S1 | ES706306 | △ SW PUSH (C,A) |
| 5-F1 | EF705573 | △ FUSE (U) |
| 5-F1 | EF706437 | △ FUSE T315MA (B) |
| 5-C1 | EC320548 | △ C CE V F 103Z 250AC (U) |
| 5-C1 | EC706419 | △ C CE 103 125AC (J) |
| 5-C1 | EC706422 | △ C CE 103 250AC (C,A) |
| 5-C1 | EC706416 | △ C CE 103 250AC (E,B,S,V) |

6) FINAL ASSEMBLY BLOCK

| | | |
|------|----------|---|
| 6-1 | ED705561 | D LED SLP-265B (D17) |
| 6-2 | ED705562 | D LED SLP-136B (D18,19) |
| 6-3 | ED705563 | D LED SLP-236B (D20) |
| 6-4 | ED705562 | D LED SLP-136B (D21) |
| 6-5 | ED705564 | D LED SLP-262B (D22) |
| 6-6 | ED705566 | D LED SLP-635B (D23) |
| 6-7 | EJ705560 | TERMINAL PLATE 4PEA-G90 |
| 6-8 | EJ705592 | TERMINAL |
| 6-9 | EL705591 | LAMP |
| 6-10 | BT705558 | △ TRANS POWER EA-G90 (U) |
| 6-11 | BT706434 | △ TRANS POWER EA-G90(J) |
| 6-12 | BT706431 | △ TRANS POWER EA-G90 (C) |
| 6-13 | BT706430 | △ TRANS POWER EA-G90 (A) |
| 6-14 | BT706433 | △ TRANS POWER EA-G90 (E,V) |
| 6-15 | BT707023 | △ TRANS POWER EA-G90 (B) |
| 6-16 | BT707024 | △ TRANS POWER EA-G90 (S) |
| 6-17 | BC705546 | UPPER CASE |
| 6-18 | BC705547 | UPPER CASE (BL) |
| 6-19 | BD705548 | PANEL BLK EA-G90 |
| 6-20 | BD705549 | PANEL BLK EA-G90-BL |
| 6-21 | SK705551 | KNOB BLK EA-G90 (EQ) |
| 6-22 | SK705552 | KNOB BLK EA-G90-BL (EQ) |
| 6-23 | ZG705577 | SP KNOB (A) |
| 6-24 | SK705553 | KNOB (B) (POWER) |
| 6-25 | ZG705578 | SP KNOB (B) |
| 6-26 | SK705555 | KNOB (A) (VOLUME) |
| 6-27 | SA706208 | FOOT |
| 6-28 | SK705557 | KNOB (C) (FUNCTION) |
| 6-29 | ML706425 | LEVER KNOB (B) (FOR FUNCTION) |
| 6-30 | ML705579 | LEVER KNOB (FOR EQ) |
| 6-31 | ML706207 | LEVER SW (FOR POWER) |
| 6-32 | SP705559 | PANEL REAR EA-G90 (U) |
| 6-33 | SP706429 | PANEL REAR EA-G90 (J) |
| 6-34 | SP706426 | PANEL REAR EA-G90 (C,A) |
| 6-35 | SP706428 | PANEL REAR EA-G90 (E,V) |
| 6-36 | SP706427 | PANEL REAR EA-G90 (B,S) |
| 6-37 | EZ706210 | STRAIN RELIEF 2P-4 (U,J,C,A) |
| 6-38 | EZ706319 | STRAIN RELIEF (E,B,S,V) |
| 6-39 | EW306428 | △ AC CORD 2 CORES KP-205A, VFF UCJ (U,S) |
| 6-40 | EW706418 | △ AC CORD (J) |
| 6-41 | EW706420 | △ AC CORD (C,A) |
| 6-42 | EW706423 | △ AC CORD (E) |
| 6-43 | EW706415 | △ AC CORD (B) |