



HITACHI

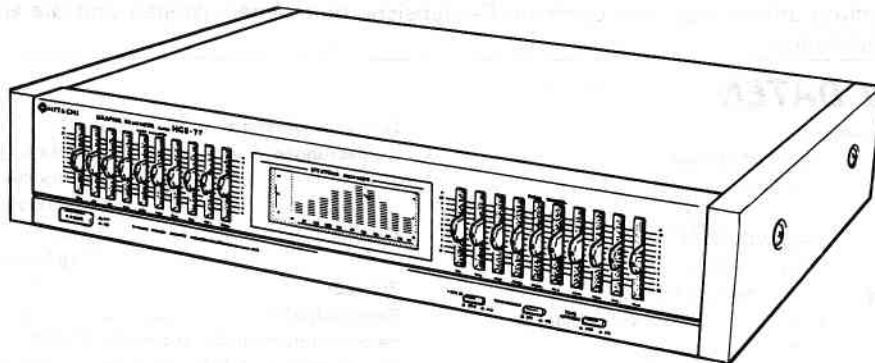
SERVICE MANUAL

TY

No. 551 EGF

HGE-77

(US, CS, BS, VK, ZS, EW)



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SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with Δ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

Input Sensitivity/impedance

INPUT: 200mV/45 kohms
TAPE PLAY: 200mV/45 kohms

Output level/impedance

OUTPUT: 200mV/1 kohms
TAPE REC: 200mV/1 kohms

Power output:

3V (T.H.D. 0.1%)

Total harmonic distortion:

0.05% (20 Hz~20 kHz Output sensitivity)

Gain:

0 dB

Frequency response:

10~20 kHz \pm 1 dB

Signal-to-noise ratio:

96 dB (for rated output, IHF A network)

Equalizer center frequencies:

10 elements 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz

Variable range of adjustment:

left, right independent \pm 10 dB

Power supply voltage:

~120V, 60 Hz (for US), ~240V, 50 Hz (for BK)
~220V, 50 Hz (for VK, ZS), ~110V/220V/240V, 50/60 Hz (for EW)

Power consumption:

15W

Dimensions:

370(W) x 85(H) x 276(D) mm
400(W) x 85(H) x 276(D) mm (With included side wood panels)

Weight:

3.3 kg
3.7 kg (With included side wood panels)

Accessories

| | |
|---|---|
| Side wood | 2 |
| Side wood installing screw | 4 |
| Side wood installing washer | 4 |
| Side wood installing flat spring washer | 4 |
| Connecting pin cord | 2 |

* All value given in this specification refer to equalizer in the "flat" condition.

For the purpose of improvement, design and specification are subject to change without notice.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

GRAPHIC EQUALIZER

April 1987

TOYOKAWA WORKS

SICHERHEITSMASSNAHMEN

Die folgenden Vorsichtsmaßnahmen sind einzuhalten, wenn Wartungsarbeiten an diesem Modell ausgeführt werden.

- Da verschiedene Teile dieses Gerätes besondere Sicherheitsfunktionen aufweisen, nur Hitachi Original-Ersatzteile verwenden. Besonders kritische Teile im Netzteil dürfen nicht durch Teile anderer Hersteller ersetzt werden.

Die kritischen Teile sind in den Schaltplänen und Leiterplatten-Diagrammen mit dem Symbol \triangle gekennzeichnet.

- Bevor das reparierte Gerät an den Kunden ausgeliefert wird, muß der Wartungstechniker das Gerät einer gründlichen Prüfung unterziehen, um optimale Betriebsicherheit sicherzustellen und die Gefahr elektrischer Schläge auszuschließen.

TECHNISCHEN DATEN

| | | | |
|---|--|--|--|
| Eingangsempfindlichkeit/Impedanz | | Leistungsaufnahme | 15W |
| INPUT: | 200mV/45 kOhms | Abmessungen | 370(B) x 85(H) x 276(T) mm |
| TAPE PLAY: | 200mV/45 kOhms | | 400(B) x 85(H) x 276(T) mm (einschließlich Seitenholztafeln) |
| Ausgangspegel/Impedanz | | Gewicht | 3.3 kg |
| OUTPUT: | 200mV/1 kOhms | | 3.7 kg (einschließlich Seitenholztafeln) |
| TAPE REC: | 200mV/1 kOhms | Zubehör | |
| Maximale Ausgangsleistung | 3V (Klirrfaktor 0.1%) | Seitenholztafeln | 2 |
| Klirrfaktor | 0.5% (20 Hz ~ 20 kHz Nennausgang) | Befestigungsschraube für Seitenholztafeln | 4 |
| Verstärkungsfaktor | 0 dB | Unterlegscheibe zur Befestigung der Seitenholztafeln | 4 |
| Frequenzgang | 10 Hz ~ 20 kHz \pm 1 dB | Flache Federscheibe zur Befestigung der Seitenholztafeln | 4 |
| Rauschabstand | 96 dB (für Nennausgang, IHF-A-Nets) | Anschluß-Stiftsteckerkabel | 2 |
| Equalizer-Mittelfrequenzen | 10 Elemente 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz | | |
| Variabler Einstellbereich | links, rechts unabhängig \pm 10 dB | | |
| Betriebsstrom | 120V, 60 Hz (für US) | | |
| | 240V, 50 Hz (für BK) | | |
| | 220V, 50 Hz (für VK, ZS) | | |
| | 110V/220V/240V, 50/60 Hz (für EW) | | |

* Alle unter Technischen Daten angegebenen Werte gelten für den Betriebszustand bei linearer Equalizereinstellung. Änderungen von technischen Daten und Design Swecks Produktverbesserung ohne Vorankündigung vorbehalten.

PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

- Étant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnées du symbole \triangle dans le plan de circuit et sur le plan de base.
- Avant de retourner l'appareil réparé au client, le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

CARCTÉRISTIQUES TECHNIQUES

| | | | |
|---|--|--|--|
| Sensibilité d'entrée impédance | | Consommation | 15W |
| Entrée: | 200mV/45 kohms | Dimensions | 370(L) x 85(H) x 276(P) mm |
| Lecture bande: | 200mV/45 kohms | | 400(L) x 85(H) x 276(P) mm (y compris les panneaux latéraux en bois) |
| Niveau de sortie/impédance | | Poids | 3.3 kg |
| Sortie: | 200mV/1 kohms | | 3.7 kg (y compris les panneaux latéraux en bois) |
| Enregistrement bande: | 200mV/1 kohms | Accessories | |
| Sortie maximale | 3V (distorsion harmonique totale 0.1%) | Panneaux latéraux en bois | 2 |
| Distorsion harmonique total | 0.5% (20 Hz ~ 20 kHz puissance nominale) | Vis de pose des panneaux latéraux en bois | 4 |
| Gain | 0 dB | Rondelle de pose des panneaux latéraux en bois | 4 |
| Réponse en fréquence | 10 Hz ~ 20 kHz \pm 1 dB | Rondelle de ressort plat des panneaux latéraux en bois | 4 |
| Rapport signal/bruit | 96 dB (puissance nominale, réseau IHF A) | Cordon d'axe de liaison | 2 |
| Fréquences centrales d'égaliseur | 10 gammes 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz | | |
| Plage de réglage | \pm 10 dB à gauche et à droite | | |
| Alimentation | 120V, 60 Hz (pour US) | | |
| | 240V, 50 Hz (pour BK) | | |
| | 220V, 50 Hz (pour VK, ZS) | | |
| | 110V/220V/240V, 50/60 Hz (pour EW) | | |

* Toutes les valeurs figurant dans les caractéristiques techniques s'appliquent avec l'égaliseur avec réglages "plats". Dans les but d'améliorer le produit, la présentation et les caractéristiques techniques sont sujettes à modification sans préavis.

DISASSEMBLY

1. Top Cover (Fig. 1)

After the four screws ① are removed the casing is eased out of place as indicated by Arrow (A). Jiggle the back of the casing right and left and lift off in the direction indicated by Arrow (B).

2. Escutcheon Assembly (Fig. 2)

First remove the twenty small slide knobs then the eight screws ② which hold the Escutcheon Plate in place.

3. GE BLOCK VR (Fig. 3)

Remove the eight screws ③ from the Slide Volume P.W.B.

4. FL C.B.A. (Fig. 3)

Remove the four connectors from the top of the main P.W.B., then the two screws ④.

5. Mechanical Plate (Fig. 3)

Remove two screws ⑤, and five screws ⑥, as indicated in diagram.

6. Rear Panel (Fig. 4)

Remove two screws ⑦, four screws ⑧, then pull up in direction indicated by arrow.

7. Main P.W.B. (Fig. 5)

Remove three screws ⑨ and three screws ⑩ at points indicated on diagram.

8. Power supply P.W.B. (Fig. 6)

Remove two screws ⑪.

DEMONTAGE

1. Obere Abdeckung (Abb. 1)

Nachdem die vier Schrauben ① entfernt worden sind, kann der Rahmen in der durch Pfeil (A) angezeigten Richtung vorsichtig herausgezogen werden. Die Rückseite des Rahmens abwechselnd nach links und rechts drücken und so in Pfeilrichtung (B) abziehen.

2. Schlossblech-Baugruppe (Abb. 2)

Zuerst die zwanzig kleinen Schieberegler abnehmen, dann die acht Schrauben ②, die das Schloßblech halten.

3. Graphic Equalizer-Lautstärke (Abb. 3)

Die acht Schrauben ③ von der Lautstärkeschieber-Grundplatte entfernen.

4. Platinenbaugruppe der Leuchtröhrenanzeige (Abb.3)

Die vier Stecker von der Oberseite der Hauptplatte abziehen, und dann die beiden Schrauben ④ abnehmen.

5. Mechanikplatte (Abb. 3)

Die beiden Schrauben ⑤ und die fünf Schrauben ⑥ abnehmen, wie in der Zeichnung dargestellt.

6. Rückplatte (Abb. 4)

Die beiden Schrauben ⑦, anschließend die vier Schrauben ⑧ entfernen, und dann in Pfeilrichtung abziehen.

7. Hauptplatte (Abb. 5)

Die drei Schrauben ⑨ und die drei Schrauben ⑩ an den in der Zeichnung dargestellten Punkten entfernen.

8. Netzspannung-Leiterplatte (Abb.6)

Die beiden Schrauben ⑪ entfernen.

DÉMONTAGE

1. Couvercle supérieur (Fig. 1)

Après avoir enlevé les quatre vis ①, dégagé le coffret comme indiqué par la flèche (A). Secouer légèrement l'arrière du coffret de gauche à droite et le soulever dans la direction indiquée par la flèche (B).

2. Panneau avant (Fig. 2)

Enlever tout d'abord les vingt petits curseurs latéraux puis les huit vis ② qui maintiennent le panneau avant en place.

3. Volume de l'égaliseur graphique (Fig. 3)

Enlever les huit vis ③ de la plaque de base des curseurs de volume.

4. Plaquette de circuits du tube fluorescent d'affichage (Fig. 3)

Enlever les quatre connecteurs du haut de la carte à circuit imprimés principale, puis les deux vis ④.

5. Plaque mécanique (Fig. 3)

Enlever deux vis ⑤ et cinq vis ⑥, comme indiqué sur le schéma.

6. Panneau arrière (Fig. 4)

Enlever deux vis ⑦, quatre vis ⑧, puis tirer vers le haut dans la direction indiquée par la flèche.

7. Carte à circuits imprimés principale (Fig. 5)

Enlever trois vis ⑨ et trois vis ⑩ aux points indiqués sur le schéma.

8. Carte à circuits imprimés d'alimentation. (Fig. 6)

Retirer les deux vis de fixation ⑪.

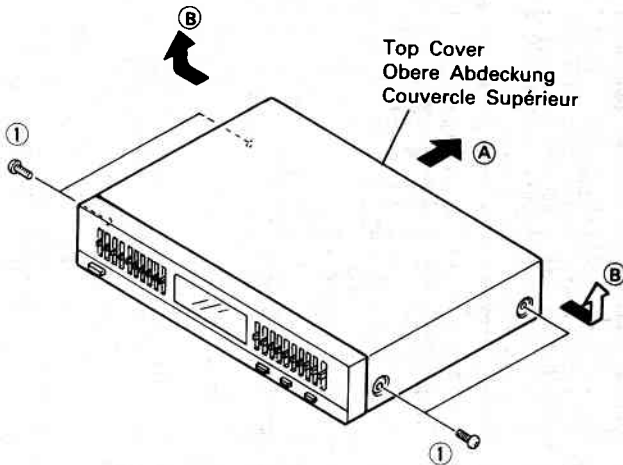


Fig. 1 Abb. 1

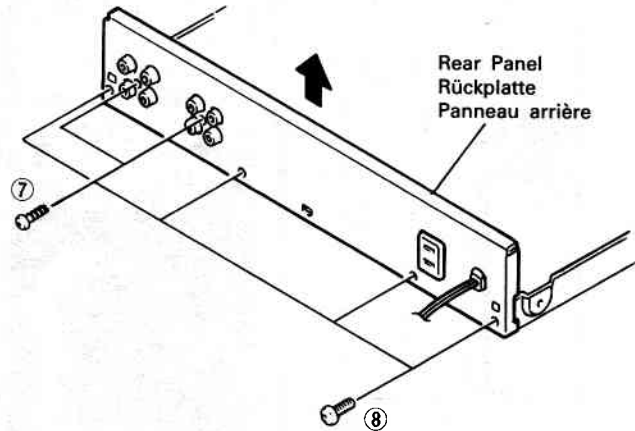


Fig. 4 Abb. 4

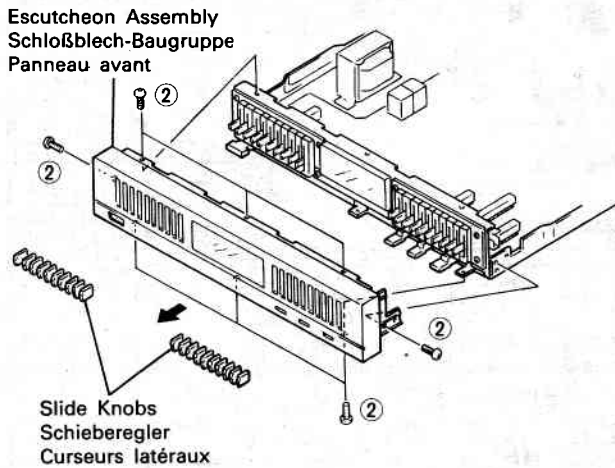


Fig. 2 Abb. 2

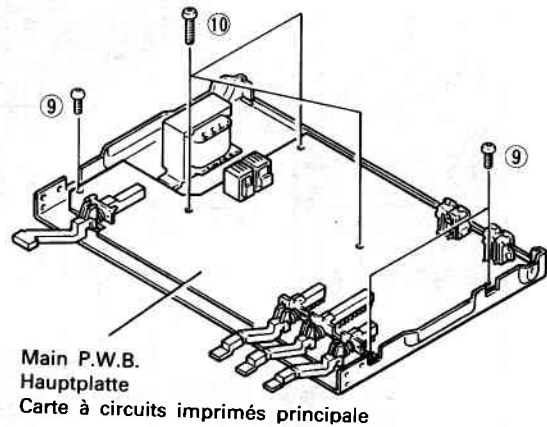


Fig. 5 Abb. 5

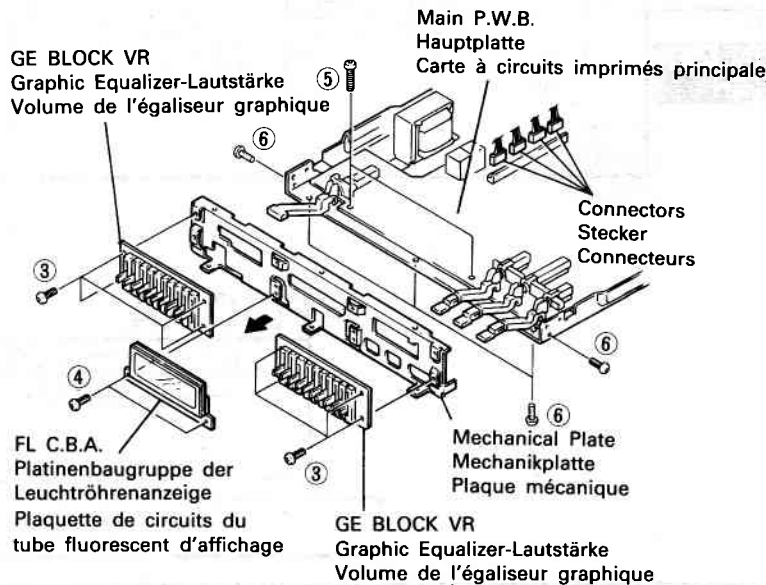


Fig. 3 Abb. 3

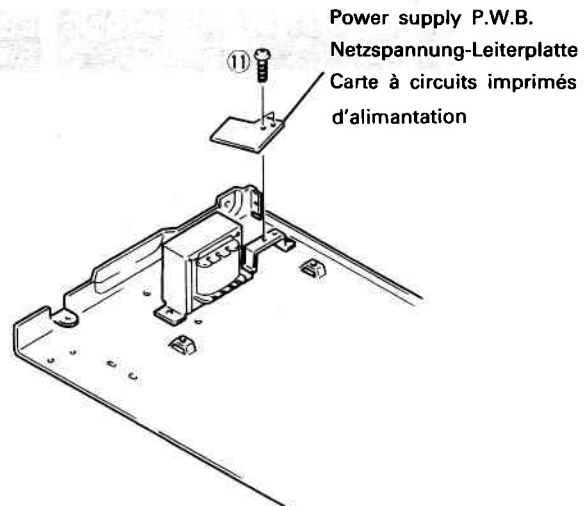
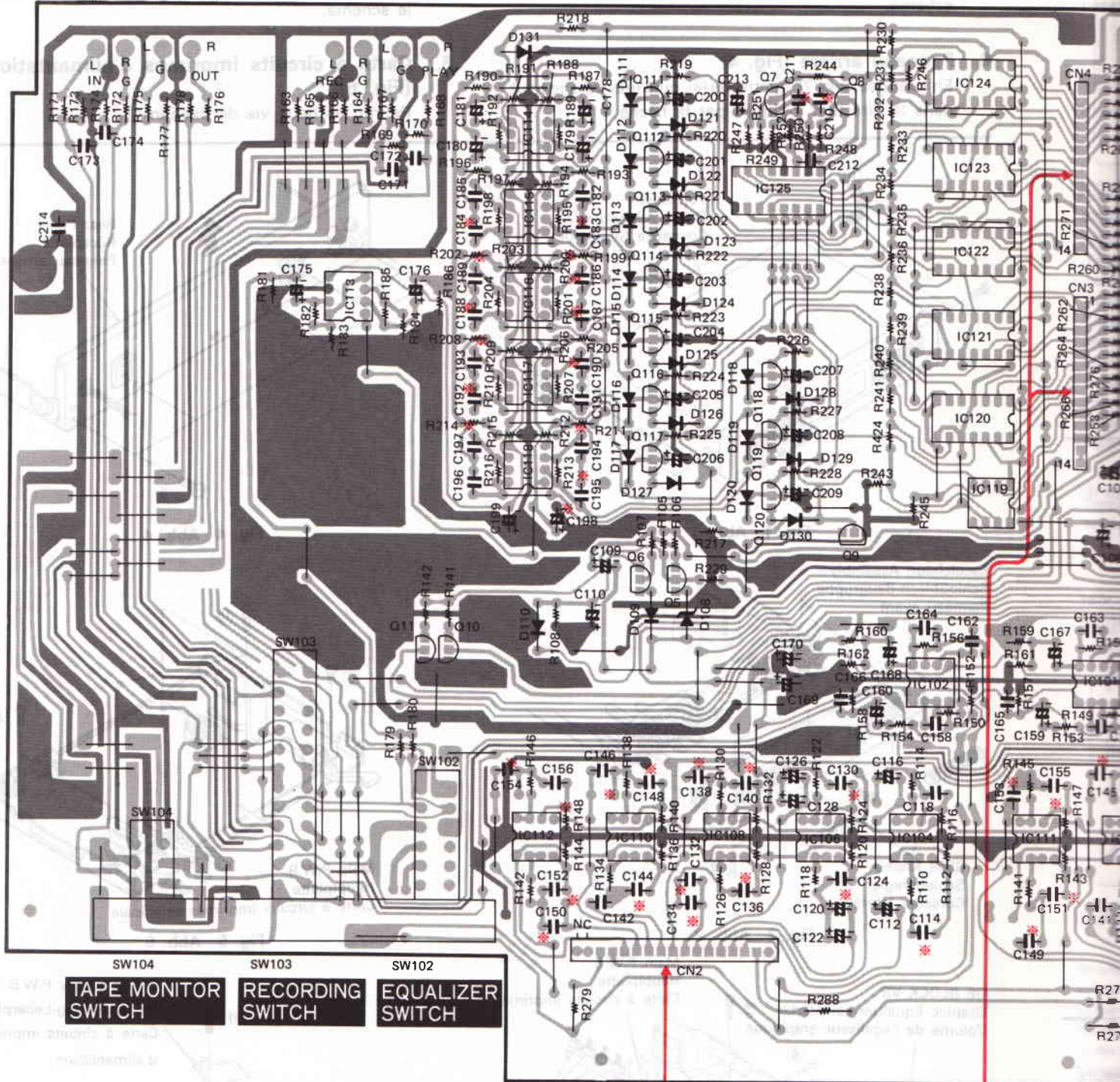


Fig. 6 Abb. 6

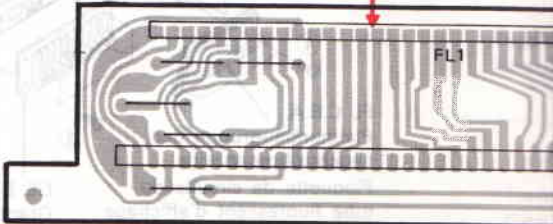
LINE TAPE
 IN OUT REC PLAY
 Lch Rch Lch Rch Lch Rch Lch Rch

MAIN P.W.B.



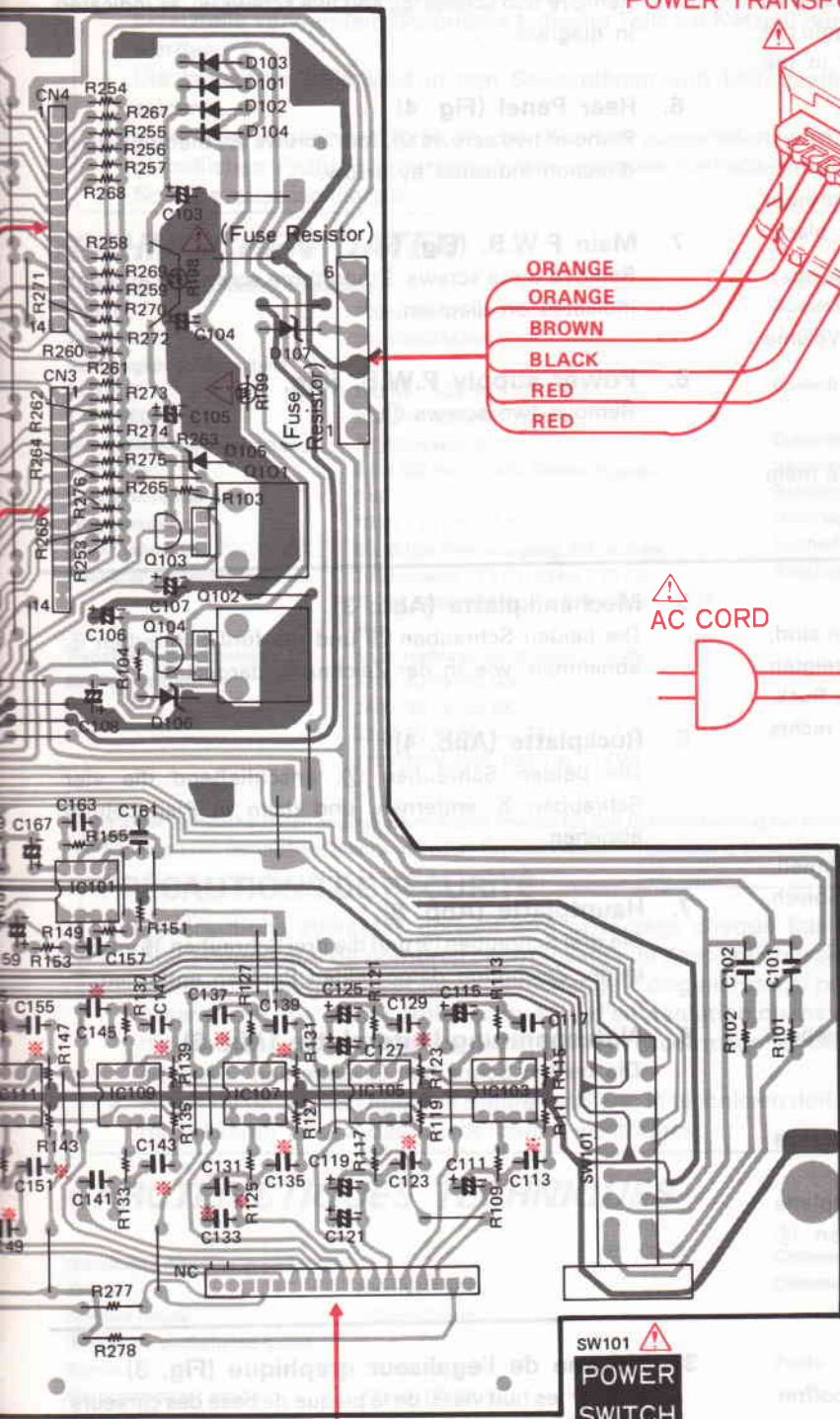
SW104 SW103 SW102
TAPE MONITOR SWITCH **RECORDING SWITCH** **EQUALIZER SWITCH**

To GE BLOCK VR **FL C.B.A.**

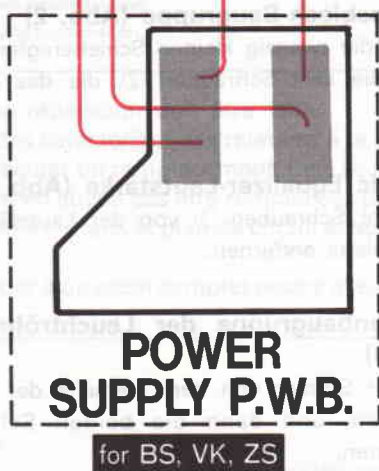
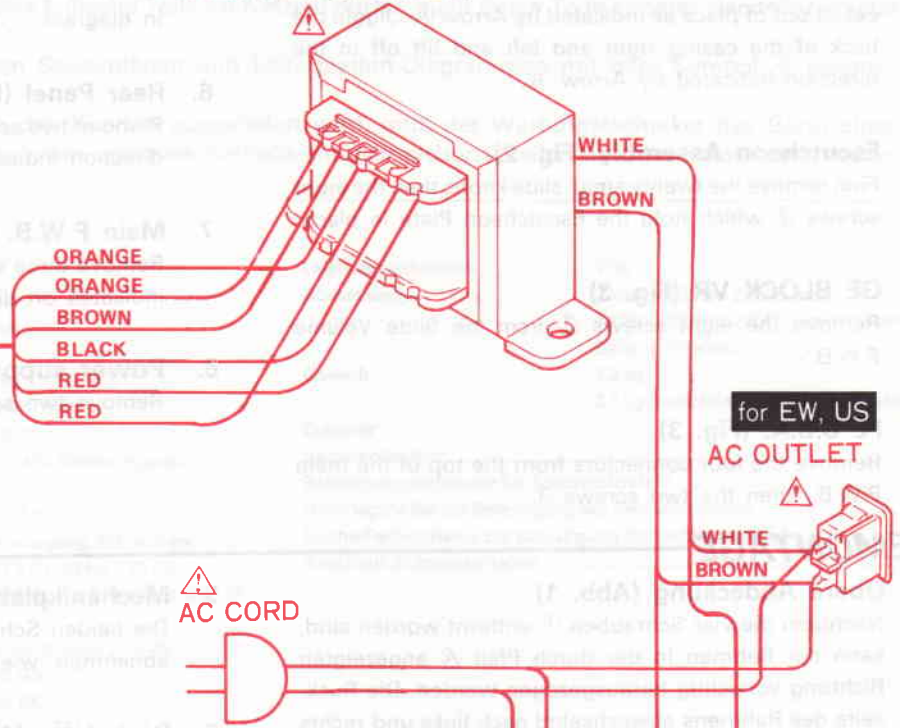


- ※ : Axial lead cylindrical ceramic capacitor.
- ※ : Zylindrischer keramikkondensator mit axialer Zuleitung.
- ※ : Condensateur ceramique cilindrique a conducteur axial.

[Others]



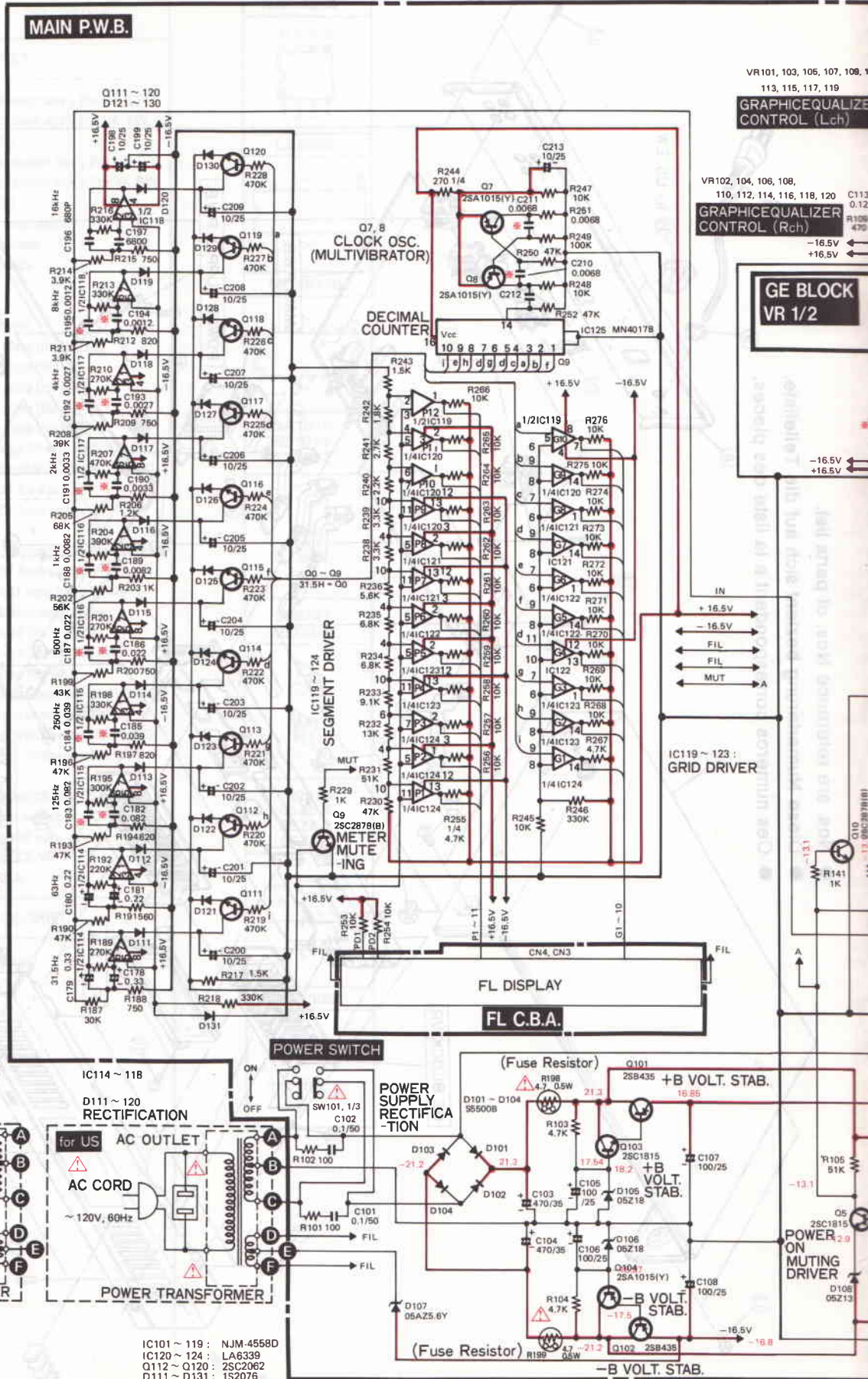
POWER TRANSFORMER



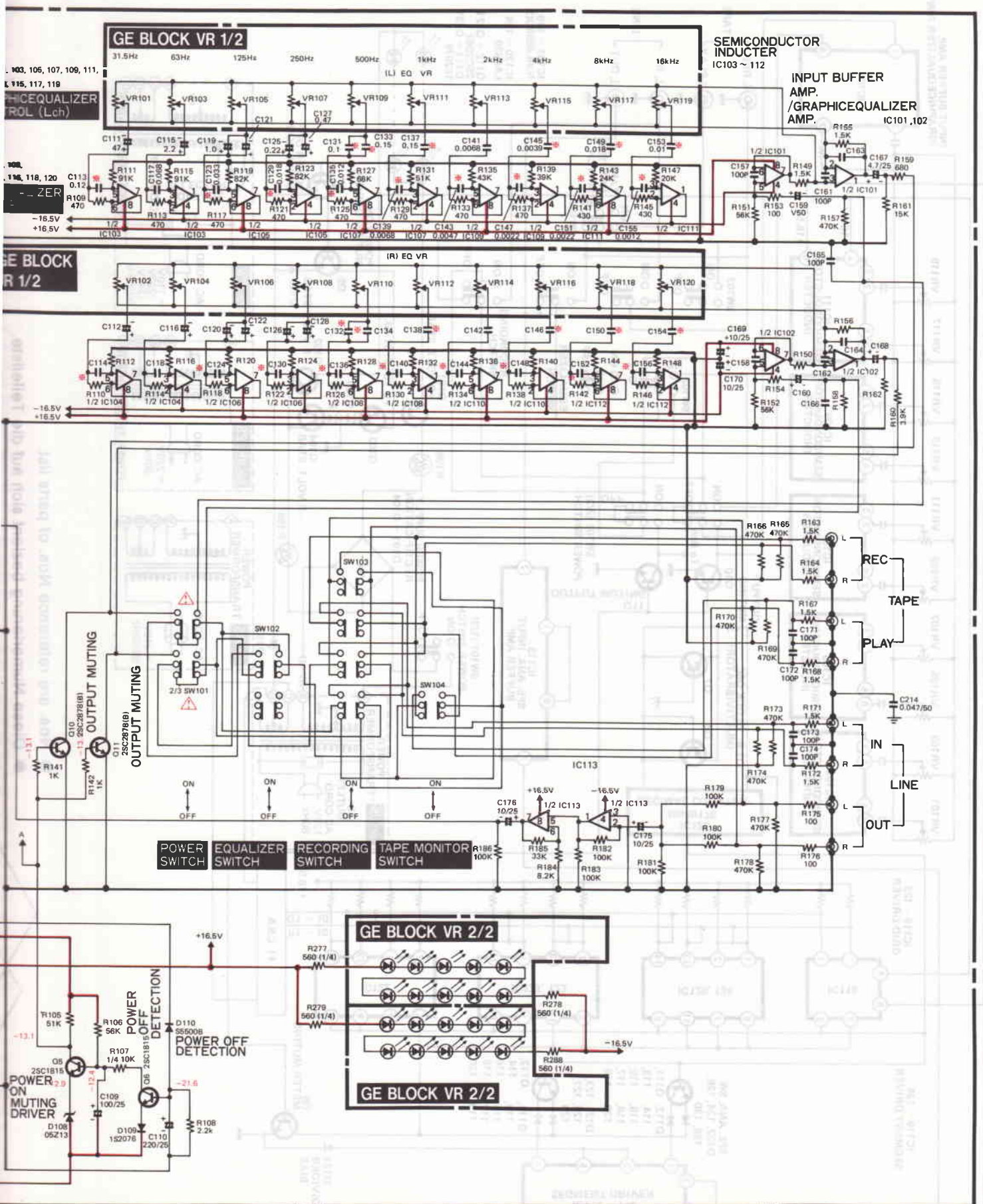
SW101
POWER SWITCH

To GE BLOCK VR

| | E | C | B |
|------|-------|-------|--------|
| Q101 | 16.85 | 21.3 | 17.54 |
| Q102 | -16.8 | -21.2 | -17.5 |
| Q103 | 17.54 | 21.3 | 18.2 |
| Q104 | -17.5 | -21.2 | -18.07 |
| Q105 | -12.9 | -13.1 | -12.4 |
| Q106 | - | - | -21.6 |
| Q107 | 0 | - | -13.1 |
| Q108 | 0 | - | -13.1 |



- ⊗ : Axial lead cylindrical ceramic capacitor.
- ⊗ : Zylindrischer keramikkondensator mit axialer Zuleitung.
- ⊗ : Condensateur ceramique clindrique a conducteur axial.



A

B

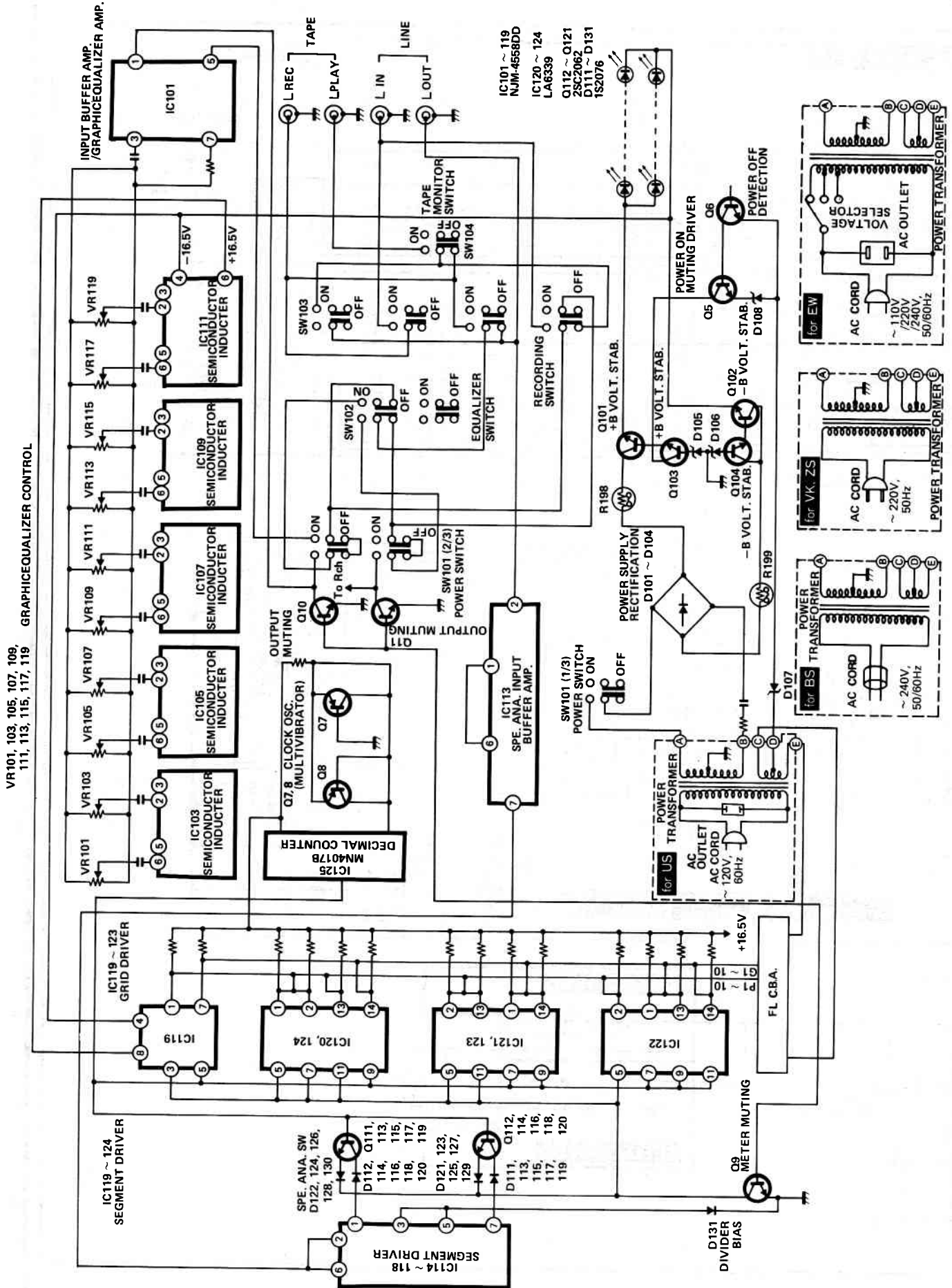
C

D

E

F

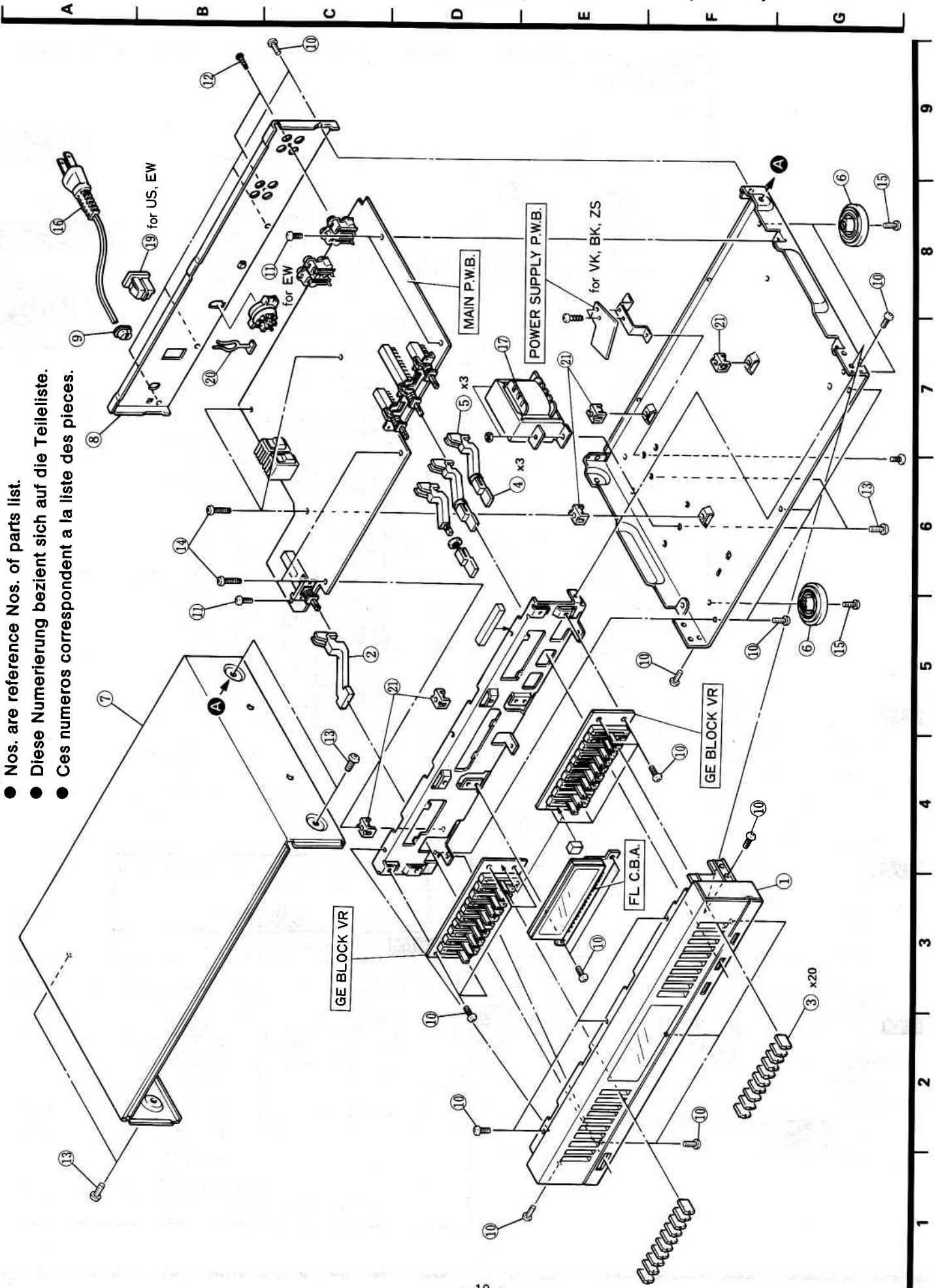
G



**EXPLODED VIEW
(Cabinet)**

**EXPLOSIONSANSICHT
(Chassis)**

**VUE EXPLOSEE
(Coffret)**



- Nos. are reference Nos. of parts list.
- Diese Numerierung bezieht sich auf die Teileliste.
- Ces numeros correspondent a la liste des pieces.

REPLACEMENT PARTS LIST · ERSATZTEILLISTE · TABLEAU DES PIÈCES

| SYMBOL No. | PART No. | DESCRIPTION | SYMBOL No. | PART No. | DESCRIPTION | SYMBOL No. | PART No. | DESCRIPTION |
|------------|----------|--------------------------------|------------|----------|-----------------------------------|------------|----------|-----------------------------------|
| CAPACITORS | | | C160 | 02528112 | EL 1 μ F \pm 20% 50V | R108 | 0129609 | CF 2.2K Ω \pm 5% SRD1/4P |
| C101 | 4845461 | CD 0.1 μ F \pm 10% 50V | C161 | 4845491 | CD 100PF \pm 10% 50V | R109 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C102 | 4845461 | CD 0.1 μ F \pm 10% 50V | C162 | 4845491 | CD 100PF \pm 10% 50V | R110 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C103 | 4845431 | EL 470 μ F \pm 20% 35V | C163 | 4845481 | CD 470PF \pm 10% 50V | R111 | 4845509 | CF 91K Ω \pm 5% SRD1/6P |
| C104 | 4845431 | EL 470 μ F \pm 20% 35V | C164 | 4845481 | CD 470PF \pm 10% 50V | R112 | 4845509 | CF 91K Ω \pm 5% SRD1/6P |
| C105 | 02526312 | EL 100 μ F \pm 20% 25V | C165 | 4845491 | CD 100PF \pm 10% 50V | R113 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C106 | 02526312 | EL 100 μ F \pm 20% 25V | C166 | 4845491 | CD 100PF \pm 10% 50V | R114 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C107 | 02526312 | EL 100 μ F \pm 20% 25V | C167 | 02526152 | EL 4.7 μ F \pm 20% 25V | R115 | 4845509 | CF 91K Ω \pm 5% SRD1/6P |
| C108 | 02526312 | EL 100 μ F \pm 20% 25V | C168 | 02526152 | EL 4.7 μ F \pm 20% 25V | R116 | 4845509 | CF 91K Ω \pm 5% SRD1/6P |
| C109 | 02526312 | EL 100 μ F \pm 20% 25V | C169 | 02526212 | EL 10 μ F \pm 20% 25V | R117 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C110 | 0252427 | EL 220 μ F \pm 20% 25V | C170 | 02526212 | EL 10 μ F \pm 20% 25V | R118 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C111 | 02528152 | EL 4.7 μ F \pm 20% 50V | C171 | 4845491 | CD 100PF \pm 10% 50V | R119 | 0113661 | CF 82K Ω \pm 5% SRD1/6P |
| C112 | 02528152 | EL 4.7 μ F \pm 20% 50V | C172 | 4845491 | CD 100PF \pm 10% 50V | R120 | 0113661 | CF 82K Ω \pm 5% SRD1/6P |
| C113 | 4848421 | CC 0.12 μ F \pm 10% 50V | C173 | 4845491 | CD 100PF \pm 10% 50V | R121 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C114 | 4848421 | CC 0.12 μ F \pm 10% 50V | C174 | 4845491 | CD 100PF \pm 10% 50V | R122 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C115 | 02528122 | EL 2.2 μ F \pm 20% 50V | C175 | 02526212 | EL 10 μ F \pm 20% 25V | R123 | 0113661 | CF 82K Ω \pm 5% SRD1/6P |
| C116 | 02528122 | EL 2.2 μ F \pm 20% 50V | C176 | 02526212 | EL 10 μ F \pm 20% 25V | R124 | 0113661 | CF 82K Ω \pm 5% SRD1/6P |
| C117 | 0275216 | MF 0.068 μ F \pm 5% 50V | C178 | 0252803 | EL 0.33 μ F \pm 20% 50V | R125 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C118 | 0275216 | MF 0.068 μ F \pm 5% 50V | C179 | 0252803 | EL 0.33 μ F \pm 20% 50V | R126 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C119 | 02528112 | EL 1 μ F \pm 20% 50V | C180 | 0252802 | EL 0.22 μ F \pm 20% 50V | R127 | 0113659 | CF 68K Ω \pm 5% SRD1/6P |
| C120 | 02528112 | EL 1 μ F \pm 20% 50V | C181 | 0252802 | EL 0.22 μ F \pm 20% 50V | R128 | 0113659 | CF 68K Ω \pm 5% SRD1/6P |
| C121 | 0252802 | EL 0.22 μ F \pm 20% 50V | C182 | 0275036 | CC 0.082 μ F \pm 10% 50V | R129 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C122 | 0252802 | EL 0.22 μ F \pm 20% 50V | C183 | 0275036 | CC 0.082 μ F \pm 10% 50V | R130 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C123 | 02750142 | MF 0.033 μ F \pm 10% 50V | C184 | 0275034 | CC 0.039 μ F \pm 10% 50V | R131 | 4845508 | CF 51K Ω \pm 5% SRD1/6P |
| C124 | 02750142 | MF 0.033 μ F \pm 10% 50V | C185 | 0275034 | CC 0.039 μ F \pm 10% 50V | R132 | 4845508 | CF 51K Ω \pm 5% SRD1/6P |
| C125 | 0252801 | EL 0.1 μ F \pm 20% 50V | C186 | 02750132 | CC 0.022 μ F \pm 10% 50V | R133 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C126 | 0252801 | EL 0.1 μ F \pm 20% 50V | C187 | 02750132 | CC 0.022 μ F \pm 10% 50V | R134 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C127 | 02528052 | EL 0.47 μ F \pm 20% 50V | C188 | 0274036 | CC 8200PF \pm 10% 50V | R135 | 4845507 | CF 43K Ω \pm 5% SRD1/6P |
| C128 | 02528052 | EL 0.47 μ F \pm 20% 50V | C189 | 0274036 | CC 8200PF \pm 10% 50V | R136 | 4845507 | CF 43K Ω \pm 5% SRD1/6P |
| C129 | 0275032 | CC 0.018 μ F \pm 10% 50V | C190 | 02740142 | CC 3300PF \pm 10% 50V | R137 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C130 | 0275032 | CC 0.018 μ F \pm 10% 50V | C191 | 02740142 | CC 3300PF \pm 10% 50V | R138 | 0113607 | CF 470 Ω \pm 5% SRD1/6P |
| C131 | 02760112 | CC 0.1 μ F \pm 10% 50V | C192 | 0274033 | CC 2700PF \pm 10% 50V | R139 | 0113653 | CF 39K Ω \pm 5% SRD1/6P |
| C132 | 02760112 | CC 0.1 μ F \pm 10% 50V | C193 | 0274033 | CC 2700PF \pm 10% 50V | R140 | 0113653 | CF 39K Ω \pm 5% SRD1/6P |
| C133 | 02760122 | CC 0.15 μ F \pm 10% 50V | C194 | 0274231 | CC 1200PF \pm 5% 50V | R141 | 4845511 | CF 430 Ω \pm 5% SRD1/6P |
| C134 | 02760122 | CC 0.15 μ F \pm 10% 50V | C195 | 0274231 | CC 1200PF \pm 5% 50V | R142 | 4845511 | CF 430 Ω \pm 5% SRD1/6P |
| C135 | 0275031 | CC 0.012 μ F \pm 10% 50V | C198 | 02526212 | EL 10 μ F \pm 20% 25V | R143 | 4845503 | CF 13K Ω \pm 5% SRD1/6P |
| C136 | 0275031 | CC 0.012 μ F \pm 10% 50V | C199 | 02526212 | EL 10 μ F \pm 20% 25V | R144 | 4845503 | CF 13K Ω \pm 5% SRD1/6P |
| C137 | 02760122 | CC 0.15 μ F \pm 10% 50V | C200 | 02526212 | EL 10 μ F \pm 20% 25V | R145 | 4845511 | CF 430 Ω \pm 5% SRD1/6P |
| C138 | 02760122 | CC 0.15 μ F \pm 10% 50V | C201 | 02526212 | EL 10 μ F \pm 20% 25V | R146 | 4845511 | CF 430 Ω \pm 5% SRD1/6P |
| C139 | 0274016 | CC 6800PF \pm 10% 50V | C202 | 02526212 | EL 10 μ F \pm 20% 25V | R147 | 4845504 | CF 20K Ω \pm 5% SRD1/6P |
| C140 | 0274016 | CC 6800PF \pm 10% 50V | C203 | 02526212 | EL 10 μ F \pm 20% 25V | R148 | 4845504 | CF 20K Ω \pm 5% SRD1/6P |
| C141 | 0275216 | MF 0.068 μ F \pm 10% 50V | C204 | 02526212 | EL 10 μ F \pm 20% 25V | R149 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C142 | 0275216 | MF 0.068 μ F \pm 10% 50V | C205 | 02526212 | EL 10 μ F \pm 20% 25V | R150 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C143 | 02740152 | CC 4700PF \pm 10% 50V | C206 | 02526212 | EL 10 μ F \pm 20% 25V | R151 | 0113657 | CF 56K Ω \pm 5% SRD1/6P |
| C144 | 02740152 | CC 4700PF \pm 10% 50V | C207 | 02526212 | EL 10 μ F \pm 20% 25V | R152 | 0113657 | CF 56K Ω \pm 5% SRD1/6P |
| C145 | 0275034 | CC 0.039 μ F \pm 10% 50V | C208 | 02526212 | EL 10 μ F \pm 20% 25V | R153 | 0113591 | CF 100 Ω \pm 5% SRD1/6P |
| C146 | 0275034 | CC 0.039 μ F \pm 10% 50V | C209 | 02526212 | EL 10 μ F \pm 20% 25V | R154 | 0113591 | CF 100 Ω \pm 5% SRD1/6P |
| C147 | 02740132 | CC 2200PF \pm 10% 50V | C210 | 02740162 | CC 6800PF \pm 10% 50V | R155 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C148 | 02740132 | CC 2200PF \pm 10% 50V | C211 | 02740162 | CC 6800PF \pm 10% 50V | R156 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C149 | 0275032 | CC 0.018 μ F \pm 10% 50V | C212 | 4845491 | CD 100PF \pm 10% 50V | R159 | 0113611 | CF 680 Ω \pm 5% SRD1/6P |
| C150 | 0275032 | CC 0.018 μ F \pm 10% 50V | C213 | 02526212 | EL 10 μ F \pm 20% 25V | R160 | 0113611 | CF 680 Ω \pm 5% SRD1/6P |
| C151 | 02740132 | CC 2200PF \pm 10% 50V | C214 | 4845461 | CD 0.1 μ F \pm 10% 50V | R161 | 0113643 | CF 15K Ω \pm 5% SRD1/6P |
| C152 | 02740132 | CC 2200PF \pm 10% 50V | RESISTORS | | | R162 | 0113643 | CF 15K Ω \pm 5% SRD1/6P |
| C153 | 02750112 | CC 0.01 μ F \pm 10% 50V | R101 | 0113591 | CF 100 Ω \pm 5% SRD1/6P | R163 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C154 | 02750112 | CC 0.01 μ F \pm 10% 50V | R102 | 0113591 | CF 100 Ω \pm 5% SRD1/6P | R164 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C155 | 0274231 | CC 1200PF \pm 5% 50V | R103 | 0113631 | CF 4.7K Ω \pm 5% SRD1/6P | R165 | 0113679 | CF 470K Ω \pm 5% SRD1/6P |
| C156 | 0274231 | CC 1200PF \pm 5% 50V | R104 | 0113631 | CF 4.7K Ω \pm 5% SRD1/6P | R166 | 0113679 | CF 470K Ω \pm 5% SRD1/6P |
| C157 | 4845491 | CD 100PF \pm 10% 50V | R105 | 4845508 | CF 51K Ω \pm 5% SRD1/6P | R167 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C158 | 4845491 | CD 100PF \pm 10% 50V | R106 | 0113657 | CF 56K Ω \pm 5% SRD1/6P | R168 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P |
| C159 | 02528112 | EL 1 μ F \pm 20% 50V | R107 | 0129631 | CF 10K Ω \pm 5% SRD1/4P | R169 | 0113679 | CF 470K Ω \pm 5% SRD1/6P |
| | | | | | | R170 | 0113679 | CF 470K Ω \pm 5% SRD1/6P |

CD : Ceramic discal EL : Electrolytic
 CC : Cylindrical ceramic CF : Carbon film
 MF : Mylar film FR : Fuse resistor

| SYMBOL No. | PART No. | DESCRIPTION | SYMBOL No. | PART No. | DESCRIPTION | SYMBOL No. | PART No. | DESCRIPTION |
|---------------|----------|-----------------------------------|-------------------|----------|-----------------------------------|---------------|----------|----------------|
| R171 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P | R244 | 0129571 | CF 270 Ω \pm 5% SRD1/4P | IC123 | 4836921 | LA6339 |
| R172 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P | R245 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | IC124 | 4836921 | LA6339 |
| R173 | 0113679 | CF 470K Ω \pm 5% SRD1/6P | R246 | 0113675 | CF 330K Ω \pm 5% SRD1/6P | IC125 | 4836931 | MN4017B |
| R174 | 0113679 | CF 470K Ω \pm 5% SRD1/6P | R247 | 0113655 | CF 47K Ω \pm 5% SRD1/6P | Q5 | 2319041 | 2SC1815 |
| R175 | 0113591 | CF 100 Ω \pm 5% SRD1/6P | R248 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q6 | 2319041 | 2SC1815 |
| R176 | 0113591 | CF 100 Ω \pm 5% SRD1/6P | R249 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | Q7 | 2317682 | 2SA1015 |
| R177 | 0113679 | CF 470K Ω \pm 5% SRD1/6P | R250 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | Q8 | 2317682 | 2SA1015 |
| R178 | 0113679 | CF 470K Ω \pm 5% SRD1/6P | R251 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q101 | 4817121 | 2SD856 |
| R179 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R252 | 0113655 | CF 47K Ω \pm 5% SRD1/6P | Q102 | 4817131 | 2SB761 |
| R180 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R253 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q103 | 2319041 | 2SC1815 |
| R181 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R254 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q104 | 2317682 | 2SA1015 |
| R182 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R255 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q111 | 4838831 | 2SC2062 |
| R183 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R256 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q112 | 4838831 | 2SC2062 |
| R184 | 0129892 | CF 8.2K Ω \pm 5% SRD1/4P | R257 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q113 | 4838831 | 2SC2062 |
| R185 | 0113651 | CF 33K Ω \pm 5% SRD1/6P | R258 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q114 | 4838831 | 2SC2062 |
| R186 | 0113663 | CF 100K Ω \pm 5% SRD1/6P | R259 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q115 | 4838831 | 2SC2062 |
| R187 | 4845506 | CF 30K Ω \pm 5% SRD1/6P | R260 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q116 | 4838831 | 2SC2062 |
| R188 | 4845513 | CF 750 Ω \pm 5% SRD1/6P | R261 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q117 | 4838831 | 2SC2062 |
| R189 | 0113673 | CF 270K Ω \pm 5% SRD1/6P | R262 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q118 | 4838831 | 2SC2062 |
| R190 | 4845505 | CF 24K Ω \pm 5% SRD1/6P | R263 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q119 | 4838831 | 2SC2062 |
| R191 | 0113609 | CF 560 Ω \pm 5% SRD1/6P | R264 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | Q120 | 4838831 | 2SC2062 |
| R192 | 0113671 | CF 220K Ω \pm 5% SRD1/6P | R265 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | DIODES | | |
| R193 | 0113655 | CF 47K Ω \pm 5% SRD1/6P | R266 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D101 | 4825101 | S5500B |
| R194 | 0113613 | CF 820 Ω \pm 5% SRD1/6P | R267 | 0129617 | CF 4.7K Ω \pm 5% SRD1/4P | D102 | 4825101 | S5500B |
| R195 | 4845512 | CF 300K Ω \pm 5% SRD1/6P | R268 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D103 | 4825101 | S5500B |
| R196 | 0113655 | CF 47K Ω \pm 5% SRD1/6P | R269 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D104 | 4825101 | S5500B |
| R197 | 0113613 | CF 820 Ω \pm 5% SRD1/6P | R270 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D105 | 4836891 | 05Z18 |
| Δ R198 | 1113825 | FR 4.7 Ω \pm 5% RN1/2B | R271 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D106 | 4836891 | 05Z18 |
| Δ R199 | 1113825 | FR 4.7 Ω \pm 5% RN1/2B | R272 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D107 | 4845421 | 05Z5.6 |
| R200 | 4845513 | CF 750 Ω \pm 5% SRD1/6P | R273 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D108 | 4845411 | 05Z8.2 |
| R201 | 0113673 | CF 270K Ω \pm 5% SRD1/6P | R274 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D109 | 2337011 | 1S2076 |
| R202 | 0113657 | CF 56K Ω \pm 5% SRD1/6P | R275 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D110 | 4825101 | S5500B |
| R203 | 0113615 | CF 1K Ω \pm 5% SRD1/6P | R276 | 0113639 | CF 10K Ω \pm 5% SRD1/6P | D111 | 2337011 | 1S2076 |
| R204 | 0113677 | CF 390K Ω \pm 5% SRD1/6P | R278 | 0129579 | CF 560 Ω \pm 5% SRD1/4P | D112 | 2337011 | 1S2076 |
| R205 | 0113659 | CF 68K Ω \pm 5% SRD1/6P | R282 | 0113615 | CF 1K Ω \pm 5% SRD1/6P | D113 | 2337011 | 1S2076 |
| R206 | 0113617 | CF 1.2K Ω \pm 5% SRD1/6P | R283 | 0113615 | CF 1K Ω \pm 5% SRD1/6P | D114 | 2337011 | 1S2076 |
| R208 | 0113653 | CF 39K Ω \pm 5% SRD1/6P | R288 | 0129579 | CF 560 Ω \pm 5% SRD1/4P | D115 | 2337011 | 1S2076 |
| R209 | 4845513 | CF 750 Ω \pm 5% SRD1/6P | ICs & TRANSISTORS | | | D116 | 2337011 | 1S2076 |
| R210 | 0113673 | CF 270K Ω \pm 5% SRD1/6P | IC101 | 2369551 | NJM4558 | D118 | 2337011 | 1S2076 |
| R211 | 0113653 | CF 39K Ω \pm 5% SRD1/6P | IC102 | 2369551 | NJM4558 | D119 | 2337011 | 1S2076 |
| R212 | 0113613 | CF 820 Ω \pm 5% SRD1/6P | IC103 | 2369551 | NJM4558 | D120 | 2337011 | 1S2076 |
| R213 | 0113675 | CF 330K Ω \pm 5% SRD1/6P | IC104 | 2369551 | NJM4558 | D121 | 2337011 | 1S2076 |
| R214 | 0113653 | CF 39K Ω \pm 5% SRD1/6P | IC105 | 2369551 | NJM4558 | D122 | 2337011 | 1S2076 |
| R215 | 4845513 | CF 750 Ω \pm 5% SRD1/6P | IC106 | 2369551 | NJM4558 | D123 | 2337011 | 1S2076 |
| R216 | 0113673 | CF 270K Ω \pm 5% SRD1/6P | IC107 | 2369551 | NJM4558 | D124 | 2337011 | 1S2076 |
| R217 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P | IC108 | 2369551 | NJM4558 | D125 | 2337011 | 1S2076 |
| R218 | 0113675 | CF 330K Ω \pm 5% SRD1/6P | IC109 | 2369551 | NJM4558 | D126 | 2337011 | 1S2076 |
| R229 | 0113615 | CF 1K Ω \pm 5% SRD1/6P | IC110 | 2369551 | NJM4558 | D127 | 2337011 | 1S2076 |
| R230 | 0113655 | CF 47K Ω \pm 5% SRD1/6P | IC111 | 2369551 | NJM4558 | D128 | 2337011 | 1S2076 |
| R231 | 4845508 | CF 51K Ω \pm 5% SRD1/6P | IC112 | 2369551 | NJM4558 | D129 | 2337011 | 1S2076 |
| R232 | 4845503 | CF 13K Ω \pm 5% SRD1/6P | IC113 | 2369551 | NJM4558 | D130 | 2337011 | 1S2076 |
| R234 | 0113635 | CF 6.8K Ω \pm 5% SRD1/6P | IC114 | 2369551 | NJM4558 | D131 | 2337011 | 1S2076 |
| R235 | 0113635 | CF 6.8K Ω \pm 5% SRD1/6P | IC115 | 2369551 | NJM4558 | D170 | 2337011 | 1S2076 |
| R236 | 0113633 | CF 5.6K Ω \pm 5% SRD1/6P | IC116 | 2369551 | NJM4558 | MISCELLANEOUS | | |
| R238 | 0113627 | CF 3.3K Ω \pm 5% SRD1/6P | IC117 | 2369551 | NJM4558 | | 4836851 | Power SW |
| R239 | 0113627 | CF 3.3K Ω \pm 5% SRD1/6P | IC118 | 2369551 | NJM4558 | | 4839021 | FUNCTION SW |
| R240 | 0113623 | CF 2.2K Ω \pm 5% SRD1/6P | IC119 | 2369551 | NJM4558 | | 2678344 | 4P US pin jack |
| R241 | 0113625 | CF 2.2K Ω \pm 5% SRD1/6P | IC120 | 4836921 | LA6339 | | | |
| R242 | 0113621 | CF 1.8K Ω \pm 5% SRD1/6P | IC121 | 4836921 | LA6339 | | | |
| R243 | 0113619 | CF 1.5K Ω \pm 5% SRD1/6P | IC121 | 4836921 | LA6339 | | | |

| SYMBOL No. | PART No. | DESCRIPTION |
|------------------------|---|---|
| CABINET | | |
| 1 | 4839072 4839073 | Escutcheon ass'y [for US, CS] Escutcheon ass'y [for VK, EW, BK, ZS] |
| 2 | 3308162 3308163 | Power button ass'y [for US, CS] Power button ass'y [for VK, EW, BK, ZS] |
| 3 | 3307851 | Slide knob ass'y |
| 4 | 3307771 | Push button |
| 5 | 3960371 | Joint stick |
| 6 | 4029294 | Foot |
| 7 | 4839832 | Top cover |
| 8 | 4474033 4474034 4474035 4474036 4474037 | Rear plate [for US, CS] Rear plate [for VK] Rear plate [for EW] Rear plate [for ZS] Rear plate [for BK] |
| 9 | 00437932 3913006 | Bushing(3P-4) [for US, CS, EW] Bushing(4N-4) [for VK, ZS, BK] |
| 10 | 4567431 | 3 x 6BT bind screw |
| 11 | 4567451 | 3 x 6DT bind screw |
| 12 | 4784106 | 3 x 10 tapping bind head screw |
| 13 | 4567442 | 3 x 8DT bind screw |
| 14 | 4567455 | 3 x 14DT bind head screw |
| 15 | 4567413 | 3 x 10 bind head screw |
| △16 | 4845541 | AC coad [for US, CS] |
| △ | 2712101 | AC coad [for VK, ZS, EW] |
| △ | 2749582 | AC coad [for BK] |
| △17 | 4844921 | Power transformer [for US, CS] |
| △ | 4847551 | Power transformer [for BK] |
| △ | 4847931 | Power transformer [for VK, ZS] |
| △ | 4848431 | Power transformer [for EW] |
| △18 | 2658372 | AC outlet [for US, CS, EW] |
| △19 | 2618053 47702552 4847571 4845273 | Voltage switch 4 Flanged nut GE BLOCK VR FL C.B.A. |
| for ACCESSORIES | | |
| | 9004057 | Side wood |

| |
|---|
| <p>NJM 4558</p> |
| <p>LA6339</p> |
| <p>MN4017B</p> |
| <p>2SA1015 2SC1815 2SC2062</p> |
| <p>2SB761 2SD856</p> |
| <p>1S2076 05Z5.6 05Z8.2 05Z18</p> |
| <p>S5500B</p> |



HITACHI SALES EUROPA GmbH
Rungedamm 2, 2050 Hamburg 80,
West Germany
Tel. 040-734 11-0

HITACHI SALES (U.K.) Ltd.
Hitachi House, Station Road, Hayes, Middlesex UB3
4DR, England
Tel. 01-848-8787

HITACHI SALES SCANDINAVIA AB
Rissneleden 8, Box 7138, 172-07 Sundbyberg, Sweden
Tel. 08-98 52 80

HITACHI SALES NORWAY A/S
P.O. Box 503, Oerebekk, 1620,
Gressvik, Norway
Tel. 032-28255

SUOMEN HITACHI OY
Takojanratsu 5, 15800 Lahti 80, Finland
Tel. (918) 44 241

HITACHI SALES A/S
Kuldysen 13, DK-2630, Taastrup, Denmark
Tel. 02-999200

HITACHI SALES A.G.
Bahnhofstrasse, 19, 5600 Lenzburg, Switzerland
Tel. 064-513621

HITACHI SALES WARENHANDELS GMBH
A-1180/Wien, Kreuzgasse 27, Austria
Tel. 0222-421670

HITACHI SALES ITALIANA, S.P.A.
Via Cristoforo Colombo 49, Trezzano sul naviglio
(Milano), Italy
Tel. 44 59 031

HITACHI SALES BELGIUM S.A./N.V.
Chaussee de Namur, 56, B-1400 Nivelles, Belgium
Tel. (3267) 21-71-81, (3267) 21-79-81

HITACHI SALES IBERICA, S.A.
Gran Via Carlos Tercero, 101, 1-1, Barcelona-08028,
Spain
Tel. 330-8652

**HITACHI PRODUCTIONS MAROC ELECTRONIQUES
DOMESTIQUES S.A.**
Rue du Havre, Casablanca, Morocco
Tel. 30-73-68, 30-73-57

HITACHI CANARIAS S.A.
Calle San-Francisco No. 19, 38002, Santa Cruz de Tenerife
Canary Islands
Tel. 24-64-98

HITACHI SALES (HELLAS) S.A.
110 Syngrou St., Athens, Greece
Tel. 9219082, 9233469

HITACHI SALES (MALAYSIA) SDN. BHD.
Wisma Hitachi, No. 2, Lorong 13/6A, 46200 Petaling
Jaya, Malaysia
Tel. 7573455

HITACHI (SINGAPORE) PTE., LTD.
18 Pasir Panjang Road # 01-03 PSA
Multi-Storey Complex, Singapore 0511
Tel. 2738102

HITACHI SALES (THAILAND) LTD.
2240-46, New Petchburi Road, Bangkok, Hueykuang
Bangkok, Thailand
Tel. 314-2741

HITACHI ELECTRIC SERVICE CO., (HONG KONG) LTD.
4th Floor Leun Tai Industrial Bldg., 72-76 Kwai Cheong
Road Kwai Chung N.T., Hong Kong
Tel. 0-242976, 0-240126

HITACHI SALES AUSTRALIA PTY LTD.
153 Keys Road, Moorabbin, Victoria 3189 Australia
Tel. 555-8722

HITACHI SALES CORPORATION OF AMERICA
Eastern Regional Office
1290 Wall Street West, Lyndhurst, New Jersey 07071,
U.S.A.
Tel. 201-935-8980

Mid-Western Regional Office
1400 Morse Ave., Elk Grove Village, Illinois 60007, U.S.A.
Tel. 312-593-1550

Southern Regional Office
510 Plaza Drive, College Park, Georgia 30349, U.S.A.
Tel. 404-763-0360

Headquarters Western Regional Office
401 West Artesia Boulevard, Compton, California 90220
U.S.A.
Tel. 213-537-8383

HITACHI SALES CORPORATION OF HAWAII, INC.
3219 Koapaka Street, Honolulu, Hawaii 96819, U.S.A.
Tel. 808-836-3621

HITACHI (HSC) CANADA INC.
3300 Trans-Canada Highway, Pointe Claire, Quebec,
H9R 1B1, Canada
Tel. 514-697-9150

Hitachi Sales Centroamericana, S.A.
HITACHI ELECTRONICA CENTROAMERICANA S.A.
San Rafael de Escazu, (Apartado 10272), San Jose,
Costa Rica
Tel. 28-20-11, 28-00-37

Hitachi Sales Corporation de Panama, S.A.
INTERNATIONAL HITACHI SALES PANAMA, LTD.
PRODUCTOS HITACHI, S.A.
Apartado 7657 Panama 5 Panama City, Rep. of Panama
Tel. 61-3100, 61-4305

HITACHI-FRANCE (RADIO-T.V. ELECTRO-MENAGER) S.A.
95-101 Rue Charles Michels,
93200 SAINT-DENIS,
France
Tel. 4821 6015

HITACHI LTD. TOKYO JAPAN
Head Office: THE HITACHI ATAGO BLDG.
No. 15-12, 2-Chome Nishi-Shinbashi
Minato-ku, Tokyo 105, Japan
Tel. Tokyo (03) 502-2111