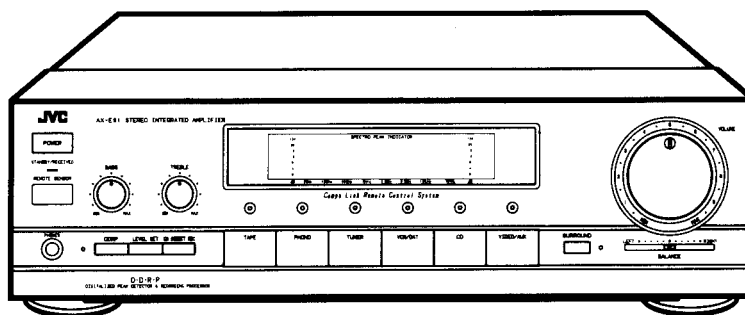
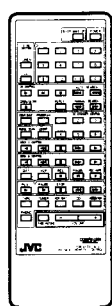


JVC

SERVICE MANUAL

MODEL No. **AX-E91BK**



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Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (\triangle) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

Do not use a line isolation transformer during this check.

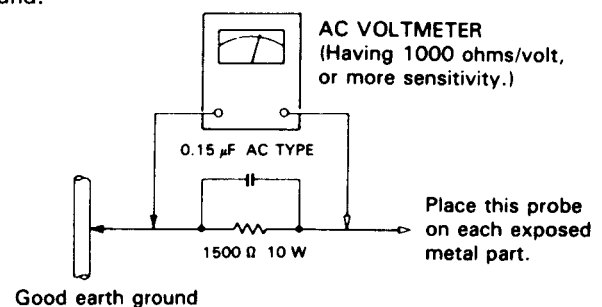
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).

- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

SPECIFICATIONS

AX-E91BK

OVERALL CHARACTERISTICS

Output power
 80 Watts per channel into 8 ohms at 1 kHz (DIN).
 75 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.
 40 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.05% total harmonic distortion.

Power band width : 10 Hz – 30 kHz (1HF, 0.9%, 8 ohms both channels driven)
 Frequency response : 5Hz – 75 kHz + 0, –3 dB (8 ohms)

Input terminals

Input sensitivity/impedance (1 kHz)
 PHONO : 3.0 mV/47 kohms
 VIDEO/AUX, TUNER, TAPE, VCR/DAT : 200 mV/47 kohms
 CD : 400 mV/47 kohms

Signal-to-noise ratio

PHONO : 73 dB ('66 IHF)
 CD, VIDEO/AUX, TUNER, TAPE, VCR/DAT : 98 dB ('66 IHF)
 PHONO : 67 dB (DIN)
 CD, VIDEO/AUX, TUNER, TAPE, VCR/DAT : 68 dB (DIN)

Tone controls : TREBLE: +8 ±1 dB
 –8 ±1 dB (at 10 kHz)
 BASS: +8 ±1 dB
 –8 ±1 dB (at 100 Hz)

EQUALIZER

PHONO overload capacity
 PHONO : 110 mV (0.06% THD)
 PHONO RIAA deviation
 PHONO : ±0.8 dB (20 Hz – 20 kHz)
 Recording output
 Output level
 TAPE REC : 500 mV
 VCR REC : 200 mV

GENERAL

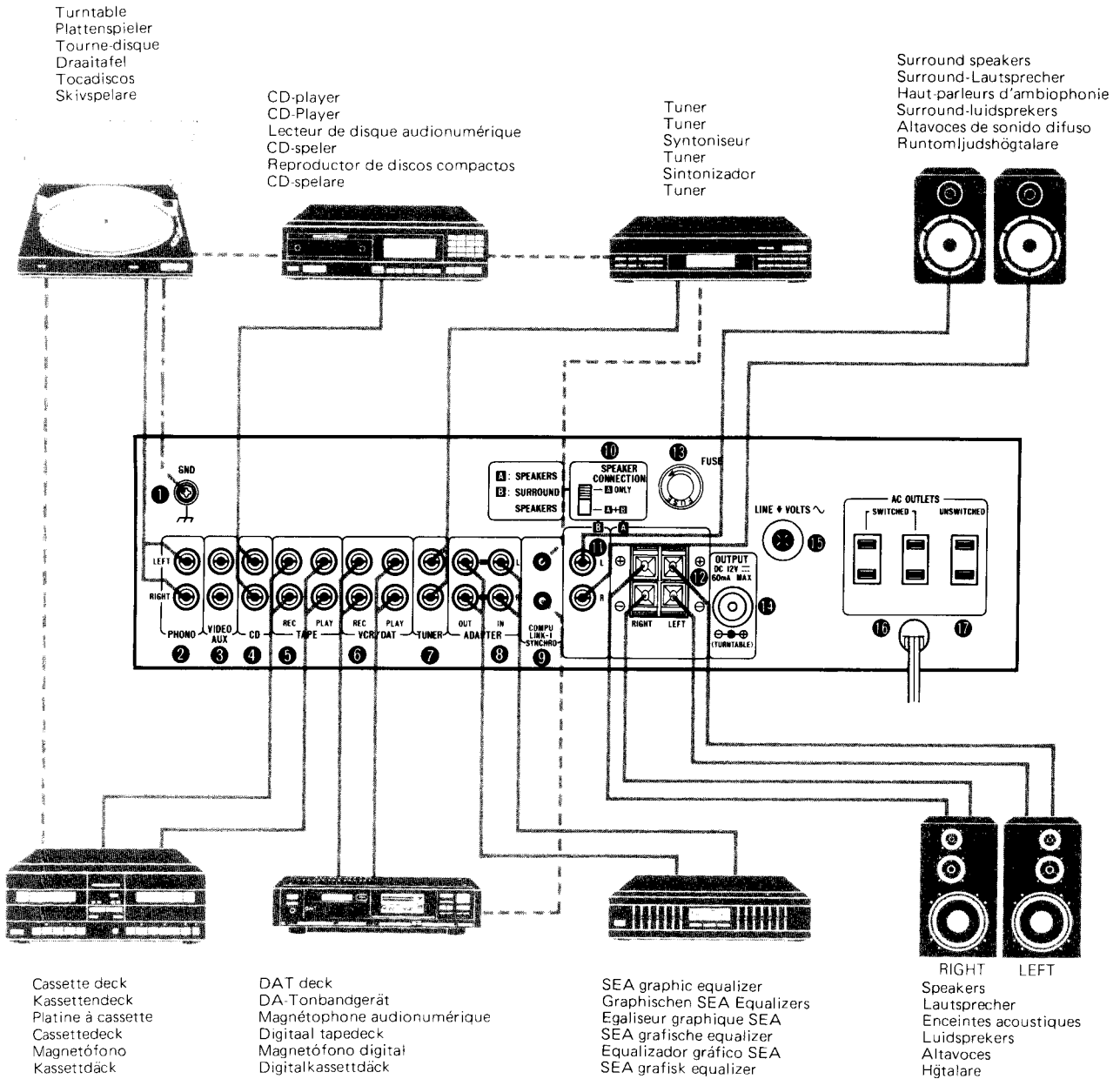
Dimensions : 360 (W) × 108 (H) × 307 (D) mm
 (14-3/16" × 4-1/4" × 12-1/8")
 Weight : 6.0 kg (13.3 lbs.)

Design and specifications subject to change without notice.

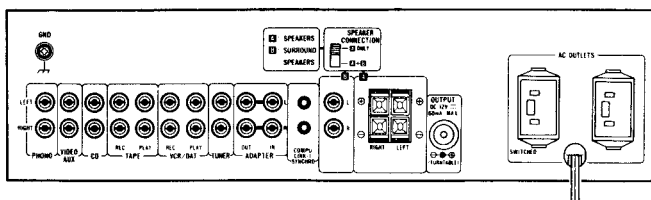
POWER SPECIFICATIONS

Areas	Line Voltage & Frequency	Power Consumption
		AX-E91BK
U.K.	AC 240 V ~, 50 Hz	395 watts
Australia		
Continental Europe	AC 220 V ~, 50 Hz	170 watts
Other areas	AC 110 / 127 / 220 / 240 V ~ selectable, 50/60 Hz	

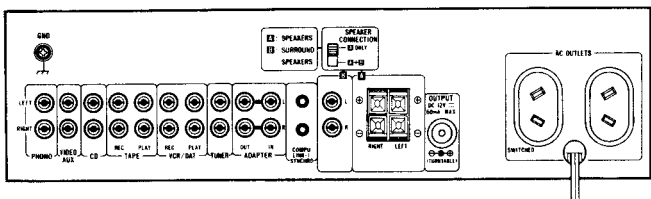
CONNECTION DIAGRAM
 ANSCHLUSSDIAGRAMM
 DIAGRAMME DES RACCORDEMENTS
 AANSLUITINGSDIAGRAM
 DIAGRAMA DE CONEXIONES
 ANSLUTNINGSSCHEMA



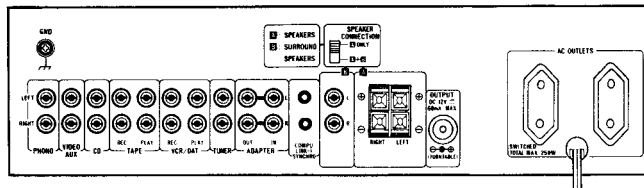
For the U.K.
Für Großbritannien
Pour le Royaume-Uni
Voor de U.K.
Para Reino Unido
För Storbritannien



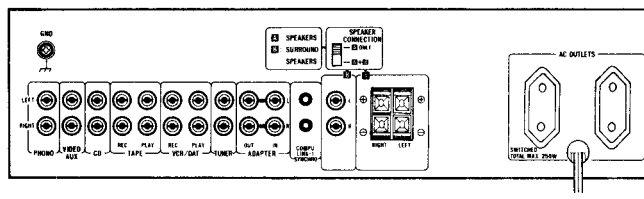
For Australia
Für Australien
Pour l'Australie
Voor Australië
Para Australia
För Australien



For Continental Europe
Für Kontinentaleuropa
Pour l'Europe Continentale
Voor het vasteland van Europe
Para Europa Continental
För Kontinentala Europa



For West Germany
Für die Bundesrepublik Deutschland
Pour l'Allemagne de l'ouest
Voor West-Duitsland
Para Alemania Federal
För Västtyskland



- 1 GND terminal
- 2 PHONO terminals
- 3 VIDEO/AUX terminals
- 4 CD terminals
- 5 TAPE terminals
- 6 VCR/DAT terminals
- 7 TUNER terminals
- 8 ADAPTER
Disconnect the short pin and connect the SEA Graphic Equalizer
When the SEA Graphic Equalizer is not used, connect the short pin.
- 9 COMPU LINK-1/SYNCHRO terminals
Connect to units provided with a COMPU LINK-1/SYNCHRO terminal to let the COMPU LINK control system function.
- 10 SPEAKER CONNECTION switch
When the surround speakers are used, switch over to "A + B". When not in use, switch over to "A ONLY".

Notes:

- If the SPEAKER CONNECTION switch is not as required above, it may cause unnecessary heating and improper output from the speakers.
- Do not connect the power cord to the wall outlet before or during the operating this switch.

- 11 SURROUND SPEAKERS B terminals
- 12 SPEAKERS A terminals
- 13 FUSE holder*
- 14 OUTPUT**
- 15 AC voltage selector*
This is used when the turntable with DC input plug is connected.
- 16 When this equipment is used in an area where the supply voltage is different from the preset voltage, reset the voltage selector to the correct position.
- 16 SWITCHED AC OUTLETS
- 17 UNSWITCHED AC OUTLET*
- 18 Power cord

* Not provided on units for the Continental Europe, the U.K., West Germany and Australia.

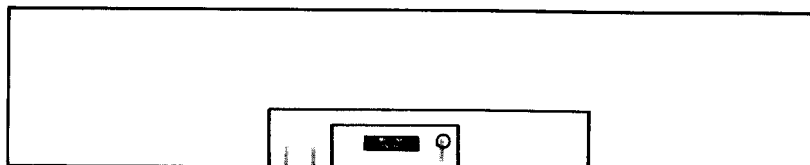
** Not provided on units for West Germany.

Notes:

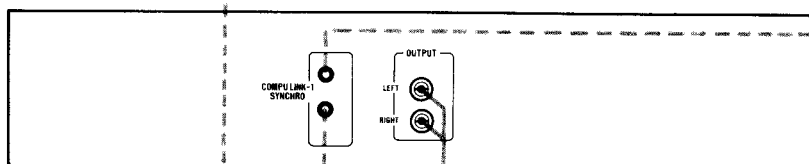
1. Make sure the power is off while connecting any component.
2. Connect the source components with left and right channels connected correctly. Reversed channels may degrade the stereo effect.
3. Connect speakers with correct polarity; (+) to (+) and (-) to (-). Reversed polarity may degrade the stereo effect.
4. Connect plugs or wires firmly. Poor contact may result in hum.
5. Do not connect the power plugs of components which have a total power consumption exceeding the value indicated on the rear panel.
6. The SWITCHED AC outlets are switched off when the front-panel POWER button is switched off.
7. The UNSWITCHED AC outlet is not switched off when the front-panel POWER button is switched off.
8. If your turntable has a separate ground lead, connect it to the GND terminal.
9. Use speakers with the correct impedance within the value indicated on the rear panel.

CONNECTION EXAMPLE
 ANSCHLUSSBEISPIEL
 EXEMPLE DE RACCORDEMENTS
 AANSLUITINGSVOORBEELD
 EJEMPLO DE CONEXIONES
 EXEMPEL PÅ ANSLUTNING

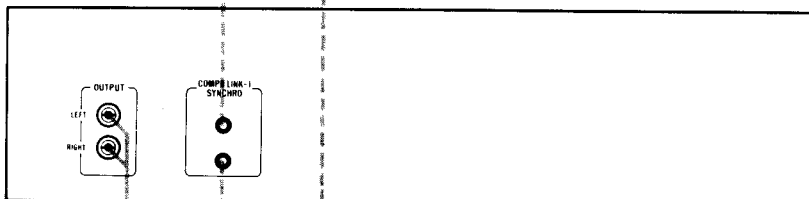
COMPU LINK Turntable
 COMPU LINK Plattenspieler
 Tourne-disque COMPU LINK
 COMPU LINK draaitafel
 Tocadiscos COMPU LINK
 COMPU LINK skivspelare



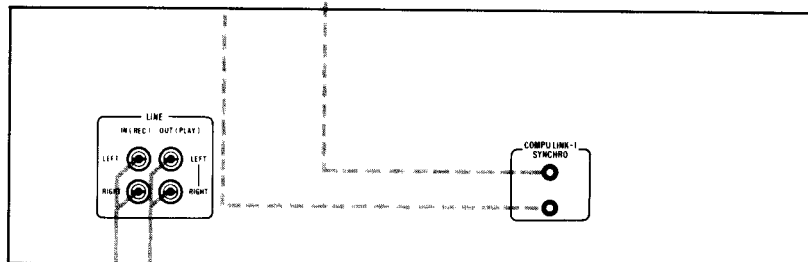
COMPU LINK tuner
 COMPU LINK Tuner
 Syntoniseur COMPU LINK
 COMPU LINK tuner
 Sintonizador COMPU LINK
 COMPU LINK tuner



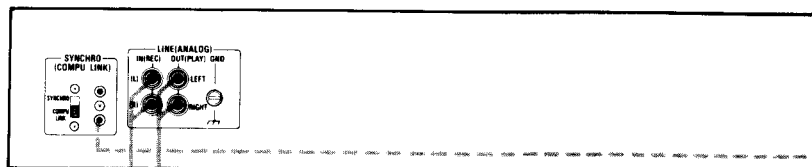
COMPU LINK CD player
 COMPU LINK CD-Player
 Lecteur de disques compacts
 COMPU LINK
 COMPU LINK CD-speler
 Reproductor de discos compactos
 COMPU LINK
 COMPU LINK CD-spelare



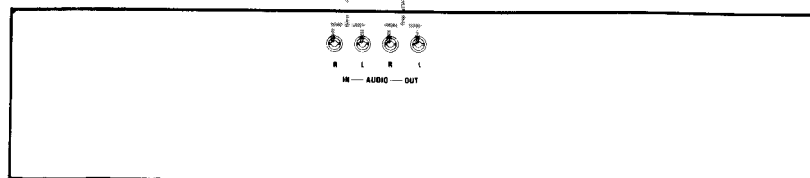
COMPU LINK Cassette deck
 COMPU LINK Kassettendeck
 Platine à cassettes COMPU LINK
 COMPU LINK cassettedeck
 Magnetófono COMPU LINK
 COMPU LINK kassettdäck



COMPU LINK DAT deck
 COMPU LINK DA-Tonbandgerät
 Enregistreur audionumérique
 COMPU LINK
 COMPU LINK DAT digitaal deck
 Magnetófono digital COMPU LINK
 COMPU LINK digitalkassettdäck

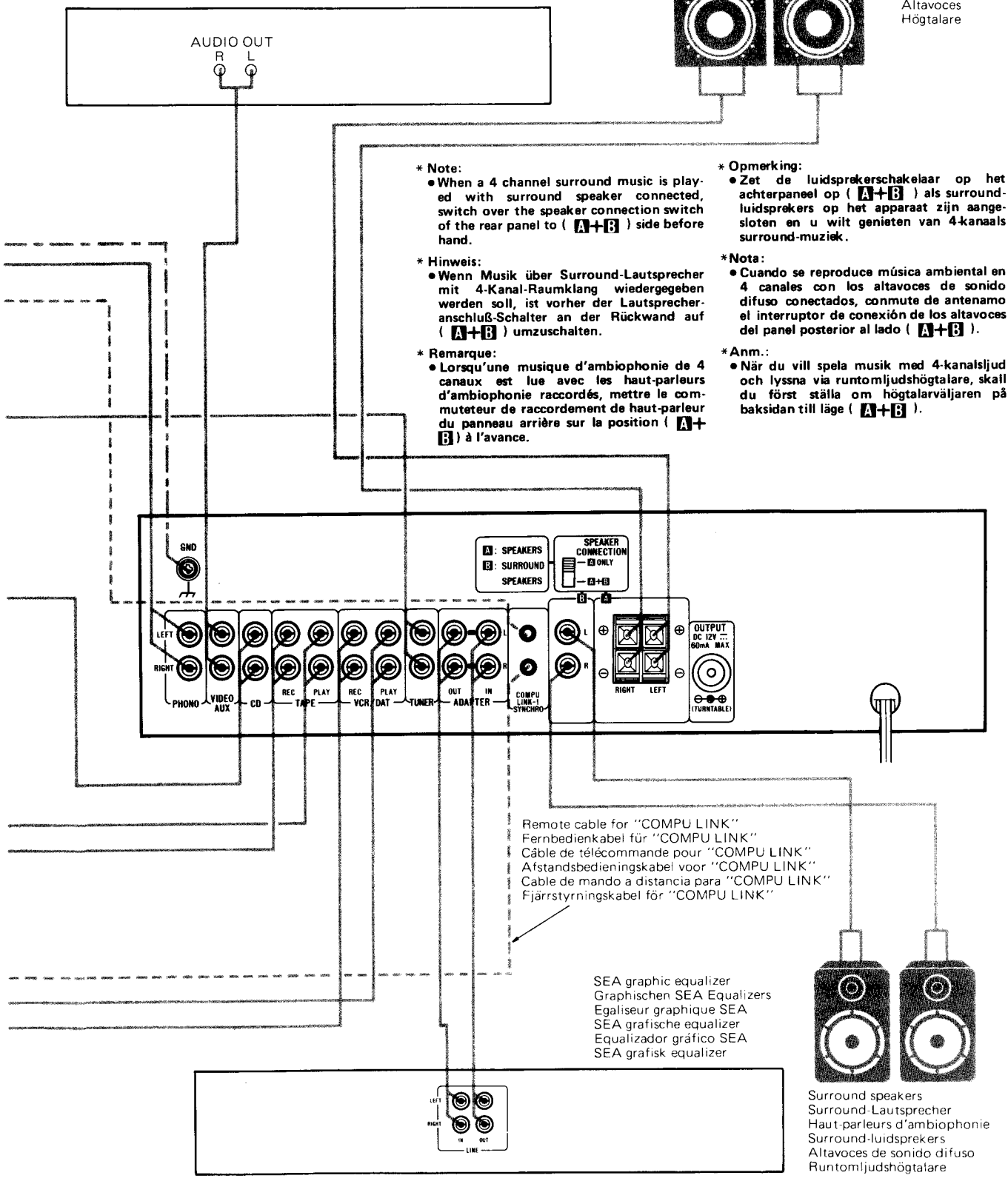


JVC Hi-Fi VCR
 JVC Hi-Fi-Videorecorder
 Magnétoscope de haute fidélité JVC
 JVC Hi-Fi videorecorder
 Grabador de videocassettes JVC
 JVC hifi-videobandspelare



JVC's Videodisc player, etc.
 JVC-Bildplattenspieler u.a.
 Lecteur de vidéodisque JVC, etc.
 JVC's beeldplaten-speler etc.
 Reproductor de video discos, etc. de JVC
 JVC videodiskivspelare, etc.

Speakers
 Lautsprecher
 Enceintes acoustiques
 Luidsprekers
 Altavoces
 Högtalare



*** Note:**

• When a 4 channel surround music is played with surround speaker connected, switch over the speaker connection switch of the rear panel to (**A+B**) side before hand.

*** Hinweis:**

• Wenn Musik über Surround-Lautsprecher mit 4-Kanal-Raumklang wiedergegeben werden soll, ist vorher der Lautsprecheranschluß-Schalter an der Rückwand auf (**A+B**) umzuschalten.

*** Remarque:**

• Lorsqu'une musique d'ambiophonie de 4 canaux est lue avec les haut-parleurs d'ambiophonie raccordés, mettre le commutateur de raccordement de haut-parleur du panneau arrière sur la position (**A+B**) à l'avance.

*** Opmerking:**

• Zet de luidsprekerschakelaar op het achterpaneel op (**A+B**) als surround-luidsprekers op het apparaat zijn aangesloten en u wilt genieten van 4-kanals surround-muziek.

*** Nota:**

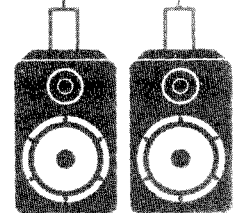
• Cuando se reproduce música ambiental en 4 canales con los altavoces de sonido difuso conectados, conmute de antemano el interruptor de conexión de los altavoces del panel posterior al lado (**A+B**).

*** Anm.:**

• När du vill spela musik med 4-kanalsljud och lyssna via runtomljudshögtalare, skall du först ställa om högtalarväljaren på baksidan till läge (**A+B**).

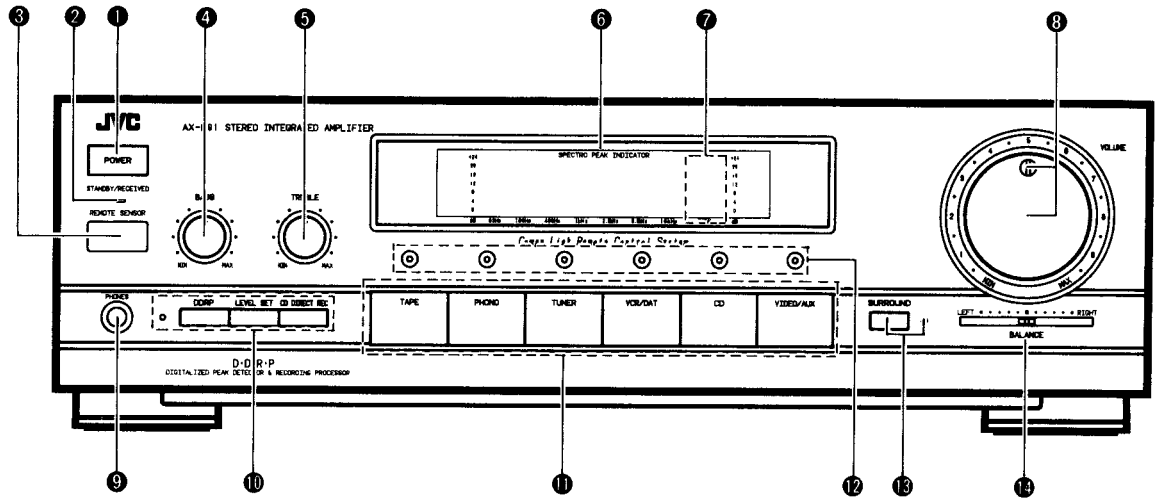
Remote cable for "COMPU LINK"
 Fernbedienkabel für "COMPU LINK"
 Câble de télécommande pour "COMPU LINK"
 Afstandsbedieningskabel voor "COMPU LINK"
 Cable de mando a distancia para "COMPU LINK"
 Fjärrstyrningskabel för "COMPU LINK"

SEA graphic equalizer
 Graphischen SEA Equalizers
 Egaliseur graphique SEA
 SEA grafische equalizer
 Equalizador gráfico SEA
 SEA grafisk equalizer



Surround speakers
 Surround-Lautsprecher
 Haut-parleurs d'ambiophonie
 Surround-luidsprekers
 Altavoces de sonido difuso
 Runtomljudshögtalare

FRONT PANEL
 FRONTPLATTE
 PANNEAU AVANT
 VOORPANEEL
 PANEL DELANTERO
 FRAMSIDAN



1 POWER (ON/STANDBY)

Press this button to turn the power on. Press again to turn the power off and activate the STANDBY mode. The STANDBY/RECEIVED indicator will light.

A small amount of power (4 watts) is consumed in the STANDBY mode. To turn the power off completely, disconnect the power cord from the wall outlet. Preset data is retained in memory while the power cord is plugged into the wall outlet. If the power cord is disconnected or a power failure occurs, data is retained for two or three days.

2 STANDBY/RECEIVED indicator

Connecting the power plug to the AC wall outlet causes this indicator to light, indicating that the unit has been placed in the STANDBY mode. The light will go out when the power button is turned on. The indicator will go on again while infrared signals are being received from the remote control unit.

3 REMOTE SENSOR

This window receives signals from the remote control unit. Do not obstruct it.

4 BASS

Turn clockwise to boost bass response and counterclockwise to decrease it.

5 TREBLE

Turn clockwise to boost treble response and counterclockwise to decrease it.

6 SPECTRO PEAK INDICATOR (AX-E91BK only)

Input signal levels are analyzed for 7 frequency bands. The SPECTRO PEAK INDICATOR shows the input signal level in each frequency band. To facilitate viewing, indicator response time is faster when the signal level is rising and slower when the signal level is dropping.

7 TOTAL-spectro-peak-indicator (AX-E91BK only)

Indicates the input signal level.

8 VOLUME and indicator

Controls the volume of the speakers and headphones. This indicator lights when the POWER button is pressed on.

9 PHONES (headphone jack)**10 DDRP/LEVEL SET/CD DIRECT REC and indicator**

DDRP (Digitalized Peak Detector & Recording Processor) detects the peak level of each source, automatically sets the optimum recording level, and then memorizes it.

To use, press first the DDRP button and then the LEVEL SET button when playing the source you want. The indicator shows that the recording level has been set by changing from flickering to a steady light.

CD DIRECT REC enables easy recording of a compact disc on a cassette deck. For details about both the DDRP and CD DIRECT REC, see page 31.

Notes:

- Since the DDRP level setting ends in approx. 30 seconds, set the level again when higher level is expected.
- To stop the DDRP operation halfway, press the DDRP button again.
- DDRP cannot be used for recording output on a VCR/DAT deck.

11 Source selector

Press the one you want.

12 SOURCE indicator

The indicator light corresponds to the pressed source selector button.

13 SURROUND and indicator

This indicator lights when the SURROUND button is pressed on.

When this button is pressed while listening to a stereo source, the sound field will be expanded.

Notes:

- When a 4 channel surround music is played with surround speaker connected, switch over the speaker connection switch of the rear panel to (A + B) side beforehand.
- However, when the audio source is monaural, no surround effect will be obtained.
- Sound from the surround speakers cannot be recorded on the tape.

14 BALANCE

Use to adjust the balance between the left and right speakers.

This knob is normally set to the center click position.

REMOTE CONTROL UNIT (RM-SE91)

1 POWER

Press to change the power for the AX-E91BK/AX-E71BK to on or STANDBY.

2 SLEEP/WAKE UP

Pressing this button sets the audio timer built in JVC's COMPU LINK tuner.

When the power of the tuner is switched to ON, pressing this button makes the timer SLEEP mode, and pressing more changes the time display in turn.

When the power is switched to STANDBY, pressing once makes the mode WAKE UP, and more changes the time display additionally.

3 10 KEY CONTROL

TUNER (): Press this button to use the 10 key () as a tuner 10 key operation button.

CD (): Press this button to use the 10 key () as a CD 10 key operation button.

4 10 KEY ([1] ~ [10], [0], [+10])

These buttons are for directly accessing the FM/AM preset stations, and for selecting the CD track No. Use this button to assign the CH numbers or track numbers (1 ~ 10) of a disc which is to be played or programmed. To assign, a track number greater than 10, use a combination of the [+10] button and numeric button.

Examples:

5: Press numeric button [5].

10: Press numeric button [10].

17: Press the [+10] button once and numeric button [7].

20: Press the [+10] button once and numeric button [10]. Or press the [0] button after pressing the [+10] button twice.

25: Press the [+10] button twice and numeric button [5].

5 CD CONTROL

Play (): Press this button to play a compact disc.

Pause (): Press this button to temporarily stop play. To start play again, press the Play () button.

Stop (): Press this button to stop play. The standby mode will be entered.

AUTO SEARCH () (backward): Press once during play to return the unit to the start of the current tune. Press twice to return the unit to the start of the previous tune. Each time this button is pressed, the unit moves backward by one selection. Keeping this button continuously pressed will return the unit to the beginning of the disc. Pressing this button to return to the beginning of the disc.

AUTO SEARCH () (forward): Press once during play to move the unit to the start of the next tune. Each time this button is pressed, the unit moves forward by one tune.

OPEN/CLOSE (): Press this button to open or close the disc tray. Pressing this button during play stops play and the disc tray slides out.

REPEAT: Press this button to play the CD repeatedly.

MANUAL SEARCH () (backward): Press to search for the desired selection in the reverse direction.

MANUAL SEARCH () (forward): Press to search for the desired selection in the forward direction. Sound will be heard at a reduced level while search is taking place from the play mode.

6 CD CHANGER CONTROL

CONTINUE: Pressing this button plays the discs in the magazine sequentially, starting with Disc 1, regardless of the program.

PROGRAM: Press this button to play the discs in programmed sequence.

[1] ~ [6]: Press the button to specify a disk by its number in the magazine.

Notes:

• For details, consult the instruction book of the CD auto changer.

7 MUSIC SCAN: Press this button together with the () or () of tape deck A or B (8 or 9) to briefly play the beginning of each selection.

DDRP: Press this button to set the amplifier for DDRP recording; this operates the DDRP and LEVEL SET buttons together, which detect the recording level (the indicator flickers). The DDRP level setting ends in approx. 30 seconds and the indicator changes to a steady light. To stop the DDRP operation halfway, press the button again while the indicator is still flickering. The indicator will change to a steady light, but this does not mean that the optimum recording level has been detected.

8 DECK A CONTROL

(): Press to quickly wind the tape from the right to the left reel.

(): Press to stop the tape.

(): Press to quickly wind the tape from the left to the right reel.

(): Press to play the tape in the forward direction.

(): Press to play the reverse direction of the tape.

9 DECK B CONTROL

For (), (), (), (), and (), the operation is the same as that for DECK A.

PAUSE (): Press to temporarily stop the play or recording modes. To restart, press the play button.

REC (): To record, press the PLAY () button while holding down this button.

REC MUTE (): Press this button to create a non-recorded section between songs.

10 DAT/VCR CONTROL ([DAT] or [VCR])

PAUSE (): Press this button to pause during playback or recording. To cancel PAUSE, press the PLAY button.

STOP (): Press this button to stop operation.

REC (): To record, press the PLAY () button while holding down this button.

(): DAT DECK: Press this button to quickly wind the tape from the right to left reel.

VCR: From the stop mode, press this button to quickly rewind tape. From the playback mode press this button to view high speed reverse play. (Shuttle search.)

PLAY (): Press this button to play a tape.

(): DAT DECK: Press this button to quickly wind the tape from the left to right reel.

VCR: From the stop mode, press this button to take VCR to the fast forward mode. From the playback mode, press this button to view high speed forward play. (Shuttle search.)

11 Source Select

This function is similar to the 1 SOURCE SELECTOR at page 19. For components with COMPU LINK, the selected unit will start playing while the previously selected unit stops playing.

For components without the COMPU LINK feature, such as a VCR or a video disc player, only the source selector changes in response to the button pressed.

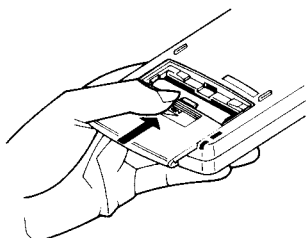
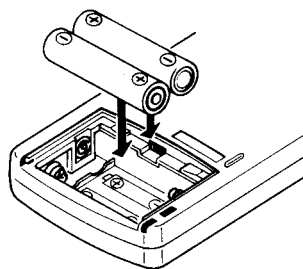
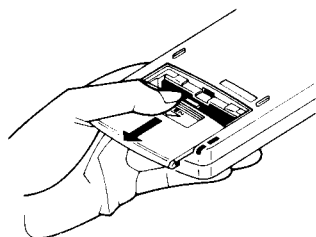
12 FADE MUTING

Pressing this button to lower the volume in steps. The volume continues to decrease each time this button is pressed.

13 VOLUME ([-] [+])

Press the [+] button to increase the volume and the [-] button to decrease it. When these buttons are pressed, the VOLUME knob on the amplifier rotates to register the new volume level and during rotating the knob's indicator blinks.

How to install the batteries
Einsetzen der Batterien
Comment mettre les piles en place
Plaatsen van de batterijen
Cómo se instalan las pilas
Insättning av batterier



Batteries

• **How to install the batteries**

1. Remove the battery cover by sliding the cover of the battery case in the direction of the arrow.
2. Install the provided batteries ("AA": UM-3, R6, 1.5 V), with their polarities properly placed. Positive and negatives facing the correct direction.
3. Re-Install the battery cover.

• **Battery life**

The batteries can be used for an average of 1 year.

• **Battery replacement time**

When the distance at which the remote control unit functions begins to decrease, replace the batteries ("AA": UM-3, R6, 1.5 V).

• **How to operate the remote control unit**

The remote control range is approximately 23 feet (7 m). Pointing the remote control at an angle to this unit will reduce the useful distance of the remote control.

OPERATION

Before use

Connect each component correctly, then plug the power cord to the AC wall outlet.

Basic operation

1. Press the POWER button on.
2. Proceed through the steps described below.
3. Adjust the volume and balance for the desired sound levels.
4. Use the BASS and TREBLE volumes to obtain the tone you wish to hear.
5. When the SEA graphic equalizer is connected to the unit, use it to adjust the tone quality.

Listening to broadcasts

1. Press the TUNER button so that the TUNER indicator lights.
2. Operate the tuner as described in its operation manual.

Listening to records

1. Press the PHONO button. The PHONO indicator will light.
2. Operate the turntable as described in its manual.

NOTES:

- Use a turntable with an MM cartridge.

Listening to compact discs

1. Press the CD button. The CD indicator will light.
2. Operate the CD player as described in its operation manual.

Listening to tapes

1. Press the TAPE button so that the TAPE indicator will light.
2. Operate the cassette deck for playback as described in its operation manual.

Listening to VCR/DAT

1. Press the VCR/DAT button so that the VCR/DAT indicator lights.
2. Operate the VCR or DAT deck according to instructions.

Listening to VIDEO DISC etc.

1. Press the VIDEO/AUX button so that the VIDEO/AUX indicator lights.
2. Operate the video disc player etc. as described in its operation manual.

Using stereo headphones

Stereo headphones can be plugged into the front panel jack. The signal from this jack is independent of the speakers.

Plug stereo headphones into this jack for private listening.

DDRP RECORDING

When setting a recording level

Play the source desired. Press first the DDRP button and then the LEVEL SET button.

Since the recording level is being searched when the DDRP indicator is flickering, perform the recording operation after the flickering changes to a steady light.

Notes:

- The sound you hear from the speakers or headphones is the source sound, not the recording on the tape.
- The recording level set by the DDRP is memorized for each source. To record from the same source continuously, press only the DDRP button to set the recording level.
- If the DDRP indicator of lights when changing the source, the recording level has been memorized. When pressing the DDRP button in this status, the recording level is reset.
- When recording without the DDRP, the recorded sound may be distorted.

CD DIRECT RECORDING

This function can be activated when incorporating the JVC COMPU LINK CD player. In this case make sure to connect this unit and the CD player with a remote cable.

Notes:

When a CD player accommodating the DDRP is connected.

- Press the CD DIRECT REC button, to automatically activated the DDRP. In this case, all the tunes to be recorded are scanned for the optimum recording level. (The indicator flickers and the sound cannot be heard.) When the indicator changes from flickering to a steady light, auto recording has started.

When a CD player not accomodating the DDRP is connected.

- Set the CD player in the playback mode. Press the DDRP button and LEVEL SET button to set the recording level. (The indicator changes from flickering to a steady light.) Then, press the CD DIRECT REC button.
- As the source are locked to CD during synchro recording, it cannot be switched even if another source button is pressed.
- The synchro recording does not start except for when the REC/REC MUTE (○) and Pause (■) buttons are pressed simultaneously to set the recording-standby mode.

TIMER RECORDING AND PLAYBACK

- Recording from a tuner or playing back each source at a desired time can be performed using an audio timer built in JVC's COMPU LINK tuner. For details, see the instructions of the components.
- Timer recording and playback cannot be performed if the COMPU LINK remote cables are not connected correctly. (See page 11.)

AUFNAHME UND WIEDERGABE MIT TIMER

- Aufnahme von einem Tuner oder Wiedergabe jeder gewünschten Tonquelle zu jedem gewünschten Zeitpunkt ist mit dem in COMPU LINK Tunern von JVC eingebauten Audiotimer möglich. Einzelheiten siehe Bedienungsanleitung des betreffenden Bausteins.
- Wiedergabe und Aufnahme mit Timer ist nicht möglich, wenn die Fernbedienungskabel für COMPU LINK nicht richtig angeschlossen sind. (Siehe Seite 11.)

ENREGISTREMENT AVEC MINUTERIE ET LECTURE

- L'enregistrement à partir du tuner ou la lecture de chaque source à l'heure désirée peut être effectuée en utilisant la minuterie audio incorporée dans le tuner COMPU LINK de JVC. Pour plus de détails, se reporter au mode d'emploi des composants.
- L'enregistrement et la lecture ne peuvent pas être effectués si les câbles de commande à distance COMPU LINK ne sont pas correctement connectés. (Voir page 11.)

<p>Procedure Verfahren Procédure</p>	<p>Timer playback* (tuner, CD, phono, tape) Timerwiedergabe* (Tuner, CD, Phono, Tonband) Lecteur avec minuterie* (tuner, disque audionumérique, disque analogique, bande)</p>	<p>Timer recording (tuner only) Timeraufnahme (nur Tuner) Enregistrement par minuterie (tuner uniquement)</p>
<p>1. Timer operation 1. Timerbetrieb 1. Opération de minuterie</p>	<ul style="list-style-type: none"> Make sure that the POWER switches of the units are switched to ON. Set the timer according to the instructions of the tuner. Prüfen, ob die Netzschalter aller angeschlossenen Geräte in Ein-Stellung gestellt sind. Den Timer entsprechend der Bedienungsanleitung des Tuners einstellen. Vérifier que l'interrupteur d'alimentation POWER de chaque appareil est commuté sur marche (ON). Régler la minuterie en fonction du mode d'emploi du tuner. 	
<p>2. Amplifier operation 2. Verstärkerbetrieb 2. Opération de l'amplificateur</p>	<ul style="list-style-type: none"> Set the VOLUME wanted to playback. Die zur Wiedergabe gewünschte Lautstärke einstellen. Spécifier le niveau de volume désiré pour la lecture. 	<ul style="list-style-type: none"> Set the VOLUME in case you need to monitor the source sound. Use the DDRP in case the recording level has been set with it. Den Lautstärkepegel einstellen, wenn die Aufnahme mitgehört werden soll. Die Funktion DDRP verwenden, falls der Aufnahmepegel mit dieser Funktion bestimmt wurde. Spécifier le niveau de volume désiré dans le cas où l'on veut surveiller la source sonore. Utiliser le DDRP si le niveau d'enregistrement a été réglé par cette fonction.
<p>3. (e.g.) Deck operation 3. (Z.B) Deckbetrieb 3. (ez.) Opération de la platine</p>	<ul style="list-style-type: none"> Load a recorded cassette. Eine bespielte Cassette einlegen und Wiedergabe durchführen. Mettre une cassette enregistrée en place et effectuer la lecture. 	<ul style="list-style-type: none"> Load a cassette, and set the INPUT LEVEL when not using the DDRP. Eine cassette einlegen, und INPUT LEVEL verwenden, wenn die Funktion DDRP nicht verwendet wird. Mettre une cassette en place et régler le niveau d'entrée si le DDRP n'est pas utilisé.

* To play back with a timer, prepare each source for playback; for example, set a CD in the CD player.

* Zur Wiedergabe mit Timer jede Tonquelle zur Wiedergabe vorbereiten; z.B. eine CD in den CD-Player einlegen.

* Pour la lecture avec la minuterie, préparer chaque source pour la lecture. Par exemple, mettre un disque audionumérique dans le lecteur de disque audionumérique.

Notes:

- Connect the power plug of the tuner to the wall outlet or the UNSWITCHED AC outlet of the amplifier.
- Connect the power plug of the cassette deck to the SWITCHED AC outlet of the amplifier.

Hinweise:

- Den Netzstecker des Tuners an eine Wandsteckdose oder an die Gerätesteckdose UNSWITCHED AC des Verstärkers anschließen.
- Den Netzstecker des Cassettendecks an die Gerätesteckdose SWITCHED AC des Verstärkers anschließen.

Remarques:

- Raccorder la fiche secteur du tuner à une prise murale ou à la prise secteur non commutée de l'amplificateur.
- Raccorder la fiche secteur de la platine cassette à la prise secteur commutée de l'amplificateur.

HOW TO USE THE REMOTE CONTROL UNIT (RM-SE91)

- The "COMPU LINK" component system is composed of the following: Tuner, CD player, Cassette deck, Record player and DAT deck. All interconnect to the COMPU LINK-1/SYNCHRO terminals.
- Each "COMPU LINK" component can be put into operation by merely operating the appropriate button on the remote control unit. It is not necessary to press the source selector button on the amplifier.

Example:

While a CD is playing you press the tape play button. The CD will stop playing and the tape playback will start.

Note:

- If the component already in playback happens to be a device without the "COMPU LINK" feature, it will keep on playing. To stop a COMPU LINK device (which may be a VCR) press its STOP button.
- The remote control unit works best when it is aimed straight at the remote sensor of the amplifier. (The control unit is model RM-SE91 and the amplifier is model AX-E91BK or AX-E71BK.)
If the signal sent by the remote control unit is received by two or more components, the components may hesitate to start up. If this should occur keep pressing the button until all of the target components start. If the target components are far apart, they may not be able to receive the remote control signals simultaneously, therefore some of them may remain inactive. In such a case, re-aim the control unit to the remote sensor of each inactive component and press the appropriate button. (RM-SE91)
- The remote control unit has no memory capability. Thus, memory programming, if desired, must be done at the component level, which can be either Tuner, CD player or DAT player.

To listen to AM or FM radio broadcasts (Fig. 2)

1. **10 KEY CONTROL** (TUNER) : Pressing this button sets these buttons in FM or AM mode, 10 KEY: (1 ~ 10, +10, 0.)

Note:

- The amplifier source selector automatically switches over to "TUNER".
2. (1 ~ 10, +10, 0) : Of the preset channels, programmed in the tuner, check the number of the channel of your choice, and press the button corresponding to that channel number.

To play CD (Fig. 3)

1. **10 KEY CONTROL** (CD) : To select a track by number on the CD, press the CD button first, then press the 10 KEY (1 ~ 10, +10, 0) buttons for the desired selection.

1. **CD CONTROL** (▶): Press this button to start play.
2. (■): Press this button to stop play.
3. **AUTO SEARCH** (◀◀): Pressing this button interrupts the selection being played and returns to the beginning of that selection.
AUTO SEARCH (▶▶): Pressing this button interrupts the play and brings the CD to the start of the next selection.
4. **MANUAL SEARCH** (◀◀): Press this button for fast reverse of the CD during play or pause modes.
MANUAL SEARCH (▶▶): Press this button to fast forward the CD during play or pause modes.
5. **REPEAT** (♻): Press this button to repeat the play of the whole disc or of the selected tune.
6. **OPEN/CLOSE** (⬆): Press this button to load or unload the disc platter.

To play cassette deck

DECK A CONTROL (Fig. 4)

1. (◀): Press to play the reverse direction of the tape.
2. (◀◀): Press to quickly wind the tape from the right to the left reel.
3. (■): Press to stop the tape.
4. (▶): Press to play the tape in the forward direction.
5. (▶▶): Press to quickly wind the tape from the left to the right reel.

DECK B CONTROL (Fig. 4)

1. (◀), (◀◀), (■), (▶▶), (▶) : The functions of these buttons are the same as those of DECK A.
2. (⏸): Press this button to pause tape running. Press this button simultaneously with the REC (○) button to allow the deck to enter the recording wait status. Press the (◀) or (▶) button to cancel pause and to start recording.
3. **REC** (○) (○): Press either the (◀) or (▶) button while pressing this button to start recording.
4. **REC MUTE** (○) (○): Press this button to omit unwanted recording during the recording mode or to insert a blank space between programs.

Note:

- Deck A will come into operation when any remote control unit DECK B CONTROL button is pressed while a cassette is loaded only in deck A, but this is not a fault or malfunction.

MUSIC SCAN

1. (7) : Press either the (◀◀) or (▶▶) button of DECK A or DECK B simultaneously with this button to find the start of a program.

Note:

- For details, see the "instruction of cassette deck".

DDRP

1. (7) : Press for DDRP recording. For details, see page 23.

To play DAT or VCR (Fig. 5)

1. Press the (DAT) button to control the DAT deck or the (VCR) button to control the VCR.

Note:

- Point the front end of the Remote Control Unit directly at the remote sensor of the VCR when operating the VCR.

DAT (Fig. 5)

1. **CONTROL** (DAT) : Pressing (DAT) button makes the control buttons (10) control the DAT deck.
2. **PLAY** (▶) (▶): Press this button for DAT playback.
3. **STOP** (■) (■): Press this button to stop the DAT deck.
4. **PAUSE** (⏸) (⏸): Press this button pauses the DAT deck when it is the play back mode.
PLAY (▶) (▶): Pressing this button resumes the recording operation that was interrupted by pause.

5. **⏮** : Press this button to set the tape to rapid wind into the left cassette reel.
⏭ : Press this button to set the tape to rapid wind into the right cassette reel.
REC (⏺) + **▶** : Pressing **▶** button while keeping **⏺** button pressed commences recording.
REC (⏺) + **⏸** : Pressing these buttons, **⏺** and **⏸**, at the same time pauses the recording operation.
 (Recording can be resumed at anytime.)

VCR (Fig. 5)

- CONTROL** (⏻) **VCR** : Pressing this button makes the control button **⏻** control the VCR.
- PLAY** (▶) : Pressing this button puts the VCR into playback.
- STOP** (■) : For stopping the VCR.
- PAUSE** (⏸) : Pressing this button while the VCR is in playback switches its mode to STILL.
PLAY (▶) : To cancel PAUSE, press PLAY button.
- ⏮** : Press this button to rewind the tape.
⏭ : Press this button to set the tape in rapid forward motion. When the tape is in the PLAY mode, these two buttons can be used for selecting the "SHUTTLE SEARCH".
REC (⏺) + **▶** : To start recording, press **▶** button while keeping **⏺** button pressed.
REC (⏺) + **⏸** : Pressing these buttons, **⏺** and **⏸**, at the same time pauses the recording operation.
 (Recording can be resumed at anytime by pressing PLAY **▶** button.)

SOURCE SELECT (Fig. 6)

The source changes automatically in response to the pressed buttons. When the source is switched to the component which have COMPU LINK, the unit starts playing automatically.

Mute the sound (Fig. 7)

FADE MUTING (⏶) : Press this button to lower the volume in steps. The volume continues to decrease each time this button is pressed.

Move volume up or down (Fig. 7)

VOLUME (⏪ ⏩) : The sound volume is increased or decreased gradually.

RM-SE91

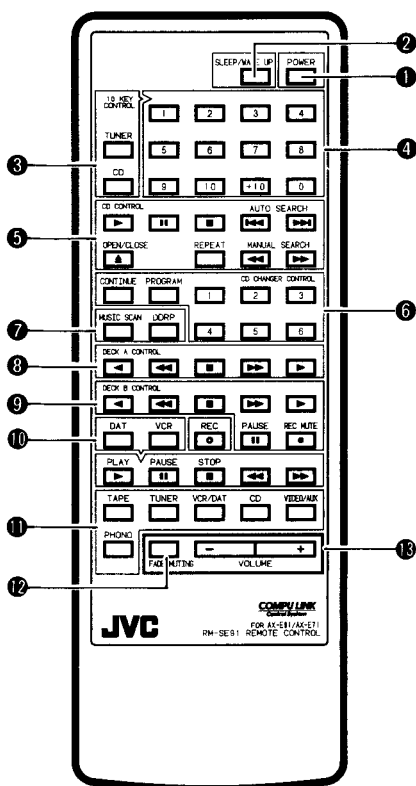


Fig. 1
Abb. 1
Afb. 1

- SOURCE SELECT
- SOURCE SELECT
- Sélection de source (SOURCE SELECT)
- Brontoetsen (SOURCE SELECT)
- Selección de fuente (SOURCE SELECT)
- SOURCE SELECT

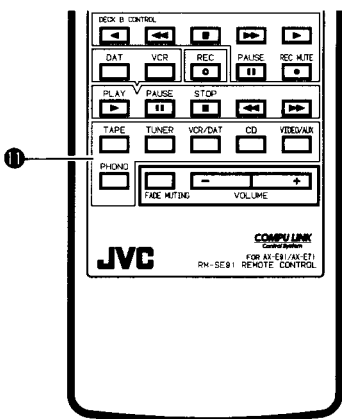


Fig. 6
Abb. 6
Afb. 6

- FM/AM broadcast
- FM/AM-Sender
- Emission en FM/AM
- FM/AM uitzending
- Radiodifusión en FM/AM
- FM/AM-sändning

- CD player
- CD-Player
- Lecteur de disque audionumérique (CD)
- CD-speler
- Reproductor de discos compactos
- CD-spelare

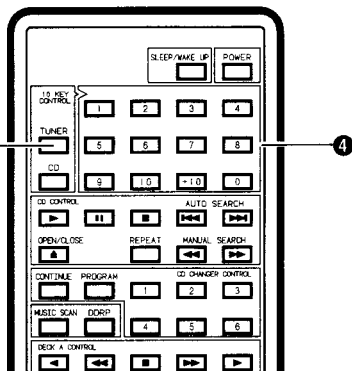


Fig. 2
Abb. 2
Afb. 2

- Cassette deck
- Kassettendeck
- Platine à cassette
- Cassettdeck
- Manetófono
- Kassettcäck

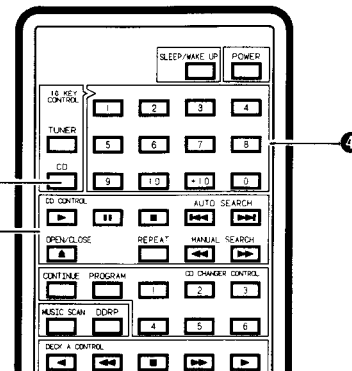


Fig. 3
Abb. 3
Afb. 3

- DAT or VCR
- DAT oder VCR
- Commande de magnétophone audio-numérique ou magnétoscope
- DAT of VCR
- Magnetófono digital o grabador de video cassettes
- Kontroll ditigalkassettdeck eller videobandspelare

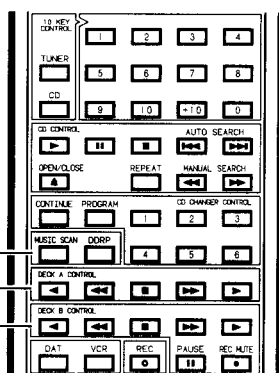


Fig. 4
Abb. 4
Afb. 4

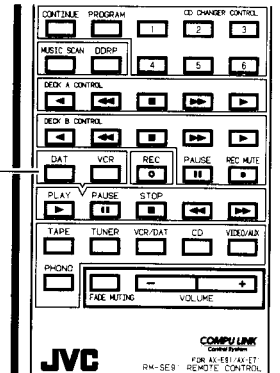


Fig. 5
Abb. 5
Afb. 5

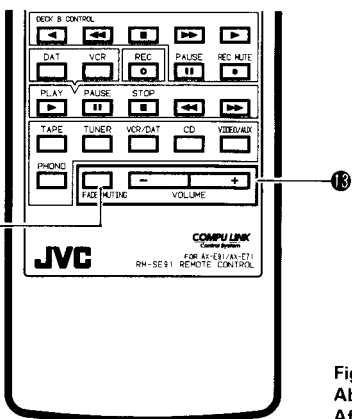


Fig. 7
Abb. 7
Afb. 7

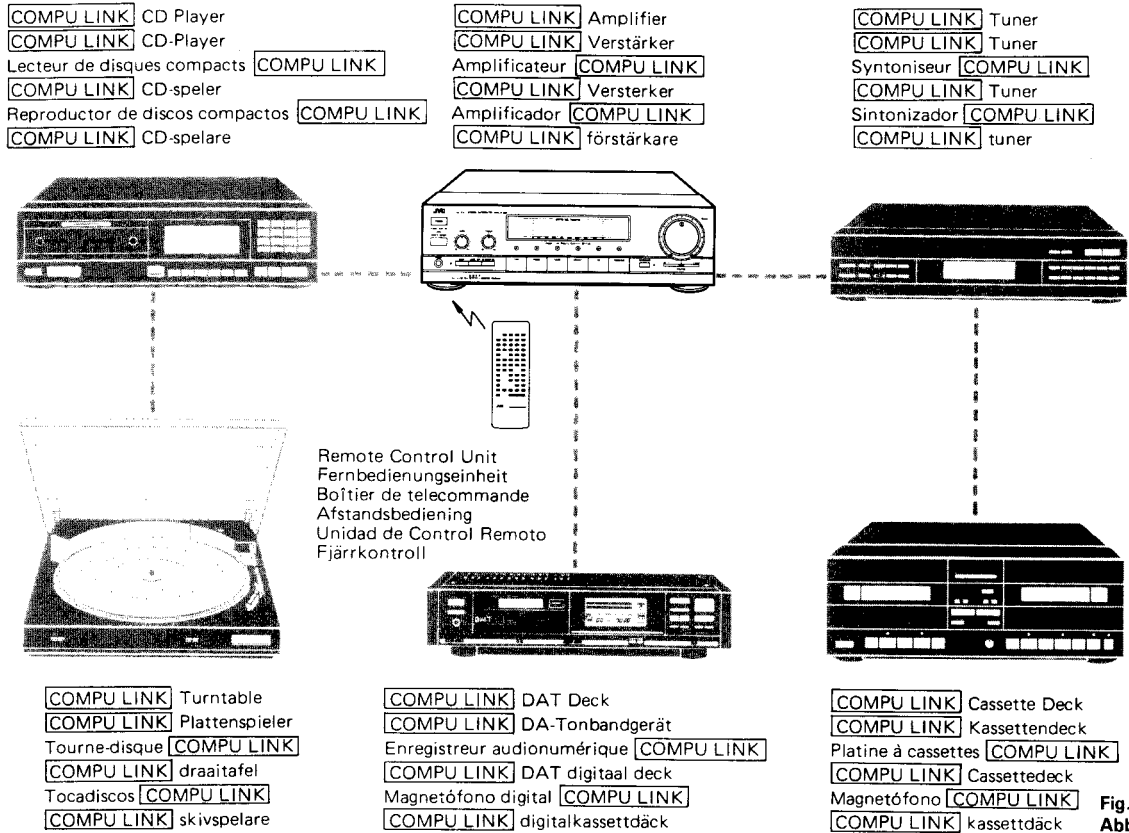


Fig. 8
Abb. 8
Afb. 8

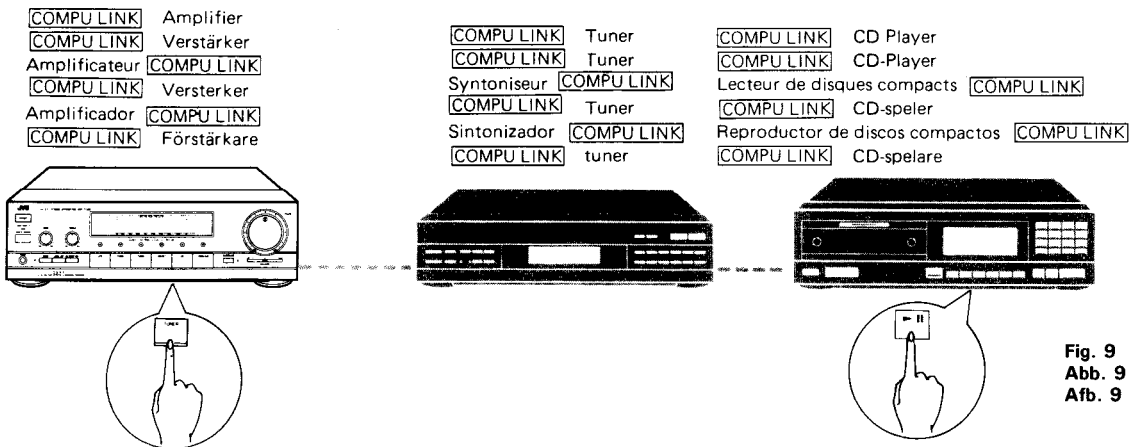


Fig. 9
Abb. 9
Afb. 9

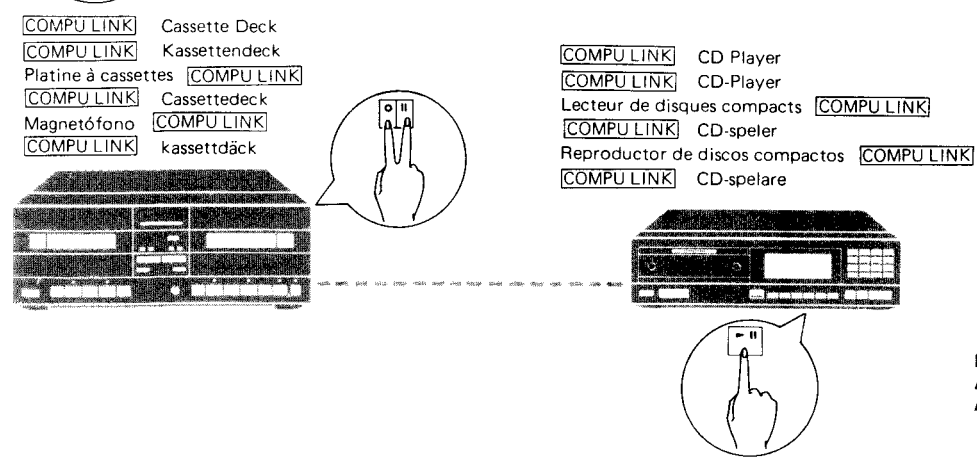


Fig. 10
Abb. 10
Afb. 10

COMPU LINK

Remote Control Component

COMPU LINK REMOTE CONTROL SYSTEM

The COMPU LINK Remote Control System was developed by JVC for the remote control of an entire stereo system which is made up of COMPU LINK components. By operating the hand held remote control unit, you can control all the components of your COMPU LINK system, performing such advanced operations as automatic source selection and synchronized recording.

The following is a brief explanation of the system's major functions; we encourage you to operate the remote control yourself to experience how flexible the system is.

1. Remote Control of Each Component (Fig. 8)

The functions of the following front-panel buttons are generated by the remote control unit.

CD Player:

PLAY, PAUSE, STOP, AUTO SEARCH, MANUAL SEARCH, REPEAT, OPEN/CLOSE, and TRACK SELECT

CD auto-changer:

PLAY MODE (CONTINUE, PROGRAM), DISC NO. SELECT, TRACK NO. SELECT

Tuner:

PRESET CHANNEL NO. SELECTION

Cassette Deck:

(DECK A)

PLAY, STOP, FAST FORWARD, REWIND and MUSIC SCAN

(DECK B)

PLAY, STOP, FAST FORWARD, REWIND, PAUSE, RECORD, REC MUTE and MUSIC SCAN

DAT Deck:

PLAY, STOP, PAUSE, FAST FORWARD, REWIND, RECORD

Turntable:

PLAY, STOP

Notes:

- You can separately select each source, namely PHONO, TAPE, TUNER, VCR/DAT, CD, or VIDEO/AUX.

2. Automatic Source Selection (Fig. 9)

By pressing the required source button on the amplifier or remote control unit, the corresponding source component will automatically start playing. Source selection can also be performed by simply pressing the PLAY button of the required source component. The newly desired component will start immediately and within a few seconds, the previous source component will stop.

3. Synchronized Recording (Fig. 10)

By using the Cassette deck together with the CD player, you can easily perform synchronized recording. The following describes synchronized recording using a CD player.

- Load the required compact disc and the tape on which you want to record. Use the DDRP to detect the optimum recording level. For details about the DDRP, see page 31.
- Set the Cassette deck to the REC/PAUSE mode.
- Press the PLAY button of the CD player or the CD button of the remote control unit or amplifier; the CD player and cassette deck will start operating simultaneously with synchronized recording.
 - When the cassette deck is in the REC/PAUSE mode per pressing REC and PLAY will not cause synchronized recording. Synchronized recording cannot occur from the REC/PAUSE mode. For details, refer to your cassette deck's instruction manual.
 - You can program the order of the tracks you want to record. For details, refer to the CD player's instruction manual.
 - When the order of tracks to be recorded has been programmed, blank gaps of about 4 seconds are automatically inserted between selections. These gaps make it possible to use music scanning when playing back the tape.

Notes:

- When the REC/PAUSE mode is set to PAUSE after depressing the REC and PLAY buttons simultaneously, synchronized recording is not possible. For details, refer to your cassette deck's instruction manual.
- Abnormal operation will result if the power supply of one of the components is interrupted during synchronized recording. If this happens, push the activation button again to restart.
- Ensure that the COMPU LINK-1/SYNCHRO terminal of each component is connected with the attached remote cable. Be sure to read the instruction manual for each component very carefully.
- The source is locked to CD position during synchronized recording to avoid accidental stops or changing to another source. To change the source, first cancel synchronized recording.

CAUTION:

- Connect the remote cable of a DAT to the COMPU LINK-1/SYNCHRO terminals of this unit.

TROUBLESHOOTING

What appears to be a malfunction may not always be serious.

Make sure first

No sound and no illumination

Is the AC plug connected properly?

Note:

- If one of the source buttons is not completely pressed in, no sound will be heard from the speakers. Press the desired button in again.

No sound from speakers

Are the speaker wires connected correctly?

Is the VOLUME control set to other than minimum?

Sound from one speaker only

Is the BALANCE control set to the center?

Loud hum during record playing

Is the turntable grounded?

- Try to change cord path.

Howling during record playing

Is the turntable too close to the speakers?

STORINGZOEKEN

Wat een foutief functioneren van het apparaat lijkt, kan vaak snel verholpen worden. Controleer altijd eerst de onderstaande punten

Geen geluid en geen verlichting

Is de stekker in het stopcontact gestoken?

Opmerking:

- Als de brontoets niet goed wordt ingedrukt, zal er geen geluid via de luidsprekers worden weergegeven. Druk in dit geval nogmaals op de toets.

Geen geluid via de luidsprekers

Zijn er luidsprekerdraden korrekt aangesloten?

Staat de VOLUME-regelaar in de minimumstand?

Alleen geluid via één luidspreker

Staat de BALANCE-regelaar wel in het midden?

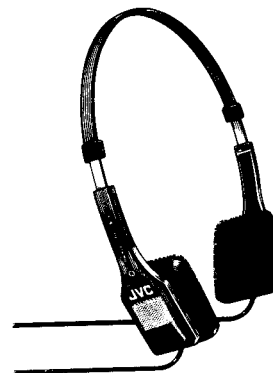
Luide brom tijdens het afspelen van grammofoonplaten

Is de platenspeler geaard?

- Laat het snoer op een andere wijze lopen.

Rondzingen tijdens het afspelen van grammofoonplaten

Staat de platenspeler misschien te dicht bij de luidsprekers?



OPEN-AIR STEREO HEADPHONES HA-CD7

The JVC HA-CD7 Open-Air high-quality Stereo Headphones (optionally available) are recommended for use with this unit.

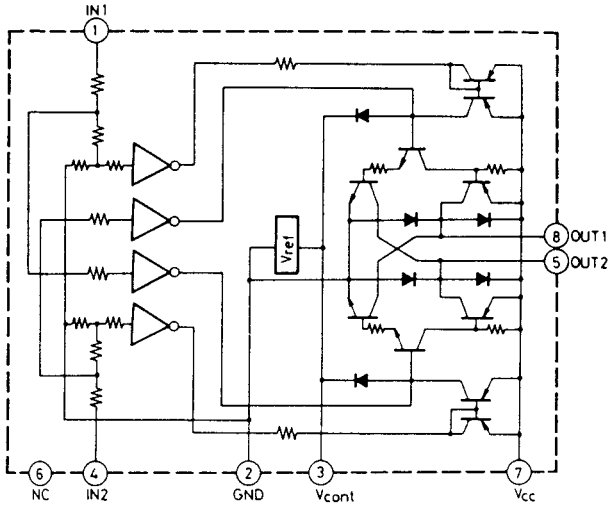
Explanation of LSI

■ μ PD75104CW-179 (IC101) ... System Control

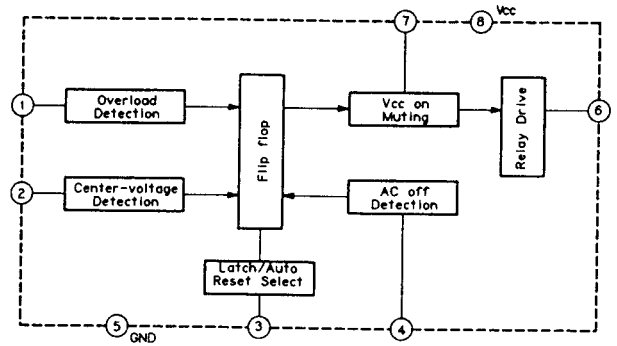
Compu-Link signal input	DCS IN	1	I	64	GND	Ground
Connect to ground		2	0	63	DSC OUT	Compu-Link signal output
Remote-control signal	RM IN	3	I	62	VOL. IND	Volume indicator signal
Power off detect signal	INH	4	I	61	VOL. DOWN	Volume down control signal
Connect to ground		5	0	60	VOL. UP	Volume up control signal
Connect to ground		6	0	59	AC CONTROL	AC Control signal
DDRP level signal input	DDRP INH	7	I	58		Non connection
Connect to ground	DDRP IND	8	I	57		Non connection
Connect to ground		9	0	56		Non connection
Connect to ground		10	0	55	TAPE IND	TAPE indicator signal
Remote-control indicator signal	RM IND	11	0	54	PHONE IND	PHONE indicator signal
Mute signal	MUTE	12	0	53	TUNER IND	TUNER indicator signal
Strobe signal (IC201, IC403)	STROBE	13	0	52	VCR/DAT IND	VCR/DAT indicator signal
Non connection		14	0	51	CD IND	CD indicator signal
Connect to ground		15	0	50	VIDEO/AUX IND	VIDEO/AUX indicator signal
DATA signal (IC201, IC403)	DATA	16	0	49	SURROUND IND	SURROUND indicator signal
CLOCK signal (IC201, IC403)	CLOCK	17	0	48		Non connection
Connect to ground		18	I	47	OSC1	Clock signal input
Key scan signal	KEY OUT3	19	0	46	OSC2	Clock signal output
Key scan signal	KEY OUT2	20	0	45	RESET	Reset signal input
Key scan signal	KEY OUT1	21	0	44		Connect to ground
Key scan signal	KEY OUT0	22	0	43		
Key in signal	KEY IN3	23	I	42		
Key in signal	KEY IN2	24	I	41		
Key in signal	KEY IN1	25	I	40		
Key in signal	KEY IN0	26	I	39		
Connect to ground		27	0	38		
DDRP input short	DDRP	28	0	37		
Connect to ground		29	0	36		
DDRP indicator signal	DDRP IND	30	0	35		
Non connection		31	0	34		
Positive power supply (+5V)	Vdd	32	0	33		

Internal Block Diagram of ICs

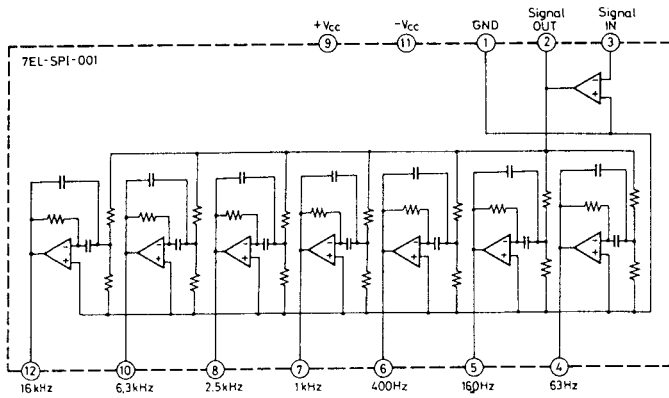
■ LB1639-CV (IC421) ... Motor Driver



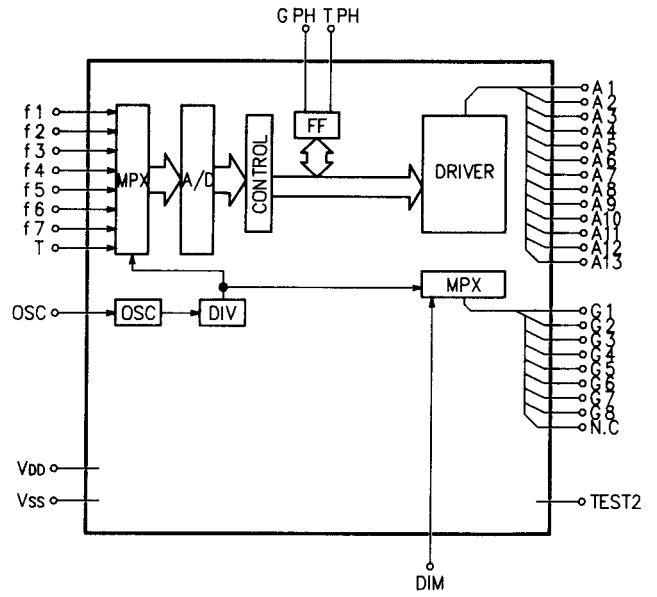
■ μ PC1237HA (IC901) ... Protector



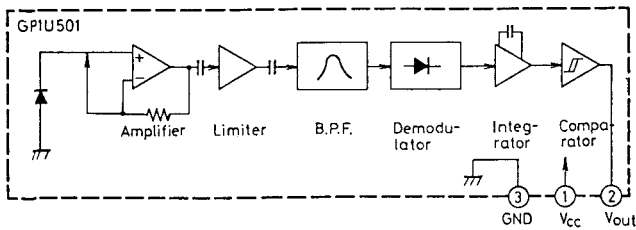
■ 7EL-SPI-001 (IC601) ... Band Pass Filter



■ LC7566 (IC602) ... FL Driver



■ GP1U501X (IC102) ... Remocon Module



Removal Procedures

(1) Removing the Top Cover

1. Remove four screws fastening the side of the top cover, and two screws fastening the rear side.
2. Remove the top cover by lifting up its rear section and pulling it backward while holding it on incline.

(2) Removing the Front Panel Ass'y

1. Remove the top cover.
2. Remove five screws ① through ⑤ securing the bottom of the front panel.

(3) Removing the Main Volume

1. Remove the top cover.
2. Pull out the main volume knob and LED holder.
3. Remove the nut securing the main volume.

(4) Removing the BASS Volume and TREBLE Volume

1. Remove the front panel Ass'y.
2. Pull out the volume knob.
3. Remove the nut securing the volume.

(5) Removing the Front PCB

1. Remove the front panel Ass'y.
2. Remove the catches retaining the PC Boards backside the front panel.

(6) Removing the Bottom Plate

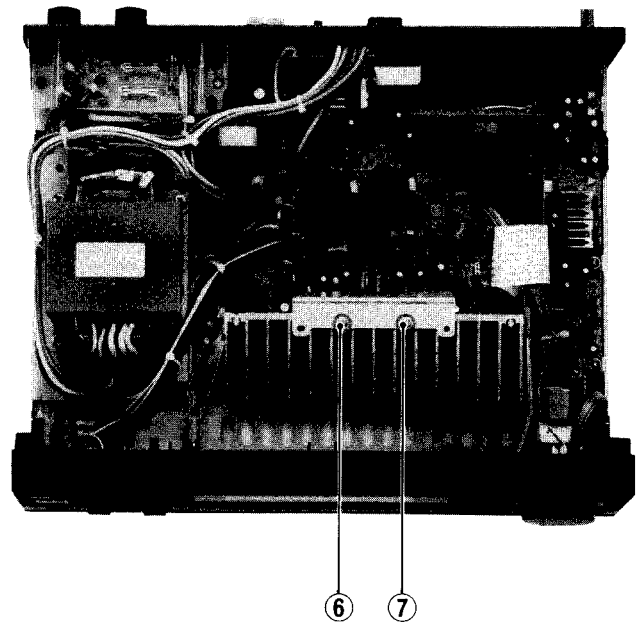
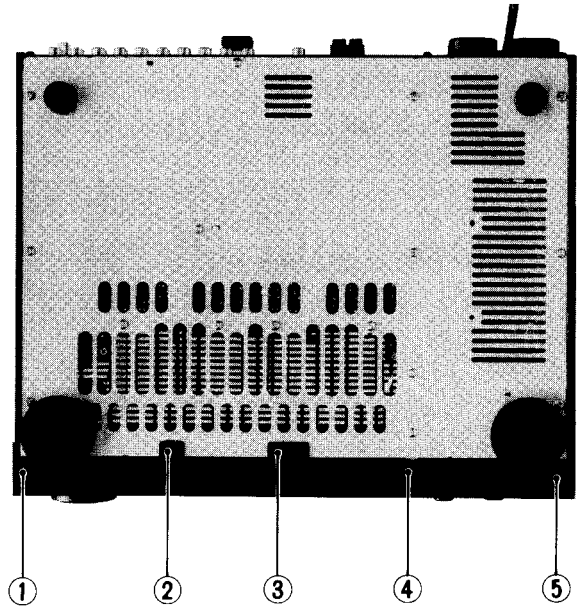
1. Remove the front panel Ass'y.
2. Remove sixteen screws on the bottom surface.

Caution:

Connect the ground of the circuit board to the chassis when removing the bottom plate.

(7) Removing the Power Pack

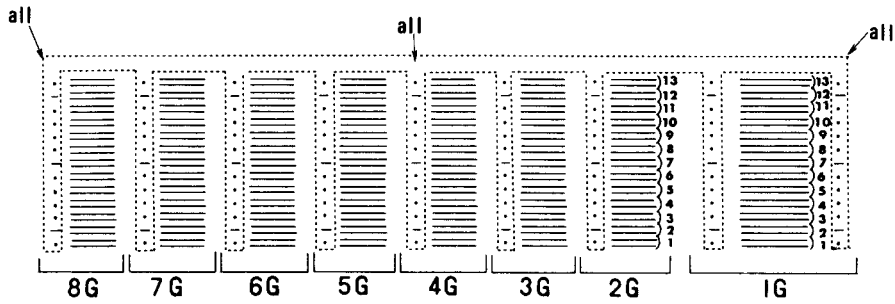
1. Remove the bottom plate.
2. Remove two screws ⑥ and ⑦ securing the heat-sink and leaf spring.
3. Unsolder the power pack.



Internal Connections for the FL Display Tube

■ ELU0001-047 (FL601)

(1) Grid Layout



(Note): In the connections of the bar graph section, 2 bars make 1 segment, and "1" is the lowest step counting from the highest steps of "13", "12".

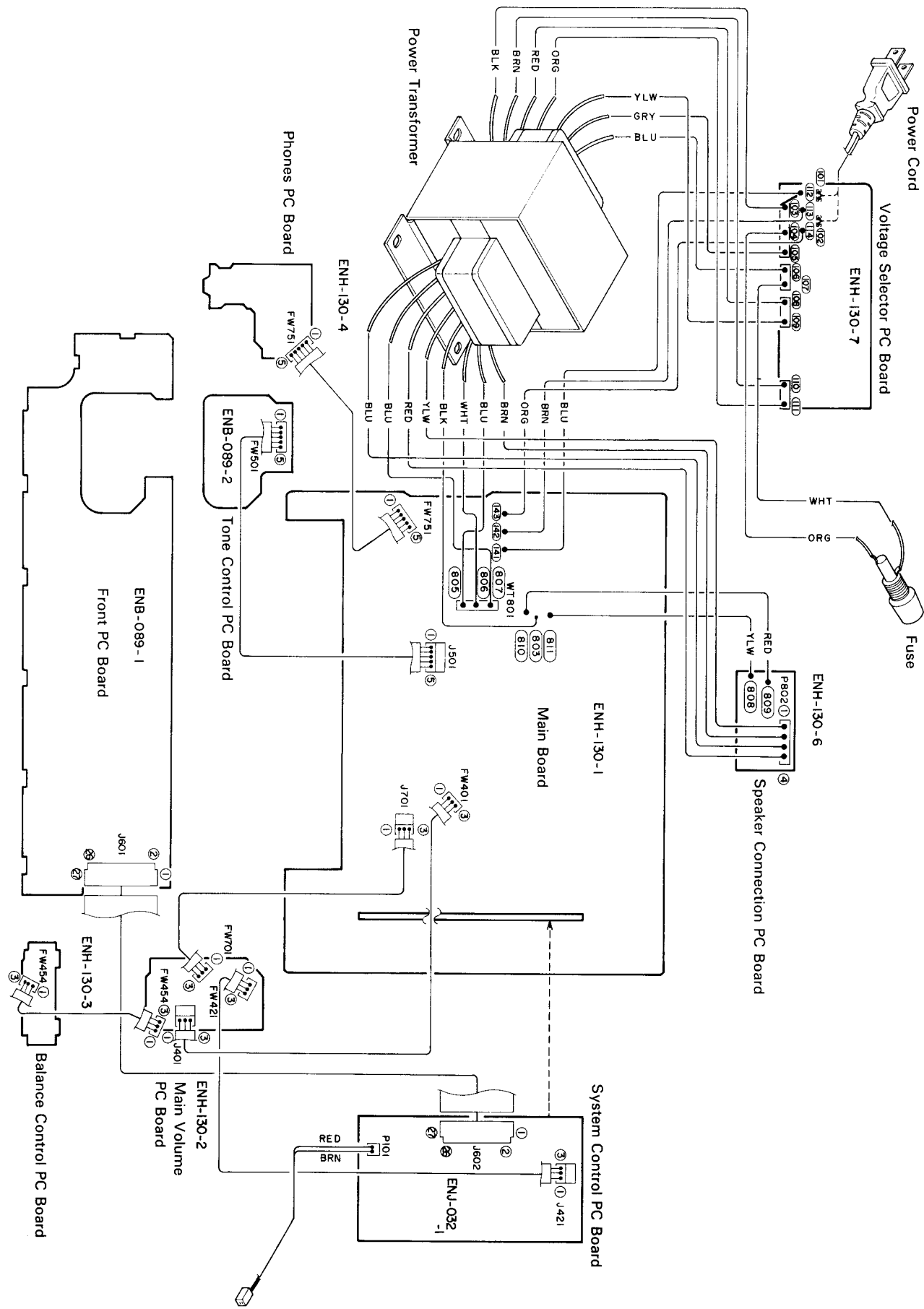
(2) Pin Connections

Pin No.	IC Pin No.	Indication	Remarks
1			Filament
2			Filament
4			NC
5	41	8G	
6	2	A1	
7	3	A2	
8	4	A3	
9	40	7G	
10	5	A4	
11	6	A5	
12	39	6G	
13	7	A6	
14	8	A7	
15	9	A8	
16	38	5G	
17	10	A9	
18	11	A10	
19	12	A11	

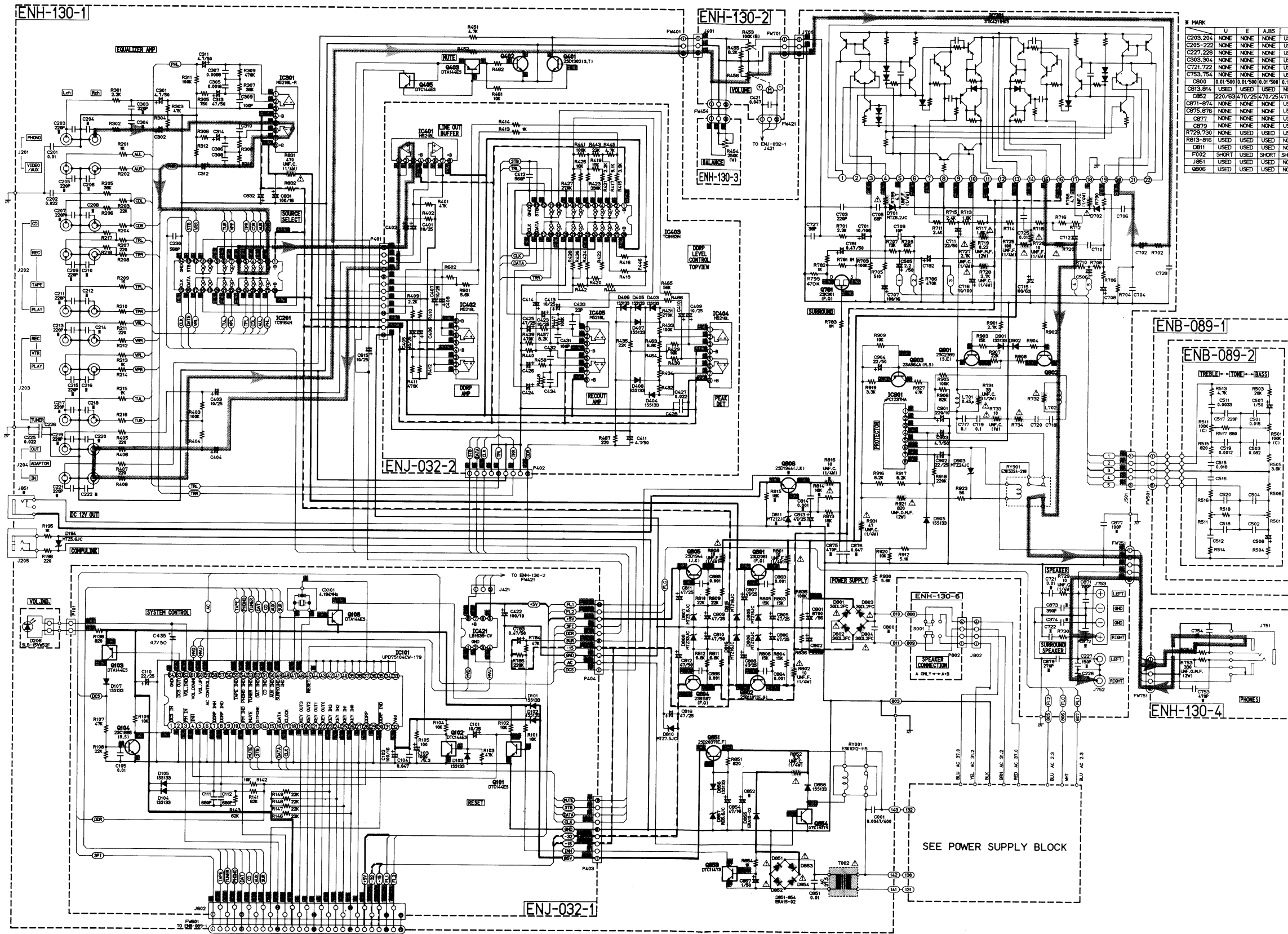
Pin No.	IC Pin No.	Indication	Remarks
20	37	4G	
21	13	A12	
22	14	A13	
24	36	3G	
25			NC
26			NC
27	35	2G	
28			NC
29			NC
30			NC
31	34	1G	
32			NC
33			NC
34			NC
35	42	ALL	Normally lit
36			NC
38			Filament
39			Filament

JVC

Connection Diagram



Schematic Diagrams

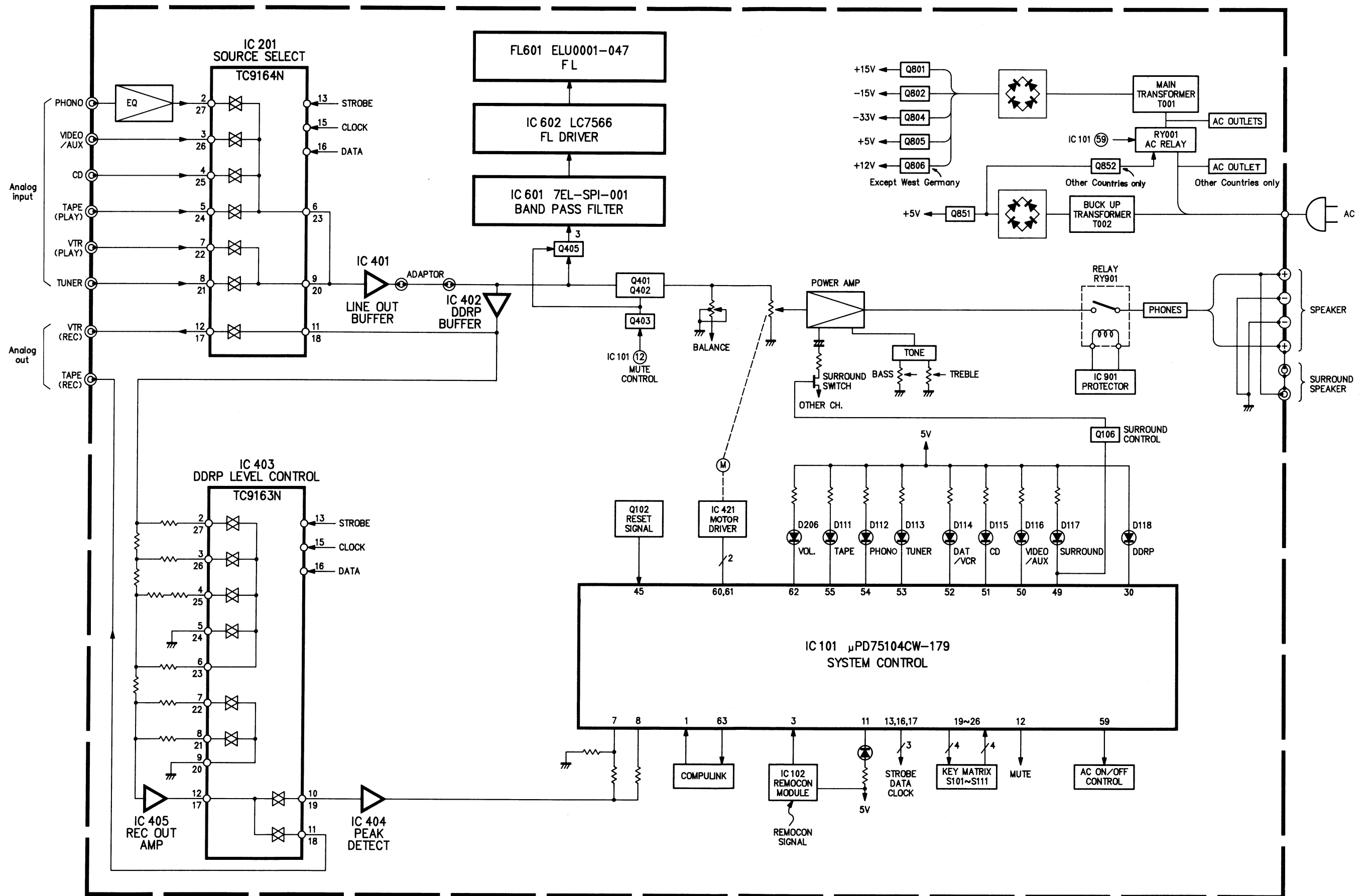


MARK	U	E	A.B.S	Q
C203,204	NONE	NONE	NONE	USED
C205-222	NONE	NONE	NONE	USED
C223,228	NONE	NONE	NONE	USED
C303,304	NONE	NONE	NONE	USED
C721,722	NONE	NONE	NONE	USED
C753,754	NONE	NONE	NONE	USED
C800	1.01	500	1.01	1.750
C813,814	USED	USED	USED	NONE
C82	220/63	470/25	470/25	470/25
C871-874	NONE	NONE	NONE	USED
C875,876	NONE	NONE	NONE	USED
C877	NONE	NONE	NONE	USED
C879	NONE	NONE	NONE	USED
R729,730	NONE	USED	USED	NONE
R813-816	USED	USED	USED	NONE
D811	USED	USED	USED	NONE
F002	SHORT	USED	SHORT	SHORT
J851	SHORT	USED	SHORT	NONE
Q806	USED	USED	USED	NONE

Notes:

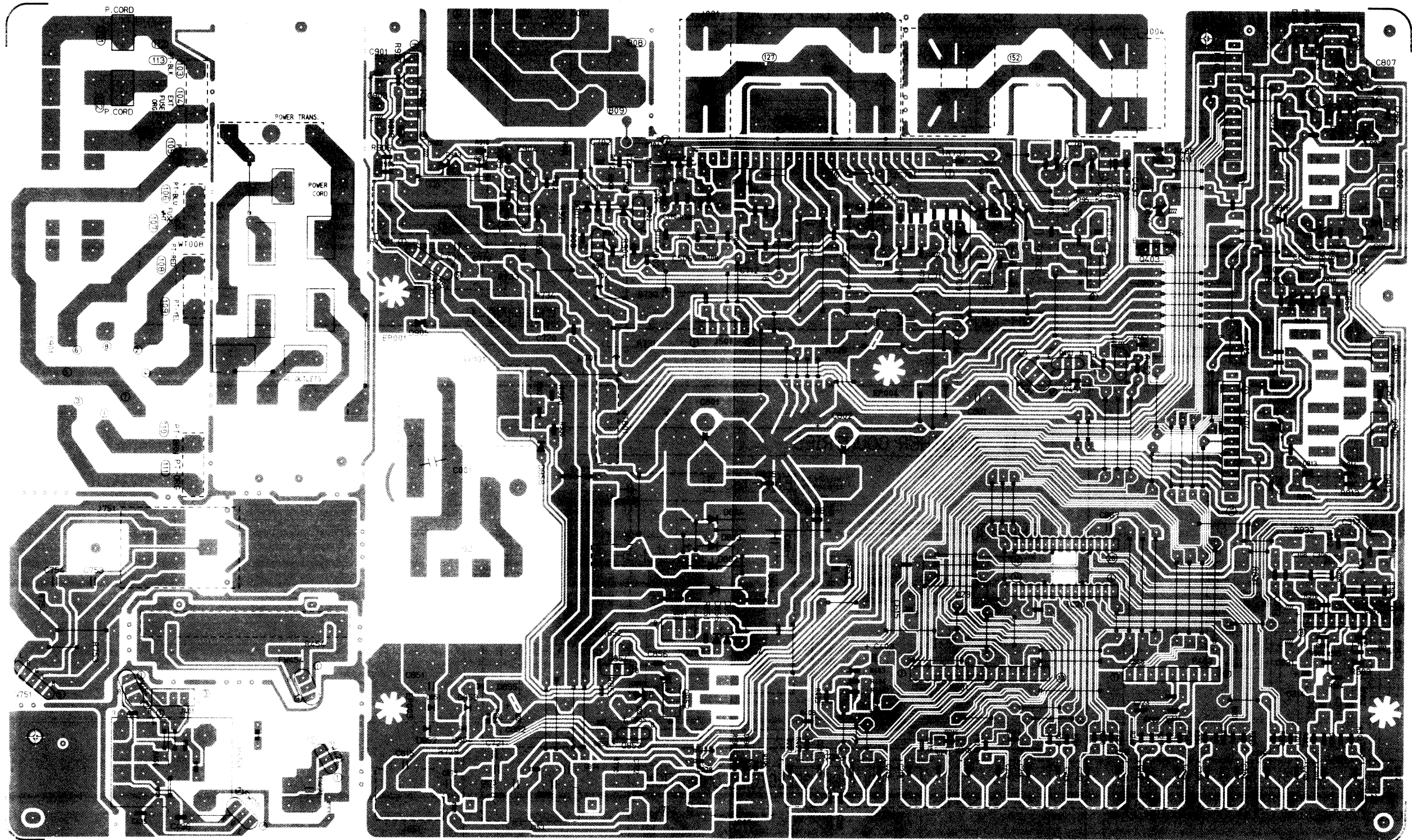
1. — indicates +B power supply.
2. - - - indicates -B power supply.
3. [Solid line with arrow] indicates signal path.
4. [Solid line with arrow and ground symbol] shows DC voltage to the chassis with no signal input.
5. When replacing the parts in the darkened are ([Darkened area]) and those marked with Δ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

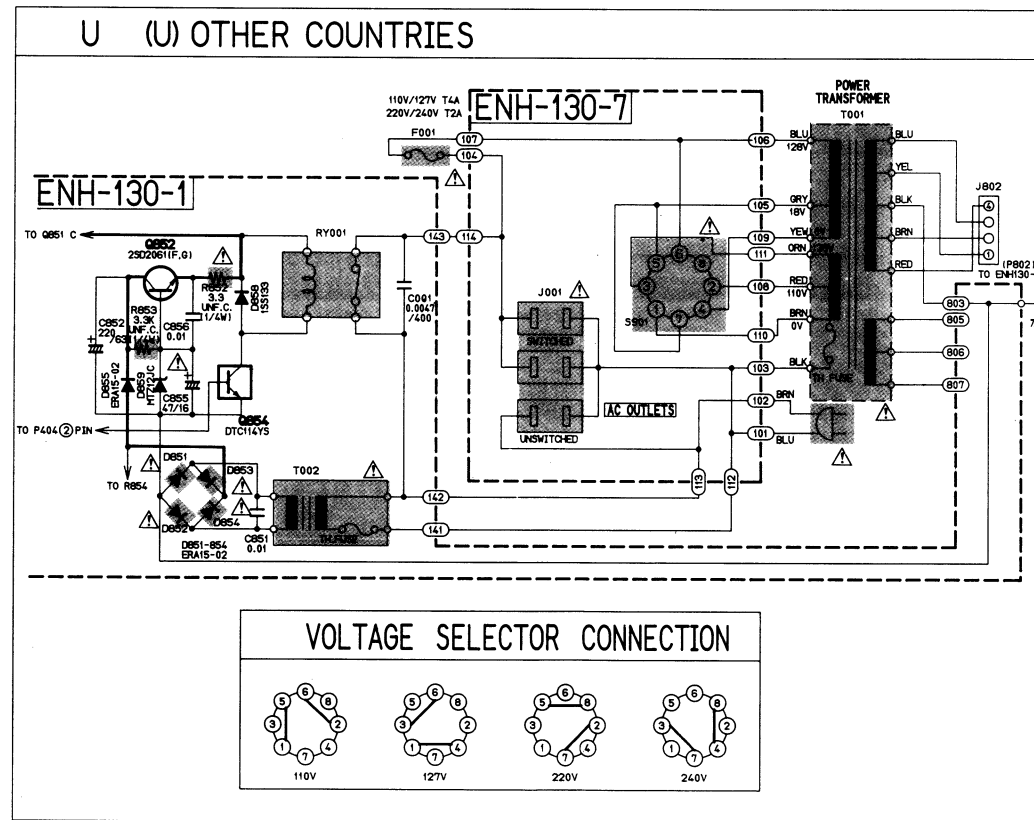
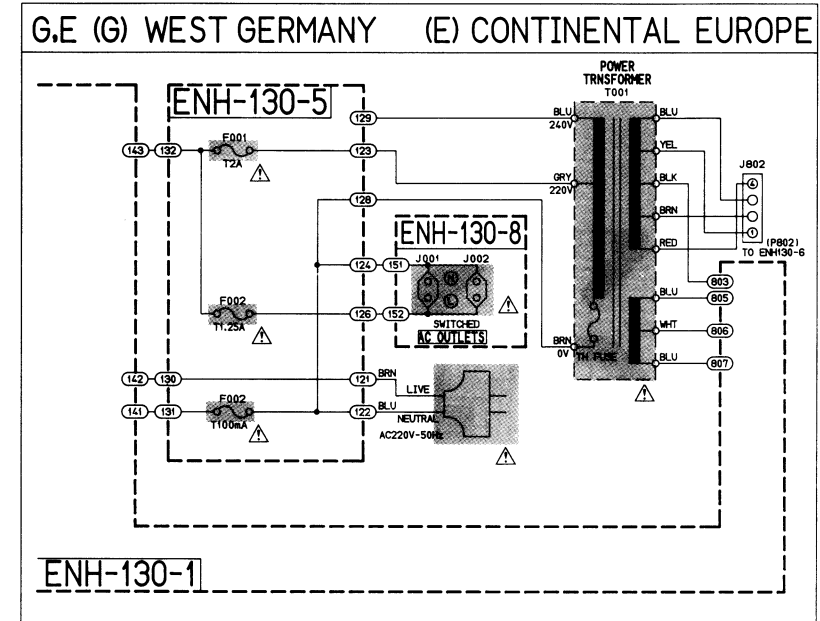
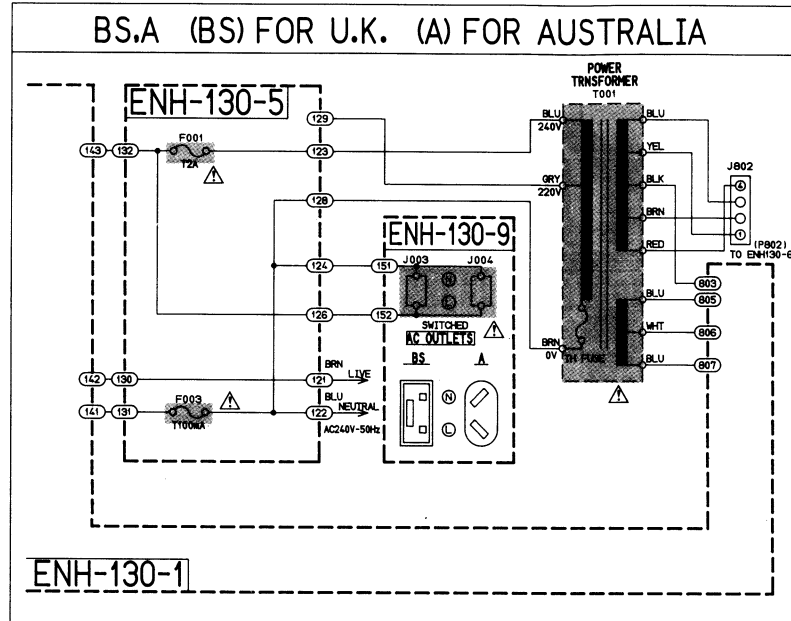
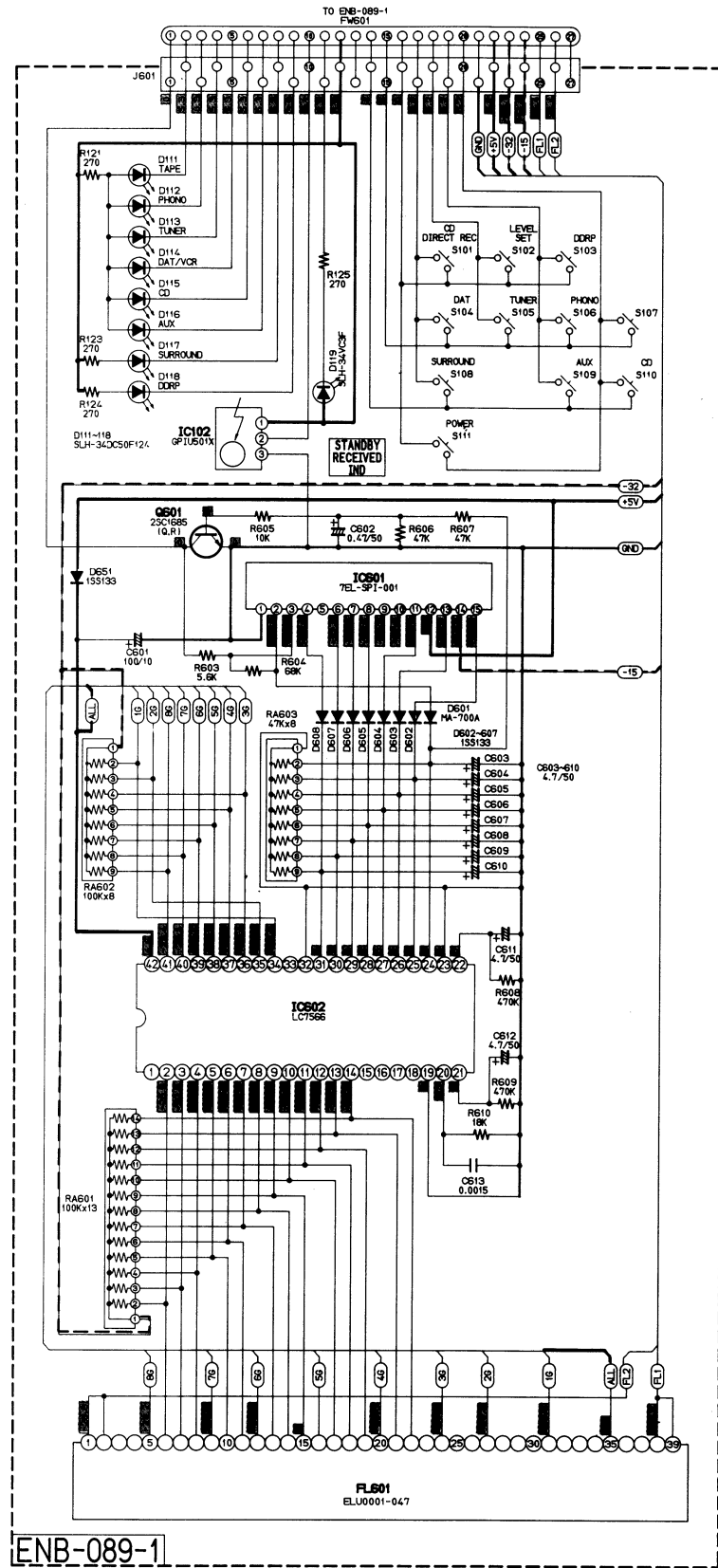
Block Diagram



Printed Circuit Boards

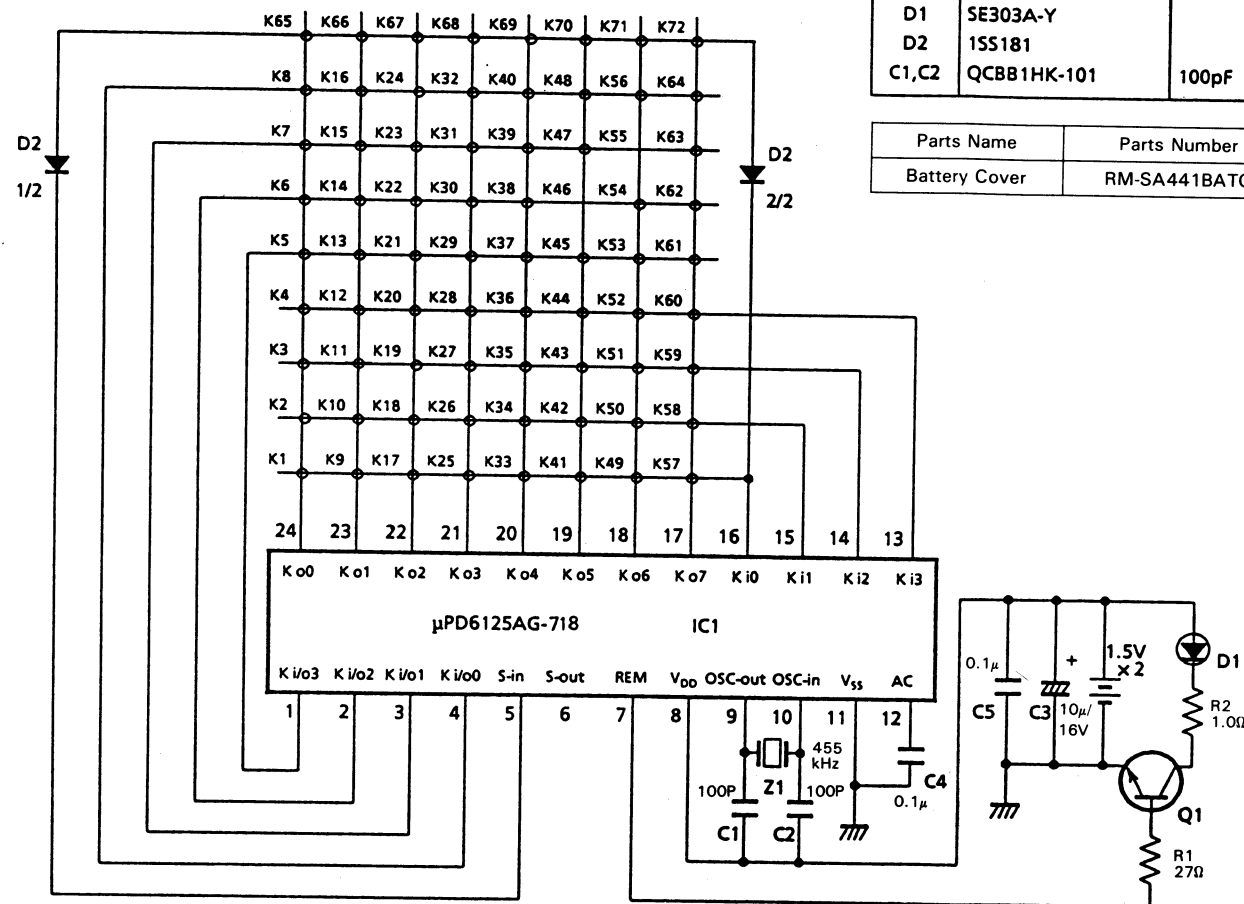
■ Main PC Board (ENH-130)





Remote Control Unit (RM-SE91)

■ Schematic Diagram

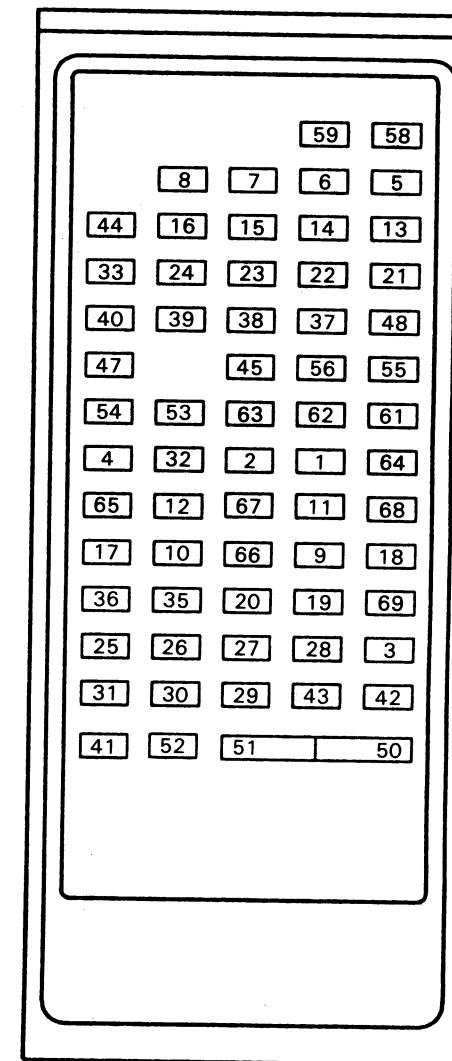


■ Parts List

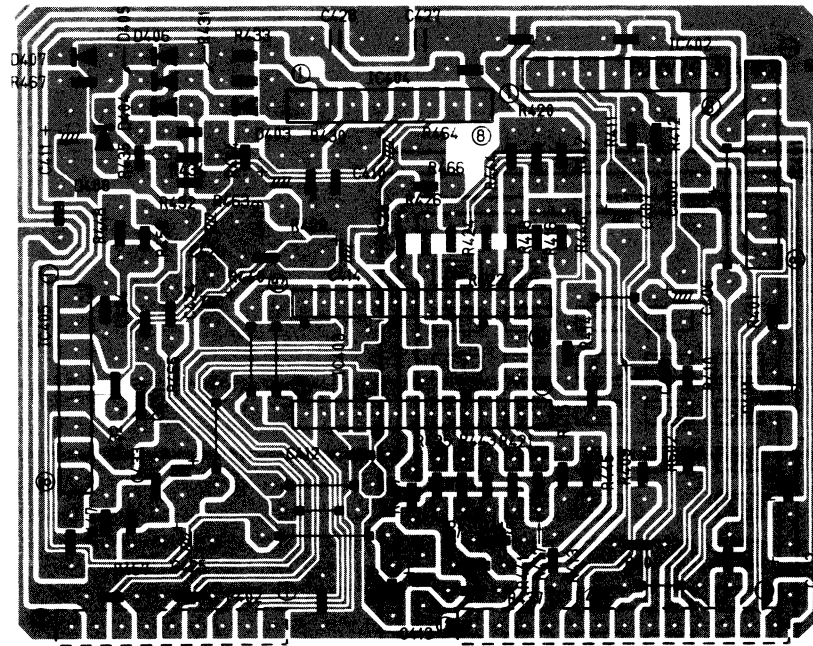
Symbol	Part Number	Description
IC1	μPD6125AG-718	
Q1	2SC3265(O,Y)	
D1	SE303A-Y	
D2	1SS181	
C1,C2	QCBB1HK-101	100pF

Parts Name	Parts Number
Battery Cover	RM-SA441BATC

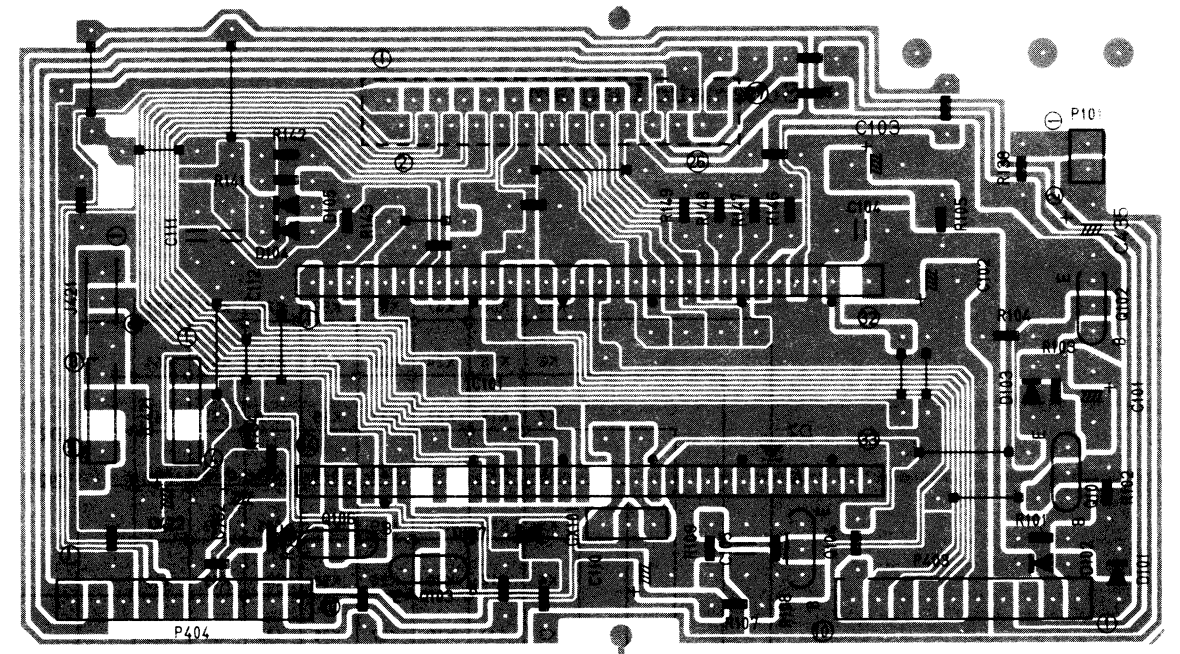
■ Key Layout



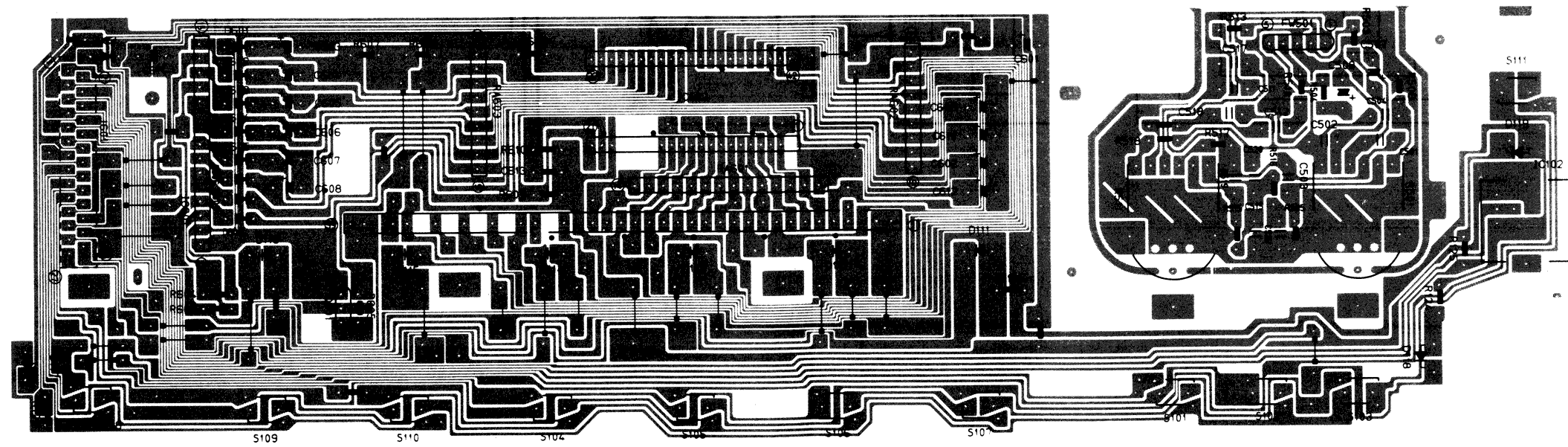
■ DDRP PC Board (ENJ-032-2)



■ System Control PC Board (ENJ-032-1)



■ Front PC Board (ENB-089)

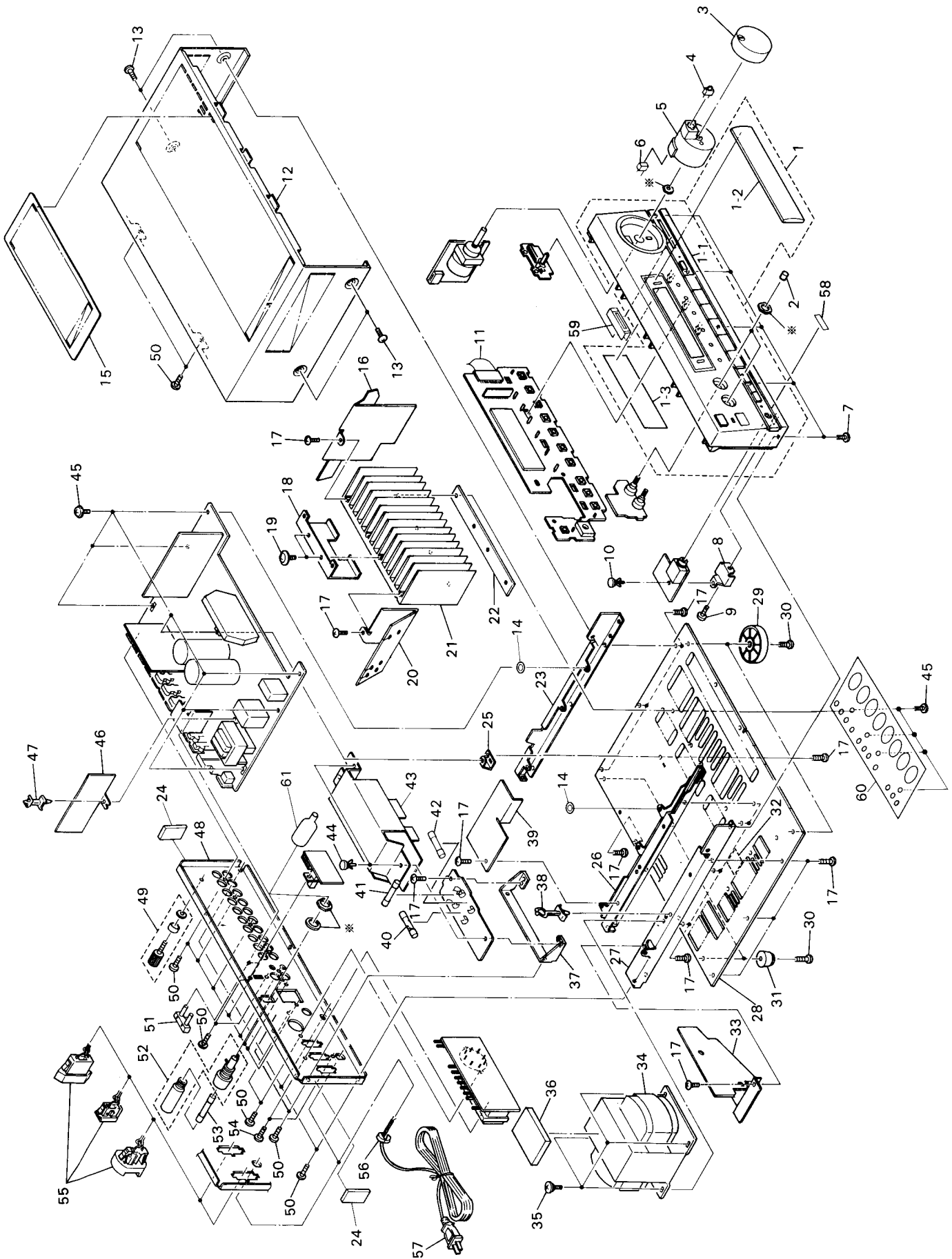


PARTS LIST

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Exploded View and Parts List



* mark indicates attached part.

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-AXE91BKE	Front Panel Ass'y	1		
	1-1	E11980-004	Front Panel	1		
	1-2	E306097-001	Window Screen	1		
	1-3	E70561-026	FL Screen	1		
	2	E74690-001	Knob	2		
	3	E306094-001	Volume Knob	1		
	4	SLB-15VW52F	L.E.D	1	D206	
	5	E306095-001	Holder	1		
	6	EW5142-012	SKT Wire Ass'y	1		
	7	SDSB3008M	Screw	5		
	8	E75254-001	Head Phon Bracket	1		
	9	SBSF3008Z	Screw	1		
	10	E48729-008	Plastic Rivet	1		
	11	EWR1TE-20TT	F.F.C Cable	1		
	12	E25999-004	Metal Cover	1		
	13	SDSE3008M	Screw	4		
	14	E46891-026	Spacer	2		
	15	E306099-001	Protect Sheet	1		E, EF, U, BS
	16	E306267-001	Protect Cover	1		
	17	SBSG3008N	Screw	16		
	18	E305367-005	Leaf Spring	1		
	19	E73265-001	Special Screw	2		
	20	E306266-001	Protect Cover	1		
	21	E302993-003	Heat Sink	1		
	22	E75448-001	Felt Spacer	1		
	23	E304850-001	Side Bracket	1	Right	
	24	EXO040010R10S	Spacer	2		
	25	E68587-008	Bracket	1		
	26	E304849-008	Center Bracket	1		
	27	E304848-007	Side Bracket	1	Left	
	28	E26404-003	Bottom Plate	1		
	29	E74175-002	Foot	2	Front	
	30	SBST3008Z	Screw	4		
	31	E47227-010	Foot	2	Rear	
	32	E70115-002	Caution Label	1		E, EF, A, G, U, BS
	33	E306268-001	Protect Cover	1		U
⚠	34	ETP1150-36FA	Power Transformer	1		U
⚠	35	ETP1150-36EA	Power Transformer	1		E, EF, A, G
⚠	35	ETP1150-36EABS	Power Transformer	1		BS
⚠	35	E65389-004	Special Screw	4		
	36	EXO040030N90S02	Spacer	1		
	37	E71074-003	Bracket	1		E, EF, A, G, BS
	38	E303704-001	Wire Clamp	1		
	39	E75499-001	Protect Cover	1		
⚠	40	QMF51A2-2R0S	Fuse	1	F001	E, EF, A, G
⚠	41	QMF51E2-2R0SBS	Fuse	1	F001	BS
⚠	42	QMF51A2-1R25S	Fuse	1	F002	E, EF
⚠	42	QMF51A2-R10S	Fuse	1	F003	E, EF, A, G
⚠	43	QMF51E2-R10SBS	Fuse	1	F003	BS
⚠	43	E306269-001	Protect Cover	1		E, EF, A, G, BS
	44	E48729-007	Plastic Rivet	2		E, EF, A, G, BS
	45	GBSG3008CC	Screw	11		
	46	E75486-001	Protect Cover	1		
	47	E302321-001	Fastener	1		
	48	E26405-004	Rear Panel	1		U
		E26405-005	Rear Panel	1		A, BS
		E26405-006	Rear Panel	1		G
		E26405-008	Rear Panel	1		E, EF
	49	E70078-001	GND Terminal	1		
	50	E73273-001	Special Screw	17		

⚠: Safety Parts

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	51	EMZ3001-002	Short Pin	2		
⚠	52	QMG0301-003	Fuse Holder	1		
	53	QMF51A2-2R0S	Fuse	1	F001	U
	54	SDSG3008M	Screw	2		U
⚠	55	EMC0233-001	AC Outlet	2	J001,J002	U A
⚠		EMC0236-001	AC Socket	2	J001,J002	E, EF, G
⚠		EMC0237-001BS	AC Outlet	2	J001,J002	BS
⚠	56	QHS3876-162	Cord Stopper	1		Except BS
⚠		QHS3876-162BS	Cord Stopper	1		BS
⚠	57	QMP3900-200	Power Cord	1		E, EF, G
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP7520-200	Power Cord	1		U
⚠		QMP9017-008BS	Power Cord	1		BS
	58	E49267-001	Origin Marking Label	1		BS
	59	E75502-001	Blind Sheet	1		
	60	E306285-001	Protect Sheet	1		Except A, G
	61	E69291-001	Fuse Cover	1		U

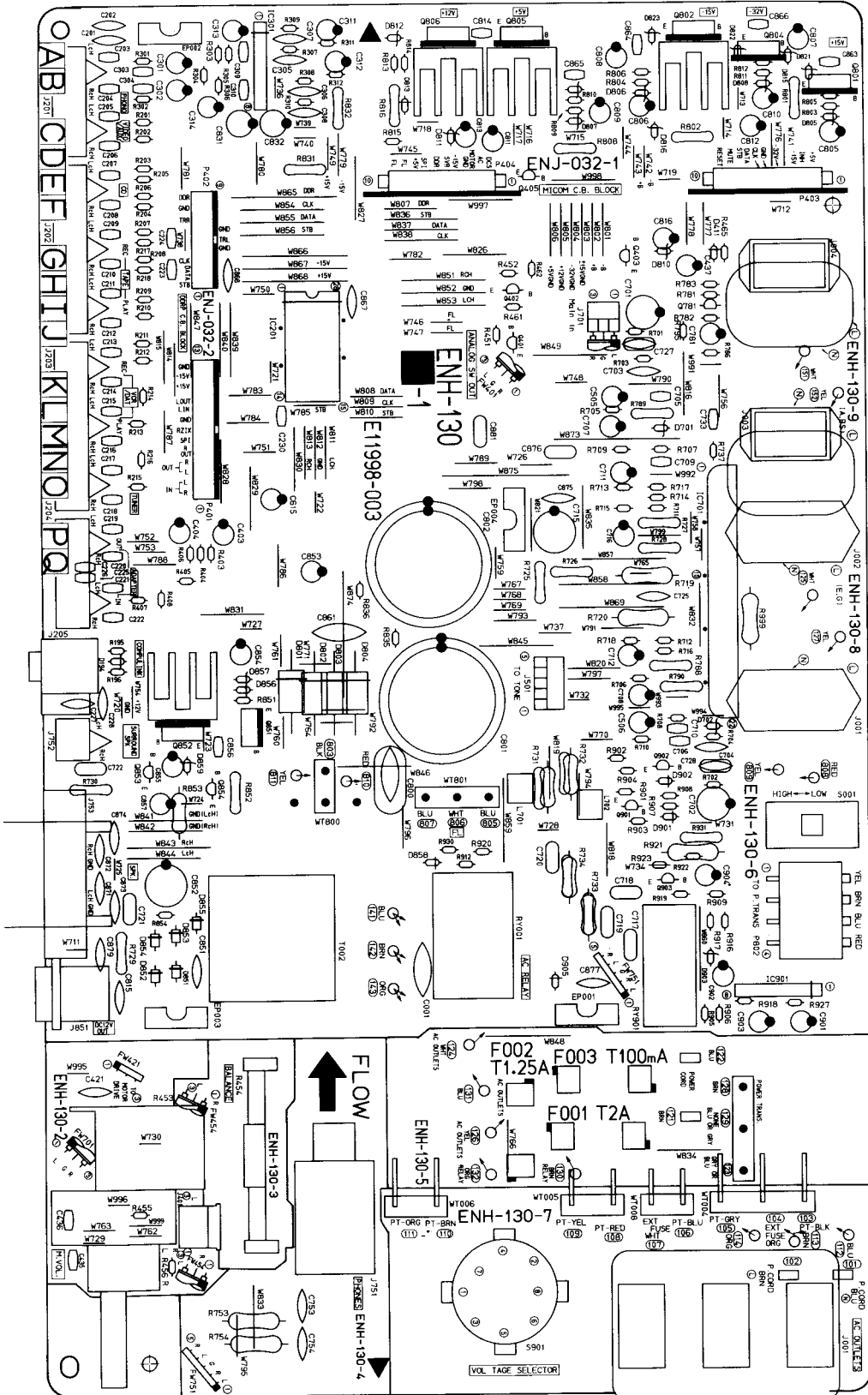
⚠ : Safety Parts

The Marks Designated Areas	
A.....Australia	BS.....the U.K.
E, EF.....Cotinental Europe	U.....Other Countries
G.....West Germany	No mark indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENH-130 □ Main and Power Supply PC Board Ass'y

Note: ENH-130 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENH-130 A	Other Countries
ENH-130 B	Continental Europe
ENH-130 C BS	the U.K.
ENH-130 D	West Germany
ENH-130 E	Australia

Transistors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q401	2SD1302(S,T)	SILICON	MATSUSHITA	
Q402	2SD1302(S,T)	SILICON	MATSUSHITA	
Q403	DTA144ES	SILICON	ROHM	
Q405	DTC144ES	SILICON	ROHM	
Q781	2SK301(P,Q)	F.E.T	MATSUSHITA	
Q801	2SD2061(F,G)	SILICON	ROHM	
Q802	2SB1187(F,G)	SILICON	ROHM	
Q804	2SB1187(F,G)	SILICON	ROHM	
Q805	2SD1944(J,K)	SILICON	ROHM	
Q806	2SD1944(J,K)	SILICON	ROHM	A
Q806	2SD1944(J,K)	SILICON	ROHM	B
Q806	2SD1944(J,K)	SILICON	ROHM	CBS
Q806	2SD1944(J,K)	SILICON	ROHM	E
Q851	2SD2037(F,G)	SILICON	ROHM	
Q852	2SD2061(F,G)	SILICON	ROHM	A
Q853	DTC114YS	SILICON	ROHM	
Q854	DTC143TS	SILICON	ROHM	
Q901	2SC2389(S,E)	SILICON	ROHM	
Q902	2SC2389(S,E)	SILICON	ROHM	
Q903	2SA564A(R,S)	SILICON	MATSUSHITA	

I.C.s

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC201	TC9164N	I.C.	TOSHIBA	
IC301	M5218L-R	I.C.	mitsubishi	
IC701	STK4211MK5	I.C.	SANYO	
IC901	UPC1237HA	I.C.	NEC	

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D194	MTZ5.6JC	ZENER	ROHM	
D701	MTZ6.2JC	ZENER	ROHM	
D702	MTZ6.2JC	ZENER	ROHM	
D801	30DL2FC	SILICON	NIHONINTER	
D802	30DL2FC	SILICON	NIHONINTER	
D803	30DL2FC	SILICON	NIHONINTER	
D804	30DL2FC	SILICON	NIHONINTER	
D805	MTZ15JC	ZENER	ROHM	
D806	MTZ15JC	ZENER	ROHM	
D807	MTZ5.6JC	ZENER	ROHM	
D808	MTZ33JC	ZENER	ROHM	
D810	MTZ7.5JC	ZENER	ROHM	
D811	MTZ12JC	ZENER	ROHM	A
D811	MTZ12JC	ZENER	ROHM	B
D811	MTZ12JC	ZENER	ROHM	CBS
D811	MTZ12JC	ZENER	ROHM	E
D815	MTZ16JC	ZENER	ROHM	
D816	MTZ16JC	ZENER	ROHM	
D851	ERA15-02L19	SILICON	KYODOU	
D852	ERA15-02L19	SILICON	KYODOU	
D853	ERA15-02L19	SILICON	KYODOU	
D854	ERA15-02L19	SILICON	KYODOU	
D855	ERA15-02L19	SILICON	KYODOU	
D856	1SS133	SILICON	ROHM	
D857	MTZ5.6JC	ZENER	ROHM	
D858	1SS133	SILICON	ROHM	
D859	MTZ12JC	ZENER	ROHM	A
D901	1SS133	SILICON	ROHM	
D902	1SS133	SILICON	ROHM	
D903	MTZ24JC	ZENER	ROHM	
D905	1SS133	SILICON	ROHM	

△ : SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
△ C001	QCZ9019-472	4700PF	CERAMIC	A
△ C001	QCZ9019-472	4700PF	CERAMIC	B
△ C001	QCZ9019-472	4700PF	CERAMIC	D
△ C001	QCZ9019-472	4700PF	CERAMIC	E
△ C001	QCZ9019-472BS	4700PF	CERAMIC	CBS
C201	QCF21HP-223	0.022MF	50V CERAMIC	
C202	QCF21HP-103	0.01MF	50V CERAMIC	
C203	QCBB1HK-221	220PF	50V CERAMIC	D
C204	QCBB1HK-221	220PF	50V CERAMIC	D
C205	QCBB1HK-221	220PF	50V CERAMIC	D
C206	QCBB1HK-221	220PF	50V CERAMIC	D
C207	QCBB1HK-221	220PF	50V CERAMIC	D
C208	QCBB1HK-221	220PF	50V CERAMIC	D
C209	QCBB1HK-221	220PF	50V CERAMIC	D
C210	QCBB1HK-221	220PF	50V CERAMIC	D
C211	QCBB1HK-221	220PF	50V CERAMIC	D
C212	QCBB1HK-221	220PF	50V CERAMIC	D
C213	QCBB1HK-221	220PF	50V CERAMIC	D
C214	QCBB1HK-221	220PF	50V CERAMIC	D
C215	QCBB1HK-221	220PF	50V CERAMIC	D
C216	QCBB1HK-221	220PF	50V CERAMIC	D
C217	QCBB1HK-221	220PF	50V CERAMIC	D
C218	QCBB1HK-221	220PF	50V CERAMIC	D
C219	QCBB1HK-221	220PF	50V CERAMIC	D
C220	QCBB1HK-221	220PF	50V CERAMIC	D
C221	QCBB1HK-221	220PF	50V CERAMIC	D
C222	QCBB1HK-221	220PF	50V CERAMIC	D
C225	QCHB1EZ-223	0.022MF	25V CERAMIC	
C226	QCHB1EZ-223	0.022MF	25V CERAMIC	
C227	QCS21HJ-151	150PF	50V CERAMIC	D
C228	QCS21HJ-151	150PF	50V CERAMIC	D
C230	QCBB1HK-561	560PF	50V CERAMIC	
C301	QETB1HM-475	4.7MF	50V ELECTRO	
C302	QETB1HM-475	4.7MF	50V ELECTRO	
C303	QCBB1HK-221	220PF	50V CERAMIC	D
C304	QCBB1HK-221	220PF	50V CERAMIC	D
C305	QCY21HK-182	1800PF	50V CERAMIC	
C306	QCY21HK-182	1800PF	50V CERAMIC	
C307	QCY21HK-682	6800PF	50V CERAMIC	
C308	QCY21HK-682	6800PF	50V CERAMIC	
C309	QCBB1HK-101	100PF	50V CERAMIC	
C310	QCBB1HK-101	100PF	50V CERAMIC	
C311	QETB1HM-475	4.7MF	50V ELECTRO	
C312	QETB1HM-475	4.7MF	50V ELECTRO	
C313	QETB1HM-476	4.7MF	50V ELECTRO	
C314	QETB1HM-476	4.7MF	50V ELECTRO	
C403	QETB1EM-106	10MF	25V ELECTRO	
C404	QETB1EM-106	10MF	25V ELECTRO	
C421	QCF21HP-473	0.047MF	50V CERAMIC	
C505	QEH1HM-225	2.2MF	50V ELECTRO	
C506	QEH1HM-225	2.2MF	50V ELECTRO	
C615	QETB1EM-106	10MF	25V ELECTRO	
C701	EEZ1005-106	10MF	100V ELECTRO	
C702	EEZ1005-106	10MF	100V ELECTRO	
C703	QCS21HJ-221	220PF	50V CERAMIC	
C704	QCS21HJ-221	220PF	50V CERAMIC	
C705	QCSB1HJ-680	68PF	50V CERAMIC	
C706	QCSB1HJ-680	68PF	50V CERAMIC	
C707	QETB1CM-107	100MF	16V ELECTRO	
C708	QETB1CM-107	100MF	16V ELECTRO	
C709	QCSB1HJ-100	10PF	50V CERAMIC	
C710	QCSB1HJ-100	10PF	50V CERAMIC	
C711	QEH1HM-226	22MF	50V ELECTRO	
C712	QEH1HM-226	22MF	50V ELECTRO	
C715	QETB1JM-107	100MF	63V ELECTRO	
C716	QETB2AM-106	10MF	100V ELECTRO	
C717	QFN81HK-104	0.1MF	50V MYLAR	
C718	QFN81HK-104	0.1MF	50V MYLAR	
C719	QFN81HK-104	0.1MF	50V MYLAR	
C720	QFN81HK-104	0.1MF	50V MYLAR	
C721	QFN81HK-103	0.01MF	50V MYLAR	D
C722	QFN81HK-103	0.01MF	50V MYLAR	D
C725	QCF21HP-103	0.01MF	50V CERAMIC	
C727	QCS21HJ-390	39PF	50V CERAMIC	
C728	QCS21HJ-390	39PF	50V CERAMIC	
C753	QCS21HJ-471	470PF	50V CERAMIC	D
C754	QCS21HJ-471	470PF	50V CERAMIC	D
C781	QETB1HM-474	0.47MF	50V ELECTRO	
C782	QETB1HM-474	0.47MF	50V ELECTRO	
C800	QCE22HP-103	0.01MF	500V CERAMIC	A
C800	QCE22HP-103	0.01MF	500V CERAMIC	B
C800	QCE22HP-103	0.01MF	500V CERAMIC	CBS
C800	QCE22HP-103	0.01MF	500V CERAMIC	E
C800	QFH42EK-104	0.1MF	250V M.MYLAR	D
C801	QEZO075-878N	8700MF	56V ELECTRO	
C802	QEZO075-878N	8700MF	56V ELECTRO	
C805	QETB1EM-476	47MF	25V ELECTRO	
C806	QETB1EM-476	47MF	25V ELECTRO	
C807	QETB1EM-476	47MF	25V ELECTRO	
C808	QETB1EM-476	47MF	25V ELECTRO	

Capacitors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C809	QETB1EM-476	47MF	25V	ELECTRO	
	C810	QETB1HM-476	47MF	50V	ELECTRO	
	C811	QETB1EM-476	47MF	25V	ELECTRO	
	C812	QETB1HM-476	47MF	50V	ELECTRO	
	C813	QETB1EM-476	47MF	25V	ELECTRO	A
	C813	QETB1EM-476	47MF	25V	ELECTRO	B
	C813	QETB1EM-476	47MF	25V	ELECTRO	CBS
	C813	QETB1EM-476	47MF	25V	ELECTRO	E
	C814	QCGB1HK-102	1000PF	50V	CERAMIC	A
	C814	QCGB1HK-102	1000PF	50V	CERAMIC	B
	C814	QCGB1HK-102	1000PF	50V	CERAMIC	CBS
	C814	QCGB1HK-102	1000PF	50V	CERAMIC	E
	C816	QETB1EM-476	47MF	25V	ELECTRO	
	C831	QETB1CM-107	100MF	16V	ELECTRO	
	C832	QETB1CM-107	100MF	16V	ELECTRO	
	C851	QCF21HP-103	0.01MF	50V	CERAMIC	
	C852	QETB1EM-477	470MF	25V	ELECTRO	B
	C852	QETB1EM-477	470MF	25V	ELECTRO	CBS
	C852	QETB1EM-477	470MF	25V	ELECTRO	D
	C852	QETB1EM-477	470MF	25V	ELECTRO	E
	C852	QETB1JM-227	220MF	63V	ELECTRO	A
	C854	QETB1CM-476	47MF	16V	ELECTRO	
	C855	QETB1CM-476	47MF	16V	ELECTRO	A
	C856	QCGB1HK-102	1000PF	50V	CERAMIC	A
	C857	QETB1HM-105	1MF	50V	ELECTRO	
	C863	QCGB1HK-102	1000PF	50V	CERAMIC	
	C864	QCGB1HK-102	1000PF	50V	CERAMIC	
	C865	QCGB1HK-102	1000PF	50V	CERAMIC	
	C866	QCGB1HK-102	1000PF	50V	CERAMIC	
	C871	QCS21HJ-391	390PF	50V	CERAMIC	D
	C872	QCS21HJ-391	390PF	50V	CERAMIC	D
	C873	QCS21HJ-391	390PF	50V	CERAMIC	D
	C874	QCS21HJ-391	390PF	50V	CERAMIC	D
	C875	QCS21HJ-471	470PF	50V	CERAMIC	D
	C876	QCS21HJ-471	470PF	50V	CERAMIC	D
	C901	QETB1AM-227	220MF	10V	ELECTRO	
	C902	QEK51EM-226	22MF	25V	ELECTRO	
	C903	QEH1HM-475	4.7MF	50V	ELECTRO	
	C904	QETB1HM-226	22MF	50V	ELECTRO	

△ : SAFETY PARTS

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R195	QRD167J-102	1K	1/6W	CARBON	
	R196	QRD167J-221	220	1/6W	CARBON	
	R201	QRD167J-102	1K	1/6W	CARBON	
	R202	QRD167J-102	1K	1/6W	CARBON	
	R203	QRD167J-243	24K	1/6W	CARBON	
	R204	QRD167J-243	24K	1/6W	CARBON	
	R205	QRD167J-393	39K	1/6W	CARBON	
	R206	QRD167J-393	39K	1/6W	CARBON	
	R207	QRD167J-221	220	1/6W	CARBON	
	R208	QRD167J-221	220	1/6W	CARBON	
	R209	QRD167J-102	1K	1/6W	CARBON	
	R210	QRD167J-102	1K	1/6W	CARBON	
	R211	QRD167J-221	220	1/6W	CARBON	
	R212	QRD167J-221	220	1/6W	CARBON	
	R213	QRD167J-102	1K	1/6W	CARBON	
	R214	QRD167J-102	1K	1/6W	CARBON	
	R215	QRD167J-102	1K	1/6W	CARBON	
	R216	QRD167J-102	1K	1/6W	CARBON	
	R217	QRD167J-104	100K	1/6W	CARBON	
	R218	QRD167J-104	100K	1/6W	CARBON	
	R301	QRD167J-222	2.2K	1/6W	CARBON	
	R302	QRD167J-222	2.2K	1/6W	CARBON	
	R303	QRD167J-473	47K	1/6W	CARBON	
	R304	QRD167J-473	47K	1/6W	CARBON	
	R305	QRD167J-751	750	1/6W	CARBON	
	R306	QRD167J-751	750	1/6W	CARBON	
	R307	QRD167J-393	39K	1/6W	CARBON	
	R308	QRD167J-393	39K	1/6W	CARBON	
	R309	QRD167J-474	470K	1/6W	CARBON	
	R310	QRD167J-474	470K	1/6W	CARBON	
	R311	QRD167J-104	100K	1/6W	CARBON	
	R312	QRD167J-104	100K	1/6W	CARBON	
	R403	QRD167J-104	100K	1/6W	CARBON	
	R404	QRD167J-104	100K	1/6W	CARBON	
	R405	QRD167J-221	220	1/6W	CARBON	
	R406	QRD167J-221	220	1/6W	CARBON	
	R407	QRD167J-221	220	1/6W	CARBON	
	R408	QRD167J-221	220	1/6W	CARBON	
	R451	QRD167J-472	4.7K	1/6W	CARBON	
	R452	QRD167J-472	4.7K	1/6W	CARBON	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R453	QVDB91B-E15E	100K		VARIABLE	
	R454	QVUB06W-E15B	100K		VARIABLE	
	R455	QRD167J-822	8.2K	1/6W	CARBON	
	R456	QRD167J-822	8.2K	1/6W	CARBON	
	R461	QRD167J-103	10K	1/6W	CARBON	
	R462	QRD167J-103	10K	1/6W	CARBON	
	R701	QRD167J-222	2.2K	1/6W	CARBON	
	R702	QRD167J-222	2.2K	1/6W	CARBON	
	R703	QRD167J-104	100K	1/6W	CARBON	
	R704	QRD167J-104	100K	1/6W	CARBON	
	R705	QRD167J-511	510	1/6W	CARBON	
	R706	QRD167J-511	510	1/6W	CARBON	
	R707	QRD167J-133	13K	1/6W	CARBON	
	R708	QRD167J-133	13K	1/6W	CARBON	
	R709	QRD167J-823	82K	1/6W	CARBON	
	R710	QRD167J-823	82K	1/6W	CARBON	
	R711	QRD167J-242	2.4K	1/6W	CARBON	
	R712	QRD167J-242	2.4K	1/6W	CARBON	
	R713	QRD167J-162	1.6K	1/6W	CARBON	
	R714	QRD167J-162	1.6K	1/6W	CARBON	
	R715	QRD167J-242	2.4K	1/6W	CARBON	
	R716	QRD167J-242	2.4K	1/6W	CARBON	
	R717	QRD167J-162	1.6K	1/6W	CARBON	
	R718	QRD167J-162	1.6K	1/6W	CARBON	
△	R719	QRX022J-R22AM	0.22	2W	M.FILM	
△	R720	QRX022J-R22AM	0.22	2W	M.FILM	
△	R725	QRZ0077-101	100	1/4W	FUSIBLE	
△	R726	QRZ0077-100	10	1/4W	FUSIBLE	
△	R727	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R728	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R729	QRD14CJ-100S	10	1/4W	UNF.CARBON	D
△	R730	QRD14CJ-100S	10	1/4W	UNF.CARBON	D
△	R731	QRD125J-330	33	1/2W	UNF.CARBON	
△	R732	QRD125J-330	33	1/2W	UNF.CARBON	
△	R733	QRG012J-100AM	10	1W	O.M.FILM	
△	R734	QRG012J-100AM	10	1W	O.M.FILM	
△	R753	QRG022J-331AM	330	2W	O.M.FILM	
△	R754	QRG022J-331AM	330	2W	O.M.FILM	
△	R781	QRD167J-105	1M	1/6W	CARBON	
△	R782	QRD167J-102	1K	1/6W	CARBON	
△	R783	QRD167J-105	1M	1/6W	CARBON	
△	R786	QRD167J-474	470K	1/6W	CARBON	
△	R788	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
△	R789	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
△	R790	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
△	R795	QRD167J-474	470K	1/6W	CARBON	
△	R801	QRZ0077-100	10	1/4W	FUSIBLE	
△	R802	QRZ0077-100	10	1/4W	FUSIBLE	
△	R803	QRD167J-153	15K	1/6W	CARBON	
△	R804	QRD167J-153	15K	1/6W	CARBON	
△	R805	QRD167J-153	15K	1/6W	CARBON	
△	R806	QRD167J-153	15K	1/6W	CARBON	
△	R808	QRZ0077-100	10	1/4W	FUSIBLE	
△	R809	QRD167J-223	22K	1/6W	CARBON	
△	R810	QRD167J-223	22K	1/6W	CARBON	
△	R811	QRD167J-682	6.8K	1/6W	CARBON	
△	R812	QRD167J-682	6.8K	1/6W	CARBON	
△	R813	QRD167J-183	18K	1/6W	CARBON	A
△	R813	QRD167J-183	18K	1/6W	CARBON	B
△	R813	QRD167J-183	18K	1/6W	CARBON	CBS
△	R813	QRD167J-183	18K	1/6W	CARBON	E
△	R814	QRD167J-183	18K	1/6W	CARBON	A
△	R814	QRD167J-183	18K	1/6W	CARBON	B
△	R814	QRD167J-183	18K	1/6W	CARBON	CBS
△	R814	QRD167J-183	18K	1/6W	CARBON	E
△	R815	QRD167J-183	18K	1/6W	CARBON	A
△	R815	QRD167J-183	18K	1/6W	CARBON	B
△	R815	QRD167J-183	18K	1/6W	CARBON	CBS
△	R815	QRD167J-183	18K	1/6W	CARBON	E
△	R816	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
△	R816	QRD14CJ-100S	10	1/4W	UNF.CARBON	B
△	R816	QRD14CJ-100S	10	1/4W	UNF.CARBON	CBS
△	R816	QRD14CJ-100S	10	1/4W	UNF.CARBON	E
△	R831	QRD14CJ-471S	470	1/4W	UNF.CARBON	
△	R832	QRD14CJ-471S	470	1/4W	UNF.CARBON	
△	R835	QRD167J-104	100K	1/6W	CARBON	
△	R836	QRD167J-104	100K	1/6W	CARBON	
△	R851	QRD167J-821	820	1/6W	CARBON	
△	R852	QRD14CJ-3R3S	3.3	1/4W	UNF.CARBON	
△	R853	QRG012J-332A	3.3K	1W	O.M.FILM	A
△	R854	QRD167J-102	1K	1/6W	CARBON	
△	R901	QRD167J-272	2.7K	1/6W	CARBON	
△	R902	QRD167J-272	2.7K	1/6W	CARBON	
△	R903	QRD167J-153	15K	1/6W	CARBON	
△	R904	QRD167J-153	15K	1/6W	CARBON	
△	R905	QRD167J-104	100K	1/6W	CARBON	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R906	QRD167J-823	82K	1/6W	CARBON	
	R907	QRD167J-223	22K	1/6W	CARBON	
	R908	QRD167J-223	22K	1/6W	CARBON	
	R909	QRD167J-103	10K	1/6W	CARBON	
	R912	QRD167J-512	5.1K	1/6W	CARBON	
	R916	QRD167J-822	8.2K	1/6W	CARBON	
	R917	QRD167J-822	8.2K	1/6W	CARBON	
	R918	QRD167J-224	220K	1/6W	CARBON	
	R919	QRD167J-332	3.3K	1/6W	CARBON	
	R920	QRD167J-103	10K	1/6W	CARBON	
△	R921	QRG022J-821A	820	2W	O.M.FILM	
	R923	QRD167J-560	56	1/6W	CARBON	
	R927	QRD167J-473	47K	1/6W	CARBON	
	R930	QRD167J-562	5.6K	1/6W	CARBON	
△	R931	QRD14CJ-470S	47	1/4W	UNF. CARBON	
△	R999	QRG022J-331A	330	2W	O.M.FILM	

△ : SAFETY PARTS

Others

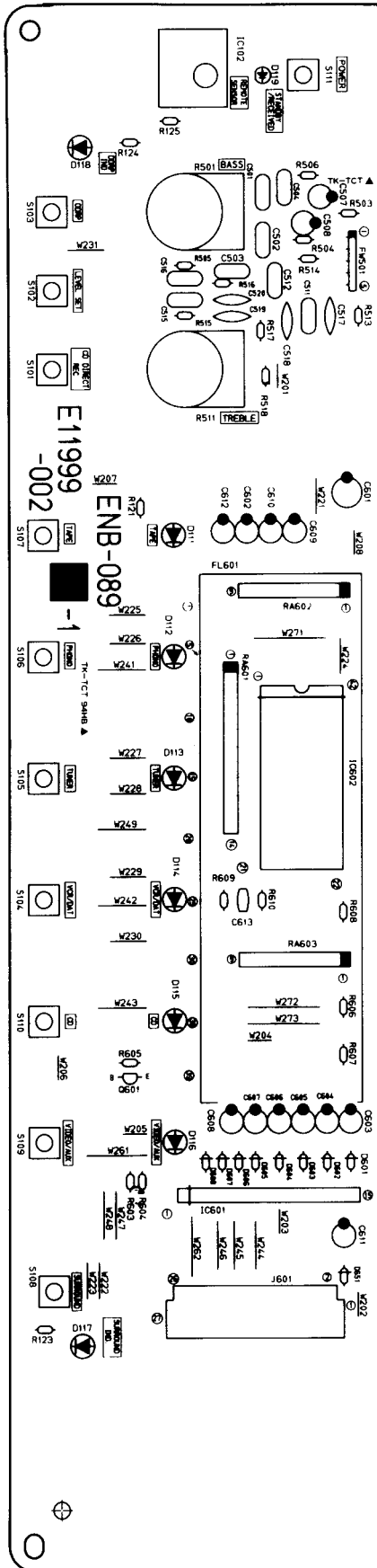
△	ITEM	PART NUMBER	DESCRIPTION		AREA
	FW751	EWR35B-25SST	FLAT WIRE		
	RY001	ESK1D12-115	RELAY		A
	RY001	ESK1D12-115	RELAY		B
	RY001	ESK1D12-115	RELAY		D
	RY001	ESK1D12-115	RELAY		E
	RY001	ESK1D12-115BS	RELAY		CBS
	RY001	ESK5D24-218	RELAY		
	WT001	E67764-203	WRAPPING TERMINAL		B
	WT001	E67764-203	WRAPPING TERMINAL		CBS
	WT001	E67764-203	WRAPPING TERMINAL		D
	WT001	E67764-203	WRAPPING TERMINAL		E
	WT004	E67764-303	WRAPPING TERMINAL		A
	WT005	E67764-302	WRAPPING TERMINAL		A
	WT006	E67764-302	WRAPPING TERMINAL		A
	WT008	E67764-402	WRAPPING TERMINAL		A
	WT800	E67764-102	WRAPPING TERMINAL		
	WT801	E67764-103	WRAPPING TERMINAL		

△ : SAFETY PARTS

Others

△	ITEM	PART NUMBER	DESCRIPTION		AREA
		EMG7331-002	FUSE CLIP		B
		EMG7331-002	FUSE CLIP		CBS
		EMG7331-002	FUSE CLIP		D
		EMG7331-002	FUSE CLIP		E
		EMG7331-002	FUSE CLIP		B
		EMG7331-002	FUSE CLIP		CBS
		EMG7331-002	FUSE CLIP		D
		EMG7331-002	FUSE CLIP		E
		E11998-003	CIRCUIT BOARD		A
		E11998-003	CIRCUIT BOARD		B
		E11998-003	CIRCUIT BOARD		D
		E11998-003	CIRCUIT BOARD		E
		E11998-003BS	CIRCUIT BOARD		CBS
		E65508-002	TAB		
		E70945-H25	HEAT SINK		
		E70945-H25	HEAT SINK		A
		E70945-H25	HEAT SINK		A
		E70945-H25	HEAT SINK		B
		E70945-H25	HEAT SINK		CBS
		E70945-H25	HEAT SINK		E
		SBSB3008CC	SCREW		
		SBSB3008CC	SCREW		A
		SBSB3008CC	SCREW		A
		SBSB3008CC	SCREW		B
		SBSB3008CC	SCREW		CBS
		SBSB3008CC	SCREW		E
		E74920-002	SHIELD PLATE		
△	J005	QMC0637-004	AC OUTLET		A
	J201	EMN00TV-402A	4P PIN JACK		
	J202	EMN00TV-602A	6P PIN JACK		
	J203	EMN00TV-602A	6P PIN JACK		
	J204	EMN00TV-405A	4P PIN JACK		
	J205	QMS3501-021	MINI JACK		
	J401	EMV7122-003	CONNECTOR		
	J501	EMV7122-005	CONNECTOR		
	J701	EMV7122-003	CONNECTOR		
	J751	QMS6312-025	HEADPHONE JACK		
	J752	EMN00TV-201A	2P PIN JACK		
	J753	EMB90TV-402A	SPEAKER TERMINAL		
	J851	QMA1221-009	DC JACK		A
	J851	QMA1221-009	DC JACK		B
	J851	QMA1221-009	DC JACK		CBS
	J851	QMA1221-009	DC JACK		E
	L701	EQL0001-R45	INDUCTOR		
	L702	EQL0001-R45	INDUCTOR		
	P802	EMV5102-004B	PLUG ASSY		
	S001	QSS5C22-E03	SLIDE SWITCH		
△	S901	QSR0085-009	VOLTAGE SELECTOR		A
△	T002	ETP1000-41EA	POWER TRANSFORMER		B
△	T002	ETP1000-41EA	POWER TRANSFORMER		D
△	T002	ETP1000-41EA	POWER TRANSFORMER		E
△	T002	ETP1000-41EABS	POWER TRANSFORMER		CBS
△	T002	ETP1000-41ZB	POWER TRANSFORMER		A
	EP002	E70859-001	EARTH PLATE		
	EP003	E70859-001	EARTH PLATE		
	EP004	E70859-001	EARTH PLATE		
	FW401	EWR23C-25LN	FLAT WIRE		
	FW421	EWR33B-16LST	FLAT WIRE		
	FW454	EWR23C-16NN	FLAT WIRE		
	FW701	EWR23C-20LN	FLAT WIRE		

■ ENB-089 A Front PC Board Ass'y



Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
Q601	2SC1685(Q,R)	SILICON	MATSUSHITA	

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
IC102	GP1U501X	I.C.	SHARP	
IC601	7EL-SPI-001	I.C.	KYOSERA	
IC602	LC7566	I.C.	SANYO	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
D111	SLH-34DC50F124	L.E.D.	ROHM	
D112	SLH-34DC50F124	L.E.D.	ROHM	
D113	SLH-34DC50F124	L.E.D.	ROHM	
D114	SLH-34DC50F124	L.E.D.	ROHM	
D115	SLH-34DC50F124	L.E.D.	ROHM	
D116	SLH-34DC50F124	L.E.D.	ROHM	
D117	SLH-34DC50F124	L.E.D.	ROHM	
D118	SLH-34DC50F124	L.E.D.	ROHM	
D119	SLH-34VC3F	L.E.D.	ROHM	
D601	MA700	ZENER	MATSUSHITA	
D602	1SS133	SILICON	ROHM	
D603	1SS133	SILICON	ROHM	
D604	1SS133	SILICON	ROHM	
D605	1SS133	SILICON	ROHM	
D606	1SS133	SILICON	ROHM	
D607	1SS133	SILICON	ROHM	
D608	1SS133	SILICON	ROHM	
D651	1SS133	SILICON	ROHM	

Capacitors

ITEM	PART NUMBER	DESCRIPTION			AREA
C501	QFN81HJ-153	0.015MF	50V	MYLAR	
C502	QFN81HJ-153	0.015MF	50V	MYLAR	
C503	QFN81HK-823	0.082MF	50V	MYLAR	
C504	QFN81HK-823	0.082MF	50V	MYLAR	
C507	QEK51HM-105G	1MF	50V	ELECTRO	
C508	QEK51HM-105G	1MF	50V	ELECTRO	
C511	QFN81HJ-332	3300PF	50V	MYLAR	
C512	QFN81HJ-332	3300PF	50V	MYLAR	
C515	QFN81HJ-183	0.018MF	50V	MYLAR	
C516	QFN81HJ-183	0.018MF	50V	MYLAR	
C517	QCS21HJ-221	220PF	50V	CERAMIC	
C518	QCS21HJ-221	220PF	50V	CERAMIC	
C519	QCY21HK-122	1200PF	50V	CERAMIC	
C520	QCY21HK-122	1200PF	50V	CERAMIC	
C601	QEK51CM-107	100MF	16V	ELECTRO	
C602	QEK51HM-474G	0.47MF	50V	ELECTRO	
C603	QER51EM-475G	4.7MF	25V	ELECTRO	
C604	QER51EM-475G	4.7MF	25V	ELECTRO	
C605	QER51EM-475G	4.7MF	25V	ELECTRO	
C606	QER51EM-475G	4.7MF	25V	ELECTRO	
C607	QER51EM-475G	4.7MF	25V	ELECTRO	
C608	QER51EM-475G	4.7MF	25V	ELECTRO	
C609	QER51EM-475G	4.7MF	25V	ELECTRO	
C610	QER51EM-475G	4.7MF	25V	ELECTRO	
C611	QEK51HM-475	4.7MF	50V	ELECTRO	
C612	QEK51HM-475	4.7MF	50V	ELECTRO	
C613	QCXB1CM-152	1500PF	16V	CERAMIC	

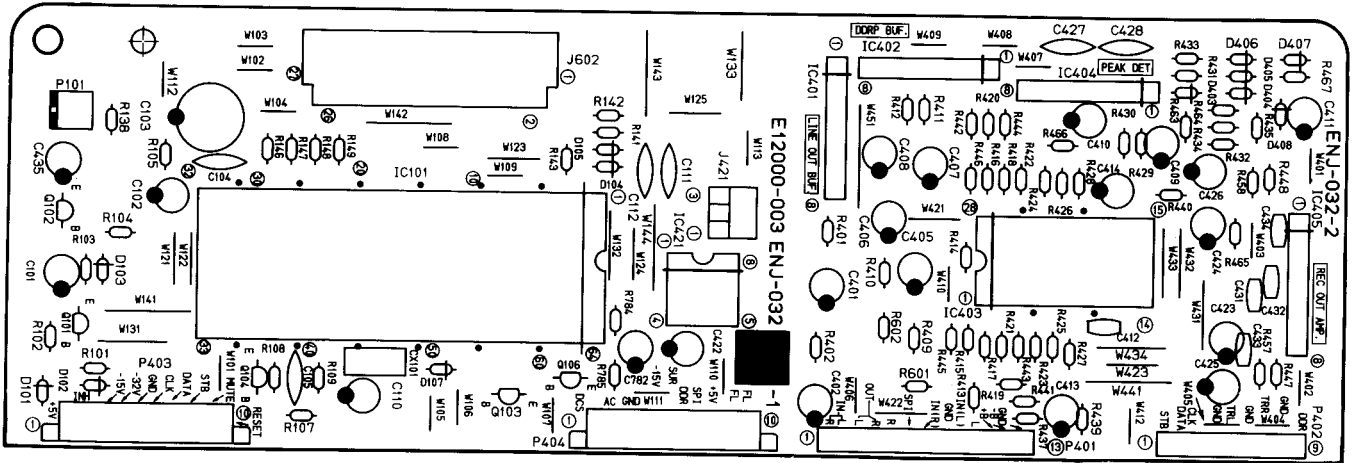
Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R121	QRD167J-271	270 1/6W CARBON	
R123	QRD167J-271	270 1/6W CARBON	
R124	QRD167J-271	270 1/6W CARBON	
R125	QRD167J-271	270 1/6W CARBON	
R501	QVDB92C-E15B	100K VARIABLE	
R503	QRD167J-203	20K 1/6W CARBON	
R504	QRD167J-203	20K 1/6W CARBON	
R505	QRD167J-362	3.6K 1/6W CARBON	
R506	QRD167J-362	3.6K 1/6W CARBON	
R511	QVDB92C-E15B	100K VARIABLE	
R513	QRD167J-472	4.7K 1/6W CARBON	
R514	QRD167J-472	4.7K 1/6W CARBON	
R515	QRD167J-821	820 1/6W CARBON	
R516	QRD167J-821	820 1/6W CARBON	
R517	QRD167J-681	680 1/6W CARBON	
R518	QRD167J-681	680 1/6W CARBON	
R603	QRD167J-562	5.6K 1/6W CARBON	
R604	QRD167J-683	68K 1/6W CARBON	
R605	QRD167J-103	10K 1/6W CARBON	
R606	QRD167J-473	47K 1/6W CARBON	
R607	QRD167J-473	47K 1/6W CARBON	
R608	QRD167J-474	470K 1/6W CARBON	
R609	QRD167J-474	470K 1/6W CARBON	
R610	QRD167J-183	18K 1/6W CARBON	
RA601	QRB135J-104	100K 1/8W R.NETWORK	
RA602	QRB085J-104	100K 1/8W R.NETWORK	
RA603	QRB085J-473	47K 1/8W R.NETWORK	

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
J601	E11999-002(S)	CIRCUIT BOARD CONNECTOR	
S101	ESP0001-018	TACT SWITCH	
S102	ESP0001-018	TACT SWITCH	
S103	ESP0001-018	TACT SWITCH	
S104	ESP0001-018	TACT SWITCH	
S105	ESP0001-018	TACT SWITCH	
S106	ESP0001-018	TACT SWITCH	
S107	ESP0001-018	TACT SWITCH	
S108	ESP0001-018	TACT SWITCH	
S109	ESP0001-018	TACT SWITCH	
S110	ESP0001-018	TACT SWITCH	
S111	ESP0001-018	TACT SWITCH	
FL601	ELU0001-047	FL TUBE	
FS601	E3400-400	SPACER	
FW501	EWR35B-30LST	FLAT WIRE	

ENJ-032 System Control and DDRP PC Board Ass'y



Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q101	DTC144ES	SILICON ROHM	
Q102	DTC144ES	SILICON ROHM	
Q103	DTA144ES	SILICON ROHM	
Q104	2SC1685(R,S)	SILICON MATSUSHITA	
Q106	DTA144ES	SILICON ROHM	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D101	1SS133	SILICON ROHM	
D102	1SS133	SILICON ROHM	
D103	1SS133	SILICON ROHM	
D104	1SS133	SILICON ROHM	
D105	1SS133	SILICON ROHM	
D107	1SS133	SILICON ROHM	
D403	1SS133	SILICON ROHM	
D404	1SS133	SILICON ROHM	
D405	1SS133	SILICON ROHM	
D406	1SS133	SILICON ROHM	
D407	1SS133	SILICON ROHM	
D408	1SS133	SILICON ROHM	

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC101	UPD75104CW-179	I.C. NEC	
IC401	M5218L	I.C. MITSUBISHI	
IC402	M5218L	I.C. MITSUBISHI	
IC403	TC9163N	I.C. TOSHIBA	
IC404	M5218L	I.C. MITSUBISHI	
IC405	M5218L	I.C. MITSUBISHI	
IC421	LB1639-CV	I.C. SANYO	

Capacitors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QETB1EM-106	10MF	25V	ELECTRO	
	C102	QETB1CM-107	100MF	16V	ELECTRO	
	C103	QETB0JM-108	1000MF	6.3V	ELECTRO	
	C104	QCF21HP-473	0.047MF	50V	CERAMIC	
	C105	QCF21HP-103	0.01MF	50V	CERAMIC	
	C110	QETB1EM-226	22MF	25V	ELECTRO	
	C111	QCS21HJ-681	680PF	50V	CERAMIC	
	C112	QCS21HJ-681	680PF	50V	CERAMIC	
	C401	QETB1EM-106	10MF	25V	ELECTRO	
	C402	QETB1EM-106	10MF	25V	ELECTRO	
	C405	QETB1EM-106	10MF	25V	ELECTRO	
	C406	QETB1EM-106	10MF	25V	ELECTRO	
	C407	QETB1EM-106	10MF	25V	ELECTRO	
	C408	QETB1EM-106	10MF	25V	ELECTRO	
	C409	QETB1EM-106	10MF	25V	ELECTRO	
	C410	QETB1EM-106	10MF	25V	ELECTRO	
	C411	QETB1HM-475	4.7MF	50V	ELECTRO	
	C412	QCBB1HK-561	560PF	50V	CERAMIC	
	C413	QETB1EM-106	10MF	25V	ELECTRO	
	C414	QETB1EM-106	10MF	25V	ELECTRO	
	C422	QETB1AM-107	100MF	10V	ELECTRO	
	C423	QETB1EM-106	10MF	25V	ELECTRO	
	C424	QETB1EM-106	10MF	25V	ELECTRO	
	C425	QETB1EM-476	47MF	25V	ELECTRO	
	C426	QETB1EM-476	47MF	25V	ELECTRO	
	C427	QCF21HP-223	0.022MF	50V	CERAMIC	
	C428	QCF21HP-223	0.022MF	50V	CERAMIC	
	C431	QCBB1HK-101	100PF	50V	CERAMIC	
	C432	QCBB1HK-101	100PF	50V	CERAMIC	
	C433	QCSB1HJ-220	22PF	50V	CERAMIC	
	C434	QCSB1HJ-220	22PF	50V	CERAMIC	
	C435	QETB1HM-475	4.7MF	50V	ELECTRO	
	C783	QETB1HM-474	0.47MF	50V	ELECTRO	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD167J-103	10K	1/6W	CARBON	
	R102	QRD167J-103	10K	1/6W	CARBON	
	R103	QRD167J-473	47K	1/6W	CARBON	
	R104	QRD167J-103	10K	1/6W	CARBON	
	R105	QRD167J-101	100	1/6W	CARBON	
	R107	QRD167J-473	47K	1/6W	CARBON	
	R108	QRD167J-223	22K	1/6W	CARBON	
	R109	QRD167J-103	10K	1/6W	CARBON	
	R138	QRD167J-821	820	1/6W	CARBON	
	R141	QRD167J-623	62K	1/6W	CARBON	
	R142	QRD167J-103	10K	1/6W	CARBON	
	R143	QRD167J-623	62K	1/6W	CARBON	
	R146	QRD167J-223	22K	1/6W	CARBON	
	R147	QRD167J-223	22K	1/6W	CARBON	
	R148	QRD167J-223	22K	1/6W	CARBON	
	R149	QRD167J-223	22K	1/6W	CARBON	
	R401	QRD167J-473	47K	1/6W	CARBON	
	R402	QRD167J-473	47K	1/6W	CARBON	
	R409	QRD167J-222	2.2K	1/6W	CARBON	
	R410	QRD167J-222	2.2K	1/6W	CARBON	
	R411	QRD167J-474	470K	1/6W	CARBON	
	R412	QRD167J-474	470K	1/6W	CARBON	
	R413	QRD167J-102	1K	1/6W	CARBON	
	R414	QRD167J-102	1K	1/6W	CARBON	
	R415	QRD167J-392	3.9K	1/6W	CARBON	
	R416	QRD167J-392	3.9K	1/6W	CARBON	
	R417	QRD167J-912	9.1K	1/6W	CARBON	
	R418	QRD167J-912	9.1K	1/6W	CARBON	
	R419	QRD167J-153	15K	1/6W	CARBON	
	R420	QRD167J-153	15K	1/6W	CARBON	
	R421	QRD167J-222	2.2K	1/6W	CARBON	
	R422	QRD167J-222	2.2K	1/6W	CARBON	
	R423	QRD167J-334	330K	1/6W	CARBON	
	R424	QRD167J-334	330K	1/6W	CARBON	
	R425	QRD167J-183	18K	1/6W	CARBON	
	R426	QRD167J-183	18K	1/6W	CARBON	
	R427	QRD167J-274	270K	1/6W	CARBON	
	R428	QRD167J-274	270K	1/6W	CARBON	
	R429	QRD167J-103	10K	1/6W	CARBON	
	R430	QRD167J-103	10K	1/6W	CARBON	
	R431	QRD167J-274	270K	1/6W	CARBON	
	R432	QRD167J-274	270K	1/6W	CARBON	
	R433	QRD167J-104	100K	1/6W	CARBON	
	R434	QRD167J-104	100K	1/6W	CARBON	
	R435	QRD167J-223	22K	1/6W	CARBON	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R439	QRD167J-474	470K	1/6W	CARBON	
	R440	QRD167J-474	470K	1/6W	CARBON	
	R441	QRD167J-104	100K	1/6W	CARBON	
	R442	QRD167J-104	100K	1/6W	CARBON	
	R443	QRD167J-223	22K	1/6W	CARBON	
	R444	QRD167J-223	22K	1/6W	CARBON	
	R445	QRD167J-472	4.7K	1/6W	CARBON	
	R446	QRD167J-472	4.7K	1/6W	CARBON	
	R447	QRD167J-104	100K	1/6W	CARBON	
	R448	QRD167J-104	100K	1/6W	CARBON	
	R457	QRD167J-822	8.2K	1/6W	CARBON	
	R458	QRD167J-822	8.2K	1/6W	CARBON	
	R463	QRD167J-682	6.8K	1/6W	CARBON	
	R464	QRD167J-682	6.8K	1/6W	CARBON	
	R465	QRD167J-563	56K	1/6W	CARBON	
	R466	QRD167J-563	56K	1/6W	CARBON	
	R467	QRD167J-221	220	1/6W	CARBON	
	R601	QRD167J-562	5.6K	1/6W	CARBON	
	R602	QRD167J-562	5.6K	1/6W	CARBON	
	R784	QRD167J-473	47K	1/6W	CARBON	
	R785	QRD167J-224	220K	1/6W	CARBON	

Others

△	ITEM	PART NUMBER	DESCRIPTION			AREA
		E12000-003(S)	CIRCUIT BOARD			
	J421	EMV7122-003	CONNECTOR			
	J602	EMV7123-027R	CONNECTOR			
	P101	EMV5103-002A	PLUG ASSY			
	P401	EMV5101-013B	PLUG ASSY			
	P402	EMV5101-009B	PLUG ASSY			
	P403	EMV5112-010R	PLUG ASSY			
	P404	EMV5112-010R	PLUG ASSY			
	CX101	ECX0004-194KM	RESONATOR			

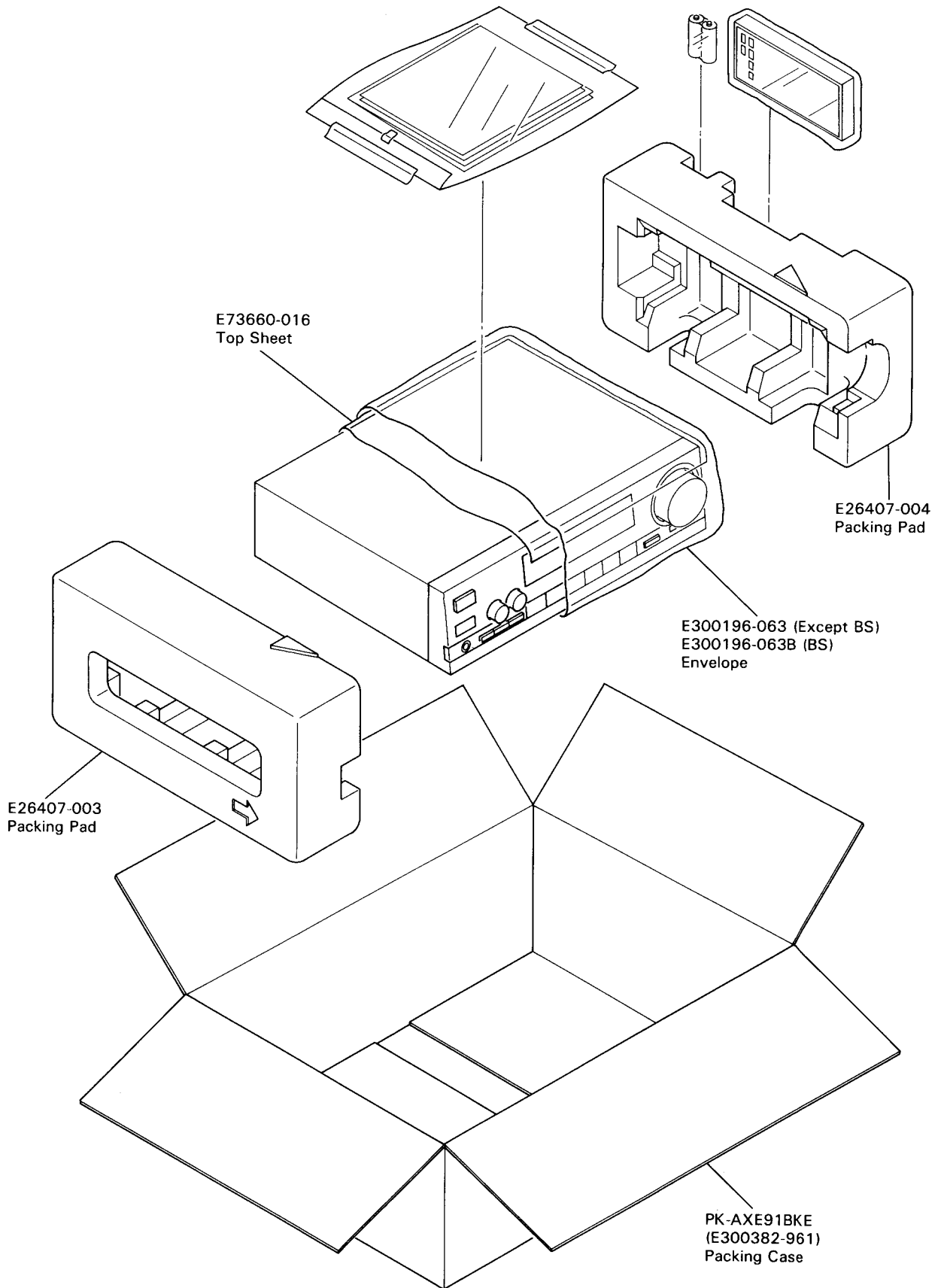
Accessories List

△	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1528B E30580-1528BBS BT20117 BT20029C BT20098	Instruction Book Instruction Book Warranty Card Warranty Card Warranty Card	1 1 1 1 1	for Australia for New Zealand	Except BS BS G A A
	BT20060 BT20066A QZL1008-001 E43486-340A E43486-371A	Warranty Card EEC Agency FTZ Information Sheet Safety Sheet Sheet	1 1 1 1 1		BS BS G BS BS
△ △ △	QMF51A2-4R0S E67142-T4R0 E6581-4 EMC0202-001BS E04056	Fuse Fuse Label Envelope AC Plug Siemens Plug	1 1 1 2 1	for Fuse	U U U BS U
	E35497-015 UM-3(DJ)-2PSA RM-SE91 E300196-033 E300196-033B	Caution Sheet Battery Remote Controler Envelope Eenvelope	1 1 1 1 1	220V	U Except BS BS

△: Safety Parts

The Marks Designated Areas	
A.....Australia	BS.....the U.K.
E , EF.....Cotinental Europe	U.....Other Countries
G.....West Germany	No mark indicates all areas.

Packing Materials and Part Numbers



The Marks Designated Areas

A.....Australia	BS.....the U.K.
E, EF.....Cotinental Europe	U.....Other Countries
G.....West Germany	No mark indicates all areas.

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