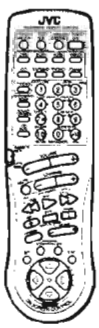
JVC

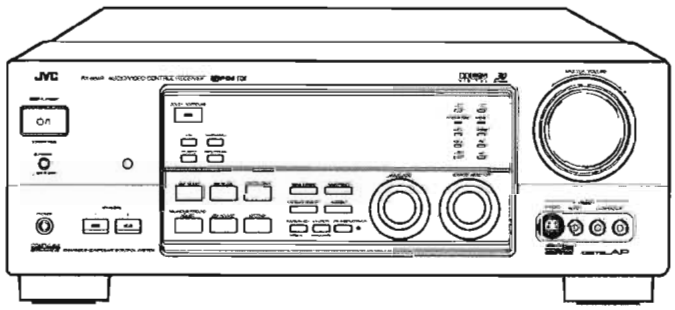
SERVICE MANUAL

AUDIO/VIDEO CONTROL RECEIVER

RX-884RBK

Area Suffix	
B	U.K.
EN	Nothern Europe
E	Continental Europe





TEXT
COMPU LINK

COMPU LINK
Remote

3D-PHONIC

digital AP

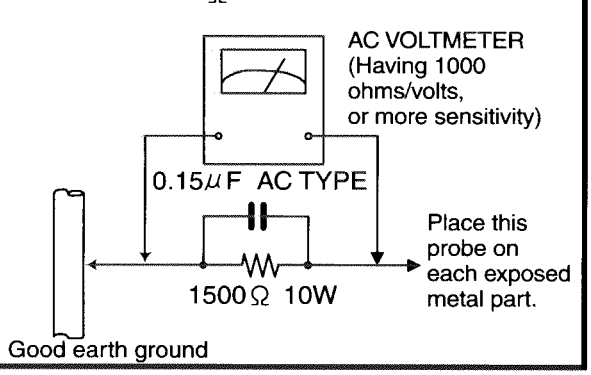
DOLBY
DIGITAL

Contents

No.20710
Jun.1998

Safety Precautions

1. This 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. Services 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 manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products 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 (⚠) 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 parts 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 currnet 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 parts 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 0.5mA 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 10W resistor paralleled by a 0.15 μF 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 eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V 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.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Safety Precautions (U.K only)

1. This 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.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by (⚠) on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and 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.

Warning

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JVC

VICTOR COMPANY OF JAPAN, LIMITED

RX-884RBK

Instruction Book

JVC

AUDIO/VIDEO CONTROL RECEIVER

AUDIO/VIDEO-RECEIVER MIT STEUEREINHEIT
AMPLI/TUNER DE COMMANDE AUDIO/VIDEO
GEINTEGREERDE AUDIO/VIDEO-VERSTERKER
RECEPTOR DE CONTROL DE AUDIO/VÍDEO
RICEVITORE DI CONTROLLO AUDIO/VIDEO

RX-884RBK

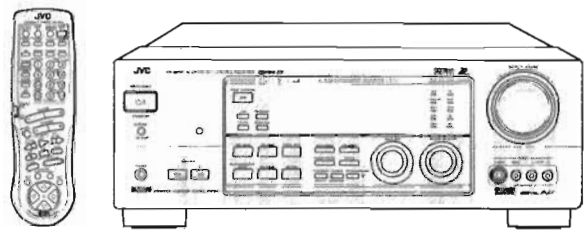
TEXT COMPU LINK

COMPU LINK Remote

3D-PHONIC

digital AP

DOLBY DIGITAL



INSTRUCTIONS

BEDIENUNGSANLEITUNG
MANUEL D'INSTRUCTIONS
GEBRUIKSAANWIJZING
MANUAL DE INSTRUCCIONES
ISTRUZIONI

For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

EN, GE, FR, NL, SP, IT

0498OFMM

LVT0016-001A
[E]

Warnings, Cautions and Others/Warnung, Achtung und sonstige Hinweise/ Mises en garde, précautions et indications diverses/Waarschuwingen, voorzorgen en andere mededelingen/Avisos, precauciones y otras notas/ Avvertenze e precauzioni da osservare

IMPORTANT for the U.K.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

Per l'Italia:
"Si dichiara che il questo prodotto di marca JVC è conforme alle prescrizioni del Decreto Ministeriale n.548 del 28/08/95 pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana n.301 del 28/12/95."

CAUTION
To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

ACHTUNG
Zur Verhinderung von elektrischen Schlägen, Brandgefahr, usw:
1. Keine Schrauben lösen oder Abdeckungen entfernen und nicht das Gehäuse öffnen.
2. Dieses Gerät weder Regen noch Feuchtigkeit aussetzen.

ATTENTION
Afin d'éviter tout risque d'électrocution, d'incendie, etc.:
1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

VOORZICHTIG
Ter vermindering van gevaar voor brand, elektrische schokken, enz.:
1. Verwijder geen schroeven, panelen of de behuizing.
2. Stel dit toestel niet bloot aan regen of vocht.

PRECAUCIÓN
Para reducir riesgos de choques eléctricos, incendio, etc.:
1. No extraiga los tornillos, los cubiertas ni la caja.
2. No exponga este aparato a la lluvia o a la humedad.

ATTENZIONE
Per ridurre il rischio di scosse elettriche, incendi, ecc...
1. Non togliere viti, coperchi o la scatola.
2. Non esporre l'apparecchio alla piogggia e all'umidità.

English
Deutsch
Français
Nederlands
Español
Italiano

RX-884RBK

Caution — ⏻ POWER switch and STANDBY/ON ⏻/I button!
This apparatus is provided with a ⏻ POWER switch to be able to minimize power consumption for safe use. Therefore,
1. When doing initial setting, complete all the connections required, connect the mains plug into the wall outlet, and set the ⏻ POWER switch to ON. After these, it will be available to operate STANDBY/ON ⏻/I button and so on.
2. When not in use, set the ⏻ POWER switch to OFF.
3. Disconnect the mains plug to shut the power off completely. The ⏻ POWER switch and STANDBY/ON ⏻/I button in any position do not disconnect the mains line.
4. The power can be remote controlled.

Achtung — ⏻ POWER-Schalter und STANDBY/ON ⏻/I-Taste!
Dieses Gerät hat einen Netzschalter (⏻ POWER), um den Stromverbrauch für sichere Verwendung auf ein Minimum bringen zu können. Verfahren Sie deshalb wie folgt:
1. Beim ursprünglichen Aufbau alle erforderlichen Anschlüsse herstellen, den Netzstecker in eine Wandsteckdose stecken, und den ⏻ POWER-Schalter einschalten. Anschließend ist Betrieb der STANDBY/ON ⏻/I-Taste usw. möglich.
2. Wenn das Gerät nicht verwendet wird, den ⏻ POWER-Schalter ausschalten.
3. Den Netzstecker aus der Steckdose ziehen, um die Stromversorgung vollkommen zu unterbrechen. Der ⏻ POWER-Schalter und die STANDBY/ON ⏻/I-Taste unterbrechen in keiner Stellung die Stromversorgung vollkommen.
4. Die Stromversorgung kann mit der Fernbedienung ein- und ausgeschaltet werden.

Attention — Commutateur ⏻ POWER et d'une touche STANDBY/ON ⏻/I!
Cet appareil est équipé d'un commutateur ⏻ POWER qui lui permet de réduire sa consommation d'électricité pour une utilisation plus sûre. Par conséquent,
1. En procédant au réglage initial, compléter toutes les connexions nécessaires, connecter la fiche secteur dans la prise murale et mettre le commutateur ⏻ POWER sur la position ON. Ensuite, il sera possible de contrôler la touche STANDBY/ON ⏻/I, etc.
2. Mettre le commutateur ⏻ POWER sur la position OFF lorsque l'appareil n'est pas utilisé.
3. Déconnecter la fiche secteur pour couper complètement le courant. Le commutateur ⏻ POWER et la touche STANDBY/ON ⏻/I ne coupent jamais complètement l'alimentation, quelle que soit leurs positions.
4. L'alimentation peut être télécommandée.

Voorzichtig — ⏻ POWER en STANDBY/ON ⏻/I schakelaars!
Dit apparaat is voorzien van een ⏻ POWER hoofdschakelaar om het apparaat gebruiksklaar te zetten, maar te zorgen dat het stroomverbruik minimaal blijft. Neem in verband hiermee het volgende in acht:
1. Bij de eerste ingebruikneming zorgt u eerst dat alle aansluitingen in orde zijn, dan steekt u de stekker in het stopkontakt en dan zet u de ⏻ POWER schakelaar in de "ON" stand. Daarna kunt u het apparaat aan- en uitschakelen met de STANDBY/ON ⏻/I schakelaar.
2. Wanneer u het apparaat geruime tijd niet gebruikt, kunt u beter de ⏻ POWER schakelaar in de "OFF" stand zetten.
3. Om de stroomtoevoer geheel uit te schakelen, trekt u de stekker uit het stopkontakt. Anders zal er altijd een geringe hoeveelheid stroom naar het apparaat lopen, ongeacht de stand van de STANDBY/ON ⏻/I en de ⏻ POWER.
4. U kunt het apparaat ook met de afstandsbediening aan- en uitschakelen.

Precaución — Interruptor ⏻ POWER y botón STANDBY/ON ⏻/I!
Esta unidad dispone de un interruptor ⏻ POWER que sirve para reducir al mínimo el consumo de alimentación para proporcionar mayor seguridad operacional. Por lo tanto,
1. Al ejecutar el ajuste inicial, después de completar todas las conexiones requeridas, conectar el cable de alimentación a una toma de pared, y activar el interruptor ⏻ POWER. Entonces, será posible ejecutar operaciones tales como la conmutación del estado de alimentación.
2. Desactivar el interruptor ⏻ POWER al dejar la unidad fuera de uso.
3. Desconectar el cable de alimentación para desactivar la alimentación totalmente. Cualquier que sea la posición de ajustes del interruptor ⏻ POWER y el botón STANDBY/ON ⏻/I, la alimentación no es cortada completamente.
4. La alimentación puede ser controlada remotamente.

Attenzione — Interruttore ⏻ POWER e tasto STANDBY/ON ⏻/I!
Per ridurre al minimo l'assorbimento di corrente ai fini della sicurezza, questo apparecchio è stato dodato di un interruttore ⏻ POWER. Di conseguenza,
1. Al momento dell'impostazione iniziale, completare tutti i collegamenti richiesti, inserire la spina del cavo di alimentazione nella presa a muro della rete elettrica e impostare l'interruttore ⏻ POWER in posizione ON. Fatto ciò, sarà pronto all'uso STANDBY/ON ⏻/I.
2. Quando non in uso, impostare l'interruttore ⏻ POWER in posizione OFF.
3. Disinserire la spina del cavo di alimentazione dalla presa della rete elettrica per staccare completamente l'alimentazione. L'interruttore ⏻ POWER e il tasto STANDBY/ON ⏻/I in nessuna posizione staccano la linea di alimentazione elettrica principale.
4. È possibile il controllo remoto dell'alimentazione.

Caution: Proper Ventilation
To avoide risk of electric shock and fire and to protect from damage. Locate the apparatus as follows:
Front: No obstructions open spacing.
Sides: No obstructions in 10 cm from the sides.
Top: No obstructions in 10 cm from the top.
Back: No obstructions in 15 cm from the back
Bottom: No obstructions, place on the level surface.
In addition, maintain the best possible air circulation as illustrated.

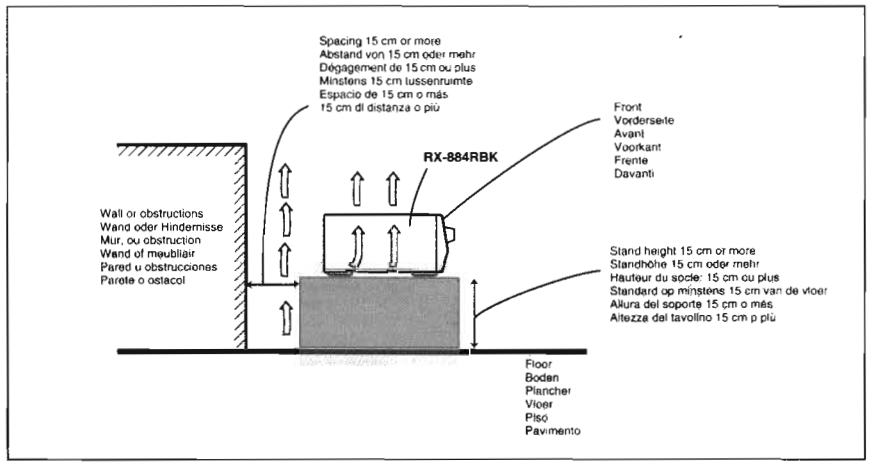
Achtung: Angemessene Ventilation
Stellen Sie das Gerät zur Verhütung von elektrischem Schlag und Feuer und zum Schutz gegen Beschädigung wie folgt auf:
Vorderseite: Offener Platz ohne Hindernisse.
Seiten: Keine Hindernisse innerhalb 10 cm von den Seiten.
Oberseite: Keine Hindernisse innerhalb 10 cm von der Oberseite.
Rückseite: Keine Hindernisse innerhalb 15 cm von der Rückseite.
Unterseite: Keine Hindernisse. Auf eine ebene Oberfläche stellen.
Zusätzlich die bestmögliche Luftzirkulation wie gezeigt erhalten.

Attention: Ventilation Correcte
Pour éviter les chocs électriques, l'incendie et tout autre dégât. Disposer l'appareil en tenant compte des impératifs suivants
Avant: Rien ne doit gêner le dégagement
Flancs: Laisser 10 cm de dégagement latéral
Dessus: Laisser 10 cm de dégagement supérieur
Arrière: Laisser 15 cm de dégagement arrière
Dessous: Rien ne doit obstruer par dessous; poser l'appareil sur une surface plate.
Veiller également à ce que l'air circule le mieux possible comme illustré.

Voorzichtig: Zorg Voor Goede Ventilatie
Om gevaar voor brand of een elektrische schok te voorkomen, dient u bij opstelling van het apparaat op de volgende punten te letten:
Voorkant: Voldoende ruimte vrij houden.
Zijkanten: Minstens 10 cm aan weerszijden vrij houden.
Bovenkant: Niets bovenop plaatsen; 10 cm speling geven.
Achterkant: Minstens 15 cm ruimte achteraan vrij houden.
Onderkant: Opstellen op een egaal horizontaal oppervlak.
Bovendien moet er rondom voldoende luchtdoorstroming zijn, zoals in de afbeelding aangegeven.

Precaución: Ventilación Adecuada
Para evitar el riesgo de choque eléctrico e incendio y para proteger el aparato contra daños.
Ubique el aparato de la siguiente manera:
Frente: Espacio abierto sin obstrucciones
Lados: 10 cm sin obstrucciones a los lados
Parte superior: 10 cm sin obstrucciones en la parte superior
Parte trasera: 15 cm sin obstrucciones en la parte trasera
Fondo: Sin obstrucciones, colóquelo sobre una superficie nivelada
Además, mantenga la mejor circulación de aire posible como se ilustra.

Attenzione: Problemi di Ventilazione
Per evitare il rischio di folgorazioni ed incendi e proteggere l'unità da danni, installarla nel modo seguente.
Davanti: Nessun ostacolo, spazio libero
Lati: Nessun ostacolo per almeno 10 cm
Sopra: Nessun ostacolo per almeno 10 cm
Retro: Nessun ostacolo per almeno 15 cm
Fondo: Libero ed in piano
Inoltre, mantenere il più possibile la circolazione dell'aria.



English

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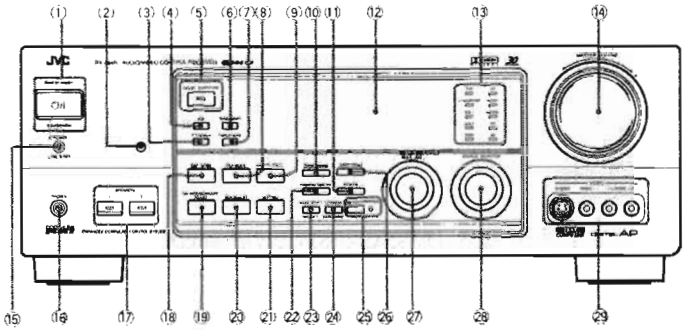
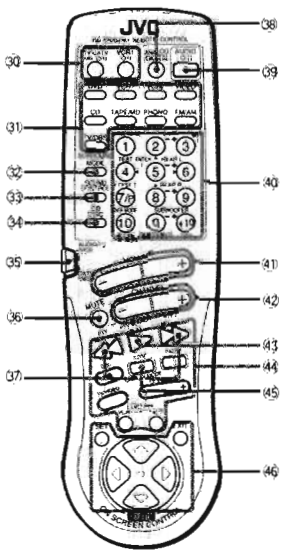
English

Parts Identification

Become familiar with the buttons and controls on the receiver before use.



Refer to the pages in parentheses for details.



Front Panel

(1) STANDBY/ON ⏻/I button and STANDBY lamp (14)
(2) Remote sensor (13)
(3) PTY SEARCH button (28)
(4) EON button (30)
(5) DOLBY SURROUND button and lamp (42)
(6) TA/NEWS/INFO button (30)
(7) DISPLAY MODE button (27)
(8) SEA MODE button (32) *
(9) DIGITAL INPUT button (18)
(10) FM/AM TUNING button (24) *
(11) FM MODE button (25)
(12) Display (14)
(13) Source lamps (14)
(14) MASTER VOLUME control (15)
(15) ⏻ POWER switch (13)
(16) PHONES jack (16)
(17) SPEAKERS 1/2 buttons and lamps (16)
(18) DSP MODE button (35) *
(19) BALANCE/SURROUND ADJUST button (19, 36) *
(20) SEA ADJUST button (33) *
(21) SETTING button (19) *
(22) TUNER/SEA MEMORY button (24, 26, 33)
(23) SOUND SELECT/INPUT ATT. button (15, 17)
(24) LOUDNESS/SOURCE NAME button (18, 19)
(25) ONE TOUCH OPERATION button and lamp (23)
(26) TUNER PRESET button (25) *
(27) MULTI JOG control
What this control actually does depends on which function you are trying to adjust. Before using this control, select the function by pressing one of the buttons marked with *.
(28) SOURCE SELECTOR control (14)
(29) VIDEO input jacks (11)

Remote Control

(30) TV/CATV/DBS ⏻/I and VCR1 ⏻/I buttons (65, 66)
(31) Source selecting buttons (15)
(32) SURROUND MODE button (37)
(33) SOUND CONTROL button (32, 37, 63)
(34) CD DISC button (64)
(35) Remote control mode selector (AUDIO/TV/VCR, CATV/DBS) (14, 63, 67)
To operate an audio system, TV, and VCR, set this selector to "AUDIO/TV/VCR."
To operate a CATV converter and DBS tuner, set this selector to "CATV/DBS."
(36) MUTE button (16)
(37) PTY buttons (+/–) (29)
(38) ANALOG/DIGITAL button (18)
(39) AUDIO ⏻/I button (14)
(40) 10 keys for selecting preset channel (25)
10 keys for adjusting sound (32, 37)
10 keys for operating audio/video components (63, 67)
(41) VOLUME buttons (+/–) (15)
(42) CHANNEL buttons (+/–) (65, 67)
(43) PTY SEARCH button (29)
(44) Operating buttons for audio/video components (63, 67)
(45) DISPLAY MODE button (27)
(46) MENU operating buttons (SET, EXIT, △, ▽, ◁, ▷) (47)

Getting Started

This section explains how to connect audio/video components and speakers to the receiver, and how to connect the power supply.

Before Installation

General

- Be sure your hands are dry.
- Turn the power off to all components.
- Read the manuals supplied with the components you are going to connect.

Locations

- Install the receiver in a location that is level and protected from moisture.
- The temperature around the receiver must be between –5° and 35° C (23° and 95° F).
- Make sure there is good ventilation around the receiver. Poor ventilation could cause overheating and damage the receiver.

Handling the receiver

- Do not insert any metal object into the receiver.
- Do not disassemble the receiver or remove screws, covers, or cabinet.
- Do not expose the receiver to rain or moisture.

Checking the Supplied Accessories

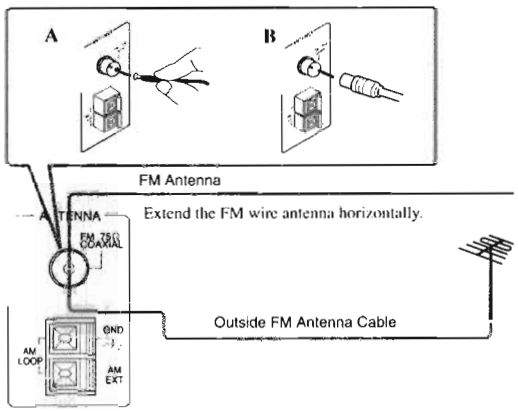
Check to be sure you have all of the following items, which are supplied with the receiver.
The number in the parentheses indicates quantity of the pieces supplied.

- **Remote Control (1)**
- **Batteries (2)**
- **AM (MW/LW) Loop Antenna (1)**
- **FM Antenna (1)**

If anything is missing, contact your dealer immediately.

Connecting the FM and AM (MW/LW) Antennas

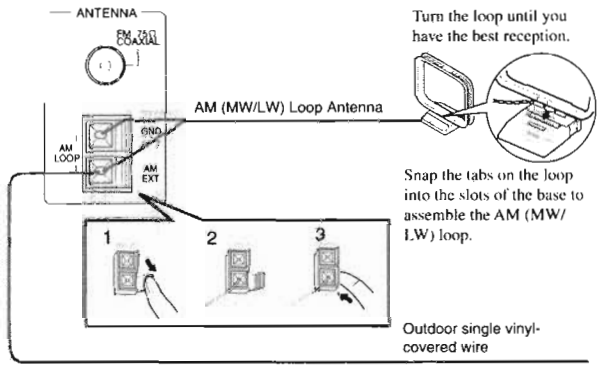
FM Antenna Connections



A. Using the Supplied FM Antenna
The FM antenna provided can be connected to the FM 75Ω COAXIAL terminal as temporary measure.

B. Using the Standard Type Connector (Not Supplied)
A standard type connector (IEC or DIN45325) should be connected to the FM 75Ω COAXIAL terminal.

AM (MW/LW) Antenna Connections



Note:

If reception is poor, connect the outside antenna.
Before attaching a 75Ω coaxial cable (the kind with a round wire going to an outside antenna), disconnect the supplied FM wire antenna.

Notes:

- *Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord. This could cause poor reception.*
- *If reception is poor, connect an outdoor single vinyl-covered wire to the AM EXT terminal. (Keep the AM (MW/LW) loop antenna connected.)*

Connecting the Speakers

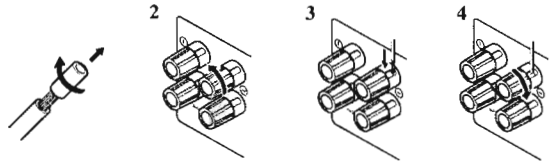
You can connect the following speakers:

- Two pairs of front speakers to produce normal stereo sound.
- One pair of rear speakers to enjoy the surround effect.
- One center speaker to produce more effective surround effect (to emphasize human voices).
- One subwoofer to enhance the bass.

IMPORTANT:

After connecting the speakers listed above, set the speaker setting information properly to obtain the best possible performance. For details, see pages 19 and 20.

For each speaker (except for subwoofer), connect the (–) and (+) terminals on the rear panel to the (–) and (+) terminals marked on the speakers. For connecting a subwoofer, see page 7.



1 Cut, twist and remove the insulation at the end of each speaker signal cable.

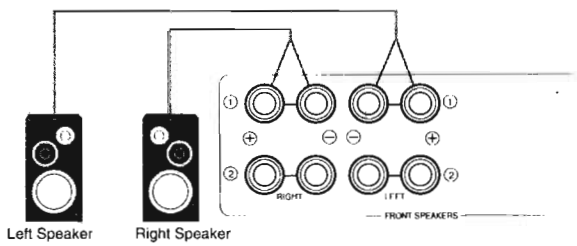
2 Turn the knob counterclockwise.

3 Insert the speaker signal cable.

4 Turn the knob clockwise.

Connecting the front speakers

Connect the front speakers to the FRONT SPEAKERS terminals.
You can connect two pairs of front speakers (one pair to the FRONT SPEAKERS (1) terminals, and another pair to the FRONT SPEAKERS (2) terminals).

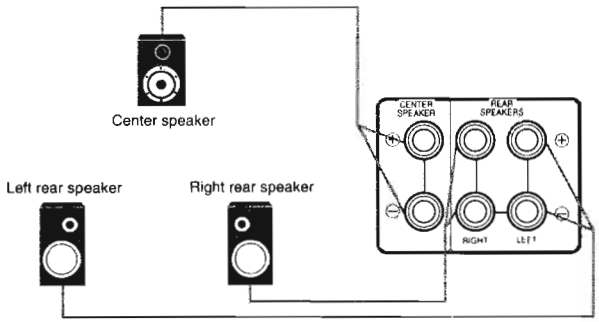


CAUTION:

Use speakers with the SPEAKER IMPEDANCE indicated by the speaker terminals.

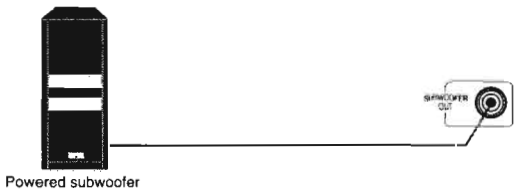
Connecting the rear and center speakers

Connect the rear speakers to the REAR SPEAKERS terminals and a center speaker to the CENTER SPEAKER terminals.



Connecting the subwoofer speaker

Connect the input jack of a powered subwoofer to the SUBWOOFER OUT jack on the rear panel, using a cable with RCA pin plugs.



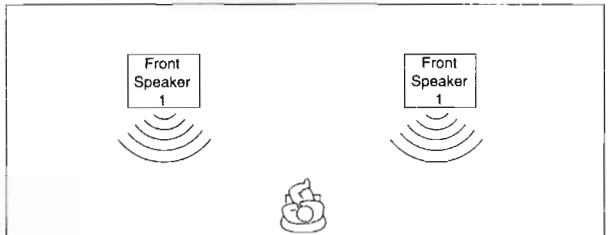
CAUTION:

Use speakers with the SPEAKER IMPEDANCE indicated by the speaker terminals.

About the speaker impedance

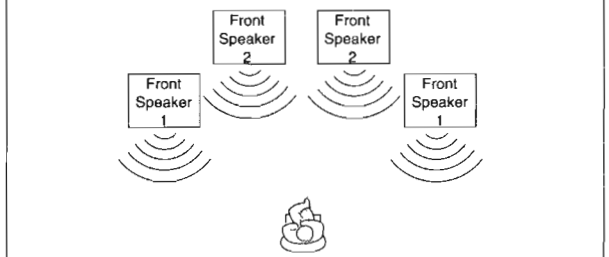
The required speaker impedance of the front speakers does differ depending on whether both the FRONT SPEAKERS (1) and FRONT SPEAKERS (2) terminals are used or only one of them is used.

CASE 1 **When you connect only one set of front speakers**



Use front speakers with **4 — 16 ohm** impedance.

CASE 2 **When you connect two sets of front speakers**



Use front speakers with **8 — 16 ohm** impedance.

CAUTION:

When connecting speakers, use speakers with the same SPEAKER IMPEDANCE indicated by the speaker terminals.

Connecting Audio/Video Components

You can connect the following audio/video components to this receiver. Refer also to the manuals supplied with your components. If you want to connect a component not listed in the table below, refer to the manual supplied with it.

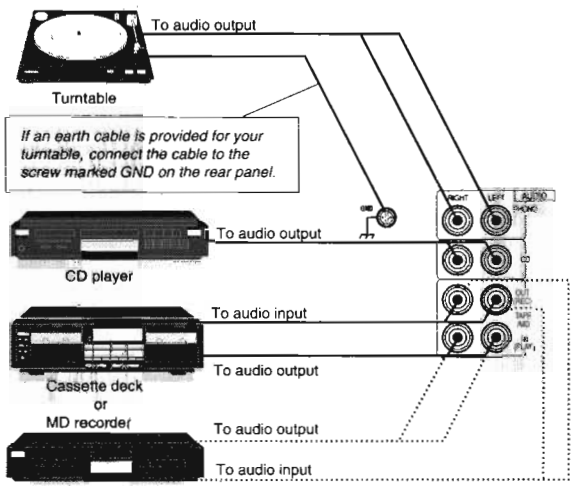
Audio Components	Video Components
• Turntable	• DVD player*
• CD player*	• TV
• Cassette deck or MD recorder*	• DBS tuner*
———	• VCRs
———	• Video camera

* *You can connect these components using the methods described in "Analog connections" (below) or in "Digital connections" (see page 12).*

Analog connections

Audio component connections

Use the cables with RCA pin plugs (not supplied).
Connect the white plug to the audio left jack, and the red plug to the audio right jack.



If your audio components have a COMPU LINK-3 or TEXT COMPU LINK terminal

- See also page 55 for detailed information about the connection and the COMPU LINK-3 remote control system.
- See also page 56 for detailed information about the connection and the TEXT COMPU LINK remote control system.

CAUTION:

If you connect a sound-enhancing device such as a graphic equalizer between the source components and this receiver, the sound output through this receiver may be distorted.

Notes:

- *Any turntables incorporating a small-output cartridge such as an MC (moving-coil type) must be connected to this receiver through a commercial head amplifier or step-up transformer. Direct connection may result in insufficient volume.*
- *You can connect either a cassette deck or an MD recorder to the TAPE/MD jacks. When connecting an MD recorder to the TAPE/MD jacks, change the source name, which will be shown on the display when selected as the source, to "MD." See page 18 for details.*

Video component connections

Use the cables with RCA pin plugs (not supplied).
Connect the white plug to the audio left jack, the red plug to the audio right jack, and the yellow plug to the video jack.
If your video components have S-video (Y/C-separation) terminals, connect them using S-video cables (not supplied). Connecting these video components through the S-video input/output terminals will give you better picture playback (or recording) quality.

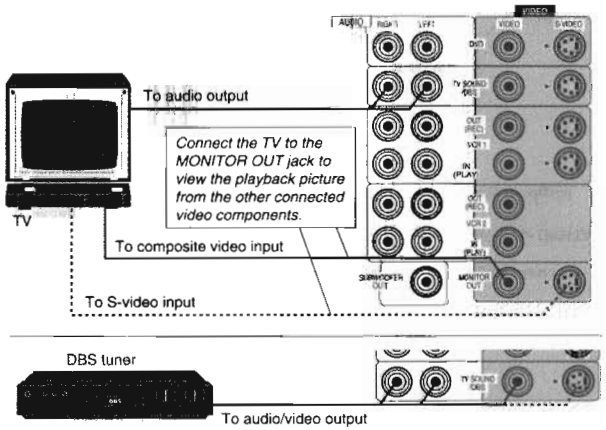
IMPORTANT:

This receiver is equipped with both the composite video and S-video input/output terminals for connecting video components.
You do not have to connect both the composite video and S-video terminals.
However, **remember that the video signals from the composite video input terminals are output only through the composite video output terminals, while the ones from the S-video input terminals are output only through the S-video output terminals.**
Therefore, if a recording video component and a playing video component are connected to the receiver through the different video terminals, you cannot record the picture from the playing component on the recording component. In addition, if the TV and a playing video component are connected to the receiver through the different video terminals, you cannot view the playback picture from the playing component on the TV.

To view and record the playback picture from the video component connected to the VCR2 jacks, you must connect the TV and the recording video component through the composite video terminals.

Connecting the TV and/or DBS tuner

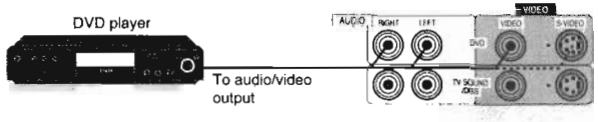
You can connect either the TV or DBS tuner to the TV SOUND/DBS jacks.



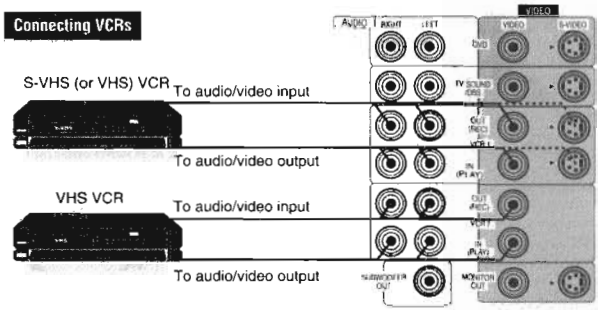
Notes:

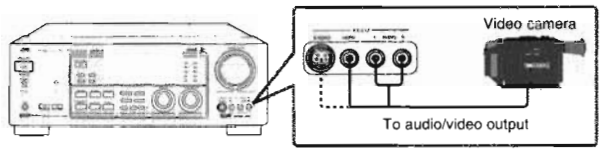
- *Use the video components of the PAL color system.*
- *When connecting the TV to the TV SOUND/DBS jacks, DO NOT connect the TV's video output to these video input terminals.*
- *When connecting the DBS tuner to the TV SOUND/DBS jacks, change the source name, which will be shown on the display when selected as the source, to "DBS." See page 18 for details.*
- *To enjoy Dolby Digital with the DBS tuner as the source, connect the DBS tuner using the method described in "Digital connections" on page 12.*

Connecting DVD player



Connecting VCRs



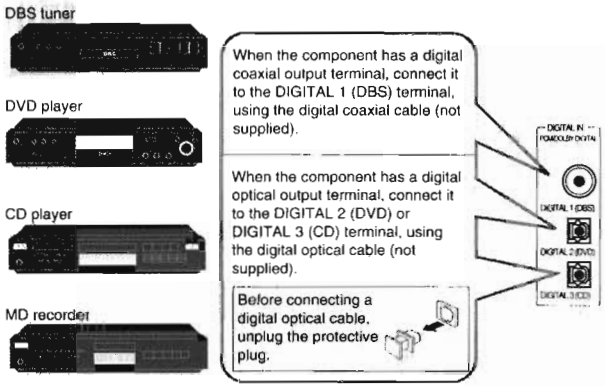


Note:

To enjoy Dolby Digital with the DVD player as the source, connect the DVD player, using the method described in "Digital connections" on page 12.

Digital connections

This receiver is equipped with three DIGITAL IN terminals — one digital coaxial terminal and two digital optical terminals.
To enjoy Dolby Digital, you have to connect the source components using the DIGITAL IN terminals.
You can connect any component to any one of the digital terminals using the digital coaxial cable (not supplied) or digital optical cable (not supplied).



IMPORTANT:

- When connecting the DVD player or the DBS tuner using the digital terminal, you also need to connect it to the video jack (either composite video terminal or S-video terminal) on the rear. Without connecting it to the video jack, you can view no playback picture.
- After connecting the above components using the DIGITAL IN terminals, set the following correctly if necessary.
  - Select the digital input mode correctly. For details, see "Selecting the Input Mode" on page 18.
  - Set the digital input (DIGITAL IN) terminal setting correctly. For details, see "Digital Input (DIGITAL IN) Terminal Setting" on page 20.

Notes:

- *When shipped from the factory, the DIGITAL IN terminals has been set for use with the following components.*
  - *DIGITAL 1 (coaxial): For DBS tuner*
  - *DIGITAL 2 (optical): For DVD player*
  - *DIGITAL 3 (optical): For CD player*
- *When you want to operate the CD player or MD recorder using the COMPU LINK remote control system, connect the target component also as described in "Analog connections" (see page 9).*

Getting Started

Connecting the Power Cord

Before plugging the receiver into an AC outlet, make sure that all connections have been made.

1. **Plug the power cord into an AC outlet.**
2. **Press ⏻ POWER to set it in the ▂ON position.**
   The STANDBY lamp lights up. A small amount of power is always consumed.

To shut off the power completely

Press ⏻ POWER to set it in the ■OFF position.

Keep the power cord away from the connecting cables and the antenna. The power cord may cause noise or screen interference. We recommend that you use a coaxial cable to connect the antenna, since it is well-shielded against interference.

The difference between the ⏻ POWER switch and the STANDBY/ON ⏻/I button

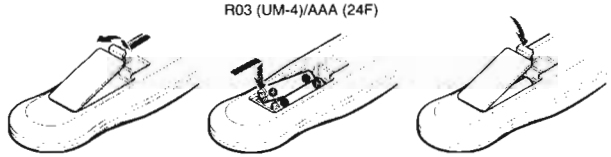
- The ⏻ POWER switch is the mains supply switch, allowing the receiver to connect to the mains supply. To shut off the power completely, press the ⏻ POWER switch to set it in the ■OFF position.
- The STANDBY/ON ⏻/I button is a functional on/off (standby) switch, and does not disconnect the receiver from the mains supply. A small amount of power is consumed even in standby mode for the receiver to accept signals from the remote control.

Putting Batteries in the Remote Control

Before using the remote control, put two supplied batteries first. When using the remote control, aim the remote control directly at the remote sensor on the receiver.

1. **On the back of the remote control, remove the battery cover as illustrated.**
2. **Insert batteries. Make sure to observe the proper polarity: (+) to (+) and (–) to (–).**
3. **Replace the cover.**

R03 (UM-4)/AAA (24F)



If the range or effectiveness of the remote control decreases, replace the batteries. Use two R03 (UM-4)/AAA (24F) type dry-cell batteries.

Note:

The preset settings such as preset channel and sound adjustment may be erased in the following cases:

- *When you press ⏻ POWER to set it in the ■OFF position.*
- *When you unplug the power cord.*
- *When a power failure occurs.*

CAUTIONS:

- Do not touch the power cord with wet hands.
- Do not pull on the power cord to unplug the cord. When unplugging the cord, always grasp the plug so as not to damage the cord.

CAUTION:

Follow these precautions to avoid leaking or cracking cells:

- Place batteries in the remote control so they match the polarity indicated: (+) to (+) and (–) to (–).
- Use the correct type of batteries. Batteries that look similar may differ in voltage.
- Always replace both batteries at the same time.
- Do not expose batteries to heat or flame.

Basic Operations

The following operations are commonly used when you play any sound source.

IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:

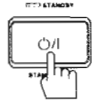
To operate an audio system, TV, and VCR, set it to "AUDIO/TV/VCR."

To operate a CATV converter and DBS tuner, set it to "CATV/DBS."

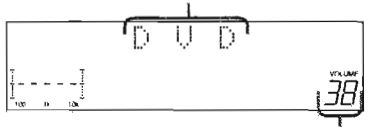
Turning the Power On and Off (Standby)

On the front panel:

To turn on the power, press STANDBY/ON ⏻/I.
The STANDBY lamp goes off. The name of the current source (or station frequency) appears on the display.

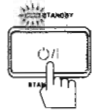


Current source name appears



Current volume level is shown here

To turn off the power (into standby mode), press STANDBY/ON ⏻/I again.
The STANDBY lamp lights up.



From the remote control:

To turn on the power, press AUDIO ⏻/I.
The STANDBY lamp goes off. The name of the current source (or station frequency) appears on the display.

To turn off the power (into standby mode), press AUDIO ⏻/I again.
The STANDBY lamp lights up.

Selecting the Source to Play

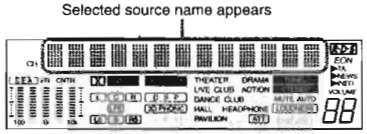
On the front panel:

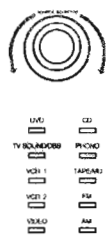
Turn SOURCE SELECTOR until the source name you want appears on the display.
As you turn the selector, the source changes as follows:

→ CD ↔ PHONO ↔ TAPE/MD ↔ FM ↔ AM ↔ DVD →
→ VIDEO ⟶ VCR2 ⟶ VCR1 ⟶ TV SOUND/DBS →

The selected source lamp also lights up.

Selected source name appears





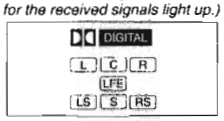
Source lamps on the front panel

Note:

Pressing the STANDBY/ON ⏻/I button again turns off the power (into standby mode) and lights the STANDBY lamp. A small amount of power is consumed in standby mode. To turn the power off completely, press the ⏻ POWER switch to set it in the ■OFF position on the front panel.

What are the following indicators?

When you select the source encoded with Dolby Digital and start playback, the following indicators light up on the display to show the signal being input to this receiver. (Only the indicators for the received signals light up.)



L: Left front channel
R: Right front channel
C: Center channel
LS: Left rear channel
RS: Right rear channel
S: Rear channel (monaural)
LFE: Subwoofer channel

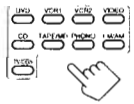
Note:

When connecting an MD recorder (to the TAPE/MD jacks), and a DBS tuner (to the TV SOUND/DBS jacks), change the source name appears on the display. For details, see page 18.

Basic Operations

From the remote control:

Press one of the source selecting buttons directly.



DVD	Selects the DVD player.
VCR1	Selects the video component connected to the VCR1 jacks.
VCR2	Selects the video component connected to the VCR2 jacks.
VIDEO	Selects the video component connected to the VIDEO jacks.
CD*	Selects the CD player.
TAPE/MD*	Selects the cassette deck or the MD recorder.
PHONO*	Selects the turntable.
FM/AM*	Selects an FM and AM (MW/LW) broadcast. Each time you press the button, the band alternates between FM and AM (MW/LW).
TV/DBS	• Selects TV sounds when the remote control selector is set to "AUDIO/TV/VCR." • Selects the DBS tuner when the remote control selector is set to "CATV/DBS."

Note:

When you press one of the source selecting buttons marked above with an asterisk (*), the receiver automatically turns on.

Selecting different sources for picture and sound

You can watch picture from a video component while listening to sound from another component.

On the front panel:

1. **Press SOUND SELECT briefly while viewing the picture from a video component such as the VCR or DVD player, etc.**
   "SOUND SELECT" appears on the display.

2. **Turn SOURCE SELECTOR to select the sound (except the TV sound), while the indication of the above step is still on the display.**

From the remote control:

Press one of the audio source selecting buttons (CD, TAPE/MD, PHONO, FM/AM), while viewing the picture from a video component such as the VCR or DVD player, etc.

Notes:

- *Once you have selected a video source, pictures of the selected source is sent to the TV until you select another video source.*
- *When you select TV sound as the source, this function does not work.*

Adjusting the Volume

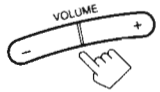
On the front panel:

To increase the volume, turn MASTER VOLUME clockwise.
To decrease the volume, turn it counterclockwise.

When you turn MASTER VOLUME **rapidly**, the volume level also changes **rapidly**.
When you turn MASTER VOLUME **slowly**, the volume level also changes **slowly**.

From the remote control:

To increase the volume, press VOLUME +.
To decrease the volume, press VOLUME –.



CAUTION:

Always set the volume to the minimum before starting any source. If the volume is set at its high level, the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.

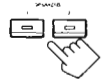
Note:

The volume level can be adjusted within the range of "0" (minimum) to "90" (maximum).

Selecting the Front Speakers

On the front panel *only*:

When you have connected two pairs of the front speakers, you can select which to use.



Press SPEAKERS 1 or SPEAKERS 2 to select the speaker to use.
Each time you press the button, the lamp on the respective button turns on and off. When the lamp on either button lights up, the respective speakers are activated.

IMPORTANT:

You can activate two pairs of the front speakers at the same time only when no signals are sent to the center and rear speakers. Otherwise, activating one pair of the speakers deactivates the other.

Note:

If you use any of the DSP modes other than the 3D-PHONIC modes and "HEADPHONE" with both front speakers activated, the speakers connected to the FRONT SPEAKERS (2) terminals are deactivated.

Listening only with headphones

1. Connect a pair of headphones to the PHONES jack on the front panel.
2. Press SPEAKERS 1 and/or 2 so that no lamps on the buttons are turned on.

CAUTION:

Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.

Note:

You cannot shut off the sound through the subwoofer using the SPEAKERS 1 and 2 buttons.

Muting the Sound

From the remote control *only*:

Press MUTE to mute the sound through all speakers and headphones connected.
"MUTE" appears on the display and the volume turns off (the volume level indicator also goes off).

To restore the sound, press MUTE again so that "OFF" appears on the display. Turning MASTER VOLUME or pressing VOLUME +/– also restores the sound at the previous volume level.

Recording a Source

You can record any source playing through the receiver to the cassette deck or the MD recorder connected to the TAPE/MD jacks and the VCRs connected to the VCR1 and VCR2 jacks at the same time.
While recording, you can listen to the selected sound source at whatever sound level you like, without affecting the sound levels of the recording.

Note:

The output volume level and SEA modes cannot affect the recording.

IMPORTANT:

When recording the digital source, turn off the DSP mode.

Basic Operations

Attenuating the Input Signal

When the input level of the playing source through the analog terminals is too high, the sounds will be distorted. If this happens, you need to attenuate the input signal level to prevent the sound distortion.

On the front panel *only*:

Press and hold SOUND SELECT/INPUT ATT. until "INPUT ATT ON" appears on the display.
The ATT indicator also lights up on the display.

Each time you press and hold the button, the input attenuator mode turns on ("INPUT ATT ON") and off ("INPUT NORMAL").
You can set input attenuator mode separately for each source.

Adjusting the Subwoofer Output Level

You can adjust the subwoofer output level if you have selected "YES" for the "SUBWOOFER" (see page 19).
Once it has been adjusted, the receiver memorizes the adjustment.

On the front panel:

1. **Press BALANCE/SURROUND ADJUST repeatedly until "SUBWFR LEVEL" appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to adjust the subwoofer output level (–10 dB to +10 dB), while the indication of the previous step is still on the display.**

From the remote control:

1. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

2. **Press SUBWOOFER +/– to adjust the subwoofer output level (–10 dB to +10 dB).**

Notes:

- *This function is available only for the sources connected using the analog terminals.*
- *This function takes effect only when the DSP mode is in use.*

Basic Settings

Some of the following settings are required after connecting and positioning your speakers in your listening room, while others will make operations easier.

IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:
To operate this receiver, set it to "AUDIO/TV/VCR" (except when selecting the DBS tuner as the source).

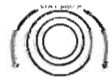
Changing the Source Name

When you have connected an MD recorder to the TAPE/MD jacks or the DBS tuner to the TV SOUND/DBS jacks on the rear panel. Change the source name shown on the display when you select the MD recorder or DBS tuner as the source.

On the front panel *only*:

1. ***When changing the source name from "TAPE" to "MD":***
   - **Turn SOURCE SELECTOR until "TAPE" appears.**

   When changing the source name from "TV SOUND" to "DBS":
   - **Turn SOURCE SELECTOR until "TV SOUND" appears.**



2. **Press and hold LOUDNESS/SOURCE NAME until "ASSGN. MD" or "ASSGN. DBS" appears on the display.**

To change the source names to "TAPE" or "TV SOUND," repeat the same procedure above (in step 1, select "MD" or "DBS" then press and hold SOURCE NAME).

Selecting the Input Mode

When you have connected some components such as CD player, MD recorder, DVD player and the DBS tuner using digital terminals (see page 12), you need to change the input mode for these components to the digital input.

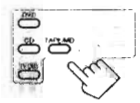
On the front panel:

1. **Turn SOURCE SELECTOR until the source (CD, MD, DBS, or DVD) for which you want to change the input mode from analog input to digital input.**

2. **Press DIGITAL INPUT to change the input mode.**
   Each time you press the button, the input mode alternates between the digital input and analog input.

From the remote control:

1. **Press the source selecting button (CD, TAPE/MD, TV/DBS, or DVD) for which you want to change the input mode from analog input to digital input.**



2. **Press ANALOG/DIGITAL to change the input mode.**
   Each time you press the button, the input mode alternates between the digital input and analog input.

Note:

Without changing the source name, you can still use the connected components. However, there may be some inconvenience.
- *"TAPE" or "TV SOUND" will appear on the display when you select the MD recorder or DBS tuner.*
- *You cannot use the digital input (see below) for the MD recorder and the DBS tuner.*
- *You cannot use the COMPU LINK remote control system (see page 55) to operate the MD recorder.*

Note:

Once you have set the digital input for these components, it is always used every time you select these components as the source.

Basic Settings

Adjusting the Front Speaker Output Balance

If the sounds you hear from the front right and left speakers are unequal, you can adjust the speaker output balance.

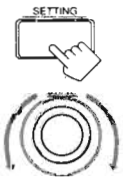
On the front panel *only*:

1. **Press BALANCE/SURROUND ADJUST repeatedly until "L/R BALANCE" appears on the display.**
   The display changes to show the current setting.
2. **Turn MULTI JOG to adjust the balance, while the indication of the previous step is still on the display.**
   - Turning it clockwise decreases the left channel output.
   - Turning it counterclockwise decreases the right channel output.

Setting the Subwoofer Information

Register whether or not you have connected a subwoofer.

On the front panel *only*:



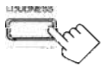
1. **Press SETTING repeatedly until "SUBWOOFER" appears on the display.**
   The display changes to show the current setting.
2. **Turn MULTI JOG to register whether you have connected a subwoofer or not, while the indication of the previous step is still on the display.**
   As you turn it, the subwoofer setting alternates between "YES" and "NO."

YES	Select this when you use a subwoofer.
NO	Select this when you do not use a subwoofer.

Listening at Low Volume (Loudness)

Human ears are not sensitive to bass at low volume. To compensate for this, the loudness function automatically boosts the bass level as you lower the volume.

On the front panel *only*:



Press LOUDNESS/SOURCE NAME briefly to select the loudness function.
Each time you press the button, the loudness function turns on ("LOUDNESS ON") and off ("LOUDNESS OFF").
- Select "LOUDNESS ON" to activate the loudness function.
  The LOUDNESS indicator lights up on the display.
- Select "LOUDNESS OFF" to cancel it.
  The indicator goes off.

Note:

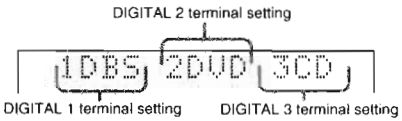
The loudness function affects the front speaker sounds only.

Digital Input (DIGITAL IN) Terminal Setting

When you use the digital input terminals, you have to register what components are connected to which terminals (DIGITAL IN 1/2/3).

On the front panel *only*:

1. **Press SETTING repeatedly until "DIGITAL IN" appears on the display.**
   The display changes to show the current setting.



2. **Turn MULTI JOG to select the appropriate digital terminal setting, while the indication of the previous step is still on the display.**
   As you turn it, the display changes to show the following:
   ⇄ 1 DBS 2 DVD 3 CD ⇄ 1 MD 2 DVD 3 CD ⇄ 1 MD 2 DBS 3 CD
   ⇄ 1 MD 2 DBS 3 DVD ⇄ 1 CD 2 DVD 3 MD ⇄ 1 CD 2 DBS 3 MD
   ⇄ 1 CD 2 DBS 3 DVD ⇄ 1 DVD 2 CD 3 MD ⇄ 1 DVD 2 DBS 3 MD
   ⇄ 1 DVD 2 DBS 3 CD ⇄ 1DBS 2 CD 3 MD ⇄ DBS 2 DVD 3 MD
   ⇄ (back to the beginning)

Setting the Speakers for the DSP Modes

To obtain the best possible surround sound of the DSP modes, you have to register the information about the speakers arrangement after all connections are completed.

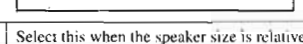
Front, Center, and Rear Speaker Setting

Register the sizes of the other speakers.

On the front panel *only*:

1. **Press SETTING repeatedly until "FRONT SPK" (Front Speaker), "CENTER SPK" (Center Speaker) or "REAR SPK" (Rear Speaker) appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to select the appropriate item about your front, center and rear speakers, while the indication of the previous step is still on the display.**
   As you turn it, the display changes to show the following:



LARGE	Select this when the speaker size is relatively large.
SMALL	Select this when the speaker size is relatively small.
NONE	Select this when you have not connect a speaker. (Not selectable for the front speakers)

Note:

When shipped from the factory, the DIGITAL IN terminals can be used as the digital input for the following components.
- *DIGITAL 1 (coaxial): For DBS tuner*
- *DIGITAL 2 (optical): For DVD player*
- *DIGITAL 3 (optical): For CD player*

Note:

When you change your speakers, you need to register the information about the speakers again.

Notes:
- *If the size of the cone speaker unit built in your speaker is greater than 12 cm (4 ¾ inches), select "LARGE," and if it is smaller than 12 cm (4 ¾ inches), select "SMALL."*
- *If you have selected "NO" for the subwoofer setting above, you can only select "LARGE" for the front speaker setting.*

Basic Settings

Center Delay Time Setting

Register the delay time of the sound from the center speaker, comparing that of the sound from the front speakers.
If the distance from your listening point to the center speaker is equal to that to the front speakers, select 0 msec. As the distance to the center speaker becomes shorter, increase the delay time.

On the front panel *only*:

1. **Press SETTING repeatedly until "CENTER DELAY" appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to select the delay time of the center speaker output, while the indication of the previous step is still on the display.**
   - Turn it clockwise to increase the delay time from 0 msec ("C. DELAY 0ms") to 5 msec ("C. DELAY 5ms").
   - Turn it counterclockwise to decrease the delay time from 5 msec ("C. DELAY 5ms") to 0 msec ("C. DELAY 0ms").

Note:

1 msec increase (or decrease) in delay time corresponds to 30 cm (11 $^{13}/_{16}$ inches) decrease (or increase) in distance.

Rear Delay Time Setting

Register the delay time of the sound from the rear speakers, comparing that of the sound from the front speakers.
If the distance from your listening point to the rear speakers is equal to that to the front speakers, select 0 msec. As the distance to the rear speakers becomes shorter, increase the delay time.

On the front panel *only*:

1. **Press SETTING repeatedly until "REAR DELAY" appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to select the delay time of the rear speaker output, while the indication of the previous step is still on the display.**
   - Turn it clockwise to increase the delay time from 0 msec ("R. DELAY 0ms") to 15 msec ("R. DELAY 15ms").
   - Turn it counterclockwise to decrease the delay time from 15 msec ("R. DELAY 15ms") to 0 msec ("R. DELAY 0ms").

Notes:

- *1 msec increase (or decrease) in delay time corresponds to 30 cm (11 $^{13}/_{16}$ inches) decrease (or increase) in distance.*
- *It is recommended that the rear delay time for Dolby Digital be set to 5 msec.*

Crossover Frequency Setting

Small speaker cannot reproduce the bass sound very well. So, if you have used a small speaker any for the front, center, or rear channels, this receiver automatically reallocate the bass elements, originally assigned to the channel for which you have connected the small speaker, to another channel (for which you have connected the large speaker).
To use this function properly, you need to set this crossover frequency level according to the size of the small speaker connected.

On the front panel *only*:

1. **Press SETTING repeatedly until "CROSSOVER FRQ" (Crossover Frequency) appears on the display.**
   The display changes to show the current setting.

Note:

This function takes effect only when playing back a source using the Dolby Digital. However, if you have selected "LARGE" for all speakers (see page 20), this function will not take effect.

2. **Turn MULTI JOG to select the crossover frequency level according to the size of the small speaker connected, while the indication of the previous step is still on the display.**
   As you turn it, the display changes to show the following:

CROSS: 80Hz ⟷ CROSS:100Hz ⟷ CROSS:120Hz

CROSS: 80Hz	Select this when the cone speaker unit built in the speaker is about 12 cm (4 $^{1}/_{4}$ inches).
CROSS:100Hz	Select this when the cone speaker unit built in the speaker is about 10 cm (3 $^{15}/_{16}$ inches).
CROSS:120Hz	Select this when the cone speaker unit built in the speaker is about 8 cm (3 $^{1}/_{16}$ inches).

Low Frequency Effect Attenuator Setting

If the bass sound is distorted while playing back a source using Dolby Digital, follow the procedure below.

On the front panel *only*:

1. **Press SETTING repeatedly until "LFE ATT" (Low Frequency Effect Attenuator) appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to select the low frequency effect attenuator level, while the indication of the previous step is still on the display.**
   As you turn it, the display changes to show the following:

LFE ATT: 0dB ⟷ LFE ATT:10dB

LFE ATT: 0dB	Normally select this.
LFE ATT:10dB	Select this when the bass sound is distorted.

Note:

This function takes effect only when playing back a source using the Dolby Digital.

Dynamic Range Compression Setting

You can compress the dynamic range (difference between maximum sound and minimum sound) of the reproduced sound. This is useful when enjoying surround sound at night.

On the front panel *only*:

1. **Press SETTING repeatedly until "D. RANGE COMP." (Dynamic Range Compression) appears on the display.**
   The display changes to show the current setting.

2. **Turn MULTI JOG to select the appropriate item about the compression level, while the indication of the previous step is still on the display.**
   As you turn it, the display changes to show the following:

COMP.: OFF ⟷ COMP.: MID ⟷ COMP.: MAX

COMP.: OFF	Select this when you want to enjoy surround with its full dynamic range. (No effect applied.)
COMP.: MID	Select this when you want to reduce the dynamic range a little. (Factory setting.)
COMP.: MAX	Select this when you want to apply the compression effect fully. (Useful at night.)

Note:

This function takes effect only when playing back a source using the Dolby Digital.

One Touch Operation

This receiver can memorize the optimum sound settings for each playing source.

About the One Touch Operation

JVC's One Touch Operation function is used to assign and store different sound settings for each different playing source. By using this function, you do not have to change the settings every time you change the source. The stored settings for the newly selected source are automatically recalled.

The following can be stored for each source:

- Volume level (see page 15)
- Input attenuator mode (see page 17)
- Subwoofer output level (see page 17)
- Input mode (see page 18)
- Balance (see page 19)
- Loudness (see page 19)
- SEA modes (see page 32)
- DSP modes
  - 3D-PHONIC mode settings (see page 35)
    DAP mode settings (see page 38)
  - Surround mode settings (see page 40 and 43)

Using the One Touch Operation

On the front panel *only*:

To store the sound settings

1. **Press ONE TOUCH OPERATION.**
   The ONE TOUCH OPERATION lamp lights up, then the previously memorized settings are recalled.

2. **Adjust the sound using the functions listed above.**
   The newly adjusted settings are memorized.

To recall the sound settings

With the ONE TOUCH OPERATION lamp lit, the settings for the currently selected source is recalled when the source is selected.

To cancel the One Touch Operation function

Press ONE TOUCH OPERATION so that the lamp goes off.
(Even though the One Touch Operation function is canceled, the recalled sound effects remain active.)

Note:

If the source is FM or AM (MW/LW), you can assign a different setting for each band.

Receiving Radio Broadcasts

You can browse through all the stations or use the preset function to go immediately to a particular station.

IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:
To operate this receiver, set it to "AUDIO/TV/VCR" (except when selecting the DBS tuner as the source).

Tuning in Stations Manually

On the front panel *only*:

1. **Press FM/AM TUNING to select the band.**
   Each time you press the button, the band alternates between FM and AM (MW/LW).

2. **Turn MULTI JOG until you find the frequency you want.**
   - Turning it clockwise increases the frequency.
   - Turning it counterclockwise decreases the frequency.

Notes:

- *When you turn MULTI JOG quickly in step 2, the frequency keeps changing until a station is tuned in.*
- *When a station of sufficient signal strength is tuned in, the TUNED indicator lights up on the display.*
  When an FM stereo program is received, the STEREO indicator also lights up.

Using Preset Tuning

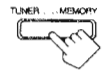
Once a station is assigned to a channel number, the station can be quickly tuned. You can preset up to 40 stations at random.

To store the preset stations

On the front panel *only*:

1. **Tune in the station you want to preset (see above).**
   If you want to store the FM reception mode for this station, select the FM reception mode you want. See page 25 for details.

2. **Press TUNER/SEA MEMORY.**
   "CH-" appears and the channel number position starts flashing on the display for about 5 seconds.



3. **Turn MULTI JOG to select a channel number while the channel number position is flashing.**

4. **Press TUNER/SEA MEMORY again while the selected channel number is flashing on the display.**
   The selected channel number stops flashing.
   The station is assigned to the selected channel number.

Continued to the next page.

Note:

You can use the 10 keys on the remote control to select the preset number. When using the 10 keys, be sure that they are activated for tuner, not for the CD and others. (See page 63.)

Receiving Radio Broadcasts

5. **Repeat steps 1 to 4 until you store all the stations you want.**

To erase a stored preset station

Storing a new station on a used number erases the previously stored one.

To tune in a preset station

On the front panel:

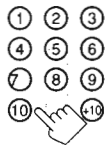
1. **Press TUNER PRESET.**

2. **Turn MULTI JOG to select a preset channel.**

From the remote control:

1. **Press FM/AM.**
   Each time you press the button, the band alternates between FM and AM (MW/LW).

2. **Press 10 keys to select a preset channel number.**
   - For channel number 5, press 5.
   - For channel number 15, press +10 then 5.
   - For channel number 20, press +10 then 10.
   - For channel number 30, press +10, +10, then 10.



Selecting the FM Reception Mode

When an FM stereo broadcast is hard to receive or noisy, set the FM reception mode to "MONO." (When shipped from the factory, this mode has been set to "AUTO.")
You can change the FM reception mode while receiving an FM broadcast.

Press FM MODE on the front panel or FM MODE/MUTE on the remote control.
Each time you press the button, the FM reception mode alternates between "AUTO" and "MONO."

AUTO:	When a program is broadcasted in stereo, you will hear stereo sound; when in monaural, you will hear monaural sounds. This mode is also useful to suppress static noise between stations. The MUTE AUTO indicator lights up on the display.
MONO:	Reception will be improved although you will lose the stereo effect. In this mode, you will hear noise while tuning into the stations. The MUTE AUTO indicator goes off on the display.

Note:

When you use the 10 keys on the remote control, be sure that they are activated for tuner, not for the CD and others. (See page 63.)

Notes:

- *You can store the FM reception mode for each preset station.*
- *When using the FM MODE/MUTE button, be sure that the 10 keys are activated for tuner, not for the CD and others. (See page 63.)*

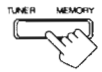
Assigning Names to Preset Stations

You can assign a name of up to four characters to each preset station. When a preset station is tuned in, its assigned name will appear on the display.

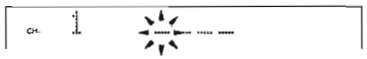
On the front panel *only*:

1. **Tune in a preset station.**
   See page 25 for details.

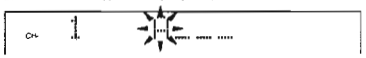
2. **Press TUNER/SEA MEMORY.**
   The preset channel number starts flashing for about 5 seconds.



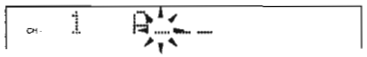
3. **Press TUNER PRESET, while the preset channel number is flashing.**
   The first character position starts flashing.



4. **Turn MULTI JOG to select the first character, while the first character position is flashing.**
   You can use characters listed below.



5. **Press TUNER PRESET, while a character you want is flashing.**
   The next (or previous) character position starts flashing.



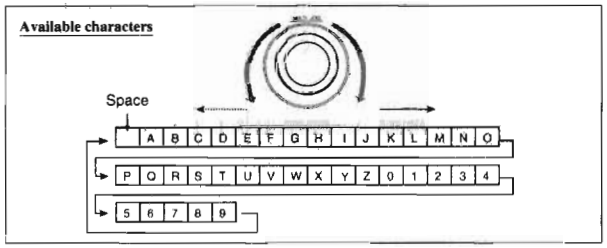
6. **Repeat steps 4 and 5 to enter up to four characters.**

7. **Press TUNER/SEA MEMORY while the last selected character is flashing after you have assigned a name.**

To erase the input characters

Insert spaces using the same procedure described above.

Available characters



Note:

If you turn MULTI JOG while the preset channel number is flashing, you can change the preset channel number.

Note on step 3 to 7:

You cannot select any entry after the indication on the display stops flashing.
In this case, repeat the procedure from step 2 again.

Receiving Radio Broadcasts

Using the RDS (Radio Data System) to Receive FM Stations

RDS allows FM stations to send an additional signal along with their regular program signals. For example, the stations send their station names, as well as information about what type of program they broadcast, such as sports or music, etc.

When tuned to an FM station which provides the RDS service, the RDS indicator lights up on the display.

With the receiver, you can receive the following types of RDS signals.

PS (Program Service):	shows commonly known station names
PTY (Program Type):	shows types of broadcast programs
RT (Radio Text):	shows text messages the station sends
EON (Enhanced Other Network):	see page 31.

What Information Can RDS Signals Provide?

You can see the RDS signals the station sends on the display.

To show the RDS signals

On the front panel:

Press DISPLAY MODE while listening to an FM station.
Each time you press the button, the display changes to show you the following information:

PS → PTY → RT → Frequency

PS (Program Service):
While searching, "PS" appears and then the station names will be displayed. "NO PS" appears if no signal is sent.

PTY (Program Type):
While searching, "PTY" appears and then the type of the broadcast program will be displayed. "NO PTY" appears if no signal is sent.

RT (Radio Text):
While searching, "RT" appears and then text messages the station sends will be displayed. "NO RT" appears if no signal is sent.

Station Frequency:
Station frequency (non-RDS service)

When pressing DISPLAY MODE on the remote control:
Make sure that you have selected FM station using the remote control.
If not, the DISPLAY MODE button does not work for tuner operation. (Pressing FM/AM activates the remote control for tuner operation.)

R·D·S EON

Note:

RDS may not operate correctly if the station tuned is not transmitting RDS signal properly or if the signal strength is weak.

Notes:

- *If searching finishes at once, "PS", "PTY", and "RT" will not appear on the display.*
- *Even if you press DISPLAY MODE while listening to an AM (MW/LW) station, the display only shows station frequency.*
- *RDS is not available for AM (MW/LW) broadcasts.*

Searching for a Program by PTY Codes

One of the advantages of the RDS service is that you can locate a particular kind of program from the preset channels by specifying the PTY codes.

To search for a program using the PTY codes

On the front panel:

1. **Press PTY SEARCH while listening to an FM station.**
   "PTY SELECT" flashes on the display.

2. **Turn MULTI JOG until the PTY code you want appears on the display while "PTY SELECT" is flashing.**
   As you turn it, the display gives you the PTY codes described on page 29.

3. **Press PTY SEARCH again while the PTY code selected in the previous step is still on the display.**
   While searching, "SEARCH" and the selected PTY code alternate on the display.
   The receiver searches 40 preset channels, stops when it finds the one you have selected, and tunes in that station.

To continue searching after the first stop

Press PTY SEARCH again while the indications on the display are flashing.
If no program is found, "NOTFOUND" appears on the display.

To stop searching any time during the process

Press PTY SEARCH while searching.

Note:

FM stations must be preset to use the PTY codes.

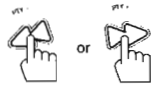
Receiving Radio Broadcasts

From the remote control:

Before starting the procedure below, make sure you have selected FM station only using the remote control. If not, the following RDS operating buttons do not work for tuner operation. (Pressing FM/AM activates the remote control for tuner operation.)

1. **Press PTY SEARCH while listening to an FM station.**
   "PTY SELECT" flashes on the display.

2. **Press PTY +/– until the PTY code you want appears on the display while "PTY SELECT" is flashing.**
   The display gives you the PTY codes described to the right.



3. **Press PTY SEARCH again while the PTY code selected in previous step is still on the display.**
   While searching, "SEARCH" and the selected PTY code alternate on the display.
   The receiver searches 40 preset channels, stops when it finds the one you have selected, and tunes in that station.

To continue searching after the first stop

Press PTY SEARCH again while the indications on the display are flashing.
If no program is found, "NOTFOUND" appears on the display.

To stop searching any time during the process

Press PTY SEARCH while searching.

When an emergency broadcast (ALARM signal) is sent from an FM station:
The receiver automatically tunes in the station except in the following cases:
- When you are listening to non-RDS stations (all AM — MW/LW and some FM stations).
- When the receiver is in standby mode.

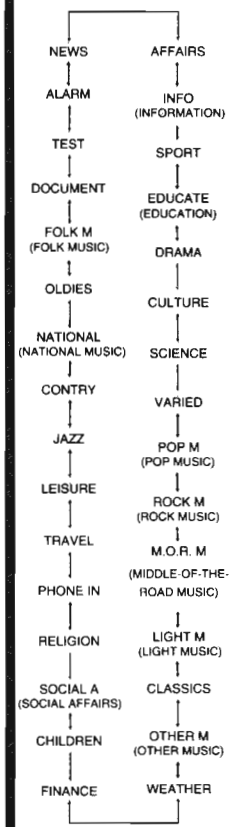
While receiving an emergency broadcast, "ALARM" appears on the display.

The TEST signal is used for equipment test — whether it can receive the ALARM signal correctly.
The TEST signal makes the receiver work in the same way as the ALARM signal does. If an TEST signal is received, the receiver automatically switches to the station broadcasting the TEST signal.
While receiving an test signal, "TEST" appears on the display.

Note:

When selecting the PTY codes by pressing PTY +, NEWS always appears first.
When selecting the PTY codes by pressing PTY –, ALARM always appears first.

Descriptions of the PTY codes:



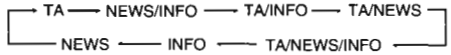
Switching to a Broadcast Program of Your Choice Temporarily

Another convenient RDS service is called "EON (Enhanced Other Network)."
The EON indicator lights up while receiving a station with the EON code.
This allows the receiver to switch temporarily to a broadcast program of your choice (NEWS, TA, and/or INFO) from a different station except in the following cases:
- When you are listening to a non-RDS stations (all AM — MW/LW and some FM stations).
- When the last received FM station is a non-RDS station.
- When the receiver is in standby mode.

On the front panel *only:*

1. **Press EON so that the last selected program type appears on the display.**
   The receiver enters EON standby mode*.

2. **Press TA/NEWS/INFO until the program type you want appears on the display.**
   Each time you press the button, the display changes to show the following.



TA: Traffic Announcement in your area.
NEWS: News.
INFO: Program the purpose of which is to impart advice in the widest sense.

CASE 1 **If there is no station broadcasting the program you have selected**

The receiver continues playing the current source (all sources except AM — MW/LW).

⇩

When a station starts broadcasting the program you have selected, the receiver automatically switches to the station. The indicator of received PTY code starts flashing.

⇩

When the program is over, the receiver goes back to the previously selected source, but still remains in EON standby mode. The indicator of received PTY code stops flashing and remains lit.

Continued to the next page.

Note:

FM stations must be preset to use the EON function.

Note:

** When the receiver is in EON standby mode, the receiver is ready to receive the EON data (TA/NEWS/INFO) you select.*

Receiving Radio Broadcasts

CASE 2 **If there is a station broadcasting the program you have selected**

The receiver changes the source (all sources except AM — MW/LW), and tunes in the station. The indicator of received PTY code starts flashing.

⇩

When the program is over, the receiver goes back to the previously selected source, but still remains in EON standby mode. The indicator of received PTY code stops flashing and remains lit.

CASE 3 **If the FM station you are listening is broadcasting the program you have selected**

The receiver continues to receive the station but the indicator of received PTY code starts flashing.

⇩

When the program is over, the indicator of received PTY code stops flashing and remains lit, but the receiver remains in EON standby mode.

To stop listening to the program selected by EON

Press EON so that the program type (TA/NEWS/INFO) goes off from the display. The receiver enters EON off mode and goes back to the previously selected source.
Each time you press EON, the EON mode alternates between standby mode and off mode.

Notes:

- *EON data sent from some stations may not be compatible with this receiver.*
- *In EON standby mode, if you change the source to AM (MW/LW) or if you carry out synchronized recording (see page 55), EON standby mode is canceled temporarily. The receiver goes back to EON standby mode again when you have finished that operation.*
- *While listening to a program tuned in by the EON function, you can only use STANDBY/ON ⏻/I, EON, MASTER VOLUME (on the front panel) and AUDIO ⏻/I (on the remote control).*
- *While listening to a program tuned in by the EON function, you cannot perform the on-screen operations (pages 47 and 57).*
- *When the receiver is turned off (into standby mode), the EON function is also turned off.*

CAUTION:

When the source alternates intermittently between the station tuned in by the EON function and the currently selected source, press EON to cancel the EON function. This is not a malfunction of the receiver.

Using the SEA Modes

The SEA (Sound Effect Amplifier) modes give you control of the way your music sounds.

IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:
To operate this receiver, set it to "AUDIO/TV/VCR" (except when selecting the DBS tuner as the source).

Selecting Your Favorite SEA Mode

On the front panel:

1. **Press SEA MODE.**
   The display changes to show the current setting.

2. **Turn MULTI JOG until the mode you want appears on the display, while the indication of the previous step is still on the display.**
   As you turn it, the SEA mode changes as follows:

SEA ROCK ↔ SEA MUSICAL ↔ SEA MOVIE ↔ SEA COUNTRY
SEA OFF ← SEA USERMODE ← SEA JAZZ

SEA ROCK:	Gives a heavy sound. Both high and low frequencies are boosted.
SEA MUSICAL:	Enhance the mid-frequency range, which the human voice is mostly made up of.
SEA MOVIE:	Adds breadth to sounds so you feel like you are in a movie theater.
SEA COUNTRY:	Enhances the high-frequency range so that instruments such the violin and banjo are emphasized.
SEA JAZZ:	Gives a feeling of a live atmosphere. Good for acoustic music.
SEA USERMODE:	Your original SEA adjustment (see page 33).
SEA OFF:	No SEA mode is applied (see below).

To cancel the SEA mode

Turn MULTI JOG until "SEA OFF" appears in step 2 above.
The SEA indicator goes off from the display.

From the remote control:

1. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

2. **Press SEA MODE repeatedly until the SEA mode you want appears on the display.**
   Each time you press the button, the SEA mode changes as follows:

SEA ROCK → SEA MUSICAL → SEA MOVIE → SEA COUNTRY
SEA OFF ← SEA USERMODE ← SEA JAZZ

To cancel the SEA mode

Press SEA MODE until "SEA OFF" appears in step 2 above.
The SEA indicator goes off from the display.

Notes:

- *The SEA modes cannot be used for recording.*
- *When the SEA mode is turned on, the SEA indicator lights up on the display.*
- *When the SEA mode is used with the DAP mode (see page 38), sounds may be distorted. If this happens, turn off the DAP mode or decrease the effect level of the DAP mode.*

Note:

When the SEA mode is turned on, the SEA indicator lights up on the display.

Using the SEA Modes

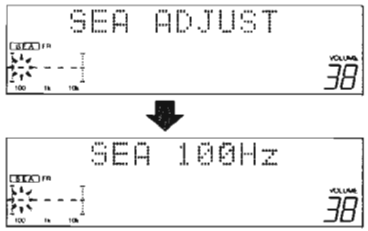
Creating Your Own SEA Mode

You can adjust and store your own SEA adjustment into memory (SEA USERMODE).

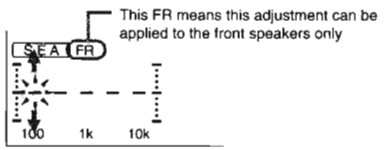
On the front panel *only*:

If you do not want to store your adjustment, but rather want to adjust the SEA temporarily, skip step 4 below.

1. **Press SEA ADJUST repeatedly until the frequency range (100Hz, 1kHz or 10kHz) you want appears on the display.**



2. **Turn MULTI JOG to adjust the SEA level of the selected frequency range, while the indication of the previous step is still on the display.**
   - Turning it clockwise increases the level.
   - Turning it counterclockwise decreases the level.



3. **Repeat step 1 and 2 to adjust other frequency ranges if necessary.**

4. **Press TUNER/SEA MEMORY, while the indication of the previous step is still on the display.**
   Your adjustment is stored into the SEA USERMODE.

To recall your own SEA adjustment

See page 32.

To erase a stored adjustment

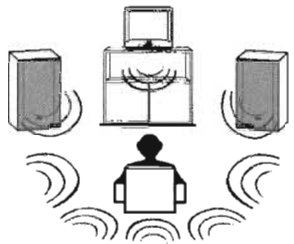
Storing a new adjustment into SEA USERMODE erases the previously stored one.

Using the DSP Modes

The built-in Surround Processor provides three types of the DSP (Digital Signal Processor) mode — 3D-PHONIC mode, DAP (Digital Acoustic Processor) mode and Surround mode (Dolby Digital, Dolby Pro Logic and JVC's Theater Surround.)

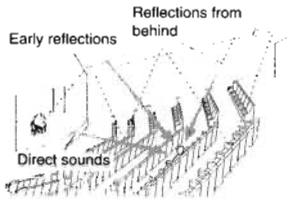
On the 3D-PHONIC mode

The 3D-PHONIC mode gives you such a nearly surround effect as it is reproduced through the Dolby Surround decoder, which is widely used to reproduce sounds with a feeling of movement like those experienced in movie theaters. The 3D-PHONIC mode is the result of research on sound localization technology carried out at JVC for many years and makes it possible to reproduce the surround sound **with only two front speakers**.



On the DAP mode

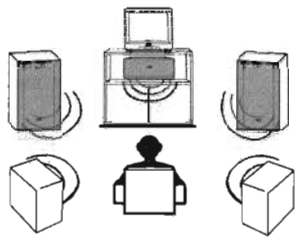
The sound heard in a concert hall or club consists of direct sound and indirect sound — early reflections and reflections from behind. Direct sounds reach the listener directly without any reflection. On the other hand, indirect sounds are delayed by the distances of the ceiling and walls. These direct sounds and indirect sounds are the most important elements of the acoustic surround effects. The DAP mode can create these important elements, and gives you a real "being there" feeling.



On Surround mode

With this receiver, you can use two types of the surround mode.

Dolby Surround (Dolby Digital and Dolby Pro Logic)
Used to watch the soundtracks of software encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).
Dolby Digital and Dolby Pro Logic can be selected automatically according to software played back.



JVC's Theater Surround
In order to reproduce a more realistic sound field in your listening room while playing soundtracks of software encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND), Theater Surround has been designed to create a real "being there" feeling.

Notes:

- *The DSP modes has no effect on monaural sources.*
- *You can not use the two types of the DSP modes at the same time.*

IMPORTANT:

When recording the digital source, turn off the DSP mode.

Note:

To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.

Using the DSP Modes

IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:
To operate this receiver, set it to "AUDIO/TV/VCR" (except when selecting the DBS tuner as the source).

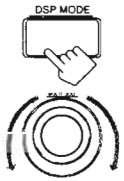
Using the 3D-PHONIC Modes

When using the 3D-PHONIC modes, you need only two front speakers to reproduce the soundtracks of software encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).

On the front panel:

1. **Select and play the source encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DD DIGITAL indicator lights up on the display.

2. **Press DSP MODE.**
   The current DSP mode appears on the display.



3. **Turn MULTI JOG until the mode — 3D ACTION (or 3D DIGITAL), 3D DRAMA, or 3D THEATER — you want appears on the display, while the indication of the previous step is still on the display.**
   As you turn it, the DSP modes change as follows (the 3D-PHONIC and DSP indicators also light up on the display):

When the digital input is selected to play the source encoded with Dolby Digital:

DIG-THEATER ⟷ HEADPHONE
DSP OFF ⟷ 3D DIGITAL

For other sources:

THEATER ⟷ LIVE CLUB ⟷ DANCE CLUB ⟷ HALL ⟷ PAVILION
DSP OFF ⟷ 3D THEATER ⟷ 3D DRAMA ⟷ 3D ACTION ⟷ HEADPHONE

3D ACTION:	Best for action and war movies — where the action is fast and explosive.
3D DRAMA:	Best for dramas and romantic movies — where the action is slow and soft.
3D THEATER:	Reproduces the sound field of a theater.
3D DIGITAL:	Reproduces multi-sound source encoded with Dolby Digital.
DSP OFF:	No DSP mode is applied.

For the other modes, see pages 38 and 43.

If you need to make any adjustment, go to the following steps.

Notes:

- *To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.*
- *The 3D-PHONIC mode is not used with the other DSP modes such as the DAP mode and the Surround mode. When the 3D-PHONIC mode is turned on, the other DSP mode, if used, will be turned off.*

Notes on the Indications:

- *The indicator of the selected DSP mode also lights up on the display while selecting.*
- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DD DIGITAL indicator goes off.

4. **Press BALANCE/SURROUND ADJUST repeatedly until "DSP EFFECT" appears on the display.**
   The display changes to show the current setting.

5. **Turn MULTI JOG to select the effect level, while the indication of the previous step is still on the display.**
   As you turn it, the effect level changes as follows:

DSP EFFECT 1 ⟷ DSP EFFECT 2 ⟷ DSP EFFECT 3
DSP EFFECT 5 ⟷ DSP EFFECT 4

As the number increases, the selected 3D-PHONIC mode becomes stronger.

To cancel the 3D-PHONIC mode

Turn MULTI JOG until "DSP OFF" appears in step 3.
The 3D-PHONIC and DSP indicators go off from the display.

Note:

Once you have adjusted the 3D-PHONIC modes, it is memorized for each 3D-PHONIC mode.

Using the DSP Modes

From the remote control:

1. **Select and play the source encoded with Dolby Digital (bearing the mark) or with Dolby Surround (bearing the mark).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DD DIGITAL indicator lights up on the display.

2. **Press SURROUND MODE repeatedly until the mode — 3D ACTION (or 3D DIGITAL), 3D DRAMA, or 3D THEATER — you want appears on the display.**
   Each time you press the button, the DSP modes change as follows (the 3D-PHONIC and DSP indicators also light up on the display):

When the digital input is selected to play the source encoded with Dolby Digital:

DOLBY DIGITAL → DIG-THEATER → HEADPHONE → 3D DIGITAL → OFF → DOLBY DIGITAL

For other sources:

PRO LOGIC → THEATER → LIVE CLUB → DANCE CLUB → HALL → PAVILION → HEADPHONE → 3D THEATER → 3D DRAMA → 3D ACTION → OFF → PRO LOGIC

3. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

4. **Press EFFECT to select the effect level.**
   Each time you press the button, the effect level changes as follows:

DSP EFFECT 1 → DSP EFFECT 2 → DSP EFFECT 3 → DSP EFFECT 4 → DSP EFFECT 5 → DSP EFFECT 1

As the number increases, the selected 3D-PHONIC mode becomes stronger.

To cancel the 3D-PHONIC mode

Press SURROUND MODE repeatedly until "OFF" appears.
The 3D-PHONIC and DSP indicators go off from the display.

Note:

The 3D-PHONIC mode is not used with the other DSP modes such as the DAP mode and the Surround mode. When the 3D-PHONIC mode is turned on, the other DSP mode, if used, will be turned off.

Notes on the indications:

- *The indicator of the selected DSP mode also lights up on the display while selecting.*
- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

  While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DD DIGITAL indicator goes off.

Note:

Once you have adjusted the 3D-PHONIC modes, it is memorized for each 3D-PHONIC mode.

Using the DAP Modes

You can use five DAP modes — "Live Club, Dance Club, Hall, Pavilion, and Headphones" for any source.
Among the DAP modes, "Headphones" is very special. It can create the same stereo sound as you listen through the speakers off air while listening to a source using headphones. So, you can feel as if you were not using the headphones and listening to music in a room.
If the digital input is selected to play the source encoded with Dolby Digital, you can only select "Headphones."

On the front panel:

1. **Press DSP MODE.**
   The current DSP mode appears on the display.

2. **Turn MULTI JOG until the mode (LIVE CLUB, DANCE CLUB, HALL, PAVILION, or HEADPHONE) you want appears on the display, while the indication of the previous step is still on the display.**
   The DSP indicator also lights up on the display.

As you turn it, the DSP modes change as follows:

THEATER → LIVE CLUB → DANCE CLUB → HALL → PAVILION → HEADPHONE → 3D THEATER → 3D DRAMA → 3D ACTION → DSP OFF → THEATER

When the digital input is selected to play the source encoded with Dolby Digital:

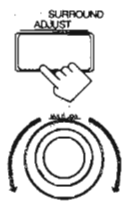
DIG-THEATER → HEADPHONE → DSP OFF → 3D DIGITAL → DIG-THEATER

LIVE CLUB:	Gives the feeling of a live music club with a low ceiling.
DANCE CLUB:	Gives a throbbing bass beat.
HALL:	Gives clear vocal and the feeling of a concert hall.
PAVILION:	Gives the spacious feeling of a pavilion with a high ceiling.
HEADPHONE:	Gives a spacious stereo effect when listening with headphones.
DSP OFF:	No DSP mode is applied.

For the other modes, see pages 35 and 43.

If you need to make any adjustment, go to the following steps.

3. **Adjust the speaker output levels as follows.**
   1) **Press BALANCE/SURROUND ADJUST repeatedly until one of the indications appears on the display.**
      "REAR L LEVEL": To adjust the left speaker level.
      "REAR R LEVEL": To adjust the right speaker level.
   2) **Turn MULTI JOG to adjust the selected speaker output level (from –10 dB to +10 dB), while the indication of the previous step is still on the display.**
   3) **Repeat 1) and 2) to adjust the other speaker output levels.**



Continued to the next page.

Notes:

- *The DAP mode is not used with the other DSP modes such as the 3D-PHONIC mode and the Surround mode. When the DAP mode is turned on, the other DSP mode, if used, will be turned off.*
- *When the DAP mode is used with the SEA mode (see page 32), sounds may be distorted. If this happens, turn off the SEA mode.*

Note:

The indicator of the selected DSP mode also lights up on the display while selecting.

Note:

When you select "HEADPHONE," you cannot go to the following steps. No adjustments can be made for "HEADPHONE."

Note:

You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).

Using the DSP Modes

4. **Adjust the effect level.**
   1) **Press BALANCE/SURROUND ADJUST repeatedly until "DSP EFFECT" appears on the display.**
   2) **Turn MULTI JOG to select the effect level, while the indication of the previous step is still on the display.**
   As you turn it, the effect level changes as follows:

DSP EFFECT 1 → DSP EFFECT 2 → DSP EFFECT 3 → DSP EFFECT 4 → DSP EFFECT 5 →

As the number increases, the selected DAP mode becomes stronger.

To cancel the DAP mode

Turn MULTI JOG until "DSP OFF" appears in step 2.
The DSP indicator goes off from the display.

From the remote control:

1. **Press SURROUND MODE repeatedly until the mode you want appears on the display.**
   The DSP indicator also lights up on the display.

Each time you press the button, the DSP modes change as follows (the indicator of the selected DSP mode also lights up on the display):

PRO LOGIC → THEATER → LIVE CLUB → DANCE CLUB → HALL → PAVILION → 3D THEATER → 3D DRAMA → 3D ACTION → HEADPHONE → OFF

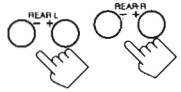
When the digital input is selected to play the source encoded with Dolby Digital:

DOLBY DIGITAL → DIG-THEATER → HEADPHONE → 3D DIGITAL → OFF

If you need to make any adjustment, go to the following steps.

2. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

3. **Adjust the speaker output levels as follows:**
   - To adjust the left rear speaker level, press REAR•L +/–.
   - To adjust the right rear speaker level, press REAR•R +/–.



4. **Press EFFECT to select the effect level.**
   Each time you press the button, the effect level changes as follows:

DSP EFFECT 1 → DSP EFFECT 2 → DSP EFFECT 3 → DSP EFFECT 4 → DSP EFFECT 5 →

As the number increases, the selected DAP mode becomes stronger.

To cancel the DAP mode

Press SURROUND MODE repeatedly until "OFF" appears.
The DSP indicator goes off from the display.

Note:

Once you have adjusted the DAP modes, the adjustment is memorized for each DAP mode.

Note:

The DAP mode is not used with the other DSP modes such as the 3D-PHONIC mode and the Surround mode. When the DAP mode is turned on, the other DSP mode, if used, will be turned off.

Note:

When you select "HEADPHONE," you cannot go to the following steps. No adjustments can be made for "HEADPHONE."

Note:

You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).

Note:

Once you have adjusted the DAP modes, the adjustment is memorized for each DAP mode.

Using the Dolby Digital and Dolby Pro Logic Modes

Once you have adjusted the Dolby Digital and Dolby Pro Logic modes, this receiver memorizes adjustment for each mode.
To activate the Dolby Digital and Dolby Pro Logic modes, follow the procedure below.

From the remote control:

1. **Select and play the source encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DIGITAL indicator lights up on the display.

2. **Press SURROUND MODE repeatedly until "PRO LOGIC" or "DOLBY DIGITAL" appears on the display.**
   Dolby Digital or Dolby Pro Logic is automatically selected according to the source being played back.

When Dolby Pro Logic is selected, the lamp on the DOLBY SURROUND button (on the front panel) lights red.

When Dolby Digital is selected, the lamp on the DOLBY SURROUND button (on the front panel) lights green.

Each time you press the button, the DSP modes change as follows:

When the digital input is selected to play the source encoded with Dolby Digital:

DOLBY DIGITAL → DIG-THEATER → HEADPHONE → 3D DIGITAL → OFF

For other sources:

PRO LOGIC → THEATER → LIVE CLUB → DANCE CLUB → HALL → PAVILION → 3D THEATER → 3D DRAMA → 3D ACTION → HEADPHONE → OFF

If you need to make any adjustment, go to the following steps.

3. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

Continued to the next page.

Notes:

- *To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.*
- *When the signals come into this receiver through the analog connection from the source component, "PRO LOGIC" is automatically selected.*
- *The Surround mode is not used with the other DSP modes such as the DAP mode and 3D-PHONIC mode. When the Surround mode is turned on, the other DSP mode, if used, will be turned off.*

Notes on the Indications:

- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

  While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DIGITAL indicator goes off.

Using the DSP Modes

4. **Press TEST to start checking the speaker output balance.**
"TEST TONE L" starts flashing on the display, and a test tone comes out of the speakers in the following order:

TEST TONE L (Left front speaker) → TEST TONE C (Center speaker) → TEST TONE R (Right front speaker) → TEST TONE RS (Right rear speaker) → TEST TONE LS (Left rear speaker) →

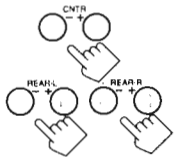
[L] [C] [R] *The speaker indicators also light on the display while the test tone comes out of the speakers.*

[LS] [RS]
L: Lights when the test tone comes out of the left front speaker.
C: Lights when the test tone comes out of the center speaker.
R: Lights when the test tone comes out of the right front speaker.
RS: Lights when the test tone comes out of the right rear speaker.
LS: Lights when the test tone comes out of the left rear speaker.

IMPORTANT:

- *Output the test tone while playing back an audio source. With the DVD digital input selected as the source, no test tone may come out while no signal is input to this receiver.*
- *Test tone comes out even while playing back a source encoded with Dolby Digital. In this case, the PRO LOGIC indicator lights up on the display.*

5. **Adjust the speaker output levels as follows:**
   - To adjust the center speaker level, press CNTR +/–.
   - To adjust the left rear speaker level, press REAR•L +/–.
   - To adjust the right rear speaker level, press REAR•R +/–.

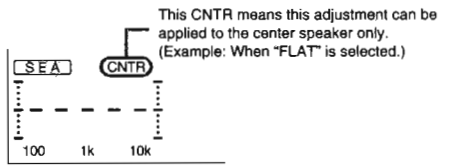


6. **Press TEST again to stop the test tone.**

7. **Press CNTR TONE to select the center tone level you want.**
The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of. Each time you press the button, the display changes to show the following:

SOFT2 → SOFT1 → FLAT → SHARP1 → SHARP2 →

Adjusted levels are also shown on the equalizer display.



To make the dialogue clearer, select "SHARP1" (little) or "SHARP2" (much).
To make the dialogue softer, select "SOFT1" (little) or "SOFT2" (much).
When "FLAT" is selected, no adjustment is applied.

To cancel the Surround mode

Press SURROUND MODE repeatedly until "OFF" appears.

Notes:

- *No test tone comes out of the center speakers when "CENTER SPK" is set to "NONE" (see page 20).*
- *No test tone comes out of the rear speakers when "REAR SPK" is set to "NONE" (see page 20).*
- *If the TV is turned on and the proper video input is selected on the TV, the test tone screen will appear on the TV.*

Notes:

- *You can adjust the speaker output levels and center tone without outputting the test tone.*
- *You cannot adjust the center speaker output level when "CENTER SPK" is set to "NONE" (see page 20).*
- *You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).*

Note:

The center tone cannot be adjusted when "CENTER SPK" is set to "NONE" (see page 20).

On the front panel:

You can also use the buttons on the front panel to adjust the Dolby Digital and Dolby Pro Logic modes. However, no test tone is available when using the buttons on the front panel. So, make adjustments while listening to the sound of the source played back.

1. **Select and play the source encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DIGITAL indicator lights up on the display.

2. **Press DOLBY SURROUND so that the lamp on the button lights up.**
"SURROUND ON" appears on the display.
Dolby Digital or Dolby Pro Logic is automatically selected according to the source being played back.

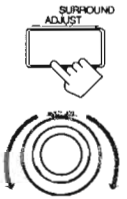
When Dolby Pro Logic is selected, the lamp on the DOLBY SURROUND button lights red.

When Dolby Digital is selected, the lamp on the DOLBY SURROUND button lights green.

If you need to make any adjustment, go to the following steps.

3. **Adjust the speaker output levels as follows.**
   1) **Press BALANCE/SURROUND ADJUST repeatedly until one of the indications appears on the display.**
   "CENTER LEVEL": To adjust the center speaker level.
   "REAR L LEVEL": To adjust the left speaker level.
   "REAR R LEVEL": To adjust the right speaker level.
   2) **Turn MULTI JOG to adjust the selected speaker output level (from –10 dB to +10 dB), while the indicator of the previous step is still on the display.**
   3) **Repeat 1) and 2) to adjust the other speaker output levels.**

4. **Press BALANCE/SURROUND ADJUST repeatedly until "CENTER TONE" appears on the display.**
The display changes to show the current setting.



5. **Turn MULTI JOG to select the center tone level you want, while the indication of the previous step is still on the display.**
The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of. As you turn it, the display changes to show the following:

SOFT2 ← SOFT1 ← FLAT ← SHARP1 ← SHARP2

To make the dialogue clearer, select "SHARP1" (little) or "SHARP2" (much).
To make the dialogue softer, select "SOFT1" (little) or "SOFT2" (much).
When "FLAT" is selected, no adjustment is applied.

To cancel the Surround mode

Press DOLBY SURROUND again so that "SURROUND OFF" appears.

Notes:

- *To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.*
- *When the signals come into this receiver through the analog connection from the source component, "PRO LOGIC" is automatically selected.*
- *The Surround mode is not used with the other DSP modes such as the DAP mode and 3D-PHONIC mode. When the Surround mode is turned on, the other DSP mode, if used, will be turned off.*

Notes on the Indications:

- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

  While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DIGITAL indicator goes off.

Notes:

- *You cannot adjust the center speaker level when "CENTER SPK" is set to "NONE" (see page 20).*
- *You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).*

Using the DSP Modes

Using the Theater Surround Mode

Once you have adjusted the Theater Surround mode, this receiver memorizes the adjustment. To activate the Theater Surround mode, follow the procedure below.

From the remote control:

1. **Select and play the source encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DD DIGITAL indicator lights up on the display.

2. **Press SURROUND MODE repeatedly until "THEATER" or "DIG-THEATER" appears on the display.**
   The DSP and THEATER indicators also light up on the display.

Each time you press the button, the DSP modes change as follows:

When the digital input is selected to play the source encoded with Dolby Digital:

DOLBY DIGITAL → DIG-THEATER → OFF → 3D DIGITAL → HEADPHONE → DOLBY DIGITAL

For other sources:

PRO LOGIC → THEATER → LIVE CLUB → DANCE CLUB → HALL → PAVILION → HEADPHONE → 3D THEATER → 3D DRAMA → 3D ACTION → PRO LOGIC

OFF

If you need to make any adjustment, go to the following steps.

3. **Press SOUND CONTROL.**
   10 keys are activated for sound adjustments.

4. **Press TEST to start checking the speaker output balance.**
   "TEST TONE L" starts flashing on the display, and a test tone comes out of the speakers in the following order:

TEST TONE L (Left front speaker) → TEST TONE C (Center speaker) → TEST TONE R (Right front speaker) → TEST TONE RS (Right rear speaker) → TEST TONE LS (Left rear speaker)

L C R	*The speaker indicators also light on the display while the test tone comes out of the speakers.*
LS RS	*L: Lights when the test tone comes out of the left front speaker.*
	C: Lights when the test tone comes out of the center speaker.
	R: Lights when the test tone comes out of the right front speaker.
	RS: Lights when the test tone comes out of the right rear speaker.
	LS: Lights when the test tone comes out of the left rear speaker.

IMPORTANT:

- *Output the test tone while playing back an audio source. With the DVD digital input selected as the source, no test tone may come out while no signal is input to this receiver.*
- *Test tone comes out even while playing back a source encoded with Dolby Digital. In this case, the PRO LOGIC indicator lights up on the display.*

Notes:

- *To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.*
- *The Surround mode is not used with the other DSP modes such as the DAP mode and 3D-PHONIC mode. When the Surround mode is turned on, the other DSP mode, if used, will be turned off.*

Notes on the indications:

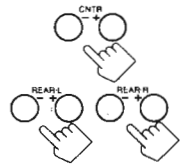
- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

  While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DD DIGITAL indicator goes off.

Notes:

- *No test tone comes out of the center speakers when "CENTER SPK" is set to "NONE" (see page 20).*
- *No test tone comes out of the rear speakers when "REAR SPK" is set to "NONE" (see page 20).*
- *If the TV is turned on and the proper video input is selected on the TV, the test tone screen will appear on the TV.*

5. **Adjust the speaker output levels as follows:**
   - To adjust the center speaker level, press CNTR +/–.
   - To adjust the left rear speaker level, press REAR•L +/–.
   - To adjust the right rear speaker level, press REAR•R +/–.

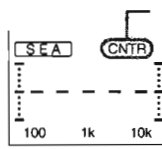


6. **Press TEST again to stop the test tone.**

7. **Press CNTR TONE to select the center tone level you want.**
   The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
   Each time you press the button, the display changes to show the following:

SOFT2 → SOFT1 → FLAT → SHARP1 → SHARP2

Adjusted levels are also shown on the equalizer display.



This CNTR means this adjustment can be applied to the center speaker only.
(Example: When "FLAT" is selected.)

To make the dialogue clearer, select "SHARP1" (little) or "SHARP2" (much).
To make the dialogue softer, select "SOFT1" (little) or "SOFT2" (much).
When "FLAT" is selected, no adjustment is applied.

8. **Press EFFECT to select the effect level.**
   Each time you press the button, the effect level changes as follows:

DSP EFFECT 1 → DSP EFFECT 2 → DSP EFFECT 3 → DSP EFFECT 4 → DSP EFFECT 5 → DSP EFFECT 1

As the number increases, the surround effect becomes stronger.

To cancel the Theater Surround mode

Press SURROUND MODE repeatedly until "OFF" appears.
The DSP and THEATER indicators goes off.

Notes:

- *You can adjust the speaker output levels and center tone without outputting the test tone.*
- *You cannot adjust the center speaker level when "CENTER SPK" is set to "NONE" (see page 20).*
- *You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).*

Note:

The center tone cannot be adjusted when "CENTER SPK" is set to "NONE" (see page 20).

Note:

You cannot adjust the effect level when "REAR SPK" is set to "NONE" (see page 20).

Using the DSP Modes

On the front panel:

You can also use the buttons on the front panel to adjust the Theater Surround mode. However, no test tone is available when using the buttons on the front panel. So, make adjustments while listening to the sound of the source played back.

1. **Select and play the source encoded with Dolby Digital (bearing the mark DOLBY DIGITAL) or with Dolby Surround (bearing the mark DOLBY SURROUND).**
   - When you play back the source encoded with Dolby Digital and select the digital input for that source, the DIGITAL indicator lights up on the display.

2. **Press DSP MODE.**
   The current DSP mode appears on the display.

3. **Turn MULTI JOG until "THEATER" or "DIG-THEATER" appears on the display, while the indication of the previous step is still on the display.**
   The DSP and THEATER indicators also light up on the display.

As you turn it, the DSP modes change as follows:

When the digital input is selected to play the source encoded with Dolby Digital:

DIG-THEATER ⟵ HEADPHONE
DSP OFF ⟵ 3D DIGITAL

For other sources:

THEATER ⟶ LIVE CLUB ⟶ DANCE CLUB ⟶ HALL ⟶ PAVILION
DSP OFF
3D THEATER ⟶ 3D DRAMA ⟶ 3D ACTION ⟶ HEADPHONE

If you need to make any adjustment, go to the following steps.

4. **Adjust the speaker output levels as follows.**
   1) **Press BALANCE/SURROUND ADJUST repeatedly until one of the indications appears on the display.**
      "CENTER LEVEL": To adjust the center speaker level.
      "REAR L LEVEL": To adjust the left speaker level.
      "REAR R LEVEL": To adjust the right speaker level.
   2) **Turn MULTI JOG to adjust the selected speaker output level (from –10 dB to +10 dB), while the indication of the previous step is still on the display.**
   3) **Repeat 1) and 2) to adjust the other speaker output levels.**

Notes:

- *To enjoy the software encoded with Dolby Digital, you must connect the source component using the digital terminal on the rear of this receiver.*
- *The Surround mode is not used with the other DSP modes such as the DAP mode and 3D-PHONIC mode. When the Surround mode is turned on, the other DSP mode, if used, will be turned off.*

Notes on the indications:

- *The PRO LOGIC indicator lights up when the Dolby Pro Logic decoder built in this receiver is activated.*
- *The Dolby Pro Logic decoder is used not only for the analog sources but also for the sources encoded with Dolby Digital in the following cases:*
  - *When only front channel signals are encoded.*
  - *When front channel and monaural rear channel signals are encoded.*

  While the Dolby Pro Logic is activated for this type of Dolby Digital source, the DIGITAL indicator goes off.

Notes:

- *You cannot adjust the center speaker level when "CENTER SPK" is set to "NONE" (see page 20).*
- *You cannot adjust the rear speaker levels when "REAR SPK" is set to "NONE" (see page 20).*

5. **Press BALANCE/SURROUND ADJUST repeatedly until "CENTER TONE" appears on the display.**
   The display changes to show the current setting.

6. **Turn MULTI JOG to select the center tone level you want, while the indication of the previous step is still on the display.**
   The center tone adjustment affects the mid-frequency range, which the human voice is mostly made up of.
   As you turn it, the display changes to show the following:

SOFT2 ⟶ SOFT1 ⟶ FLAT ⟶ SHARP1 ⟶ SHARP2

7. **Press BALANCE/SURROUND ADJUST repeatedly until "DSP EFFECT" appears on the display.**
   The display changes to show the current setting.

8. **Turn MULTI JOG to select the effect level, while the indication of the previous step is still on the display.**
   As you turn it, the effect level changes as follows:

DSP EFFECT 1 ⟷ DSP EFFECT 2 ⟷ DSP EFFECT 3
DSP EFFECT 5 ⟵ DSP EFFECT 4

As the number increases, the surround effect becomes stronger.

To cancel the Theater Surround mode

Turn MULTI JOG until "DSP OFF" appears in step 3.
The DSP and THEATER indicators goes off.

Note:

You cannot adjust the effect level when "REAR SPK" is set to "NONE" (see page 20).

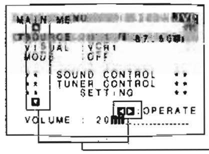
Using the On-Screen Menus

You can use the menus on the TV screen to control the receiver.
To use this function, you need to connect the TV to the MONITOR OUT jack on the rear panel (see page 10), and set the TV's input mode to the proper position to which the receiver is connected.

Selecting the Source to Play (Also see page 14)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.

MAIN MENU



Shows the buttons you can use on the current menu.
In this case, use △ / ▽ to move ☞ up and down, and ◁ / ▷ to select, adjust or set the item.

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOURCE."**
3. **Press ON SCREEN CONTROL ◁ / ▷ to select the source.**
4. **When you finish, press EXIT.**
   The menu disappears from the TV.

Selecting the Different Sources for Picture and Sound

You can view the pictures played back on a video component while listening to any source.

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "VISUAL."**
3. **Press ON SCREEN CONTROL ◁ / ▷ to select a different video source.**
   • When you select "OSD," see page 56.
4. **When you finish, press EXIT.**
   The menu disappears from the TV.

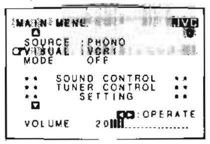
Using the DSP Modes (Also see pages 35, 38, 40, and 43)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "MODE."**
3. **Press ON SCREEN CONTROL ◁ / ▷ to select the DSP mode you want to use.**
4. **When you finish, press EXIT.**
   The menu disappears from the TV.

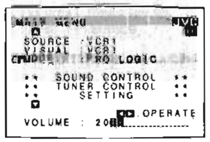
Notes

- *The on-screen display will disappear if no operation is done for about one minute.*
- *If your TV is not of the PAL color system, the TV screen will be distorted.*

MAIN MENU



MAIN MENU



Adjusting the Front Speaker Output Balance (Also see page 19)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "BAL." (Balance).**
4. **Press ON SCREEN CONTROL ◁ / ▷ to adjust the balance.**
5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

Listening at Low Volume (Loudness) (Also see page 19)

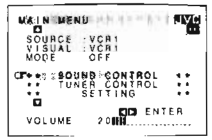
1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "LOUDNESS."**
4. **Press ON SCREEN CONTROL ◁ / ▷ to turn the loudness "ON" or "OFF."**
5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

Attenuating the Input Signal (Also see page 17)

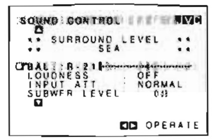
This function is available only for the sources connected using the analog terminals and takes effect only when the DSP mode is in use.

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "INPUT ATT."**
4. **Press ON SCREEN CONTROL ◁ / ▷ to turn the function on ("ATT ON") or off ("NORMAL").**
5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

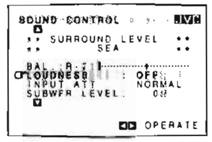
MAIN MENU



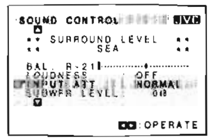
SOUND CONTROL menu



SOUND CONTROL menu



SOUND CONTROL menu



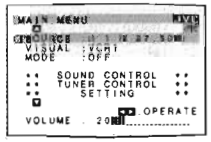
Using the On-Screen Menus

■ Adjusting the Subwoofer Output Level (Also see page 17)

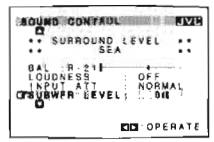
You can adjust the subwoofer output level if you have selected "YES" for the "SUBWOOFER" (see page 19).

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SUBWFR LEVEL" (Subwoofer Level).**
4. **Press ON SCREEN CONTROL ◁ / ▷ to adjust the subwoofer output level.**
5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

MAIN MENU



SOUND CONTROL menu



■ Adjusting the DSP Modes (Also see pages 35, 38, 40, and 43)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "MODE."**
3. **Press ON SCREEN CONTROL ◁ / ▷ to select the DSP mode you want to adjust.**
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.
5. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SURROUND LEVEL," then press ◁ / ▷.**
   The SURROUND LEVEL menu appears.
   • If you select "HEADPHONE" in step 3, the SURROUND LEVEL menu will not appear.
6. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to the item you want to set or adjust, then press ON SCREEN CONTROL ◁ / ▷.**
   On these adjustment menus, you can do the following:

   For 3D-PHONIC modes:
   "DSP EFFECT": Adjust the effect level.

   For DAP modes (LIVE CLUB, DANCE CLUB, HALL, PAVILION):
   "REAR L LEVEL": Adjust the left rear speaker output level. *
   "REAR R LEVEL": Adjust the right rear speaker output level. *
   "DSP EFFECT": Select the effect level.

For Dolby Surround Pro Logic:
"TEST TONE": Output a test tone.
"CENTER LEVEL": Adjust the center speaker output level. **
"REAR L LEVEL": Adjust the left rear speaker output level. *
"REAR R LEVEL": Adjust the right rear speaker output level. *
"CENTER TONE": Select the center tone level. **

For Dolby Digital:
"TEST TONE": Output a test tone.
"CENTER LEVEL": Adjust the center speaker output level. **
"REAR L LEVEL": Adjust the left rear speaker output level. *
"REAR R LEVEL": Adjust the right rear speaker output level. *
"CENTER TONE": Select the center tone level. **

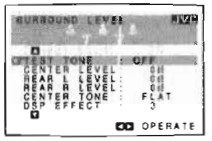
For Theater Surround and Digital Theater Surround:
"TEST TONE": Output a test tone.
"CENTER LEVEL": Adjust the center speaker output level. **
"REAR L LEVEL": Adjust the left rear speaker output level. *
"REAR R LEVEL": Adjust the right rear speaker output level. *
"CENTER TONE": Select the center tone level. **
"DSP EFFECT": Select the effect level.*

7. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Selecting Your Favorite SEA Mode (Also see page 32)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEA," then press ◁ / ▷.**
   The SEA menu appears.
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEA MODE."**
5. **Press ON SCREEN CONTROL ◁ / ▷ to select the SEA mode you want.**
6. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

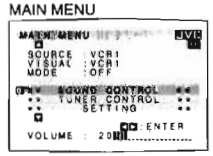
Example:
SURROUND LEVEL menu for Theater Surround



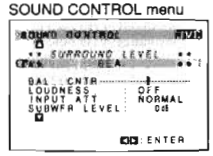
Notes:

** Not displayed when "REAR SPK" is set to "NONE" (see page 20).*
*** Not displayed when "CENTER SPK" is set to "NONE" (see page 20).*

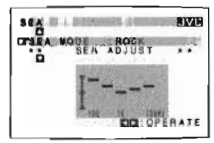
MAIN MENU



SOUND CONTROL menu



SEA menu



Using the On-Screen Menus

■ Creating Your Own SEA Mode (Also see page 33)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOUND CONTROL," then press ◁ / ▷.**
   The SOUND CONTROL menu appears.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEA," then press ◁ / ▷.**
   The SEA menu appears.
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEA ADJUST," then press ◁ / ▷.**
   The SEA ADJUST menu appears.
5. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to adjust the SEA mode as you want.**
   ◁ / ▷ : Select the frequency ranges.
   △ / ▽ : Adjust the frequency levels.
6. **Press SET to store the setting into the SEA USERMODE.**
   • If you press EXIT, without pressing SET in this step, you can return to the SEA menu. (The adjustment you have made is active but not stored.)
7. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

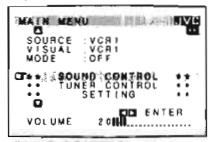
■ Basic Settings

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SETTING," then press ◁ / ▷.**
   The SETTING 1 or SETTING 2 menu appears.
3. **Press ON SCREEN CONTROL △ / ▽ to the setting item you want to adjust.**
   • To go to the SETTING 2 menu, move ☞ to "NEXT PAGE," then press ◁ / ▷.
   • To go back to the SETTING 1 menu, move ☞ to "PREVIOUS PAGE," then press ◁ / ▷.

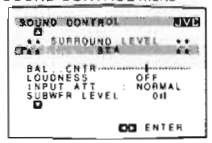
   On the SETTING 1 and 2 menus, you can do the following:

"SUBWOOFER":	Set the subwoofer information (See page 19).
"FRONT SPK":	Set the front speaker information (See page 20).
"CENTER SPK":	Set the center speaker information (See page 20).
"REAR SPK":	Set the rear speaker information (See page 20).
"CNTR DELAY":	Adjust the delay time of the center speaker output (See page 21).
"REAR DELAY":	Adjust the delay time of the rear speaker output (See page 21).
"CROSSOVER":	Set the crossover frequency (See page 21).
"LFE ATT.":	Set the low frequency effect attenuator level (See page 22).
"COMP.":	Set the dynamic range compression (See page 22).
"DIGITAL 1/2/3":	Set the digital input terminal (See page 20).

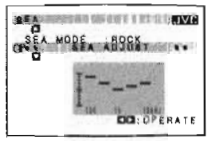
MAIN MENU



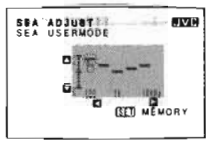
SOUND CONTROL menu



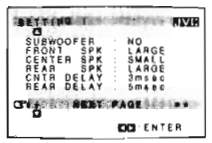
SEA menu



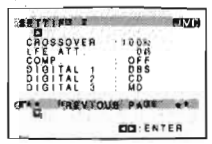
SEA ADJUST menu



SETTING 1 menu



SETTING 2 menu



4. **Press ON SCREEN CONTROL ◁ / ▷ to set (or adjust) the setting item selected in step 3.**
5. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Operating the Tuner

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.**
   The TUNER CONTROL menu appears.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to the item you want to set or adjust, then press ON SCREEN CONTROL ◁ / ▷.**
   On the TUNER CONTROL menu, you can do the following:

"PRESET CH":	Select a preset channel station. (See page 25)
"BAND":	Select the band. (See page 24)
"FREQUENCY":	Tune in a station manually. (See page 24)
"FM MODE":	Select the FM reception mode. (See page 25) *
"PRESET MEMORY":	See "Storing the Preset Stations" below.
"RDS INFORMATION":	See "Checking the RDS Information." (See page 54)

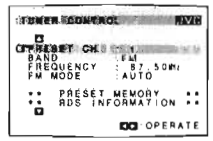
4. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

■ Storing the Preset Stations (Also see page 24)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.**
   The TUNER CONTROL menu appears.
3. **Tune into a station on the TUNER CONTROL menu, referring to "Operating the Tuner" above.**
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PRESET MEMORY," then press ◁ / ▷.**
   The PRESET MEMORY menu appears.
5. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PRESET CH"**
6. **Press ON SCREEN CONTROL ◁ / ▷ to select a preset station number you want.**
7. **Press SET to store the setting.**
8. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

MAIN MENU

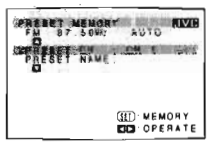
TUNER CONTROL menu



Note:

** Not displayed when an AM station is selected.*

PRESET MEMORY menu



Using the On-Screen Menus

Assigning Names to the Preset Stations (Also see page 26)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.**
   The TUNER CONTROL menu appears.

3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PRESET CH."**

4. **Press ON SCREEN CONTROL ◁ / ▷ to select a preset station.**

5. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PRESET MEMORY," then press ◁ / ▷.**
   The PRESET MEMORY menu appears.

6. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PRESET NAME," then press SET.**
   The character entry screen appears.

7. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ in front of a character you want.**
   You can also select the following:
   SPACE: To enter space CANCEL: To erase the character
   ◀ ▶ : To go back to the previous character position or go to the next character position

8. **Press SET to enter the selected character.**

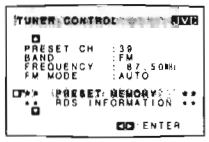
9. **Repeat steps 7 and 8 to enter up to four characters.**

10. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to "PRESET NAME," then press SET to store the setting.**
    The TUNER CONTROL menu appears again.

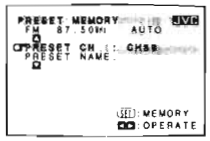
11. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

MAIN MENU

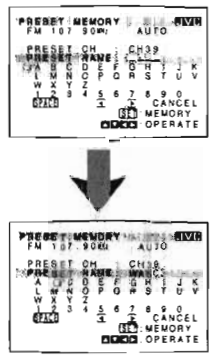
TUNER CONTROL menu



PRESET MEMORY menu



PRESET MEMORY menu:
Character entry screen



Checking the RDS Information (Also see page 27)

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TUNER CONTROL," then press ◁ / ▷.**
   The TUNER CONTROL menu appears.

3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "RDS INFORMATION," then press ◁ / ▷.**
   The RDS INFORMATION menu appears.

4. **When you finish, press EXIT repeatedly until the menu disappears from the TV.**

RDS INFORMATION menu

Notes:

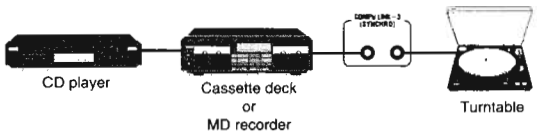
- *The on-screen display cannot show accented letters.*
- *RDS is not available for AM (MW/LW) broadcasts.*

COMPU LINK Remote Control System

The COMPU LINK remote control system allows you to operate JVC audio components through the remote sensor on the receiver.

To use this remote control system, you need to connect JVC audio components through the COMPU LINK-3 (SYNCHRO) jacks (see below) in addition to the connections using cables with RCA pin plugs (see page 9) (and a digital cable if you want — see page 12).

- Make sure that the AC power cords of these components are unplugged before connection. Plug the AC power cords only after all connections are complete.



This remote control system allows you to use four functions listed below.

Remote Control through the Remote Sensor on the Receiver

You can control the connected audio components through the remote sensor on the receiver using this remote control. Aim the remote control directly at the remote sensor on the receiver. For details, see pages 63 and 64.

Automatic Source Selection

When you press the play (►) button on a connected component or on its own remote control, the receiver automatically turns on and changes the source to the component. On the other hand, if you select a new source on the receiver or the remote control, the selected component begins playing immediately.
In both cases, the previously selected source continues playing without sound for a few seconds.

Automatic Power On/Off (Standby): only possible with the COMPU LINK-3 connection

Both the CD player and cassette deck (or MD recorder) turn on and off (standby) along with the receiver.
When you turn on the receiver, the CD player or cassette deck (or MD recorder) will turn on automatically, depending on which component has been previously selected.
When you turn off the receiver, both the CD player and cassette deck (or MD recorder) will turn off (standby).

Synchronized Recording

Synchronized recording means the cassette deck (or MD recorder) starts recording as soon as a CD or a record begins playing.

To use synchronized recording, follow these steps:

1. **Put a tape in the cassette deck (or an MD in the MD recorder), and a disc in the CD player (or a record on the turntable).**
2. **Press the record (●) button and the pause (II) button on the cassette deck (or MD recorder) at the same time.**
   This puts the cassette deck (or MD recorder) into recording pause.
   If you do not press the record (●) button and pause (II) button at the same time, the synchronized recording feature will not operate.
3. **Press the play (►) button on the CD player or on the turntable.**
   The source changes on the receiver, and as soon as play starts, the cassette deck (or MD recorder) starts recording. When the play ends, the cassette deck (or MD recorder) enters recording pause, and stops about 4 seconds later.

Notes:

- *If your audio component has two COMPU LINK-3 (SYNCHRO) jacks, you can use either one. If it has only one COMPU LINK-3 (SYNCHRO) jack, connect it so that it is the last item in the series of components. (For example, the turntable or CD player in the diagram to the left.)*
- *To operate the cassette deck or MD recorder using the COMPU LINK remote control system, set the source name correctly. (See page 18.)*
- *Refer also to the manuals supplied with your audio components.*

Notes:

- *During synchronized recording, the selected source cannot be changed.*
- *If your CD player is playing in program mode, a 4-second blank is recorded between tracks so that the music scan feature of your cassette deck can be used on the recorded tape.*
- *If the power of any component is shut off during synchronized recording, the COMPU LINK remote control system may not operate properly. In this case, you must start again from the beginning.*

TEXT COMPU LINK Remote Control System

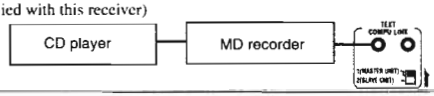
The TEXT COMPU LINK remote control system has been newly developed to deal with the disc information recorded in the CD Text and MDs. Using these information in the discs, you can operate the CD player or MD recorder equipped with the TEXT COMPU LINK remote control system through the receiver.*

CONNECTIONS:

To use this remote control system, you need to connect the CD player and/or MD recorder you want to operate, following the procedures below.

1. **If you have already plugged your CD player, MD recorder, and this receiver into the AC outlets, unplug their AC power cords first.**
2. **Connect your CD player, MD recorder, and this receiver as follows, through the COMPU LINK-3 (SYNCHRO) jacks and TEXT COMPU LINK jacks.**
   1) **COMPU LINK-3 (SYNCHRO) jacks:** Use the cables with the monaural mini-plugs (not supplied with this receiver)

   2) **TEXT COMPU LINK jacks:** Use the cables with the stereo mini-plugs (not supplied with this receiver)



IMPORTANT:
Set the Master/Slave Selector on the rear to "1(MASTER UNIT)."
• "2(SLAVE UNIT)" is just for the serviceman's use. The TEXT COMPU LINK remote control system does not function with the selector set to "2(SLAVE UNIT)."

3. **Connect your CD player, MD recorder and this receiver, using the cables with RCA pin plugs (see page 9) (and a digital cable if you want — see page 12).**
4. **Plug the AC power cords of these components above into the AC outlets.**
5. **When turning on these components for the first time, turn on the connected components first, then turn on this receiver.**

FUNCTIONS:

This remote control system allows you to use the functions listed below.

Displaying the Disc Information on the TV screen

Disc information such as its performer and disc title (and track titles only when a CD Text is selected) is shown on the TV screen.

Disc Search: Only for CD Player

This remote control system can allow you to search discs by the performer, disc title, and music genre.
With this disc search, you can easily find the disc you want to play.

Additional Functions:

- If your CD player has the User File function, you can select a disc from the groups.
  * A "user file" is a group of the discs you make as you like on the CD player.
- If your CD player has the disc memory function, you can input the performer, disc title, and music genre about these normal audio CDs on the TV screen.

****What is a CD Text?***

In a CD Text, some information about the disc (its disc title, performer, composer, arranger, etc.) is recorded.

Notes:

- *If your audio component has two COMPU LINK-3 (SYNCHRO) jacks, you can use either one. If it has only one COMPU LINK-3 (SYNCHRO) jack, connect it so that it is the last item in the series of components. (For example, the CD player in the diagram to the left.)*
- *If your audio component has two TEXT COMPU LINK jacks, you can use either one. If it has only one TEXT COMPU LINK jack, connect it so that it is the last item in the series of components. (For example, the CD player in the diagram to the left.)*
- *Refer also to the manuals supplied with your CD player or MD recorder.*

Note:

If you turn on the receiver before turning on the other components after connecting components, the TEXT COMPU LINK remote control system does not work correctly.
If this happens:

1. Turn off the all components including this receiver.
2. Turn on the connected components.
3. Turn on this receiver.

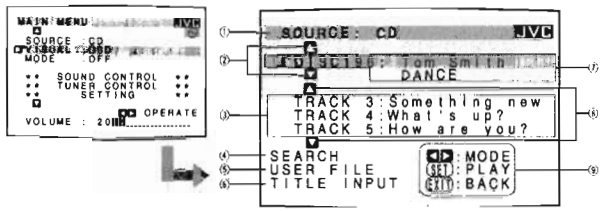
TEXT COMPU LINK Remote Control System

OPERATIONS

To use this remote control system, you need to connect the TV to the MONITOR OUT jack on the rear panel (see page 10), and set the TV's input mode to the proper position to which the receiver is connected. **Make sure you have connected the CD player or MD recorder equipped with the TEXT COMPU LINK remote control system. If not, you cannot use the following functions.**

■ Showing the Disc Information on the TV Screen

1. **Press any button of ON SCREEN CONTROL △ / ▽ / ◁ / ▷ once.**
   The MAIN MENU appears on the TV.
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SOURCE."**
3. **Press ON SCREEN CONTROL ◁ / ▷ to select "CD" or "MD."**
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "VISUAL."**
5. **Press ON SCREEN CONTROL ◁ / ▷ to select "OSD," then press EXIT.**
   The Disc Information screen appears on the TV.



① Source name: CD or MD
② Select ▲ or ▼, then press SET to change the disc.
③ Track numbers and track titles.
- The current playing (selected) track is indicated in yellow.
- When you move ☞ to a track number, you can change the track information by pressing ◁ / ▷. Each time you press the button, track information alternates between its track title and its performer. (You can also start playing the track by pressing SET.)

④ Select this (move ☞ in front), then press SET to go to the DISC SEARCH screen (see page 58).
⑤ Select this (move ☞ in front), then press SET to go to the USER FILE screen (see page 60).
⑥ Select this (move ☞ in front), then press SET to go to the TITLE INPUT screen (see page 61).
⑦ Disc information such as the disc title, performer, and music genre.
When this is selected (☞ in front) , you can change the disc information by pressing ◁ / ▷. Each time you press the button, disc information (see the note) changes.
⑧ Select ▲ or ▼, then press SET to change the track.
⑨ Usable buttons and their functions for the current selection.
Indication here will be changed what is currently selected (☞ in front) on the screen.

6. **When you finish, press EXIT repeatedly until the MAIN MENU appears on the TV.**

To exit from the MAIN MENU:
1) Press ON SCREEN CONTROL △ / ▽ to move ☞ to "VISUAL."
2) Press ON SCREEN CONTROL ◁ / ▷ to select any one other than "OSD," then press EXIT.

Notes:

- *The on-screen display will not appear about one minute after the power is turned on.*
- *The on-screen display will disappear in the following case:*
  – *if no operation is done for about 10 minutes.*
  – *if you do any operation other than explained in this section.*
- *To control the MD recorder using the TEXT COMPU LINK remote control system, you have to change the source name shown on the display from "TAPE" to "MD." (See page 18.)*
- *The number of characters to show the disc information such as the disc title or track title is limited to 32. So if the disc title, for example, is longer than 32 characters, only the first 32 characters are shown.*
- *Some special characters such as accented letters cannot be displayed correctly.*

Note on ⑦

The following information will appear on the display:

- *Disc title*
- *Performer*
- *Genre*
- *Song writer*
- *Composer*
- *Arranger*
- *Message*

Only recorded information will be shown. If there is no data, "NO DATA" will appear.

Note on ⑨

For example, the SET button will be used to start play (PLAY), to go to the next screen (ENTER), and to determine the selection (ENTER).

■ Searching a Disc (Only for the CD player)

Search a disc by its performer:

1. **Display the disc information screen by following the procedure on page 57.**
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEARCH," then press SET.**
   The DISC SEARCH screen appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "PERFORMER", then press SET.**
   The PERFORMER SEARCH screen appears.
4. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ in front of the first character of the performer you want to search, then press SET.**

   To correct the incorrect entry, press ON SCREEN CONTROL △ / ▽ to move ☞ in front of the correct character, then press SET.

   To erase the incorrect entry, press ON SCREEN CONTROL △ / ▽ to move ☞ to CANCEL, then press SET.
5. **Press SET again.**
   Disc search starts, then the SEARCH RESULT screen, showing the performers, appears.
6. **On the SEARCH RESULT screen, you can do the following:**
   - **Changing the indication of the disc information:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its performer and its disc title.
   - **Going to the Disc Information screen (see page 57):** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press SET.
   - **Showing unseen disc information** (if more than 5 discs are listed as a result of the search)**:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to ▼ (or ▲), then press SET.
   - **Going back to the PERFORMER SEARCH screen:** Press EXIT.

Search a disc by its disc title:

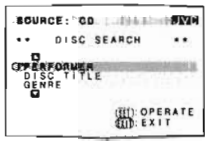
1. **Display the disc information screen by following the procedure on page 57.**
2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEARCH," then press SET.**
   The DISC SEARCH screen appears on the TV.
3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ "DISC TITLE", then press SET.**
   The DISC TITLE SEARCH screen appears.
4. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ in front of the first character of the disc title you want to search, then press SET.**

   To correct the incorrect entry, press ON SCREEN CONTROL △ / ▽ move ☞ in front of the correct character, then press SET.

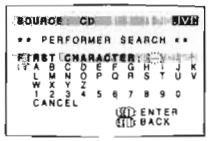
   To erase the incorrect entry, press ON SCREEN CONTROL △ / ▽ move ☞ to CANCEL, then press SET.

Continued to the next page.

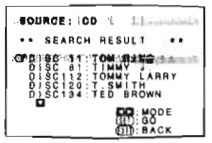
DISC SEARCH screen



PERFORMER SEARCH screen



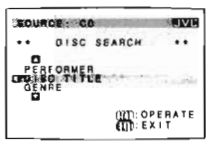
SEARCH RESULT screen



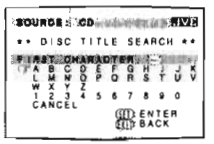
Note

Symbols such as @, # or $ cannot be available for search.

DISC SEARCH screen



DISC TITLE SEARCH screen



5. **Press SET again.**
   Disc search starts, then the SEARCH RESULT screen, showing the disc titles, appears.

6. **On the SEARCH RESULT screen, you can do the following:**
   - **Changing the indication of the disc information:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its disc title and its performer.
   - **Going to the Disc Information screen (see page 57):** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press SET.
   - **Showing unseen disc information** (if more than 5 discs are listed as a result of the search)**:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to ▼ (or ▲), then press SET.
   - **Going back to the DISC TITLE SEARCH screen:** Press EXIT.

Search a disc by its genre:

1. **Display the disc information screen by following the procedure on page 57.**

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "SEARCH," then press SET.**
   The DISC SEARCH screen appears on the TV.

3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "GENRE", then press SET.**
   The GENRE SEARCH screen appears.

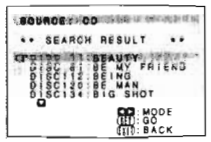
4. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to the genre you want to search, then press SET.**

   To show the unseen genres, press ON SCREEN CONTROL △ / ▽ until they appear.

   Disc search starts, then the SEARCH RESULT screen, showing the disc titles, appears.

5. **On the SEARCH RESULT screen, you can do the following:**
   - **Changing the indication of the disc information:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its disc title and its performer.
   - **Going to the Disc Information screen (see page 57):** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a searched disc, then press SET.
   - **Showing unseen disc information** (if more than 5 discs are listed as a result of the search)**:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to ▼ (or ▲), then press SET.
   - **Going back to the GENRE SEARCH screen:** Press EXIT.

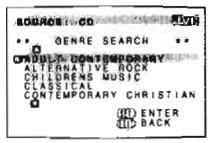
SEARCH RESULT screen



Note

Symbols such as @, # or $ cannot be available for search.

GENRE SEARCH screen



SEARCH RESULT screen

■ Using the User File (Only for the CD Player with the User File Function)

You can use the User File function through this receiver.
For the User File function, refer to the manual supplied with your CD player.

Using your own User Files:

1. **Display the disc information screen by following the procedure on page 57.**

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "USER FILE," then press SET.**
   The USER FILE screen appears on the TV.

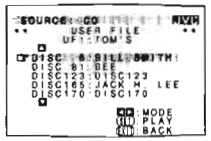
   To show the unseen user files, press ON SCREEN CONTROL △ / ▽ until they appear.

3. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to the User File you want, then press SET.**
   The selected User File screen appears on the TV.
   The disc information shown will be the disc title. (If no disc title information is recorded for the discs, only the disc numbers will be shown.)

4. **On this selected User File screen, you can do the following:**
   - **Changing the indication of the disc information:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a disc, then press ◁ / ▷. Each time you press ◁ / ▷, the disc information alternates between its disc title and its performer.
   - **Starting a disc play:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to a disc, then press SET.
   - **Showing unseen disc information** (if more than 5 discs are listed)**:** Press ON SCREEN CONTROL △ / ▽ to move ☞ to ▼ (or ▲) and press SET.
   - **Going back to the USER FILE screen:** Press EXIT.

USER FILE screen

User File 1 screen



Entering the Disc Information

For the CD Player with the disc memory function:

You can use the disc memory function through this receiver.
The disc information (its performer, disc title, and its music genre) of normal audio CDs will be stored into the memory built in the CD player.
For the disc memory function, refer to the manual supplied with your CD player.

- The performer, disc title, and music genre information are usually recorded in a CD Text. However, if a CD Text has no genre information recorded in the disc itself, you can input its music genre by yourself.
  Note: You can enter the TITLE INPUT screens for a CD Text and input its titles. However, **you cannot store the titles you have input for a CD Text.**

Example: Entering the following information for Disc 1
Performer: "MICHEAL."
Disc title: "MY FAVORITE"

1. **Display the disc information screen by following the procedure on page 57.**

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TITLE INPUT," then press SET.**
   The TITLE INPUT: PERFORMER screen appears on the TV.

3. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ in front of a character you want, then press SET to enter the character.**
   - If the current CD is a CD Text, go to step **5** without entering the performer.

   To use the lower case letters, press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to [SHIFT], then press SET.
   To use the upper case letters again, press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to [SHIFT], then press SET.

4. **Repeat step 3 until you finish putting a name (up to 32 characters) to this User File.**

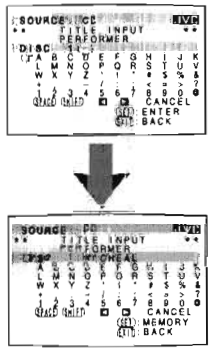
   To insert a space, press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to [SPACE], then press SET.

   To correct an incorrect character:
   1) Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to ◀ or ▶, then press SET until the incorrect character is selected.
   2) Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to CANCEL, then press SET to erase the character.
   3) Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ in front of an correct character, then press SET to enter a correct character.

5. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to "DISC1: MICHEAL (in this example)," then press SET.**
   The TITLE INPUT: DISC TITLE screen appears.

6. **Enter the disc title, referring to steps 3 and 4.**
   - If the current CD is a CD Text, go to the next step without entering the disc title.

TITLE INPUT: PERFORMER screen



TITLE INPUT: DISC TITLE screen

7. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to "DISC1: MY FAVORITE (in this example)," then press SET.**
   The TITLE INPUT: DISC 1 GENRE screen appears.

8. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to the genre you want, then press SET.**
   The Disc Information screen appears again.

   To show the unseen genres, press ON SCREEN CONTROL △ / ▽ until they appear.

For the MD recorder:

You can write the disc information (disc title and song titles) into the disc. You can only write the song title for the song currently selected.

- If you have the CD-MD combination deck, you can also enter the disc information (its performer, disc title, and its music genre) of normal audio CDs into the memory built in the CD-MD combination deck. (To do this, follow the procedure on page 61.)

1. **Display the disc information screen by following the procedure on page 57.**

2. **Press ON SCREEN CONTROL △ / ▽ to move ☞ to "TITLE INPUT," then press SET.**
   The DISC TITLE INPUT screen appears on the TV.

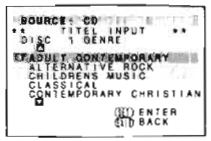
3. **Enter the disc title, referring to steps 3 and 4 on page 61.**
   - You can enter up to 32 character for the disc title.

4. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to the disc title you have just entered, then press SET.**
   The disc title is stored into the memory, and the SONG TITLE INPUT screen for the currently selected song appears.
   - You can enter a song title for the song currently selected (indicated in yellow on the TV screen).

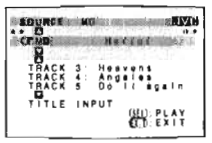
5. **Enter the song title, referring to steps 3 and 4 on page 61.**
   - You can enter up to 32 character for the song title.

6. **Press ON SCREEN CONTROL △ / ▽ / ◁ / ▷ to move ☞ to the song title you have just entered, then press SET.**
   The song title is stored into the memory, and the Disc Information screen appears again.

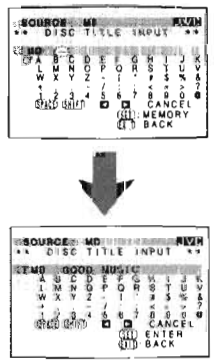
TITLE INPUT: DISC 1 GENRE screen



Disc Information screen



DISC TITLE INPUT screen



Operating JVC's Audio/Video Components

You can operate JVC's audio and video components with this receiver's remote control, since control signals for JVC components are preset in the remote control.

IMPORTANT:

To operate JVC's audio components using this remote control:

- You need to connect JVC audio components through the COMPU LINK-3 (SYNCHRO) jacks (see page 55) in addition to the connections using cables with RCA pin plugs (see page 9) or using digital cables (see page 12).
- Aim the remote control directly at the remote sensor on the receiver.

Tuner

After pressing FM/AM (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations:

FM/AM: Alternates between FM and AM (MW/LW).

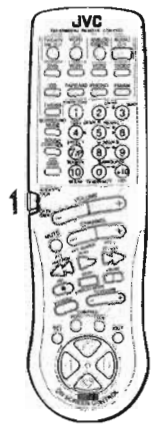
1 – 10, +10: Selects a preset channel number directly. For channel number 5, press 5. For channel number 15, press +10, then 5. For channel number 20, press +10, then 10.

PTY SEARCH: Searches for a program by PTY codes.

PTY +/–: Selects the PTY codes.

DISPLAY MODE: Shows the RDS signals.

FM MODE/MUTE: Changes the FM reception mode.



Sound control section (Amplifier)

You can always perform the following operations (*with the remote control mode selector set to "AUDIO/TV/VCR"*):

SURROUND MODE: Changes the DSP modes.

After pressing SOUND CONTROL (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations:

SEA MODE: Changes the SEA modes.

SUBWOOFER +/–: Adjusts the subwoofer output level.

CNTR +/–: Adjusts the center speaker output level.

REAR•L +/–: Adjusts the left rear speaker output level.

REAR•R +/–: Adjusts the right rear speaker output level.

EFFECT: Selects the effect level.

TEST: Turns on or off the test tone output.

CNTR TONE: Selects the center tone.

CD player

After pressing CD (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on a CD player:

PLAY: Starts playing.

⏮: Returns to the beginning of the current (or previous) track.

⏭: Skips to the beginning of the next track.

STOP: Stops playing.

PAUSE: Pauses playing. To release it, press PLAY.

1 – 10, +10: Selects a track number directly.
For track number 5, press 5. For track number 15, press +10, then 5. For track number 20, press +10, then 10. For track number 30, press +10, +10, then 10.

Notes:

- *If you use the buttons on the front panel or the menu function to choose a source, the remote control will not operate that source. To operate a source with the remote control, the source must be selected using buttons on the remote control.*
- *Check to see if its remote control mode selector is set to the correct position. To operate audio system, TVs, and VCRs, set it to "AUDIO/TV/VCR."*
- *Refer also to the manuals supplied with your components.*

Note:

After adjusting sounds, press the corresponding source selecting button or CD DISC to operate your target source by using 10 keys; otherwise, 10 keys cannot be used for operating your target source.

CD player-changer

After pressing CD DISC (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the CD player-changer:

PLAY: Starts playing.

⏮: Returns to the beginning of the current (or previous) track.

⏭: Skips to the beginning of the next track.

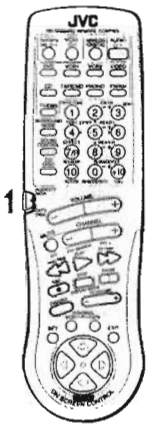
STOP: Stops playing.

PAUSE: Pauses playing. To release it, press the PLAY button.

1 – 6, 7/P: Select the number of a disc installed in a CD player-changer.

After pressing CD (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the CD player-changer:

1 – 10, +10: Selects a track number directly.
For track number 5, press 5. For track number 15, press +10, then 5. For track number 20, press +10, then 10. For track number 30, press +10, +10, then 10.



Turntable

After pressing PHONO (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the turntable:

PLAY: Starts playing.

STOP: Stops playing.

Cassette deck

After pressing TAPE/MD or TAPE CONTROL (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the cassette deck:

PLAY: Starts playing.

REW: Fast winds the tape from right to left.

FF: Fast winds the tape from left to right.

STOP: Stops operations.

PAUSE: Pauses playing or recording temporarily. To release it, press the PLAY button.

REC ●: Press this button with the PLAY button to start recording.
Press this button with the PAUSE button to enter recording pause.

MD recorder

After pressing TAPE/MD or TAPE CONTROL (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the MD recorder:

PLAY: Starts playing.

⏮: Returns to the beginning of the current (or previous) track.

⏭: Skips to the beginning of the next track.

STOP: Stops playing.

PAUSE: Pauses playing. To release it, press the PLAY button.

REC ●: Press this button with the PLAY button to start recording.
Press this button with the PAUSE button to enter recording pause.

Notes:

- *To operate the cassette deck or MD recorder using the COMPU LINK remote control system, set the source name correctly. (See page 18.)*
- *You can use either the TAPE/MD button or the TAPE CONTROL button to activate the buttons listed to the left. If you press TAPE/MD, the playing source also changes. On the other hand, if you press TAPE CONTROL, the playing source does not change.*

Operating JVC's Audio/Video Components

IMPORTANT:

To operate JVC's video components using this remote control:

- Aim the remote control directly at the remote sensor on the VCR, DVD player or TV, not on the receiver.

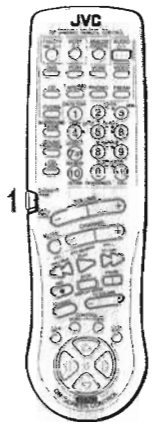
VCR1 (the VCR connected to the VCR1 jacks)

You can always perform the following operations (*with the remote control mode selector set to "AUDIO/TV/VCR"*):

VCR1 ⏻/I : Turns on or off the VCR1.

After pressing VCR1 or VCR1 CONTROL (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the VCR:

PLAY: Starts playing.
REW: Rewinds a tape.
FF: Fast winds a tape.
STOP: Stops operations.
PAUSE: Pauses playing or recording temporarily. To release it, press the PLAY button.
REC ●: Press this button with the PLAY button to start recording.
Press this button with the PAUSE button to enter recording pause.
CHANNEL +/–: Changes the channels on the VCR.
1 – 9, 0: Selects the channels on the VCR.
For channel 5, press 5.
For channel 10, press 1, then 0.



DVD player

After pressing DVD (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on a DVD player:

PLAY: Starts playing.
⏮◀: Returns to the beginning of the current (or previous) track.
▶⏭: Skips to the beginning of the next track.
STOP: Stops playing.
PAUSE: Stops playing temporarily. To release it, press the PLAY button.

Notes:

- *Some JVC VCRs can accept two types of the control signals — code "A" and "B." Before using this remote control, make sure that the remote control code of the VCR1 is set to code "A."*
- *You can use either the VCR1 button or the VCR1 CONTROL button to activate the buttons listed to the left. If you press VCR1, the playing source also changes. On the other hand, if you press VCR1 CONTROL, the playing source does not change.*

After pressing DVD (*with the remote control mode selector set to the "AUDIO/TV/VCR" position*), these buttons can be used for the DVD menu operations.

Note:

For detailed menu operations, refer to the instructions supplied with the discs or the DVD player.

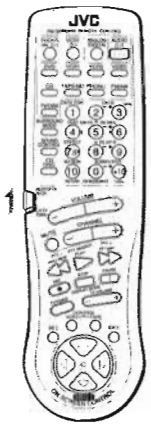
TV

You can always perform the following operations (*with the remote control mode selector set to "AUDIO/TV/VCR"*):

TV/CATV/DBS ⏻/I : Turns on or off the TV.
TV VOLUME +/–: Adjusts the volume.
TV/VIDEO: Sets the input mode (either TV or VIDEO).

After pressing TV/DBS (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on a TV:

CHANNEL +/–: Changes the channels.
1 – 9, 0, 100+: Selects the channels.
RETURN: Alternates between the previously selected channel and the current channel.



Operating Other Manufactures' Components

This remote control supplied with the receiver can transmit control signals for other manufacturers' VCRs, TVs, CATV converters and DBS tuners. By changing the transmittable signals from preset ones to the other manufacturers', you can operate the other manufacturer's components using this remote control.

When operating the other manufacturers' components, refer also to the manuals supplied with them.
To operate these components with the remote control, first you need to set the manufacturer's code each for the VCR, TV, CATV converter, and DBS tuner.

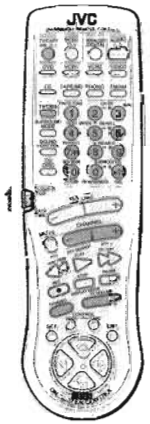
IMPORTANT:

When using the Remote Control, check to see if its remote control mode selector is set to the correct position:
To operate an audio system, TV, and VCR, set it to "AUDIO/TV/VCR."
To operate a CATV converter and DBS tuner, set it to "CATV/DBS."

To change the transmittable signals for operating another manufacturer's TV

1. **Set the remote control mode selector to "AUDIO/TV/VCR."**
2. **Press and hold TV/CATV/DBS ⏻/I.**
3. **Press TV/DBS.**
4. **Enter the manufacturer's code (three digits) using buttons 1 – 9, and 0.**
   See the lists on pages 70 and 71 to find the code.
5. **Release TV/CATV/DBS ⏻/I.**
   The following buttons can be used for operating the TV (*with the remote control mode selector set to "AUDIO/TV/VCR"*):
   TV/CATV/DBS ⏻/I: Turns on and off TV.
   TV VOLUME +/–: Adjusts the volume.
   TV/VIDEO: Sets the input mode (either TV or VIDEO).

   After pressing TV/DBS (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the TV:
   CHANNEL +/–: Changes the channels.
   1 – 10, 0, 100+(+10): Selects the TV channels. 100+(+10) button will function as the ENTER button if your TV requires pressing ENTER after selecting a channel number.
6. **Try to operate your TV by pressing TV/CATV/DBS ⏻/I.**
   When your TV turns on or off, you have entered the correct code.
7. **If there are more than one code listed for your brand of TV, try each one until the correct one is entered.**

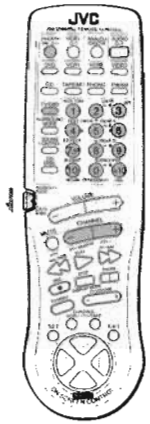


Note:

Refer also to the manual supplied with your TV.

To change the transmittable signals for operating a CATV converter or DBS tuner

1. **Set the remote control mode selector to "CATV/DBS."**
2. **Press and hold TV/CATV/DBS ⏻/I.**
3. **Press TV/DBS.**
4. **Enter the manufacturer's code (three digits) using buttons 1 – 9, and 0.**
   See the lists on page 72 to find the code.
5. **Release TV/CATV/DBS ⏻/I.**
   After setting the remote control mode selector to "CATV/DBS," you can perform the following operations on the CATV converter or on the DBS tuner:
   TV/CATV/DBS ⏻/I: Turns on and off the CATV converter or DBS tuner.
   CHANNEL +/–: Changes the channels.
   1 – 10, 0, 100+(+10): Selects the channels. 100+(+10) button will function as the ENTER button if your CATV converter or DBS tuner requires pressing ENTER after selecting a channel number.
6. **Try to operate your CATV converter or DBS tuner by pressing TV/CATV/DBS ⏻/I.**
   When your CATV converter or DBS tuner turns on or off, you have entered the correct code.
7. **If there are more than one code listed for your brand of CATV converter or DBS tuner, try each one until the correct one is entered.**



Note:

Refer also to the manual supplied with your CATV converter or DBS tuner.

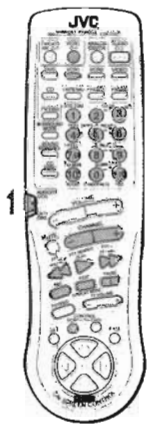
English

Operating Other Manufactures' Components

To change the transmittable signals for operating another manufacturer's VCR

1. **Set the remote control mode selector to "AUDIO/TV/VCR."**
2. **Press and hold VCR1 ⏻/I.**
3. **Press VCR1.**
4. **Enter the manufacturer's code (three digits) using buttons 1 – 9, and 0.**
   See the lists on pages 72 and 73 to find the code.
5. **Release VCR1 ⏻/I.**
   The following buttons can be used for operating the VCR (*with the remote control mode selector set to "AUDIO/TV/VCR"*):
   VCR1 ⏻/I: Turns on and off VCR.

   After pressing VCR1 or VCR1 CONTROL (*with the remote control mode selector set to "AUDIO/TV/VCR"*), you can perform the following operations on the VCR:
   CHANNEL +/–: Changes the channels on the VCR.
   1 – 10, 0, 100+(+10): Selects the channels on the VCR. 100+(+10) button will function as the ENTER button if your VCR requires pressing ENTER after selecting a channel number.
   PLAY: Starts playback.
   STOP: Stops operations.
   PAUSE: Pauses.
   REW: Rewinds a tape.
   FF: Fast winds a tape.
   REC ●: Starts recording or enters recording pause.
6. **Try to operate your VCR by pressing VCR1 ⏻/I.**
   When your VCR turns on or off, you have entered the correct code.
7. **If there are more than one code listed for your brand of VCR, try each one until the correct one is entered.**



Notes:

- *You can use either the VCR1 button or the VCR1 CONTROL button to activate the buttons listed to the left. If you press VCR1, the playing source also changes. On the other hand, if you press VCR1 CONTROL, the playing source does not change.*
- *Refer also to the manual supplied with your VCR.*

Manufacturers' codes for TV

Acura	009
Admiral	087, 163
Adyson	217
Akai	208
Akura	218
Alba	009, 036, 037, 211, 218, 235
Amplivision	217
Amstrad	009, 171, 177, 354, 362
Anitech	009
Arcam	217
ASA	087
Asuka	218
Audiosonic	037
Autovox	087
Bang & Olufsen	087
Basic Line	009, 218
Baur	010, 037, 512
Beon	037
Binatone	217
Blaupunkt	195
Blue Sky	218
Blue Star	282
Bondstec	247
Boots	217
BPL	282
Brandt	335
Brionvega	087
Bruns	087
BTC	218
Bush	009, 036, 037, 211, 218, 282, 355, 519
Carrefour	036
Cascade	009
Cathay	037
Centurion	037
Century	087
CGE	247
Cimline	009
Clarivox	037
Clatronic	247
Contec	009, 036
Crosley	087
Crown	009, 037
CTC	247
Cybertron	218
Daewoo	009, 037
Dainichi	218
Dansai	037
Dayton	009
De Graaf	208, 227
Decca	037, 072, 249
Dixi	009, 037
Dual	519
Dual Tec	217
Dumont	070, 087
Elin	037
Elite	218
Elta	009
Emerson	087
Erres	037
Ferguson	005, 037, 073, 190, 335
Fidelity	372
Finlandia	208, 346
Finlux	037, 070, 072, 087, 179, 346
Firstline	009, 217, 247, 321
Fisher	208, 217
Formenti	037, 087
Frontech	163, 247, 448
Fujitsu	072
Funai	179
GEC	037, 043, 072, 217
Geloso	009
Genexxa	163, 218
Goldstar	037, 217, 290
Goodmans	036, 037, 072, 179, 217, 235, 257, 317
GPM	218
Graetz	163
Granada	037, 072, 146, 201, 208, 217, 339
Grandin	282
Grundig	070, 195
Hanseatic	037
Harwood	257
HCM	009, 282
Hinari	009, 036, 037, 179, 218
Hisawa	282
Hitachi	032, 036, 043, 044, 163, 217, 225, 227
Hypson	037, 282
ICE	217
ICeS	218
ITT	163
Imperial	247
Indiana	037
Ingelen	163
Inno Hit	072
Interfunk	037, 163, 247, 512
Intervision	037, 217
Isukai	218
JVC	036, 053, 190, 192
Kaisui	009, 217, 218, 282
Kapsch	163
Kendo	037, 235, 362
Korpel	037
Korting	087
Koyoda	009
Leyco	037, 072
Liesenk & Tter	037
Lloytron	032
Loewe	087, 512
M Electronic	009, 037, 163, 217, 346
Magnadyne	087, 247
Manesth	217, 235
Marantz	037
Marelli	087

English

Mark	037
Matsui	009, 011, 035, 036, 037, 072, 177, 208, 211, 217, 235, 354, 355, 443
McMichael	043
Mediator	037
Memorex	009
Metz	087
Minerva	070
Mitsubishi	036, 087, 108, 201, 354, 512
Mivar	290
MTC	512
Multitech	009
Neckermann	037, 087
NEI	037
Nesco	179
Nikkai	032, 035, 037, 072, 218
Oceanic	163
Orion	037, 177, 235, 321, 355
Osaki	032, 072, 217, 218, 257
Oso	218
Osume	032, 072, 157
Otake	317
Otto Versand	010, 036, 037, 217, 512
Panama	217
Panasonic	100, 163, 214, 250, 340
Pausa	009
Phase	032
Philco	087, 247
Philips	037, 043, 087
Phoenix	087
Phonola	037, 087
Pioneer	163
Profex	009
Proline	321
Protech	009, 037, 217, 247
Quelle	010, 011, 037, 070, 512
Questa	036
R-Line	037
Radiola	037
Radiomarelli	087
Rank Arena	036
RBM	070, 089
Rediffusion	201
Revox	037
Rex	163
RFT	087
Roadstar	009, 218
SBR	037, 043
SEG	036, 217
SEI	087, 177
Saba	087, 163, 335
Saikou	257
Saisho	009, 011, 177, 211, 235, 354
Salora	163
Samsung	009, 037, 217, 290
Sanyo	011, 036, 072, 146, 157, 208, 339
Schneider	037, 218, 247
Sei-Sinudyne	010
Seleco	163, 362
Sentra	035
Sharp	036, 093
Siarem	087
Siemens	037, 157, 195
Silver	036
Singer	087
Sinudyne	087, 177, 235
Solavox	032, 163
Sonitron	208
Sonoko	009, 037
Sonolor	163, 208
Sontec	037
Sony	010, 011, 036
Soundwave	037
Standard	009, 217, 218
Stern	163
Sunkai	321, 355
Susumu	218
Sysline	037
Tandy	072, 163, 217, 218
Tashiko	036, 043, 217
Tatung	037, 072, 217, 249
Tec	217, 247
Technics	250
Technol Ace	179
Telefunken	005, 262, 335
Teletech	009
Teleton	217
Tensai	218, 317
Texet	218
Thorn	035, 037, 072, 190, 192, 512
Tomashi	282
Toshiba	035, 036, 070, 089
Triumph	177
Ultra	192
Universum	037, 346
Vestel	037
Videosat	247
Videotechnic	217
Voxson	087, 163
Waltham	217
Watson	037
Wega	036, 087
White Westinghouse	037
Yoko	037, 217

Manufacturers' codes for CATV converters

British Telecom	105
France Telecom	451
Jerrold	003, 276
PVP Stereo Visual Matrix	003
Scientific Atlanta	008, 277
United Cable	003
Westminster	105

Manufacturers' codes for DBS tuner

Akai	515
Alba	515
Amstrad	345
Astra	108
BT	515
Bush	522
Cambridge	515
Cyrus	200
DNT	200
Finlux	108
Gooding	571
Grundig	328, 571, 750
Hirschmann	573
ITT	108
JVC	515, 571
Kathrein	200
Luxor	108, 573
Marantz	200
Maspro	328, 750
Matsui	571
Minerva	571
Nokia	108, 328, 573
Orion	522
Pace	328, 795
Palladium	571
Philips	200, 328, 571, 750
RFT	200
Radiola	200
Salora	108
Satec	328
Universum	571
Ventana	200

Manufacturers' codes for VCR

Aiwa	000
Akai	106
Alba	209, 278
Amstrad	000, 278
ASA	037, 081
Asuka	037
Baird	000, 104
Basic Line	278
Blaupunkt	034, 226
Brandt	320
Bush	209, 278
CGE	000
Crown	278
Daewoo	278
De Graaf	042, 166
Decca	000, 081
Dumont	000, 081, 104
ESC	278
Ferguson	320
Fidelity	000
Finlandia	081, 104
Finlux	000, 042, 081, 104
Firstline	037, 043, 045, 209
Fisher	104
Funai	000
GEC	081
GoldStar	037
Goodmans	000, 037, 278
Graetz	104
Granada	081, 104
Grandin	000, 037
Grundig	034, 081, 226
Hanseatic	037
Hitachi	000, 042, 166
ITT	104, 106
ITV	037, 278
Imperial	000
Interfunk	081
JVC	067
Kendo	106, 209
Lenco	278
Loewe	037, 081
Luxor	043, 048, 104, 106
M Electronic	000
Manesth	045
Marantz	081
Matsui	209
Memorex	000, 037, 104
Mitsubishi	043, 067, 081
Multitech	000
Murphy	000
NEC	067
Nechermann	081
Nokia	048, 104, 106
Nordmende	320
Oceanic	000

Orion	209
Osaki	000, 037
Otto Versand	081
Palladium	037
Panasonic	226
Pentax	042
Perdio	000
Philips	081
Phonola	081
Pioneer	067, 081
Proline	000
Pye	081
Quelle	081
Radiola	081
Roadstar	037, 278
SBR	081
SEI	081
Saba	320
Salsho	209
Salora	043, 106
Sansui	067
Sanyo	104
Schaub Lorenz	000, 104
Schneider	000, 081
Sharp	048
Shintom	104
Siemens	037, 081, 104
Silva	037
Singer	045
Sinudyne	081
Sontec	037
Sony	032, 033, 034
Sunstar	000
Suntronic	000
Tashiko	000
Tatung	000, 081
Technics	226
Telefunken	320
Tensai	000
Thomson	320
Thorn	104
Toshiba	043, 045, 081
Universum	000, 037, 081, 106

Manufacturers' codes listed on page 70 to 73 are subject to change without notice. If they are changed, this remote control cannot operate the equipment.

Troubleshooting

Use this chart to help you solve daily operational problems. If there is any problem you cannot solve, contact your JVC service center.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The display does not light up.	The power cord is not plugged in or the ⏻ POWER switch pressed to set it in the ■OFF position.	Plug the power cord into an AC outlet and/or press ⏻ POWER to set it in the ▬ON position.
No sound from speakers.	Speaker signal cables are not connected.	Check speaker wiring and reconnect if necessary.
	The SPEAKERS 1 and 2 buttons are not set correctly.	Press SPEAKERS 1 and 2 correctly.
	An incorrect source is selected.	Select the correct source.
	Muting is activated.	Press MUTE to cancel the mute.
Sound from one speaker only.	Speaker signal cables are not connected properly.	Check speaker wiring and reconnect if necessary.
	The balance is set to one extreme.	Adjust the balance properly (see page 19).
Continuous hiss or buzzing during FM reception.	Incoming signal is too weak.	Connect an outside FM antenna or contact your dealer.
	The station is too far away.	Select a new station.
	An incorrect antenna is used.	Check with your dealer to be sure you have the correct antenna.
	Antennas are not connected properly.	Check connections.
Occasional cracking noise during FM reception.	Ignition noise from automobiles.	Move the antenna farther from automobile traffic.
No colors on the on-screen display.	The color system of the connected TV is not PAL.	Connect a PAL TV.
Howling during record playing.	Your turntable is too close to speakers.	Move speakers away from the turntable.
"OVERLOAD" starts flashing on the display.	Speakers are overloaded because of high volume.	Rotate the MASTER VOLUME control counterclockwise three or four times then press STANDBY/ON ⏻/I on the front panel. If "OVERLOAD" does not disappear, unplug the AC power cord, then plug it back again.
	Speakers are overloaded because of short circuit of speaker terminals.	Press STANDBY/ON ⏻/I on the front panel then check the speaker wiring. If "OVERLOAD" does not disappear, unplug the AC power cord, then plug it back again. If speaker wiring is not short-circuited, contact your dealer.
Remote control does not work.	The remote control mode selector is not set correctly.	Set the selector correctly either to "AUDIO/TV/VCR" or to "CATV/DBS."
	There is an obstruction in front of the remote sensor on the receiver.	Remove the obstruction.
	Batteries are weak.	Replace batteries.

Specifications

Amplifier

Output Power
- At Stereo operation
  - Front channels: 100 watts per channel, min. RMS, driven into 4 ohms at 1 kHz, with no more than 0.7 % total harmonic distortion. (IEC268-3/DIN)
  - 50 watts per channel, min. RMS, driven into 8 ohms at 1 kHz, with no more than 0.7 % total harmonic distortion. (IEC268-3/DIN)
- At Surround operation
  - Front channels: 70 watts per channel, min. RMS, driven into 4 ohms at 1 kHz, with no more than 0.8 % total harmonic distortion.
  - Center channel: 70 watts, min. RMS, driven into 4 ohms at 1 kHz, with no more than 0.8 % total harmonic distortion.
  - Rear channels: 70 watts per channel, min. RMS, driven into 4 ohms at 1 kHz, with no more than 0.8 % total harmonic distortion.

Total Harmonic Distortion (8 ohms, 1 kHz): 0.02 %* at 50 watts output (* Measured by JVC Audio Analysis System)

Audio Input Sensitivity/Impedance (1 kHz)
- PHONO (MM): 2.5 mV/47 k ohms
- CD, TAPE/MD, TV SOUND/DBS, VCR1, VCR2, VIDEO, DVD: 200 mV/47 k ohms

Audio Input (DIGITAL IN)
- Coaxial: DIGITAL 1 (DBS): 0.5 Vp-p/75 ohms
- Optical: DIGITAL 2 (DVD), DIGITAL 3 (CD): –21 dBm to –15 dBm (660 nm ±30 nm)

Audio Output Level
- TAPE/MD, VCR1, VCR2: 200 mV

Signal-to-Noise Ratio ('66 IHF/DIN)
- PHONO: 70 dB/66 dB
- CD, TAPE/MD, TV SOUND/DBS, VCR1, VCR2, VIDEO, DVD: 87 dB/67 dB

Frequency Response (8 ohms)
- PHONO: 20 Hz to 20 kHz (±1 dB)
- CD, TAPE/MD, TV SOUND/DBS, VCR1, VCR2, VIDEO, DVD: 20 Hz to 20 kHz (±1 dB)

RIAA Phono Equalization: ±0.5 dB (20 Hz to 20 kHz)

Loudness Control (Volume Control at –30 dB)
- +6 ±1 dB at 100 Hz
- +4 ±1 dB at 10 kHz

S.E.A.
- Center Frequencies: 100 Hz, 1 kHz, 10 kHz
- Control Range: ±10 dB ±2 dB

Video

Video Input Sensitivity/Impedance
- Composite video: TV SOUND/DBS, VCR1, VCR2, VIDEO, DVD: 1 Vp-p/75 ohms
- S-video: TV SOUND/DBS, VCR1, VIDEO, DVD
  - (Y: luminance): 1 Vp-p/75 ohms
  - (C: chrominance, burst): 0.286 Vp-p/75 ohms

Video Output Level
- Composite video: VCR1, VCR2, MONITOR OUT: 1 Vp-p/75 ohms
- S-video: VCR1, MONITOR OUT: 1 Vp-p/75 ohms
  - (Y: luminance): 1 Vp-p/75 ohms
  - (C: chrominance, burst): 0.286 Vp-p/75 ohms

Synchronization: Negative

Signal-to-Noise Ratio: 45 dB

On-Screen Color System: PAL

FM tuner (IHF)

Tuning Range: 87.5 MHz to 108.0 MHz

Usable Sensitivity
- Monaural: 12.7 dBf (1.2 µV/75 ohms)

50 dB Quieting Sensitivity
- Monaural: 16.3 dBf (1.8 µV/75 ohms)
- Stereo: 38.3 dBf (22.5 µV/75 ohms)

Signal-to-Noise Ratio (IHF-A weighted)
- Monaural: 80 dB at 85 dBf
- Stereo: 73 dB at 85 dBf

Total Harmonic Distortion
- Monaural: 0.15 % at 1 kHz
- Stereo: 0.2 % at 1 kHz

Stereo Separation at REC OUT: 40 dB at 1 kHz

Capture Ratio: 1.5 dB at 85 dBf

Alternate Channel Selectivity: 60 dB: (±400 kHz)

Frequency Response: 30 Hz to 15 kHz: (+0.5 dB, –3 dB)

AM (MW/LW) tuner

Tuning Range: 522 kHz to 1,629 kHz (MW); 144 kHz to 288 kHz (LW)

Usable Sensitivity
- Loop antenna: 300 µV/m (MW); 600 µV/m (LW)

Signal-to-Noise Ratio: 50 dB (100 mV/m)

General

Power Requirements: AC 230V~, 50 Hz

Power Consumption: 280 watts; 2 watts (in standby mode)

Dimensions (W x H x D): 435 x 157 x 412.5 mm (17 3/16 x 6 3/16 x 16 1/4 inches)

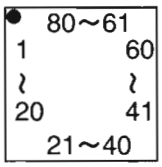
Mass: 11.3 kg (25.0 lbs)

Designs & specifications are subject to change without notice.

Description of Major ICs

■ MN101C15FAF (IC401) : System Control Micon

1. Terminal Layout

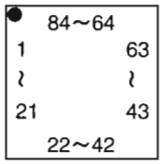


2. Pin Function

Pin No	Symbol	Functions	Pin No	Symbol	Functions
1	GND	Ground	41	VIDEO3	VIDEO 3 signal terminal
2	DVD-S/C	DVD S/C signal select terminal	42	VIDEO4	VIDEO 4 signal terminal
3	VCR1-S/C	VCR1 S/C signal select terminal	43	S.MUTE	Source mute control terminal
4	VIDEO-S/C	VIDEO S/C signal select terminal	44	———	———
5	TV-S/C	TV S/C select terminal	45	DSP-COMPLETE	DSP control signal terminal
6	4/8-IN	4 ohm / 8 ohm select signal terminal	46	DSP-REQ	DSP control signal terminal
7	TV SOUND	TV Auto power on	47	———	———
8	GND	Ground	48	———	———
9	PROTECT	Protect	49	INH-IN	Inhibit signal input terminal
10	GND	Ground	50	DSP-SYS-REQ	DSP control signal terminal
11	VDD	Power supply	51	DSP-RESET	DSP reset signal terminal
12	OSC2	Oscillation terminal	52	M/CS	Control signal from IC400
13	OSC1	Oscillation terminal	53	M-RESET	Reset signal from IC400
14	Vss	Ground	54	STATUS	Status signal from IC400
15	XI	Ground	55	COMMAND	Command signal from IC400
16	XO	Ground	56	MCLK	Clock signal from IC400
17	GND	Ground	57	SEA-CLK	SEA clock signal from terminal
18	———	Text signal input terminal	58	SEA-DATA	SEA data signal terminal
19	———	Text signal output terminal	59	VL/VH	Connect to power supply board
20	MASTER	Master signal terminal	60	4/8 OUT	4 ohm / 8 ohm select signal terminal
21	DSP-COMMAND	DSP control signal terminal	61	GND	Ground
22	DSP-STATUS	DSP control signal terminal	62	GND	Ground
23	DSP-CK	DSP control signal terminal	63	VOL-STB	Volume strobo signal terminal
24	GND	Ground	64	VOL-DATA	Volume data signal terminal
25	RESET-IN	Reset signal input terminal	65	VOL-CLK	Volume clock signal terminal
26	TUNER-CE	Tuner chip enable	66	SW-STB	Switch strobo signal terminal
27	TUNER-CLK	Tuner clock signal terminal	67	OTO-LED	OTO LED signal terminal
28	TUNER-STATUS	Tuner control signal terminal	68	D.DIGITAL	Dolby LED (Digital)
29	TUNER-COMMAND	Tuner control signal terminal	69	FR-RELAY1	Relay 1 signal terminal
30	TUNER-MUTE	Tuner mute signal terminal	70	FR-RELAY2	Relay 2 signal terminal
31	TUNER-IN	Tuner signal input terminal	71	CNTR-RELAY	Center speaker relay terminal
32	STEREO-IN	Stereo signal input terminal	72	SUR-RELAY	Surround speaker relay terminal
33	———	———	73	HP-RELAY	Head Phone relay terminal
34	M-BUSY	Busy signal from IC400	74	DOLBY	Dolby LED (PROLOGIC)
35	———	———	75	C.TONE3	Center tone 3 signal terminal
36	OSD-DATA	OSD data signal input terminal	76	C.TONE2	Center tone 2 signal terminal
37	OSD-STB	OSD standby signal terminal	77	C.TONE1	Center tone 1 signal terminal
38	OSD-CLK	OSD clock signal terminal	78	LED-LCK	LED latch clock signal terminal
39	VIDEO1	VIDEO 1 signal terminal	79	LED-DATA	LED data signal terminal
40	VIDEO2	VIDEO 2 signal terminal	80	LED-CLK	LED clock signal terminal

■ MN172412JABZ (IC400) : FL Tube Drive Control Micon

1. Terminal Layout

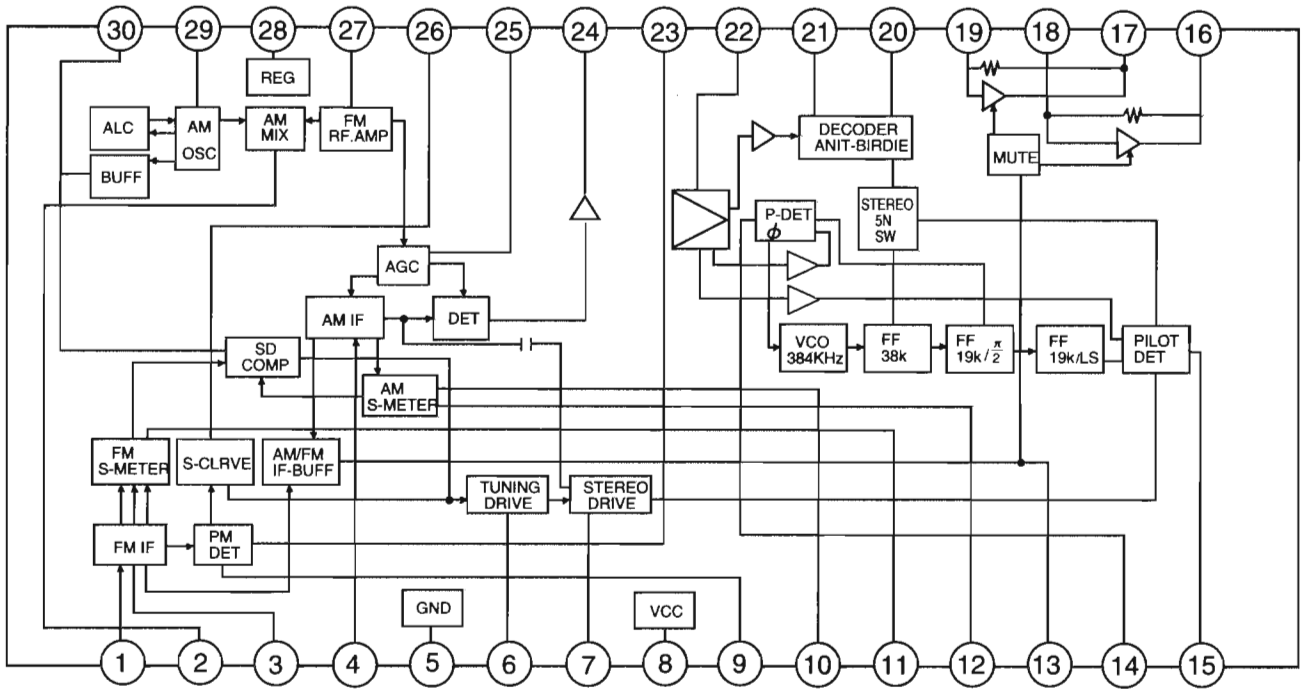


2. Pin Function

Pin No	Symbol	Functions	Pin No	Symbol	Functions
1	S22	Segment controlsignal output	43	JOG4	Connect to volume
2	S21	Segment controlsignal output	44	MBUSY	Busy signal to IC401
3	S20	Segment controlsignal output	45	MCLK	Clock signal to IC401
4	S19	Segment controlsignal output	46	COMMAND	Command signal to IC401
5	S18	Segment controlsignal output	47	STATUS	Status signal fot IC 401
6	S17	Segment controlsignal output	48	M/CS	Control signal to IC401
7	S16	Segment controlsignal output	49	RM	Remocon signal terminal
8	S15	Segment controlsignal output	50	VCRI	Compulink signal input
9	S14	Segment controlsignal output	51	DCSI	Compulink signal input
10	S13	Segment controlsignal output	52	DCSO	Compulink signal output
11	S12	Segment controlsignal output	53	VCRO	Compulink signal output
12	S11	Segment controlsignal output	54	TVO	Compulink output
13	S10	Segment controlsignal output	55	TVC	Compulink control output
14	S9	Segment controlsignal output	56	JOG5	Connect to mullti jog
15	S8	Segment controlsignal output	57	JOG6	Connect to mullti jog
16	S7	Segment controlsignal output	58	POWER	From power supply
17	S6	Segment controlsignal output	59	STANDBY	Standby signal terminal
18	S5	Segment controlsignal output	60	KI3	Key matrix input
19	S4	Segment controlsignal output	61	KI2	Key matrix input
20	S3	Segment controlsignal output	62	KI1	Key matrix input
21	S2	Segment controlsignal output	63	KI0	Key matrix input
22	S1	Segment controlsignal output	64	S36	Segment controlsignal output
23	VPP	Powe supply fot FL display	65	S35	Segment controlsignal output
24	G14	Grid control signal output	66	S34	Segment controlsignal output
25	G13	Grid controlsignal output	67	S33	Segment controlsignal output
26	G12	Grid controlsignal output	68	RST	Reset signal input
27	G11	Grid controlsignal output	69	X1	Connect to ground
28	G10	Grid controlsignal output	70	X2	No use
29	G9	Grid controlsignal output	71	VSS	Connect to ground
30	G8	Grid controlsignal output	72	OSC2	Oscillation terminal
31	G7	Grid controlsignal output	73	OSC1	Osillation terminal
32	G6	Grid controlsignal output	74	VDD	Power supply
33	G5	Grid controlsignal output	75	S32	Segment controlsignal output
34	G4	Grid controlsignal output	76	S31	Segment controlsignal output
35	G3	Grid controlsignal output	77	S30	Segment controlsignal output
36	G2	Grid controlsignal output	78	S29	Segment controlsignal output
37	————	Connect to Q408	79	S28	Segment controlsignal output
38	————	Connect to Q407	80	S27	Segment controlsignal output
39	G1	Grid controlsignal output	81	S26	Segment controlsignal output
40	JOG1	Connect to source selector	82	S25	Segment controlsignal output
41	JOG2	Connect to source selector	83	S24	Segment controlsignal output
42	JOG3	Connect to volume	84	S23	Segment controlsignal output

■ LA1837(IC102): FM AM IF AMP&detector, FM MPX Decorder

1. Block Diagram

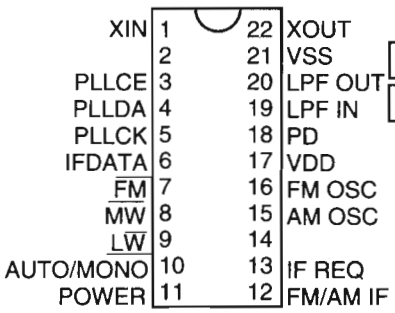


3. Pin Function

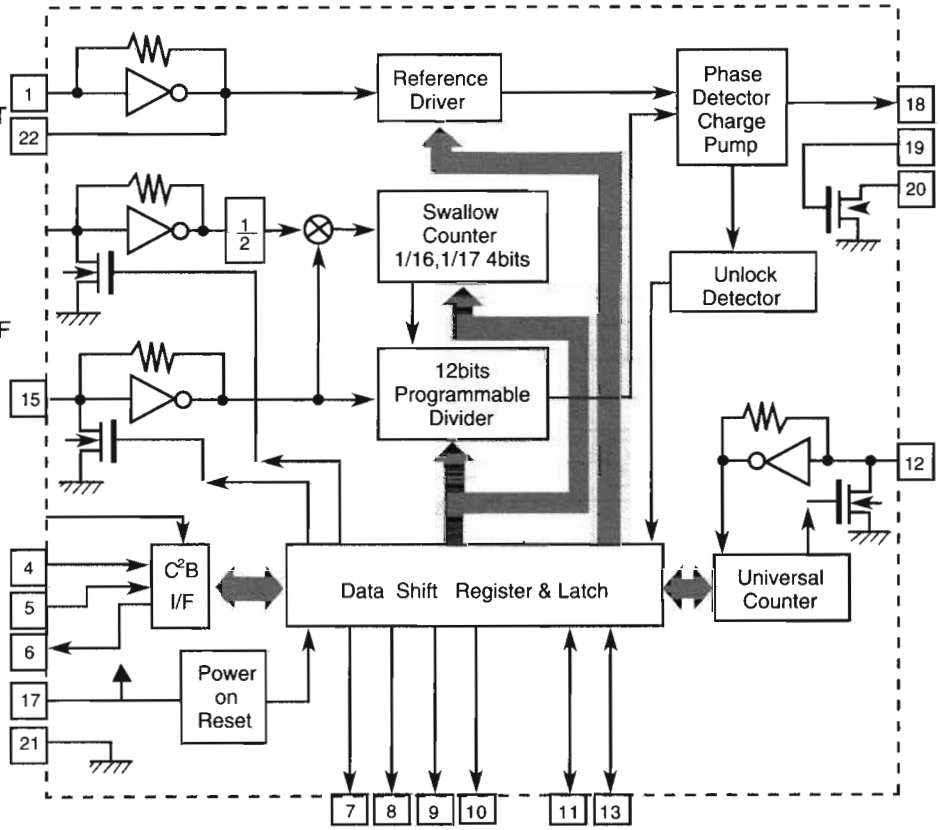
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the Left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the Right channel post AMP.
5	GND	—	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	TUNED	O	When the set is tunning,this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	STEREO	O	Stereo indicator output. Stereo "L", Mono: "H"	22	IF IN	I	Mpx input terminal
8	VCC	—	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	—	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	—	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	—	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 desides the frequency width of the input signal.
14	FM/AM	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
15	MONO/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LC72131(IC121):PLL Synthesizer

1. Terminal Layout



2. Block Diagram

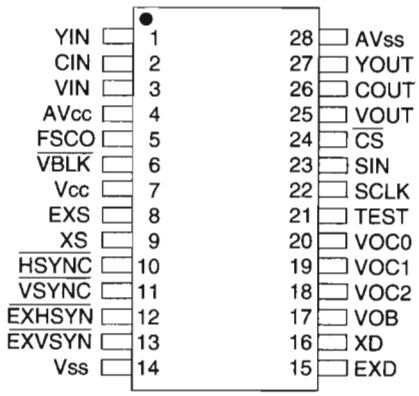


3.Pin Functions

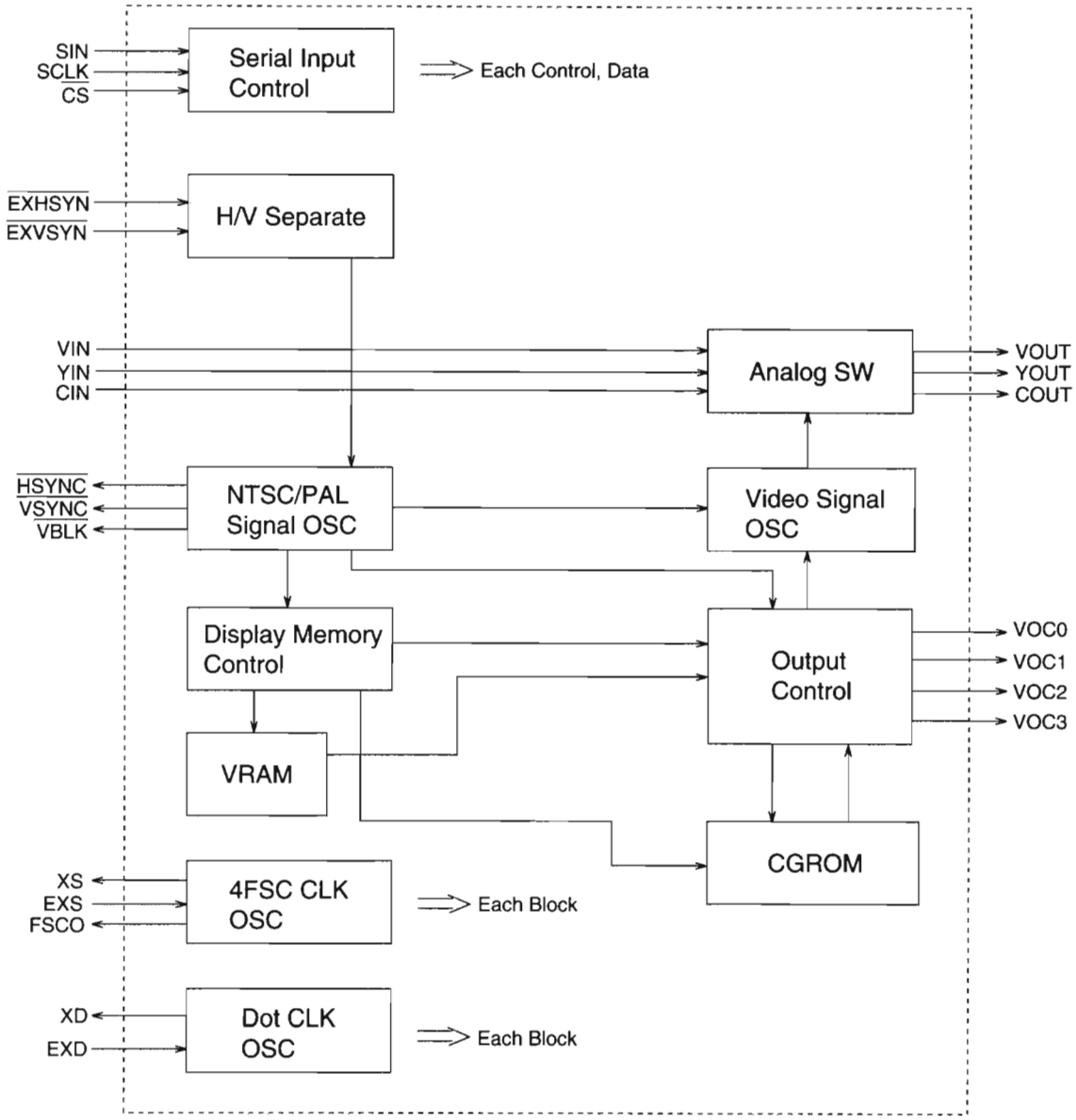
Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	Xin	I	Crystal oscillator (7.2MHz).	12	FM/AM IF	I	Universal counter input
2		--	Not nse	13	IF REQ	O	Output the "IF-signal request" to IC102
3	PLLCE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data	14		I	Not use
4	PLLDA	I	Receive the control data from the controller (IC801).	15	AMOSC		Input the local oscillator signal of AM.
5	PLLCK	I	This clock is used to synchronize data when transmitting the data of DI and DO.	16	FM OSC	I	Input the local oscillator signal of FM.
6	IFDATA	O	Transmit the data from LC72131 to the controller which is synchronized with CK.	17	VDD	O	This is a terminal of power supply.
7	$\overline{FM}$	O	It is "L" on FM mode.	18	PD	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output.When it is same as reference frequency signals, it will be floating.
8	$\overline{MW}$	O	It is "L" on MW mode.	19	LPF IN	I	Transistor used for the PLL active low-pass filterr
9	$\overline{LW}$	O	It is "L" on LW mode.	20	LPF OUT	O	Transistor used for the PLL active low-pass filterr
10	AUTO/$\overline{MONO}$	O	It is "L" on monaural, "L" on auto	21	VSS	--	Connected toGND
11	POWER	O	Regulator control signal P ON "H" , STANDBY "L"	22	X out	O	Crystal oscillator(7.2MHz).

■ MB90089 (IC203) : On Screen Display Controller

1.Terminal Layout



2.Block Diagram



3.Functions

pin no	Symbol	I/O	Function
1	YIN	I	Lux signal Input termianl for Superinpause indocation
2	CIN	I	Contrast signal input terminal for Superinpause indication
3	VIN	I	Composit video signal input terminal for Superinpause indication
4	AVcc	-	Analog power supply terminal
5	FSCO	O	Internal collar barst phase indication signal
6	$\overline{VBLK}$	O	Verticak blanking signal output terminal
7	Vcc	-	Power supply terminal
8	EXS	I	Clock generater outside circuit terminal for collar barst
9	XS	O	
10	$\overline{HSYNC}$	O	Horizontal signal output terminal
11	$\overline{VSYNC}$	O	Vertical signal output terminal
12	$\overline{EXHSYN}$	I	EXT horizontal signal input terminal
13	$\overline{EXVSYN}$	I	EXT vertical signal input terminal
14	Vss	-	GND
15	EXD	I	Dot clock generater outside circuit signal terminal for indication
16	XD	O	
17	VOB	O	Character & background signal output terminal
18	VOC2	O	Collar signal output terminal
19	VOC1		
20	VOC0		
21	$\overline{TEST}$	I	Test signal input terminal
22	SCLK	I	Shift clock input terminal for serial transmission
23	SIN	I	Serial data input terminal
24	$\overline{CS}$	I	Tip select terminal
25	VOUT	O	Composit video signal output terminal
26	COUT	O	Contrast signal output terminal
27	YOUT	O	Lux signal output terminal
28	AVss	-	Anarog GND terminal

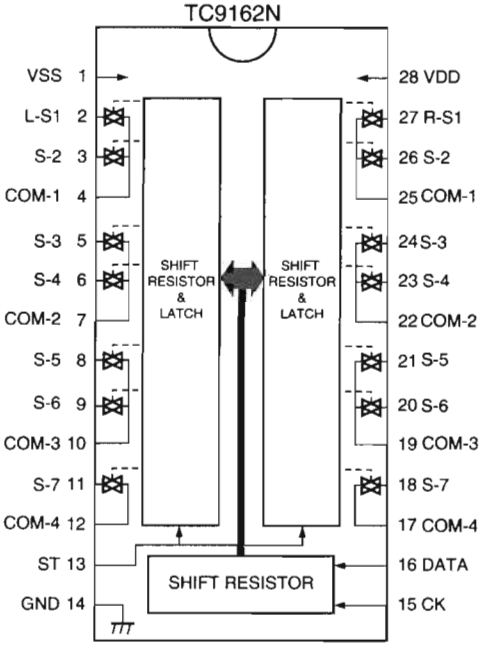
■ TC9162AN (IC321), TC9163AN (IC311), TC9164AN (IC304): Analog Switch

1.Function

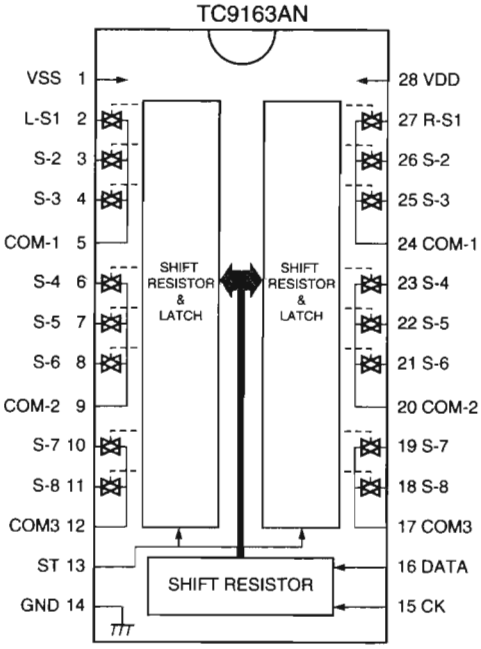
Switch to On/Off of S1 to S8 by control of LSI.

2.Terminal Lay out & Block Diagram

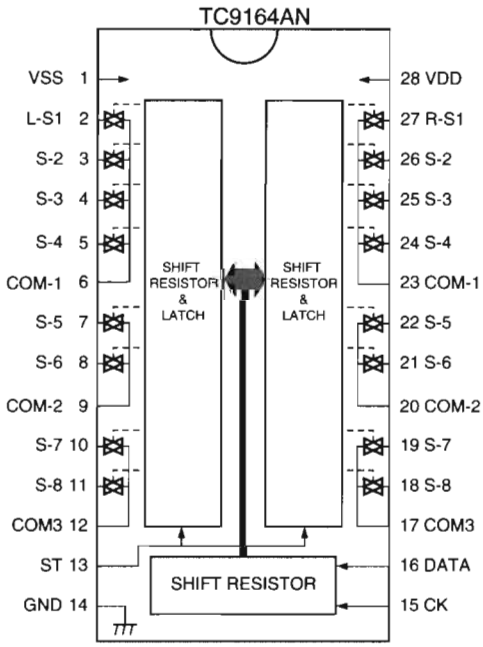
TC9162N



TC9163AN



TC9164AN



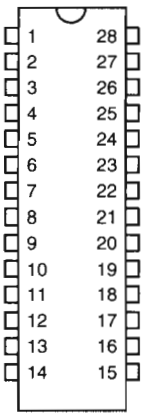
3.Corespondance of Switch & Data

S1～S8 are "1" position to ON by bit1～8 of Serial Data.
S9 is Right,S10 is Left Switch to ON/OFF. TC9162,TC9163 and TC9164 are select by bit11～14.

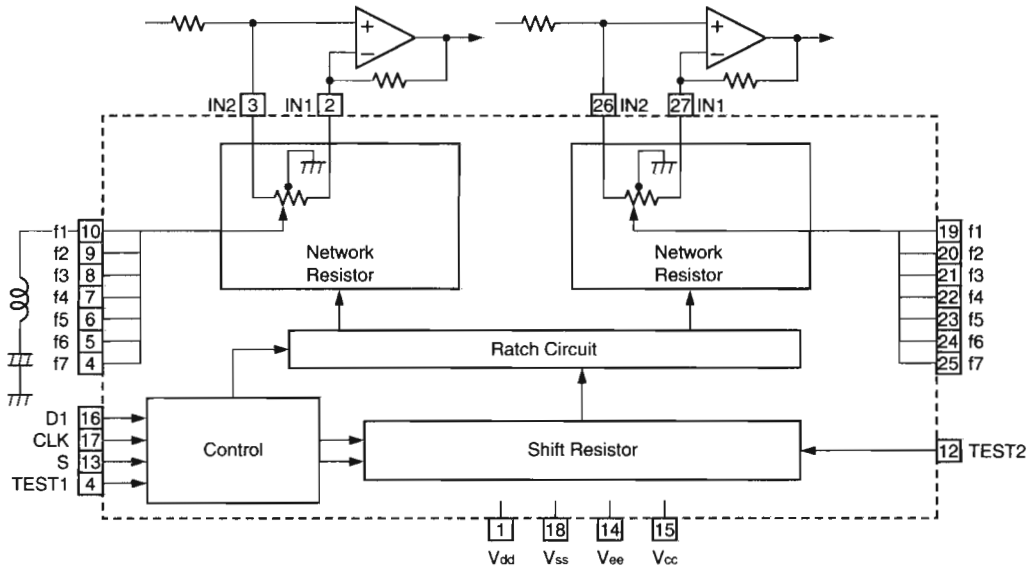
	Switch Select bit								Right	Left	Switch Select bit			
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
TC9162N	S1～S8 are "0" position to ON by bit1～8 of Serial Data.										0	0	0	0
TC9163N	S1～S8 are "1" position to ON by bit1～8 of Serial Data.										1	0	0	0
TC9164N	S1～S8 are "1" position to ON by bit1～8 of Serial Data.										0	1	0	0

■ LC7522(IC451) : SEA Control

1.Terminal



2.Block Diagram

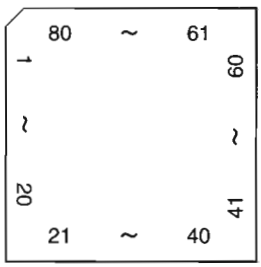


3.Function

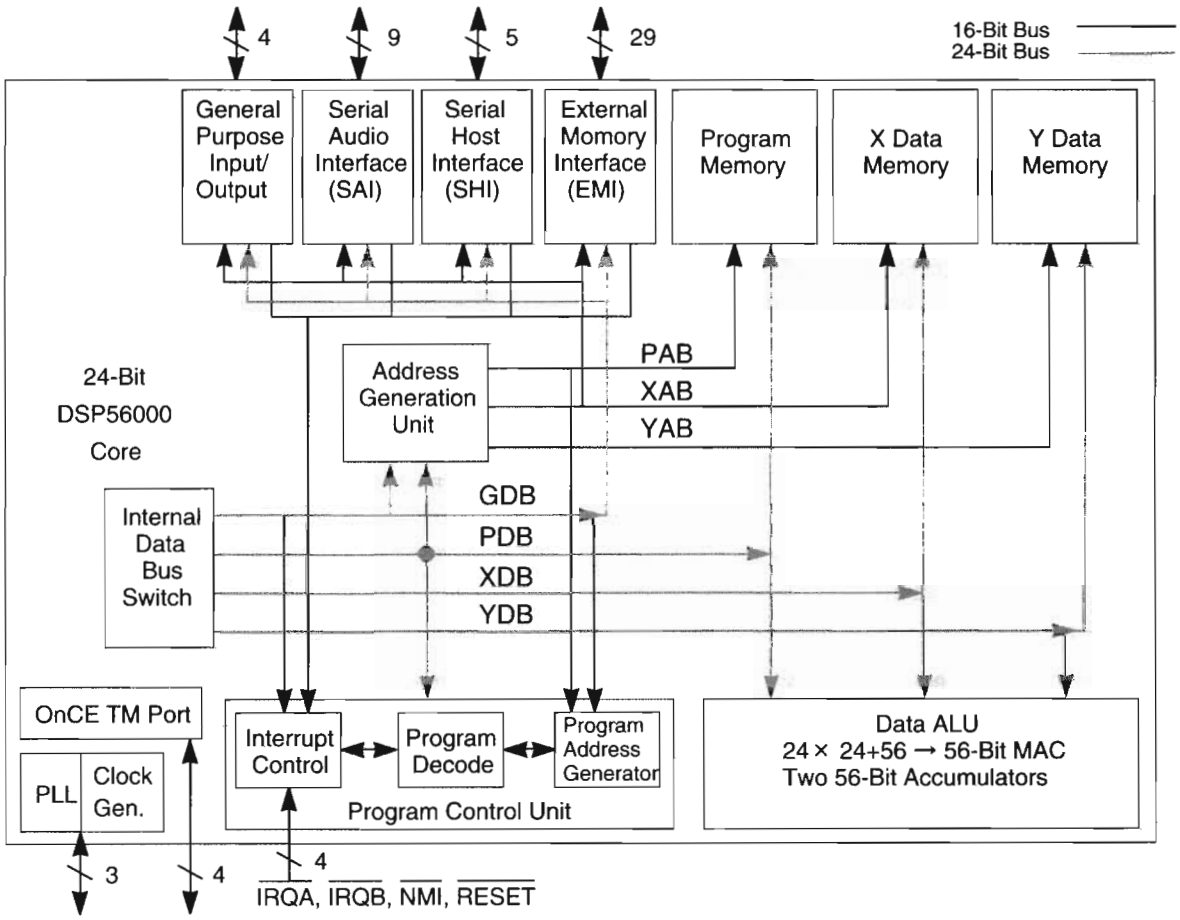
Pin No.	Symbole	Function
1 18 14 15	V_{DD} V_{SS} V_{EE} V_{CC}	Power Supply terminal for Audio signal +7V(typ) Power Supply terminal 0V Power Supply terminal for Audio signal. Single channel use, joint VSS. Power Supply terminal +5V(typ)
2,27 3,26	IN 1 IN 2	Audio signal Input terminal IN1 joint oposit input of Operation amp. IN2 joint unoposit input of Operation amp. It have Right and Left.
16	D1	Data input terminal from CPU Shumit inverter style
17	CLK	Clock input terminal from CPU Shumit inverter style
4～10 19～25	f1～f7	Joint terminal of B.P.F. f1～f7 × Right, Left Total 14 terminal
11 12	TEST1 TEST2	Internal test terminal of IC It can use open condition
13	S	Select terminal for 2 tip use "1" input, key code 7C3→VDD joint "0" input, key code 7C2→VEE joint
28	NC	No use

■ XCF56009FJ88 (IC631) : DSP Signal Processor

1.Terminal Layout



2.Block Diagram

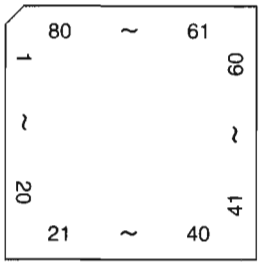


3.Pin function

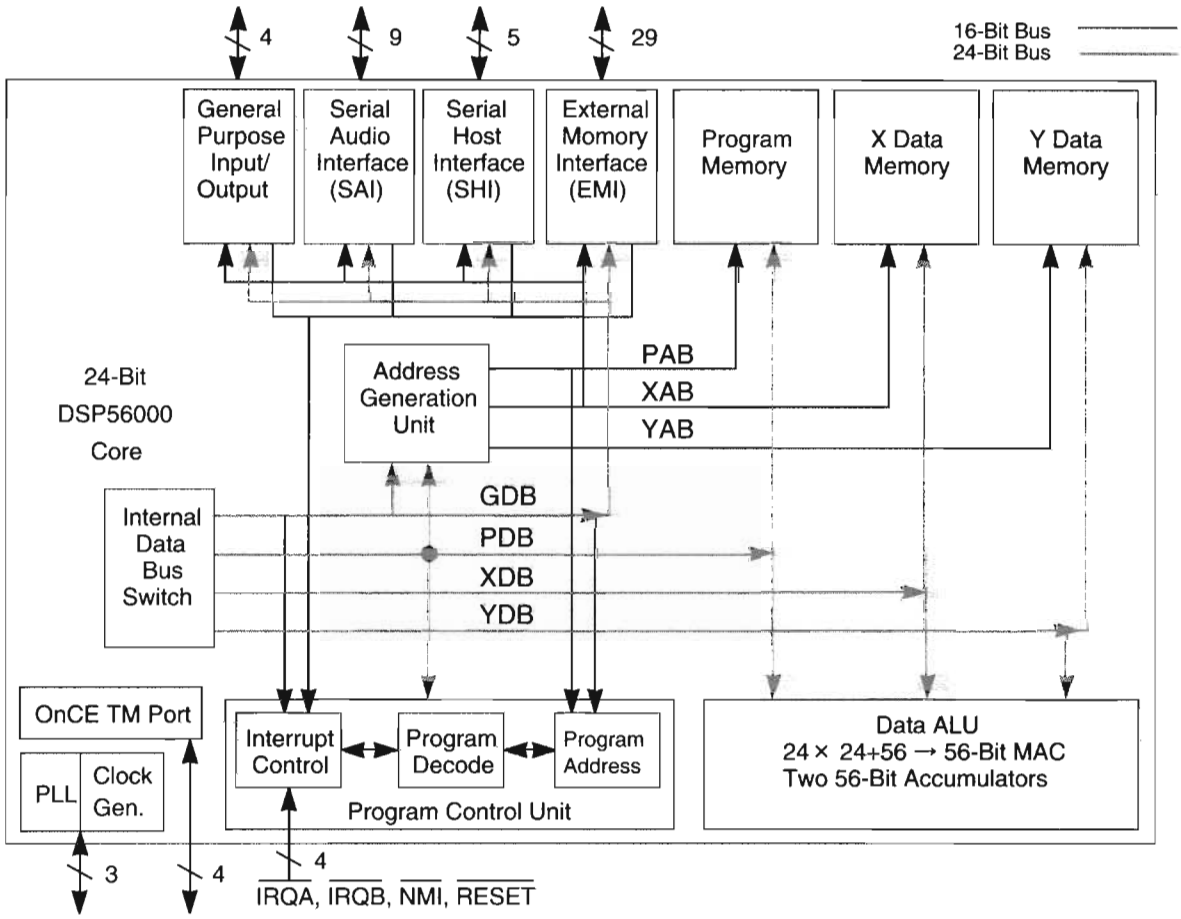
Pin No	Symbol	I/O	Function	Pin No	Symbol	I/O	Function
1	GNDA	---	Ground	41	MOSI	I/O	SPI Master-Out-Slave-In
2	$\overline{\text{MCS0}}$	O	No use	42	$\overline{\text{SS}}$	I	SPI Slave Select
3	$\overline{\text{MCS3}}$	O	No use	43	$\overline{\text{HRQE}}$	I/O	Host Request
4	MA14	O	No use	44	GNDS	---	Ground
5	MA13	---	No use	45	SDO2	O	No use
6	VCCA	O	Address Bus Power	46	SDO1	O	Serial Data Output
7	MA12	---	No use	47	SDO0	O	Serial Data Output
8	GNDA	---	Ground	48	VCCS	---	Serial Interface Power
9	VCCQ	---	Quiet Power	49	SCKT	I/O	Serial Clock Transmit
10	GNDQ	O	Ground	50	WST	I/O	Word Select Transmit
11	MA11	O	No use	51	SCKR	I/O	Receive Serial Clock
12	MA10	O	No use	52	GNDQ	---	Ground
13	MA9	O	No use	53	VCCQ	---	Quiet Power
14	MA8	---	No use	54	GNDS	---	Ground
15	GNDA	O	Ground	55	WSR	I/O	Word Select Receive
16	MA7	---	No use	56	SDI1	I	Serial Data Input
17	VCCA	O	Address Bus Power	57	SDI0	I	Serial Data Input
18	MA6	O	No use	58	DSO	O	No use
19	MA5	O	No use	59	DSI	I	No use
20	MA4	---	No use	60	DSCK	I	No use
21	GNDA	O	Ground	61	$\overline{\text{DR}}$	I	Debug Request
22	MA3	O	No use	62	MD7	I/O	No use
23	MA2	O	No use	63	MD6	I/O	No use
24	MA1	O	No use	64	MD5	I/O	No use
25	MA0	I	No use	65	MD4	I/O	No use
26	SCK	I	SPI Serial Clock	66	GNDD	---	Ground
27	EXTAL	---	External Clock/Crystal	67	MD3	I/O	No use
28	VCCQ	---	Quiet Power	68	MD2	I/O	No use
29	GNDQ	I	Ground	69	MD1	I/O	No use
30	PINIT	---	Ground	70	VCCD	---	Data Bus Power
31	GNDP	I	Ground	71	MD0	I/O	No use
32	PCAP	---	PLL Filter Capasitor	72	GNDD	---	Ground
33	VCCP	---	PLLn Power	73	GPIO3	I/O	No use
34	GNDS	I/O	Ground	74	GPIO2	I/O	No use
35	MISO	I	SPI Master-In-Slave -Out	75	GPIO1	I/O	No use
36	$\overline{\text{RESET}}$	I	Reset	76	GPIO0	I/O	Control Signal with IC641
37	MODA	I	Mode Select	77	$\overline{\text{MRDO}}$	O	No use
38	MODB	I	Ground	78	$\overline{\text{MWR}}$	O	No use
39	MODC	I	Mode Select	79	$\overline{\text{MCS1}}$	O	No use
40	VCCS	---	Serial Interface Power	80	$\overline{\text{MCS2}}$	O	No use

■ XCB56007FJ88 (IC641) : DSP Signal Processor

1. Terminal Layout



2.Block Diagram

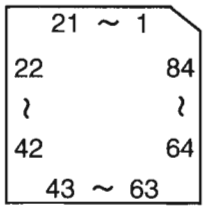


3. Functions

Pin No	Symbol	I/O	Function	Pin No	Symbol	I/O	Function
1	GNDA	---	Ground	41	MOSI	I/O	SPI Master-Out-Slave-In
2	$\overline{\text{MCS0}}$	O	Memory Chip Select	42	$\overline{\text{SS}}$	I	SPI Slave Select
3	$\overline{\text{MCS3}}$	O	No use	43	$\overline{\text{HRQE}}$	I/O	Host Request
4	MA14	O	Memory Address	44	GNDS	---	Ground
5	MA13	O	Memory Address	45	SDO2	O	Serial Data Output
6	VCCA	---	Address Bus Power	46	SDO1	O	Serial Data Output
7	MA12	O	Memory Address	47	SDO0	O	Serial Data Output
8	GNDA	---	Ground	48	VCCS	---	Srial Interface Power
9	VCCQ	---	Quiet Power	49	SCKT	I/O	Serial Clock Transmit
10	GNDQ	---	Ground	50	WST	I/O	Word Select Transmit
11	MA11	O	Memory Address	51	SCKR	I/O	Receive Serial Clock
12	MA10	O	Memory Address	52	GNDD	---	Ground
13	MA9	O	Memory Address	53	VCCQ	---	Quiet Power
14	MA8	O	Memory Address	54	GNDS	---	Ground
15	GNDA	---	Ground	55	WSR	I/O	Word Select Receive
16	MA7	O	Memory Address	56	SDI1	I	Serial Data Input
17	VCCA	---	Address Bus Power	57	SDI0	I	Serial Data Input
18	MA6	O	Memory Address	58	DSO	O	No use
19	MA5	O	Memory Address	59	DSI	I/O	No use
20	MA4	O	Memory Address	60	DSCK	I/O	No use
21	GNDA	---	Ground	61	$\overline{\text{DR}}$	I	Debug Request
22	MA3	O	Memory Address	62	MD7	I/O	Data Bus
23	MA2	O	Memory Address	63	MD6	I/O	Data Bus
24	MA1	O	Memory Address	64	MD5	I/O	Data Bus
25	MA0	O	Memory Address	65	MD4	I/O	Data Bus
26	SCK	I/O	SPI Serial Clock	66	GND0	---	Ground
27	EXTAL	I	External Clock/Crystal	67	MD3	I/O	Data Bus
28	VCCQ	---	Address Bus Power	68	MD2	I/O	Data Bus
29	GNDQ	---	Ground	69	MD1	I/O	Data Bus
30	PINIT	I	Ground/PLLInitialization	70	VCCD	---	Data Bus Power
31	GNDP	---	Ground	71	MD0	I/O	Data Bus
32	PCAP	I	PLL Filter Capacitor	72	GNDO	---	Ground
33	VCCP	---	PLL Power	73	GPIO3	I/O	No use
34	GNDS	---	Ground	74	GPIO2	I/O	No use
35	MISO	I/O	SPI Master-In-Slave-Out	75	GPIO1	I/O	No use
36	$\overline{\text{RESET}}$	I	Reset	76	GPIO0	I/O	Control Signal with IC631
37	MODA	I	Mode Select	77	$\overline{\text{MRD}}$	O	Memory Read Strobe
38	MODB	I	Ground	78	$\overline{\text{MWR}}$	O	Memory Write strobe
39	MODC	I	Mode Select	79	$\overline{\text{MCS1}}$	O	No use
40	VCCS	---	Serial Interface Power	80	$\overline{\text{MCS2}}$	O	No use

■MN173222JAP(IC671) : DSP Control Micon

1.Terminal Layout



2.Key Matrix

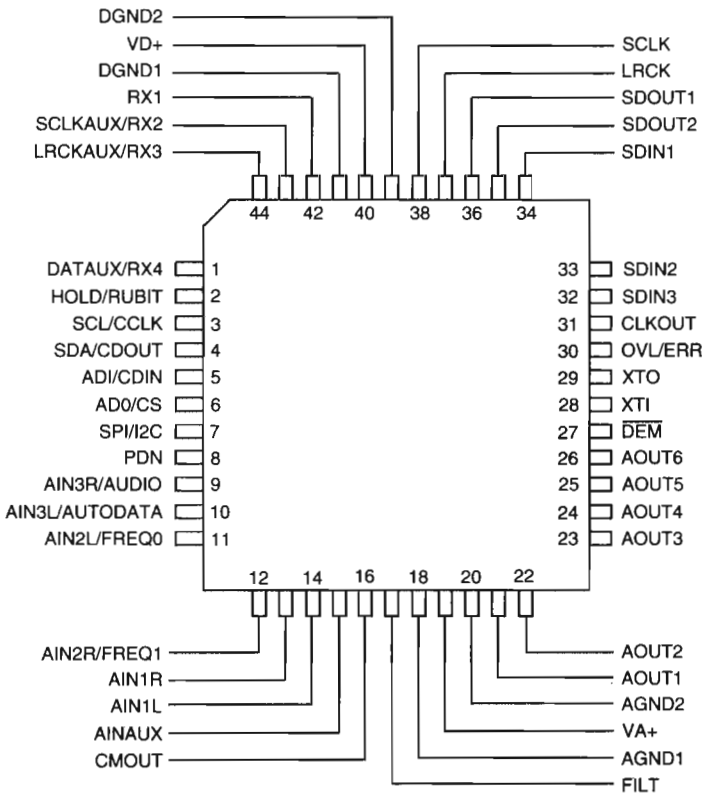
	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
KEY OUT 0	POWER S401	DVD MULTI S419	———	———
KEY OUT 1	SURROUND S402	PRESET SEA S403	TUNER/BAND S404	SETTING S405
KEY OUT 2	SOURCE S406	ADJUST S407	ONE TOUCH OPERATION S408	MEMORY S409
KEY OUT 3	◁ S410	▷ S411	△ S412	▽ S413

3.Pin Function

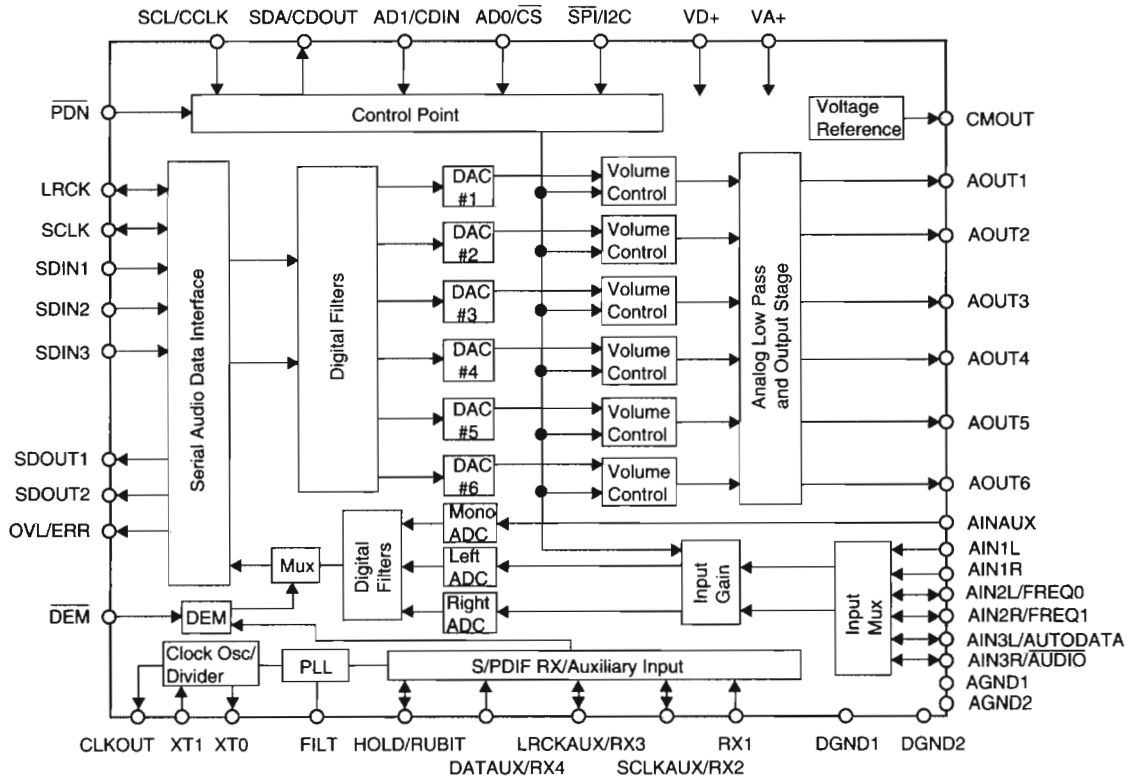
Pin No.	Synbol	I/O	Function	Pin No.	Synbol	I/O	Function
1~22	DGT1 to 22	O	Grid control signal output	57	TBL3	O	$\overline{CCS}$
23	Vpp	--		58	TBL4	O	CDIN
24~39	Seg1 to15	O	Segment control signal output	59	TBL5	I	CDOUT
40	Bz	O	COMPLETE	60	TBL6	O	CCLK
41	$\overline{SBTBT}$	O	DCLK	61	TBL7	I	$\overline{REQ}$/09
42	$\overline{SBTB}$	I	DOUT	62	TBL8	O	$\overline{CS}$/09
43	$\overline{SBTB}$	O	DIN	63	TBL9	O	$\overline{RESET}$/09
44	$\overline{TCO}$	O	DAPREQ	64	P50	I	$\overline{REQ}$/07
45	$\overline{SBTA}$	I	SCK	65	P51	O	$\overline{CS}$/07
46	$\overline{SBTA}$	I	SYSDATA	66	P52	O	$\overline{RESET}$/07
47	$\overline{SBOA}$	OI	DAPDATA	67	P53	I	GPIO/07
48	$\overline{IRQ0}$	I	SYSREQ	68	RST	I	$\overline{RESET}$
49	$\overline{IRQ1}$	I	GPIO/09	69	X1	I	Ground
50	$\overline{TCIB}$	I		70	X2	O	Open
51	$\overline{TCIA}$	I	FREQ1	71	VSS	--	Ground
52	$\overline{IRQ2}$	I	OVL/ERR	72	OSC2	O	Joint to crystal osc.
53	$\overline{IRQ3}$	I	AUTODATA	73	OSC1	I	Joint to crystal osc.
54	TBL0	I	FREQ0	74	VDD	--	+5V
55	TBL1	I	$\overline{AUDIO}$	75 to 84	DGT31 to 22	O	Grid control signal output
56	TBL2	O	PDOWN				

■ CS4226-KQ (IC601) : D/A, A/D Converter

1.Terminal Layout



2.Block Diagram

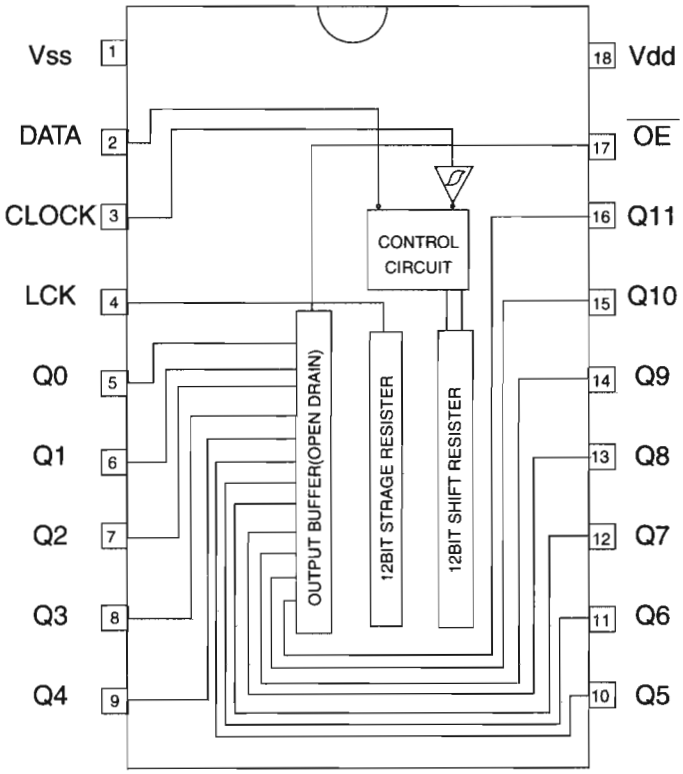


3.Functions

pin no	Symbol	Function
1	DATAUX/RX4	Auxiliary Dat Input / Receiver Channel 4
2	HOLD/RUBIT	S/PDIF Received User Bit / Hold Control
3	SLC/CCLK	Serial Control Interface Clock
4	SDA/CDOUT	Serial Control Data Out
5	ADI/CDIN	Address Bit / Serial Control Data In
6	AD0/$\overline{CS}$	Address Bit / Control Port Chip Select
7	$\overline{SPI}$/I2C	Analog ground
8	$\overline{PDN}$	Powerdown Pin
9	AIN3R/$\overline{AUDIO}$	Right Channel Mux Input 3/AC3 and MPEG
10	AIN3L/AUTODATA	Left Channel Mux Input 3/AC3 and MPEG
11	AIN2L/FREQ0	Left Channel Mux Input 2/Channel Status Freq. Bits
12	AIN2R/FREQ1	Right Channel Mux Input 2/Channel Status Freq. Bits
13	AIN1R	Right Channel Mux Input 1
14	AIN1L	Left Channel Mux Input 1
15	AINAUX	Analog ground
16	CMOUT	Common Mode Output
17	FILT	PLL Loop Filter Pin
18	AGND1	Analog Ground
19	VA+	Analog Power Input
20	AGND2	Analog Ground
21	AOUT1	Audio Outputs
22	AOUT2	Audio Outputs
23	AOUT3	Audio Outputs
24	AOUT4	Audio Outputs
25	AOUT5	Audio Outputs
26	AOUT6	Audio Outputs
27	$\overline{DEM}$	Analog ground
28	XTI	Crystal Connections
29	XTO	Crystal Connections
30	OVL/ERR	Overload Indicator
31	CLKOUT	Master Clock Output
32	SDIN3	Serial Data Input 3
33	SDIN2	Serial Data Input 2
34	SDIN1	Serial Data Input 1
35	SDOUT2	Serial Data Out put 2
36	SDOUT1	Serial Data Out put 1
37	LRCK	Left / Right Select Signal I/O
38	SCLK	DSP Serial Port Clock I/O
39	DGND2	Analog ground
40	VD+	Analog Power Input
41	DGND1	Analog Ground
42	RX1	Receiver Channel 1
43	SCLKAUX/RX2	Auxiliary Bit Clock Input or Output / Receiver Channel 2
44	LRCKAUX/RX3	Auxiliary Word Clock Input or Output / eceiver Channel 3

■BU2092 (IC402) : PORT EXPANDER

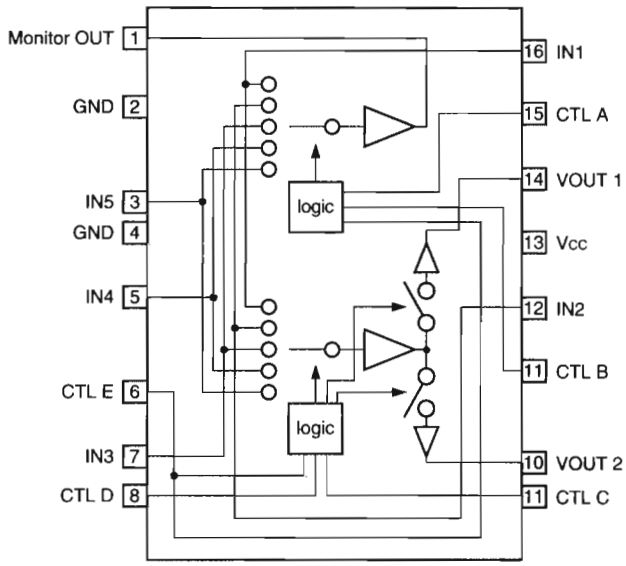
1.Terminal Layout



2.Pin Function

Pin No.	Symbol	I/O	Function
1	Vss	-	Connect to GND
2	DATA	I	Serial Data input
3	CLOCK	I	Shift Clock of Data
4	LCK	I	Latch Clock of Data
5~16	Q0~Q11	O	Parallel Data Output Latch Data: L / H OUTPUT: ON / OFF
17	$\overline{OE}$	I	Output Enable
18	Vdd	-	Power Supply

■ BA7625 (IC201) : Video Selector

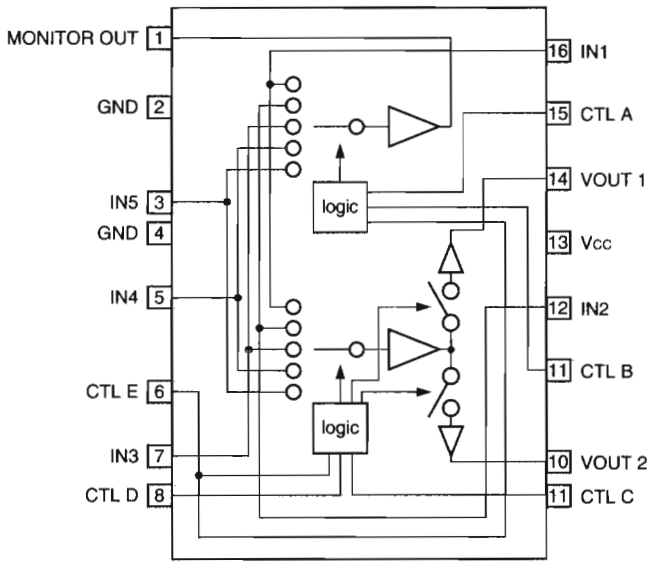


A	B	E	Monitor OUT
L	L	*	IN1
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT1
L	L	*	--
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT2
L	L	*	IN1
H	L	*	--
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

■ BA7626(IC241) : VIDEO SELECTOR



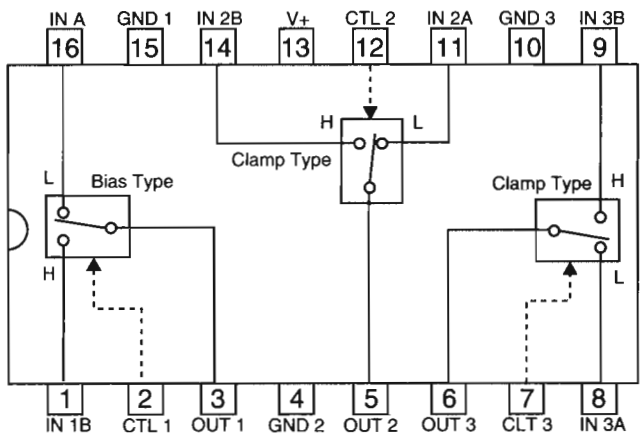
A	B	E	MONITOR OUT
L	L	*	IN1
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	VOUT1
L	L	*	--
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

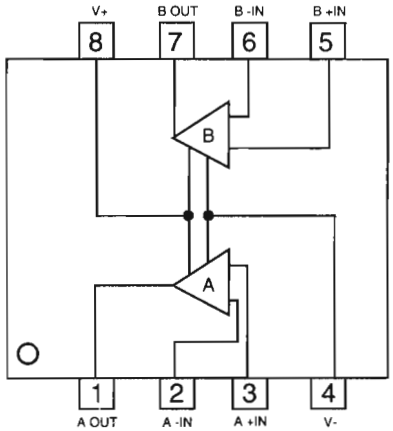
C	D	E	VOUT2
L	L	*	IN1
H	L	*	--
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

■ NJM2285D (IC202) : Video Switch

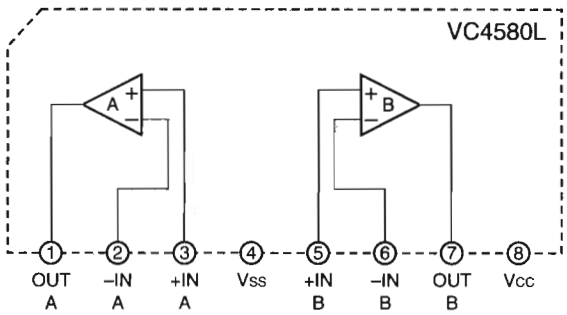
1.Terminal Layout & Block Diagram



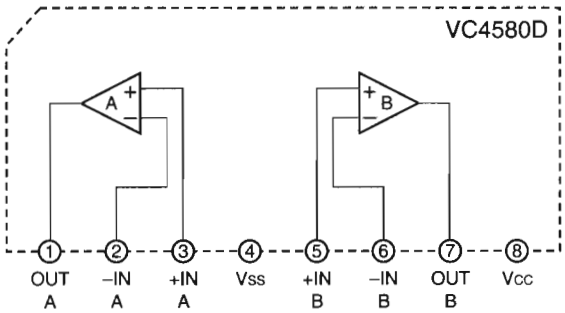
■ NJM4580DD (IC301) : Dual Ope. Amp



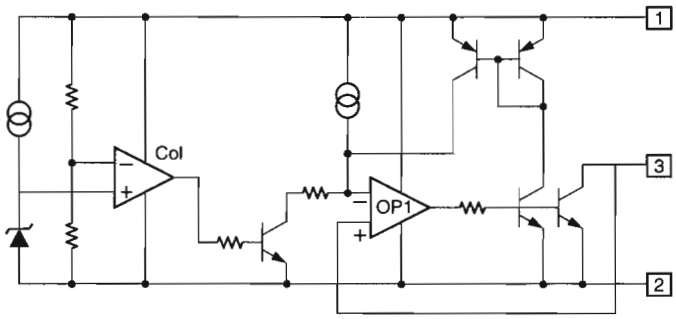
■ NJM4580L (IC361) : Dual Ope. Amp.



■ NJM4580D(IC305) : Dual Ope. Amp

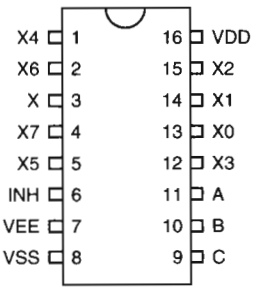


■ PST600E (IC403) : Reset IC

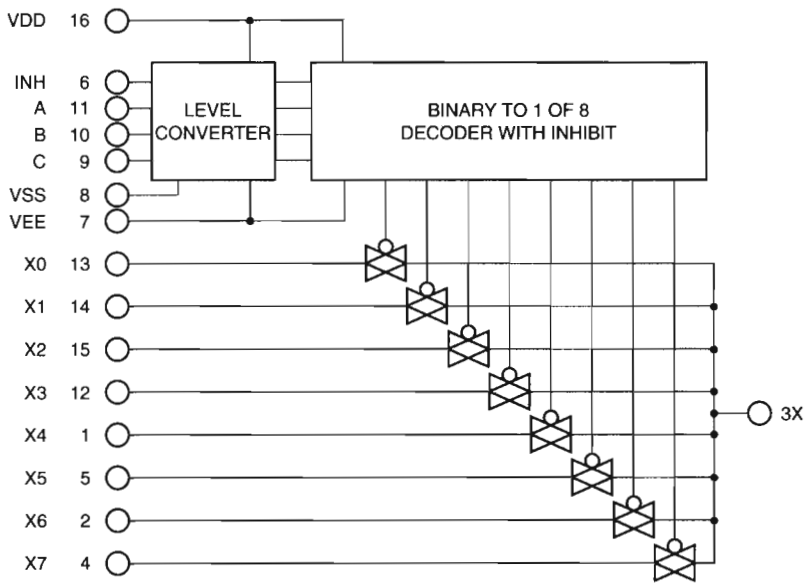


■ BU4051BC (IC341) : Analog Multiplexers / Demultiplexers

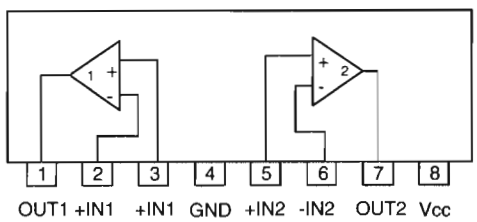
1.Terminal



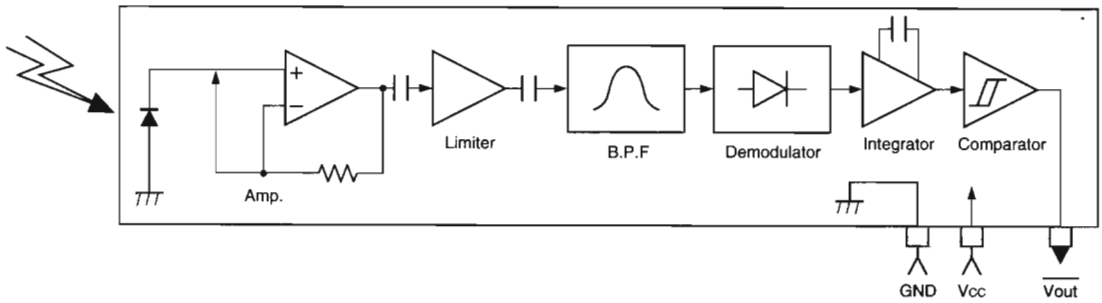
2.Brock Diagram



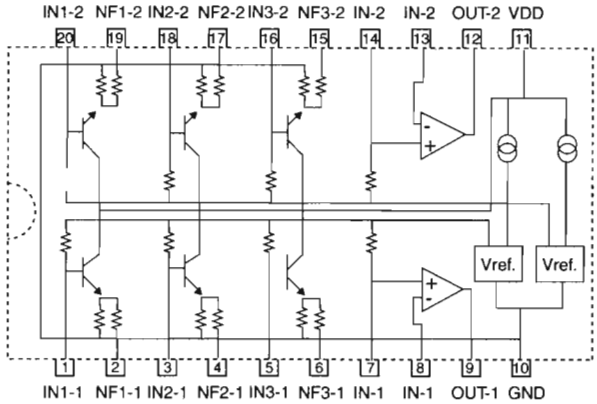
■ BA15218N (IC331,332,333) : Dual Ope. Amp.



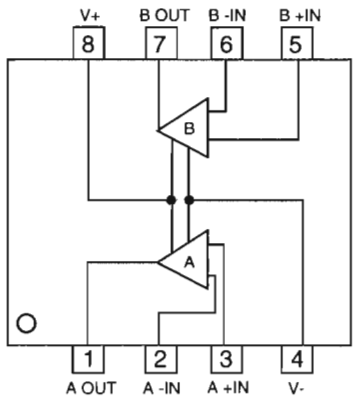
■ GP1U27151X (IC404) : Receiver for remote



■M5243P (IC452) : S.E.A. Graphic Equalizer

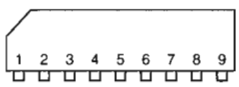


■ NJM4580E : Dual Ope. Amp. (IC501,511,521,551,561,571,581,591)

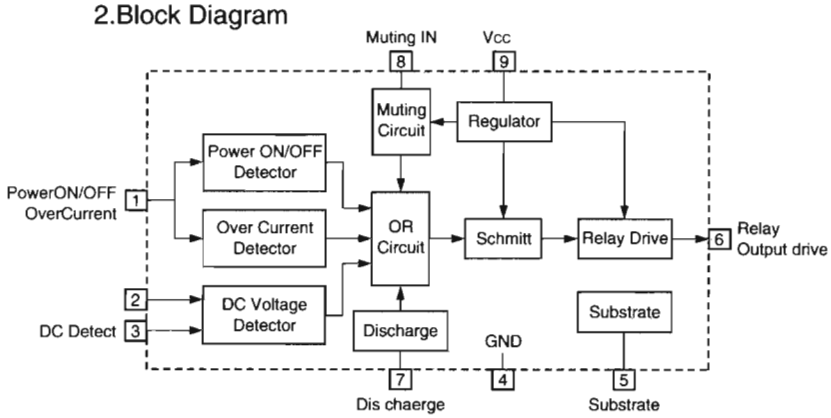


■ TA7317P (IC901) : Protecter

1.Terminal Layout

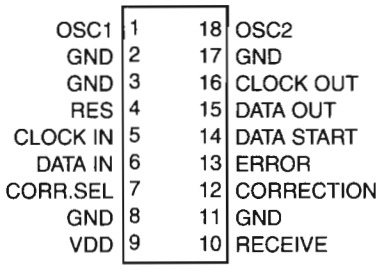


2.Block Diagram

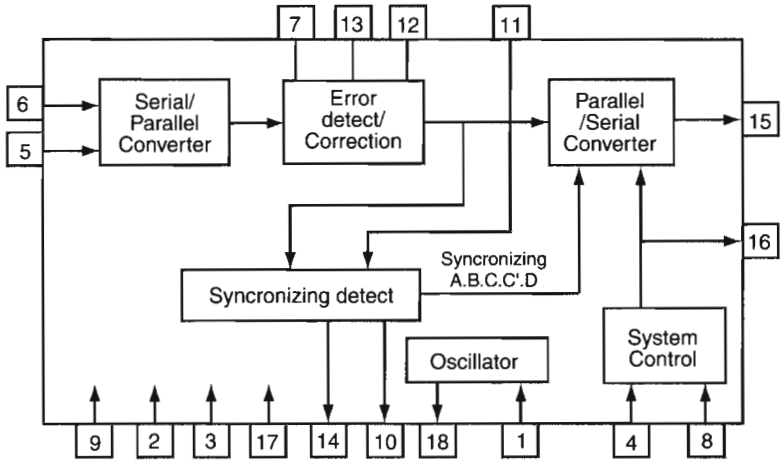


■ LC7073 (IC191) : Radio Data System

1.Terminal Layout



2.Block Diagram

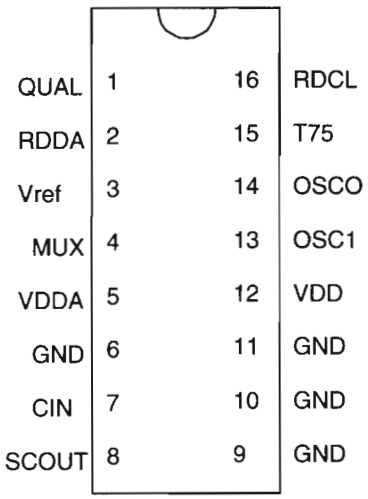


3.Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	OSC1	I	Oscillation.	10	RECEIVE	-	Non connect.
2	GND	-	Connect to GND.	11	GND	-	Connect to GND.
3	GND	-	Connect to GND.	12	CORRECTION	-	Non connect.
4	RES	I	Reset signal input.	13	ERROR	-	Non connect.
5	CLOCK IN	I	RDS clock input.	14	DATA START	O	Data start signal for block
6	DATA IN	I	RDS data input.				data to output serial data.
7	CORR.SEL	I	Non connect.	15	DATA OUT	O	Serial data output.
8	GND	I	Connect to GND.	16	CLOCK OUT	O	Data output of serial data output.
9	VDD	-	Power supply.	17	GND	-	Connect to GND
				18	OSC2	O	Oscillation terminal

■SAA6579 (IC192) : RDS Detector

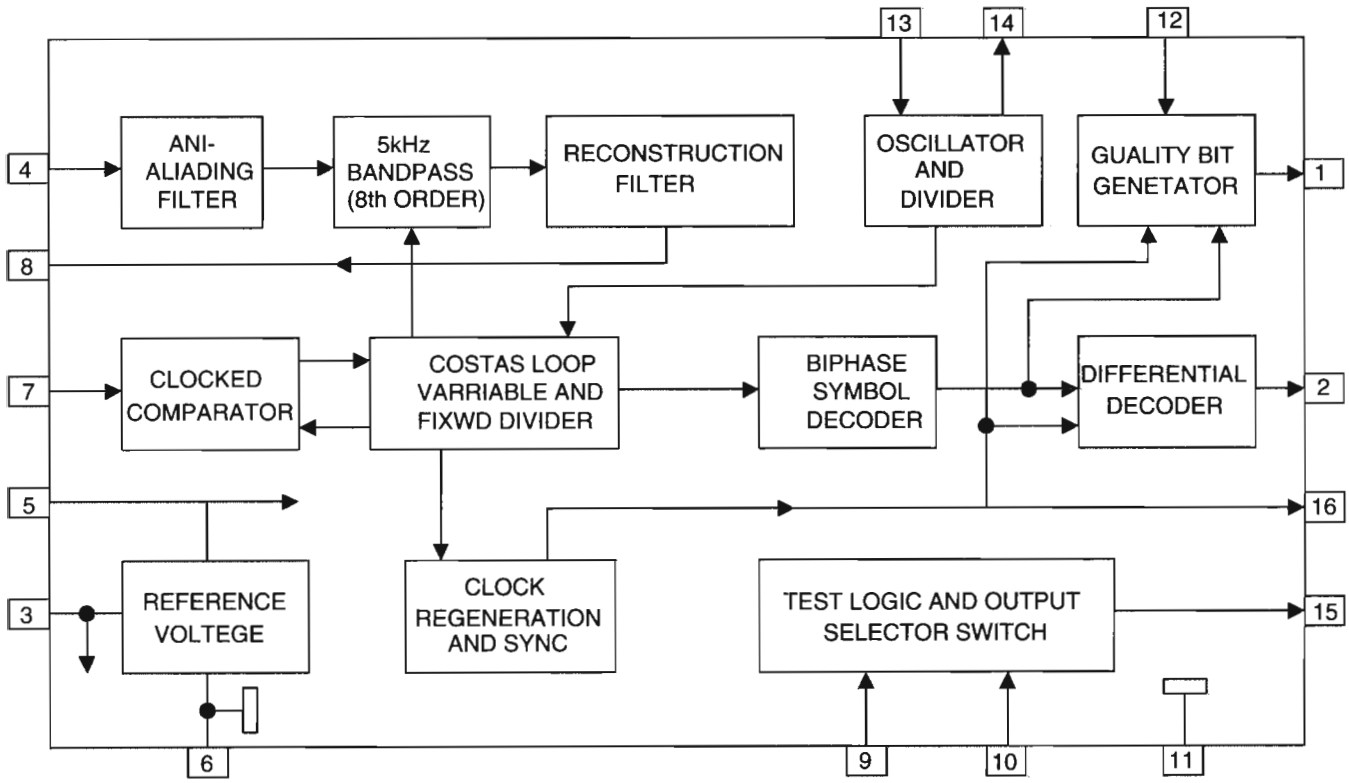
1.Terminal Layout



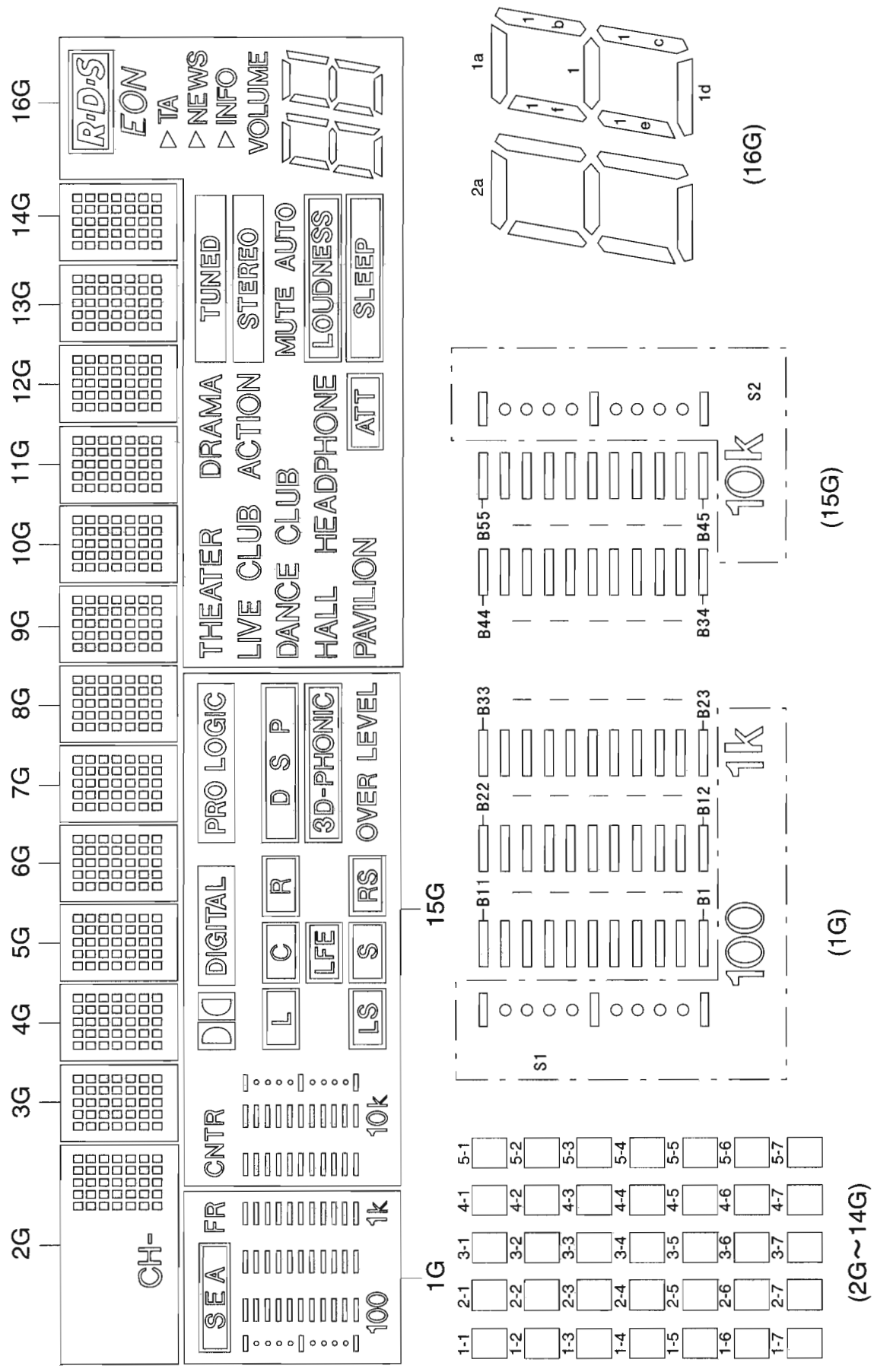
2.Pin Functiont

Pin No	Symbol	I/O	Function
1	QUAL	--	Non connection
2	RDDA	O	RDS data output
3	Vref	O	Reference voltage output
4	MUX	I	Multiplex signal input
5	VDDA	--	+5Vsupply voltage for analog
6	GND	--	Ground for analog part(0V)
7	CIN	I	Subcarrier outputof reconstruction filter
8	SCOUT	O	Ground for digital part(0V)
9	GND	--	Ground for digital part(0V)
10	GND	--	Ground for digital part(0V)
11	GND	--	Ground for digital part(0V)
12	VDD	--	+5Vsupply voltage fordigital part
13	OSC1	I	Oscilator input
14	OSCO	O	Oscilator OUTput
15	T57	--	Non connection
16	RDCL	O	RDS clock output

3.Block Diagram



INTERNAL CONNECTION OF FL DISPLAY TUBE



ANODE CONNECTION

	1G	2G	3G~14G	15G	16G
P1	S1	1-1	1-1	S2	-
P2	B1	2-1	2-1	B34	-
P3	B12	3-1	3-1	B45	2d
P4	B23	4-1	4-1	B35	2e
P5	B2	5-1	5-1	B46	2c
P6	B13	1-2	1-2	B36	2g
P7	B24	2-2	2-2	B47	2f
P8	B3	3-2	3-2	B37	2b
P9	B14	4-2	4-2	B48	2a
P10	B25	5-2	5-2	B38	1d
P11	B4	1-3	1-3	B49	1e
P12	B15	2-3	2-3	B39	1c
P13	B26	3-3	3-3	B50	1g
P14	B5	4-3	4-3	B40	1f
P15	B16	5-3	5-3	B51	1b
P16	B27	1-4	1-4	B41	1a
P17	B6	2-4	2-4	B52	R·D·S
P18	B17	3-4	3-4	B42	EON
P19	B28	4-4	4-4	B53	VOLUME
P20	B7	5-4	5-4	B43	▷INFO
P21	B18	1-5	1-5	B54	▷NEWS
P22	B29	2-5	2-5	B44	▷TA
P23	B8	3-5	3-5	B55	ATT
P24	B19	4-5	4-5	LS	SLEEP
P25	B30	5-5	5-5	S	LOUDNESS
P26	B9	1-6	1-6	RS	PAVILION
P27	B20	2-6	2-6	OVER LEVEL	HEADPHONE
P28	B31	3-6	3-6	3D-PHONIC	HALL
P29	B10	4-6	4-6	LFE	MUTE AUTO
P30	B21	5-6	5-6	CNTR	STEREO
P31	B32	1-7	1-7	L	TUNED
P32	B11	2-7	2-7	C	DANCE CLUB
P33	B22	3-7	3-7	R	ACTION
P34	B33	4-7	4-7	D S P	LIVE CLUB
P35	SEA	5-7	5-7	DIGITAL	DRAMA
P36	FR	CH-	-	PRO LOGIC	THEATER

Disassembly Procedures

■Removing the Top cover

(See Fig. 1)

1. From behind body, remove the four screws 1 of the left and right side and three screws 2of the rear side on top cover.
2. Lift the back of the top cover spreading both sides to remove.

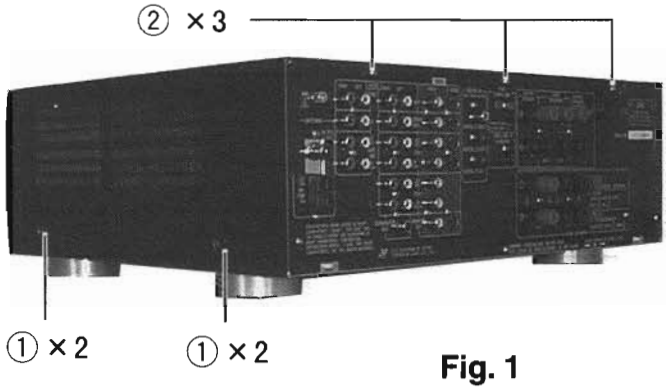


Fig. 1

■Removing the Front panel

(See Fig. 2)

1. Remove the Top cover.
2. Disconnect the six connectors CN202, CN206, CN244, CN400, CN402 and CN416.
3. Remove the three screws ③ on top side of Front panel and five screws ④ on under the Front panel.
4. Remove the Front panel assembly.

Fig. 2

■Removing the Rear panel

(See Fig. 3)

1. Remove the Top cover.
2. Pull out the Cord stopper ⑤ .
3. Remove the 27pcs screws ⑥ on Rear panel.
4. Remove the Rear panel.

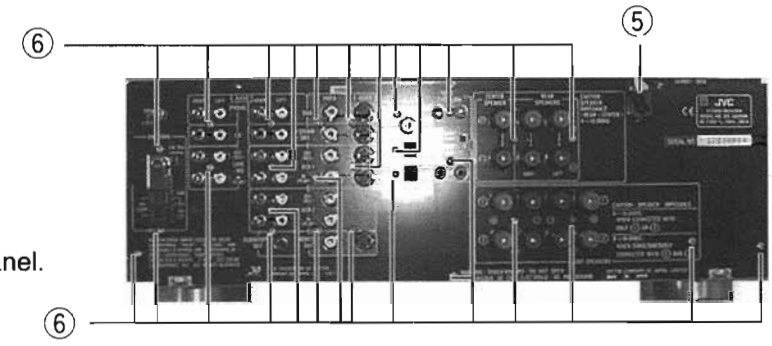


Fig. 3

■ Removing Front P.C. board

(See Figs. 4 and 5)

1. Remove the Top cover.
2. Remove the Front panel.
3. Pull out the volume knob ⑦ , then turn off to counterclockwise the volume nut ⑧ .
4. Remove the six screws ⑨ and disconnect connector wire at CN422 ⑩ and CN430 ⑪ .
5. Remove the Front P.C. board.

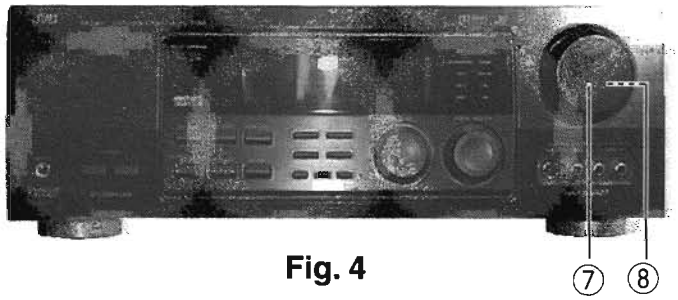


Fig. 4

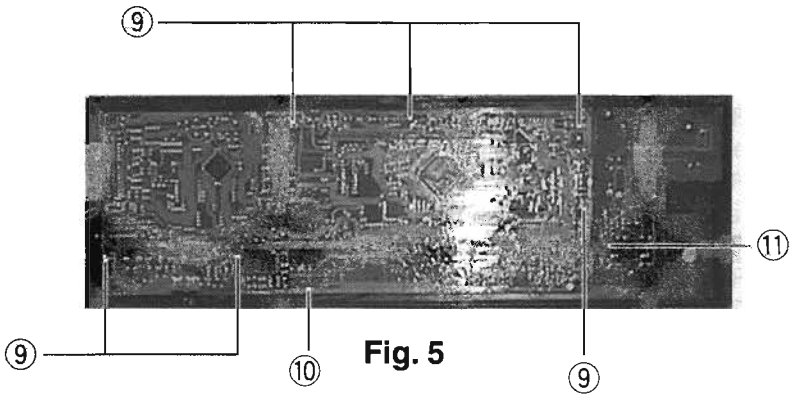


Fig. 5

■ Removing Switch P.C. board

(See Fig. 6)

1. Remove the Top cover.
2. Remove the Front panel.
3. Remove the Front P.C. board.
4. Remove the six screws ⑫ and disconnect connector wire at CN422 ⑬ and CN430 ⑭ .
5. Remove the P.C. board cover from four engagements ⑮ at front panel.
6. Remove the Switch P.C. board.

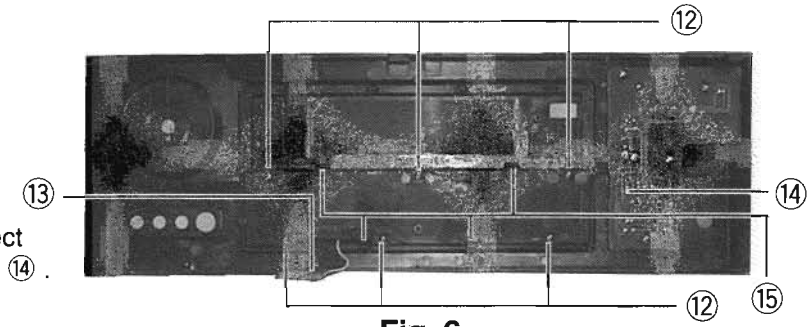


Fig. 6

■ Removing Remote P.C. board

(See Fig. 7)

1. Remove the Top cover.
2. Remove the Front panel.
3. Remove four screws ⑯ .
4. Remove the Remote P.C. board.

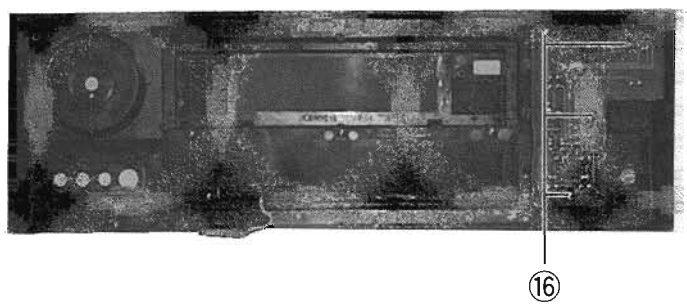


Fig. 7

■ Removing the Main P.C. board

(See Fig. 8)

1. Remove the Top cover.
2. Remove the Front panel.
3. Remove the Rear panel.
4. Remove the Joint P.C.board ⑰ ,⑱ and ⑲ .
5. Remove the Pre amp P.C. board ⑳ .
6. Remove the Tuner P.C. board ㉑ .
7. Remove the SEA P.C. board ㉒ .
8. Remove the Analog P.C. board ㉓ .
9. Remove the Center tone P.C. board ㉔ .
10. Remove the V-Audio P.C. board ㉕ .
11. Remove the Video P.C. board ㉖ .
12. Remove the S-Video P.C. board ㉗ .
13. Remove the TXT Compulink P.C. board ㉘ .
14. Remove the seven screws ㉙ and take off the shield cover ㉚ .
15. Remove the DSP P.C. board ㉛ .
16. Remove the five screws ㉜ .
17. The Main P.C. board slide to right way and lift up right side of the Main P.C. board.

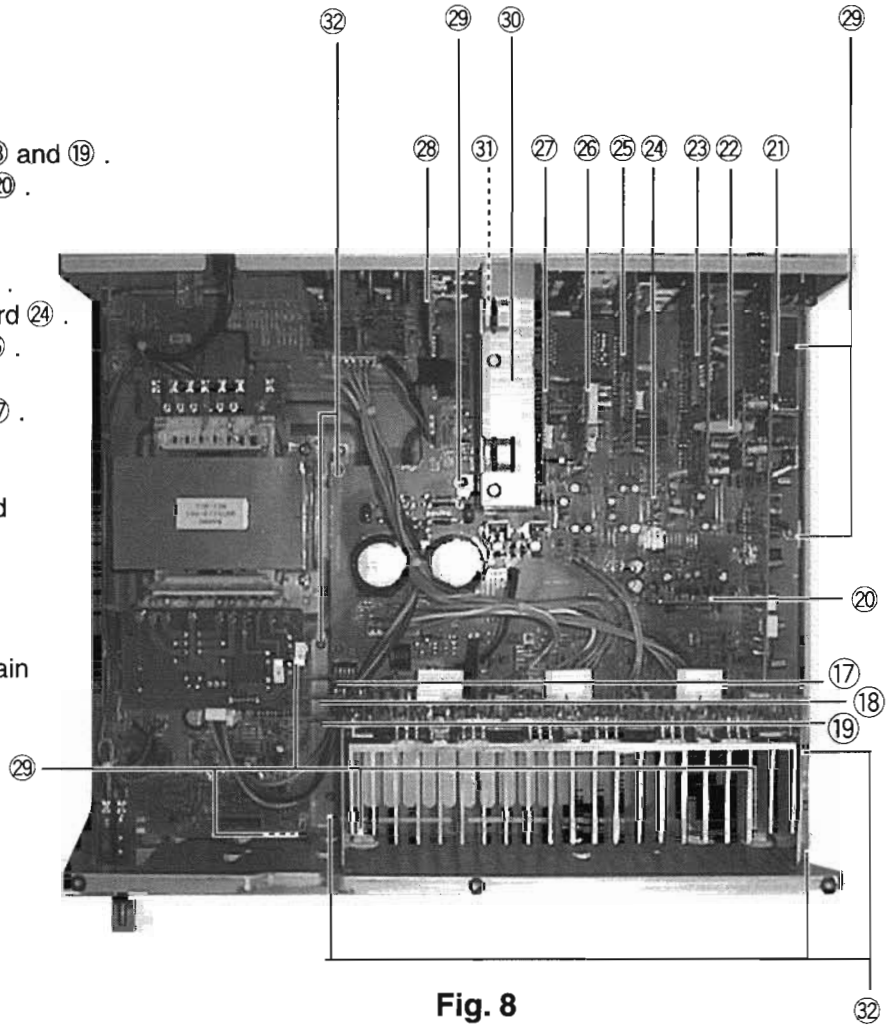


Fig. 8

■ Removing the Amp P.C. board

(See Fig. 9)

1. Remove the Top cover.
2. Remove the Front panel.
3. Remove the Rear panel.
4. Remove the Joint P.C. board ⑰ ,⑱ and ⑲ .
5. Remove the Pre amp P.C. board ⑳ .
6. Remove the Tuner P.C. board ㉑ .
7. Remove the SEA P.C. board ㉒ .
8. Remove the Analog P.C. board ㉓ .
9. Remove the Center tone P.C. board ㉔ .
10. Remove the V-Audio P.C. board ㉕ .
11. Remove the Video P.C. board ㉖ .
12. Remove the S-Video P.C. board ㉗ .
13. Remove the TXT Compulink P.C. board ㉘ .
14. Remove the six screws ㉝ and four screws ㉞ .
15. Remove the Amp P.C. board.

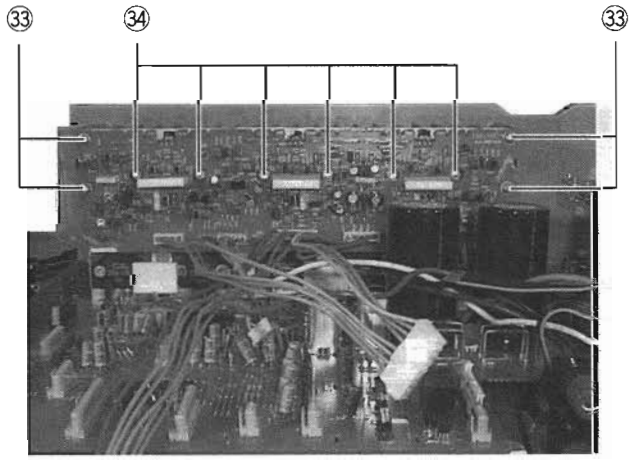


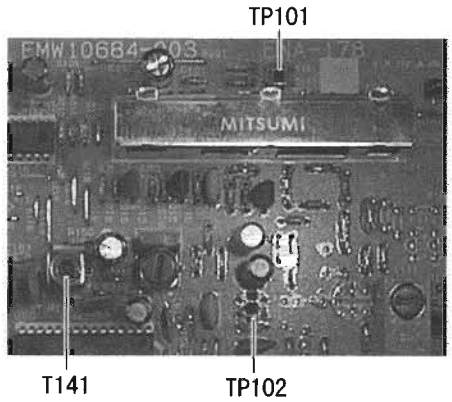
Fig. 9

Adjustment Procedures

■TUNER SECTION

1.Tuner range

FM	87.5MHz～108.0MHz
MW	530kHz～1710kHz
LW	144kHz～288kHz



2.Tuning voltage

Confirm the voltages in the table at TP101

FM tuning voltage (Unit V)

87.5MHz	1.6 <	(Nominal 2.0)
108.0MHz	8.0 >	(Nominal 9.0)

MW tuning voltage (Unit V)

530kHz	0.8 <	(Nominal 1.0)
1710kHz	8.0 >	(Nominal 8.8)

LW tuning voltage (Unit V)

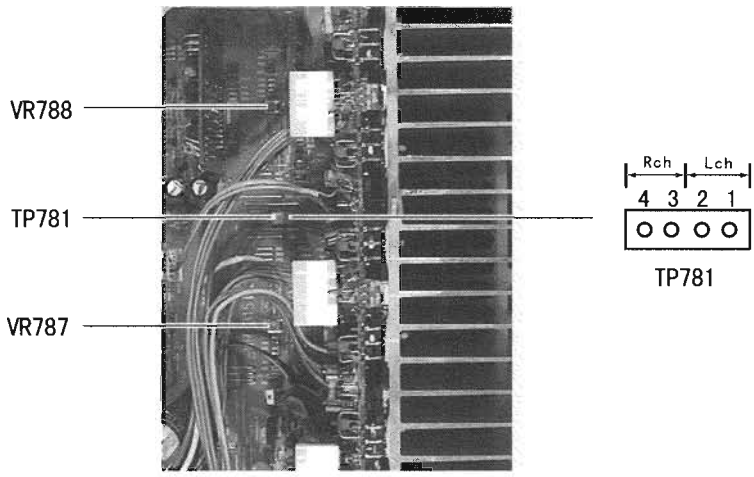
144kHz	0.7<	(Nominal 1.0)
288kHz	7.5>	(Nominal 5.0)

3.FM center meter

Receive a broadcast by using the function of 'AUTO STOP'

Adjust T141 (Detector coil) so that the voltage at TP102 becomes 0±1.5mV

■POWER AMPLIFIER SECTION



IDLING CURRENT

1.Set the volume control to minimum during this adjustment. set the surround mode "OFF"

2.Turn VR787 and VR788 fully counterclockwise to warm up before adjustment.
If the heat sink is already warm from previous use the correct adjustment can not be made.

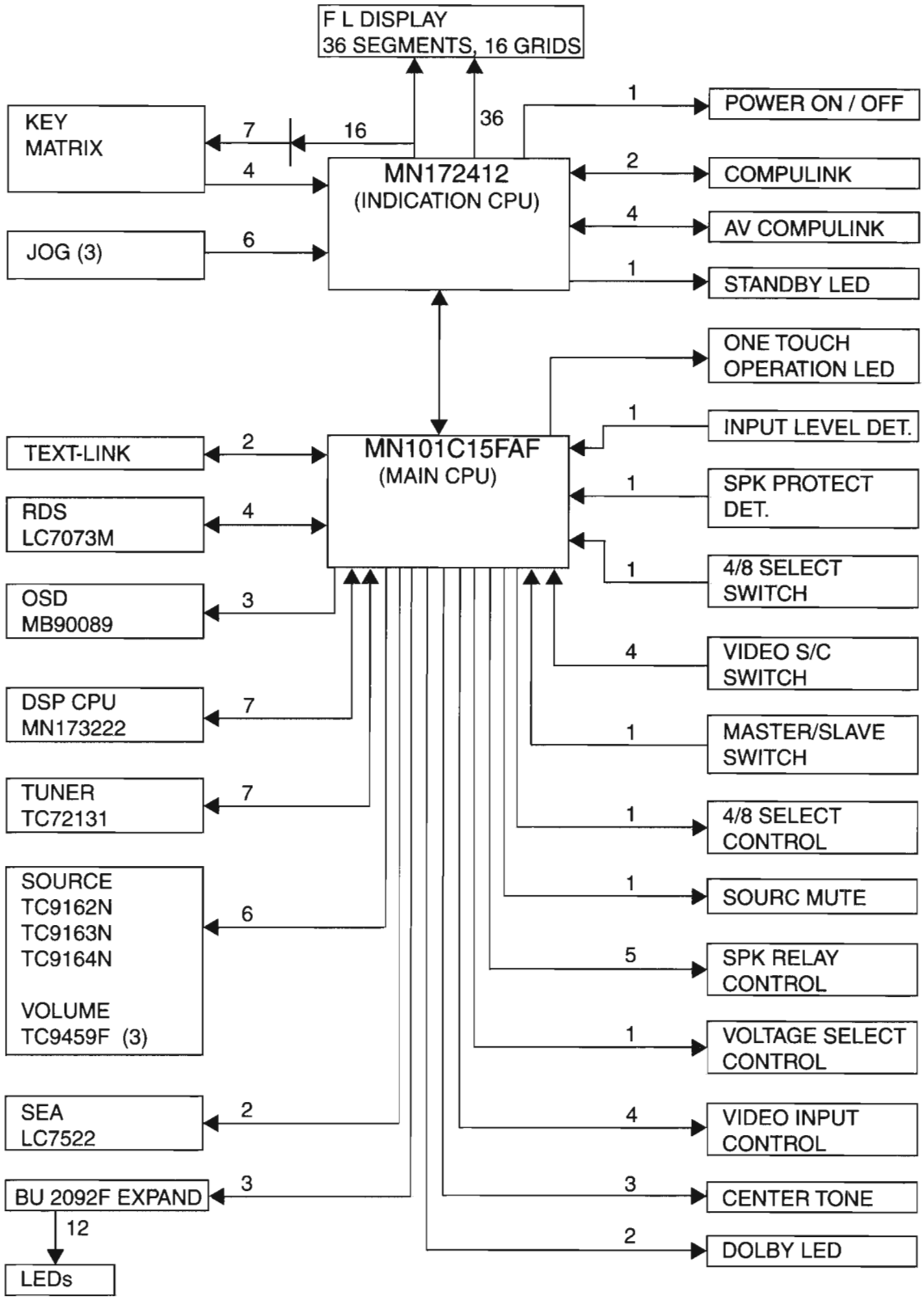
3.For L-ch,connect a DC voltmeter between TP001's pin1 and pin2 (Lch)
And,connect it between pin3 and pin4(Rch).

4.30 minutes later after power on, adjust VR741 for L-ch, or VR742 for R-ch so that the DC voltmeter value has 1mV～10mV.

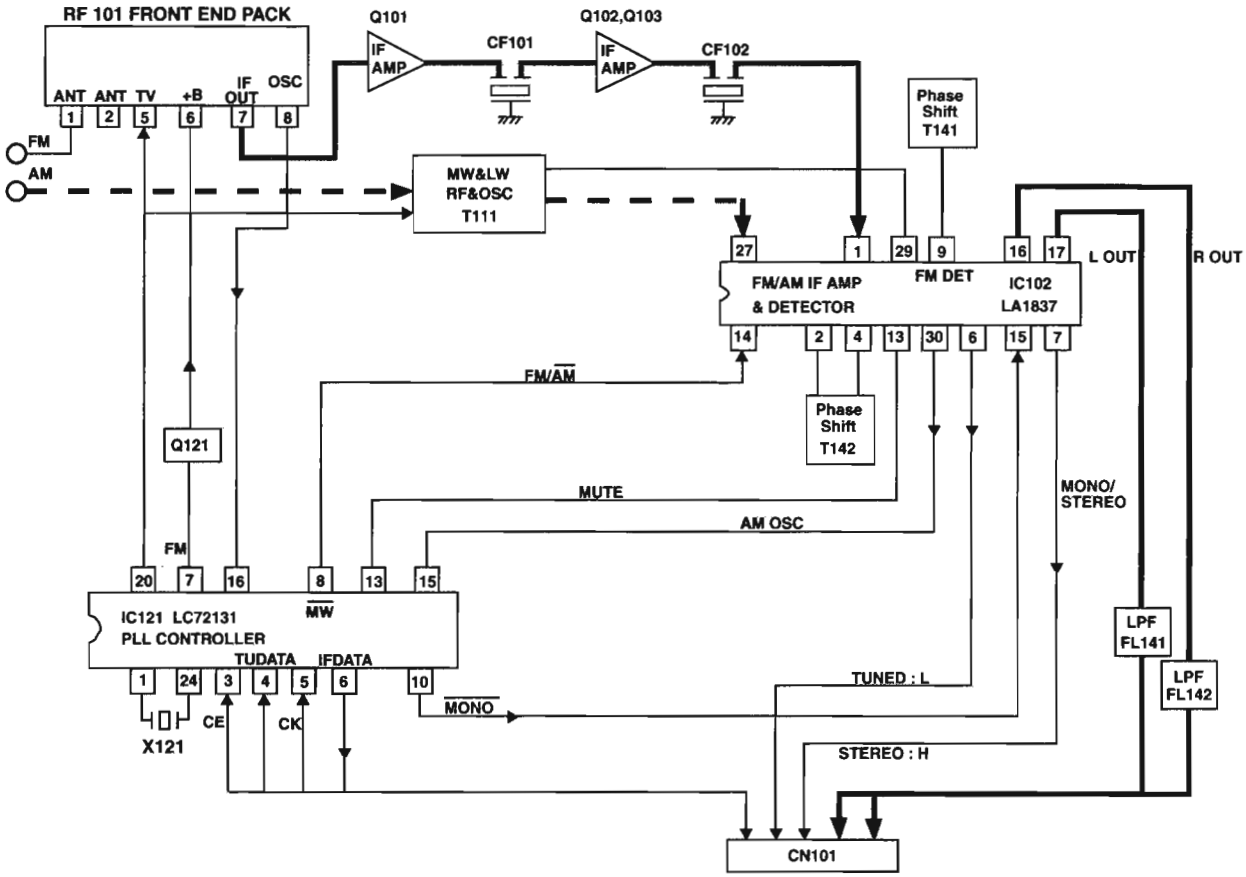
-MEMO-

Block Diagrams

CPU System

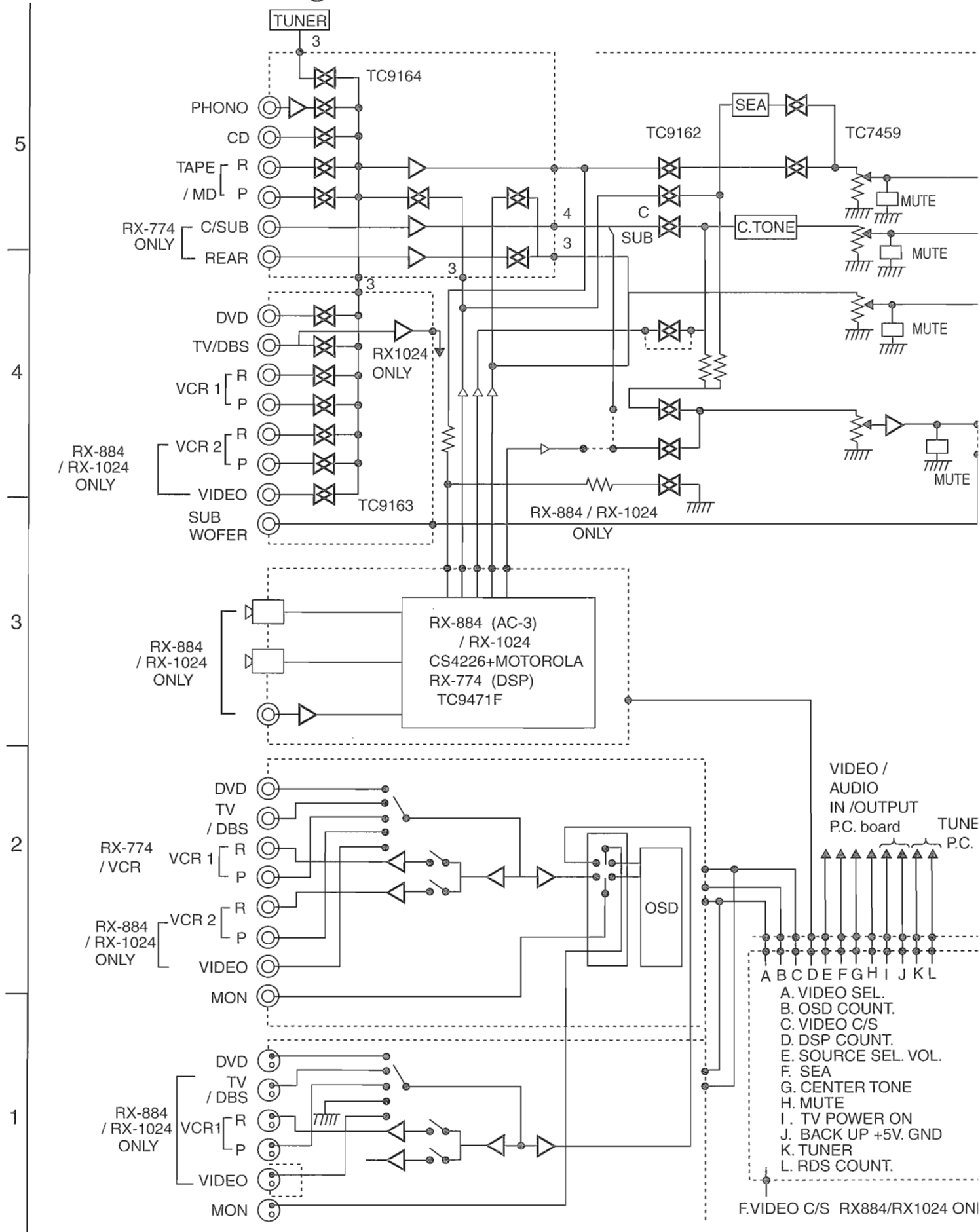


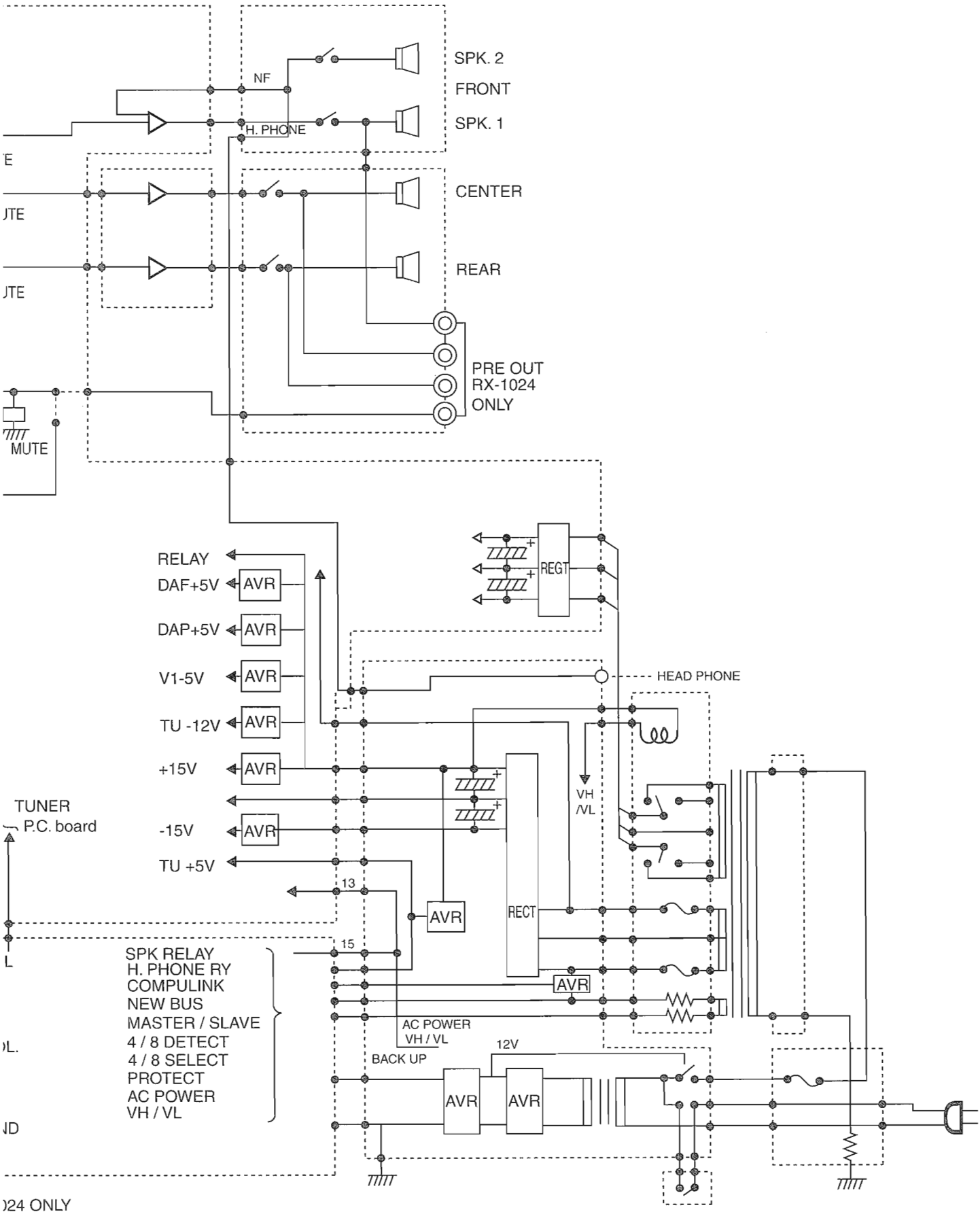
Tuner Section



Block Diagram

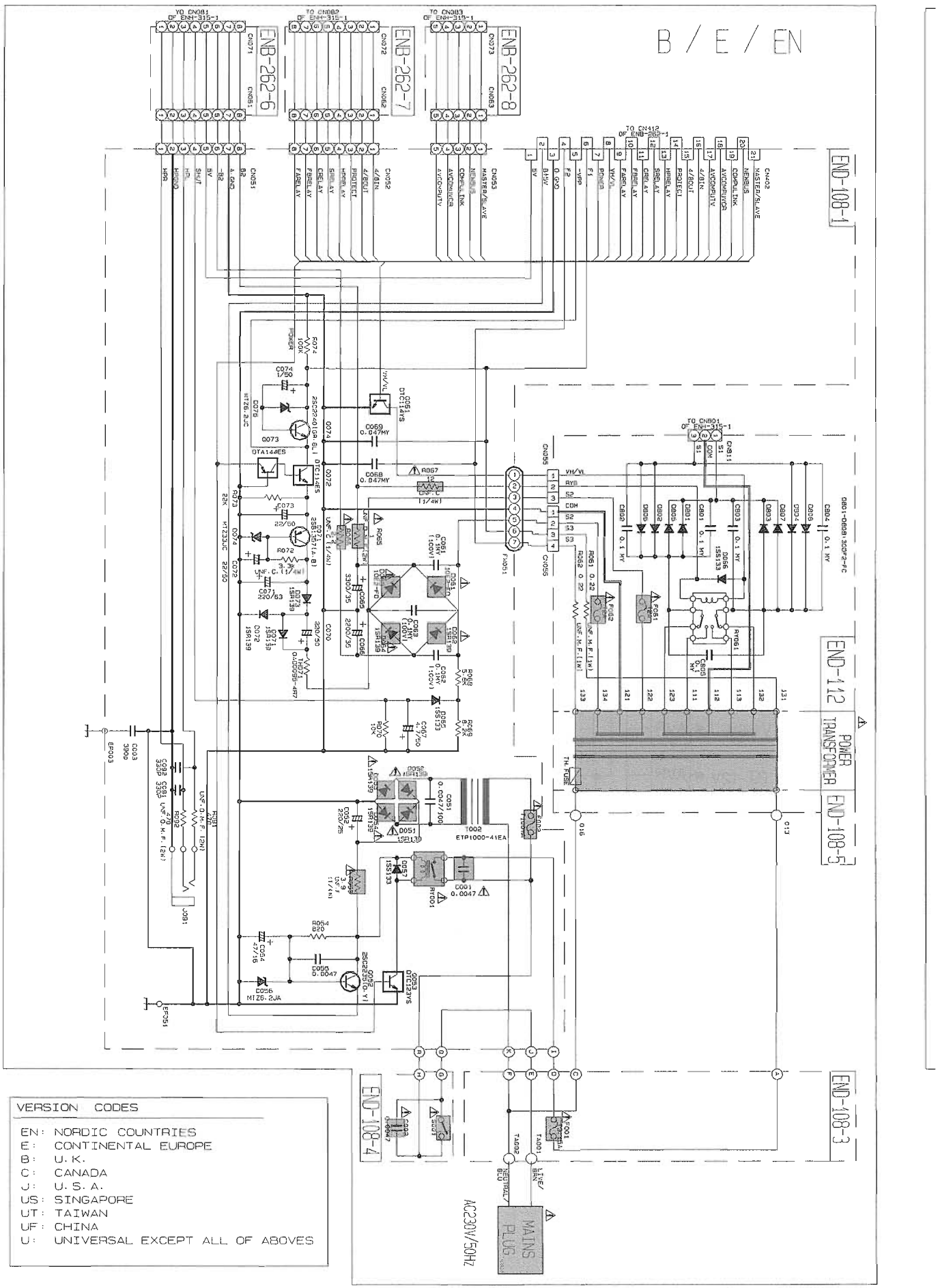
For RX-774/884/1024



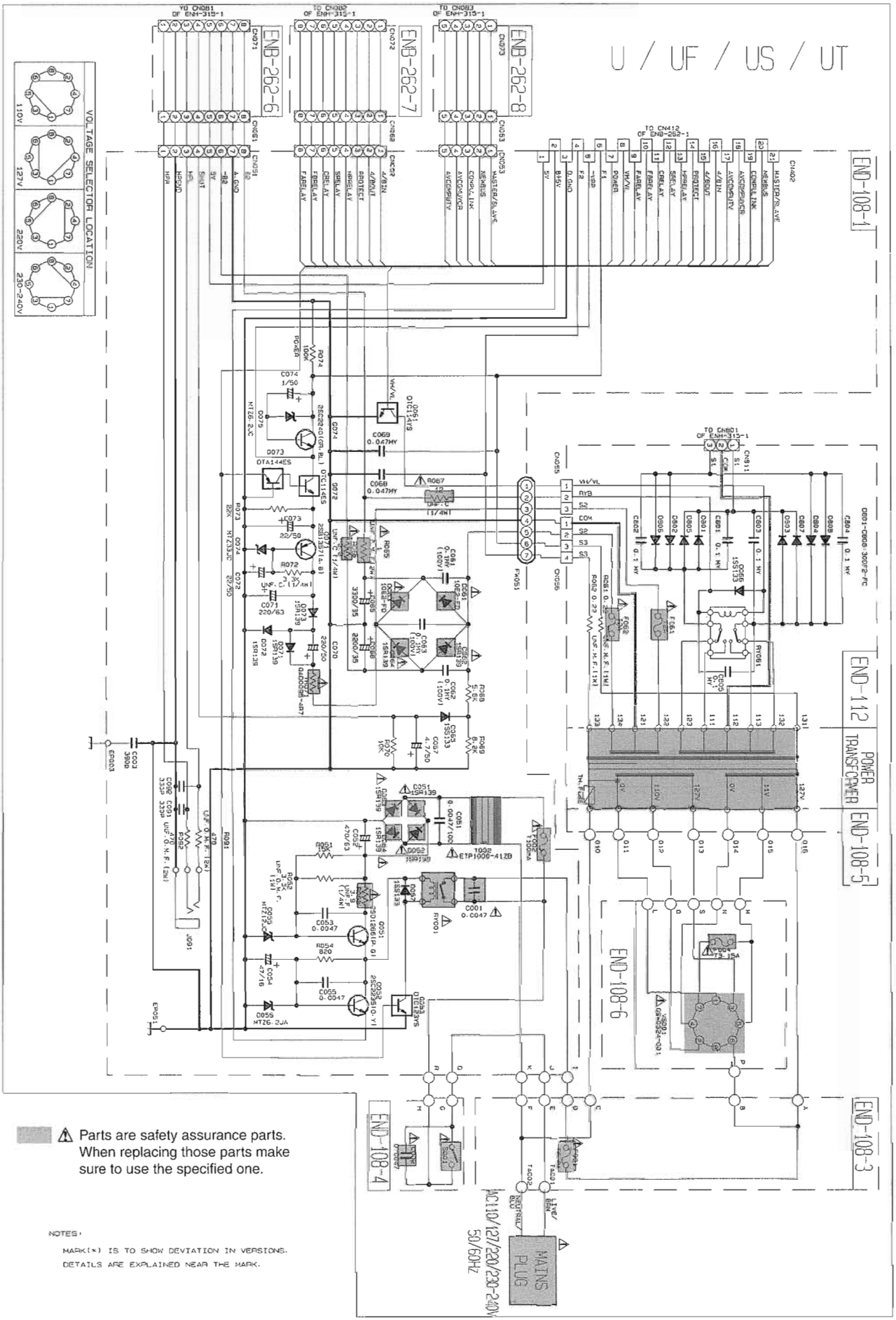

SPK. 2
FRONT
SPK. 1
NF
H. PHONE
CENTER
REAR
PRE OUT
RX-1024
ONLY
MUTE
RELAY
DAF+5V
DAP+5V
V1-5V
TU -12V
+15V
-15V
TU +5V
AVR
REGT
HEAD PHONE
VH
/VL
TUNER
P.C. board
13
15
RECT
SPK RELAY
H. PHONE RY
COMPULINK
NEW BUS
MASTER / SLAVE
4 / 8 DETECT
4 / 8 SELECT
PROTECT
AC POWER
VH / VL
AC POWER
VH / VL
BACK UP
12V

Schematic Diagrams

■ POWER PRIMARY SECTION for B/E/EN and U/UF/U

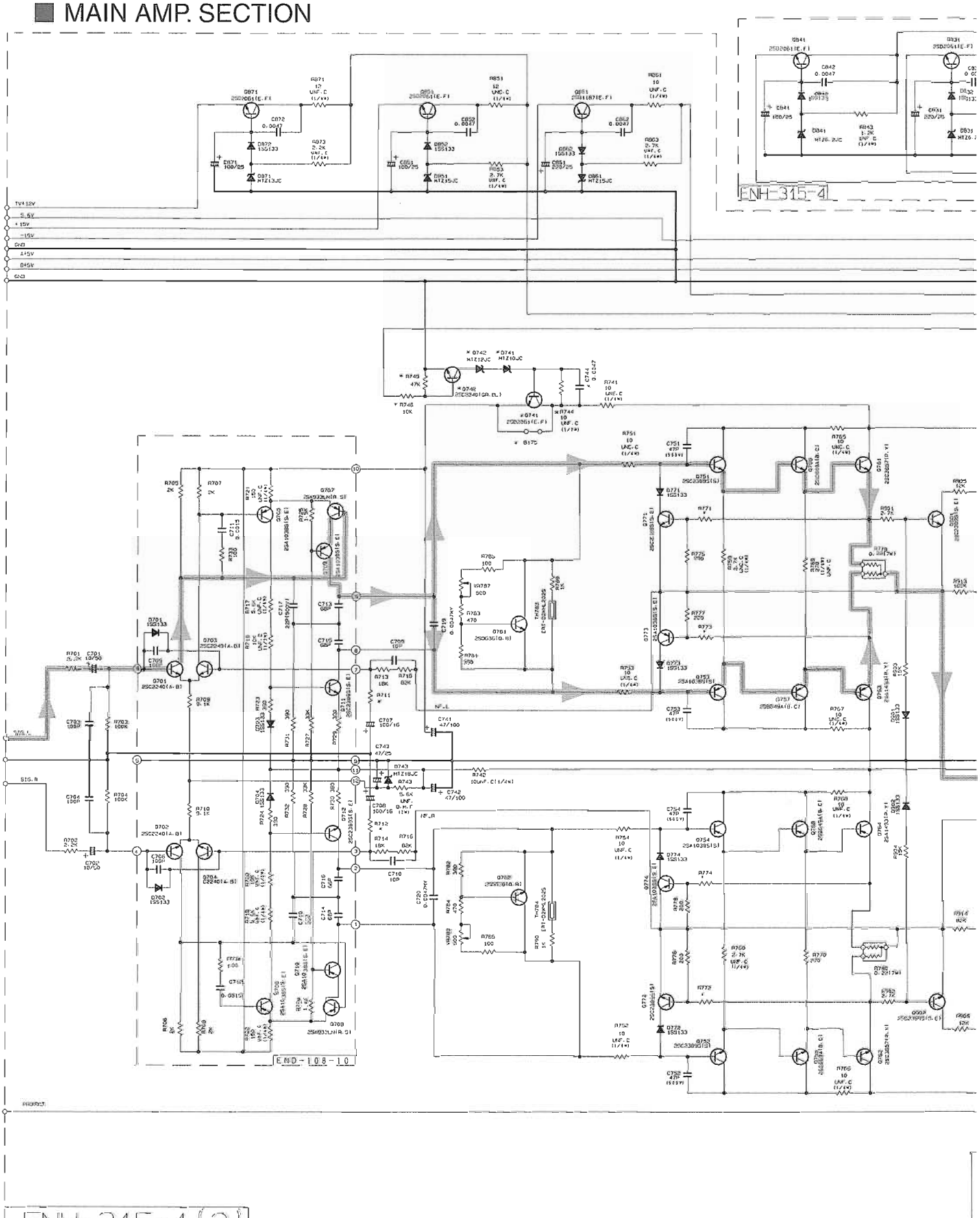


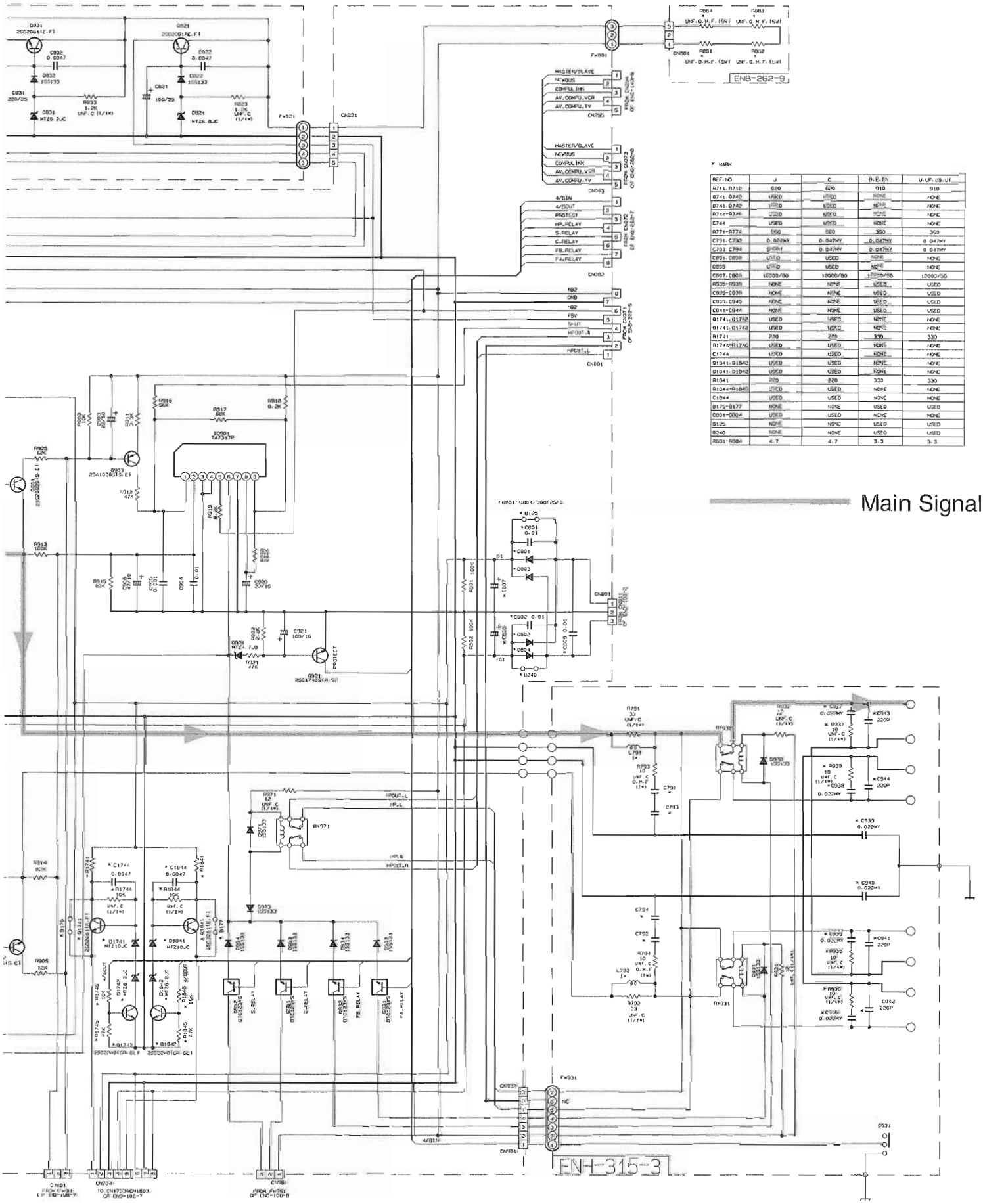
/UF/US/UT



D E F G H

MAIN AMP. SECTION

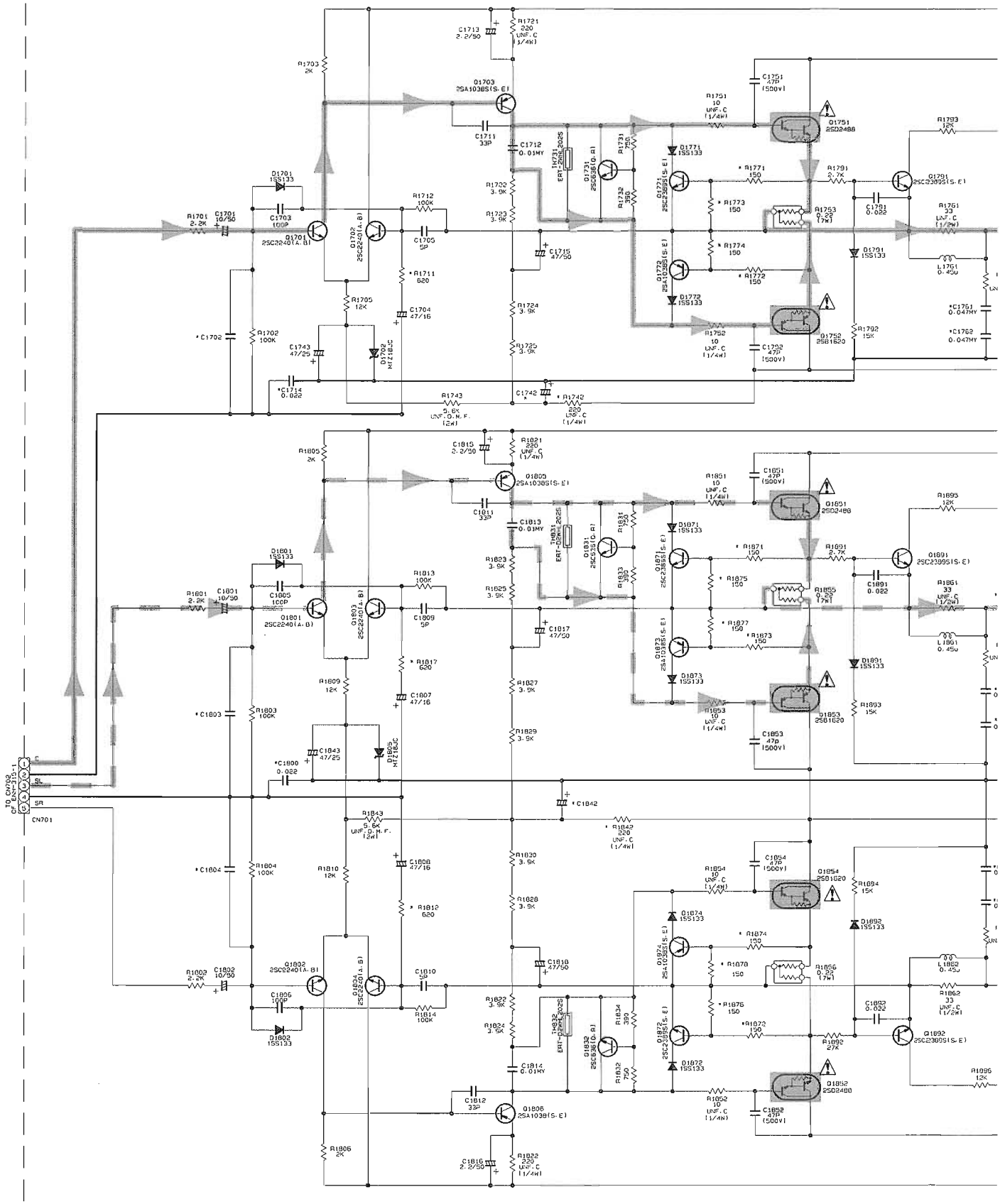


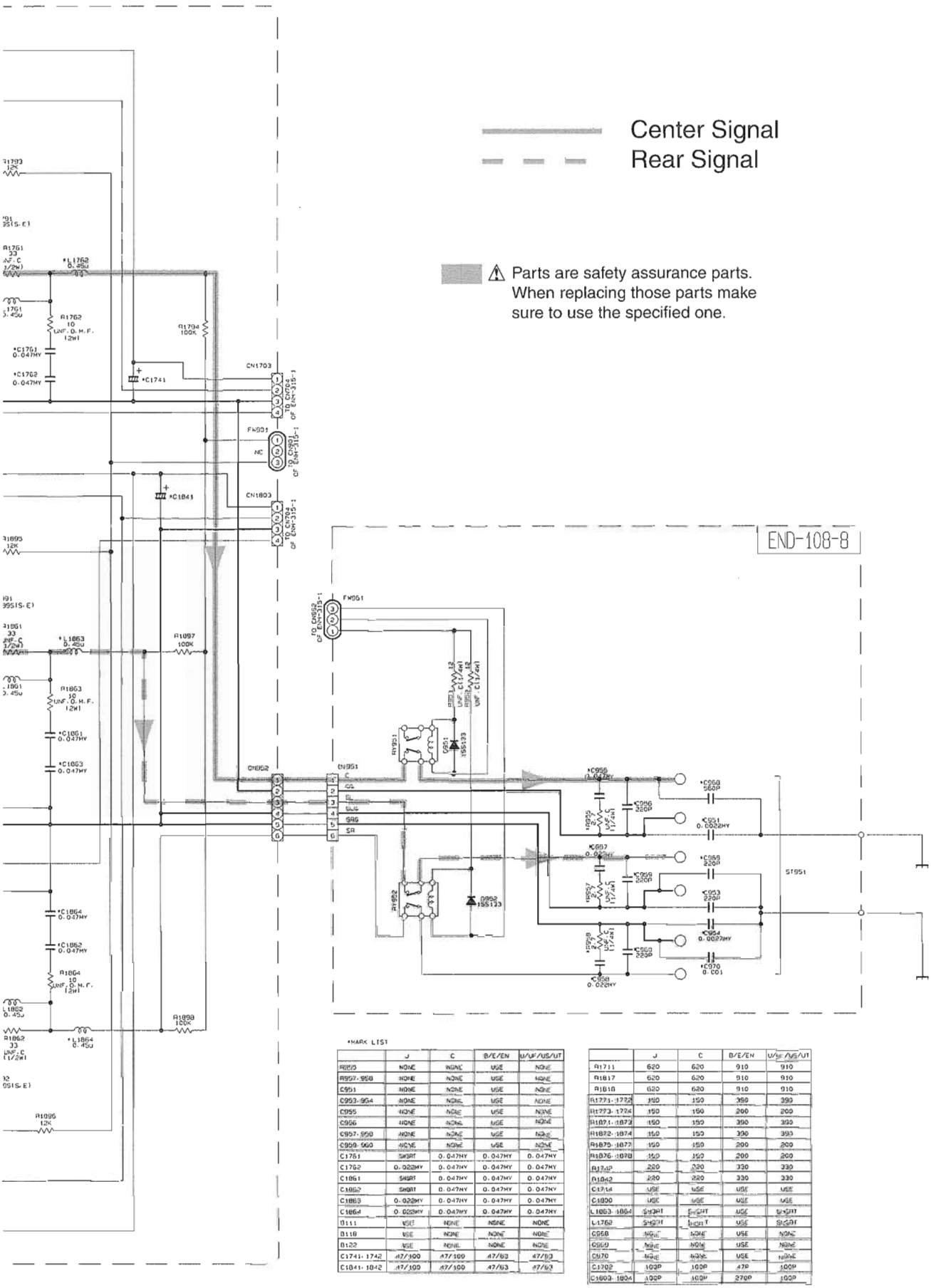


REF.NO	J	C	B,E,EN	U,UF,UB,UT
R711,R712	820	820	910	910
R741,R742	USED	USED	NONE	NONE
R741,R742	USED	USED	NONE	NONE
R744-R746	USED	USED	NONE	NONE
C744	USED	USED	NONE	NONE
R771-R774	560	560	390	390
C791-C792	0.022MY	0.047MY	0.047MY	0.047MY
C793-C794	SHORT	0.047MY	0.047MY	0.047MY
C891-C898	USED	USED	NONE	NONE
C895	USED	USED	NONE	NONE
C897,C804	12000/80	12000/80	12000/56	12000/56
R935-R938	NONE	NONE	USED	USED
C935-C938	NONE	NONE	USED	USED
C939-C949	NONE	NONE	USED	USED
C941-C944	NONE	NONE	USED	USED
D1741,D1742	USED	USED	NONE	NONE
D1741,D1742	USED	USED	NONE	NONE
R1741	220	220	330	330
R1744-R1746	USED	USED	NONE	NONE
C1744	USED	USED	NONE	NONE
D1841,D1842	USED	USED	NONE	NONE
D1841,D1842	USED	USED	NONE	NONE
R1841	220	220	330	330
R1844-R1846	USED	USED	NONE	NONE
C1844	USED	USED	NONE	NONE
B175-B177	NONE	NONE	USED	USED
D801-D804	USED	USED	NONE	NONE
B125	NONE	NONE	USED	USED
B240	NONE	NONE	USED	USED
R881-R884	4.7	4.7	3.3	3.3

REAR / CENTER AMP. SECTION

END~108~7





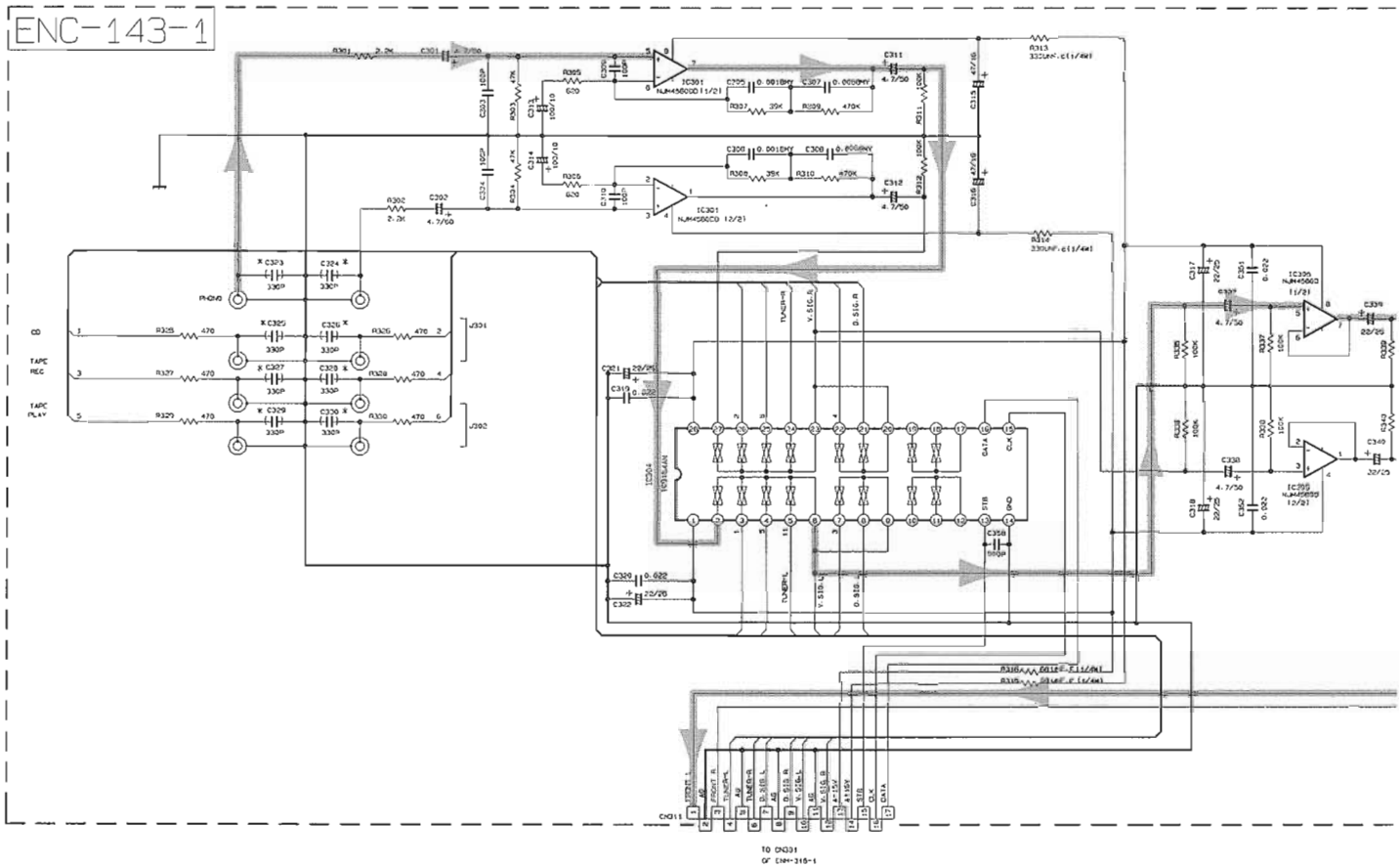
*MARK LIST

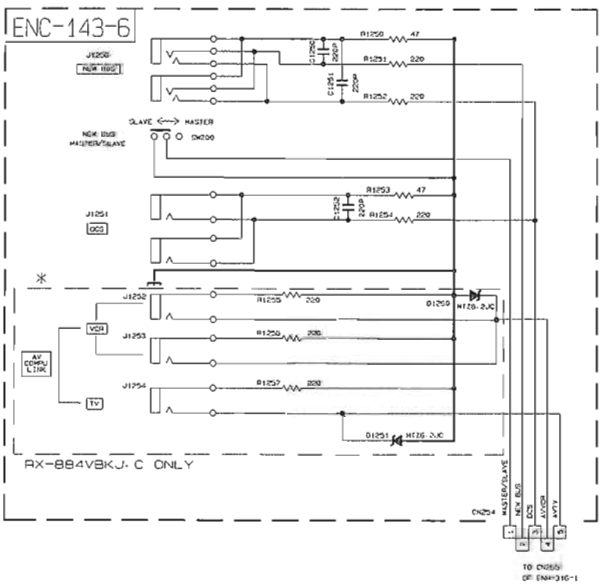
	J	C	B/E/EN	U/UF/US/UT
R955	NONE	NONE	USE	NONE
R957-958	NONE	NONE	USE	NONE
C951	NONE	NONE	USE	NONE
C953-954	NONE	NONE	USE	NONE
C955	NONE	NONE	USE	NONE
C956	NONE	NONE	USE	NONE
C957-958	NONE	NONE	USE	NONE
C959-960	NONE	NONE	USE	NONE
C1761	SHORT	0.047MY	0.047MY	0.047MY
C1762	0.022MY	0.047MY	0.047MY	0.047MY
C1861	SHORT	0.047MY	0.047MY	0.047MY
C1862	SHORT	0.047MY	0.047MY	0.047MY
C1863	0.022MY	0.047MY	0.047MY	0.047MY
C1864	0.022MY	0.047MY	0.047MY	0.047MY
B111	USE	NONE	NONE	NONE
B118	USE	NONE	NONE	NONE
B122	USE	NONE	NONE	NONE
C1741-1742	47/100	47/100	47/63	47/63
C1841-1842	47/100	47/100	47/63	47/63

	J	C	B/E/EN	U/UF/US/UT
R1711	620	620	910	910
R1817	620	620	910	910
R1818	620	620	910	910
R1771-1772	150	150	390	390
R1773-1774	150	150	200	200
R1871-1872	150	150	390	390
R1872-1874	150	150	390	390
R1875-1877	150	150	200	200
R1876-1878	150	150	200	200
R1942	220	220	330	330
R1943	220	220	330	330
C1914	USE	USE	USE	USE
C1930	USE	USE	USE	USE
L1863-1864	SHORT	SHORT	USE	SHORT
L1762	SHORT	SHORT	USE	SHORT
C958	NONE	NONE	USE	NONE
C959	NONE	NONE	USE	NONE
C970	NONE	NONE	USE	NONE
C1702	100P	100P	470	100P
C1803-1804	100P	100P	2700	100P

D E F G H

■ AUDIO SELECTOR SECTION

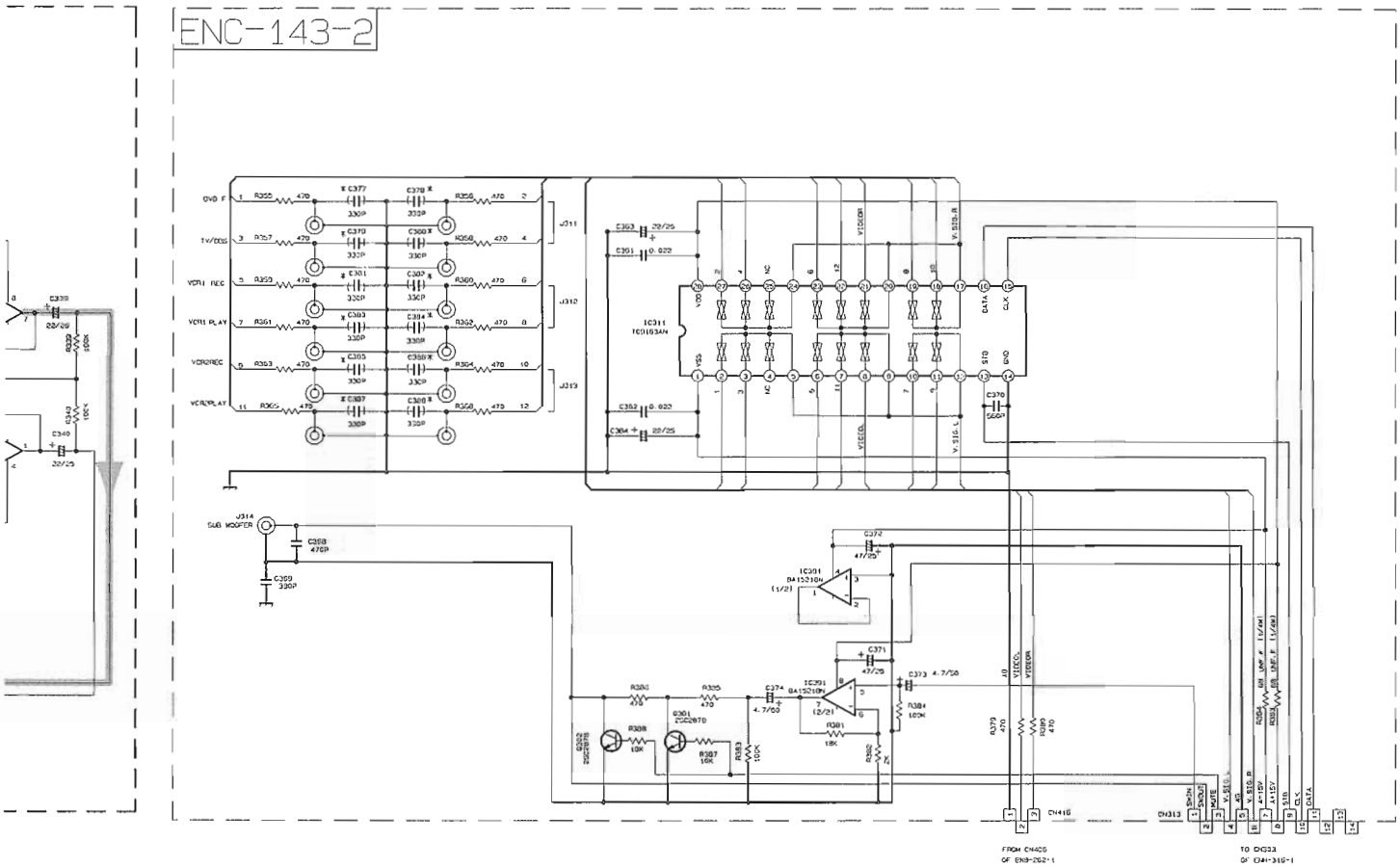




* MARK. LIST

	RX- B
C323-C330	
C377-C388	

RX-



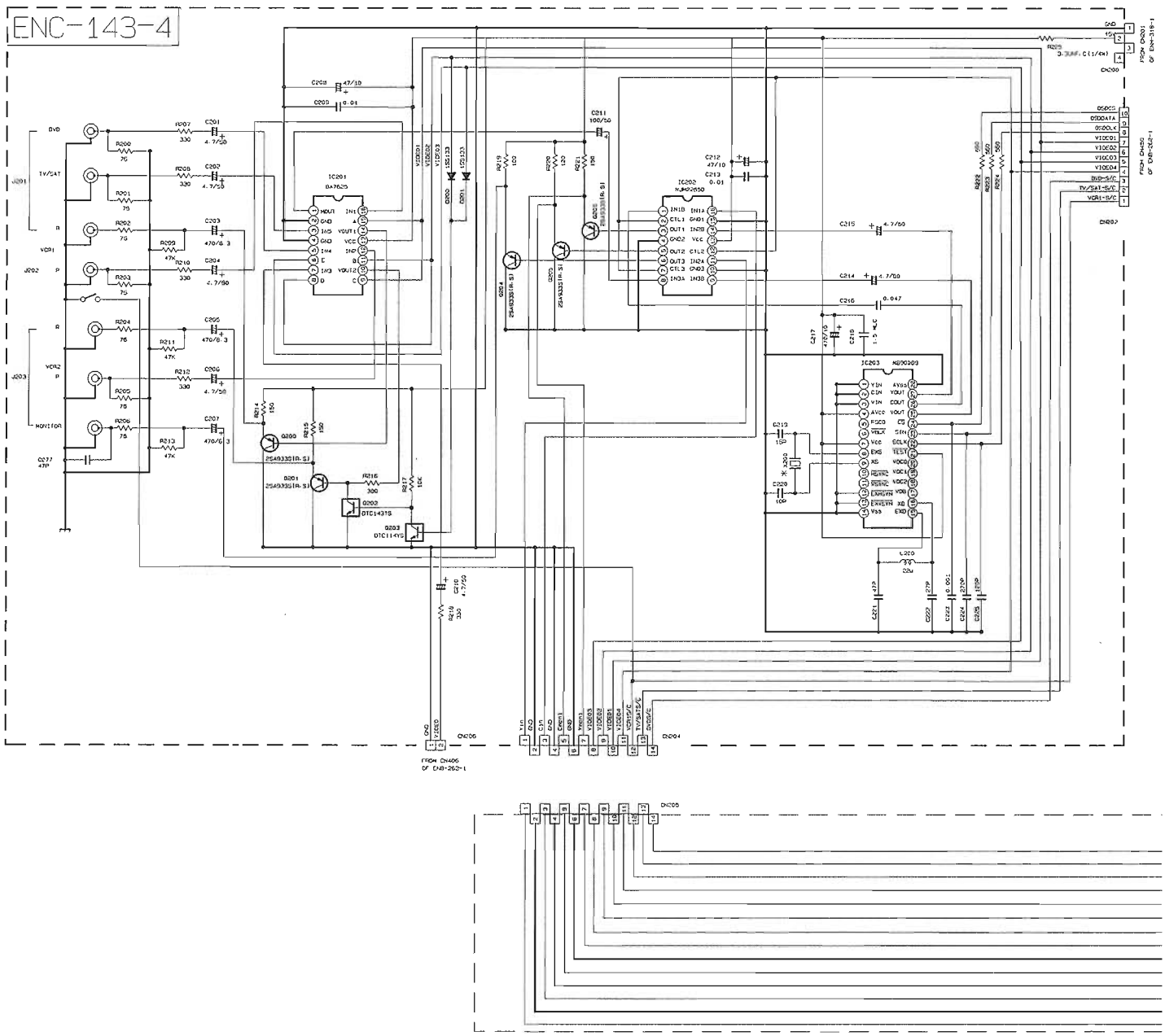
RK. LIST

	RX-884RBK B, E, EN	RX-884VBK J, C, U, UT	RX-884PBK U, UF, US, UT	RX-884PGD UF
-C330	USED	NONE	NONE	NONE
-C388	USED	NONE	NONE	NONE

RX-884VBKJ, C ONLY

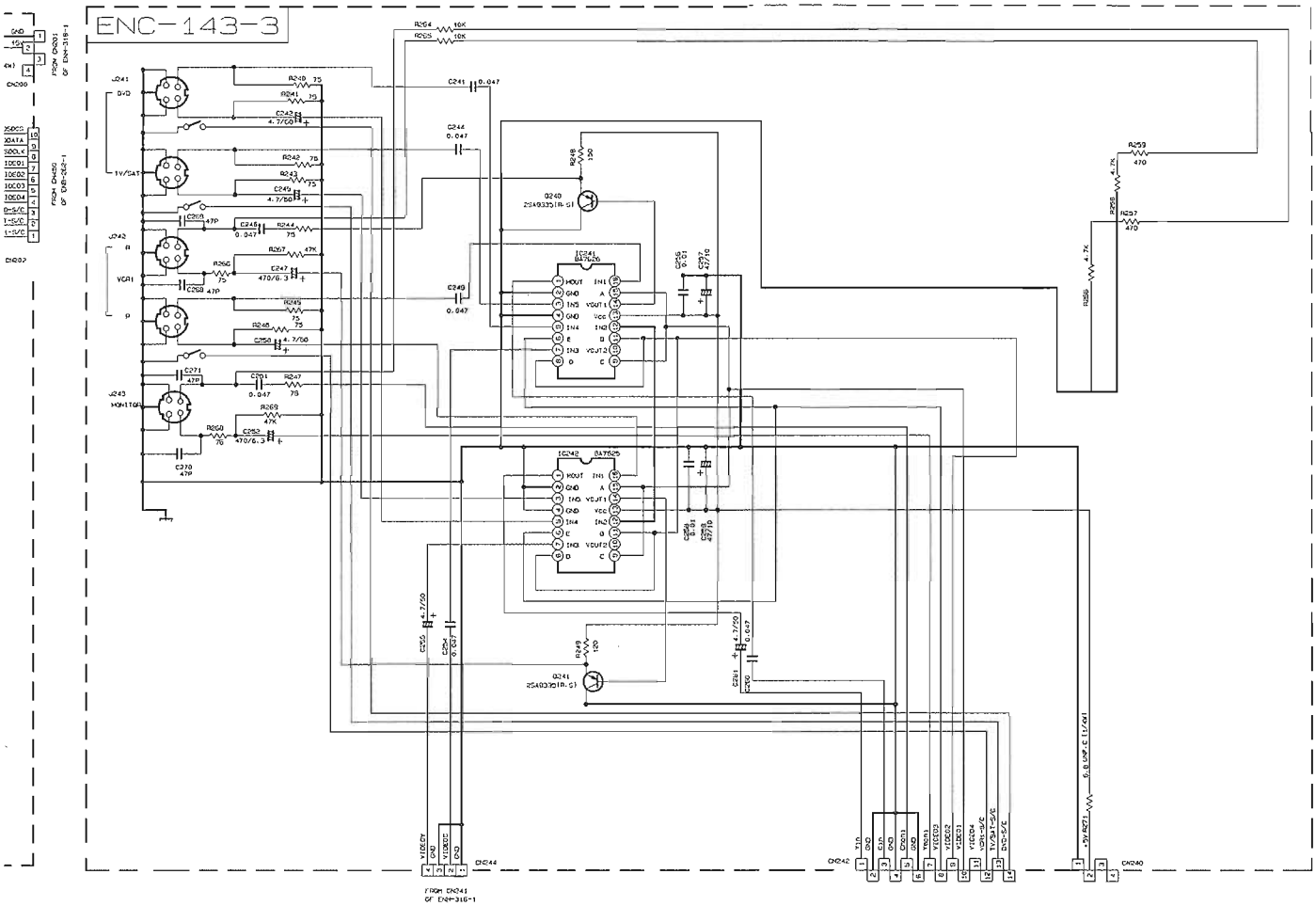
Main Signal

VIDEO SECTION



*MARK LIST

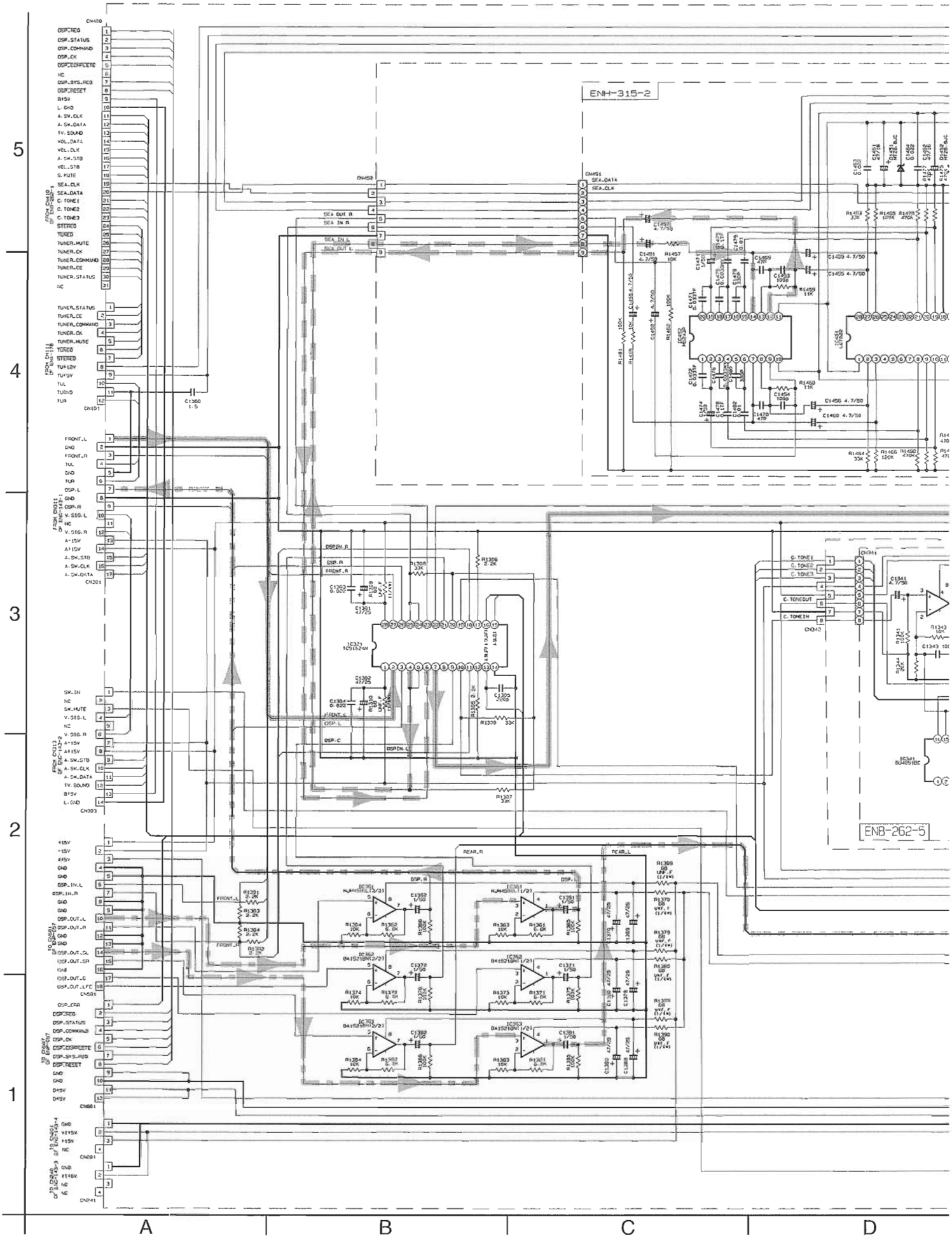
	RX-884VBK J, C, U, UT
X200	QAX0260-001Z

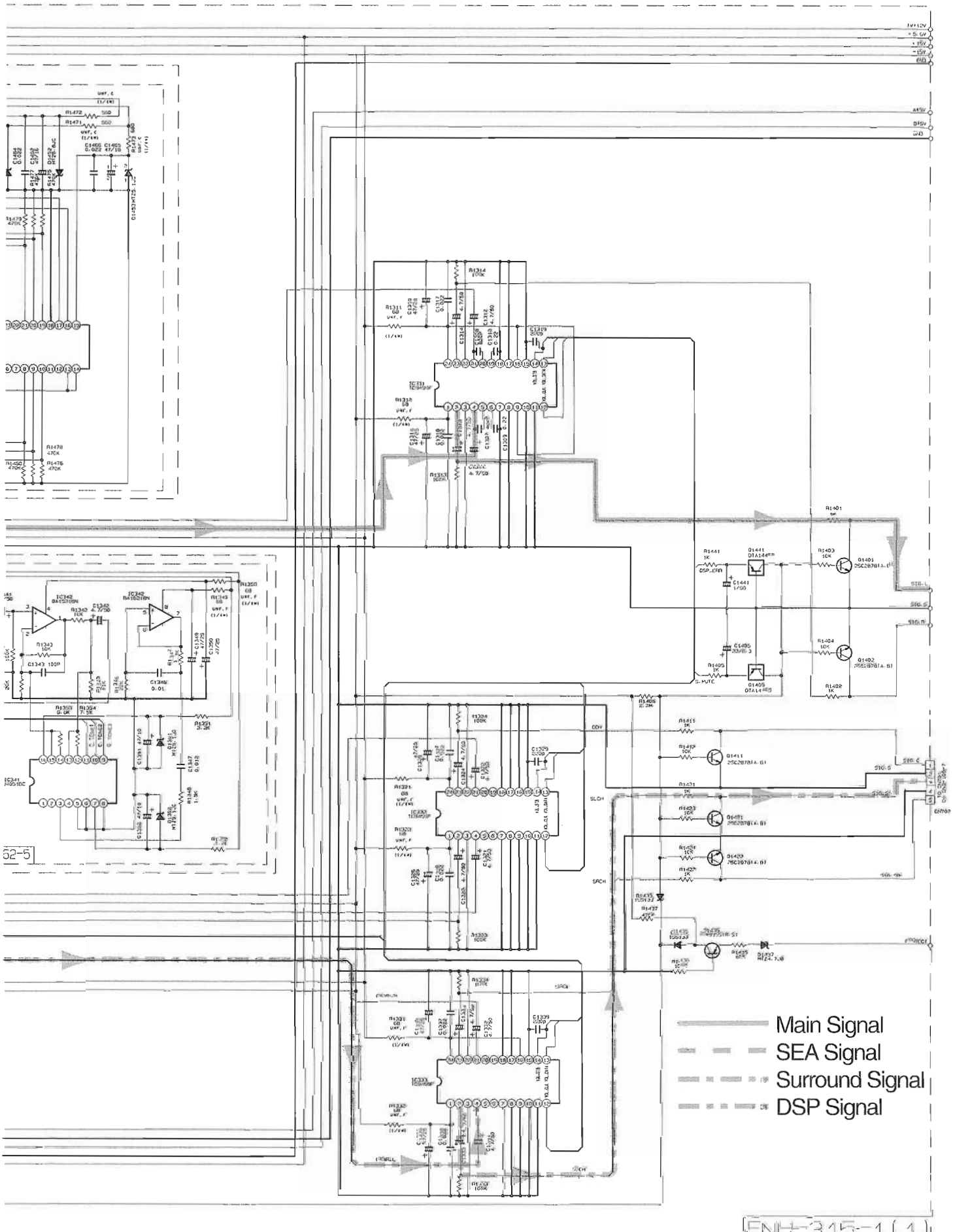


4VBK UT	RX-884RBK B, E, EN	RX-884PGD U, UF, US, UT	RX-884PBK UF
)-001Z	QAX0261-001Z	QAX0261-001Z	QAX0261-001Z

D E F G H

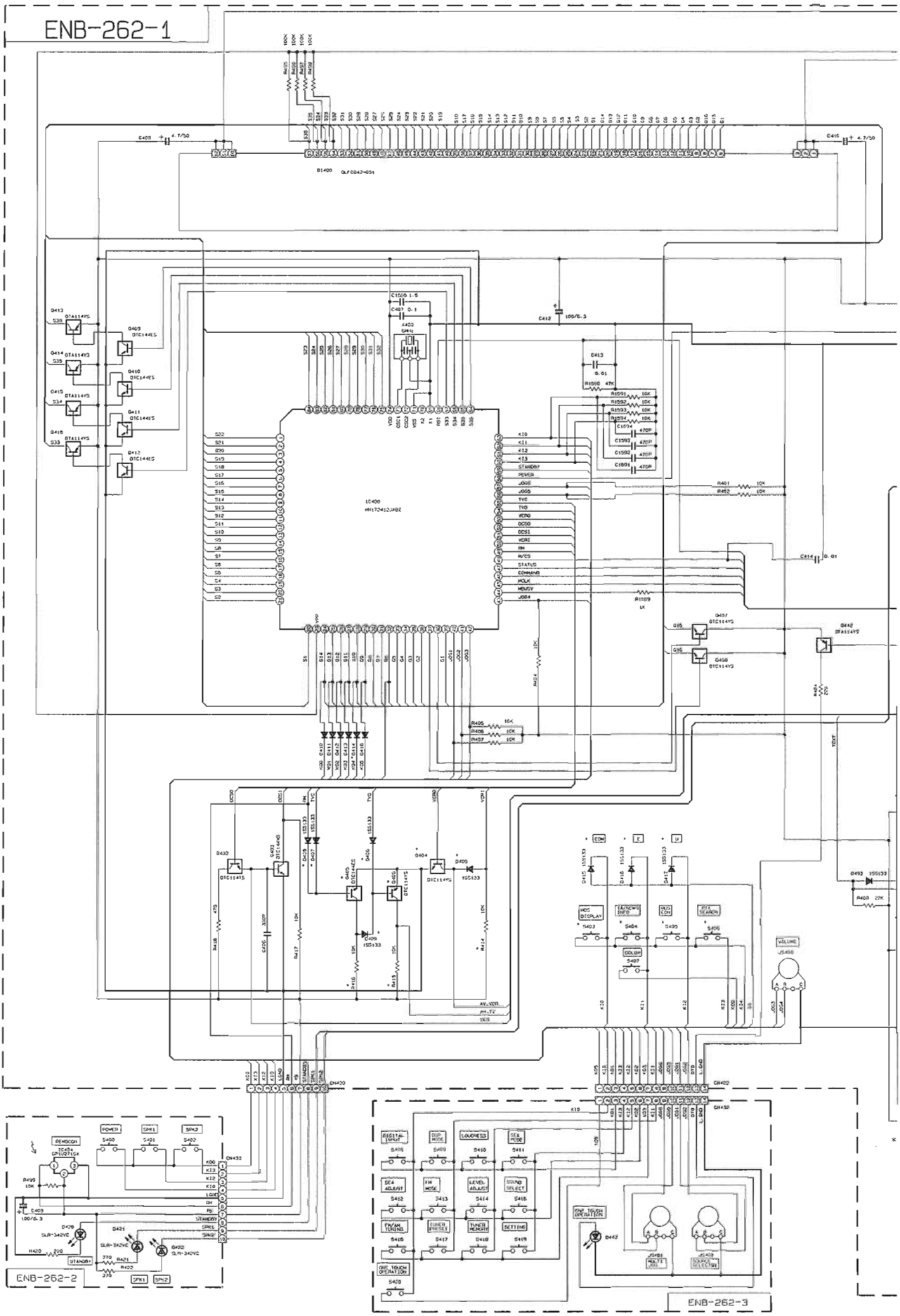
■ VOLUME CONTROL SECTION

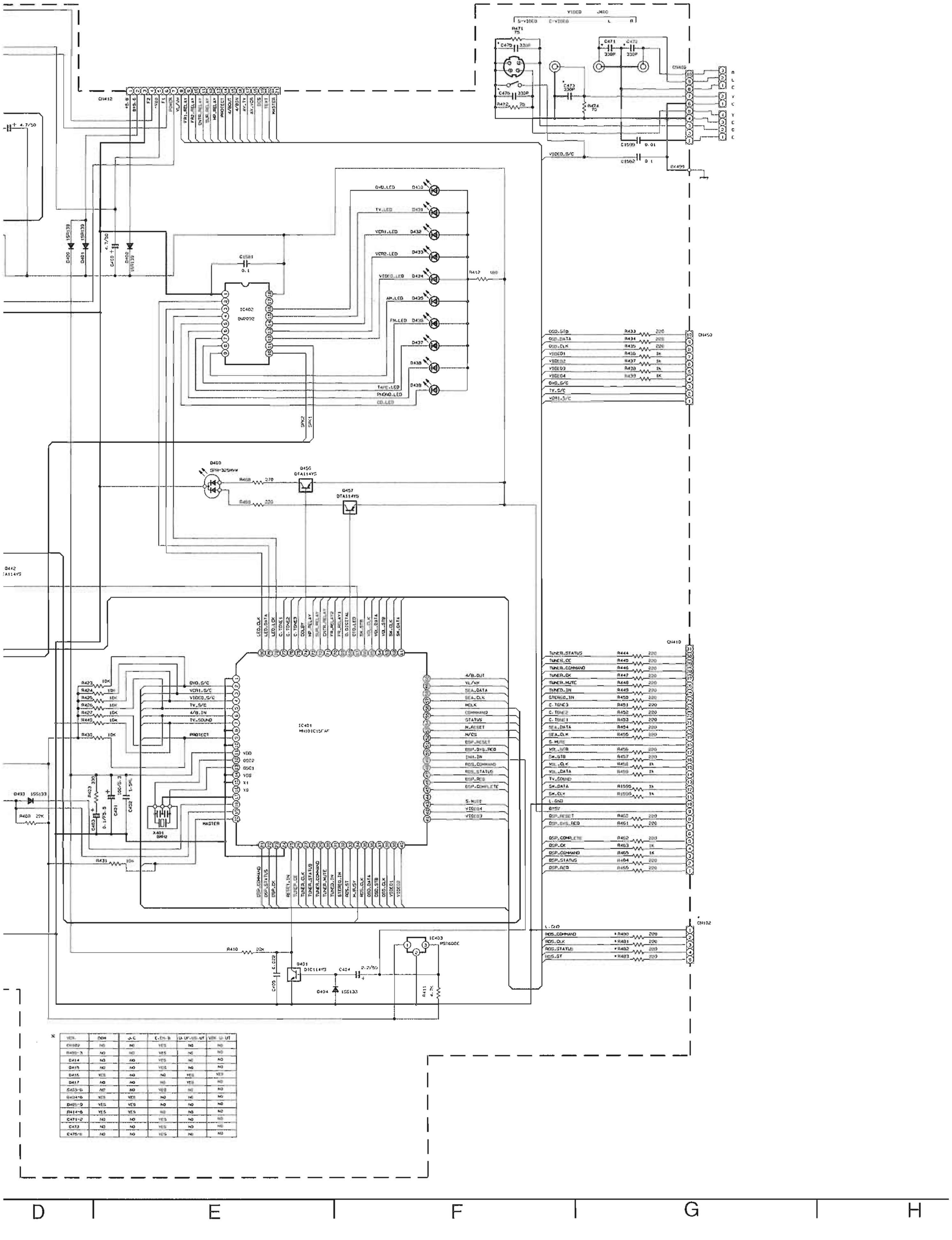




ENH-315-1(1)

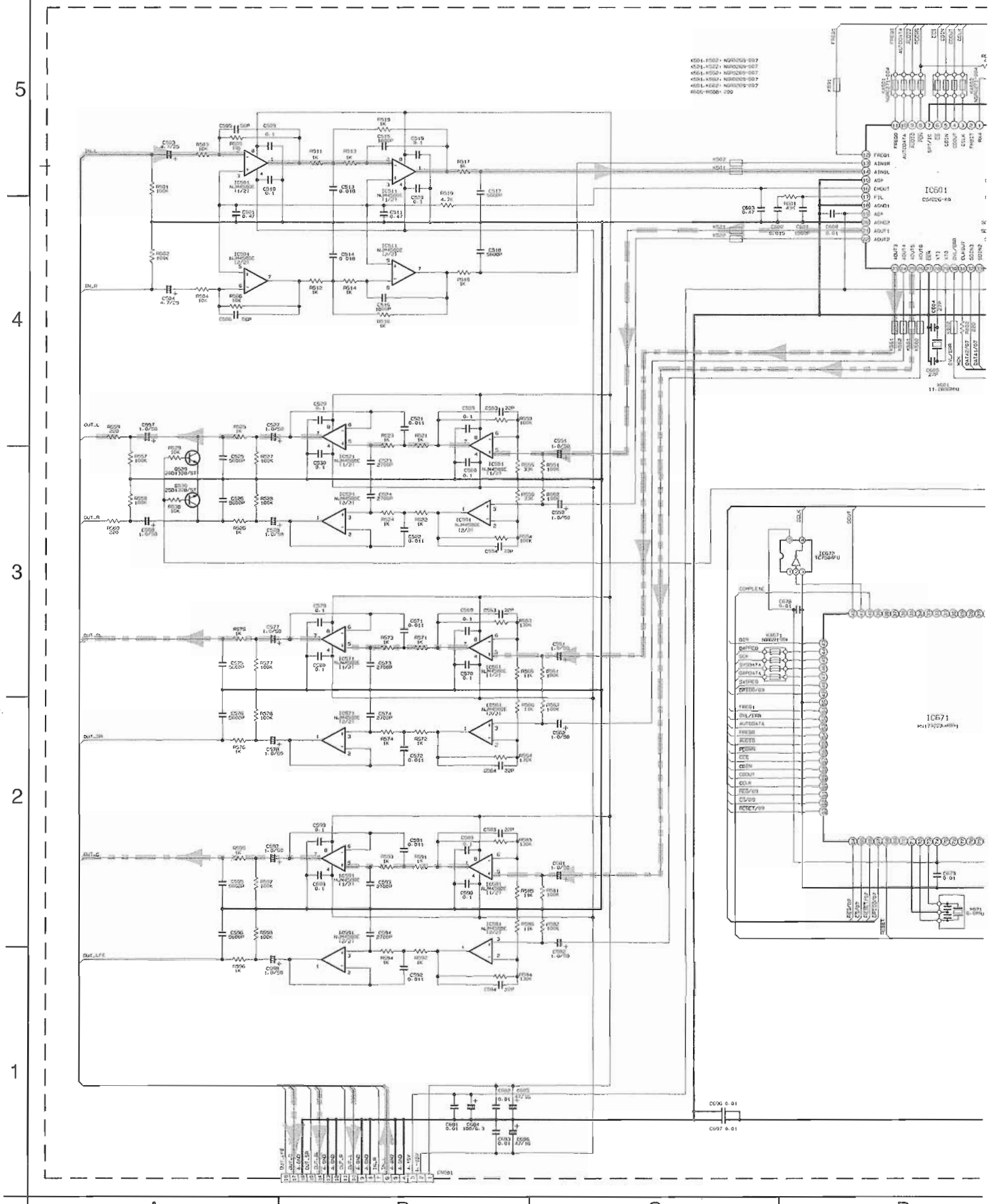
FL DISPLAY SECTION

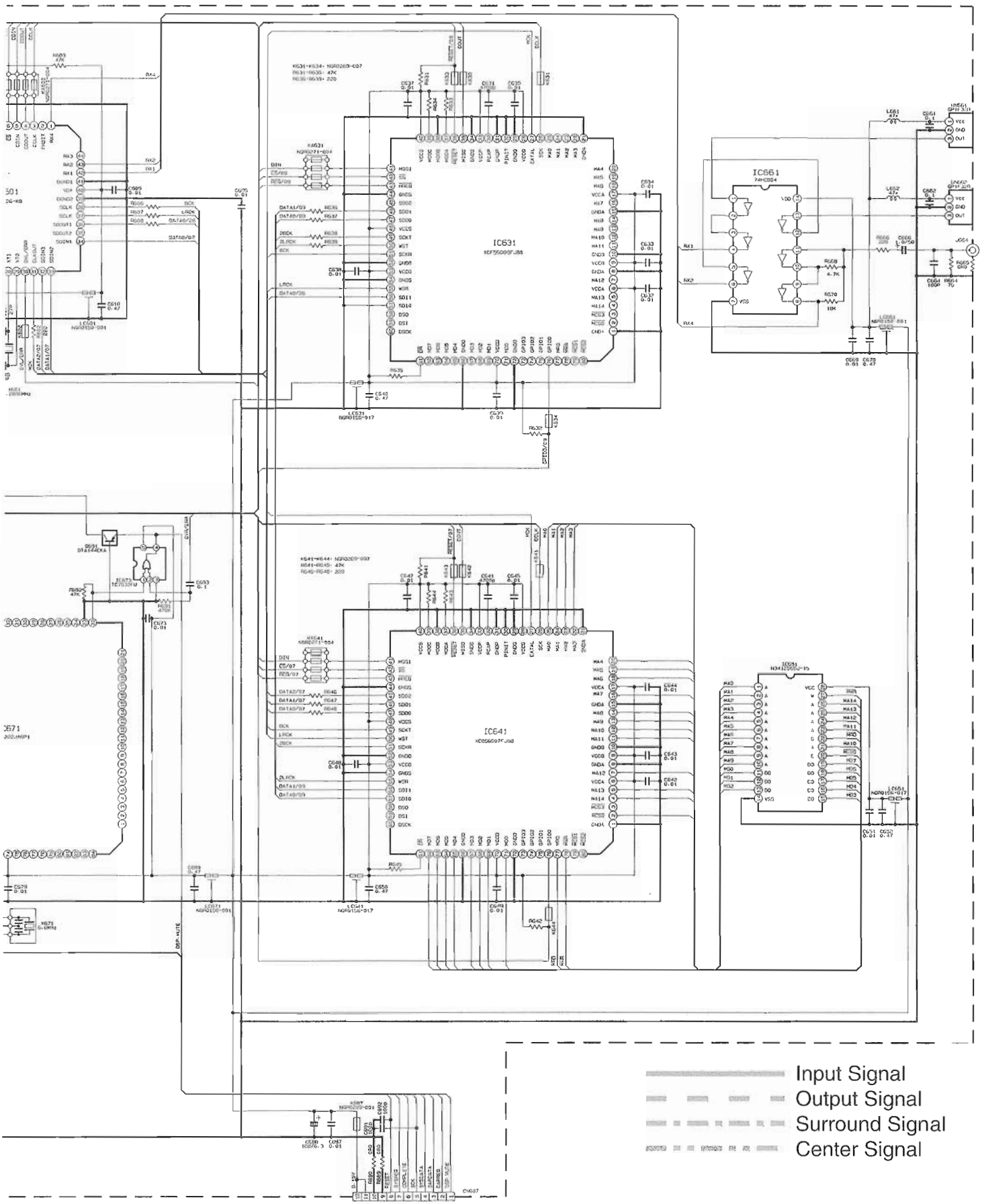




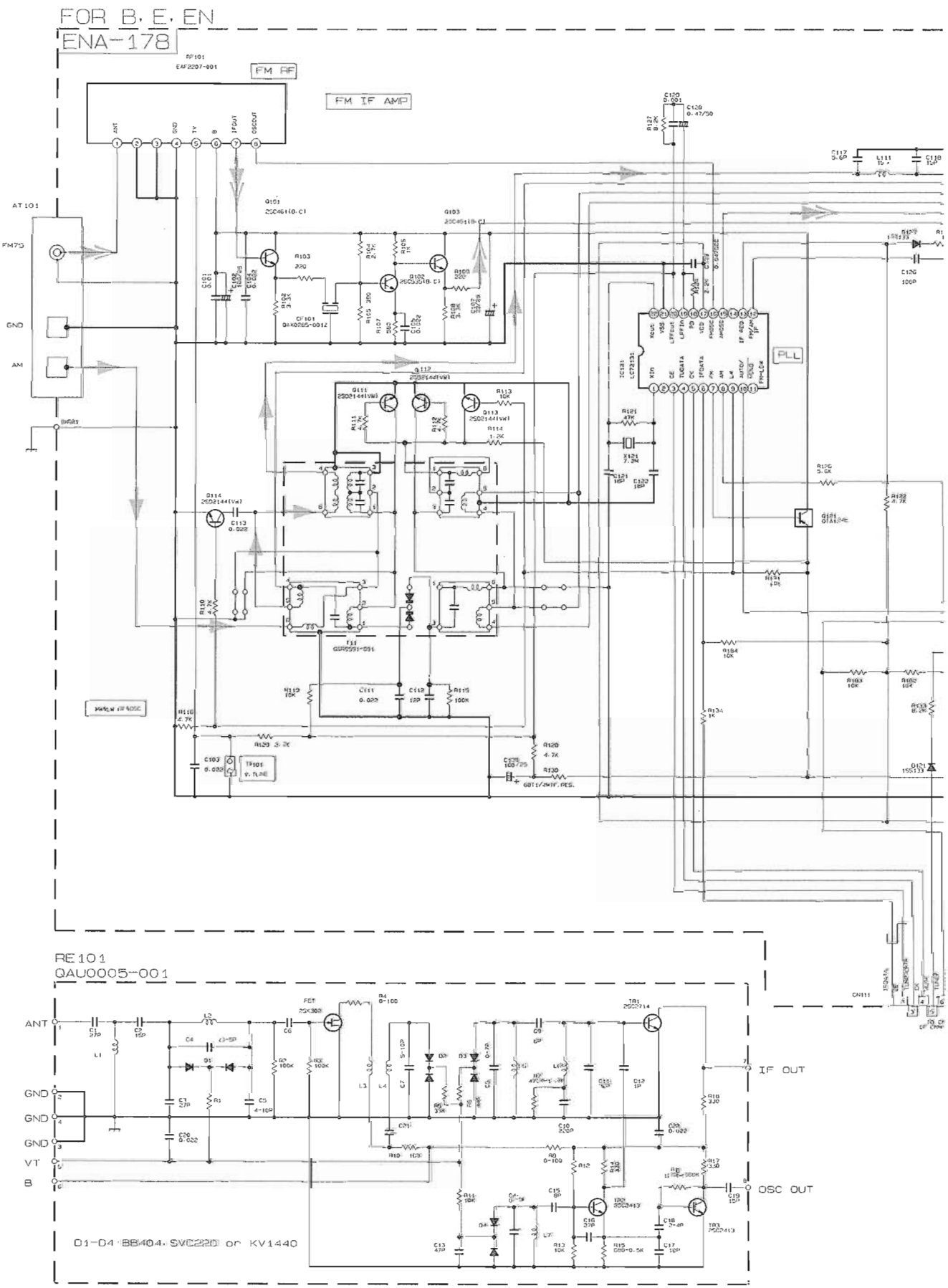
VER.	DOH	J-C	E-EH-B	U-UP-US-UT	VBK-U-UT
CN102	NO	NO	YES	NO	NO
R480-3	NO	NO	YES	NO	NO
D414	NO	NO	YES	NO	NO
D415	NO	NO	YES	NO	NO
D416	YES	NO	NO	YES	YES
D417	NO	NO	NO	YES	NO
D453-6	NO	NO	YES	NO	NO
R434-6	YES	YES	NO	NO	NO
D405-9	YES	YES	NO	NO	NO
R414-6	YES	YES	NO	NO	NO
C471-2	NO	NO	YES	NO	NO
C473	NO	NO	YES	NO	NO
C475-6	NO	NO	YES	NO	NO

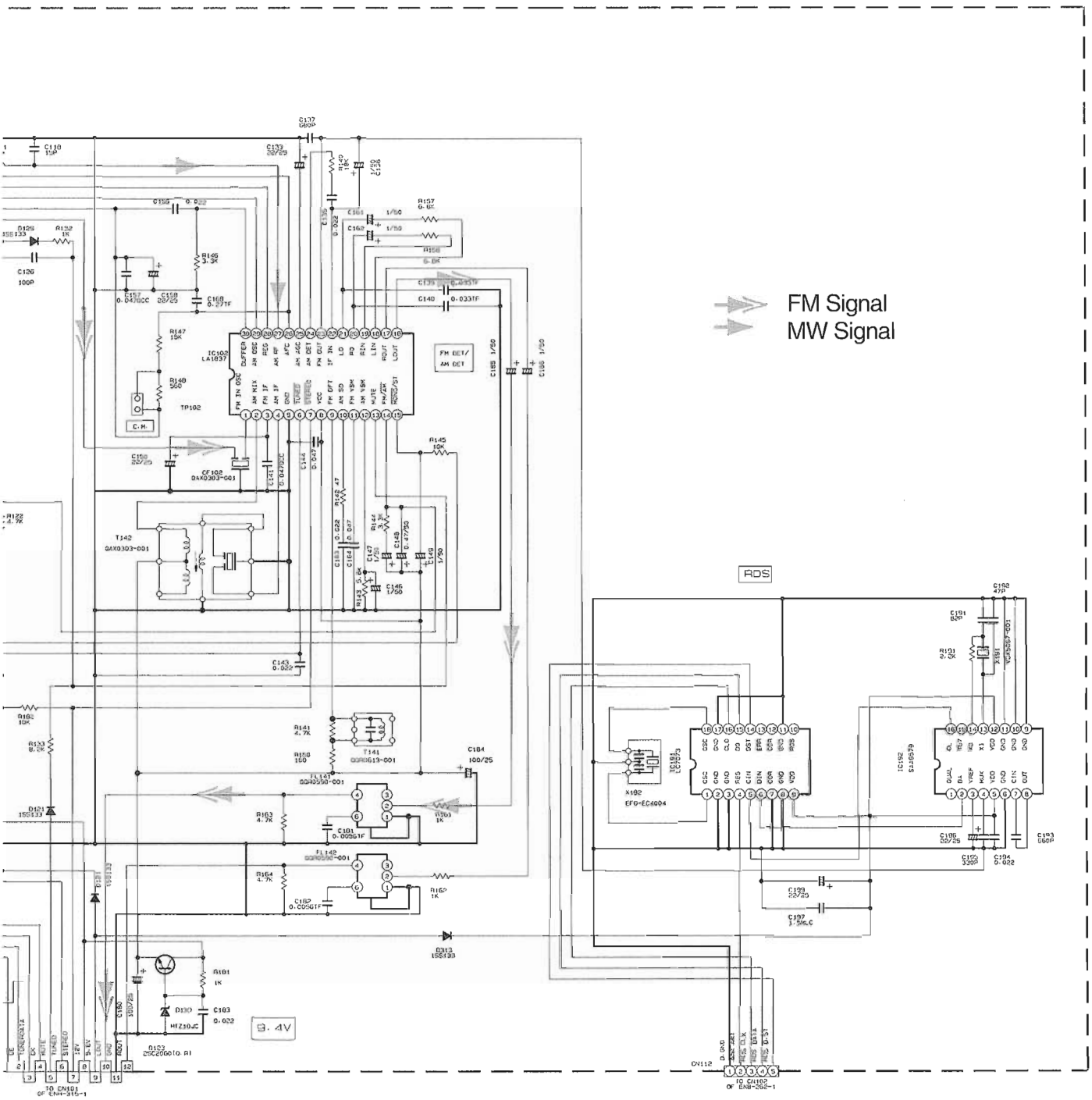
DSP SECTION




IC631
IC641
IC661
Input Signal
Output Signal
Surround Signal
Center Signal

■ Tuner Section

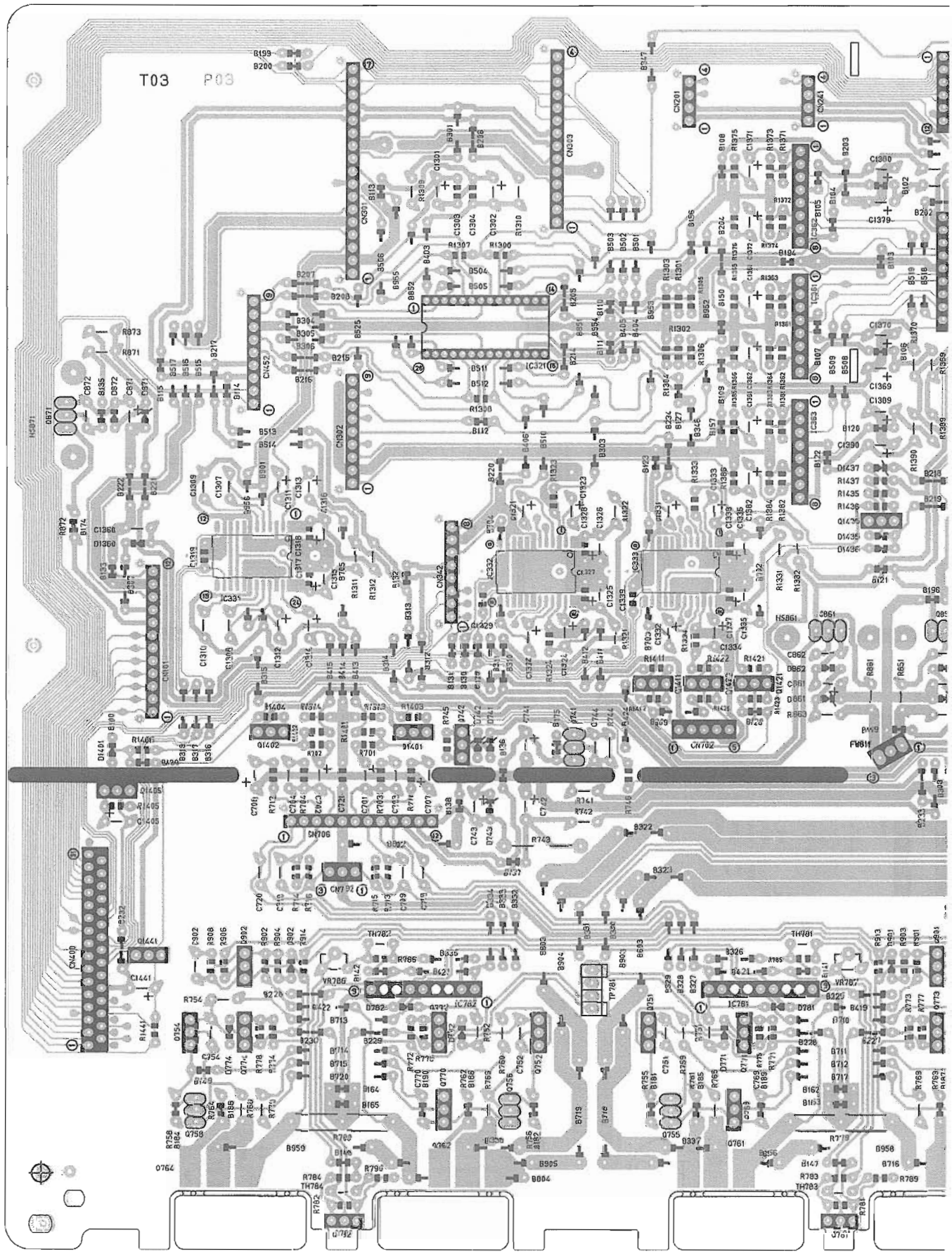


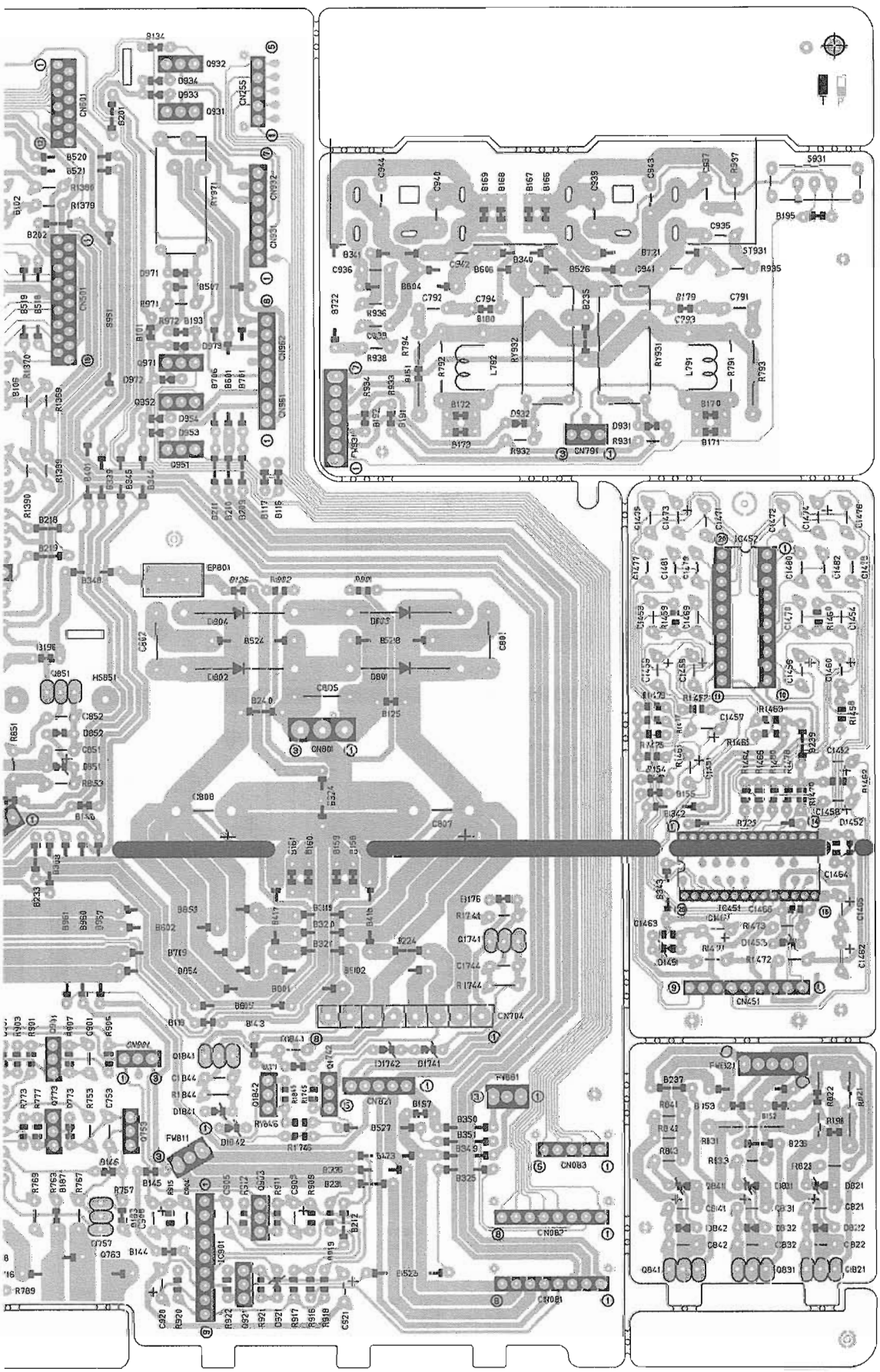


D | E | F | G | H

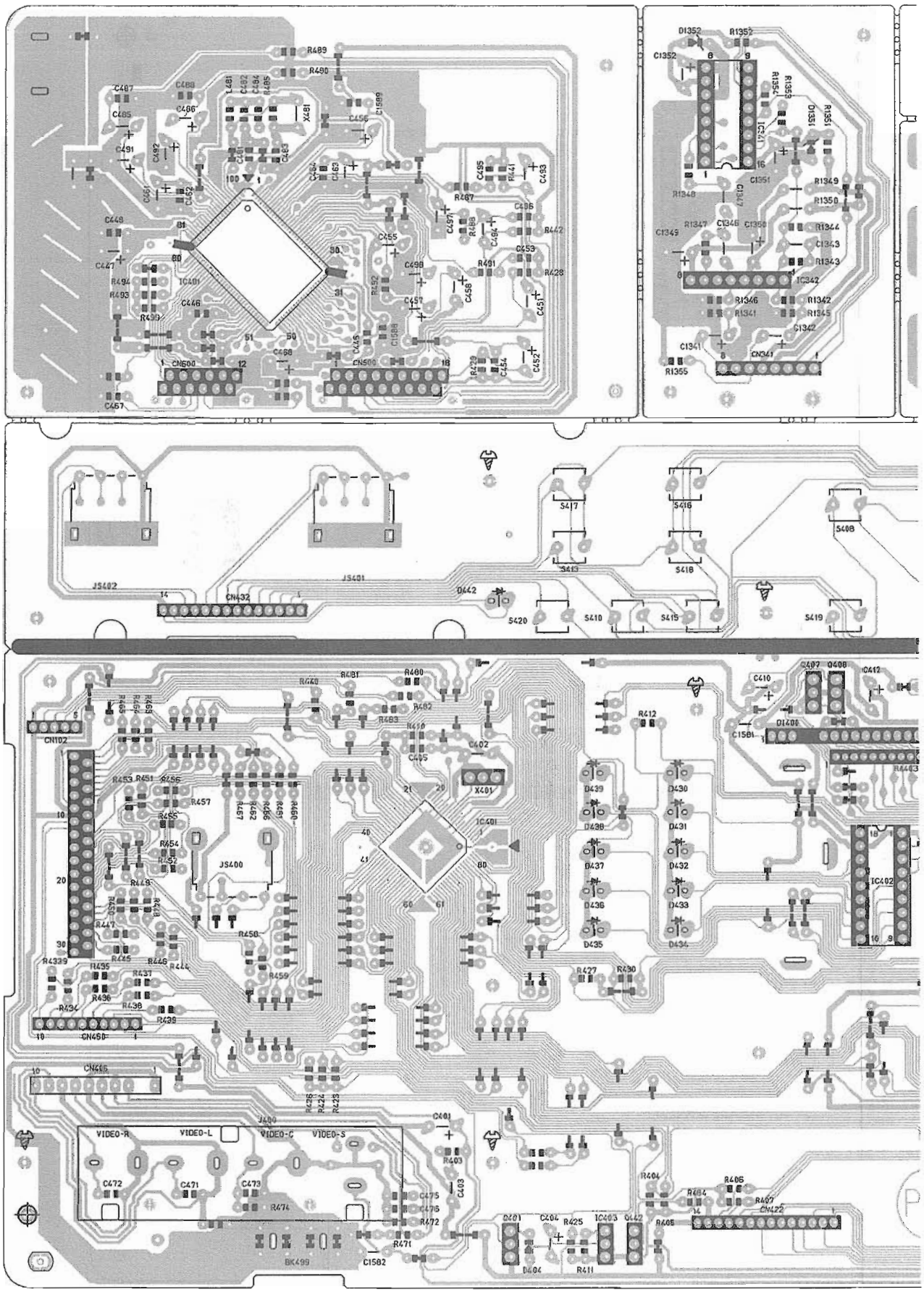
Printed Circuit Boards

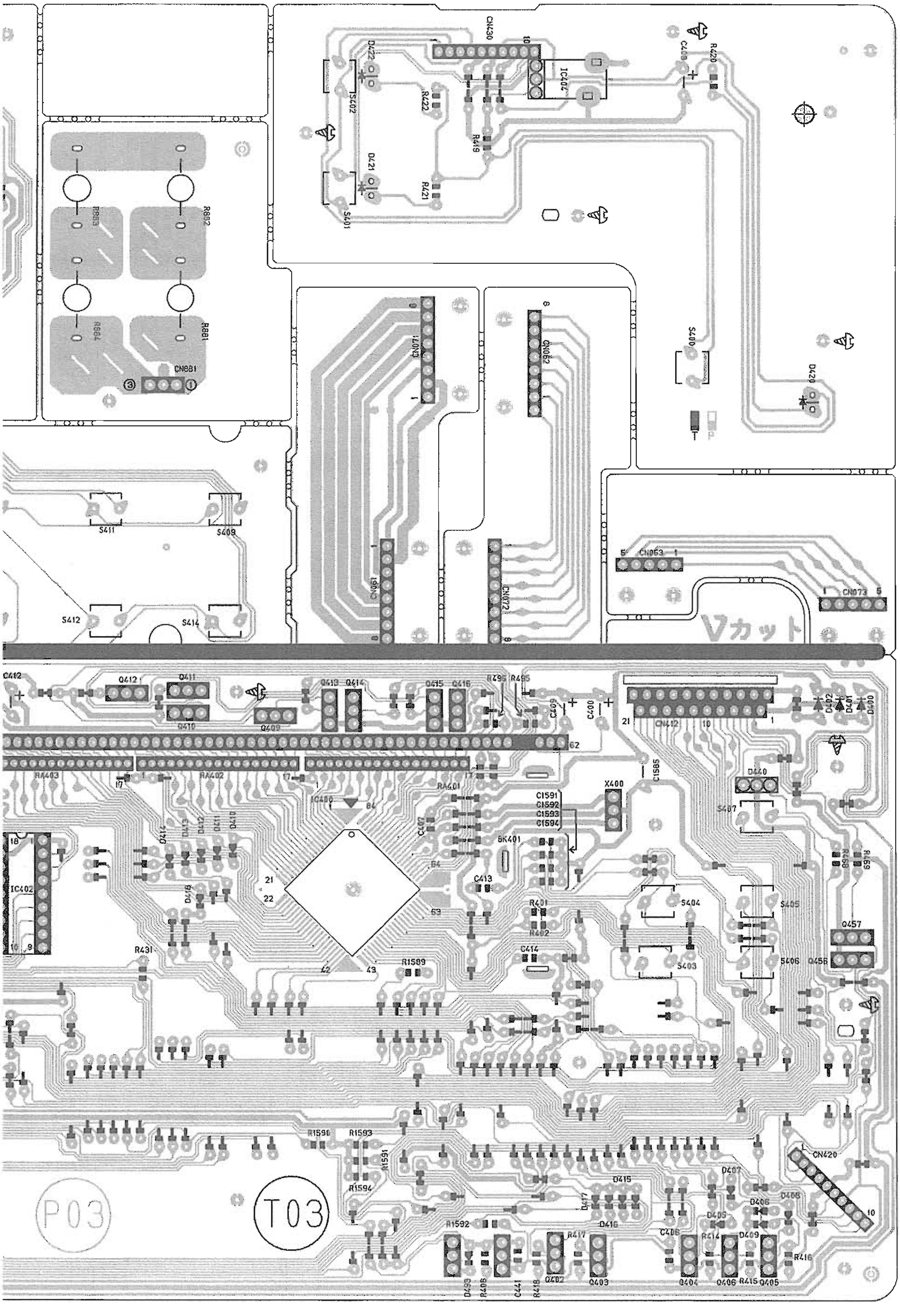
■ Main P.C. Board





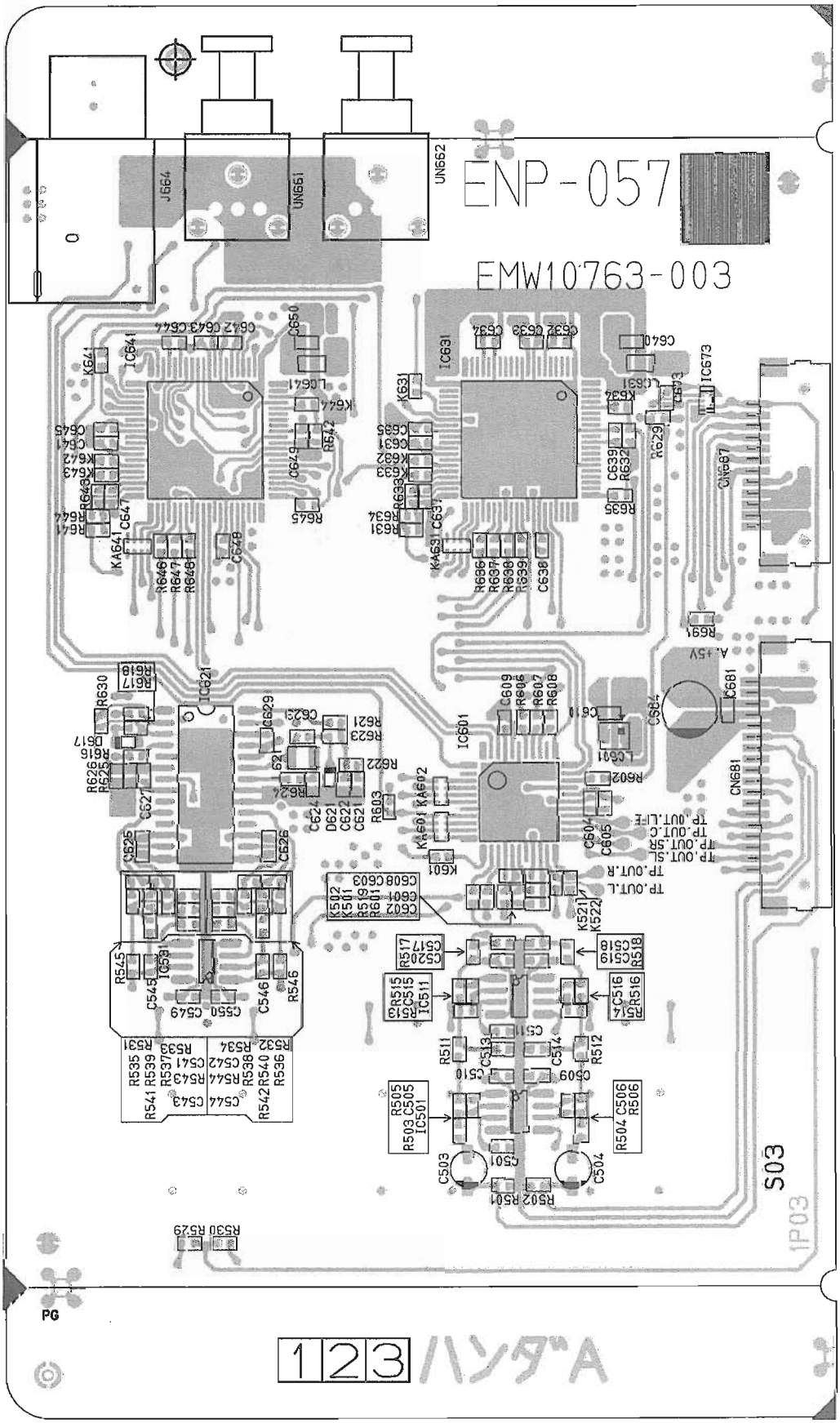
Front P.C. Board

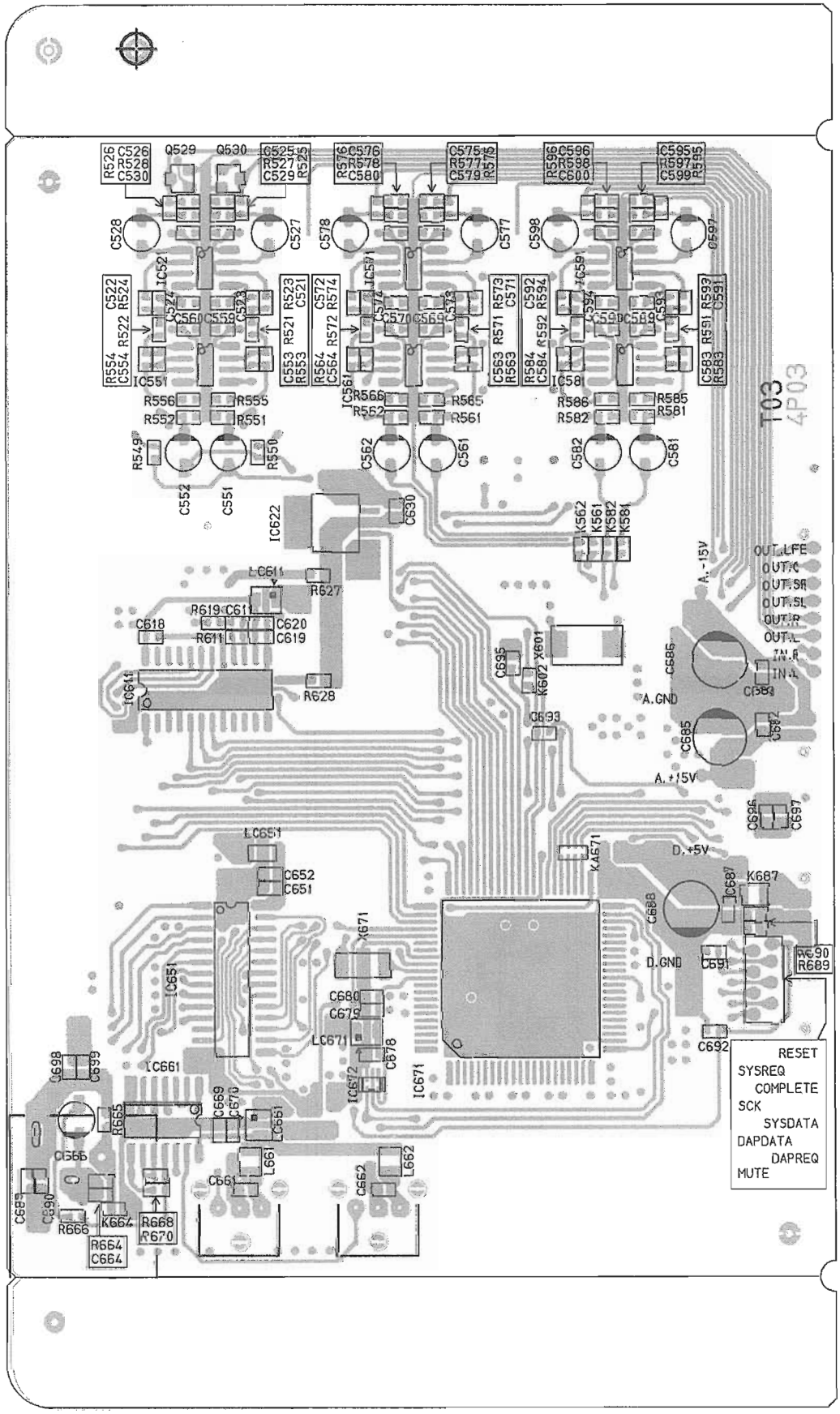



CN430
IC404
D422
S402
R422
R419
D421
R421
S401
C408
R420
R883
R882
R884
R881
CN881
CN071
CN062
S400
D420
S411
S409
S412
S414
CN061
CN072
CN063
CN073
Vカット
C412
Q412
Q411
Q410
Q409
Q413
Q414
Q415
Q416
R496
R495
C409
C400
CN412
D402
D401
D400
RA403
RA402
RA401
IC400
D440
S407
X400
C1585
C1591
C1592
C1593
C1594
BK401
C413
R401
R402
C414
S404
S403
S405
S406
R468
R469
Q457
Q456
IC402
R431
R1589
D414
D413
D412
D411
D410
D416
R1590
R1593
R1591
R1594
R1592
CN420
D407
D415
D417
D418
D408
D406
D405
D409
C408
R414
R417
R416
R415
D423
R408
C441
R418
Q402
Q403
Q404
Q406
Q405
P03
T03

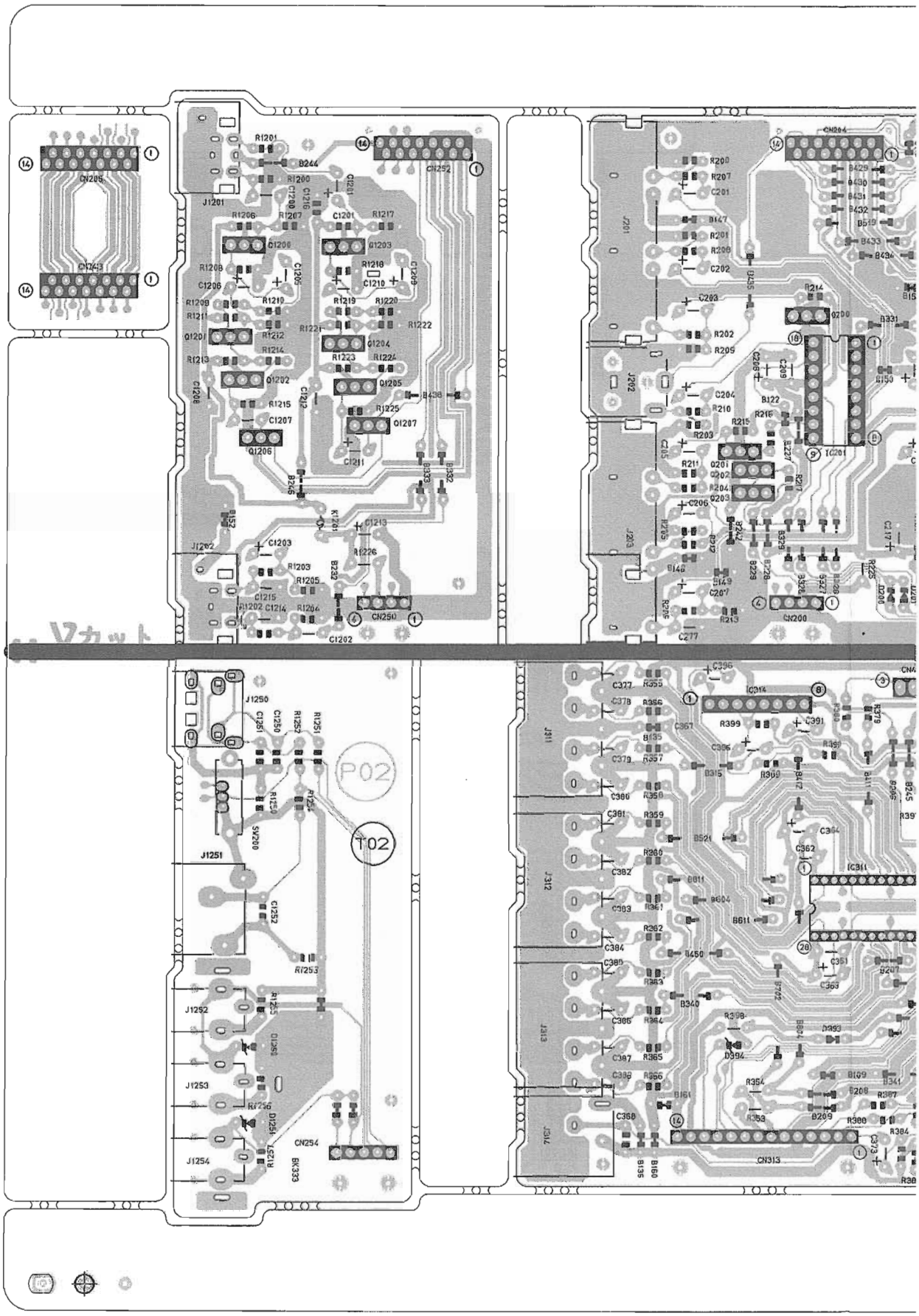
D | E | F | G | H

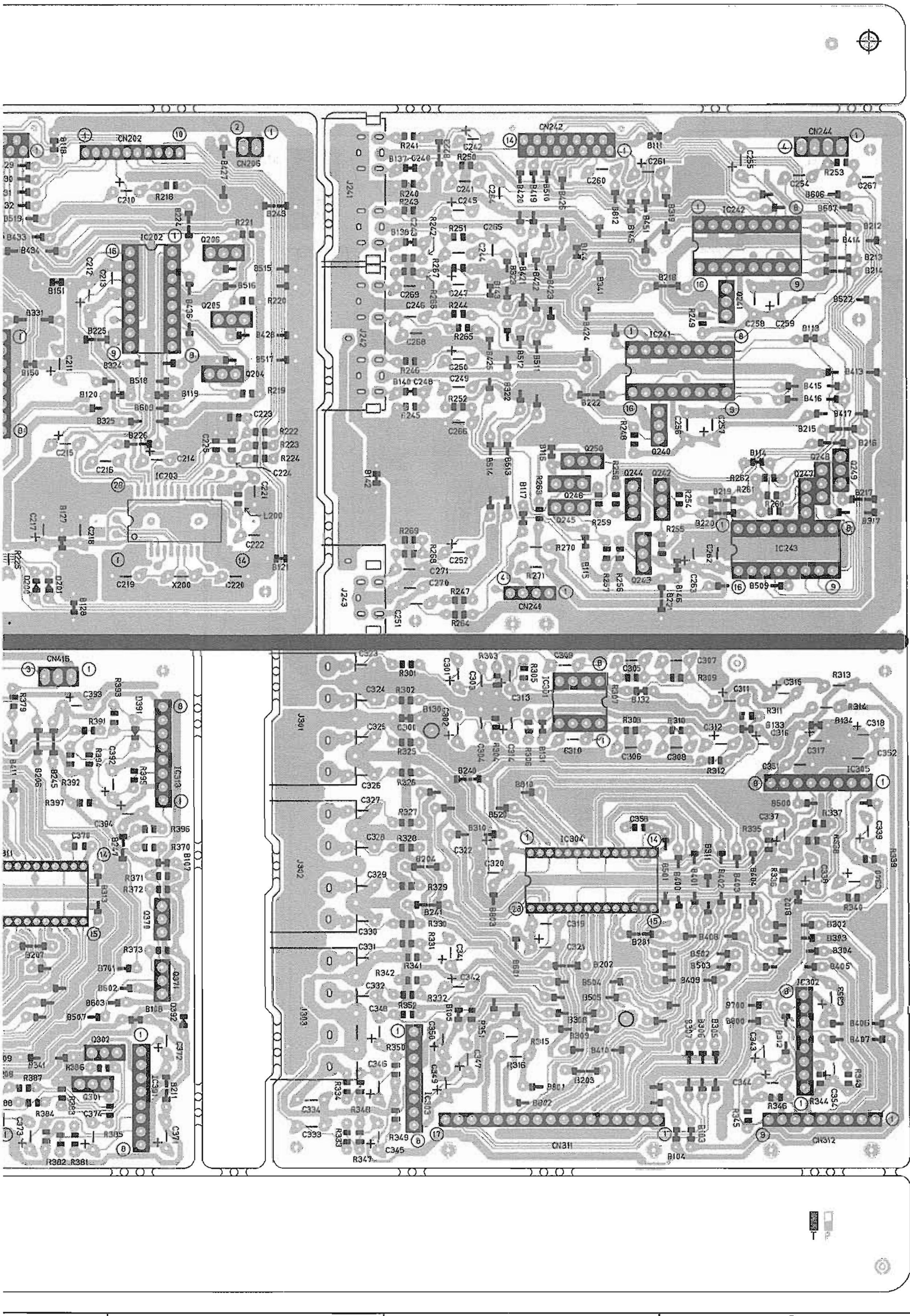
AC-3 P.C. Board




T03
4P03
OUT.LFE
OUT.C
OUT.SR
OUT.SL
OUT.R
OUT.L
IN.R
IN.L
A.-15V
A.GND
A.+15V
D.+5V
D.GND
RESET
SYSREQ
COMPLETE
SCK
SYSDATA
DAPDATA
DAPREQ
MUTE

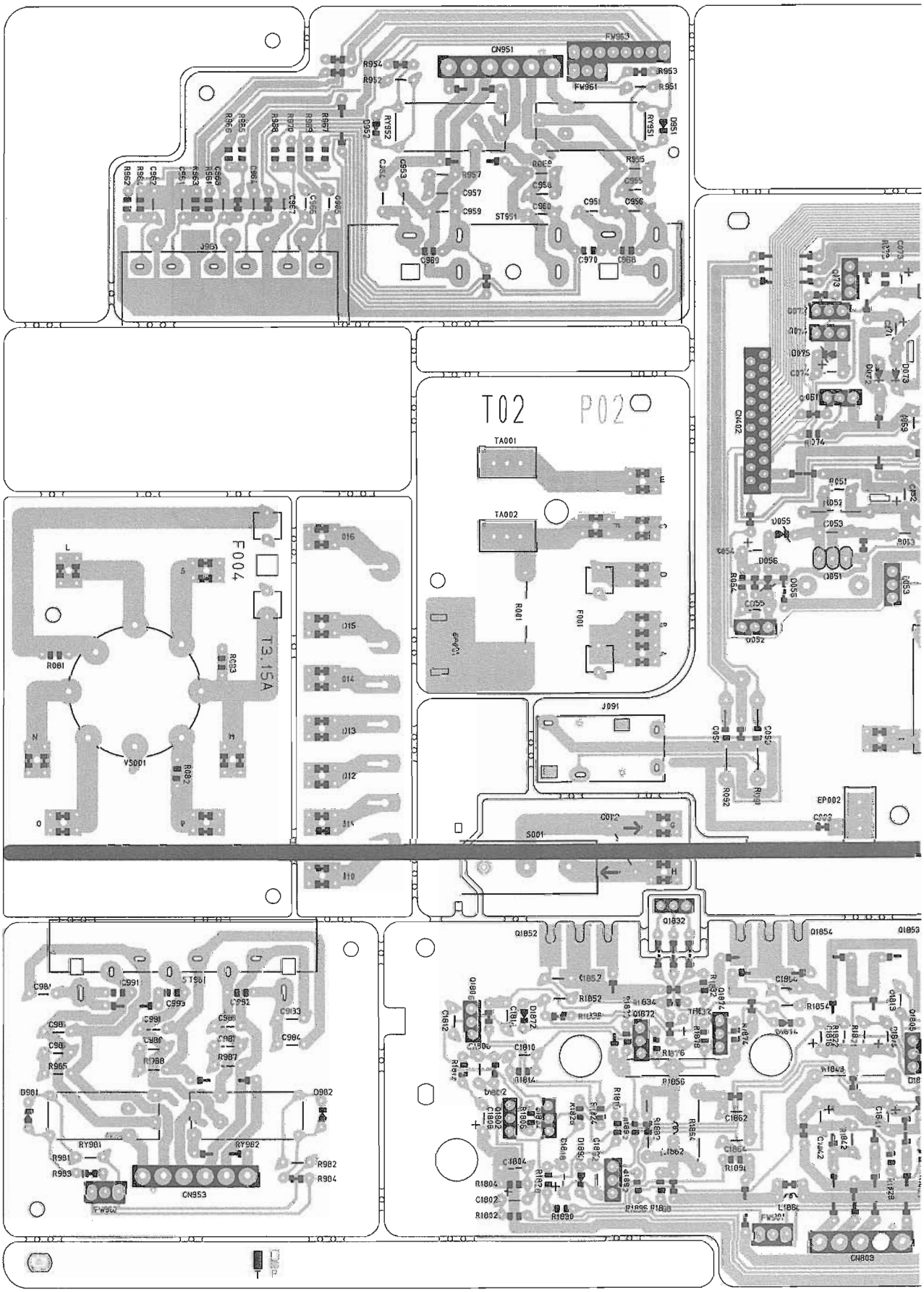
■ Control P.C. Board

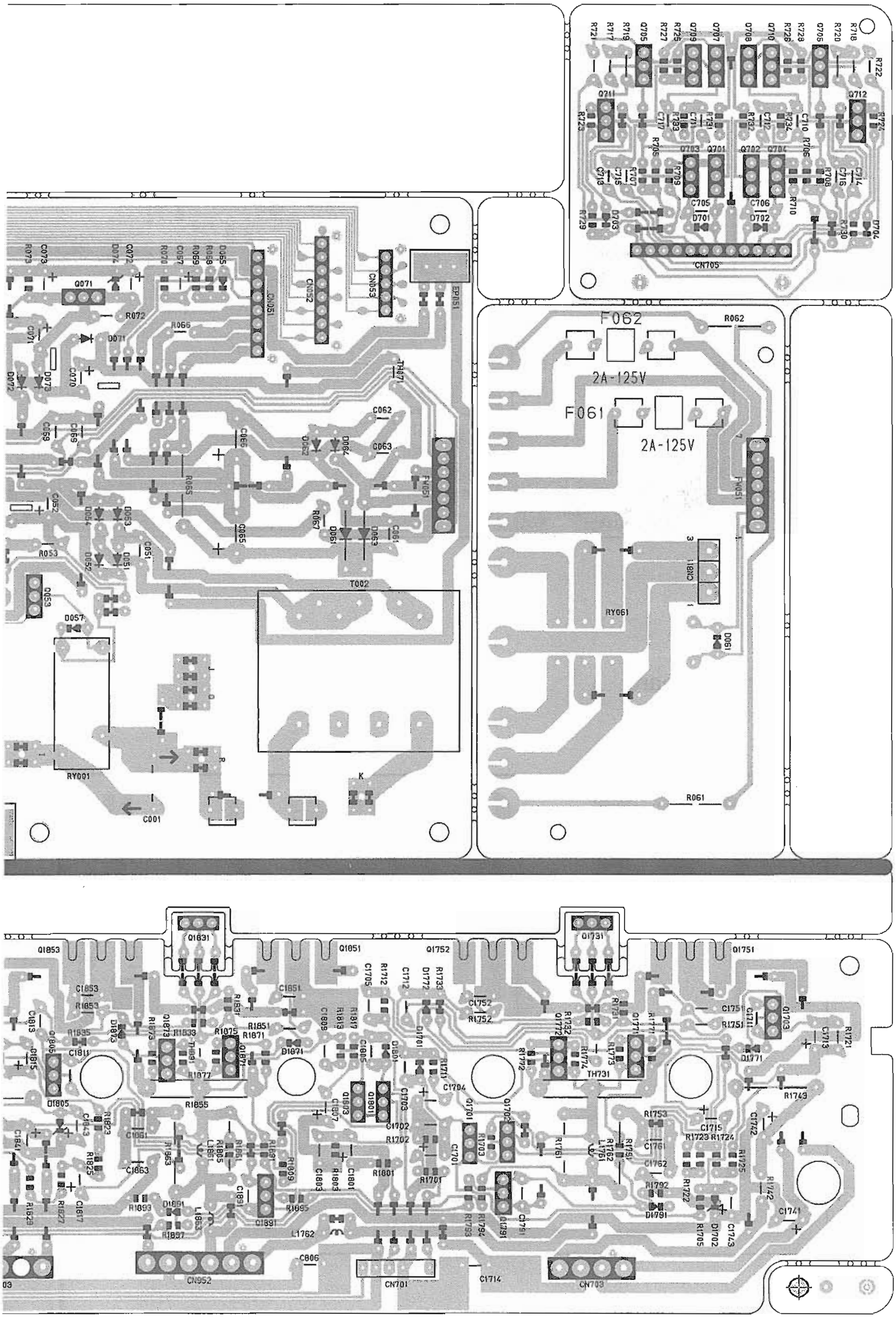



CN202
CN206
IC202
IC203
Q206
Q205
Q204
L200
X200
J241
J242
J243
CN242
CN244
CN240
IC241
IC242
IC243
Q240
Q241
Q242
Q243
Q244
Q245
Q246
Q247
Q248
Q249
Q250
CN416
IC313
Q370
Q371
Q302
Q301
IC331
J301
J302
J303
IC303
IC304
IC305
IC302
CN311
CN312

D E F G H

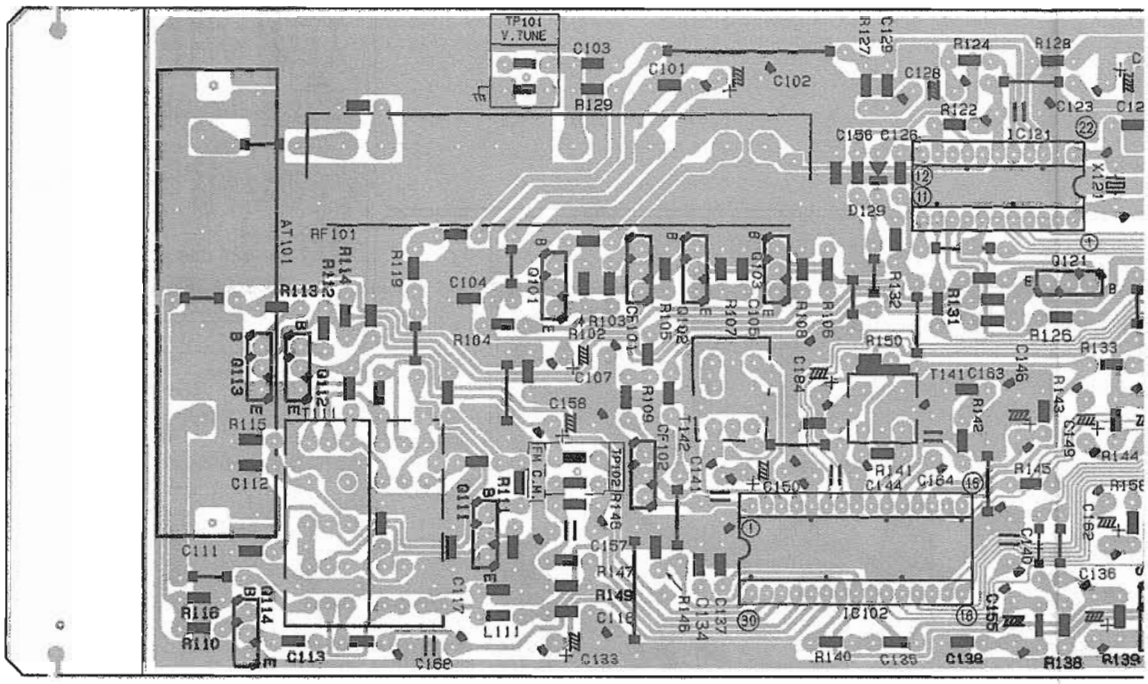
■ AC Supply P.C. Board



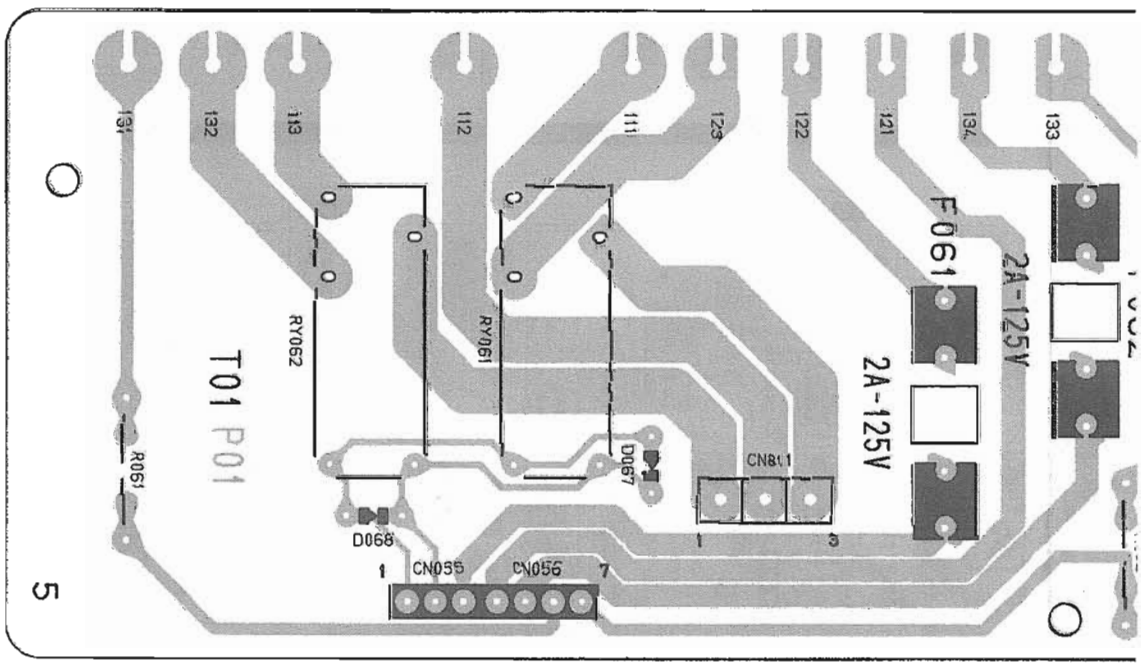

F062
2A-125V
F061
2A-125V
CN705
CN952
CN701
CN703
RY001
RY061
T002

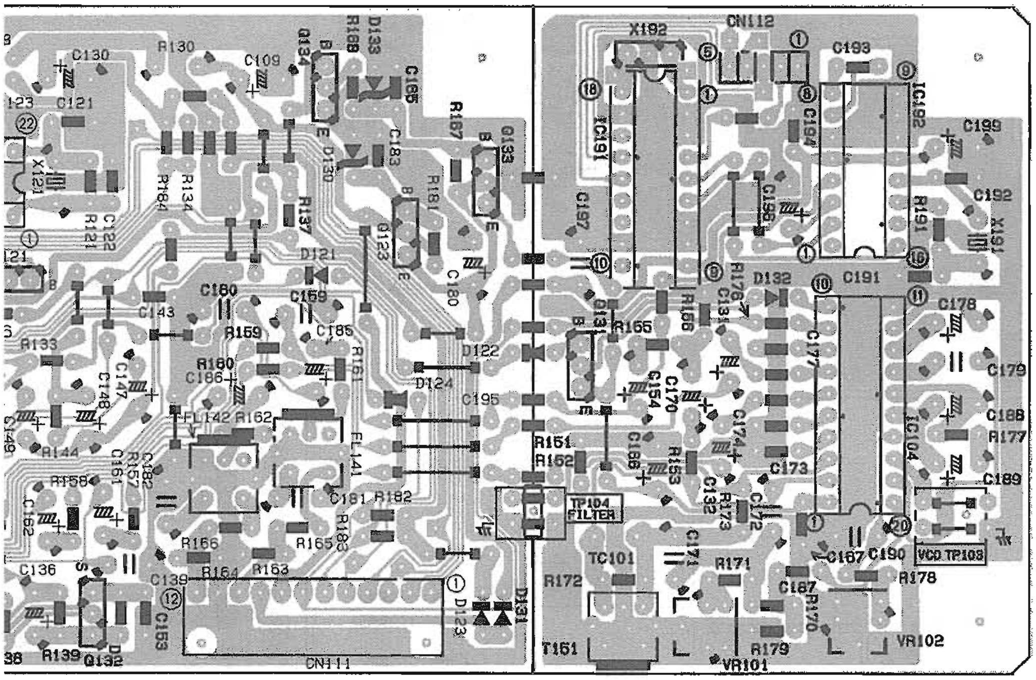
E	F	G

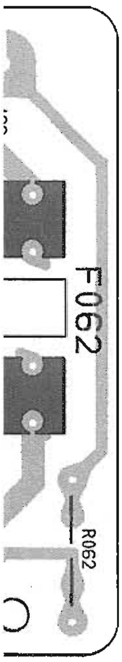
■ Tuner PC Board



■ Resistor P.C. Board




C130
R130
C109
Q134
R168
D133
C165
C121
X121
R184
R134
R137
D130
C183
R167
Q133
R181
Q123
D121
C180
C160
C159
C143
R133
R159
C185
R161
D122
C147
C148
R160
C186
D124
C195
FL142
R162
FL141
R144
R158
C161
R157
C182
C181
R182
R183
C162
R166
R165
C136
C139
R164
R163
C153
R139
Q132
CN111
D123
D131
X192
CN112
C193
IC192
C199
IC191
C194
C197
C196
R191
X191
C192
C191
R176
D132
R155
R156
C131
C178
C177
C154
C170
C174
C179
C188
R177
R151
R152
C156
R153
C173
C189
IC104
TP104
FILTER
C132
R173
C172
C167
C190
VCD TP103
TC101
C171
R171
R178
R172
C187
R170
T151
R179
VR101
VR102


F062
R062

D | E | F | G | H

PARTS LIST

[RX-884RBK]

* All printed circuit boards and its assemblies are not available as service parts.

The Marks for Designated Areas

B ..... U.K.
E ..... Continental Europe
EN ..... Northern Europe

- Contents -

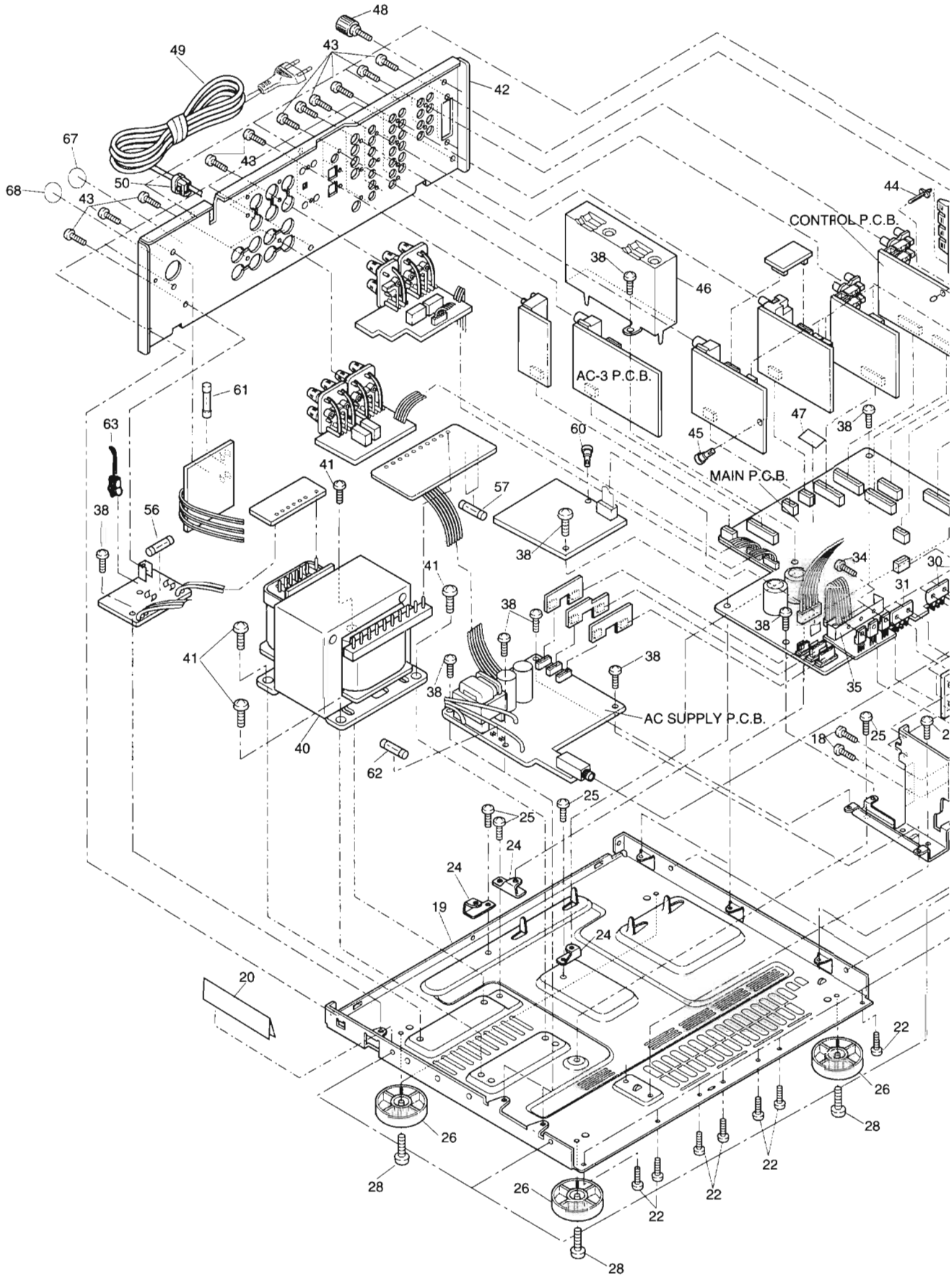
■ Parts List

Block No. M1MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	LV10018-003AKP	FRONT PANEL	1		
	2	VJD5429-001	JVC MARK	1		
	3	LV20031-002AKP	WINDOW SCREEN	1		
	4	LV20032-001AKP	FRONT ESCUTCEON	1		
	5	LV20034-001AKP	PUSH BUTTON	1		
	6	LV40099-001AKP	INDICATOR LENS	1		
	7	QYSDSF2608Z	SCREW	18		
	8	LV30068-002AKP	POWER BUTTON	1		
	9	FSJD4001-002	INDICATOR LENS	1		
	10	LV30069-001AKP	PUSH BUTTON	1		
	11	LV30071-001AKP	PUSH BUTTON	1		
	12	LV30067-001AKP	PUSH BUTTON	1		
	13	E308744-002	REMOCON PLATE	1		
	14	LV30073-001AKP	INDICATOR LENS	1		
	15	VWF1221-20TTB	FLAT WIRE	1		
	16	VWF1231-22TTBW	FLAT WIRE	1		
	17	QYSDSG3008M	SCREW	5		
	18	QYSBSG3008E	T. SCREW	8		
	19	LV10019-002AKP	CHASSIS BASE	1		
	20	EX0150010H09S11	FELT SPACER	1		
	21	LV10020-001AKP	FRONT BRACKET	1		
	22	QYSDSG3008E	T. SCREW	7		
	23	LE40139-001A	HEADPHONE BRACKET	1		
	24	E68587-223SM	P. W. BOARD BRACKET	3		
	25	QYSBST3006E	TAP. SCREW	9		
	26	VJF4039-00P	FOOT ASSY	4		
	28	QYSBST3010Z	TH TAP SCREW	4		
⚠	29	LV30075-001AKP	HEAT SINK	1		
⚠	30	2SC3857/PY/-F1	SI. TRANSISTOR	2	3A	
⚠	31	2SA1493/PY/-F1	SI. TRANSISTOR	2	3A	
⚠	32	2SD2488/Z1/-F1	SI. TRANSISTOR	3	3A	
⚠	33	2SB1620/OP/-F1	SI. TRANSISTOR	3	3A	
	34	E73525-003	SCREW	16		
	35	LV40390-001AKP	LEAF SPRING	1		
	36	LV20035-001AKP	HEAT SINK BRACKET	1		
	37	LV20036-001AKP	HEAT SINK BRACKET	1		
	38	QYSBSGG3008E	T. SCREW	17		
	39	VKZ4150-001	NUT	1		
⚠	40	QQT0212-002KP	POWER TRANSFORMER	1		
	41	QYSDSTL4008E	SPECIAL SCREW	4		
	42	LV10021-017AKP	REAR PANEL	1		
	43	QYSBSGY3008E	SPECIAL SCREW	30		
	44	E302321-001	FASTENER	1		
	45	E48729-008	PLASTIC RIVET	1		
	46	LV20037-001AKP	SHIELD CASE	1		
	47	E75896-003	SPACER	1		
	48	E409257-001	EARTH TERMINAL	1		
⚠	49	QMP39E0-200	POWER CORD	1		E, EN
⚠		QMP5530-0085BS	POWER CORD	1		B
⚠	50	QHS3771-108	CORD STOPPER	1		
	51	LV30076-001AKP	PROTECTOR	1		
	52	LV20038-002A(S)	METAL COVER	1		
	53	E406308-003	SPECIAL SCREW	4		
	54	LV30480-001AKP	VOLUME KNOB	1		
	55	LV30481-001AKP	SELECT KNOB	2		
⚠	56	QMF51E2-3R15-J1	FUSE	1	F001	
⚠	57	QMF51E2-2R0-J1	FUSE	2	F061, F062	
	59	E409396-001	CAUTION LABEL	1		
	60	E310243-002	PLASTIC RIVET	1		
⚠	62	QMF51A2-R10-S	FUSE	1	F002	
	63	E307572-001	FASTENER	1		
	64	LV30077-001AKP	PROTECT SHEET	1		
	65	E407321-002SM	PUSH BUTTON	1		

General Exploded View and Parts List

Block No. M 1 M M



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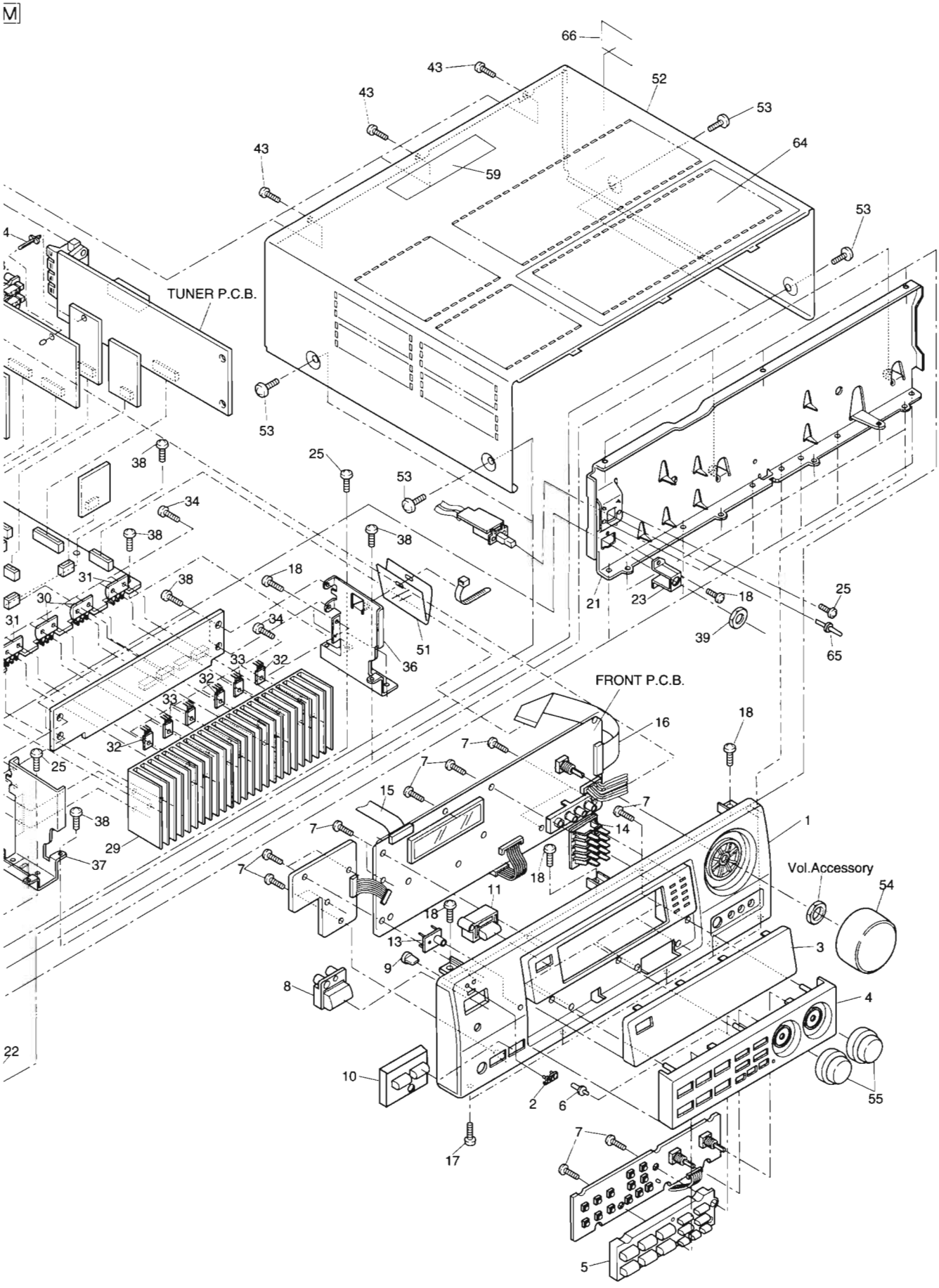


■Electrical Parts List (Tuner P.C.B)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC102	LA1837	I.C(MONO-ANALOG)	
	IC121	LC72131	I.C(M)	
	IC191	LC7073	I.C(DIGI-MOS)	
	IC192	SAA6579	I.C(M)	
		DIODES		
	D121	1SS133-T2	SI.DIODE	
	D123	1SS133-T2	SI.DIODE	
	D129	1SS133-T2	SI.DIODE	
	D130	MTZJ10C-T2	ZENER	
	D131	1SS133-T2	SI.DIODE	
		TRANSISTORS		
	Q101	2SC461/BC/-T	SILICON	
	Q102	2SC535/BC/-T	SILICON	
	Q103	2SC461/BC/-T	SILICON	
	Q111	2SD2144S/VW/-T	SILICON	
	Q112	2SD2144S/VW/-T	SILICON	
	Q113	2SD2144S/VW/-T	SILICON	
	Q114	2SD2144S/VW/-T	SILICON	
	Q121	DTA124ES-T	SILICON	
	Q123	2SC2060/QR/-T	SILICON	
		CAPACITORS		
	C101	QDYB1CM-103Y	0.01MF 16V C CAP.	
	C102	QETC1EM-107Z	100MF 25V AL E.CAP.	
	C103	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C104	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C105	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C107	QETC1EM-226ZM	22MF 25V E.CAP.	
	C109	QETC1EM-226ZM	22MF 25V E.CAP.	
	C111	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C112	QDCB1HJ-120Y	12PF 50V C CAP.	
	C113	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C117	QCSB1HK-5R6Y	5.6PF 50V CER.CAP.	
	C118	QCSB1HJ-150Y	15PF 50V CER.CAP.	
	C121	QDCB1HJ-180Y	18PF 50V C CAP.	
	C122	QDCB1HJ-180Y	18PF 50V C CAP.	
	C123	QDX31EM-473Z	0.047MF 25V C CAP.	
	C126	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C128	QENB1HM-474	0.47MF 50V NP E.CAP.	
	C129	QCGB1HK-102	1000PF 50V CER.CAP.	
	C130	QETC1EM-107Z	100MF 25V AL E.CAP.	
	C133	QETC1EM-226ZM	22MF 25V E.CAP.	
	C134	QDXB1CM-222Y	2200PF 16V C CAP.	
	C135	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C136	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C137	QCBB1HK-391Y	390PF 50V CER.CAP.	
	C139	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C140	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C141	QDX31EM-473Z	0.047MF 25V C CAP.	
	C143	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C144	QDX31EM-473Z	0.047MF 25V C CAP.	
	C146	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C147	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C148	QETN1HM-474Z	0.47MF 50V AL E.CAP.	
	C149	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C150	QETC1EM-226ZM	22MF 25V E.CAP.	
	C156	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C157	QDX31EM-473Z	0.047MF 25V C CAP.	
	C158	QETC1EM-226ZM	22MF 25V E.CAP.	
	C161	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C162	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C163	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C164	QDX31EM-473Z	0.047MF 25V C CAP.	
	C168	QCZ0205-155	1.5MF 25V C.CAP.	
	C180	QETC1EM-107Z	100MF 25V AL E.CAP.	
	C181	QFLB1HJ-562	5600PF 50V MYLAR CAP.	
	C182	QFLB1HJ-562	5600PF 50V MYLAR CAP.	
	C183	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C184	QETC1EM-107Z	100MF 25V AL E.CAP.	
	C185	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C186	QETN1HM-105Z	1MF 50V AL E.CAP.	
	C191	QCBB1HK-820Y	82PF 50V CER.CAP.	
	C192	QCSB1HJ-470	47PF 50V CER.CAP.	
	C193	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C194	QDVB1EZ-223Y	0.022MF 25V C CAP.	

⚠	Item	Parts Number	Description	Area
	C195	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C196	QETC1EM-226ZM	22MF 25V E.CAP.	
	C197	QCZ0205-155	1.5MF 25V C.CAP.	
	C199	QETC1EM-226ZM	22MF 25V E.CAP.	
		RESISTORS		
	R102	QRE141J-332Y	3.3K 1/4W R.NETWORK	
	R103	QRE141J-221Y	220 1/4W R.NETWORK	
	R104	QRE141J-272Y	2.7K 1/4W R.NETWORK	
	R105	QRE141J-391Y	390 1/4W R.NETWORK	
	R106	QRE141J-102Y	1K 1/4W R.NETWORK	
	R107	QRE141J-561Y	560 1/4W R.NETWORK	
	R108	QRE141J-332Y	3.3K 1/4W R.NETWORK	
	R109	QRE141J-221Y	220 1/4W R.NETWORK	
	R110	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R111	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R112	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R113	QRE141J-103Y	10K 1/4W R.NETWORK	
	R114	QRE141J-122Y	1.2K 1/4W R.NETWORK	
	R115	QRE141J-104Y	100K 1/4W R.NETWORK	
	R116	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R119	QRE141J-103Y	10K 1/4W R.NETWORK	
	R121	QRE141J-473Y	47K 1/4W R.NETWORK	
	R122	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R124	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R126	QRE141J-562Y	5.6K 1/4W R.NETWORK	
	R127	QRE141J-822Y	8.2K 1/4W R.NETWORK	
	R128	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R129	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R130	QRZ9005-680X	68 FUSIBLE	
	R131	QRE141J-103Y	10K 1/4W R.NETWORK	
	R132	QRE141J-102Y	1K 1/4W R.NETWORK	
	R133	QRE141J-562Y	5.6K 1/4W R.NETWORK	
	R134	QRE141J-102Y	1K 1/4W R.NETWORK	
	R140	QRE141J-563Y	56K 1/4W R.NETWORK	
	R141	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R142	QRE141J-470Y	47 1/4W R.NETWORK	
	R143	QRE141J-562Y	5.6K 1/4W R.NETWORK	
	R144	QRE141J-332Y	3.3K 1/4W R.NETWORK	
	R145	QRE141J-103Y	10K 1/4W R.NETWORK	
	R146	QRE141J-562Y	5.6K 1/4W R.NETWORK	
	R147	QRE141J-273Y	27K 1/4W R.NETWORK	
	R148	QRE141J-561Y	560 1/4W R.NETWORK	
	R150	QRE141J-101Y	100 1/4W R.NETWORK	
	R157	QRE141J-182Y	1.8K 1/4W R.NETWORK	
	R158	QRE141J-182Y	1.8K 1/4W R.NETWORK	
	R161	QRE141J-102Y	1K 1/4W R.NETWORK	
	R162	QRE141J-102Y	1K 1/4W R.NETWORK	
	R163	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R164	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R181	QRE141J-102Y	1K 1/4W R.NETWORK	
	R182	QRE141J-103Y	10K 1/4W R.NETWORK	
	R183	QRE141J-103Y	10K 1/4W R.NETWORK	
	R184	QRE141J-103Y	10K 1/4W R.NETWORK	
	R191	QRE141J-222Y	2.2K 1/4W R.NETWORK	
		OTHERS		
	L111	QQL231K-150Y	INDUCTOR I.M	
	T111	QQR0591-001	RF COIL	
	T141	QQR0613-001	I.F.TRANSFORMER	
	T142	QAX0303-001	CERAMIC FILTER	
	X121	QAX0259-001Z	RESONATOR I.M	
	X191	QAX0263-001Z	CRYSTAL	
	X192	QAX0248-001Z	CERA LOCK	
	AT101	QNB0014-001	ANT TERMINAL	
	BK001	E308963-223SM	SHIELD BRACKET	
	CF101	QAX0285-001Z	CERAMIC FILTER	
	CF102	QAX0285-001Z	CERAMIC FILTER	
	CN111	QGB2510K1-12	CONNECTOR	
	CN112	QGA2001C1-05	5P PLUG ASSY	
	FL141	QQR0590-001	LOWPASS FILTER	
	FL142	QQR0590-001	LOWPASS FILTER	
	RF101	QAU0005-001	FRONT END	

■Electrical Parts List (Main P.C.B)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC321	TC9162AN	I.C(DIGI-OTHER)	
	IC331	TC9459F	I.C(M)	
	IC332	TC9459F	I.C(M)	
	IC333	TC9459F	I.C(M)	
	IC361	NJM4580L	I.C(MONO-ANALOG)	
	IC362	BA15218N	I.C(MONO-ANALOG)	
	IC363	BA15218N	I.C(MONO-ANALOG)	
	IC451	LC7522	I.C(DIGI-MOS)	
	IC452	M5243AP12	I.C(M)	
	IC901	TA7317P	I.C(MONO-ANALOG)	
		DIODES		
	D743	MTZJ18C-T2	ZENER	
	D771	1SS133-T2	SI.DIODE	
	D772	1SS133-T2	SI.DIODE	
	D773	1SS133-T2	SI.DIODE	
	D774	1SS133-T2	SI.DIODE	
	D801	30DF2-FC	SILICON	
	D802	30DF2-FC	SILICON	
	D803	30DF2-FC	SILICON	
	D804	30DF2-FC	SILICON	
	D821	MTZJ6.8C-T2	ZENER	
	D822	1SS133-T2	SI.DIODE	
	D831	MTZJ6.2C-T2	ZENER	
	D832	1SS133-T2	SI.DIODE	
	D841	MTZJ6.2C-T2	ZENER	
	D842	1SS133-T2	SI.DIODE	
	D851	MTZJ15C-T2	ZENER	
	D852	1SS133-T2	SI.DIODE	
	D861	MTZJ15C-T2	ZENER	
	D862	1SS133-T2	SI.DIODE	
	D871	MTZJ13C-T2	ZENER	
	D872	1SS133-T2	SI.DIODE	
	D901	1SS133-T2	SI.DIODE	
	D902	1SS133-T2	SI.DIODE	
	D921	MTZJ4.7B-T2	ZENER	
	D931	1SS133-T2	SI.DIODE	
	D932	1SS133-T2	SI.DIODE	
	D933	1SS133-T2	SI.DIODE	
	D934	1SS133-T2	SI.DIODE	
	D953	1SS133-T2	SI.DIODE	
	D954	1SS133-T2	SI.DIODE	
	D971	1SS133-T2	SI.DIODE	
	D973	1SS133-T2	SI.DIODE	
	D1435	1SS133-T2	SI.DIODE	
	D1436	1SS133-T2	SI.DIODE	
	D1437	MTZJ4.7B-T2	ZENER	
	D1451	MTZJ6.8C-T2	ZENER	
	D1452	MTZJ6.8C-T2	ZENER	
	D1453	MTZJ5.1C-T2	ZENER	
		TRANSISTORS		
	Q751	2SC2389S/S/-T	SILICON	
	Q752	2SC2389S/S/-T	SILICON	
	Q753	2SA1038S/S/-T	SILICON	
	Q754	2SA1038S/S/-T	SILICON	
	Q755	2SD669A/BC/	SILICON	
	Q756	2SD669A/BC/	SILICON	
	Q757	2SB649A/BC/	SILICON	
	Q758	2SB649A/BC/	SILICON	
	Q771	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q772	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q773	2SA1038S/SE/-T	SILICON	
	Q774	2SA1038S/SE/-T	SILICON	
	Q781	2SD636/QR/	SILICON	
	Q782	2SD636/QR/	SILICON	
	Q821	2SD2061/EF/	SI.TRANSISTOR	
	Q831	2SD2061/EF/	SI.TRANSISTOR	
	Q841	2SD2061/EF/	SI.TRANSISTOR	
⚠	Q851	2SD2061/EF/	SI.TRANSISTOR	
⚠	Q861	2SB1187/EF/	SILICON	
	Q871	2SD2061/EF/	SI.TRANSISTOR	
	Q901	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q902	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q903	2SA1038S/SE/-T	SILICON	
	Q921	2SC1740S/RS/-T	SI.TRANSISTOR	

⚠	Item	Parts Number	Description	Area
	Q931	DTC123YS-T	SILICON	
	Q932	DTC123YS-T	SILICON	
	Q951	DTC123YS-T	SILICON	
	Q952	DTC123YS-T	SILICON	
	Q1401	2SC2878/AB/-T	SILICON	
	Q1402	2SC2878/AB/-T	SILICON	
	Q1405	DTA144ES-T	SILICON	
	Q1411	2SC2878/AB/-T	SILICON	
	Q1421	2SC2878/AB/-T	SILICON	
	Q1422	2SC2878/AB/-T	SILICON	
	Q1435	2SA933S/RS/-T	SILICON	
	Q1441	DTA144ES-T	SILICON	
		CAPACITORS		
	C701	QETB1HM-106	10MF 50V E.CAP.	
	C702	QETB1HM-106	10MF 50V E.CAP.	
	C703	QCS21HJ-101A	100PF 50V CER.CAP.	
	C704	QCS21HJ-101A	100PF 50V CER.CAP.	
	C707	QETB1CM-107	100MF 16V AL E.CAP.	
	C708	QETB1CM-107	100MF 16V AL E.CAP.	
	C709	QCS21HJ-100	10PF 50V CER.CAP.	
	C710	QCS21HJ-100	10PF 50V CER.CAP.	
	C719	QFLB1HJ-472	4700PF 50V MYLAR CAP.	
	C720	QFLB1HJ-472	4700PF 50V MYLAR CAP.	
	C741	QETB2AM-476	47MF 100V AL E.CAP.	
	C742	QETB2AM-476	47MF 100V AL E.CAP.	
	C743	QETB1EM-476	47MF 25V AL E.CAP.	
	C751	QCS22HJ-470A	47PF 500V CER.CAP.	
	C752	QCS22HJ-470A	47PF 500V CER.CAP.	
	C753	QCS22HJ-470A	47PF 500V CER.CAP.	
	C754	QCS22HJ-470A	47PF 500V CER.CAP.	
	C791	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C792	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C793	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C794	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C807	QEZ0427-129	12000MF NP E.CAP.	
	C808	QEZ0427-129	12000MF NP E.CAP.	
	C821	QEHC1EM-107	100MF 25V E.CAP.	
	C822	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C831	QEHC1EM-227Z	220MF 25V ELECTRO	
	C832	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C841	QEHC1EM-107	100MF 25V E.CAP.	
	C842	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C851	QETB1EM-107	100MF 25V AL E.CAP.	
	C852	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C861	QETB1EM-107	100MF 25V AL E.CAP.	
	C862	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C871	QETB1EM-107	100MF 25V AL E.CAP.	
	C872	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C903	QER61HM-226	22MF 50V AL E.CAP.	
	C904	QCF31HZ-103Z	0.01MF 50V CERAMIC	
	C905	QCB31HK-102Z	1000PF 50V CERAMIC	
	C906	QETC1AM-476ZM	47MF 10V E.CAP.	
	C920	QETB1CM-226	22MF 16V E.CAP.	
	C921	QER51CM-107	100MF 16V E.CAP.	
	C935	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C936	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C937	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C938	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C939	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C940	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C941	QCS21HJ-221	220PF 50V CER.CAP.	
	C942	QCS21HJ-221	220PF 50V CER.CAP.	
	C943	QCS21HJ-221	220PF 50V CER.CAP.	
	C944	QCS21HJ-221	220PF 50V CER.CAP.	
	C1301	QETB1EM-476	47MF 25V AL E.CAP.	
	C1302	QETB1EM-476	47MF 25V AL E.CAP.	
	C1303	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1304	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1307	QFLB1HJ-821	820PF 50V MYLAR CAP.	
	C1308	QFLB1HJ-821	820PF 50V MYLAR CAP.	
	C1309	QFVJ1HJ-224Z	0.22MF 50V T.FILM	
	C1310	QFVJ1HJ-224Z	0.22MF 50V T.FILM	
	C1311	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1312	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1313	QETB1HM-475E	4.7MF 50V E.CAP.	

■Electrical Parts List (Main P.C.B)

⚠	Item	Parts Number	Description	Area
	C1314	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1315	QETB1EM-476	47MF 25V AL E.CAP.	
	C1316	QETB1EM-476	47MF 25V AL E.CAP.	
	C1317	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1318	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1319	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C1321	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1322	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1323	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1324	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1325	QETB1EM-476	47MF 25V AL E.CAP.	
	C1326	QETB1EM-476	47MF 25V AL E.CAP.	
	C1327	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1328	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1329	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C1331	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1332	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1333	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1334	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1335	QETB1EM-476	47MF 25V AL E.CAP.	
	C1336	QETB1EM-476	47MF 25V AL E.CAP.	
	C1337	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1338	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1339	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C1360	QCZ0202-155	1.5MF 25V CER.CAP.	
	C1361	QETB1HM-105	1MF 50V AL E.CAP.	
	C1362	QETB1HM-105	1MF 50V AL E.CAP.	
	C1369	QETB1EM-476	47MF 25V AL E.CAP.	
	C1370	QETB1EM-476	47MF 25V AL E.CAP.	
	C1371	QETB1HM-105	1MF 50V AL E.CAP.	
	C1372	QETB1HM-105	1MF 50V AL E.CAP.	
	C1379	QETB1EM-476	47MF 25V AL E.CAP.	
	C1380	QETB1EM-476	47MF 25V AL E.CAP.	
	C1381	QETB1HM-105	1MF 50V AL E.CAP.	
	C1382	QETB1HM-105	1MF 50V AL E.CAP.	
	C1389	QETB1EM-476	47MF 25V AL E.CAP.	
	C1390	QETB1EM-476	47MF 25V AL E.CAP.	
	C1405	QETC1CM-226ZM	22MF 16V E.CAP.	
	C1441	QETB1HM-226E	22MF 50V E.CAP.	
	C1451	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1452	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1453	QCS21HJ-101A	100PF 50V CER.CAP.	
	C1454	QCS21HJ-101A	100PF 50V CER.CAP.	
	C1455	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1456	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1457	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1458	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1459	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1460	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1461	QETB1CM-476	47MF 16V AL E.CAP.	
	C1462	QETB1CM-476	47MF 16V AL E.CAP.	
	C1463	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1464	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C1465	QETB1CM-476	47MF 16V AL E.CAP.	
	C1469	QCS21HJ-470	47PF 50V CER.CAP.	
	C1470	QCS21HJ-470	47PF 50V CER.CAP.	
	C1471	QFVJ1HJ-333Z	0.033MF 50V T.FILM	
	C1472	QFVJ1HJ-333Z	0.033MF 50V T.FILM	
	C1473	QETB1HM-105	1MF 50V AL E.CAP.	
	C1474	QETB1HM-105	1MF 50V AL E.CAP.	
	C1475	QFLB1HJ-332	3300PF 50V MYLAR CAP.	
	C1476	QFLB1HJ-332	3300PF 50V MYLAR CAP.	
	C1477	QFVJ1HJ-104Z	0.1MF 50V T.FILM	
	C1478	QFVJ1HJ-104Z	0.1MF 50V T.FILM	
	C1479	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C1480	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C1481	QFVJ1HJ-103Z	0.01MF 50V T.FILM	
	C1482	QFVJ1HJ-103Z	0.01MF 50V T.FILM	
		RESISTORS		
	R701	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R702	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R703	QRE141J-104Y	100K 1/4W R.NETWORK	
	R704	QRE141J-104Y	100K 1/4W R.NETWORK	
	R711	QRE141J-911Y	910 1/4W R.NETWORK	
	R712	QRE141J-911Y	910 1/4W R.NETWORK	

⚠	Item	Parts Number	Description	Area
	R713	QRE141J-183Y	18K 1/4W CARBON RES.	
	R714	QRE141J-183Y	18K 1/4W CARBON RES.	
	R715	QRE141J-823Y	82K 1/4W R.NETWORK	
	R716	QRE141J-823Y	82K 1/4W R.NETWORK	
	R741	QRJ146J-100X	10 1/4W R.NETWORK	
	R742	QRJ146J-100X	10 1/4W R.NETWORK	
	R743	QRL022J-562	5.6K 2W R.NETWORK	
	R751	QRJ146J-100X	10 1/4W R.NETWORK	
	R752	QRJ146J-100X	10 1/4W R.NETWORK	
	R753	QRJ146J-100X	10 1/4W R.NETWORK	
	R754	QRJ146J-100X	10 1/4W R.NETWORK	
	R759	QRJ146J-272X	2.7K 1/4W R.NETWORK	
	R760	QRJ146J-272X	2.7K 1/4W R.NETWORK	
	R765	QRJ146J-100X	10 1/4W R.NETWORK	
	R766	QRJ146J-100X	10 1/4W R.NETWORK	
	R767	QRJ146J-100X	10 1/4W R.NETWORK	
	R768	QRJ146J-100X	10 1/4W R.NETWORK	
	R769	QRJ146J-271X	270 1/4W R.NETWORK	
	R770	QRJ146J-271X	270 1/4W R.NETWORK	
	R771	QRE141J-391Y	390 1/4W R.NETWORK	
	R772	QRE141J-391Y	390 1/4W R.NETWORK	
	R773	QRE141J-391Y	390 1/4W R.NETWORK	
	R774	QRE141J-391Y	390 1/4W R.NETWORK	
	R775	QRE141J-201Y	200 1/4W R.NETWORK	
	R776	QRE141J-201Y	200 1/4W R.NETWORK	
	R777	QRE141J-201Y	200 1/4W R.NETWORK	
	R778	QRE141J-201Y	200 1/4W R.NETWORK	
	R779	QRZ0197-R22	0.22 1W NETWORK RES.	
	R780	QRZ0197-R22	0.22 1W NETWORK RES.	
	R781	QRE141J-391Y	390 1/4W R.NETWORK	
	R782	QRE141J-391Y	390 1/4W R.NETWORK	
	R783	QRE141J-471Y	470 1/4W R.NETWORK	
	R784	QRE141J-471Y	470 1/4W R.NETWORK	
	R785	QRE141J-102Y	1K 1/4W R.NETWORK	
	R786	QRE141J-102Y	1K 1/4W R.NETWORK	
	R789	QRE141J-102Y	1K 1/4W R.NETWORK	
	R790	QRE141J-102Y	1K 1/4W R.NETWORK	
	R791	QRJ125J-330	33 1/2W R.NETWORK	
	R792	QRJ125J-330	33 1/2W R.NETWORK	
	R793	QRL022J-100	10 2W R.NETWORK	
	R794	QRL022J-100	10 2W R.NETWORK	
	R801	QRE141J-104Y	100K 1/4W R.NETWORK	
	R802	QRE141J-104Y	100K 1/4W R.NETWORK	
	R821	QRK126J-220X	22 1/2W R.NETWORK	
	R822	QRK126J-220X	22 1/2W R.NETWORK	
	R823	QRJ146J-122X	1.2K 1/4W UNF.CARBON R	
		QRJ146J-392X	3.9K 1/4W UNF.CARBON R	
	R831	QRL022J-100	10 2W R.NETWORK	
	R833	QRJ146J-122X	1.2K 1/4W UNF.CARBON R	
	R841	QRJ146J-220X	22 1/4W R.NETWORK	
	R842	QRJ146J-220X	22 1/4W R.NETWORK	
	R843	QRJ146J-122X	1.2K 1/4W UNF.CARBON R	
	R851	QRJ146J-120X	12 1/4W R.NETWORK	
	R853	QRJ146J-272X	2.7K 1/4W R.NETWORK	
	R861	QRJ146J-100X	10 1/4W R.NETWORK	
	R863	QRJ146J-272X	2.7K 1/4W R.NETWORK	
	R871	QRJ146J-120X	12 1/4W R.NETWORK	
	R873	QRJ146J-222X	2.2K 1/4W R.NETWORK	
	R901	QRE141J-272Y	2.7K 1/4W R.NETWORK	
	R902	QRE141J-272Y	2.7K 1/4W R.NETWORK	
	R903	QRE141J-153Y	15K 1/4W R.NETWORK	
	R904	QRE141J-153Y	15K 1/4W R.NETWORK	
	R905	QRE141J-123Y	12K 1/4W R.NETWORK	
	R906	QRE141J-123Y	12K 1/4W R.NETWORK	
	R909	QRE141J-103Y	10K 1/4W R.NETWORK	
	R911	QRE141J-332Y	3.3K 1/4W R.NETWORK	
	R912	QRE141J-473Y	47K 1/4W R.NETWORK	
	R913	QRE141J-104Y	100K 1/4W R.NETWORK	
	R914	QRE141J-823Y	82K 1/4W R.NETWORK	
	R915	QRE141J-823Y	82K 1/4W R.NETWORK	
	R916	QRE141J-563Y	56K 1/4W R.NETWORK	
	R917	QRE141J-683Y	68K 1/4W R.NETWORK	
	R918	QRE141J-822Y	8.2K 1/4W R.NETWORK	
	R919	QRE141J-822Y	8.2K 1/4W R.NETWORK	
	R920	QRE141J-224Y	220K 1/4W R.NETWORK	

■Electrical Parts List (Main P.C.B)

⚠	Item	Parts Number	Description	Area
	R921	QRE141J-473Y	47K 1/4W R.NETWORK	
	R922	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R931	QRJ146J-120X	12 1/4W R.NETWORK	
	R932	QRJ146J-120X	12 1/4W R.NETWORK	
	R935	QRZ9005-100X	10 FUSIBLE	
	R936	QRZ9005-100X	10 FUSIBLE	
	R937	QRZ9005-100X	10 FUSIBLE	
	R938	QRZ9005-100X	10 FUSIBLE	
	R971	QRJ146J-120X	12 1/4W R.NETWORK	
	R1300	QRE141J-333Y	33K 1/4W R.NETWORK	
	R1301	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1302	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1303	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1304	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1305	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1306	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1307	QRE141J-333Y	33K 1/4W R.NETWORK	
	R1308	QRE141J-333Y	33K 1/4W R.NETWORK	
	R1309	QRZ9005-680X	68 FUSIBLE	
	R1310	QRZ9005-680X	68 FUSIBLE	
	R1311	QRZ9005-680X	68 FUSIBLE	
	R1312	QRZ9005-680X	68 FUSIBLE	
	R1313	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1314	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1321	QRZ9005-680X	68 FUSIBLE	
	R1322	QRZ9005-680X	68 FUSIBLE	
	R1323	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1324	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1331	QRZ9005-680X	68 FUSIBLE	
	R1332	QRZ9005-680X	68 FUSIBLE	
	R1333	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1334	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1361	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1362	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1363	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1364	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1365	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1366	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1369	QRZ9005-680X	68 FUSIBLE	
	R1370	QRZ9005-680X	68 FUSIBLE	
	R1371	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1372	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1373	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1374	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1375	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1376	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1379	QRZ9005-680X	68 FUSIBLE	
	R1380	QRZ9005-680X	68 FUSIBLE	
	R1381	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1382	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1383	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1384	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1385	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1386	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1389	QRZ9005-680X	68 FUSIBLE	
	R1390	QRZ9005-680X	68 FUSIBLE	
	R1401	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1402	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1403	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1404	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1405	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1406	QRE141J-225Y	2.2M 1/4W R.NETWORK	
	R1411	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1412	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1421	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1422	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1423	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1424	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1435	QRE141J-683Y	68K 1/4W R.NETWORK	
	R1436	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1437	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1441	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1457	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1458	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1459	QRE141J-113Y	11K 1/4W R.NETWORK	

⚠	Item	Parts Number	Description	Area
	R1460	QRE141J-113Y	11K 1/4W R.NETWORK	
	R1461	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1462	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1463	QRE141J-333Y	33K 1/4W R.NETWORK	
	R1464	QRE141J-333Y	33K 1/4W R.NETWORK	
	R1465	QRE141J-124Y	120K 1/4W R.NETWORK	
	R1466	QRE141J-124Y	120K 1/4W R.NETWORK	
	R1471	QRJ146J-561X	560 1/4W R.NETWORK	
	R1472	QRJ146J-561X	560 1/4W R.NETWORK	
	R1473	QRJ146J-681X	680 1/4W R.NETWORK	
	R1475	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1476	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1477	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1478	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1479	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1480	QRE141J-474Y	470K 1/4W R.NETWORK	
	R1741	QRJ146J-331X	330 1/4W R.NETWORK	
	R1841	QRJ146J-331X	330 1/4W R.NETWORK	
	VR787	QVP0004-501Z	500 VARIABLE	
	VR788	QVP0004-501Z	500 VARIABLE	
		OTHERS		
		QUB220-09HPHP	CONNECTOR WIRE ASSY	
		QUB221-13HPHP	CONNECTOR WIRE ASSY	
		QWE690-26RR	VINYL WIRE	
		QWE691-26RR	VINYL WIRE	
		QWE692-38RR	VINYL WIRE	
		QWE699-38RR	VINYL WIRE	
		QYSBS63008E	T.SCREW	
	L791	QQLZ003-1R0	INDUCTOR	
	L792	QQLZ003-1R0	INDUCTOR	
	CN081	QGB2510J1-08	CONNECTOR	
	CN082	QGB2510J1-08	CONNECTOR	
	CN083	QGB2510J1-05	CONNECTOR	
	CN101	QGB2510J1-12	CONNECTOR	
	CN201	QGB2510J1-04	CONNECTOR	
	CN241	QGB2510J1-04	CONNECTOR	
	CN255	QGB2510J1-05	CONNECTOR	
	CN301	QGB2510J1-17	CONNECTOR	
	CN303	QGB2510J1-14	CONNECTOR	
	CN342	QGB2510J1-08	CONNECTOR	
	CN400	QGF1205C1-31	FFC SOCKET	
	CN451	QGB2510K1-09	CONNECTOR	
	CN452	QGB2510J1-09	CONNECTOR	
	CN501	QGB1214J3-18S	CONNECTOR	
	CN601	QGB1214J3-12S	CONNECTOR	
	CN702	QGA2501C1-05	CONNECTOR	
	CN704	QGA3901C1-08	CONNECTOR	
	CN706	QGB2510J1-12	CONNECTOR	
	CN801	EWS283-003	SOCKET WIRE ASSY	
	CN821	QGD2501C1-05Z	SOCKET I.M	
	CN901	QGD2501C1-03Z	SOCKET I.M	
	CN931	QGD2501C1-04Z	SOCKET I.M	
	CN932	QGD2501C1-03Z	SOCKET I.M	
	CN961	QGD2501C1-03Z	SOCKET I.M	
	EP801	QNZ0136-001Z	IM EARTH PLATE	
	FW811	EWR33D-10SS	CORD	
	FW821	EWR35D-08LS	FLAT WIRE	
	FW881	EWR33D-25LS	FLAT WIRE	
	FW931	EWR37D-16LS	FLAT WIRE	
	HS851	E70306-001	HEAT SINK	
	HS861	E70306-001	HEAT SINK	
	HS871	E70306-001	HEAT SINK	
	RY931	QSK0042-001	RELAY	
	RY932	QSK0042-001	RELAY	
	RY971	QSK0042-001	RELAY	
	ST931	QNB0024-001	SPK.TERMINAL	
	TH783	QAD0012-202	THERMISTOR	
	TH784	QAD0012-202	THERMISTOR	
	TP781	QMV5005-004K	PLUG ASSY	

■Electrical Parts List (Front P.C.B)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC341	BU4051BC	I.C(DIGI-MOS)	
	IC342	BA15218N	I.C(MONO-ANALOG)	
	IC400	MN172412JABZ	I.C(M)	
	IC401	MN101C15FAF1	I.C.	
	IC402	BU2092	I.C(M)	
	IC403	IC-PST600/E/-T	I.C.	
	IC404	GP1U271X	INFRARED DETECT UNIT	
		DIODES		
	D400	1SR139-200-T4	SILICON	
	D401	1SR139-200-T4	SILICON	
	D402	1SR139-200-T4	SILICON	
	D404	1SS133-T2	SI.DIODE	
	D410	1SS133-T2	SI.DIODE	
	D411	1SS133-T2	SI.DIODE	
	D412	1SS133-T2	SI.DIODE	
	D413	1SS133-T2	SI.DIODE	
	D414	1SS133-T2	SI.DIODE	
	D415	1SS133-T2	SI.DIODE	
	D418	1SS133-T2	SI.DIODE	
	D420	SLR-342VC-T	L.E.D.	
	D421	SLR-342VC-T	L.E.D.	
	D422	SLR-342VC-T	L.E.D.	
	D430	SLR-342VC-T	L.E.D.	
	D431	SLR-342VC-T	L.E.D.	
	D432	SLR-342VC-T	L.E.D.	
	D433	SLR-342VC-T	L.E.D.	
	D434	SLR-342VC-T	L.E.D.	
	D435	SLR-342VC-T	L.E.D.	
	D436	SLR-342VC-T	L.E.D.	
	D437	SLR-342VC-T	L.E.D.	
	D438	SLR-342VC-T	L.E.D.	
	D439	SLR-342VC-T	L.E.D.	
	D440	SPR-325MVW/L/-T	L.E.D.	
	D442	SLR-342VC-T	L.E.D.	
	D493	1SS133-T2	SI.DIODE	
	D1351	MTZJ5.1C-T2	ZENER	
	D1352	MTZJ5.1C-T2	ZENER	
		TRANSISTORS		
	Q401	DTC114YS-T	SILICON	
	Q402	DTC114TSTP	DIGITAL TRANSISTOR	
	Q403	DTC144WS-T	SILICON	
	Q407	DTC114YS-T	SILICON	
	Q408	DTC114YS-T	SILICON	
	Q409	DTC144ES-T	SILICON	
	Q410	DTC144ES-T	SILICON	
	Q411	DTC144ES-T	SILICON	
	Q412	DTC144ES-T	SILICON	
	Q413	DTA114YS	DIGITAL TRANSISTOR	
	Q414	DTA114YS	DIGITAL TRANSISTOR	
	Q415	DTA114YS	DIGITAL TRANSISTOR	
	Q416	DTA114YS	DIGITAL TRANSISTOR	
	Q442	DTA114YS	DIGITAL TRANSISTOR	
	Q456	DTA114YS	DIGITAL TRANSISTOR	
	Q457	DTA114YS	DIGITAL TRANSISTOR	
		CAPACITORS		
	C400	QEKC1HM-475Z	4.7MF 50V ELECTRO	
	C401	QEKC0JM-107Z	100MF 6.3V ELECTRO	
	C402	QCZ0202-155	1.5MF 25V CER.CAP.	
	C403	QEZ0329-10AZ	ELECTRO	
	C404	QER61HM-225	2.2MF 50V ELECTRO	
	C405	QDVB1EZ-223Y	0.022MF 25V C CAP.	
	C406	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C407	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C408	QEKC0JM-107Z	100MF 6.3V ELECTRO	
	C409	QEKC1HM-475Z	4.7MF 50V ELECTRO	

⚠	Item	Parts Number	Description	Area
	C410	QEKC1HM-475Z	4.7MF 50V ELECTRO	
	C412	QEKC0JM-107Z	100MF 6.3V ELECTRO	
	C413	QDYB1CM-103Y	0.01MF 16V C CAP.	
	C414	QDYB1CM-103Y	0.01MF 16V C CAP.	
	C471	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C472	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C473	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C475	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C476	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C1341	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1342	QETB1HM-475E	4.7MF 50V E.CAP.	
	C1343	QCS21HJ-101A	100PF 50V CER.CAP.	
	C1346	QFLB1HJ-103	0.01MF 50V MYLAR CAP.	
	C1347	QFLB1HJ-123	0.012MF 50V MYLAR CAP.	
	C1349	QETB1EM-476	47MF 25V AL E.CAP.	
	C1350	QETB1EM-476	47MF 25V AL E.CAP.	
	C1351	QETC1AM-476ZM	47MF 10V E.CAP.	
	C1352	QETC1AM-476ZM	47MF 10V E.CAP.	
	C1581	QFVJ1HJ-104Z	0.1MF 50V T.FILM	
	C1582	QFVJ1HJ-104Z	0.1MF 50V T.FILM	
	C1585	QCZ0202-155	1.5MF 25V CER.CAP.	
	C1591	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C1592	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C1593	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C1594	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C1599	QDYB1CM-103Y	0.01MF 16V C CAP.	
		RESISTORS		
	R401	QRE141J-103Y	10K 1/4W R.NETWORK	
	R402	QRE141J-103Y	10K 1/4W R.NETWORK	
	R403	QRE141J-331Y	330 1/4W R.NETWORK	
	R404	QRE141J-103Y	10K 1/4W R.NETWORK	
	R405	QRE141J-103Y	10K 1/4W R.NETWORK	
	R406	QRE141J-103Y	10K 1/4W R.NETWORK	
	R407	QRE141J-103Y	10K 1/4W R.NETWORK	
	R408	QRE141J-223Y	22K 1/4W R.NETWORK	
	R410	QRE141J-223Y	22K 1/4W R.NETWORK	
	R411	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R412	QRE141J-181Y	180 1/4W R.NETWORK	
	R417	QRE141J-103Y	10K 1/4W R.NETWORK	
	R418	QRE141J-471Y	470 1/4W R.NETWORK	
	R419	QRE141J-103Y	10K 1/4W R.NETWORK	
	R420	QRE141J-221Y	220 1/4W R.NETWORK	
	R421	QRE141J-271Y	270 1/4W R.NETWORK	
	R422	QRE141J-271Y	270 1/4W R.NETWORK	
	R423	QRE141J-103Y	10K 1/4W R.NETWORK	
	R424	QRE141J-103Y	10K 1/4W R.NETWORK	
	R425	QRE141J-103Y	10K 1/4W R.NETWORK	
	R426	QRE141J-103Y	10K 1/4W R.NETWORK	
	R427	QRE141J-103Y	10K 1/4W R.NETWORK	
	R430	QRE141J-103Y	10K 1/4W R.NETWORK	
	R431	QRE141J-103Y	10K 1/4W R.NETWORK	
	R433	QRE141J-221Y	220 1/4W R.NETWORK	
	R434	QRE141J-221Y	220 1/4W R.NETWORK	
	R435	QRE141J-221Y	220 1/4W R.NETWORK	
	R436	QRE141J-102Y	1K 1/4W R.NETWORK	
	R437	QRE141J-102Y	1K 1/4W R.NETWORK	
	R438	QRE141J-102Y	1K 1/4W R.NETWORK	
	R439	QRE141J-102Y	1K 1/4W R.NETWORK	
	R440	QRE141J-103Y	10K 1/4W R.NETWORK	
	R444	QRE141J-221Y	220 1/4W R.NETWORK	
	R445	QRE141J-221Y	220 1/4W R.NETWORK	
	R446	QRE141J-221Y	220 1/4W R.NETWORK	
	R447	QRE141J-221Y	220 1/4W R.NETWORK	
	R448	QRE141J-221Y	220 1/4W R.NETWORK	
	R449	QRE141J-221Y	220 1/4W R.NETWORK	
	R450	QRE141J-221Y	220 1/4W R.NETWORK	

■Electrical Parts List (Front P.C.B)

⚠	Item	Parts Number	Description	Area
	R451	QRE141J-221Y	220 1/4W R.NETWORK	
	R452	QRE141J-221Y	220 1/4W R.NETWORK	
	R453	QRE141J-221Y	220 1/4W R.NETWORK	
	R454	QRE141J-221Y	220 1/4W R.NETWORK	
	R455	QRE141J-221Y	220 1/4W R.NETWORK	
	R456	QRE141J-221Y	220 1/4W R.NETWORK	
	R457	QRE141J-221Y	220 1/4W R.NETWORK	
	R458	QRE141J-102Y	1K 1/4W R.NETWORK	
	R459	QRE141J-102Y	1K 1/4W R.NETWORK	
	R460	QRE141J-221Y	220 1/4W R.NETWORK	
	R461	QRE141J-221Y	220 1/4W R.NETWORK	
	R462	QRE141J-221Y	220 1/4W R.NETWORK	
	R463	QRE141J-102Y	1K 1/4W R.NETWORK	
	R464	QRE141J-221Y	220 1/4W R.NETWORK	
	R465	QRE141J-102Y	1K 1/4W R.NETWORK	
	R466	QRE141J-221Y	220 1/4W R.NETWORK	
	R468	QRE141J-271Y	270 1/4W R.NETWORK	
	R469	QRE141J-221Y	220 1/4W R.NETWORK	
	R471	QRE141J-750Y	75 1/4W R.NETWORK	
	R472	QRE141J-750Y	75 1/4W R.NETWORK	
	R474	QRE141J-750Y	75 1/4W R.NETWORK	
	R480	QRE141J-221Y	220 1/4W R.NETWORK	
	R481	QRE141J-221Y	220 1/4W R.NETWORK	
	R482	QRE141J-221Y	220 1/4W R.NETWORK	
	R483	QRE141J-221Y	220 1/4W R.NETWORK	
	R484	QRE141J-271Y	270 1/4W R.NETWORK	
	R495	QRE141J-104Y	100K 1/4W R.NETWORK	
	R496	QRE141J-104Y	100K 1/4W R.NETWORK	
	R497	QRE141J-104Y	100K 1/4W R.NETWORK	
	R498	QRE141J-104Y	100K 1/4W R.NETWORK	
	R881	QRZ0209-3R3	3.3 2W FUSIBLE	
	R882	QRZ0209-3R3	3.3 2W FUSIBLE	
	R883	QRZ0209-3R3	3.3 2W FUSIBLE	
	R884	QRZ0209-3R3	3.3 2W FUSIBLE	
	R1341	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1342	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1343	QRE141J-203Y	20K 1/4W R.NETWORK	
	R1344	QRE141J-203Y	20K 1/4W R.NETWORK	
	R1345	QRE141J-273Y	27K 1/4W R.NETWORK	
	R1346	QRE141J-223Y	22K 1/4W R.NETWORK	
	R1347	QRE141J-132Y	1.3K 1/4W R.NETWORK	
	R1348	QRE141J-182Y	1.8K 1/4W R.NETWORK	
	R1349	QRZ9005-680X	68 FUSIBLE	
	R1350	QRZ9005-680X	68 FUSIBLE	
	R1351	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1352	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R1353	QRE141J-682Y	6.8K 1/4W R.NETWORK	
	R1354	QRE141J-752Y	7.5K 1/4W R.NETWORK	
	R1355	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1589	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1590	QRE141J-473Y	47K 1/4W R.NETWORK	
	R1591	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1592	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1593	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1594	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1595	QRE141J-102Y	1K 1/4W R.NETWORK	
	R1596	QRE141J-102Y	1K 1/4W R.NETWORK	
		OTHERS		
	J400	QND0026-001	PIN JACK	
	S400	QSW0683-001Z	PUSH SWITCH	
	S401	QSW0683-001Z	PUSH SWITCH	
	S402	QSW0683-001Z	PUSH SWITCH	
	S403	QSW0683-001Z	PUSH SWITCH	
	S404	QSW0683-001Z	PUSH SWITCH	
	S405	QSW0683-001Z	PUSH SWITCH	
	S406	QSW0683-001Z	PUSH SWITCH	

⚠	Item	Parts Number	Description	Area
	S407	QSW0683-001Z	PUSH SWITCH	
	S408	QSW0683-001Z	PUSH SWITCH	
	S409	QSW0683-001Z	PUSH SWITCH	
	S410	QSW0683-001Z	PUSH SWITCH	
	S411	QSW0683-001Z	PUSH SWITCH	
	S412	QSW0683-001Z	PUSH SWITCH	
	S413	QSW0683-001Z	PUSH SWITCH	
	S414	QSW0683-001Z	PUSH SWITCH	
	S415	QSW0683-001Z	PUSH SWITCH	
	S416	QSW0683-001Z	PUSH SWITCH	
	S417	QSW0683-001Z	PUSH SWITCH	
	S418	QSW0683-001Z	PUSH SWITCH	
	S419	QSW0683-001Z	PUSH SWITCH	
	S420	QSW0683-001Z	PUSH SWITCH	
	X400	QAX0112-001Z	RESONATOR I.M	
	X401	QAX0246-001Z	RESONATOR I.M	
	BK400	E308566-001	FL HOLDER	
	BK401	E308566-002	FL HOLDER	
	BK499	E70225-002	EARTH PLATE	
	CN061	QGB2510K1-08	CONNECTOR	
	CN062	QGB2510K1-08	CONNECTOR	
	CN063	QGB2510K1-05	CONNECTOR	
	CN071	QGB2510K1-08	CONNECTOR	
	CN072	QGB2510K1-08	CONNECTOR	
	CN073	QGB2510K1-05	CONNECTOR	
	CN102	EWS265-A920J	SOCKET WIRE ASSY	
	CN341	QGB2510K1-08	CONNECTOR	
	CN406	EWS21A-001	SOCKET WIRE ASSY	
	CN410	QGF1205F1-31	CONNECTOR	
	CN412	QGF1210G1-21	CONNECTOR	
	CN420	EWS26A-F908J	SOCKET WIRE ASSY	
	CN422	QGA2001F1-14	14P PLUG ASSY	
	CN430	QGA2001F1-10	10P PLUG ASSY	
	CN432	EWS26E-F908J	SOCKET WIRE ASSY	
	CN450	EWS26A-A940J	SOCKET WIRE ASSY	
	CN881	QGD2501C1-03Z	SOCKET I.M	
	DI400	QLF0042-001	FLUORESCENT DISPLAY TUBE	
	FS400	E3400-444	FELT SPACER	
	FS401	E3400-444	FELT SPACER	
	FS489	E3400-431	FELT SPACER	
	JS400	QSW0502-001	SW	
	JS401	QSW0672-001	ROTARY SWITCH	
	JS402	QSW0672-001	ROTARY SWITCH	

■Electrical Parts List (Control P.C.B)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC201	BA7625	I.C(MONO-ANALOG)	
	IC202	NJM2285D	I.C(M)	
	IC203	MB90089PF-206	I.C(M)	
	IC241	BA7626	I.C(MONO-ANALOG)	
	IC242	BA7625	I.C(MONO-ANALOG)	
	IC301	NJM4580D-D	I.C.	
	IC304	TC9164AN	I.C(DIGI-MOS)	
	IC305	NJM4580L	I.C(MONO-ANALOG)	
	IC311	TC9163AN	I.C(DIGI-MOS)	
	IC391	BA15218N	I.C(MONO-ANALOG)	
		DIODES		
	D200	1SS133-T2	SI.DIODE	
	D201	1SS133-T2	SI.DIODE	
		TRANSISTORS		
	Q200	2SA933S/RS/-T	SILICON	
	Q201	2SA933S/RS/-T	SILICON	
	Q202	DTC143TS	DIGITAL TRANSISTOR	
	Q203	DTC114YS-T	SILICON	
	Q204	2SA933S/RS/-T	SILICON	
	Q205	2SA933S/RS/-T	SILICON	
	Q206	2SA933S/RS/-T	SILICON	
	Q240	2SA933S/RS/-T	SILICON	
	Q241	2SA933S/RS/-T	SILICON	
	Q301	2SC2878/AB/-T	SILICON	
	Q302	2SC2878/AB/-T	SILICON	
		CAPACITORS		
	C201	QETB1HM-475E	4.7MF 50V E.CAP.	
	C202	QETB1HM-475E	4.7MF 50V E.CAP.	
	C203	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C204	QETB1HM-475E	4.7MF 50V E.CAP.	
	C205	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C206	QETB1HM-475E	4.7MF 50V E.CAP.	
	C207	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C208	QETC1AM-476ZM	47MF 10V E.CAP.	
	C209	QCF31HZ-103Z	0.01MF 50V CERAMIC	
	C210	QETB1HM-475E	4.7MF 50V E.CAP.	
	C211	QETB1HM-107	100MF 50V E.CAP.	
	C212	QETC1AM-476ZM	47MF 10V E.CAP.	
	C213	QCF31HZ-103Z	0.01MF 50V CERAMIC	
	C214	QETB1HM-475E	4.7MF 50V E.CAP.	
	C215	QETB1HM-475E	4.7MF 50V E.CAP.	
	C216	QDX31EM-473Z	0.047MF 25V C CAP.	
	C217	QETB1AM-477	470MF 10V E.CAP.	
	C218	QCZ0202-155	1.5MF 25V CER.CAP.	
	C219	QDC31HJ-150Z	15PF 50V C CAP.	
	C220	QDC31HJ-100Z	10PF 50V C.CAPA. I.M	
	C221	QDC31HJ-470Z	47PF 50V C.CAPA. I.M	
	C222	QDC31HJ-270Z	27PF 50V ACCAPA. I.M	
	C223	QCGB1HK-102	1000PF 50V CER.CAP.	
	C224	QCBB1HK-271Y	270PF 50V CER.CAP.	
	C225	QCBB1HK-121Y	120PF 50V CER.CAP.	
	C241	QDX31EM-473Z	0.047MF 25V C CAP.	
	C242	QETB1HM-475E	4.7MF 50V E.CAP.	
	C244	QDX31EM-473Z	0.047MF 25V C CAP.	
	C245	QETB1HM-475E	4.7MF 50V E.CAP.	
	C246	QDX31EM-473Z	0.047MF 25V C CAP.	
	C247	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C249	QDX31EM-473Z	0.047MF 25V C CAP.	
	C250	QETB1HM-475E	4.7MF 50V E.CAP.	
	C251	QDX31EM-473Z	0.047MF 25V C CAP.	
	C252	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C254	QDX31EM-473Z	0.047MF 25V C CAP.	
	C255	QETB1HM-475E	4.7MF 50V E.CAP.	
	C256	QCF31HZ-103Z	0.01MF 50V CERAMIC	
	C257	QETC1AM-476ZM	47MF 10V E.CAP.	
	C258	QCF31HZ-103Z	0.01MF 50V CERAMIC	
	C259	QETC1AM-476ZM	47MF 10V E.CAP.	
	C260	QDX31EM-473Z	0.047MF 25V C CAP.	

⚠	Item	Parts Number	Description	Area
	C261	QETB1HM-475E	4.7MF 50V E.CAP.	
	C268	QCS21HJ-470	47PF 50V CER.CAP.	
	C269	QCS21HJ-470	47PF 50V CER.CAP.	
	C270	QCS21HJ-470	47PF 50V CER.CAP.	
	C271	QCS21HJ-470	47PF 50V CER.CAP.	
	C277	QCS21HJ-470	47PF 50V CER.CAP.	
	C301	QETB1HM-475E	4.7MF 50V E.CAP.	
	C302	QETB1HM-475E	4.7MF 50V E.CAP.	
	C303	QCS21HJ-101A	100PF 50V CER.CAP.	
	C304	QCS21HJ-101A	100PF 50V CER.CAP.	
	C305	QFLB1HJ-182	1800PF 50V MYLAR CAP.	
	C306	QFLB1HJ-182	1800PF 50V MYLAR CAP.	
	C307	QFLB1HJ-682	6800PF 50V MYLAR CAP.	
	C308	QFLB1HJ-682	6800PF 50V MYLAR CAP.	
	C309	QCS21HJ-101A	100PF 50V CER.CAP.	
	C310	QCS21HJ-101A	100PF 50V CER.CAP.	
	C311	QETB1HM-475E	4.7MF 50V E.CAP.	
	C312	QETB1HM-475E	4.7MF 50V E.CAP.	
	C313	QETC1AM-107ZN	100MF 10V E.CAP.	
	C314	QETC1AM-107ZN	100MF 10V E.CAP.	
	C315	QETB1CM-476	47MF 16V AL E.CAP.	
	C316	QETB1CM-476	47MF 16V AL E.CAP.	
	C317	QETB1EM-226N	22MF 25V E.CAP.	
	C318	QETB1EM-226N	22MF 25V E.CAP.	
	C319	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C320	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C321	QETB1EM-226N	22MF 25V E.CAP.	
	C322	QETB1EM-226N	22MF 25V E.CAP.	
	C323	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C324	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C325	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C326	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C327	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C328	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C329	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C330	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C337	QETB1HM-475E	4.7MF 50V E.CAP.	
	C338	QETB1HM-475E	4.7MF 50V E.CAP.	
	C339	QETB1EM-226N	22MF 25V E.CAP.	
	C340	QETB1EM-226N	22MF 25V E.CAP.	
	C351	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C352	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C358	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C361	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C362	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C363	QETB1EM-226N	22MF 25V E.CAP.	
	C364	QETB1EM-226N	22MF 25V E.CAP.	
	C368	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C369	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C370	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C371	QETB1EM-476	47MF 25V AL E.CAP.	
	C372	QETB1EM-476	47MF 25V AL E.CAP.	
	C373	QETB1HM-475E	4.7MF 50V E.CAP.	
	C374	QETB1HM-475E	4.7MF 50V E.CAP.	
	C377	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C378	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C379	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C380	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C381	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C382	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C383	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C384	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C385	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C386	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C387	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C388	QCS31HJ-331Z	330PF 50V CER.CAP.	
	C1250	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C1251	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C1252	QCBB1HK-221Y	220PF 50V CER.CAP.	

■Electrical Parts List (Control P.C.B)

⚠	Item	Parts Number	Description	Area
		RESISTORS		
	R200	QRE141J-750Y	75 1/4W R.NETWORK	
	R201	QRE141J-750Y	75 1/4W R.NETWORK	
	R202	QRE141J-750Y	75 1/4W R.NETWORK	
	R203	QRE141J-750Y	75 1/4W R.NETWORK	
	R204	QRE141J-750Y	75 1/4W R.NETWORK	
	R205	QRE141J-750Y	75 1/4W R.NETWORK	
	R206	QRE141J-750Y	75 1/4W R.NETWORK	
	R207	QRE141J-331Y	330 1/4W R.NETWORK	
	R208	QRE141J-331Y	330 1/4W R.NETWORK	
	R209	QRE141J-473Y	47K 1/4W R.NETWORK	
	R210	QRE141J-331Y	330 1/4W R.NETWORK	
	R211	QRE141J-473Y	47K 1/4W R.NETWORK	
	R212	QRE141J-331Y	330 1/4W R.NETWORK	
	R213	QRE141J-473Y	47K 1/4W R.NETWORK	
	R214	QRE141J-151Y	150 1/4W R.NETWORK	
	R215	QRE141J-151Y	150 1/4W R.NETWORK	
	R216	QRE141J-301Y	300 1/4W R.NETWORK	
	R217	QRE141J-103Y	10K 1/4W R.NETWORK	
	R218	QRE141J-331Y	330 1/4W R.NETWORK	
	R219	QRE141J-101Y	100 1/4W R.NETWORK	
	R220	QRE141J-121Y	120 1/4W R.NETWORK	
	R221	QRE141J-151Y	150 1/4W R.NETWORK	
	R222	QRE141J-561Y	560 1/4W R.NETWORK	
	R223	QRE141J-561Y	560 1/4W R.NETWORK	
	R224	QRE141J-561Y	560 1/4W R.NETWORK	
	R225	QRJ146J-3R3X	3.3 1/4W R.NETWORK	
	R240	QRE141J-750Y	75 1/4W R.NETWORK	
	R241	QRE141J-750Y	75 1/4W R.NETWORK	
	R242	QRE141J-750Y	75 1/4W R.NETWORK	
	R243	QRE141J-750Y	75 1/4W R.NETWORK	
	R244	QRE141J-750Y	75 1/4W R.NETWORK	
	R245	QRE141J-750Y	75 1/4W R.NETWORK	
	R246	QRE141J-750Y	75 1/4W R.NETWORK	
	R247	QRE141J-750Y	75 1/4W R.NETWORK	
	R248	QRE141J-151Y	150 1/4W R.NETWORK	
	R249	QRE141J-121Y	120 1/4W R.NETWORK	
	R256	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R257	QRE141J-471Y	470 1/4W R.NETWORK	
	R258	QRE141J-472Y	4.7K 1/4W R.NETWORK	
	R259	QRE141J-471Y	470 1/4W R.NETWORK	
	R264	QRE141J-103Y	10K 1/4W R.NETWORK	
	R265	QRE141J-103Y	10K 1/4W R.NETWORK	
	R266	QRE141J-750Y	75 1/4W R.NETWORK	
	R267	QRE141J-473Y	47K 1/4W R.NETWORK	
	R268	QRE141J-750Y	75 1/4W R.NETWORK	
	R269	QRE141J-473Y	47K 1/4W R.NETWORK	
	R271	QRJ146J-6R8X	6.8 1/4W R.NETWORK	
	R301	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R302	QRE141J-222Y	2.2K 1/4W R.NETWORK	
	R303	QRE141J-473Y	47K 1/4W R.NETWORK	
	R304	QRE141J-473Y	47K 1/4W R.NETWORK	
	R305	QRE141J-621Y	620 1/4W R.NETWORK	
	R306	QRE141J-621Y	620 1/4W R.NETWORK	
	R307	QRE141J-393Y	39K 1/4W R.NETWORK	
	R308	QRE141J-393Y	39K 1/4W R.NETWORK	
	R309	QRE141J-474Y	470K 1/4W R.NETWORK	
	R310	QRE141J-474Y	470K 1/4W R.NETWORK	
	R311	QRE141J-104Y	100K 1/4W R.NETWORK	
	R312	QRE141J-104Y	100K 1/4W R.NETWORK	
	R313	QRJ146J-331X	330 1/4W R.NETWORK	
	R314	QRJ146J-331X	330 1/4W R.NETWORK	
	R315	QRZ9005-680X	68 FUSIBLE	
	R316	QRZ9005-680X	68 FUSIBLE	
	R325	QRE141J-471Y	470 1/4W R.NETWORK	
	R326	QRE141J-471Y	470 1/4W R.NETWORK	
	R327	QRE141J-471Y	470 1/4W R.NETWORK	
	R328	QRE141J-471Y	470 1/4W R.NETWORK	
	R329	QRE141J-471Y	470 1/4W R.NETWORK	

⚠	Item	Parts Number	Description	Area
	R330	QRE141J-471Y	470 1/4W R.NETWORK	
	R335	QRE141J-104Y	100K 1/4W R.NETWORK	
	R336	QRE141J-104Y	100K 1/4W R.NETWORK	
	R337	QRE141J-104Y	100K 1/4W R.NETWORK	
	R338	QRE141J-104Y	100K 1/4W R.NETWORK	
	R339	QRE141J-104Y	100K 1/4W R.NETWORK	
	R340	QRE141J-104Y	100K 1/4W R.NETWORK	
	R353	QRZ9005-680X	68 FUSIBLE	
	R354	QRZ9005-680X	68 FUSIBLE	
	R355	QRE141J-471Y	470 1/4W R.NETWORK	
	R356	QRE141J-471Y	470 1/4W R.NETWORK	
	R357	QRE141J-471Y	470 1/4W R.NETWORK	
	R358	QRE141J-471Y	470 1/4W R.NETWORK	
	R359	QRE141J-471Y	470 1/4W R.NETWORK	
	R360	QRE141J-471Y	470 1/4W R.NETWORK	
	R361	QRE141J-471Y	470 1/4W R.NETWORK	
	R362	QRE141J-471Y	470 1/4W R.NETWORK	
	R363	QRE141J-471Y	470 1/4W R.NETWORK	
	R364	QRE141J-471Y	470 1/4W R.NETWORK	
	R365	QRE141J-471Y	470 1/4W R.NETWORK	
	R366	QRE141J-471Y	470 1/4W R.NETWORK	
	R379	QRE141J-471Y	470 1/4W R.NETWORK	
	R380	QRE141J-471Y	470 1/4W R.NETWORK	
	R381	QRE141J-183Y	18K 1/4W CARBON RES.	
	R382	QRE141J-202Y	2K 1/4W R.NETWORK	
	R383	QRE141J-104Y	100K 1/4W R.NETWORK	
	R384	QRE141J-104Y	100K 1/4W R.NETWORK	
	R385	QRE141J-471Y	470 1/4W R.NETWORK	
	R386	QRE141J-471Y	470 1/4W R.NETWORK	
	R387	QRE141J-103Y	10K 1/4W R.NETWORK	
	R388	QRE141J-103Y	10K 1/4W R.NETWORK	
	R1250	QRE141J-470Y	47 1/4W R.NETWORK	
	R1251	QRE141J-221Y	220 1/4W R.NETWORK	
	R1252	QRE141J-221Y	220 1/4W R.NETWORK	
	R1253	QRE141J-470Y	47 1/4W R.NETWORK	
	R1254	QRE141J-221Y	220 1/4W R.NETWORK	
		OTHERS		
		QUB220-10HPHP	CONNECTOR WIRE ASSY	
	J201	QNN0078-001	PIN JACK	
	J202	QNN0067-001	PIN JACK	
	J203	QNN0078-001	PIN JACK	
	J241	QND0002-001	CONNECT TERMINAL	
	J242	QND0028-001	PIN JACK	
	J243	QND0024-001	PIN JACK	
	J301	QNN0056-001	PIN JACK	
	J302	QNN0056-001	PIN JACK	
	J311	QNN0056-001	PIN JACK	
	J312	QNN0056-001	PIN JACK	
	J313	QNN0056-001	PIN JACK	
	J314	QNN0107-001	PIN JACK	
	L200	QQL231K-220Y	INDUCTOR	
	X200	QAX0261-001Z	CRYSTAL	
	CN200	QGB2510K1-04	CONNECTOR	
	CN202	QGA2001F1-10	10P PLUG ASSY	
	CN204	QGB1214K1-14S	CONNECT TERMINAL	
	CN205	QGB1214J1-14S	CONNECT TERMINAL	
	CN206	QGA2501F1-02	CONNECTOR	
	CN240	QGB2510K1-04	CONNECTOR	
	CN242	QGB1214K1-14S	CONNECT TERMINAL	
	CN243	QGB1214J1-14S	CONNECT TERMINAL	
	CN244	QGA2501F1-04	CONNECTOR	
	CN254	QGB2510K1-05	CONNECTOR	
	CN311	QGB2510K1-17	CONNECTOR	
	CN313	QGB2510K1-14	CONNECTOR	
	CN416	QGA2501F1-03	CONNECTOR	
	J1250	QNS0077-001	PIN JACK	
	J1251	QNS0083-001	PIN JACK	
	SP203	VYH7653-005	I.C.PROTECTOR	
	SW200	QSW0673-001	LEVER SWITCH	

■Electrical Parts List (AC Supply P.C.B)

⚠	Item	Parts Number	Description	Area
		DIODES		
	D051	1SR139-200-T4	SILICON	
	D052	1SR139-200-T4	SILICON	
	D053	1SR139-200-T4	SILICON	
	D054	1SR139-200-T4	SILICON	
	D056	MTZJ6.2A-T2	ZENER	
	D057	1SS133-T2	SI.DIODE	
⚠	D061	10E2-FD	DIODE	
	D062	1SR139-200-T4	SILICON	
⚠	D063	10E2-FD	DIODE	
	D064	1SR139-200-T4	SILICON	
	D065	1SS133-T2	SI.DIODE	
	D066	1SS133-T2	SI.DIODE	
	D071	1SR139-200-T4	SILICON	
	D072	1SR139-200-T4	SILICON	
	D073	1SR139-200-T4	SILICON	
	D074	MTZJ33C-T2	ZENER	
	D075	MTZJ6.2C-T2	ZENER	
	D701	1SS133-T2	SI.DIODE	
	D702	1SS133-T2	SI.DIODE	
	D703	1SS133-T2	SI.DIODE	
	D704	1SS133-T2	SI.DIODE	
⚠	D801	30DF2-FC	SILICON	
⚠	D802	30DF2-FC	SILICON	
⚠	D803	30DF2-FC	SILICON	
⚠	D804	30DF2-FC	SILICON	
⚠	D805	30DF2-FC	SILICON	
⚠	D806	30DF2-FC	SILICON	
⚠	D807	30DF2-FC	SILICON	
⚠	D808	30DF2-FC	SILICON	
	D951	1SS133-T2	SI.DIODE	
	D952	1SS133-T2	SI.DIODE	
	D1701	1SS133-T2	SI.DIODE	
	D1702	MTZJ18C-T2	ZENER	
	D1771	1SS133-T2	SI.DIODE	
	D1772	1SS133-T2	SI.DIODE	
	D1791	1SS133-T2	SI.DIODE	
	D1801	1SS133-T2	SI.DIODE	
	D1802	1SS133-T2	SI.DIODE	
	D1805	MTZJ18C-T2	ZENER	
	D1871	1SS133-T2	SI.DIODE	
	D1872	1SS133-T2	SI.DIODE	
	D1873	1SS133-T2	SI.DIODE	
	D1874	1SS133-T2	SI.DIODE	
	D1891	1SS133-T2	SI.DIODE	
	D1892	1SS133-T2	SI.DIODE	
		TRANSISTORS		
	Q052	2SC2235/OY/-T	SILICON	
	Q053	DTC123YS-T	SILICON	
	Q061	DTC114YS-T	SILICON	
	Q071	2SB1357/EF/-T	SILICON	
	Q072	DTC114ES	DIGITAL TRANSISTOR	
	Q073	DTA144ES-T	SILICON	
	Q074	2SC2240/GL/-T	SILICON	
	Q701	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q702	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q703	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q704	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q705	2SA1038S/SE/-T	SILICON	
	Q706	2SA1038S/SE/-T	SILICON	
	Q707	2SA933AS/RS/-T	SILICON	
	Q708	2SA933AS/RS/-T	SILICON	
	Q709	2SA1038S/SE/-T	SILICON	
	Q710	2SA1038S/SE/-T	SILICON	
	Q711	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q712	2SC2389S/SE/-T	SI.TRANSISTOR	

⚠	Item	Parts Number	Description	Area
	Q1701	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1702	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1703	2SA1038S/S/-T	SILICON	
	Q1731	2SD636/QR/	SILICON	
	Q1771	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q1772	2SA1038S/SE/-T	SILICON	
	Q1791	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q1801	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1802	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1803	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1804	2SC2240-BL/AB/	SI.TRANSISTOR	
	Q1805	2SA1038S/S/-T	SILICON	
	Q1806	2SA1038S/S/-T	SILICON	
	Q1831	2SD636/QR/	SILICON	
	Q1832	2SD636/QR/	SILICON	
	Q1871	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q1872	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q1873	2SA1038S/SE/-T	SILICON	
	Q1874	2SA1038S/SE/-T	SILICON	
	Q1891	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q1892	2SC2389S/SE/-T	SI.TRANSISTOR	
		CAPACITORS		
⚠	C001	QCZ9019-472	4700PF CER.CAP.	
⚠	C002	QCZ9019-472	4700PF CER.CAP.	
	C003	QCBB1HK-391Y	390PF 50V CER.CAP.	
	C051	QFN82AK-472	4700PF 100V METAL.MYLAR	
	C052	QETN1EM-108Z	1000MF 25V AL E.CAP.	
	C054	QETN1CM-477Z	470MF 16V ELECTRO	
	C055	QCF31HZ-472Z	4700PF 50V CERAMIC	
	C061	QFN82AJ-104	0.1MF 100V MYLAR CAP.	
	C062	QFN82AJ-104	0.1MF 100V MYLAR CAP.	
	C063	QFN82AJ-104	0.1MF 100V MYLAR CAP.	
	C065	QETB1VM-338	3300MF 35V AL E.CAP.	
	C066	QETB1VM-228N	2200MF 35V E.CAP.	
	C067	QETB1HM-475E	4.7MF 50V E.CAP.	
	C068	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C069	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C070	QETB1HM-227	220MF 50V E.CAP.	
	C071	QETN1JM-227Z	220MF 63V ELECTRO	
	C072	QETB1HM-226E	22MF 50V E.CAP.	
	C073	QETB1HM-226E	22MF 50V E.CAP.	
	C074	QETB1HM-105	1MF 50V AL E.CAP.	
	C091	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C092	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C705	QCS21HJ-101A	100PF 50V CER.CAP.	
	C706	QCS21HJ-101A	100PF 50V CER.CAP.	
	C710	QCS22HJ-220	22PF 500V CER.CAP.	
	C711	QFLB1HJ-152	1500PF 50V MYLAR CAP.	
	C712	QFLB1HJ-152	1500PF 50V MYLAR CAP.	
	C713	QCS21HJ-680A	68PF 50V CER.CAP.	
	C714	QCS21HJ-680A	68PF 50V CER.CAP.	
	C715	QCS21HJ-680A	68PF 50V CER.CAP.	
	C716	QCS21HJ-680A	68PF 50V CER.CAP.	
	C717	QCS22HJ-220	22PF 500V CER.CAP.	
	C801	QFN82CK-104	0.1MF 160V METAL.MYLAR	
	C802	QFN82CK-104	0.1MF 160V METAL.MYLAR	
	C803	QFN82CK-104	0.1MF 160V METAL.MYLAR	
	C804	QFN82CK-104	0.1MF 160V METAL.MYLAR	
	C805	QFN82CK-104	0.1MF 160V METAL.MYLAR	
	C951	QFLB1HJ-222	2200PF 50V MYLAR CAP.	
	C955	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C956	QCS21HJ-221	220PF 50V CER.CAP.	
	C957	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C958	QFLB1HJ-223	0.022MF 50V MYLAR CAP.	
	C959	QCS21HJ-221	220PF 50V CER.CAP.	
	C960	QCS21HJ-221	220PF 50V CER.CAP.	

■Electrical Parts List (AC Supply P.C.B)

⚠	Item	Parts Number	Description	Area
	C968	QCBB1HK-561Y	560PF 50V CER. CAP.	
	C969	QCGB1HK-102	1000PF 50V CER. CAP.	
	C970	QCGB1HK-102	1000PF 50V CER. CAP.	
	C1701	QETB1HM-106	10MF 50V E. CAP.	
	C1702	QCS21HJ-470	47PF 50V CER. CAP.	
	C1703	QCS21HJ-101A	100PF 50V CER. CAP.	
	C1704	QETB1CM-476	47MF 16V AL E. CAP.	
	C1705	QCS21HJ-5R0	5PF 50V CER. CAP.	
	C1711	QCS22HJ-330	33PF 500V CER. CAP.	
	C1712	QFLB1HJ-103	0.01MF 50V MYLAR CAP.	
	C1713	QETB1HM-225	2.2MF 50V AL E. CAP.	
	C1714	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C1715	QETB1HM-476	47MF 50V E. CAP.	
	C1741	QETB1JM-476	47MF 63V AL E. CAP.	
	C1742	QETB1JM-476	47MF 63V AL E. CAP.	
	C1743	QETB1EM-476	47MF 25V AL E. CAP.	
	C1751	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1752	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1761	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1762	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1791	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C1801	QETB1HM-106	10MF 50V E. CAP.	
	C1802	QETB1HM-106	10MF 50V E. CAP.	
	C1803	QCS21HJ-101A	100PF 50V CER. CAP.	
	C1804	QCS21HJ-101A	100PF 50V CER. CAP.	
	C1805	QCS21HJ-221	220PF 50V CER. CAP.	
	C1806	QCS21HJ-221	220PF 50V CER. CAP.	
	C1807	QETB1CM-476	47MF 16V AL E. CAP.	
	C1808	QETB1CM-476	47MF 16V AL E. CAP.	
	C1809	QCS21HJ-5R0	5PF 50V CER. CAP.	
	C1810	QCS21HJ-5R0	5PF 50V CER. CAP.	
	C1811	QCS22HJ-330	33PF 500V CER. CAP.	
	C1812	QCS22HJ-330	33PF 500V CER. CAP.	
	C1813	QFLB1HJ-103	0.01MF 50V MYLAR CAP.	
	C1814	QFLB1HJ-103	0.01MF 50V MYLAR CAP.	
	C1815	QEKC1HM-225Z	2.2MF 50V ELECTRO	
	C1816	QEKC1HM-225Z	2.2MF 50V ELECTRO	
	C1817	QETB1HM-476	47MF 50V E. CAP.	
	C1818	QETB1HM-476	47MF 50V E. CAP.	
	C1841	QETB1JM-476	47MF 63V AL E. CAP.	
	C1842	QETB1JM-476	47MF 63V AL E. CAP.	
	C1843	QETB1EM-106	10MF 25V AL E. CAP.	
	C1851	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1852	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1853	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1854	QCS22HJ-470A	47PF 500V CER. CAP.	
	C1861	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1862	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1863	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1864	QFLB1HJ-473	0.047MF 50V MYLAR CAP.	
	C1891	QCF31HZ-223Z	0.022MF 50V CERAMIC	
	C1892	QCF31HZ-223Z	0.022MF 50V CERAMIC	
		RESISTORS		
	R053	QRZ9015-3R9	3.9 FUSIBLE	
	R054	QRE141J-821Y	820 1/4W R. NETWORK	
	R061	QRT012J-R22	0.22 1W R. NETWORK	
	R062	QRT012J-R22	0.22 1W R. NETWORK	
	R065	QRT022J-1R0	1 2W R. NETWORK	
	R066	QRJ146J-2R2X	2.2 1/4W R. NETWORK	
	R067	QRJ146J-120X	12 1/4W R. NETWORK	
	R068	QRE141J-562Y	5.6K 1/4W R. NETWORK	
	R069	QRE141J-822Y	8.2K 1/4W R. NETWORK	
	R070	QRE141J-103Y	10K 1/4W R. NETWORK	
	R072	QRJ146J-332X	3.3K 1/4W R. NETWORK	
	R073	QRE141J-223Y	22K 1/4W R. NETWORK	
	R074	QRE141J-104Y	100K 1/4W R. NETWORK	

⚠	Item	Parts Number	Description	Area
	R091	QRL022J-471	470 2W OXIDE METAL	
	R092	QRL022J-471	470 2W OXIDE METAL	
	R705	QRE141J-202Y	2K 1/4W R. NETWORK	
	R706	QRE141J-202Y	2K 1/4W R. NETWORK	
	R707	QRE141J-202Y	2K 1/4W R. NETWORK	
	R708	QRE141J-202Y	2K 1/4W R. NETWORK	
	R709	QRE141J-912Y	9.1K 1/4W R. NETWORK	
	R710	QRE141J-912Y	9.1K 1/4W R. NETWORK	
	R717	QRJ146J-562X	5.6K 1/4W R. NETWORK	
	R718	QRJ146J-562X	5.6K 1/4W R. NETWORK	
	R719	QRK126J-103X	10K 1/2W R. NETWORK	
	R720	QRK126J-103X	10K 1/2W R. NETWORK	
	R721	QRJ146J-151X	150 1/4W CARBON RES.	
	R722	QRJ146J-151X	150 1/4W CARBON RES.	
	R723	QRE141J-391Y	390 1/4W R. NETWORK	
	R724	QRE141J-391Y	390 1/4W R. NETWORK	
	R725	QRE141J-152Y	1.5K 1/4W R. NETWORK	
	R726	QRE141J-152Y	1.5K 1/4W R. NETWORK	
	R727	QRE141J-333Y	33K 1/4W R. NETWORK	
	R728	QRE141J-333Y	33K 1/4W R. NETWORK	
	R729	QRE141J-391Y	390 1/4W R. NETWORK	
	R730	QRE141J-391Y	390 1/4W R. NETWORK	
	R731	QRE141J-391Y	390 1/4W R. NETWORK	
	R732	QRE141J-391Y	390 1/4W R. NETWORK	
	R733	QRE141J-101Y	100 1/4W R. NETWORK	
	R734	QRE141J-101Y	100 1/4W R. NETWORK	
	R951	QRJ146J-120X	12 1/4W R. NETWORK	
	R952	QRJ146J-120X	12 1/4W R. NETWORK	
	R955	QRJ146J-2R7X	2.7 1/4W R. NETWORK	
	R957	QRJ146J-2R7X	2.7 1/4W R. NETWORK	
	R958	QRJ146J-2R7X	2.7 1/4W R. NETWORK	
	R1701	QRE141J-222Y	2.2K 1/4W R. NETWORK	
	R1702	QRE141J-104Y	100K 1/4W R. NETWORK	
	R1703	QRE141J-202Y	2K 1/4W R. NETWORK	
	R1705	QRE141J-123Y	12K 1/4W R. NETWORK	
	R1711	QRE141J-911Y	910 1/4W R. NETWORK	
	R1712	QRE141J-104Y	100K 1/4W R. NETWORK	
	R1721	QRJ146J-221X	220 1/4W R. NETWORK	
	R1722	QRE141J-392Y	3.9K 1/4W R. NETWORK	
	R1723	QRE141J-392Y	3.9K 1/4W R. NETWORK	
	R1724	QRE141J-392Y	3.9K 1/4W R. NETWORK	
	R1725	QRE141J-392Y	3.9K 1/4W R. NETWORK	
	R1731	QRE141J-751Y	750 1/4W R. NETWORK	
	R1732	QRE141J-391Y	390 1/4W R. NETWORK	
	R1742	QRJ146J-331X	330 1/4W R. NETWORK	
	R1743	QRL022J-562	5.6K 2W R. NETWORK	
	R1751	QRJ146J-100X	10 1/4W R. NETWORK	
	R1752	QRJ146J-100X	10 1/4W R. NETWORK	
	R1753	QRZ0197-R22	0.22 1W NETWORK RES.	
	R1761	QRJ125J-330	33 1/2W R. NETWORK	
	R1762	QRL022J-100	10 2W R. NETWORK	
	R1771	QRE141J-391Y	390 1/4W R. NETWORK	
	R1772	QRE141J-391Y	390 1/4W R. NETWORK	
	R1773	QRE141J-201Y	200 1/4W R. NETWORK	
	R1774	QRE141J-201Y	200 1/4W R. NETWORK	
	R1791	QRE141J-272Y	2.7K 1/4W R. NETWORK	
	R1792	QRE141J-153Y	15K 1/4W R. NETWORK	
	R1793	QRE141J-123Y	12K 1/4W R. NETWORK	
	R1794	QRE141J-104Y	100K 1/4W R. NETWORK	
	R1801	QRE141J-222Y	2.2K 1/4W R. NETWORK	
	R1802	QRE141J-222Y	2.2K 1/4W R. NETWORK	
	R1803	QRE141J-104Y	100K 1/4W R. NETWORK	
	R1804	QRE141J-104Y	100K 1/4W R. NETWORK	
	R1805	QRE141J-202Y	2K 1/4W R. NETWORK	
	R1806	QRE141J-202Y	2K 1/4W R. NETWORK	
	R1809	QRE141J-123Y	12K 1/4W R. NETWORK	

■Electrical Parts List (AC Supply P.C.B)

⚠	Item	Parts Number	Description	Area
	R1810	QRE141J-123Y	12K 1/4W R.NETWORK	
	R1811	QRE141J-911Y	910 1/4W R.NETWORK	
	R1812	QRE141J-911Y	910 1/4W R.NETWORK	
	R1813	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1814	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1821	QRJ146J-221X	220 1/4W R.NETWORK	
	R1822	QRJ146J-221X	220 1/4W R.NETWORK	
	R1823	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1824	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1825	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1826	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1827	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1828	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1829	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1830	QRE141J-392Y	3.9K 1/4W R.NETWORK	
	R1831	QRE141J-751Y	750 1/4W R.NETWORK	
	R1832	QRE141J-751Y	750 1/4W R.NETWORK	
	R1833	QRE141J-391Y	390 1/4W R.NETWORK	
	R1834	QRE141J-391Y	390 1/4W R.NETWORK	
	R1842	QRJ146J-331X	330 1/4W R.NETWORK	
	R1843	QRL022J-562	5.6K 2W R.NETWORK	
	R1851	QRJ146J-100X	10 1/4W R.NETWORK	
	R1852	QRJ146J-100X	10 1/4W R.NETWORK	
	R1853	QRJ146J-100X	10 1/4W R.NETWORK	
	R1854	QRJ146J-100X	10 1/4W R.NETWORK	
	R1855	QRZ0197-R22	0.22 1W NETWORK RES.	
	R1856	QRZ0197-R22	0.22 1W NETWORK RES.	
	R1861	QRJ125J-330	33 1/2W R.NETWORK	
	R1862	QRJ125J-330	33 1/2W R.NETWORK	
	R1863	QRL022J-100	10 2W R.NETWORK	
	R1864	QRL022J-100	10 2W R.NETWORK	
	R1871	QRE141J-391Y	390 1/4W R.NETWORK	
	R1872	QRE141J-391Y	390 1/4W R.NETWORK	
	R1873	QRE141J-391Y	390 1/4W R.NETWORK	
	R1874	QRE141J-391Y	390 1/4W R.NETWORK	
	R1875	QRE141J-201Y	200 1/4W R.NETWORK	
	R1876	QRE141J-201Y	200 1/4W R.NETWORK	
	R1877	QRE141J-201Y	200 1/4W R.NETWORK	
	R1878	QRE141J-201Y	200 1/4W R.NETWORK	
	R1891	QRE141J-272Y	2.7K 1/4W R.NETWORK	
	R1892	QRE141J-272Y	2.7K 1/4W R.NETWORK	
	R1893	QRE141J-153Y	15K 1/4W R.NETWORK	
	R1894	QRE141J-153Y	15K 1/4W R.NETWORK	
	R1895	QRE141J-123Y	12K 1/4W R.NETWORK	
	R1896	QRE141J-123Y	12K 1/4W R.NETWORK	
	R1897	QRE141J-104Y	100K 1/4W R.NETWORK	
	R1898	QRE141J-104Y	100K 1/4W R.NETWORK	
		OTHERS		
		QWE881-12RR	VINYL WIRE	
		QWE881-18RR	VINYL WIRE	
		QWE881-38RR	VINYL WIRE	
		QWE882-36RR	VINYL WIRE	
		QWE884-20RR	VINYL WIRE	
		QWE886-16RR	PIN WIRE	
		QWE886-26RR	VINYL WIRE	
	G	QWE882-14RR	VINYL WIRE	
	H	QWE880-14RR	VINYL WIRE	
	10	QWE881-16RR	VINYL WIRE	
	J091	QNS0023-001	JACK	
⚠	S001	QSW0650-001	PUSH SWITCH	
⚠	T002	ETP1000-41EA	POWER TRASNFORMER	
	CN051	QGB2510J1-08	CONNECTOR	
	CN052	QGB2510J1-08	CONNECTOR	
	CN053	QGB2510J1-05	CONNECTOR	
	CN055	QGD2501C1-03Z	SOCKET I.M	
	CN056	QGD2501C1-04Z	SOCKET I.M	

⚠	Item	Parts Number	Description	Area
	CN402	QGF1205C1-21	CONNECTOR	
	CN701	EWS216-007	SOCKET WIRE ASSY	
	CN703	EWS288-001	VINYL WIRE	
	CN705	QGB2510K1-12	CONNECTOR	
	CN811	QGA3901F2-03	CONNECTOR	
	CN951	EWS356-004	SOCKET WIRE ASSY	
	EP001	E409182-001SM	EARTH TERMINAL	
	EP002	QNZ0136-001Z	IM EARTH PLATE	
	EP051	QNZ0136-001Z	IM EARTH PLATE	
	FC001	QNG0020-001Z	FUSE CLIP	
	FC002	QNG0020-001Z	FUSE CLIP	
	FC003	QNG0020-001Z	FUSE CLIP	
	FC004	QNG0020-001Z	FUSE CLIP	
	FC061	QNG0020-001Z	FUSE CLIP	
	FC062	QNG0020-001Z	FUSE CLIP	
	FC063	QNG0020-001Z	FUSE CLIP	
	FC064	QNG0020-001Z	FUSE CLIP	
	FW051	EWR37D-10LS	FLAT WIRE	
	FW901	EWR33D-08LS	CORD	
	FW961	EWR33D-15LS	FLAT WIRE	
	L1761	QQLZ005-R45	INDUCTOR	
	L1762	QQLZ005-R45	INDUCTOR	
	L1861	QQLZ005-R45	INDUCTOR	
	L1862	QQLZ005-R45	INDUCTOR	
	L1863	QQLZ005-R45	INDUCTOR	
	L1864	QQLZ005-R45	INDUCTOR	
⚠	RY001	QSK0039-001	RELAY	
	RY061	QSK0082-001	RELAY	
	RY951	QSK0042-001	RELAY	
	RY952	QSK0042-001	RELAY	
	ST951	QNB0079-001	SPEAKER TERMINAL	
	TA001	QNZ0079-001Z	TAB I.M	
	TA002	QNZ0079-001Z	TAB I.M	
	TH071	QAD0095-4R7Z	POSITIVE THERMISTOR	
	TH731	QAD0012-202	THERMISTOR	
	TH831	QAD0012-202	THERMISTOR	
	TH832	QAD0012-202	THERMISTOR	

■Electrical Parts List (AC-3 P.C.B)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC501	NJM4580E-W	I.C(M)	
	IC511	NJM4580E-W	I.C(M)	
	IC521	NJM4580E-W	I.C(M)	
	IC551	NJM4580E-W	I.C(M)	
	IC561	NJM4580E-W	I.C(M)	
	IC571	NJM4580E-W	I.C(M)	
	IC581	NJM4580E-W	I.C(M)	
	IC591	NJM4580E-W	I.C(M)	
	IC601	CS4226-KQ	I.C(M)	
	IC631	XCF56009FJ88	I.C(M)	
	IC641	XCB56007FJ88	I.C(M)	
	IC651	M341256SJ-15-X	I.C(S-RAM)	
	IC661	TC74HCU04AF-W	I.C.	
	IC671	MN173222JABP1	I.C(M)	
	IC672	TC7S04FU-X	I.C(M)	
	IC673	TC7S32FU-X	I.C(M)	
		TRANSISTORS		
	Q529	2SD1328/ST/-X	SILICON	
	Q530	2SD1328/ST/-X	SILICON	
	Q691	DTA144EKA-X	DIGITAL TRANSISTOR	
		CAPACITORS		
	C501	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C503	NEA21EM-475NZ	4.7MF 25V AL E.CAP.	
	C504	NEA21EM-475NZ	4.7MF 25V AL E.CAP.	
	C505	NCS31HJ-560X	56PF 50V C CAP.	
	C506	NCS31HJ-560X	56PF 50V C CAP.	
	C509	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C510	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C511	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C513	NCB31CK-183X	0.018MF 16V C.CAPA. C.M.	
	C514	NCB31CK-183X	0.018MF 16V C.CAPA. C.M.	
	C515	NCB31HK-182X	1800PF 50V C.CAP.	
	C516	NCB31HK-182X	1800PF 50V C.CAP.	
	C517	NCB31HK-562X	5600PF 50V C CAP.	
	C518	NCB31HK-562X	5600PF 50V C CAP.	
	C519	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C520	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C521	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C522	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C523	NCB31HK-272X	2700PF 50V C CAP.	
	C524	NCB31HK-272X	2700PF 50V C CAP.	
	C525	NCB31HK-562X	5600PF 50V C CAP.	
	C526	NCB31HK-562X	5600PF 50V C CAP.	
	C527	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C528	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C529	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C530	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C551	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C552	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C553	NCS31HJ-220X	22PF 50V C CAP.	
	C554	NCS31HJ-220X	22PF 50V C CAP.	
	C557	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C558	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C559	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C560	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C561	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C562	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C563	NCS31HJ-220X	22PF 50V C CAP.	
	C564	NCS31HJ-220X	22PF 50V C CAP.	
	C569	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C570	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C571	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C572	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C573	NCB31HK-272X	2700PF 50V C CAP.	
	C574	NCB31HK-272X	2700PF 50V C CAP.	
	C575	NCB31HK-562X	5600PF 50V C CAP.	
	C576	NCB31HK-562X	5600PF 50V C CAP.	
	C577	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C578	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C579	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C580	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	

⚠	Item	Parts Number	Description	Area
	C581	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C582	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C583	NCS31HJ-220X	22PF 50V C CAP.	
	C584	NCS31HJ-220X	22PF 50V C CAP.	
	C589	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C590	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C591	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C592	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C593	NCB31HK-272X	2700PF 50V C CAP.	
	C594	NCB31HK-272X	2700PF 50V C CAP.	
	C595	NCB31HK-562X	5600PF 50V C CAP.	
	C596	NCB31HK-562X	5600PF 50V C CAP.	
	C597	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C598	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C599	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C600	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C601	NCB31HK-152X	1500PF 50V C.CAPA. C.M	
	C602	NCB31CK-153X	0.015MF 16V C CAP.	
	C603	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C604	NCS31HJ-270X	27PF 50V C CAP.	
	C605	NCS31HJ-270X	27PF 50V C CAP.	
	C608	NCB31HK-103X	0.01MF 50V C CAP.	
	C609	NCB31HK-103X	0.01MF 50V C CAP.	
	C610	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C611	NCB31HK-221X	220PF 50V C CAP.	
	C619	NCB31HK-103X	0.01MF 50V C CAP.	
	C620	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C631	NCB31HK-472X	4700PF 50V C.CAPA. C.	
	C632	NCB31HK-103X	0.01MF 50V C CAP.	
	C633	NCB31HK-103X	0.01MF 50V C CAP.	
	C634	NCB31HK-103X	0.01MF 50V C CAP.	
	C635	NCB31HK-103X	0.01MF 50V C CAP.	
	C637	NCB31HK-103X	0.01MF 50V C CAP.	
	C638	NCB31HK-103X	0.01MF 50V C CAP.	
	C639	NCB31HK-103X	0.01MF 50V C CAP.	
	C640	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C641	NCB31HK-472X	4700PF 50V C.CAPA. C.	
	C642	NCB31HK-103X	0.01MF 50V C CAP.	
	C643	NCB31HK-103X	0.01MF 50V C CAP.	
	C644	NCB31HK-103X	0.01MF 50V C CAP.	
	C645	NCB31HK-103X	0.01MF 50V C CAP.	
	C647	NCB31HK-103X	0.01MF 50V C CAP.	
	C648	NCB31HK-103X	0.01MF 50V C CAP.	
	C649	NCB31HK-103X	0.01MF 50V C CAP.	
	C650	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C651	NCB31HK-103X	0.01MF 50V C CAP.	
	C652	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C661	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C662	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C664	NCS31HJ-101X	100PF 50V C.CAPA. C.M	
	C666	NEA21HM-105NZ	1MF 50V AL E.CAP.	
	C669	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C670	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C673	NCB31CK-103X	0.01MF 16V C.CAPA. C.M	
	C678	NCB31HK-103X	0.01MF 50V C CAP.	
	C679	NCB31HK-103X	0.01MF 50V C CAP.	
	C680	NCB30JK-474X	0.47MF 6.3V CER.CAP.	
	C681	NCB31HK-103X	0.01MF 50V C CAP.	
	C682	NCB31HK-103X	0.01MF 50V C CAP.	
	C683	NCB31HK-103X	0.01MF 50V C CAP.	
	C684	NEA20JM-107NPM	100MF 6.3V E.CAP.	
	C685	NEA21CM-476NP	47MF 16V AL E.CAP.	
	C686	NEA21CM-476NP	47MF 16V AL E.CAP.	
	C687	NCB31HK-103X	0.01MF 50V C CAP.	
	C688	NEA20JM-107NPM	100MF 6.3V E.CAP.	
	C689	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C690	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C691	NCS31HJ-101X	100PF 50V C.CAPA. C.M	
	C692	NCS31HJ-101X	100PF 50V C.CAPA. C.M	
	C693	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C695	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C696	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	

■ Electrical Parts List (AC-3 P.C.B)

⚠	Item	Parts Number	Description	Area
	C697	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C698	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
	C699	NCB31CK-104X	0.1MF 16V C.CAPA. C.M	
		RESISTORS		
	R501	NRSA63J-104X	RES. C.M	
	R502	NRSA63J-104X	RES. C.M	
	R503	NRSA63J-103X	RES. C.M	
	R504	NRSA63J-103X	RES. C.M	
	R505	NRSA63J-103X	RES. C.M	
	R506	NRSA63J-103X	RES. C.M	
	R511	NRSA63J-102X	RES. C.M	
	R512	NRSA63J-102X	RES. C.M	
	R513	NRSA63J-102X	RES. C.M	
	R514	NRSA63J-102X	RES. C.M	
	R515	NRSA63J-102X	RES. C.M	
	R516	NRSA63J-102X	RES. C.M	
	R517	NRSA63J-102X	RES. C.M	
	R518	NRSA63J-102X	RES. C.M	
	R519	NRSA63J-472X	RES. C.M	
	R521	NRSA63J-102X	RES. C.M	
	R522	NRSA63J-102X	RES. C.M	
	R523	NRSA63J-102X	RES. C.M	
	R524	NRSA63J-102X	RES. C.M	
	R525	NRSA63J-102X	RES. C.M	
	R526	NRSA63J-102X	RES. C.M	
	R527	NRSA63J-104X	RES. C.M	
	R528	NRSA63J-104X	RES. C.M	
	R529	NRSA63J-103X	RES. C.M	
	R530	NRSA63J-103X	RES. C.M	
	R551	NRSA63J-104X	RES. C.M	
	R552	NRSA63J-104X	RES. C.M	
	R553	NRSA63J-104X	RES. C.M	
	R554	NRSA63J-104X	RES. C.M	
	R555	NRSA63J-333X	RES. I.M	
	R556	NRSA63J-333X	RES. I.M	
	R557	NRSA63J-104X	RES. C.M	
	R558	NRSA63J-104X	RES. C.M	
	R559	NRSA63J-221X	MG RES.	
	R560	NRSA63J-221X	MG RES.	
	R561	NRSA63J-104X	RES. C.M	
	R562	NRSA63J-104X	RES. C.M	
	R563	NRSA63J-104X	RES. C.M	
	R564	NRSA63J-104X	RES. C.M	
	R565	NRSA63J-752X	MG RES.	
	R566	NRSA63J-752X	MG RES.	
	R571	NRSA63J-102X	RES. C.M	
	R572	NRSA63J-102X	RES. C.M	
	R573	NRSA63J-102X	RES. C.M	
	R574	NRSA63J-102X	RES. C.M	
	R575	NRSA63J-102X	RES. C.M	
	R576	NRSA63J-102X	RES. C.M	
	R577	NRSA63J-104X	RES. C.M	
	R578	NRSA63J-104X	RES. C.M	
	R581	NRSA63J-104X	RES. C.M	
	R582	NRSA63J-104X	RES. C.M	
	R583	NRSA63J-104X	RES. C.M	
	R584	NRSA63J-104X	RES. C.M	
	R585	NRSA63J-752X	MG RES.	
	R586	NRSA63J-752X	MG RES.	
	R591	NRSA63J-102X	RES. C.M	
	R592	NRSA63J-102X	RES. C.M	
	R593	NRSA63J-102X	RES. C.M	
	R594	NRSA63J-102X	RES. C.M	
	R595	NRSA63J-102X	RES. C.M	
	R596	NRSA63J-102X	RES. C.M	
	R597	NRSA63J-104X	RES. C.M	
	R598	NRSA63J-104X	RES. C.M	
	R601	NRSA63F-433X	METAL GLAZE	
	R602	NRSA63J-221X	MG RES.	
	R603	NRSA63J-473X	RES. C.M	
	R606	NRSA63J-221X	MG RES.	
	R607	NRSA63J-221X	MG RES.	

⚠	Item	Parts Number	Description	Area
	R608	NRSA63J-221X	MG RES.	
	R611	NRSA63J-105X	MG RES.	
	R631	NRSA63J-473X	RES. C.M	
	R632	NRSA63J-473X	RES. C.M	
	R633	NRSA63J-473X	RES. C.M	
	R634	NRSA63J-473X	RES. C.M	
	R635	NRSA63J-473X	RES. C.M	
	R636	NRSA63J-221X	MG RES.	
	R637	NRSA63J-221X	MG RES.	
	R638	NRSA63J-221X	MG RES.	
	R639	NRSA63J-221X	MG RES.	
	R641	NRSA63J-473X	RES. C.M	
	R642	NRSA63J-473X	RES. C.M	
	R643	NRSA63J-473X	RES. C.M	
	R644	NRSA63J-473X	RES. C.M	
	R645	NRSA63J-473X	RES. C.M	
	R646	NRSA63J-221X	MG RES.	
	R647	NRSA63J-221X	MG RES.	
	R648	NRSA63J-221X	MG RES.	
	R664	NRSA63J-750X	RES. C.M	
	R665	NRSA63J-0R0X	RES. C.M	
	R666	NRSA63J-221X	MG RES.	
	R668	NRSA63J-472X	RES. C.M	
	R670	NRSA63J-183X	MG RES.	
	R689	NRSA63J-0R0X	RES. C.M	
	R690	NRSA63J-0R0X	RES. C.M	
	R691	NRSA63J-474X	RES. C.M	
	R692	NRSA63J-473X	RES. C.M	
	R693	NRSA63J-105X	MG RES.	
		OTHERS		
		EWE390-08BB	VINYL WIRE	
		E3400-431	FELT SPACER	
	J664	EMN00TV-107A	PIN JACK	
	K501	NQR0269-007X	BANDPASS FILTER	
	K502	NQR0269-007X	BANDPASS FILTER	
	K521	NQR0269-007X	BANDPASS FILTER	
	K522	NQR0269-007X	BANDPASS FILTER	
	K561	NQR0269-007X	BANDPASS FILTER	
	K562	NQR0269-007X	BANDPASS FILTER	
	K581	NQR0269-007X	BANDPASS FILTER	
	K582	NQR0269-007X	BANDPASS FILTER	
	K601	NQR0269-007X	BANDPASS FILTER	
	K602	NQR0269-007X	BANDPASS FILTER	
	K631	NQR0269-007X	BANDPASS FILTER	
	K632	NQR0269-007X	BANDPASS FILTER	
	K633	NQR0269-007X	BANDPASS FILTER	
	K634	NQR0269-007X	BANDPASS FILTER	
	K641	NQR0269-007X	BANDPASS FILTER	
	K642	NQR0269-007X	BANDPASS FILTER	
	K643	NQR0269-007X	BANDPASS FILTER	
	K644	NQR0269-007X	BANDPASS FILTER	
	K687	NQR0229-001X	F.BEADS C.M	
	L661	EQL5002-470T	INDUCTOR	
	L662	EQL5002-470T	INDUCTOR	
	X601	NAX0213-001X	CRYSTAL	
	X671	NAX0192-001X	CRYSTAL	
	CN681	QGB1214K3-18W	CONNECTOR	
	CN687	QGB1214K3-12W	CONNECTOR	
	KA601	NQR0271-004X	BANDPASS FILTER	
	KA602	NQR0271-004X	BANDPASS FILTER	
	KA631	NQR0271-004X	BANDPASS FILTER	
	KA641	NQR0271-004X	BANDPASS FILTER	
	KA671	NQR0271-004X	BANDPASS FILTER	
	LC601	NQR0150-001X	EMI FILTER C.M	
	LC611	NQR0150-001X	EMI FILTER C.M	
	LC631	NQR0156-017X	EMI FILTER C.M	
	LC641	NQR0156-017X	EMI FILTER C.M	
	LC651	NQR0156-017X	EMI FILTER C.M	
	LC661	NQR0150-001X	EMI FILTER C.M	
	LC671	NQR0150-001X	EMI FILTER C.M	
	UN661	GP1F32R	OPTICAL JACK	
	UN662	GP1F32R	OPTICAL JACK	

■Electrical Parts List (Resistor P.C.B)

⚠	Item	Parts Number	Description	Area
		RESISTORS		
	R881	QRL022J-100	10 2W R.NETWORK	
	R882	QRL022J-100	10 2W R.NETWORK	
	R883	QRL022J-100	10 2W R.NETWORK	
	R884	QRL022J-100	10 2W R.NETWORK	
	R885	QRL022J-100	10 2W R.NETWORK	
	R886	QRL022J-100	10 2W R.NETWORK	
	R887	QRL022J-100	10 2W R.NETWORK	
	R888	QRL022J-100	10 2W R.NETWORK	
	R889	QRL022J-100	10 2W R.NETWORK	
	R890	QRL022J-100	10 2W R.NETWORK	
	R891	QRL022J-100	10 2W R.NETWORK	
	R892	QRL022J-100	10 2W R.NETWORK	
	R893	QRL022J-100	10 2W R.NETWORK	
	R894	QRL022J-100	10 2W R.NETWORK	
	R895	QRL022J-100	10 2W R.NETWORK	
	R896	QRL022J-100	10 2W R.NETWORK	
		OTHERS		
		QGD2501C1-03Z	SOCKET 1.M	

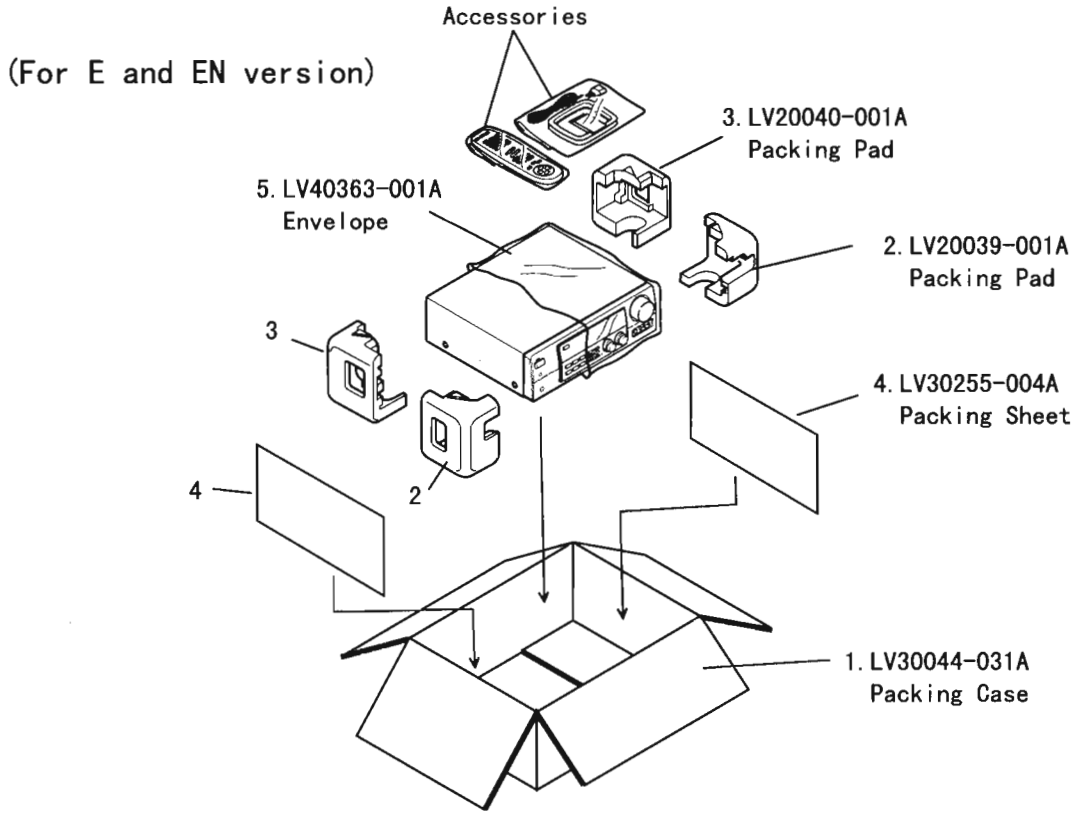
■ Accessories List

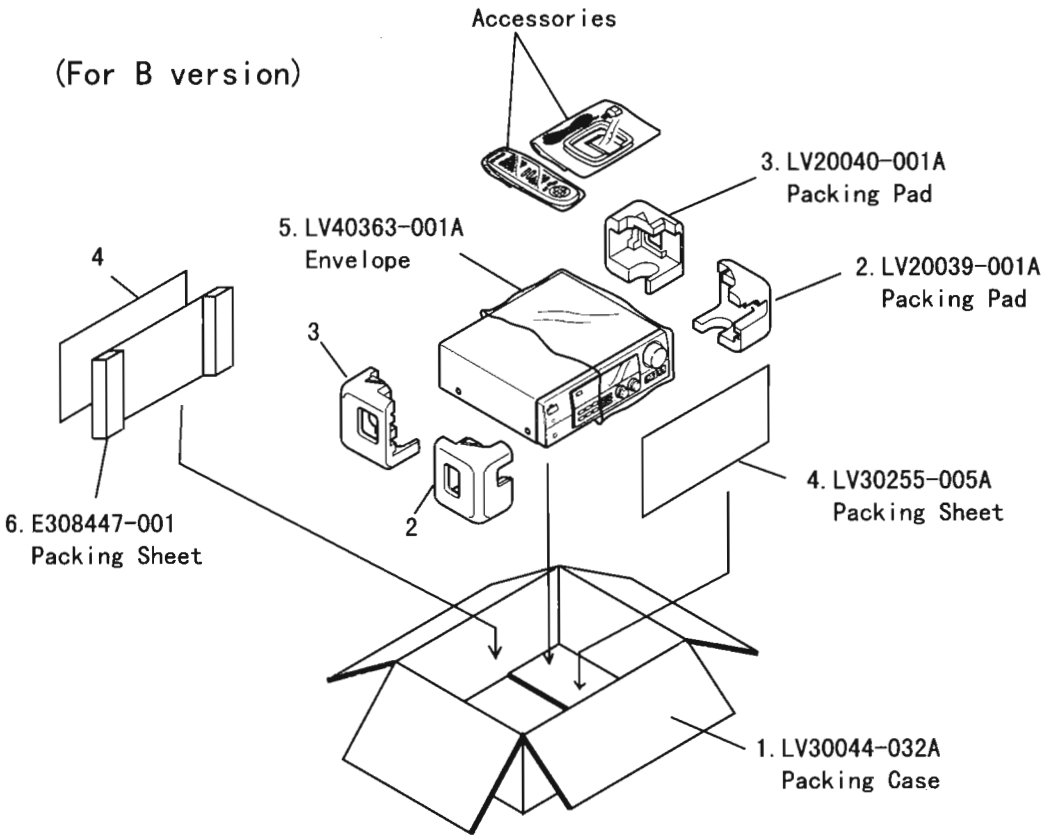
Bloock No. M2MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	LVT0016-001A	INSTRUCTION BOOK	1		E
		LVT0016-002A	INSTRUCTION BOOK	1		EN
		LVT0016-003A	INSTRUCTION BOOK	1		B
	2	E43486-340A	SAFETY SHEET	1		B
	3	BT-54008-1	WARRANTY CARD	1		
	4	EWP503-001	ANTENNA WIRE	1		
	5	QAL0014-001	LOOP ANTENNA	1		
	6	R03BPA/2STS	BATTERY	1		
	7	RM-SR884RU	WIRE-LESS REMOTE CONTROL	1		
	8	QPA02503505P	POLY BAG	1		

Packing Materials and Parts Numbers

Block No. M 3 M M





RX-884RBK

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(No.20710)

Printed in Japan
9806(V)