

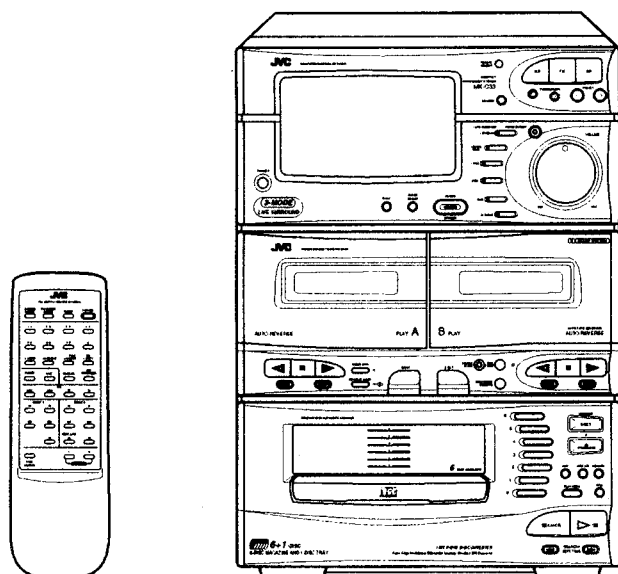
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-C33BK

Pick up	OPTIMA-5
CD signal processor	MN662720RB
CDservo LSI	AN8803SB



Area Suffix

BS the U.K.
C Canada
E Continental Europe
G Germany
J the U.S.A.
US Singapore
UT Taiwan
U Other Area

COMPACT
disc
DIGITAL AUDIO

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日本ビクター株式会社

サービス部 部品管理課

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. 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 (Δ) 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 current check (Electrical shock hazard testing)

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

Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal 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

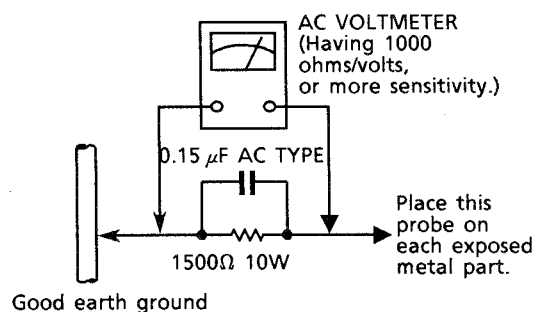
Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

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

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor.

Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.).

This corresponds to 0.5 mA AC (r.m.s.).



Warning

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

Important for Laser Products

1. **CLASS 1 LASER PRODUCT**
2. **DANGER** : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION** : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. **CAUTION** : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. **CAUTION** : If safety switches malfunction, the laser is able to function.
6. **CAUTION** : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. **CAUTION** : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

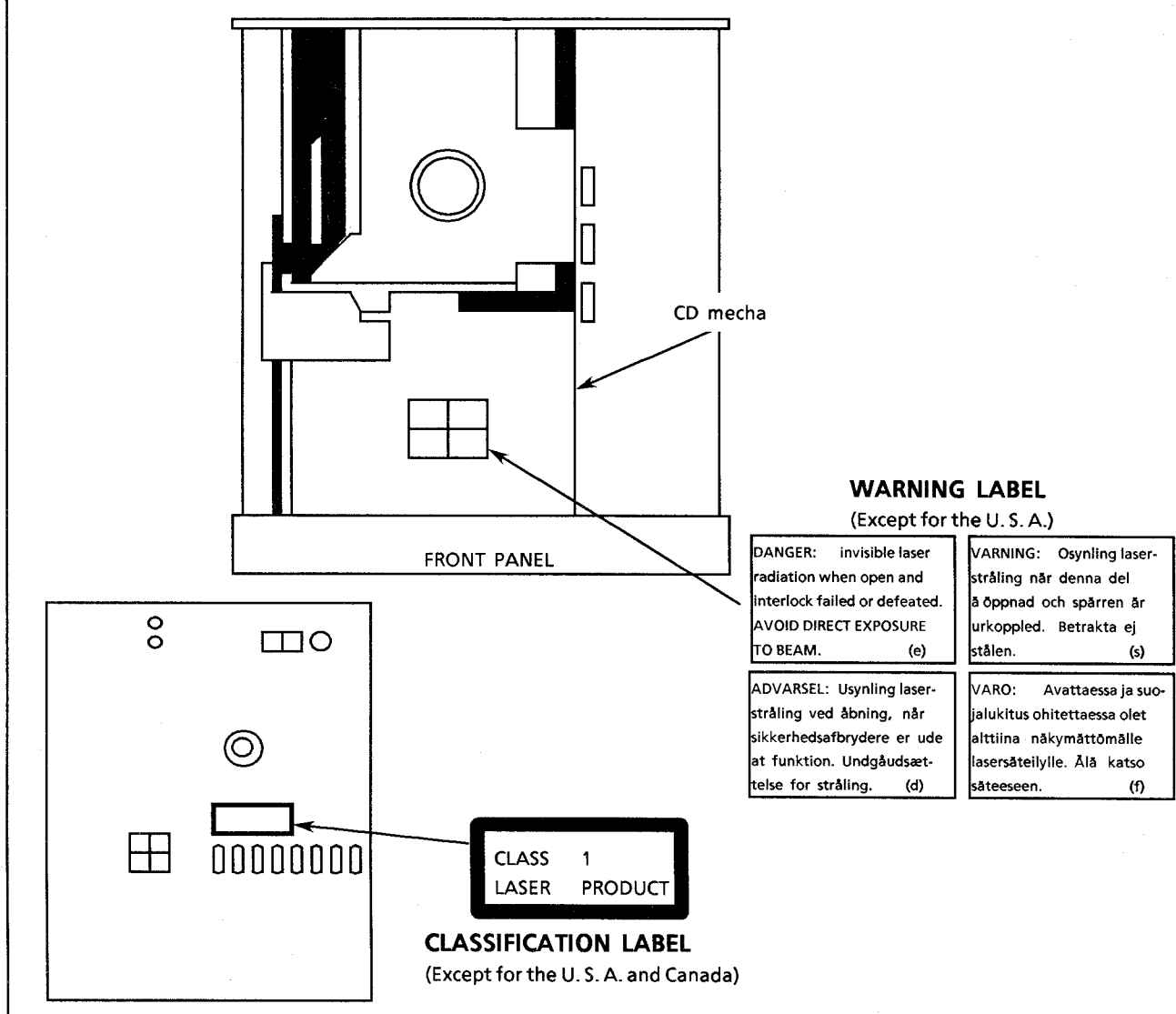
VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Beträkta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstrålning ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

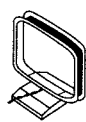
ADVARSEL : Usynlig laserstrålning ved åbning, når sikkerhedsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS



Getting Started

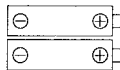
Check to be sure you have all of the following things, which are supplied with the system.



AM Loop Antenna



Remote Controller



Batteries



Magazine



FM Feeder Antenna



FM Antenna Adaptor

If any are missing, contact your dealer immediately.

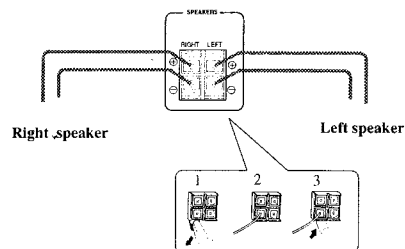
Connecting the Speakers (Please refer to instructions for speakers as well when you connect speakers.)

For each speaker connect one end of the speaker wire to the speaker terminals on the back of the CA-C33BK and one end to the speaker.

1. Open each terminal.
2. Insert the end of the speaker wire as shown (be sure to remove the insulation at the end of each wire first).
3. Close the terminals to clamp the speaker wires firmly in place.
4. Connect the red (+) and black (-) terminals of the right side speaker to the red (+) and black (-) terminals marked RIGHT on the CA-C33BK.

Connect the red (+) and black (-) terminals of the left side speaker to the red (+) and black (-) terminals marked LEFT on the CA-C33BK.

IMPORTANT: Match the polarity of the speaker terminals with the polarity of the terminals on the CA-C33BK, red (+) to red (+) and black (-) to black (-). Check your speakers for correct impedance: 6 ohms speakers only.



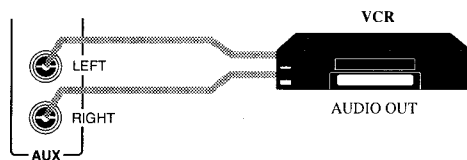
Connecting Auxiliary Equipment

Connect the components exactly as illustration.

CAUTION: First make all connections before plugging the Unit into any AC power outlet.

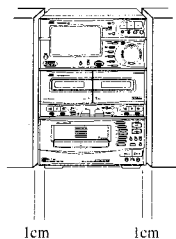
VCR, etc.

To listen to this source, press the AUX button.



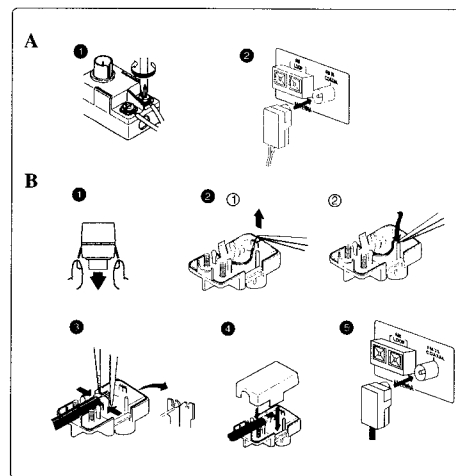
Laying Out the System

- Leave a space of at least 1 cm on both sides of the amplifier and keep the back at least 10 cm from the wall for ventilation.



Connecting the FM and AM Antennas

FM Antenna Connections



A. Using the Supplied Feeder Antenna

- ① Attach the feeder antenna to the FM connector as shown in the figure.
- ② Connect the FM connector to the FM 75-ohm terminal.

B. Using FM 75-ohm antenna Cable (Not Supplied)

- ① Open the claws at both sides and remove the cover.
- ② Move the conductor wire from ① to ② using tweezers or a similar instrument (only when using coaxial cable).
- ③ Fix the coaxial cable and its core.
- ④ Put on the cover.
- ⑤ Connect the FM connector on the FM 75-ohm COAXIAL terminal.

Note: Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord in the system. This could cause poor reception.

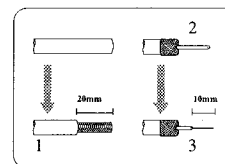


Unfold the loops of the supplied dipole FM feeder antenna and extend them as shown. Fasten them up in the position which gives you the best FM reception.



If reception is poor, connect the outside antenna.

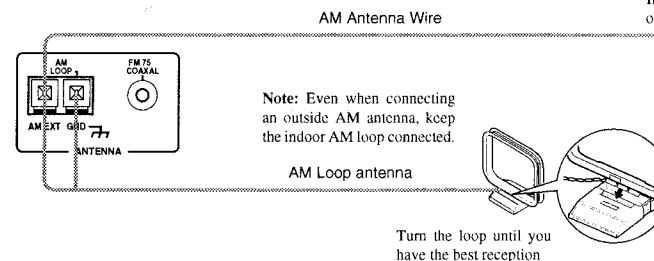
Before attaching a 75 ohm coaxial lead (the kind with a round wire going to an outside antenna), disconnect the supplied dipole indoor antenna.



How to Strip the 75-ohm Coaxial Cable

1. Strip back the outside covering of the 75 ohm coaxial cable to expose the braided metallic mesh.
2. Pull the mesh back over the cable as shown.
3. Strip the insulation about 10 mm back from the central wire.
4. Attach to the supplied antenna adaptor, as shown in the diagram above.

AM Antenna Connections



If reception is poor, connect the outside antenna.

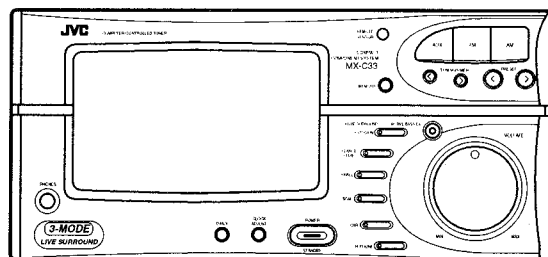
Turn the loop until you have the best reception

Snap the tabs on the loop into the slots of the base to assemble the AM loop.

Now you can plug the AC power cord into the wall outlet, and your CA-C33BK is at your command!

Common Operations

Here are the things that apply to all the functions of your CA-C33BK. If something in a later procedure is unclear to you, check back here.



The Magic of



COMPUPLAY

COMPUPLAY is JVC's feature that lets you control the most used functions of the CA-C33BK with a single touch. This One Touch Operations starts playing a CD, turns on the radio, plays a tape, etc. with a single press of the play button for that function. What One Touch Operation does for you is to turn the power on, then start function you have called for. If the Unit is not ready, such as no CD or tape in place, the Unit still comes on so you can put in a CD or tape. How One Touch Operation works in each case is explained in the section about that function.

Turning the CA-C33BK On

Press the **POWER** button.

The displays come on and the red indicator on **POWER** lights goes out.

- ☐ The CA-C33BK comes on ready to do whatever it was doing when the power was last shut off. So if the last thing you were doing was listening to a tape in deck B, you now are ready to listen to a tape again in deck B, or you can change to another source.
- ☐ If you were listening to the radio last, the radio comes on playing that last station.

Turning the CA-C33BK Off

Press the **POWER** button again.

The red indicator on the **POWER** button light up and the displays blank, except for the clock display.

- ☐ A little power (15 watts) is always consumed even though power is turned off (called standby mode).
- ☐ To switch off the Unit completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the clock will rest to AM 12:00 right away, while the tuner preset stations will be erased in a few days.

Adjusting the Volume controls

Volume Control

Turn the **VOLUME** control adjust the volume level of the speakers or headphones.

CAUTION: Always set the **VOLUME** control to **MIN** before turning on a connected source such as a VCR, or starting any other of the sound sources such as the radio, tape, CD player. Otherwise, if the **VOLUME** control is turned up the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.

Active Bass Extension

This feature is designed and incorporated to reinforce the bass sound, depending on the volume level to maintain the richness and fullness of the bass. You cannot control it manually.

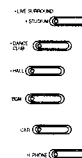
Press the **ACTIVE BASS EX.** button to light the indicator if you want to use the Active Bass Extension function.

To cancel this function, press the **ACTIVE BASS EX.** button again. The indicator will go off.

Listening with Headphones

A standard pair of headphones can be connected at the **PHONES** jack on the front panel. No sound can be heard from the speakers. Be sure to turn down the volume before connecting or putting on headphones as high volume can damage both the headphones and your hearing.

Caution:
Too LOUD!



LIVE SURROUND effects:

STADIUM
DANCE CLUB
HALL

S.E.A. effects

BGM
CAR
H. PHONE

Sound Effect Modes

The CA-C33BK has some preset sound effects that give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source. We can give you some idea of how each one affects the music, but the only way to really tell is to try them yourself.

You can use only one effect at a time selecting from the **LIVE SURROUND** or **S.E.A.** effects. Feel free to experiment!

To get an effect, press a preset button so that the indicator on the button lights up.

To cancel the effect, press the button again, or press another preset button to select another effect.

LIVE SURROUND effects

With these effects, the sound coming from only two speakers approaches the quality of sound from four speakers.

STADIUM Adds clarity and spreads the sound, like in an outdoor stadium.
DANCE CLUB Increase resonance and bass.
HALL Adds depth and brilliance to the sound, like in a concert hall.

Preset S.E.A. (Sound Effect Amplifier) effects.

Adjustments of frequency range levels have been preset as three S.E.A. effects.

BGM Used as a back ground music.
CAR Used for recording tapes to listen to in a car.
H. PHONE Used for recording tapes to listen to with headphones.

- ☐ On the Remote controller, you can't find buttons for these preset sound effects. By pressing the **SOUND MODE** on the Remote controller, you can cycle through the effects one after the other.

Advantages in connecting optional equipment



Listening to Optional Equipment

By playing the sound from a VCR or Auxiliary equipment through the CA-C33BK, you can gain control over how the music or program sounds. Once the connected equipment is playing through the CA-C33BK, you can apply the sound effects, make recordings, or listen with the headphones.

- ☐ First make sure that the connection between optional equipment and the CA-C33BK has been done correctly.

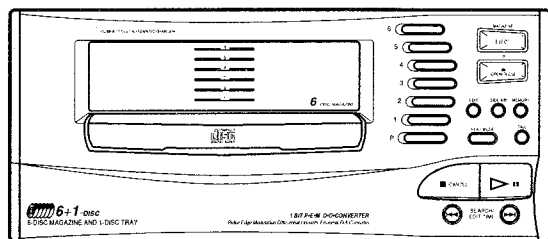
1. Set the **VOLUME** control to **MIN**.
2. Press the **AUX** button.
The Unit automatically turns on and "AUX" lights up on the display.
3. Start playing the selected equipment.
4. Adjust the **VOLUME** control to a proper listening level.
5. Select a desired sound effect mode if you want.

To cancel the setting

Change the source by starting any one of the CA-C33BK's built-in sound sources, such as the radio or CD player.

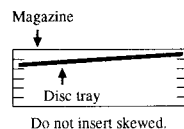
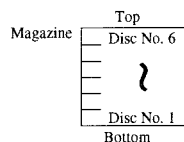
Using the CD player

Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance. This CD player is called an automatic changer, which can play 6 discs in the supplied magazine and one on the ordinary single tray called PLUS 1 tray.



How to use the CD player: from the most basic to advanced

In the magazine, the disc No.s will be as follows:



Basics of Using the CD Player

The quickest way to start a CD is with the One Touch Operation:

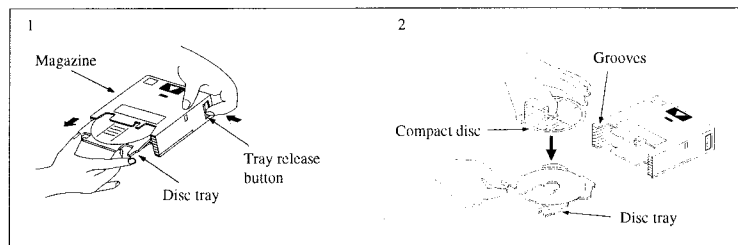
- ☐ Press the Disc buttons (1 to 6 and P).
 - If no disc is loaded, the Unit turns on and wait for further instructions.
- ☐ Press the \triangleright/II button (or \blacktriangleright on the Remote controller) on the CD player.
 - If a CD is already loaded in the inserted magazine or on the PLUS 1 tray, the Unit automatically turns on and starts to play it from track 1.
 - If no CD is loaded, the Unit automatically turns on and the PLUS 1 tray comes out. This is the exactly same as what happens if you press the OPEN/CLOSE \blacktriangle button instead of the \triangleright/II button.

To Prepare Discs

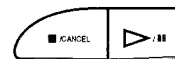
The discs are first loaded into the trays which are then inserted into the magazine. The magazine is then put into the changer. You can also place a disc on the PLUS 1 tray.

To install discs into the magazine

1. To remove the disc tray from the magazine, slide the disc tray out while holding down the tray release button.
2. Place a disc on the disc tray with its label side up.
3. Line up the disc tray with the grooves in the magazine and push the disc tray right in.
 - ☐ It's unnecessary to press the tray release button when inserting the disc tray.



- ☐ When inserting or removing a disc tray:
 - Never bend the disc or force it into the magazine. A disc tray inserted skewed may cause a malfunction.
 - The magazine should be held horizontally.
- ☐ The openings in the disc trays are for passage of the laser signal. These openings leave a part of the shiny surface of the disc exposed. Do not touch this shiny surface.
- ☐ It is impossible to play a disc if it is in upside-down.
- ☐ Never place a disc directly in the magazine without using the disc tray.
- ☐ If you want to use 8 cm (3 inch) CDs, use an optional magazine designed for these discs — XC-M73.



To insert the magazine

Insert the magazine, with disc loaded, into the changer and push it in gently until it clicks in place.

- ☐ The \blacktriangle mark on the magazine must be facing up.

To remove the magazine, press the MAGAZINE EJECT button.

CAUTION: The CD player may be damaged if the magazine is pushed in with too much force.

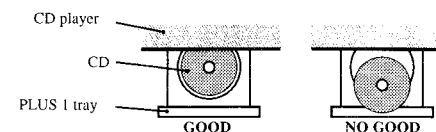
To load a CD on the PLUS 1 tray

1. Press the OPEN/CLOSE \blacktriangle button.
 - The PLUS 1 tray comes out automatically.
2. Put a CD, with its label side up, into the tray.
3. Press the OPEN/CLOSE \blacktriangle button to close the tray.
 - ☐ It is unnecessary to press the OPEN/CLOSE \blacktriangle button to the tray. If you press the \triangleright/II button to start play, the tray closes automatically.

Note:

- When inserting or removing the magazine, do not operate a CD on the PLUS 1 tray, vice versa, when putting in or out a CD on the PLUS 1 tray, do not operate a CD in the magazine.

ATTENTION: Please set a CD in the right place at the center of the PLUS 1 tray, when you play a CD with the tray. The PLUS 1 tray would cause malfunction, if you set a CD in a wrong place or missed the center of the tray.



To remove a CD from the PLUS 1 tray, press the OPEN/CLOSE \blacktriangle button again.

To Play a CD

1. Prepare discs.
2. Press the \triangleright/II button (or \blacktriangleright on the Remote controller).
 - The Unit plays the first track on the disc in the PLUS 1 tray. (The current disc number is indicated by the arrow on the display.) If no disc is loaded on the PLUS 1 tray, the Unit automatically skips the empty tray, and finds and plays the discs you have put in the magazine from bottom (Disc No.1) to top (Disc No.6). The indicators for these skipped trays go off. The Unit memorized these empty trays and will skip them next time without searching until the magazine is ejected.

To stop the CD, press the \blacksquare /CANCEL button (or \blacksquare on the Remote controller).

To pause the play, press the \triangleright/II button while the CD is playing.

To Change Discs While Playing

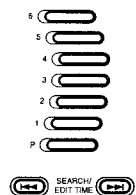
To change discs in the magazine while playing a CD in the PLUS 1 tray.

1. Press the MAGAZINE EJECT button.
 - The magazine comes out.
2. Change the discs in the magazine.
3. Push back in the magazine.

To change discs in the PLUS 1 tray while playing a CD in the magazine.

1. Press the OPEN/CLOSE \blacktriangle button.
 - The PLUS 1 tray comes out.
2. Change the discs.
3. Press the OPEN/CLOSE \blacktriangle button again.
 - The tray goes back.

How to find a track



Searching the contents of CDs



To Select the Disc, Track or Passage within a Track

By using the Unit

- If the disc with the track you want is not playing, enter the number of disc you want to using the disc buttons (1 to 6 and P) on the CD player.
 - Example: for the third disc (from the bottom) in the magazine, press 3. For the disc on the PLUS 1 tray, press P.
- Select the number of the track you want using the SEARCH/EDIT TIME ◀▶ or ▶▶▶ button. The selected track starts playing.
 - Each time you press briefly and release the SEARCH/EDIT TIME ◀▶ or ▶▶▶ button, the track changes by one. Press and release the SEARCH/EDIT TIME ▶▶▶ button to go ahead one track at a time. Press and release the SEARCH/EDIT TIME ◀▶ button to go back one track at a time.
 - Holding down the SEARCH/EDIT TIME ◀▶ or ▶▶▶ button will fast forward or fast reverse the CD so you can quickly find particular passage in the selection you are listening to.

By using the Remote Controller

- If the disc with the track you want is not playing, first press the CD CHANGER button, then enter the number of disc you want using the numeric keys (1 to 6 and P).
 - Example: for the third disc (from the bottom) in the magazine, press 3. For the disc on the PLUS 1 tray, press P.
- Press the CD 10KEY.
- Enter the number of the track you want using the numeric keys. The selected track starts playing.
 - Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10.
 - You can also use the ◀▶ or ▶▶▶ button to change tracks. However, you cannot fast forward or reverse forward to locate a particular passage using the Remote controller.

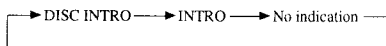
After you have pressed the ▶▶▶ button on the Remote controller, the numeric keys on the Remote controller functions as the disc buttons until you change it.

Intro Scan

You can use two types of intro scan functions (Disc Intro Scan and Track Intro Scan) to search for a desired disc or track.

- Make sure that the CD is not playing and "CONTINUE" lights up on the display. If not, stop the CD player and press the PLAY MODE button on the Unit until "CONTINUE" lights up on the display.
- Press the CD CHANGER on the Remote controller.
- Press the INTRO on the Remote controller.

Each time you press the button, the intro scan mode changes and lights up on the display in the following sequence:



- Press the ◀▶/II button (or ▶▶ on the Remote controller).
 - Disc Intro Scan (when "DISC INTRO" lights up):**
Plays the beginning of the first track of each CD for about 15 seconds starting with the disc on the PLUS 1 tray and then disc no. 1 disc through disc no. 6 disc in the magazine.
 - Track Intro Scan (when only "INTRO" lights up):**
Plays the beginning of each track of each CD for about 15 seconds starting with the disc on the PLUS 1 tray and then disc no. 1 disc through disc no. 6 disc in the magazine.
- Press the SEARCH/EDIT TIME ◀▶ button (or ◀▶ on the Remote controller) when the desired track is reached. Intro scan is canceled and normal playback starts from the track.
 - If you press the following buttons instead of the SEARCH/EDIT TIME ◀▶ button, intro scan is also canceled and then:
 - SEARCH/EDIT TIME ▶▶▶: Continuous play starts from the next track.
 - Disc buttons (1 to 6 and P (PULS 1)): Continuous play start from the first track of the selected disc.

To stop playing, press the ■/CANCEL button (or ■ on the Remote controller).

To exit intro scan mode, press INTRO so that neither "DISC INTRO" nor "INTRO" lights on the display.

With programming, you can play back tracks in any order



Programming the Playing Order of the Tracks

In addition to the high quality sound which makes the CD such a good way to listen to music, you can change the order in which the tracks play.

Random Play

The tracks will play in no special order when you use this mode. Before starting a CD, press the PLAY MODE button repeatedly until "RANDOM" lights up on the display. When all of the tracks have been played, the CD stops.

To stop playing, press the ■/CANCEL button (or ■ on the Remote controller).

To exit random mode, press the PLAY MODE button until "RANDOM" is no longer lighted on the display (the Unit must be in stop mode).

Program Play

You can change the order in which the discs and tracks play, and select only the discs and tracks you want from among those loaded in the magazine and the PLUS 1 tray.

- You can program from either the Unit buttons or the Remote controller, or a combination of both.
- You can program up to 32 steps in any desired order from among the discs in the player. Since a step can be either a single track or an entire disc with many tracks, the total number of selections which will actually play can be much larger than 32.

Programming Procedure:

You can only make or change a program when the CD player is stopped.

By using the Unit

- Press the PLAY MODE button repeatedly until "PROGRAM" lights up on the display.
 - Select a disc with the disc buttons (1 to 6 and P). As soon as a disc is selected, it is memorized and "AL" lights up on the display. If you want all the tracks on that disc to play as part of the program, skip step 3.
 - To select individual tracks from the selected disc (its number is indicated by the arrow on the display), press the SEARCH/EDIT TIME ◀▶ or ▶▶▶ button.
 - Press the MEMORY button.
 - Repeat steps 2 - 4 until you have entered all the tracks you want to program.
 - Press the ◀▶/II button.
- The Unit plays the tracks in the order you have programmed them.

By using the Remote controller

- Press the CD CHANGER.
- Press the PLAY MODE repeatedly until "PROGRAM" lights up on the display.
- Select a disc with the numeric keys (1 to 6 and P).
- To select individual tracks from the selected disc enter each number by pressing the CD 10 KEY and using the numeric keys (1 to 10 and +10).
 - Example: for track 5, press 5. For track 15, press +10 and 5. For track 20, press +10 and 10.

- You can also use the ◀▶ or ▶▶▶ to select tracks.

- Repeat 1 and 3 - 4 until you have entered all the tracks you want to program.
 - Press the ▶.
- The Unit plays the tracks in the order you have programmed them.

To stop playing, press the ■/CANCEL (or ■ on the Remote controller) once.

To delete the program and exit program mode, press the ■/CANCEL button on the Unit repeatedly until all the program steps are deleted, and then press the PLAY MODE button until "CONTINUE" appears on the display.

- You can skip to a particular program step by pressing the SEARCH/EDIT TIME ◀▶ or ▶▶▶ button during program play.
- To play the programmed tracks over and over, press the REPEAT on the remote controller so that "REPEAT" lights up on the display.

Programming Hints



Repeat a selection or the CDs



A few Hints to Make Programming Easier

To check the program contents (the Unit must be in stop mode)

- Each time you press the CALL button on the Unit, the program contents are shown on the display in the programmed order.

To change the program contents

- Press the CALL button until the display shows the program step to correct. Enter the new disc number and/or track number, which will replace the ones originally showing.
- To delete a program step, press the CALL button until the display shows the program step to delete, then press the ■/CANCEL button (or the CANCEL on the Remote controller).
- You can use both of these ways to change program steps during programming as well as later.

Repeating a Selection or the Discs

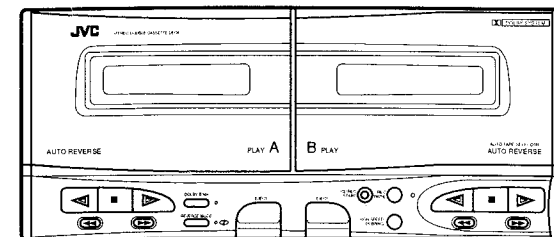
You can have all the discs, the program or the individual selection currently playing repeat as many times as you like by pressing the REPEAT on the Remote controller.

- Press the CD CHANGER on the Remote controller.
- Press the REPEAT on the Remote controller.
Each time you press the REPEAT, it cycles from function — off, which turns "REPEAT" out on the display, to "REPEAT" which will repeat all the tracks in order or according to the program you have set, and then to "REPEAT 1" which will repeat the currently playing track.

To exit repeat mode, press the REPEAT so that neither "REPEAT" or "REPEAT 1" lights on the display.

- Press the REPEAT before or during random play to instruct the CA-C33BK to continue with a different random track selection after the last selection of the last disc is played.

Using the Cassette Deck



CA-C33BK

Listen to a tape:
How to use your
cassette deck

Playback procedure

Listening to a Tape

The cassette deck allows you to play, record and dub audio tapes.

- Most tapes are now recorded with the Dolby NR system, so first check which type of the Dolby NR system has been used on the tape. Only the Dolby B NR is incorporated into the CA-C33BK.
- With Automatic Tape Detection, you can listen to type I or II tapes without changing any settings.

One Touch Play

By pressing either the ▶ or ◀ button on either deck A or B, the Unit will turn on, and if a tape is in the deck, it will start to play. If no tape is loaded, the Unit will turn on and wait for further instructions.

Regular Play

When the power is already on, you can use this basic procedure:

- Press the EJECT button for the deck you want to use.
- When the cassette carrier opens, put the cassette in, with the exposed part of the tape down toward the base of the CA-C33BK.
 - If the cassette carrier does not open, turn the Unit off, then back on again and press the EJECT button.
- Close the carrier gently.
- Press ▶ to play the front side, or ◀ to play the reverse side. The arrow indicator on the pressed button starts blinking and tape play starts.

To stop playing, press the ■ button.

To remove the tape, press the EJECT button.

Fast Left and Fast Right

- While the tape is stopped, press the ◀◀ button and the tape will wind rapidly onto the left side of the cassette without playing.
- While the tape is stopped, press the ▶▶ button and the tape will wind rapidly onto the right side of the cassette without playing.

Music Scan

To find the beginning of a music track during play, use the Music Scan function. Music Scan searches for blank portions that usually separate tracks, then plays the next song.

- If you use Music Scan on deck A while recording on deck B, recording will stop.

To find the beginning of the current song

Press the ◀◀ or ▶▶ button during play.

- Make sure that you press the ◀◀ or ▶▶ button in the opposite direction to tape play. Searching stops automatically at the beginning of the current song, and the current song starts automatically.

To find the beginning of the next song

Press the ◀◀ or ▶▶ button during play.

- Make sure that you press the ◀◀ or ▶▶ button in the same direction as tape play. Searching stops automatically at the beginning of the next song, and the next song starts automatically.

Finding the place
you want:
Music Scan

Scan back

Scan forward

More useful things to know:

- **Reverse Mode**
- **Continuous Play**



- **Dolby**



The Music Scan works by detecting a 4-second long blank at the beginning of each selection, so it won't work well if your tape has:

- No blank at the beginning of a track
- Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
- Long, very soft passages or pauses in a selection. The scan will detect these instead of the 4-second long blanks. If this happens, just go ahead and scan again until you reach the selection you want.

Useful Other Features Using the Cassette Deck

- ❑ Use **Reverse Mode** to make the tape automatically reverse at the end of a side and start playing the other side. Press the REVERSE MODE button to change from Reverse Mode on (the indicator is lit) to Reverse Mode off, or from off, to on.
- ❑ **Continuous Play:** When a tape finishes playing with the Reverse Mode LED on, the Unit always checks to see if a tape is in the other deck. If one is there, it automatically starts playing it. This Continuous Play happens regardless of which deck starts first.
- ❑ Press the DOLBY B NR button to switch Dolby B Noise Reduction on (the indicator lights up) or off (the indicator goes off). If a tape is recorded with the Dolby B NR system, playing it back with the Dolby NR on will reduce tape noise and improve the clarity of the sound.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Recording**What can you record?**

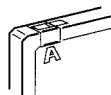
- **Tapes**
- **Radio**
- **CDs**
- **Connected source**

Copyright**Reduce hiss —
Dolby NR****Recording level****Erasure protection****Recording sound
mode****Usable tape type**

Recording onto cassette tape from any of the sound sources is easy and the CA-C33BK does most of the work. Just have a tape in deck B, have the source ready, make one or two settings, and you're ready to record. For each source the procedure is a little different and now we'll explain just what to do for each one. If you forget, just come back to the section which has the specific procedures you need. But first, here are a few things to make your recordings better.

Things to Know before You Start recording

- ❑ **It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.**
- ❑ Press the DOLBY B NR button — the indicator lights up — to reduce tape hiss, except when dubbing tapes since Dolby NR is inactive in dubbing mode regardless of the setting of DOLBY B NR. The dubbed tape automatically contains the same processing as the source tape.
- ❑ The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the CA-C33BK. Thus, you can adjust the sound you are actually listening to without changing the recording level.
- ❑ Two small tabs on the back, one for side A and one for side B, can be removed to prevent accidental erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first. However, when a type II tape is used, only cover part of the hole as shown, since the other part of the hole is used to detect the tape type.
- ❑ When recording, you can use the sound effect modes to condition the music as it is recorded. But when recording using CD Direct, Auto Edit or Program Edit, once recording has started, these settings cannot be changed. When recording from cassette deck A to deck B, the sound effects cannot be used, because the signal doesn't go through the amplifier. This method gives you the highest quality dubbed tapes.
- ❑ Type I and type II tapes can be used for recording.



CAUTION: If recordings you have made have excessive noise or static, the Unit may be too close to a TV which has been on during the recording. Either turn off the TV or increase the distance between the TV and the CA-C33BK.

**Standard recording:
Any source to tape****Source to tape:
Step by step****CD to tape recording:
Introduction****CD Direct Recording:
Step by step****Standard Recording**

This is the basic method for recording any source. The CA-C33BK also has special ways for recording CD to tape, and tape to tape, which save you time and effort, as well as give you some special effects. However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method we describe here; just substitute the source you want, such as tape in deck A, or CD, or radio in this procedure. You can also record from an auxiliary source with this procedure.

To Record Any Sound Source to Tape

Follow these steps to record from any sound source onto a tape in deck B.

1. Insert a blank or erasable tape into deck B.
2. Press the REC PAUSE button.
The REC PAUSE indicator lights up.
3. Press the REVERSE MODE button if you want to record on both sides of the tape.
The REVERSE MODE indicator lights up.
4. Prepare the source, for example, tuning in a radio station, loading CDs, turning on connected equipment.
5. Press either the ▷ button to record on the front side, or the ◁ button to record on the reverse side, on deck B.

To pause any time during recording process

Press the REC PAUSE button again. Then press either the ▷ or ◁ button on deck B to restart recording.

To stop any time during recording process

Press the ■ button on deck B.

CAUTION: During recording, DO NOT change the source or change discs. Otherwise, recording will be interrupted.

CD to Tape Recording

There are four ways to record from CD to tape:

- ❑ **Standard Recording** — Described above.
- ❑ **CD Direct Recording** — Everything on the CD goes onto the tape in the order it is on the CD, or according to an order you have set in a program.
- ❑ **Auto Edit Recording** — Your CA-C33BK figures out which selections to put on which side of the tape, so a selection isn't cut off before it's finished when the tape runs out.
- ❑ **Program Edit Recording** — First you select tracks to record by using the programming method described on page 10, and then start play and recording simultaneously.

CD Direct Recording

1. Prepare CDs. (See page 8.)
2. Set the sound effect mode if you want.
3. Insert a cassette in deck B to record on.
❑ If you want to record on both side of the tape, press the REVERSE MODE button on the cassette deck so that the REVERSE MODE indicator lights up.
4. Press the CD REC START button on the cassette deck.
The Unit plays the CDs (from the disc on the PLUS 1 tray then to the discs in the magazine) and starts recording.

At the end of the tape, the CA-C33BK automatically goes back to the beginning of the last selection and re-records it, this time gently fading out at the end. If you selected the Reverse Mode, the reverse side starts with the last selection on the front side and will be faded out at the end again. (A 10 second blank is created on the beginning of the reverse side.)

When the tapes is finished, the Unit stops the CD and the cassette deck.

To stop any time during the recording process

Press the ■ button on deck B.

For CD Direct Recording using more than one disc, use a blank tape. If you use a pre-recorded tape, pre-recorded sound may be unerased between newly-recorded tracks.

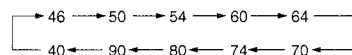
**Auto Edit Recording:
Introduction****Auto Edit Recording:
Step by step****Auto Edit Recording**

Using Auto Edit, you can record the CD tracks to fit the tape, so a selection isn't cut off. Auto Edit is one of the best ways to copy all of a CD onto a tape.

Auto Edit programs the CD tracks in the numerical order. To prevent the end of the last track on the front side from being cut off, the last track on the front side is selected to fit on the remaining tape length.

1. Prepare CDs. (See page 8.)
2. Set the sound effect mode if you want.
3. Press the EDIT button on the CD player repeatedly until "A. EDIT" lights up on the display.
4. Press the SEARCH/EDIT TIME \lll or \ggg button (\lll or \ggg button on the Remote controller) repeatedly to set the tape length.
 - ☐ You can select a different length of tape from ten possibilities programmed into the CA-C33BK: 40, 46, 50, 54, 60, 64, 70, 74, 80, 90. Cycle through these choices using the SEARCH/EDIT TIME \lll or \ggg button (\lll or \ggg on the Remote controller).

[46]



5. Press the SIDE A/B button on the CD player.
6. Select a disc with the disc buttons (1 to 6 and P).
7. Insert a blank or erasable cassette in deck B.
 - ☐ If you want to record on both sides of the tape, press the REVERSE MODE button on the cassette deck so that the REVERSE MODE indicator lights up.
8. Press the CD REC START button on the cassette deck.

The Unit will automatically rewind the tape to the beginning of the front side, create a 10 second blank, turn on the CD and start recording. (A 10 second blank is also created on the beginning of the reverse side.)

To stop any time during the recording process

Press the \blacksquare button on deck B or \blacksquare /CANCEL button on the CD player.

To exit edit mode and delete the program

Press the PLAY MODE button so "A.EDIT" is no longer lighted on the display (the Unit must be in stop mode.)

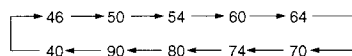
Using the Auto Edit, you can program up to 16 tracks for each side of the tape, and cannot program a track the number of which on the disc is greater than 31.

**Program Edit
Recording: Step by
step****Program Edit Recording**

Using Program Edit, you can record only the CD tracks you want, and fit them onto the tape. Program Edit is one of the best ways to make a tape of only your favourite songs.

1. Prepare CDs. (See page 8.)
2. Set the sound effect mode if you want.
3. Press the EDIT button on the CD player repeatedly until "P. EDIT" lights up on the display.
4. Press the SEARCH/EDIT TIME \lll or \ggg button (\lll or \ggg button on the Remote controller) repeatedly to set the tape length.
 - ☐ You can select a different length of tape from ten possibilities programmed into the CA-C33BK: 40, 46, 50, 54, 60, 64, 70, 74, 80, 90. Cycle through these choices using the SEARCH/EDIT TIME \lll or \ggg button (\lll or \ggg on the Remote controller).

[46]



5. Press the SIDE A/B button and select the tracks you want to record on the front side (A).

By using the Unit

- (1) Select a disc with the disc buttons (1 to 6 and P). As soon as a disc is selected, it is memorized and "AL" lights up on the display. If you want all the tracks on that disc to record, skip step (2).
- (2) To select individual tracks from the selected disc (its number is indicated by the arrow on the display), press the SEARCH/EDIT TIME \lll or \ggg button.
- (3) Press the MEMORY button.
- (4) Repeat steps (1) - (3) until you have entered all the tracks you want.

By using the Remote controller

- (1) Press the CD CHANGER.
- (2) Select a disc with the numeric keys (1 to 6 and P).
- (3) To select individual tracks from the selected disc enter each number by pressing the CD 10 KEY and using the numeric keys (1 to 10 and +10).
 - ☐ You can also use the \lll or \ggg to select tracks.
- (4) Repeat (1) - (3) until you have entered all the tracks you want to program.
 - ☐ If the total playing time for the front side (A) exceeds the tape length for this side, the displayed excess playing time blinks. During recording, the last track on this side will be recorded fading out at the end of the tape.
6. Press the SIDE A/B button and select the tracks you want to record on the reverse side (B).
 - ☐ If the total playing time for the reverse side (B) exceeds the tape length for this side, the displayed excess playing time blinks. During recording, the last track on this side will be recorded fading out at the end of the tape.
7. Insert a blank or erasable cassette in deck B.
 - ☐ If you want to record on both sides of the tape, press the REVERSE MODE button on the cassette deck so that the REVERSE MODE indicator lights up.
8. Press the CD REC START button on the cassette deck.

The Unit will automatically rewind the tape to the beginning of the front side, create a 10 second blank, turn on the CD and start recording. (A 10 second blank is also created on the beginning of the reverse side.)

**To stop any time during the recording process**

Press the \blacksquare button on deck B or \blacksquare /CANCEL button on the CD player.

To exit edit mode and delete the program

Press the PLAY MODE button so "P.EDIT" is no longer lighted on the display (the Unit must be in stop mode.)

- ☐ If you choose wrong tracks during programming, press the \blacksquare /CANCEL button on the CD player. Each time you press the button, the last-chosen track is deleted from the program.
- ☐ Using the Program Edit, you can program up to 16 tracks for each side of the tape, and cannot program a track the number of which on the disc is greater than 31.
- ☐ If you want to make some changes in program after starting recording, make sure that the display is showing the tracks for the front side (A) when you restart recording. If not, press the SIDE A/B button.

**Tape to tape dubbing:
Introduction****Tape to Tape Recording (Dubbing)**

Recording from one tape to another is called dubbing.

You can dub at regular speed for the best possible quality, or with a slight loss in sound quality you can dub at high speed. With high speed it takes only about one-half the time to copy a tape.

- ☐ To dub both sides of a tape, start from side A for both deck A and deck B, and press the REVERSE MODE so that the REVERSE MODE indicator lights up.
- ☐ It is preferable that the type of tape (Normal or CrO₂) you record from be the same as the type you record onto.

**Regular speed
dubbing: Step by step****Regular Speed Dubbing**

1. Insert a source cassette you want to copy from into deck A from playback.
2. Insert a blank or erasable cassette you want to copy onto into deck B for recording.
3. Press the REC PAUSE button on deck B.
4. Press the \triangleright button (or \triangleleft button) on deck B.
 - Recording starts.
 - To advance the leader tape (the beginning of the tape on which you cannot record), start recording first and wait about 10 seconds before starting deck A.
5. Press the \triangleright button (or \triangleleft button) on deck A.

Deck A starts playing.

To stop any time during the dubbing process

Press the \blacksquare button on both deck A and deck B.

High speed dubbing: Step by step



High Speed Dubbing

Although the quality of the dubbed tape is a little less, high speed dubbing is a very convenient way to record from one tape to another.

1. Insert a source cassette you want to copy from into deck A, and a blank or erasable cassette to be copied onto in deck B.
2. For each deck, select the side (A or B) to start with.
To change the side, press the < or > button and then quickly press the ■ button on the same deck.
□ The tape will travel in the direction of the lit arrow indicator on the < or > button for each deck.
3. Press the HIGH SPEED DUBBING button on the cassette deck.
Both decks start, deck A playing and deck B recording.
□ The sound you hear is strange because it is much faster than usual, and you may not want to listen to it. Turn it down with the VOLUME control, or press the FADE MUTING on the Remote controller.
□ You can also listen to another source such as the radio or the CD player, just as if you weren't dubbing.

To stop any time during the dubbing process

Press the ■ button on deck B.

To record selections from several different tapes during high speed dubbing.

When you want to take selections from several different tapes and combine them on one tape during high speed dubbing, follow these steps:

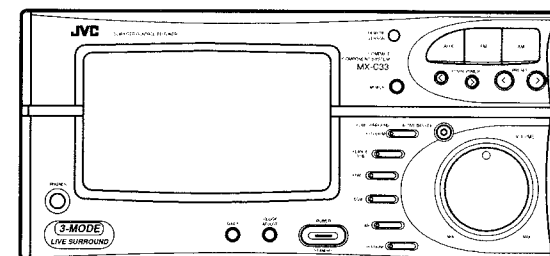
1. Press the ■ button on deck A.
□ This causes deck A to stop, so you can change tapes, and deck B makes a few seconds blank and pauses.
• If you don't want to make a few seconds blank, press the REC PAUSE button before pressing the ■ button on deck A.
2. Change the tape in deck A.
3. Press the HIGH SPEED DUBBING button to start deck A playing and deck B recording again.

- Dolby NR is inactive in dubbing mode regardless of the setting of DOLBY B NR. The dubbed tape automatically contains the same processing as the source tape.
- You cannot dub using the sound effect modes such as STADIUM, DANCE CLUB, HALL etc.

Using the Tuner

You can listen to both FM and AM stations. Stations can be turned in manually, automatically, or from preset memory storage.

- Before listening to the radio:
 - Check that both the FM and AM antennas are firmly connected.



One Touch Radio

Just press the FM button to turn on the Unit and start playing the most recent FM station tuned in, or press the AM button to start the most recent AM station tuned in.

- You can switch from any other sound source to the radio by pressing either the FM or AM button.

Tuning in a Station

Press the FM or AM button to turn on the radio. The display shows the station frequency tuned to.

Three ways to tune in a station



How to preset FM and AM radio stations



Three ways to select a station

1. Press the TUNING/TIMER < or > button repeatedly to move from frequency to frequency until you find the one you want.

OR

2. Hold down the TUNING/TIMER < or > button, the frequency starts changing on the display. When a station is tuned in, "TUNED" lights up on the display and the frequency stops changing.

OR

3. (Possible only after presetting stations.)

Press once and release the PRESET < or > button to go to the next preset station, or hold the PRESET < or > button to cycle through the preset stations; release the button when the preset station you want shows on the display.

You can also use the Remote controller to tune in preset channels:

1. Press the TUNER so that you can receive the most recent station tuned in.
2. Select the station by entering the preset number in the numeric keys of the Remote controller.

Presetting Stations

You can store up to 40 of your favorite radio stations (FM and AM) in memory, giving you quick, easy access to the stations.

1. Select a band by pressing either the FM or AM button.
2. Press the TUNING/TIMER < or > button to tune in a station.
3. Press the MEMORY button on the Tuner.
On the display "MEMORY" will blink for 5 seconds.
□ During these 5 seconds while "MEMORY" is blinking you can assign a channel number to the station and enter it into the memory.
4. Select a channel number by pressing the PRESET < or > button until you find the channel number you want.
5. Press the MEMORY button and the station will be assigned to the channel number showing on the display.
□ If a station has been previously stored using the same channel number, it will be erased and the newly selected station will be stored.
□ If "MEMORY" in the display goes off, start again from step 3.
6. Repeat steps 1 - 5 for each station you want to store in memory with a preset number.

Caution! If the Unit is unplugged or if a power failure occurs, the preset stations stored in memory may be lost.

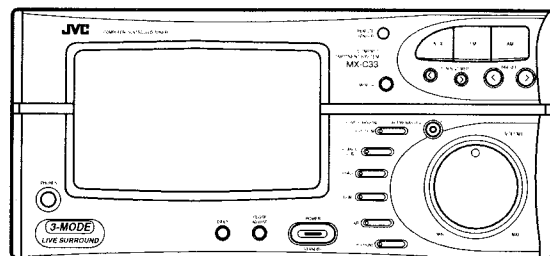
Receiving in Stereo or Mono

The CA-C33BK can receive broadcasts in either stereo or mono. When "AUTO" lights up on the display, the Unit automatically receives broadcasts in the mode they are transmitted. Usually, leaving the Unit in Auto Mode, with "AUTO" lit, gives you the best reception.

To improve reception in cases like this, press the FM MODE/ MUTE on the Remote controller so that "MONO" on the display lights up. Although you lose the stereo effect, reception may improve.

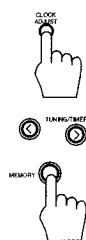
To restore automatic stereo detection, press the FM MODE/MUTE so that "AUTO" lights up.

Using the Timers



Two Timers: • DAILY TIMER • SLEEP TIMER

IMPORTANT! Set your clock



Two types of timers are available:

- ☐ **Daily** — Wake up to music from any source.
- ☐ **Sleep Timer** — Fall asleep and have your CA-C33BK turn off automatically after a certain length of time.

Clock Setting

The timers depend on the clock: If the clock is right, the timers will work like you expect, but if the time is incorrect on the clock then the timers will also be incorrect.

Special Notice: The clock must be set, or the timers cannot be set!

So, lets set the clock first.

1. Press the **CLOCK ADJUST** button.
2. Set the hour by pressing the **TUNING/TIMER** < or > button. Press the > button increase the hour, and pressing the < button decreases it.
3. Press the **MEMORY** button.
4. Set the minutes by pressing **TUNING/TIMER** < or > button. Press the > button increase the minute, and pressing the < button decreases it.
5. Press the **MEMORY** button again and the clock is set and starts from zero second.

Caution! If there is a power failure, the clock loses its setting, the display shows "AM 12:00", and it must be reset.

Setting the Daily Timer

With this timer you can wake up to music from a CD, tape, or your favorite radio program.

- ☐ You can set the Daily Timer whether the Unit is on or off.

Follow this procedure to set the Daily timer:

1. Press the **DAILY** button. The "DAILY TIME" and "ON TIME" indications flash in the display. As long as it is flashing, you can continue with the setting process. If you wait too long, and it stops before you are done, just press the button twice and start over.
2. Set the time you want the sound source to come on.
 - ☐ Use the **TUNING/TIMER** < or > button just like setting the clock.
3. Select the sound source with the **TUNING/TIMER** < or > button.
 - ☐ Each time you press the **TUNING/TIMER** < or > button, the unit gives you one of the following settings:

Display	What it means
FM	Plays an FM broadcast
AM	Plays an AM broadcast
CD	Plays a CD
TAPE	Plays tape

- ☐ If you select FM or AM as the source, the last played station is the one which comes on at the set time.
 - ☐ If you select CD as the source, the last played mode is the one which comes on at the set time.
- You can change the mode (CONTINUOUS, PROGRAM, or RANDOM) by pressing the **PLAY MODE** button.
- You cannot use repeat mode on Daily timer.

4. Press the **MEMORY** or **DAILY** button.

The Unit will memorize the setting.

When the set time comes, the CA-C33BK turns on ("DAILY" appears on the display), play the source you have selected for 60 minutes, and then the Unit turns off.

- ☐ If you press the **DAILY** button while the Daily Timer is being activated, the Unit will not turn off automatically after 60 minutes.

Before turning off the Unit

- ☐ Select the sound mode if you want to listen using a sound mode (STADIUM, DANCE CLUB, HALL, etc.).
- ☐ Set the volume to an appropriate level.
- ☐ If the source is tape:
 - Check that the tape transport direction is correct. This is important especially when Reverse Mode is off.
 - Deck B has priority, so if tapes are in both deck, the tape in deck B plays first.
 - Set Reverse Mode on if you want play both sides of the tape.

To cancel the Daily Timer settings, press the **DAILY** button again; the indicator on the display goes off.

Resetting the Daily Timer

To reset the **Daily Timer**, press the **DAILY** button twice. Now the timer is set again and will use the same start-time and source as before.

Sleep Timer

Use the **Sleep Timer** to turn the Unit off after a certain number of minutes when it is playing. Setting this timer, you can fall asleep to music and know your Unit will turn off by itself rather than play all night.

- ☐ You can only set the Sleep Timer when the Unit is on and a source is playing.
- ☐ To cancel the Sleep Timer, press the **POWER** button to turn off the Unit.

To set the Sleep Timer follow this procedure:

1. With the Unit on and a source playing, press the **SLEEP** on the Remote controller. The "SLEEP" indicator on the display will start blinking.
2. Set the length of time you want the source to play before shutting off.
 - ☐ Each time you press the **SLEEP** while the "SLEEP" indicator is blinking, it changes the number of minutes shown on the display in this sequence:
→ 10 → 20 → 30 → 60 → 90 → 120 → Sleep timer off → (back to the beginning)
 - ☐ The actual time when the Unit will shut off shows in the right hand corner of the display.

When the number of minutes you want shows on the display, just wait 5 seconds until the indicator stops blinking, but remains lighted.

The Unit is now set to turn off after the number of minutes you set.

Timer Priority

Since each timer can be set independently, you may have wondered what happens if the settings overlap. Here are the priorities for each timer.

- ☐ The Sleep Timer has priority over Daily timer. This means that if the stop-time for one of the timers occurs before the sleep time, the Unit will wait until the sleep-time before turning itself off.

Checking the Remaining Time

After setting the Sleep Timer, you can check the time remaining until the Unit shuts off.

- ☐ Press the **SLEEP** button shows you the remaining time on the display for 5 seconds.

Using the Remote Controller

How to Use the Remote Controller

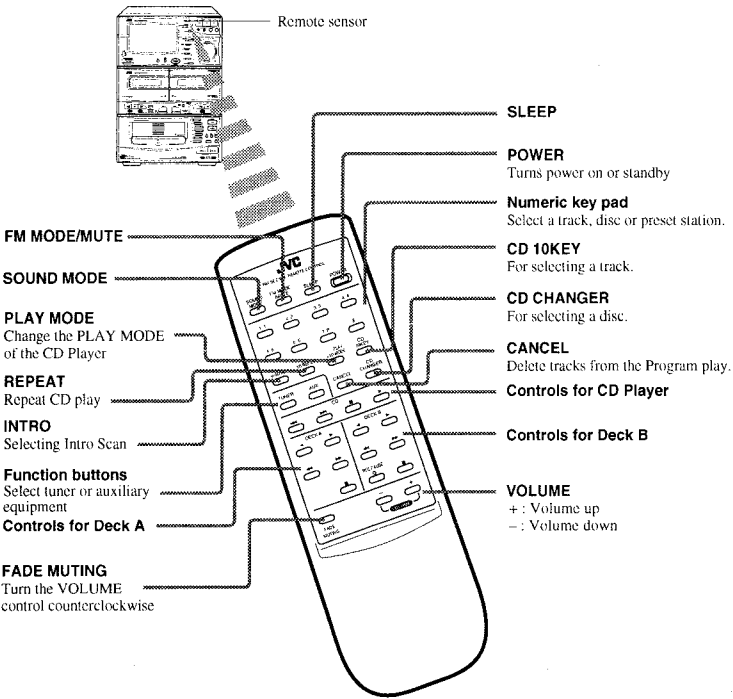
The Remote controller makes it easy to use many of the functions of the CA-C33BK from a distance of up to 23 feet away. You do need to point the remote sensor at the CA-C33BK front panel.

- Most of the buttons on the Remote controller do just what the ones on the CA-C33BK do.
- A few function are available only by using the Remote controller, and those are described below.

Using the Numeric Key Pad

The numeric key pad is used to specify a CD, a CD track or the number you have assigned to a preset radio station. To enter a number using the numeric key pad, follow these step:

- Before using the numeric key pad, check to see whether the numeric key pad is functioning to operate the CD player or tuner. This is depends on which button on the Remote controller you have pressed before using the numeric key pad. For example, if you press the TUNER before the numeric key pad, it can select a preset station. Pressing the CD CHANGER enable you to select a CD and also to operate the INTRO, REPEAR and PLAY MODE. If you press the CD 10KEY, it can select a CD track.
- For numbers between 1 and 10, just press the button with the number you want.
- For numbers from 11 to 20, first press the +10 key, then the one's digit of the number you want — to get 15, first press +10, then 5. For 20, press +10 and 10.
- For numbers from 21 to 30, press the +10 key twice; then press the one's digit — to get 25, press +10 +10 and 5. For 30, +10 +10 and 10.
- For number from 31 to 40, press the +10 key three times, then the one's digit of the number you want — to get 32, first press +10 +10 +10 and 2. For 40, press +10 +10 +10 and 10.



Troubleshooting

- If you are having a problem with your CA-C33BK, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the Unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	ACTION
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 3 - 4.)
Impossible to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Hard to listen to broadcasts because of noise.	The antenna is disconnected. The AM loop antenna is too close to the Unit. The FM wire antenna is not properly extended and positioned.	Re-connect the antenna securely. Change the position and direction of the AM loop antenna. Extend FM wire antenna to the best reception position.
The CD sound is discontinuous.	The CD is scratched or dirty.	Clean or replace the CD.
Unable to operate the Remote controller.	The path between the Remote controller and the sensor on the Unit is blocked. The batteries are discharged.	Remove the obstruction. Replace the batteries.
The CD tray cannot be operated.	The main AC power cord is not plugged in.	Plug in the AC power plug.
The CD does not play.	The CD is upside down.	Put the CD in with the label side up.
Operations are disabled.	The built in microprocessor may malfunction due to external electrical interference.	Unplug the Unit then plug it back in.
The cassette carrier cannot be opened.	The Unit was turned off because the timer was operated while the tape was running.	Turn on the Unit.

Specifications

Amplifier section		CD Automatic Changer section	
Output Power	25 watts per channel, min. RMS, both channels driven, into 6 ohms from 60 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.	CD capacity	7 discs
		Dynamic Range	96 dB
		Signal-to-Noise Ratio	100 dB
		Wow and Flutter	Unmeasurable
		Tuner section	
Input Sensitivity/Impedance (1 kHz)		FM Tuner	
AUX	250 mV/22 kohms	Tunig Range	87.5 - 108.0 MHz
		Usable Sensitivity	0.95 µV/75 ohms (10.8 dBf)
		Signal-to Noise Ratio (IHF-A weighted)	MONO 80 dB STEREO 73 dB
Cassette Deck section		AM Tuner	
Frequency response		Tuning Range	530 - 1.710 kHz
CrO ₂ :	30 - 16,000 Hz		
Normal:	30 - 15,000 Hz	Dimensions	245 x 329 x 333 mm (W/H/D) (9-11/16 x 13 x 13-1/8 inches)
Wow and flutter	0.09% (WRMS)	Weight	8.8 kg (19.4 lbs)
		Power Specifications	
		Power Requirements	AC 120 V ~ . 60 Hz
		Power Consumption	95 watts
		<i>Design and specifications subject to change without notice.</i>	
Accessories			
AM Loop Antenna	1		
Remote Controller	1		
Batteries (R6 (SUM-3)/AA)	2		
Magazine	1		
FM Feeder Antenna	1		
FM Antenna Adaptor	1		

■ MN172412JYD1 (IC451) : CD SYSTEM CONTROLLER

1. Terminal Layout

63 ~ 43	
64	42
}	}
84	22
1 ~ 21	

2. Key Matrix

	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
4G	—	D5	D6	—
5G	EDIT	MEMORY	CALL	P.MODE
20G	+ 1 TIME ►►	+ 10 TIME ◄◄	SIDE A/B	■/CANCEL
6G	D1	D2	P1	►/
8G	D4	MAGAZINE EJECT	P1 OPEN/CLOSE	D3

3. Description

Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	3G	O	FL grid control output	43	MDATA	O	μ-com command data output
2	4G	O	FL grid control output(Key matrix output)	44	P.OFF	O	H : power off, L : power on.
3	5G	O	FL grid control output(Key matrix output)	45	SQCK	O	80-bit Sub Q and 16-bit PCM Peak Level Data
4	20G	O	FL grid control output(Key matrix output)	46	SUBQ	I	Sub-code Q-code input
5	6G	O	FL grid control output(Key matrix output)	47	MLD	O	μ-com command load signal output
6	7G	O	FL grid control output	48	STATUS	I	Status signal input
7	8G	O	FL grid control output(Key matrix output)	49	/TLOCK	I	Lock signal for Tracking
8	9G	O	FL grid control output	50	/FLOCK	I	Lock signal for Focus
9	DGT13	--	Connected to GND	51	TCIA	--	Connected to GND
10	DGT12	--	Connected to GND	52	IRQ2	--	Connected to GND
11	KEY IN0	I	Key matrix input	53	IRQ3	--	Connected to GND
12	KEY IN1	I	Key matrix input	54	TBLO	--	Connected to GND
13	KEY IN2	I	Key matrix input	55	DCS IN	I	Compulink signal input
14	KEY IN3	I	Key matrix input	56	DCS OUT	O	Compulink signal output
15	DGT7	--	Not used	57	OPEN/LOAD	O	P1 Open or Load
16	DGT6	--	Not used	58	CLOSE/UNLOAD	O	P1 Close or Unload driving control signal
17	DGT5	--	Not used	59	SD	O	Load drive speed down output
18	DGT4	--	Not used	60	/PU REST	I	Pick up rest switch input
19	DGT3	--	Not used	61	/LOAD SW	I	Disc load detect signal
20	DGT2	--	Not used	62	/JAB SW	I	JAB switch signal
21	DGT1	--	Not used	63	/MAG IN SW	I	Magazine in signal
22	DGT0	--	Not used	64	UP	O	Lifter driving control signal
23	-VDISP	--	Power supply for FL display	65	DOWN	O	Lifter driving control signal
24	S1	O	FL segment control output	66		--	Connected to GND
25	S2	O	FL segment control output	67		--	Connected to GND
26	S3	O	FL segment control output	68	/RESET	I	Reset signal input
27	S4	O	FL segment control output	69	X1	--	Connected to GND
28	S5	O	FL segment control output	70	X2	--	Not used
29	S6	O	FL segment control output	71	VSS	--	GND
30	S7	O	FL segment control output	72	OSC2	O	Clock oscillation output
31	S8	O	FL segment control output	73	OSC1	I	Clock oscillation input
32	S9	O	FL segment control output	74	VDD	--	Power supply
33	S10	O	FL segment control output	75	/UP/DOWN SW	I	Height detect signal
34	S11	O	FL segment control output	76	/R&M SW	I	Reset & Memory switch input
35	S12	O	FL segment control output	77	/CLOSE SW	I	"L" with tray closed
36	S13	O	FL segment control output	78	/OPEN SW	I	"L" with tray opened
37	MS0	I	Model select	79	DGT27	--	Connected to GND
38	MS1	I	Model select	80	DGT26	--	Connected to GND
39	SED15	--	Connected to GND	81	DGT25	--	Connected to GND
40	/RST	O	System Reset signal output	82	DGT24	--	Connected to GND
41	MCLK	O	μ-com command clock signal output	83	1G	O	FL grid control output
42	SENSE	I	SENSE signal input	84	2G	O	FL grid control output

■ MN172412JYA1 (IC401) : TUNER SYSTEM CONTROLLER

1. Terminal Layout

63 ~ 43	
64	42
}	}
84	22
1 ~ 21	

2. Key Matrix

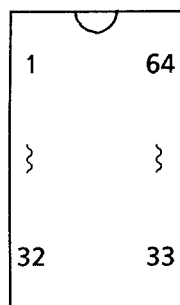
	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
KEY OUT 0	AM	PRESET >	A.BASS.EX	POWER
KEY OUT 1	FM	PRESET <	H.PHONE	CLOCK ADJ
KEY OUT 2	AUX	TUN >	CAR	DAILY
KEY OUT 3	MEMORY	TUN <	BGM	—
KEY OUT 4	STADIUM	D.CLUB	HALL	—

3. Description

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	D.CLUB	O	DANCE/CLUB Indication signal	43	T.DATA	O	Data for PLL synthesizer
2	HALL	O	HALL Indication signal	44	f out	O	Clock frequency
3	BGM	O	BGM Indication signal	45	CLK	O	Clock output for IC351
4	CAR	O	CAR Indication signal	46	STB	O	Strobe signal for IC351
5	H.PHONE	O	H.PHONE Indication signal	47	DATA	O	Data for IC351
6	A.BASS.EX	O	A.BASS.EX indication signal and control	48	INH IN	I	Inhibit signal for tuner controller
7	CS0	I	Chip select	49	RM IN	I	Input from remote signal detector
8	CS1	I	Chip select	50	/TUNED	I	For the indication "TUNED"
9	CS2	I	Chip select	51	/STEREO	I	For the indication "STEREO"
10	CS3	I	Chip select	52	DECK P.OFF	O	Deck power control signal output
11	10G	O	FL grid control output	53	DECK RESET	O	Deck system Reset signal output
12	11G	O	FL grid control output	54	DCS OUT	O	Compulink signal output
13	12G	O	FL grid control output	55	DCS IN	I	Compulink signal input
14	13G	O	FL grid control output	56	KI0	I	Key matrix input
15	14G	O	FL grid control output	57	KI1	I	Key matrix input
16	15G	O	FL grid control output	58	KI2	I	Key matrix input
17	16G	O	FL grid control output	59	KI3	I	Key matrix input
18	17G	O	FL grid control output	60	KO0	O	Key matrix output
19	DGT3	--	Not used	61	KO1	O	Key matrix output
20	DGT2	--	Not used	62	KO2	O	Key matrix output
21	DGT1	--	Not used	63	KO3	O	Key matrix output
22	DGT0	--	Not used	64	KO4	O	Key matrix output
23	-VDISP	--	Power supply for FL display	65		--	Not used
24	S14	O	FL segment control output	66		--	Not used
25	S15	O	FL segment control output	67		--	Not used
26	S16	O	FL segment control output	68	/RESET	I	Reset signal input
27	S17	O	FL segment control output	69	X1	--	GND
28	S18	O	FL segment control output	70	X2	--	Not used
29	S19	O	FL segment control output	71	VSS	--	GND
30	S20	O	FL segment control output	72	OSC2	I/O	Clock oscillation terminal
31	S21	O	FL segment control output	73	OSC1	I/O	Clock oscillation terminal
32	S22	O	FL segment control output	74	VDD	--	Power supply
33	S23	O	FL segment control output	75	T.MUTE	O	Muting tuner sound
34	S24	O	FL segment control output	76	T.TEST	--	Test mode terminal
35	S25	O	FL segment control output	77	PRT	I	Detection for protector
36	S26	O	FL segment control output	78	SPK	O	Speaker relay control signal
37	S27	O	FL segment control output	79	POWER	O	System power control signal output
38	S28	O	FL segment control output	80	VOL UP	O	Volume control signal
39	S29	O	FL segment control output	81	VOL DOWN	O	Volume control signal
40	T.CE	O	Chip enable signal for PLL synthesizer	82	S.MUTE	O	Muting signal when changing the source
41	T.CLK	O	Clock for PLL synthesizer	83	STD-BY	O	STD-BY Indication signal
42	IF DATA	I	Data from PLL synthesizer	84	STADIUM	O	STADIUM Indication signal

■ HD614081SE07 (IC501) : DECK SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix

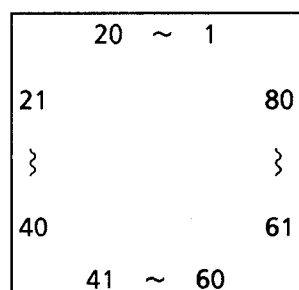
	KEY IN 1	KEY IN 2	KEY IN 3	KEY IN 4
KEY OUT 1	A ◀	A ◀◀	A ▶▶	A ▶
KEY OUT 2	B ◀	B ◀◀	B ▶▶	B ▶
KEY OUT 3	A ■	B ■	B REC PAUSE	—
KEY OUT 4	H.S.D	DOLBY	REV.MODE	CD.REC

3. Description

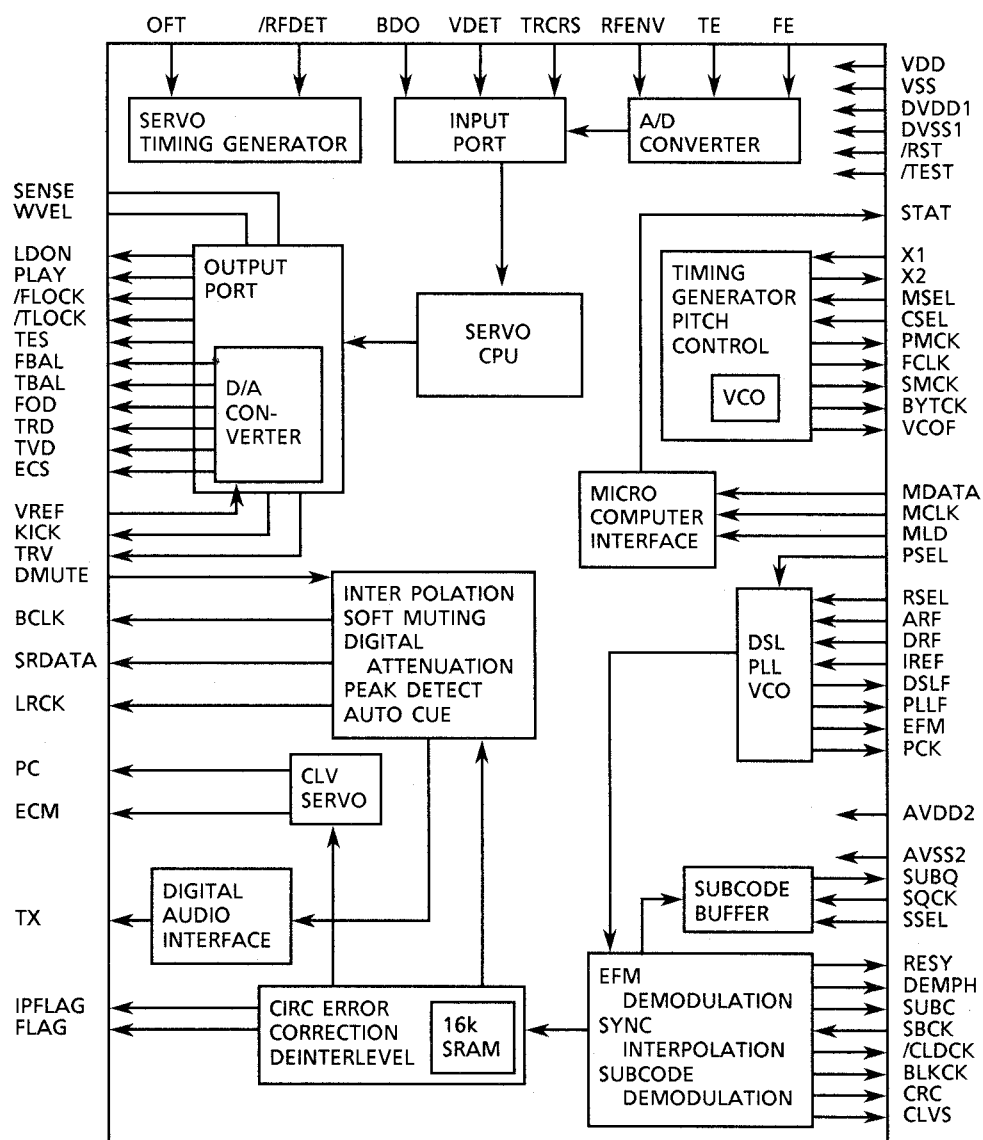
Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	NR LED	O	Dolby B indicator signal output	33	METAL	O	METAL Recording Equalizer control
2	NR LED (C)	O	Dolby C indicator signal output	34	(AMT)CrO2	O	CrO2 Recording Equalizer control
3	A SPEED UP	O	A deck Reel motor speed control output	35	(BMT)H.S NORM	O	High speed Normal Recording Equalizer control
4	B SPEED UP	O	B deck Reel motor speed control output	36	(C.LED)H.S METAL	O	High speed METAL Recording Equalizer control
5	MUSIC IN	I	Music scan signal input	37	H.S CrO2	O	High speed CrO2 Recording Equalizer control
6	B FWD REEL MOTOR	O	FWD direction control for B reel motor	38	/HI SPEED DUBBING	O	Recording Equalizer control
7	B REV REEL MOTOR	O	REV direction control for B reel motor	39	/SW OUT1	O	Leaf switch output
8	B REV CAM MOTOR	O	REV direction control for B cam motor	40	/SW OUT2	O	Leaf switch output
9	B FWD CAM MOTOR	O	FWD direction control for B cam motor	41	/KEY OUT1	O	Key matrix output
10	/A CAM SW2	I	A CAM SW input	42	/KEY OUT2	O	Key matrix output
11	/A CAM SW1	I	A CAM SW input	43	/KEY OUT3	O	Key matrix output
12	/A CAM SW0	I	A CAM SW input	44	/KEY OUT4	O	Key matrix output
13	A PULSE IN	I	A deck reel pulse input	45	/KEY&SW IN1	I	Key matrix and Leaf switch input
14	/B CAM SW2	I	B CAM SW input	46	/KEY&SW IN2	I	Key matrix and Leaf switch input
15	/B CAM SW1	I	B CAM SW input	47	/KEY&SW IN3	I	Key matrix and Leaf switch input
16	/B CAM SW0	I	B CAM SW input	48	/KEY&SW IN4	I	Key matrix and Leaf switch input
17	B PULSE IN	I	B deck reel pulse input	49	RESET IN	I	Reset signal input
18	/POWER OFF IN	I	Power ON / OFF signal input	50	TO VCC	-	Connect to VCC
19	GND	-	Ground	51	4.19MHzOSC IN	I	Clock oscillator input
20	A FWD REEL MOTOR	O	FWD direction control for A reel motor	52	4.19MHzOSC IN	I	Clock oscillator input
21	A REV REEL MOTOR	O	REV direction control for A reel motor	53	GND	-	Ground
22	A REV CAM MOTOR	O	REV direction control for A cam motor	54	/DCS OUT	O	DCS signal output
23	A FWD CAM MOTOR	O	FWD direction control for A cam motor	55	/DCS IN	I	DCS signal input
24	NR REC	O	NR Rec control signal output to IC301	56	REC MUTE	O	Recording mute control signal output
25	A MUTE	O	A Deck play back mute signal output	57	NR OFF	O	NR ON/OFF control signal output to IC301
26	B MUTE	O	B Deck play back mute signal output	58	BIAS	O	BIAS control signal output
27	PLAY MUTE	O	Play back mute signal output	59	REV MODE	O	REV Mode indicator signal output
28	/CAP.MOTOR ON	O	Capstan motor ON/OFF control	60	REC LED	O	Recording indicator signal output
29	REC	O	PB / REC control signal output to IC204	61	B REV LED	O	B REV indicator signal output
30	FADE CTRL	O	Fade control signal output	62	B FWD LED	O	B FWD indicator signal output
31	/BEQ	O	Equalizer switching signal	63	A REW LED	O	A REW indicator signal output
32	+ 5V	-	Power supply	64	A FWD LED	O	A FWD indicator signal output

■ MN662720RB (IC810) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR

1. Terminal Layout



2. Block Diagram



3. Description

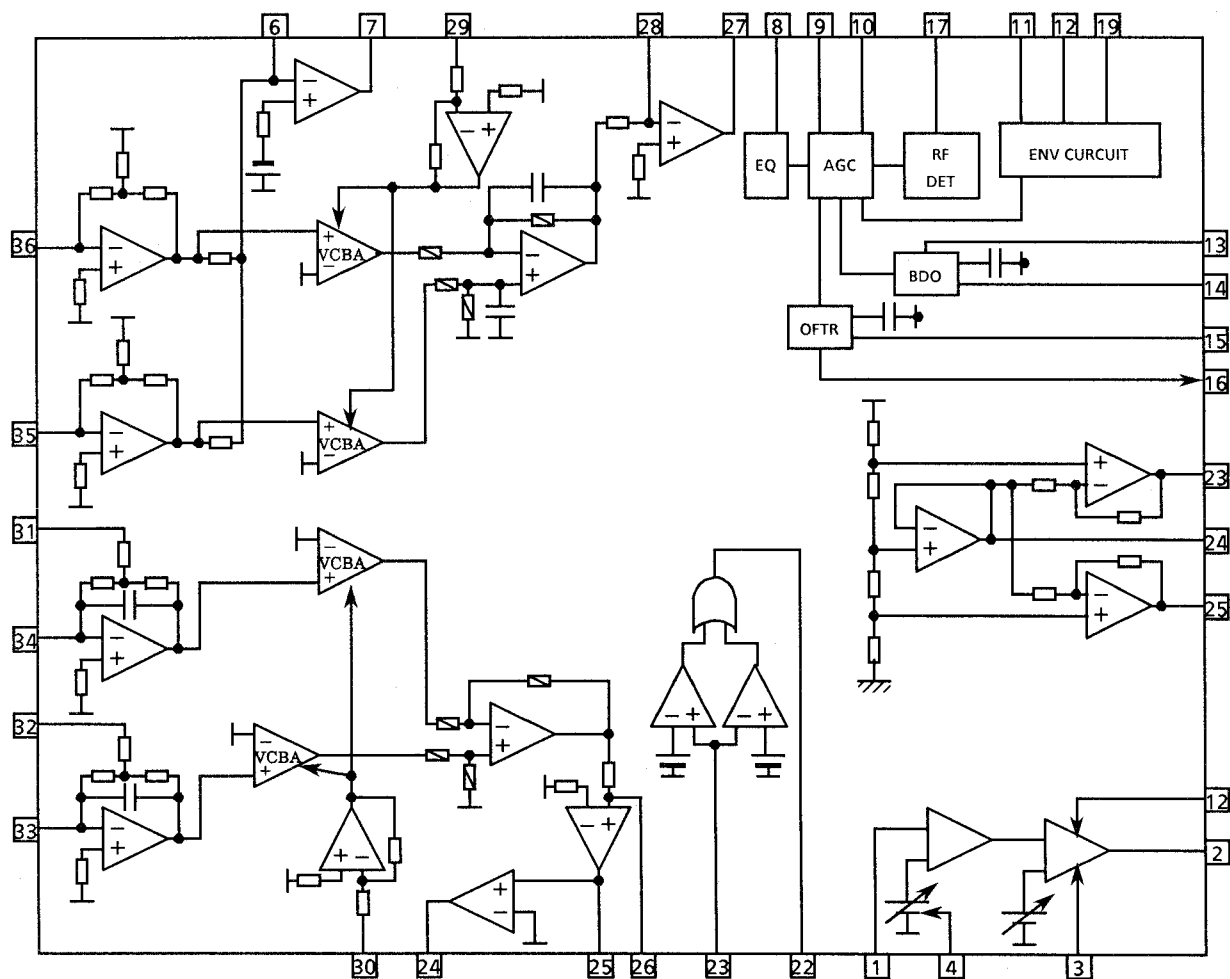
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Bit clock output pin for SRDATA	41	TES	—	Not used
2	LRCK	O	L/R distinction signal	42	PLAY	—	Not used
3	SRDATA	O	Serial data output	43	WVEL	—	Not used
4	DVDD1	—	Power supply	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND	45	IREF	I	Reference current input pin
6	TX	—	Not used	46	DRF	I	Bias adjustment pin for DSL
7	MCLK	I	μ -com command clock signal input	47	DSL F	I/O	Loop filter pin for DSL
8	MDATA	I	μ -com command data input	48	PLL F	I/O	Loop filter pin for PLL
9	MLD	I	μ -com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sense signal output	50	AVDD2	—	Power supply
11	FLOCK	O	Lock signal for Tracking	51	AVSS2	—	Connected to GND
12	TLOCK	O	Lock signal for Focus	52	EFM	—	Not used
13	BLKCK	—	Not used	53	PCK	—	Not used
14	SQCK	I	Clock for sub-code Q resister	54	PDO	—	Not used
15	SUBQ	O	Sub-code Q-code output	55	SUBC	—	Not used
16	DMUTE	—	Connected to GND	56	SBCK	—	Connected to GND
17	STATUS	O	Status signal	57	VSS	—	Connected to GND
18	/RST	I	Reset signal input (L:Reset)	58	X1	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	—	Not used
20	PMCK	—	Not used	60	VDD	—	Power supply
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	CLDCK	—	Not used
23	PC	—	Not used	63	FCLK	—	Not used
24	ECM	O	Spindle motor drive signal (Enforced output) 3-State	64	IPPLAG	—	Not used
25	ECS	O	Spindle motor drive signal (Servo signal)	65	FLAG	—	Not used
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	Not used
28	FOD	O	Focus drive output	68	DEMPH	O	De-emphasis ON signal (H : ON)
29	VREF	I	Reference voltage input pin	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	RST 2	—	Connected to GND
31	TBAL	O	Tracking Balance adjust signal output	71	/TEST	—	Pull up (+5V)
32	FE	I	Focus error signal input	72	AVDD1	—	Power supply
33	TE	I	Tracking error signal input	73	OUT L	—	Not used
34	RF ENV	I	RF envelope signal input	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input	75	OUT R	—	Not used
36	OFT	I	Off track signal input	76	RSEL	—	Pull up (+5V)
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	/RFDET	I	RF detect signal input	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output	80	SSEL	—	Pull up (+5V)

■ AN8803SB (IC830) : RF & SERVO AMP

1. Terminal Layout

PD	1	36 PDAC
LD	2	35 PDBD
LDON	3	34 PDE
LDP	4	33 PDF
VCC	5	32 PDER
RF-	6	31 PDFR
RF OUT	7	30 TBAL
RF IN	8	29 FBAL
C.AGC	9	28 FE-
ARF	10	27 FE OUT
C.ENV	11	26 TE-
C.EA	12	25 TE OUT
CS BDO	13	24 CROSS
BDO	14	23 TE BPF
CS BRT	15	22 VDET
OFTR	16	21 LD OFF
/NRFD	17	20 VREF
GND	18	19 ENV

2. Block Diagram



3. Description

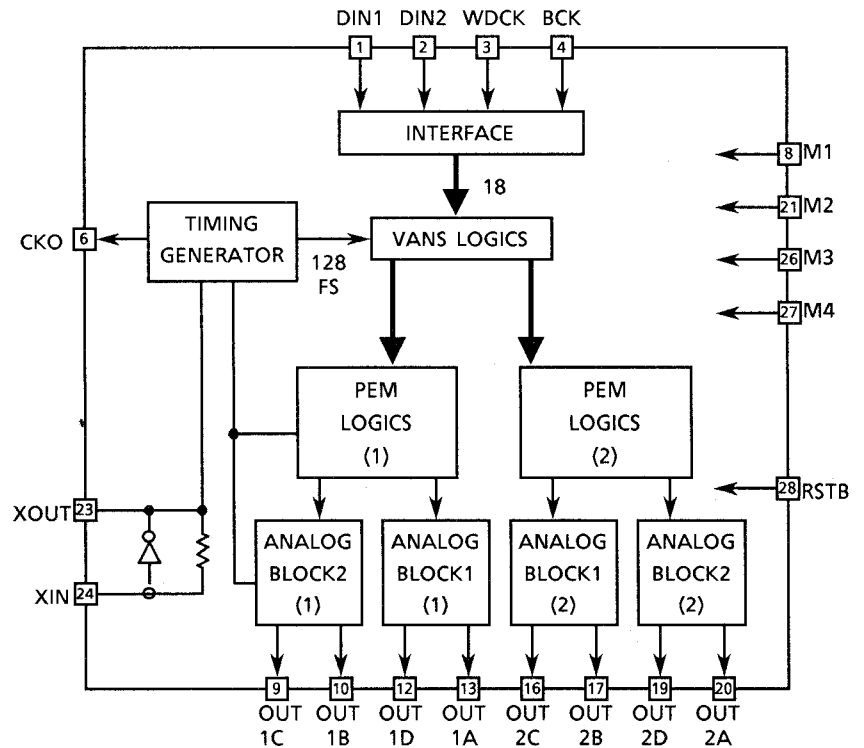
Pin No.	Symbol	I/O	Description
1	PD	--	Connected to GND
2	LD	--	Non connection
3	LD ON	--	Connected to GND
4	LDP	--	Connected to GND
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RF amp output pin
8	RF IN	I	AGC input pin
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	AGC output pin
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of the RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of the RF signal
16	OFTR	O	Of-track status signal output pin
17	/NRFDET	O	RF detection signal output pin
18	GND	--	GND
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output pin
21	LD OFF	--	Connect to GND
22	VDET	O	Vibration detection signal output pin
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output pin
25	TE OUT	O	Tracking error signal output pin
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control pin
30	TBAL	I	Tracking balance control pin
31	PDFR	I/O	E and E I-V amp gain control pin
32	PDER	I/O	F and E I-V amp gain control pin
33	PDF	I	I-V amp input pin
34	PDE	I	I-V amp input pin
35	PD BD	I	I-V amp input pin
36	PD AC	I	I-V amp input pin

■ MN35501 (IC920) : D / A CONVERTER

1. Terminal Layout

DIN1	1	28	RSTB
DIN2	2	27	M4
WDCK	3	26	M3
BCK	4	25	DVDD1
DVDD2	5	24	XIN
CKO	6	23	XOUT
DVSS2	7	22	DVSS1
M1	8	21	M2
OUT1C	9	20	OUT2C
OUT1B	10	19	OUT2B
AVDD1	11	18	AVDD2
OUT1D	12	17	OUT2D
OUT1A	13	16	OUT2A
AVSS1	14	15	AVSS2

2. Block Diagram

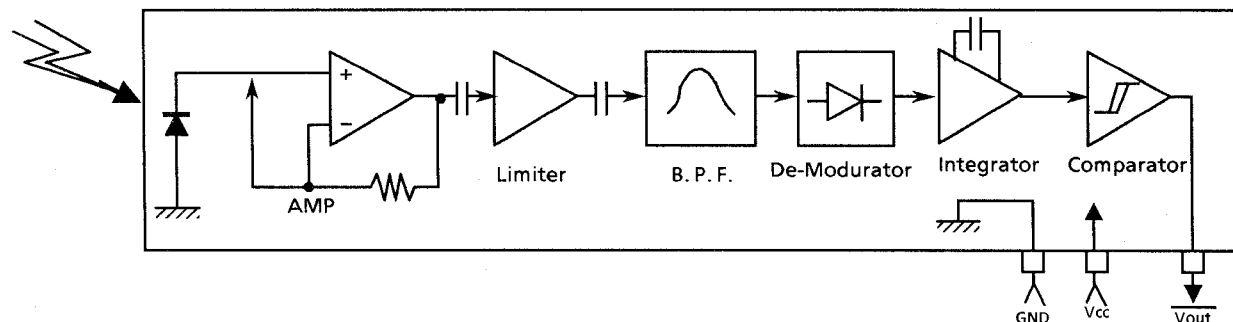


3. Description

Pin No.	Symbol	I/O	Function
1	DIN1	I	Serial data input
2	DIN2	I	Serial data input
3	WDCK	I	Word clock input
4	BCK	I	Bit clock input
5	DVDD2	--	Power supply for digital circuit
6	CKO	O	Clock output
7	DVSS2	--	GND for digital circuit
8	M1	I	Input for mode select
9	OUT1C	O	PEM signal output (Channel 1)
10	OUT1B	O	PEM signal output (Channel 1)
11	AVDD1	--	Power supply for analog circuit (Channel 1)
12	OUT1D	O	PEM signal output (Channel 1)
13	OUT1A	O	PEM signal output (Channel 1)
14	AVSS1	--	GND for analog circuit (Channel 1)

Pin No.	Symbol	I/O	Function
15	AVSS2	--	GND for analog circuit (Channel 2)
16	OUT2A	O	PEM signal output (Channel 2)
17	OUT2D	O	PEM signal output (Channel 2)
18	AVDD2	--	Power supply for analog circuit (Channel 2)
19	OUT2B	O	PEM signal output (Channel 2)
20	OUT2C	O	PEM signal output (Channel 2)
21	M2	I	Input for mode select
22	DVSS1	--	GND for clock circuit
23	XOUT	O	Oscillation terminal
24	XIN	I	Oscillation terminal
25	DVDD1	--	Power supply for clock circuit
26	M3	I	Input for mode select
27	M4	I	Input for mode select
28	RSTB	I	Reset input (Low active)

■ NJH32H380A(IC402) : Receiver for remote control

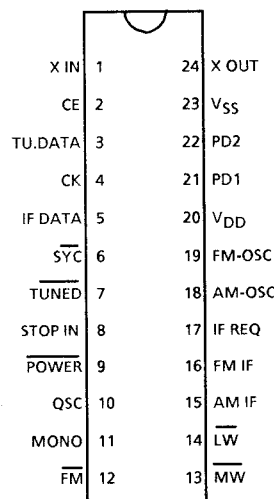


■ LC7218 (IC102) : PLL Synthesizer

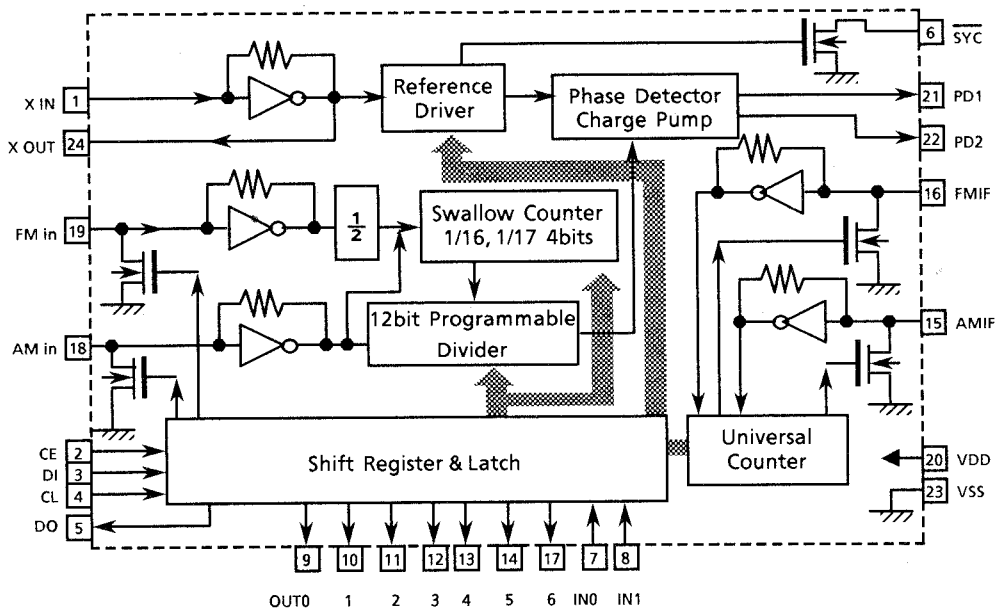
1. The main function descriptions

- (1) It makes the local oscillation frequency by the control data from IC401.
- (2) Decode the control signal and transmit the signal for receiving conditions.
- (3) For the best tuning, count the internal-frequency and transmit the data to IC401.

2. Terminal Layout



3. Block Diagram



4. Description

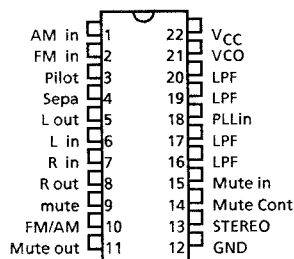
Pin No.	Symbol	I/O	Description
1,24	X in, X out	I/O	Crystal oscillator (7.2MHz).
2	CE	I	Fix the chip enable to "H" when inputting (TU.DATA) and outputting (IF DATA) the serial data.
3	TU.DATA	I	Receive the control data from the controller (IC401).
4	CK	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	IF DATA	O	Transmit the data from LC7218 to the controller which is synchronized with CL.
6	SYNC	—	Not used.
7	TUNED	I	Receive the tuned signal from IC104 (LA1266A).
8	STOP IN	—	Connected to GND
9	POWER	—	Not used.
10	QSC	—	Not used.
11	MONO	O	It is "H" on FM-monaural, "L" on FM-Stereo.
12	FM	O	It is "L" on FM mode.
13	MW	O	It is "L" on MW mode.
14	LW	O	It is "L" on LW mode.
15	AM-IF	I	Universal counter input for AM-IF from IC104 (LA1266A).
16	FM-IF	I	Universal counter input for FM-IF from IC104 (LA1266A).
17	IF REQ	O	Output the "IF-signal request" to IC104 when the pin-7 (tuned in) goes to "H".
18	AM OSC	I	Input the local oscillator signal of AM.
19	FM OSC	I	Input the local oscillator signal of FM.
20	V _{DD}	—	This is a terminal of power supply.
21	PD1	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.
22	PD2	—	Not used.
23	V _{SS}	—	Connected to GND

LA3401 (IC105) : FM MPX Detector

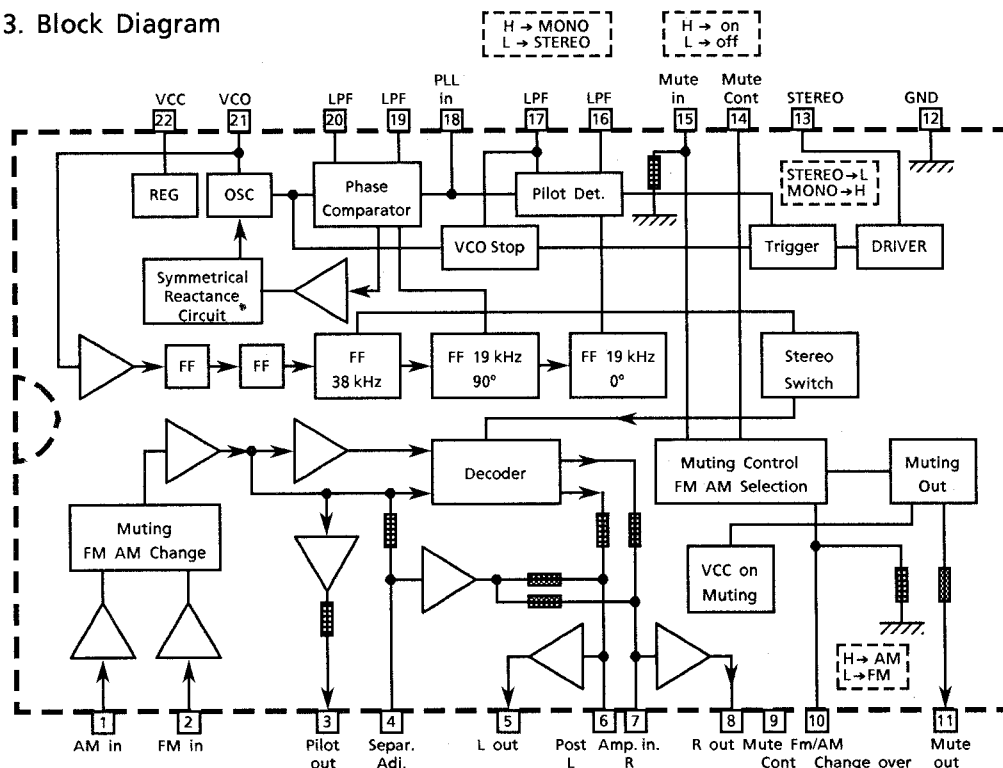
1. The main function descriptions

- (1) Detect the FM Multiplex Signal (Stereo signal).
- (2) When receiving FM Stereo Signal, it outputs the signal for indicator.
- (3) AM/FM Audio Amplifier.

2. Terminal Layout



3. Block Diagram



4. Description

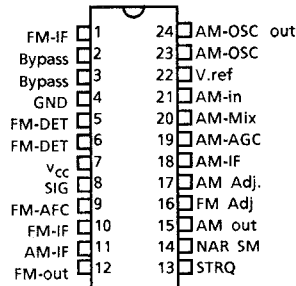
Pin No.	Symbol	I/O	Description
1	AM in	I	This is an input terminal for AM detection signal.
2	FM in	I	This is an input terminal for FM detection signal.
3	Pilot out	O	Output of MPX pilot signal (Connect to Pin18).
4	Sepa. Adj.	---	Separation adjustment.
5	L. out	O	Left channel signal output.
6	L	O	Reversal output of Pin5.
7	R	O	Reversal output of Pin8.
8	R out	O	Right channel signal output
9	Mute Cont	---	The mute time is controlled by the connected capacitor when turning the power switch on.
10	FM / AM	I	Change over the FM / AM input. "H" : AM, "L" : FM
11	Mute out	---	Not use
12	GND	---	Ground terminal.
13	Stereo	O	Stereo indicator output. Stereo : "L", Mono : "H"
14	Mute Cont	---	The mute time is controlled by the connected capacitor when changing over the FM / AM .
15	Mute in	I	Mute signal input. "H" : Mute on, "L" : Mute off.
16	LPF	---	Low pass filter of pilot detector.
17	LPF	---	While this terminal goes to "H", the VCO stop.
18	Pilot in	I	PLL input.
19	LPF	---	Low-pass filter of PLL.
20	LPF	---	Low-pass filter of PLL.
21	VCO	I	Voltage controlled oscillator terminal.
22	Vcc	---	Power supply.

LA1266A (IC104) : FM AM IF AMP & detector

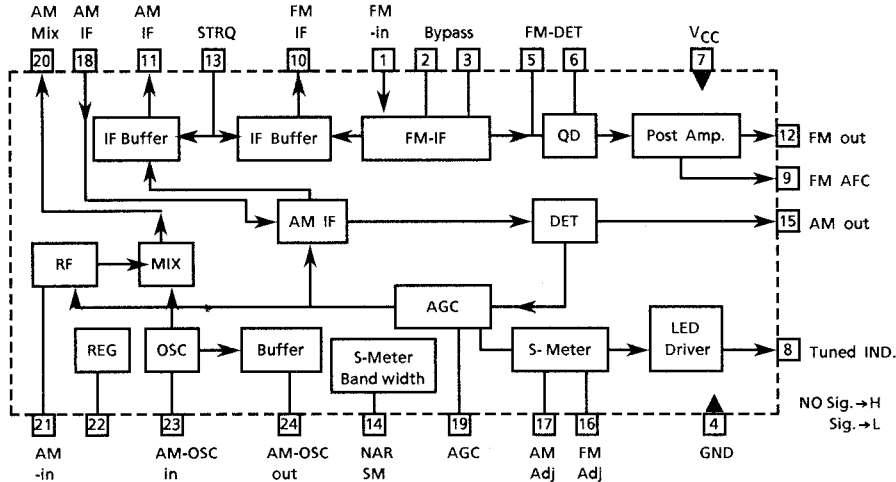
1. The main function descriptions

- (1) Amplify and detect of FM intermodulation frequencies.
- (2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

2. Top View



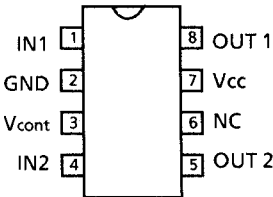
3. Block Diagram



4. Description

Pin No.	Symbol	I/O	Description
1	FM IF	I	This is an input terminal of FM IF Signal.
2, 3	Bypass	---	Bypass of FM IF Amp.
4	GND	---	This is the device ground terminal.
5, 6	FM DET	---	FM detect transformer.
7	V _{CC}	---	This is the power supply terminal.
8	SIGNAL	O	Mute drive and signal stop drive output when tuning. Active Low
9	FM AFC	O	This is an output terminal of voltage for FM -AFC.
10	FM IF	O	When the IF REQ signal of IC102(LC7218) applies to pin13, the signal of FM IF outputs.
11	AM IF	O	When the IF REQ signal of IC102(LC7218) applies to pin13, the signal of AM IF outputs.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal goes to "High".
14	NAR SM	---	Control the Band-width of AM signal meter.
15	AM out	O	AM detection output.
16	FM Adj	---	For adjust the stop level (or mute level) of FM.
17	AM Adj	---	For adjust the stop level (or mute level) of AM.
18	AM-IF	I	Input of AM IF Signal.
19	AM-AGC	I	This is an AGC voltage Input terminal for AM.
20	AM-MIX	O	This is an output terminal for AM mixer.
21	AM-IN	I	This is an input terminal for AM RF Signal.
22	V.REF	---	Control the Band-width of FM signal meter.
23	AM-OSC	---	This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

LB1639-CV (IC465) : Motor Driver



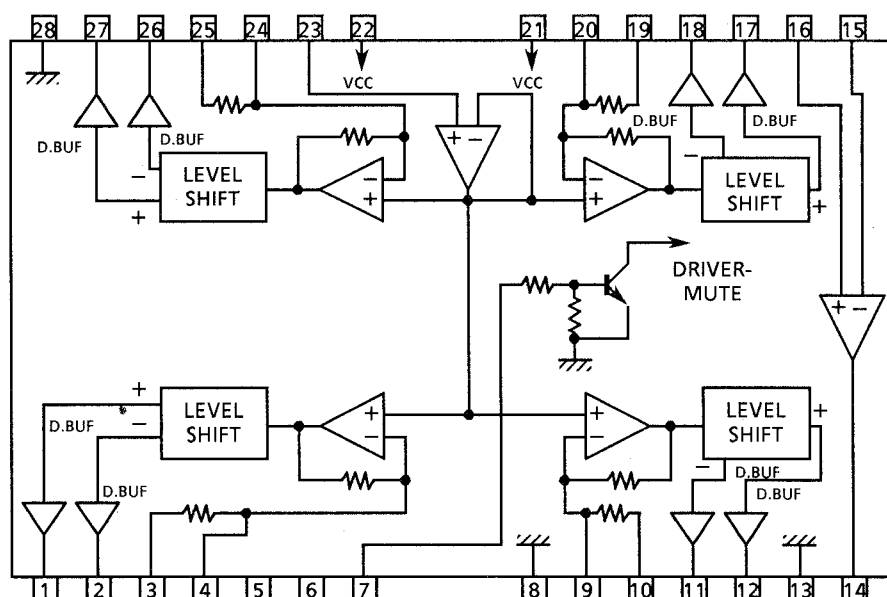
IN 1	IN 2	OUT 1	OUT 2	MOTOR
H	L	H	L	CLOCKWISE
L	H	L	H	COUNTER-CLOCKWISE
H	H	OFF	OFF	WAITING
L	L	OFF	OFF	WAITING

■ BA6393FP(IC860) : BTL DRIVER

1. Terminal Layout

CH1-OUT A	1	28	GND
CH1-OUT B	2	27	CH4-OUT A
CH1-IN A	3	26	CH4-OUT B
CH1-IN B	4	25	CH4-IN A
NC	5	24	CH4-IN B
NC	6	23	BIAS IN
MUTE	7	22	VCC
GND	8	21	VCC
CH2-IN B	9	20	CH3-IN B
CH2-IN A	10	19	CH3-IN A
CH2-OUT B	11	18	CH3-OUT B
CH2-OUT A	12	17	CH3-OUT A
GND	13	16	OP IN +
OP OUT	14	15	OP IN-

2. Block Diagram

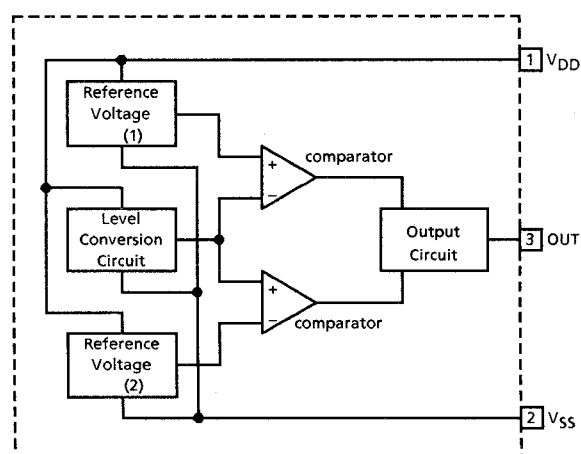


3. Description

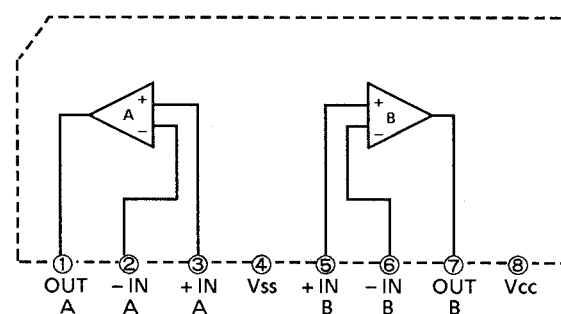
Pin No.	Symbol	I/O	Description
1 2	CH1-OUT A CH1-OUT B	O	Focus drive output
3	CH1-IN A	I	Focus drive input
4 5,6 10 19 24	CH1-IN B NC CH2-IN A CH2-IN B CH3-IN A CH4-IN B	—	Non connection
7	MUTE	I	Mute signal input pin
9 20	CH2-IN B CH3-IN B	I	Spindle motor drive input Feed motor drive input
25	CH4-IN A	I	Tracking drive input

Pin No.	Symbol	I/O	Description
8,13,28	GND	—	GND
11 12	CH2-OUT B CH2-OUT A	O	Spindle motor drive output
14	OP OUT	O	OP amp output
15,16	OP IN	I	OP amp input
17 18	CH3-OUT A CH3-OUT B	O	Feed motor drive output
21,22	Vcc	—	Power supply
23	BIAS IN	I	Input pin of Bias
26 27	CH4-OUT B CH4-OUT A	O	Tracking drive output

■ MN1281(P,Q) (IC453) : Reset IC

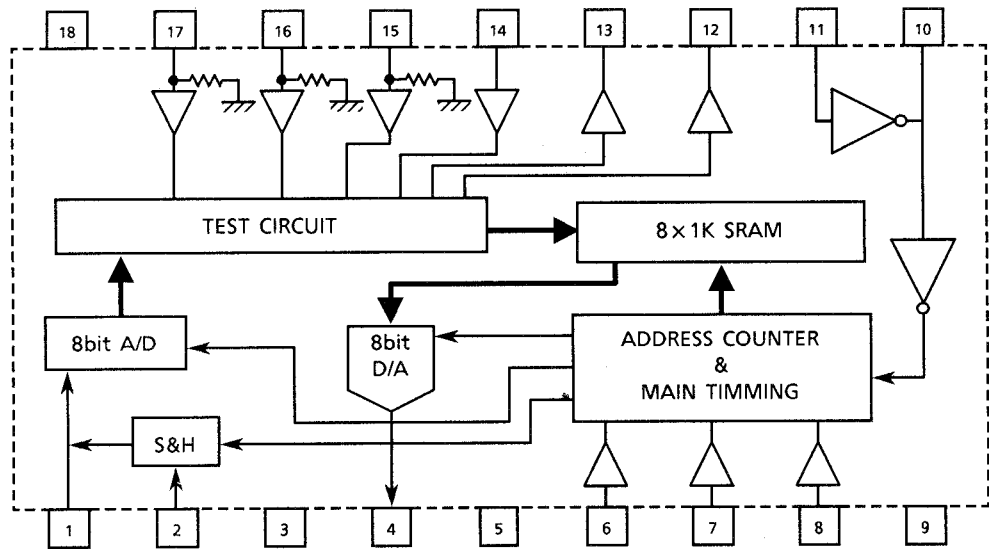


■ M5218AL (IC890) BA15218 (IC940) : Dual OP Amp.



■ BU9251S (IC652) : Delay Circuit (For U,UT,US)

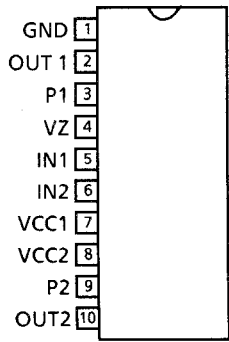
Block Diagram



Description

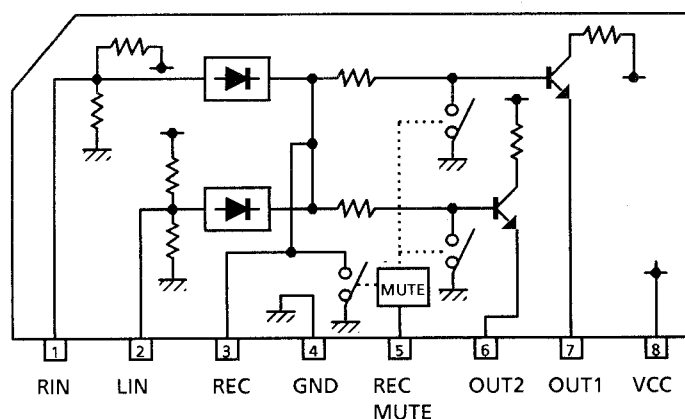
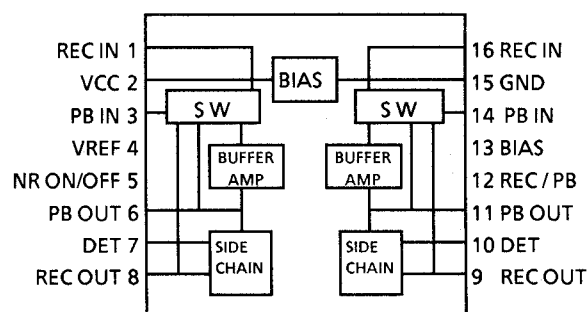
Pin No	Symbol	Function	Pin No	Symbol	Function
1	S&H	A capacitor is connected for sample & hold	10	OSC0	Oscillation terminal
2	AIN	Analog input	11	OSC1	Oscillation terminal
3	GND	GND	12	TDO1	Not used
4	AOUT	Analog output	13	TDO0	Not used
5	VDD	Power supply	14	TDIN	Not used
6	DCNT0	Pull up (+5V)	15	TST2	Not used
7	DCNT1	Pull up (+5V)	16	TST1	Not used
8	DCNT2	Pull up (+5V)	17	TST0	Not used
9	GND	GND	18	VCC	Power supply

■ LB1641 (IC551~554) : Motor Driver



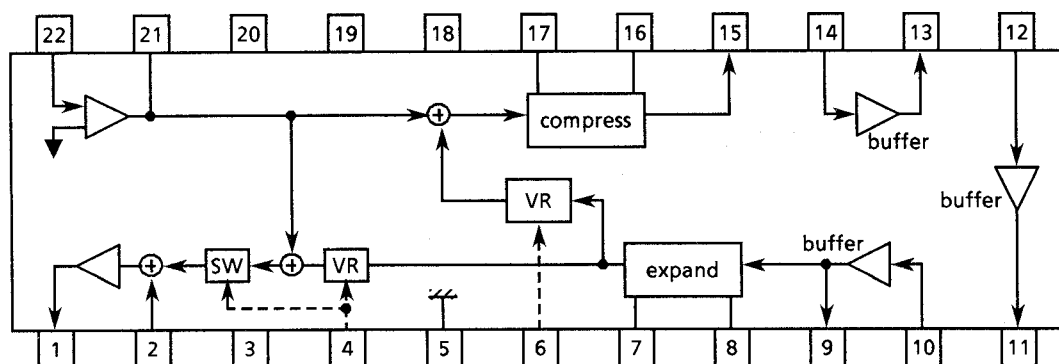
INPUT		OUTPUT		MOTOR
IN1	IN2	OUT1	OUT2	
L	L	L	L	BREAK
H	L	H	L	COUNTER-CLOCKWISE
L	H	L	H	CLOCKWISE
H	H	L	L	BREAK

■ BA8221N (IC302) : ALC

■ HA12136A (IC301)
: Noise Reduction Amplifier

■ BA7725S (IC651) : Echo circuit (For U,UT,US)

Block Diagram



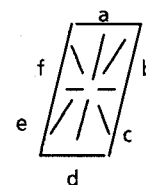
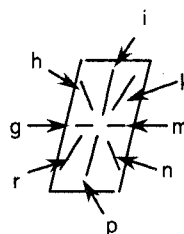
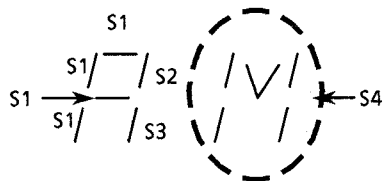
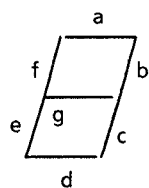
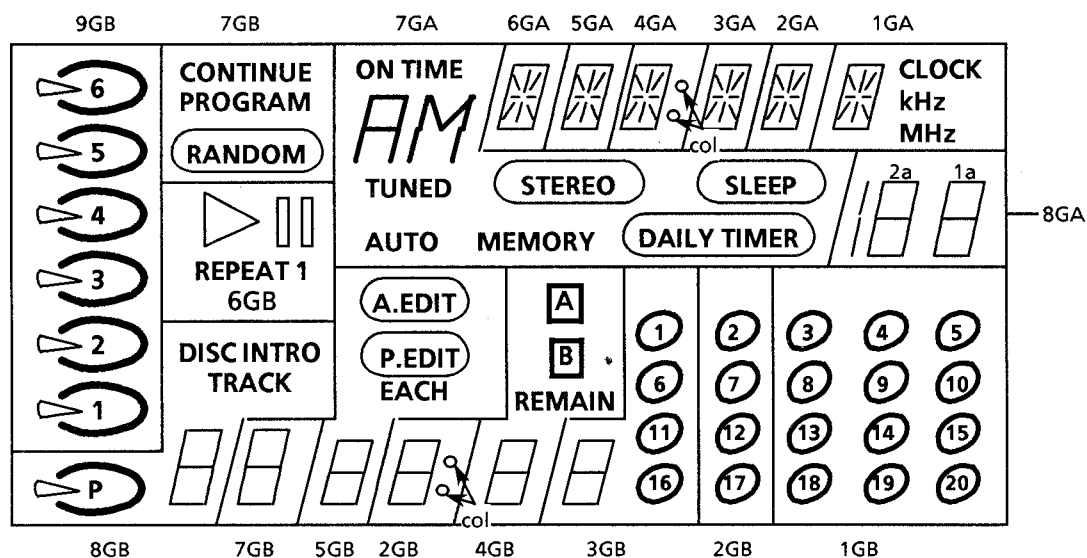
Terminal Description

Pin No.	Symbol	I/O	Function
1	LINE OUT	O	Line output
2	LINE IN	I	Line input
3	NC	--	Not used
4	ECHO LEV CTRL	--	Determines echo level. The echo circuit is off when 1 volt is added. The echo level varies according to the voltage from 2 volts to 9 volts.
5	GND	--	Analog GND
6	LOOP GAIN CTRL	--	Loop gain control terminal. The gain varies according to the voltage from 2 volts to 9 volts.
7	EXP DET	--	Detection terminal for expand circuit
8	EXP DET CT	--	Determines the attack and recovery time of expand circuit
9	EXP BF OUT	O	Buffer output (Expand circuit side)
10	EXP BF IN	I	Buffer input (Expand circuit side)
11	DLY BF OUT	O	Delay buffer output
12	DLY BF IN	I	Delay buffer input
13	CMP BF OUT	O	Buffer output (Compress circuit side)
14	CMP BF IN	I	Buffer input (Compress circuit side)
15	CMP OUT	O	Compress circuit output
16	CMP DET CT	--	Determines the attack and recovery time of compress circuit
17	CMP DET	--	Detection terminal for compress circuit
18	RIPPLE FITER	--	A capacitor is connected for ripple elimination filter
19	VCC	--	Power supply
20	NC	--	Not used
21	MIC AMP OUT	O	Mic amp output
22	MIC AMP IN	I	Mic amp input

Internal Connections of FL Display

■ ELU0001-175 (FL401)

(1) Grid Layout



(2) Pin Connections

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ELECTRODE	F1	F1	F1	NP	P13B	P12B	P11B	P10B	P9B	P8B	P7B	P6B	P5B	P4B
PIN NO.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ELECTRODE	P3B	P2B	P1B	NC	NC	NC	NC	NC	9GB	8GB	7GB	6GB	5GB	4GB
PIN NO.	29	30	31	32	33	34	35	36	37	38	39	40	41	42
ELECTRODE	3GB	2GB	1GB	NP	F2	F2	F2	F2	F2	F2	NP	NC	P16A	P15A
PIN NO.	43	44	45	46	47	48	49	50	51	52	53	54	55	56
ELECTRODE	P14A	P13A	P12A	P11A	P10A	P9A	P8A	P7A	P6A	P5A	P4A	P3A	P2A	P1A
PIN NO.	57	58	59	60	61	62	63	64	65	66	67	68	69	70
ELECTRODE	NC	8GA	7GA	6GA	5GA	4GA	3GA	2GA	1GA	IC	NP	F1	F1	F1

Notes F1,F2:Filament NP:No Pin NC:No connection IC:Internal connection 1GA~8GA,1GB~9GB:Grid

(3) Anode Connections

	9GB	8GB	7GB	6GB	5GB	4GB	3GB	2GB	1GB
P1B	(6)	DISC	CONTINUE	REPEAT	A.EDIT	A	1	2	3
P2B	▷(6)	INTRO	PROGRAM	1	P.EDIT	B	6	7	4
P3B	(5)	TRACK	RANDOM	—	EACH	REMAIN	11	12	5
P4B	▷(5)	a	a	—	a	a	a	a	8
P5B	(4)	b	b	—	b	b	b	b	9
P6B	▷(4)	c	c	—	c	c	c	c	10
P7B	(3)	d	d	—	d	d	d	d	13
P8B	▷(3)	e	e	—	e	e	e	e	14
P9B	(2)	f	f	—	f	f	f	f	15
P10B	▷(2)	g	g	—	g	g	g	g	18
P11B	(1)	(P)	—	—	—	—	16	17	19
P12B	▷(1)	▷(P)	—	▶	—	—	—	col	20
P13B	123456	P	—	II	—	—	—	—	—

	8GA	7G	6G	5G	4G	3G	2G	1G
P1A	1a	TIME	a	a	a	a	a	a
P2A	1b	ON	b	b	b	b	b	b
P3A	1c	S1	c	c	c	c	c	c
P4A	1d	S2	d	d	d	d	d	d
P5A	1e	S3	e	e	e	e	e	e
P6A	1f	S4	f	f	f	f	f	f
P7A	1g	SLEEP	g	g	g	g	g	g
P8A	2a	STEREO	h	h	h	h	h	h
P9A	2b	TUNED	j	j	j	j	j	j
P10A	2c	DAILY TIMER	k	k	k	k	k	k
P11A	2d	MEMORY	m	m	m	m	m	m
P12A	2e	AUTO	n	n	n	n	n	n
P13A	2f	—	p	p	p	p	p	p
P14A	2g	—	r	r	r	r	r	CLOCK
P15A	/	—	—	—	col(上)	—	—	KHz
P16A	—	—	—	—	col(下)	—	—	MHz

1. Remove 6 screws on the rear side and 2 screws on both sides of the cover.
2. Remove the cover.

1. Remove the top cover.
2. Remove the 3 screws ④.
3. Remove the 3 screws ⑤ fixing the Tuner and deck PCB.
4. Remove JA511,J601,J701,P201,P202 and P406 which are connected with the PCB.
5. Also remove other connectors if it is necessary to remove the PCB completely.

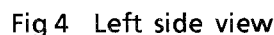


1. Remove the top cover.
2. Remove the tuner and deck PCB (ENJ-079-1).
3. Remove the 2 screws ⑤⑥.
4. Remove the Side Bracket.
5. Remove the 10 screws ③④ (U,UT,US), 8 screws ③ (Except for U,UT,US).
6. Remove the rear panel.

1. Remove the top cover.
2. Remove the 2 screws ③ on the bottom of the front panel.
3. Turn on the power. Press the OPEN/CLOSE switch to move the tray out and the power off.
4. Remove the fitting.
5. Remove the tuner and deck PCB (ENJ-079-1).
6. Remove the 2 screws ⑤⑥.
7. Remove the Side Bracket.
8. Remove the screw ④.
9. Remove the assembly, disconnecting connectors JB451,JA511,J441,J501,J601,P201,P202,P406,P481 and P712.



1. Remove the top cover.
2. Remove the 2 screws fixing the CD PCB.
3. Disconnecting connectors JB751,P481,P903,P904,FW801,FW803 and FW831.
4. Remove the CD PCB.



(6) CD mechanism assembly removal.

1. Remove the top cover.
2. Remove the front panel assembly.
3. Remove the CD PCB.
4. Remove the 2 screws ①.
5. Slide the changer mecha assembly to arrow direction ①.
6. Remove the CD mechanism assembly.

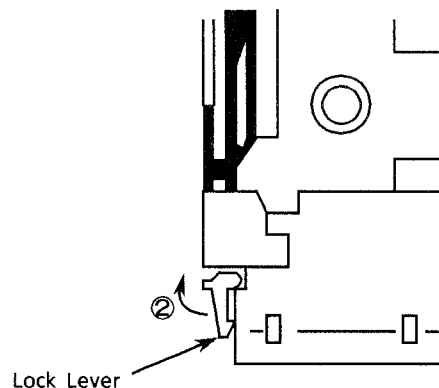


Fig 6

(7) Removing the magazine

1. Rotate the lock-lever to arrow direction ②.
2. Pull the magazine.

(8) Cassette mechanism with the PCB (ENC-112-4) removal

1. Remove the top cover.
2. Remove the front panel assembly.
3. Disconnect the connectors J651 (U,UT,US only),P405,P501 and P502.
4. Remove the 8 screws ①.
5. Open the cassette doors to remove the cassette mechanism assembly.

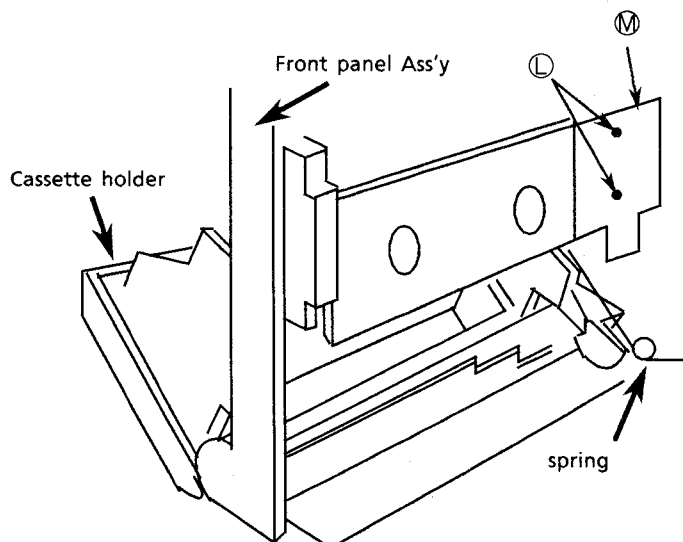


Fig 7

(9) Cassette holder removal

1. Remove the cassette mechanism assembly.
2. Remove the 2 screws ①.
3. Remove the ①.
4. Remove the spring hooked on the cassette holder (Fig 7).
5. Remove the cassette holder.

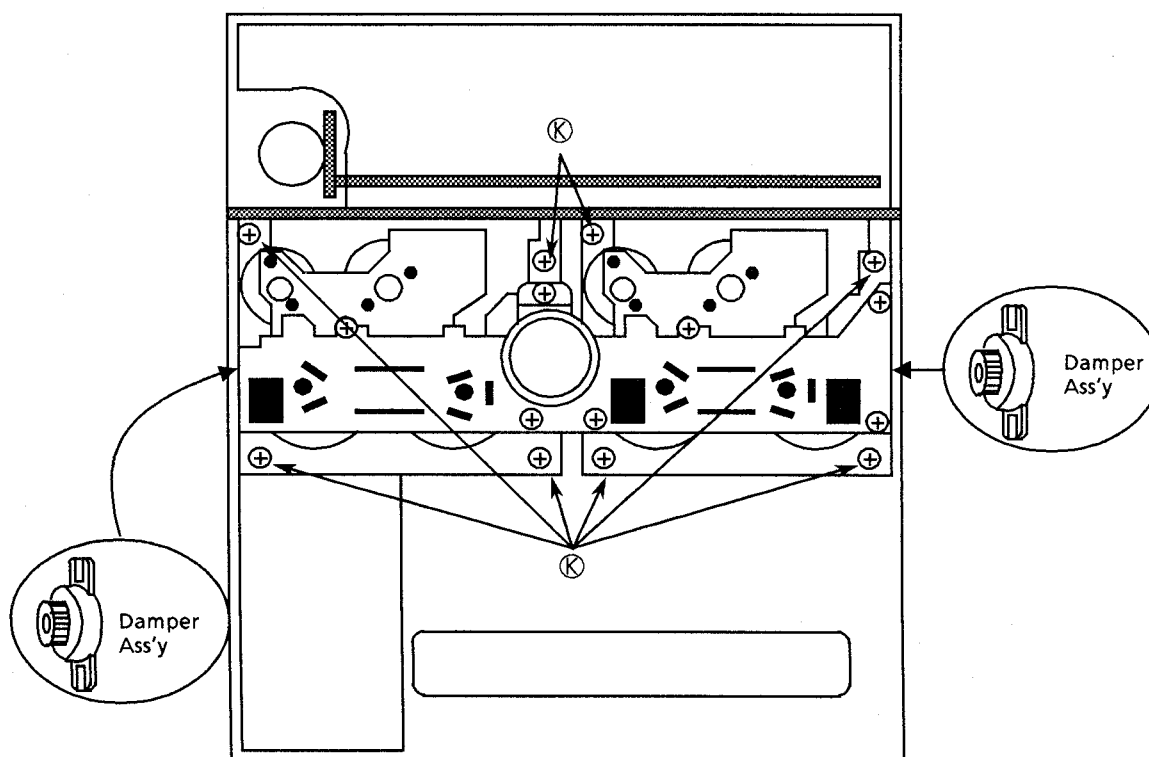


Fig 8

Disassemble of the cd mechanism assembly

(1) Removing the turntable base

1. Remove the changer mecha assembly.
2. Turn over the changer mecha assembly.
3. Remove the 3 screws ④.
- * NOTICE :The left side spring differs from the right side ones.
4. Take out the turntable base.

(2) Exchanging the pickup

1. Take out the turntable base.
2. Cut the tie-band
3. Remove the screw ①, and remove the feed nut support.
4. Remove the feed screw assembly.
5. Remove the screw ②, and remove the Pickup with the pickup shaft.
6. Exchange the pickup.

(3) Removing the magazine holder

1. Remove the 2 screws fixing the magazine holder.
2. Slide the lift cam backward.
3. Slide the magazine holder backward, and remove the magazine holder to upside.

(4) Removing the LIFTER UNIT Assembly

1. Remove the magazine holder.
2. Lift the LIFTER UNIT Assembly to the top position.
3. Remove the ELEVATOR ARMS from the CHASSIS BASE and the LIFTER UNIT Assembly.
4. Remove the LIFTER UNIT Assembly.

※ The LIFT CAM can be released, After removing the LIFTER UNIT Assembly

1. When installing the lift cam, Put the cam slider to the position shown in fig 10.
2. Install the changer assembly.
3. Set the power on to operate the mechanism.
4. Set the power off while the disc is playing.
5. Set the power on again. In this case the unit will be reseted.

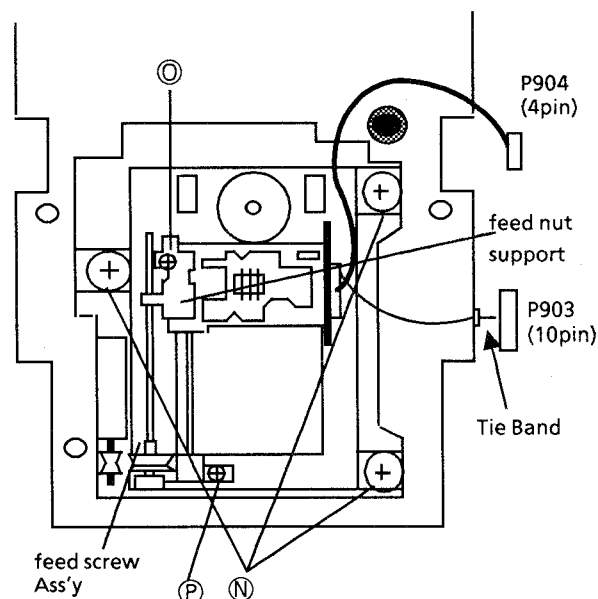


Fig 9

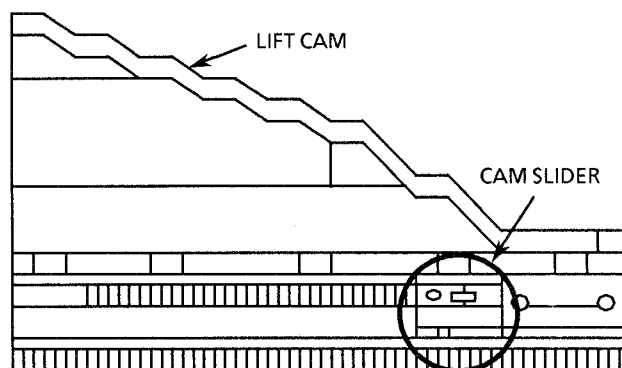


Fig 10

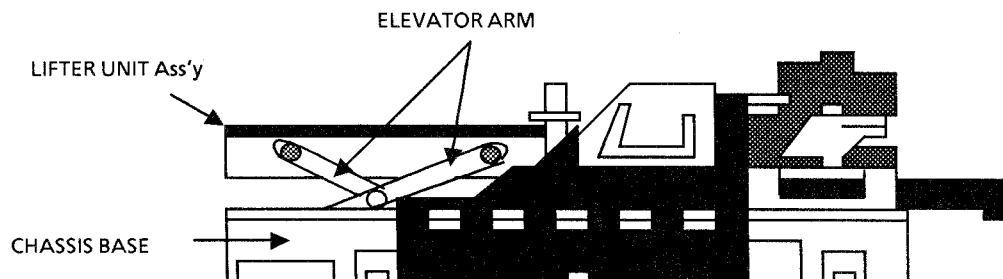


Fig 11

(5) Removing the P1 RAIL BASE

1. Remove the magazine holder.
2. Rotate the gear ① clockwise a little.
3. Pull out the P1 RAIL BASE.
4. Pull the P1 TRAY backward.
5. Remove the screw fixing the open/close sw by inserting a thin driver from ① hole to remove the Front door indicator assembly.
6. Pull the P1 RAIL BASE by pulling up the hook ② slightly.
7. Remove the P1 RAIL BASE.

※ Install gear ⑤ so that part ④ shown in fig.13 is perpendicular to the P1 RAIL BASE.

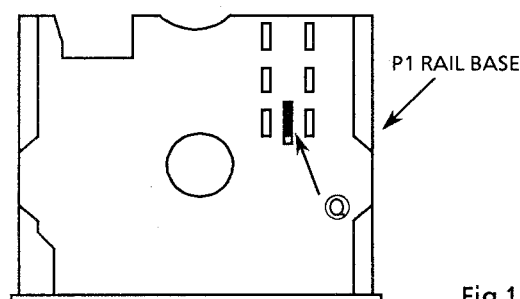


Fig 12

The Gear Position when the P1 Rail Base is pulled out forward.

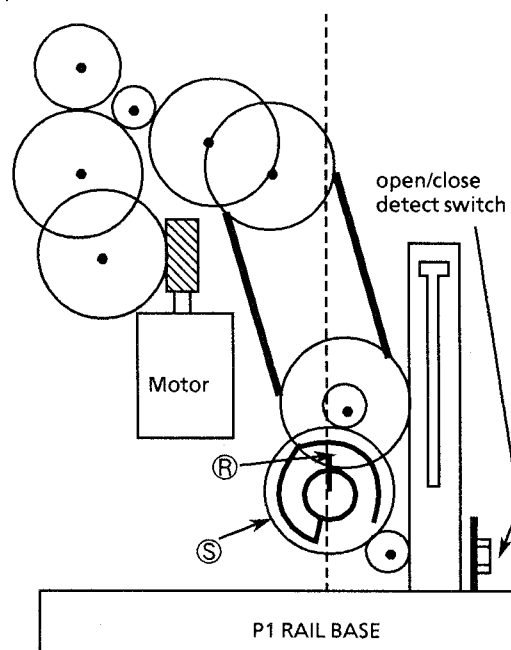


Fig 13

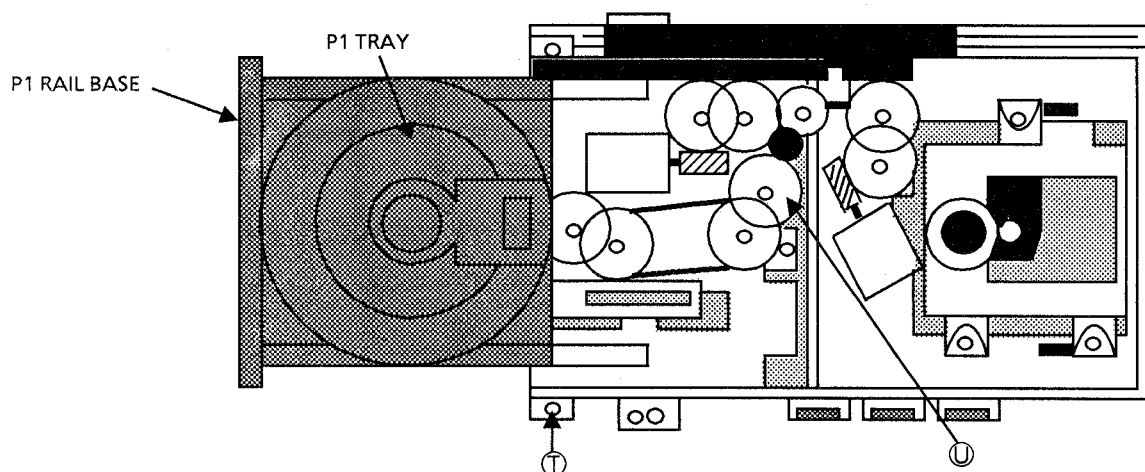


Fig 14

(6) Removing the spindle motor

1. Remove the TURN TABLE BASE.
2. Turn over TURN TABLE BASE.
3. Remove the pressed-in turntable.
4. Remove the 2 screws fixing the motor.
5. Remove the spindle motor.

(7) Mounting the spindle motor

1. Alternately tighten the 2 screws.
2. Fit the turntable by pressing gently at the centre to obtain a distance of $10.3\text{mm} \pm 0.1\text{mm}$ from the mechanism base to the top of the turntable.

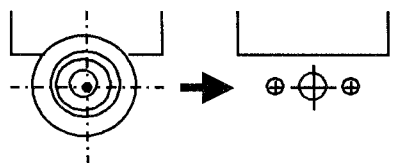


Fig 15

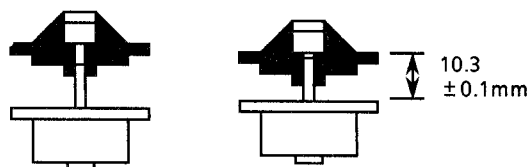


Fig 16

Disassemble of the cassette mechanism assembly

(1) Cassette controller PCB (ENC-112-4) removal

1. Remove the cassette mechanism assembly with the PCB.
2. Remove the 2 screws ④.

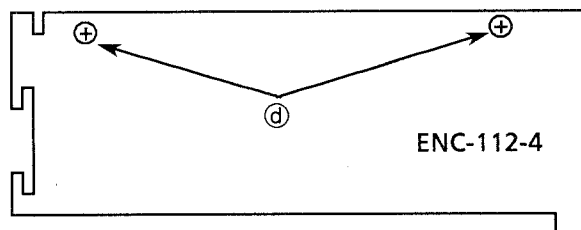


Fig 17

(2) Head assembly removal

1. Remove the cassette mechanism assembly.
2. Remove the FPC holder (Fig 20).
3. Remove the 3 screws ⑥ fixing the head assembly (Fig 21).

※ Note

The direction of the head is changed with the head gear. When servicing, install the head gear according to the direction of the head. Refer to fig 19.

(3) Pinch roller arm assembly removal

1. Release the hook holding the pinch roller arm assembly to remove the assembly (Fig 20).

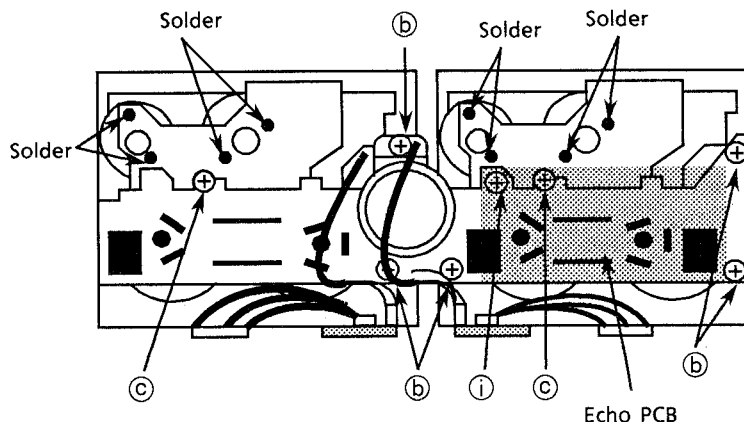


Fig 18

(4) Capstan motor removal

1. Remove the cassette mechanism assembly.
2. Remove the cassette controller PCB.
3. Remove the screw ① to remove the echo PCB (Fig 18).
4. Remove the 7 screws ②, ③ fixing the bracket (Fig 18).
5. Remove the motor with the bracket.
6. Remove the 2 screws fixing the motor and the bracket.

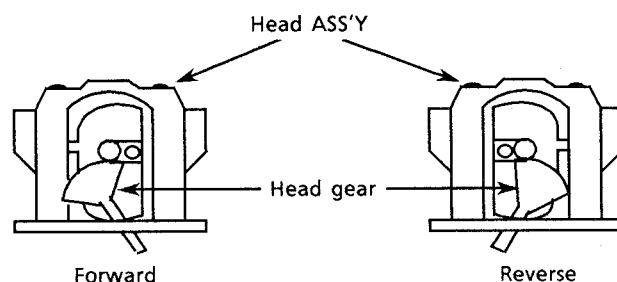


Fig 19

(5) Reel and cam motor PCB

with reel and cam motor removal

1. Remove the cassette mechanism assembly.
2. Remove the cassette controller PCB (ENC-112-4).
3. Remove the 7 screws ②, ③ fixing the bracket (Fig 18).
4. Remove the motor with the bracket.
5. Remove the 4 screws ④ fixing the reel and cam motor.
6. Unsolder the reel and cam motor PCB.
7. Remove the PCB with motor.
Be careful so that stress is not added to the terminals of the motor.

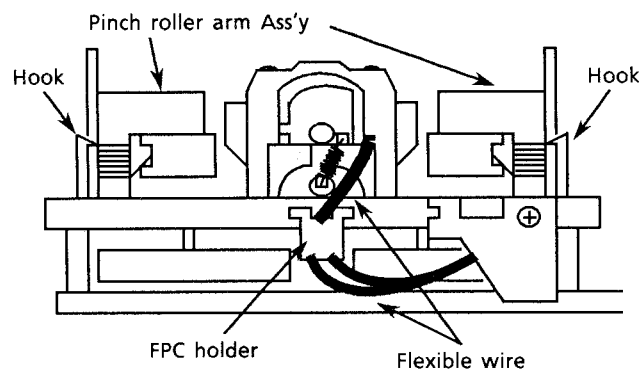


Fig 20

(5) Fly wheel removal

1. Remove the cassette mechanism assembly.
 2. Remove the cassette controller PCB.
 3. Remove the 7 screws (b, c) and the bracket (Fig 18).
- * The oil on the capstan must be wiped out after re-assembling.

※ To install the bracket

1. Install the belt of mechanism A as shown in fig 23.
2. Assemble the mechanism A and the bracket with the capstan motor.
3. Hang the belt of the mechanism A to the motor pulley using a tweezers and the like.
4. Hang the part (r) to the Idler pulley.
5. Install the mechanism B installed the belt as shown in fig 24 to the bracket which is assembled with the mechanism A.
6. Hang the part (t) to the motor pulley using a tweezers and the like.

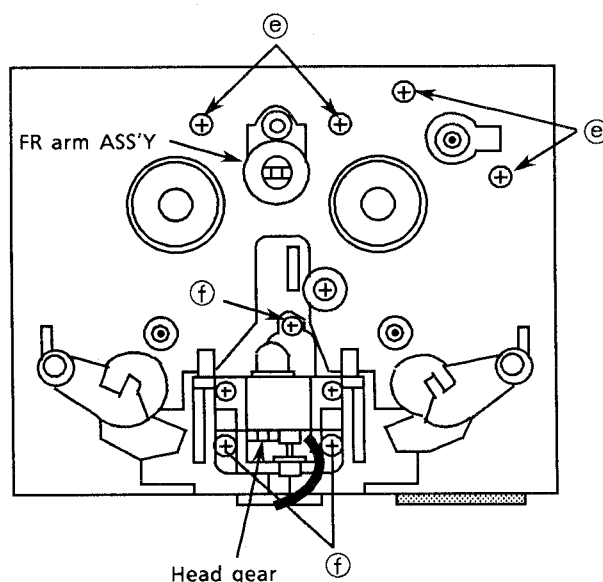


Fig 21

(6) Cam switch PCB removal

1. Remove the fly wheel.
 2. Remove the screw fixing the PCB.
 3. Remove the hooks fixing the PCB to remove the cam switch.
- When assembling the cam switch, install it so that the part (g) meets the part (h) (Fig 25).

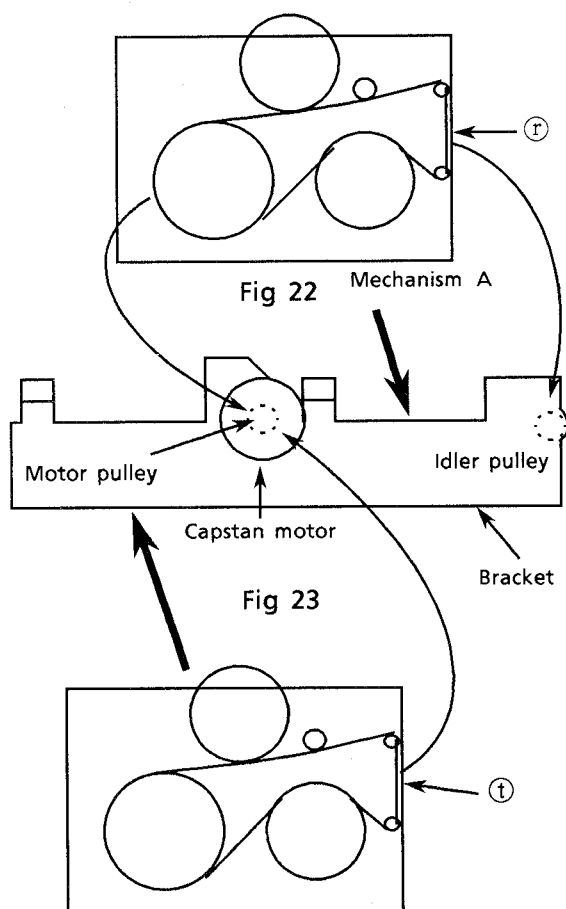


Fig 24 Mechanism B

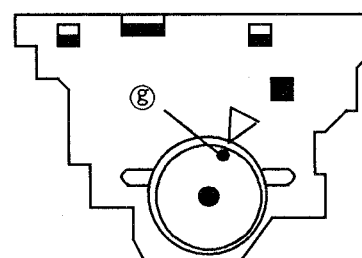
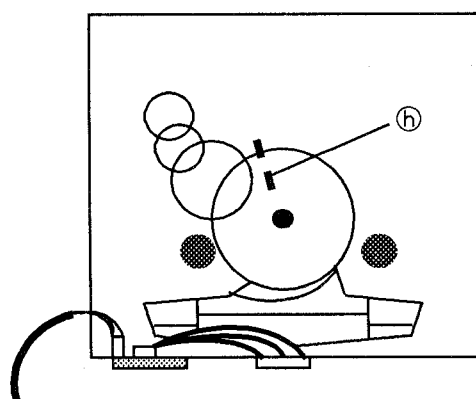


Fig 25

Adjustment Procedures

(NOTE) Adjustment is not necessary for CD section.

■ Tuner section

(1) Tuning voltage

Confirm the voltages in the table below at TP101. If the voltages are not satisfied, replace T101 for AM or FE101 for FM.

FM Tuning voltage (Unit : V)

Area	Frequency			
	64.0MHz	74.0MHz	87.5MHz	108MHz
East Europe	—	—	—	—
the U.K. , Continental Europe, the U.S.A. , Canada, Universal	—	—	1.6 ± 1.0 (V)	8.0 ± 2.0 (V)

AM Tuning voltage (Unit : V)

Area	Frequency (MW)							Frequency (LW)		
	522KHz	530KHz	531KHz	1600KHz	1602KHz	1629KHz	1710KHz	144kHz	290kHz	353kHz
East Europe	—	—	—	—	—	—	—	—	—	—
the U.K. , Continental Europe	0.5~1.0	—	—	—	—	7.5~8.5	—	0.5~1.0	5.0~7.5	6.5~9.0
the U.S.A. , Canada	—	—	0.5~1.0	—	—	—	8.0~9.0	—	—	—
Australia	—	—	—	—	—	—	—	—	—	—
Universal (Channel space 9kHz)	—	—	0.5~1.0	—	7.2~8.5	—	—	—	—	—
Universal (Channel space 10kHz)	—	0.5~1.0	—	7.2~8.5	—	—	—	—	—	—

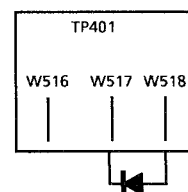
(2) FM center meter

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

Adjust T105 (detector coil) so that the voltage at TP102 becomes $0 \pm 3.0\text{mV}$.

(3) Clock Adjustment

1. After connecting W516 and W517 with some wire, connect ac power cord into ac outlet.
2. Confirm that the display is off and remove the wire.
3. Connect a frequency counter to TP401 (W518).
4. Adjust TC401 so that the frequency becomes $50000 \pm 0.29\text{Hz}$.



例 1S5133 1S2076
1S5119 1S2473

■ Cassette Deck section

1. Measuring instruments

Audio frequency signal generator (0dbS output at the 600 ohm output terminal from 50Hz to 20KHz)

Electronic voltmeter

Frequency counter

Wow & Flutter meter

Distortion Meter with band pass filter

Attenuator (600 ohm impedance)

A resistor with 600Ω

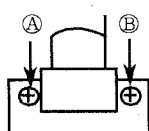
Standard Tape

0dbS = 0.775V

Tape No.	Frequency	Level (Wow & Flutter)	Purpose
VTT-703L	10kHz	- 10dBs	Head azimuth , Frequency Response
VTT-712	3000Hz	0dbS 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	- 4dBs	Standard Level
TMT-6447 , TMT-6448	—	—	Music Scan
TMT-7088	—	—	Recording standard Normal : UR
AC-513	—	—	Recording standard CrO ₂ : SA
CTG-N(CT-100M)	—	—	Forward / reverse play torque measuring
TW-2231	—	—	Feed forward / rewind torque measuring
C-120 Tape	—	—	Confirming the tape running

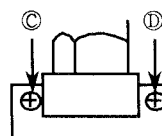
2. Adjustment and repairing the mechanism

Item	Adjustment method	Standard value	Remarks
Head azimuth	<p>Deck A</p> <ol style="list-style-type: none"> 1. Connect an electronic voltmeter to the DOLBY TP (figure 3) to playback VTT-703L. 2. Adjust screw ① so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw ② so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. <p>Deck B</p> <ol style="list-style-type: none"> 4. Adjust screw ③ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw ④ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment, apply screw lock to prevent screws ①, ②, ③ and ④ coming loose. 	<p>Maximum</p> <p>Refer to Figure 1</p>	<ol style="list-style-type: none"> 1. Refer to figure 1. 2. When the specified characteristic cannot be obtained because of head wear, excessive magnetization, etc., replace the head assembly and adjust the head azimuth. Also, perform the electric adjustment. 3. When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head assembly to avoid complaints.
Playback torque	1. Measure the torque in the playback mode by the torqu meter.	26 ~ 62 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Fast forward torque	1. Measure the torque in the fast forward mode by the torqu meter.	80 ~ 170 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Rewind torque	1. Measure the torque in the rewind mode by the torqu meter.	80 ~ 170 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Wow & flutter	<ol style="list-style-type: none"> 1. Connect the wow & flutter meter to the DOLBY TP (figure 3) and play back VTT-712. 2. Its reading should be within 0.2% (WTD). 	Less than 0.2% (WTD)	As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.



Deck A

Figure 1



Deck B

3. Electrical Adjustments (Make the following adjustments after adjusting the head azimuth.)

In principle, the adjustments should be made in the following sequence.

Adjustments marked with an asterisk (*) should always be made after the head is replaced

0dBs = 0.775V.

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
1 Tape Speed	1. Connect a frequency counter to the DOLBY TP (figure 3) and play back VTT-712. 2. Normal speed Adjustment Playback deck B to adjust the semi-fixed resistor R539 on ENB-179-3. 3. Confirm the normal speed of deck A Play back deck A to confirm that the difference between deck A and deck B is within $\pm 51\text{Hz}$. 4. High-speed confirming Play back deck A in high speed dubbing and confirm that the counter indicates 6000Hz.	R539	3,000 Hz $\pm 10\text{Hz}$ 6,000Hz $\pm 600\text{Hz}$	—
* 2 Standard level (Playback Level)	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). Play back VTT-724 (1 kHz : -4dBs) to adjust the semi-fixed resistors.	Deck A L: R211 R: R212 Deck B L: R243 R: R244	-4dBs (488mV)	1) The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 k Ω or more.
* 3 Playback Frequency Response	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). 2. Play VTT-703L (10kHz : -10dBs) and adjust semi-fixed resistors to obtain the standard values.	Deck A L: R203 R: R204 Deck B L: R235 R: R236	-10dBs (245mV)	—
* 4 Recording Bias Frequency	1. Connect a frequency counter to the BIAS TP (figure 3), and perform a recording with no signal to adjust bias frequency.	L311	105kHz + 10kHz - 5kHz	—
* 5 Record / Play Frequency Response (Bias current)	1. Supply 1kHz and 12.5kHz signals with 25mV to AUX terminals respectively to record them. 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signals again to confirm the values.	L: R301 R: R302	0 \pm 2 dB with 1kHz as the standard.	Refer to figure 2 below. 1) The recording and playback frequency response of the cassette deck are adjusted by adjusting the bias current. 2) Perform the adjustment with normal tape and confirm that the values are within the range for metal tape.
* 6 Record / Playback Sensitivity	1. Input a 1 kHz (250mV) signal to AUX terminals and record it on the left and right channels. 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded levels. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signal again to confirm the values.	L: R321 R: R322	-5.5dBs (411mV) $\pm 1\text{dB}$	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less

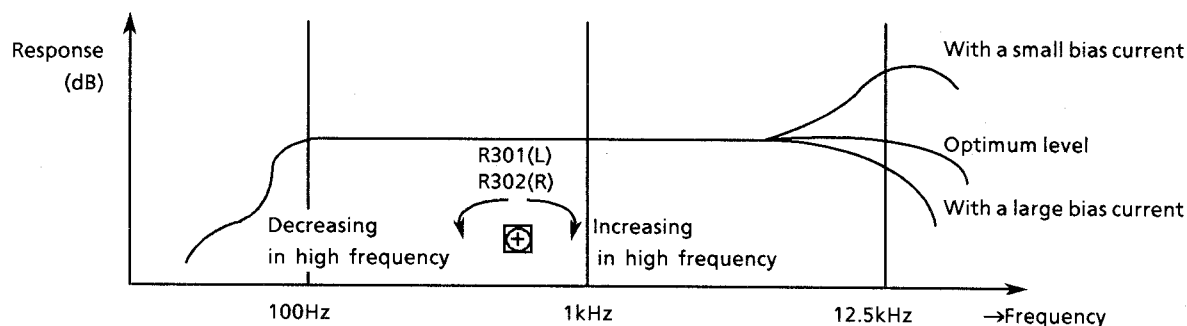


Figure 2

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
7	Erase ratio check	1. Record a music source using metal tape. 2. Rewind and erase the recorded section. 3. Confirm nothing can be heard.	—	—	—
8	Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6448. 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6447.	—	—	—

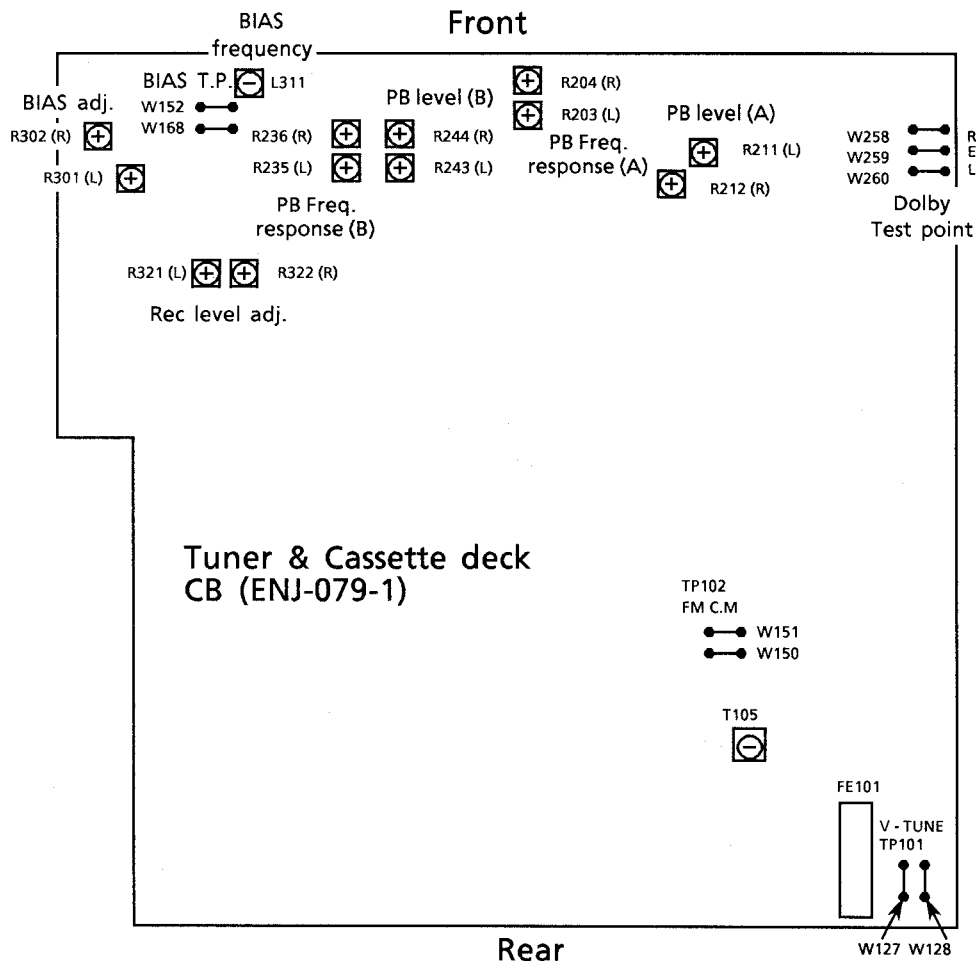
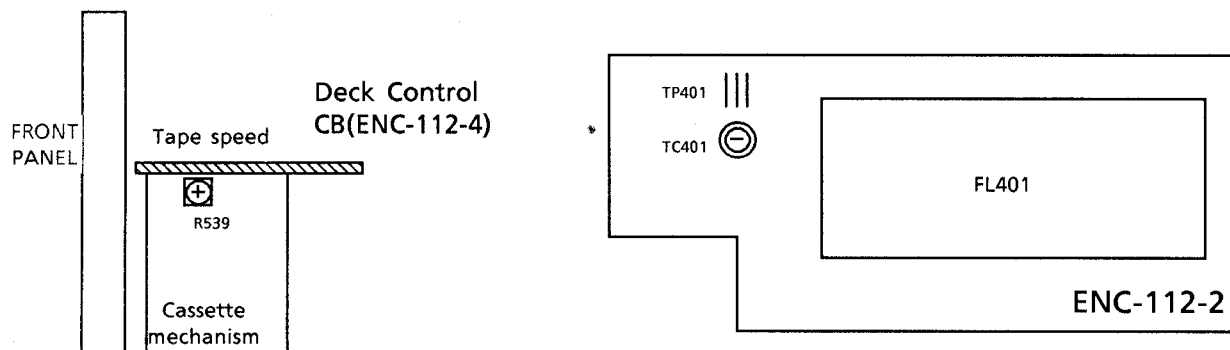


Figure 3

Operation check by each switch.

SW801 : Single tray open / close detect switch.

When a single tray is ejected, the open signal is "L" and when it is closed, the close signal is "L".

SW802 : Magazine in switch.

When a magazine is inserted, the switch is turned on.

SW803 : JAB switch.

When drive plate comes toward, the switch is turned on. (The switch is turned on momentarily.)

SW803 : Tray load switch.

When the tray of a disc is loaded, the switch is turned on.

SW804 : UP/DOWN switch.

When the mechanism goes up or down, this switch turns on and off alternately.

SW805 : Reset switch.

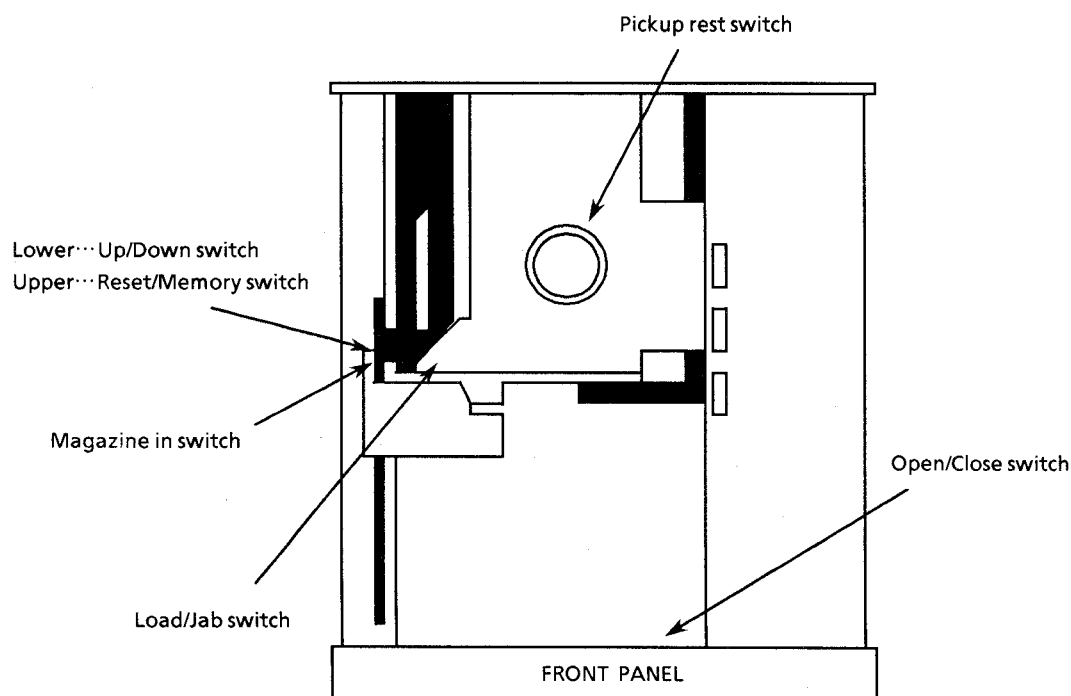
When the mechanism comes to the point under the initial position, the switch is turned on.

SW805 : Memory switch.

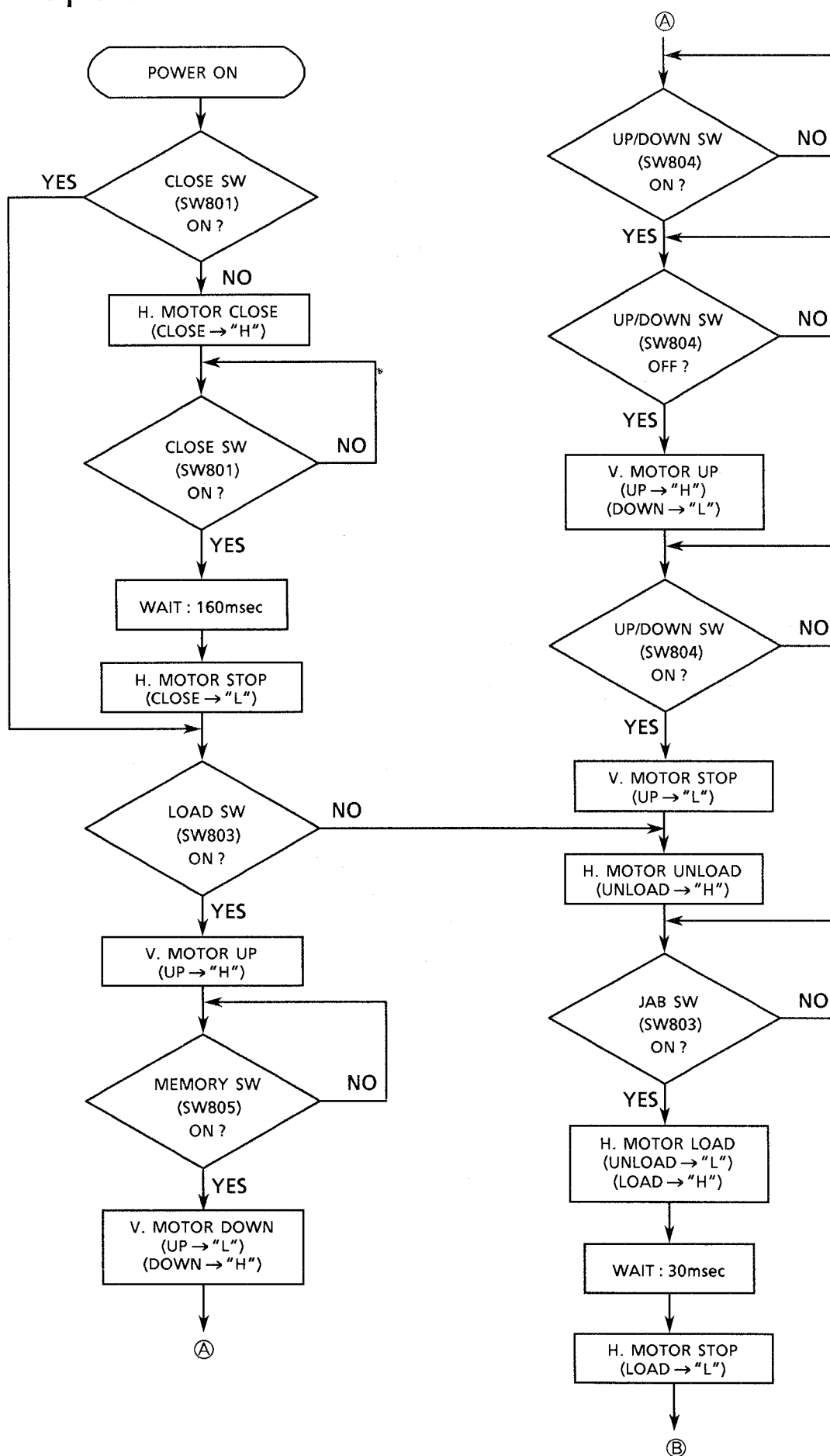
When the power is off in playing a disc, and on again, the switch detect which height the tray should be returned.

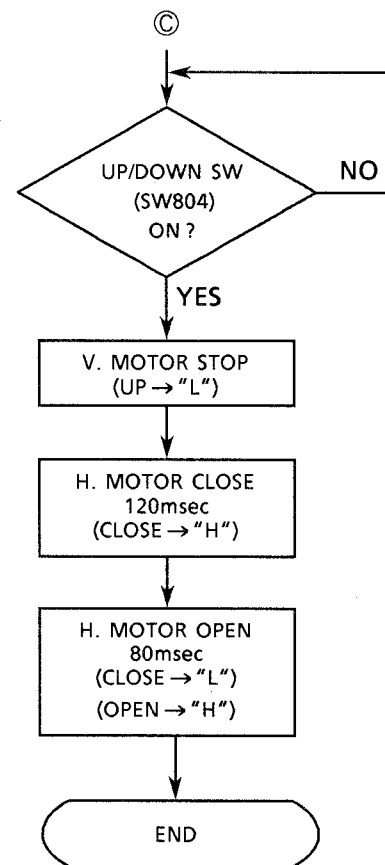
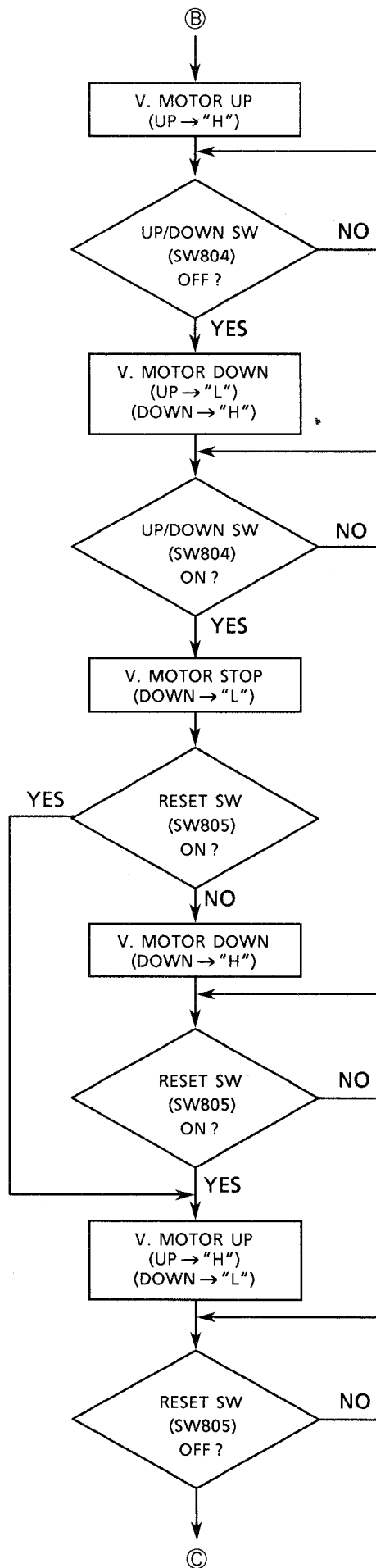
SW807 : Pickup rest switch.

When pickup comes to the initial position, the switch is turned on.

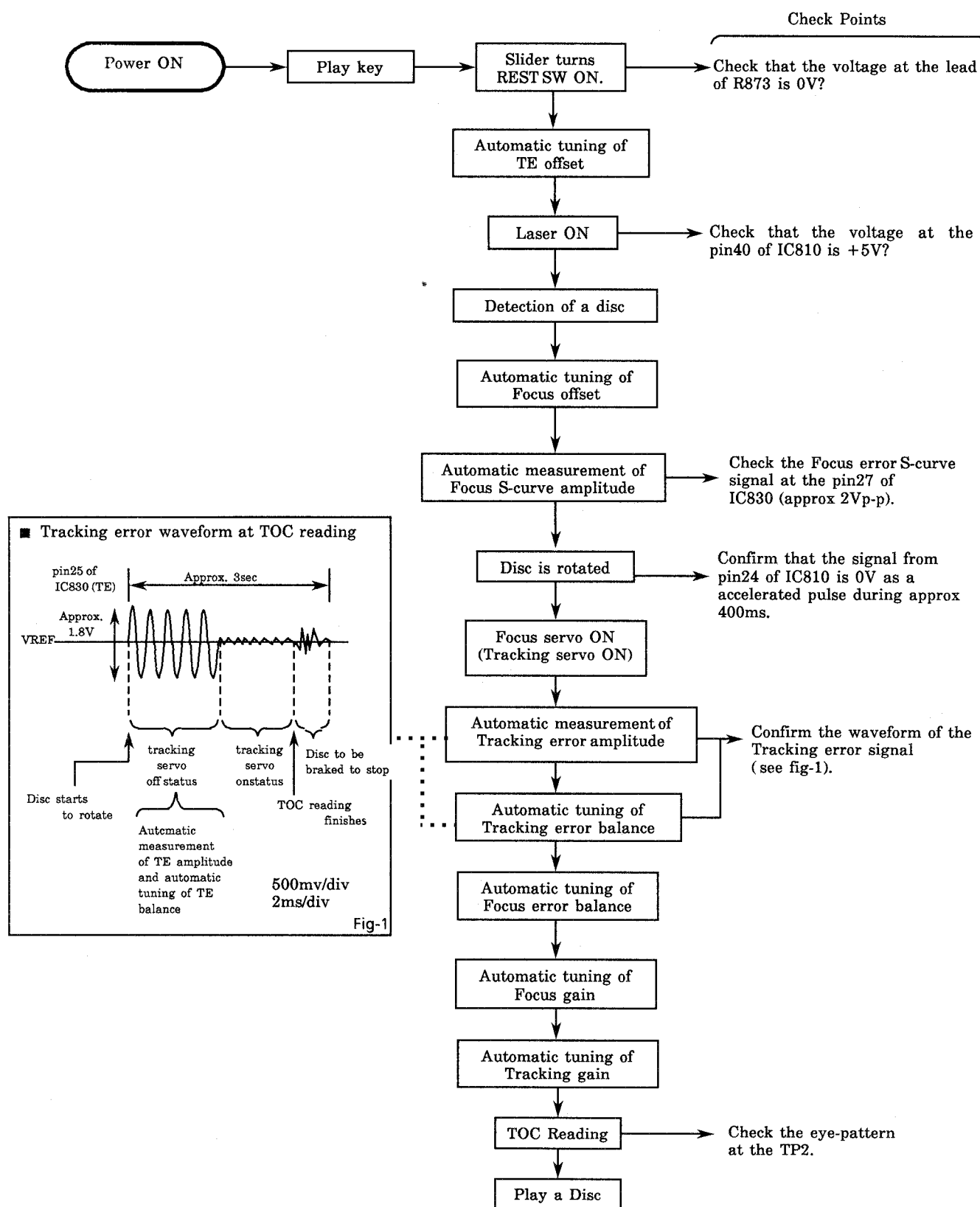


Initial Operation of Mechanism





Flow of Functional Operation Until TOC is Read

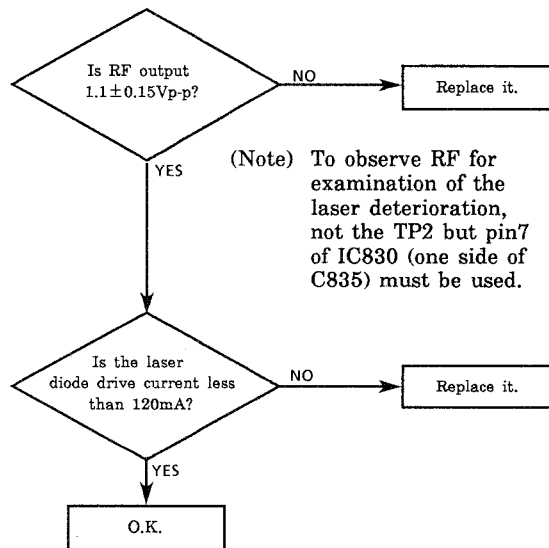


Maintenance of Laser Pickup

(1) Life of the laser diode

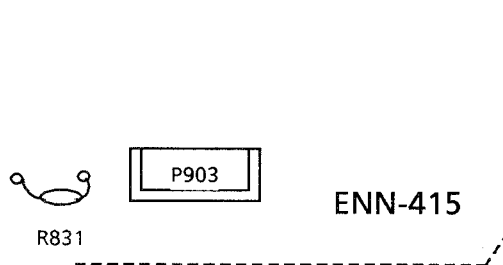
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased. In such a case, check the life of the laser diode following the flowchart below.



(2) Measurement of laser diode drive current

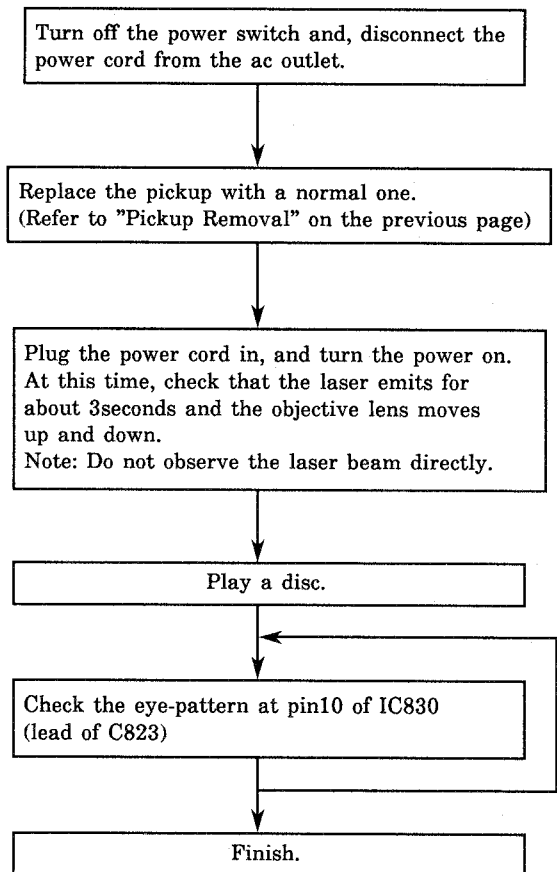
To voltage of the both sides of R831 must be less than 1.88V by measurement with a milli-voltmeter.



(3) Semi-fixed resistor on the APC PC board

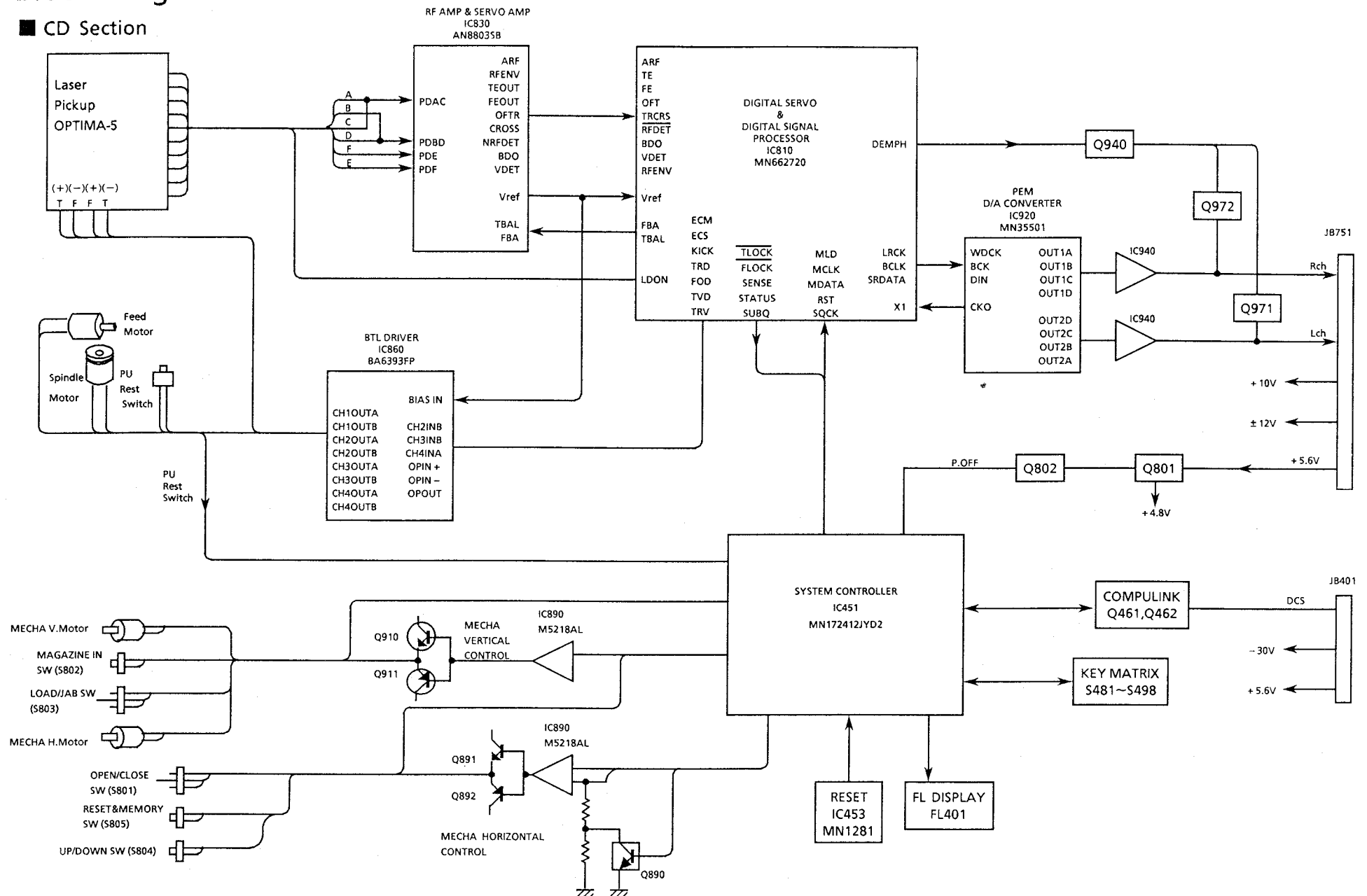
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor. If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced. If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup

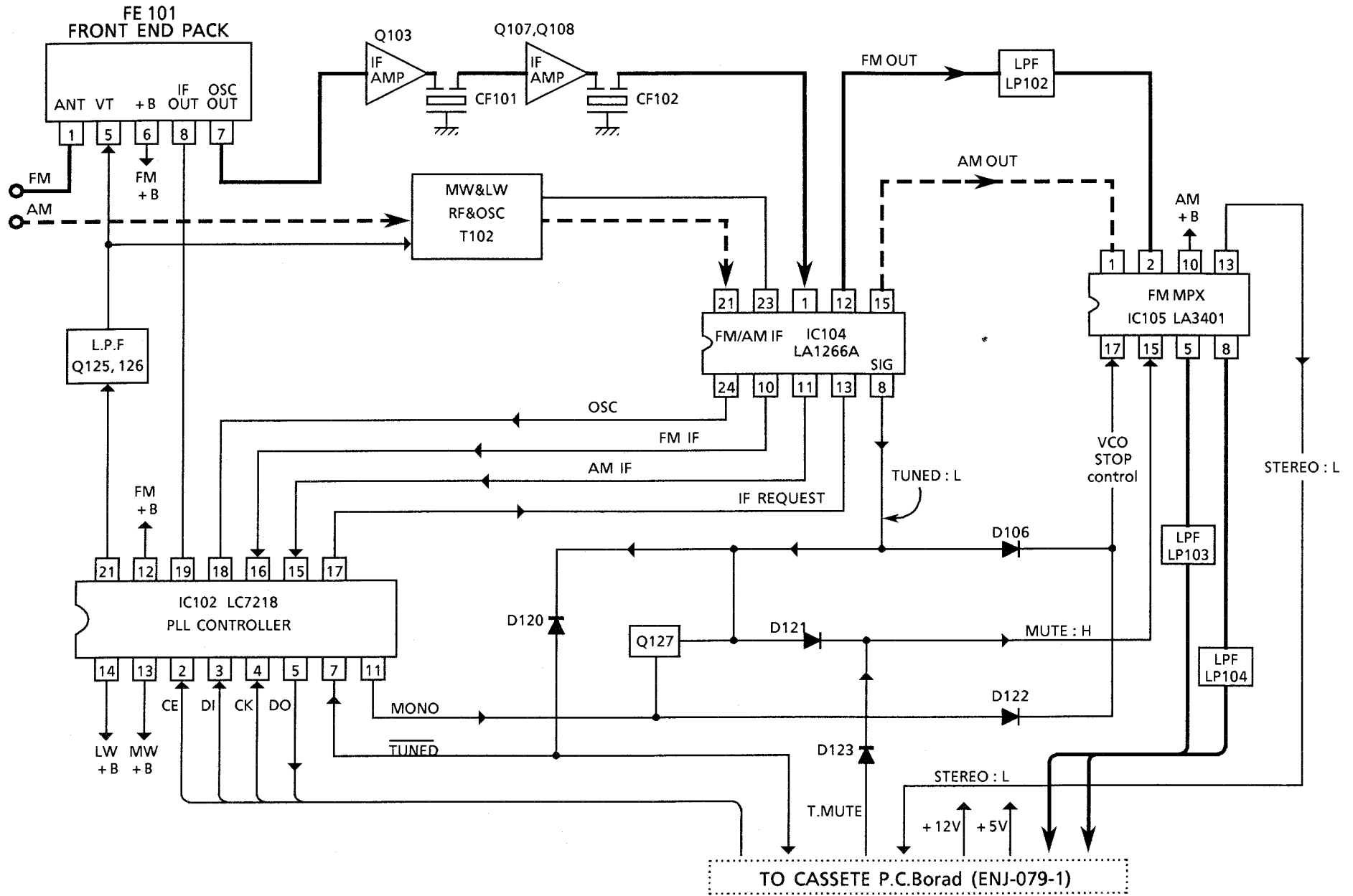


Block Diagram

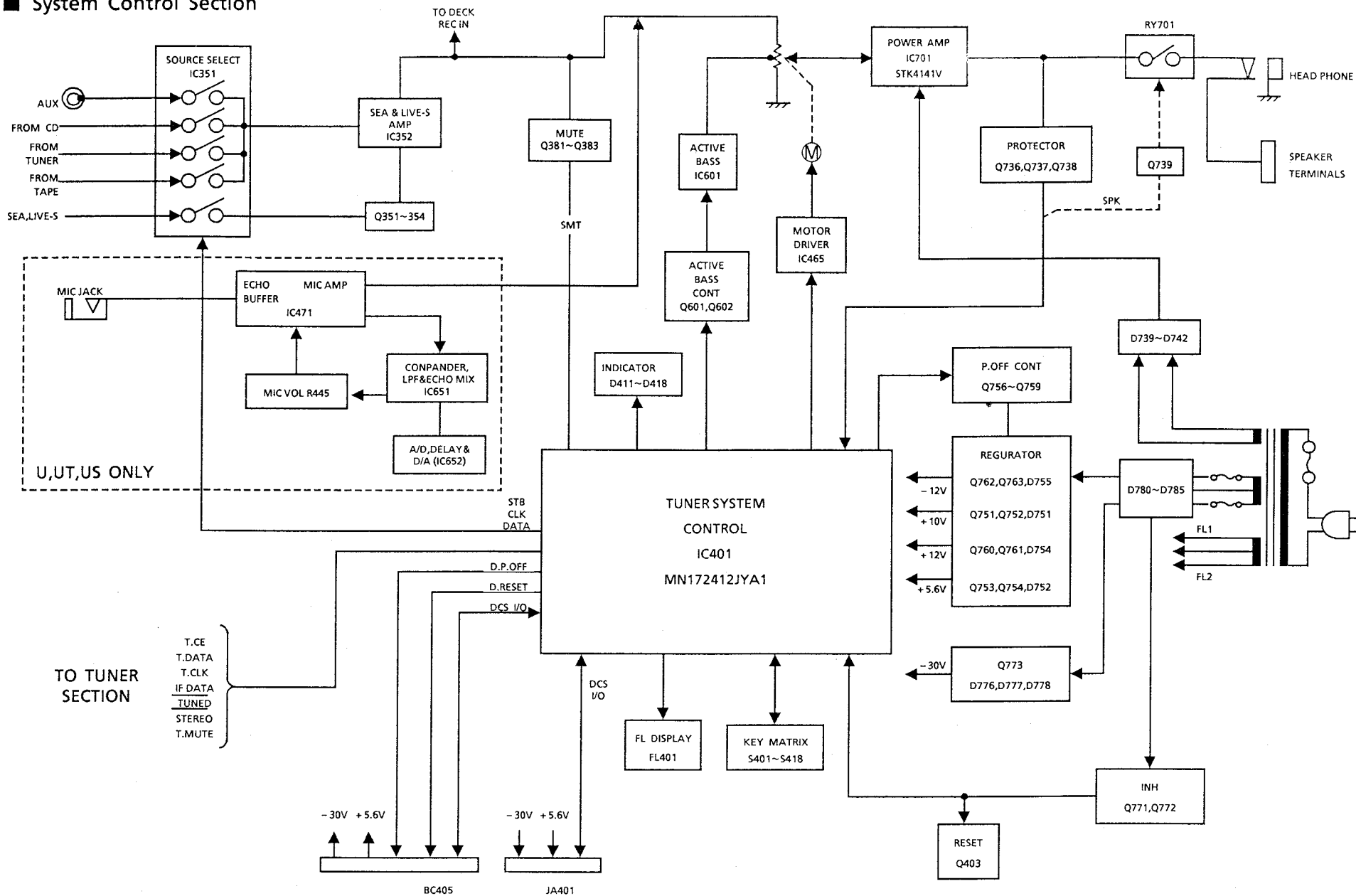
■ CD Section



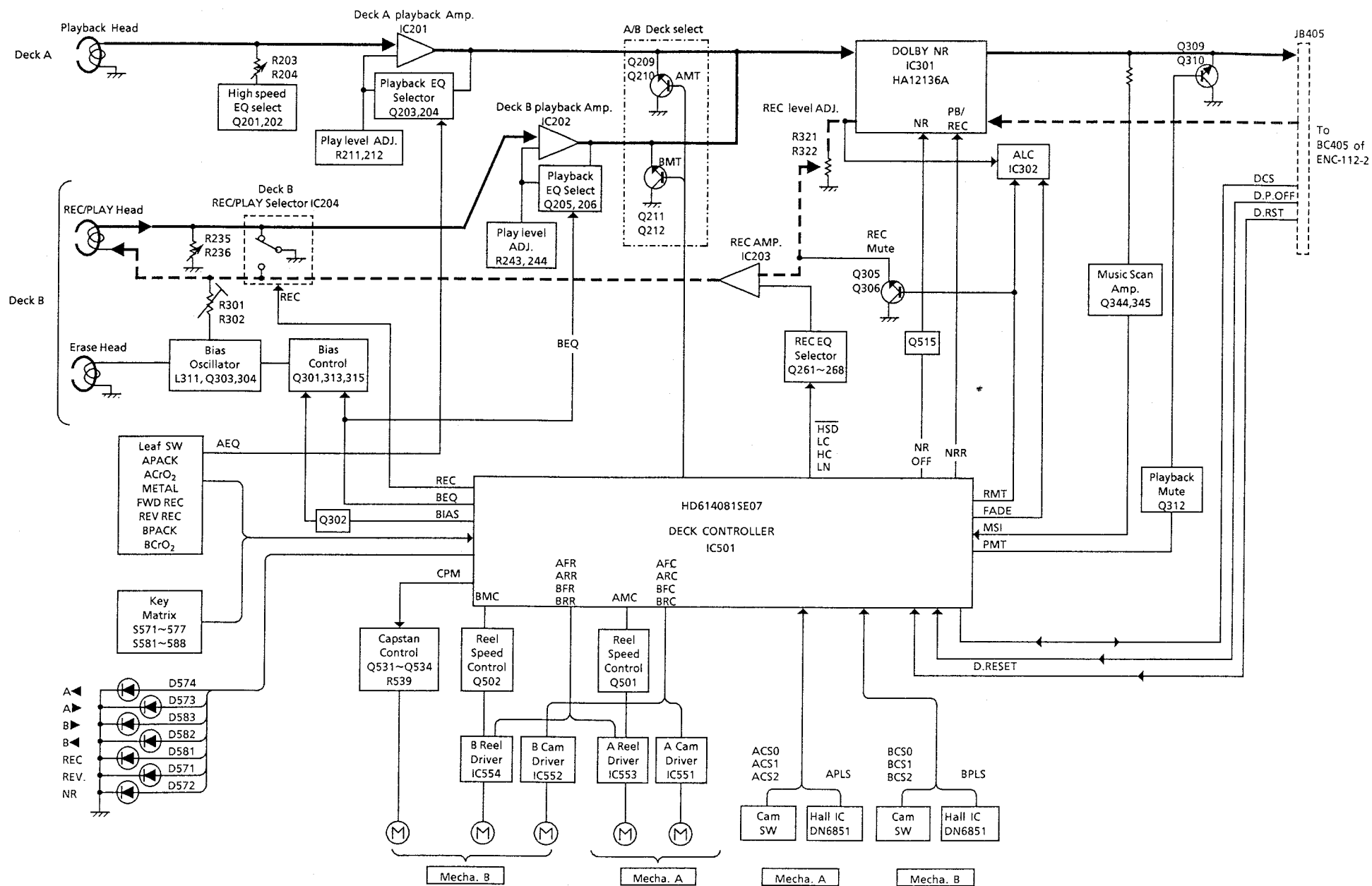
Tuner Section



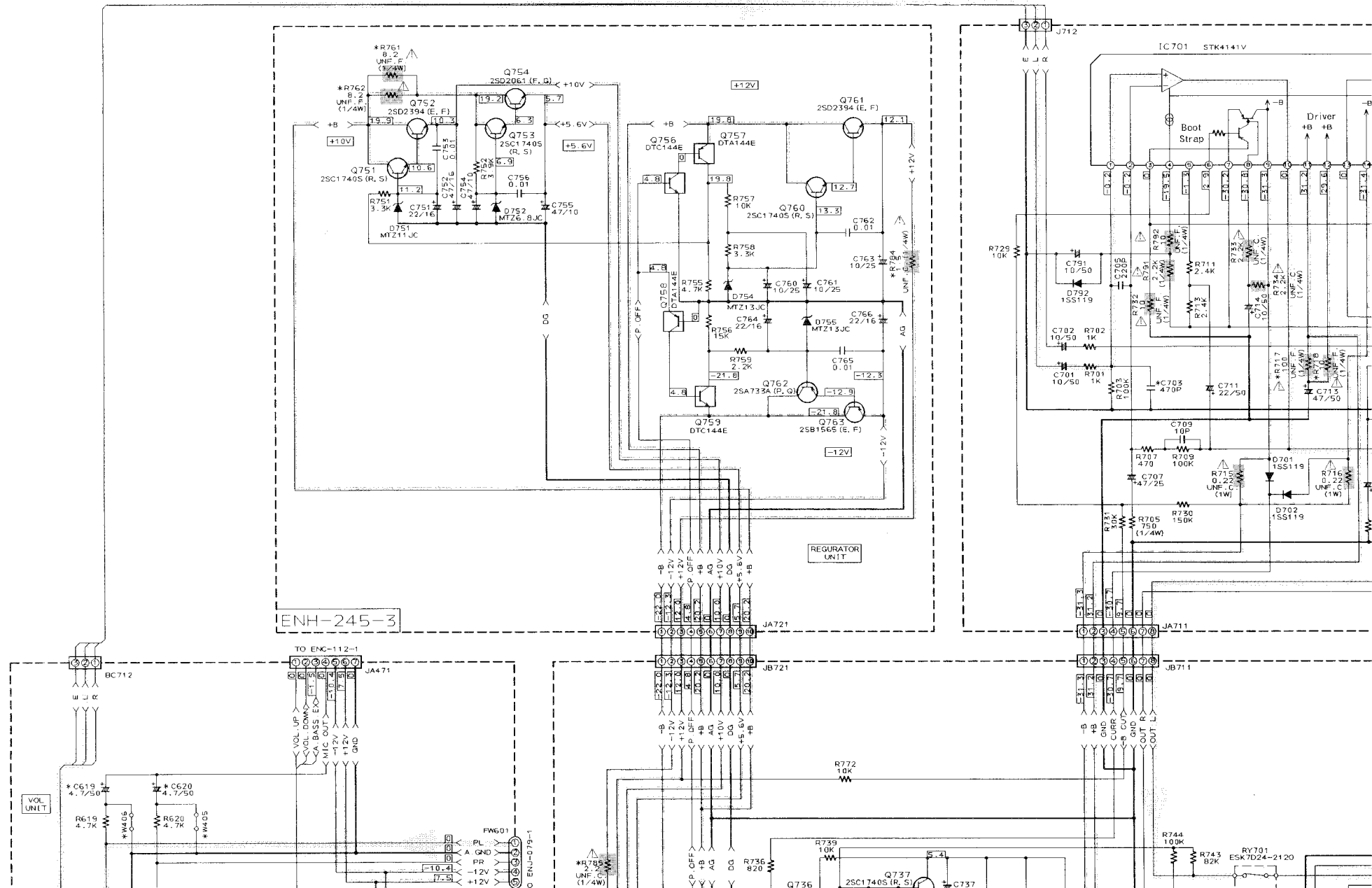
■ System Control Section

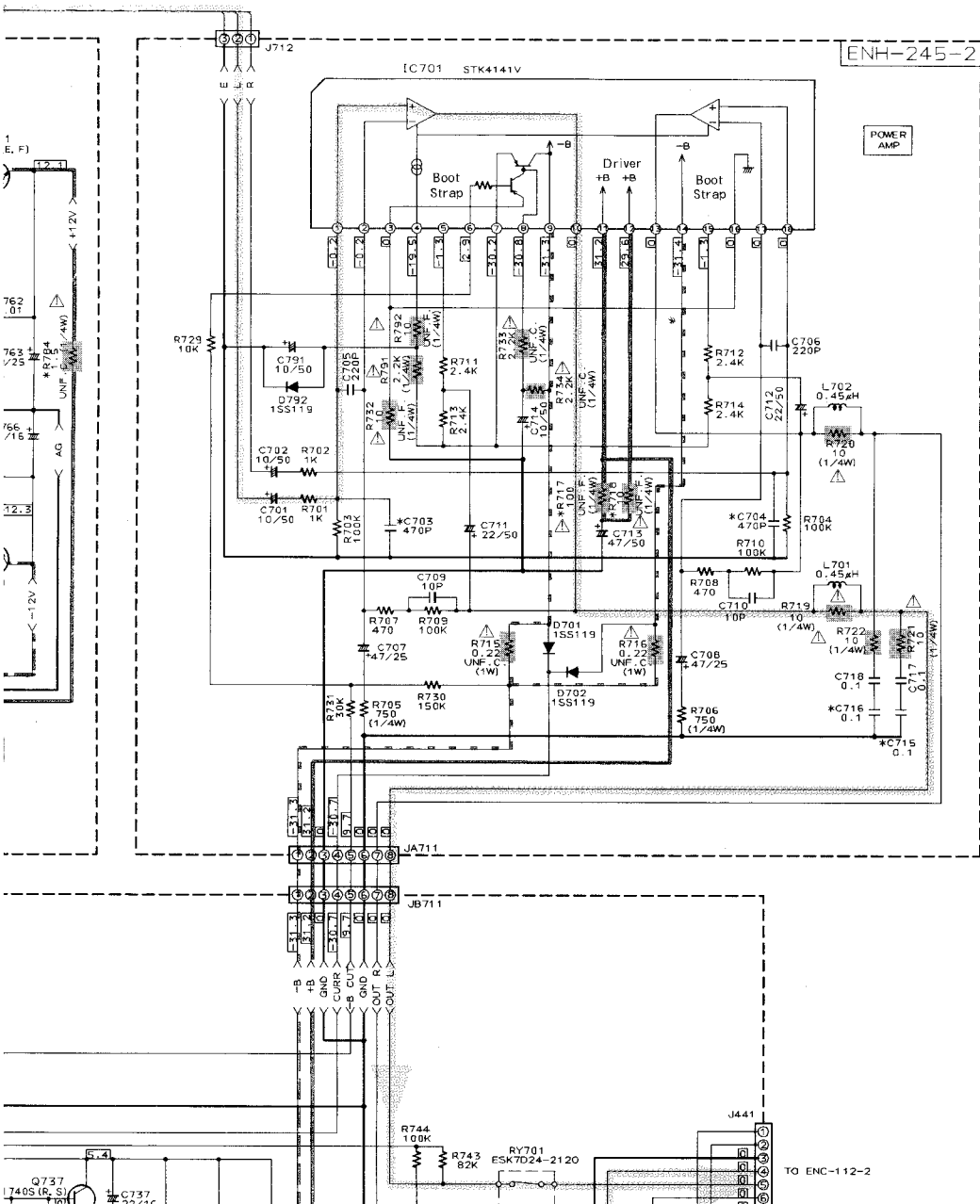


Cassette Deck Section



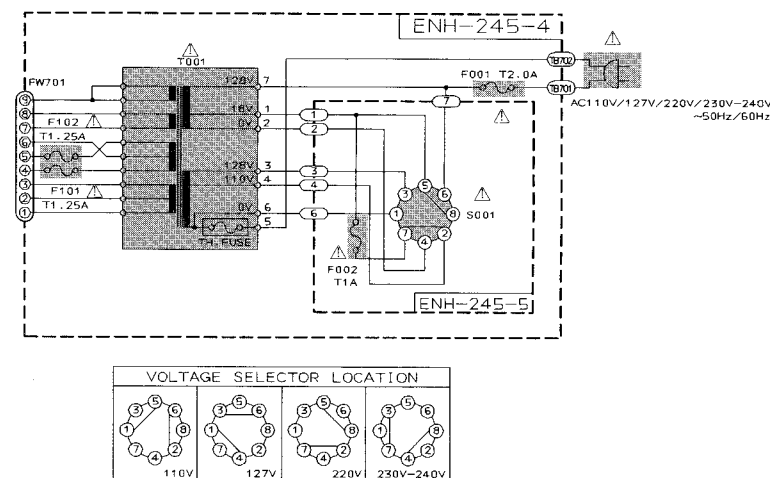
(1) Power Supply & Audio Section



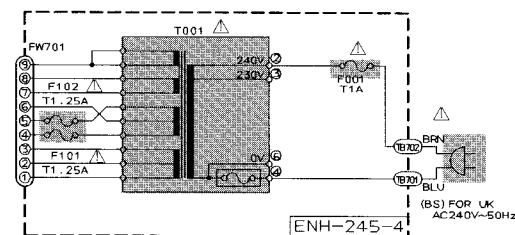


(U) FOR OTHER COUNTRIES
(UT) FOR TAIWAN
(US) FOR SINGAPORE

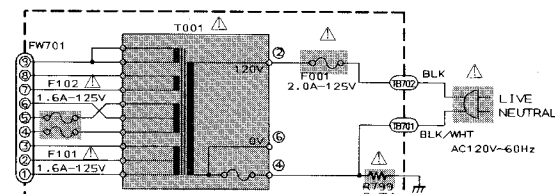
AC110V/127V/220V/230V~240V~50Hz/60Hz

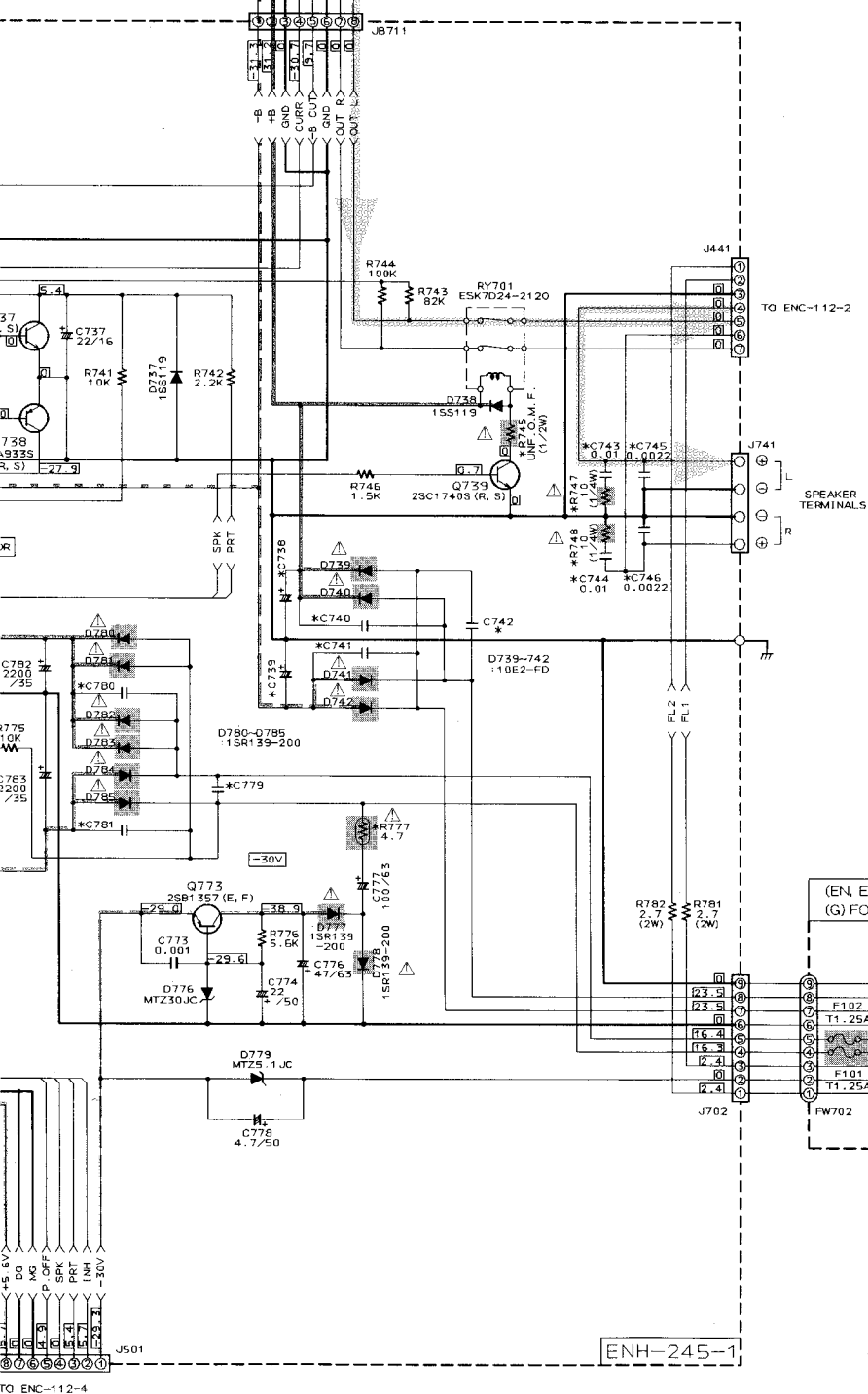


(BS) FOR UK AC240V~50Hz



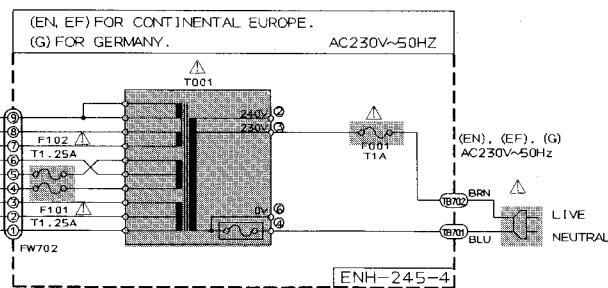
(J), (C) FOR U.S.A./CANADA AC 120V~60Hz



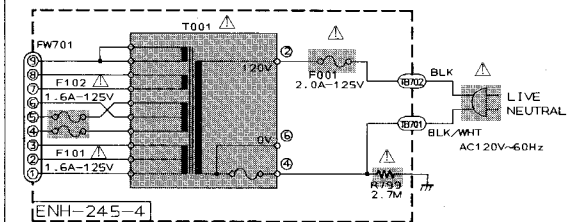


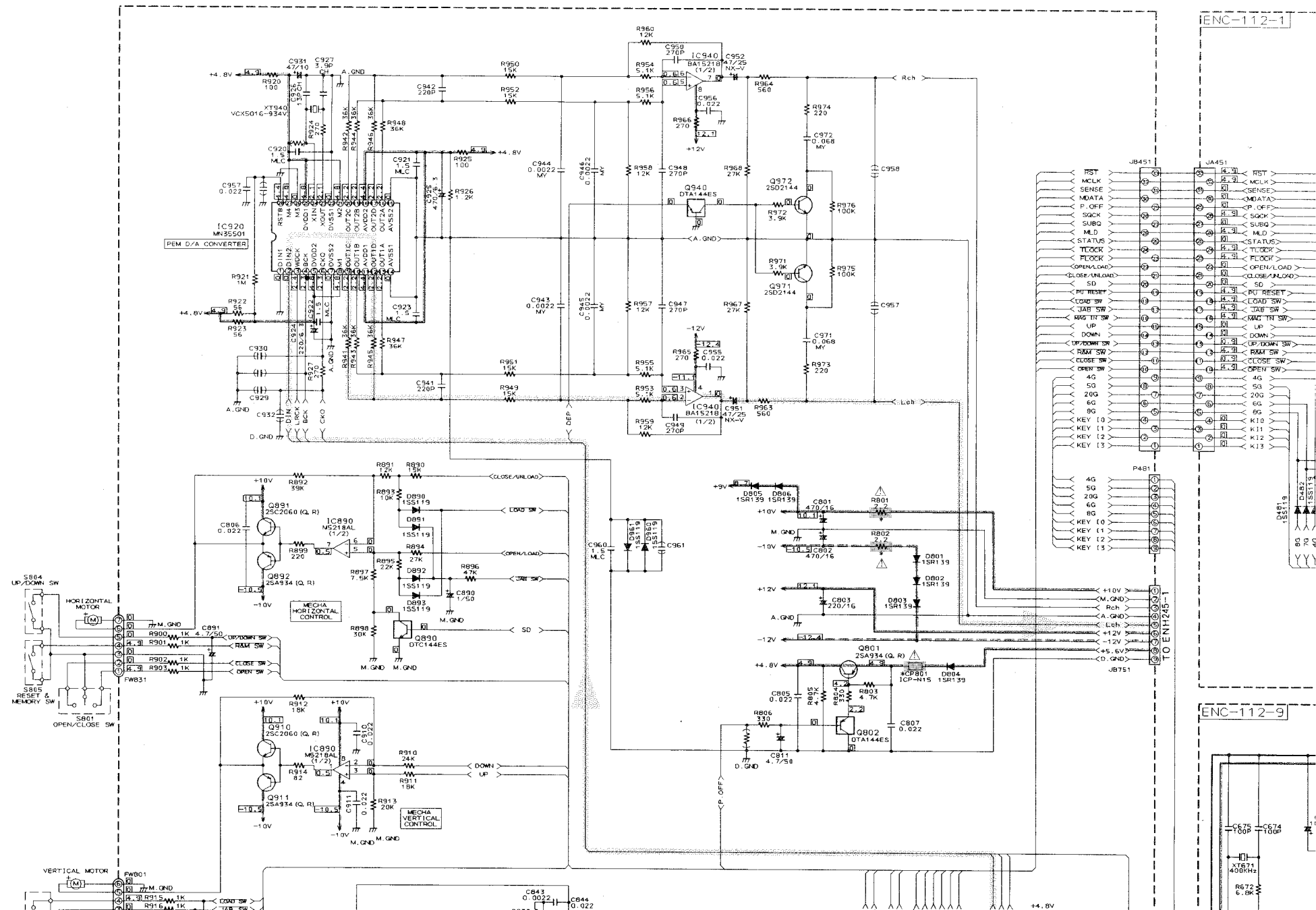
* MARK LIST

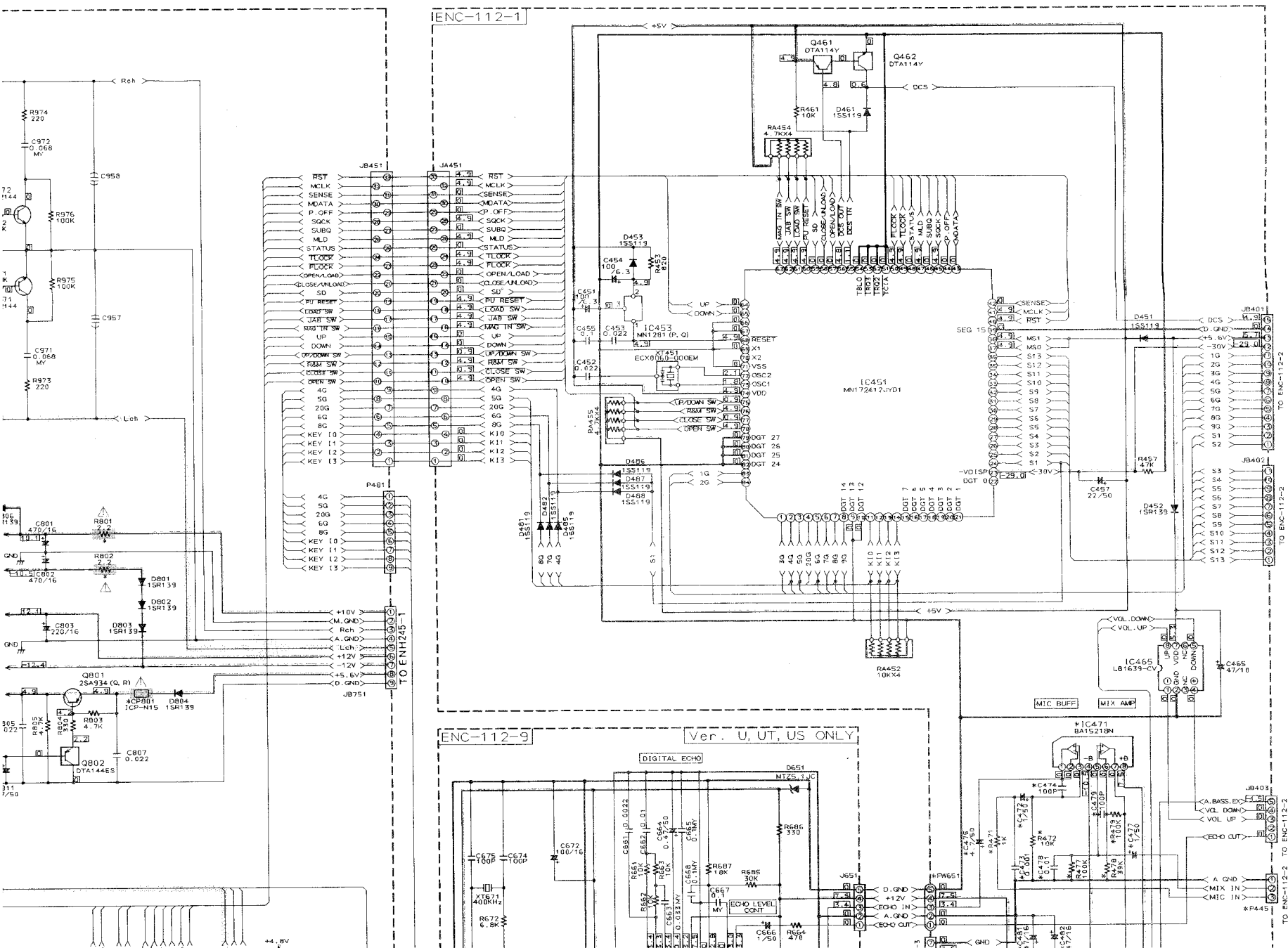
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C703, 704	USED	USED	USED	NONE
C715, 716	SHORT	USED	USED	USED
C738, 739	3300/42	2200/42	2200/42	2200/42
C740~742	0.01μF	0.01μF	0.01μF	0.1μF
C743, 744	NONE	NONE	NONE	USED
C745, 746	NONE	NONE	NONE	USED
C779~781	0.01μF	0.01μF	0.01μF	0.22μF
C790	NONE	NONE	NONE	USED
R717, 718	UNF. C.	UNF. F.	UNF. F.	UNF. F.
R761, 762	UNF. C.	UNF. F.	UNF. F.	UNF. F.
R798	UNF. C.	UNF. F.	UNF. F.	UNF. F.
C619, 620	NONE	USED	NONE	NONE
W405, 406	USED	NONE	USED	USED
R783~785	UNF. C.	SHORT	SHORT	SHORT
R777	UNF. C.		POSISTOR	
R745	470	510	470	470



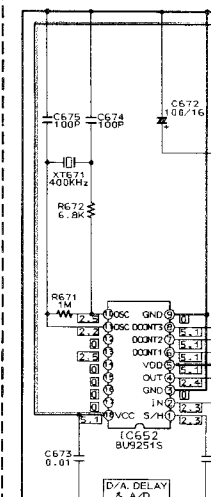
(J), (C) FOR U.S.A./CANADA AC 120V~60Hz





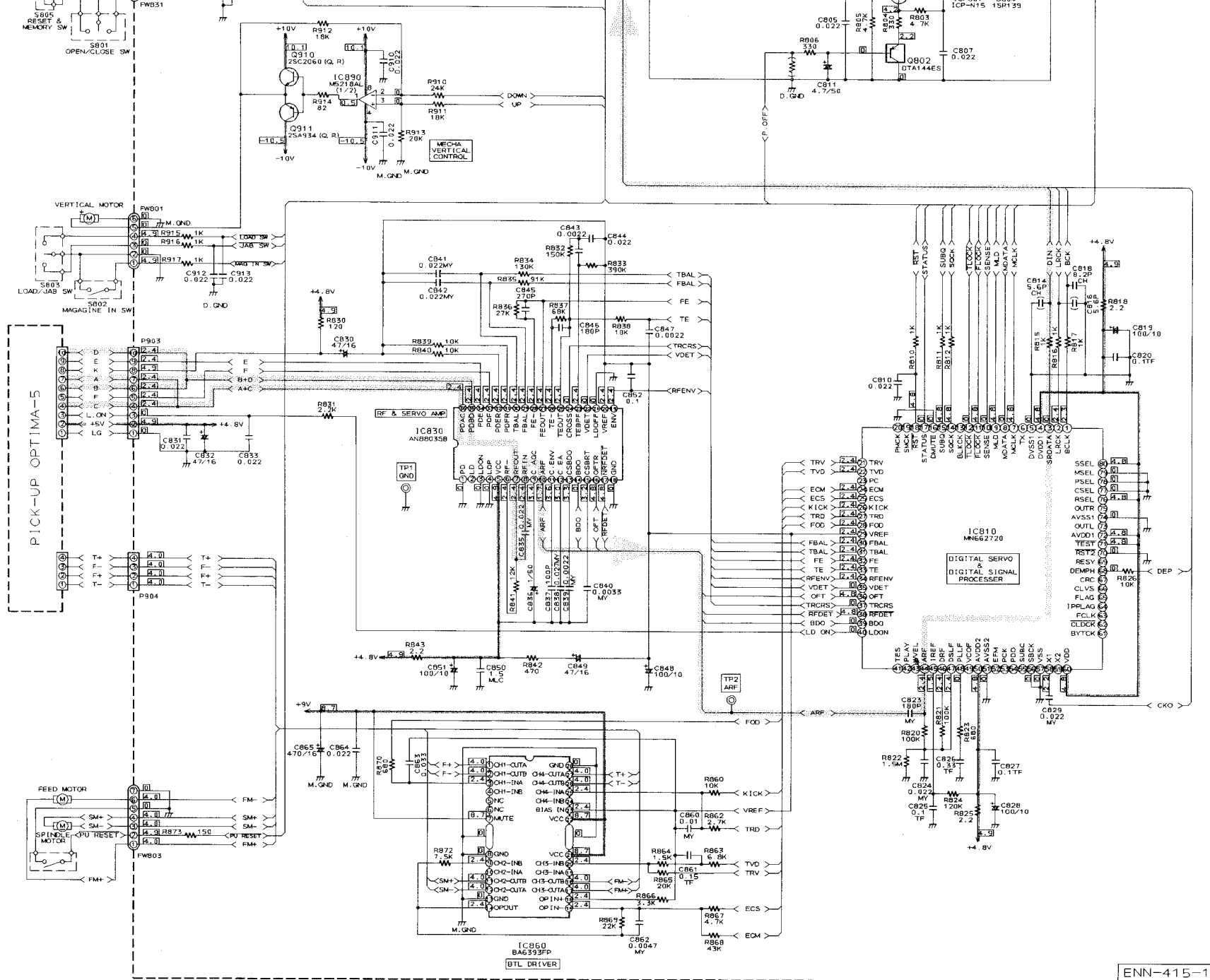


ENC-112-9

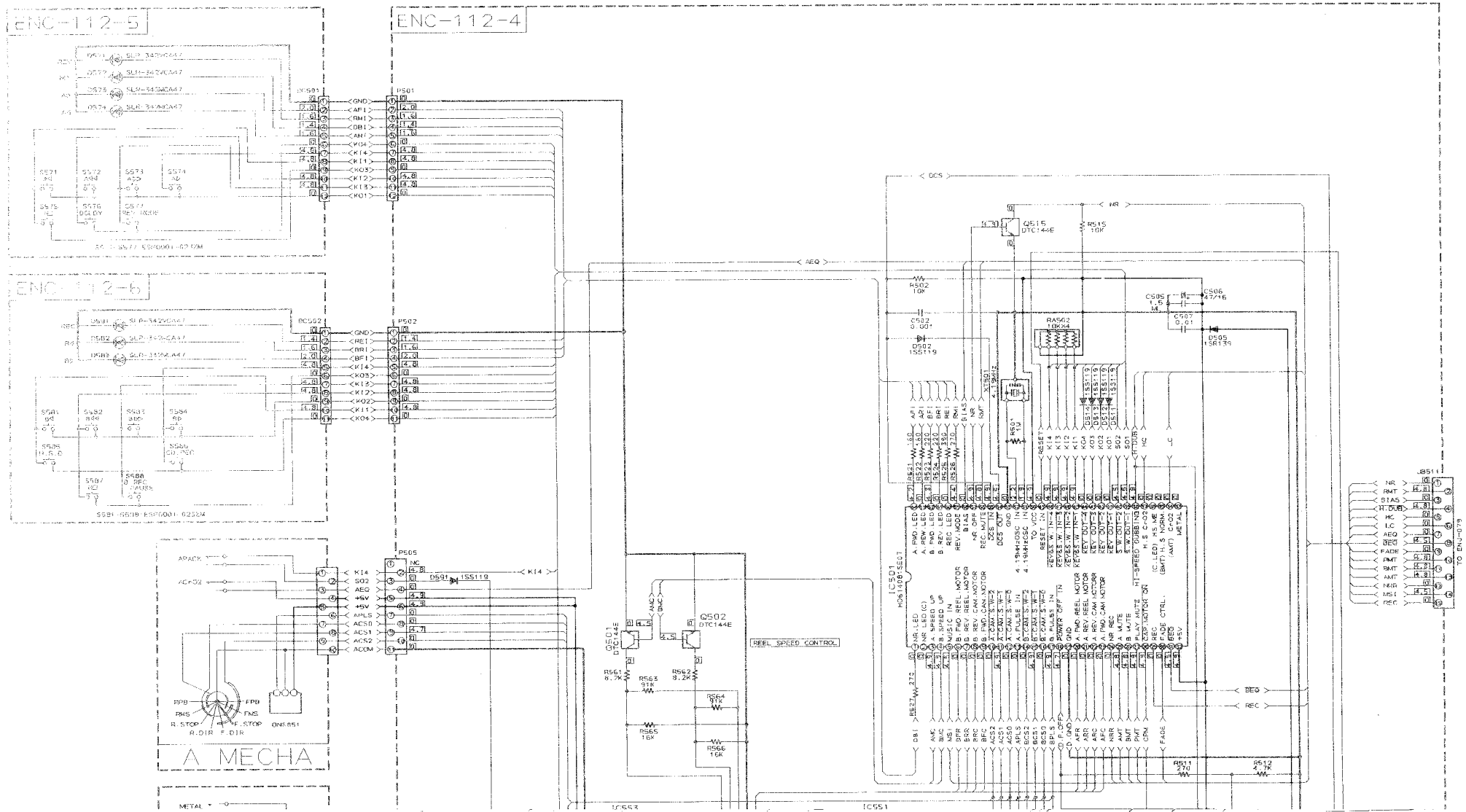


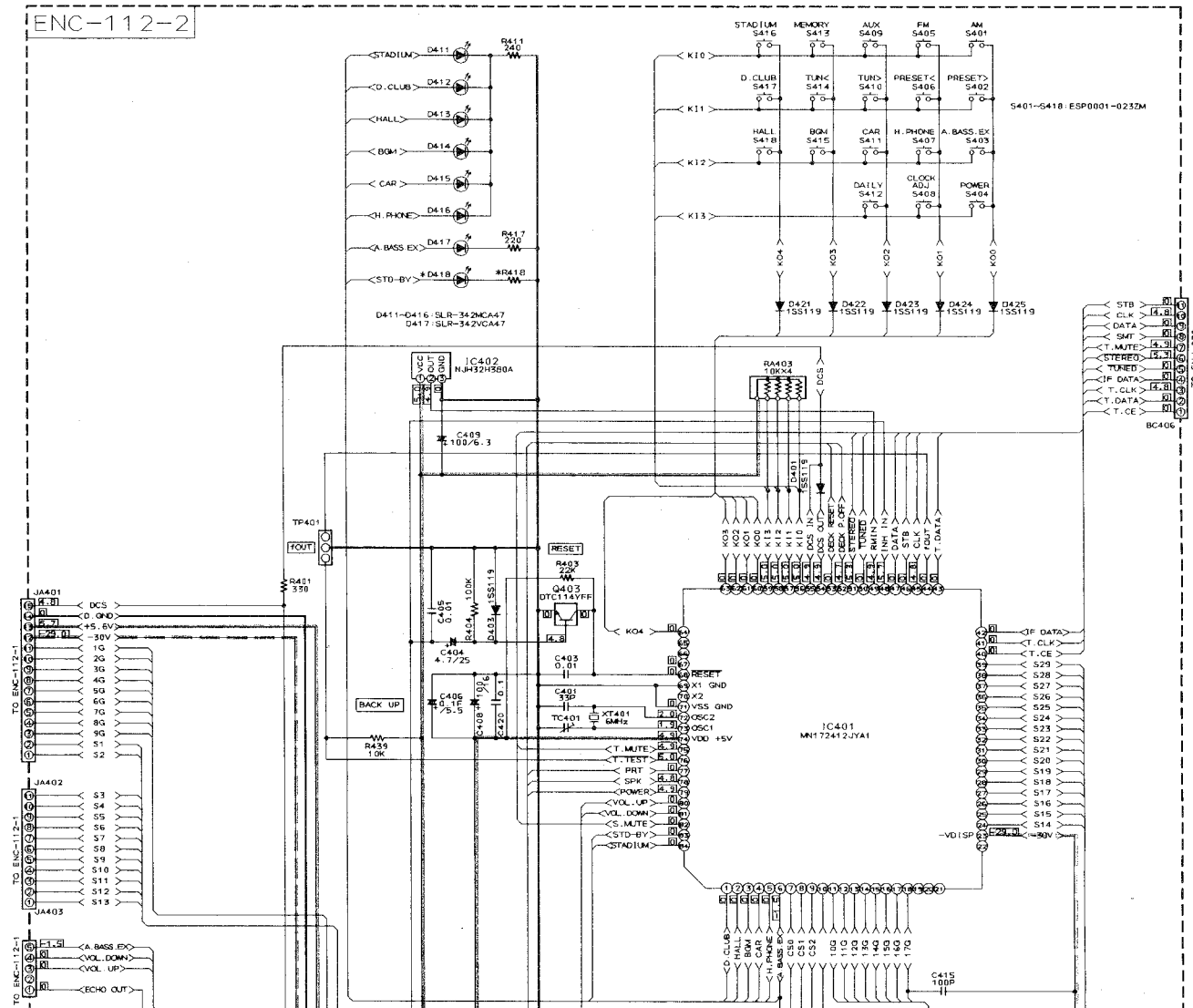
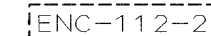
ENC-112-6

ENN-415-1



(3) System Control Section



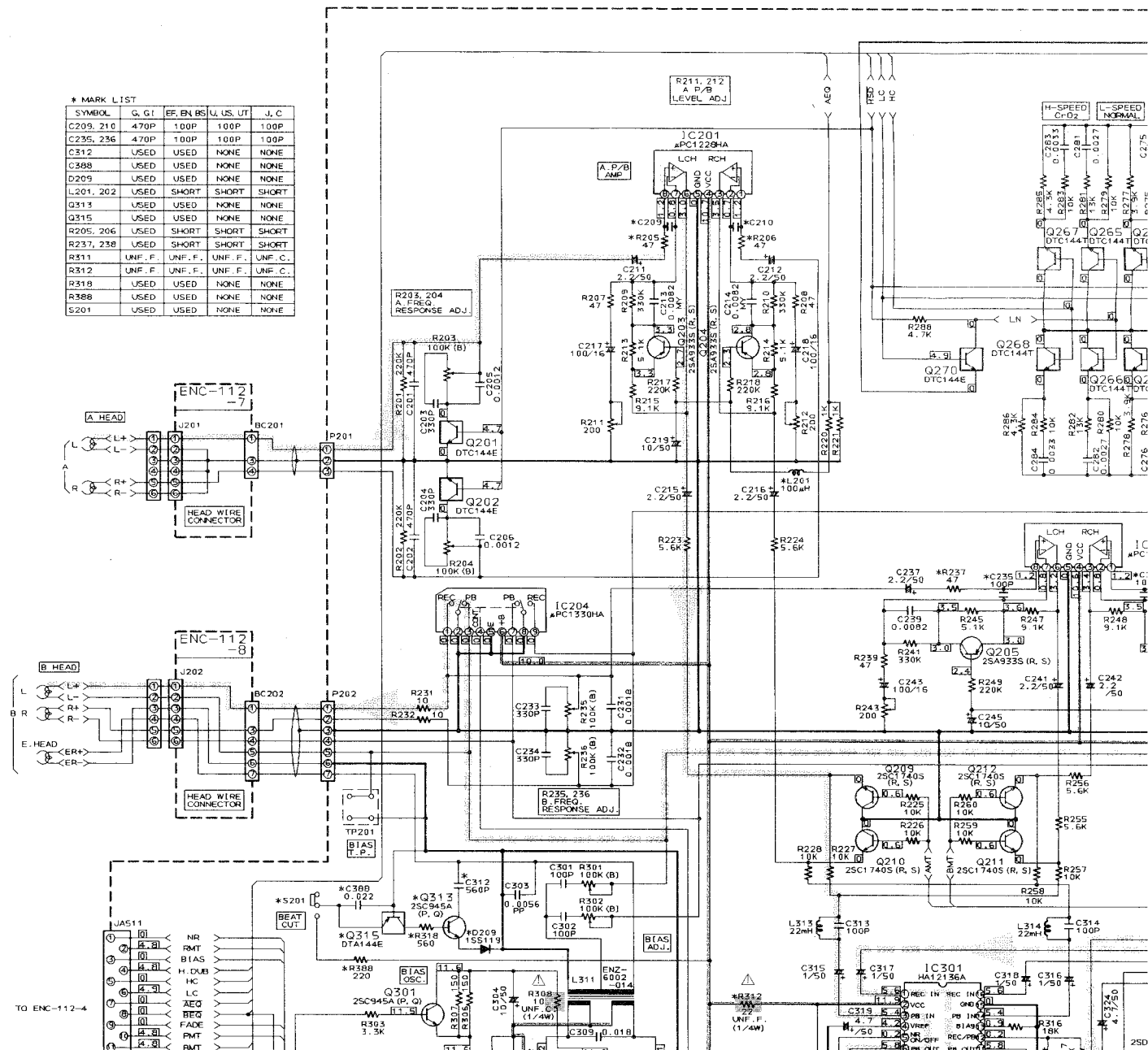


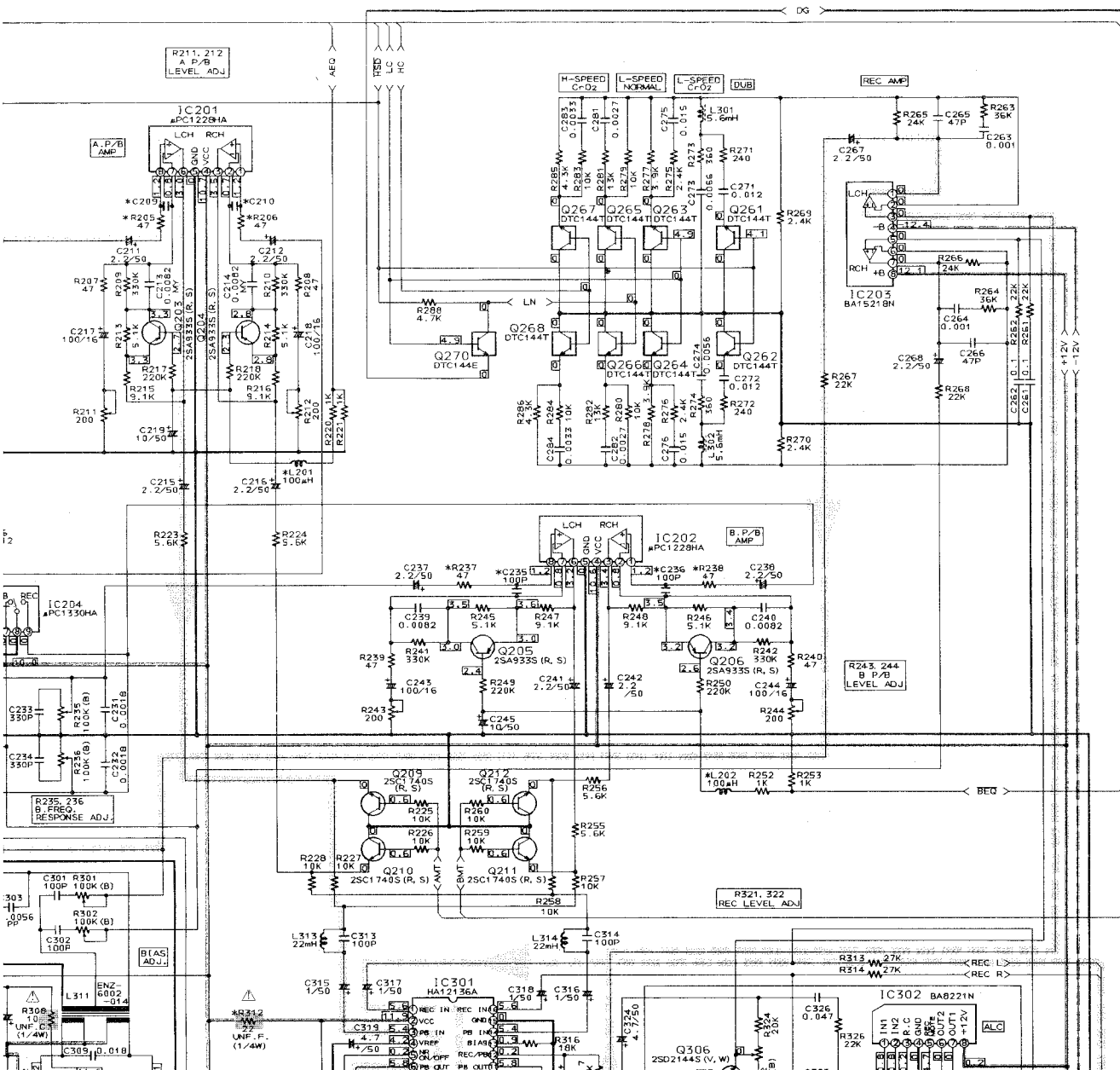


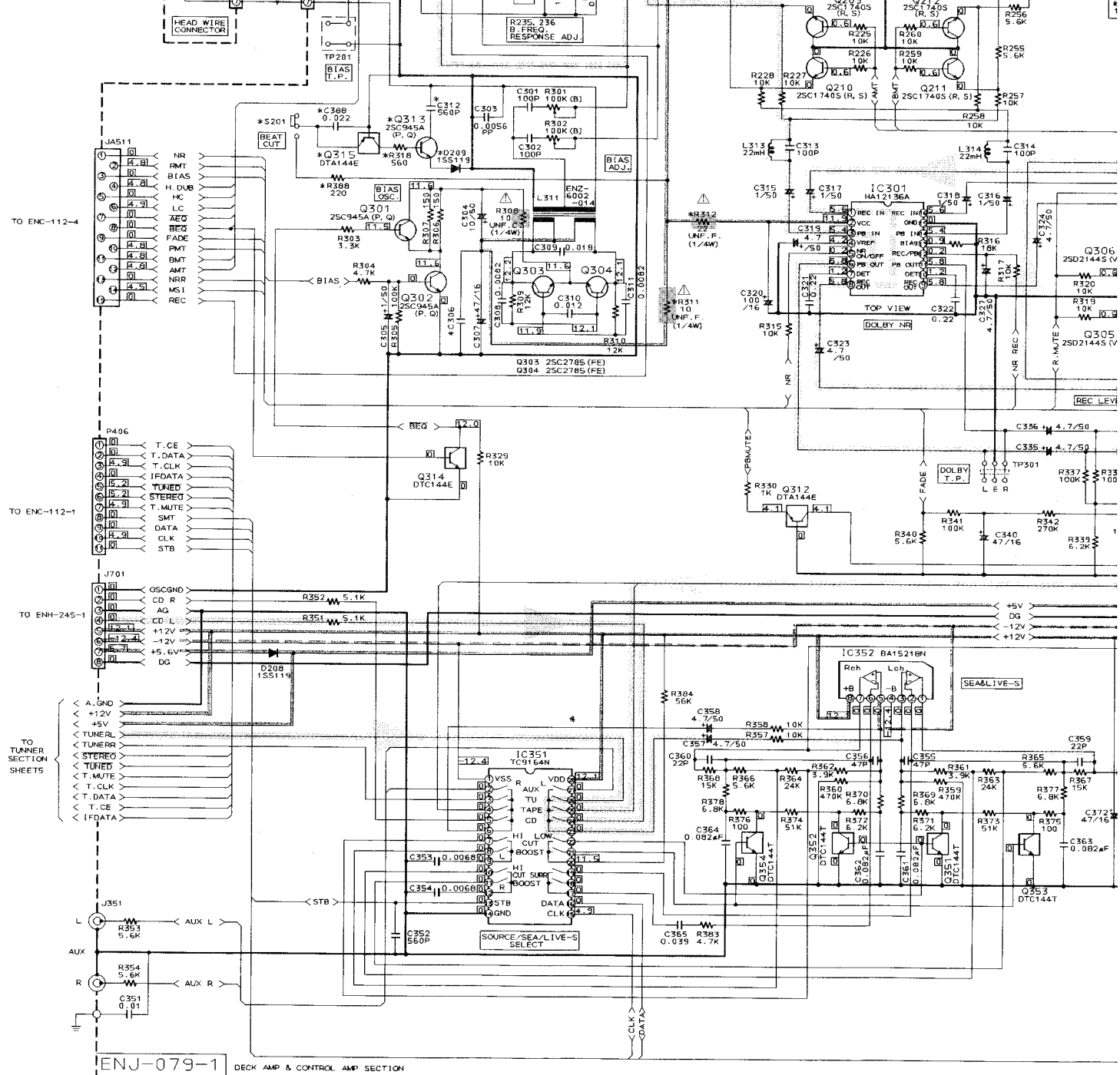
(4) Cassette Deck Section

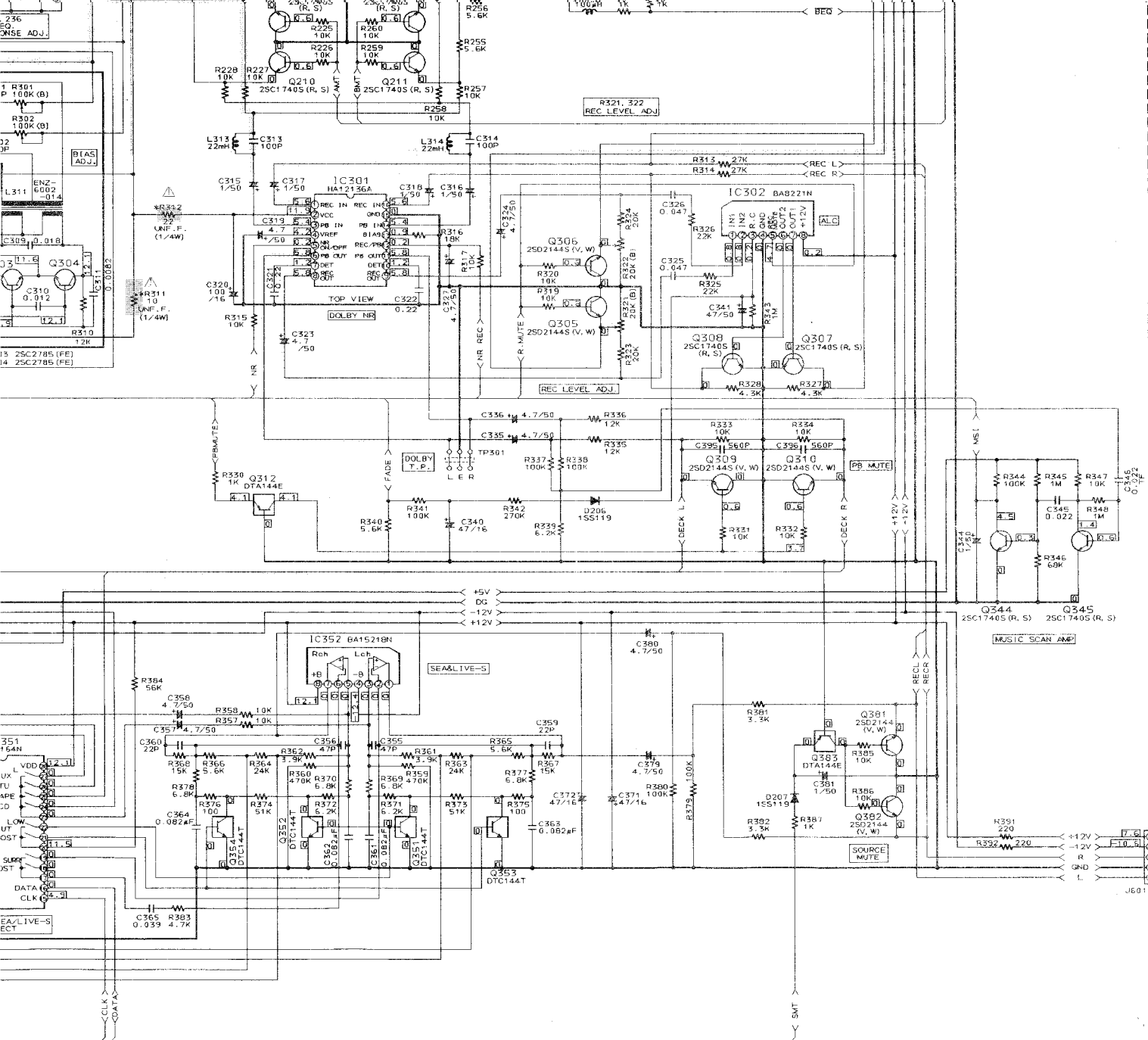
* MARK LIST

SYMBOL	G, G1	EF, BN, BS	U, US, UT	J, C
C209, 210	470P	100P	100P	100P
C235, 236	470P	100P	100P	100P
C312	USED	USED	NONE	NONE
C388	USED	USED	NONE	NONE
D209	USED	USED	NONE	NONE
L201, 202	USED	SHORT	SHORT	SHORT
Q313	USED	USED	NONE	NONE
Q315	USED	USED	NONE	NONE
R205, 206	USED	SHORT	SHORT	SHORT
R237, 238	USED	SHORT	SHORT	SHORT
R511	UNF. F.	UNF. F.	UNF. F.	UNF. C.
R312	UNF. F.	UNF. F.	UNF. F.	UNF. C.
R318	USED	USED	NONE	NONE
R388	USED	USED	NONE	NONE
S201	USED	USED	NONE	NONE









TO ENO

E

F

G

H

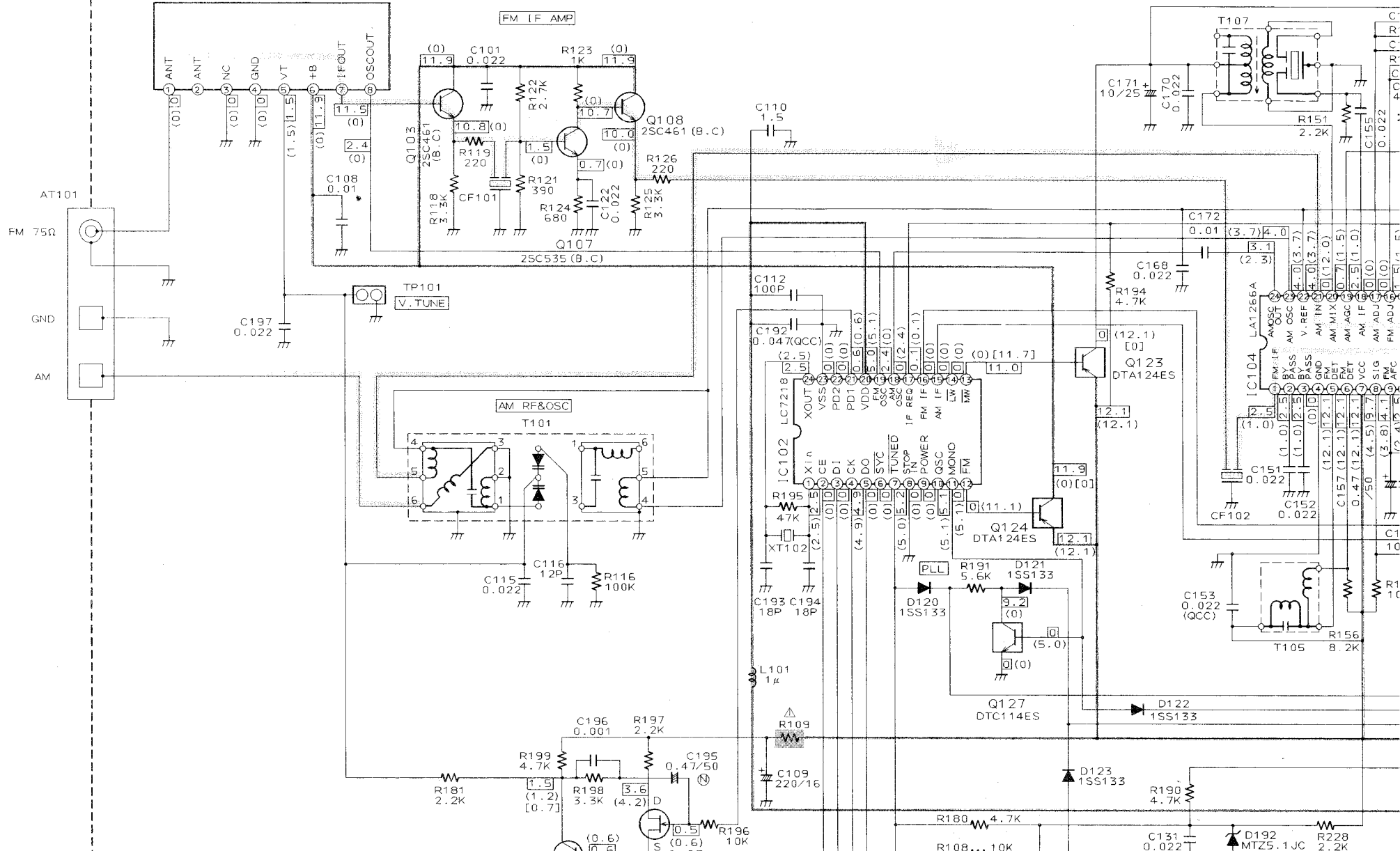
J

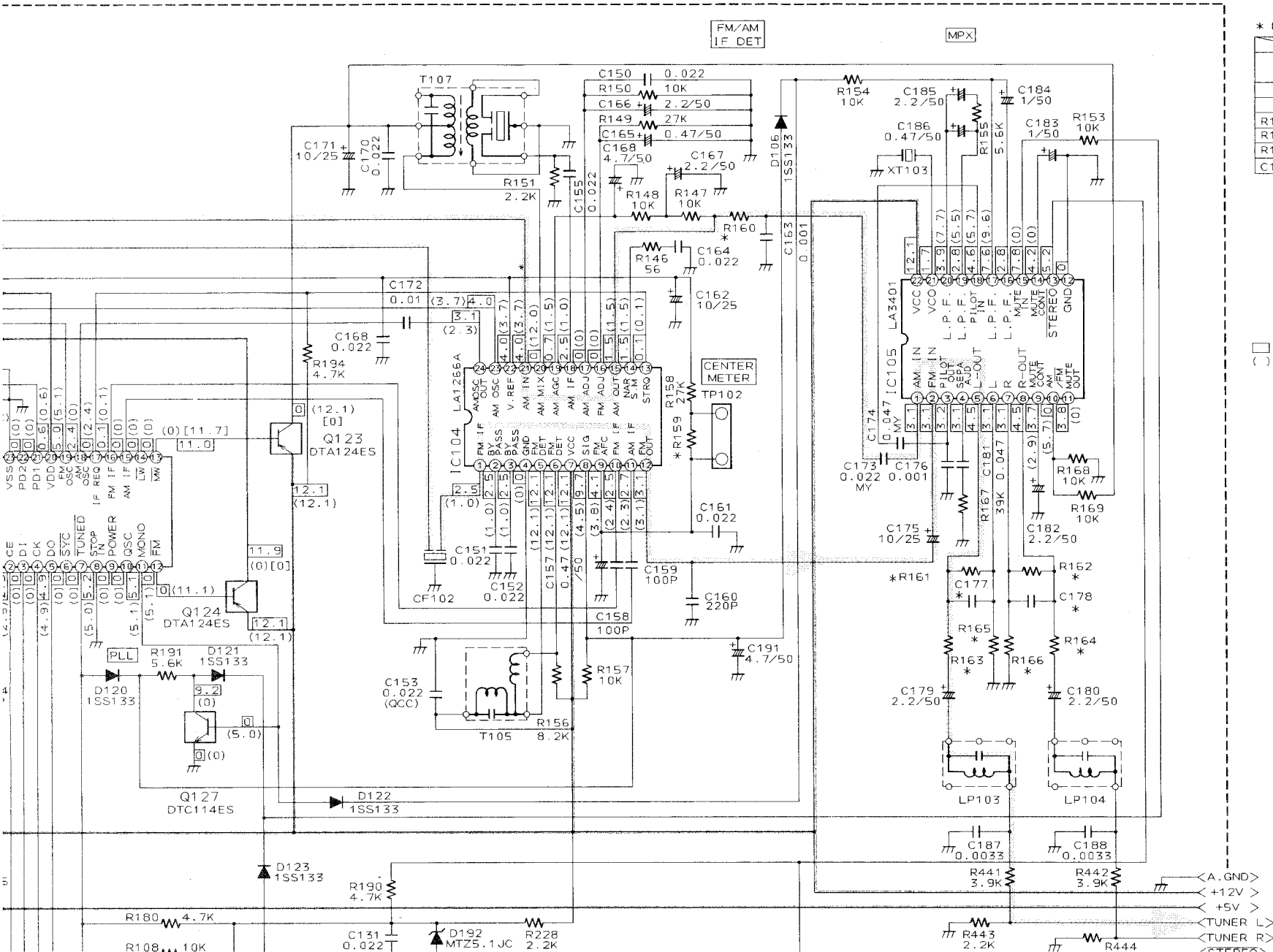
(5) Tuner Section (For U.UT.US.A.J.C)

FOR U, UT, US, A, J, C

ENJ-079-1

FM RF
FE101
EAF2203-004

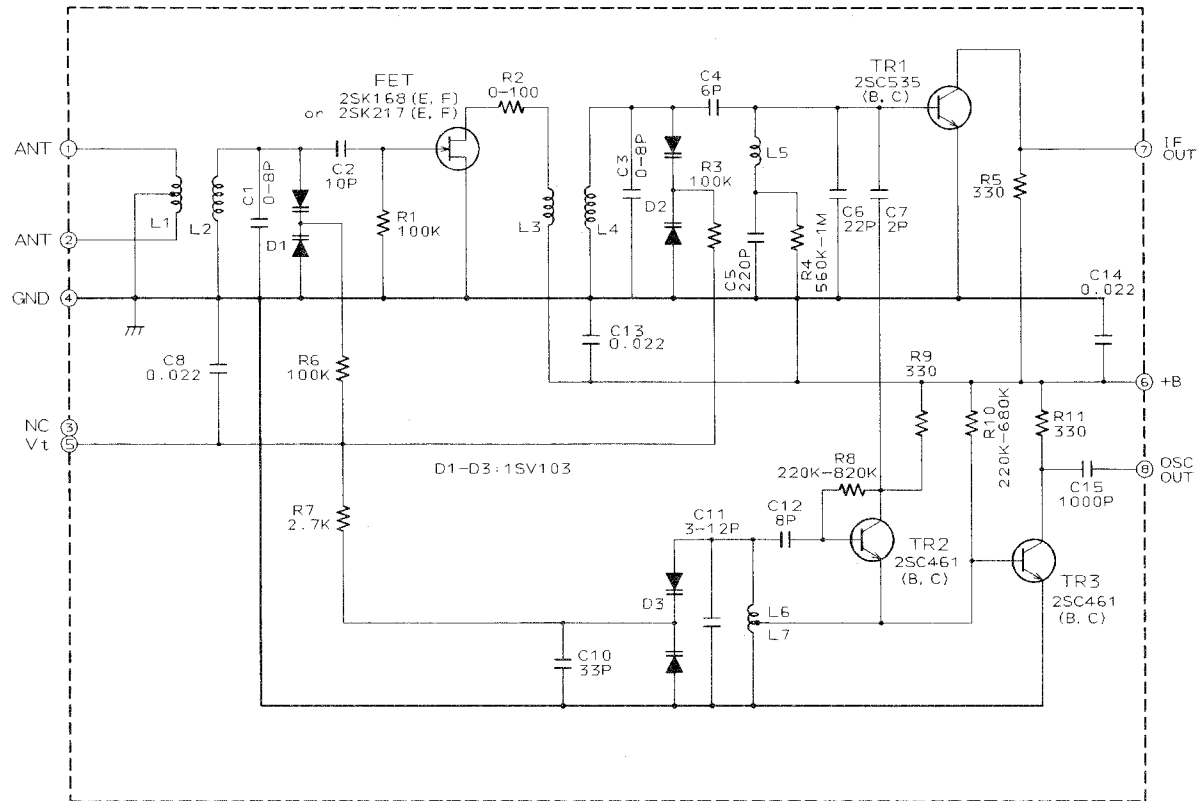
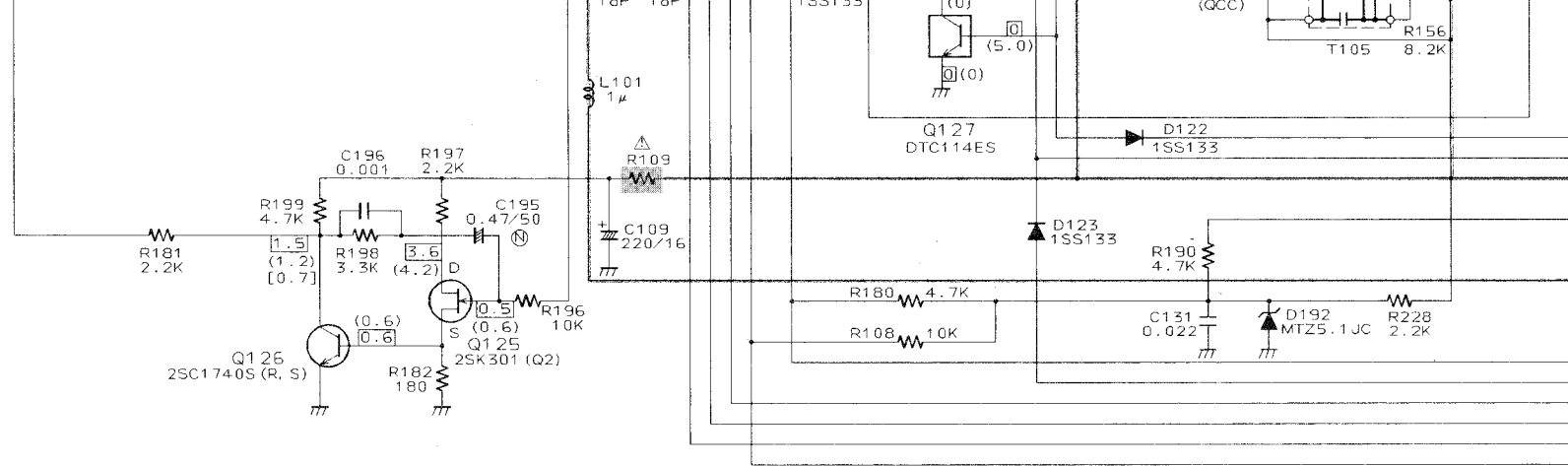




* MARK

	U	A	J, C
R109	68 UNF. F. (1/4W)	68 UNF. F. (1/4W)	68 UNF. C (1/4W)
R159	27K	27K	15K
R160	5.6K	10K	5.6K
R161, 162	82K	120K	82K
R163, 164	4.7K	3.3K	4.7K
R165, 166	180K	270K	180K
C177, 178	820P	470P	820P

☐ FM AUTO NO SIGNAL
() MW NO SIGNAL



B

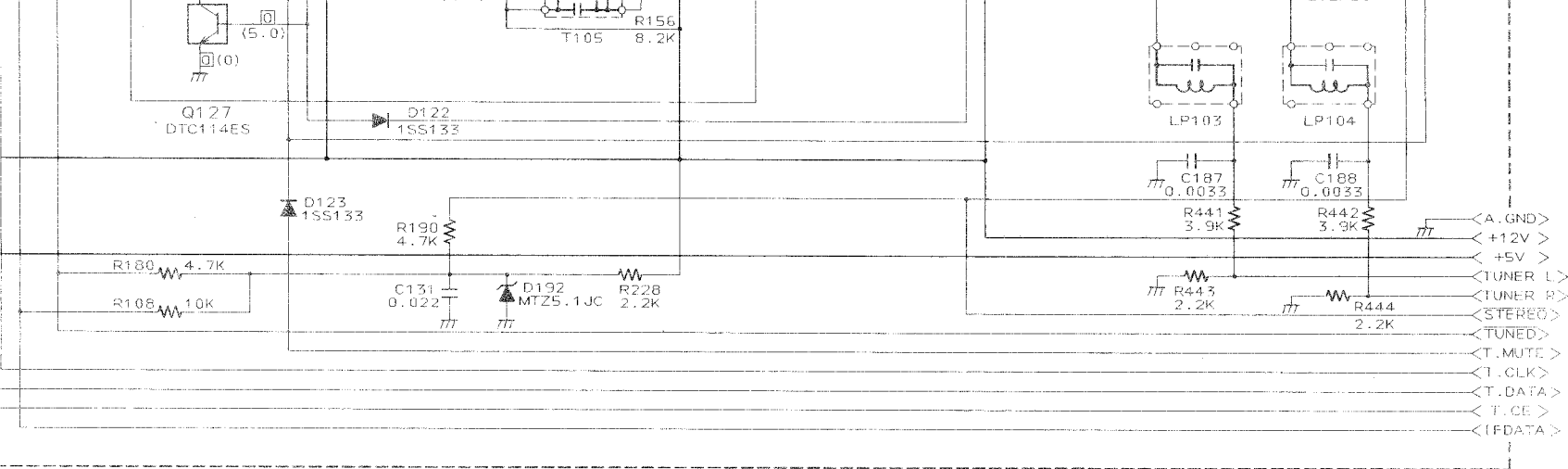
C

D

E

F

G



IF
OUT

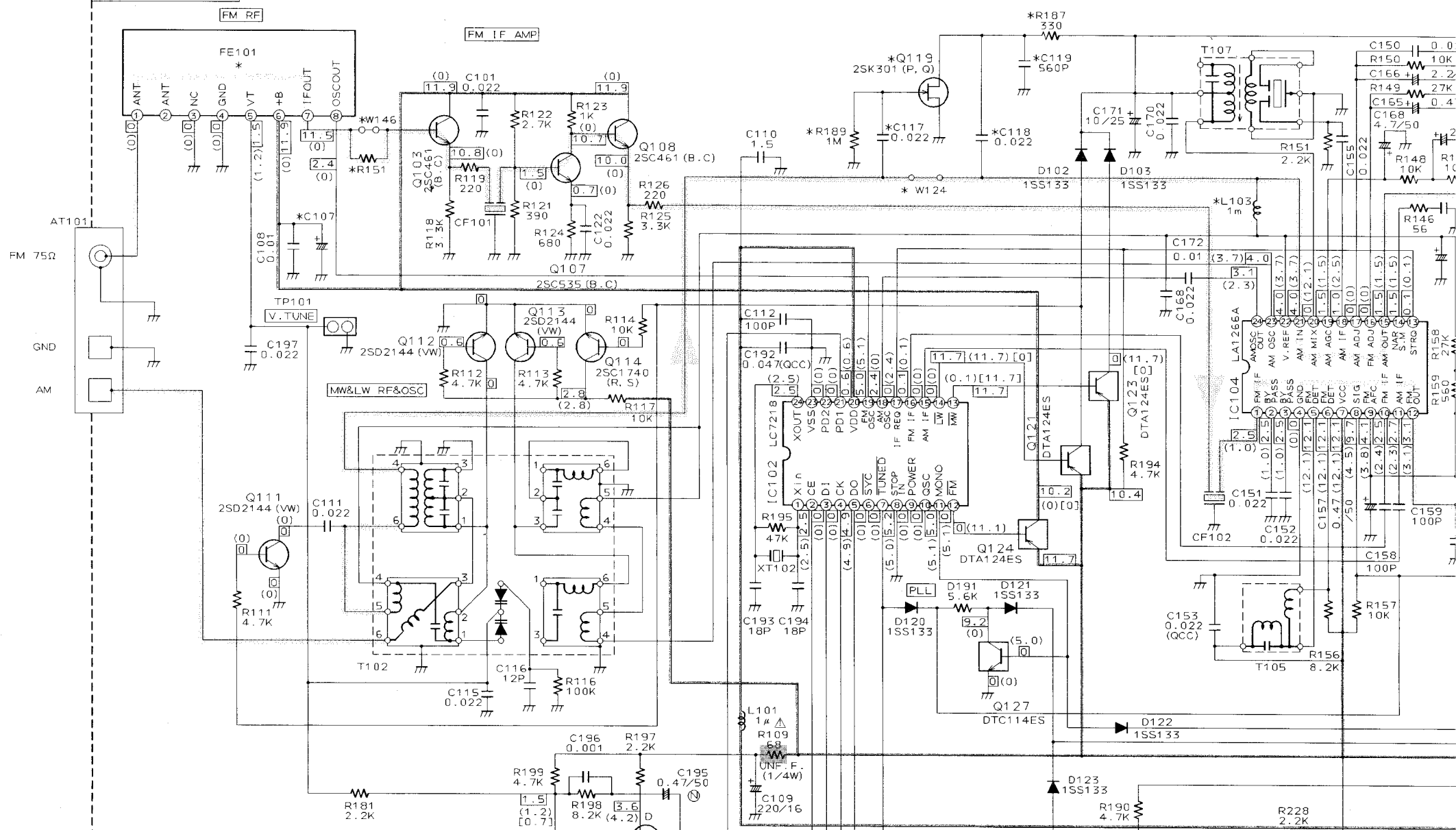
+B

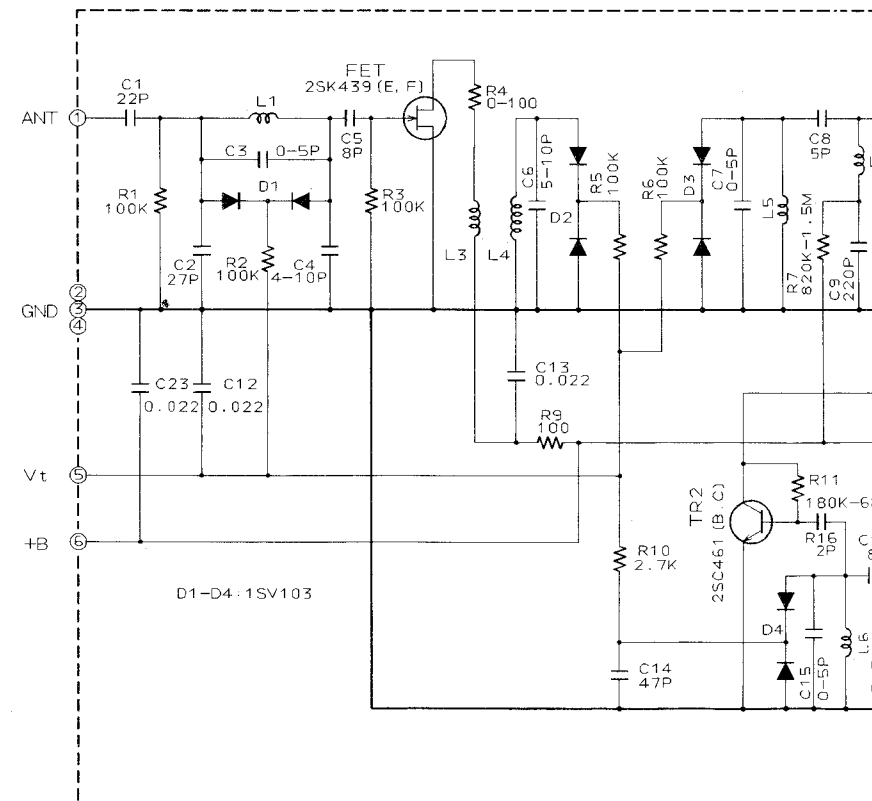
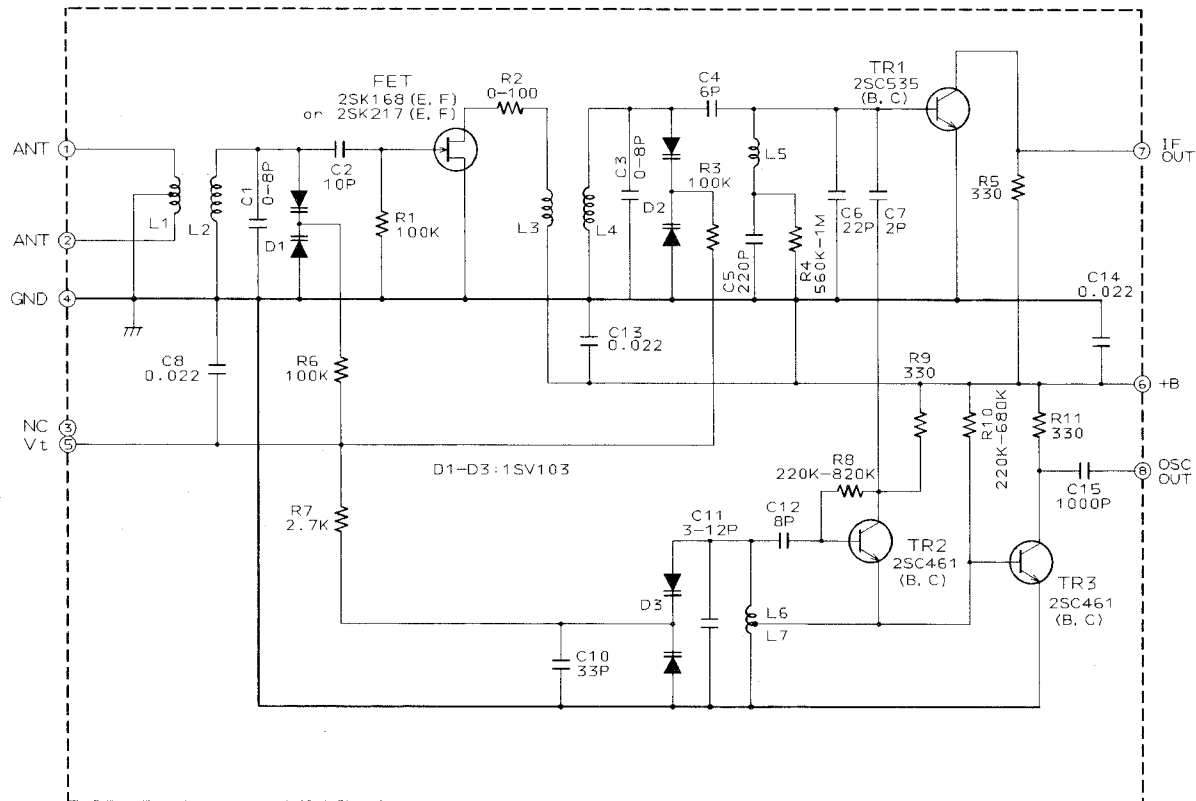
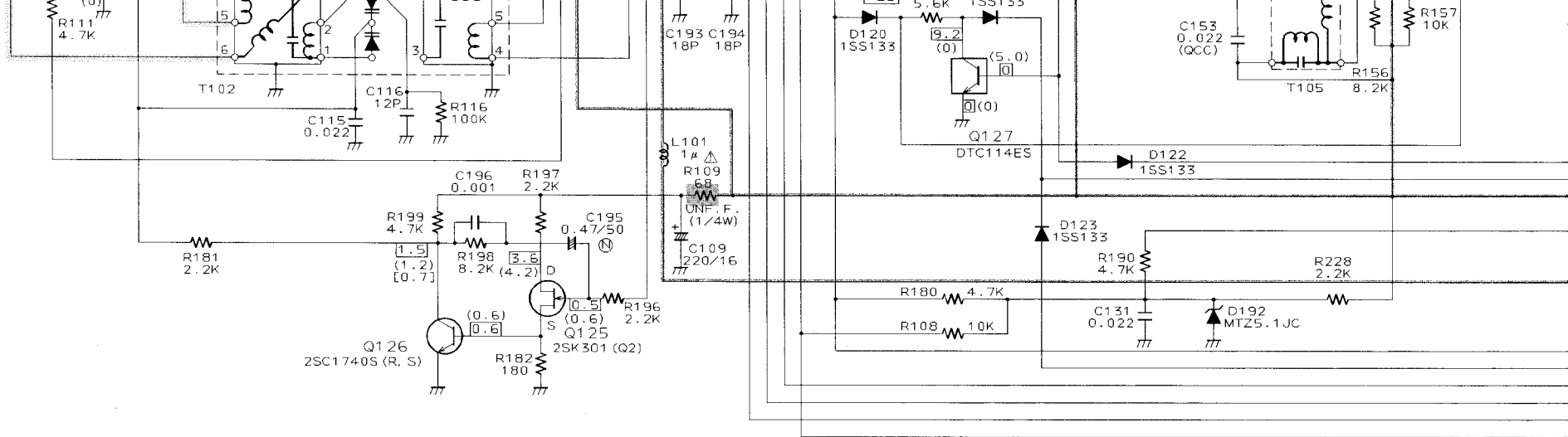
OSC
OUT

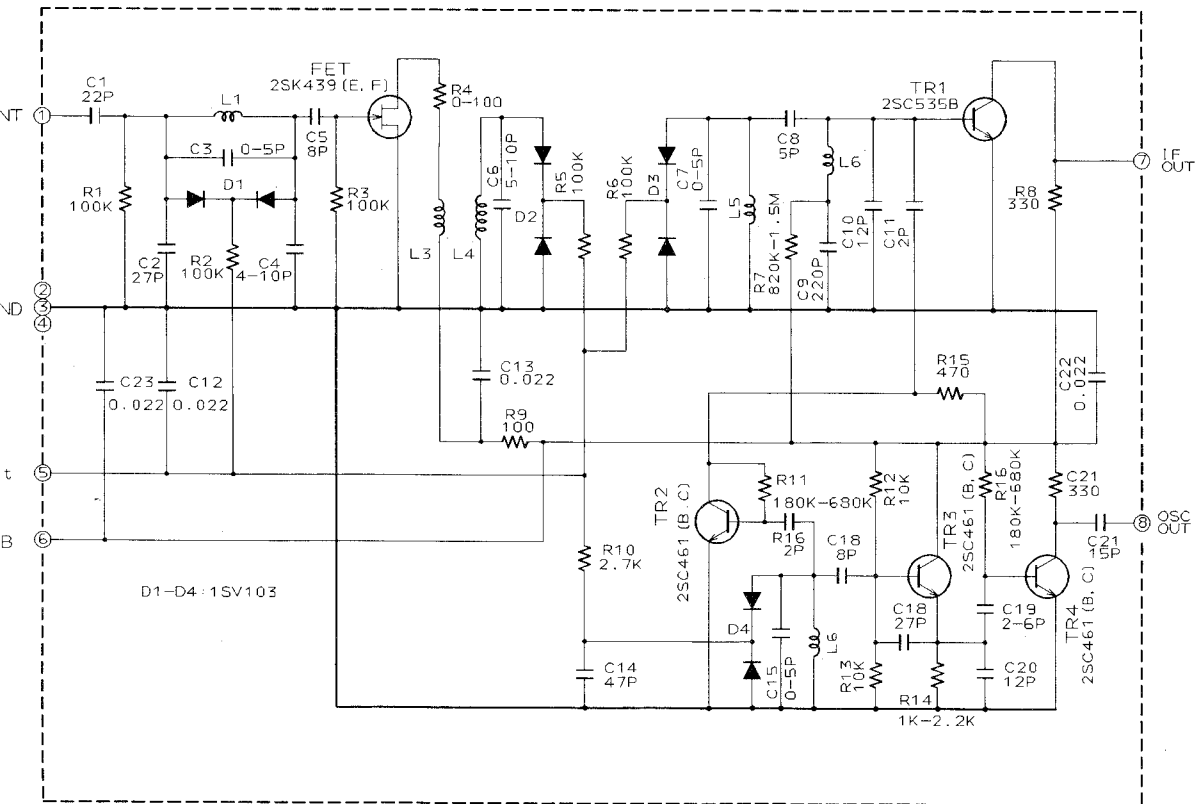
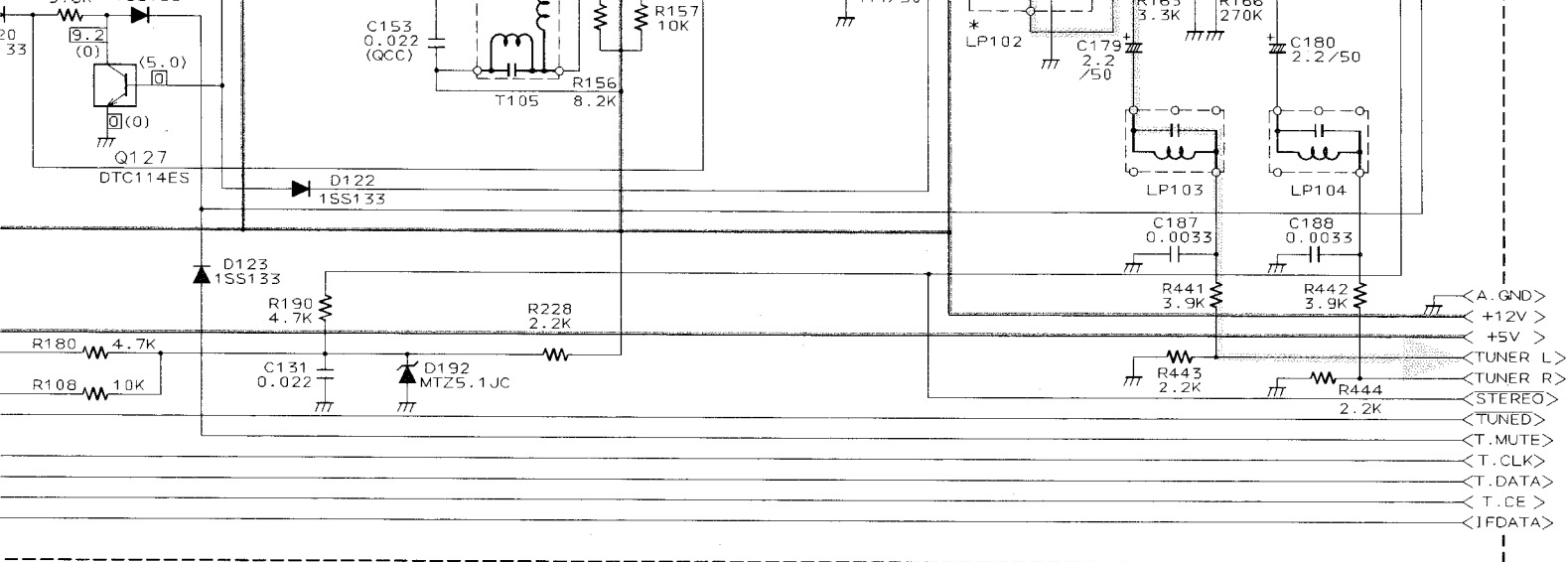
(6) Tuner Section (For EN.EF.BS.G.GI)

FOR EN, EF, BS, G, GI

ENJ-079-1







E

F

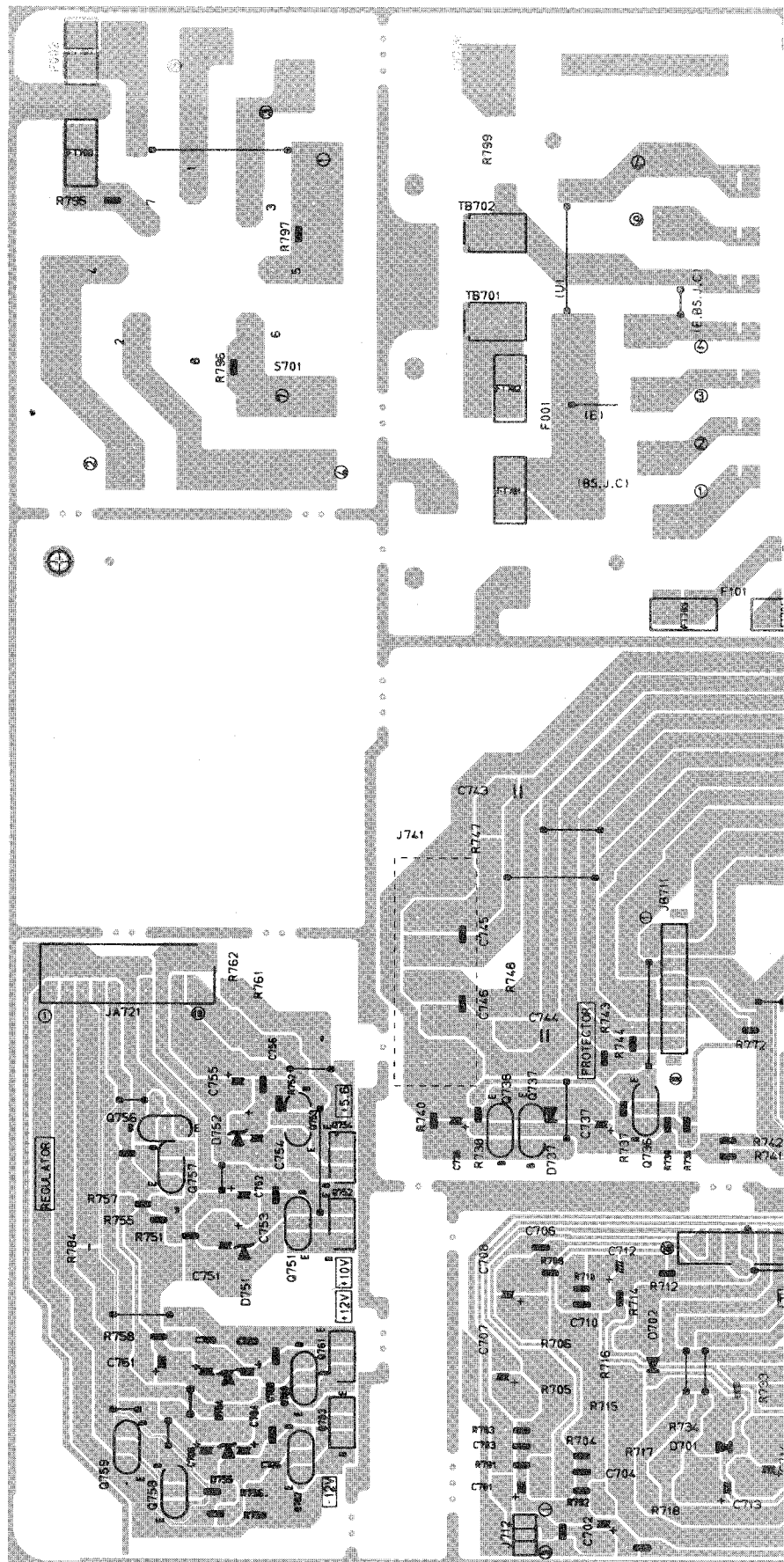
G

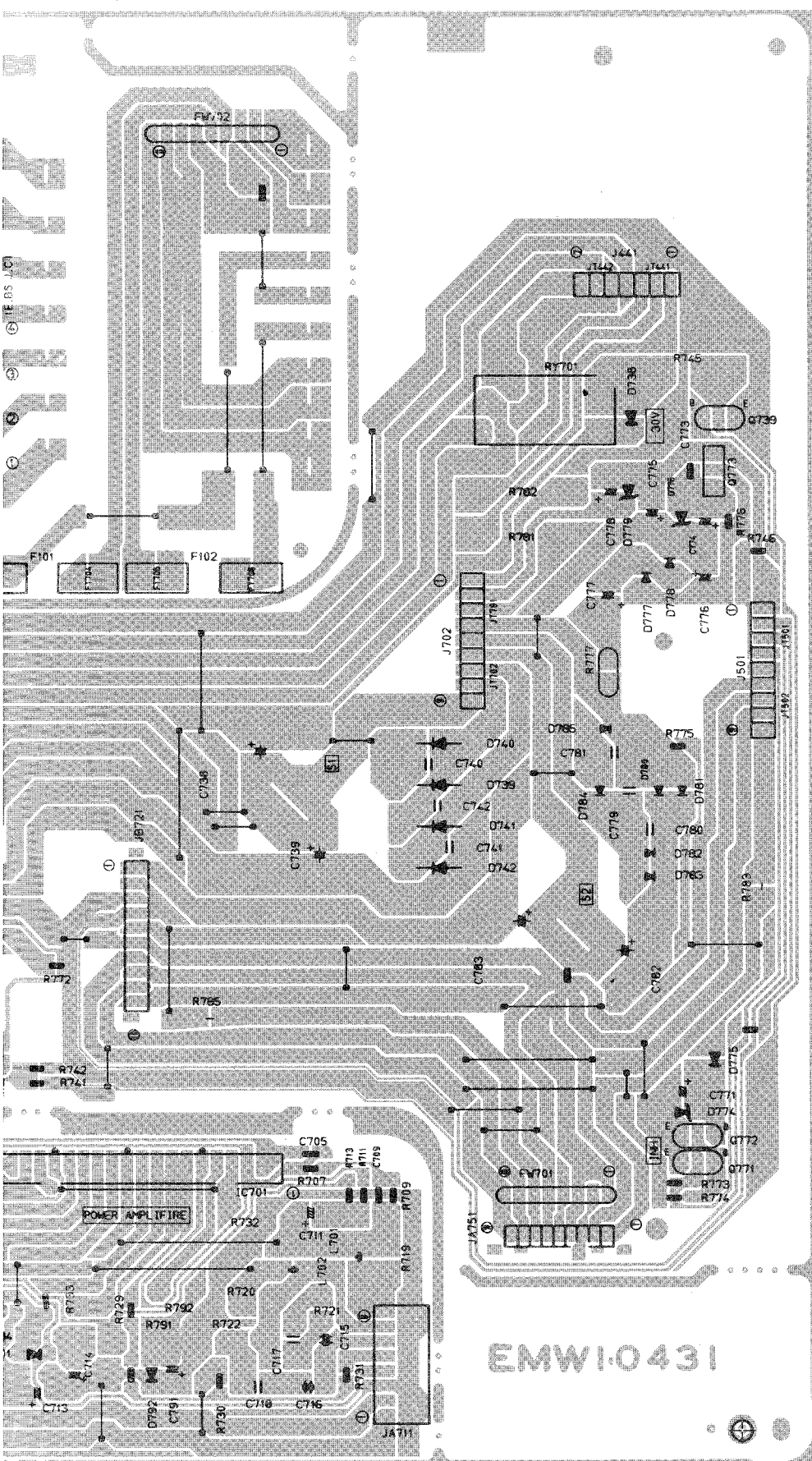
H

I

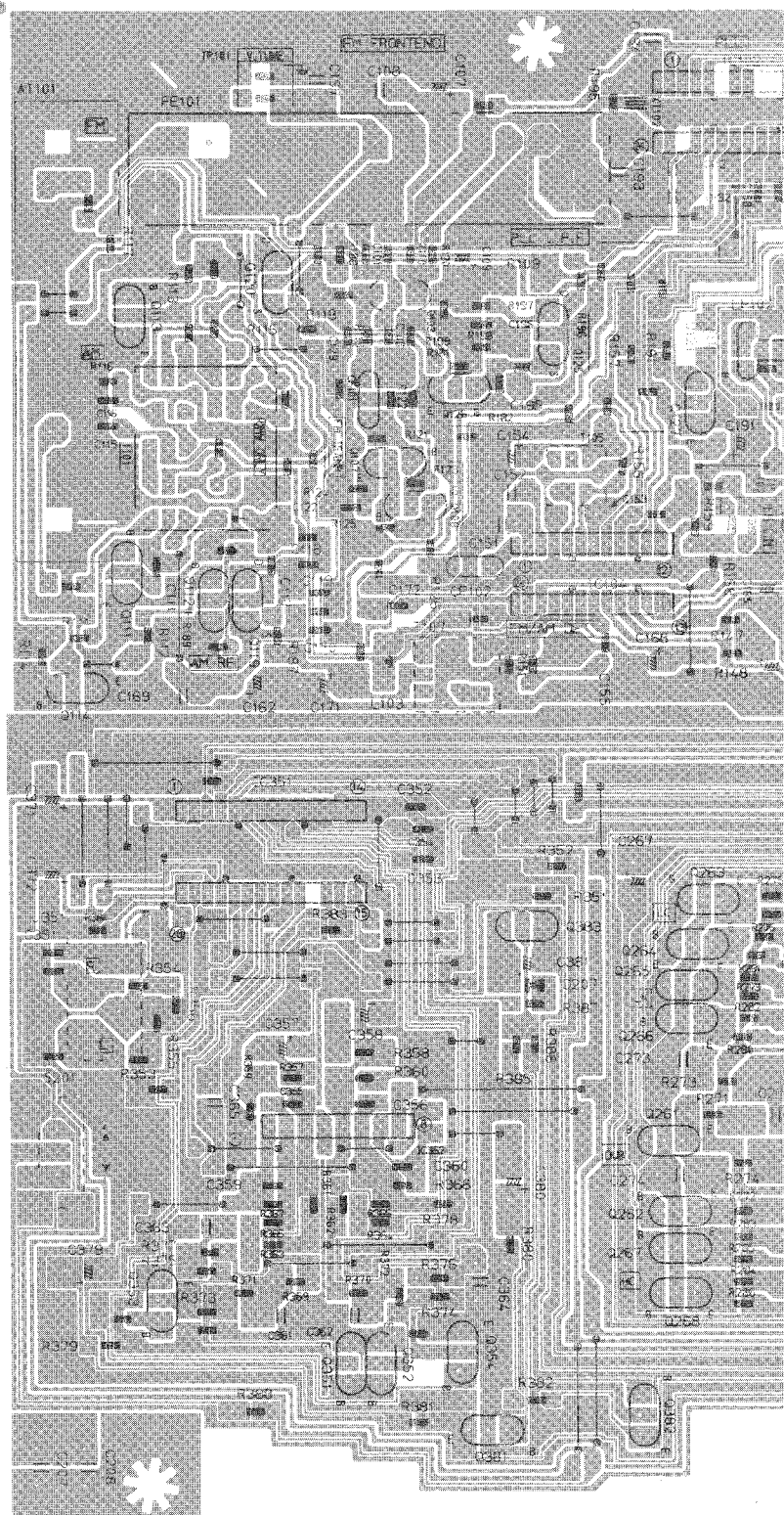
Printed Circuit Board

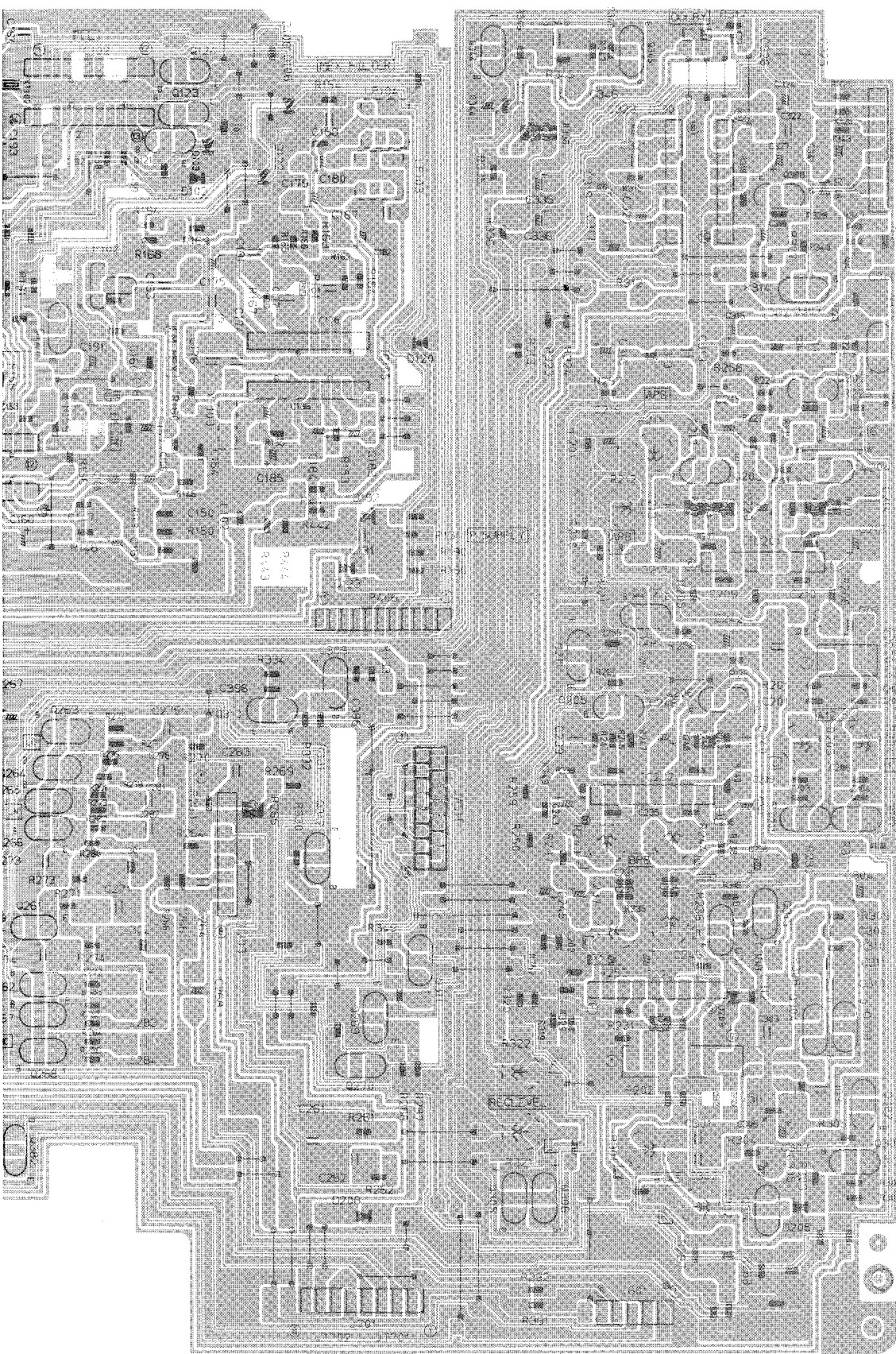
■ Power Supply, Protector & Active bass P.C.Board (ENH-245)



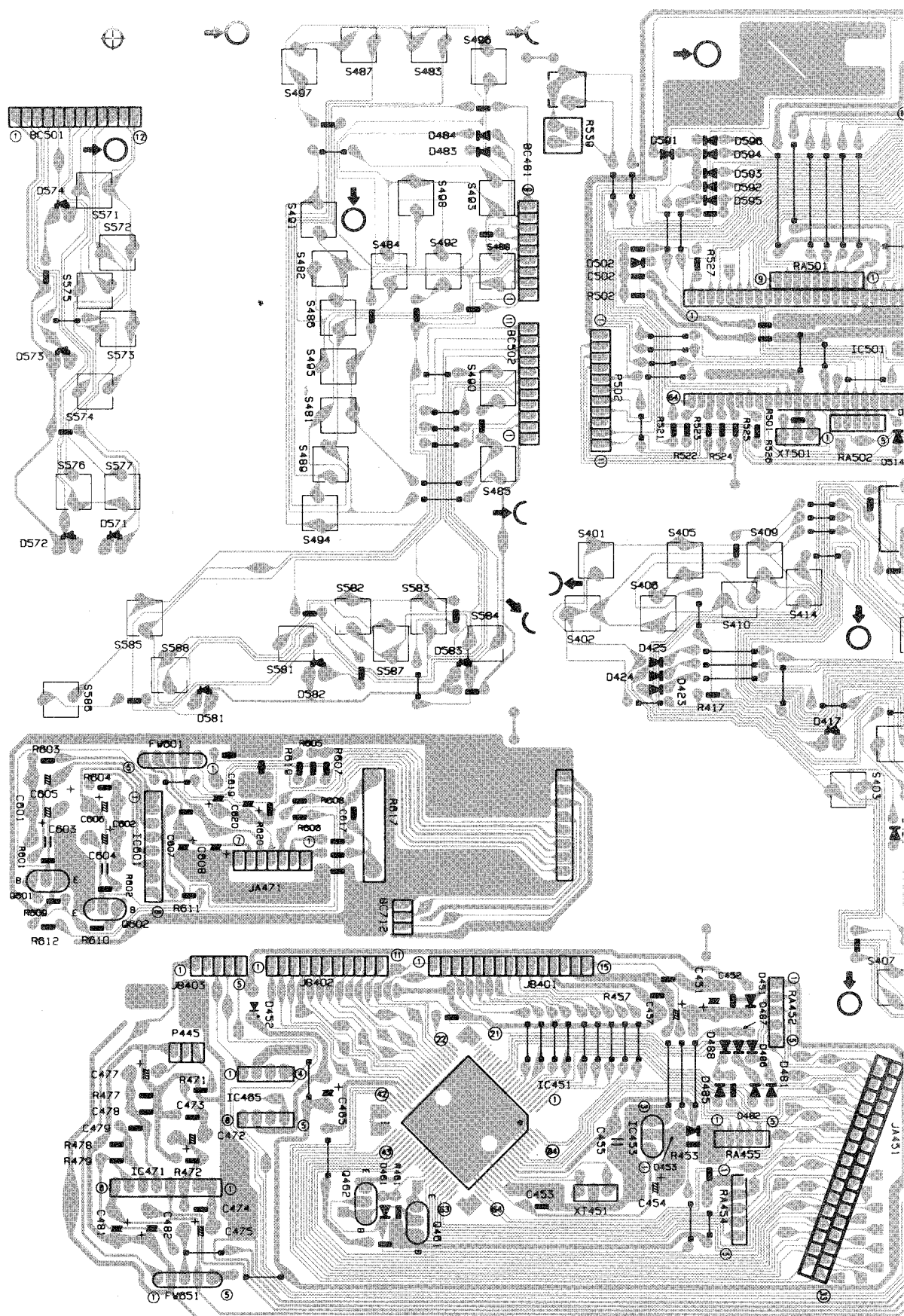


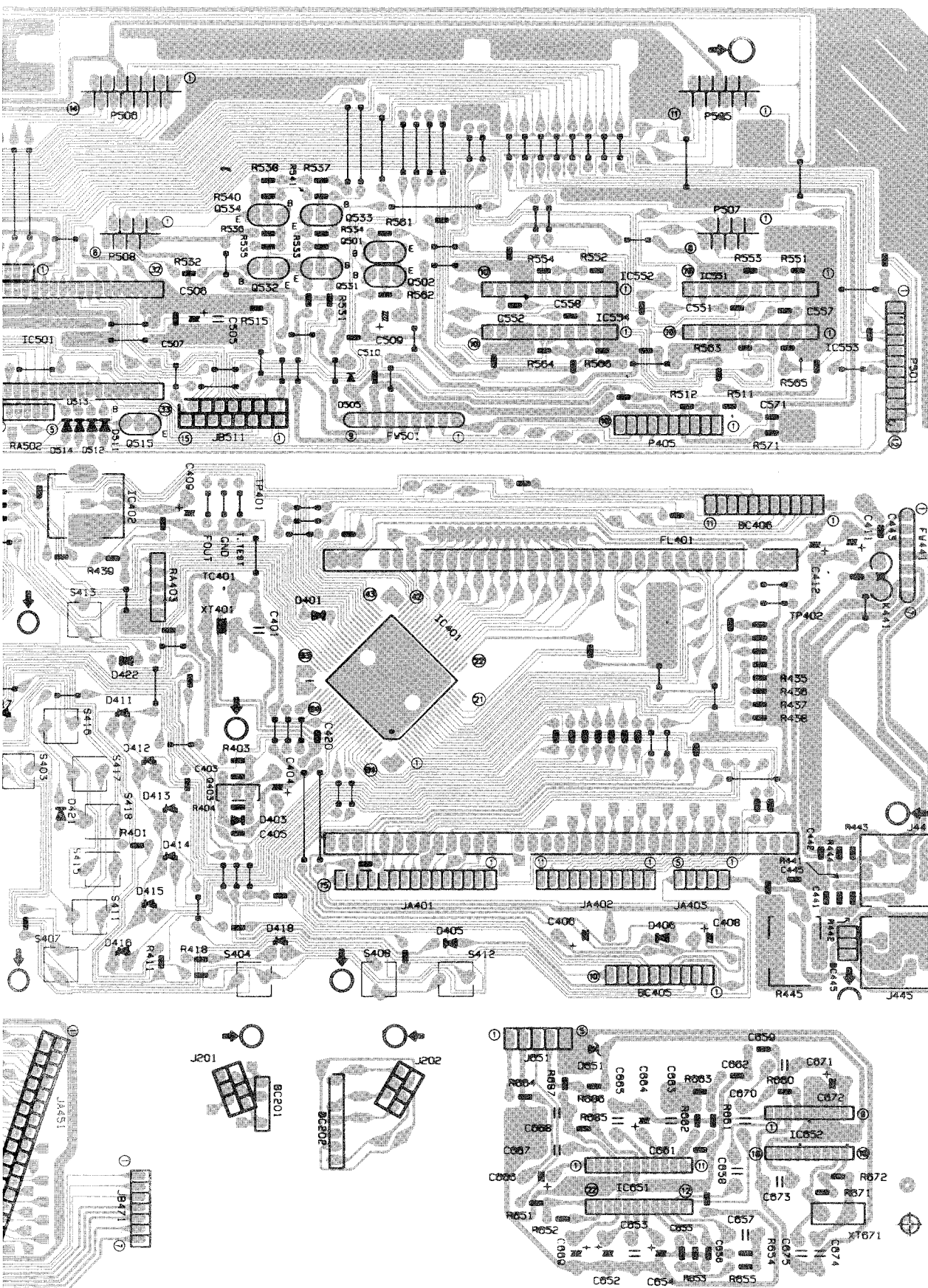
■ Tuner & Deck P.C. Board (ENJ-079)



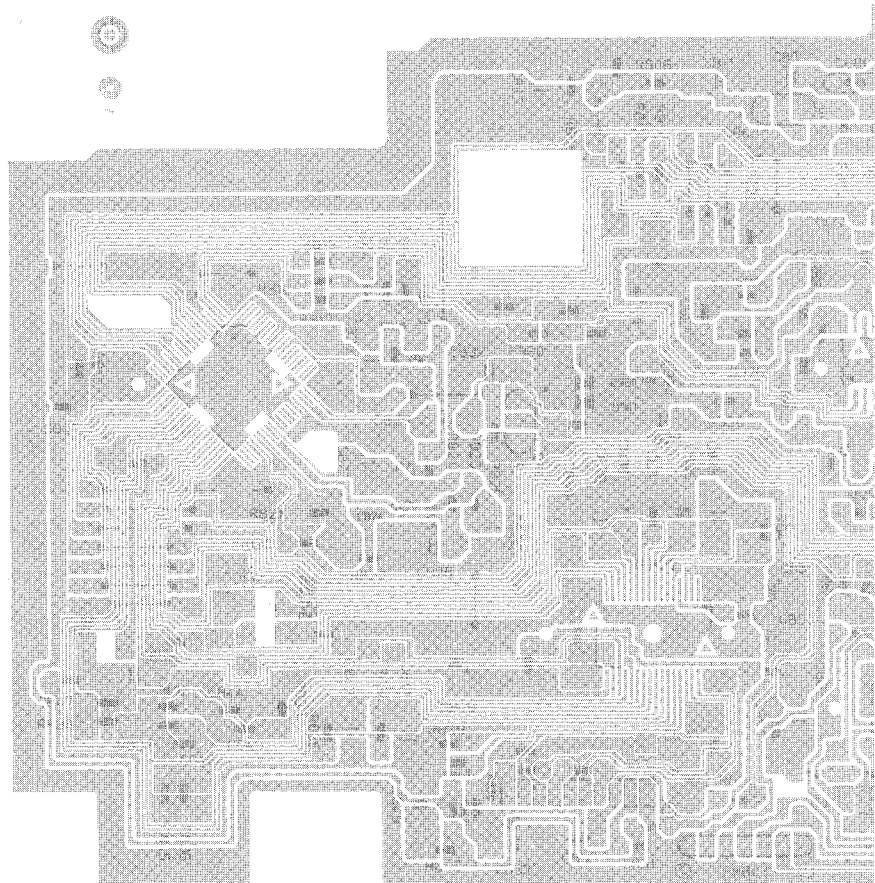


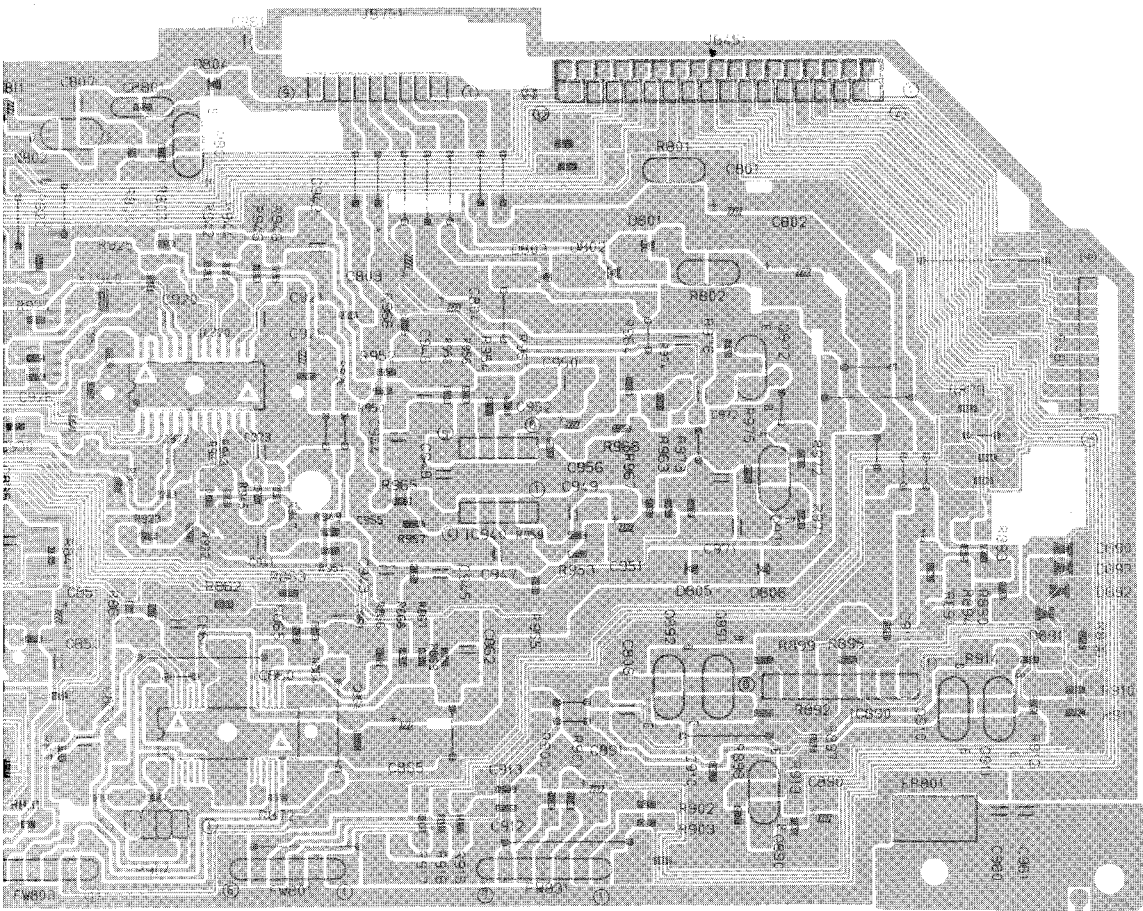
■ Front&Controller P.C.Board (ENC-112)





■CD P.C.Board (ENN-415)





PARTS LIST

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

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■ ENN-415 <input type="checkbox"/> CD PC Board Ass'y	2-20
■ ENJ-079 <input type="checkbox"/> Tuner & Deck PC Board Ass'y	2-23
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General Exploded View and Parts List

Symbol No.

M	1	M	M
---	---	---	---

■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		BS
		FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		C
		FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		EF
		FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		EN
		FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		G
		FFP-CAC33BKE (S)	FRONT PANEL ASSY	1		GI
		FFP-CAC33BKU (S)	FRONT PANEL ASSY	1		U
		FFP-CAC33BKU (S)	FRONT PANEL ASSY	1		US
		FFP-CAC33BKU (S)	FRONT PANEL ASSY	1		UT
		FFP-CAC33BKJ (S)	FRONT PANEL ASSY	1		J
	1-1	E102841-001SS	FRONT PANEL	1		U
		E102841-001SS	FRONT PANEL	1		US
		E102841-001SS	FRONT PANEL	1		UT
		E102841-002SS	FRONT PANEL	1		BS
		E102841-002SS	FRONT PANEL	1		C
		E102841-002SS	FRONT PANEL	1		EF
		E102841-002SS	FRONT PANEL	1		EN
		E102841-002SS	FRONT PANEL	1		G
		E102841-002SS	FRONT PANEL	1		GI
		E102841-002SS	FRONT PANEL	1		J
	1-2	E208147-001SS	WINDOW SCREEN	1		BS
		E208147-001SS	WINDOW SCREEN	1		C
		E208147-001SS	WINDOW SCREEN	1		EF
		E208147-001SS	WINDOW SCREEN	1		EN
		E208147-001SS	WINDOW SCREEN	1		G
		E208147-001SS	WINDOW SCREEN	1		GI
		E208147-001SS	WINDOW SCREEN	1		U
		E208147-001SS	WINDOW SCREEN	1		US
		E208147-001SS	WINDOW SCREEN	1		UT
		E208147-002SS	WINDOW SCREEN	1		J
	1-3	E69777-003	REFLECTION PLATE	2		
	1-4	E70561-260SS	FL SCREEN	1		
	1-5	E406971-001SS	JVC MARK	1		
	2	E207966-002SA	CASSETTE LID ASSY	1	DECK A	
	2-1	E207966-002	CASSETTE LID	1	DECK A	
	2-2	E406971-001SS	JVC MARK	1	DECK A	
	3	E207969-002	CASSETTE LID ASSY	1	DECK B	
	4	E207972-002	CASS HOLDER	1	DECK A	
	5	E207973-002	CASS HOLDER	1	DECK B	
	6	E406713-001	CASS SPRING	4		
	7	SBSG3008Z	SCREW	7		
	8	SDSF2608Z	SCREW	20		
		SDSF2608Z	SCREW	1		U
		SDSF2608Z	SCREW	1		US
		SDSF2608Z	SCREW	1		UT
	9	E304434-005	DAMPER ASSY	2		
	10	E73534-001	SPRING	1		
	11	E307865-008ST	LID	1		
	12	E72405-001	SPECIAL SCREW	2		
	13	E408061-001SS	INDICATOR	1		
	14	E208133-001SS	PUSH BUTTON ASSY	1		
	15	E308921-001SS	EJECT BUTTON	1	DECK A	
	16	E308922-001SS	EJECT BUTTON	1	DECK B	
	17	E308681-001	EJECT LEVER	1	DECK A	
	18	E308683-002	EJECT GUIDE	1		

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	19	E407798-002	SPRING	1	DECK B	
	20	E308682-001	EJECT LEVER	1		
	21	E407795-001	INDICATOR	1		
	22	E208136-001SS	PUSH BUTTON ASSY	1		
	23	E208131-001SS	PUSH BUTTON	1		
	24	E407431-001SS	REMOTE LENS	1		J C U US
	25	E208128-001SS	PUSH BUTTON	1		
		E208128-001SS	PUSH BUTTON	1		
		E208128-001SS	PUSH BUTTON	1		
		E208128-001SS	PUSH BUTTON	1		
		E208128-001SS	PUSH BUTTON	1		UT BS EF EN G
		E208128-002SS	PUSH BUTTON	1		
		E208128-002SS	PUSH BUTTON	1		
		E208128-002SS	PUSH BUTTON	1		
		E208128-002SS	PUSH BUTTON	1		
	26	E207956-001	P.BUTTON ASSY	1		GI U US
	27	FSXP3012-001	VOLUME KNOB	1		
	28	E407233-003	KNOB	1		
		E407233-003	KNOB	1		
		E407233-003	KNOB	1		
	29	E208158-001SS	FITTING	1		UT
	30	E102846-001SS	METAL COVER	1		
	31	SDSG3008M	SCREW	8		
	32	EWR633K-25TTJ2	FLAT WIRE ASSY	1		
	33	E208139-001SS	HOLDER BRACKET	1		
	34	FSKW4002-001SS	HOLDER SPRING	1		
	35	FSKW4003-001SS	HOLDER SPRING	1		
	36	SPST2604Z	SCREW	4		
	37	SBSF3006Z	SCREW	2		
	38	E407801-002	SPRING	1		
	39	E407802-002	SPRING	1	DECK A	
	40	E407799-001	EJECT SAFTY	1	DECK B	
	41	E407800-001	EJECT SAFTY	1	DECK A	
	42	VKS3655-002	FPC HOLDER	2	DECK B	
	43	-----	CASSETTE MECHANISM ASSY	1	SEE PAGE 2-13	U
	44	EWT021-026	WIRE	1		
	45	SBST3006C	SCREW	4		
	46	SBSF3008C	SCREW	4		
	47	SBSG3006N	SCREW	1		
		SBSG3006N	SCREW	1	REAR FOOT SEE PAGE 2-9	US UT
		SBSG3006N	SCREW	1		
	48	E102843-001SS	CHASSIS BASE	1		
	49	E75896-006	FELT SPACER	2		
	50	-----	CD CHANGER MECHANISM ASSY	2		
	51	SBST3006Z	SCREW	2		BS C EF EN
	52	E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		G GI U US UT
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		
		E406507-001	CAUTION LABEL	1		

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	53	E102851-001SS	TRANS CHASSIS	1		
	54	GBSG3008Z	SCREW	1		
	55	E208164-001SS	SIDE BRACKET	1		
	56	E407469-001SS	WIRE CLAMP	1		
⚠	57	ETP1070-33EAJBS	POWER TRANSFORMER	1	T001	BS
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1	T001	EF
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1	T001	EN
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1	T001	G
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1	T001	GI
⚠		ETP1070-33AJ	POWER TRANSFORMER	1	T001	C
⚠		ETP1070-33AJ	POWER TRANSFORMER	1	T001	J
⚠		ETP1070-33FAJ	POWER TRANSFORMER	1	T001	U
⚠		ETP1070-33FAJ	POWER TRANSFORMER	1	T001	US
⚠		ETP1070-33FAJ	POWER TRANSFORMER	1	T001	UT
	58	E65389-004	SPECIAL SCREW	4		
⚠	59	QMF51E2-1R2J1BS	FUSE	2	F101, F102 (T1.25A/250V)	BS
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	EF
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	EN
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	G
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	GI
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	U
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	US
⚠		QMF51E2-1R25	FUSE	2	F101, F102 (T1.25A/250V)	UT
⚠		QMF0007-1R6J1	FUSE	2	F101, F102 (1.6A/125V)	J
⚠		QMF0007-1R6J1	FUSE	2	F101, F102 (1.6A/125V)	C
⚠	60	QMF51E2-1R0J1BS	FUSE	1	F001 (T1A/250V)	BS
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1A/250V)	EF
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1A/250V)	EN
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1A/250V)	G
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1A/250V)	GI
⚠		QMF51E2-2R0J1	FUSE	1	F001 (T2A/250V)	U
⚠		QMF51E2-2R0J1	FUSE	1	F001 (T2A/250V)	US
⚠		QMF51E2-2R0J1	FUSE	1	F001 (T2A/250V)	UT
⚠		QMF0007-2R0J1	FUSE	1	F001 (2A/125V)	C
⚠		QMF0007-2R0J1	FUSE	1	F001 (2A/125V)	J
	61	SBSG3014M	SCREW	6		
	62	E406969-221	LEAF SPRING	1		
	63	E208159-001SS	HEAT SINK	1		
	64	E406084-004	FASTENER	1		
	65	EWR615K-20TTJ2	FLAT WIRE ASSY	1		
	66	E48729-008	PLASTIC RIVET	1		
	67	E309039-002SS	SHIELD PLATE	1		
⚠	68	QMF51E2-1R0J1	FUSE	1	F002 (T1A/250V)	U
⚠		QMF51E2-1R0J1	FUSE	1	F002 (T1A/250V)	US
⚠		QMF51E2-1R0J1	FUSE	1	F002 (T1A/250V)	UT
	69	E102844-001SS	REAR PANEL	1		J
		E102844-002SS	REAR PANEL	1		C
		E102844-003SS	REAR PANEL	1		U
		E102844-003SS	REAR PANEL	1		US
		E102844-003SS	REAR PANEL	1		UT
		E102844-004SS	REAR PANEL	1		EF
		E102844-004SS	REAR PANEL	1		EN
		E102844-004SS	REAR PANEL	1		G
		E102844-004SS	REAR PANEL	1		GI
		E102844-005SS	REAR PANEL	1		BS

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	70	E73273-003	SPECIAL SCREW	10		
		E73273-003	SPECIAL SCREW	2		U
		E73273-003	SPECIAL SCREW	2		US
		E73273-003	SPECIAL SCREW	2		UT
⚠	71	QMP5530-0085BS	POWER CORD	1		BS
⚠		QMP3900-200	POWER CORD	1		EF
⚠		QMP3900-200	POWER CORD	1		EN
⚠		QMP3900-200	POWER CORD	1		G
⚠		QMP3900-200	POWER CORD	1		GI
⚠		QMP3900-200	POWER CORD	1		US
⚠		QMP1D00-200H	POWER CORD	1		C
⚠		QMP1D00-200H	POWER CORD	1		J
⚠		QMP7520-200	POWER CORD	1		U
⚠		QMP7520-200	POWER CORD	1		UT
⚠	72	QHS3876-162BS	CORD STOPPER	1		BS
⚠		QHS3876-162	CORD STOPPER	1		C
⚠		QHS3876-162	CORD STOPPER	1		EF
⚠		QHS3876-162	CORD STOPPER	1		EN
⚠		QHS3876-162	CORD STOPPER	1		G
⚠		QHS3876-162	CORD STOPPER	1		GI
⚠		QHS3876-162	CORD STOPPER	1		J
⚠		QHS3876-162	CORD STOPPER	1		U
⚠		QHS3876-162	CORD STOPPER	1		US
⚠		QHS3876-162	CORD STOPPER	1		UT
	73	SBSG3008Z	SCREW	1		BS
		SBSG3008Z	SCREW	1		C
		SBSG3008Z	SCREW	1		EF
		SBSG3008Z	SCREW	1		EN
		SBSG3008Z	SCREW	1		J
		SBSG3008Z	SCREW	1		U
		SBSG3008Z	SCREW	1		US
		SBSG3008Z	SCREW	1		UT
	74	E73265-003	SPECIAL SCREW	1		G
		E73265-003	SPECIAL SCREW	1		GI
		E73265-003	SPECIAL SCREW	1		
	—	E61029-005	NUMBER LABEL	1		BS
		E61029-005	NUMBER LABEL	1		C
		E61029-005	NUMBER LABEL	1		EF
		E61029-005	NUMBER LABEL	1		EN
		E61029-005	NUMBER LABEL	1		G
		E61029-005	NUMBER LABEL	1		GI
		E61029-005	NUMBER LABEL	1		U
		E61029-005	NUMBER LABEL	1		US
		E61029-005	NUMBER LABEL	1		UT
		E307570-001	NUMBER LABEL	1		J
	—	E70891-001	CLASS 1 LABEL	1		BS
		E70891-001	CLASS 1 LABEL	1		EF
		E70891-001	CLASS 1 LABEL	1		EN
		E70891-001	CLASS 1 LABEL	1		G
		E70891-001	CLASS 1 LABEL	1		GI
		E70891-001	CLASS 1 LABEL	1		U
		E70891-001	CLASS 1 LABEL	1		US
		E70891-001	CLASS 1 LABEL	1		UT
	—	E75804-001	CAUTION LABEL	1		C
	—	E45858-002	CSA LABEL	1		C

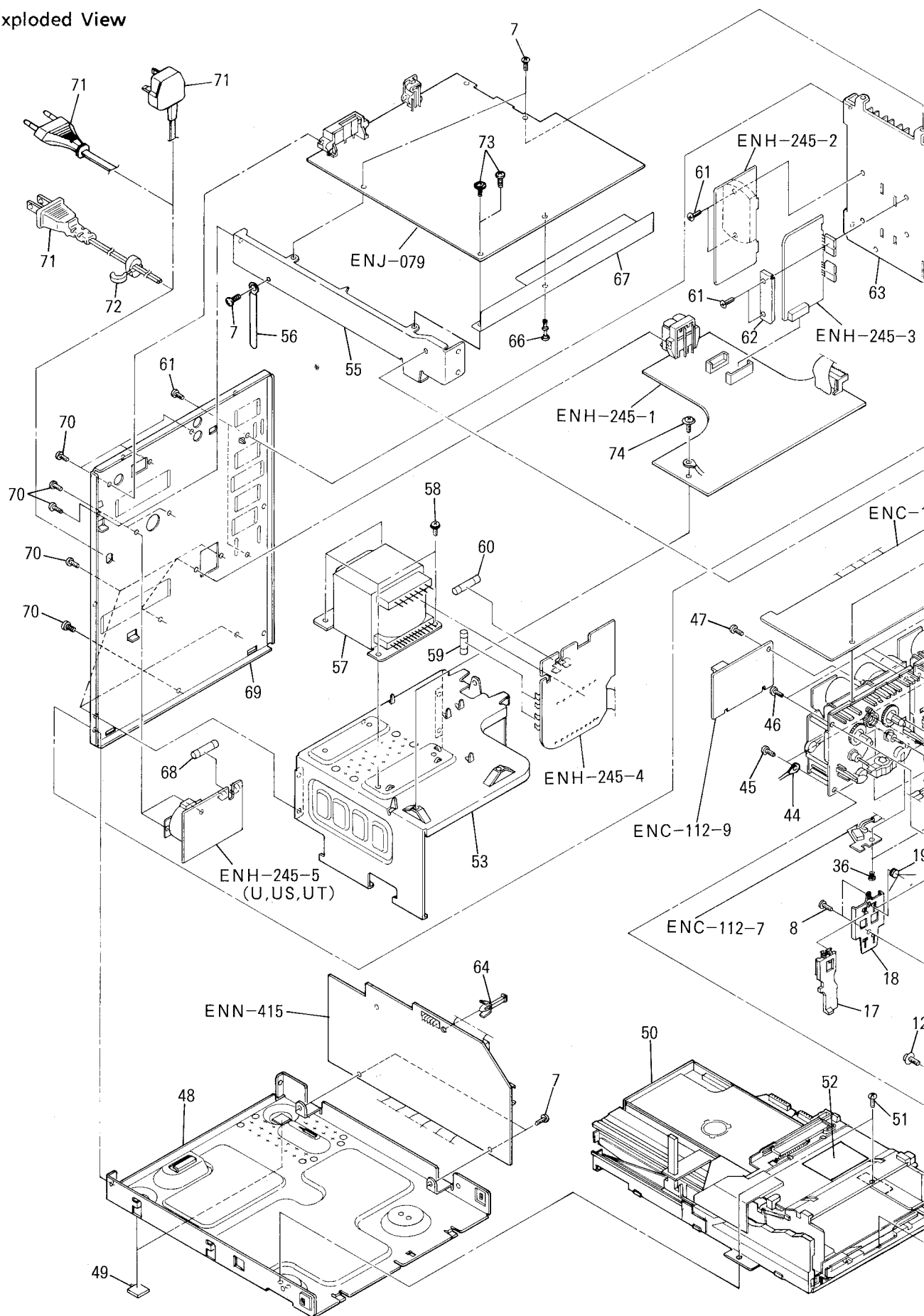
⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	—	QZL1031-101	SRV LABEL	1		EF
	—	E70027-001	APPROVAL LABEL	1		EN
	—	E75803-001	FUSE CAUTION LABEL	1		J
	—	E308522-039	RATING LABEL	1		UT

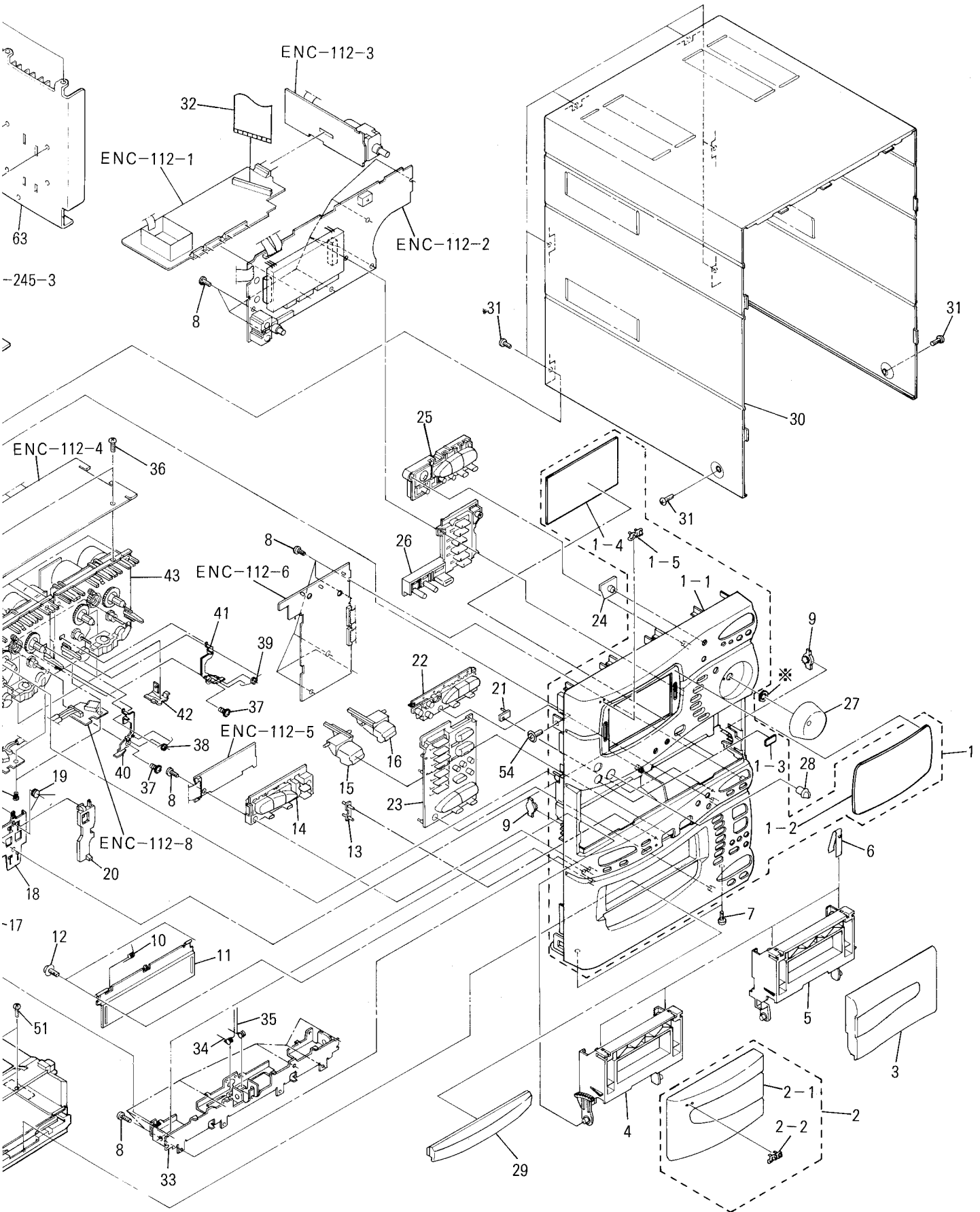
⚠ SAFETY PARTS

The Marks for Designated Areas

J	the U.S.A.	C	Canada	BS	the U.K.	EN	Scandinavia
EF	Continental Europe	G	Germany	GI	Italy	US	Singapore
UT	Taiwan	U	Universal Type	No mark indicates all areas.			

■ Exploded View



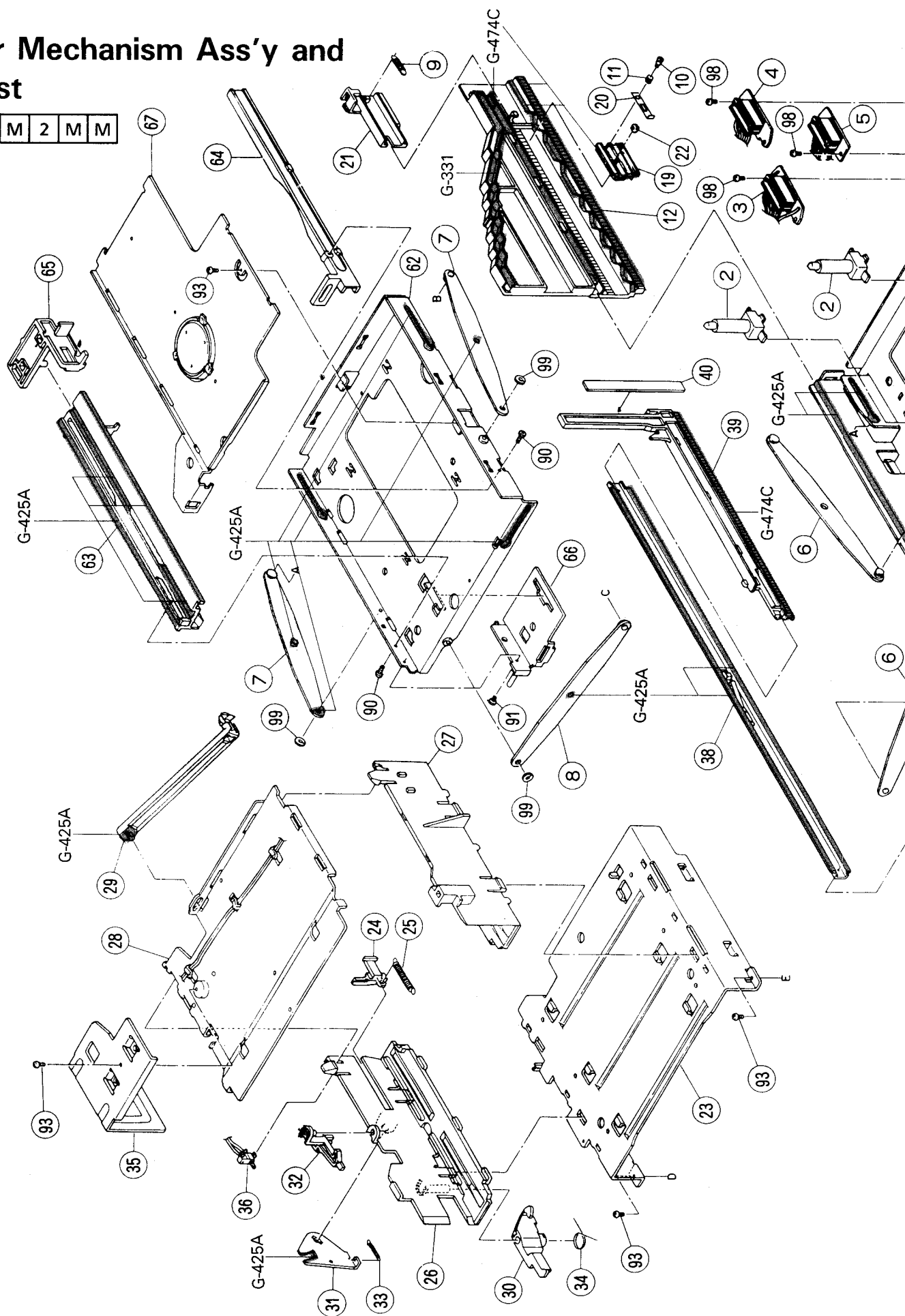


※mark indicates attached part.

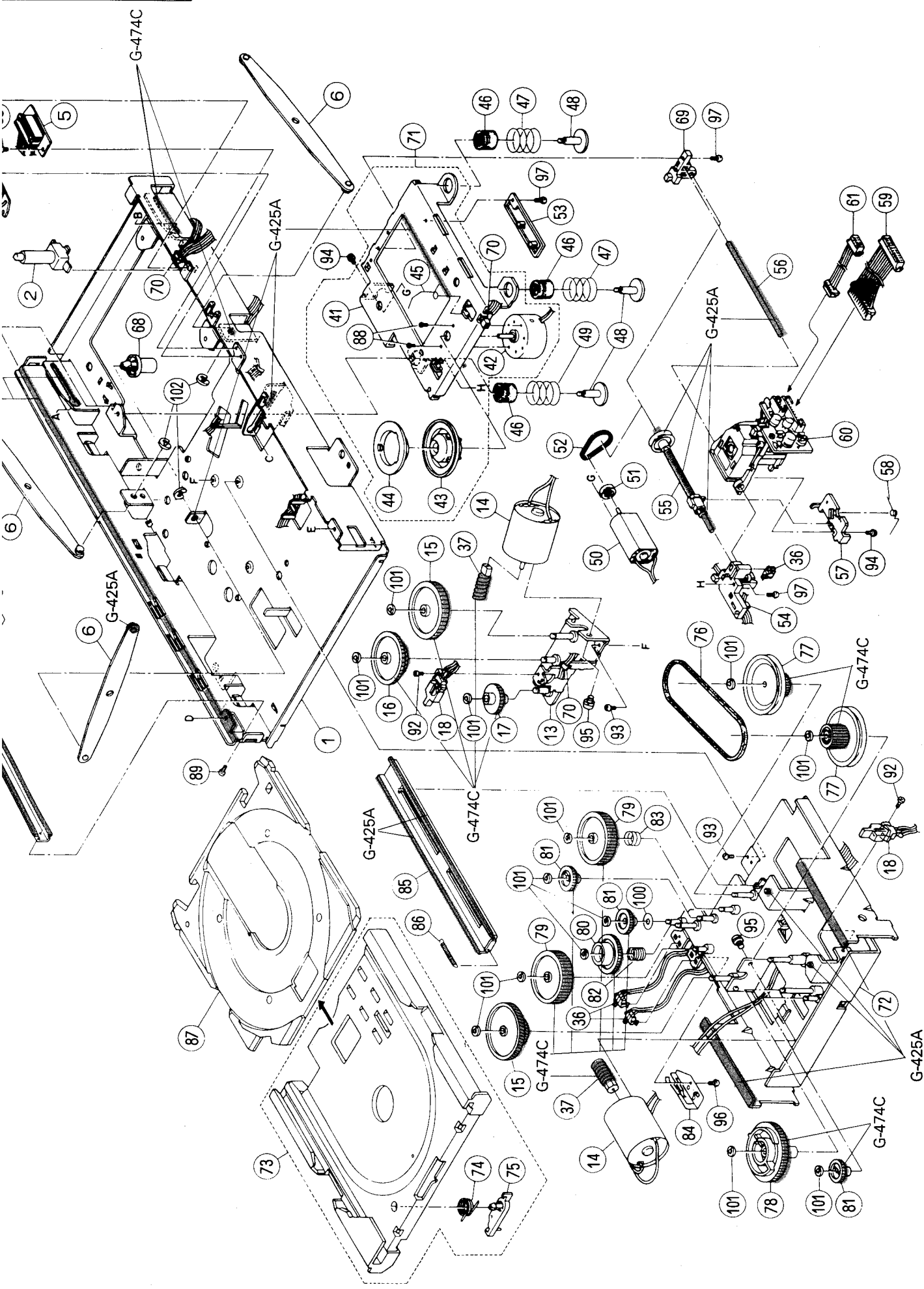
Changer Mechanism Ass'y and Parts List

Symbol No.

M	2	M	M
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Grease G-425A : EBS0006-018B
G-474C : EBS0006-019B



■ Parts List (Changer Mechanism Assy)

△	Item	Part Number	Part Name	Q'ty	Description	Area
	1	30100101T	CHASSIS BASE	1		
	2	30050115T	GUIDE BOSS	2		
	3	300501302T	PRINTED WIRING BOARD ASSY	1		
	4	301001301T	PRINTED WIRING BOARD ASSY	1		
	5	300501304T	PRINTED WIRING BOARD ASSY	1		
	6	301002502T	ELEVATOR ARM ASSY	3		
	7	301002503T	ELEVATOR ARM ASSY	2		
	8	301002504T	FRONT ARM ASSY	1		
	9	30100221T	LEVER SPRING	1		
	10	30100222T	SCREW	1		
	11	30100223T	SPRING	1		
	12	30100202T	LIFT CAM	1		
	13	301002501T	MOTOR BRACKET *	1		
	14	RF-370C-15370	DC MOTOR	2		
	15	30100210T	ELEVATOR GEAR	2		
	16	30100211T	ELEVATOR GEAR	1		
	17	30100212T	ELEVATOR GEAR	1		
	18	640101167T	LEAF SWITCH	1		
	19	30100204T	CAM SLIDER	1		
	20	30100205T	SPRING PLATE	1		
	21	30100206T	CAM LEVER	1		
	22	30100207T	CAM ROLLER	1		
	23	30100301T	GUIDE BASE	1		
	24	30100311T	SLIDE LEVER	1		
	25	30100312T	LEVER SPRING	1		
	26	301003703T	GUIDE ARM	1	LEFT	
	27	30050303T	GUIDE ARM	1	RIGHT	
	28	30100305T	GUIDE COVER	1		
	29	30100309T → 30050309T	LEVER SPRING '96.3.27 747249	1		
	30	30100310T	RELEASE LEVER	1		
	31	30100308T	KICK LEVER	1		
	32	30100307T	LOCK LEVER	1		
	33	30100309T	LEVER SPRING	1		
	34	30100313T	LEVER SPRING	1		
	35	301003706T	STABILIZER	1		
	36	64020403T	PUSH SWITCH	4		
	37	30050508T	ELEVATOR GEAR	2		
	38	301005501T	UPPER RAIL	1		
	39	30100504T	SLIDE GEAR	1		
	40	30100505T	GEAR PLATE	1		
	41	30050738T	TURN TABLE BASE	1		
	42	60020705T	DC MOTOR	1		
	43	30050729T	TURNTABLE	1		
	44	30050713T	LOCK RING	1		
	45	30050742T	SPRING	1		
	46	30050721T	FLOATING RUBBER	3		
	47	30050715T	FLOATING SPRING	2		
	48	30050743T	SCREW	3		
	49	30050740T	SPRING	1		
	50	60021102T	DC MOTOR	1		
	51	30050709T	MOTOR PULLEY	1		
	52	30050714T	CAPSTAN BELT	1		
	53	30050737T	ARM SUPPORT	1		
	54	30050724T	SHAFT HOLDER	1		
	55	300507303T	SCREW	1		

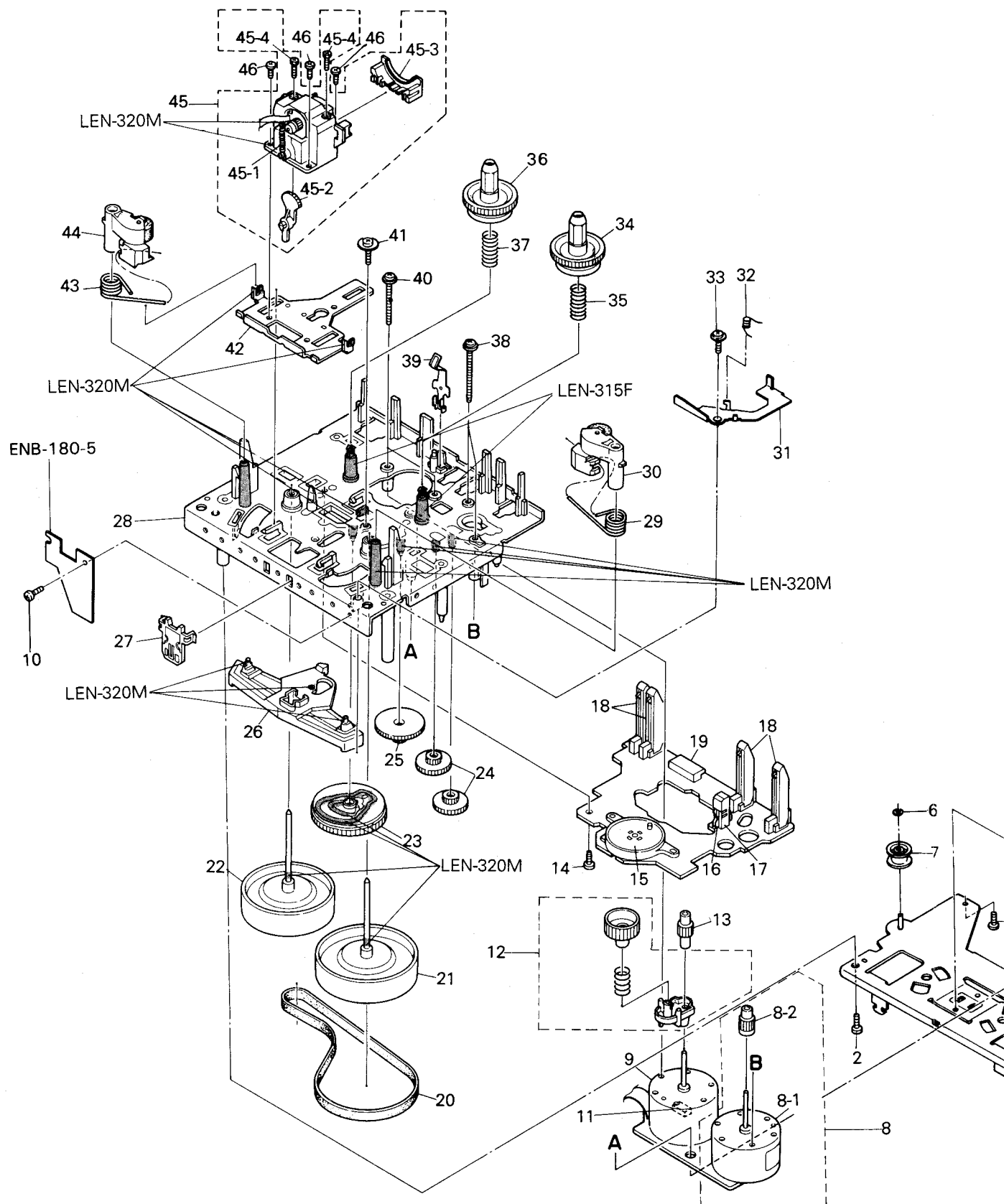
M M

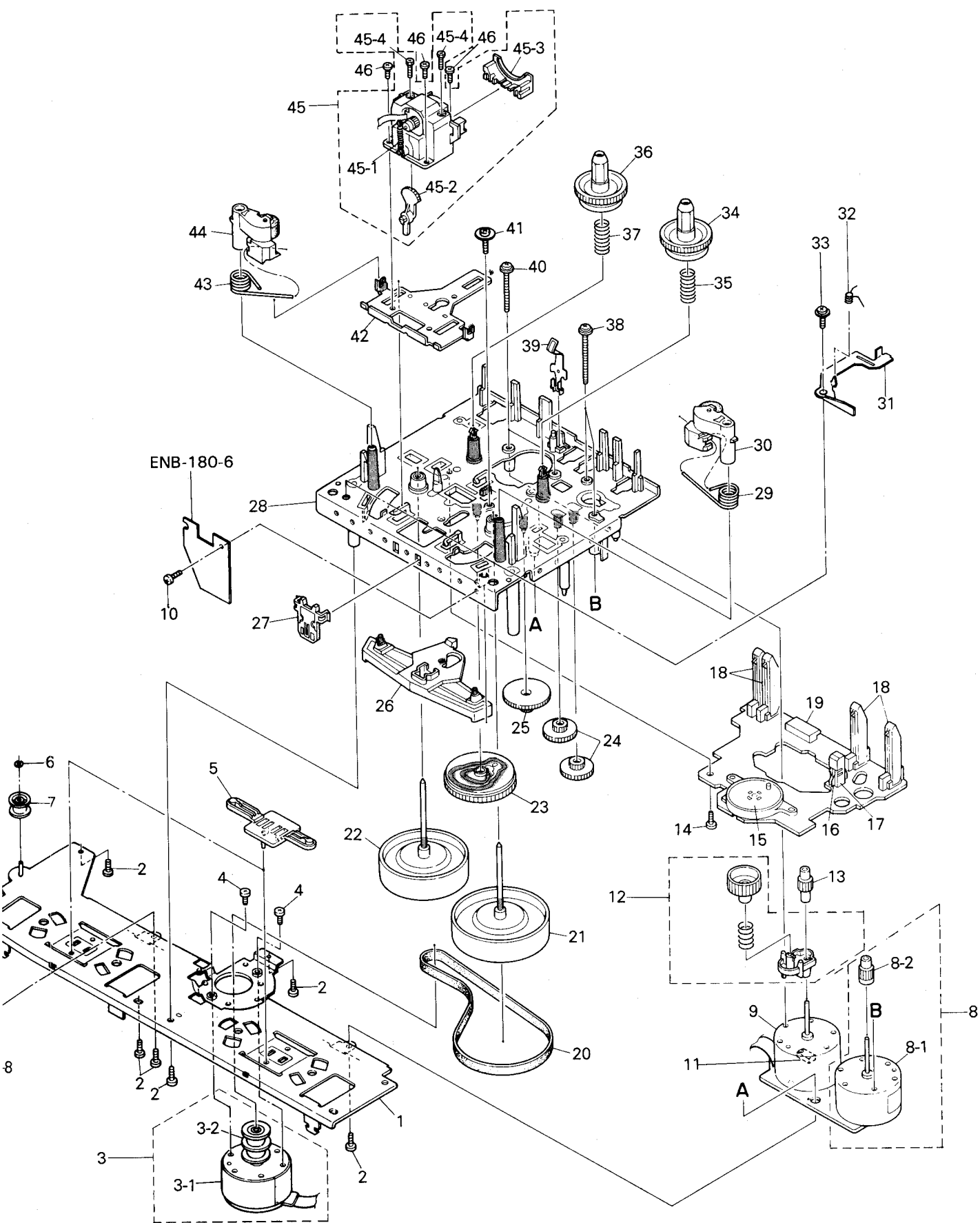
ea

Item	Part Number	Part Name	Q'ty	Description	Area
56	30050728T	DRIVE SHAFT	1		
57	30050735T	LOCK HOLDER	1		
58	30050739T	SPRING	1		
59	EWS26A-B428	SOCKET WIRE ASSY	1		
60	OPTIMA-5S	OPTICAL PICK-UP	1		
61	EWS264-B434	SOCKET WIRE ASSY	1	4PIN	
62	301008503T	RAIL BASE ASSY	1		
63	30100802T	SLIDE RAIL	1	LEFT	
64	30100803T	SLIDE RAIL	1	RIGHT	
65	30100804T	HOOK LEVER	1		
66	301008502T	LP BRACKET ASSY	1		
67	301008301T	MAGNET HOLDER	1		
68	30050114T	ARM SUPPORT	1		
69	30050725T	JOINT HOLDER	1		
70	12030105T	TIE BAND	4		
71	30050730S	PLUS BASE ASSY	1		
72	301004502T	MOUNT BASE	1		
73	301004301T	RAIL BASE ASSY	1		
74	30100415T	STOPPER SPRING	1		
75	30050416T	STOPPER BASE	1		
76	30100411T	LOADING BELT	1		
77	30100403T	FEED GEAR	2		
78	30100404T	FEED GEAR	1		
79	30100515T	FEED GEAR	2		
80	30100506T	FEED GEAR	1		
81	30100516T	FEED GEAR	3		
82	30100413T	GEAR SPRING	1		
83	30100412T	GEAR SPRING	1		
84	30100414T	ACTUATOR	1		
85	30100409T	SLIDE RAIL	1		
86	30100410T	RAIL SPRING	1		
87	E26554-004	CD TRAY	1		
88	SPSK1722M	SCREW	2		
89	9C0420253T	SCREW	1		
90	9C0820601T	SCREW	1		
91	9C1220301T	SCREW	1		
92	9C0420403T	SCREW	2		
93	9P0420031T	SCREW	6		
94	9P0220031T	SCREW	2		
95	9P0230041T	SCREW	2		
96	9P1120032T	TAPPING SCREW	1		
97	9P0420051T	SCREW	3		
98	9P0420041T	SCREW	3		
99	9W0640040T	WASHER	3		
100	9W0113080T	WASHER	2		
101	9W0250110T	WASHER	14		
102	REE3000X	'E' WASHER	3		

⚠ : Safety Parts

Cassette Mechanism Ass'y and Parts List





■ Parts List (Cassette Mechanism Ass'y)

Symbol No.

M	3	M	M
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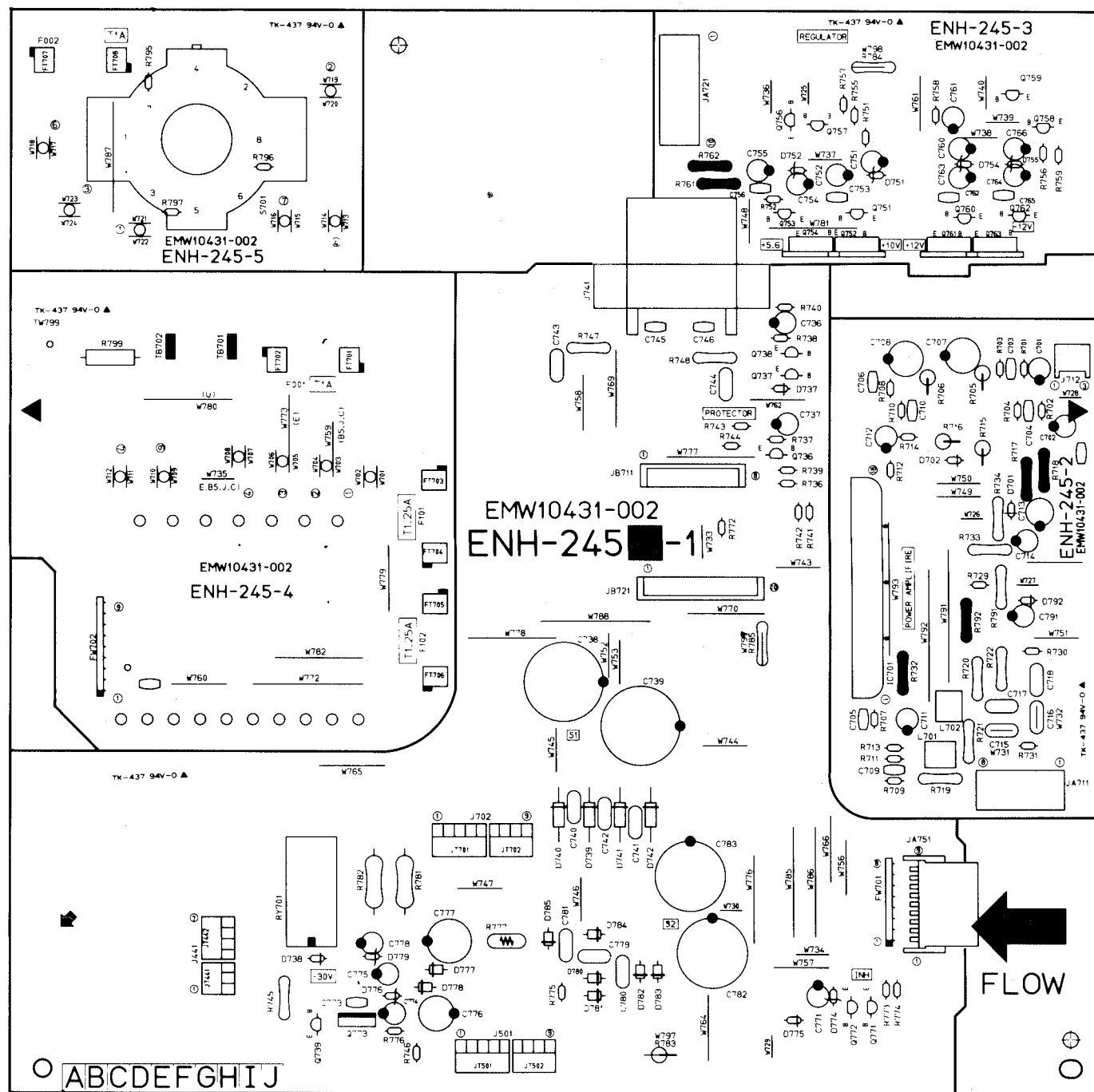
Item	Part Number	Part Name	Q'ty	Description	Areas
1	VKM3775-00A	FM BRACKET	1		
2	SDSF2608Z	SCREW	7		
3	MSI5U2LWA-SA1	DC MOTOR ASSY	1		
3-1	MSI-5U2LWA	DC MOTOR	1		
3-2	VKR4632-004	MOTOR PULLEY	1		
4	SPSP2603Z	SCREW	2		
5	VKS5327-004	PLATE	2		
6	WDL163525-4	WASHER	1		
7	VKR4631-005	IDLER PULLEY	1		
8	MSN5D257A-SA1	DC MOTOR ASSY	2		
8-1	MSN-5D257A	DC MOTOR	2		
8-2	VKS5433-001	MOTOR GEAR	2		
9	MMN-6F4RA38	DC MOTOR	2		
10	SDST2604Z	SCREW	2		
11	VMC0234-R08	CONNECTOR	2		
12	VKS5430-00C	FR ARM	2		
13	VKS5432-001	REEL MOTOR GEAR	2		
14	SDST2612Z	SCREW	2		
15	VKS3616-00A	CAM SWITCH	2		
16	DN6851-HI	HALL I.C.	2		
17	VKS3630-001	I.C. HOLDER	2		
18	VSH1170-001	LEAF SWITCH	7		
19	VMC0234-R11	CONNECTOR	1	A MECHA	
	VMC0234-R14	CONNECTOR	1	B MECHA	
20	VKB3001-061	DRIVE BELT	1	A MECHA	
	VKB3001-062	DRIVE BELT	1	B MECHA	
21	VKF3184-00H	FLYWHEEL	2	RIGHT	
22	VKF3186-00H	FLYWHEEL	2	LEFT	
23	VKS2224-001	CONTROL CAM	2		
24	VKS5454-001	ACTUATER GEAR (2)	4		
25	VKS5455-001	ACTUATER GEAR (3)	2		
26	VKS3627-001	PINCHROLLER LEVER	2		
27	VKS3655-002	F.P.C. HOLDER	2		
28	VKS1134-00B	CHASSIS BASE	2		
29	VKW5045-003	PINCHROLLER SPRING	2	RIGHT	
30	VKP4227-00B	PINCH ROLLER	2	RIGHT	
31	E407799-001	EJECT SAFETY	1	A MECHA	
	E407800-001	EJECT SAFETY	1	B MECHA	
32	E407801-002	SPRING	1	A MECHA	
	E407802-002	SPRING	1	B MECHA	
33	SBSF3006Z	SCREW	2		
34	VKS5428-00B	T-UP REEL ASSY	2		
35	VKW5043-001	TENSION SPRING	2		
36	VKS3617-002	T-UP REEL ASSY	2		
37	VKW5043-001	TENSION SPRING	2		
38	VKZ4705-002	SCREW	4		
39	VKY4670-001	CASSETEE SPRING	2		
40	VKZ4705-001	SCREW	4		
41	VKZ4708-001	SPECIAL SCREW	2		
42	VKM3632-001	HEAD BASE	2		
43	VKW5046-003	PINCH ROLLER SPRING	2	LEFT	
44	VKP4229-00B	PINCH ROLLER	2	LEFT	
45	VKS3626-00D	HEAD MOUNT ASS'Y	1	A MECHA	
	VKS3629-00D	HEAD MOUNT ASS'Y	1	B MECHA	
45-1	VKW5063-003	HEAD SPRING	2		
45-2	VKS3614-001	TURN OVER GEAR	2		
45-3	VKS3654-001	HEAD MOUNT COVER	2		
45-4	VKZ4629-003	SCREW	4		
46	SDST2004Z	SCREW	6		

Printed Circuit Board Ass'y and Parts List

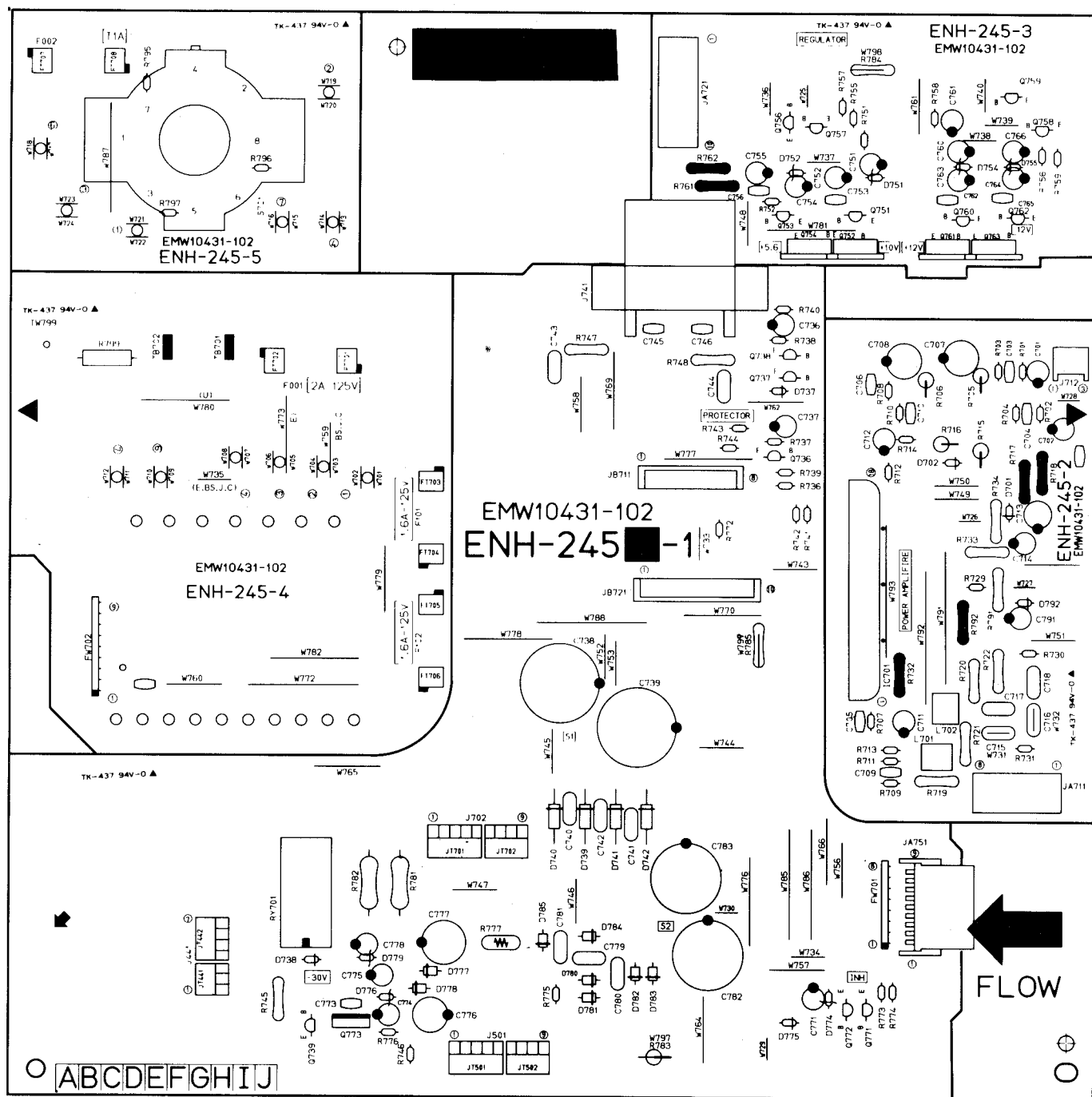
■ ENH-245 □ Power Supply, Protector & Active Bass PC Board Ass'y

Note: ENH-245 □ varies according to the areas employed. See note (1) when placing an order.

(Only for the U.S.A. & Canada)



(Except for the U.S.A. & Canada)



Note (1)

PC Board Ass'y	Version	Designated Areas
ENH-245 [A] BS	BS	the U.K.
ENH-245 [B]	J C	the U.S.A. Canada
ENH-245 [C]	EN EF	Scandinavia Continental Europe
ENH-245 [D]	G GI	Germany Italy
ENH-245 [E]	U US UT	Universal Type Singapore Taiwan

TRANSISTORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q736	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q737	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q738	2SA933S(RS)	SI. TRANSIST	
	Q739	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q751	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q752	2SD2394(E,F)	SI. TRANSIST ROHM	
	Q753	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q754	2SD2061(F,G)	SI. TRANSIST ROHM	
	Q756	DTC144ES	DIGITAL TRA ROHM	
	Q757	DTA144ES	DIGITAL TRA ROHM	
	Q758	DTA144ES	DIGITAL TRA ROHM	
	Q759	DTC144ES	DIGITAL TRA ROHM	
	Q760	2SC1740S(R,S)	SI. TRANSIST ROHM	
	Q761	2SD2394(E,F)	SI. TRANSIST ROHM	
	Q762	2SA733A(P,K)	SI. TRANSIST	
	Q763	2SB156S(E,F)	SI. TRANSIST ROHM	
	Q771	DTC114YS	DIGITAL TRA ROHM	
	Q772	DTC114YS	DIGITAL TRA ROHM	
	Q773	2SB1357(E,F)	SI. TRANSIST ROHM	

Δ USAPETY PARTS

I. C. S.

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC701	STK4141MK5	I.C(HYBRID) SANYO	

DIODES

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D701	1SS119	SI.DIODE	
	D702	1SS119	SI.DIODE	
	D737	1SS119	SI.DIODE	
	D738	1SS119	SI.DIODE	
	D739	10E2-FD	DIODE NIHONINTER	
	D740	10E2-FD	DIODE NIHONINTER	
	D741	10E2-FD	DIODE NIHONINTER	
	D742	10E2-FD	DIODE NIHONINTER	
	D751	MTZ11JC	ZENER DIODE ROHM	
	D752	MTZ6.8JC	ZENER DIODE ROHM	
	D754	MTZ13JC	ZENER DIODE ROHM	
	D755	MTZ13JC	ZENER DIODE ROHM	
	D774	MTZ5.1JC	ZENER DIODE ROHM	
	D775	1SS119	SI.DIODE	
	D776	MTZ30JC	ZENER DIODE ROHM	
	D777	1SR139-200	SI.DIODE ROHM	
	D778	1SR139-200	SI.DIODE ROHM	
	D779	MTZ5.1JC	ZENER DIODE ROHM	
	D780	1SR139-200	SI.DIODE ROHM	
	D781	1SR139-200	SI.DIODE ROHM	
	D782	1SR139-200	SI.DIODE ROHM	
	D783	1SR139-200	SI.DIODE ROHM	
	D784	1SR139-200	SI.DIODE ROHM	
	D785	1SR139-200	SI.DIODE ROHM	
	D792	1SS119	SI.DIODE	

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C701	QETB1HM-106	10MF 50V E.CAPACITO	
	C702	QETB1HM-106	10MF 50V E.CAPACITO	
	C703	QCB1HK-471Y	470PF 50V CER.CAPACI	
	C704	QCB1HK-471Y	470PF 50V CER.CAPACI	
	C705	QCB1HK-221Y	220PF 50V CER.CAPACI	
	C706	QCB1HK-221Y	220PF 50V CER.CAPACI	
	C707	QETB1EM-476	47MF 25V AL E.CAPAC	
	C708	QETB1EM-476	47MF 25V AL E.CAPAC	
	C709	QCSB1HJ-100	10PF 50V CER.CAPACI	
	C710	QCSB1HJ-100	10PF 50V CER.CAPACI	
	C711	QETB1HM-226E	22MF 50V E.CAPACITO	
	C712	QETB1HM-226E	22MF 50V E.CAPACITO	
	C713	QETB1HM-476	47MF 50V E.CAPACITO	
	C714	QETB1HM-106	10MF 50V E.CAPACITO	
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	BS
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	EF
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	EN
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	G
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	GI
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	U
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	US
	C715	QFN81HJ-104	0.1MF 50V METAL.MYLA	UT
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	BS
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	EF
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	EN
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	G
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	GI
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	U
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	US
	C716	QFN81HJ-104	0.1MF 50V METAL.MYLA	UT
	C717	QFN81HJ-104	0.1MF 50V METAL.MYLA	
	C718	QFN81HJ-104	0.1MF 50V METAL.MYLA	
	C736	QETB1CM-476	47MF 16V AL E.CAPAC	
	C737	QETB1EM-226	22MF 25V E.CAPACITO	
	C738	EET4202-228E	2200MF E.CAPACITO	BS
	C738	EET4202-338E	3300MF E.CAPACITO	C
	C738	EET4202-228E	2200MF E.CAPACITO	EF
	C738	EET4202-228E	2200MF E.CAPACITO	EN
	C738	EET4202-228E	2200MF E.CAPACITO	G
	C738	EET4202-228E	2200MF E.CAPACITO	GI
	C738	EET4202-338E	3300MF E.CAPACITO	J
	C738	EET4202-228E	2200MF E.CAPACITO	U
	C738	EET4202-228E	2200MF E.CAPACITO	US
	C738	EET4202-228E	2200MF E.CAPACITO	UT
	C739	EET4202-228E	2200MF E.CAPACITO	BS
	C739	EET4202-338E	3300MF E.CAPACITO	C
	C739	EET4202-228E	2200MF E.CAPACITO	EF
	C739	EET4202-228E	2200MF E.CAPACITO	EN
	C739	EET4202-228E	2200MF E.CAPACITO	G
	C739	EET4202-228E	2200MF E.CAPACITO	GI
	C739	EET4202-338E	3300MF E.CAPACITO	J
	C739	EET4202-228E	2200MF E.CAPACITO	U
	C739	EET4202-228E	2200MF E.CAPACITO	US
	C739	EET4202-228E	2200MF E.CAPACITO	UT
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS

Δ : SAFETY PARTS

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C740	QFV82AJ-104	0.1MF 100V THIN FILM	G
	C740	QFV82AJ-104	0.1MF 100V THIN FILM	GI
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C740	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C741	QFV82AJ-104	0.1MF 100V THIN FILM	G
	C741	QFV82AJ-104	0.1MF 100V THIN FILM	GI
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C741	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C742	QFV82AJ-104	0.1MF 100V THIN FILM	G
	C742	QFV82AJ-104	0.1MF 100V THIN FILM	GI
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C742	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C743	QFN81HJ-103	0.01MF 50V METAL.MYLA	G
	C743	QFN81HJ-103	0.01MF 50V METAL.MYLA	GI
	C744	QFN81HJ-103	0.01MF 50V METAL.MYLA	G
	C744	QFN81HJ-103	0.01MF 50V METAL.MYLA	GI
	C745	QCB1CM-222	2200PF 16V CER.CAPACI	G
	C745	QCB1CM-222	2200PF 16V CER.CAPACI	GI
	C746	QCB1CM-222	2200PF 16V CER.CAPACI	G
	C746	QCB1CM-222	2200PF 16V CER.CAPACI	GI
	C751	QETB1EM-226	22MF 25V E.CAPACITO	
	C752	QETB1CM-476	47MF 16V AL E.CAPAC	
	C753	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C754	QETB1AM-476	47MF 10V E.CAPACITO	
	C755	QETB1AM-476	47MF 10V E.CAPACITO	
	C756	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C760	QETB1HM-106	10MF 50V E.CAPACITO	
	C761	QETB1HM-106	10MF 50V E.CAPACITO	
	C762	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C763	QETB1HM-106	10MF 50V E.CAPACITO	
	C764	QETB1EM-226	22MF 25V E.CAPACITO	
	C765	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C766	QETB1EM-226	22MF 25V E.CAPACITO	
	C771	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C773	QCB1HK-102	1000PF 50V CER.CAPACI	
	C774	QETB1HM-226E	22MF 50V E.CAPACITO	
	C776	QETB1JM-476	47MF 63V AL E.CAPAC	
	C777	QETB1JM-107	100MF 63V AL E.CAPAC	
	C778	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C779	QFV82AJ-224	0.22MF 100V MYLAR CAPA	G
	C779	QFV82AJ-224	0.22MF 100V MYLAR CAPA	GI
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C779	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C780	QFV82AJ-224	0.22MF 100V MYLAR CAPA	G
	C780	QFV82AJ-224	0.22MF 100V MYLAR CAPA	GI
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C780	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	BS
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	C
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EF
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	EN
	C781	QFV82AJ-224	0.22MF 100V MYLAR CAPA	G
	C781	QFV82AJ-224	0.22MF 100V MYLAR CAPA	GI
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	J
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	U
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	US
	C781	QFN82AJ-103	0.01MF 100V MYLAR CAPA	UT
	C782	QETM1VM-228J7	2200MF 35V E.CAPACITO	
	C783	QETM1VM-228J7	2200MF 35V E.CAPACITO	
	C791	QETB1HM-106	10MF 50V E.CAPACITO	

Δ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R701	QRD167J-102	1K 1/6W CARBON RES	
	R702	QRD167J-102	1K 1/6W CARBON RES	
	R703	QRD161J-104	100K 1/6W CARBON RES	
	R704	QRD161J-104	100K 1/6W CARBON RES	
	R705	ERD004J-751Z	750 CARBON RES	
	R706	ERD004J-751Z	750 CARBON RES	
	R707	QRD167J-471	470 1/6W CARBON RES	
	R708	QRD167J-471	470 1/6W CARBON RES	
	R709	QRD161J-104	100K 1/6W CARBON RES	
	R710	QRD161J-104	100K 1/6W CARBON RES	
	R711	QRD161J-242	2.4K 1/6W CARBON RES	
	R712	QRD161J-242	2.4K 1/6W CARBON RES	
	R713	QRD161J-242	2.4K 1/6W CARBON RES	
	R714	QRD161J-242	2.4K 1/6W CARBON RES	
△	R715	QRX014J-R22	0.22 1W METAL FILM	
△	R716	QRX014J-R22	0.22 1W METAL FILM	
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	BS
△	R717	QRD14CJ-101S	100 1/4W UNF.CARBON	C
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	EF
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	EN
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	G
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	GI
△	R717	QRD14CJ-101S	100 1/4W UNF.CARBON	#
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	U
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	US
△	R717	QRZ0077-101	100 1/4W FUSIBLE RE	UT
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	BS
△	R718	QRD14CJ-100SX	10 1/4W UNF.CARBON	C
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	EF
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	EN
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	G
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	GI
△	R718	QRD14CJ-100SX	10 1/4W UNF.CARBON	J
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	U
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	US
△	R718	QRZ0077-100	10 1/4W FUSIBLE RE	UT
△	R719	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R720	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R721	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R722	QRD14CJ-100SX	10 1/4W UNF.CARBON	
	R729	QRD161J-103	10K 1/6W CARBON RES	
	R730	QRD167J-154	150K 1/6W CARBON RES	
	R731	QRD161J-303Y	30K 1/6W CARBON RES	
	R732	QRZ0077-100	10 1/4W FUSIBLE RE	
△	R733	QRD14CJ-222S	2.2K 1/4W UNF.CARBON	
△	R734	QRD14CJ-222S	2.2K 1/4W UNF.CARBON	
	R736	QRD161J-821	820 1/6W CARBON RES	
	R737	QRD161J-104	100K 1/6W CARBON RES	
	R738	QRD161J-104	100K 1/6W CARBON RES	
	R739	QRD161J-103	10K 1/6W CARBON RES	
	R740	QRD161J-104	100K 1/6W CARBON RES	
	R741	QRD161J-103	10K 1/6W CARBON RES	
	R742	QRD161J-222	2.2K 1/6W CARBON RES	
	R743	QRD161J-823	82K 1/6W CARBON RES	
	R744	QRD161J-104	100K 1/6W CARBON RES	
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	BS
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	C
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	EF
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	EN
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	G
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	GI
	R745	QRD12CJ-471SX	470 1/2W UNF.CARBON	J
△	R745	QRD12CJ-511S	510 1/2W CARBON RES	U
△	R745	QRD12CJ-511S	510 1/2W CARBON RES	US
△	R745	QRD12CJ-511S	510 1/2W CARBON RES	UT
	R746	QRD167J-152	1.5K 1/6W CARBON RES	
△	R747	QRD14CJ-100SX	10 1/4W UNF.CARBON	G
△	R747	QRD14CJ-100SX	10 1/4W UNF.CARBON	GI
△	R748	QRD14CJ-100SX	10 1/4W UNF.CARBON	G
△	R748	QRD14CJ-100SX	10 1/4W UNF.CARBON	GI
	R751	QRD167J-332	3.3K 1/6W CARBON RES	
	R752	QRD161J-392	3.9K 1/6W CARBON RES	
	R755	QRD161J-472	4.7K 1/6W CARBON RES	
	R756	QRD167J-153	15K 1/6W CARBON RES	
	R757	QRD161J-103	10K 1/6W CARBON RES	
	R758	QRD167J-332	3.3K 1/6W CARBON RES	
	R759	QRD161J-222	2.2K 1/6W CARBON RES	
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	BS
△	R761	QRD14CJ-8R2S	8.2 1/4W UNF.CARBON	C
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	EF
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	EN
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	G
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	GI
△	R761	QRD14CJ-8R2S	8.2 1/4W UNF.CARBON	J
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	U
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	US
△	R761	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	UT
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	BS
△	R762	QRD14CJ-8R2S	8.2 1/4W UNF.CARBON	C
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	EF
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	EN
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	G
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	GI
△	R762	QRD14CJ-8R2S	8.2 1/4W UNF.CARBON	J
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	U
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	US
△	R762	QRZ0077-8R2	8.2 1/4W FUSIBLE RE	UT
	R772	QRD161J-103	10K 1/6W CARBON RES	
	R773	QRD167J-102	1K 1/6W CARBON RES	
	R774	QRD161J-103	10K 1/6W CARBON RES	

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R775	QRD161J-103	10K 1/6W CARBON RES	
	R776	QRD167J-562	5.6K 1/6W CARBON RES	
△	R777	PTH61G25AR4R7M	POSITIVE T	BS
△	R777	QRD14CJ-4R7S	4.7 1/4W UNF.CARBON	C
△	R777	PTH61G25AR4R7M	POSITIVE T	EF
△	R777	PTH61G25AR4R7M	POSITIVE T	EN
△	R777	PTH61G25AR4R7M	POSITIVE T	G
△	R777	PTH61G25AR4R7M	POSITIVE T	GI
△	R777	QRD14CJ-4R7S	4.7 1/4W UNF.CARBON	J
△	R777	PTH61G25AR4R7M	POSITIVE T	U
△	R777	PTH61G25AR4R7M	POSITIVE T	US
△	R777	PTH61G25AR4R7M	POSITIVE T	UT
	R781	QRX022J-2R7AM	2.7 2W METAL FILM	
	R782	QRX022J-2R7AM	2.7 2W METAL FILM	
△	R783	QRX014J-R22	0.22 1W METAL FILM	C
△	R783	QRX014J-R22	0.22 1W METAL FILM	J
△	R784	QRD14CJ-1R5SX	1.5 1/4W UNF.CARBON	C
△	R784	QRD14CJ-1R5SX	1.5 1/4W UNF.CARBON	J
△	R785	QRD14CJ-2R2SX	2.2 1/4W UNF.CARBON	C
△	R785	QRD14CJ-2R2SX	2.2 1/4W UNF.CARBON	J
△	R791	QRD14CJ-222S	2.2K 1/4W UNF.CARBON	
△	R792	QRZ0077-100	10 1/4W FUSIBLE RE	
	R795	QRD161J-103	10K 1/6W CARBON RES	U
	R795	QRD161J-103	10K 1/6W CARBON RES	US
	R795	QRD161J-103	10K 1/6W CARBON RES	UT
	R796	QRD161J-103	10K 1/6W CARBON RES	U
	R796	QRD161J-103	10K 1/6W CARBON RES	US
	R796	QRD161J-103	10K 1/6W CARBON RES	UT
	R797	QRD161J-103	10K 1/6W CARBON RES	U
	R797	QRD161J-103	10K 1/6W CARBON RES	US
	R797	QRD161J-103	10K 1/6W CARBON RES	UT
△	R799	QRC128K-275EM	2.7M 1/2W COMPOSITIO	C
△	R799	QRC128K-275EM	2.7M 1/2W COMPOSITIO	J

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		E67132-T2R0	FUSE LABEL	U
		QWE881-17RR	PIN WIRE	U
		QWE882-15RR	VINYL WIRE	U
		QWE883-17RR	PIN WIRE	U
		QWE884-14RR	PIN WIRE	U
		QWE886-16RR	PIN WIRE	U
		QWE888-14RR	PIN WIRE	U
		E67132-T2R0	FUSE LABEL	US
		QWE881-17RR	PIN WIRE	US
		QWE882-15RR	VINYL WIRE	US
		QWE883-17RR	PIN WIRE	US
		QWE884-14RR	PIN WIRE	US
		QWE886-16RR	PIN WIRE	US
		QWE888-14RR	PIN WIRE	US
	J712	EMV5109-003B	CONNECT TER(3PIN)	
	J741	EMB90TV-402A	SPEAKER TER	
	L701	EQL0011-R45J1	INDUCTOR	
	L702	EQL0011-R45J1	INDUCTOR	
	S701	QSR8001-E01U	ROTARY SWIT	U
	S701	QSR8001-E01U	ROTARY SWIT	US
	S701	QSR8001-E01U	ROTARY SWIT	UT
	FT701	VMZ0087-001Z	FUSE HOLDER	
	FT702	VMZ0087-001Z	FUSE HOLDER	
	FT703	VMZ0087-001Z	FUSE HOLDER	
	FT704	VMZ0087-001Z	FUSE HOLDER	
	FT705	VMZ0087-001Z	FUSE HOLDER	
	FT706	VMZ0087-001Z	FUSE HOLDER	
	FT707	VMZ0087-001Z	FUSE HOLDER	U
	FT707	VMZ0087-001Z	FUSE HOLDER	US
	FT707	VMZ0087-001Z	FUSE HOLDER	UT
	FT708	VMZ0087-001Z	FUSE HOLDER	U
	FT708	VMZ0087-001Z	FUSE HOLDER	US
	FT708	VMZ0087-001Z	FUSE HOLDER	UT
	FW701	EWR38D-25LS	FLAT WIRE A(8PIN)	
	FW702	EWR39D-10LS	FLAT WIRE A(9PIN)	
	JA711	EMV7125-008R	MALE CONNec(8PIN)	
	JA721	EMV7125-010R	MALE CONNec(10PIN)	
	JA751	VMC0193-S09	CONNECT TER(9PIN)	
	JB711	EMV5125-008	MALE CONNec(8PIN)	
	JB721	EMV5125-010	MALE CONNec(10PIN)	
	JT441	EMV7122-103	CONNECT TER(3PIN)	
	JT442	EMV7122-004	CONNECT TER(4PIN)	
	JT501	EMV7122-005	MALE CONNec(5PIN)	
	JT502	EMV7122-004	CONNECT TER(4PIN)	
	JT701	EMV7122-005	MALE CONNec(5PIN)	
	JT702	EMV7122-004	CONNECT TER(4PIN)	
	RY701	ESK7D24-2120	RELAY	
	TB701	EMZ4001-001	TAB	

△ : SAFETY PARTS

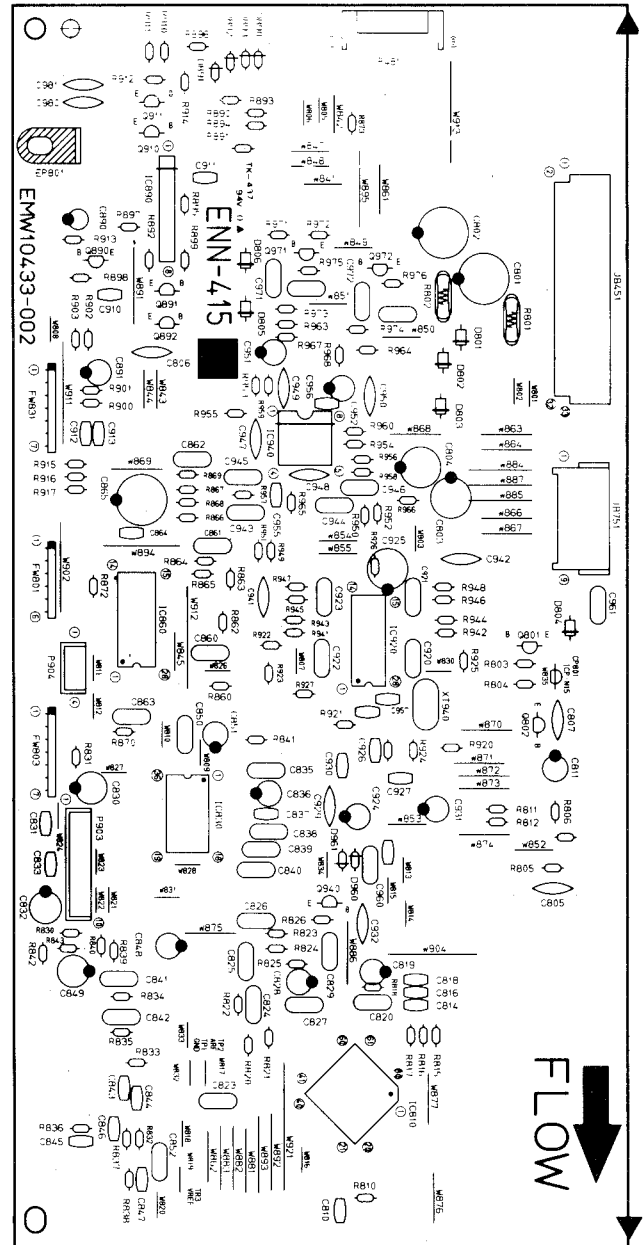
OTHERS

ITEM	PART NUMBER	DESCRIPTION	AREA
TB702	EMZ4001-001	TAB	C J
TW799	EWTO11-075	TERMINAL WI	
TW799	EWTO11-075	TERMINAL WI	

⚠ SAFETY PARTS

■ ENN-415 □ CD PC Board Ass'y

Note : ENN-415 □ varies according to the areas employed.
See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENN-415 A	J	the U.S.A.
ENN-415 B	G GI	Germany Italy
ENN-415 C	BS C EN EF U US UT	the U.K. Canada Scandinavia Continental Europe Universal Type Singapore Taiwan

TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q801	2SA934(Q,R)	SI.TRANSIST ROHM	
	Q802	DTA144ES	DIGITAL TRA ROHM	
	Q890	DTC144ES	DIGITAL TRA ROHM	
	Q891	2SC2060(Q,R)	SI.TRANSIST ROHM	
	Q892	2SA934(Q,R)	SI.TRANSIST ROHM	
	Q910	2SC2060(Q,R)	SI.TRANSIST ROHM	
	Q911	2SA934(Q,R)	SI.TRANSIST ROHM	
	Q940	DTA144ES	DIGITAL TRA ROHM	
	Q971	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q972	2SD2144S(VW)	SI.TRANSIST ROHM	

I. C. S.

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC810	MN662720RB	I.C(DIGI-MO MATSUSHITA	
	IC830	AN8803SB	I.C(MONO-AN MATSUSHITA	
	IC860	BA6393FP	I.C(MONO-AN ROHM	
	IC890	M5218AL	I.C(MONO-AN MITSUBISHI	
	IC920	MN35501	I.C(DIGI-MO MATSUSHITA	
	IC940	BA15218	I.C(MONO-AN ROHM	

DIODES

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	D801	1SR139-200	SI.DIODE ROHM	
	D802	1SR139-200	SI.DIODE ROHM	
	D803	1SR139-200	SI.DIODE ROHM	
	D804	1SR139-200	SI.DIODE ROHM	
	D805	1SR139-200	SI.DIODE ROHM	
	D806	1SR139-200	SI.DIODE ROHM	
	D890	1SS119	SI.DIODE	
	D891	1SS119	SI.DIODE	
	D892	1SS119	SI.DIODE	
	D893	1SS119	SI.DIODE	
	D960	1SS119	SI.DIODE	
	D961	1SS119	SI.DIODE	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C801	QETB1CM-477M	470MF 16V E.CAPACITO	
	C802	QETB1CM-477M	470MF 16V E.CAPACITO	
	C803	QETB1CM-227	220MF 16V AL E.CAPAC	
	C805	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C806	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C807	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C810	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C811	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C818	QCT30CH-8R2Y	8.2PF 50V CER.CAPACI	
	C819	QETB1AM-107	100MF 10V AL E.CAPAC	
	C820	QFV81HJ-104	0.1MF 50V THIN FILM	
	C823	QFLB1HJ-181	180PF 50V MYLAR CAPA	
	C824	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C825	QFV81HJ-104	0.1MF 50V THIN FILM	
	C826	QFV81HJ-334	0.33MF 50V TF.CAPACIT	
	C827	QFV81HJ-104	0.1MF 50V THIN FILM	
	C828	QETB1AM-107	100MF 10V AL E.CAPAC	
	C829	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C830	QERS1CM-476	47MF 16V AL E.CAPAC	
	C831	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C832	QERS1CM-476	47MF 16V AL E.CAPAC	
	C833	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C835	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C836	QETB1HM-105	1MF 50V AL E.CAPAC	
	C837	QCB1HK-101Y	100PF 50V CER.CAPACI	
	C838	QFLB1HJ-273	0.022MF 50V MYLAR CAPA	
	C839	QFLB1HJ-222	2200PF 50V MYLAR CAPA	
	C840	QFLB1HJ-332	3300PF 50V MYLAR CAPA	
	C841	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C842	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C843	QCB1CM-222	2200PF 16V CER.CAPACI	
	C844	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C845	QCB1HK-271Y	270PF 50V CER.CAPACI	
	C846	QCB1HK-181Y	180PF 50V CER.CAPACI	
	C847	QCB1CM-222	2200PF 16V CER.CAPACI	
	C848	QETB1AM-107	100MF 10V AL E.CAPAC	
	C849	QERS1CM-476	47MF 16V AL E.CAPAC	
	C850	QCZ0202-155	1.5MF 25V CER.RESIST	
	C851	QETB1AM-107	100MF 10V AL E.CAPAC	
	C852	QFLB1HJ-104	0.1MF 50V MYLAR CAPA	

△ : SAFETY PARTS

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C860	QFLB1HJ-103	0.01MF 50V MYLAR CAPA	
	C861	QFV81HJ-154	0.15MF 50V THIN FILM	
	C862	QFLB1HJ-472	4700PF 50V MYLAR CAPA	
	C863	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	
	C864	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C865	QETB1CM-477M	470MF 16V E.CAPACITO	
	C890	QER61HM-105	1MF 50V ELECTRO	
	C891	QERS1HM-475	4.7MF 50V AL E.CAPAC	
	C910	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C911	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C912	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C913	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C920	QCZ0202-155	1.5MF 25V CER.RESIST	
	C921	QCZ0202-155	1.5MF 25V CER.RESIST	
	C922	QCZ0202-155	1.5MF 25V CER.RESIST	
	C923	QCZ0202-155	1.5MF 25V CER.RESIST	
	C924	QETB0JM-227	220MF 6.3V E.CAPACITO	
	C925	QETB0JM-477	470MF 6.3V AL E.CAPAC	
	C926	QCT30CH-130Y	13PF 50V CER.CAPACI	
	C927	QCT30CH-3R9Y	3.9PF 50V CER.CAPACI	
	C931	QETB1AM-476	47MF 10V E.CAPACITO	
	C941	QCS21HJ-221	220PF 50V CER.CAPACI	
	C942	QCS21HJ-221	220PF 50V CER.CAPACI	
	C943	QFLB1HJ-222	2200PF 50V MYLAR CAPA	
	C944	QFLB1HJ-222	2200PF 50V MYLAR CAPA	
	C945	QFLB1HJ-222	2200PF 50V MYLAR CAPA	
	C946	QFLB1HJ-222	2200PF 50V MYLAR CAPA	
	C947	QCS21HJ-271A	270PF 50V CER.CAPACI	
	C948	QCS21HJ-271A	270PF 50V CER.CAPACI	
	C949	QCS21HJ-271A	270PF 50V CER.CAPACI	
	C950	QCS21HJ-271A	270PF 50V CER.CAPACI	
	C951	EET2502-476N	47MF AL E.CAPAC	
	C952	EET2502-476N	47MF AL E.CAPAC	
	C955	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C956	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C957	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C960	QCZ0202-155	1.5MF 25V CER.RESIST	
	C971	QFLB1HJ-683	0.068MF 50V MYLAR CAPA	
	C972	QFLB1HJ-683	0.068MF 50V MYLAR CAPA	
	C980	QCF31HP-223	0.022MF 25V C.CAPA	BS
	C980	QCF31HP-223	0.022MF 25V C.CAPA	C
	C980	QCF31HP-223	0.022MF 25V C.CAPA	EN
	C980	QCF31HP-223	0.022MF 25V C.CAPA	EF
	C980	QCF31HP-223	0.022MF 25V C.CAPA	U
	C980	QCF31HP-223	0.022MF 25V C.CAPA	US
	C980	QCF31HP-223	0.022MF 25V C.CAPA	UT

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R801	PTH61G30BD2R2N	FUSIBLE RE	BS
	R801	PTH61G30BD2R2N	FUSIBLE RE	C
	R801	PTH61G30BD2R2N	FUSIBLE RE	EF
	R801	PTH61G30BD2R2N	FUSIBLE RE	EN
	R801	PTH61G30BD2R2N	FUSIBLE RE	G
	R801	PTH61G30BD2R2N	FUSIBLE RE	GI
	R801	QRD12CJ-2R2SX	2.2 1/2W CARBON RES	J
	R801	PTH61G30BD2R2N	FUSIBLE RE	U
	R801	PTH61G30BD2R2N	FUSIBLE RE	US
	R801	PTH61G30BD2R2N	FUSIBLE RE	UT
	R802	PTH61G30BD2R2N	FUSIBLE RE	BS
	R802	PTH61G30BD2R2N	FUSIBLE RE	C
	R802	PTH61G30BD2R2N	FUSIBLE RE	EF
	R802	PTH61G30BD2R2N	FUSIBLE RE	EN
	R802	PTH61G30BD2R2N	FUSIBLE RE	G
	R802	PTH61G30BD2R2N	FUSIBLE RE	GI
	R802	QRD12CJ-2R2SX	2.2 1/2W CARBON RES	J
	R802	PTH61G30BD2R2N	FUSIBLE RE	U
	R802	PTH61G30BD2R2N	FUSIBLE RE	US
	R802	PTH61G30BD2R2N	FUSIBLE RE	UT
	R803	QRD161J-472	4.7K 1/6W CARBON RES	
	R804	QRD161J-331	330 1/6W CARBON RES	
	R805	QRD161J-472	4.7K 1/6W CARBON RES	
	R806	QRD161J-331	330 1/6W CARBON RES	
	R810	QRD167J-102	1K 1/6W CARBON RES	
	R811	QRD167J-102	1K 1/6W CARBON RES	
	R812	QRD167J-102	1K 1/6W CARBON RES	
	R815	QRD167J-102	1K 1/6W CARBON RES	
	R816	QRD167J-102	1K 1/6W CARBON RES	
	R817	QRD167J-102	1K 1/6W CARBON RES	
	R818	QRD161J-2R2	2.2 1/6W CARBON RES	
	R820	QRD161J-104	100K 1/6W CARBON RES	
	R821	QRD161J-104	100K 1/6W CARBON RES	
	R822	QRD167J-155	1.5M 1/6W CARBON RES	
	R823	QRD161J-681	680 1/6W CARBON RES	
	R824	QRD161J-124	120K 1/6W CARBON RES	
	R825	QRD161J-2R2	2.2 1/6W CARBON RES	
	R826	QRD161J-103	10K 1/6W CARBON RES	
	R830	QRD167J-121	120 1/6W CARBON RES	
	R831	QRD161J-222	2.2K 1/6W CARBON RES	
	R832	QRD167J-154	150K 1/6W CARBON RES	
	R833	QRD161J-394	390K 1/6W CARBON RES	
	R834	QRD167J-134	130K 1/6W CARBON RES	
	R835	QRD161J-913	91K 1/6W CARBON RES	
	R836	QRD161J-273	27K 1/6W CARBON RES	
	R837	QRD161J-683	68K 1/6W CARBON RES	
	R838	QRD161J-103	10K 1/6W CARBON RES	
	R839	QRD161J-103	10K 1/6W CARBON RES	
	R840	QRD161J-103	10K 1/6W CARBON RES	
	R841	QRD161J-123	12K 1/6W CARBON RES	

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R842	QRD167J-471	470 1/6W CARBON RES	
	R843	QRD161J-2R2	2.2 1/6W CARBON RES	
	R860	QRD161J-103	10K 1/6W CARBON RES	
	R862	QRD167J-272	2.7K 1/6W CARBON RES	
	R863	QRD167J-682	6.8K 1/6W CARBON RES	
	R864	QRD167J-152	1.5K 1/6W CARBON RES	
	R865	QRD161J-203	20K 1/6W CARBON RES	
	R866	QRD167J-332	3.3K 1/6W CARBON RES	
	R867	QRD161J-472	4.7K 1/6W CARBON RES	
	R868	QRD167J-433	43K 1/6W CARBON	
	R869	QRD167J-223	22K 1/6W CARBON RES	
	R870	QRD161J-681	680 1/6W CARBON RES	
	R872	QRD161J-752	7.5K 1/6W CARBON RES	
	R873	QRD167J-151	150 1/6W CARBON RES	
	R890	QRD167J-153	15K 1/6W CARBON RES	
	R891	QRD161J-123	12K 1/6W CARBON RES	
	R892	QRD161J-393	39K 1/6W CARBON RES	
	R893	QRD161J-103	10K 1/6W CARBON RES	
	R894	QRD161J-273	27K 1/6W CARBON RES	
	R895	QRD167J-223	22K 1/6W CARBON RES	
	R896	QRD161J-473	47K 1/6W CARBON RES	
	R897	QRD161J-752	7.5K 1/6W CARBON RES	
	R898	QRD161J-303Y	30K 1/6W CARBON RES	
	R899	QRD161J-221	220 1/6W CARBON RES	
	R900	QRD167J-102	1K 1/6W CARBON RES	
	R901	QRD167J-102	1K 1/6W CARBON RES	
	R902	QRD167J-102	1K 1/6W CARBON RES	
	R903	QRD167J-102	1K 1/6W CARBON RES	
	R910	QRD161J-243	24K 1/6W CARBON RES	
	R911	QRD161J-183	18K 1/6W CARBON RES	
	R912	QRD161J-183	18K 1/6W CARBON RES	
	R913	QRD161J-203	20K 1/6W CARBON RES	
	R914	QRD161J-820	82 1/6W CARBON RES	
	R915	QRD167J-102	1K 1/6W CARBON RES	
	R916	QRD167J-102	1K 1/6W CARBON RES	
	R917	QRD167J-102	1K 1/6W CARBON RES	
	R920	QRD161J-101	100 1/6W CARBON RES	
	R921	QRD161J-105	1M 1/6W CARBON RES	
	R922	QRD167J-560	56 1/6W CARBON RES	
	R923	QRD167J-560	56 1/6W CARBON RES	
	R924	QRD161J-271	270 1/6W CARBON RES	
	R925	QRD161J-101	100 1/6W CARBON RES	
	R926	QRD161J-122	1.2K 1/6W CARBON RES	
	R927	QRD161J-271	270 1/6W CARBON RES	
	R941	QRD161J-363	36K 1/6W CARBON RES	
	R942	QRD161J-363	36K 1/6W CARBON RES	
	R943	QRD161J-363	36K 1/6W CARBON RES	
	R944	QRD161J-363	36K 1/6W CARBON RES	
	R945	QRD161J-363	36K 1/6W CARBON RES	
	R946	QRD161J-363	36K 1/6W CARBON RES	
	R947	QRD161J-363	36K 1/6W CARBON RES	
	R948	QRD161J-363	36K 1/6W CARBON RES	
	R949	QRD167J-153	15K 1/6W CARBON RES	
	R950	QRD167J-153	15K 1/6W CARBON RES	
	R951	QRD167J-153	15K 1/6W CARBON RES	
	R952	QRD167J-153	15K 1/6W CARBON RES	
	R953	QRD161J-512	5.1K 1/6W CARBON RES	
	R954	QRD161J-512	5.1K 1/6W CARBON RES	
	R955	QRD161J-512	5.1K 1/6W CARBON RES	
	R956	QRD161J-512	5.1K 1/6W CARBON RES	
	R957	QRD161J-123	12K 1/6W CARBON RES	
	R958	QRD161J-123	12K 1/6W CARBON RES	
	R959	QRD161J-123	12K 1/6W CARBON RES	
	R960	QRD161J-123	12K 1/6W CARBON RES	
	R963	QRD161J-561	560 1/6W CARBON RES	
	R964	QRD161J-561	560 1/6W CARBON RES	
	R965	QRD161J-271	270 1/6W CARBON RES	
	R966	QRD161J-271	270 1/6W CARBON RES	
	R967	QRD161J-273	27K 1/6W CARBON RES	
	R968	QRD161J-273	27K 1/6W CARBON RES	
	R971	QRD161J-392	3.9K 1/6W CARBON RES	
	R972	QRD161J-392	3.9K 1/6W CARBON RES	
	R973	QRD161J-221	220 1/6W CARBON RES	
	R974	QRD161J-221	220 1/6W CARBON RES	
	R975	QRD161J-104	100K 1/6W CARBON RES	
	R976	QRD161J-104	100K 1/6W CARBON RES	

△ : SAFETY PARTS

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	P481	EMV5109-009B	CONNECT TER(9PIN)	
	P903	EMV5109-010A	CONNECT TER(10PIN)	
	P904	EMV5109-004A	MALE CONNEC(4PIN)	
△	CP801	ICP-N15	I.C.PROTECT	BS
△	CP801	ICP-N15	I.C.PROTECT	C
△	CP801	ICP-N15	I.C.PROTECT	EF
△	CP801	ICP-N15	I.C.PROTECT	EN
△	CP801	ICP-N15	I.C.PROTECT	G
△	CP801	ICP-N15	I.C.PROTECT	GI
△	CP801	ICP-N15	I.C.PROTECT	U
△	CP801	ICP-N15	I.C.PROTECT	US
△	CP801	ICP-N15	I.C.PROTECT	UT
	EP801	EMZ4002-001Z	EARTH PLATE	
	FW801	EWR36D-13KS	FLAT WIRE A(6PIN)	
	FW803	EWR37D-13KS	FLAT WIRE A(7PIN)	
	FW831	EWR37D-13KS	FLAT WIRE A(7PIN)	
	JB451	EMV7123-033R	FEMALE CONN(33PIN)	
	JB751	VMC0193-P09	CONNECT TER(9PIN)	
	XT940	VCX5016-934V	CRYSTAL	

△ : SAFETY PARTS

TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
Q103	2SC461(B,C)	SI. TRANSIST HITACHI	
Q107	2SC535(B,C)	SI. TRANSIST	
Q108	2SC461(B,C)	SI. TRANSIST HITACHI	
Q111	2SD2144S(VW)	SI. TRANSIST ROHM	BS
Q111	2SD2144S(VW)	SI. TRANSIST ROHM	EF
Q111	2SD2144S(VW)	SI. TRANSIST ROHM	EN
Q111	2SD2144S(VW)	SI. TRANSIST ROHM	G
Q111	2SD2144S(VW)	SI. TRANSIST ROHM	GI
Q112	2SD2144S(VW)	SI. TRANSIST ROHM	BS
Q112	2SD2144S(VW)	SI. TRANSIST ROHM	EF
Q112	2SD2144S(VW)	SI. TRANSIST ROHM	EN
Q112	2SD2144S(VW)	SI. TRANSIST ROHM	G
Q112	2SD2144S(VW)	SI. TRANSIST ROHM	GI
Q113	2SD2144S(VW)	SI. TRANSIST ROHM	BS
Q113	2SD2144S(VW)	SI. TRANSIST ROHM	EF
Q113	2SD2144S(VW)	SI. TRANSIST ROHM	EN
Q113	2SD2144S(VW)	SI. TRANSIST ROHM	G
Q113	2SD2144S(VW)	SI. TRANSIST ROHM	GI
Q114	2SC1740S(R,S)	SI. TRANSIST ROHM	BS
Q114	2SC1740S(R,S)	SI. TRANSIST ROHM	EF
Q114	2SC1740S(R,S)	SI. TRANSIST ROHM	EN
Q114	2SC1740S(R,S)	SI. TRANSIST ROHM	G
Q114	2SC1740S(R,S)	SI. TRANSIST ROHM	GI
Q119	2SK301(P,Q)	F.E.T. MATSUSHITA	G
Q119	2SK301(P,Q)	F.E.T. MATSUSHITA	GI
Q121	DTA144ES	DIGITAL TRA ROHM	BS
Q121	DTA144ES	DIGITAL TRA ROHM	EF
Q121	DTA144ES	DIGITAL TRA ROHM	EN
Q121	DTA144ES	DIGITAL TRA ROHM	G
Q121	DTA144ES	DIGITAL TRA ROHM	GI
Q123	DTA144ES	DIGITAL TRA ROHM	
Q124	DTA144ES	DIGITAL TRA ROHM	
Q125	2SK301(Q2)	F.E.T.	
Q126	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q127	DTC144ES	DIGITAL TRA ROHM	
Q201	DTC144ES	DIGITAL TRA ROHM	
Q202	DTC144ES	DIGITAL TRA ROHM	
Q203	2SA933S(RS)	SI. TRANSIST	
Q204	2SA933S(RS)	SI. TRANSIST	
Q205	2SA933S(RS)	SI. TRANSIST	
Q206	2SA933S(RS)	SI. TRANSIST	
Q209	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q210	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q211	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q212	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q261	DTC144TS	DIGITAL TRA ROHM	
Q262	DTC144TS	DIGITAL TRA ROHM	
Q263	DTC144TS	DIGITAL TRA ROHM	
Q264	DTC144TS	DIGITAL TRA ROHM	
Q265	DTC144TS	DIGITAL TRA ROHM	
Q266	DTC144TS	DIGITAL TRA ROHM	
Q267	DTC144TS	DIGITAL TRA ROHM	
Q268	DTC144TS	DIGITAL TRA ROHM	
Q270	DTC144ES	DIGITAL TRA ROHM	
Q301	2SC945A	SI. TRANSIST NEC	
Q302	2SC945A	SI. TRANSIST NEC	
Q303	2SC2785	SI. TRANSIST NEC	
Q304	2SC2785	SI. TRANSIST NEC	
Q305	2SD2144S(VW)	SI. TRANSIST ROHM	
Q306	2SD2144S(VW)	SI. TRANSIST ROHM	
Q307	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q308	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q309	2SD2144S(VW)	SI. TRANSIST ROHM	
Q310	2SD2144S(VW)	SI. TRANSIST ROHM	
Q312	DTA144ES	DIGITAL TRA ROHM	
Q313	2SC945A	SI. TRANSIST NEC	BS
Q313	2SC945A	SI. TRANSIST NEC	EF
Q313	2SC945A	SI. TRANSIST NEC	EN
Q313	2SC945A	SI. TRANSIST NEC	G
Q313	2SC945A	SI. TRANSIST NEC	GI
Q314	DTA144ES	DIGITAL TRA ROHM	
Q315	DTA144ES	DIGITAL TRA ROHM	BS
Q315	DTA144ES	DIGITAL TRA ROHM	EF
Q315	DTA144ES	DIGITAL TRA ROHM	EN
Q315	DTA144ES	DIGITAL TRA ROHM	G
Q315	DTA144ES	DIGITAL TRA ROHM	GI
Q344	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q345	2SC1740S(R,S)	SI. TRANSIST ROHM	
Q351	DTC144TS	DIGITAL TRA ROHM	
Q352	DTC144TS	DIGITAL TRA ROHM	
Q353	DTC144TS	DIGITAL TRA ROHM	
Q354	DTC144TS	DIGITAL TRA ROHM	
Q381	2SD2144S(VW)	SI. TRANSIST ROHM	
Q382	2SD2144S(VW)	SI. TRANSIST ROHM	
Q383	DTA144ES	DIGITAL TRA ROHM	

△ : SAFETY PARTS

I. C. S.

ITEM	PART NUMBER	DESCRIPTION	AREA
IC102	LC7218	I.C(DIGI-MO	
IC104	LA1266A	I.C(MONO-AN SANYO	
IC105	LA3401	I.C(MONO-AN SANYO	
IC201	UPC1228HA	I.C(MONO-AN NEC	
IC202	UPC1228HA	I.C(MONO-AN NEC	
IC203	BA15218N	I.C(MONO-AN ROHM	
IC204	UPC1330HA	I.C(MONO-AN NEC	
IC301	HA12136A	I.C(MONO-AN HITACHI	
IC302	BA8221N	I.C(MONO-AN ROHM	
IC351	TC9164N	I.C(DIGI-MO TOSHIBA	
IC352	BA15218N	I.C(MONO-AN ROHM	

DIODES

ITEM	PART NUMBER	DESCRIPTION	AREA
D102	1SS119	SI. DIODE	BS
D102	1SS119	SI. DIODE	EF
D102	1SS119	SI. DIODE	EN
D102	1SS119	SI. DIODE	G
D102	1SS119	SI. DIODE	GI
D103	1SS119	SI. DIODE	BS
D103	1SS119	SI. DIODE	EF
D103	1SS119	SI. DIODE	EN
D103	1SS119	SI. DIODE	G
D103	1SS119	SI. DIODE	GI
D106	1SS119	SI. DIODE	
D120	1SS119	SI. DIODE	
D121	1SS119	SI. DIODE	
D122	1SS119	SI. DIODE	
D123	1SS119	SI. DIODE	
D192	MTZ5.1JC	ZENER DIODE ROHM	
D206	1SS119	SI. DIODE	
D207	1SS119	SI. DIODE	
D208	1SS119	SI. DIODE	
D209	1SS119	SI. DIODE	BS
D209	1SS119	SI. DIODE	EF
D209	1SS119	SI. DIODE	EN
D209	1SS119	SI. DIODE	G
D209	1SS119	SI. DIODE	GI

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C101	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C106	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C107	QETB1EM-226	22MF 25V E.CAPACITO	G
C107	QETB1EM-226	22MF 25V E.CAPACITO	GI
C108	QCF21HP-103A	0.01MF 50V CER.CAPACI	
C109	QETB1CM-227	220MF 16V AL.E.CAPAC	
C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	BS
C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	EF
C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	EN
C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	G
C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	GI
C112	QCS21HJ-101A	100PF 50V CER.CAPACI	
C115	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C116	QCT30CH-120Y	12PF 50V CER.CAPACI	
C117	QCHB1EZ-223	0.022MF 25V CER.CAPACI	G
C117	QCHB1EZ-223	0.022MF 25V CER.CAPACI	GI
C118	QCHB1EZ-223	0.022MF 25V CER.CAPACI	G
C118	QCHB1EZ-223	0.022MF 25V CER.CAPACI	GI
C119	QCB1HK-561Y	560PF 50V CER.CAPACI	G
C119	QCB1HK-561Y	560PF 50V CER.CAPACI	GI
C122	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C131	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C150	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C151	QCF21HP-223A	0.022MF 50V CER.CAPACI	
C152	QCF21HP-223A	0.022MF 50V CER.CAPACI	
C153	QCC21EM-223	0.022MF 25V CER.CAPACI	
C155	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C157	QETB1HM-474	0.47MF 50V ELECTRO	
C158	QCB1HK-101Y	100PF 50V CER.CAPACI	
C159	QCB1HK-101Y	100PF 50V CER.CAPACI	
C160	QCB1HK-221Y	220PF 50V CER.CAPACI	
C161	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C162	QETB1HM-106	10MF 50V E.CAPACITO	
C163	QCF31HP-102Z	1000PF 50V CER.CAPACI	
C164	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C165	QETB1HM-474	0.47MF 50V ELECTRO	
C166	QETB1HM-225	2.2MF 50V E.CAPACITO	
C167	QETB1HM-225	2.2MF 50V E.CAPACITO	
C168	QETB1HM-475E	4.7MF 50V E.CAPACITO	
C169	QCZ0205-155	1.5MF 25V C.CAPACITO	BS
C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	C
C169	QCZ0205-155	1.5MF 25V C.CAPACITO	EF
C169	QCZ0205-155	1.5MF 25V C.CAPACITO	EN
C169	QCZ0205-155	1.5MF 25V C.CAPACITO	G
C169	QCZ0205-155	1.5MF 25V C.CAPACITO	GI

△ : SAFETY PARTS

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	J
	C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	U
	C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	US
	C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	UT
	C170	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C171	QETB1HM-106	10MF 50V E.CAPACITO	
	C172	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C173	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	BS
	C173	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	C
	C173	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	EF
	C173	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	EN
	C173	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	G
	C173	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	GI
	C173	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	J
	C173	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	U
	C173	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	US
	C173	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	UT
	C174	QFLB1HK-473	0.047MF 50V MYLAR CAPA	
	C175	QETB1HM-106	10MF 50V E.CAPACITO	
	C176	QCY21HK-102	1000PF 50V CER.CAPACI	
	C177	QCS21HJ-561	560PF 50V CER.CAPACI	BS
	C177	QCS21HJ-821	820PF 50V CER.CAPACI	C
	C177	QCS31HJ-471Z	470PF 50V CER.CAPACI	EF
	C177	QCS31HJ-471Z	470PF 50V CER.CAPACI	EN
	C177	QCS31HJ-471Z	470PF 50V CER.CAPACI	G
	C177	QCS31HJ-471Z	470PF 50V CER.CAPACI	GI
	C177	QCS21HJ-821	820PF 50V CER.CAPACI	J
	C177	QCS21HJ-821	820PF 50V CER.CAPACI	U
	C177	QCS21HJ-821	820PF 50V CER.CAPACI	US
	C177	QCS21HJ-821	820PF 50V CER.CAPACI	UT
	C178	QCS21HJ-561	560PF 50V CER.CAPACI	BS
	C178	QCS21HJ-821	820PF 50V CER.CAPACI	C
	C178	QCS31HJ-471Z	470PF 50V CER.CAPACI	EF
	C178	QCS31HJ-471Z	470PF 50V CER.CAPACI	EN
	C178	QCS31HJ-471Z	470PF 50V CER.CAPACI	G
	C178	QCS31HJ-471Z	470PF 50V CER.CAPACI	GI
	C178	QCS21HJ-821	820PF 50V CER.CAPACI	J
	C178	QCS21HJ-821	820PF 50V CER.CAPACI	U
	C178	QCS21HJ-821	820PF 50V CER.CAPACI	US
	C178	QCS21HJ-821	820PF 50V CER.CAPACI	UT
	C179	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C180	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C181	QCF21HP-473A	0.047MF 50V CER.CAPACI	
	C182	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C183	QETB1HM-105	1MF 50V AL E.CAPAC	
	C184	QETB1HM-105	1MF 50V AL E.CAPAC	
	C185	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C187	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C188	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C191	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C192	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C193	QCS21HJ-180A	18PF 50V CER.CAPACI	
	C194	QCS21HJ-180A	18PF 50V CER.CAPACI	
	C195	QEN51HM-474	0.47MF 50V NP E.CAPAC	
	C196	QCB81HK-102	1000PF 50V CER.CAPACI	
	C197	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C201	QCB81HK-471Y	470PF 50V CER.CAPACI	
	C202	QCB81HK-471Y	470PF 50V CER.CAPACI	
	C203	QCB81HK-331Y	330PF 50V CER.CAPACI	
	C204	QCB81HK-331Y	330PF 50V CER.CAPACI	
	C205	QCXB1CM-122	1200PF 16V POLYPROP.	
	C206	QCXB1CM-122	1200PF 16V POLYPROP.	
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	BS
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	C
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	EF
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	EN
	C209	QCB81HK-471Y	470PF 50V CER.CAPACI	G
	C209	QCB81HK-471Y	470PF 50V CER.CAPACI	GI
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	J
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	U
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	US
	C209	QCB81HK-101Y	100PF 50V CER.CAPACI	UT
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	BS
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	C
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	EF
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	EN
	C210	QCB81HK-471Y	470PF 50V CER.CAPACI	G
	C210	QCB81HK-471Y	470PF 50V CER.CAPACI	GI
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	J
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	U
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	US
	C210	QCB81HK-101Y	100PF 50V CER.CAPACI	UT
	C211	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C212	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C213	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C214	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C215	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C216	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C217	QETB1CM-107	100MF 16V AL E.CAPAC	
	C218	QETB1CM-107	100MF 16V AL E.CAPAC	
	C219	QETB1HM-106	10MF 50V E.CAPACITO	
	C231	QCXB1CM-182Y	1800PF 16V CER.CAPACI	
	C232	QCXB1CM-182Y	1800PF 16V CER.CAPACI	
	C233	QCB81HK-331Y	330PF 50V CER.CAPACI	
	C234	QCB81HK-331Y	330PF 50V CER.CAPACI	
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	BS
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	C
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	EF
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	EN

Δ SAFETY PARTS

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C235	QCB81HK-471Y	470PF 50V CER.CAPACI	G
	C235	QCB81HK-471Y	470PF 50V CER.CAPACI	GI
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	J
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	U
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	US
	C235	QCB81HK-101Y	100PF 50V CER.CAPACI	UT
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	BS
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	C
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	EF
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	EN
	C236	QCB81HK-471Y	470PF 50V CER.CAPACI	G
	C236	QCB81HK-471Y	470PF 50V CER.CAPACI	GI
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	J
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	U
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	US
	C236	QCB81HK-101Y	100PF 50V CER.CAPACI	UT
	C237	QEK51HM-225G	2.2MF 50V AL E.CAPAC	
	C238	QEK51HM-225G	2.2MF 50V AL E.CAPAC	
	C239	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C240	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C241	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C242	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C243	QETB1CM-107	100MF 16V AL E.CAPAC	
	C244	QETB1CM-107	100MF 16V AL E.CAPAC	
	C245	QETB1HM-106	10MF 50V E.CAPACITO	
	C261	QFLB1HJ-104	0.1MF 50V MYLAR CAPA	
	C262	QFLB1HJ-104	0.1MF 50V MYLAR CAPA	
	C263	QCY21HK-102	1000PF 50V CER.CAPACI	
	C264	QCY21HK-102	1000PF 50V CER.CAPACI	
	C265	QCSB1HJ-470	47PF 50V CER.CAPACI	
	C266	QCSB1HJ-470	47PF 50V CER.CAPACI	
	C267	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C268	QETB1HM-225	2.2MF 50V E.CAPACITO	
	C271	QFLB1HJ-123	0.012MF 50V MYLAR CAPA	
	C272	QFLB1HJ-123	0.012MF 50V MYLAR CAPA	
	C273	QCY31HK-562	5600PF 50V CER.CAPACI	
	C274	QCY31HK-562	5600PF 50V CER.CAPACI	
	C275	QFLB1HJ-153	0.015MF 50V MYLAR CAPA	
	C276	QFLB1HJ-153	0.015MF 50V MYLAR CAPA	
	C281	QFLB1HJ-272	2700PF 50V MYLAR CAPA	
	C282	QFLB1HJ-272	2700PF 50V MYLAR CAPA	
	C283	QFLB1HJ-332	3300PF 50V MYLAR CAPA	
	C284	QFLB1HJ-332	3300PF 50V MYLAR CAPA	
	C301	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C302	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C303	QFPB1HJ-562	5600PF 50V POLYPROP.	
	C304	QETB1HM-106	10MF 50V E.CAPACITO	
	C305	QETB1HM-105	1MF 50V AL E.CAPAC	
	C306	QCHB1EZ-223	0.022MF 25V CER.CAPACI	G
	C306	QCHB1EZ-223	0.022MF 25V CER.CAPACI	GI
	C307	QETB1CM-476	47MF 16V AL E.CAPAC	
	C308	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C309	QFLB1HJ-183	0.018MF 50V MYLAR CAPA	
	C310	QFLB1HJ-123	0.012MF 50V MYLAR CAPA	
	C311	QFLB1HJ-822	8200PF 50V MYLAR CAPA	
	C312	QCB81HK-561Y	560PF 50V CER.CAPACI	BS
	C312	QCB81HK-561Y	560PF 50V CER.CAPACI	EF
	C312	QCB81HK-561Y	560PF 50V CER.CAPACI	EN
	C312	QCB81HK-561Y	560PF 50V CER.CAPACI	G
	C313	QCS21HJ-101A	100PF 50V CER.CAPACI	GI
	C314	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C315	QEK51HM-105G	1MF 50V AL E.CAPAC	
	C316	QEK51HM-105G	1MF 50V AL E.CAPAC	
	C317	QETB1HM-105	1MF 50V AL E.CAPAC	
	C318	QETB1HM-105	1MF 50V AL E.CAPAC	
	C319	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C320	QETB1CM-107	100MF 16V AL E.CAPAC	
	C321	QFV71HJ-224ZM	0.22MF 50V THIN FILM	
	C322	QFV71HJ-224ZM	0.22MF 50V THIN FILM	
	C323	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C324	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C325	QFLB1HJ-473	0.047MF 50V MYLAR CAPA	
	C326	QFLB1HJ-473	0.047MF 50V MYLAR CAPA	
	C327	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C335	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C336	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C340	QETB1CM-476	47MF 16V AL E.CAPAC	
	C341	QETB1HM-476	47MF 50V E.CAPACITO	
	C344	QETB1HM-105	1MF 50V AL E.CAPAC	
	C345	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C346	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C351	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C352	QCB81HK-561Y	560PF 50V CER.CAPACI	
	C353	QCXB1CM-682	6800PF 16V CERAMIC	
	C354	QCXB1CM-682	6800PF 16V CERAMIC	
	C355	QCSB1HJ-470	47PF 50V CER.CAPACI	
	C356	QCSB1HJ-470	47PF 50V CER.CAPACI	
	C357	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C358	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C359	QCSB1HJ-220	22PF 50V CER.CAPACI	
	C360	QCSB1HJ-220	22PF 50V CER.CAPACI	
	C361	QFLB1HJ-823	0.082MF 50V MYLAR CAPA	
	C362	QFLB1HJ-823	0.082MF 50V MYLAR CAPA	
	C363	QFLB1HJ-823	0.082MF 50V MYLAR CAPA	
	C364	QFLB1HJ-823	0.082MF 50V MYLAR CAPA	
	C365	QFLB1HJ-393	0.039MF 50V MYLAR CAPA	
	C371	QETB1CM-476	47MF 16V AL E.CAPAC	
	C372	QETB1CM-476	47MF 16V AL E.CAPAC	
	C379	QETB1HM-475E	4.7MF 50V E.CAPACITO	

Δ SAFETY PARTS

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C380	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C381	QETB1HM-105	1MF 50V AL E.CAPAC	
	C388	QCHB1EZ-223	0.022MF 25V CER.CAPACI	BS
	C388	QCHB1EZ-223	0.022MF 25V CER.CAPACI	EF
	C388	QCHB1EZ-223	0.022MF 25V CER.CAPACI	EN
	C388	QCHB1EZ-223	0.022MF 25V CER.CAPACI	GI
	C388	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C395	QCB81HK-561Y	560PF 50V CER.CAPACI	
	C396	QCB81HK-561Y	560PF 50V CER.CAPACI	

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R101	ORD161J-392	3.9K 1/6W CARBON	
	R102	ORD161J-392	3.9K 1/6W CARBON	
	R103	ORD161J-222	2.2K 1/6W CARBON	
	R104	ORD161J-222	2.2K 1/6W CARBON	
	R108	QRD161J-103	10K 1/6W CARBON RES	
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	BS
△	R109	QRD14CJ-680SX	68 1/4W UNF. CARBON	C
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	EF
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	EN
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	G
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	GI
△	R109	QRD14CJ-680SX	68 1/4W UNF. CARBON	J
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	U
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	US
△	R109	QRZ0077-680	68 1/4W FUSIBLE RE	UT
	R111	QRD161J-472	4.7K 1/6W CARBON RES	BS
	R111	QRD161J-472	4.7K 1/6W CARBON RES	EF
	R111	QRD161J-472	4.7K 1/6W CARBON RES	EN
	R111	QRD161J-472	4.7K 1/6W CARBON RES	G
	R111	QRD161J-472	4.7K 1/6W CARBON RES	GI
	R111	QRD161J-472	4.7K 1/6W CARBON RES	BS
	R112	QRD161J-472	4.7K 1/6W CARBON RES	EF
	R112	QRD161J-472	4.7K 1/6W CARBON RES	EN
	R112	QRD161J-472	4.7K 1/6W CARBON RES	G
	R112	QRD161J-472	4.7K 1/6W CARBON RES	GI
	R113	QRD161J-472	4.7K 1/6W CARBON RES	BS
	R113	QRD161J-472	4.7K 1/6W CARBON RES	EF
	R113	QRD161J-472	4.7K 1/6W CARBON RES	EN
	R113	QRD161J-472	4.7K 1/6W CARBON RES	G
	R113	QRD161J-472	4.7K 1/6W CARBON RES	GI
	R114	QRD161J-103	10K 1/6W CARBON RES	BS
	R114	QRD161J-103	10K 1/6W CARBON RES	EF
	R114	QRD161J-103	10K 1/6W CARBON RES	EN
	R114	QRD161J-103	10K 1/6W CARBON RES	G
	R114	QRD161J-103	10K 1/6W CARBON RES	GI
	R115	QRD161J-103	10K 1/6W CARBON RES	
	R116	QRD161J-104	100K 1/6W CARBON RES	
	R117	QRD161J-103	10K 1/6W CARBON RES	BS
	R117	QRD161J-103	10K 1/6W CARBON RES	EF
	R117	QRD161J-103	10K 1/6W CARBON RES	EN
	R117	QRD161J-103	10K 1/6W CARBON RES	G
	R117	QRD161J-103	10K 1/6W CARBON RES	GI
	R118	QRD161J-332	3.3K 1/6W CARBON RES	
	R119	QRD161J-221	220 1/6W CARBON RES	
	R120	QRD161J-101	100 1/6W CARBON RES	G
	R120	QRD161J-101	100 1/6W CARBON RES	GI
	R121	QRD161J-391	390 1/6W CARBON RES	
	R122	QRD161J-272	2.7K 1/6W CARBON RES	
	R123	QRD161J-102	1K 1/6W CARBON RES	
	R124	QRD161J-681	680 1/6W CARBON RES	
	R125	QRD161J-332	3.3K 1/6W CARBON RES	
	R126	QRD161J-221	220 1/6W CARBON RES	
	R131	QRD161J-222	2.2K 1/6W CARBON RES	
	R146	QRD161J-560	56 1/6W CARBON RES	
	R147	QRD161J-103	10K 1/6W CARBON RES	
	R148	QRD161J-103	10K 1/6W CARBON RES	
	R149	QRD161J-223	22K 1/6W CARBON RES	
	R150	QRD161J-103	10K 1/6W CARBON RES	
	R151	QRD161J-222	2.2K 1/6W CARBON RES	
	R153	QRD161J-103	10K 1/6W CARBON RES	
	R154	QRD161J-103	10K 1/6W CARBON RES	
	R155	QRD161J-562	5.6K 1/6W CARBON RES	
	R156	QRD161J-822	8.2K 1/6W CARBON RES	
	R157	QRD161J-103	10K 1/6W CARBON RES	
	R158	QRD161J-273	27K 1/6W CARBON RES	
	R159	QRD161J-561	560 1/6W CARBON RES	
	R160	QRD161J-822	8.2K 1/6W CARBON RES	BS
	R160	QRD161J-562	5.6K 1/6W CARBON RES	C
	R160	QRD161J-183	18K 1/6W CARBON RES	EF
	R160	QRD161J-183	18K 1/6W CARBON RES	EN
	R160	QRD161J-183	18K 1/6W CARBON RES	G
	R160	QRD161J-183	18K 1/6W CARBON RES	GI
	R160	QRD161J-562	5.6K 1/6W CARBON RES	J
	R160	QRD161J-562	5.6K 1/6W CARBON RES	U
	R160	QRD161J-562	5.6K 1/6W CARBON RES	US
	R160	QRD161J-562	5.6K 1/6W CARBON RES	UT
	R161	QRD161J-823	82K 1/6W CARBON RES	BS
	R161	QRD161J-823	82K 1/6W CARBON RES	C
	R161	QRD161J-124	120K 1/6W CARBON RES	EF
	R161	QRD161J-124	120K 1/6W CARBON RES	EN
	R161	QRD161J-124	120K 1/6W CARBON RES	G
	R161	QRD161J-124	120K 1/6W CARBON RES	GI
	R161	QRD161J-823	82K 1/6W CARBON RES	J
	R161	QRD161J-823	82K 1/6W CARBON RES	U

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R161	QRD161J-823	82K 1/6W CARBON RES	US
	R161	QRD161J-823	82K 1/6W CARBON RES	UT
	R162	QRD161J-823	82K 1/6W CARBON RES	BS
	R162	QRD161J-823	82K 1/6W CARBON RES	C
	R162	QRD161J-124	120K 1/6W CARBON RES	EF
	R162	QRD161J-124	120K 1/6W CARBON RES	EN
	R162	QRD161J-124	120K 1/6W CARBON RES	G
	R162	QRD161J-124	120K 1/6W CARBON RES	GI
	R162	QRD161J-823	82K 1/6W CARBON RES	J
	R162	QRD161J-823	82K 1/6W CARBON RES	U
	R162	QRD161J-823	82K 1/6W CARBON RES	US
	R162	QRD161J-823	82K 1/6W CARBON RES	UT
	R163	QRD161J-332	3.3K 1/6W CARBON RES	BS
	R163	QRD161J-472	4.7K 1/6W CARBON RES	C
	R163	QRD161J-332	3.3K 1/6W CARBON RES	EF
	R163	QRD161J-332	3.3K 1/6W CARBON RES	EN
	R163	QRD161J-332	3.3K 1/6W CARBON RES	G
	R163	QRD161J-332	3.3K 1/6W CARBON RES	GI
	R163	QRD161J-472	4.7K 1/6W CARBON RES	J
	R163	QRD161J-472	4.7K 1/6W CARBON RES	U
	R163	QRD161J-472	4.7K 1/6W CARBON RES	US
	R163	QRD161J-472	4.7K 1/6W CARBON RES	UT
	R163	QRD161J-472	4.7K 1/6W CARBON RES	BS
	R164	QRD161J-332	3.3K 1/6W CARBON RES	C
	R164	QRD161J-332	3.3K 1/6W CARBON RES	EF
	R164	QRD161J-332	3.3K 1/6W CARBON RES	EN
	R164	QRD161J-332	3.3K 1/6W CARBON RES	G
	R164	QRD161J-332	3.3K 1/6W CARBON RES	GI
	R164	QRD161J-472	4.7K 1/6W CARBON RES	J
	R164	QRD161J-472	4.7K 1/6W CARBON RES	U
	R164	QRD161J-472	4.7K 1/6W CARBON RES	US
	R164	QRD161J-472	4.7K 1/6W CARBON RES	UT
	R165	QRD161J-274	270K 1/6W CARBON RES	BS
	R165	QRD161J-184	180K 1/6W CARBON RES	C
	R165	QRD161J-274	270K 1/6W CARBON RES	EF
	R165	QRD161J-274	270K 1/6W CARBON RES	EN
	R165	QRD161J-274	270K 1/6W CARBON RES	G
	R165	QRD161J-274	270K 1/6W CARBON RES	GI
	R165	QRD161J-184	180K 1/6W CARBON RES	J
	R165	QRD161J-184	180K 1/6W CARBON RES	U
	R165	QRD161J-184	180K 1/6W CARBON RES	US
	R165	QRD161J-184	180K 1/6W CARBON RES	UT
	R166	QRD161J-274	270K 1/6W CARBON RES	BS
	R166	QRD161J-184	180K 1/6W CARBON RES	C
	R166	QRD161J-274	270K 1/6W CARBON RES	EF
	R166	QRD161J-274	270K 1/6W CARBON RES	EN
	R166	QRD161J-274	270K 1/6W CARBON RES	G
	R166	QRD161J-274	270K 1/6W CARBON RES	GI
	R166	QRD161J-184	180K 1/6W CARBON RES	J
	R166	QRD161J-184	180K 1/6W CARBON RES	U
	R166	QRD161J-184	180K 1/6W CARBON RES	US
	R166	QRD161J-184	180K 1/6W CARBON RES	UT
	R167	QRD161J-473	47K 1/6W CARBON RES	BS
	R167	QRD161J-393	39K 1/6W CARBON RES	C
	R167	QRD161J-473	47K 1/6W CARBON RES	EF
	R167	QRD161J-473	47K 1/6W CARBON RES	EN
	R167	QRD161J-473	47K 1/6W CARBON RES	G
	R167	QRD161J-473	47K 1/6W CARBON RES	GI
	R167	QRD161J-393	39K 1/6W CARBON RES	J
	R167	QRD161J-393	39K 1/6W CARBON RES	U
	R167	QRD161J-393	39K 1/6W CARBON RES	US
	R167	QRD161J-393	39K 1/6W CARBON RES	UT
	R168	QRD161J-103	10K 1/6W CARBON RES	
	R169	QRD161J-103	10K 1/6W CARBON RES	
	R180	QRD161J-472	4.7K 1/6W CARBON RES	
	R181	QRD161J-222	2.2K 1/6W CARBON RES	
	R182	QRD161J-181	180 1/6W CARBON RES	
	R187	QRD161J-331	330 1/6W CARBON RES	G
	R187	QRD161J-331	330 1/6W CARBON RES	GI
	R189	QRD161J-105	1M 1/6W CARBON RES	G
	R190	QRD161J-472	4.7K 1/6W CARBON RES	
	R191	QRD161J-562	5.6K 1/6W CARBON RES	
	R194	QRD161J-103	10K 1/6W CARBON RES	
	R195	QRD161J-473	47K 1/6W CARBON RES	
	R196	QRD161J-222	2.2K 1/6W CARBON RES	BS
	R196	QRD161J-103	10K 1/6W CARBON RES	C
	R196	QRD161J-222	2.2K 1/6W CARBON RES	EF
	R196	QRD161J-222	2.2K 1/6W CARBON RES	EN
	R196	QRD161J-222	2.2K 1/6W CARBON RES	G
	R196	QRD161J-222	2.2K 1/6W CARBON RES	GI
	R196	QRD161J-103	10K 1/6W CARBON RES	J
	R196	QRD161J-103	10K 1/6W CARBON RES	U
	R196	QRD161J-103	10K 1/6W CARBON RES	US
	R196	QRD161J-103	10K 1/6W CARBON RES	UT
	R197	QRD161J-222	2.2K 1/6W CARBON RES	
	R198	QRD161J-822	8.2K 1/6W CARBON RES	BS
	R198	QRD161J-332	3.3K 1/6W CARBON RES	C
	R198	QRD161J-822	8.2K 1/6W CARBON RES	EF
	R198	QRD161J-822	8.2K 1/6W CARBON RES	EN
	R198	QRD161J-822	8.2K 1/6W CARBON RES	G
	R198	QRD161J-822	8.2K 1/6W CARBON RES	GI
	R198	QRD161J-332	3.3K 1/6W CARBON RES	J
	R198	QRD161J-332	3.3K 1/6W CARBON RES	U
	R198	QRD161J-332	3.3K 1/6W CARBON RES	US
	R198	QRD161J-332	3.3K 1/6W CARBON RES	UT
	R199	QRD161J-472	4.7K 1/6W CARBON RES	
	R201	QRD161J-224	220K 1/6W CARBON RES	
	R202	QRD161J-224	220K 1/6W CARBON RES	
	R203	QVPA601-104A	100K TRIMMER RE	

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R204	QVPA601-104A	100K TRIMMER RE	
	R205	QRD161J-470	47 1/6W CARBON RES	G
	R205	QRD161J-470	47 1/6W CARBON RES	GI
	R206	QRD161J-470	47 1/6W CARBON RES	G
	R206	QRD161J-470	47 1/6W CARBON RES	GI
	R207	QRD161J-470	47 1/6W CARBON RES	
	R208	QRD161J-470	47 1/6W CARBON RES	
	R209	QRD167J-334	330K 1/6W CARBON RES	
	R210	QRD167J-334	330K 1/6W CARBON RES	
	R211	QVPA601-201A	200 TRIMMER RE	
	R212	QVPA601-201A	200 TRIMMER RE	
	R213	QRD161J-512	5.1K 1/6W CARBON RES	
	R214	QRD161J-512	5.1K 1/6W CARBON RES	
	R215	QRD161J-912	9.1K 1/6W CARBON RES	
	R216	QRD161J-912	9.1K 1/6W CARBON RES	
	R217	QRD161J-224	220K 1/6W CARBON RES	
	R218	QRD161J-224	220K 1/6W CARBON RES	
	R220	QRD167J-102	1K 1/6W CARBON RES	
	R221	QRD167J-102	1K 1/6W CARBON RES	
	R223	QRD167J-562	5.6K 1/6W CARBON RES	
	R224	QRD167J-562	5.6K 1/6W CARBON RES	
	R225	QRD161J-103	10K 1/6W CARBON RES	
	R226	QRD161J-103	10K 1/6W CARBON RES	
	R227	QRD161J-103	10K 1/6W CARBON RES	
	R228	QRD161J-103	10K 1/6W CARBON RES	
	R231	QRD161J-100	10 1/6W CARBON RES	
	R232	QRD161J-100	10 1/6W CARBON RES	
	R235	QVPA601-104A	100K TRIMMER RE	
	R236	QVPA601-104A	100K TRIMMER RE	
	R237	QRD161J-470	47 1/6W CARBON RES	G
	R237	QRD161J-470	47 1/6W CARBON RES	GI
	R238	QRD161J-470	47 1/6W CARBON RES	G
	R238	QRD161J-470	47 1/6W CARBON RES	GI
	R239	QRD161J-470	47 1/6W CARBON RES	
	R240	QRD161J-470	47 1/6W CARBON RES	
	R241	QRD167J-334	330K 1/6W CARBON RES	
	R242	QRD167J-334	330K 1/6W CARBON RES	
	R243	QVPA601-201A	200 TRIMMER RE	
	R244	QVPA601-201A	200 TRIMMER RE	
	R245	QRD161J-512	5.1K 1/6W CARBON RES	
	R246	QRD161J-512	5.1K 1/6W CARBON RES	
	R247	QRD161J-912	9.1K 1/6W CARBON RES	
	R248	QRD161J-912	9.1K 1/6W CARBON RES	
	R249	QRD161J-224	220K 1/6W CARBON RES	
	R250	QRD161J-224	220K 1/6W CARBON RES	
	R252	QRD167J-102	1K 1/6W CARBON RES	
	R253	QRD167J-102	1K 1/6W CARBON RES	
	R255	QRD167J-562	5.6K 1/6W CARBON RES	
	R256	QRD167J-562	5.6K 1/6W CARBON RES	
	R257	QRD161J-103	10K 1/6W CARBON RES	
	R258	QRD161J-103	10K 1/6W CARBON RES	
	R259	QRD161J-103	10K 1/6W CARBON RES	
	R260	QRD161J-103	10K 1/6W CARBON RES	
	R261	QRD167J-223	22K 1/6W CARBON RES	
	R262	QRD167J-223	22K 1/6W CARBON RES	
	R263	QRD161J-363	36K 1/6W CARBON RES	
	R264	QRD161J-363	36K 1/6W CARBON RES	
	R265	QRD161J-243	24K 1/6W CARBON RES	
	R266	QRD161J-243	24K 1/6W CARBON RES	
	R267	QRD167J-223	22K 1/6W CARBON RES	
	R268	QRD167J-223	22K 1/6W CARBON RES	
	R269	QRD161J-242	2.4K 1/6W CARBON RES	
	R270	QRD161J-242	2.4K 1/6W CARBON RES	
	R271	QRD161J-241	240 1/6W CARBON RES	
	R272	QRD161J-241	240 1/6W CARBON RES	
	R273	QRD161J-361	360 1/6W CARBON RES	
	R274	QRD161J-361	360 1/6W CARBON RES	
	R275	QRD161J-242	2.4K 1/6W CARBON RES	
	R276	QRD161J-242	2.4K 1/6W CARBON RES	
	R277	QRD161J-392	3.9K 1/6W CARBON RES	
	R278	QRD161J-392	3.9K 1/6W CARBON RES	
	R279	QRD161J-103	10K 1/6W CARBON RES	
	R280	QRD161J-103	10K 1/6W CARBON RES	
	R281	QRD161J-133Y	13K 1/6W CARBON RES	
	R282	QRD161J-133Y	13K 1/6W CARBON RES	
	R283	QRD161J-103	10K 1/6W CARBON RES	
	R284	QRD161J-103	10K 1/6W CARBON RES	
	R285	QRD161J-432	4.3K 1/6W CARBON RES	
	R286	QRD161J-432	4.3K 1/6W CARBON RES	
	R288	QRD161J-472	4.7K 1/6W CARBON RES	
	R301	QVPA601-104A	100K TRIMMER RE	
	R302	QVPA601-104A	100K TRIMMER RE	
	R303	QRD167J-332	3.3K 1/6W CARBON RES	
	R304	QRD161J-472	4.7K 1/6W CARBON RES	
	R305	QRD161J-104	100K 1/6W CARBON RES	
	R306	QRD167J-151	150 1/6W CARBON RES	
	R307	QRD167J-151	150 1/6W CARBON RES	
	R308	QRD14CJ-100SX	10 1/4W UNF. CARBON	
	R309	QRD161J-123	12K 1/6W CARBON RES	
	R310	QRD161J-123	12K 1/6W CARBON RES	
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	BS
△	R311	QRD14CJ-100SX	10 1/4W UNF. CARBON	C
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	EF
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	EN
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	G

△ : SAFETY PARTS

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	GI
△	R311	QRD14CJ-100SX	10 1/4W UNF. CARBON	J
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	U
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	US
△	R311	QRZ0077-100	10 1/4W FUSIBLE RE	UT
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	BS
△	R312	QRD14CJ-220S	22 1/4W UNF. CARBON	C
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	EF
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	EN
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	G
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	GI
△	R312	QRD14CJ-220S	22 1/4W UNF. CARBON	J
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	U
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	US
△	R312	QRZ0077-220	22 1/4W FUSIBLE RE	UT
	R313	QRD161J-273	27K 1/6W CARBON RES	
	R314	QRD161J-273	27K 1/6W CARBON RES	
	R315	QRD161J-103	10K 1/6W CARBON RES	
	R316	QRD161J-183	18K 1/6W CARBON RES	
	R317	QRD161J-103	10K 1/6W CARBON RES	
	R318	QRD161J-561	560 1/6W CARBON RES	BS
	R318	QRD161J-561	560 1/6W CARBON RES	EF
	R318	QRD161J-561	560 1/6W CARBON RES	EN
	R318	QRD161J-561	560 1/6W CARBON RES	G
	R318	QRD161J-561	560 1/6W CARBON RES	GI
	R319	QRD161J-103	10K 1/6W CARBON RES	
	R320	QRD161J-103	10K 1/6W CARBON RES	
	R321	QVPA601-203A	20K VARIABLE R	
	R322	QVPA601-203A	20K VARIABLE R	
	R323	QRD161J-203	20K 1/6W CARBON RES	
	R324	QRD161J-203	20K 1/6W CARBON RES	
	R325	QRD167J-223	22K 1/6W CARBON RES	
	R326	QRD167J-223	22K 1/6W CARBON RES	
	R327	QRD161J-432	4.3K 1/6W CARBON RES	
	R328	QRD161J-432	4.3K 1/6W CARBON RES	
	R329	QRD161J-103	10K 1/6W CARBON RES	
	R330	QRD167J-102	1K 1/6W CARBON RES	
	R331	QRD161J-103	10K 1/6W CARBON RES	
	R332	QRD161J-103	10K 1/6W CARBON RES	
	R334	QRD161J-103	10K 1/6W CARBON RES	
	R335	QRD161J-123	12K 1/6W CARBON RES	
	R336	QRD161J-123	12K 1/6W CARBON RES	
	R337	QRD161J-104	100K 1/6W CARBON RES	
	R338	QRD161J-104	100K 1/6W CARBON RES	
	R339	QRD167J-272	2.7K 1/6W CARBON RES	
	R340	QRD167J-562	5.6K 1/6W CARBON RES	
	R341	QRD161J-104	100K 1/6W CARBON RES	
	R342	QRD161J-274	270K 1/6W CARBON RES	
	R343	QRD161J-105	1M 1/6W CARBON RES	
	R344	QRD161J-104	100K 1/6W CARBON RES	
	R345	QRD161J-105	1M 1/6W CARBON RES	
	R346	QRD161J-683	68K 1/6W CARBON RES	
	R347	QRD161J-103	10K 1/6W CARBON RES	
	R348	QRD161J-105	1M 1/6W CARBON RES	
	R351	QRD161J-512	5.1K 1/6W CARBON RES	
	R352	QRD161J-512	5.1K 1/6W CARBON RES	
	R353	QRD167J-562	5.6K 1/6W CARBON RES	
	R354	QRD167J-562	5.6K 1/6W CARBON RES	
	R357	QRD161J-103	10K 1/6W CARBON RES	
	R358	QRD161J-103	10K 1/6W CARBON RES	
	R359	QRD161J-474	470K 1/6W CARBON RES	
	R360	QRD161J-474	470K 1/6W CARBON RES	
	R361	QRD161J-392	3.9K 1/6W CARBON RES	
	R362	QRD161J-392	3.9K 1/6W CARBON RES	
	R363	QRD161J-243	24K 1/6W CARBON RES	
	R364	QRD161J-243	24K 1/6W CARBON RES	
	R365	QRD167J-562	5.6K 1/6W CARBON RES	
	R366	QRD167J-562	5.6K 1/6W CARBON RES	
	R367	QRD167J-153	15K 1/6W CARBON RES	
	R368	QRD167J-153	15K 1/6W CARBON RES	
	R369	QRD167J-682	6.8K 1/6W CARBON RES	
	R370	QRD167J-682	6.8K 1/6W CARBON RES	
	R371	QRD161J-622	6.2K 1/6W CARBON RES	
	R372	QRD161J-622	6.2K 1/6W CARBON RES	
	R373	QRD161J-513	51K 1/6W CARBON RES	
	R374	QRD161J-513	51K 1/6W CARBON RES	
	R375	QRD161J-101	100 1/6W CARBON RES	
	R376	QRD161J-101	100 1/6W CARBON RES	
	R377	QRD167J-682	6.8K 1/6W CARBON RES	
	R378	QRD167J-682	6.8K 1/6W CARBON RES	
	R379	QRD161J-104	100K 1/6W CARBON RES	
	R380	QRD161J-104	100K 1/6W CARBON RES	
	R381	QRD167J-332	3.3K 1/6W CARBON RES	
	R382	QRD167J-332	3.3K 1/6W CARBON RES	
	R383	QRD161J-472	4.7K 1/6W CARBON RES	
	R384	QRD161J-563	56K 1/6W CARBON RES	
	R385	QRD161J-103	10K 1/6W CARBON RES	
	R386	QRD161J-103	10K 1/6W CARBON RES	
	R387	QRD167J-102	1K 1/6W CARBON RES	
	R388	QRD161J-221	220 1/6W CARBON RES	BS
	R388	QRD161J-221	220 1/6W CARBON RES	EF
	R388	QRD161J-221	220 1/6W CARBON RES	EN
	R388	QRD161J-221	220 1/6W CARBON RES	G
	R388	QRD161J-221	220 1/6W CARBON RES	GI
	R391	QRD161J-221	220 1/6W CARBON RES	
	R392	QRD161J-221	220 1/6W CARBON RES	

△ : SAFETY PARTS

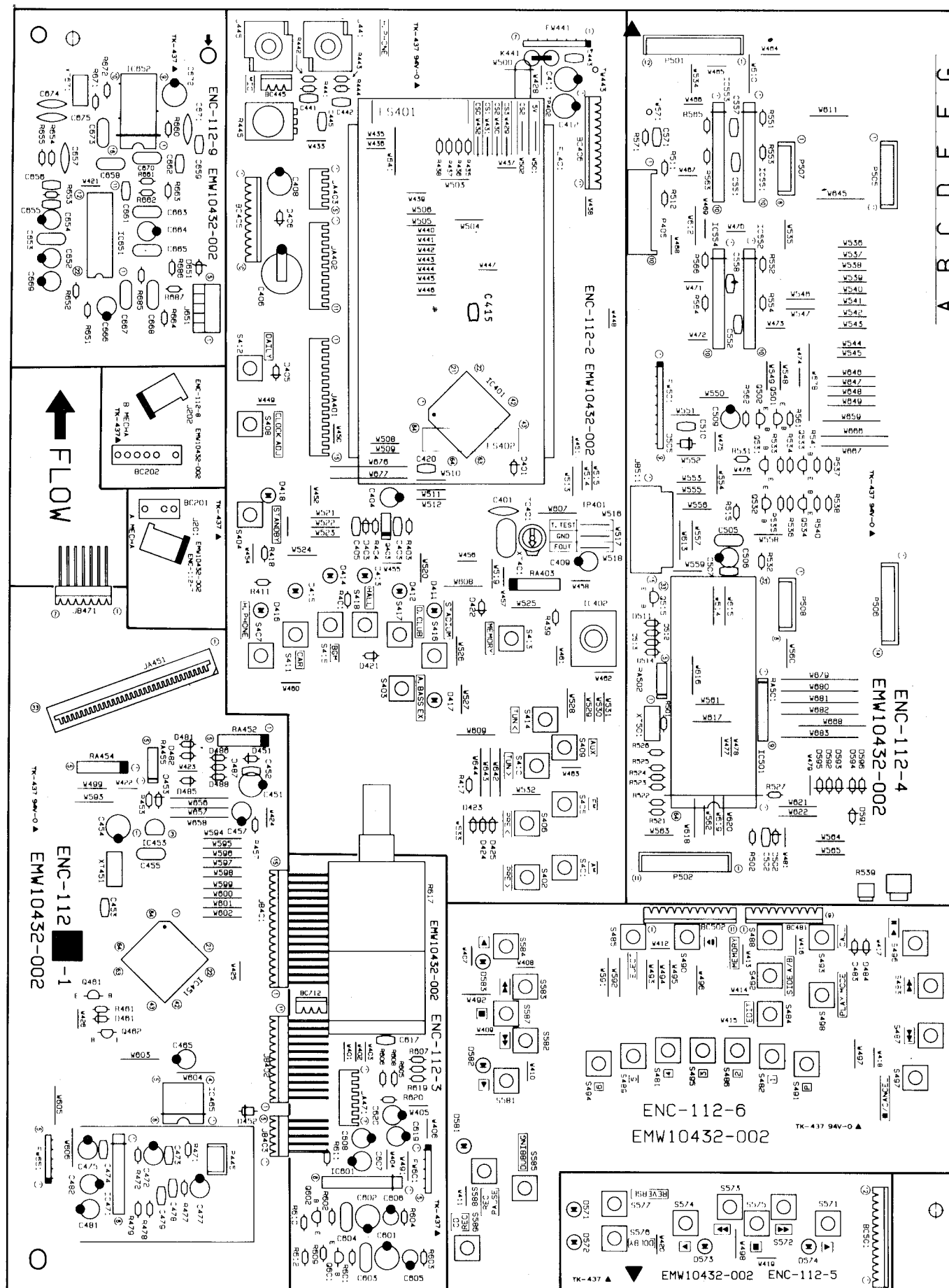
OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		FSKL4005-001	SHIELD PLAT	EF
		FSKL4005-001	SHIELD PLAT	EN
		FSKL4005-001	SHIELD PLAT	G
		FSKL4005-001	SHIELD PLAT	GI
		FSKL4005-001	SHIELD PLAT	U
		FSKL4005-001	SHIELD PLAT	US
		FSKL4005-001	SHIELD PLAT	UT
	J351	EMN00TV-222AJ2	PIN JACK	
	J601	EMV7122-005	MALE CONNEC(5PIN)	
	L101	EQL4007-1R0T	INDUCTOR	
	L102	EQL4007-2R2T	INDUCTOR	
	L103	EQL3001-102K	INDUCTOR	G
	L103	EQL3001-102K	INDUCTOR	GI
	L201	EQL4007-101	INDUCTOR	G
	L201	EQL4007-101	INDUCTOR	GI
	L202	EQL4007-101	INDUCTOR	G
	L202	EQL4007-101	INDUCTOR	GI
	L301	EQL2106-562	INDUCTOR	
	L302	EQL2106-562	INDUCTOR	
	L311	ENZ6002-014	OSCILLATOR	
	L313	EQL2106-223	INDUCTOR	
	L314	EQL2106-223	INDUCTOR	
	P201	EMV5133-003	CONNECT TER(3PIN)	
	P202	EMV5133-007K	PLUG(7PIN)	
	P406	EMV5142-911	CONNECT TER(11PIN)	
	S201	QSS7A12-E01	SLIDE SWITC(BEATCUT)	BS
	S201	QSS7A12-E01	SLIDE SWITC(BEATCUT)	EF
	S201	QSS7A12-E01	SLIDE SWITC(BEATCUT)	EN
	S201	QSS7A12-E01	SLIDE SWITC(BEATCUT)	G
	S201	QSS7A12-E01	SLIDE SWITC(BEATCUT)	GI
	T101	EQR7121-006	RF COIL	BS
	T101	EQR7121-007	RF COIL	C
	T101	EQR7121-006	RF COIL	EF
	T101	EQR7121-006	RF COIL	EN
	T101	EQR7121-006	RF COIL	G
	T101	EQR7121-006	RF COIL	GI
	T101	EQR7121-007	RF COIL	J
	T101	EQR7121-007	RF COIL	U
	T101	EQR7121-007	RF COIL	US
	T101	EQR7121-007	RF COIL	UT
	T105	EQT2140-017	I.F.TRANSFO	
	T107	ECB1560-010	CERAMIC FIL	
	AT101	EMB41YV-302K	ANTENNA TER	
	CF101	ECB2118-007R	CERAMIC FIL	BS
	CF101	ECB2123-006R	CERAMIC FIL	C
	CF101	ECB2118-007R	CERAMIC FIL	EF
	CF101	ECB2118-007R	CERAMIC FIL	EN
	CF101	ECB2118-007R	CERAMIC FIL	G
	CF101	ECB2118-007R	CERAMIC FIL	GI
	CF101	ECB2123-006R	CERAMIC FIL	J
	CF101	ECB2123-006R	CERAMIC FIL	U
	CF101	ECB2123-006R	CERAMIC FIL	US
	CF101	ECB2123-006R	CERAMIC FIL	UT
	CF102	ECB2118-007R	CERAMIC FIL	BS
	CF102	ECB2123-006R	CERAMIC FIL	C
	CF102	ECB2118-007R	CERAMIC FIL	EF
	CF102	ECB2118-007R	CERAMIC FIL	EN
	CF102	ECB2118-007R	CERAMIC FIL	G
	CF102	ECB2118-007R	CERAMIC FIL	GI
	CF102	ECB2123-006R	CERAMIC FIL	J
	CF102	ECB2123-006R	CERAMIC FIL	U
	CF102	ECB2123-006R	CERAMIC FIL	US
	CF102	ECB2123-006R	CERAMIC FIL	UT
	FE101	EAf2203-004	FRONT END	BS
	FE101	EAf2203-004	FRONT END	C
	FE101	EAf2203-004	FRONT END	EF
	FE101	EAf2203-004	FRONT END	EN
	FE101	EAf2203-005	FRONT END	G
	FE101	EAf2203-005	FRONT END	GI
	FE101	EAf2203-004	FRONT END	J
	FE101	EAf2203-004	FRONT END	U
	FE101	EAf2203-004	FRONT END	US
	FE101	EAf2203-004	FRONT END	UT
	JA511	EMV7123-015	MALE CONNEC(15PIN)	
	JT701	EMV7122-004	CONNECT TER(4PIN)	
	JT702	EMV7122-004	CONNECT TER(4PIN)	
	LP102	EQF0102-001	LOWPASS FIL	G
	LP102	EQF0102-001	LOWPASS FIL	GI
	LP103	EQF0101-010	LOWPASS FIL	
	LP104	EQF0101-010	LOWPASS FIL	
	XT102	ECX0007-200KJ1	CRYSTAL	
	XT103	ECX0000-456KR	CERAMIC RES	

△ : SAFETY PARTS

■ ENC-112 □ Front & Controller PC Board Ass'y

Note : ENC-112 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENC-112 A	U US UT	Universal Type Singapore Taiwan
ENC-112 B	BS	the U.K.
ENC-112 C	J C	the U.S.A. Canada
ENC-112 D	G	Germany
ENC-112 E	EN EF	Scandinavia Continental Europe
ENC-112 F	GI	Italy

TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
Q403	DTC114YFF	DIGITAL TRA ROHM	
Q461	DTA114YS	DIGITAL TRA ROHM	
Q462	DTC114YS	DIGITAL TRA ROHM	
Q501	DTC144ES	DIGITAL TRA ROHM	
Q502	DTC144ES	DIGITAL TRA ROHM	
Q515	DTC144ES	DIGITAL TRA ROHM	
Q531	2SC1740S(R,S)	SI.TRANSIST ROHM	
Q532	2SC1740S(R,S)	SI.TRANSIST ROHM	
Q533	2SA933S(RS)	SI.TRANSIST	
Q534	2SA933S(RS)	SI.TRANSIST	
Q601	2SA933S(RS)	SI.TRANSIST	
Q602	2SA933S(RS)	SI.TRANSIST	

I. C. S.

ITEM	PART NUMBER	DESCRIPTION	AREA
IC401	MN172412JYA1	I.C.(MICRO-C MATSUSHITA	
IC402	NJH32H380A	I.C.(M) DAINICHI	
IC451	MN172412JYD2	I.C.(MICRO-C MATSUSHITA	
IC453	MN1281(P,Q)	I.C.(DIGI-MO MATSUSHITA	
IC465	LB1639-CV	I.C.(DIGI-OT SANYO	
IC471	BA15218N	I.C.(MONO-AN ROHM	U
IC471	BA15218N	I.C.(MONO-AN ROHM	US
IC471	BA15218N	I.C.(MONO-AN ROHM	UT
IC501	HD614081SE07	I.C.(M) HITACHI	BS
IC501	HD614081SE07	I.C.(M) HITACHI	C
IC501	HD614081SE07	I.C.(M) HITACHI	EF
IC501	HD614081SE07	I.C.(M) HITACHI	EN
IC501	HD614081SE07	I.C.(M) HITACHI	G
IC501	HD614081SE07	I.C.(M) HITACHI	GI
IC501	HD614081SE07	I.C.(M) HITACHI	J
IC501	HD614081SE07	I.C.(M) HITACHI	U
IC501	HD614081SE07	I.C.(M) HITACHI	US
IC501	HD614081SE07	I.C.(M) HITACHI	UT
IC551	LB1641	I.C.(DIGI-OT SANYO	
IC552	LB1641	I.C.(DIGI-OT SANYO	
IC553	LB1641	I.C.(DIGI-OT SANYO	
IC554	LB1641	I.C.(DIGI-OT SANYO	
IC601	BA15218N	I.C.(MONO-AN ROHM	
IC651	BA7725S	I.C.(M) ROHM	U
IC651	BA7725S	I.C.(M) ROHM	US
IC651	BA7725S	I.C.(M) ROHM	UT
IC652	BU9251S	I.C.(M) ROHM	U
IC652	BU9251S	I.C.(M) ROHM	US
IC652	BU9251S	I.C.(M) ROHM	UT

DIODES

ITEM	PART NUMBER	DESCRIPTION	AREA
D401	1SS119	SI.DIODE	
D403	1SS119	SI.DIODE	
D405	1SS119	SI.DIODE	
D406	1SS119	SI.DIODE	
D411	SLR-342MCA47	L.E.D. ROHM	
D412	SLR-342MCA47	L.E.D. ROHM	
D413	SLR-342MCA47	L.E.D. ROHM	
D414	SLR-342MCA47	L.E.D. ROHM	
D415	SLR-342MCA47	L.E.D. ROHM	
D416	SLR-342MCA47	L.E.D. ROHM	
D417	SLR-342VC3F	L.E.D. ROHM	
D418	SLA-380LT	L.E.D. ROHM	BS
D418	SLR-342VC3F	L.E.D. ROHM	C
D418	SLR-342VC3F	L.E.D. ROHM	EF
D418	SLR-342VC3F	L.E.D. ROHM	EN

Δ : SAFETY PARTS

DIODES

ITEM	PART NUMBER	DESCRIPTION	AREA
D418	SLR-342VC3F	L.E.D. ROHM	G
D418	SLR-342VC3F	L.E.D. ROHM	GI
D418	SLR-342VC3F	L.E.D. ROHM	J
D418	SLR-342VC3F	L.E.D. ROHM	U
D418	SLR-342VC3F	L.E.D. ROHM	US
D418	SLR-342VC3F	L.E.D. ROHM	UT
D421	1SS119	SI.DIODE	
D422	1SS119	SI.DIODE	
D423	1SS119	SI.DIODE	
D424	1SS119	SI.DIODE	
D425	1SS119	SI.DIODE	
D451	1SS119	SI.DIODE	
D452	1SR139-200	SI.DIODE ROHM	
D453	1SS119	SI.DIODE	
D461	1SS119	SI.DIODE	
D481	1SS119	SI.DIODE	
D482	1SS119	SI.DIODE	
D483	1SS119	SI.DIODE	
D484	1SS119	SI.DIODE	
D485	1SS119	SI.DIODE	
D486	1SS119	SI.DIODE	
D487	1SS119	SI.DIODE	
D488	1SS119	SI.DIODE	
D502	1SS119	SI.DIODE	
D505	1SR139-200	SI.DIODE ROHM	
D511	1SS119	SI.DIODE	
D512	1SS119	SI.DIODE	
D513	1SS119	SI.DIODE	
D514	1SS119	SI.DIODE	
D571	SLR-342VC3F	L.E.D. ROHM	
D572	SLR-342VC3F	L.E.D. ROHM	
D573	SLR-342MCA47	L.E.D. ROHM	
D574	SLR-342MCA47	L.E.D. ROHM	
D581	SLR-342VC3F	L.E.D. ROHM	
D582	SLR-342MCA47	L.E.D. ROHM	
D583	SLR-342MCA47	L.E.D. ROHM	
D591	1SS119	SI.DIODE	
D592	1SS119	SI.DIODE	
D593	1SS119	SI.DIODE	
D594	1SS119	SI.DIODE	
D595	1SS119	SI.DIODE	
D596	1SS119	SI.DIODE	
D651	MTZ5.1JC	ZENER DIODE ROHM	U
D651	MTZ5.1JC	ZENER DIODE ROHM	US
D651	MTZ5.1JC	ZENER DIODE ROHM	UT

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C401	QCT26CH-330	33PF 50V CER.CAPACI	
C403	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
C404	QER51EM-475G	4.7MF 25V AL E.CAPAC	
C405	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
C406	QEZO171-10AM	AL E.CAPAC	
C408	QER51CM-107	100MF 16V E.CAPACITO	
C409	QER50JM-107	100MF 6.3V AL E.CAPAC	
C411	QER51HM-106	10MF 50V AL E.CAPAC	
C412	QER51HM-106	10MF 50V AL E.CAPAC	
C415	QCB1HK-101Y	100PF 50V CER.CAPACI	
C420	QCFB1HZ-104Y	0.1MF 50V CER.CAPACI	
C441	QCB1HK-471Y	470PF 50V CER.CAPACI	G
C441	QCB1HK-471Y	470PF 50V CER.CAPACI	GI
C442	QCB1HK-471Y	470PF 50V CER.CAPACI	G
C442	QCB1HK-471Y	470PF 50V CER.CAPACI	GI
C443	QCHB1EZ-223Y	0.022MF 25V CER.CAPACI	
C445	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
C451	QETB1AM-107	100MF 10V AL E.CAPAC	
C452	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C453	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
C454	QETB1AM-107	100MF 10V AL E.CAPAC	
C455	QFV81HJ-104	0.1MF 50V THIN FILM	
C457	QETB1HM-226E	22MF 50V E.CAPACITO	
C465	QETB1AM-476	47MF 10V E.CAPACITO	
C472	QETB1HM-105	1MF 50V AL E.CAPAC	U
C472	QETB1HM-105	1MF 50V AL E.CAPAC	US
C472	QETB1HM-105	1MF 50V AL E.CAPAC	UT
C473	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	U
C473	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	US
C473	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	UT
C474	QCB1HK-101Y	100PF 50V CER.CAPACI	U
C474	QCB1HK-101Y	100PF 50V CER.CAPACI	US
C474	QCB1HK-101Y	100PF 50V CER.CAPACI	UT
C475	QETB1HM-475E	4.7MF 50V E.CAPACITO	U
C475	QETB1HM-475E	4.7MF 50V E.CAPACITO	US
C475	QETB1HM-475E	4.7MF 50V E.CAPACITO	UT
C477	QETB1HM-105	1MF 50V AL E.CAPAC	U
C477	QETB1HM-105	1MF 50V AL E.CAPAC	US
C477	QETB1HM-105	1MF 50V AL E.CAPAC	UT
C478	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	U
C478	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	US
C478	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	UT
C479	QCB1HK-101Y	100PF 50V CER.CAPACI	U
C479	QCB1HK-101Y	100PF 50V CER.CAPACI	US

Δ : SAFETY PARTS

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C479	QCBB1HK-101Y	100PF	50V	CER.CAPACI	UT
	C481	QETB1CM-476	47MF	16V	AL E.CAPAC	U
	C481	QETB1CM-476	47MF	16V	AL E.CAPAC	US
	C481	QETB1CM-476	47MF	16V	AL E.CAPAC	UT
	C482	QETB1CM-476	47MF	16V	AL E.CAPAC	U
	C482	QETB1CM-476	47MF	16V	AL E.CAPAC	US
	C482	QETB1CM-476	47MF	16V	AL E.CAPAC	UT
	C502	QCGB1HK-102	1000PF	50V	CER.CAPACI	
	C505	QCZO205-155	1.5MF	25V	C.CAPACITO	
	C506	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C507	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C509	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C510	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C551	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C552	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C557	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C558	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C571	QCBB1HK-101Y	100PF	50V	CER.CAPACI	G
	C571	QCBB1HK-101Y	100PF	50V	CER.CAPACI	GI
	C601	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C602	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C603	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	
	C604	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	
	C605	QETB1HM-474	0.47MF	50V	ELECTRO	
	C606	QETB1HM-474	0.47MF	50V	ELECTRO	
	C607	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C608	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C617	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C619	QETB1HM-475E	4.7MF	50V	E.CAPACITO	U
	C619	QETB1HM-475E	4.7MF	50V	E.CAPACITO	US
	C619	QETB1HM-475E	4.7MF	50V	E.CAPACITO	UT
	C620	QETB1HM-475E	4.7MF	50V	E.CAPACITO	U
	C620	QETB1HM-475E	4.7MF	50V	E.CAPACITO	US
	C620	QETB1HM-475E	4.7MF	50V	E.CAPACITO	UT
	C652	QETB1CM-226	22MF	16V	E.CAPACITO	U
	C652	QETB1CM-226	22MF	16V	E.CAPACITO	US
	C652	QETB1CM-226	22MF	16V	E.CAPACITO	UT
	C653	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	U
	C653	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	US
	C653	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	UT
	C654	QETB1HM-474	0.47MF	50V	ELECTRO	U
	C654	QETB1HM-474	0.47MF	50V	ELECTRO	US
	C654	QETB1HM-474	0.47MF	50V	ELECTRO	UT
	C655	QCXB1CM-562Y	5600PF	16V	CER.CAPACI	U
	C655	QCXB1CM-562Y	5600PF	16V	CER.CAPACI	US
	C655	QCXB1CM-562Y	5600PF	16V	CER.CAPACI	UT
	C656	QCGB1HK-821	820PF	50V	CER.CAPACI	U
	C656	QCGB1HK-821	820PF	50V	CER.CAPACI	US
	C656	QCGB1HK-821	820PF	50V	CER.CAPACI	UT
	C657	QFLB1HJ-183	0.018MF	50V	MYLAR CAPA	U
	C657	QFLB1HJ-183	0.018MF	50V	MYLAR CAPA	US
	C657	QFLB1HJ-183	0.018MF	50V	MYLAR CAPA	UT
	C658	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	U
	C658	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	US
	C658	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	UT
	C659	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	U
	C659	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	US
	C659	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	UT
	C661	QCXB1CM-222	2200PF	16V	CER.CAPACI	U
	C661	QCXB1CM-222	2200PF	16V	CER.CAPACI	US
	C661	QCXB1CM-222	2200PF	16V	CER.CAPACI	UT
	C662	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	U
	C662	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	US
	C662	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	UT
	C663	QFLB1HJ-333	0.033MF	50V	MYLAR CAPA	U
	C663	QFLB1HJ-333	0.033MF	50V	MYLAR CAPA	US
	C663	QFLB1HJ-333	0.033MF	50V	MYLAR CAPA	UT
	C664	QETB1HM-474	0.47MF	50V	ELECTRO	U
	C664	QETB1HM-474	0.47MF	50V	ELECTRO	US
	C664	QETB1HM-474	0.47MF	50V	ELECTRO	UT
	C665	QFV81HJ-104	0.1MF	50V	THIN FILM	U
	C665	QFV81HJ-104	0.1MF	50V	THIN FILM	US
	C665	QFV81HJ-104	0.1MF	50V	THIN FILM	UT
	C666	QETB1HM-105	1MF	50V	AL E.CAPAC	U
	C666	QETB1HM-105	1MF	50V	AL E.CAPAC	US
	C666	QETB1HM-105	1MF	50V	AL E.CAPAC	UT
	C667	QFV81HJ-104	0.1MF	50V	THIN FILM	U
	C667	QFV81HJ-104	0.1MF	50V	THIN FILM	US
	C667	QFV81HJ-104	0.1MF	50V	THIN FILM	UT
	C668	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	U
	C668	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	US
	C668	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	UT
	C669	QETB1CM-476	47MF	16V	AL E.CAPAC	U
	C669	QETB1CM-476	47MF	16V	AL E.CAPAC	US
	C669	QETB1CM-476	47MF	16V	AL E.CAPAC	UT
	C670	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	U
	C670	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	US
	C670	QFLB1HJ-104	0.1MF	50V	MYLAR CAPA	UT
	C671	QCS21HJ-221	220PF	50V	CER.CAPACI	U
	C671	QCS21HJ-221	220PF	50V	CER.CAPACI	US
	C671	QCS21HJ-221	220PF	50V	CER.CAPACI	UT
	C672	QETB1CM-107	100MF	16V	AL E.CAPAC	U
	C672	QETB1CM-107	100MF	16V	AL E.CAPAC	US
	C672	QETB1CM-107	100MF	16V	AL E.CAPAC	UT
	C673	QFLB1HJ-103	0.01MF	50V	MYLAR CAPA	U
	C673	QFLB1HJ-103	0.01MF	50V	MYLAR CAPA	US
	C673	QFLB1HJ-103	0.01MF	50V	MYLAR CAPA	UT
	C674	QCS21HJ-101A	100PF	50V	CER.CAPACI	U
	C674	QCS21HJ-101A	100PF	50V	CER.CAPACI	US
	C674	QCS21HJ-101A	100PF	50V	CER.CAPACI	UT

Δ : SAFETY PARTS

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C675	QCS21HJ-101A	100PF	50V	CER.CAPACI	U
	C675	QCS21HJ-101A	100PF	50V	CER.CAPACI	US
	C675	QCS21HJ-101A	100PF	50V	CER.CAPACI	UT

RESISTORS

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R401	QRD161J-331	330	1/6W	CARBON RES	
	R403	QRD167J-223	22K	1/6W	CARBON RES	
	R404	QRD161J-104	100K	1/6W	CARBON RES	
	R411	QRD161J-241	240	1/6W	CARBON RES	
	R417	QRD161J-221	220	1/6W	CARBON RES	
	R418	QRD161J-221	220	1/6W	CARBON RES	BS
	R418	QRD161J-201	200	1/6W	CARBON RES	C
	R418	QRD161J-201	200	1/6W	CARBON RES	EF
	R418	QRD161J-201	200	1/6W	CARBON RES	EN
	R418	QRD161J-201	200	1/6W	CARBON RES	G
	R418	QRD161J-201	200	1/6W	CARBON RES	GI
	R418	QRD161J-201	200	1/6W	CARBON RES	J
	R418	QRD161J-201	200	1/6W	CARBON RES	U
	R418	QRD161J-201	200	1/6W	CARBON RES	US
	R418	QRD161J-201	200	1/6W	CARBON RES	UT
	R435	QRD161J-103	10K	1/6W	CARBON RES	
	R436	QRD161J-103	10K	1/6W	CARBON RES	
	R437	QRD161J-103	10K	1/6W	CARBON RES	
	R438	QRD161J-103	10K	1/6W	CARBON RES	
	R439	QRD161J-103	10K	1/6W	CARBON RES	
	R441	QRD161J-681	680	1/6W	CARBON RES	
	R442	QRD161J-681	680	1/6W	CARBON RES	
	R443	QRD161J-681	680	1/6W	CARBON RES	
	R444	QRD161J-681	680	1/6W	CARBON RES	
	R445	QVAA72B-E54B	50K		VARIABLE R	
	R445	QVAA72B-E54B	50K		VARIABLE R	U
	R445	QVAA72B-E54B	50K		VARIABLE R	US
	R453	QRD161J-821	820	1/6W	CARBON RES	UT
	R457	QRD161J-473	47K	1/6W	CARBON RES	
	R461	QRD161J-103	10K	1/6W	CARBON RES	
	R471	QRD167J-102	1K	1/6W	CARBON RES	U
	R471	QRD167J-102	1K	1/6W	CARBON RES	US
	R471	QRD167J-102	1K	1/6W	CARBON RES	UT
	R472	QRD161J-103	10K	1/6W	CARBON RES	U
	R472	QRD161J-103	10K	1/6W	CARBON RES	US
	R472	QRD161J-103	10K	1/6W	CARBON RES	UT
	R477	QRD161J-104	100K	1/6W	CARBON RES	U
	R477	QRD161J-104	100K	1/6W	CARBON RES	US
	R477	QRD161J-104	100K	1/6W	CARBON RES	UT
	R478	QRD161J-393	39K	1/6W	CARBON RES	U
	R478	QRD161J-393	39K	1/6W	CARBON RES	US
	R478	QRD161J-393	39K	1/6W	CARBON RES	UT
	R479	QRD161J-104	100K	1/6W	CARBON RES	U
	R479	QRD161J-104	100K	1/6W	CARBON RES	US
	R479	QRD161J-104	100K	1/6W	CARBON RES	UT
	R501	QRD161J-105	1M	1/6W	CARBON RES	
	R502	QRD161J-103	10K	1/6W	CARBON RES	
	R511	QRD161J-271	270	1/6W	CARBON RES	
	R512	QRD161J-472	4.7K	1/6W	CARBON RES	
	R515	QRD161J-103	10K	1/6W	CARBON RES	
	R521	QRD167J-161	160	1/6W	CARBON RES	
	R522	QRD167J-161	160	1/6W	CARBON RES	
	R523	QRD161J-221	220	1/6W	CARBON RES	
	R524	QRD161J-221	220	1/6W	CARBON RES	
	R525	QRD161J-391	390	1/6W	CARBON RES	
	R526	QRD161J-271	270	1/6W	CARBON RES	
	R527	QRD161J-271	270	1/6W	CARBON RES	
	R531	QRD161J-103	10K	1/6W	CARBON RES	
	R532	QRD161J-103	10K	1/6W	CARBON RES	
	R533	QRD161J-184	180K	1/6W	CARBON RES	
	R534	QRD161J-224	220K	1/6W	CARBON RES	
	R535	QRD161J-224	220K	1/6W	CARBON RES	
	R536	QRD161J-224	220K	1/6W	CARBON RES	
	R537	QRD161J-132	1.3K	1/6W	CARBON RES	
	R538	QRD161J-243	24K	1/6W	CARBON RES	
	R539	QVPG401-103	10K		VARIABLE R	
	R540	QRD161J-683	68K	1/6W	CARBON RES	
	R541	QRD161J-133Y	13K	1/6W	CARBON RES	
	R551	QRD161J-432	4.3K	1/6W	CARBON RES	
	R552	QRD161J-432	4.3K	1/6W	CARBON RES	
	R553	QRD161J-103	10K	1/6W	CARBON RES	
	R554	QRD161J-103	10K	1/6W	CARBON RES	
	R561	QRD167J-822	8.2K	1/6W	CARBON RES	
	R562	QRD167J-822	8.2K	1/6W	CARBON RES	
	R563	QRD161J-913	91K	1/6W	CARBON RES	
	R564	QRD161J-913	91K	1/6W	CARBON RES	
	R565	QRD161J-163	16K	1/6W	CARBON RES	
	R566	QRD161J-163	16K	1/6W	CARBON RES	
	R571	QRD161J-220	22	1/6W	CARBON RES	G
	R571	QRD161J-220	22	1/6W	CARBON RES	GI
	R601	QRD161J-274	270K	1/6W	CARBON RES	
	R602	QRD161J-274	270K	1/6W	CARBON RES	
	R603	QRD167J-511	510	1/6W	CARBON RES	
	R604	QRD167J-511	510	1/6W	CARBON RES	
	R605	QRD167J-682	6.8K	1/6W	CARBON RES	

Δ : SAFETY PARTS

RESISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
R606	QRD167J-682	6.8K 1/6W CARBON RES	
R607	QRD161J-203	20K 1/6W CARBON RES	
R608	QRD161J-203	20K 1/6W CARBON RES	
R609	QRD161J-103	10K 1/6W CARBON RES	
R610	QRD161J-103	10K 1/6W CARBON RES	
R611	QRD161J-473	47K 1/6W CARBON RES	
R612	QRD161J-472	4.7K 1/6W CARBON RES	
R617	QV5B94B-E15D	100K VARIABLE	
R619	QRD161J-472	4.7K 1/6W CARBON RES	
R620	QRD161J-472	4.7K 1/6W CARBON RES	
R651	QRD167J-152	1.5K 1/6W CARBON RES	U
R651	QRD167J-152	1.5K 1/6W CARBON RES	US
R651	QRD167J-152	1.5K 1/6W CARBON RES	UT
R652	QRD161J-123	12K 1/6W CARBON RES	U
R652	QRD161J-123	12K 1/6W CARBON RES	US
R652	QRD161J-123	12K 1/6W CARBON RES	UT
R653	QRD161J-103	10K 1/6W CARBON RES	U
R653	QRD161J-103	10K 1/6W CARBON RES	US
R653	QRD161J-103	10K 1/6W CARBON RES	UT
R654	QRD161J-103	10K 1/6W CARBON RES	U
R654	QRD161J-103	10K 1/6W CARBON RES	US
R654	QRD161J-103	10K 1/6W CARBON RES	UT
R655	QRD161J-103	10K 1/6W CARBON RES	U
R655	QRD161J-103	10K 1/6W CARBON RES	US
R655	QRD161J-103	10K 1/6W CARBON RES	UT
R660	QRD161J-472	4.7K 1/6W CARBON RES	U
R660	QRD161J-472	4.7K 1/6W CARBON RES	US
R660	QRD161J-472	4.7K 1/6W CARBON RES	UT
R661	QRD161J-103	10K 1/6W CARBON RES	U
R661	QRD161J-103	10K 1/6W CARBON RES	US
R661	QRD161J-103	10K 1/6W CARBON RES	UT
R662	QRD161J-103	10K 1/6W CARBON RES	U
R662	QRD161J-103	10K 1/6W CARBON RES	US
R662	QRD161J-103	10K 1/6W CARBON RES	UT
R663	QRD161J-103	10K 1/6W CARBON RES	U
R663	QRD161J-103	10K 1/6W CARBON RES	US
R663	QRD161J-103	10K 1/6W CARBON RES	UT
R664	QRD167J-471	470 1/6W CARBON RES	U
R664	QRD167J-471	470 1/6W CARBON RES	US
R664	QRD167J-471	470 1/6W CARBON RES	UT
R671	QRD161J-105	1M 1/6W CARBON RES	U
R671	QRD161J-105	1M 1/6W CARBON RES	US
R671	QRD161J-105	1M 1/6W CARBON RES	UT
R672	QRD167J-682	6.8K 1/6W CARBON RES	U
R672	QRD167J-682	6.8K 1/6W CARBON RES	US
R672	QRD167J-682	6.8K 1/6W CARBON RES	UT
R685	QRD161J-303Y	30K 1/6W CARBON RES	U
R685	QRD161J-303Y	30K 1/6W CARBON RES	US
R685	QRD161J-303Y	30K 1/6W CARBON RES	UT
R686	QRD161J-331	330 1/6W CARBON RES	U
R686	QRD161J-331	330 1/6W CARBON RES	US
R686	QRD161J-331	330 1/6W CARBON RES	UT
R687	QRD161J-183	18K 1/6W CARBON RES	U
R687	QRD161J-183	18K 1/6W CARBON RES	US
R687	QRD161J-183	18K 1/6W CARBON RES	UT
RA403	QRB045J-103	10K 1/8W RESISTOR A	
RA452	QRB045J-103	10K 1/8W RESISTOR A	
RA454	QRB045J-472	4.7K 1/8W NETWORK RE	
RA455	QRB049J-472	4.7K 1/10W NETWORK RE	
RA501	QRB089J-103	10K 1/10W NETWORK RE	
RA502	QRB049J-103	10K 1/10W RESISTOR	

△ : SAFETY PARTS

OTHERS

ITEM	PART NUMBER	DESCRIPTION	AREA
	E309038-001	SHIELD CASE	U
	E309038-001	SHIELD CASE	US
	E309038-001	SHIELD CASE	UT
J201	EMV7155-106R	CONNECT TER	
J202	EMV7155-106R	CONNECT TER	
J441	QMS3R30-E40S	MICROPHONE	U
J445	QMS3R30-E40S	MICROPHONE	US
J445	QMS3R30-E40S	MICROPHONE	UT
J451	EMV7122-005	MALE CONNec	U
J651	EMV7122-005	MALE CONNec	US
J651	EMV7122-005	MALE CONNec	UT
K441	ENZ8101-007	INDUCTOR	G
K441	ENZ8101-007	INDUCTOR	GI
P405	EMV5142-910R	PIN PLUG	
P445	EMV5109-003A	MALE CONNec(3PIN)	U
P445	EMV5109-003A	MALE CONNec(3PIN)	US
P445	EMV5109-003A	MALE CONNec(3PIN)	UT
P501	EMV5109-012A	MALE CONNec(12PIN)	
P502	EMV5142-911	CONNECT TER(11PIN)	
P505	VMC0234-P11	CONNECT TER(11PIN)	
P506	VMC0234-P14	CONNECT TER(14PIN)	
P507	VMC0234-P08	CONNECT TER(8PIN)	
P508	VMC0234-P08	CONNECT TER(8PIN)	
S401	ESP0001-023M	TACT SWITCH(AM)	
S402	ESP0001-023M	TACT SWITCH(PRESET >)	
S403	ESP0001-023M	TACT SWITCH(A.BASS.EX)	
S404	ESP0001-023M	TACT SWITCH(POWER)	
S405	ESP0001-023M	TACT SWITCH(FM)	
S406	ESP0001-023M	TACT SWITCH(PRESET <)	
S407	ESP0001-023M	TACT SWITCH(H.PHONE)	
S408	ESP0001-023M	TACT SWITCH(CLOCK ADJ)	
S409	ESP0001-023M	TACT SWITCH(AUX)	
S410	ESP0001-023M	TACT SWITCH(TUN >)	
S411	ESP0001-023M	TACT SWITCH(CAR)	
S412	ESP0001-023M	TACT SWITCH(DAILY)	
S413	ESP0001-023M	TACT SWITCH(MEMORY)	
S414	ESP0001-023M	TACT SWITCH(TUN <)	
S415	ESP0001-023M	TACT SWITCH(BGM)	
S416	ESP0001-023M	TACT SWITCH(STADIUM)	
S417	ESP0001-023M	TACT SWITCH(D.CLUB)	
S418	ESP0001-023M	TACT SWITCH(HALL)	
S481	ESP0001-023M	TACT SWITCH(D4)	
S482	ESP0001-023M	TACT SWITCH(D1)	
S483	ESP0001-023M	TACT SWITCH(+1 TIME DD)	
S484	ESP0001-023M	TACT SWITCH(EDIT)	
S485	ESP0001-023M	TACT SWITCH(MAGAZINE OPEN / CLOSE)	
S486	ESP0001-023M	TACT SWITCH(D2)	
S487	ESP0001-023M	TACT SWITCH(+10 TIME KKK)	
S488	ESP0001-023M	TACT SWITCH(MEMORY)	
S489	ESP0001-023M	TACT SWITCH(D5)	
S490	ESP0001-023M	TACT SWITCH(P1 TRAY OPEN / CLOSE)	
S491	ESP0001-023M	TACT SWITCH(P1)	
S492	ESP0001-023M	TACT SWITCH(SIDE A/B)	
S493	ESP0001-023M	TACT SWITCH(CALL)	
S494	ESP0001-023M	TACT SWITCH(D6)	
S495	ESP0001-023M	TACT SWITCH(D3)	
S496	ESP0001-023M	TACT SWITCH(PLAY / PAUSE)	
S497	ESP0001-023M	TACT SWITCH(STOP / CANCEL)	
S498	ESP0001-023M	TACT SWITCH(P.MODE)	
S571	ESP0001-023M	TACT SWITCH(A <)	
S572	ESP0001-023M	TACT SWITCH(A <<)	
S573	ESP0001-023M	TACT SWITCH(A >>)	
S574	ESP0001-023M	TACT SWITCH(A >)	
S575	ESP0001-023M	TACT SWITCH(A □)	
S576	ESP0001-023M	TACT SWITCH(DOLBY)	
S577	ESP0001-023M	TACT SWITCH(REV.MODE)	
S581	ESP0001-023M	TACT SWITCH(B <)	
S582	ESP0001-023M	TACT SWITCH(B <<)	
S583	ESP0001-023M	TACT SWITCH(B >>)	
S584	ESP0001-023M	TACT SWITCH(B >)	
S585	ESP0001-023M	TACT SWITCH(H.S.D)	
S586	ESP0001-023M	TACT SWITCH(CD REC)	
S587	ESP0001-023M	TACT SWITCH(B □)	
S588	ESP0001-023ZJ5	TACT SWITCH(B REC PAUSE)	
BC201	EWS243-065J	SOCKET WIRE(4PIN)	
BC202	EWS247-012J	SOCKET WIRE(7PIN)	
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	BS
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	C
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	EF
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	EN
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	G
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	GI
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	J
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	U
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	US
BC405	EWS32A-F920	SOCKET WIRE(10PIN)	UT
BC406	EWS32B-A920	CONNECTOR W(11PIN)	BS
BC406	EWS32B-A920	CONNECTOR W(11PIN)	C
BC406	EWS32B-A920	CONNECTOR(11PIN)	EF
BC406	EWS32B-A920	CONNECTOR(11PIN)	EN
BC406	EWS32B-A920	CONNECTOR(11PIN)	G
BC406	EWS32B-A920	CONNECTOR(11PIN)	GI
BC406	EWS32B-A920	CONNECTOR(11PIN)	J
BC406	EWS32B-A920	CONNECTOR(11PIN)	U
BC406	EWS32B-A920	CONNECTOR(11PIN)	US
BC406	EWS32B-A920	CONNECTOR(11PIN)	UT
BC445	EWS293-0120	SOCKET WIRE(3PIN)	U
BC445	EWS293-0120	SOCKET WIRE(3PIN)	US

△ : SAFETY PARTS

OTHERS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	BC445	EWS293-0120	SOCKET WIRE(3PIN)	UT
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	BS
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	C
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	EF
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	EN
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	G
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	GI
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	J
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	U
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	US
	BC481	EWS269-A210	SOCKET WIRE(9PIN)	UT
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	BS
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	C
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	EF
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	EN
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	G
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	GI
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	J
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	U
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	US
	BC501	EWS26C-A220	SOCKET WIRE(12PIN)	UT
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	BS
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	C
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	EF
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	EN
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	G
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	GI
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	J
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	U
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	US
	BC502	EWS32B-A922	SOCKET WIRE(11PIN)	UT
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	BS
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	C
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	EF
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	EN
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	G
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	GI
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	J
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	U
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	US
	BC712	EWS293-0125	SOCKET WIRE(3PIN)	UT
	FL401	ELU0001-175	FLUORESCENT	
	FS401	E306805-118	FELT SPACER	
	FS402	E306805-118	FELT SPACER	
	FW441	EWR37D-30LS	CORD(7PIN)	
	FW501	EWR39D-13LS	FLAT WIRE(9PIN)	
	FW601	EWR35D-13LS	FLAT WIRE(5PIN)	
	FW651	EWR35D-13LS	FLAT WIRE(5PIN)	U
	FW651	EWR35D-13LS	FLAT WIRE(5PIN)	US
	FW651	EWR35D-13LS	FLAT WIRE(5PIN)	UT
	JA401	EMV7124-015	SOCKET(15PIN)	
	JA402	EMV7124-011	CONNECT TER(11PIN)	
	JA403	EMV7124-005	CONNECT TER(5PIN)	
	JA451	EMV7123-033	FEMALE CONN(33PIN)	
	JA471	EMV7124-007	SOCKET(7PIN)	
	JB401	EMV5122-015R	SOCKET(15PIN)	
	JB402	EMV5122-011R	CONNECT TER(11PIN)	
	JB403	EMV5122-005R	CONNECT TER(5PIN)	
	JB471	EMV5122-007R	CONNECT TER(7PIN)	
	JB511	EMV7123-015R	MALE CONNEC(15PIN)	
	TC401	ENZ1003-015	TRIMMER CAP	
	TW443	EWTO11-078	TERMINAL WI	G
	TW443	EWTO11-078	TERMINAL WI	GI
	TW571	EWTO11-078	TERMINAL WI	G
	TW571	EWTO11-078	TERMINAL WI	GI
	XT401	ECX0006-000KNJ	CRYSTAL	
	XT451	ECX0060-000EM	CERAMIC RES	
	XT501	ECX0004-194KM	CERAMIC RES	
	XT671	ECX0000-400KS	CERAMIC RES	U
	XT671	ECX0000-400KS	CERAMIC RES	US
	XT671	ECX0000-400KS	CERAMIC RES	UT

Δ : SAFETY PARTS

Accessories List

Symbol No.						M	4	M	M
⚠	Item	Part Number	Part Name	Q'ty	Description	Areas			
	1	E30580-2107A	INSTRUCTION BOOK	1		J			
		E30580-2108ABS	INSTRUCTION BOOK	1		BS			
		E30580-2109A	INSTRUCTION BOOK	1		C			
		E30580-2109A	INSTRUCTION BOOK	1		EF			
		E30580-2110A	INSTRUCTION BOOK	1		EN			
		E30580-2109A	INSTRUCTION BOOK	1		G			
		E30580-2109A	INSTRUCTION BOOK	1		GI			
		E30580-2111A	INSTRUCTION BOOK	1		U			
		E30580-2111A	INSTRUCTION BOOK	1		US			
		E30580-2111A	INSTRUCTION BOOK	1		UT			
	2	BT-51006-1	REGISTER CARD	1		J			
	3	BT-20044G	SAFETY INSTRUCTION SHEET	1		J			
	4	BT-20025L	WARRANTY CARD	1		C			
	5	BT20071B	SERVICE CENTER LIST	1		C			
	6	BT-20134	WARRANTY CARD	1					
	7	BT20060	WARRANTY CARD	1		BS			
	8	BT-20066A	WARRANTY CARD	1		BS			
	9	E43486-340A	SAFETY SHEET	1		BS			
⚠	10	ENZ2202-001	SIEMENS PLUG	1		US			
⚠		ENZ2203-001	SIEMENS PLUG	1		U			
⚠		ENZ2203-001	SIEMENS PLUG	1		UT			
	11	E26072-020	MAGAZINE	1					
	12	E26078-001	TRAY	6					
	13	E03614-004	BILT-IN ANTENNA	1		BS			
		E03614-004	BILT-IN ANTENNA	1		C			
		E03614-004	BILT-IN ANTENNA	1		EF			
		E03614-004	BILT-IN ANTENNA	1		EN			
		E03614-004	BILT-IN ANTENNA	1		GI			
		E03614-004	BILT-IN ANTENNA	1		J			
		E03614-004	BILT-IN ANTENNA	1		U			
		E03614-004	BILT-IN ANTENNA	1		US			
		E03614-004	BILT-IN ANTENNA	1		UT			
		E67007-001	ANTENNA WIRE	1		G			
	14	EQB4001-015J2	LOOP ANTENNA	1					
	15	EMZ2001-014	ADAPTOR PLUG	1		BS			
		EMZ2001-014	ADAPTOR PLUG	1		C			
		EMZ2001-014	ADAPTOR PLUG	1		EF			
		EMZ2001-014	ADAPTOR PLUG	1		EN			
		EMZ2001-014	ADAPTOR PLUG	1		GI			
		EMZ2001-014	ADAPTOR PLUG	1		J			
		EMZ2001-014	ADAPTOR PLUG	1		U			
		EMZ2001-014	ADAPTOR PLUG	1		US			
		EMZ2001-014	ADAPTOR PLUG	1		UT			
	16	R6P(NC)-2PSA	BATTERY	1					
	17	RM-SEC33U	REMOTE CONTROLLER	1					
	18	QPGA025-03505B	ENVELOPE	1					

⚠ SAFETY PARTS

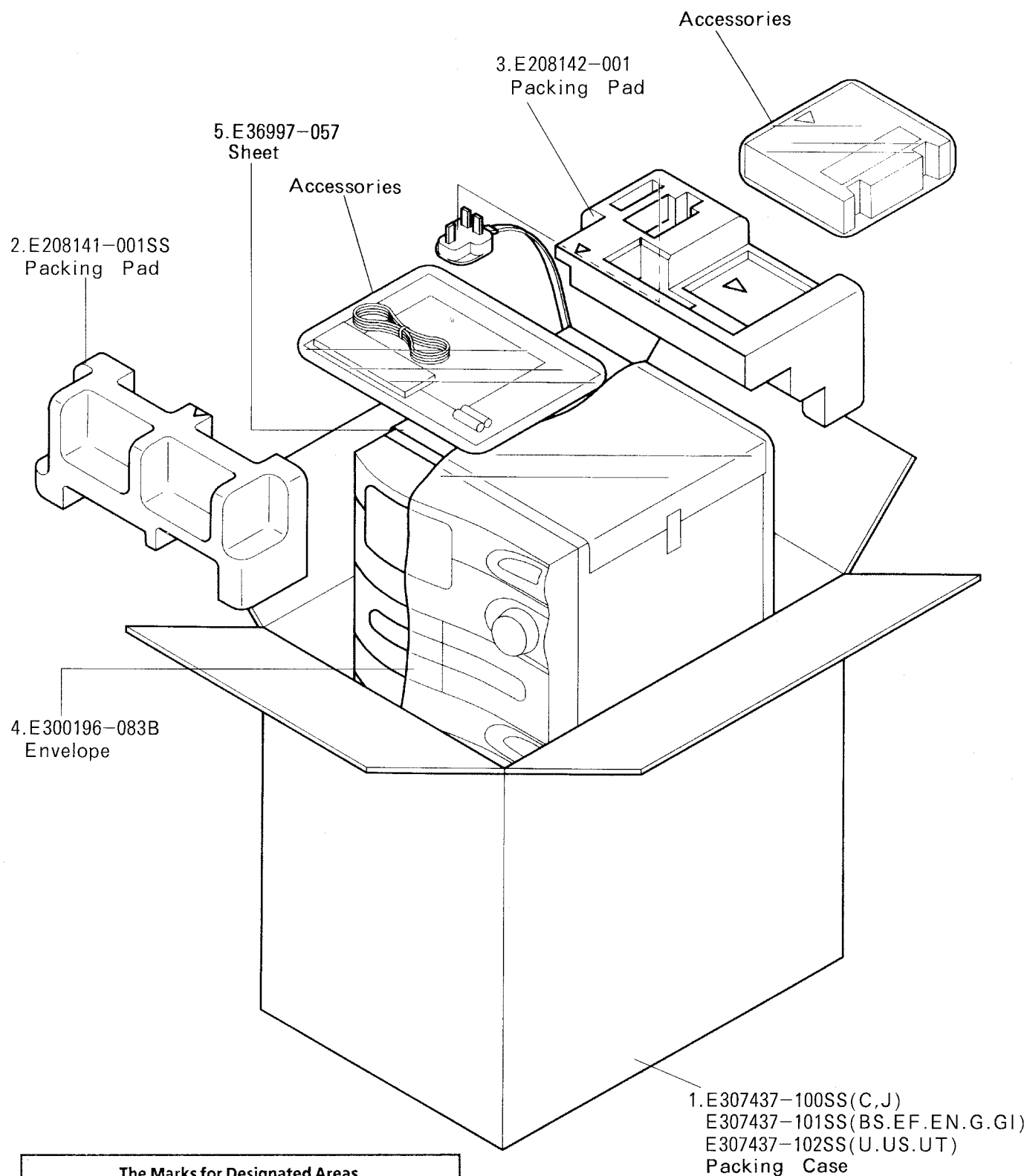
The Marks for Designated Areas

J the U.S.A. C Canada BS the U.K. EN Scandinavia
 EF Continental Europe G Germany GI Italy US Singapore
 UT Taiwan U Universal Type No mark indicates all areas.

Packing Materials and Part Numbers

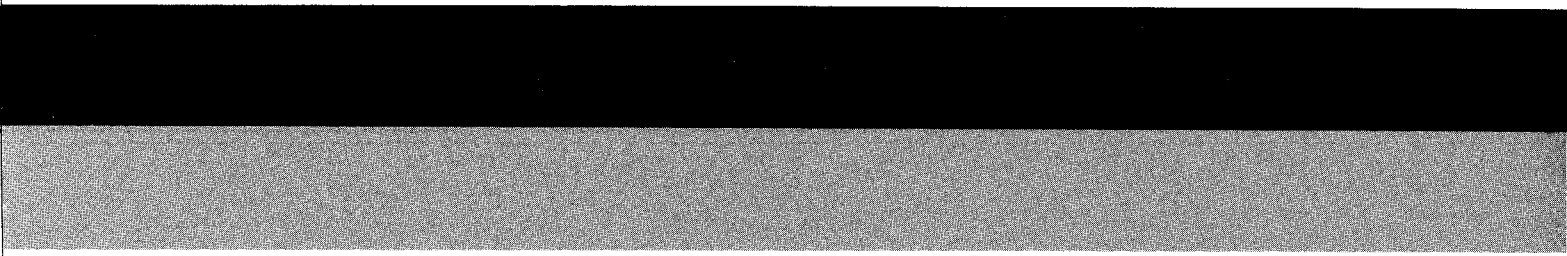
Symbol No.

M	5	M	M
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The Marks for Designated Areas

J	the U.S.A.	C	Canada
BS	the U.K.	EN	Scandinavia
EF	Continental Europe		
G	Germany	GI	Italy
US	Singapore	UT	Taiwan
U	Universal Type	No mark indicates all areas.	



JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN