

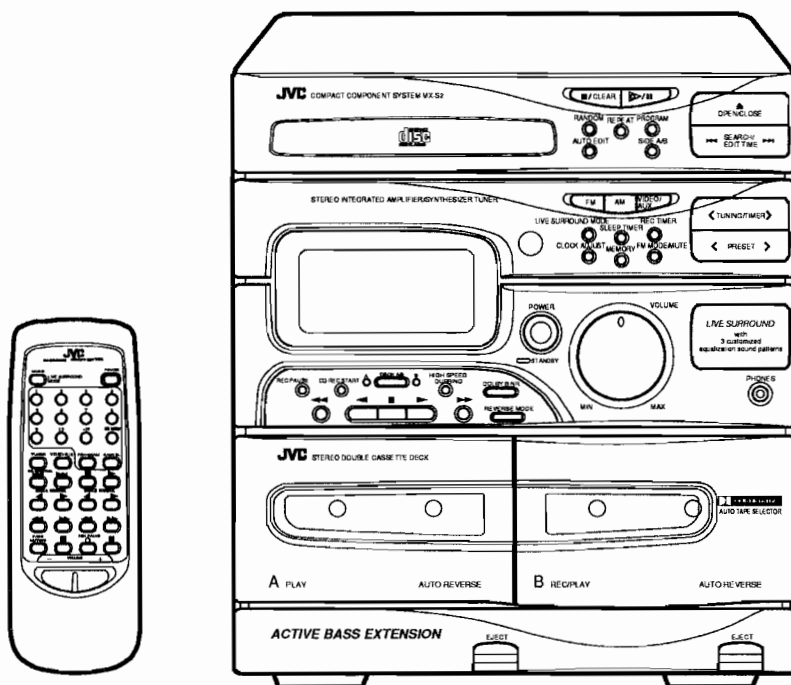
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-MXS2BK

For information on JVC products,
visit our website at
www.jvc.com



COMPACT
disc
DIGITAL AUDIO

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Safety Precautions

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

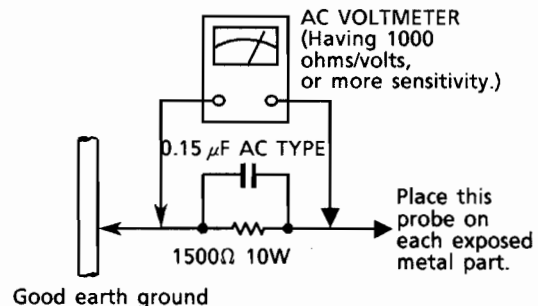
- Alternate check method

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.

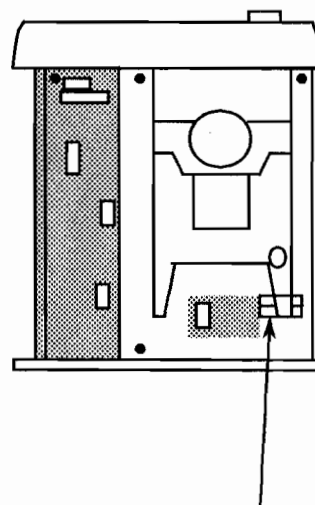
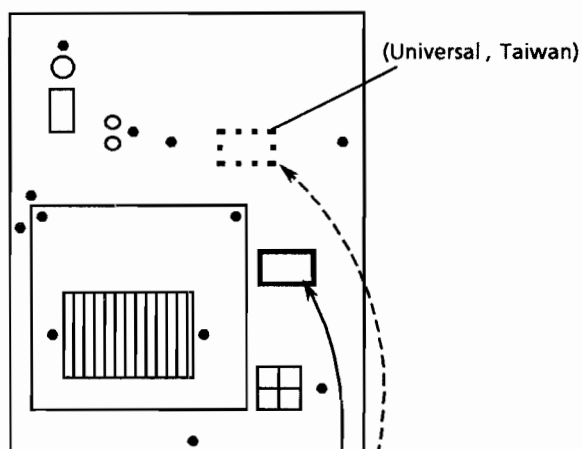
WARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

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



WARNING LABEL

(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

WARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)

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

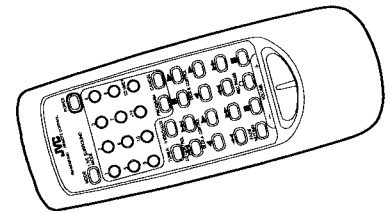
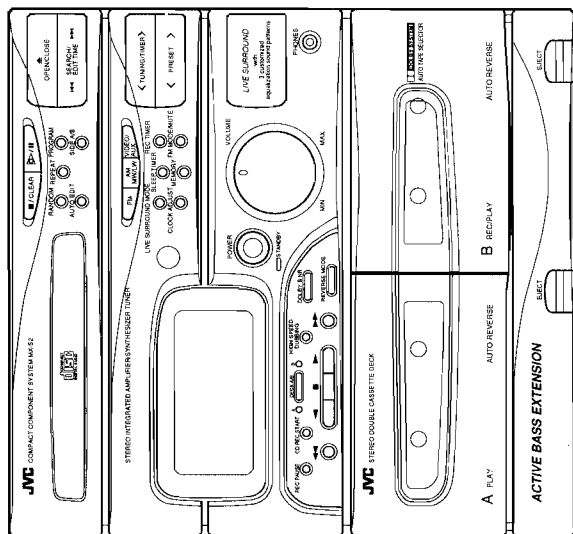
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

CLASS 1
LASER PRODUCT

CLASSIFICATION LABEL

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

Control Panel and Remote—Illustrations
Bedienfeld und Fernbedienung—Abbildungen
Panneau de commandes et télécommande—
Illustrations
Bedieningspaneel en afstandsbediening —
Afbeeldingen
Ilustraciones del panel de control y del controlador
remoto
Pannello comandi e telecomando—Illustrazioni



Tuner Section for Canadian Model
Tuner-gedeelte van het Canada model
Section tuner pour le modèle canadien
Tuner-gedeelte van het canadese model
Sección del sintonizador del modelo para Canadá
Sezione sintonizzatore del modello per il Canada

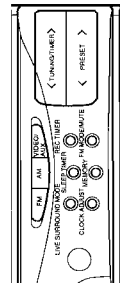


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Features

Great Sound

Here are some of the things that make your CA-MXS2BK powerful and easy to use.

- To get such **great sound** from such a compact package the CA-MXS2BK has pre-programmed sound effects like **DANCE CLUB**, **HALL**, **STADIUM**, and **LIVE SURROUND** so you don't have to be a sound engineer to get great effects. **ACTIVE BASS EXTENSION** automatically works to maintain the richness and fullness of the sound when the volume level is getting lower.

Easy Operation



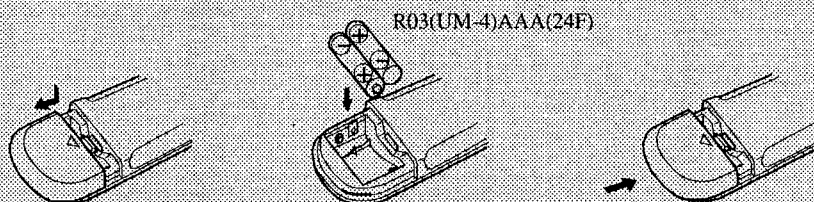
- The controls and operations have been redesigned to make them very easy to use so you can spend your time listening to music.
 - With the One Touch Operation feature of JVC's new **COMPUPLAY** you can turn on the CA-MXS2BK and start the radio, the tape deck, or the CD player with a single touch.
 - Two timers, **SLEEP**, and **REC TIMER** are extremely easy to set so you can really use them.
 - The **Display area** is large and clear. It's organized so you can tell at a glance what's happening because functions light up as you use them, and blink to tell you they are ready.
 - **Auto Edit** figures out how to arrange CD tracks on a tape. When you are recording a tape from a CD, the selections aren't cut off if the tape ends before the selection does.

IMPORTANT CAUTIONS

1. **Installation of the Unit**
 - Select a place which is level, dry and neither too hot nor too cold (between 5°C and 35°C).
 - Leave sufficient distance between the Unit and your TV.
 - Do not use the Unit in a place subject to vibrations.
2. **Power cord**
 - Do not handle the power cord with wet hands!
 - When unplugging from the wall outlet, always pull the plug, not the power cord.
3. **Malfunctions, etc.**
 - There are no user serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
 - Do not insert any metallic object into the Unit.

How to Put Batteries in the Remote Control

Match the polarity (+ and -) on the batteries with the + and - markings on the battery compartment.



CAUTION: Observe Proper Handling of Batteries

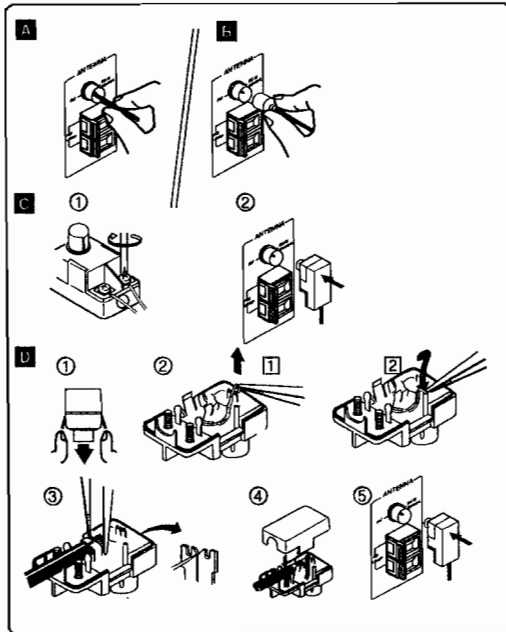
To avoid battery leakage or explosion:

- Remove batteries when the Remote will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Don't use an old battery together with a new one.
- Don't use different types of batteries together.

Connection Diagrams and Instructions

Connecting the AM (MW/LW) and FM Antennas

FM Antenna Connections



For Germany

A Using the Supplied Wire Antenna

The FM wire antenna provided can be connected to a FM 75-ohm COAXIAL as a temporary measure.

B Using the Coaxial Type Connector (Not Supplied)

A 75-ohm antenna with coaxial type connector (DIN 45332) should be connected to the FM 75-ohm COAXIAL terminal.

For Other Countries

C Using the Supplied Feeder Antenna

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

D 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 similar tool (only when using coaxial cable).
- ③ Fix the coaxial cable and its core.
- ④ Put on the cover.
- ⑤ Connect the Antenna Adaptor on the FM 75-ohm COAXIAL terminal.

Note:

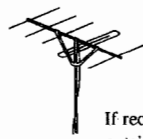
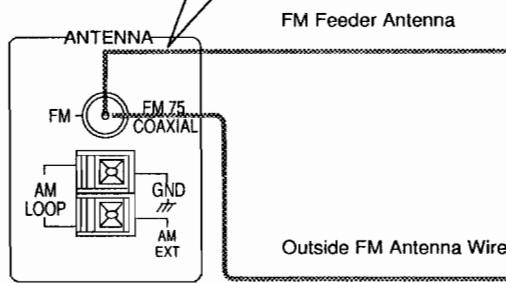
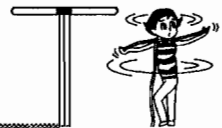
Make sure the antenna conductor do not touch any other terminals, connecting cords and power cord on the system.
This could cause poor reception.

For Germany

Extend the supplied wire antenna horizontally.

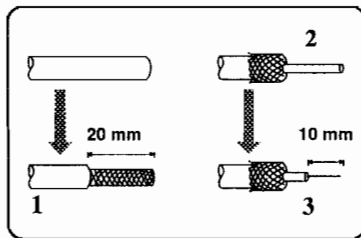
For Other Countries

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.



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

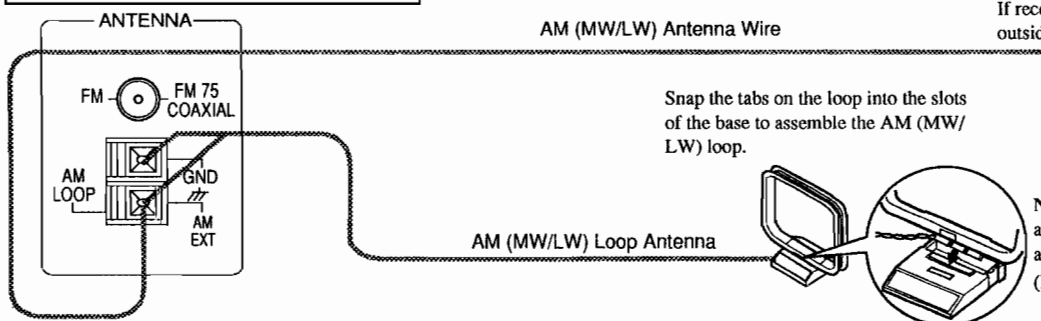
If reception is poor, connect the outside antenna.



How to Strip the 75-ohm Coaxial Cable

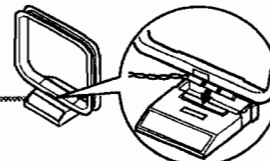
1. Strip back the outside covering of the 75 ohm coaxial cable to expose the braided metallic mesh.
2. Pull the mesh back and twist into a single connector as shown.
3. Strip the insulation about 10 mm back from the central wire.
4. Attach to the supplied Antenna Adaptor, as shown in the diagram above.

AM (MW/LW) Antenna Connections



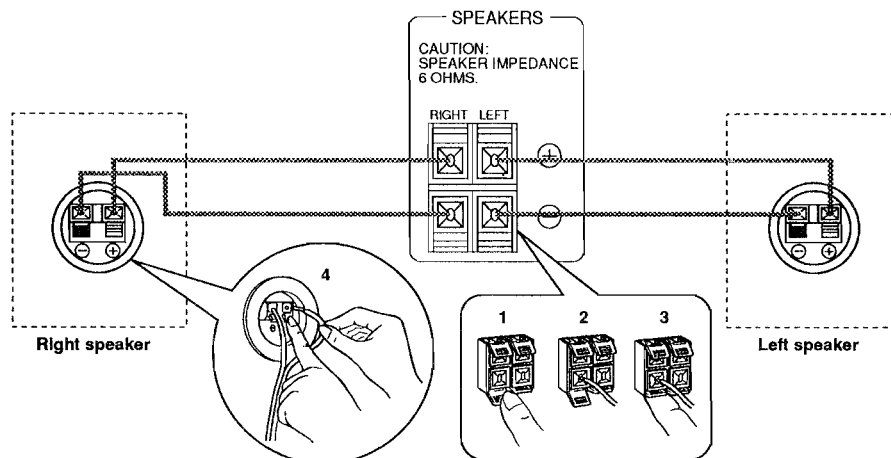
If reception is poor, connect the outside antenna.

Snap the tabs on the loop into the slots of the base to assemble the AM (MW/LW) loop.



Note: Even when connecting an outside AM (MW/LW) antenna, keep the indoor AM (MW/LW) loop connected.

Connecting the Speakers

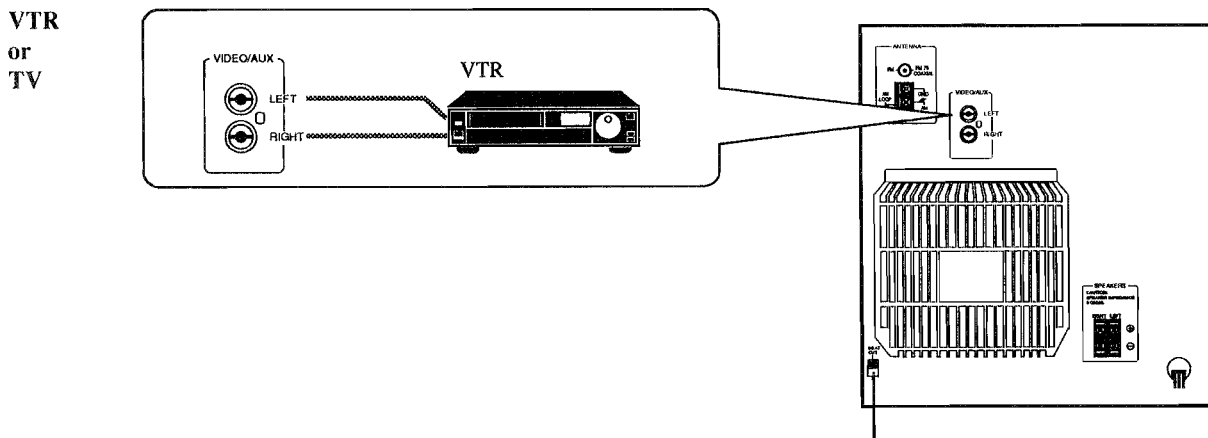


For each speaker connect one end of the speaker wire to the speaker terminals on the back of the CA-MXS2BK and one end to the speaker. On the back panel:

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-MXS2BK.
Connect the red (+) and black (-) terminals of the left side speaker to the red (+) and black (-) terminals marked LEFT on the CA-MXS2BK.

IMPORTANT: Match the polarity of the speaker terminals with the polarity of the terminals on the CA-MXS2BK, red (+) to red (+) and black (-) to black (-). Check your speakers for correct impedance: Speakers 6 ohms only.

Connecting Auxiliary Equipment



When recording an AM (MW/LW) broadcasting program, beat sounds may be heard and recorded. Set the BEAT CUT selector to either 1 or 2, so that beat sounds will not be heard nor recorded. (Except for Canadian model)

Read Me First

How to get the most for your money by using this manual.

The Engineers at JVC have made the CA-MXS2BK very easy to use, and if you are experienced using audio equipment, you can figure out how to use some of the CA-MXS2BK controls by yourself. However, we have built some new features into this model, which you can learn about easily from the manual.


If you are a new user or just want a review, this manual explains how to use the CA-MXS2BK and take advantage of its features for playing and recording music, as well as other sounds. One way to use this manual is to read it through now and refer back to it when you need to refresh your skills for some special operation. Of course you can just look up the topics, such as recording a CD, that you want to do, but remember that you may need to refer to other parts of the manual for some of the instruction: for instance, in explaining how to record a CD, we assume you already know how to load a CD. That's why we recommend that you read the manual through once before starting. We've made it short, and easy to follow.

However before you proceed, please read the IMPORTANT CAUTIONS on page 2 and the set-up directions.

IMPORTANT!
Special features for a special Manual.

How This Manual Is Organized

This is a special manual, designed to accommodate several languages. To keep the size from becoming too great, yet still give you a top quality instruction manual, we have incorporated some special features:

- A fold-out page to look at while you read the instructions shows the front controls of the CA-MXS2BK. Some procedures have the illustrations of which control to use right with them, and for some you will need to look at the fold-out for the illustration.
- Basic information that is the same for many different functions is grouped in one place, and not repeated in each procedure. For instance, in the section on playing a CD, we do not repeat the information about setting the volume and the sound conditioning, which are talked about in the Common Operations section.
- Names of buttons, controls and function names that light up on the display panel are written in all Capital letters like this: POWER.
- When we are talking about the Function, rather than the BUTTON or DISPLAY, then we just capitalize the first letter of the words.
- The  alerts you to important information or how to solve special problems that may occur when using the CA-MXS2BK.

The column on the left of the page is a special place to make it easier to find just what you want to know about, with little headlines announcing what each part of the page is about. Sometimes illustrations and helpful hints are placed here also.

Basically we use three kinds of information to help you understand and use the CA-MXS2BK:

- Information about what you can do (such as record a CD or preset a radio station) and how the Unit is designed to make doing this activity easy.
- Procedures, usually numbered in the order you do the steps, to guide you in exactly what to do to accomplish something, such as tune a radio station or record a tape.
- Information you need to know to make decisions about which functions of the CA-MXS2BK to use for particular tasks (such as when to use Dolby NR to improve tape sound) and special hints to make your work go smoothly, like reminding you to set the sound effects before starting the CD to tape recording, since they cannot be changed once recording begins without starting completely over.

The manual has a table of contents to help you easily look up what you want to know.

We've enjoyed making this manual for you, and hope you will use it to enjoy the sound and many features built into your CA-MXS2BK.

Getting Started Right

Unpacking

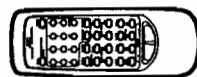
Inside the packing box....

Of course you have already opened your CA-MXS2BK carton, since you are reading this manual. Although the Unit is quite sturdy, you may want to save the packing to re-pack your CA-MXS2BK in case you are moving it some distance.

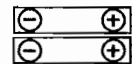
Check to be sure you have all of the following things, which are supplied with the CA-MXS2BK:



AM (MW/LW) Antenna



Remote Control



Batteries



FM Wire Antenna
(only for Germany)



FM Feeder Antenna
(except for Germany)



Antenna Adaptor
(except for Germany)

If any are missing, contact your dealer immediately.

Where can you put it?

Location

You can place the CA-MXS2BK in many different kinds of locations to suit your needs; just observe the cautions on page 2: keep away from moisture and heat; leave some space between the Unit and its surroundings, more than 1 cm at the sides of the console and 10 cm at the back.

Very little assembly required

Set Up

You will need to do the following four things to get your CA-MXS2BK ready to use.

1. Connect the Antenna(s).
2. Connect the Speakers.
3. Put Batteries in the Remote Control.
4. Connect a VTR or TV (Optional).

Please look at the diagrams on pages 3 and 4 to do these things.

1. Connect the Antenna(s)

Follow the diagrams on page 3. Here's what you need to know:

- For AM (MW/LW) reception you must connect the supplied loop antenna. If reception is poor, connect the outside antenna, but leave the loop antenna in place—the AM (MW/LW) will not work correctly without it.
- For FM reception, connect the supplied wire as shown. However, if you use an outdoor antenna, disconnect the indoor FM antenna first.
- To avoid noise, keep antennas away from metallic parts of the CA-MXS2BK, connecting cords and the AC power cord.

2. Connect the Speakers

Basically, you look at the diagrams on page 4 and follow the pictured instructions.

3. Put Batteries in the Remote Control

Pay close attention to getting the batteries in correctly—we've made it very easy, just match the + and - marks on the batteries with the + and - markings on the Remote. See page 2 for instructions

CAUTION: Handle batteries with care. See page 2 for proper use of batteries.

4. Connect a VTR or TV (Optional)

You can play the sound portion of a TV program or video tape through your CA-MXS2BK's sound system, often improving it greatly. To do this, a VTR or TV can be hooked up to play through the CA-MXS2BK. Just follow the diagram on page 4.

Now you can plug the AC power cord into the wall socket, and your CA-MXS2BK is at your command!

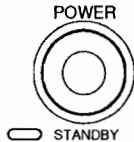
CAUTION: First make all connections before plugging the Unit into any AC power outlet.

Read on and find out how to use the many features built into your Unit.....

Common Operations

Here are the things that apply to all the functions of your CA-MXS2BK. If something in a procedure is unclear to you, check back here.

The Magic of



COMPUPLAY

COMPUPLAY is JVC's new feature that lets you control the most used functions of the CA-MXS2BK with a single touch. This One Touch Operation starts playing a CD, turns on the radio or plays a tape 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 the function you have called for. If the Unit is not ready, such as no CD or tape in place, the Unit still comes on and then pauses 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-MXS2BK On

Press POWER; the STANDBY indicator goes out.

- The CA-MXS2BK 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.

Be sure to read the caution at the end of this section concerning sound levels, and possible damage to your hearing or the equipment.

Turning the CA-MXS2BK Off

Press POWER again; the STANDBY indicator lights up and the display blanks, except for the clock display.

- The small amount of the power (13 watts) is always consumed even in the stand-by mode.
- To switch off the Unit completely, unplug the AC power cord from the AC outlet.

Making it sound the way *You* want it to:

•Volume

Controlling the Sound

The same set of buttons and knobs control the sound, no matter which function is producing it. Here we will briefly explain how these controls work, and how you can use them to increase your enjoyment of the music.

Volume Control

Rotate clockwise to increase loudness, counter-clockwise to reduce loudness. Be sure to read the caution at the end of this section about high sound levels damaging your hearing or your equipment.

Special Effects Control

The four preset special effects to condition your sound output are selected with the LIVE SURROUND MODE button located just off the right hand corner of the display. On the lower left side of the display you will see the four effects shown as LIVE-S, D. CLUB, HALL and STADIUM. The one currently selected is highlighted. Using these effects gives 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. Depending on the way each recording is made, or the quality of the radio signal, they will affect different pieces differently. Feel free to experiment!

•LIVE SURROUND
•DANCE CLUB
•HALL
•STADIUM

Selecting Sound Effects

- You select a sound effect by pressing LIVE SURROUND MODE to cycle through the effects until the effect you want is highlighted in the display.
- Live Surround is a special effect that can either affect the music by itself (just LIVE-S is highlighted) or affect the music in combination with one of the other three effects. When both an effect and LIVE-S are highlighted, they are on together.
- To remove only Live Surround from the effect, just press LIVE SURROUND MODE and Live Surround is turned off. The next time you press LIVE SURROUND MODE, the present sound effect is turned off, and the next one is turned on along with Live Surround.
- To turn all the effects off, including Live Surround, press LIVE SURROUND MODE until nothing is highlighted.

Things to remember about using special effects:

- Experiment with and set your special effects *before* you start recording with CD Direct or Auto Edit, because once recording starts, the special effects cannot be changed without stopping recording, and often having to start over. If you need different sound effects for each selection, use the standard recording features described on page 15, rather than Auto Edit or CD Direct.
- Each of the special effects changes the sound in a different way by changing which parts of the sound are increased or reduced. To see how each part of the sound will be changed, watch the display just as you press an effect button when music is playing. You will see a graphical display showing the effect's pattern for just a short time before the effect starts.

LIVE-S D. CLUB HALL STADIUM

•**LIVE SURROUND**—With this function the sound coming from only two speakers approaches the quality of sound from four speakers.

•**DANCE CLUB**—Increases resonance and bass

•**HALL**—Adds depth and brilliance to the sound, like in a concert hall

•**STADIUM**—Adds clarity and spreads the sound, like the sound in an outdoor stadium

ACTIVE BASS EXTENSION

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.

Listening with Headphones

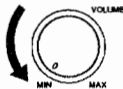
A standard pair of headphones can be connected at the PHONES jack on the front panel. No sound can be heard from the speakers. **Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.**

The Display and The LEDs

The Display and the LEDs—Two Very Useful Hints

- The Display Panel tells you many useful things about what your Unit is doing. Watch it as you give instructions to the CA-MXS2BK by pressing buttons.
- A few of the controls have a small light, called an LED, next to or even right on the function button or knob itself. The light comes on when the function is on, and goes out when it is not in use.

Caution: Too LOUD!



What's Next?

Now that you know how to control the sound, go on to learn how to enjoy each sound source: Tape, CD, Radio, and Connected Equipment.

CAUTION: Always set the VOLUME control to MIN before turning on a connected source such as a VTR or TV, or starting any other of the sound sources such as the radio, tape, or 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.

Listening to the Radio

The controls for the radio are located in the Tuner section, just above the large volume control. With these controls you can browse through all the stations or use the preset function to go immediately to a particular station.

- To record from the radio, see "Recording any Sound Source to Tape," page 15.
- To set the timer to turn the radio off at a certain time, see "Sleep Timer," page 19.

First we'll explain how to tune in stations, and then how to preset the ones you listen to often.



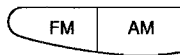
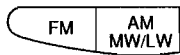
Radio

One Touch Radio

Just press AM (MW/LW) to turn on the Unit and start playing the most recent AM (MW/LW) station tuned in, or press FM to start the most recent FM station playing. If you press TUNER on the Remote instead, you can start playing the most recent station tuned in.

- You can switch from any other sound source to the radio by pressing either AM (MW/LW) or FM.

Three ways to tune in a station



Tuning in a Station

Press AM (MW/LW) or FM to turn on the radio. The display shows the frequency of the station tuned to.

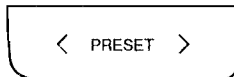
You have 3 ways to select a station:

1. Press and release TUNING/TIMER < or > to move from station to station until you find the one you want.
OR
2. Hold down TUNING/TIMER < or >, and the display cycles through all the stations one after the other. Release the button when you see the one you want.
OR
3. Press once and release PRESET > to go to the next preset station, or hold PRESET < to cycle through the preset stations: release the button when the preset station you want shows on the display. (This method is possible after presetting stations by yourself.)

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

- To tune preselected stations with the Remote:
 1. Press TUNER so that you can receive the most recent station tuned in.
 2. Select the station by entering the preset channel number in the 10 Key pad of the Remote. The Display shows the new channel number and frequency.

How to preset AM (MW/LW) and FM radio stations



MEMORY



FM MODE/MUTE



Presetting Stations

Once a station is assigned to a channel number, the station can be quickly tuned either from the Remote using the 10 Key pad of the Remote or the CA-MXS2BK itself using PRESET < or > to call up the channel number.

- You can preset a total of 40 stations, either AM (MW/LW), FM, or a mixture of both, at random.
- Preset stations may be erased when power is cut off to the Unit, as when it is unplugged from the AC outlet or a power failure occurs. If the preset stations are lost, simply set the stations again using the following procedure.

To preset radio stations:

1. Tune in the station you want to set.
2. Press MEMORY.
 - On the display, MEMORY will blink for 8 seconds. During these 8 seconds while MEMORY is blinking you can assign a channel number to the station and enter it into the memory.
3. Select a channel number by pressing PRESET < or > until you find the channel number you want.
4. Press MEMORY and the station will be assigned to the channel number showing on the display.

Receiving in Stereo or Mono

When an FM stereo broadcast is hard to receive or noisy:

- Press FM MODE/MUTE and reception will improve, although you will lose the stereo effect. In this state, you will hear some noise while tuning into a station.
- To restore stereo effect, press FM MODE/MUTE again so that AUTO appears in the display. In this state, when a program is broadcast in stereo, you will hear stereo sound; when in monaural, you will hear monaural sound. Furthermore, in this state, you won't hear noise while tuning into stations.



Listening to a Compact Disc

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

- Press Play/Pause ▷/|| on the CD player or Play ► on the CD CONTROL section on the Remote.
- If a CD is already loaded, the Unit automatically turns on and starts to play it from track 1.
- If no CD is loaded, the CD tray opens, and you can put in a CD, printed side up, press Play/Pause ▷/|| and the tray closes and the CD starts playing.
- If you press ▲ OPEN/CLOSE, the Unit automatically turns on and the CD tray comes out.

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



PLAY/PAUSE

CD
Find track

Using the Remote to find a track

With programming, you can play back tracks in any order

RANDOM



Basics of 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.

To Load, Play, and Stop a CD

1. Press ▲ OPEN /CLOSE.
2. Put a CD, printed side up, into the tray.
3. If you want to listen to the CD now, press ▷/|| and adjust the volume.
 - The CD tray closes automatically.
 - The display shows the track being played and the length of time since it started.
4. To stop the CD, press ■/CLEAR. When you start again, the CD begins with track 1.
5. To pause the play, press ▷/|| while the CD is playing so when you press ▷/|| again the CD starts just where you left off.
6. To remove a CD, press ▲ OPEN/CLOSE, take the CD out, and press ▲ OPEN/CLOSE again to close the tray. Keep the tray closed except during loading and unloading to protect the mechanism from dust and damage.

How to Find the Track or a Particular Point You Want

- Each time you press briefly and release SEARCH/EDIT TIME ◀◀ or ▶▶ the track changes by one.
 - Press and release SEARCH/EDIT TIME ▶▶ to go ahead one track at a time.
 - Press and release SEARCH/EDIT TIME ◀◀ to go back one track at a time.
- Holding down SEARCH/EDIT TIME ◀◀ or ▶▶ will fast forward or fast reverse the CD so you can quickly find the particular part of a track you want to listen to.
- Holding down ◀◀ or ▶▶ on the CD CONTROL section of the Remote allows you to change tracks continuously.

Locating a Track with the Remote Directly

Using the 10 key pad on the Remote allows you to go directly to the beginning of any track.

1. Press CD 10 KEY.
2. Enter the number of the track you want using the 10 key pad.
 - Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10.
3. As long as a CD is loaded and the Unit is on, as soon as you enter the number of the track you want, it will start to play.

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

Before starting a CD, press RANDOM on the CD player.

- The tracks will play in no special order.
- When all of the tracks have been played, the CD shuts off.
- Press REPEAT before or during random play to instruct the CA-MXS2BK to continue with a different random track selection after the last selection is played.
- To cancel random play, press ■/CLEAR.

Program with the Remote

Programmed Play

You can arrange the tracks to play in any order you like with the Program function. The Remote is very useful for this because you can select tracks by number with the key pad. See "How to Use the Remote Control," page 20, if you need more information about its use. You can also use the main Unit.

How to program: just 5 easy steps

To program the CD track order from the Remote, follow this procedure:

1. Press PROGRAM.
2. Press CD 10 KEY.
3. Press the number of the first track you want to hear, then the number of the second track, and so on until you have entered all the track numbers you want to play.
 - Refer to the section "How to use the Remote Control" on page 20 if you have questions about how to enter numbers above 10.
 - Your program can include up to 32 tracks, and you can repeat tracks if you wish.
4. Press Play/Pause ▷/|| to start the program—the first track you programmed will start to play, followed by the next one you entered, until all the selected tracks are played.
5. To stop the CD during Programmed Play, Press Stop ■. To cancel the program, press PROGRAM on the Remote or ■/CLEAR on the main Unit.

Programming from the front panel

To program the CD from the main Unit, follow this procedure

1. Press PROGRAM.
2. Press SEARCH/EDIT TIME ◀◀ or ▶▶ to locate the track you want to start with.
3. Press PROGRAM to store the selected track.
4. Repeat steps 2 and 3 until you have entered all the tracks you want to program.
5. Press Play/Pause ▷/|| and the Unit will begin playing the tracks in the order you programmed them.

Programming Hints

A Few Hints to Make Programming Easier

- If you want to change the number of a track you just entered, press CANCEL on the Remote, and enter another number. (When the display shows the total program time, press CANCEL twice repeatedly to remove the last selection entered.)
- If you want to change the entire program, press ■/CLEAR on the main Unit, and then you can start over.
- To view the order of the tracks in your program when it's playing, press Stop ■ on the Remote, then press ◀◀ or ▶▶ on the Remote to display the order of the tracks. Each time you press ▶▶ the next selection in your program is displayed. (Press ◀◀ for the previous selections.)
- To add a track to your program, just press the number you want to add.

Repeat a selection or the whole CD

Repeating a Selection or the Entire Disc

- You can have either the program or the individual selection currently playing repeat as many times as you like by pressing REPEAT. Each time you press REPEAT, it cycles from OFF, which turns the REPEAT indication out on the display, to REPEAT which will repeat all tracks in order or according to the program you have set, and REPEAT 1 which will repeat the currently playing track. To cancel Repeat, just press REPEAT until the REPEAT indication on the display goes off.

Listening to a Tape

Listen to a tape: How to use your tape deck

- ☞ The tape deck allows you to play, record and dub audio tapes.
 - To record or dub, see Recording page 14.
 - With Automatic Tape Type Detection, you can listen to type I, II, or IV tapes without changing any settings.
 - To play a tape and learn about the many easy-to-use features of the dual tape deck built into your CA-MXS2BK, read on here!

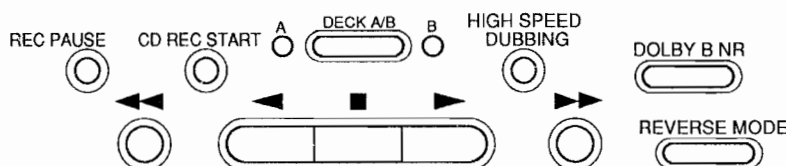
Playing Back a Tape

You can play a tape from either deck A or deck B, but remember: only deck B can record.

Easy-to-Use Tape Control Panel

You control the tape transport functions like Play, Fast forward, Reverse, etc. from just one set of buttons. Many double cassette decks have a separate set for each cassette; but the CA-MXS2BK has one set. You press DECK A/B to select which deck, A or B, the controls will control. The LED labelled A (just to the left of the DECK A/B button) or the "B" LED (just to the right of the DECK A/B button) lights up so you know which deck the control buttons are controlling.

- When a tape is in either deck A or B, the Unit automatically detects which deck to control and makes the LED for it light up. The DECK A/B button does not function.
- When tapes are in both deck A and B, the Unit automatically selects the deck in which a tape is put later and makes the LED for it light up.
- The "A" or "B" LED only shows which deck you can control. **It never shows which deck is actually operating.** For example, the "A" LED will light up if you press DECK A/B or put a tape in deck A while you are recording on deck B.



Notice on the Remote, however, that deck A and deck B have separate control sections. So when using the Remote to control the tape deck, you don't have to select which deck the buttons control, you just use the buttons on the left for deck A and the ones on the right for deck B.

One Touch Play

From the Remote:

By pressing Play Forward ► or Play Reverse ◀ for the deck you want to start, the power will come on, and if a tape is in the deck, it will start to play. If no tape is loaded, the Unit will come on and wait for further instructions.

From the Console Panel:

When you press Play Forward ► or Play Reverse ◀ the deck remembers which tape deck was used last, and that's the one which now comes on, and if a tape is still in it, starts playing the tape. What it actually remembers is which deck last had a tape inserted and its carrier door close, so if you last were listening to a tape in deck A, but since then have opened (with EJECT) deck B, inserted a tape and then closed it again, that's the deck that will be selected when you press Play Forward ► or Play Reverse ◀. You can override this memory by selecting which deck you want by turning on the power first and making the selection with DECK A/B.

Regular Play

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

With the Remote:

1. Press EJECT, which is located just to the right of the deck, for the deck you want to use.
2. When the cassette carrier opens, put the cassette in, with the exposed part of the tape down toward the base of the CA-MXS2BK.
 - If the cassette carrier does not open, turn the Unit off, then back on again and press EJECT.
3. Close the carrier gently.
4. Turn the volume down. (See the Caution on page 8 about possible damage from setting the volume too high.)
5. Press Play Forward ► to play the front side, or Play Reverse ◀ to play the reverse side.
6. To stop playing, press Stop ■. To remove the tape, press EJECT.

From the Console Panel:

Follow the above procedure, except first use DECK A/B to select the deck with the tape you want to play if tapes are inserted in both decks.



Playback Procedure



Fast Left and Fast Right

From the Console, first select the deck with DECK A/B if tapes are in both decks. From the Remote, use the controls for the appropriate deck.

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

Music Scan

The Scan function is very useful, quite easy to use, and only possible from the Console Panel.

When you scan forward, the tape advances rapidly to the beginning of the next selection and starts to play it. If you want to keep looking for another selection, scan forward again and keep repeating the procedure until you find what you are looking for.

When you scan in reverse, the tape runs rapidly in the reverse direction from which it was playing until it comes to the beginning of the selection that was playing. You can now listen to the selection again, or go to the beginning of previous selection by scanning in reverse again.

- The Scan function works by detecting a 4 second 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 blanks. If this happens, just go ahead and scan again until you reach the selection you want.
- Music scan only works on one tape at a time.

Here's the procedure for scanning:

Scan Forward

With the tape playing, to find the beginning of the next selection, press Fast Right ▶▶ or Fast Left ◀◀ whichever one points in the *same* direction as the highlighted, slowly blinking arrow in the lower right corner of the display.





- The tape will fast forward to the next selection and begin playing it.


Scan Back

With the tape playing, to find the beginning of the selection now playing, press the Fast Right ▶▶ or Fast Left ◀◀ button pointing the *opposite* direction from the highlighted, slowly blinking arrow in the lower right corner of the display.

- The tape will fast reverse to the beginning of the piece and start playing it again.

Useful hints and features to know about when using your tape deck

- Continuous Play:** When a tape finishes playing, the Unit always checks to see if a tape is in the other deck. If one is there, it automatically starts playing it while rewinding the first tape. Continuous Play works regardless of which deck starts first.
- Use **Reverse Mode** to make the tape automatically reverse at the end of a side and start playing the other side. Press REVERSE MODE to change from Reverse Mode on, to Reverse Mode off, or from off, to on. The  is highlighted if Reverse Mode is selected. When Reverse Mode is turned off, only the central part——of the  in the display is lit.
 - If there is a tape in the other deck, it will start playing when both sides of the first tape have been played. As long as the Reverse Mode symbol  in the display is lit, the tapes will continue to play in the above sequence.
 - If Reverse Mode is off, the tape will play to the end of the current side, switch to the other deck and start playing a tape there while rewinding the first tape.
- Press DOLBY B NR to switch **Dolby Noise Reduction** on (DOLBY B is highlighted in the display), or if it is on, turn it off by pressing DOLBY B NR, and the DOLBY B display will dim. If a tape has been recorded with Dolby B NR, playing it back with Dolby 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.

Finding the place you want: Music Scan

Scan Forward.....

.....Scan Back

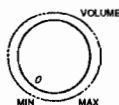
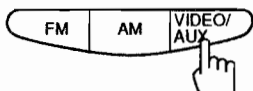
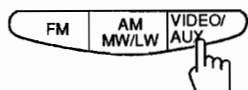
More Useful Things to Know:

- Continuous Play
- Reverse Mode
- Dolby

Listening to a VTR or TV through your CA-MXS2BK

Advantages in Connecting a VTR or TV

By playing the sound from a VTR or TV through the CA-MXS2BK, you can often dramatically improve the quality, and gain control over how the music or program sounds. Once the connected equipment is playing through the CA-MXS2BK, you can apply the sound effects, make recordings, or listen with the headphones. Here are the steps to take:



1. Make a connection between the VTR or TV as shown on page 4.
 - Since there are many different types of VTRs and TVs, we can't tell you here just how to make the connections on your other equipment. However, the diagrams on page 4 will cover most cases, and you can also look in the instruction manual for the VTR or TV you have.
2. Set the Unit's volume to its lowest setting; use FADE/MUTING on the Remote, or turn the VOLUME control all the way counterclockwise.
3. Press VIDEO/AUX on either the Unit or the Remote.
 - If the Unit is off, it will turn on.
4. Turn on the VTR or TV.
5. Adjust the volume on the CA-MXS2BK.
6. To cancel VIDEO/AUX setting, change the source by starting any one of the CA-MXS2BK's built in sound sources, such as the radio or CD player.

Recording

What can you record?

- Tapes
- Radio
- CDs
- Connected Source

Recording onto cassette tape from any of the sound sources is easy and the CA-MXS2BK 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:

Copyright

- **It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.**

Reduce Hiss—Dolby NR

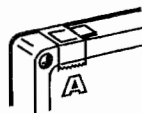
- Press DOLBY B NR (noise reduction)—DOLBY B lights up in the lower right corner of the display—to reduce tape hiss, **except** when dubbing from a tape which was already recorded with Dolby NR. Then it is better to leave the Dolby function off.

Recording Level

- 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-MXS2BK. Thus, you can adjust the sound you are actually listening to without changing the recording. If you don't want to listen to the sound, you can turn the VOLUME control all the way down, or press FADE/MUTING on the Remote.


Erasure Protection

- Cassettes have a special feature so you won't accidentally record over a tape you want to save. Two small tabs on the back, one for side A and one for side B, can be removed to prevent erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with tape first. However, when a Type II tape is used, only cover part of the hole as shown below, since the other part of the hole is used to detect the tape type.



Select Sound Effects

- When recording, you can select the sound effects with the preset sound effect buttons to condition the music as it is recorded. But when recording using Auto Edit or CD Direct, once recording has started, these settings cannot be changed. When recording from tape Deck A to Deck B, the sound effects cannot be used, because the signal doesn't go through the amplifier first. This method gives you the highest quality dubbed tapes.
- Type I and type II tapes can be used for recording. While type IV tapes can be played, type IV tapes cannot be used for recording on the CA-MXS2BK.

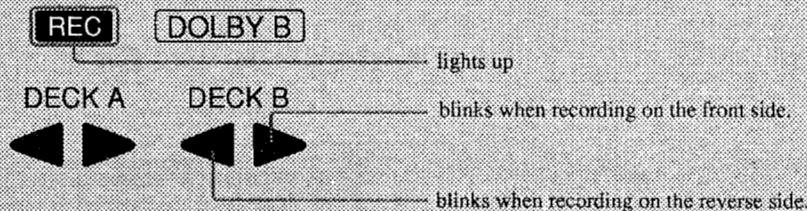
 If recordings you make have excessive noise or static, the Unit may be too close to a TV which was on during the recording. Either turn off the TV or increase the distance between the TV and the CA-MXS2BK.

Important!

Display Information for Recording

For recording, make sure the two points:

- The DECK B LED lights up before starting a recording;
 - [REC] lights up and ► or ◀ for deck B blinks in the display during recording.
- Without checking these two points, your recording will end unsuccessfully.



Standard Recording: Any Source to Tape

Standard Recording

This is the basic method for recording any source. The CA-MXS2BK 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 a tape in deck A, or CD, or radio in this procedure. You can also record from a connected VTR or TV with this procedure.

Source to Tape: Step by Step

Recording any Sound Source to Tape

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

1. Press POWER so the LED on the VOLUME control glows.
 - Press REVERSE MODE to indicate ◀▶ in the display if you want to record on both sides of the tape.
2. Load the tape you are making into Deck B.
3. Press REC PAUSE.
 - [REC] lights up in the display.
4. Prepare the source, for example, tuning in a radio station, loading a CD, turning on a connected VTR, etc.
 - If the source is already playing, Just press REC PAUSE, then press either Play Forward ► to record on side A, or Play Reverse ◀ to record on side B.
5. When you want to start recording, press either Play Forward ► to record on side A, or Play Reverse ◀ to record on side B of the tape.
 - Hint: any time a source other than deck B is playing, you can record by putting a tape in deck B, pressing REC PAUSE, then Play Forward ► or Play Reverse ◀ to start recording that source.

CD to Tape, Introduction

CD to Tape Recording

There are three ways to record from CD to tape:

- The standard method described above.
- CD Direct Record—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—Your CA-MXS2BK 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.

CD Direct Record, Step by Step

CD REC START



CD Direct Record

- Put the tape in deck B.
- Load a CD into the tray and press **▲ OPEN/CLOSE**.
 - If you want to record on both sides of the tape, press REVERSE MODE to indicate \leftrightarrow in the display.
- Press CD REC START on the tape deck.
 - The Unit will automatically rewind the tape to the beginning of side A, create a 10 second blank, turn on the CD and start recording.
 - At the end of the tape, the CA-MXS2BK 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, side B starts with the last selection on side A.
 - When the tape is finished, the Unit shuts off the CD and the tape deck and goes into Stand-by mode.
 - Any time during the recording process, you can interrupt by pushing either **■/CLEAR** on the CD player or Stop **■** on deck B.

Auto Edit, CD to tape, Introduction

Recording a CD onto a Tape Using Auto Edit

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

The selection of which tracks go on which side is based on the lengths of the tracks and the length of the tape. The CA-MXS2BK can figure out most of what it needs to know, but you will have to tell it the tape size you are using if your tape is a different size than the one picked by the program. Follow this procedure to record a CD using Auto Edit.

Auto Edit, CD to tape, Step by Step

AUTO EDIT



SIDE A/B



CD REC START



- Put the tape in deck B.
 - Press REVERSE MODE to indicate \leftrightarrow in the display if you want to record on both sides of the cassette.
 - Load the CD into the CD Player.
 - If the CD is already loaded, be sure the power is on.
 - Set the sound effects you want now, since the sound environment cannot be changed once recording starts.
 - Press **■/CLEAR**.
 - This cancels the previous edit or program setting.
 - Press AUTO EDIT on the CD player. The system tells you the minimum standard tape length to use.
 - You can select a different length of tape, depending on the actual size of the tape you are using, from ten possibilities programmed into the CA-MXS2BK: 40, 46, 50, 54, 60, 64, 70, 74, 80, 90. Cycle through these choices using SEARCH/EDIT TIME \lll or \ggg until you find the length closest to your tape's actual length.
-
- Press SIDE A/B, and the display shows which tracks will go on side A and which on side B. Each time you press SIDE A/B the display switches between A and B.
 - Now press CD REC START on the tape deck.
 - The tape automatically rewinds to the beginning of side A, a 10 second blank is created, and the CD begins to play and be recorded.
 - To stop recording any time during the process, press either Stop **■** on deck B or **■/CLEAR** on the CD player. But remember: after you stop, if you restart, the tape will rewind and start recording the CD from the beginning.

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 highest quality, or at high speed with a slight loss in sound quality. With high speed it takes only about one-half the time to copy a tape.

- Refer back to “Things to Know before You Start Recording” on page 14.
- Refer back to “Listening to a Tape” on page 12 if you have other questions about operating the tape deck.

Regular Speed Dubbing, Step by Step

How to Copy a Tape With Regular Speed Dubbing

1. Put the tape you want to copy *from* into deck A for playback.
2. Put the tape you want to copy *onto* into deck B for recording.
 - Anything already on the tape in deck B will be erased as the new sound from deck A is copied onto it.
3. Press REC PAUSE. Now deck B is ready to record.
4. Press Play Forward ► (or Play Reverse ◀) for deck B.
 - Deck B starts recording.
 - Make sure that no source is played this time.
5. Press DECK A/B so that the DECK A LED lights up.
6. Press Play Forward ► (or Play Reverse ◀) for deck A.
 - Deck A starts playing.
7. To stop the regular dubbing, stop both deck A and B.

Important Dubbing Information

The type of tape (Normal or CrO₂) you record *from* must be the same as the type you record *onto*.

- When the tape you are recording from in deck A has been recorded with Dolby B NR, you should turn off the Dolby function by pressing DOLBY B NR on the tape deck so the indicator in the display is off.
- During regular speed dubbing you can only listen to the source tape. If you don't want to hear it, turn down the VOLUME control or press FADE/MUTING on the Remote. Only the sound you hear will be affected; the recording level is controlled automatically.
- You cannot dub using the sound effects such as DANCE CLUB, HALL, etc.

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. Put the tape you want to copy *from* into deck A, and the tape to be copied *onto* in deck B.
2. Press HIGH SPEED DUBBING on the tape deck. [REC] lights up in the display.
 - Both decks start, deck A playing and deck B recording.
 - If you want to dub both sides of the tape, make sure to press REVERSE MODE to indicate ◀▶ in the display.
 - 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 FADE/MUTING on the Remote.
 - When using high speed dubbing, you can also listen to another source such as the radio or the CD player, just as if you weren't dubbing.
 - During high speed dubbing, if you listen to a CD with Auto Power Off turned on, the whole Unit, including the tape decks, may turn off when the CD ends.

Recording selections from several different tapes

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

1. Press DECK A/B to make the DECK A LED light up.
2. Press Stop ■.
 - This causes deck A to stop, so you can change tapes, while deck B makes a 4 second blank and pauses.
2. Change the tape in deck A.
3. Press HIGH SPEED DUBBING to start deck A playing and deck B recording again. [REC] lights up in the display.

How to use the Timers and Set the Clock

Two Timers:

- Record
- Sleep

- ☛ The timers let you control recording and playing functions automatically. With the CA-MXS2BK they are particularly easy to set and use. Two types of timers are available:
- Rec Timer**—unattended recording of radio broadcasts. You can set the starting time and recording duration.
 - Sleep Timer**—Fall asleep and have your CA-MXS2BK turn off automatically after a certain length of time.

NOTE: follow the procedure, step by step.

IMPORTANT!
Set your clock!

Whenever you are setting the clock or the timers, you will cancel the setting mode by pressing any other button than the one specified in the procedure. So be careful to finish the entire procedure before starting any other function, or you will have to start over.

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.

- Clock setting is possible with the Unit either on or off.

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

So, let's set the clock first.

CLOCK ADJUST



1. Press CLOCK ADJUST. (During setting, CLOCK in the display flashes.)
2. Now you are ready to set the *hour* by pressing TUNING/TIMER<or>: Press > to advance the hour, and < to decrease the hour. Each time you press TUNING/TIMER<or>, the hour changes by one. Hold the button down, and the clock will change one hour at a time as long as it is held down.
3. Press MEMORY and the hour showing in the display will be set, and the minutes digits will start to flash.
4. Now you are ready to set the *minutes* by pressing the same button, marked TUNING/TIMER < or >: Press > to advance the minutes, and < to decrease the minutes. Each time you press TUNING/TIMER < or > the minutes change by one. Hold the button down, and the clock will change rapidly in ten minute intervals (10,20, 30, etc.) as long as it is held down.
5. Press MEMORY again and the clock is set and starts from the hour and minute showing on the display.

- ☛ If there is a power failure, the clock loses its setting, the display shows "0:00" and it must be reset

Recording when you're not there

REC TIMER



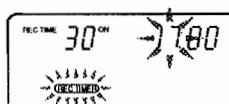
Setting the Recording Timer

With the recording timer you can make a tape of a radio broadcast automatically whether or not you are there to start the CA-MXS2BK. For the timer to work correctly, you need to make sure of two things in addition to setting the time for the radio and tape recorder to come on:

- The tape you want to record onto must be in deck B.
- The radio station whose program you want to tape must be the last one played before timer comes on.
- Setting the Recording Timer is possible with the Unit either on or off.

Follow this procedure to set the Recording Timer:

1. Press REC TIMER— REC TIMER flashes 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 REC TIMER twice and start over.
2. Set the time you want the radio to come on and the tape in deck B to start recording.
 - Just like setting the clock above: set the hour with TUNING/TIMER < or > , press MEMORY, set the minutes with TUNING/TIMER < or > , press MEMORY. The time to start recording is now set, and you are ready to set the length of time for the recording.
3. To set the length of time for the recording:
 - Each time you press the TUNING/TIMER < or > button, the duration increases by one minute. If you hold the button down, it will advance in ten minute increments up to 120 minutes, which is the maximum time you can set.



REC TIMER



4. Press MEMORY again, or wait eight seconds, and the Unit will memorize the setting.
 - The REC TIMER indication in the display will stop flashing and be highlighted. The unit will now turn on at the set time and record the last station set when it was last turned off.
 - Notice that the REC TIMER indicator is lighted up on the display whenever the Recording Timer is set.
 - At the end of the set length of time the radio and deck B will shut off.
 - If you set no time, but leave the display showing —:—, the CA-MXS2BK will not shut off, but keep playing until you shut it off.
5. Whenever REC TIMER is lit on the display, you can press REC TIMER to turn it off. Although the timer will no longer come on and make a recording, the times you have set are stored in memory, and unless the Unit is disconnected from the power source, you can recall your settings by pressing REC TIMER again. To completely erase the settings, program another setting over the previous setting.

⚠ It is very easy, and can be very disappointing, to forget to put in a tape, or to accidentally leave a tape in deck B you don't want recorded over. Although this happens to almost everyone sometimes, we hope it won't happen to you!

⚠ When the recording timer switches the CA-MXS2BK on, the volume coming out of the speakers is controlled by the VOLUME control, so set it to MIN if you will be out or sleeping during the recording.

Sleep Timer: turns the Unit off automatically after a set time

Sleep Timer

Use the sleep timer to turn the Unit off after a certain number of minutes when it is playing. Using this timer, you can fall asleep to music and know your CA-MXS2BK will turn off by itself rather than play all night.

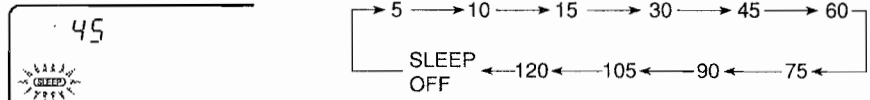
- You can only set the Sleep Timer when the CA-MXS2BK is on and a source is playing.
- To cancel the Sleep Timer setting simply press SLEEP TIMER until the SLEEP indication disappears from the display. Turning off the Unit also cancels the Sleep Timer.

SLEEP TIMER



To set the Sleep Timer follow this procedure:

1. With the CA-MXS2BK on and a source playing, press SLEEP TIMER. The SLEEP indicator in the display will start blinking.
2. Set the length of time you want the source to play before shutting off with this procedure:
 - Each time you press SLEEP TIMER while the SLEEP indication is blinking, it changes the number of minutes shown in the display in this sequence:



- The actual time when the CA-MXS2BK will shut off shows in the right hand corner of the display where the clock time is usually displayed.
- When the number of minutes you want shows in the display, just wait 8 seconds until the indicator stops blinking, but remains lighted.

The Unit will now turn off after the number of minutes you have set.

⚠ When the Recording Timer setting and Sleep Timer setting overlap, the former always has the priority. When the former timer starts activating, the latter will be cancelled.

How to Use the Remote Control

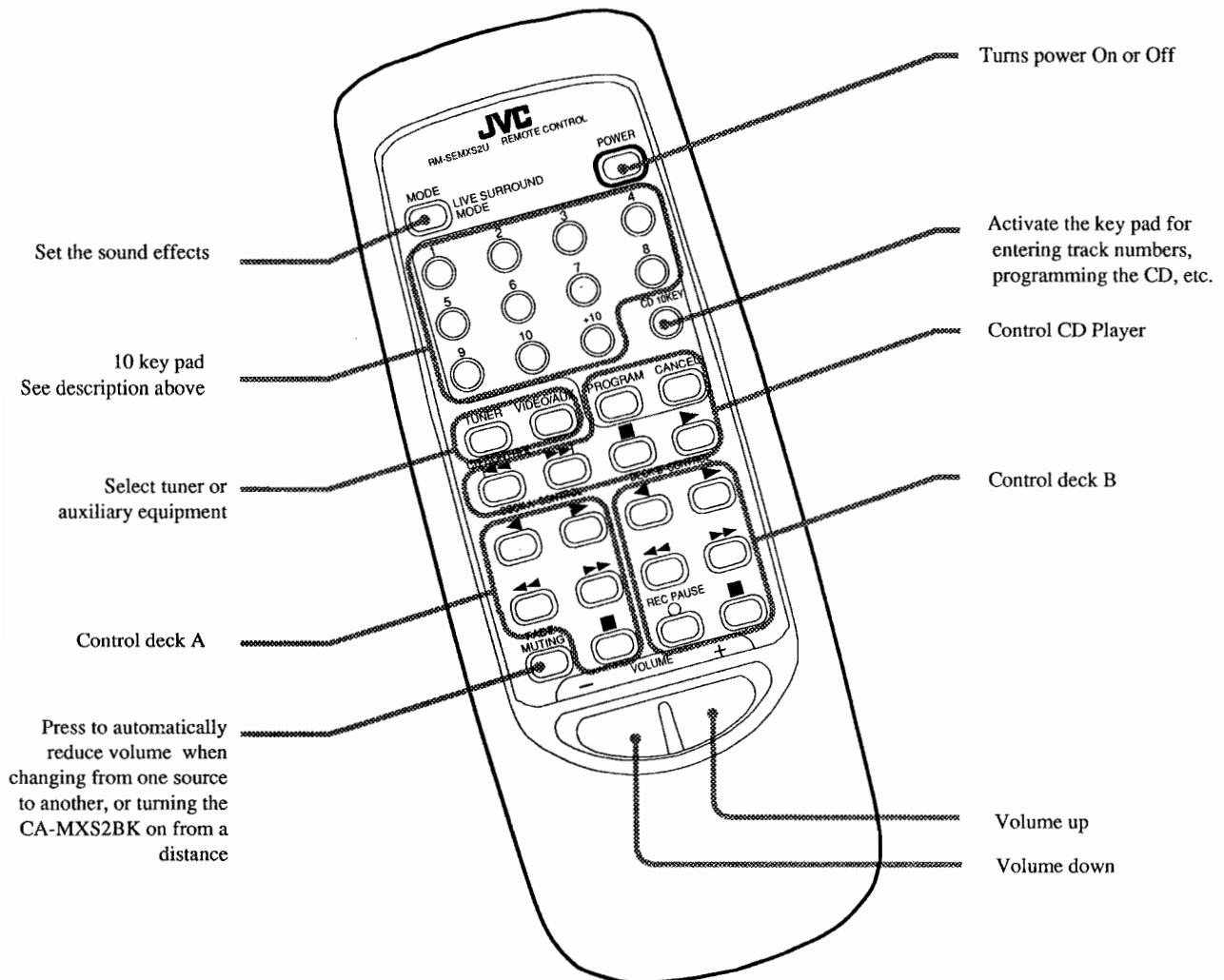
▣ The Remote Control makes it easy to control many of the functions of the CA-MXS2BK from a distance of up to 20 feet away. You do not need to point the remote sensor at the CA-MXS2BK console.

Most of the buttons on the Remote Control do just what the ones on the front of the CA-MXS2BK do, and they are explained in the manual. A few functions are available only by using the Remote Control, and those are described below.

Using the 10 Key Pad

The 10 Key pad is used to specify a CD track or the number you have assigned to a preset radio station. To enter a number using the key pad follow these steps:

- When you use the 10 key pad for CD player, first press CD 10 KEY; when for the tuner, first press TUNER before pressing any 10 key.
- 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, press +10 +10 and 10.
- For numbers from 31 and 40, follow the same procedure, only press the +10 key three times, then the one's digit—to get 32, press +10 +10 +10 and 2.



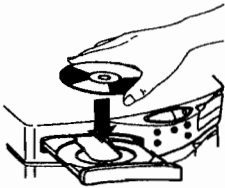
Care and Maintenance—General Notes

Compact Discs

Handle your compact discs, cassette tapes, and tape deck carefully, and they will last a long time.



- Remove the CD from the case by holding it at the edges while pressing the center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.



- Place the CD into the open tray with the label facing up.



- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.



- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from center to edge.

CAUTION: Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzene, etc.) to clean a CD.

In general, you will have the best performance by keeping your tapes, CDs, and the mechanism clean.

- Store tapes and CDs in their cases, and keep them in cabinets or on shelves.
- Keep the tape deck tape carriers and the CD tray closed when not in use.

Cassette Tapes



- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose it may get stretched, cut, or caught in the cassette.



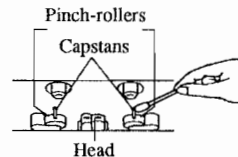
- Do not touch the tape surface.



- Do not store the tape:
 - In dusty places
 - In direct sunlight or heat
 - In moist areas
 - On a TV or speaker
 - Near a magnet

Tape Deck

- If the heads, capstans, and pinch-rollers of the tape deck become dirty, the following will occur:
 - Impaired sound quality
 - Discontinuous sound
 - Fading
 - Incomplete erasure
 - Difficulty recording
- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads becomes magnetized, it will produce noise or loose high frequencies.
- To demagnetize the heads, turn off the system, and use a head demagnetizer (available at electronics and record shops).

Troubleshooting

- If you are having a problem with your CA-MXS2BK, 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 and 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.	Re-connect the antenna securely.
	The loop antenna is too close to the system.	Change the position and direction of the loop antenna.
The CD sound is discontinuous.	The feeder antenna is not properly extended and positioned.	Extend feeder antenna at the best reception position.
	The CD is scratched or dirty.	Clean or replace the CD.
Unable to operate the Remote.	The path between the Remote and the sensor on the Unit is blocked.	Remove the obstruction.
	The batteries are discharged.	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 system then plug it back in.
The cassette carrier cannot be opened.	The system was turned off because the timer was operated while the tape was running.	Turn On the system.

Specifications

Amplifier

Output Power (IEC 268-3/DIN)

25 watts per channel, min. RMS, both channels driven, into 6 ohms at 1 kHz with no more than 0.9% total harmonic distortion.

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. (only for Canada)

Input Sensitivity/Impedance (1 kHz)

VIDEO/AUX 300mV/50 kohms

Speaker terminals

Speakers 6 ohms

Tape deck

Frequency response

CrO₂: 30 ~ 16,000 Hz

Normal: 30 ~ 15,000 Hz

Wow and Flutter

(WRMS) 0.09%

(DIN) 0.2%

Tuner

FM Tuner

Tuning Range 87.5 ~ 108.0 MHz

Usable Sensitivity 0.95 μ V/75 ohms (10.8 dBf)

Signal-to-Noise Ratio

(IHF-A weighted) MONO (at 85 dBf) 80 dB

STEREO (at 85 dBf) 73 dB

(DIN) MONO 72 dB

STEREO 64 dB

AM (MW/LW) Tuner

MW-Tuning Range 530 ~ 1,710 kHz (only for Canada)

522 ~ 1,629 kHz (except for Canada)

LW-Tuning Range (except for Canada)

144 ~ 290 kHz (only for Italy)

144 ~ 353 kHz

Compact Disc Player

Dynamic Range (1 kHz) 90 dB

Signal-to-Noise Ratio 95 dB

Wow and Flutter Unmeasurable

General

Power Requirements For Canada: 120 V AC, 60 Hz

For Europe: 230 V AC, 50 Hz

Power Consumption For Canada: 95 Watts, 120 VA

For Europe: 110 Watts

Dimensions (Approx.) 245 x 265 x 344.5 mm (W/H/D)

(9³/₄ x 10¹/₂ x 13⁹/₁₆ in.)

Weight (Approx.) 7 kg (15.4 lbs)

Supplied Accessories

FM wire antenna (1) (only for Germany)

FM feeder antenna (1) (except for Germany)

AM (MW/LW) loop antenna (1)

Remote control (RM-SEMXS2U) (1)

Batteries R03(UM-4)/AAA(24F) (2)

Antenna adaptor (1) (except for Germany)

Design and specifications subject to change without notice.

Description of Major LSIs

■ HD404019RC18S(IC801) : CD/TUNER controller

1. Terminal Layout

F OUT	1	64	MONO
CLK	2	63	MUTE
DATA	3	62	PLAY LED
CS	4	61	CD POWER
TDATAI	5	60	FOK
TCLK	6	59	DFCT SW
TDATA	7	58	XRST
TCE	8	57	SENS
	9	56	LOCK
CS 0 BAND0	10	55	DCS OUT
CS 1 BAND1	11	54	DCS IN
CS 2 9K/10K LW	12	53	GND
CS 3 GI	13	52	OSC 2
9K.T.P.	14	51	OSC 1
STEREO	15	50	TEST
TUNED	16	49	RESET
INH IN	17	48	K13
TUNER TEST	18	47	K12
V DISP	19	46	K11
CL SW	20	45	K10
OP SW	21	44	KO6
CD TEST	22	43	KO5
SCOR	23	42	KO4
L.ON	24	41	KO3
XCX	25	40	KO2
CLOSE	26	39	KO1
OPEN	27	38	KO0
CD CLK	28	37	
CD DATA	29	36	
XLT	30	35	
AMP RESET	31	34	SQSO
VCC	32	33	SCLK

2. Key Matrix

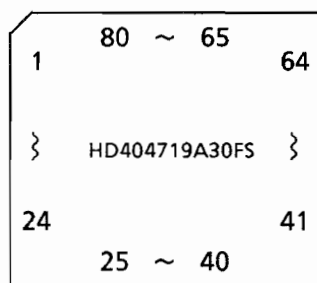
	KEY I0 (PIN 45)	KEY I1 (PIN 46)	KEY I2 (PIN 47)	KEY I3 (PIN 48)
KEY O0 (PIN 37)	RANDOM	—	SLEEP	REC TIMER
KEY O1 (PIN 38)	JUST EDIT	FM	—	CLOCK ADJ
KEY O2 (PIN 39)	REPEAT	AM	—	FM MODE MUTE
KEY O3 (PIN 40)	SIDE A/B	TUN V	—	MEMORY
KEY O4 (PIN 41)	PROGRAM	TUN A	PRESET <	—
KEY O5 (PIN 42)	⏮	▶	PRESET >	—
KEY O6 (PIN 43)	⏭	■	▲	—

3. Terminal Functions

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	F OUT	O	Frequency output (TP801)	28	CD CLK	O	Clock for data transmission
2	CLK	O	Clock to transmit data to IC802 (FL driver)	29	CD DATA	O	Serial data for signal processor of cd
3	DATA	O	Data output to IC802 (FL driver)	30	XLT	O	Latch signal for data transmission
4	CS	O	Chip select signal to IC802	31	AMP RESET	O	Reset signal to IC901
5	TDATAI	I	Data from IC102	32	VCC	--	Power supply
6	TCLK	O	Clock to transmit data to IC102	33	SCLK	O	Clock output for SQSO transmission
7	TDATA	O	Data output to IC102	34	SQSO	I	Input of Q-data of subcode
8	TCE	O	Chip select signal to IC102	35,36	—	--	Connected to GND
9	—	--	Connected to GND	37~43	KO0~KO6	O	Key matrix (out)
10	CS 0 BAND0	--	Tuner chip select	44	—	--	Connected to GND
11	CS 1 BAND1	--	Tuner chip select	45~48	KI0~KI3	I	Key matrix (in)
12	CS 2 9K/10K LW	--	Tuner chip select	49	RESET	I	Reset signal input
13	CS 3 GI	--	Tuner chip select	50	TEST	--	Pulled up
14	9K.T.P.	--	Test mode terminal	51	OSC 1	I/O	Oscillation terminal
15	STEREO	I	Input for 'STEREO' indication	52	OSC 2	I/O	Oscillation terminal
16	TUNED	I	Input for 'TUNED' indication	53	GND	--	GND
17	INH IN	I	Inhibition signal	54	DCS IN	I	Compulink signal input
18	TUNER TEST	--	TEST mode terminal (TP801)	55	DCS OUT	O	Compulink signal output
19	V DISP	--	Connected to GND	56	LOCK	I	Input terminal for LOCK signal
20	CL SW	I	'L' with the tray closed	57	SENS	I	Input terminal for SENS signal
21	OP SW	I	'L' with the tray opened	58	XRST	O	Reset signal output
22	CD TEST	--	TEST mode terminal (T.P.2)	59	DFCT SW	O	'H' with focus searching
23	SCOR	I	Subcode synchronizing signal is input	60	FOK	I	Input terminal for focus ok signal
24	L.ON	O	Laser control signal	61	CD POWER	O	Power control signal to CD section
25	XCX	O	'H' with tracking loop off.	62	PLAY LED	O	Output terminal for indication of cd
26	CLOSE	O	'H' with the tray closing	63	MUTE	O	Muting signal to TUNER section
27	OPEN	O	'H' with the tray opening	64	MONO	--	Not used.

■ HD404719A30FS (IC901) : System controller

1. Terminal Layout



2. Key input

IN1	IN2	IN3	IN4	IN5	IN6	IN7
A CrO ₂	REV REC	—	POWER	—	◀◀	DOLBY B
B CrO ₂	FWD REC	—	LIVE-S	—	◀	REV. MODE
A PACK	B PACK	—	AUX	—	■	CD D REC
—	—	—	—	—	▶	H.S.D.
—	—	—	—	—	▶▶	REC P
—	—	—	—	—	—	A/B

3. Terminal Functions

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	IN1	I	Detecting buttons and switches	41	BFR	O	Reel motor control signal (forward)
2	IN2	I	Detecting buttons and switches	42	BRR	O	Reel motor control signal (reverse)
3	PRT	I	Input from protector circuit	43	BRC	O	Cam motor control signal (counterclockwise)
4	AD GND	---	Ground for A/D converter	44	BFC	O	Cam motor control signal (clockwise)
5	AMP RESET	I	Reset signal from IC801	45	AFR	O	Reel motor control signal (forward)
6	OSC1	---	Oscillation terminal	46	ARR	O	Reel motor control signal (reverse)
7	OSC2	---	Oscillation terminal	47	ARC	O	Cam motor control signal (counterclockwise)
8	L GND	---	GND	48	AFC	O	Cam motor control signal (clockwise)
9	—	---	Connected to GND	49	—	---	Connected to GND
10	—	---	Connected to GND	50	ASC2	I	Input of mechanism information (deck A)
11	TEST	---	Connected to +5V	51	ASC1	I	Input of mechanism information (deck A)
12	+5V	---	Power supply	52	ACS0	I	Input of mechanism information (deck A)
13	DCS IN	I	Compulink signal input	53	BCS2	I	Input of mechanism information (deck B)
14	DCS OUT	O	Compulink signal output	54	BCS1	I	Input of mechanism information (deck B)
15	FADE	O	Fade recording control	55	BCS0	I	Input of mechanism information (deck B)
16	BIAS	O	Bias circuit control (on/off)	56	SMT	O	Muting control
17	ACAP	O	Drive signal for the capstan motor(A)	57	—	---	Connected to GND
18	BCAP	O	Drive signal for the capstan motor (B)	58	—	---	Connected to GND
19	AMC	O	Speed control signal for deck A	59	—	---	Connected to GND
20	BMC	O	Speed control signal for deck B	60	—	---	Connected to GND
21	APLS	I	Input of reel pulse (Deck A)	61	RMIN	I	Input from remote signal detector
22	BPLS	I	Input of reel pulse (Deck B)	62	SP CLK	O	Clock output to IC803
23	RMT	O	Recording mute control	63	SPDATA	O	Data output to IC803
24	NR	O	Noise reduction control	64	CS	O	Chip select signal to IC803
25	NR REC	O	Mode control of NR (REC/PLAY)	65	MSI	I	Blank detection terminal for music scanning
26	H.S.D.	O	Control signal for high-speed dubbing	66	CLK	O	Clock output to IC403 (Tone selector)
27	PBCR	O	Playback equalizer control	67	STB	O	Strobe output to IC403 (Tone selector)
28	—	---	Connected to +5V	68	DATA	O	Data output to IC403 (Tone selector)
29	LC	O	Rec. EQ control (Normal speed : CrO ₂)	69	POWER	O	Power control (Power on/off)
30	HC	O	Rec. EQ control (High speed : CrO ₂)	70	SPK	O	Speaker relay control
31	HN	O	Rec. EQ control (High speed : Normal)	71	VOL DOWN	O	Master volume control
32	BCR	O	'L' when using high position tape	72	VOL UP	O	Master volume control
33	—	---	Connected to +5V	73	A PLAY	O	'H' with deck A playing
34	—	---	Connected to +5V	74	PB MUTE	O	Muting control for cassette decks
35	—	---	Connected to +5V	75	AD VCC	---	+5V
36	A LED	O	Indication signal	76	IN3	---	Connected to GND
37	B LED	O	Indication signal	77	IN4	I	Detecting buttons and switches
38	STB-BY	O	Indication signal	78	IN5	---	Connected to GND
39	—	---	Connected to +5V	79	IN6	I	Detecting buttons and switches
40	VOL.IND	O	Indication signal	80	IN7	I	Detecting buttons and switches

■ CXD2500BQ(IC701) : DIGITAL SIGNAL PROCESSOR

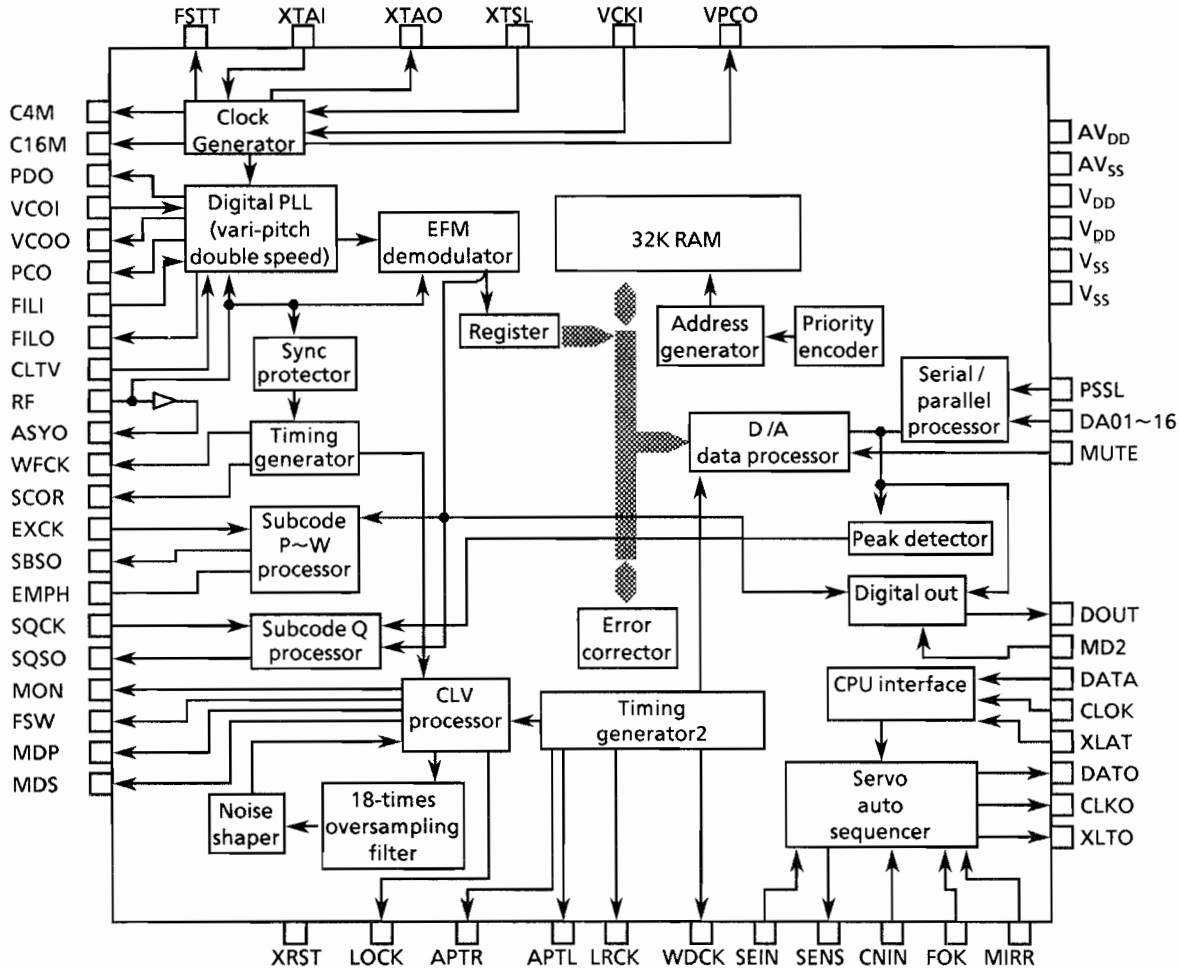
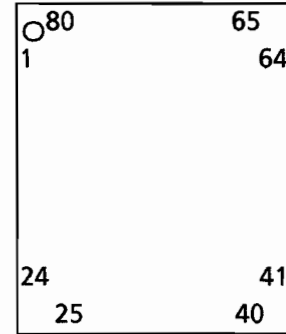
1. Outline

The CXD2500BQ is a digital signal processing LSI designed for use in compact disc players. It has the following functions:

- All digital signals for regeneration are processed using one chip.
- The built-in RAM enables high-integration mounting.
- Generation by the use of a digital PLL of bit clock pulses for strobing the EFM signal.
- EFM data demodulation
- Subcode demodulation and subcode Q data error detection
- Digital spindle servo system (incorporating an oversampling filter)

3. Internal Block Diagram

2. Terminal Layout



Notes:

- The data at the 64-bit slot is output in 2's complements on an LSB-first basis. The data at the 48-bit slot is output in 2's complements on an MSB-first basis.
- GTOP monitors the state of Frame Sync protection. ("H" : Sync protection window released)
- XUFG is a negative Frame Sync pulse obtained from the EFM signal before Frame Sync protection is effected.
- XPLCK is an inversion of the EFM PLL clock. The PLL is designed so that the falling edge of XPLCK coincides with a change point of the EFM signal.
- The GFS signal turns "H" upon coincidence between Frame Sync and the timing of interpolation protection.
- RFCK is a signal generated at 136- μ s periods using a crystal oscillator.
- C2PO is a signal to indicate a data error.
- XRAOF is a signal issued when a jitter margin of $\pm 28F$ is exceeded by the 32K RAM.

4. Terminal Description

Pin No.	Symbol	I/O	Description
1	FOK	I	Focus OK input pin. Used for SENS output and servo auto sequencer.
2	FSW	O	Non connection
3	MON	O	Output for spindle motor ON / OFF control.
4	MDP	O	Output for spindle servo control.
5	MDS	O	Output for spindle servo control (Non connection).
6	LOCK	O	This terminal is "H" when the GFS signal sampled at 460Hz is "H". It turns "L" when the GFS signal turns out "L" 8 or more times in succession.
7~9	—	--	Non connection
10	TEST	I	Test pin (Normally at 0V)
11	PDO	O	Output of charge pump for analog EFM PLL (Non connection).
12	V _{SS}	--	GND
13~16	—	--	Non connection
17	VCKI	I	Clock input from external VCO for vari-pitch control. $f_c = 16.9344\text{MHz}$.
18	FILO	O	Output of filter for master PLL (Slave = Digital PLL)
19	FILI	I	Input to filter for master PLL.
20	PCO	O	Output of charge pump for master PLL.
21	AV _{SS}		Analog GND
22	CLTV	I	VCO control voltage input for master PLL.
23	AV _{DD}	--	Analog power supply
24	RF	I	EFM signal input
25	TEST2	I	TEST pin (Connected to GND)
26	TEST3	I	TEST pin (Connected to GND)
27	ASYO	O	EFM full-swing output
28	TEST4	I	TEST pin (Connected to GND)
29	NC	--	Non connection
30	PSSL	I	Input used to switch the audio data output mode. "L" for serial output, "H" for parallel output.
31	WDCK	O	D / A interface for 48-bit slot. Word clock $f = 2F_s$.
32	LRCK	O	D / A interface for 48-bit slot. LR clock $f = F_s$.
33	V _{DD}	--	Power supply
34	DA16	O	Output DA16(MSB) when PSSL = 1 or serial data from 48-bit slot(2's complements, MSB first) when PSSL = 0.
35	DDA15	O	Output DA15 when PSSL = 1 or bit clock from 48-bit slot when PSSL = 0.
36~51	—	--	Non connection
52	V _{SS}	--	GND
53	XTAI	I	Input to 16.9344MHz Xtal oscillation circuit or 33.8688MHz input.
54	XTAO	O	Output of 16.9344 MHz Xtal oscillation circuit.
55	XTSL	I	Xtal selection input pin. "L" for 16,344MHz Xtal, "H" for 33.8688 MHz Xtal.
56~58	—	--	Non connection
59	MD2	I	Digital-Out ON/OFF control. "H" for ON, "L" for OFF.
60	DOOUT	O	Digital-Out output pin.
61	EMPH	O	H : emphasis on L : emphasis off
62	—	--	Non connection
63	SCOR	O	Turns "H" when subcode Sync S0 or S1 is detected.
64	SBSO	O	Serial output of Sub P to W.
65	EXCK	I	Clock input for reading SBSO.
66	SQSO	O	Outputs 80-bit Sub Q and 16-bit PCM peak-level data.
67	SQCK	I	Clock input for reading SQSO.
68	MUTE	I	"H" for muting, "L" for release.
69	SENS	O	SENS output to CPU.
70	XRST	I	System reset. "L" for resetting.
71	DATA	I	Inputs serial data from CPU.
72	XLAT	I	Latches serial data input from CPU at falling edge.
73	V _{DD}	--	Power supply(+ 5V)
74	CLOCK	I	Inputs serial data transfer clock from CPU.
75	SEIN	I	Inputs SENSE from SSP.
76	CNIN	I	Inputs track jump count signal.
77	DATO	O	Outputs serial data to SSP.
78	XLTO	O	Latches serial data output to SSP at falling edge.
79	CLKO	O	Outputs serial data transfer clock to SSP.
80	MIRR	I	Inputs mirror signal to be used by auto sequencer when jumping 128 or more tracks.

■ CXA1372S (IC703) : RF SIGNAL PROCESSING SERVO AMPLIFIER

1. Outline

The CXA1372S is a bipolar IC developed for RF signal processing (focus OK, mirror, defect detection, EFM comparator) and servo control.

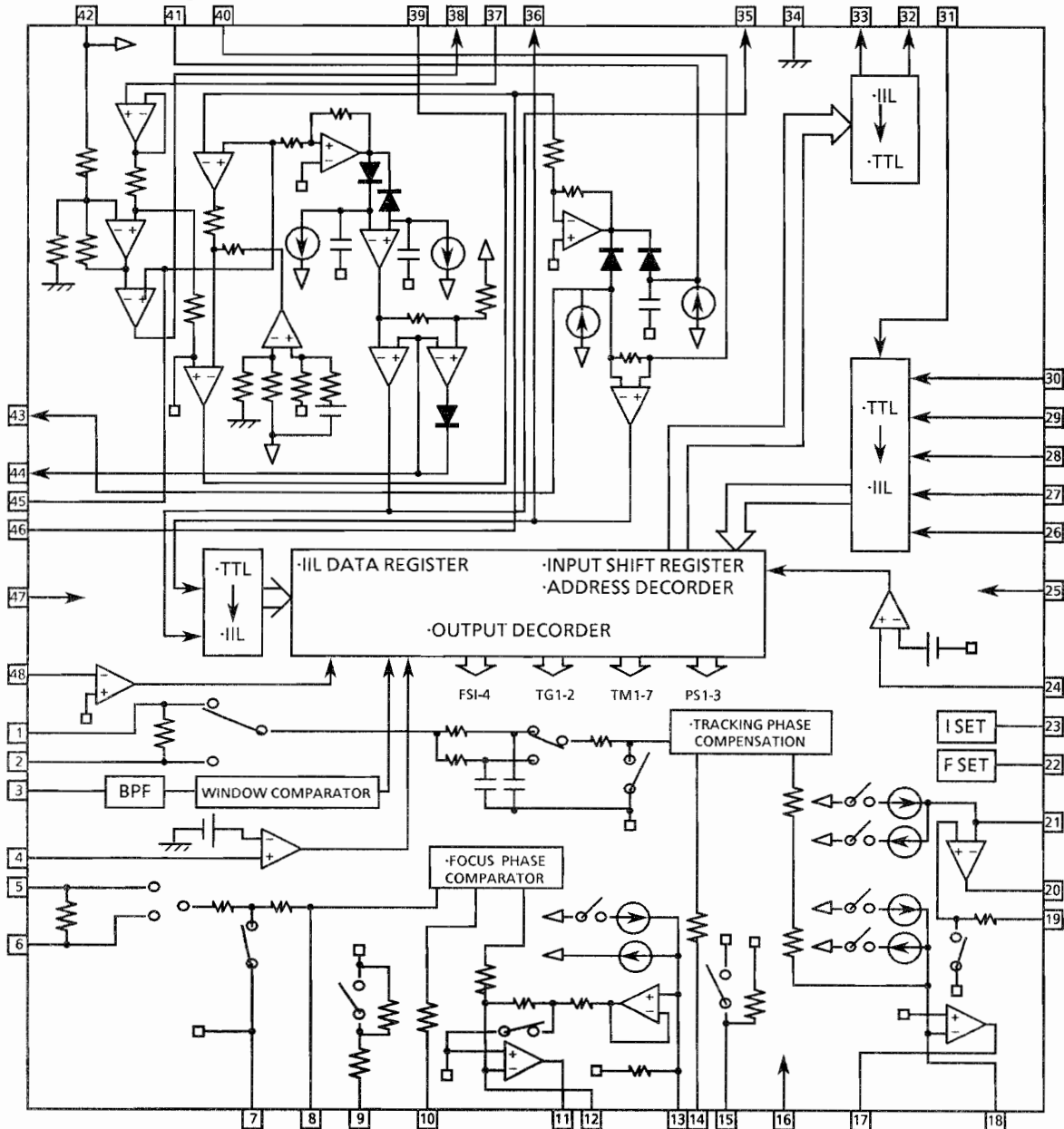
2. Functions

- Auto asymmetry control
- Focus OK detection circuit
- Mirror detection circuit
- Defects detection, counter measures circuit
- EFM comparator
- Focus servo control
- Tracking servo control
- Feed servo control

3. Terminal Layout

TE	1	48	TZC
TDFCT	2	47	DVEE
ATSC	3	46	RFO
FZC	4	45	RFI
FE	5	44	CP
DFDCT	6	43	CB
VC	7	42	DVCC
FGD	8	41	CC2
FS3	9	40	CC1
FLB	10	39	FOK
FEO	11	38	EFM
FE -	12	37	ASY
SRCH	13	36	DFCT
TGU	14	35	MIRR
TG2	15	34	DGND
AVCC	16	33	SENS
TAO	17	32	C.OUT
TA -	18	31	XRST
SL +	19	30	DATA
SLO	20	29	XLT
SL -	21	28	CLK
FSET	22	27	LOCK
ISET	23	26	DIRC
SSTOP	24	25	AVEE

4. Internal Block Diagram



5. Terminal Functions

Pin No	Symbol	I/O	Function
1	TE	I	Input pin of tracking error amplifier.
2	TDFCT	I	Capacitor connecting pin for time constant during defects.
3	ATSC	I	Window comparator input pin for ATSC detection.
4	FZC	I	Pin for focus zero-cross comparator input.
5	FE	I	Input pin of focus error.
6	FDFCT	I	Capacitor connecting pin for time constant during defect functions.
7	VC	I	Center voltage input pin. For dual power: GND For single power supply: (VCC + GND)/2
8	FGD	I	Connect a capacitor between this pin and pin3 to reduce high-frequency gain.
9	FS3	I	The high-frequency gain of the focus servo is switched through FS3 ON and OFF.
10	FLB	I	Time constant external pin to raise the low bandwidth of the focus servo.
11	FEO	O	Focus drive output.
12	FE-	I	Inverse input for focus amplifier.
13	SRCH	I	Time constant external pin for formation of focus search waveform.
14	TGU	I	Time constant external pin for the selection of tracking high band gain.
15	TG2	I	Time constant external pin for the selection of tracking high band gain.
16	AVCC	--	Power supply
17	TAO	O	Tracking drive output.
18	TA-	I	Inverse input pin for tracking amplifier.
19	SL +	I	Non- inverse input pin for feed amplifier.
20	SLO	O	Feed drive output.
21	SL-	I	Inverse input pin for feed amplifier.
22	F SET	I	Pin to set peak frequency of focus tracking phase compensation and fo of CLV LPF.
23	I SET	I	Current is input to determine focus search, track jump, and feed kick height.
24	S STOP	I	Limit SW ON/OFF signal detection pin for disc inner periphery detection.
25	AVEE	--	- 5V
26	DIRC	I	Pin for one-track jump. Contains 47kΩ pull-up resistor.
27	LOCK	I	At "L" feed runaway prevention circuit operate. Contains a 47kΩ pull-up resistor.
28	CLK	I	Serial data transfer clock input from CPU.
29	XLT	I	Latch input from CPU.
30	DATA	I	Serial data input from CPU.
31	XRST	I	Reset input pin, reset at "L".
32	C.OUT	O	Track number count signal output.
33	SENS	O	Outputs FZC, AS, TZC and S STOP through command from CPU.
34	DGND	--	GND
35	MIRR	O	MIRR comparator output pin.
36	DFCT	O	Output pin of DEFECT comparator.
37	ASY	I	Input pin of auto asymmetry control.
38	EFM	O	Output pin of EFM comparator.
39	FOK	O	Output pin of FOK comparator.
40	CC1	I	Output pin of DEFECT bottom hold.
41	CC2	O	Input pin for the capacitance coupled output of DEFECT bottom hold.
42	DVCC	--	- 5V
43	CB	I	Connection pin of DEFECT bottom hold capacitor.
44	CP	I	Connecting pin of MIRR hold condenser. Non-inverted input pin of MIRR comparator.
45	RFI	I	Input pin with coupling capacitor where RF summing amplifier output is connected.
46	RFO	O	Output pin of RF summing amplifier and check point of eye pattern.
47	DVEE	--	- 5V
48	TZC	I	Input pin of tracking zero-cross comparator.

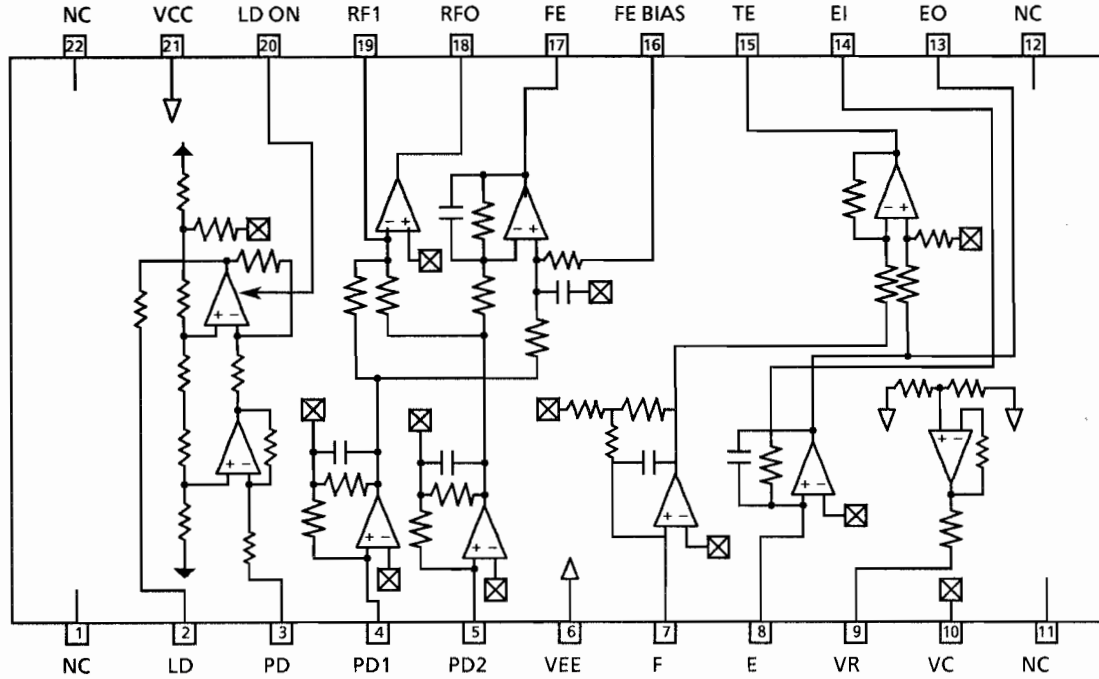
■ CXA1571S(IC702) : RF AMP FOR COMPACT DISC

1. Outline

The CXA1571S IC for compact disc 3-point method optical pickup output has following functions.

- RF amplifier
- Focus error amp
- Tracking error
- APC circuit

2. Internal Block Diagram



3. Terminal Functions

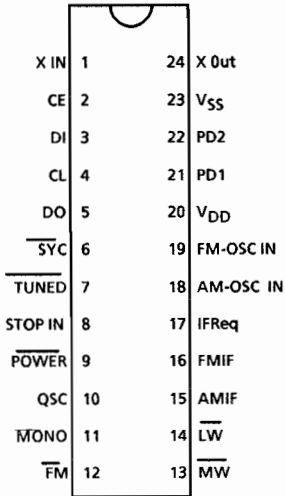
Pin No.	Symbol	I/O	Function
2	LD	O	APC amp output pin.
3	PD	I	APC amp input pin.
4	PD1	I	RF I-V amp inverted input pins; they are connected to the A + C and B + D pins of the photodiode and receive current input.
5	PD2	I	
7	F-IN	I	F and E I-V amp inverted input pin; they are connected to Photodiodes F and E and receive current input.
8	E-IN	I	
9	VR	O	(VCC + VEE) / 2 DC voltage output pin.
10	VC	I	VC intermediate voltage input pin; when dual ± 5V power supplies are used, this pin is connected to GND; for a single + 5V power supply, it is connected to the VR pin.
13	EO	O	Monitor output pin for I-V amp E.
14	EI	I	Gain adjustment pin for I-V amp E.
15	TE	O	Tracking error amp output pin.
16	FE-BIAS	I	Bias adjustment pin for the non-inverted side of the focus error amp.
17	FE	O	Focus error amp output pin.
18	RFO	O	RF amp output pin.
19	RF I	I	RF inverted side input pin; the resistor connected between this pin and the RFO pin determines the gain of the RF amp.
20	LD-ON	I	This pin switches the APC amp on / off: on for VCC, off for ground.

■ LC7218 (IC102) : PLL Synthesizer

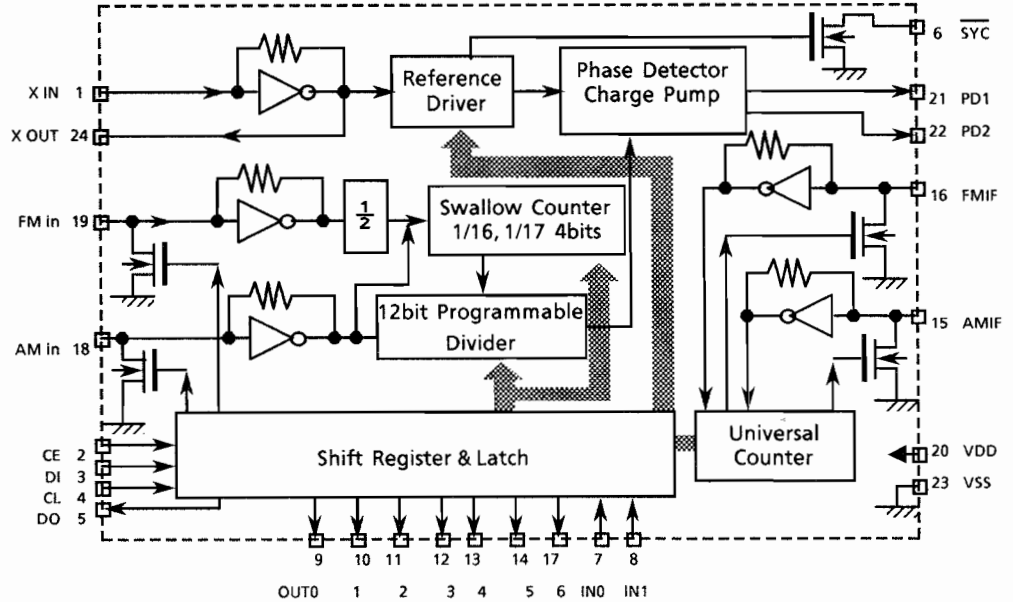
1. The main function descriptions

- (1) It makes the local oscillation frequency by the control data from IC801.
- (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 IC801.

2. Terminal Layout



3. Block Diagram



4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1,24	X in , X out	I/O	Crystal oscillator (7.2MHz).
2	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	I	Receive the control data from the controller (IC801).
4	CL	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	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	I	Not used.
9	POWER	O	Not used.
10	QSC	O	ON mode with "H" and OFF mode with "L".
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	—	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	O	Not used.
23	V _{SS}	—	Power supply.

■ LA1266A (IC104) : FM AM IF AMP & detector

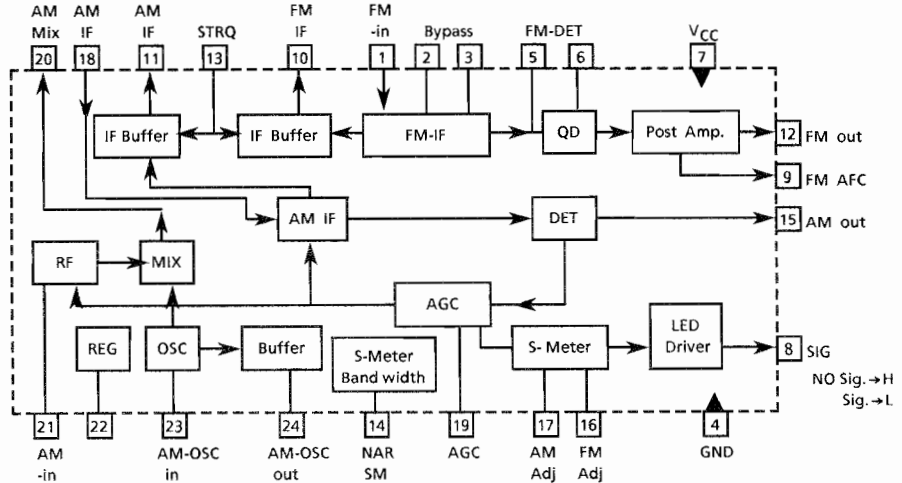
1. The main function descriptions

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

2. Terminal Layout

FM-in	1	24	AM-OSC out
Bypass	2	23	AM-OSC
Bypass	3	22	V.ref
GND	4	21	AM-in
FM-DET	5	20	AM-Mix
FM-DET	6	19	AM-AGC
V _{CC}	7	18	AM-IF
SIG	8	17	AM Adj.
FM-AFC	9	16	FM Adj
FM-IF	10	15	AM out
AM-IF	11	14	NAR SM
FM-out	12	13	STRQ

3. Block Diagram



4. Pin Function Description

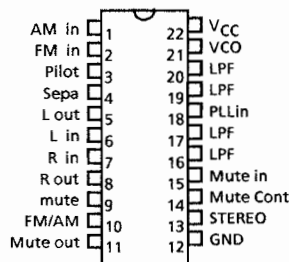
Pin No.	Symbol	I/O	Functions and Operations
1	FM in	I	This is an input terminal of FM IF Signal.
2,3	Bypass	--	Bypass of FM IF Amp.
4	GND	--	This is the device ground terminal.
5,6	FM DET	--	FM detect transformer.
7	V _{CC}	--	This is the power supply terminal.
8	SIG	O	When the set is tuning, this terminal becomes "L".
9	FM AFC	O	This is an output terminal of voltage for FM-AFC (Auto frequency control).
10	FM IF	O	When the signal of IF REQ of IC102 (LC7218) appear, the signal of FM IF output.
11	AM IF	O	When the signal of IF REQ of IC102 (LC7218) appear, the signal of AM IF output.
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 going to "High".
14	NAR SM	--	Control the Band-width of 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	--	Register value between pin9 and pin22 decides the frequency width of the input signal.
23	AM-OSC	--	This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

■ LA3401 (IC105) : FM MPX Detector

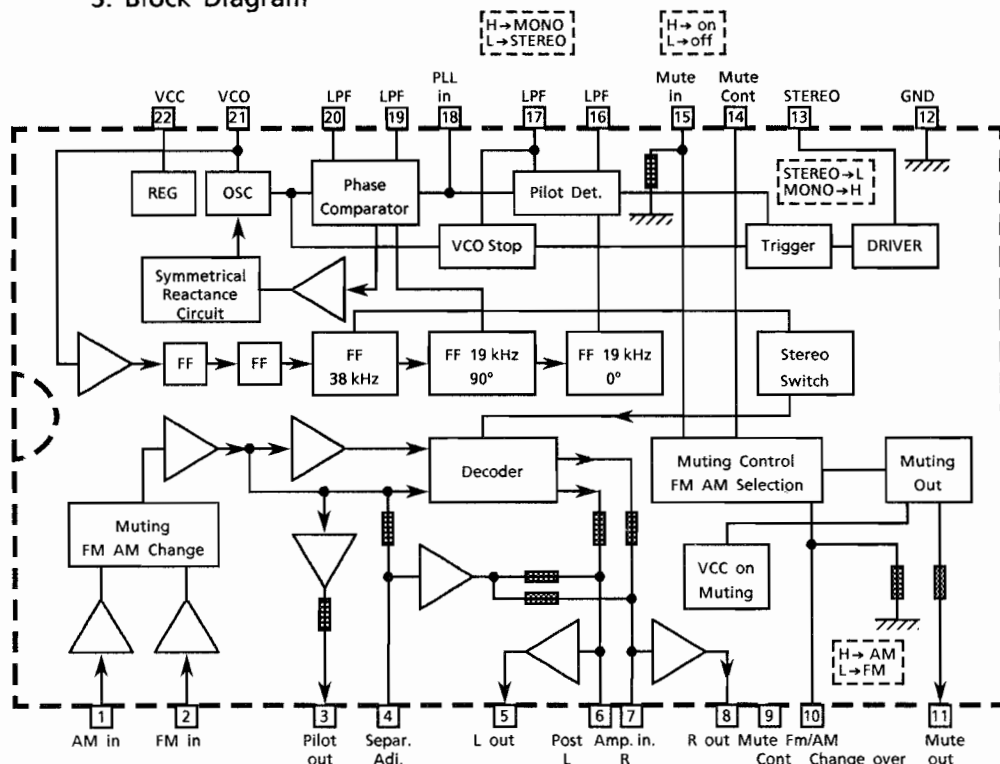
1. The main function descriptions

- (1) Detect the FM multiplex signal (Stereo signal).
- (2) When receiving FM stereo signal, it outputs the signal for indication.
- (3) AM / FM audio amplifier.

2. Terminal Layout



3. Block Diagram



4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
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	I	Input terminal of the left channel post-amplifier
7	R	I	Input terminal of the right channel post-amplifier
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 used
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 stops.
18	Pilot in	I	Pilot signal input
19	LPF	--	Low-pass filter of PLL.
20	LPF	--	Low-pass filter of PLL.
21	VCO	I	Voltage controlled oscillator terminal.
22	V _{cc}	--	Power supply.

Internal Block Diagram of Other ICs

■ M50197P (IC991) : Digital Delay IC (Only for universal version)

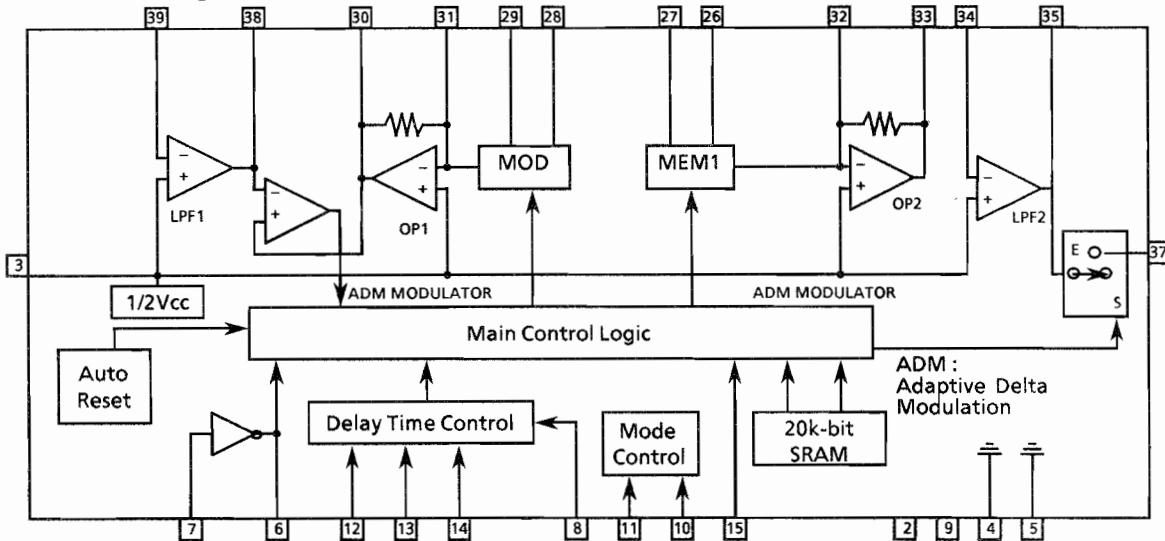
1. Terminal Layout

NC	1	40	NC
AVCC	2	39	LPF1 IN
REF	3	38	LPF1 OUT
A.GND	4	37	ECHO FB
D.GND	5	36	NC
X.OUT	6	35	LPF2 OUT
X.IN	7	34	LPF2 IN
EASY	8	33	OP2 OUT
DVCC	9	32	OP2 IN
TEST	10	31	OP1 IN
MODE	11	30	OP1 OUT
DEL1	12	29	CURRENT CONT0
DEL2	13	28	GAIN CONT0
DEL3	14	27	CURRENT CONT1
MUTE	15	26	GAIN CONT1
NC	16	25	NC
NC	17	24	NC
NC	18	23	NC
NC	19	22	NC
NC	20	21	NC

2. Terminal Functions

Pin No	Symbol	Function	Pin No	Symbol	Function
1,40	NC	Non connection	16~25	NC	Non connection
2	AVCC	Power Supply	26	GAIN CONT1	Gain control
3	REF	Reference voltage	27	CURR. CONT1	ADM control
4	AGND	Ground	28	GAIN CONT0	Gain control
5	DGND	Digital ground	29	CURR. CONT0	ADM control
6	xout	Oscillation terminal	30	OP1 OUT	OP amp output
7	XIN	Oscillation terminal	31	OP1 IN	OP amp input
8	EASY	Interface select	32	OP2 IN	OP amp input
9	VDD	Power supply	33	OP2 OUT	OP amp output
10	TEST	Connected to GND	34	LPF2 IN	Filter input
11	MODE	Connected to 5V	35	LPF2 OUT	Filter output
12	DEL1	Connected to GND	36	NC	Non connection
13	DEL2	Connected to 5V	37	ECHO FB	Echo feedback
14	DEL3	Connected to 5V	38	LPF1 OUT	Filter output
15	MUTE	Connected to GND	39	LPF1 IN	Filter input

3. Internal Block Diagram

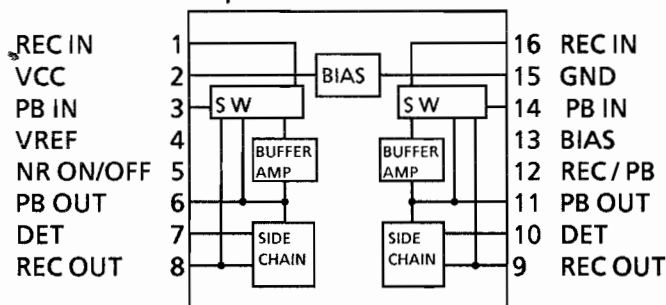


4. Operation

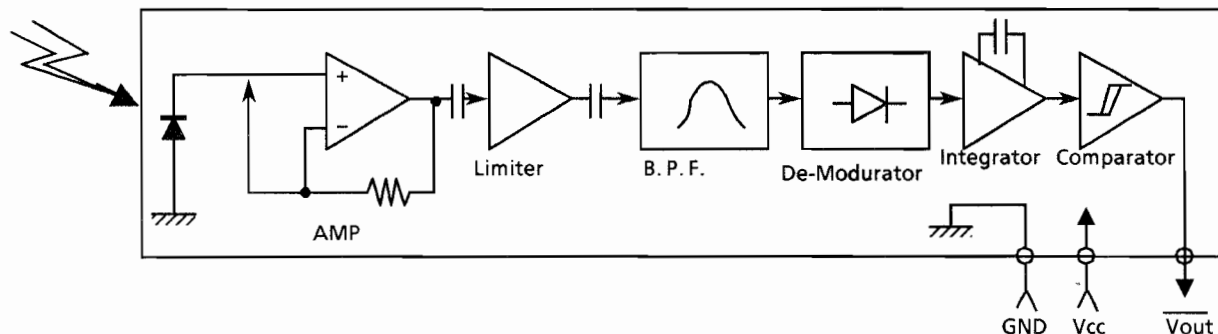
- 1) This ic has 2 modes, one of which is echo mode and the other is surround mode. Following table shows the differences between the two modes.
- 2) When EASY is 'H', DEL1, DEL2 and DEL3 are used as REQ, SECK and SEDATA. In this case, SEDATA which is used to set the mode and delay time previously mentioned, is read at the falling edge of SECK while REQ is 'L'.

DEL1 Pin12	DEL2 Pin13	DEL3 Pin14	Surround mode (Pin11 = L)		Echo mode (Pin11 = H)	
			Sampling frequency	Delay time (mSEC)	Sampling frequency	Delay time (mSEC)
L	L	L	500kHz	4.1	250kHz	20.5
H	H	L	500kHz	10.2	250kHz	41.0
H	L	L	500kHz	14.3	250kHz	61.4
L	H	L	500kHz	20.5	250kHz	81.9
H	L	H	500kHz	24.6	125kHz	98.3
L	L	H	500kHz	30.7	125kHz	122.9
L	H	H	500kHz	34.8	125kHz	139.3
H	H	H	500kHz	41.0	125kHz	163.8

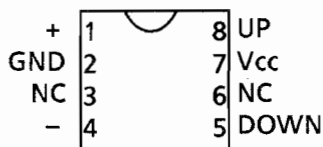
■ HA12136A (IC381) : Noise Reduction Amplifier



■ SPS-420-1 (IC804) : Remote control Module IC



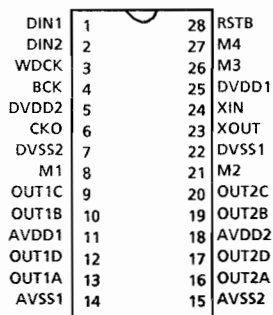
■ LB1639-CV (IC489) : Motor Driver



IN 1 (pin1)	IN 2 (pin4)	OUT 1 (pin8)	OUT 2 (pin5)	MOTOR
H	L	H	L	CLOCKWISE
L	H	L	H	COUNTER-CLOCKWISE
H	H	OFF	OFF	WAITING
L	L	OFF	OFF	WAITING

■ MN35501 (IC751) : D/A converter

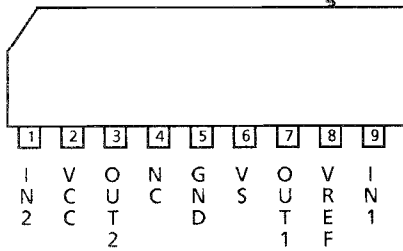
1. Terminal Layout



2. Terminal Functions

Pin No.	Symbol	I/O	Function
1,2	DIN1, 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
9,10	OUT1C, OUT1B	O	PEM signal output (Channel 1)
11	AVDD1	--	Power supply for analog circuit (Channel 1)
12,13	OUT1D, OUT1A	O	PEM signal output (Channel 1)
14	AVSS1	--	GND for analog circuit (Channel 1)
15	AVSS2	--	GND for analog circuit (Channel 2)
16,17	OUT2A, OUT2D	O	PEM signal output (Channel 2)
18	AVDD2	--	Power supply for analog circuit (Channel 2)
19,20	OUT2B, OUT2C	O	PEM signal output (Channel 2)
21	M2	I	Input for mode select
22	DVSS1	--	GND for clock circuit
23,24	XOUT, XIN	--	Oscillation terminal
25	DVDD1	--	Power supply for clock circuit
26,27	M3, M4	I	Input for mode select
28	RSTB	I	Reset input (Low active)

■ TA8409S (IC931~934) : DC motor driver



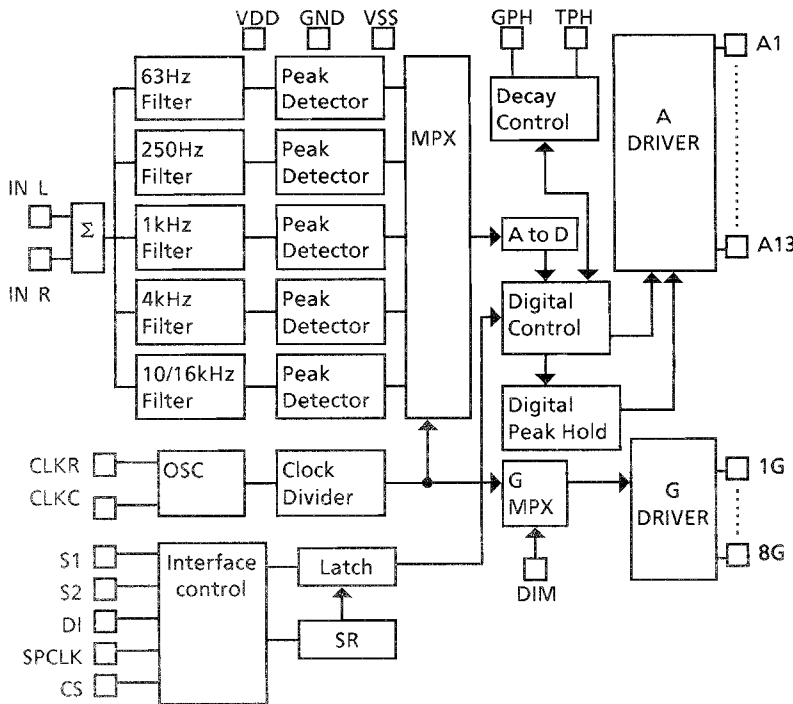
Function

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	OPEN
0	1	L	H	CLOSE
1	1	L	L	BRAKE

∞ : High impedance

■ XR1095CP (IC803) : Display Driver

1. Internal Block Diagram

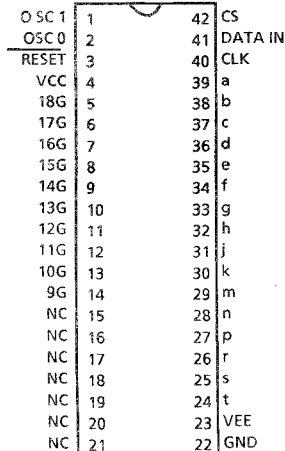


2. Terminal Functions

Pin No.	Symbol	Function
1~5, 9~16	T1~T13	FL anode control
17	CS	Chip select
18	SPCLK	Clock for data transmission
19	DI	Serial data input
20,21	S1, S2	Chip select (connected to GND)
22	DIM	Connected to ground
23	VSS	Power supply(-)
24	GND	Ground
25	R IN	Audio signal input
26	L IN	Audio signal input
27	GPH	The resistor and capacitor connected to this pin determine the peak hold time.
28	TPH	
31~38	1G~8G	FL grid control
40	CLKR	A resistor is connected for oscillation
41	CLKC	A capacitor is connected for oscillation
42	VDD	Power supply (+)

■ MSC7112-015S (IC 802) : FL Driver IC

1. Terminal Layout



2. Terminal Functions

Pin No.	Symbol	I/O	Function
1	OCS 1	I	Oscillation circuit is composed by connecting the resistor and capacitor.
2	OSC 0	O	
3	RESET	I	Reset input for internal logic at turning the power on.
4	V _{DD}	-	Power supply
5~14	18G~9G	O	FL grid drive signal
15~21	NC	-	Non connection
22	V _{SS}	-	GND
23	V _{EE}	-	-27V
24~39	t~a	O	FL anode drive signal
40	CLK	I	System clock for shift register
41	DATA IN	I	Indication data input
42	CS	I	Chip select

Internal Connection of the FL Display Tube

■ ELU0001-153

TERMINAL CONNECTION

(UPPER)

TERMINAL NO.	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35		
ELECTRODE	F1	F1	F1	NP	a	b	c	d	e	f	g	h	j	k	m	n	p	p	r	s	t	P	P	18G	17G	16G	15G	14G	13G	12G	11G	10G	9G	F2	F2	F2

(LOWER)

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
ELECTRODE	F1	F1	F1	NP	NC	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NP	T14	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	P	P	NP	F2	F2

18G

17G

16G

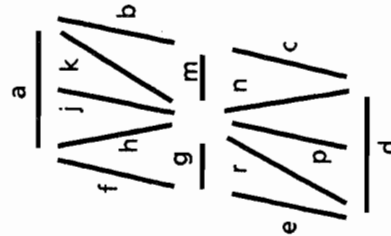
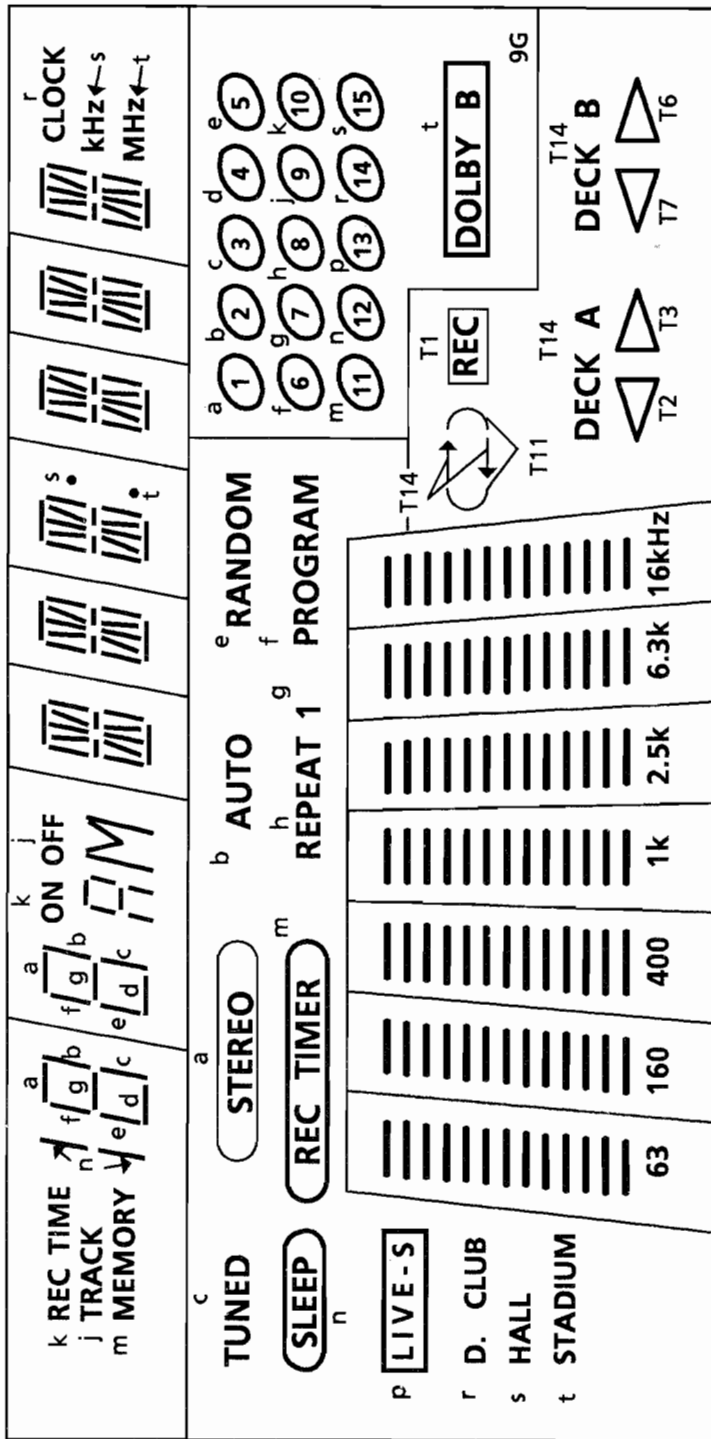
15G

14G

13G

12G

11G



Disassembly Procedures

■ Top cover removal

1. Remove 4 screws on the rear side and 2 screws on both sides of the cover.
2. Remove the cover.

■ Rear panel removal

1. Remove the top cover.
2. Remove the 5 screws (A).
3. Remove the 9 screws (B).
4. Remove the rear panel.

■ Tuner PCB (ENA-140-1) removal

1. Remove the top cover.
2. Remove the rear panel (definitely).
3. Remove the screw (C).
4. Remove the connectors JB103, J101 on the tuner PCB to remove the tuner PCB.

■ Cassette PCB (ENJ-072-2) removal

1. Remove the top cover.
 2. Remove the rear panel.
 3. Remove the tuner PCB.
 4. Remove the 2 screws (D).
 5. Disconnect the connectors P201, 202, 203, 204 and J205.
- J205 is connected to FW205.

■ CD PCB(ENN-373-1) with mechanism assembly removal.

1. Remove the top cover.
2. Remove the rear panel.
3. Remove the tuner PCB.
4. Disconnect the wires J205, J851, J911, J601 and P701.
5. Remove the 3 screws (E) (Fig 4).
6. Remove the screw (G) on the CD assembly base.
7. Take them out of the shassis, lifting them a little.

■ Front panel assembly removal

1. Remove the top cover.
2. Remove the rear panel.
3. Remove the tuner and cassette PCBs.
4. Remove the CD PCB with the mechanism assembly.
5. Remove the 3 screws (E) on the bottom of the front panel.
7. Disconnect the connectors J512, 531, 901 and 902 (Fig 5).
8. Release the 3 hooks to remove the assembly (Fig 3).

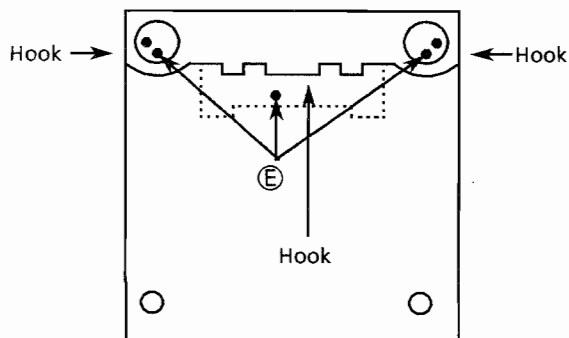


Fig 3 Bottom view

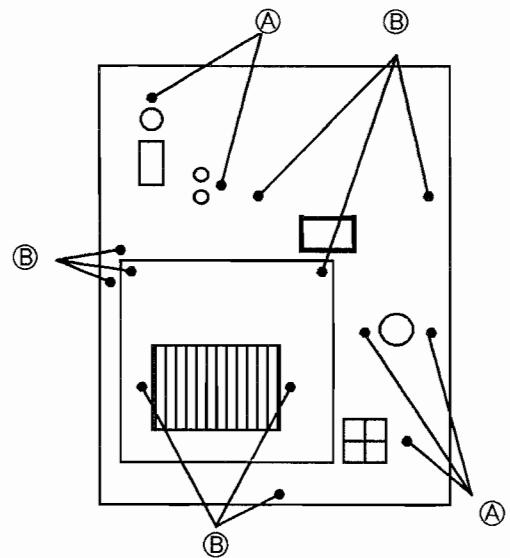


Fig 1 Rear view

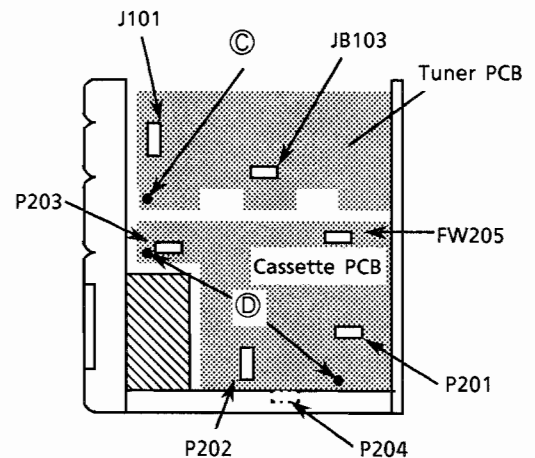


Fig 2 Right side view

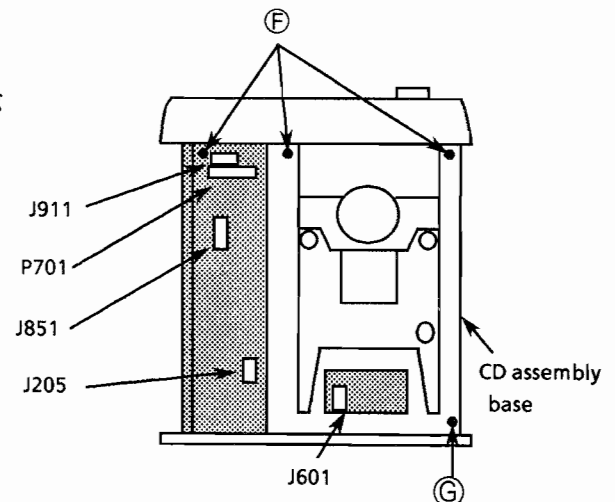


Fig 4 Top view

■ CD mechanism assembly removal

1. Remove the cd PCB with mechanism assembly.
2. Disconnect the connectors P602, P603.
3. Remove the 3 screws ⑩.
4. Disconnect the connector P601 under the mechanism, lifting the mechanism up.
5. Turn the screw ⑪ located under the mechanism to remove the tray out of the loading mechanism.
6. Remove the screw ⑫ to remove the tray.
7. Remove the 2 screws ⑬ to remove the clamp assembly.
8. Remove the screw ⑭ located under the tray to take the cd mechanism assembly out.

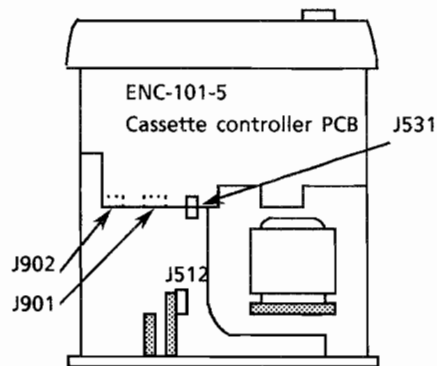


Fig 5

■ Cassette mechanism with the cassette controller PCB (ENC-101-5) removal

1. Remove the top cover.
2. Remove the front panel assembly.
3. Disconnect the connectors J991, P992 and JB851 (Fig 9).
4. Remove the 8 screws ① and ②.
5. Open the cassette doors to remove the mechanism.

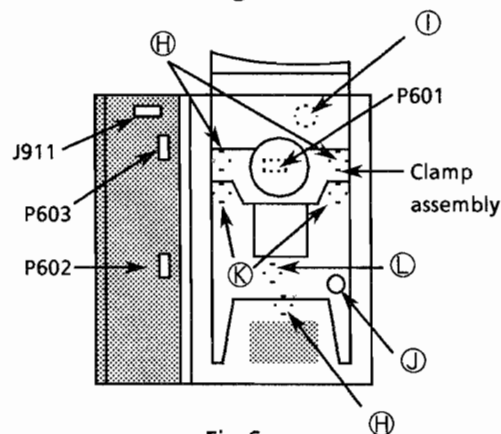


Fig 6

■ Cassette holder removal

1. Remove the front panel assembly.
2. Remove the cassette mechanism assembly.
3. Remove the spring hooked on the holder (Fig 7).
4. Remove the damper (Fig 9).
5. Remove the holder.

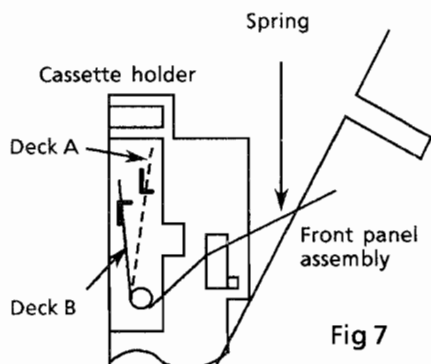
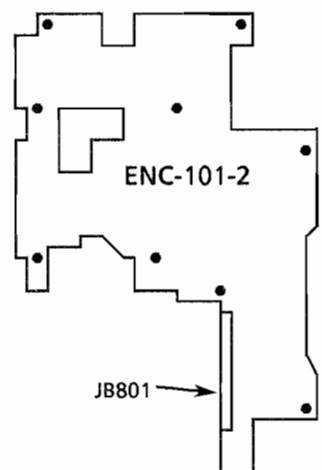


Fig 7



JA801 and JB801 are connected without wire.

Fig 8

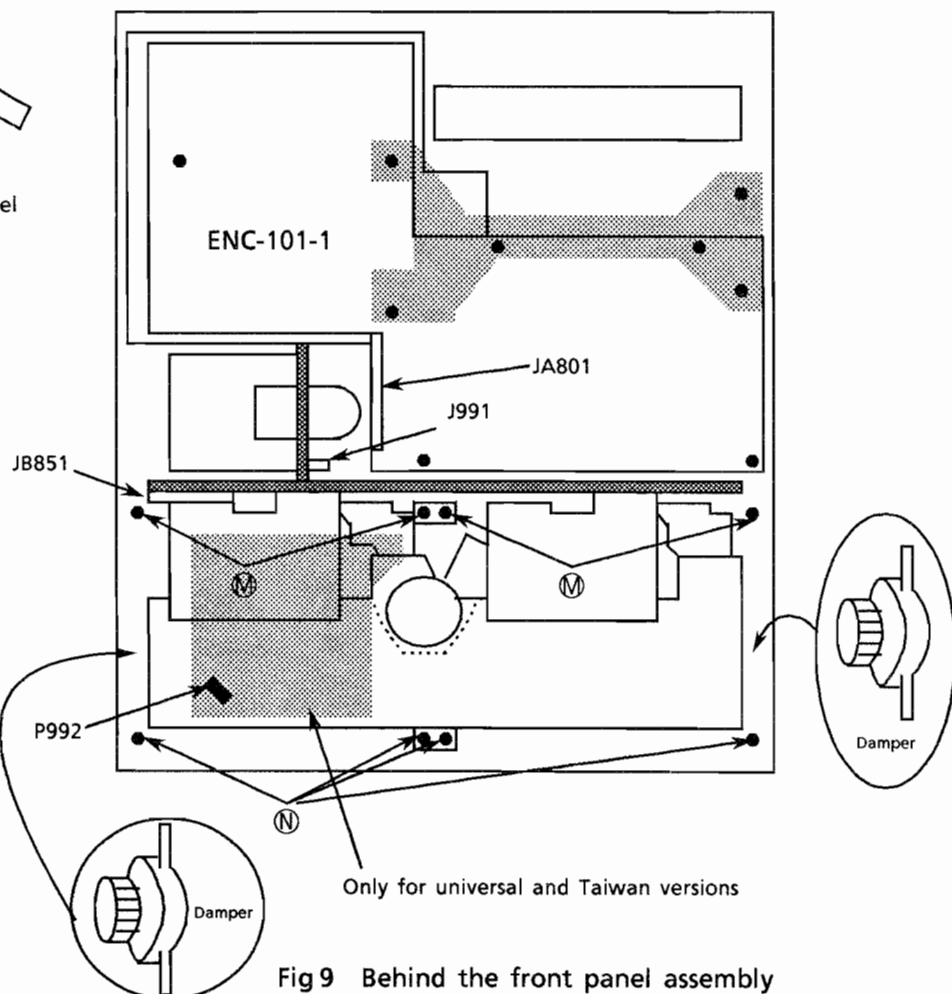


Fig 9 Behind the front panel assembly

Disassemble of the cd mechanism assembly

■ Pickup removal

1. Remove the cd mechanism assembly.
2. Release the shaft to remove the pickup (Fig 10).

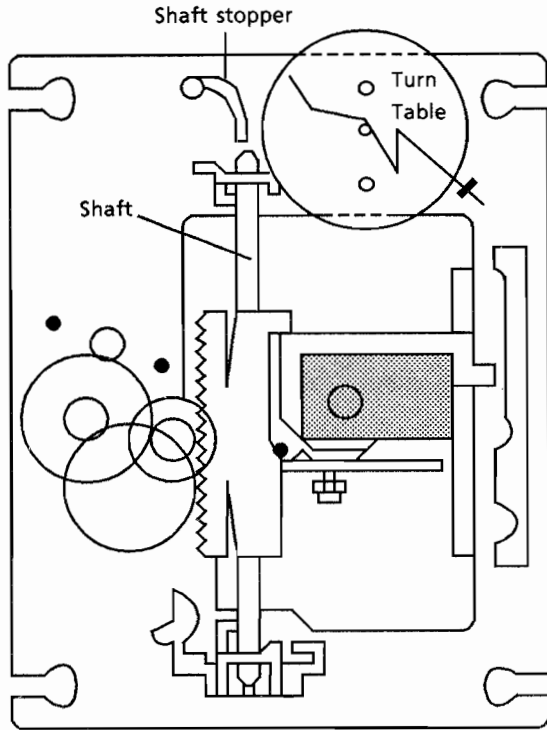


Fig 10 CD mechanism assembly

■ Spindle motor removal

1. Remove the cd mechanism assembly.
2. Remove the turntable, and remove the two screws retaining the spindle motor.
3. Remove the screws retaining the spindle and feed motor P.C. Board and unsolder it.

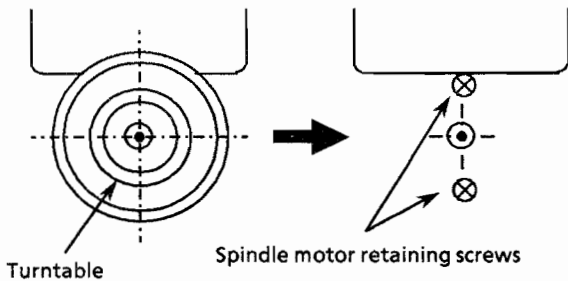


Fig 11

■ Spindle motor installation

1. Tighten the 2 screws to the same torque.
2. Fasten the spindle and feed motor P.C. board with the screw and solder.
3. Install the turntable. When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the turntable is exactly $19.4 \pm 0.1\text{mm}$.

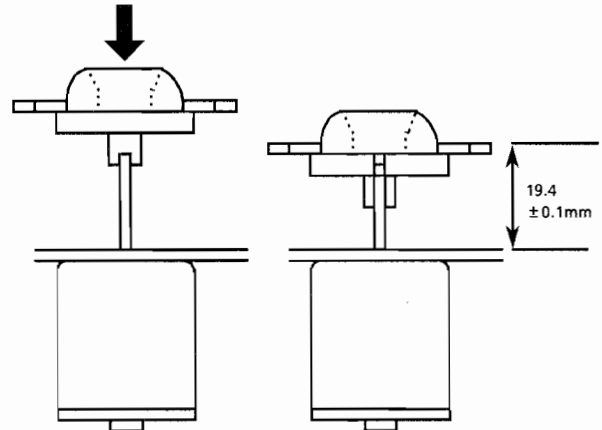


Fig 12

4. After inserting the turntable, bond the motor shaft and turntable together (at the section marked by an arrow in fig 13 on the left below).

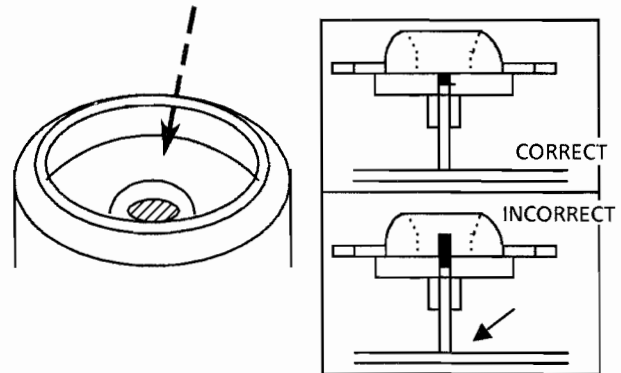


Fig 13

5. Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an arrow in fig 13 on the right).

Disassemble of the cassette mechanism

■ Cassette controller PCB(ENC-101-5) removal

1. Remove the cassette mechanism assembly with the PCB.
2. Release the 8 hooks to remove the controller PCB (Fig 14).

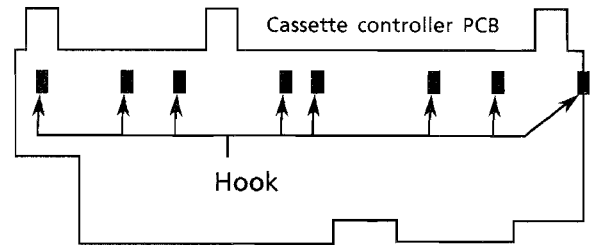


Fig 14

■ Head assembly removal

1. Remove the cassette mechanism assembly.
2. Unsolder the flexible wire (Fig 16).
3. Remove the 2 screws ① 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 15.

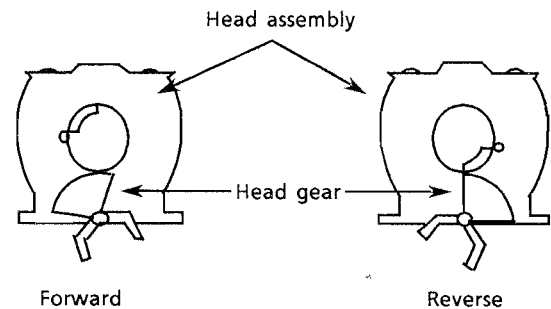


Fig 15

■ Pinch roller arm assembly removal

1. Release the return spring (Fig 21).
2. Release the hook holding the pinch roller arm assembly to remove the assembly (Fig 16).

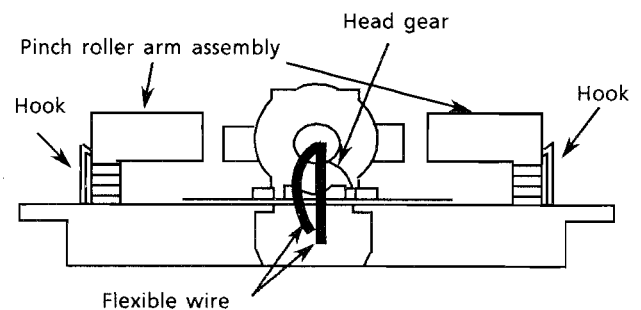


Fig 16

■ Reel motor PCB removal

1. Remove the cassette mechanism assembly.
 2. Remove the cassette controller PCB.
 3. Remove the screw ③ to remove the echo circuit board (Fig 17).
 4. Remove the screw ④ fixing the reel motor PCB.
 5. Unsolder the reel motor PCB.
 6. Remove the PCB.
- Be careful so that stress is not added to the terminals of the motor.

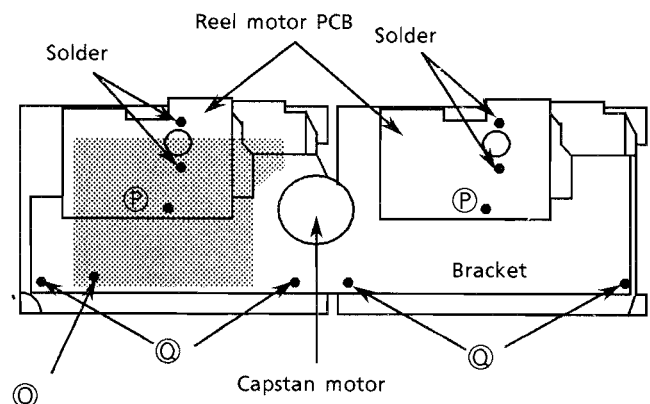


Fig 17

■ Capstan motor removal

1. Remove the cassette mechanism assembly.
2. Remove the reel motor PCBs.
3. Remove the 4 screws ⑤ fixing the bracket (Fig 17).
4. Remove the motor with the bracket.
5. Remove the 2 screws fixing the motor and the bracket.

■ Reel motor removal

1. Remove the cassette mechanism assembly.
2. Remove the reel motor PCB.
3. Remove the FR arm assembly (Fig 21).
4. Remove the screw ① fixing the motor (Fig 21).
5. Remove the hooks fixing the motor to remove the motor.

■ Fly wheel removal

1. Remove the cassette mechanism assembly.
2. Remove the reel motor PCB.
3. Remove the screws ㉔ and the bracket to remove the fly wheels (Fig 17).

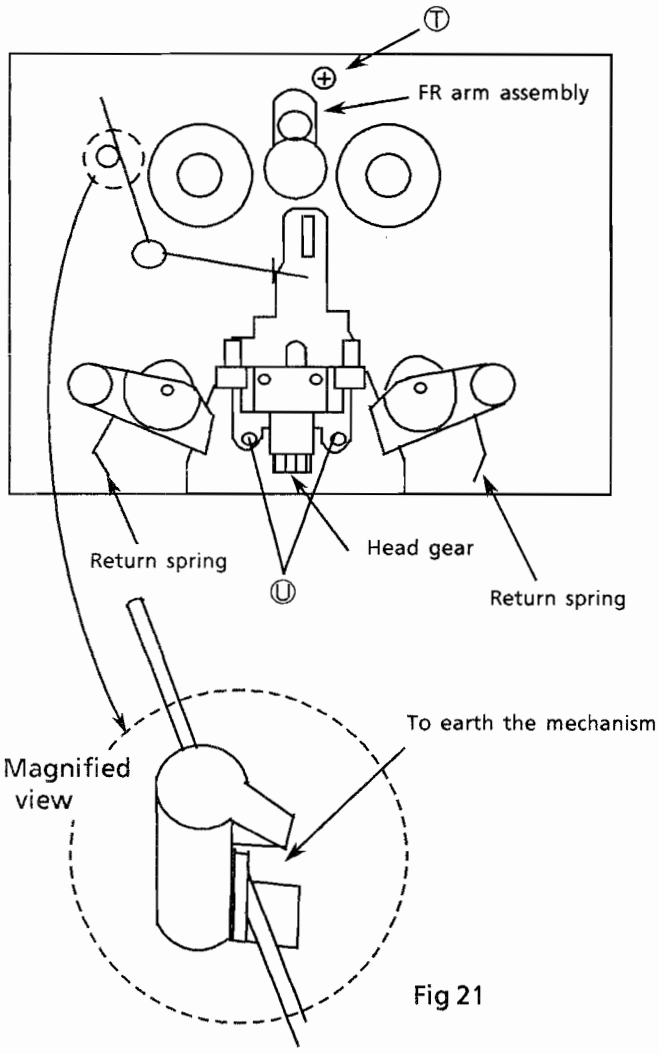
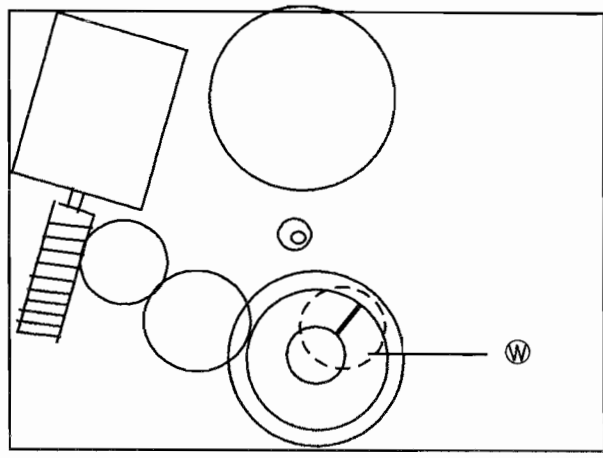
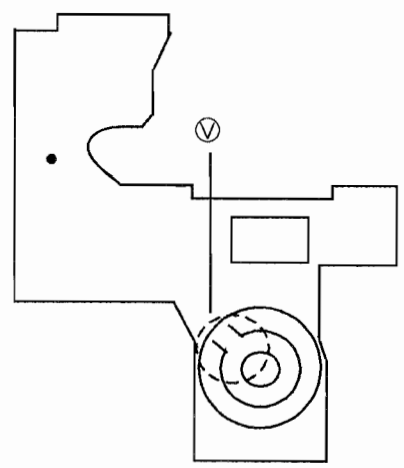
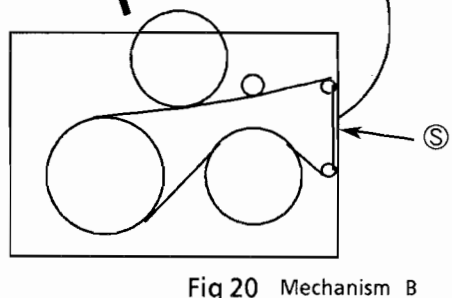
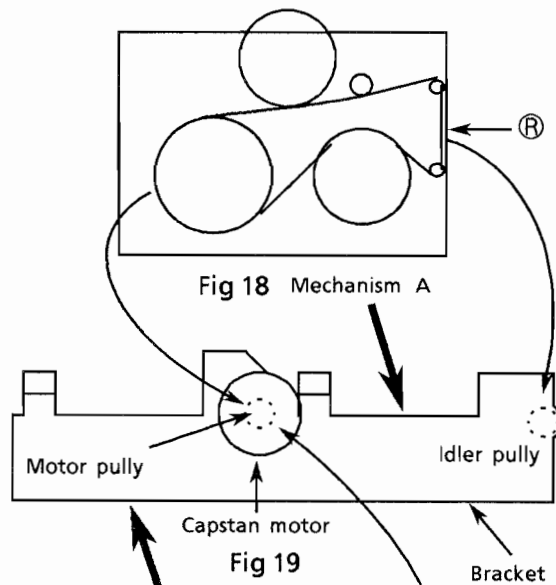
※ To install the bracket

1. Install the belt of mechanism A as shown in fig 18.
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 ㉒ to the Idler pulley.
5. Install the mechanism B installed the belt as shown in fig 20 to the bracket which is assembled with the mechanism A.
6. Hang the part ㉓ to the motor pulley using a tweezers and the like.

■ Cam switch PCB removal



1. Remove the fly wheel.
2. Remove the hooks fixing the PCB to remove the cam switch.

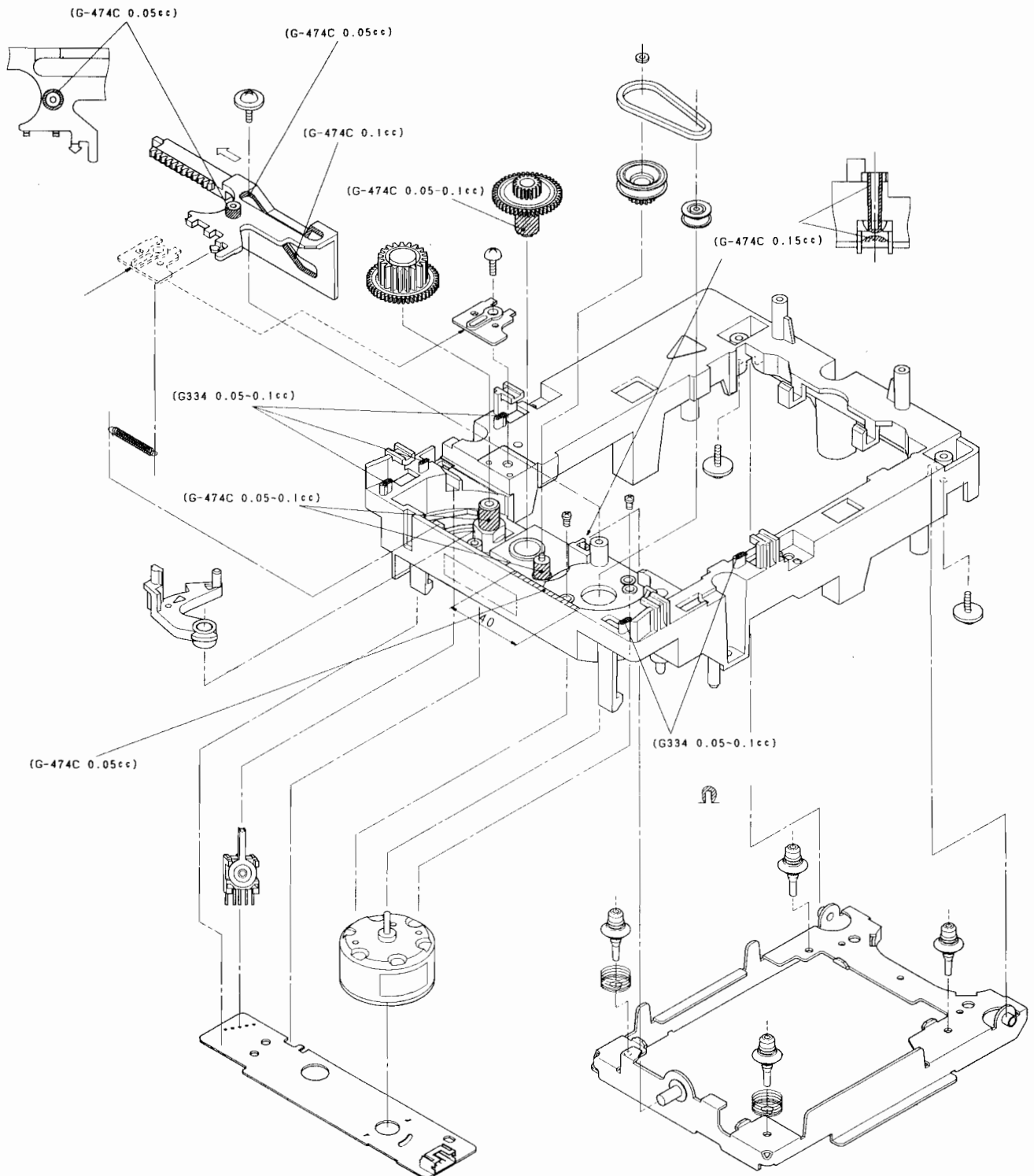
When assembling the cam switch, install it so that the part ㉖ meets the part ㉗ (Fig 22).



Application Points for Grease

Grease used

-  G-334 (Shin-Etsu Chemical Co., Ltd.)
-  G-474C (Kanto Chemical Co., Ltd.)



Grease part numbers

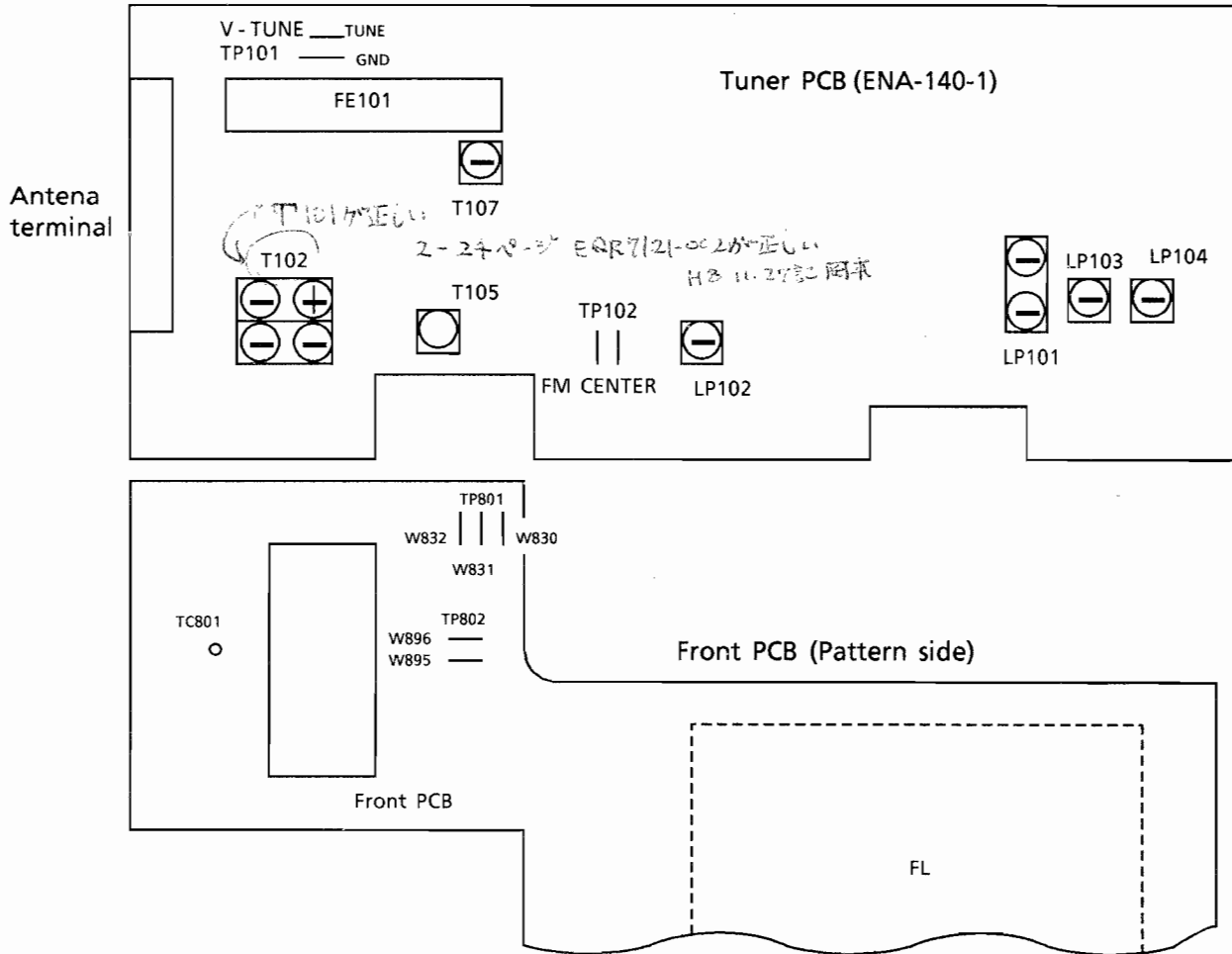
G-334: EBS0006-009B

G-474C: EBS0006-019B

Adjustment Procedures

■ Tuner section

Don't adjust the semi-fixed resistors and coils except below mentioned. If you have them out of the values previously adjusted by mistake, replace them. Service parts are adjusted.



(1) Tuning voltage

Confirm the voltages in the table below at TP101. If the voltages are not satisfied, replace T102 for AM or FE101 for FM.

Frequency	FM (V)			MW (V)				LW (V)		
	64.0MHz	87.5MHz	108MHz	522KHz	530KHz	1629KHz	1710KHz	144kHz	290kHz	353kHz
East Europe	1.7 ± 0.7	—	8.0 ± 2.0	0.5~1.0	—	7.5~8.5	—	0.5~1.0	—	6.5~9.0
U.S.A., Canada	—	1.6 ± 1.0	8.0 ± 2.0	—	0.5~1.0	—	8.0~9.0	—	—	—
the U.K., Continental Europe	—	1.6 ± 1.0	8.0 ± 2.0	0.5~1.0	—	7.5~8.5	—	0.5~1.0	—	6.5~9.0
Italy	—	1.6 ± 1.0	8.0 ± 2.0	0.5~1.0	—	7.5~8.5	—	0.5~1.0	5.0~7.5	—
Australia	—	1.6 ± 1.0	8.0 ± 2.0	0.5~1.0	—	7.5~8.5	—	—	—	—

(2) FM detector coil

Receive a broadcast by using the function of 'AUTO STOP'. Adjust T105 so that the voltage at TP102 becomes $0 \pm 1.5\text{mV}$.

(3) Frequency of the clock

1. After connecting a diode between W830 and W831 as shown right, connect ac power cord into ac outlet.
2. Confirm that the display is off and remove the diode.
3. Connect a frequency counter between W832 and W831.
4. Adjust TC801 so that the frequency becomes $34952.5 \pm 0.15\text{Hz}$.



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

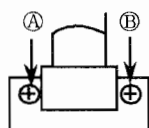
Standard Tape

0dbS = 0.775V

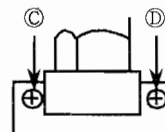
Tape No.	Frequency	Level (Wow & Fkutter)	Purpose
VTT-703L	10kHz	- 10dbS	Head azimuth , Frequency Response
VTT-712	3000Hz	0dbS 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	- 4dbS	Standard Level
TMT-6447	—	—	Blunk Skip
TMT-6247 , TMT-6237	—	—	Music Scan
TMT-7046	—	—	Recording standard Normal : UR
AC-712	—	—	Recording standard METAL :MA
AC-513	—	—	Recording standard CrO ₂ :SA
TW-2111, TW-2121	—	—	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 Ⓐ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw Ⓑ 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 Ⓒ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw Ⓓ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment, apply screw lock to prevent screws Ⓐ, Ⓑ, Ⓒ and Ⓓ coming loose. 	Maximum	<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 ~ 200 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 ~ 200 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). 	—	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



Deck B

Figure 1

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

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

Set the NR switch to OFF and the BEAT CUT switch to "1".

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. Adjust the semi-fixed resistor VR951 on ENC-101-5.	VR951	3,000 Hz ± 10 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: VR221 R: VR222 Deck B L: VR223 R: VR224	- 5.5dBs (411mV) ± 1 dB	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: VR203 R: VR204 Deck B L: VR205 R: VR206	- 11.5dBs (206mV) ± 3 dB	—
* 4	Recording Bias Frequency 1. Connect a frequency counter to the BIAS TP (figure 3), and perform a recording to adjust bias frequency.	L335	100 kHz ± 5 kHz	Set the BEAT CUT SWITCH to "1".
* 5	Record / Play Frequency Response (Bias current) 1. Supply 1kHz and 12.5kHz with 30mV signals to VIDEO/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: VR335 R: VR336	0 \pm 3 dB for 12.5 kHz with 1 kHz as the standard.	Refer to figure 2 below. 1) The recording and playback frequency response of a 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 CrO ₂ tape.
* 6	Record / Playback Sensitivity 1. Input a 1 kHz (-8.2dBs: 300mV) signal to VIDEO/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 values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signals again to confirm the values.	L: VR367 R: VR368	- 5.5dBs (411mV)	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less

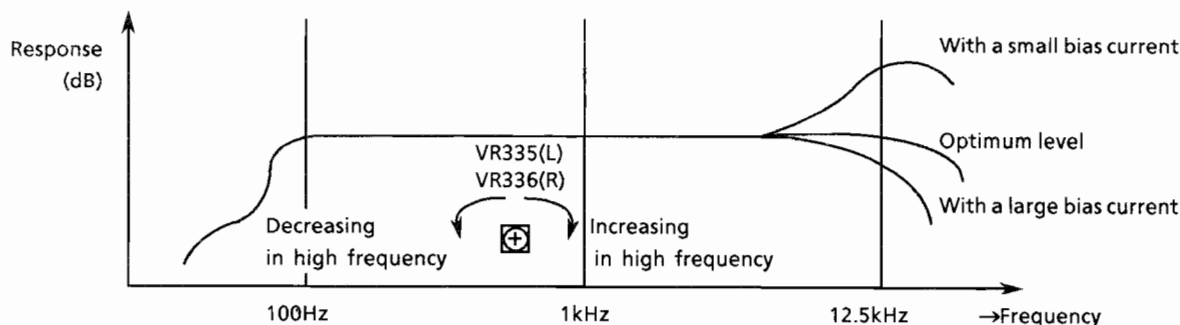


Figure 2

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
7 Erase ratio check	1. Record a music source using the CrO ₂ tape. 2. Rewind and erase the recorded section. 3. Comfirm nothing can be heard.	-	-	-
8 Auto-stop check	1. Make sure to operate AUTO STOP at the end of tape running and not to operate on the way of the playing.	-	-	-
9 Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6237. 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6247.	-	-	-

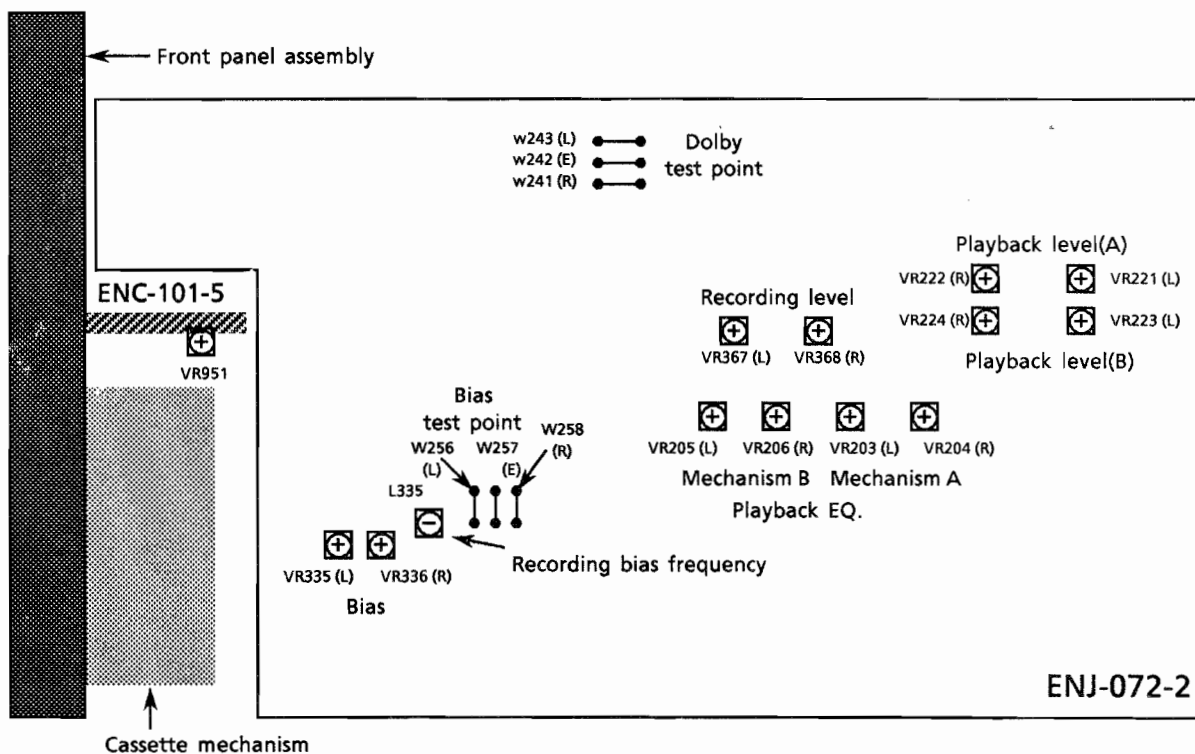
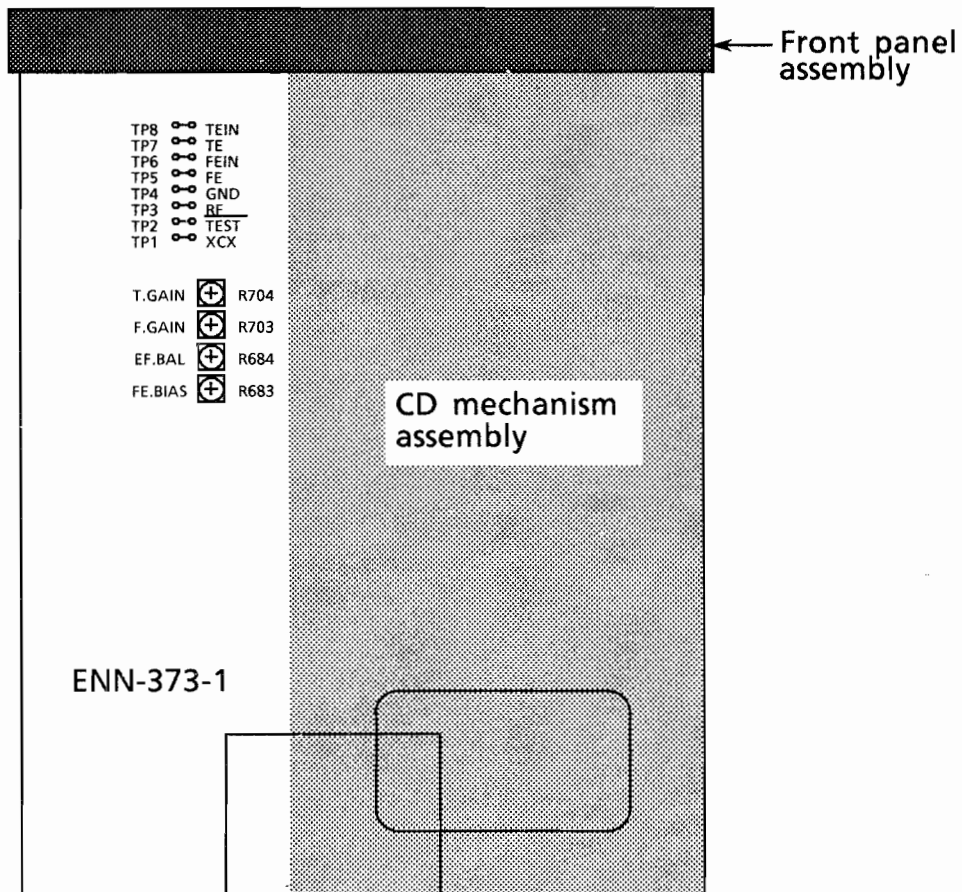


Figure 3

■ CD section



(1) Adjustment measure

Oscilloscope , Test disc (CRG-1117)

(2) Procedures

1) FE bias

- ① Connect a oscilloscope between TP5(FE) and TP4(GND).
- ② Adjust R683 so that the dc voltage at TP5 becomes $0 \pm 10\text{mV}$.

2) EF balance

- ① Connect a oscilloscope between TP7(TE) and TP4(GND) and play the test disc.
- ② Connect TP2(TEST) with TP4(GND).
- ③ Adjust R684 so that the center voltage of the waveform becomes $0 \pm 0.05\text{V}$.

3) Gain adjustment

If the gain is out of adjustment, the symptoms below will appear.

● Gain too low

- Focus gain : Focus is not obtained and disc does not rotate.
 Tracking gain : Mechanical shock occurs easily and sound is interrupted. Or time counter display stops counting.

● Gain too high

- Focus gain : Scratches (on the disc) easily interrupt play, and noise is increased during play.
 Tracking gain : Since the follow-up ability of the pickup is too high, the pickup may oscillate and oscillating sound may output.

As described above, the focus and tracking gain adjustment are performed to satisfy mutually contradictory characteristics.

A simplified adjustment procedure is described below. However, since exact adjustment can not be performed prior to adjustments, note(or mark) the positions of the semi-fixed resistors.

If the positions after the adjustment are only different, return the VRs to their original position.

Focus gain adjustment

1. Connect an oscilloscope to TP 5(FE) and TP 4(GND).
2. Load the test disc and press the PLAY button.
3. Adjust R703 (F.GAIN ADJ.) so that the correct waveform as shown in figure 1 is obtain.
(The dc offset may not occur.)

Tracking gain adjustment

1. Connect an oscilloscope to TP 7(TE) and TP 4(GND).
2. Load the test disc and press the PLAY button.
3. Adjust R704 (T.GAIN ADJ.) so that the correct waveform as shown in figure 2 is obtain.

Focus Gain Adjustment

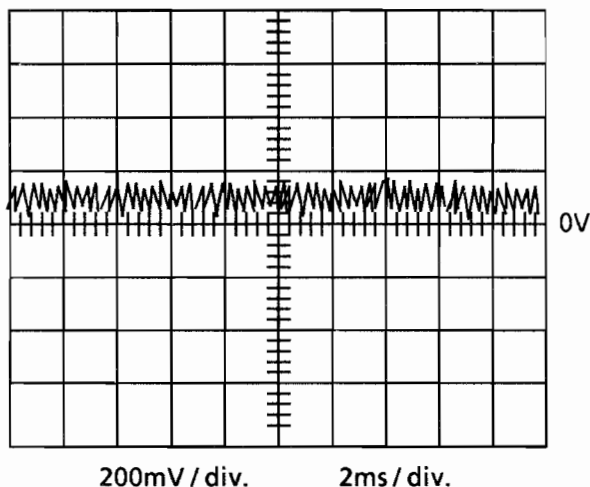


Figure 1

Tracking Gain Adjustment

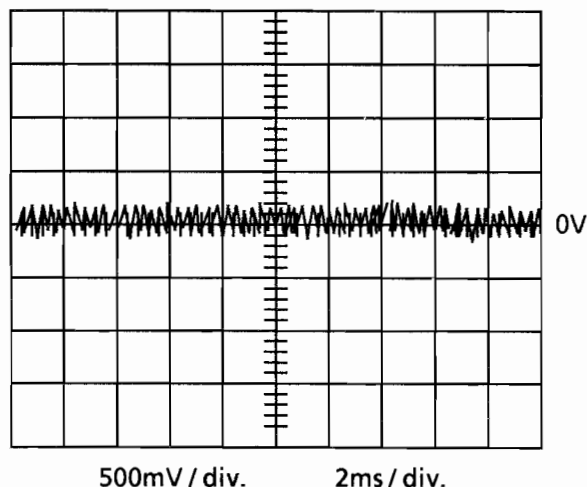
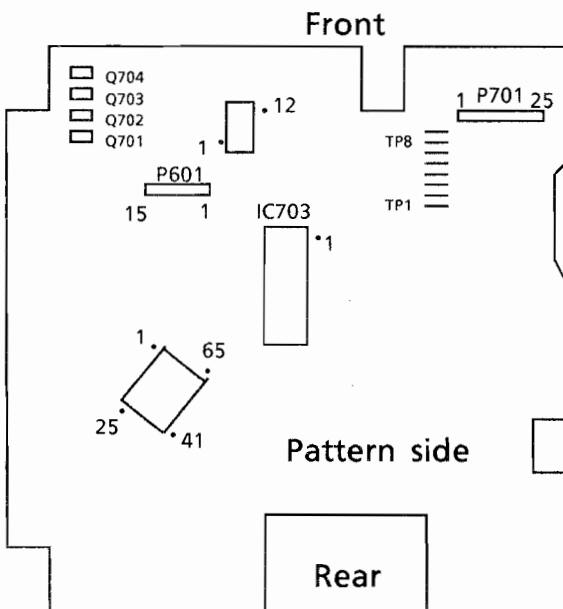
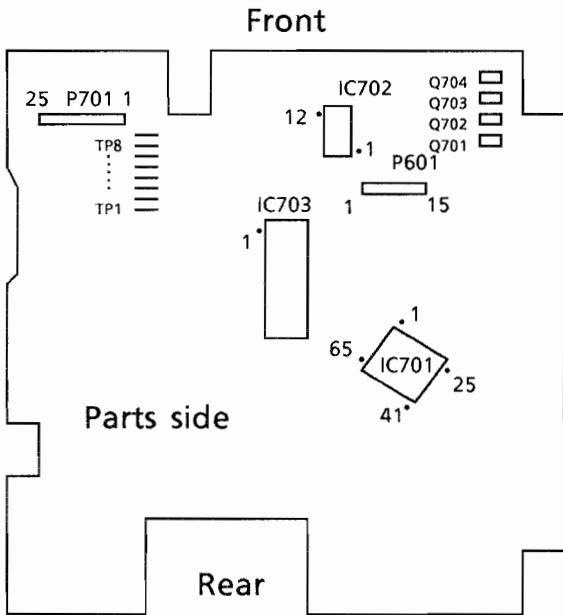
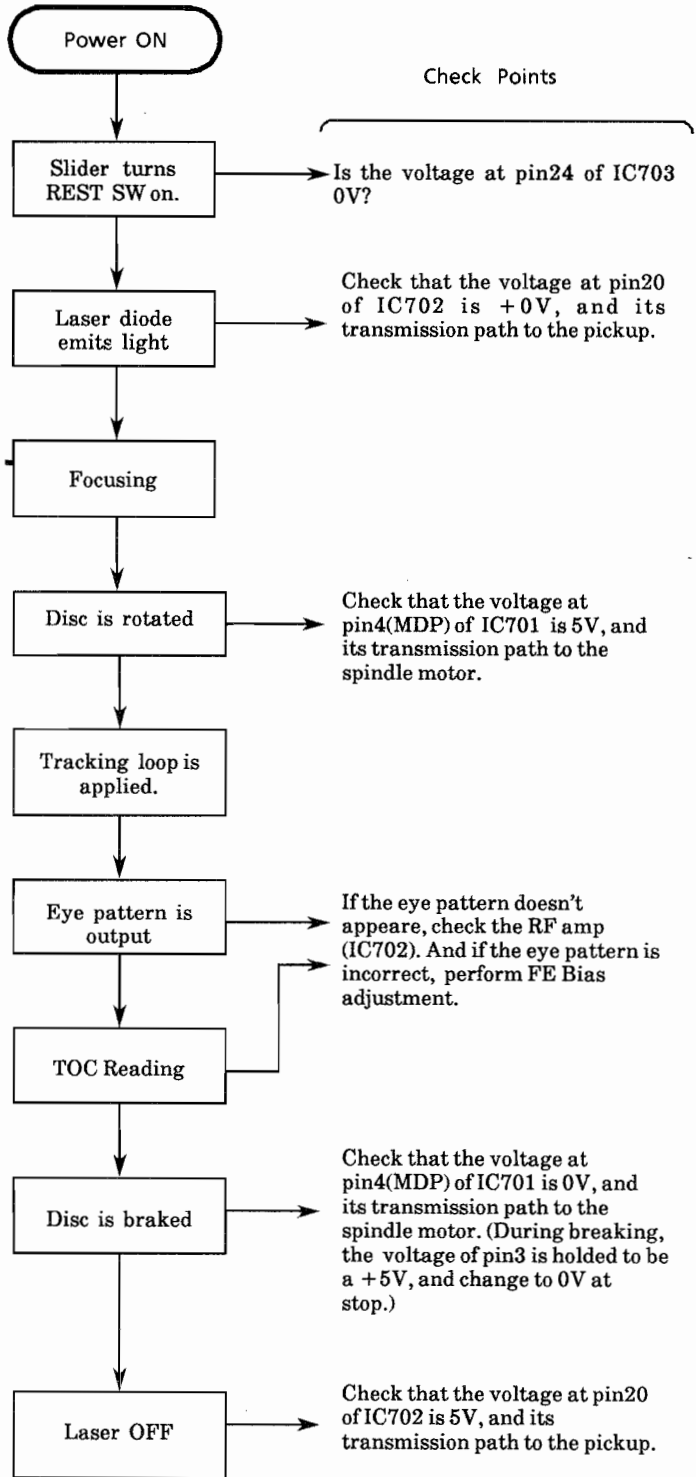
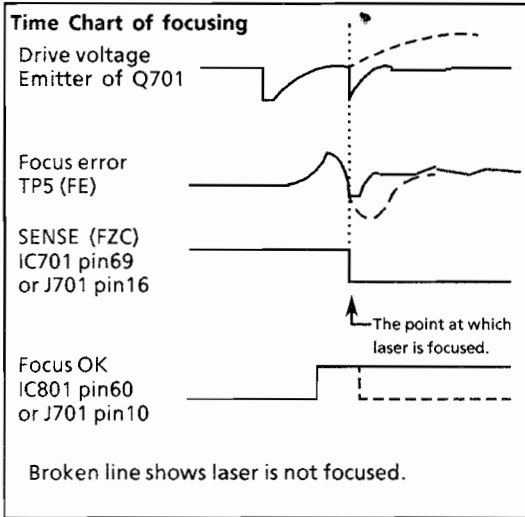


Figure 2

Flow of Functional Operation Until TOC is Read



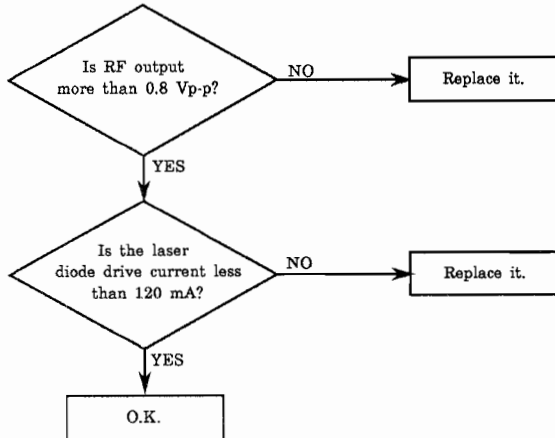
Maintenance of Laser Pickup

(1) Life of the laser diode

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

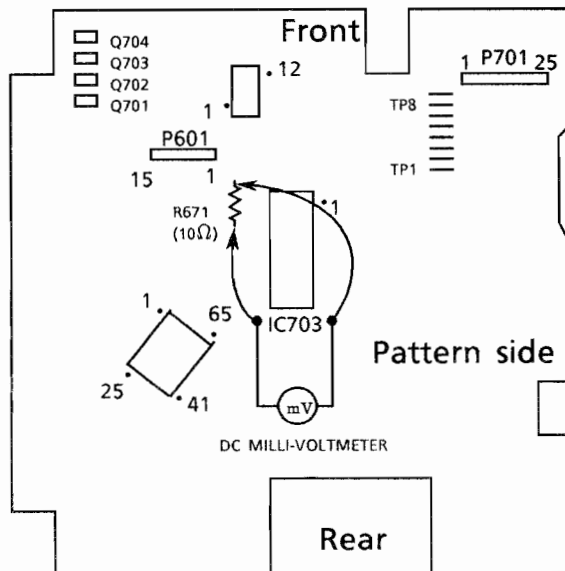
1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased.

In such a case, check the life of the laser diode by the flowchart below



(2) Measurement of laser diode drive current

Measure the voltage across the resistor R671 by using a milli-voltmeter. When the voltage is more than 1.2V, it shows that the life of the laser diode has expired.



(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.

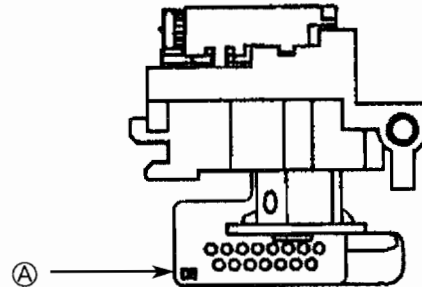
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

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

Before installing the pickup

Unsolder the part ①, which is used for countermeasure for static electricity.



Turn off the power switch and, disconnect the power cord from the ac outlet.

Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)

Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.

Play a disc, and when it starts rotating, short circuit between TP2(TEST) and GND.

Adjust tracking gain.

Adjust tracking offset.

Disconnect TP2(TEST) from GND.

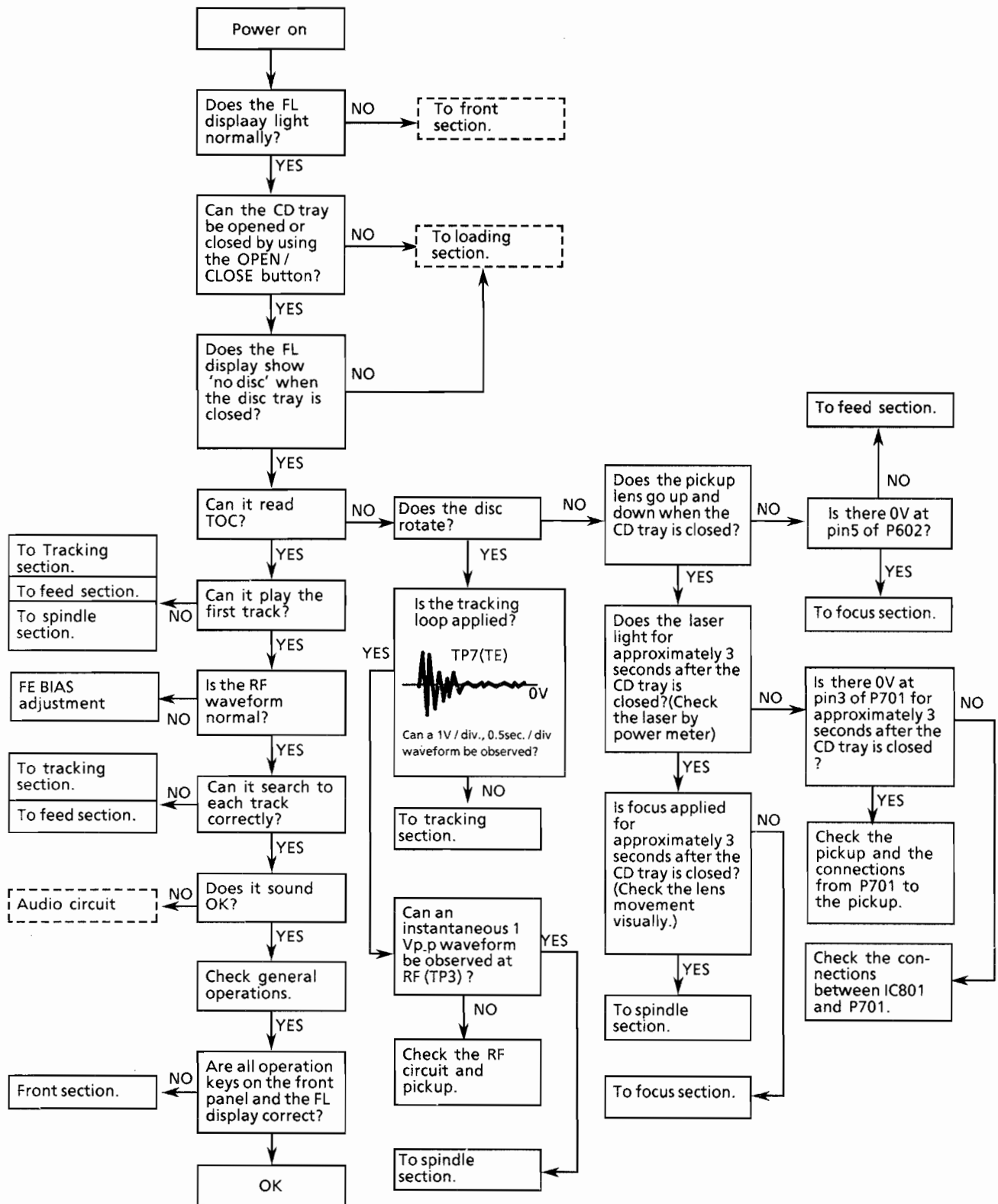
Check the eye-pattern at TP3(RF)

Finish.

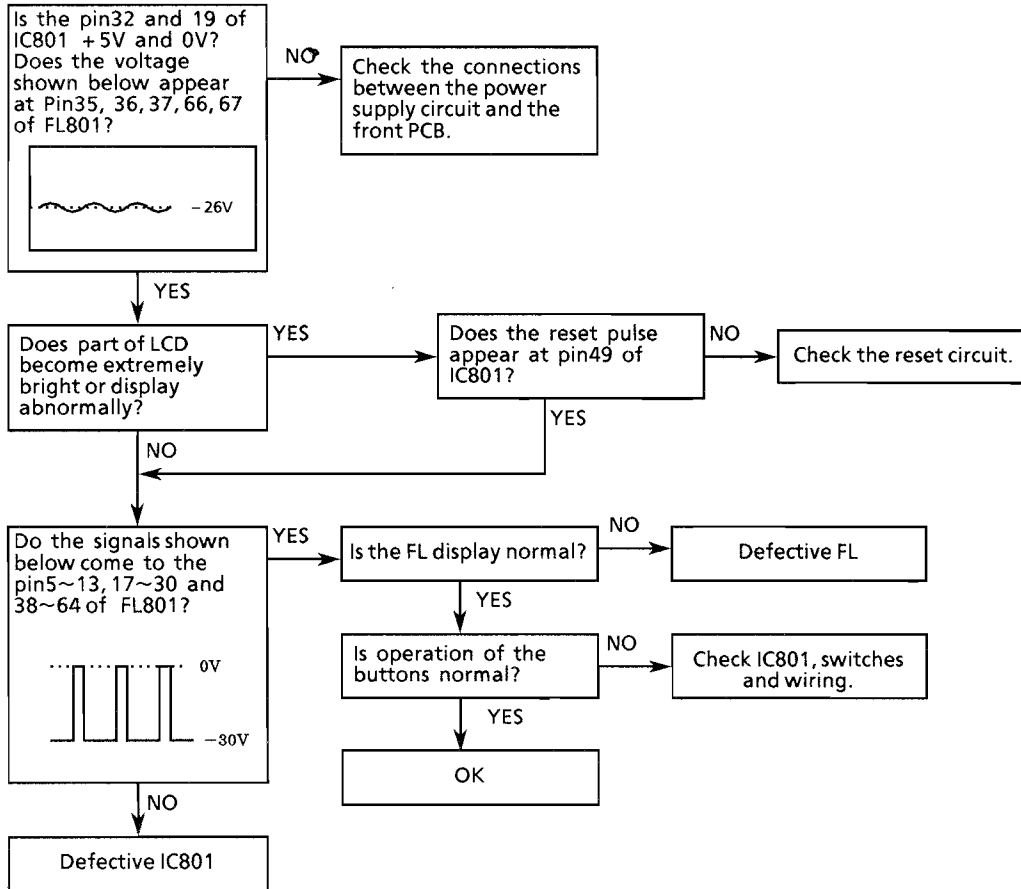
Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Troubleshooting

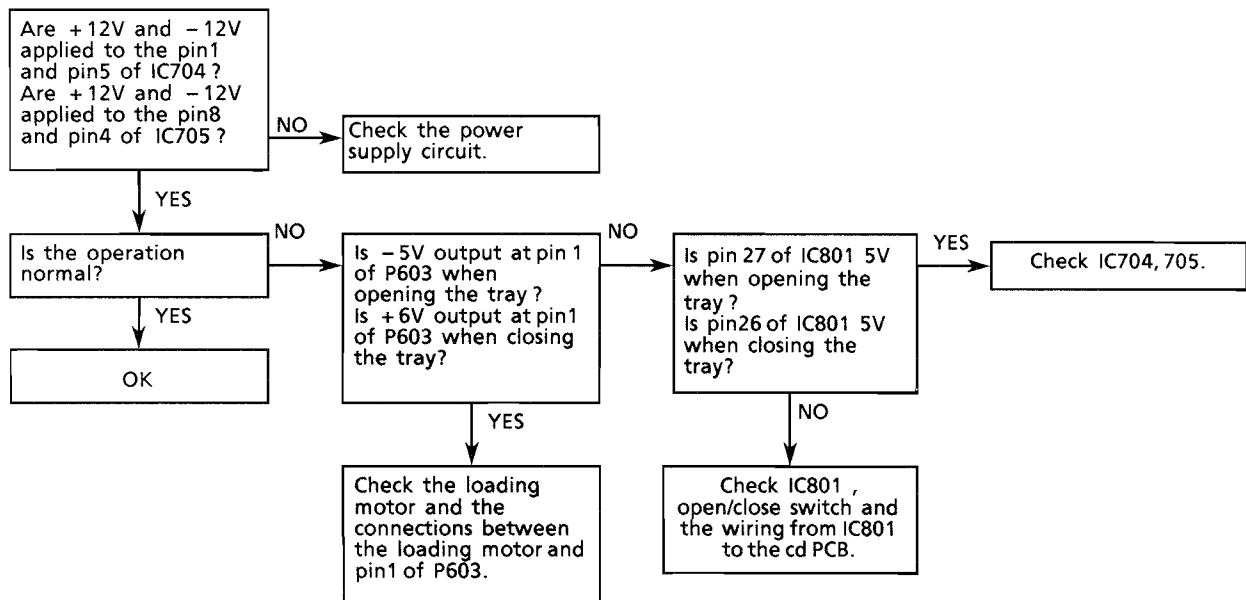
The following shows the status of the various circuits from turning on the power to the start of disc play .



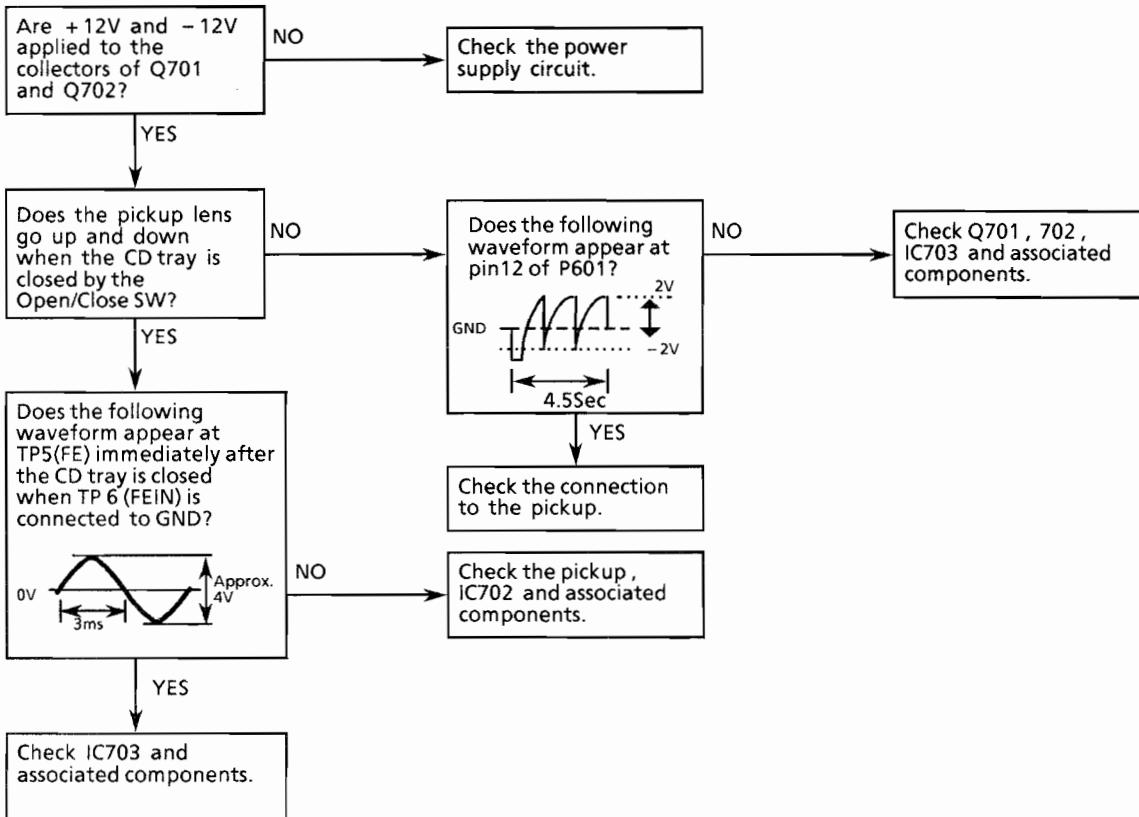
Front Section



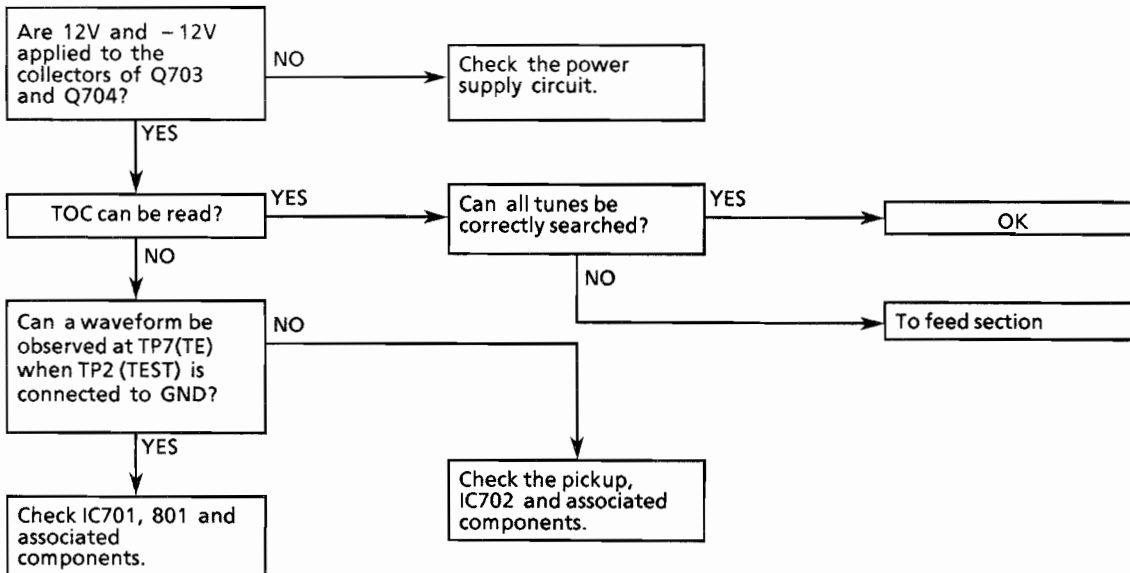
Loading section



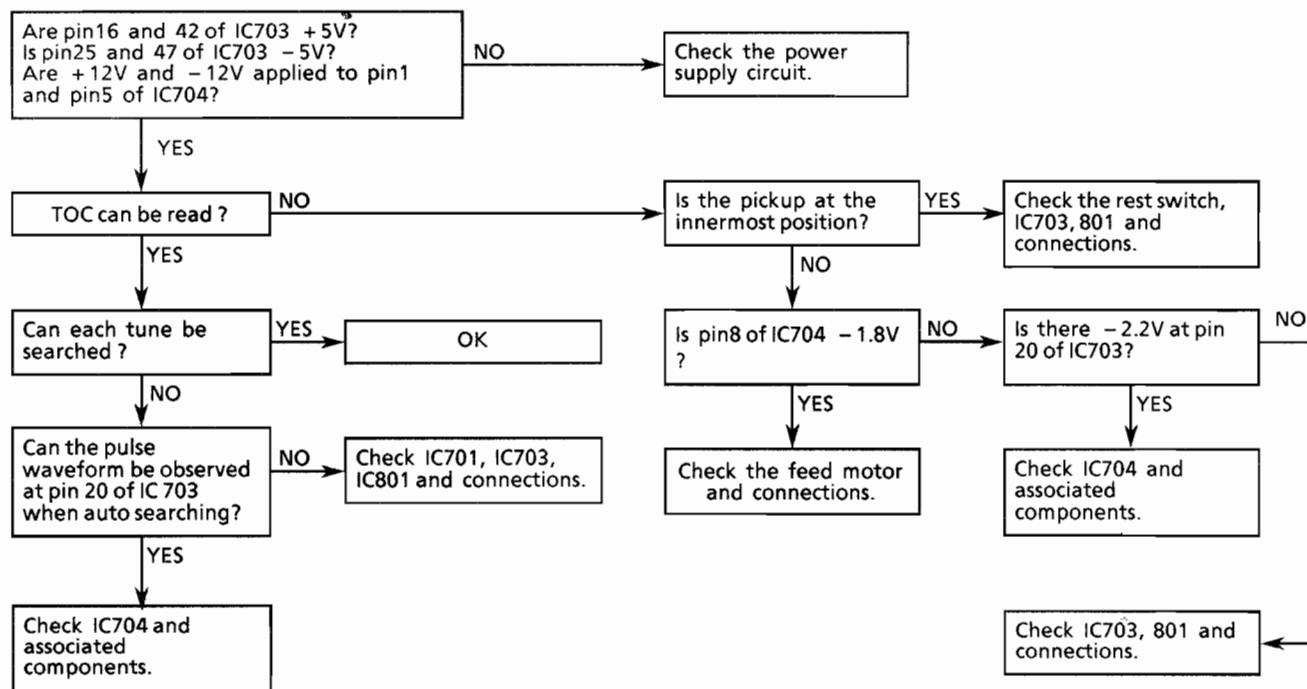
Focus section



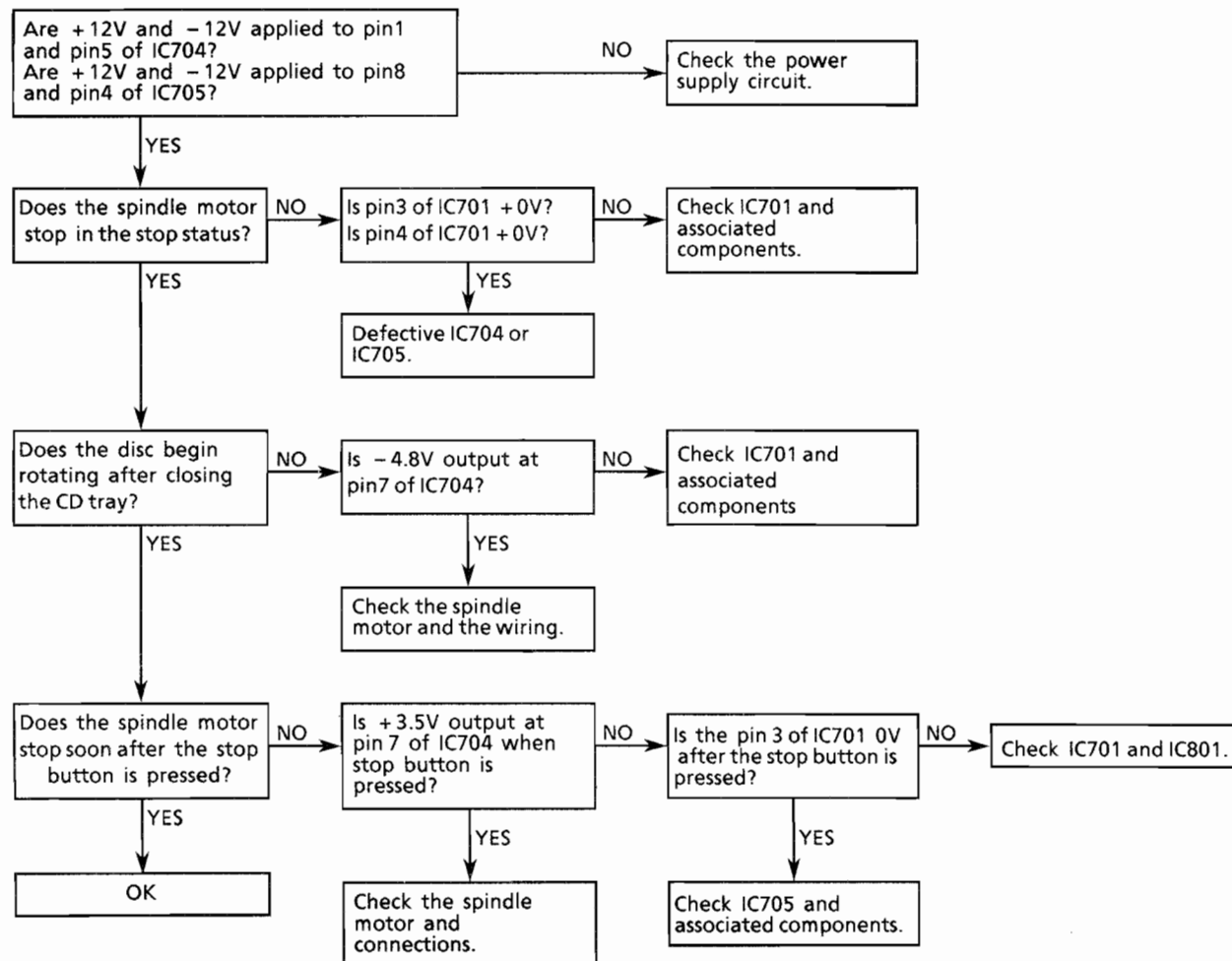
Tracking section

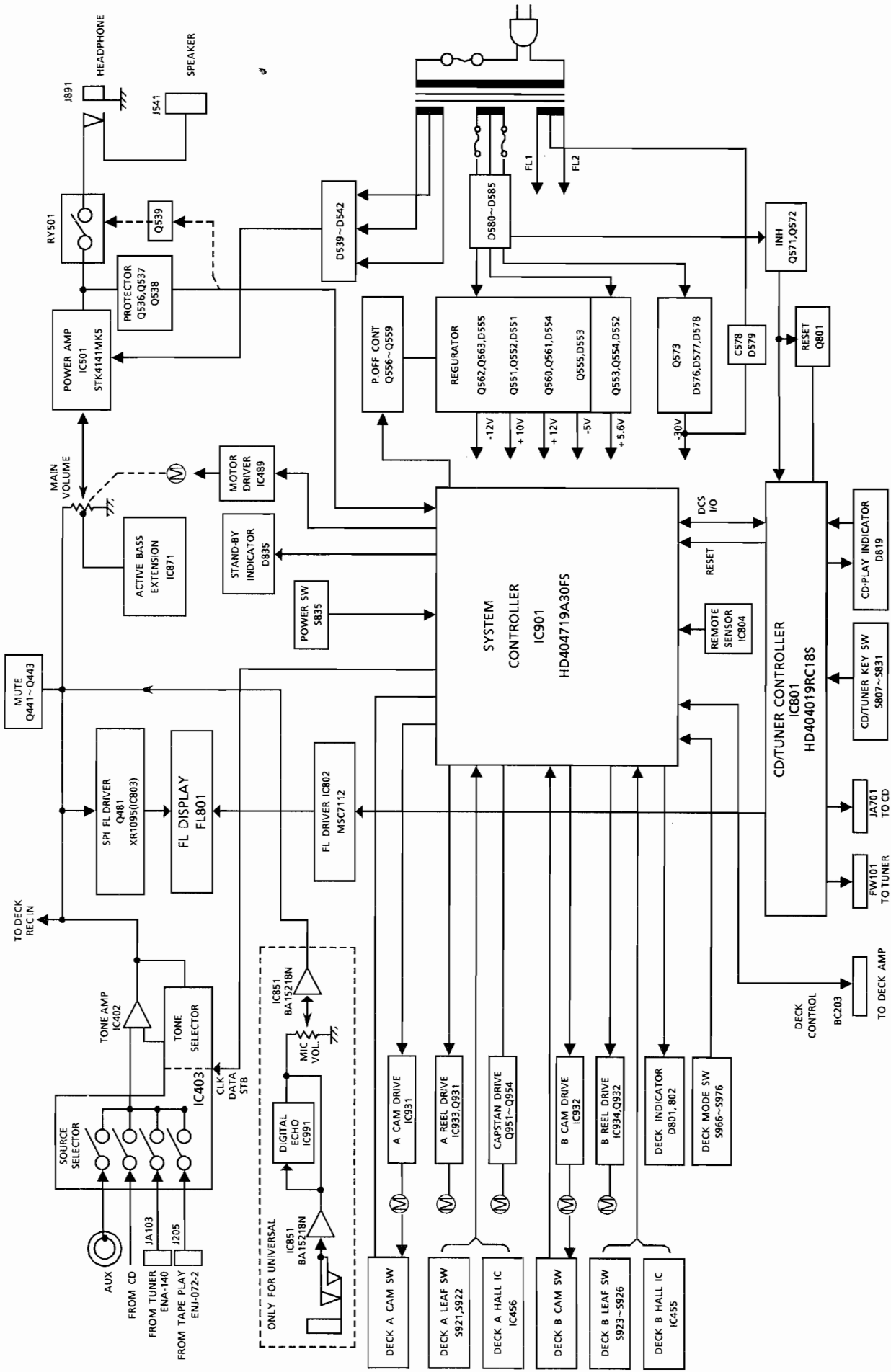


Feed section

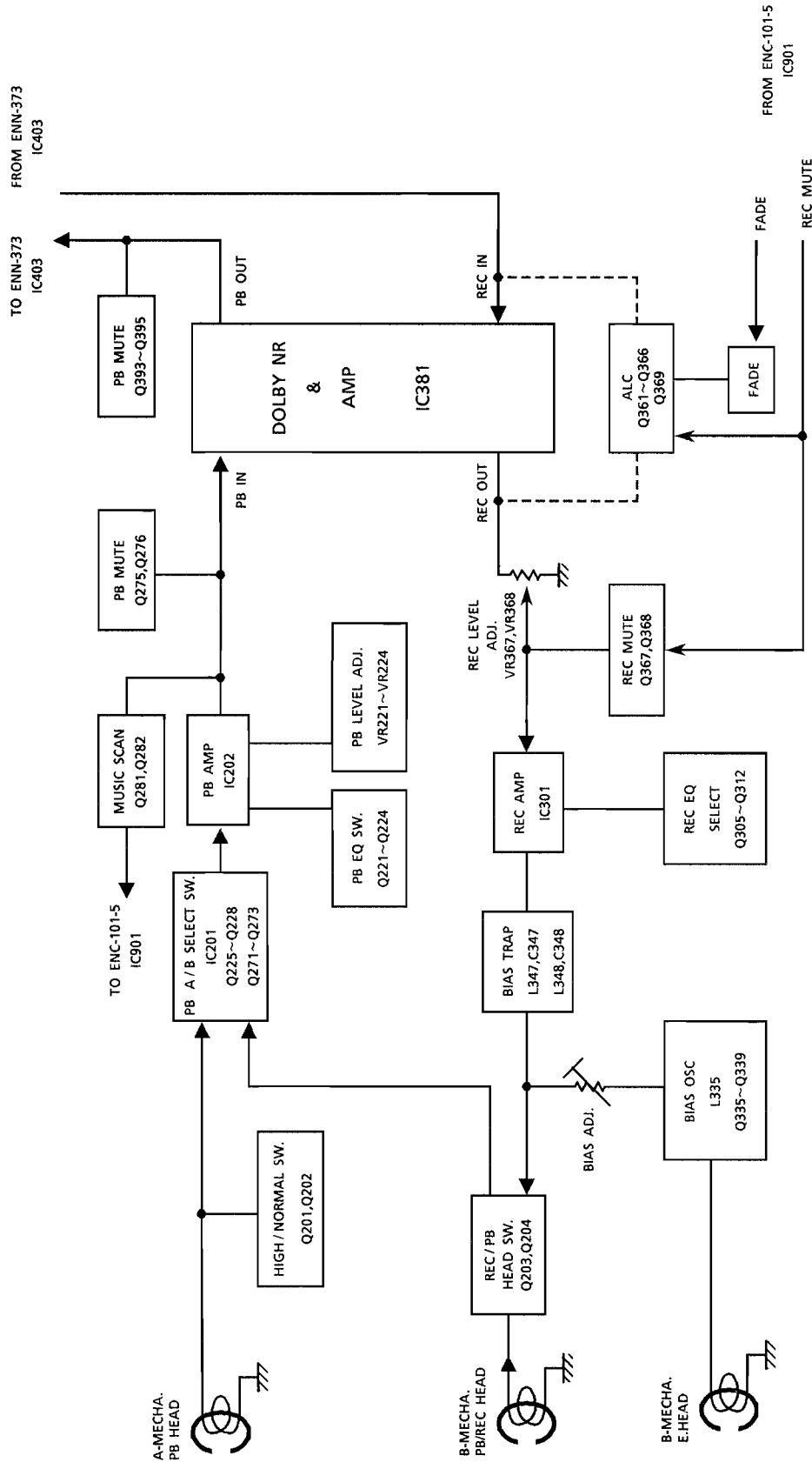


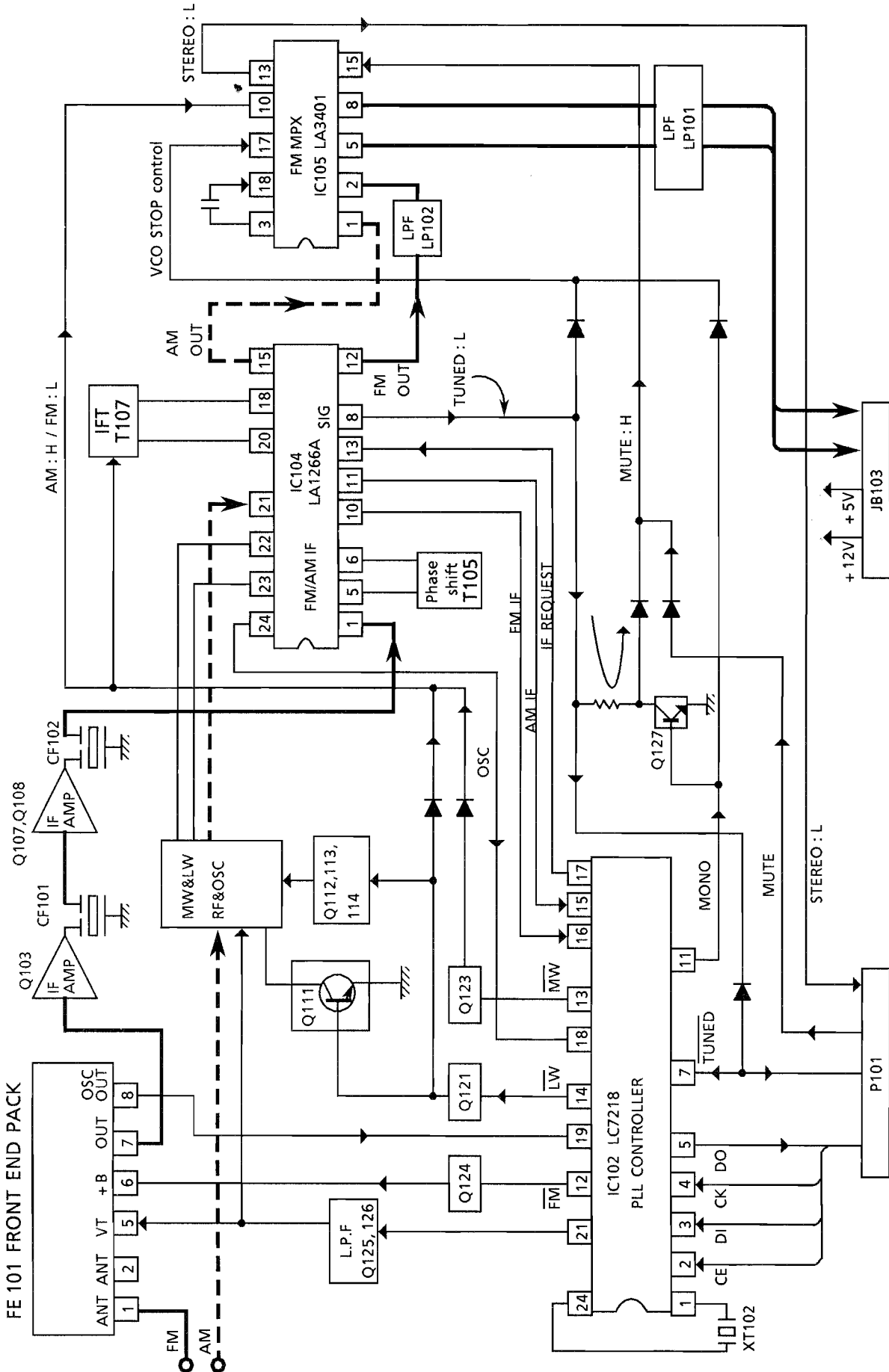
Spindle section

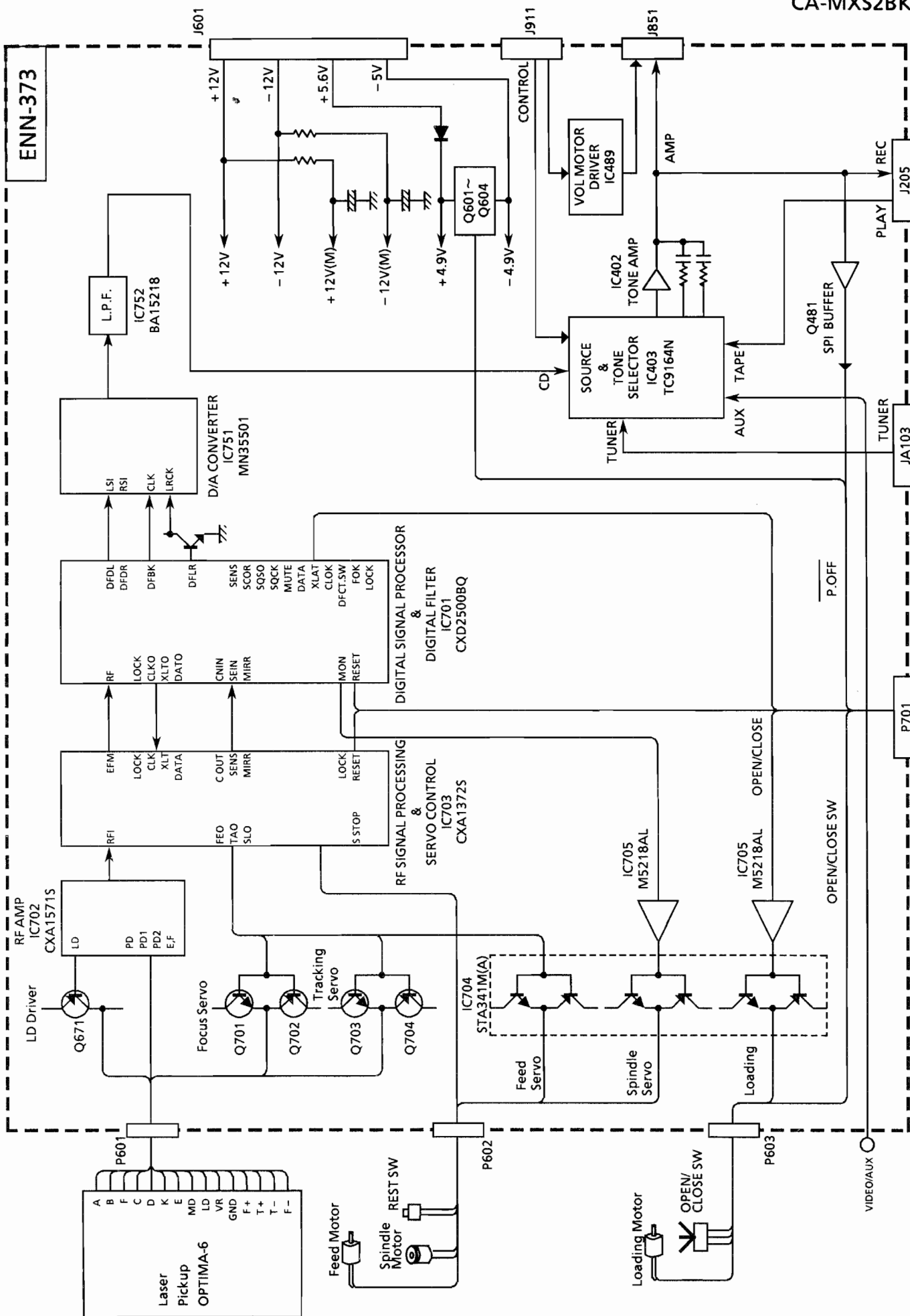




Block Diagram

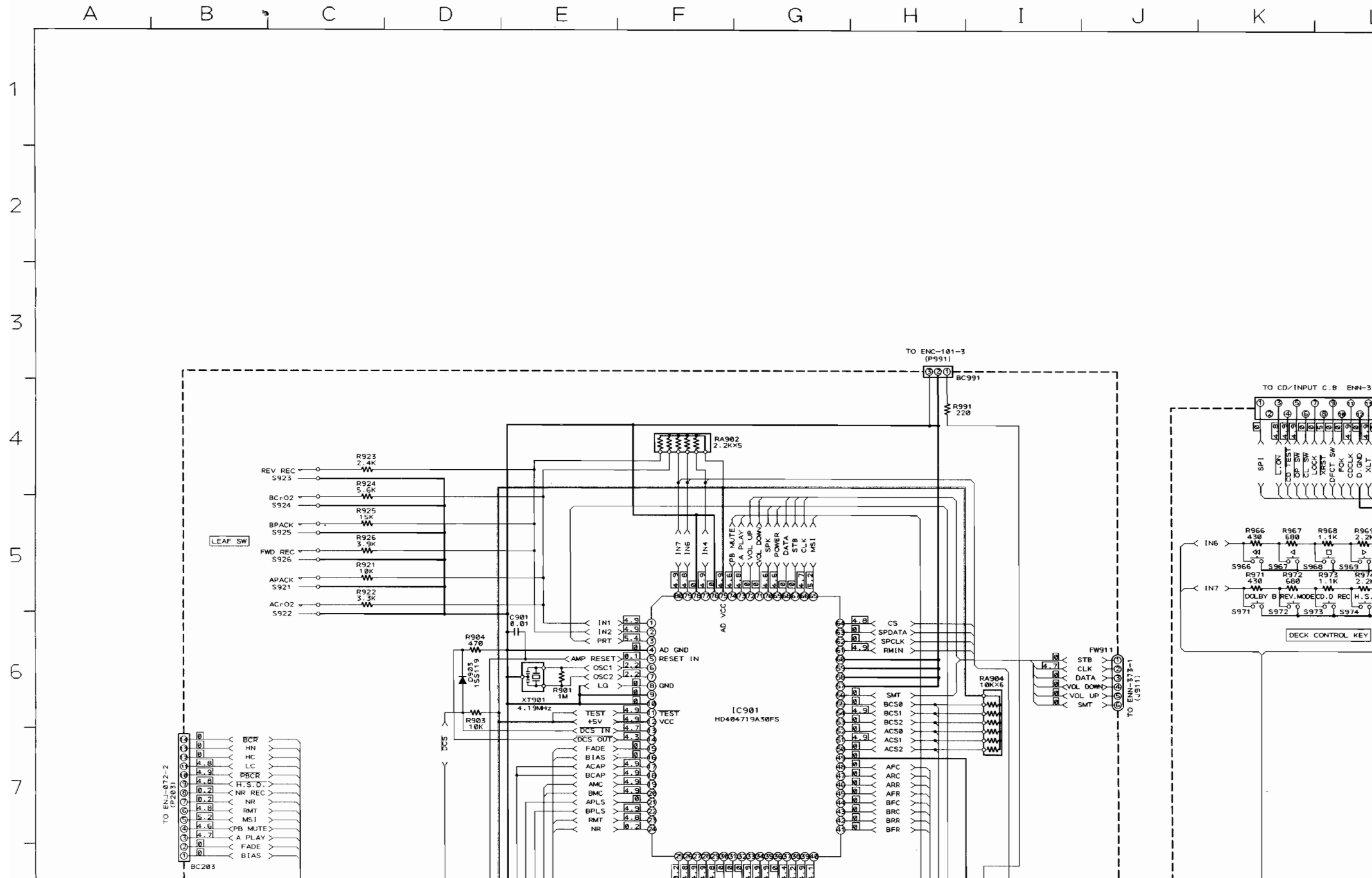




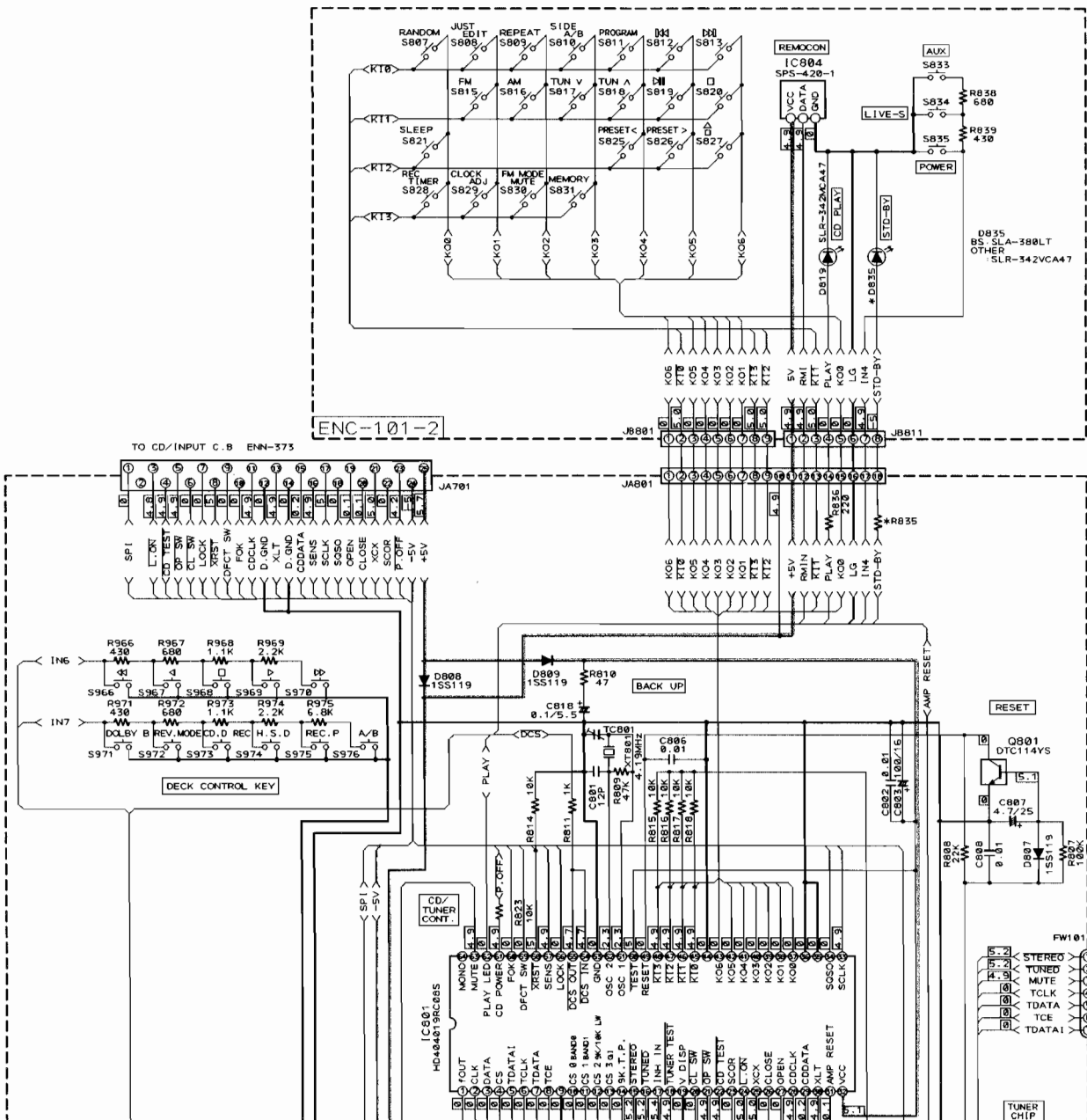
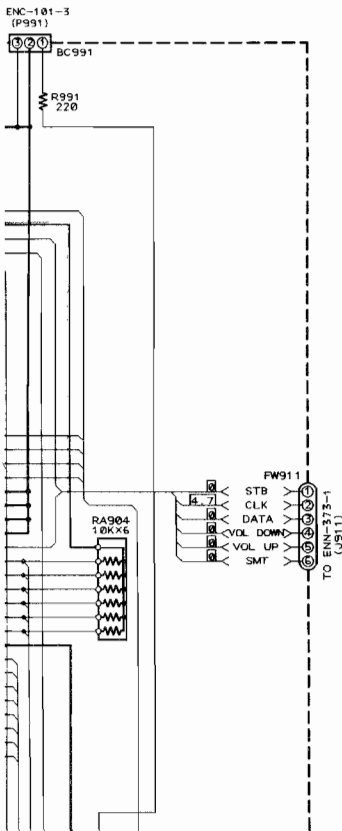


Schematic Diagrams

(1) System Control Section



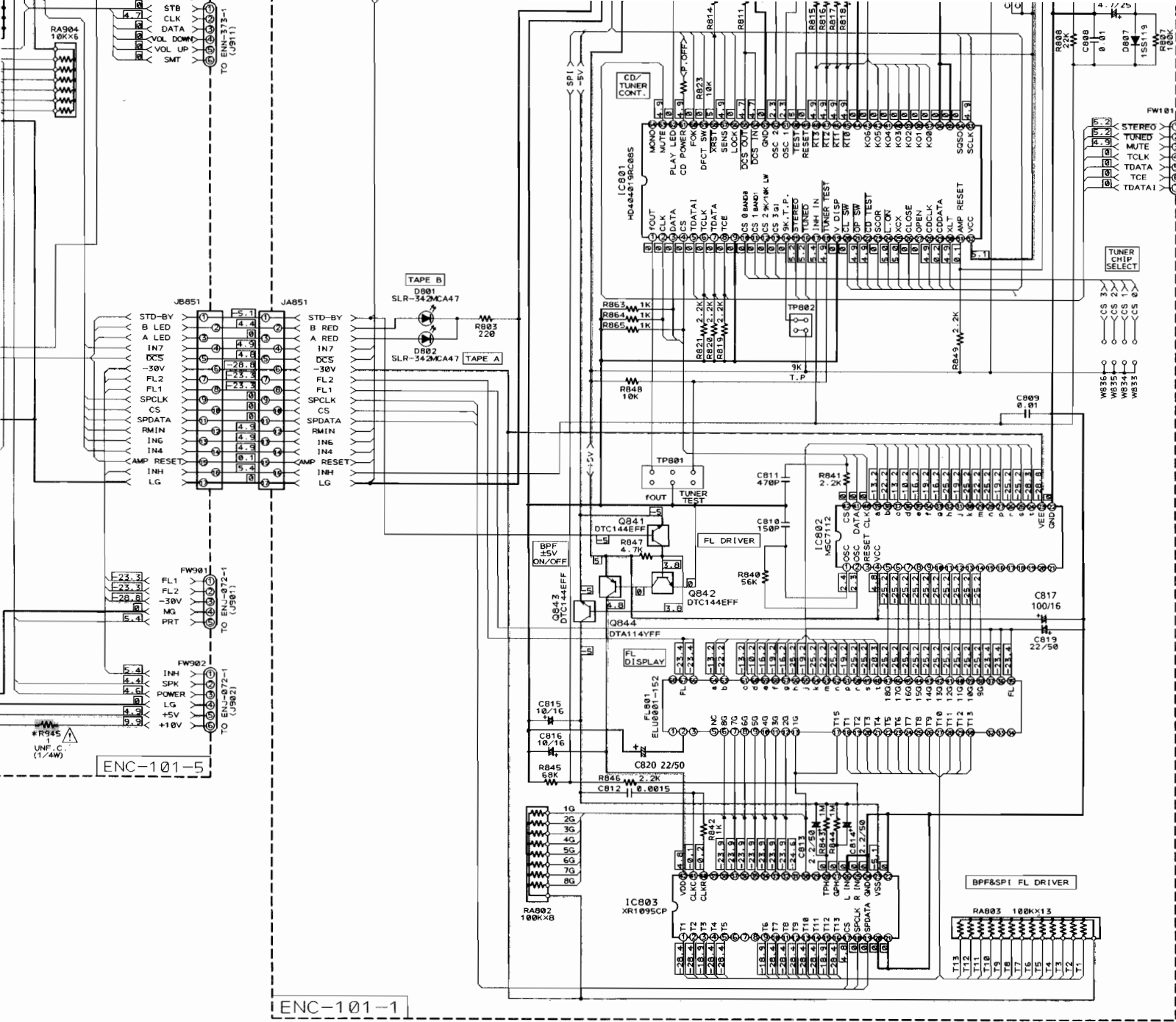
I J K L M N O P Q R S T



* MARK

	BS	J.C	G.G1	OTHERS
D835	SLA-390LT	SLR-342VCA47	SLR-342VCA47	SLR-342VCA47
R835	470	150	150	150
W865	NONE	USED	NONE	NONE
W866	USED	USED	NONE	USED
K901	SHORT	SHORT	USED	SHORT
R945	SHORT	USED	SHORT	SHORT

TO TUNER C.B. ENA-140

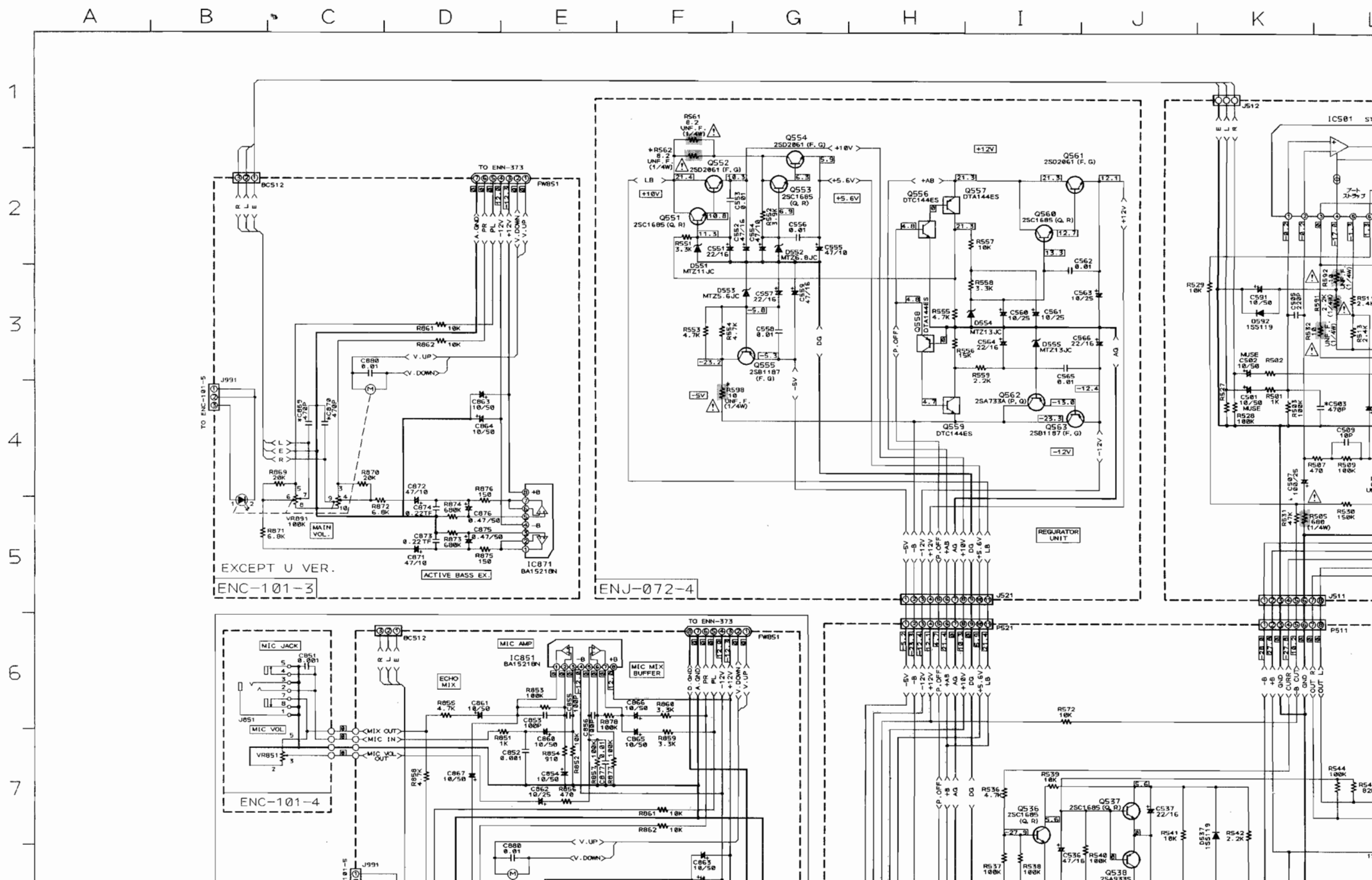


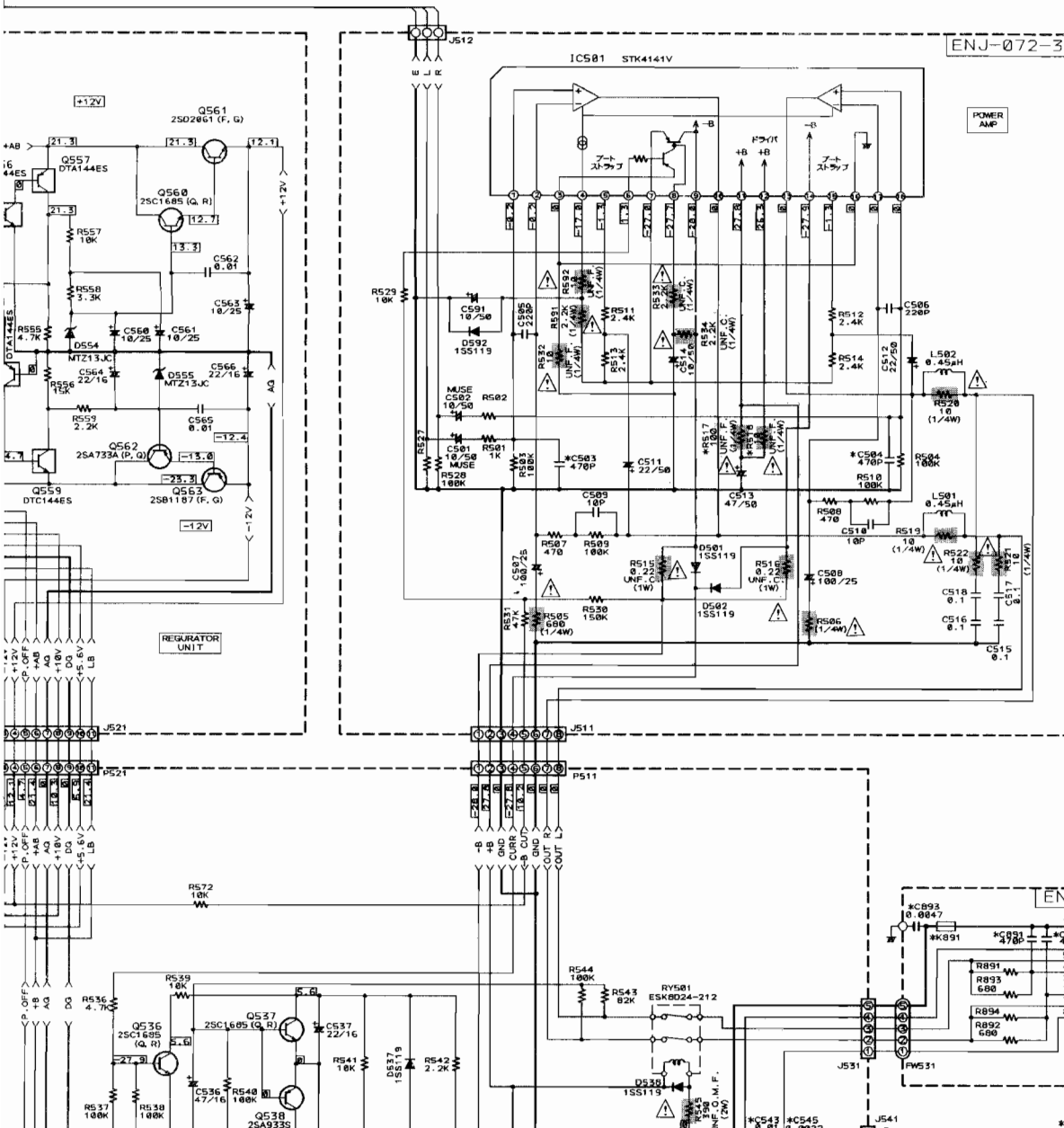
TUNER CHIP SELECT

BAND CS	EN, EF, G, BS	A	GI	VX	U, UT	J, C
CS0 W833	NONE	NONE	NONE	USED	NONE	USED
CS1 W834	NONE	NONE	NONE	USED	USED	NONE
CS2 W835	NONE	USED	NONE	NONE	NONE	NONE
CS3 W836	NONE	NONE	USED	NONE	NONE	USED

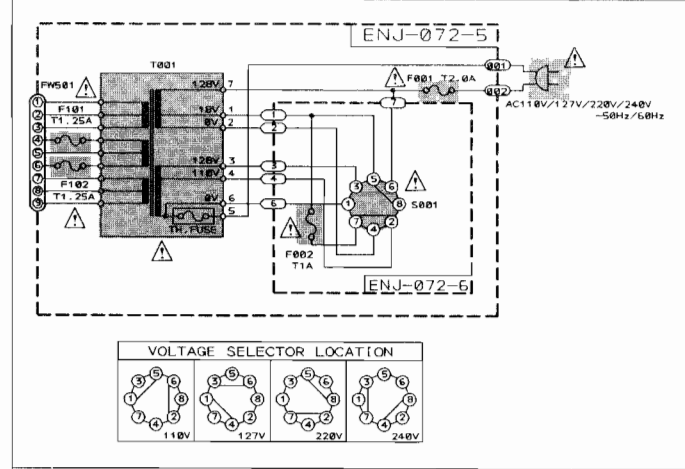
- Notes:
- indicates +B power supply.
 - indicates -B power supply.
 - indicates main signal path.
 - indicates recording signal path.
 - When replacing the parts in the shaded area () and those marked with Δ , be sure to use the designated parts to ensure safety.
This is the standard circuit diagram.
 - The design and contents are subject to change without notice.

(2) Power Supply & Audio Section

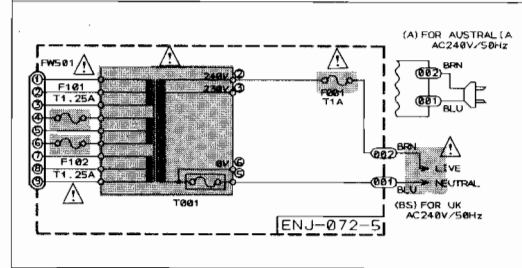




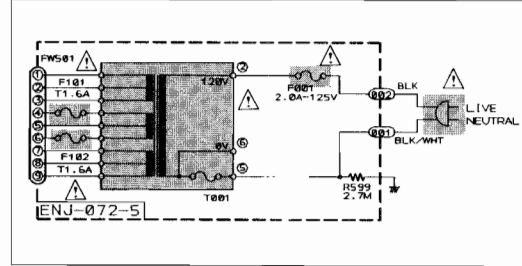
(U) FOR OTHER COUNTRIES AC110V/127V/220V/240V~50Hz/60Hz

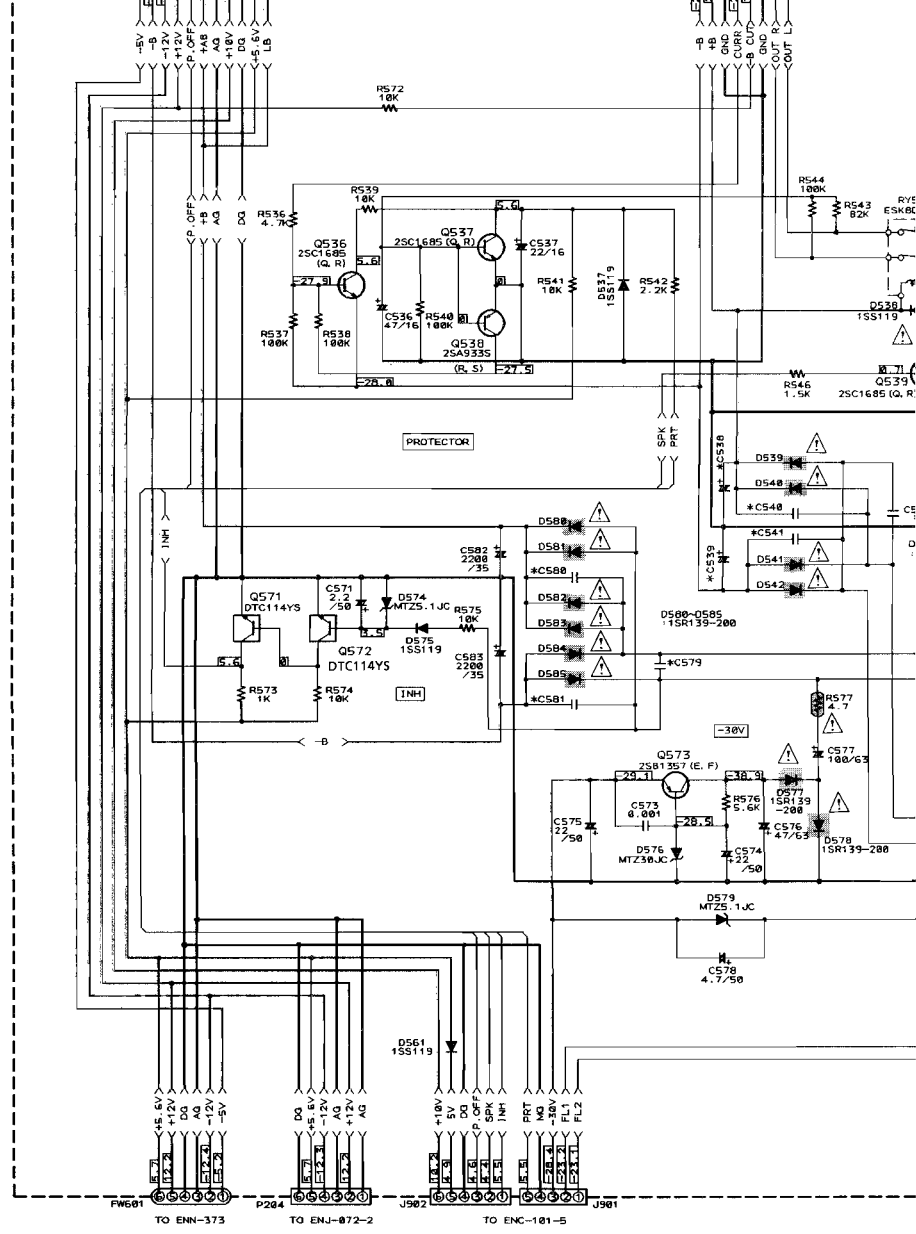
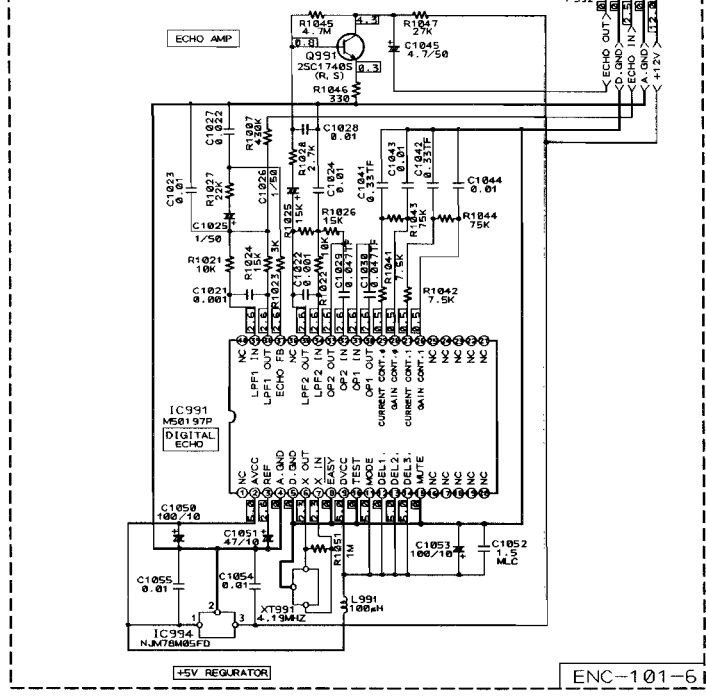
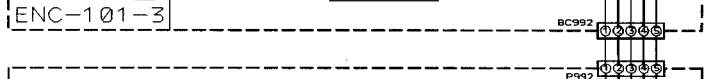
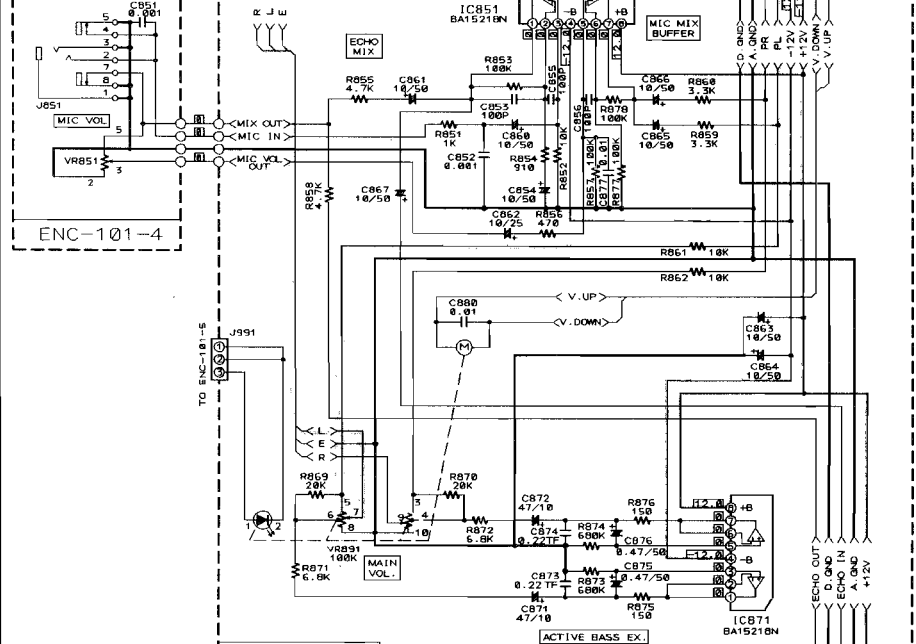


(BS) FOR UK AC240V/50Hz (A) FOR AUSTRALIA AC240V/50Hz

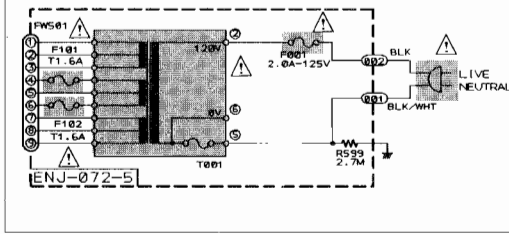
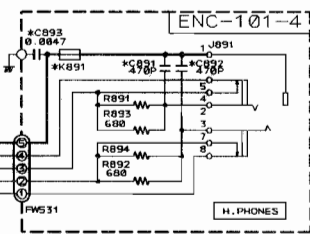
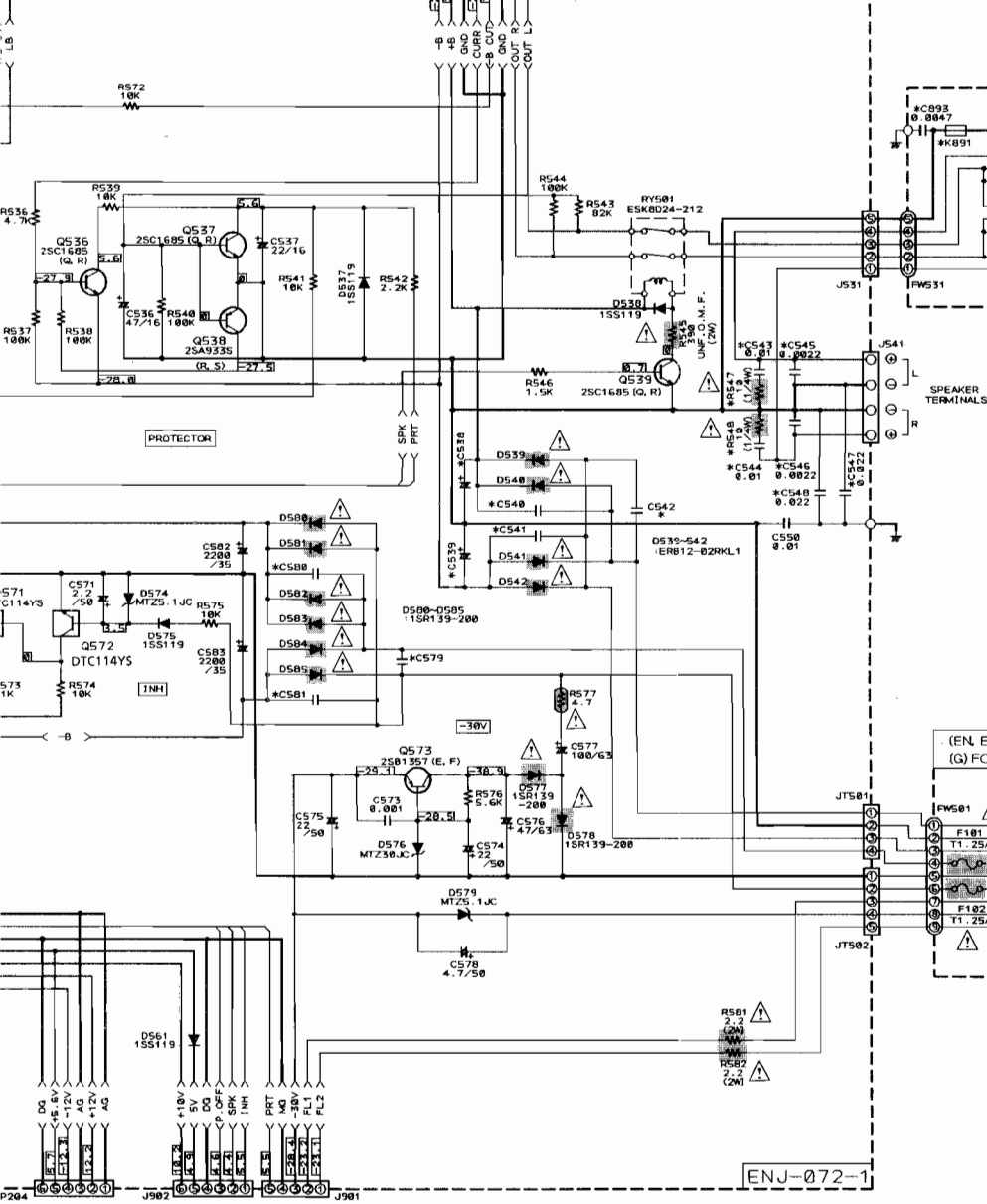


(J), (C) FOR U.S.A./CANADA AC 120V/60Hz



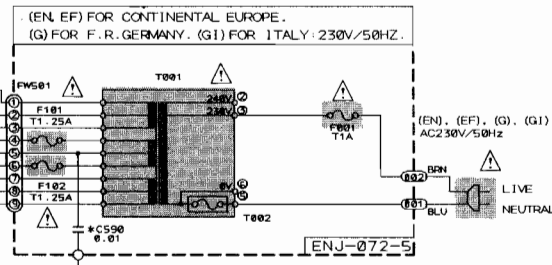


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* MARK LIST

SYMBOL	J. C	U. VT	EN, EF, A V, VX, BS	G, G1
C503, 504	USED	USED	USED	NONE
C538, 539	330Ω/42	220Ω/42	220Ω/42	220Ω/42
C540-542	0.01 μF	0.01 μF	0.01 μF	0.1 μF
C543, 544	NONE	NONE	NONE	USED
C545, 546	NONE	NONE	NONE	USED
C547, 548	NONE	NONE	NONE	USED
C579-581	0.01 μF	0.01 μF	0.01 μF	0.22 μF
C598	NONE	NONE	NONE	USED
C863, 870	NONE	NONE	NONE	USED
C891, 892	NONE	NONE	NONE	USED
C893	NONE	NONE	NONE	USED
R517, 518	UNF. C.	UNF. F.	UNF. F.	UNF. F.
R547, 548	NONE	NONE	NONE	USED
R561, 562	UNF. C.	UNF. F.	UNF. F.	UNF. F.
R598	UNF. C.	UNF. F.	UNF. F.	UNF. F.
K891	SHORT	SHORT	SHORT	USED

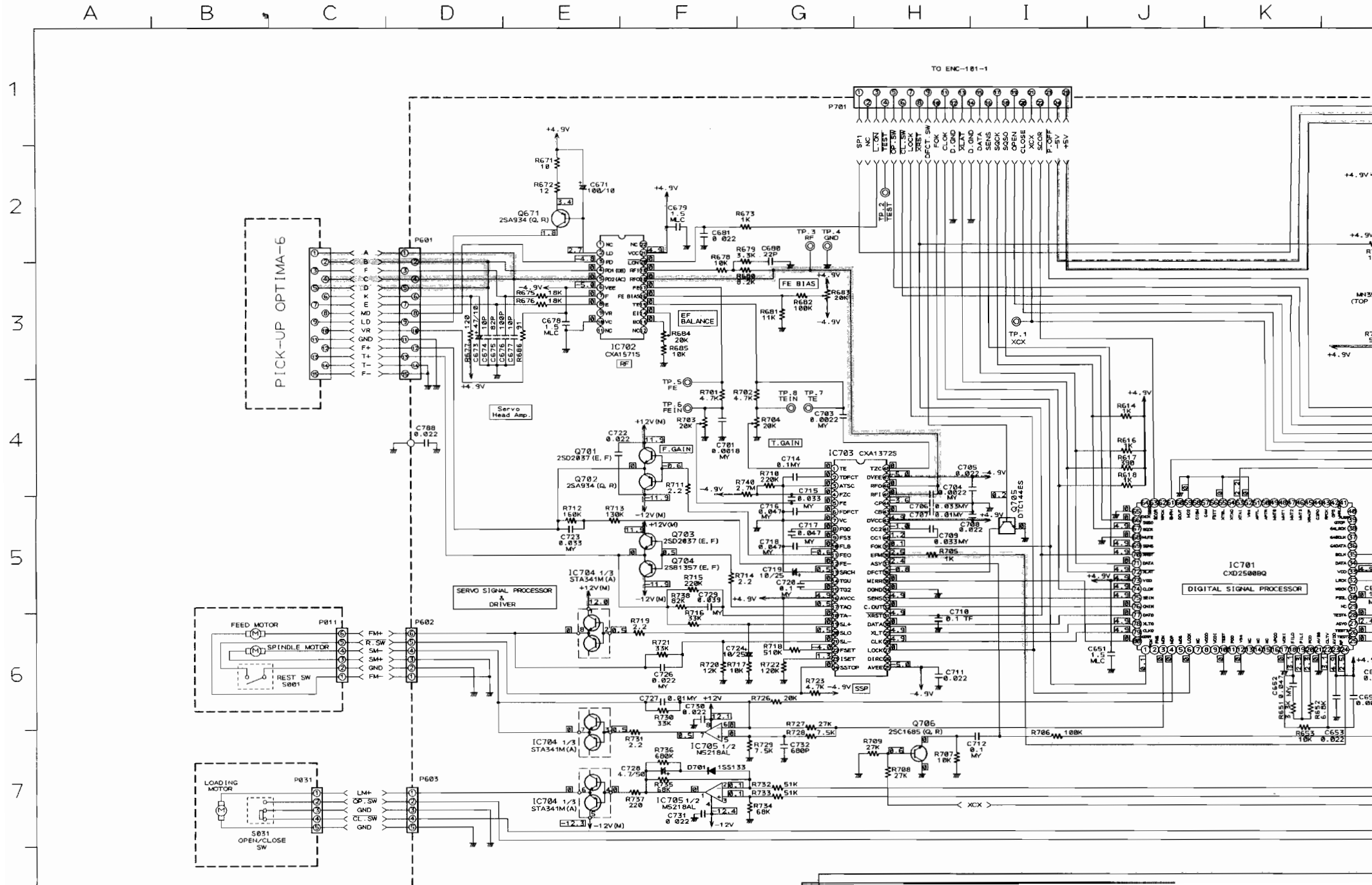


TO ENJ-072-2

TO ENC-101-5

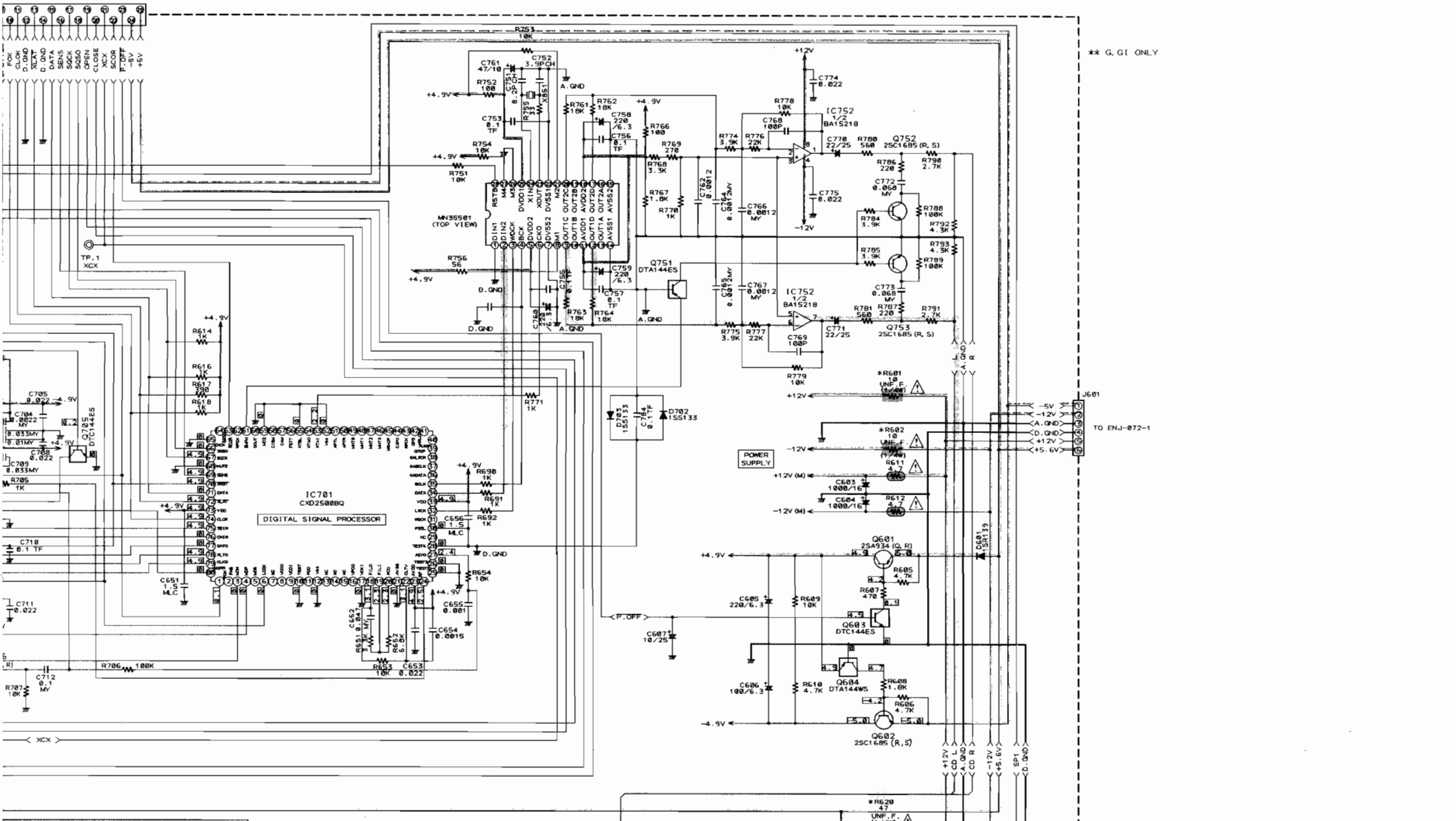
ENJ-072-1

(3) CD & Source Selector Section



I J K L M N O P Q R S T

TO ENC-181-1

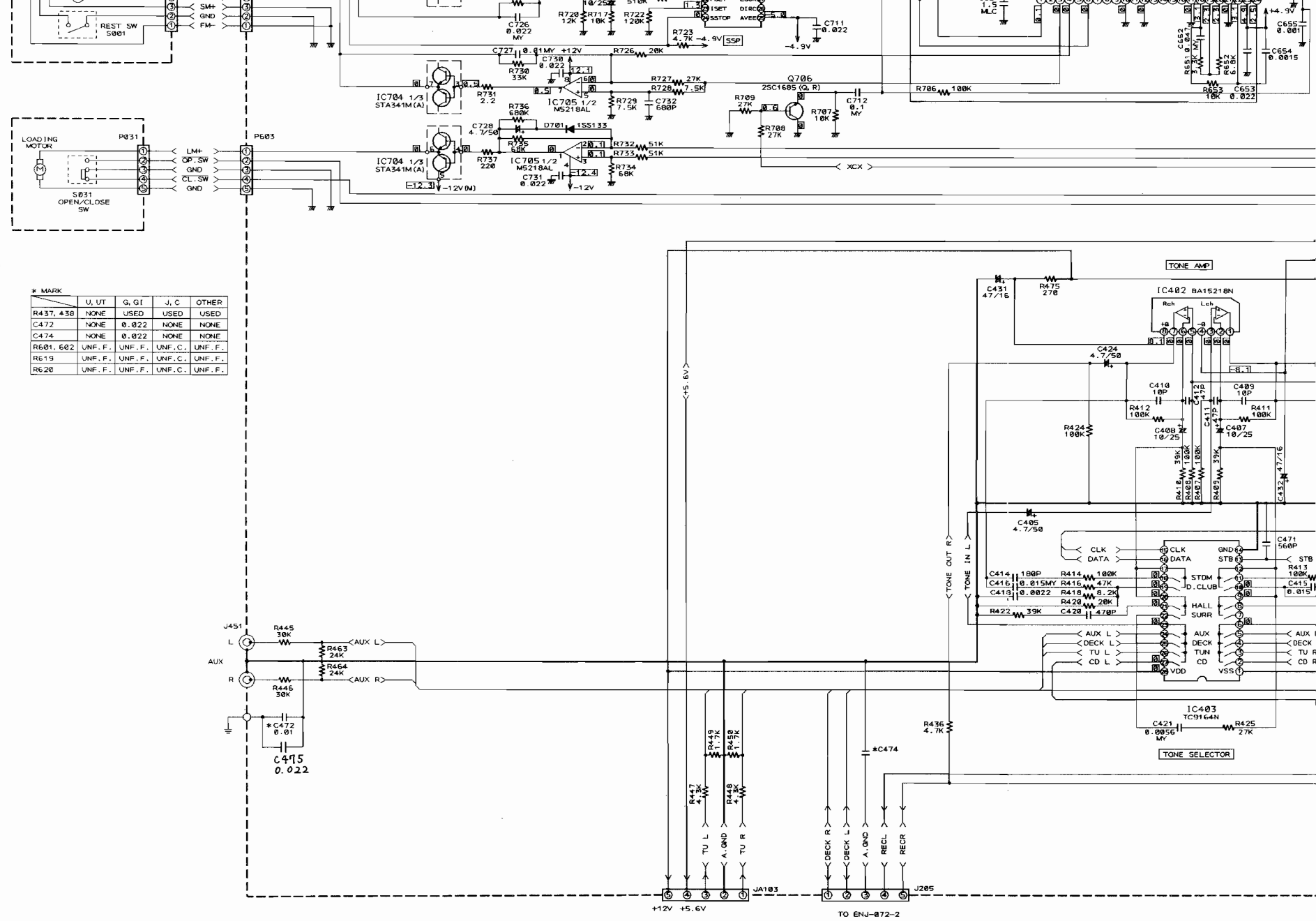


** G.GI ONLY

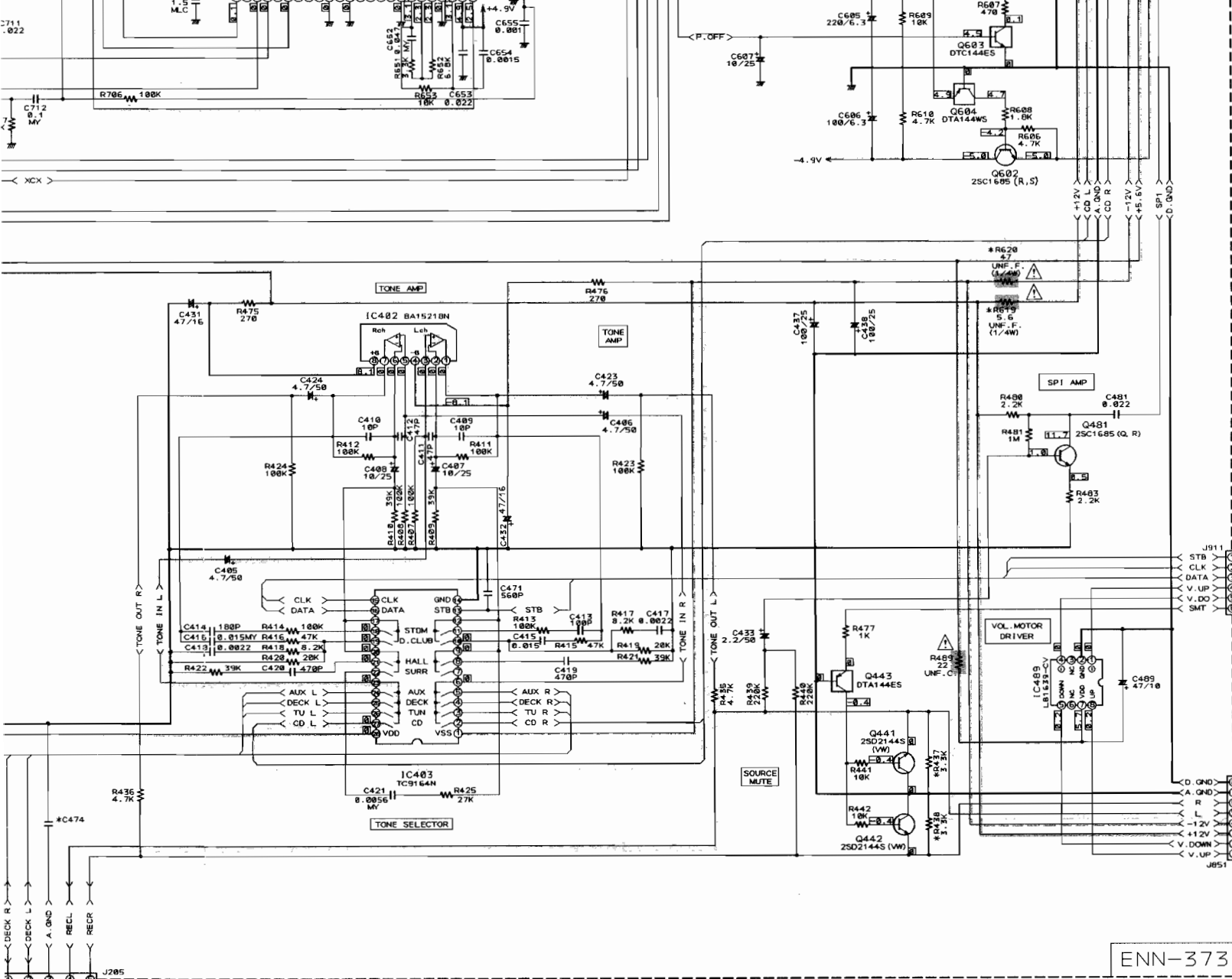
TO ENJ-072-1

*R620 47 UNF.F

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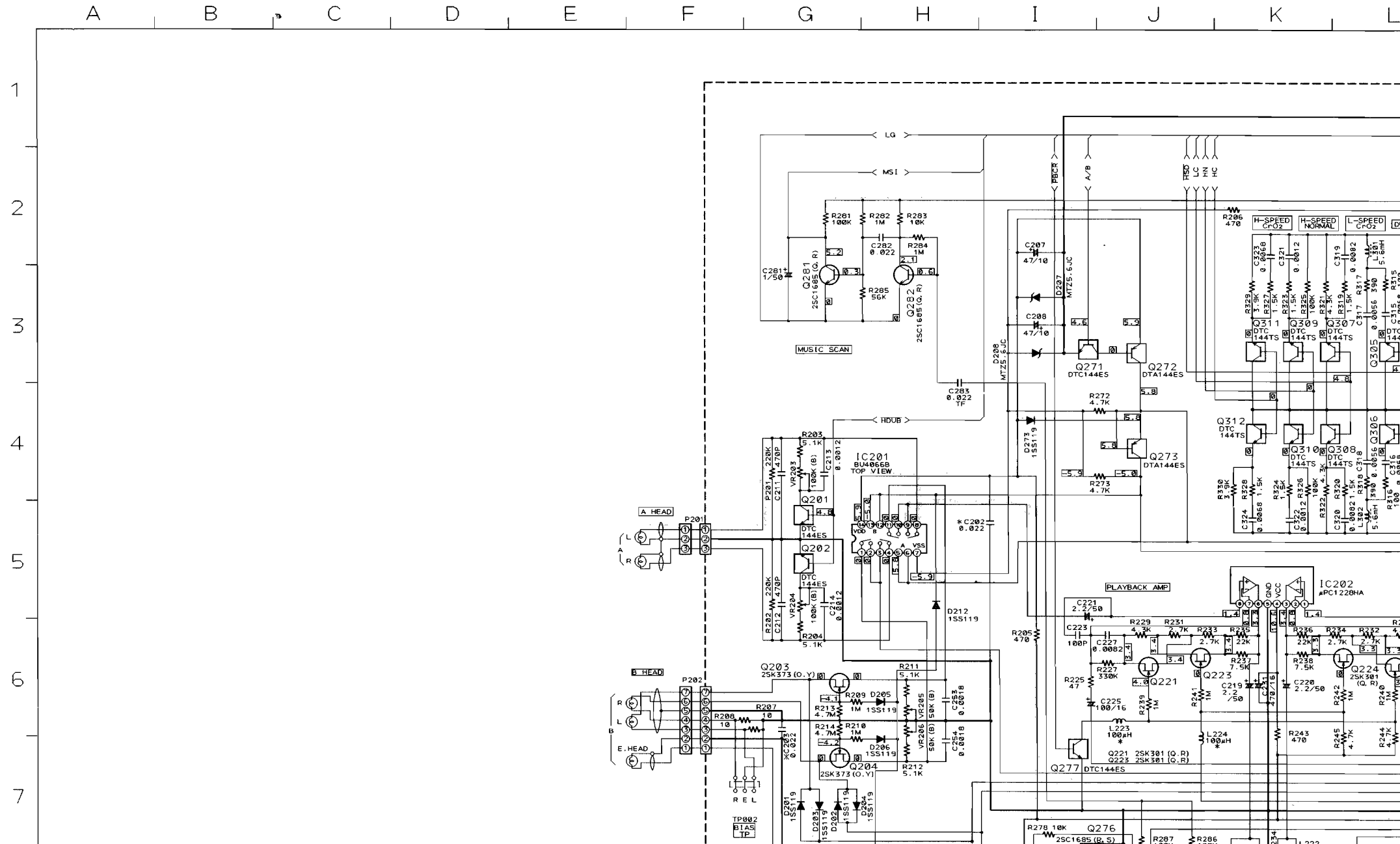


TO ENJ-072-2



ENN-373

(4) Cassette Deck Section



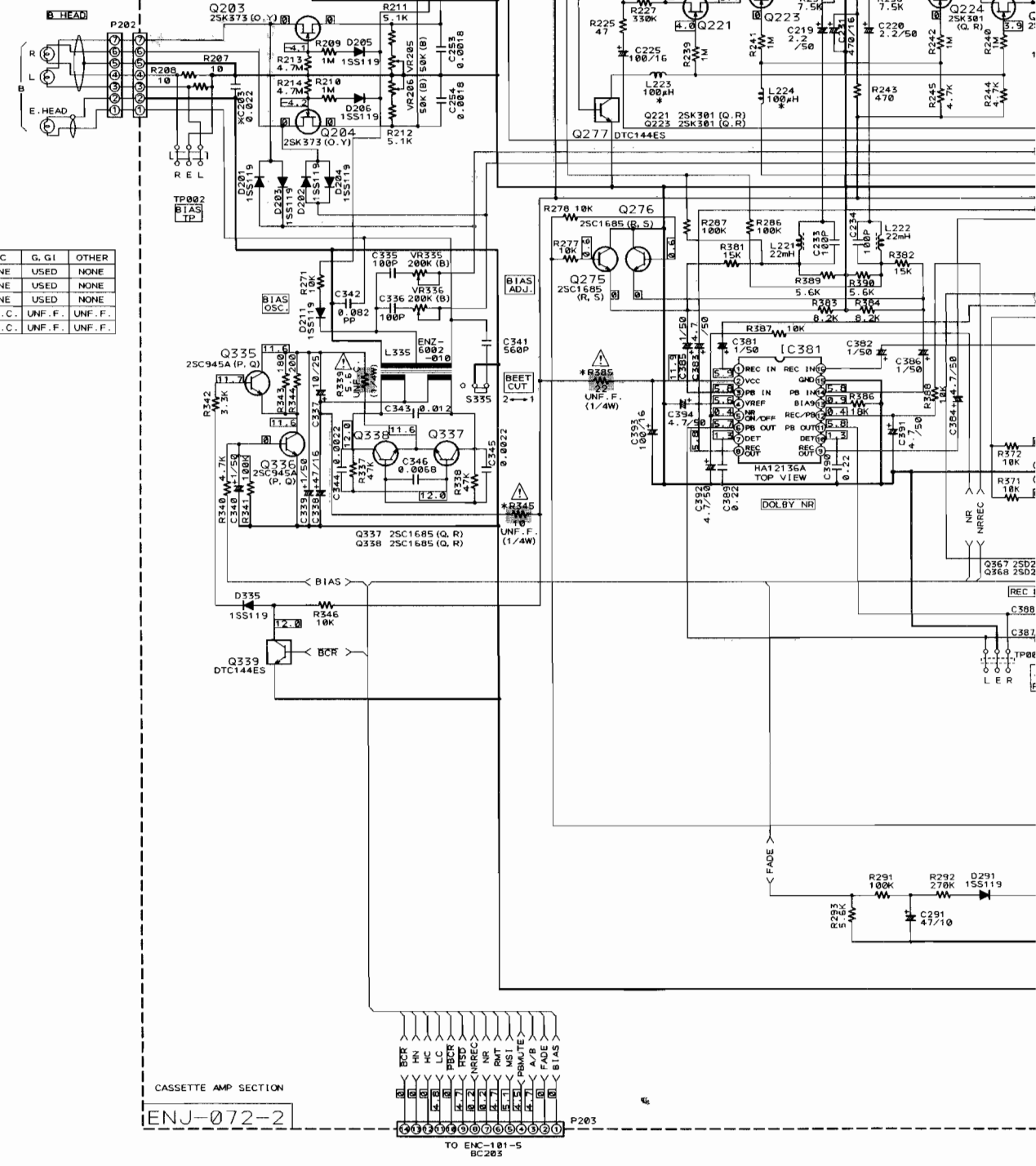
* MARK LIST

SYMBOL	J. C	G. G I	OTHER
C202	NONE	USED	NONE
C203	NONE	USED	NONE

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* MARK LIST

SYMBOL	J, C	G, G1	OTHER
C202	NONE	USED	NONE
C203	NONE	USED	NONE
L223, 224	NONE	USED	NONE
R345	UNF. C.	UNF. F.	UNF. F.
R385	UNF. C.	UNF. F.	UNF. F.

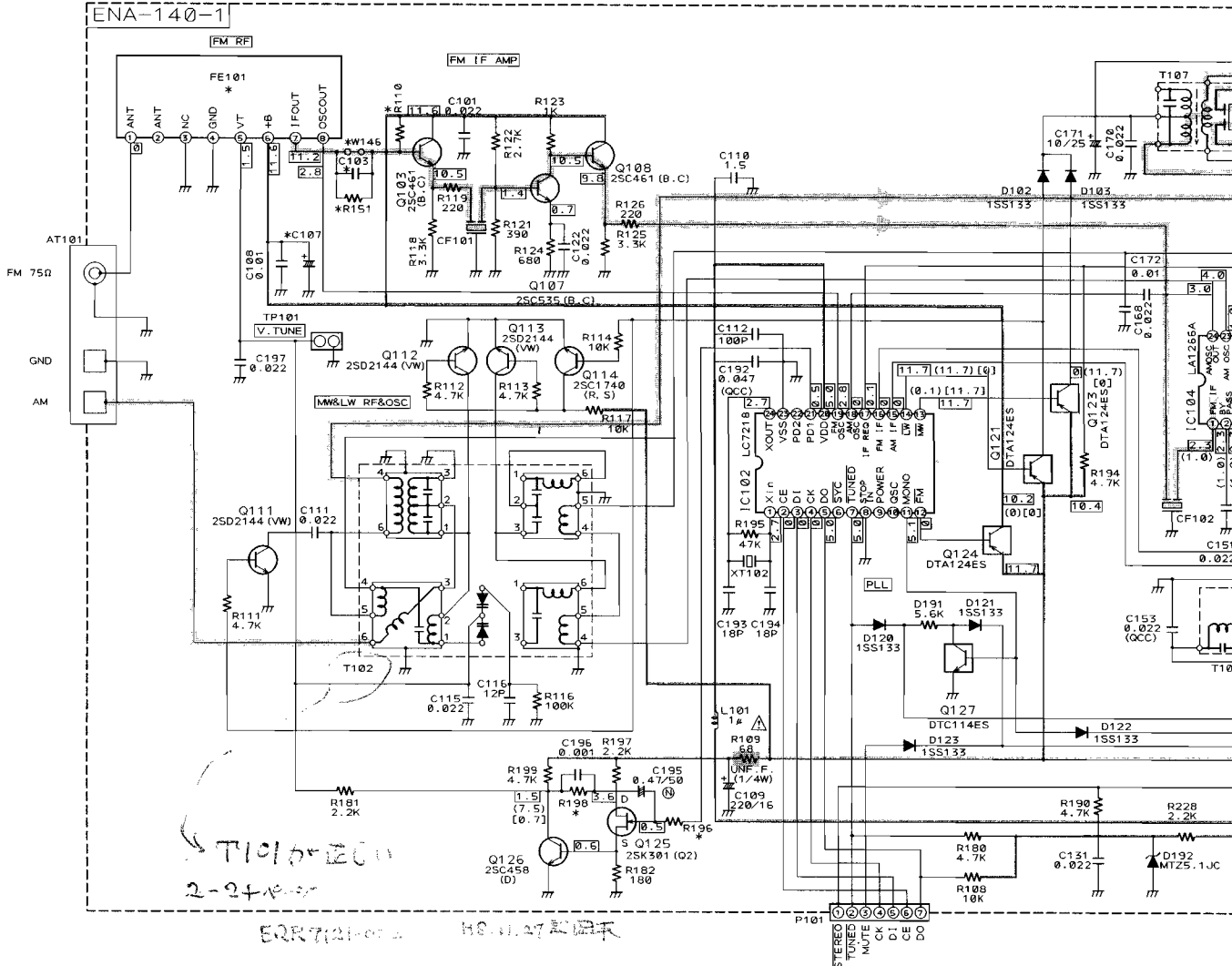


(5) Tuner Section (with LW)

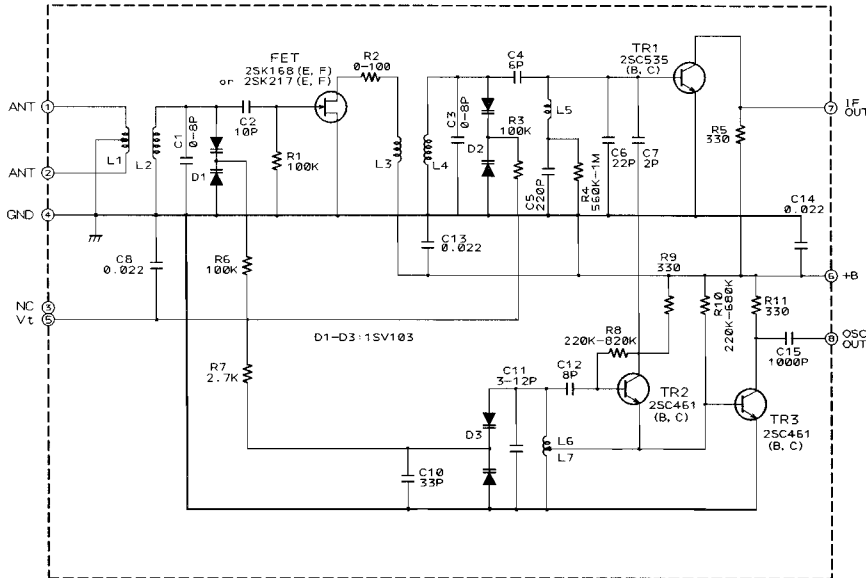
A B C D E F G H I J

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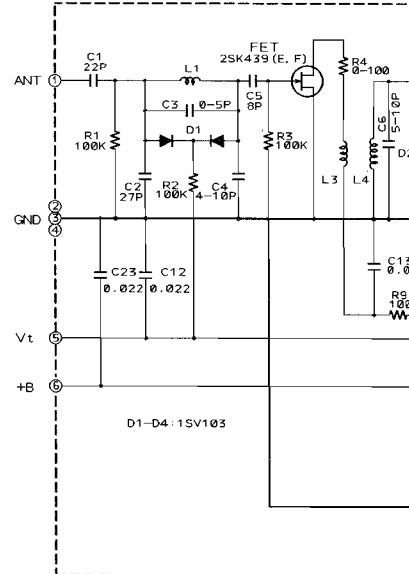
FOR EN, EF, BS, G, GI, VX



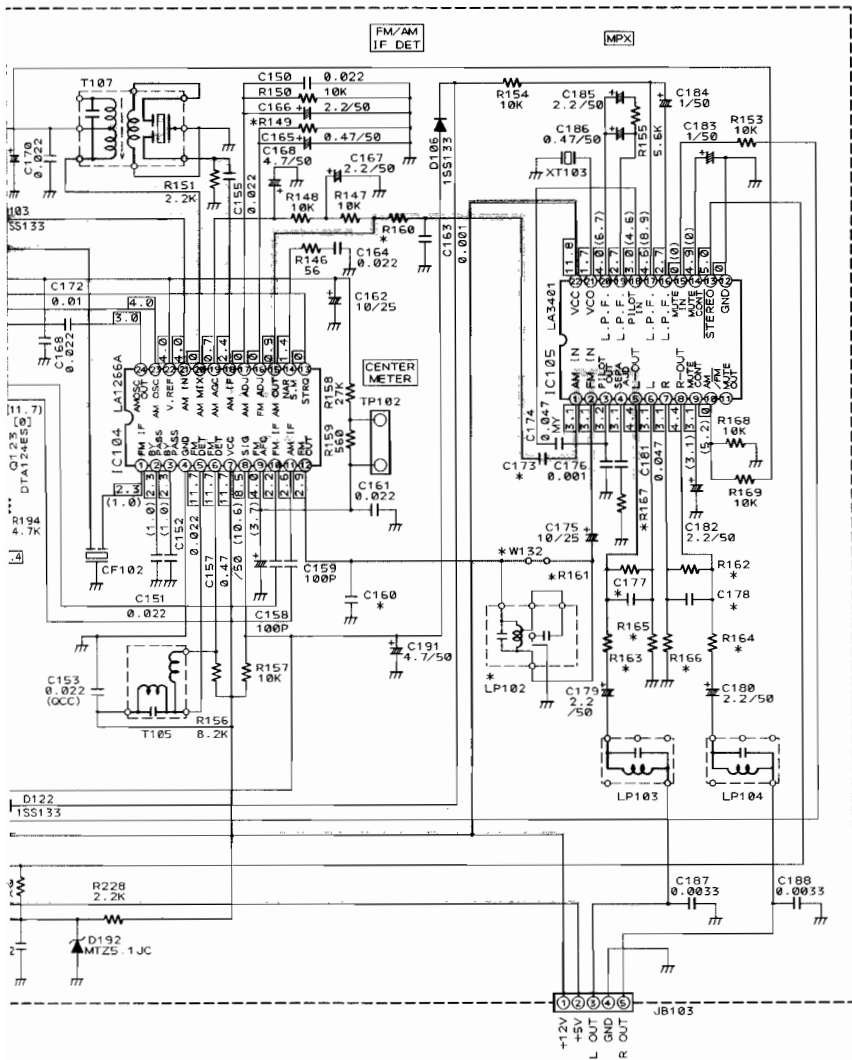
FE101
EAF2203-001 (FOR EN, EF, BS)



FE101
EAF2203-003 (FOR G, GI)



J K L M N O P Q R S T

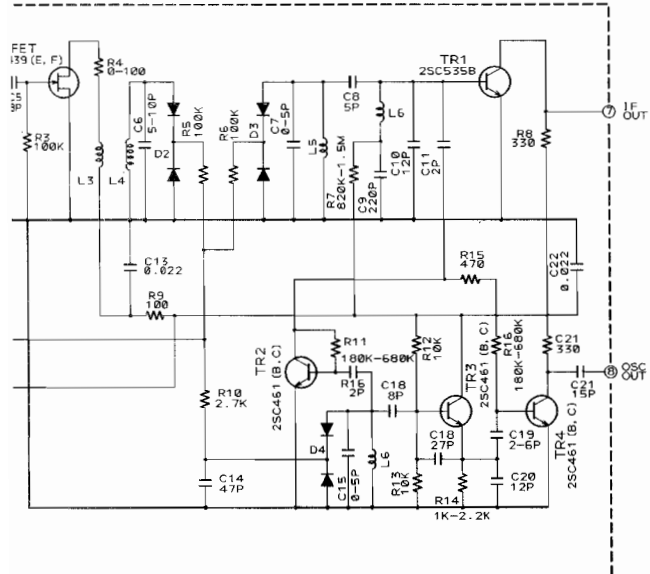


* MARK

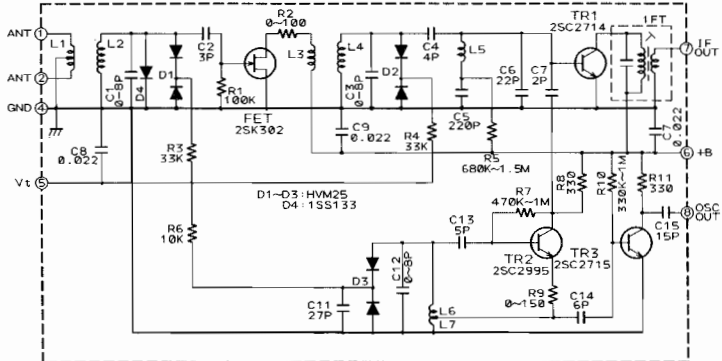
	EN, EF	G, GI	BS	VX
R160	10K	10K	1K	10K
R161, 162	100K	100K	68K	100K
R163, 164	3.9K	3.9K	3.9K	3.9K
R165, 166	270K	270K	270K	270K
R167	47K	47K	47K	47K
R196	2.2K	2.2K	2.2K	2.2K
R198	8.2K	8.2K	8.2K	8.2K
C160	100P	220P	100P	100P
C173	0.022	0.022	0.022	0.022
C177, 178	560P	560P	820P	560P
FE101	EAF2203-001	EAF2203-003	EAF2203-001	EAF2302-001
LP102	NONE	USED	NONE	NONE
W132	USED	NONE	USED	USED
R149	27K	27K	27K	15K
R110	NONE	NONE	NONE	47K
C103	NONE	NONE	NONE	0.01
W146	USED	NONE	USED	NONE
C107	NONE	22/16	NONE	NONE
R151	NONE	100	NONE	NONE

□ FM AUTO NO SIGNAL
 () MW NO SIGNAL
 [] LW NO SIGNAL

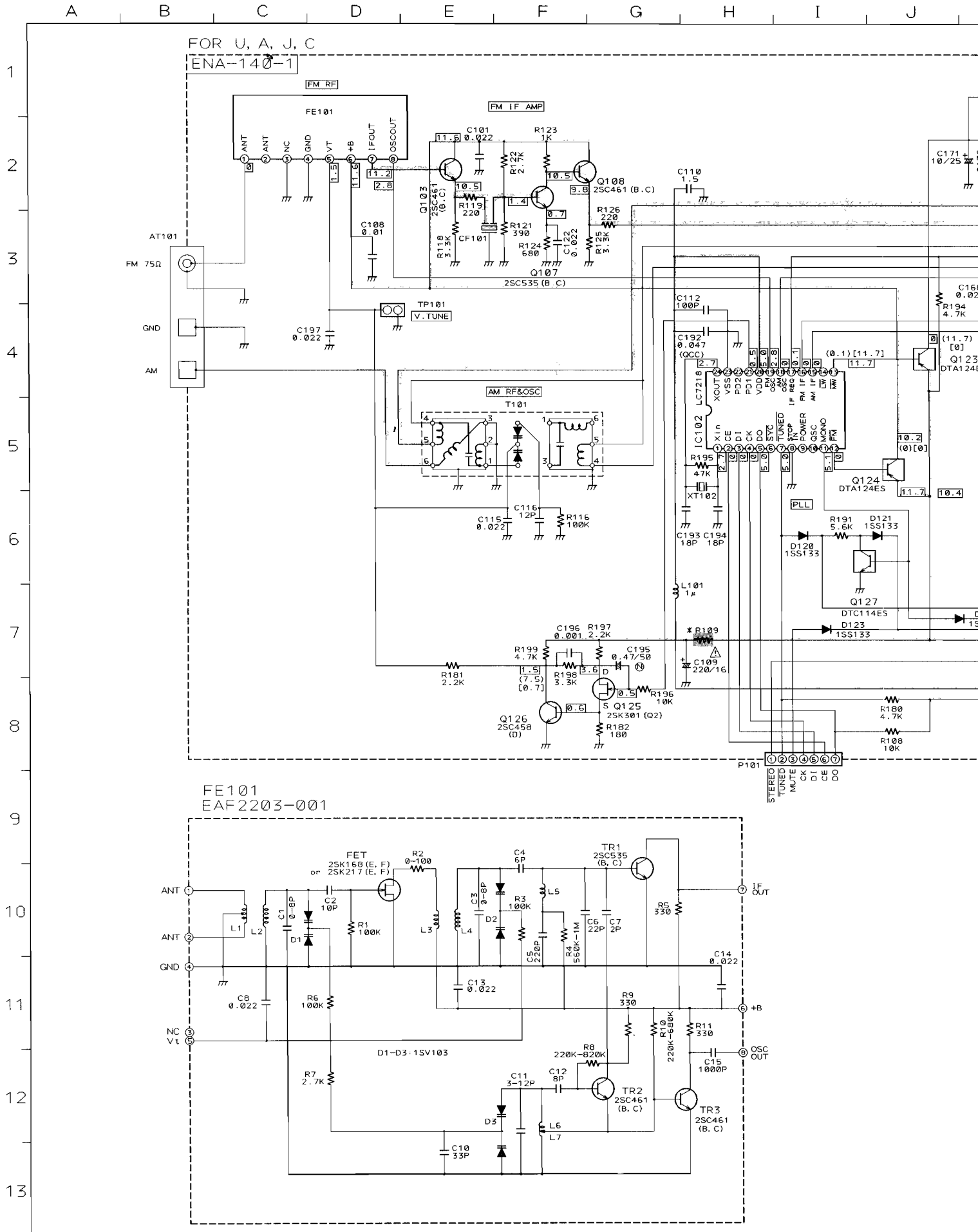
(FOR G, GI)

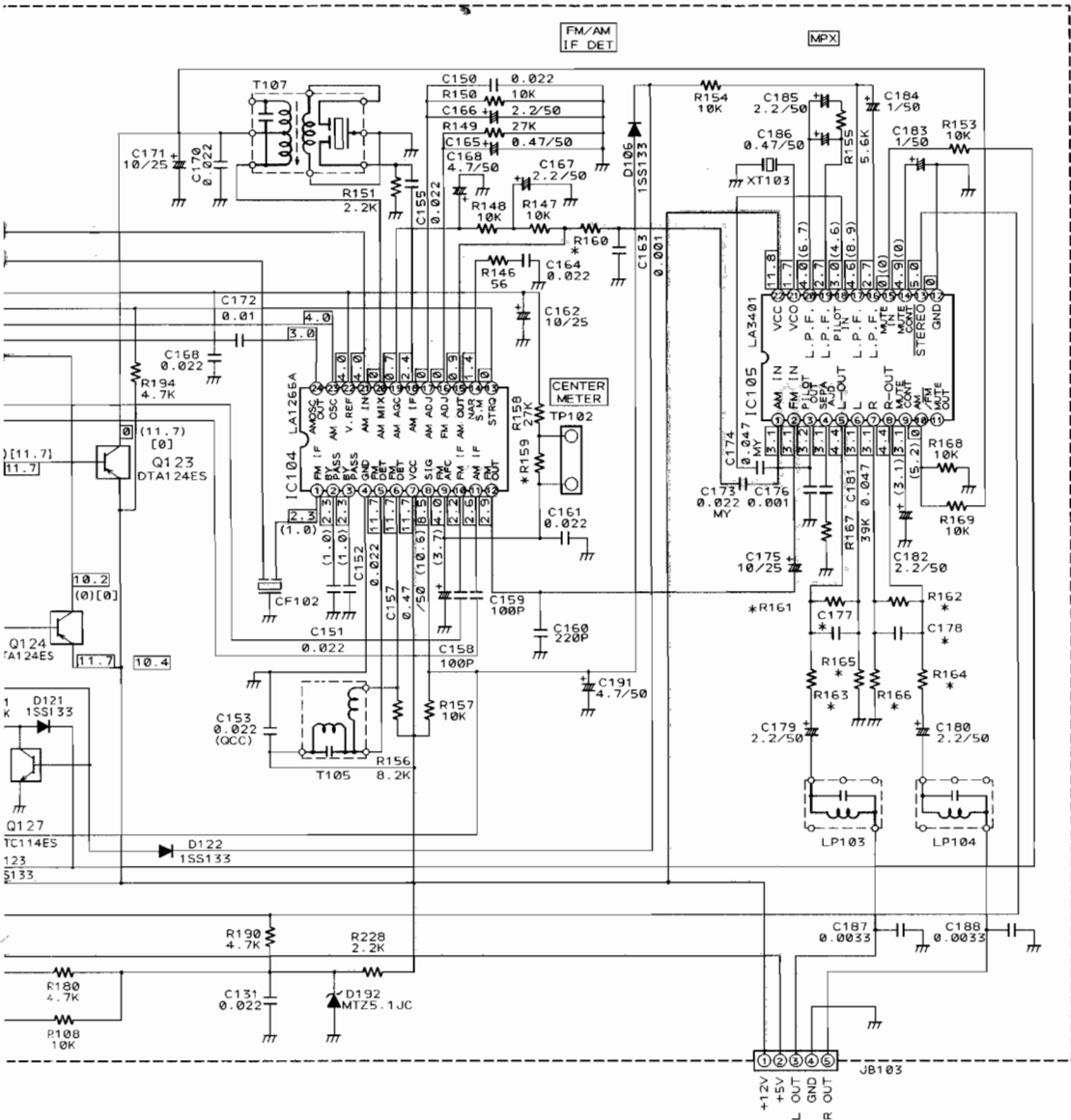


FE101
 EAF2302-001 (FOR VX)



(6) Tuner Section (without LW)

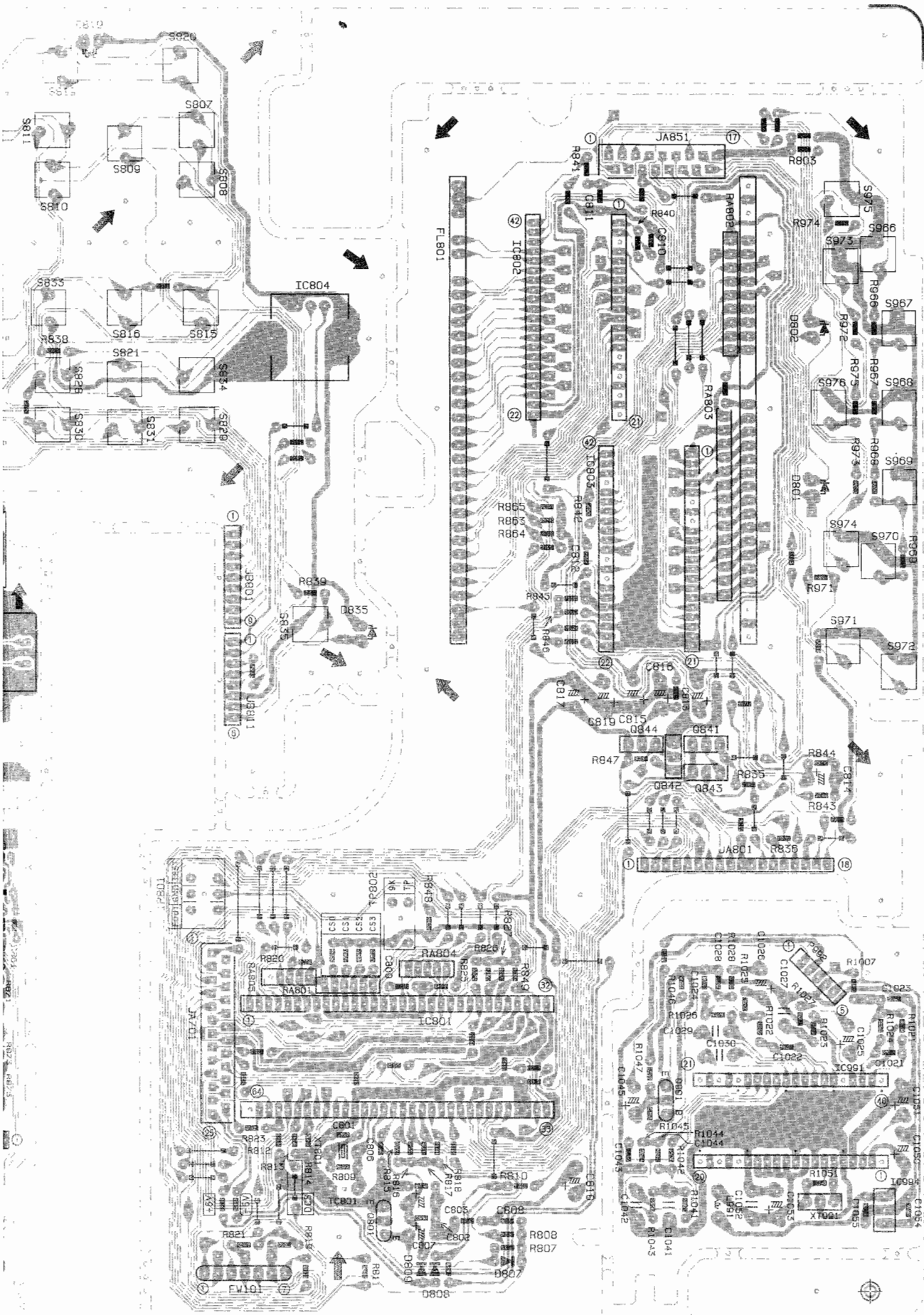




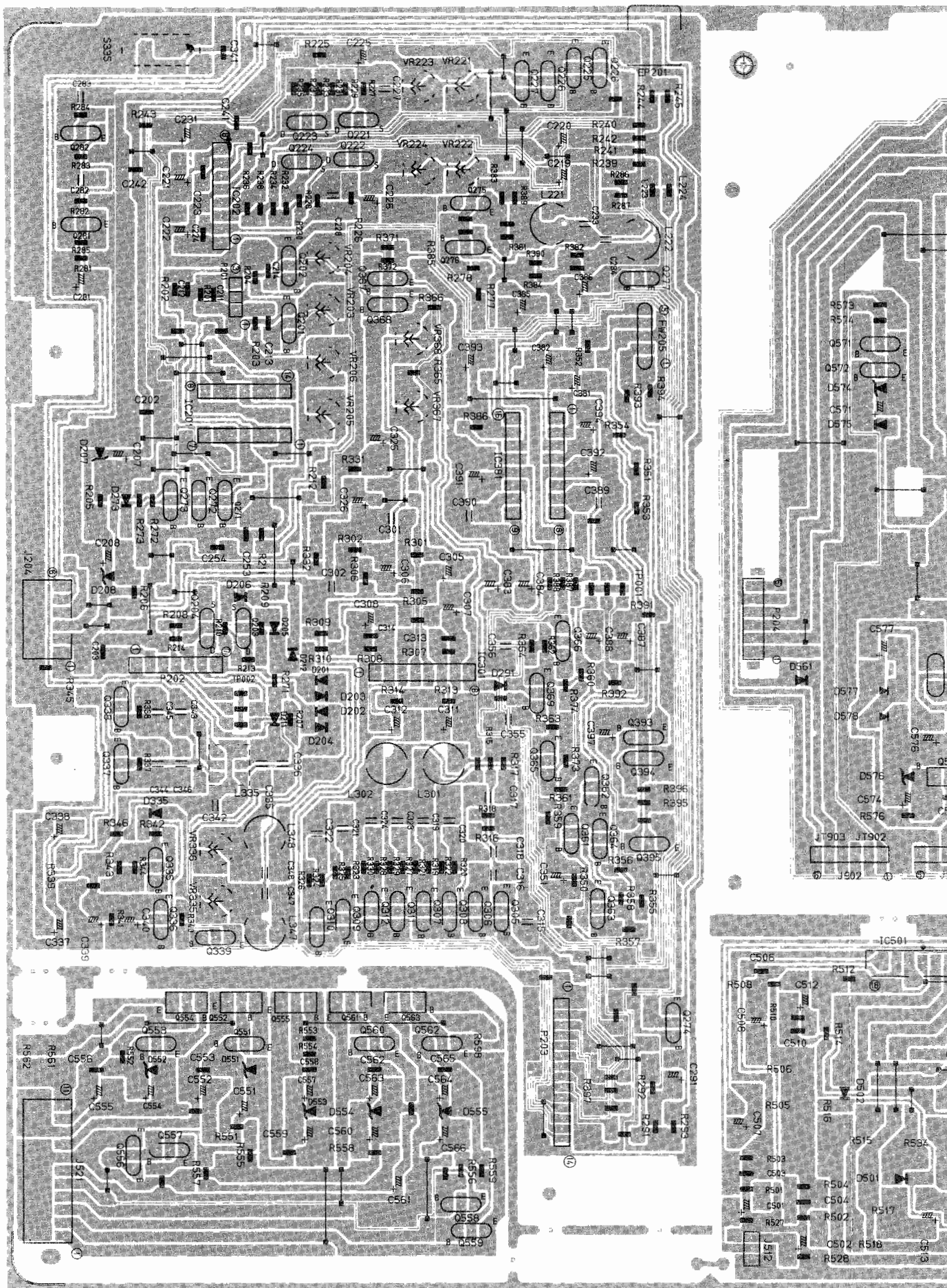
* MARK

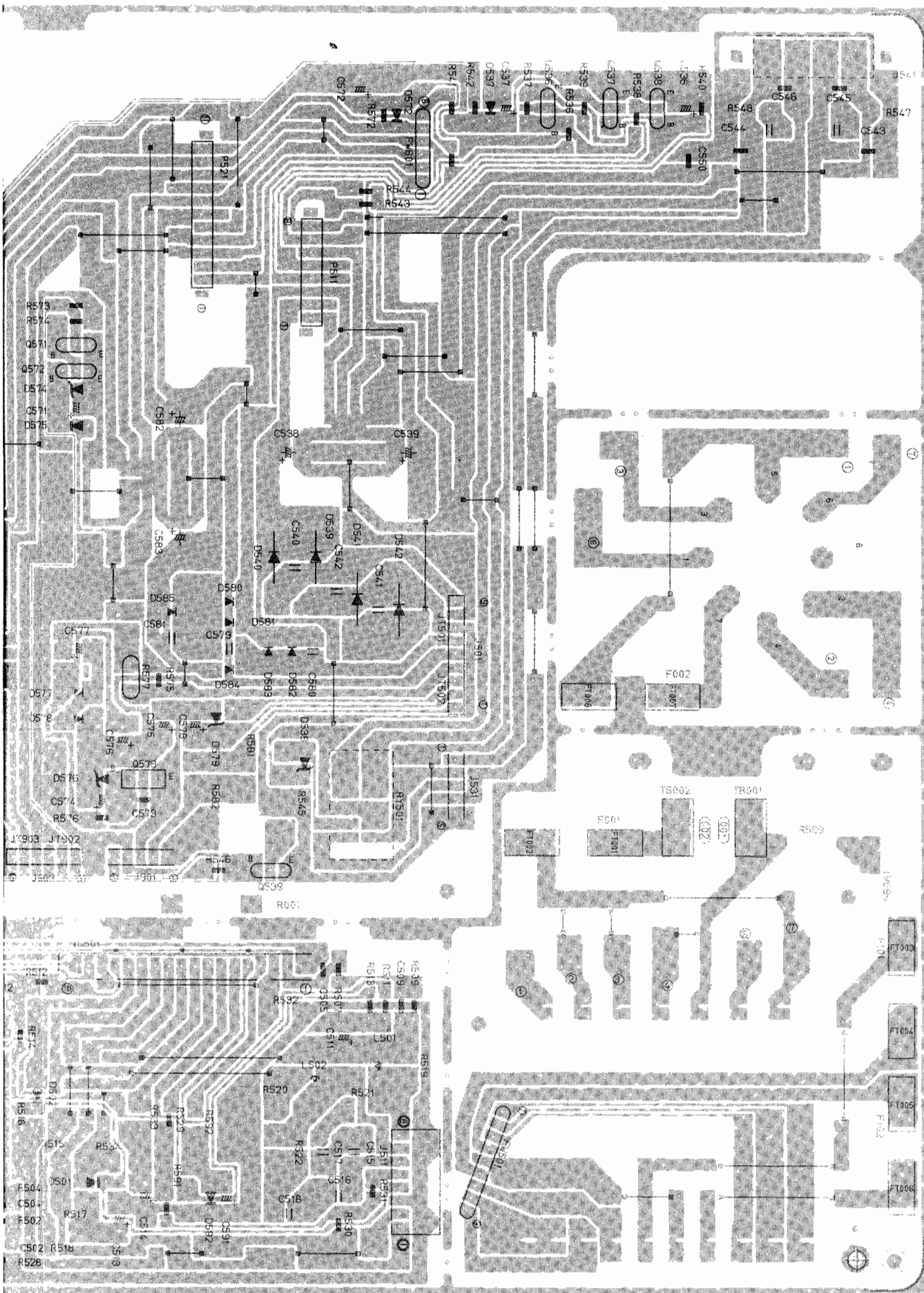
	U	A	J, C
R109	68 UNF. F. (1/4W)	68 UNF. F. (1/4W)	68 UNF. C. (1/4W)
R159	27K	27K	15K
R160	5.6K	10K	5.6K
R161, 162	82K	100K	82K
R163, 164	4.7K	3.3K	4.7K
R165, 166	180K	270K	180K
C177, 178	820P	560P	820P

□ FM AUTO NO SIGNAL
 () MW NO SIGNAL

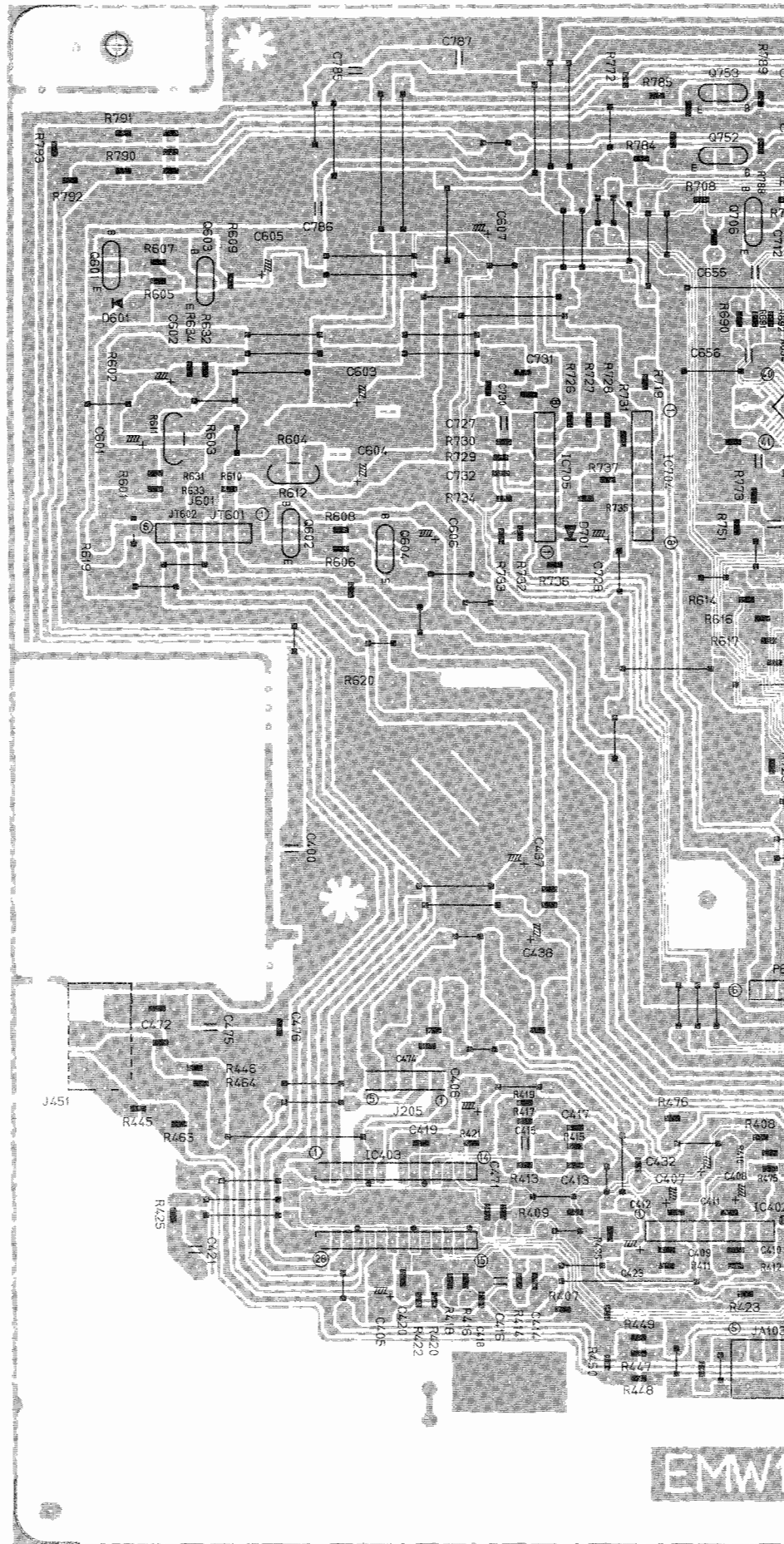


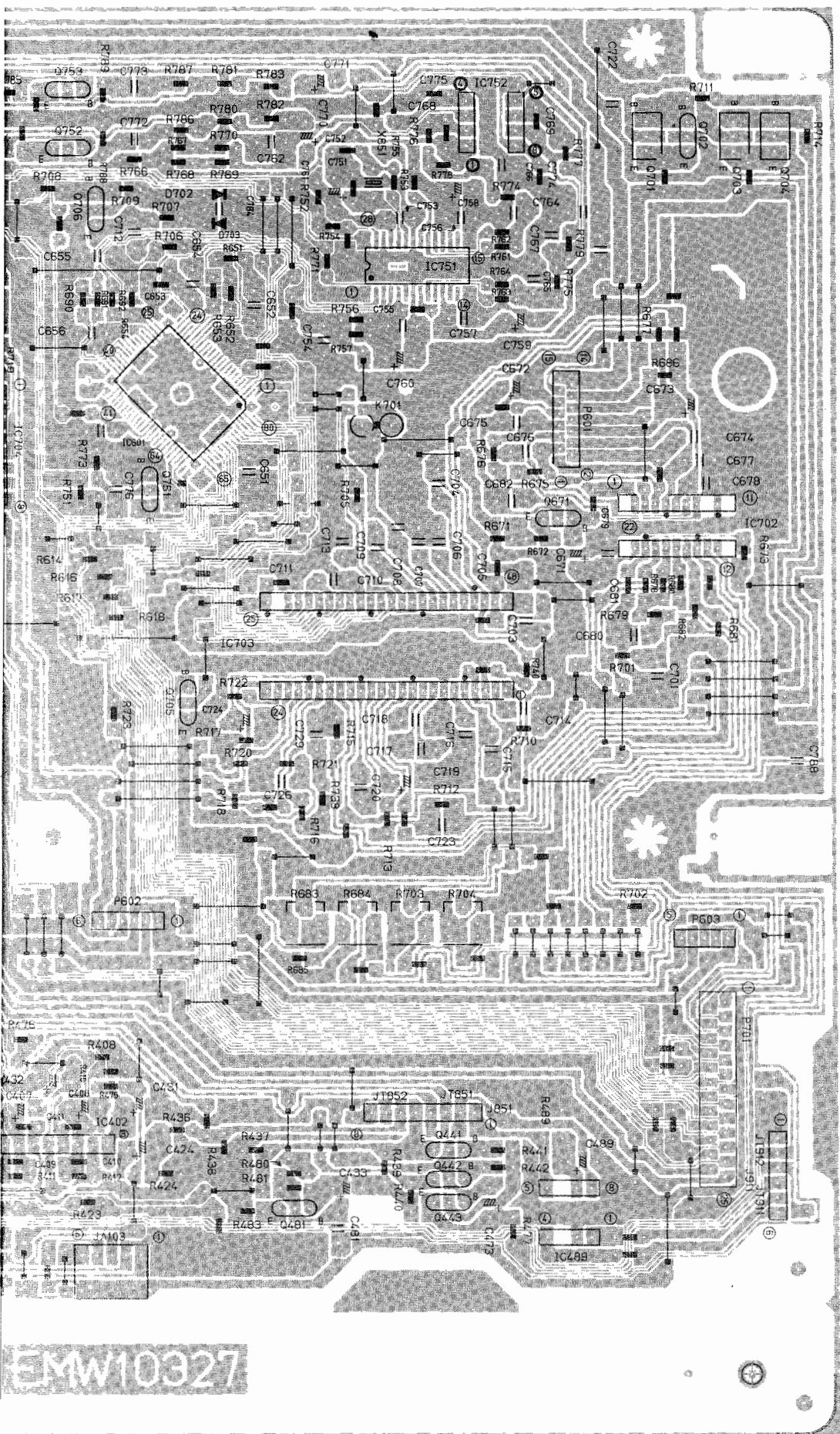
(2) Power Supply & Deck CB (ENJ-072)





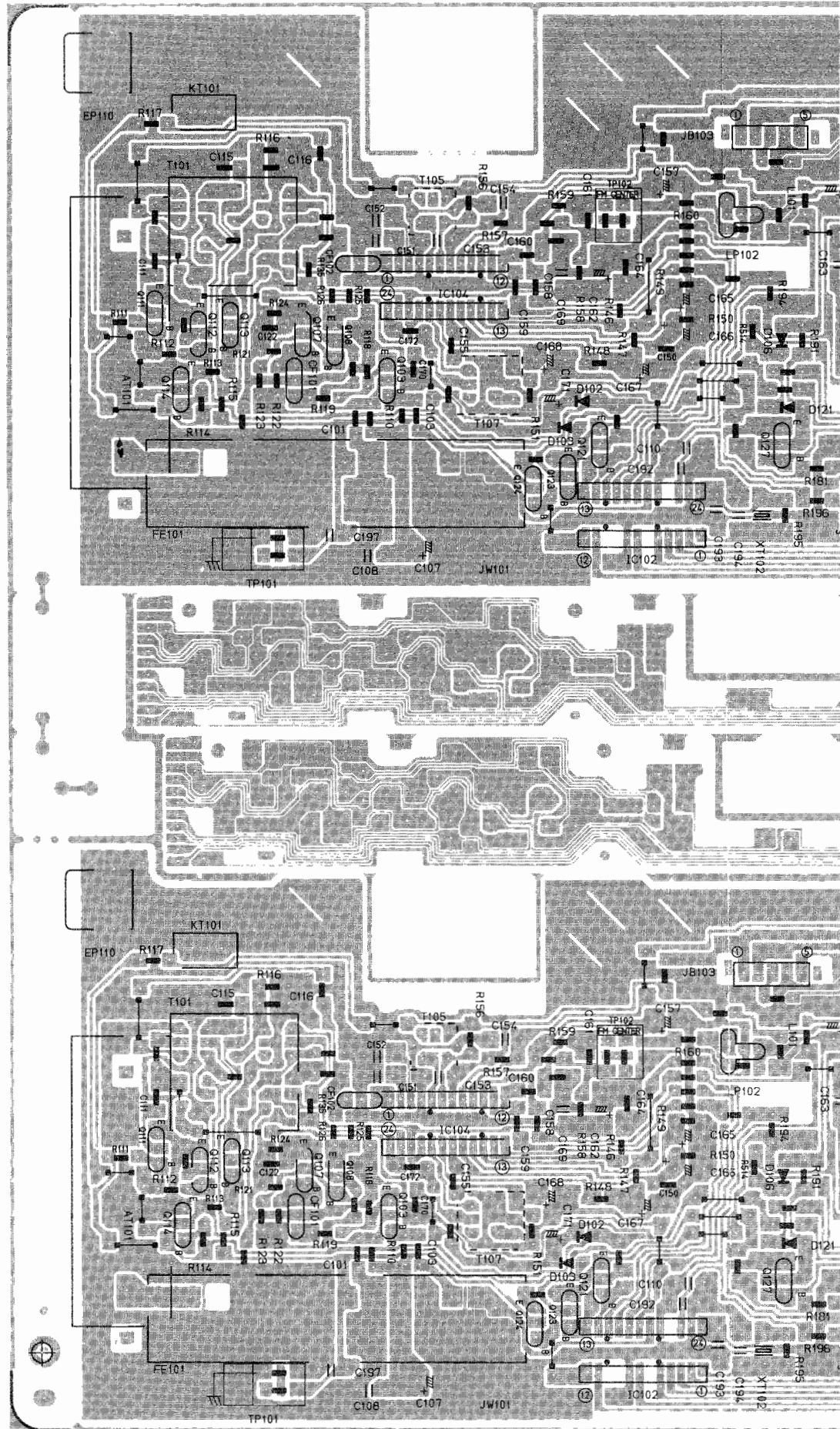
(3) CD & Source Selector CB (ENN-373)





EMW10327

(4) Tuner CB (ENA-140)



PARTS LIST

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

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General Exploded View and Parts List


Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	EFP-CAMXS2BKJ(S	FRONT PANEL ASSY	1		J
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		C
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		A
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		BS
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		EF
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		EN
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		G
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		GI
	EFP-CAMXS2BKE(S	FRONT PANEL ASSY	1		VX
	EFP-CAMXS2BKU(S	FRONT PANEL ASSY	1		U
1-1	EFP-CAMXS2BKU(S	FRONT PANEL ASSY	1		UT
	E102675-001SS	FRONT PANEL	1		U
	E102675-001SS	FRONT PANEL	1		UT
	E102675-002SS	FRONT PANEL	1		J
	E102675-002SS	FRONT PANEL	1		C
	E102675-002SS	FRONT PANEL	1		A
	E102675-002SS	FRONT PANEL	1		BS
	E102675-002SS	FRONT PANEL	1		EF
	E102675-002SS	FRONT PANEL	1		EN
1-2	E102675-002SS	FRONT PANEL	1		G
	E102675-002SS	FRONT PANEL	1		GI
	E308399-001SS	WINDOW SCREEN	1		VX
	E308399-001SS	WINDOW SCREEN	1		C
	E308399-001SS	WINDOW SCREEN	1		A
	E308399-001SS	WINDOW SCREEN	1		BS
	E308399-001SS	WINDOW SCREEN	1		EF
	E308399-001SS	WINDOW SCREEN	1		EN
	E308399-001SS	WINDOW SCREEN	1		G
	E308399-001SS	WINDOW SCREEN	1		GI
1-3	E308399-001SS	WINDOW SCREEN	1		VX
	E308399-001SS	WINDOW SCREEN	1		U
	E308399-002SS	WINDOW SCREEN	1		UT
	E69777-003	REFLECTION PLATE	2		J
1-4	E75130-008SS	FL SCREEN	1		J
1-5	E406971-221	JVC MARK	1		
2	E207554-002SA	CASSETTE LID ASSY	1	DECK A	
2-1	E207554-002	CASSETTE LID	1	DECK A	
2-2	E406971-221	JVC MARK	1	DECK A	
3	E207557-002SS	CASSETTE LID ASSY	1	DECK B	
4	E207560-002SS	CASSETTE HOLDER	1	DECK A	
5	E207561-002SS	CASSETTE HOLDER	1	DECK B	
6	E407269-002	EJECT SPRING	2		
7	E406713-001	CASSETTE SPRING	4		
8	E102358-332SS	CD TRAY	1		
9	E207534-002SS	FITTING	1		
10	SBSF3008M	SCREW	3		
11	E304434-002	DAMPER ASSY	2		
12	E308161-001SS	EJECT BUTTON	1	DECK B	
13	E75737-008	BALANCE KNOB	1		U
14	E75737-008	BALANCE KNOB	1		UT
15	E308414-001SS	VOLUME KNOB	1		
16	E207856-001SS	PUSH BUTTON ASSY	1	TUNNING / PRESET	
17	E207855-001SS	PUSH BUTTON ASSY	1	OPEN / CLOSE , SEARCH	
17	E308169-002	CIRCUIT BOARD BRACKET	1		

Item	Part Number	Part Name	Q'ty	Description	Areas
18	SDSF2608Z	SCREW	22		
19	E207536-003SS	PUSH BUTTON ASSY	1	CD PLAY	
20	E207774-001SS	PUSH BUTTON	1	BAND	J
	E207774-001SS	PUSH BUTTON	1	BAND	C
	E207774-001SS	PUSH BUTTON	1	BAND	A
	E207774-001SS	PUSH BUTTON	1	BAND	U
	E207774-001SS	PUSH BUTTON	1	BAND	UT
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	BS
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	EF
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	EN
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	G
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	GI
	E207774-002SS	PUSH BUTTON	1	BAND , MW / LW	VX
21	E407210-001	REMOTE LENS	1		
22	E407411-001SS	INDICATOR LENS	2		
23	E207778-001SS	PUSH BUTTON	1	DECK	
24	E308411-001SS	PUSH BUTTON	1	POWER	
25	E407410-001SS	PUSH BUTTON	1		
26	E308160-001SS	EJECT BUTTON	1	DECK A	
27	SBST3008Z	SCREW	3		
28	SBST3006M	SCREW	4		
29	E75896-002	SPACER	2	FRONT FOOT	
30	EWR617K-30TTJ2	FLAT WIRE	1		
31	EWR125K-13TT	FLAT WIRE	1		
32	E308402-001SS	STAY BRACKET	1		
33	E207567-001SS	HOLDER BRACKET	1		
34	E308162-002SS	EJECT LEVER	2		
35	E407214-001	SPECIAL SCREW	4		
36	GBSF3008Z	SCREW	2		
37	-----	CASSETTE MECHANISM ASSY	1	SEE PAGE 2-9	
38	SBSF3010C	SCREW	4		
39	SBST3008C	SCREW	4		
40	SBSG3008N	SCREW	13		
	SBSG3008N	SCREW	1		U
	SBSG3008N	SCREW	1		UT
41	E102616-003SS	CHASSIS BASE	1		
42	E75896-006	FELT SPACER	2	REAR FOOT	
43	E306805-078	FELT SPACER	2		G
	E306805-078	FELT SPACER	2		GI
44	E308167-001SS	STAY BRACKET	1		
45	E102617-001	CHASSIS BASE	1		
46	-----	CD MECHANISM ASSY	1	SEE PAGE 2-12	
47	EWS265-B408	SOCKET WIRE	1	5PIN	
48	SBST3006Z	SCREW	3		
49	EWR615M-14BBJ2	FLAT WIRE	1	15PIN	
50	EWS266-B412	SOCKET WIRE	1	6PIN	
51	E406293-002	SPECIAL SCREW	1		
52	E306837-005	CLAMPER ASSY	1		
52-1	E306836-003	YOKE PLATE	1		
52-2	E74897-002	MAGNET	1		
52-3	E26756-002	CLAMPER BASE	1		
52-4	E306835-001	CD CLAMPER	1		
53	E207564-001	METAL COVER	1		
54	SDSG3006M	SCREW	6		
55	E308522-026	RATING LABEL	1		UT

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	56	SBSG3014Z	SCREW	4		
	57	E406969-221	LEAF SPRING	1		
	58	E307908-001SS	HEAT SINK	1		
⚠	59	ETP1070-33JAJ	POWER TRANSFORMER	1		J
⚠		ETP1070-33JAJ	POWER TRANSFORMER	1		C
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		A
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		EF
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		EN
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		G
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		GI
⚠		ETP1070-33EAJ	POWER TRANSFORMER	1		VX
⚠		ETP1070-33EAJBS	POWER TRANSFORMER	1		BS
⚠		ETP1070-33FAJ	POWER TRANSFORMER	1		U
⚠		ETP1070-33FAJ	POWER TRANSFORMER	1		UT
⚠	60	E65389-004	SPECIAL SCREW	4		
⚠	61	QMF0007-1R6J1	FUSE	2	F101 , F102 (T1.6A / 125V)	J
⚠		QMF0007-1R6J1	FUSE	2	F101 , F102 (T1.6A / 125V)	C
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	A
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	EF
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	EN
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	G
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	GI
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	U
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	UT
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	VX
⚠		QMF51E2-1R2J1BS	FUSE	2	F101 , F102 (T1.2A / 250V)	BS
⚠	62	QMF0007-2R0J1	FUSE	1	F001 (T2.0A / 125V)	J
⚠		QMF0007-2R0J1	FUSE	1	F001 (T2.0A / 125V)	C
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	A
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	EF
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	EN
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	G
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	GI
⚠		QMF51E2-1R0J1	FUSE	1	F001 (T1.0A / 250V)	VX
⚠		QMF51E2-1R0J1BS	FUSE	1	F001 (T1.0A / 250V)	BS
⚠		QMF51E2-2R0J1	FUSE	1	F001 (T2.0A / 250V)	U
⚠		QMF51E2-2R0J1	FUSE	1	F001 (T2.0A / 250V)	UT
⚠	63	QMF51E2-1R0J1	FUSE	1	F002 (T1.0A / 250V)	U
⚠		QMF51E2-1R0J1	FUSE	1	F002 (T1.0A / 250V)	UT
⚠	64	E207780-004SS	REAR PANEL	1		A
		E207780-005SS	REAR PANEL	1		BS
		E207780-006SS	REAR PANEL	1		EF
		E207780-006SS	REAR PANEL	1		EN
		E207780-006SS	REAR PANEL	1		G
		E207780-006SS	REAR PANEL	1		GI
		E207780-007SS	REAR PANEL	1		U
		E207780-007SS	REAR PANEL	1		UT
		E207780-008SS	REAR PANEL	1		J
		E207780-010SS	REAR PANEL	1		VX
		E207780-014SS	REAR PANEL	1		C
	65	E73273-003	SPECIAL SCREW	4		
		E73273-003	SPECIAL SCREW	2		U
		E73273-003	SPECIAL SCREW	2		UT
	66	SXST3006M	SCREW	9		
	67	E207356-222	REAR COVER	1		J

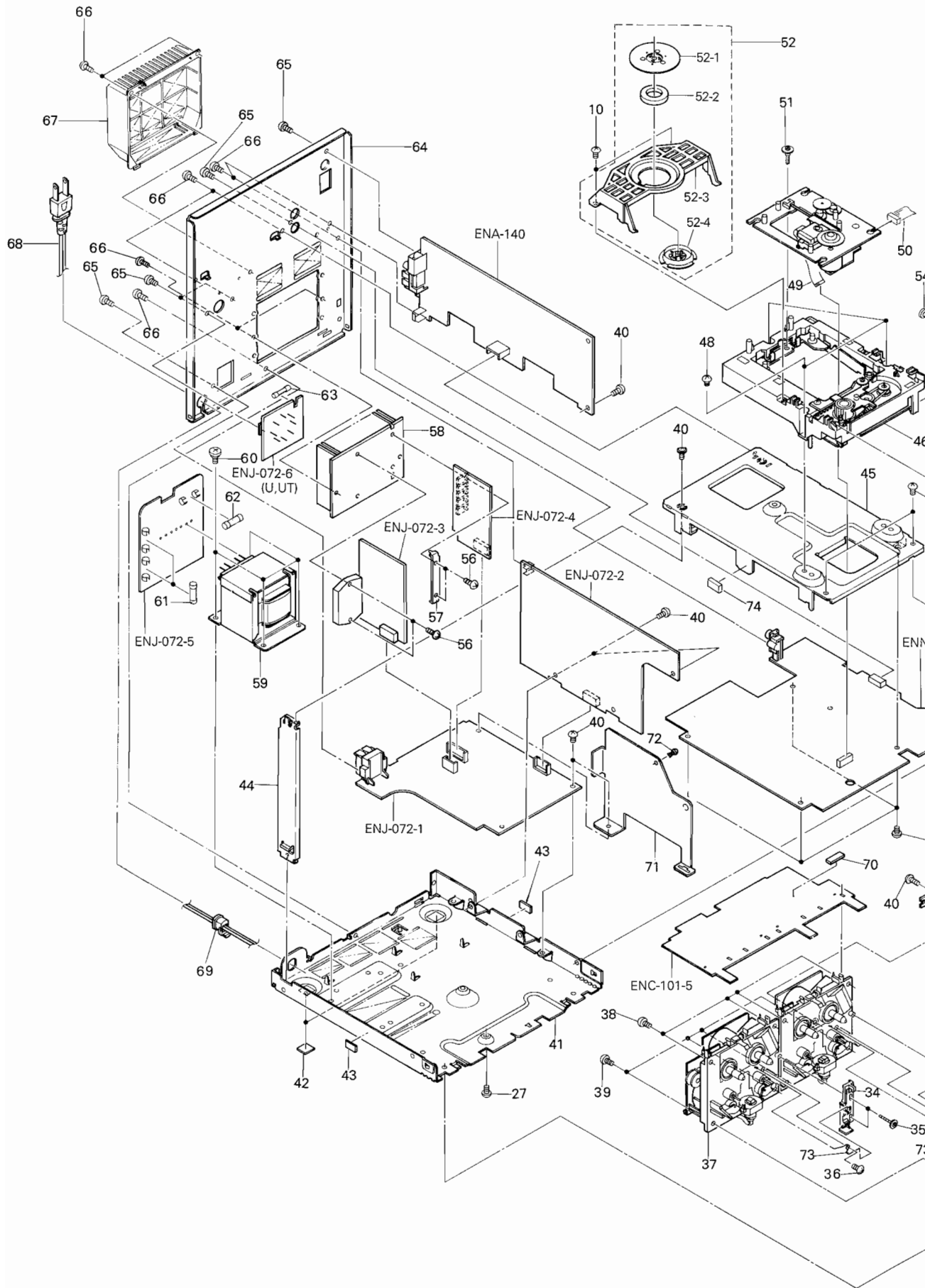
⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
		E207356-223SS	REAR COVER	1		C
		E207356-223SS	REAR COVER	1		A
		E207356-223SS	REAR COVER	1		BS
		E207356-223SS	REAR COVER	1		EF
		E207356-223SS	REAR COVER	1		EN
		E207356-223SS	REAR COVER	1		G
		E207356-223SS	REAR COVER	1		GI
		E207356-223SS	REAR COVER	1		VX
		E207356-223SS	REAR COVER	1		U
		E207356-223SS	REAR COVER	1		UT
⚠	68	QMP1D00-200H	POWER CORD	1		J
⚠		QMP1D00-200H	POWER CORD	1		C
⚠		QMP25F0-244	POWER CORD	1		A
⚠		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		VX
⚠		QMP5530-0085BS	POWER CORD	1		BS
⚠		QMP7520-200	POWER CORD	1		U
⚠		QMP7520-200	POWER CORD	1		UT
⚠	69	QHS3876-162	CORD STOPPER	1		J
⚠		QHS3876-162	CORD STOPPER	1		EF
⚠		QHS3876-162	CORD STOPPER	1		A
⚠		QHS3876-162	CORD STOPPER	1		C
⚠		QHS3876-162	CORD STOPPER	1		EN
⚠		QHS3876-162	CORD STOPPER	1		G
⚠		QHS3876-162	CORD STOPPER	1		GI
⚠		QHS3876-162	CORD STOPPER	1		VX
⚠		QHS3876-162	CORD STOPPER	1		U
⚠		QHS3876-162	CORD STOPPER	1		UT
⚠		QHS3876-162BS	CORD STOPPER	1		BS
	70	E306805-087	SPACER	1		
	71	E308548-002SS	SHIELD BRACKET	1		
	72	E48729-008	PLASTIC RIVET	1		
	73	E407304-001	SPRING	2		
	74	E306805-085	SPACER	1		G
		E306805-085	SPACER	1		GI
	-	E307570-001	NUMBER LABEL	1		J
		E61029-005	NUMBER LABEL	1		C
		E61029-005	NUMBER LABEL	1		A
		E61029-005	NUMBER LABEL	1		BS
		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		VX
		E61029-005	NUMBER LABEL	1		U
		E61029-005	NUMBER LABEL	1		UT
	-	E67199-001	CAUTION LABEL	2		J
		E65507-001	CAUTION LABEL	2		C
	-	E406507-001	CAUTION LABEL	1		C
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		E406507-001	CAUTION LABEL	1		BS
		E406507-001	CAUTION LABEL	1		EF

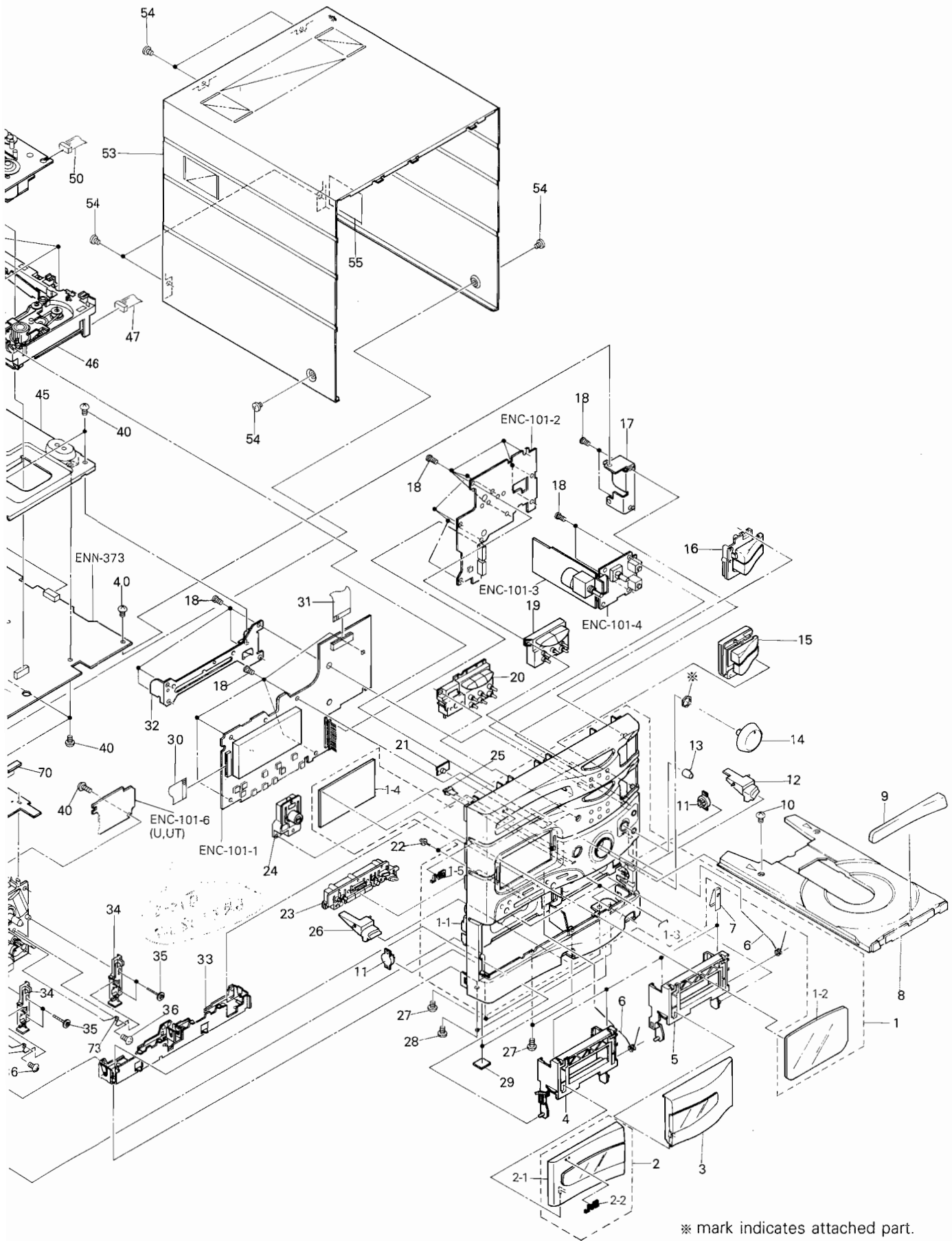
	Item	Part Number	Part Name	Q'ty	Description	Areas
		E406507-001	CAUTION LABEL	1		EN
		E406507-001	CAUTION LABEL	1		G
		E406507-001	CAUTION LABEL	1		GI
		E406507-001	CAUTION LABEL	1		VX
		E406507-001	CAUTION LABEL	1		U
	—	E406507-001	CAUTION LABEL	1		UT
		E70891-001	CLASS 1 LABEL	1		A
		E70891-001	CLASS 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		VX
		E70891-001	CLASS 1 LABEL	1		U
		E70891-001	CLASS 1 LABEL	1		UT
	—	E45858-002	CSA LABEL	1		C
	—	QZL1031-101	APPROVAL LABEL	1		EF
	—	E70027-001	SEV LABEL	1		EN

 SAFETY PARTS

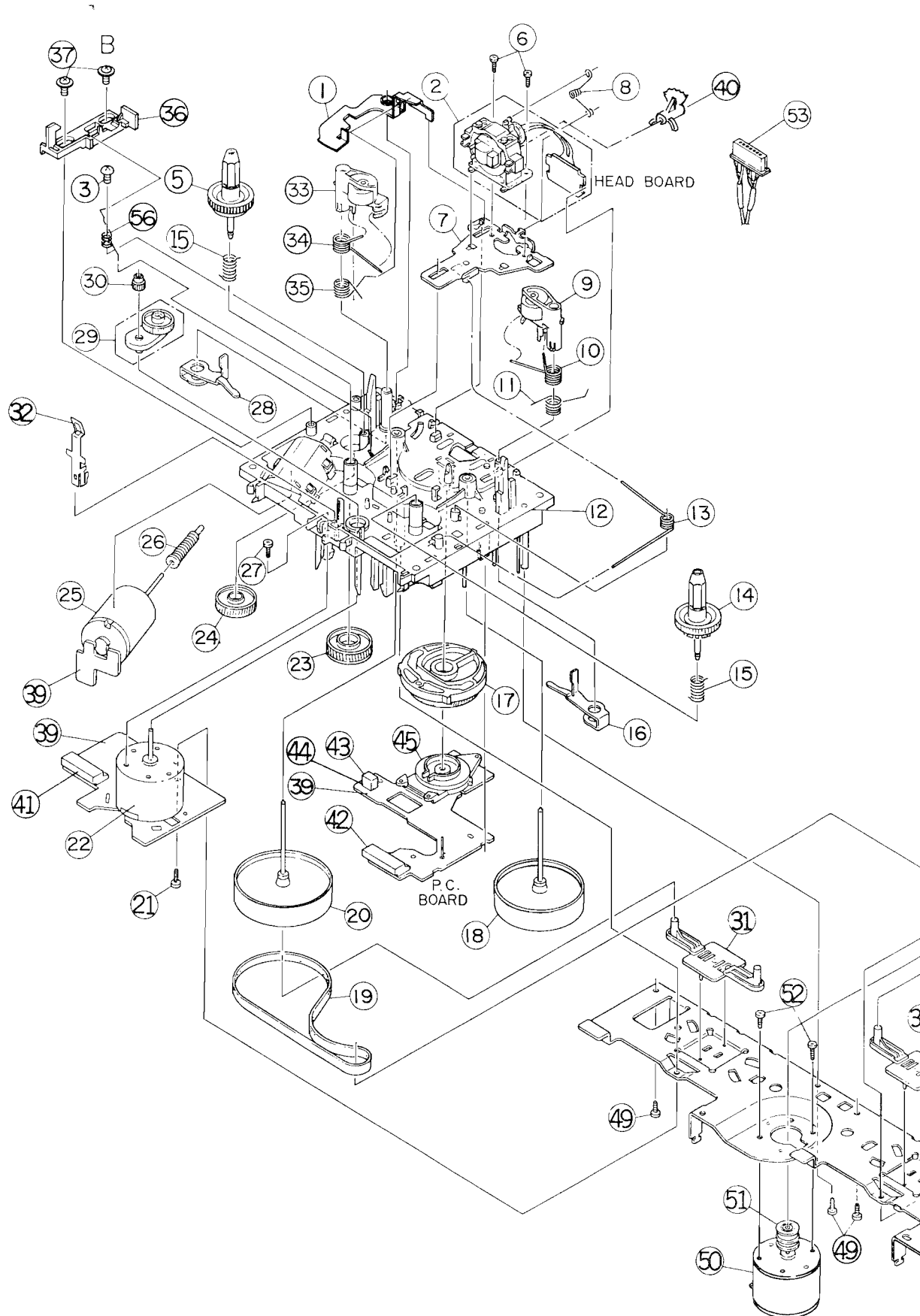
The Marks for Designated Areas

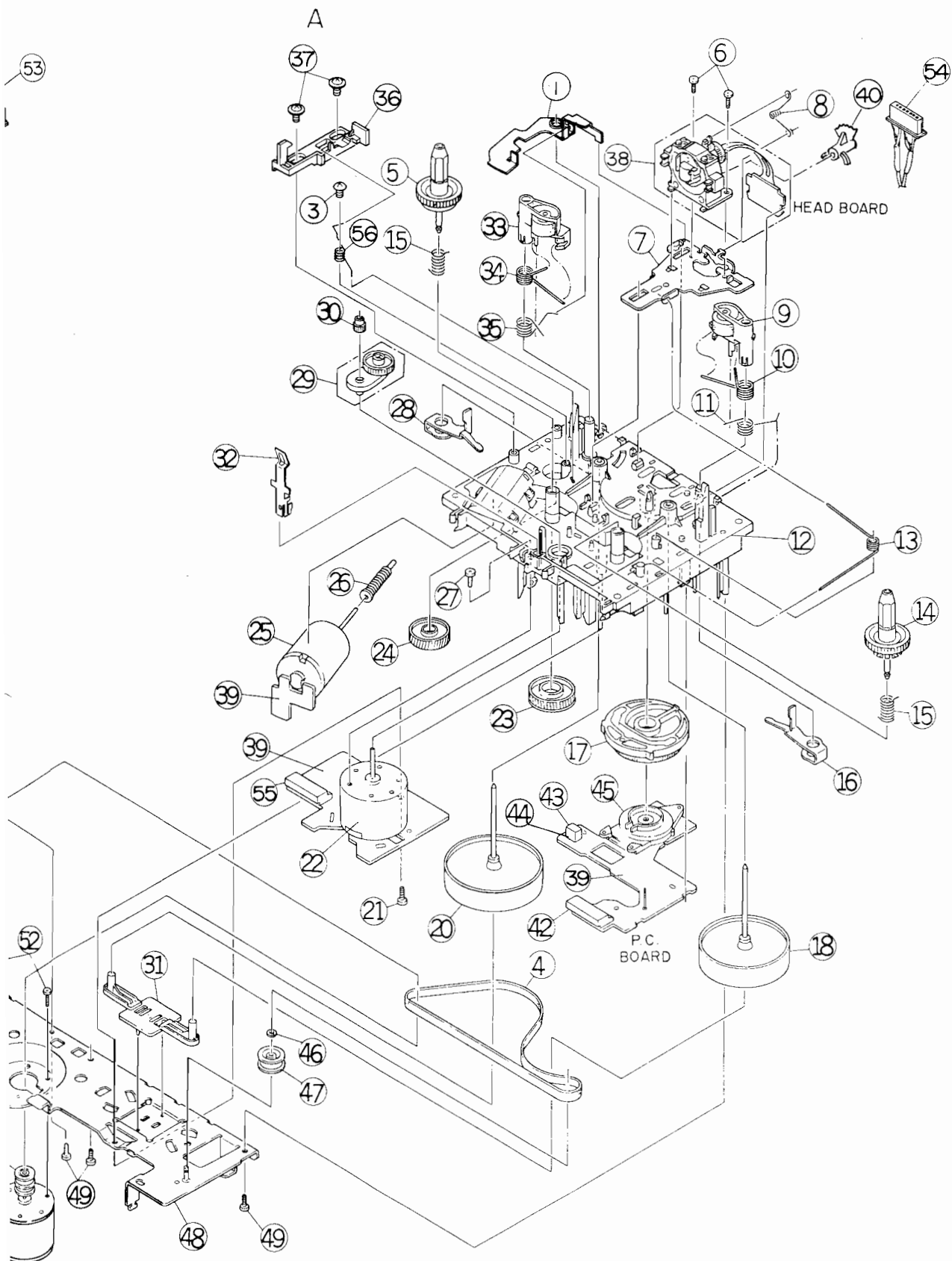
J	the U.S.A.	C	Canada	A	Australia	EN	Scandinavia
EF	Continental Europe	BS	the U.K.	G	Germany	VX ...	East Europe
GI	Italy	UT	Taiwan	U	Universal Type	No mark indicates all areas.	





Cassette Mechanism Ass'y and Parts List

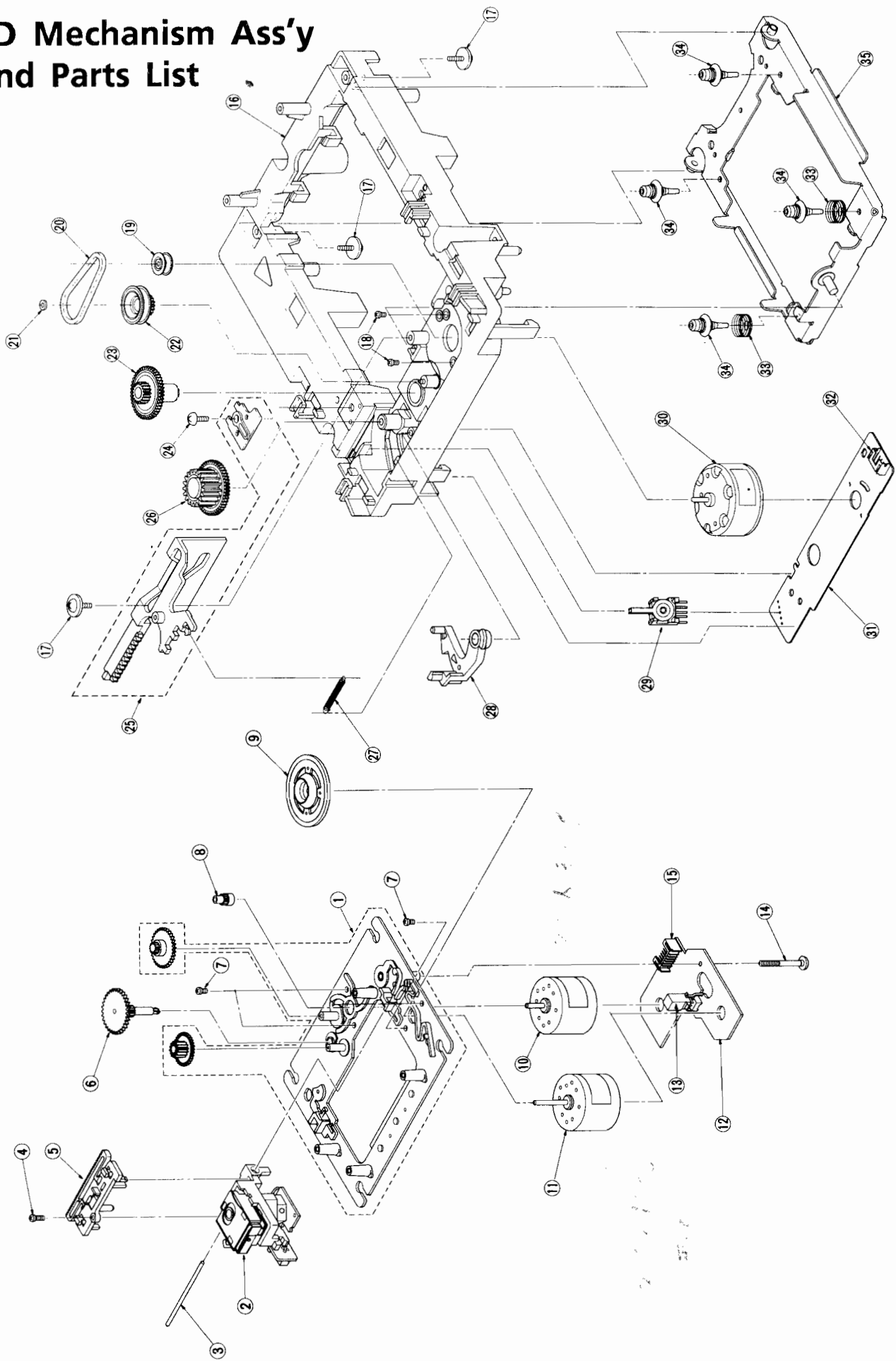




■ Parts List (Cassette Mechanism Ass'y)

Item	Part Number	Part Name	Q'ty	Description	Area
1	VKL7246-001	EJECT BRACKET	2		
2	VKS3551-00B	HEAD MOUNT ASS'Y	1	(B)	
3	GBSF3008Z	SCREW	2		
4	VKB3001-054	BELT	1	(A)	
5	VKS5321-00D	REEL ASS'Y	2	RIGHT	
6	SDST2004Z	SCREW	4	FOR HEAD MOUNT ASSY	
7	VKL6942-00E	HEAD BASE ASS'Y	2		
8	VKW4994-001	HEAD SPRING	2		
9	VKP4221-00C	PINCH ROLLER	2	LEFT	
10	VKW4982-001	TORSION SPRING	2	LEFT	
11	VKW4933-005	TORSION SPRING	2	LEFT	
12	VKS1125-00A	CHASSIS BASE ASS'Y	2		
13	VKW4930-002	RETURN SPRING	2		
14	VKS3480-005	REEL ASS'Y	2	LEFT	
15	VKW4928-003	B.T. SPRING	4	FOR REEL ASSY	
16	VKL6940-002	PINCH ROLLER LEVER	2	LEFT	
17	VKS2209-005	CONTROL CAM	2		
18	VKF3186-00C	FLYWHEEL ASS'Y	2	LEFT	
19	VKB3001-055	BELT	1	(B)	
20	VKF3184-00C	FLYWHEEL ASS'Y	2	RIGHT	
21	SDSF2608Z	SCREW	2	PC BOARD-FM BRACKET	
22	MMN-6F4RA38	D.C. MOTOR	2	REEL	
23	VKS5331-002	GEAR	2		
24	VKS5330-004	GEAR	2		
25	MXN-13FB12F	D.C. MOTOR	2	CAM	
26	VKS5329-002	GEAR	2		
27	SDSP2605Z	SCREW	2	CHASSIS BASE-D.C.MOTOR	
28	VKL6939-002	PINCH ROLLER LEVER	2	RIGHT	
29	VKS5325-00F	F.F/REW.ARM ASS'Y	2		
30	VKS5328-002	REEL MOTOR GEAR	2		
31	VKS5327-003	THRUST PLATE	2		
32	VKY4628-002	SPRING	2		
33	VKP4219-00C	PINCH ROLLER ASS'Y	2	RIGHT	
34	VKW4981-001	TORSION SPRING	2	RIGHT	
35	VKW4932-005	TORSION SPRING	2	RIGHT	
36	E308162-001	EJECT LEVER	2		
37	E407214-001	SPECIAL SCREW	4		
38	VKS3550-00B	HEAD MOUNT ASS'Y	1	(A)	
39	VMW2362-001	CIRCUIT BOARD	2		
40	VKS3485-002	HEAD GEAR	2		
41	VMC0234-R08	CONNECTOR	1	(B)	
42	VMC0234-R07	CONNECTOR	2		
43	DN6851A	I.C.	2		
44	VKS3487-002	IC HOLDER	2		
45	VKS3587-00A	CAM SWITCH ASS'Y	2		
46	WDL163525-4	WASHER	1		
47	VKR4631-003	IDLER PULLEY	1		
48	VKM3618-00A	FM BRACKET	1		
49	SDSF2605Z	SCREW	4	CHASSIS BASE-FM BRACKET	
50	MMI-6H2LWSK	MOTOR	1	CAPSTAN	
51	VKR4632-002	MOTOR PULLEY	1		
52	SPSP2603Z	SCREW	2		
53	VDM007P-024I	HEAD WIRE	1	(B)	
54	VDM003P-040I	HEAD WIRE	1	(A)	
55	VMC0234-R04	CONNECTOR	1	(A)	
56	E407304-001	SPRING	2		

CD Mechanism Ass'y and Parts List



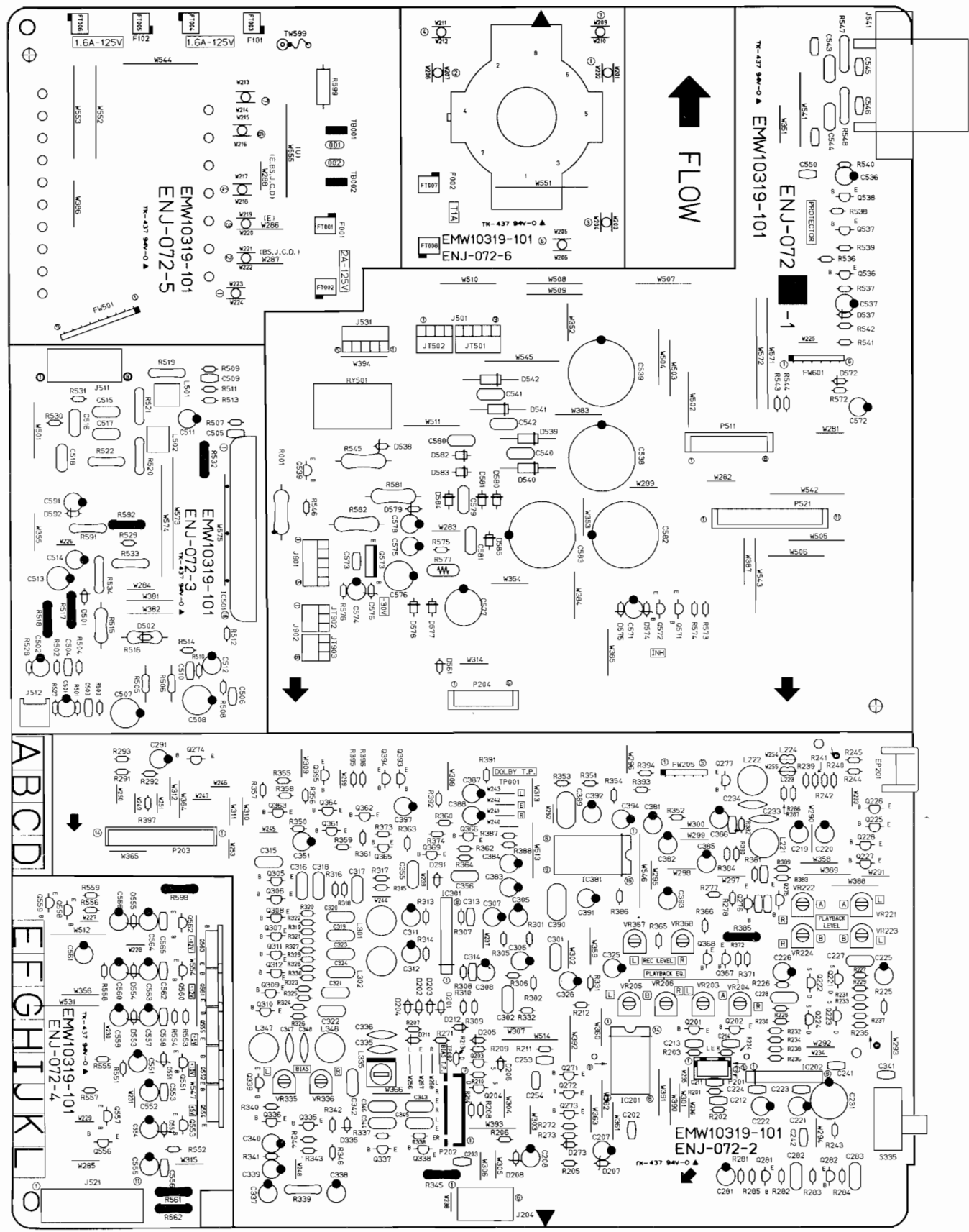
■ Parts List (CD Mechanism Ass'y)

Item	Part Number	Part Name	Q'ty	Description	Area
1	EPB-002A	MECHANISM BASE ASSY	1		
2	OPTIMA-6S	PICK UP ASS'Y	1		
3	E406777-001	SHAFT	1		
4	SDSF2006Z	SCREW	1		
5	E307746-001	CD RACK	1		
6	EPB-003A	MECHANISM BASE ASSY	1		
7	SDSP2003N	SCREW	4		
8	E406750-001	PINION GEAR	1		
9	EPB-001C	TURNTABLE	1		
10	E406784-001	DC MOTOR <i>2A-17-5</i>	1		
11	E406783-001	DC MOTOR <i>2A-17-5</i>	1		
12	EMW10190-001(S)	CIRCUIT BOARD	1		
13	ESB1100-005	LEAF SWITCH	1		
14	E75832-001	SPECIAL SCREW	1		
15	EMV5109-006B	PLUG ASSY	1	6PIN	
16	E102357-221	LOADING BASE	1		
17	E65923-003	SCREW	3		
18	SPSK2640Z	SCREW	2		
19	E75984-001	MOTOR PULLEY	1		
20	E75950-002	BELT	1		
21	E72024-001	SPEED NUT	1		
22	E75985-001	GEAR	1		
23	E75986-002	GEAR	1		
24	SBSF3008Z	SCREW	1		
25	E307252-221	CAM - PLATE	1		
26	E75987-001	REEL GEAR	1		
27	E75989-001	SPRING	1		
28	E307162-221	LEVER	1		
29	ESS1200-002	SLIDE SWITCH	1		
30	RF-500TB-12560	MOTOR	1		
31	EMW10255-002(S)	CIRCUIT BOARD	1		
32	EMV5109-005B	PLUG ASSY	1	5PIN	
33	E406871-001	SPRING	2		
34	E406294-002	INSULATOR	4		
35	E307179-221	ELEVATOR BASE ASSY	1		

Printed Circuit Board Ass'y and Parts List

■ ENJ-072 □ Power Supply & Deck PC Board Ass'y

Note : ENJ-072 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENJ-072 [B]	Taiwan, Universal Type
ENJ-072 [H]	the U.S.A., Canada
ENJ-072 [I]	Australia
ENJ-072 [J]	Scandinavia, East Europe Continental Europe
ENJ-072 [K]BS	the U.K.
ENJ-072 [L]	Germany, Italy

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q201	DTC144ES	SILICON ROHM	
Q202	DTC144ES	SILICON ROHM	
Q203	2SK373(O,Y)	F.E.T TOSHIBA	
Q204	2SK373(O,Y)	F.E.T TOSHIBA	
Q221	2SK301(Q,R)	F.E.T MATSUSHITA	
Q222	2SK301(Q,R)	F.E.T MATSUSHITA	
Q223	2SK301(Q,R)	F.E.T MATSUSHITA	
Q224	2SK301(Q,R)	F.E.T MATSUSHITA	
Q225	DTC114YS	SILICON ROHM	
Q226	DTC114YS	SILICON ROHM	
Q227	DTC114YS	SILICON ROHM	
Q228	DTC114YS	SILICON ROHM	
Q271	DTC144ES	SILICON ROHM	
Q272	DTA144ES	SILICON ROHM	
Q273	DTA144ES	SILICON ROHM	
Q274	DTC144ES	SILICON ROHM	
Q275	2SD2144S(VW)	SILICON ROHM	
Q276	2SD2144S(VW)	SILICON ROHM	
Q277	DTC144ES	SILICON ROHM	
Q281	2SC1685(Q,R)	SILICON MATSUSHITA	
Q282	2SC1685(Q,R)	SILICON MATSUSHITA	
Q305	DTC144TS	SILICON ROHM	
Q306	DTC144TS	SILICON ROHM	
Q307	DTC144TS	SILICON ROHM	
Q308	DTC144TS	SILICON ROHM	
Q309	DTC144TS	SILICON ROHM	
Q310	DTC144TS	SILICON ROHM	
Q311	DTC144TS	SILICON ROHM	
Q312	DTC144TS	SILICON ROHM	
Q335	2SC945A(P,Q)	SILICON NEC	
Q336	2SC945A(P,Q)	SILICON NEC	
Q337	2SC1685(Q,R)	SILICON MATSUSHITA	
Q338	2SC1685(Q,R)	SILICON MATSUSHITA	
Q339	DTC144ES	SILICON ROHM	
Q361	2SC1685(Q,R)	SILICON MATSUSHITA	
Q362	2SC1685(Q,R)	SILICON MATSUSHITA	
Q363	2SC1685(Q,R)	SILICON MATSUSHITA	
Q364	2SC1685(Q,R)	SILICON MATSUSHITA	
Q365	2SC1685(Q,R)	SILICON MATSUSHITA	
Q366	2SC1685(Q,R)	SILICON MATSUSHITA	
Q367	2SD2144S(VW)	SILICON ROHM	
Q368	2SD2144S(VW)	SILICON ROHM	
Q369	DTC144ES	SILICON ROHM	
Q393	2SD2144S(VW)	SILICON ROHM	
Q394	2SD2144S(VW)	SILICON ROHM	
Q395	DTA144ES	SILICON ROHM	
Q536	2SC1685(Q,R)	SILICON MATSUSHITA	
Q537	2SC1685(Q,R)	SILICON MATSUSHITA	
Q538	2SA933S(R,S)	SILICON ROHM	
Q539	2SC1685(Q,R)	SILICON MATSUSHITA	
Q551	2SC1685(Q,R)	SILICON MATSUSHITA	
Q552	2SD2061(F,G)	SILICON ROHM	
Q553	2SC1685(Q,R)	SILICON MATSUSHITA	
Q554	2SD2061(F,G)	SILICON ROHM	
Q555	2SB1187(F,G)	SILICON ROHM	
Q556	DTC144ES	SILICON ROHM	
Q557	DTA144ES	SILICON ROHM	
Q558	DTA144ES	SILICON ROHM	
Q559	DTC144ES	SILICON ROHM	
Q560	2SC1685(Q,R)	SILICON MATSUSHITA	
Q561	2SD2061(F,G)	SILICON ROHM	
Q562	2SA733A(P,Q)	SILICON NEC	
Q563	2SB1187(F,G)	SILICON ROHM	
Q571	DTC114YS	SILICON ROHM	
Q572	DTC114YS	SILICON ROHM	
Q573	2SB1357(E,F)	SILICON ROHM	

△ : SAFETY PARTS

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC201	BU4066B	I.C. ROHM	
IC202	UPC1228HA	I.C. NEC	
IC301	BA15218N	I.C. ROHM	
IC381	HA12136AT	I.C. HITACHI	
IC501	STK4141MK5	I.C. SANYO	

△ : SAFETY PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D201	1SS119	SILICON HITACHI	
D202	1SS119	SILICON HITACHI	
D203	1SS119	SILICON HITACHI	
D204	1SS119	SILICON HITACHI	
D205	1SS119	SILICON HITACHI	
D206	1SS119	SILICON HITACHI	
D207	MTZ5.6JC	ZENER ROHM	
D208	MTZ5.6JC	ZENER ROHM	
D211	1SS119	SILICON HITACHI	
D212	1SS119	SILICON HITACHI	
D273	1SS119	SILICON HITACHI	
D291	1SS119	SILICON HITACHI	
D335	1SS119	SILICON HITACHI	
D501	1SS119	SILICON HITACHI	
D502	1SS119	SILICON HITACHI	
D537	1SS119	SILICON HITACHI	
D538	MTZ24JC	ZENER ROHM	
D539	ERB12-02RKL1	SILICON KYOUDOU	
D540	ERB12-02RKL1	SILICON KYOUDOU	
D541	ERB12-02RKL1	SILICON KYOUDOU	
D542	ERB12-02RKL1	SILICON KYOUDOU	
D551	MTZ11JC	ZENER ROHM	
D552	MTZ6.8JC	ZENER ROHM	
D553	MTZ5.6JC	ZENER ROHM	
D554	MTZ13JC	ZENER ROHM	
D555	MTZ13JC	ZENER ROHM	
D561	1SS119	SILICON HITACHI	
D572	1SS119	SILICON HITACHI	
D574	MTZ5.1JC	ZENER ROHM	
D575	1SS119	SILICON HITACHI	
D576	MTZ30JC	ZENER ROHM	
D577	1SR139-200	SILICON ROHM	
D578	1SR139-200	SILICON ROHM	
D579	MTZ5.1JC	ZENER ROHM	
D580	1SR139-200	SILICON ROHM	
D581	1SR139-200	SILICON ROHM	
D582	1SR139-200	SILICON ROHM	
D583	1SR139-200	SILICON ROHM	
D584	1SR139-200	SILICON ROHM	
D585	1SR139-200	SILICON ROHM	
D592	1SS119	SILICON HITACHI	

△ : SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C202	QCHB1EZ-223	0.022MF 25V CERAMIC	L
C203	QCHB1EZ-223	0.022MF 25V CERAMIC	L
C207	QETB1AM-476	47MF 10V ELECTRO	
C208	QETB1AM-476	47MF 10V ELECTRO	
C211	QCBB1HK-471	470PF 50V CERAMIC	
C212	QCBB1HK-471	470PF 50V CERAMIC	
C213	QCXB1CM-122	1200PF 16V CERAMIC	
C214	QCXB1CM-122	1200PF 16V CERAMIC	
C219	QETB1HM-225	2.2MF 50V ELECTRO	
C220	QETB1HM-225	2.2MF 50V ELECTRO	
C221	QETB1HM-225	2.2MF 50V ELECTRO	
C222	QETB1HM-225	2.2MF 50V ELECTRO	
C223	QCBB1HK-101	100PF 50V CERAMIC	
C224	QCBB1HK-101	100PF 50V CERAMIC	
C225	QEK51CM-107	100MF 16V ELECTRO	
C226	QEK51CM-107	100MF 16V ELECTRO	
C227	QFN81HJ-822	8200PF 50V MYLAR	
C228	QFN81HJ-822	8200PF 50V MYLAR	
C231	QETB1CM-477	470MF 16V ELECTRO	
C233	QCS21HJ-101	100PF 50V CERAMIC	
C234	QCS21HJ-101	100PF 50V CERAMIC	
C241	QCHB1EZ-223	0.022MF 25V CERAMIC	B
C241	QCHB1EZ-223	0.022MF 25V CERAMIC	H
C241	QCHB1EZ-223	0.022MF 25V CERAMIC	I
C241	QCHB1EZ-223	0.022MF 25V CERAMIC	J
C241	QCHB1EZ-223	0.022MF 25V CERAMIC	KBS
C242	QCHB1EZ-223	0.022MF 25V CERAMIC	B
C242	QCHB1EZ-223	0.022MF 25V CERAMIC	H
C242	QCHB1EZ-223	0.022MF 25V CERAMIC	I
C242	QCHB1EZ-223	0.022MF 25V CERAMIC	J
C242	QCHB1EZ-223	0.022MF 25V CERAMIC	KBS
C253	QCXB1CM-182	1800PF 16V CERAMIC	
C254	QCXB1CM-182	1800PF 16V CERAMIC	
C281	QEK51HM-105G	1MF 50V ELECTRO	
C282	QFN81HJ-223	0.022MF 50V MYLAR	

△ : SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C283	QFN81HJ-223	0.022MF 50V MYLAR	
C291	QETB1AM-476	47MF 10V ELECTRO	
C301	QFN81HJ-104	0.1MF 50V MYLAR	
C302	QFN81HJ-104	0.1MF 50V MYLAR	
C305	QETB1HM-225	2.2MF 50V ELECTRO	
C306	QETB1HM-225	2.2MF 50V ELECTRO	
C307	QETB1HM-225	2.2MF 50V ELECTRO	
C308	QETB1HM-225	2.2MF 50V ELECTRO	
C311	QETB1EM-226	22MF 25V ELECTRO	
C312	QETB1EM-226	22MF 25V ELECTRO	
C313	QCSB1HJ-470	47PF 50V CERAMIC	
C314	QCSB1HJ-470	47PF 50V CERAMIC	
C315	QCY21HK-682	6800PF 50V CERAMIC	
C316	QCY21HK-682	6800PF 50V CERAMIC	
C317	QCY21HK-562	5600PF 50V CERAMIC	
C318	QCY21HK-562	5600PF 50V CERAMIC	
C319	QFN81HJ-822	8200PF 50V MYLAR	
C320	QFN81HJ-822	8200PF 50V MYLAR	
C321	QCY21HK-122	1200PF 50V CERAMIC	
C322	QCY21HK-122	1200PF 50V CERAMIC	
C323	QCY21HK-682	6800PF 50V CERAMIC	
C324	QCY21HK-682	6800PF 50V CERAMIC	
C325	QETB1CM-107	100MF 16V ELECTRO	
C326	QETB1CM-107	100MF 16V ELECTRO	
C335	QCS21HJ-101	100PF 50V CERAMIC	
C336	QCS21HJ-101	100PF 50V CERAMIC	
C337	QEK51EM-106	10MF 25V ELECTRO	
C338	QEK51EM-476	47MF 25V ELECTRO	
C339	QEK51HM-105G	1MF 50V ELECTRO	
C340	QETB1HM-105	1MF 50V ELECTRO	
C341	QCB1HK-561	560PF 50V CERAMIC	J
C341	QCB1HK-561	560PF 50V CERAMIC	KBS
C341	QCB1HK-561	560PF 50V CERAMIC	L
C342	QFP81HJ-822	8200PF 50V POLY	
C343	QFN81HJ-123	0.012MF 50V MYLAR	
C344	QFN81HJ-222	2200PF 50V MYLAR	
C345	QFN81HJ-222	2200PF 50V MYLAR	
C346	QFN81HJ-682	6800PF 50V MYLAR	
C347	QCS21HJ-101	100PF 50V CERAMIC	
C348	QCS21HJ-101	100PF 50V CERAMIC	
C351	QETB1HM-106	10MF 50V ELECTRO	
C355	QFN81HJ-473	0.047MF 50V MYLAR	
C356	QFN81HJ-473	0.047MF 50V MYLAR	
C381	QETB1HM-105	1MF 50V ELECTRO	
C382	QETB1HM-105	1MF 50V ELECTRO	
C383	QETB1HM-475	4.7MF 50V ELECTRO	
C384	QETB1HM-475	4.7MF 50V ELECTRO	
C385	QETB1HM-105	1MF 50V ELECTRO	
C386	QETB1HM-105	1MF 50V ELECTRO	
C387	QETB1HM-475	4.7MF 50V ELECTRO	
C388	QETB1HM-475	4.7MF 50V ELECTRO	
C389	QFV81HJ-224	0.22MF 50V T.FILM	
C390	QFV81HJ-224	0.22MF 50V T.FILM	
C391	QETB1HM-475	4.7MF 50V ELECTRO	
C392	QETB1HM-475	4.7MF 50V ELECTRO	
C393	QETB1CM-107	100MF 16V ELECTRO	
C394	QETB1HM-475	4.7MF 50V ELECTRO	
C397	QETB1EM-226	22MF 25V ELECTRO	
C501	EET5009-106	10MF ELECTRO	
C502	EET5009-106	10MF ELECTRO	
C503	QCB1HK-471	470PF 50V CERAMIC	B
C503	QCB1HK-471	470PF 50V CERAMIC	H
C503	QCB1HK-471	470PF 50V CERAMIC	I
C503	QCB1HK-471	470PF 50V CERAMIC	J
C503	QCB1HK-471	470PF 50V CERAMIC	KBS
C504	QCB1HK-471	470PF 50V CERAMIC	B
C504	QCB1HK-471	470PF 50V CERAMIC	H
C504	QCB1HK-471	470PF 50V CERAMIC	I
C504	QCB1HK-471	470PF 50V CERAMIC	J
C504	QCB1HK-471	470PF 50V CERAMIC	KBS
C505	QCB1HK-221	220PF 50V CERAMIC	
C506	QCB1HK-221	220PF 50V CERAMIC	
C507	QETB1EM-107	100MF 25V ELECTRO	
C508	QETB1EM-107	100MF 25V ELECTRO	
C509	QCSB1HJ-100	10PF 50V CERAMIC	
C510	QCSB1HJ-100	10PF 50V CERAMIC	
C511	QETB1HM-226	22MF 50V ELECTRO	
C512	QETB1HM-226	22MF 50V ELECTRO	
C513	QETB1HM-476	47MF 50V ELECTRO	
C514	QETB1HM-106	10MF 50V ELECTRO	
C515	QFN81HJ-104	0.1MF 50V MYLAR	
C516	QFN81HJ-104	0.1MF 50V MYLAR	
C517	QFN81HJ-104	0.1MF 50V MYLAR	
C518	QFN81HJ-104	0.1MF 50V MYLAR	
C536	QETB1CM-476	47MF 16V ELECTRO	
C537	QETB1EM-226	22MF 25V ELECTRO	
C538	EET4202-228E	2200MF ELECTRO	B
C538	EET4202-338E	3300MF ELECTRO	H
C538	EET4202-228E	2200MF ELECTRO	I
C538	EET4202-228E	2200MF ELECTRO	J
C538	EET4202-228E	2200MF ELECTRO	KBS
C538	EET4202-228E	2200MF ELECTRO	L
C539	EET4202-228E	2200MF ELECTRO	B
C539	EET4202-338E	3300MF ELECTRO	H
C539	EET4202-228E	2200MF ELECTRO	I

△ : ISIA FIEITY IPIARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C539	EET4202-228E	2200MF ELECTRO	J
C539	EET4202-228E	2200MF ELECTRO	KBS
C539	EET4202-228E	2200MF ELECTRO	L
C540	QFN82AJ-103	0.01MF 100V MYLAR	B
C540	QFN82AJ-103	0.01MF 100V MYLAR	H
C540	QFN82AJ-103	0.01MF 100V MYLAR	I
C540	QFN82AJ-103	0.01MF 100V MYLAR	J
C540	QFN82AJ-103	0.01MF 100V MYLAR	KBS
C540	QFV82AJ-104	0.1MF 100V T.FILM	L
C541	QFN82AJ-103	0.01MF 100V MYLAR	B
C541	QFN82AJ-103	0.01MF 100V MYLAR	H
C541	QFN82AJ-103	0.01MF 100V MYLAR	I
C541	QFN82AJ-103	0.01MF 100V MYLAR	J
C541	QFN82AJ-103	0.01MF 100V MYLAR	KBS
C541	QFV82AJ-104	0.1MF 100V T.FILM	L
C542	QFN82AJ-103	0.01MF 100V MYLAR	B
C542	QFN82AJ-103	0.01MF 100V MYLAR	H
C542	QFN82AJ-103	0.01MF 100V MYLAR	I
C542	QFN82AJ-103	0.01MF 100V MYLAR	J
C542	QFN82AJ-103	0.01MF 100V MYLAR	KBS
C542	QFV82AJ-104	0.1MF 100V T.FILM	L
C543	QFN81HJ-103	0.01MF 50V MYLAR	L
C544	QFN81HJ-103	0.01MF 50V MYLAR	L
C545	QCXB1CM-222	2200PF 16V CERAMIC	L
C546	QCXB1CM-222	2200PF 16V CERAMIC	L
C547	QCHB1EZ-223	0.022MF 25V CERAMIC	L
C548	QCHB1EZ-223	0.022MF 25V CERAMIC	L
C550	QCVB1CM-103	0.01MF 16V CERAMIC	
C551	QETB1EM-226	22MF 25V ELECTRO	
C552	QETB1CM-476	47MF 16V ELECTRO	
C553	QCVB1CM-103	0.01MF 16V CERAMIC	
C554	QETB1AM-476	47MF 10V ELECTRO	
C555	QETB1AM-476	47MF 10V ELECTRO	
C556	QCVB1CM-103	0.01MF 16V CERAMIC	
C557	QETB1EM-226	22MF 25V ELECTRO	
C558	QCVB1CM-103	0.01MF 16V CERAMIC	
C559	QETB1CM-476	47MF 16V ELECTRO	
C560	QETB1HM-106	10MF 50V ELECTRO	
C561	QETB1HM-106	10MF 50V ELECTRO	
C562	QCVB1CM-103	0.01MF 16V CERAMIC	
C563	QETB1HM-106	10MF 50V ELECTRO	
C564	QETB1EM-226	22MF 25V ELECTRO	
C565	QCVB1CM-103	0.01MF 16V CERAMIC	
C566	QETB1EM-226	22MF 25V ELECTRO	
C571	QETB1HM-225	2.2MF 50V ELECTRO	
C572	QETB1HM-106	10MF 50V ELECTRO	
C573	QCGB1HK-102	1000PF 50V CERAMIC	
C574	QETB1HM-226	22MF 50V ELECTRO	
C575	QETB1HM-226	22MF 50V ELECTRO	
C576	QETB1JM-476	47MF 63V ELECTRO	
C577	QETB1JM-107	100MF 63V ELECTRO	
C578	QETB1HM-475	4.7MF 50V ELECTRO	
C579	QFN82AJ-103	0.01MF 100V MYLAR	
C580	QFN82AJ-103	0.01MF 100V MYLAR	
C581	QFN82AJ-103	0.01MF 100V MYLAR	
C582	EET3501-228T	2200MF ELECTRO	
C583	EET3501-228T	2200MF ELECTRO	
C591	QETB1HM-106	10MF 50V ELECTRO	

△ : ISIA FIEITY IPIARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R201	QRD167J-224	220K 1/6W CARBON	
R202	QRD167J-224	220K 1/6W CARBON	
R203	QRD167J-512	5.1K 1/6W CARBON	
R204	QRD167J-512	5.1K 1/6W CARBON	
R205	QRD167J-471	470 1/6W CARBON	
R206	QRD167J-471	470 1/6W CARBON	
R207	QRD167J-100	10 1/6W CARBON	
R208	QRD167J-100	10 1/6W CARBON	
R209	QRD167J-105	1M 1/6W CARBON	
R210	QRD167J-105	1M 1/6W CARBON	
R211	QRD167J-512	5.1K 1/6W CARBON	
R212	QRD167J-512	5.1K 1/6W CARBON	
R213	QRD167J-475	4.7M 1/6W CARBON	
R214	QRD167J-475	4.7M 1/6W CARBON	
R225	QRD167J-470	47 1/6W CARBON	
R226	QRD167J-470	47 1/6W CARBON	
R227	QRD167J-334	330K 1/6W CARBON	
R228	QRD167J-334	330K 1/6W CARBON	
R229	QRD167J-432	4.3K 1/6W CARBON	
R230	QRD167J-432	4.3K 1/6W CARBON	
R231	QRD167J-272	2.7K 1/6W CARBON	
R232	QRD167J-272	2.7K 1/6W CARBON	
R233	QRD167J-272	2.7K 1/6W CARBON	
R234	QRD167J-272	2.7K 1/6W CARBON	
R235	QRD167J-223	22K 1/6W CARBON	
R236	QRD167J-223	22K 1/6W CARBON	
R237	QRD167J-752	7.5K 1/6W CARBON	
R238	QRD167J-752	7.5K 1/6W CARBON	
R239	QRD167J-105	1M 1/6W CARBON	
R240	QRD167J-105	1M 1/6W CARBON	

△ : ISIA FIEITY IPIARTS

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R241	QRD167J-105	1M	1/6W	CARBON	
	R242	QRD167J-105	1M	1/6W	CARBON	
	R243	QRD167J-471	470	1/6W	CARBON	
	R244	QRD167J-472	4.7K	1/6W	CARBON	
	R245	QRD167J-472	4.7K	1/6W	CARBON	
	R271	QRD167J-103	10K	1/6W	CARBON	
	R272	QRD167J-472	4.7K	1/6W	CARBON	
	R273	QRD167J-472	4.7K	1/6W	CARBON	
	R277	QRD167J-103	10K	1/6W	CARBON	
	R278	QRD167J-103	10K	1/6W	CARBON	
	R281	QRD167J-104	100K	1/6W	CARBON	
	R282	QRD167J-105	1M	1/6W	CARBON	
	R283	QRD167J-103	10K	1/6W	CARBON	
	R284	QRD167J-105	1M	1/6W	CARBON	
	R285	QRD167J-683	68K	1/6W	CARBON	
	R286	QRD167J-104	100K	1/6W	CARBON	
	R287	QRD167J-104	100K	1/6W	CARBON	
	R291	QRD167J-104	100K	1/6W	CARBON	
	R292	QRD167J-274	270K	1/6W	CARBON	
	R293	QRD167J-562	5.6K	1/6W	CARBON	
	R301	QRD167J-223	22K	1/6W	CARBON	
	R302	QRD167J-223	22K	1/6W	CARBON	
	R305	QRD167J-683	68K	1/6W	CARBON	
	R306	QRD167J-683	68K	1/6W	CARBON	
	R307	QRD167J-153	15K	1/6W	CARBON	
	R308	QRD167J-153	15K	1/6W	CARBON	
	R309	QRD167J-223	22K	1/6W	CARBON	
	R310	QRD167J-223	22K	1/6W	CARBON	
	R313	QRD167J-242	2.4K	1/6W	CARBON	
	R314	QRD167J-242	2.4K	1/6W	CARBON	
	R315	QRD167J-101	100	1/6W	CARBON	
	R316	QRD167J-101	100	1/6W	CARBON	
	R317	QRD167J-391	390	1/6W	CARBON	
	R318	QRD167J-391	390	1/6W	CARBON	
	R319	QRD167J-152	1.5K	1/6W	CARBON	
	R320	QRD167J-152	1.5K	1/6W	CARBON	
	R321	QRD167J-432	4.3K	1/6W	CARBON	
	R322	QRD167J-432	4.3K	1/6W	CARBON	
	R323	QRD167J-152	1.5K	1/6W	CARBON	
	R324	QRD167J-152	1.5K	1/6W	CARBON	
	R325	QRD167J-104	100K	1/6W	CARBON	
	R326	QRD167J-104	100K	1/6W	CARBON	
	R327	QRD167J-152	1.5K	1/6W	CARBON	
	R328	QRD167J-152	1.5K	1/6W	CARBON	
	R329	QRD167J-392	3.9K	1/6W	CARBON	
	R330	QRD167J-392	3.9K	1/6W	CARBON	
	R331	QRD161J-221	220	1/6W	CARBON	
	R332	QRD161J-221	220	1/6W	CARBON	
	R337	QRD167J-473	47K	1/6W	CARBON	
	R338	QRD167J-473	47K	1/6W	CARBON	
△	R339	QRD14CJ-5R6S	5.6	1/4W	UNF. CARBON	
	R340	QRD167J-472	4.7K	1/6W	CARBON	
	R341	QRD167J-104	100K	1/6W	CARBON	
	R342	QRD167J-332	3.3K	1/6W	CARBON	
	R343	QRD167J-181	180	1/6W	CARBON	
	R344	QRD167J-201	200	1/6W	CARBON	
△	R345	QRZ0077-100	10	1/4W	FUSIBLE	B
△	R345	QRD14CJ-100S	10	1/4W	UNF. CARBON	H
△	R345	QRZ0077-100	10	1/4W	FUSIBLE	I
△	R345	QRZ0077-100	10	1/4W	FUSIBLE	J
△	R345	QRZ0077-100	10	1/4W	FUSIBLE	KBS
△	R345	QRZ0077-100	10	1/4W	FUSIBLE	L
	R346	QRD167J-103	10K	1/6W	CARBON	
	R350	QRD167J-105	1M	1/6W	CARBON	
	R351	QRD167J-243	24K	1/6W	CARBON	
	R352	QRD167J-243	24K	1/6W	CARBON	
	R353	QRD167J-302	3K	1/6W	CARBON	
	R354	QRD167J-302	3K	1/6W	CARBON	
	R355	QRD167J-561	560	1/6W	CARBON	
	R356	QRD167J-561	560	1/6W	CARBON	
	R357	QRD167J-223	22K	1/6W	CARBON	
	R358	QRD167J-223	22K	1/6W	CARBON	
	R359	QRD167J-332	3.3K	1/6W	CARBON	
	R360	QRD167J-332	3.3K	1/6W	CARBON	
	R361	QRD167J-473	47K	1/6W	CARBON	
	R362	QRD167J-473	47K	1/6W	CARBON	
	R363	QRD167J-223	22K	1/6W	CARBON	
	R364	QRD167J-223	22K	1/6W	CARBON	
	R365	QRD167J-472	4.7K	1/6W	CARBON	
	R366	QRD167J-472	4.7K	1/6W	CARBON	
	R371	QRD167J-103	10K	1/6W	CARBON	
	R372	QRD167J-103	10K	1/6W	CARBON	
	R373	QRD167J-684	680K	1/6W	CARBON	
	R374	QRD167J-684	680K	1/6W	CARBON	
	R381	QRD167J-153	15K	1/6W	CARBON	
	R382	QRD167J-153	15K	1/6W	CARBON	
	R383	QRD167J-822	8.2K	1/6W	CARBON	
	R384	QRD167J-822	8.2K	1/6W	CARBON	
△	R385	QRZ0077-220	22	1/4W	FUSIBLE	B
△	R385	QRD14CJ-220S	22	1/4W	UNF. CARBON	H
△	R385	QRZ0077-220	22	1/4W	FUSIBLE	I
△	R385	QRZ0077-220	22	1/4W	FUSIBLE	J
△	R385	QRZ0077-220	22	1/4W	FUSIBLE	KBS
△	R385	QRZ0077-220	22	1/4W	FUSIBLE	L
	R386	QRD167J-183	18K	1/6W	CARBON	

△ IS A SAFETY PARTS.

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R387	QRD167J-103	10K	1/6W	CARBON	
	R388	QRD167J-103	10K	1/6W	CARBON	
	R389	QRD167J-562	5.6K	1/6W	CARBON	
	R390	QRD167J-562	5.6K	1/6W	CARBON	
	R391	QRD167J-822	8.2K	1/6W	CARBON	
	R392	QRD167J-822	8.2K	1/6W	CARBON	
	R393	QRD167J-272	2.7K	1/6W	CARBON	
	R394	QRD167J-272	2.7K	1/6W	CARBON	
	R395	QRD167J-103	10K	1/6W	CARBON	
	R396	QRD167J-103	10K	1/6W	CARBON	
	R397	QRD167J-102	1K	1/6W	CARBON	
	R501	QRD167J-102	1K	1/6W	CARBON	
	R502	QRD167J-102	1K	1/6W	CARBON	
	R503	QRD167J-104	100K	1/6W	CARBON	
	R504	QRD167J-104	100K	1/6W	CARBON	
	R505	ERD141J-681S	680	1/4W	CARBON	
	R506	ERD141J-681S	680	1/4W	CARBON	
	R507	QRD167J-471	470	1/6W	CARBON	
	R508	QRD167J-471	470	1/6W	CARBON	
	R509	QRD167J-104	100K	1/6W	CARBON	
	R510	QRD167J-104	100K	1/6W	CARBON	
	R511	QRD167J-242	2.4K	1/6W	CARBON	
	R512	QRD167J-242	2.4K	1/6W	CARBON	
	R513	QRD167J-242	2.4K	1/6W	CARBON	
	R514	QRD167J-242	2.4K	1/6W	CARBON	
△	R515	QRX012J-R22AM	0.22	1W	M.FILM	
△	R516	QRX012J-R22AM	0.22	1W	M.FILM	
△	R517	QRZ0077-101	100	1/4W	FUSIBLE	B
△	R517	QRD14CJ-101S	100	1/4W	UNF. CARBON	H
△	R517	QRZ0077-101	100	1/4W	FUSIBLE	I
△	R517	QRZ0077-101	100	1/4W	FUSIBLE	J
△	R517	QRZ0077-101	100	1/4W	FUSIBLE	KBS
△	R517	QRZ0077-101	100	1/4W	FUSIBLE	L
△	R518	QRZ0077-100	10	1/4W	FUSIBLE	B
△	R518	QRD14CJ-100S	10	1/4W	UNF. CARBON	H
△	R518	QRZ0077-100	10	1/4W	FUSIBLE	I
△	R518	QRZ0077-100	10	1/4W	FUSIBLE	J
△	R518	QRZ0077-100	10	1/4W	FUSIBLE	KBS
△	R518	QRZ0077-100	10	1/4W	FUSIBLE	L
△	R519	QRD14CJ-100S	10	1/4W	UNF. CARBON	
△	R520	QRD14CJ-100S	10	1/4W	UNF. CARBON	
△	R521	QRD14CJ-100S	10	1/4W	UNF. CARBON	
△	R522	QRD14CJ-100S	10	1/4W	UNF. CARBON	
	R527	QRD167J-104	100K	1/6W	CARBON	
	R528	QRD167J-104	100K	1/6W	CARBON	
	R529	QRD167J-103	10K	1/6W	CARBON	
	R530	QRD167J-154	150K	1/6W	CARBON	
	R531	QRD167J-473	47K	1/6W	CARBON	
△	R532	QRZ0077-100	10	1/4W	FUSIBLE	
△	R533	QRD14CJ-222S	2.2K	1/4W	UNF. CARBON	
△	R534	QRD14CJ-222S	2.2K	1/4W	UNF. CARBON	
	R536	QRD167J-472	4.7K	1/6W	CARBON	
	R537	QRD167J-104	100K	1/6W	CARBON	
	R538	QRD167J-104	100K	1/6W	CARBON	
	R539	QRD167J-103	10K	1/6W	CARBON	
	R540	QRD167J-104	100K	1/6W	CARBON	
	R541	QRD167J-103	10K	1/6W	CARBON	
	R542	QRD167J-222	2.2K	1/6W	CARBON	
	R543	QRD167J-823	82K	1/6W	CARBON	
	R544	QRD167J-104	100K	1/6W	CARBON	
△	R545	QRG022J-391AM	390	2W	G.M.FILM	
	R546	QRD167J-152	1.5K	1/6W	CARBON	
△	R547	QRD14CJ-100S	10	1/4W	UNF. CARBON	L
△	R548	QRD14CJ-100S	10	1/4W	UNF. CARBON	L
	R551	QRD167J-332	3.3K	1/6W	CARBON	
	R552	QRD167J-392	3.9K	1/6W	CARBON	
	R553	QRD167J-472	4.7K	1/6W	CARBON	
	R554	QRD167J-472	4.7K	1/6W	CARBON	
	R555	QRD167J-472	4.7K	1/6W	CARBON	
	R556	QRD167J-153	15K	1/6W	CARBON	
	R557	QRD167J-103	10K	1/6W	CARBON	
	R558	QRD167J-332	3.3K	1/6W	CARBON	
	R559	QRD167J-222	2.2K	1/6W	CARBON	
△	R561	QRZ0077-8R2	8.2	1/4W	FUSIBLE	B
△	R561	QRD14CJ-8R2S	8.2	1/4W	UNF. CARBON	H
△	R561	QRZ0077-8R2	8.2	1/4W	FUSIBLE	I
△	R561	QRZ0077-8R2	8.2	1/4W	FUSIBLE	J
△	R561	QRZ0077-8R2	8.2	1/4W	FUSIBLE	KBS
△	R561	QRZ0077-8R2	8.2	1/4W	FUSIBLE	L
△	R562	QRZ0077-8R2	8.2	1/4W	FUSIBLE	B
△	R562	QRD14CJ-8R2S	8.2	1/4W	UNF. CARBON	H
△	R562	QRZ0077-8R2	8.2	1/4W	FUSIBLE	I
△	R562	QRZ0077-8R2	8.2	1/4W	FUSIBLE	J
△	R562	QRZ0077-8R2	8.2	1/4W	FUSIBLE	KBS
△	R562	QRZ0077-8R2	8.2	1/4W	FUSIBLE	L
	R572	QRD167J-103	10K	1/6W	CARBON	
	R573	QRD167J-102	1K	1/6W	CARBON	
	R574	QRD167J-103	10K	1/6W	CARBON	
	R575	QRD167J-103	10K	1/6W	CARBON	
	R576	QRD167J-562	5.6K	1/6W	CARBON	
△	R577	PTH61G25AR4R7M			FUSIBLE RE SI	
△	R581	QRX022J-2R2AM	2.2	2W	M.FILM	
△	R582	QRX022J-2R2AM	2.2	2W	M.FILM	
△	R591	QRD14CJ-222S	2.2K	1/4W	UNF. CARBON	
△	R592	QRZ0077-100	10	1/4W	FUSIBLE	

△ IS A SAFETY PARTS.

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R598	QRZ0077-100	10 1/4W FUSIBLE	B
R598	QRD14CJ-100S	10 1/4W UNF. CARBON	H
R598	QRZ0077-100	10 1/4W FUSIBLE	I
R598	QRZ0077-100	10 1/4W FUSIBLE	J
R598	QRZ0077-100	10 1/4W FUSIBLE	KBS
R598	QRZ0077-100	10 1/4W FUSIBLE	L
R599	QRC12BK-275EM	2.7M 1/2W COMPOSI	H
VR203	QVPA601-104A	100K VARIABLE	
VR204	QVPA601-104A	100K VARIABLE	
VR205	QVPA601-104A	100K VARIABLE	
VR206	QVPA601-104A	100K VARIABLE	
VR221	QVPA601-201A	200 VARIABLE	
VR222	QVPA601-201A	200 VARIABLE	
VR223	QVPA601-201A	200 VARIABLE	
VR224	QVPA601-201A	200 VARIABLE	
VR335	QVPA601-204A	200K VARIABLE	
VR336	QVPA601-204A	200K VARIABLE	
VR367	QVPA601-503A	50K VARIABLE	
VR368	QVPA601-503A	50K VARIABLE	

SAFETY PARTS

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
J204	E67132-T2R0	FUSE LABEL	B
J511	EMV7125-006R	CONNECTOR(6PIN) BATTERY	
J512	EMV5109-003B	CONNECTOR(8PIN) AMPLIFIER	
J521	EMV7125-011R	PLUG ASSY(3PIN) SIGNAL PATH	
J531	EMV7122-005	CONNECTOR(11PIN) REGULATOR	
J541	EMB90TV-402A	CONNECTOR(5PIN) TO HEADPHONE	
J901	EMV7122-005	SPEAKER TERMINAL	
L221	EQL2106-223	CONNECTOR(5PIN) FL.-30V	
L222	EQL2106-223	INDUCTOR	
L223	EQL4004-101	INDUCTOR	L
L224	EQL4004-101	INDUCTOR	L
L301	EQL2126-562	INDUCTOR	
L302	EQL2126-562	INDUCTOR	
L335	ENZ6002-010	INDUCTOR	
L347	EQL2106-223	OSCILLATOR COIL	
L348	EQL2106-223	INDUCTOR	
L501	EQL0001-R45	INDUCTOR	
L502	EQL0001-R45	INDUCTOR	
P201	TFL25V-003	CONNECTOR(3PIN) A HEAD WIRE	
P202	TFL25V-007	CONNECTOR(7PIN) B HEAD WIRE	
P203	EMV5109-014A	CONNECTOR(3PIN) A HEAD WIRE	
P204	EMV5125-006	CONNECTOR(7PIN) B HEAD WIRE	
P511	EMV5125-008	PLUG ASSY(14PIN) DECK CONTROL	
P521	EMV5125-011	PLUG ASSY(6PIN) ENJ-072-1	
S001	QSR0085-018	PLUG ASSY(8PIN) TO AMPLIFIER	
S335	QSS7A12-E01	PLUG ASSY(11PIN) TO REGULATOR	
S335	QSS7A12-E01	VOLTAGE SELECTOR	B
S335	QSS7A12-E01	SLIDE SWITCH(BEET CUT)	J
S335	QSS7A12-E01	SLIDE SWITCH(BEET CUT)	KBS
S335	QSS7A12-E01	SLIDE SWITCH(BEET CUT)	L
EP201	E70225-002	EARTH PLATE	
FT001	VMZ0087-001	FUSE CLIP	
FT002	VMZ0087-001	FUSE CLIP	
FT003	VMZ0087-001	FUSE CLIP	
FT004	VMZ0087-001	FUSE CLIP	
FT005	VMZ0087-001	FUSE CLIP	
FT006	VMZ0087-001	FUSE CLIP	
FT007	VMZ0087-001	FUSE CLIP	B
FT008	VMZ0087-001	FUSE CLIP	B
FW205	EWR35B-13LST	FLAT WIRE(5PIN) PLAY/REC PATH	
FW501	EWR39E-13LST	FLAT WIRE(9PIN) TRANS. SECONDARY	
FW601	EWR36E-30LST	FLAT WIRE(6PIN) TO CD PCB	
JT501	EMV7122-005	CONNECTOR(5PIN) TO SECONDARY	
JT502	EMV7122-004	CONNECTOR(4PIN) TO SECONDARY	
JT902	EMV7122-103	CONNECTOR(3PIN) PATH OF J902	
JT903	EMV7122-103	CONNECTOR(3PIN) PATH OF J902	
RY501	ESK8D24-212	RELAY	
TB001	EMZ4001-001	TAB	
TB002	EMZ4001-001	TAB	
TW599	EWT011-075	TERMINAL WIRE	H

SAFETY PARTS

Note (1)

PC Board Ass'y	Designated Areas
ENC101 A	Scandinavia Continental Europe
ENC-101 B	the U.K.
ENC-101 C	the U.S.A., Canada
ENC-101 D	Taiwan, Universal Type
ENC-101 E	East Europe
ENC-101 F	Australia
ENC-101 G	Italy
ENC-101 H	Germany

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q801	DTC114YS	SILICON ROHM	
Q841	DTC144EFF	SILICON ROHM	
Q842	DTC144EFF	SILICON ROHM	
Q843	DTC144EFF	SILICON ROHM	
Q844	DTA114YFF	SILICON ROHM	
Q931	DTC144ES	SILICON ROHM	
Q932	DTC144ES	SILICON ROHM	
Q951	2SC1685(R,S)	SILICON MATSUSHITA	
Q952	2SC1685(R,S)	SILICON MATSUSHITA	
Q953	2SA933S(R,S)	SILICON ROHM	
Q954	2SA933S(R,S)	SILICON ROHM	
Q991	2SC1740S(R,S)	SILICON ROHM	D

△ : SAFETY PARTS.

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC801	HD404019RC18S	I.C.	
IC802	MSC7112-01SS	I.C. NIHON DENSO	
IC803	XR1095CP	I.C. EXAR JAPAN	
IC804	SPS-420-1	I.C. SANYO	
IC851	BA15218N	I.C. ROHM	D
IC871	BA15218N	I.C. ROHM	
IC901	HD404719A30FS	I.C. HITACHI	
IC931	TAB409S	I.C. TOSHIBA	
IC932	TAB409S	I.C. TOSHIBA	
IC933	TAB409S	I.C. TOSHIBA	
IC934	TAB409S	I.C. TOSHIBA	
IC991	M50197P	I.C. MITSUBISHI	D
IC994	NJM78M05FD	I.C. DAINICHI	D

△ : SAFETY PARTS.

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D801	SLR-342DCA47	L.E.D. 0050	
D802	SLR-342DCA47	L.E.D. 0050	
D807	1SS119	SILICON HITACHI	
D808	1SS119	SILICON HITACHI	
D809	1SS119	SILICON HITACHI	
D819	SLR-342MCA47	L.E.D. ROHM	
D835	SLR-342VC3F	L.E.D. ROHM	A
D835	SLA-380LT	L.E.D. ROHM	B
D835	SLR-342VC3F	L.E.D. ROHM	C
D835	SLR-342VC3F	L.E.D. ROHM	D
D835	SLR-342VC3F	L.E.D. ROHM	E
D835	SLR-342VC3F	L.E.D. ROHM	F
D835	SLR-342VC3F	L.E.D. ROHM	G
D835	SLR-342VC3F	L.E.D. ROHM	H
D903	1SS119	SILICON HITACHI	

△ : SAFETY PARTS.

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C801	QCT30CH-120	12PF 50V CERAMIC	
C802	QCVB1CM-103	0.01MF 16V CERAMIC	
C803	QEK51CM-107	100MF 16V ELECTRO	
C806	QCVB1CM-103	0.01MF 16V CERAMIC	
C807	QEK51EM-475G	4.7MF 25V ELECTRO	
C808	QCVB1CM-103	0.01MF 16V CERAMIC	
C809	QCVB1CM-103	0.01MF 16V CERAMIC	
C810	QCBB1HK-151	150PF 50V CERAMIC	
C811	QCBB1HK-471	470PF 50V CERAMIC	
C812	QCVB1CM-152	1500PF 16V CERAMIC	

△ : SAFETY PARTS.

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C813	QEK51HM-225G	2.2MF 50V ELECTRO	
C814	QEK51HM-225G	2.2MF 50V ELECTRO	
C815	QEK51CM-106G	10MF 16V ELECTRO	
C816	QEK51CM-106G	10MF 16V ELECTRO	
C817	QERSOJM-107	100MF 6.3V ELECTRO	
C818	QEA40HZ-10AB	ELECTRO	
C819	QEK51HM-226	22MF 50V ELECTRO	
C820	QETB1HM-226	22MF 50V ELECTRO	
C851	QCGB1HK-102	1000PF 50V CERAMIC	D
C852	QCGB1HK-102	1000PF 50V CERAMIC	D
C853	QCBB1HK-101	100PF 50V CERAMIC	D
C854	QETB1HM-106	10MF 50V ELECTRO	D
C855	QCBB1HK-101	100PF 50V CERAMIC	D
C856	QCBB1HK-101	100PF 50V CERAMIC	D
C860	QETB1HM-106	10MF 50V ELECTRO	D
C861	QETB1HM-106	10MF 50V ELECTRO	D
C862	QETB1HM-106	10MF 50V ELECTRO	D
C863	QETB1HM-106	10MF 50V ELECTRO	D
C864	QETB1HM-106	10MF 50V ELECTRO	D
C865	QETB1HM-106	10MF 50V ELECTRO	D
C866	QETB1HM-106	10MF 50V ELECTRO	D
C867	QETB1HM-106	10MF 50V ELECTRO	D
C869	QCBB1HK-471	470PF 50V CERAMIC	G
C869	QCBB1HK-471	470PF 50V CERAMIC	H
C870	QCBB1HK-471	470PF 50V CERAMIC	G
C870	QCBB1HK-471	470PF 50V CERAMIC	H
C871	QETB1AM-476	47MF 10V ELECTRO	
C872	QETB1AM-476	47MF 10V ELECTRO	
C873	QFN81HJ-224	0.22MF 50V MYLAR	
C874	QFN81HJ-224	0.22MF 50V MYLAR	
C875	QEK51HM-474G	0.47MF 50V ELECTRO	
C876	QEK51HM-474G	0.47MF 50V ELECTRO	
C877	QCVB1CM-103	0.01MF 16V CERAMIC	D
C880	QCVB1CM-103	0.01MF 16V CERAMIC	
C891	QCBB1HK-471	470PF 50V CERAMIC	G
C891	QCBB1HK-471	470PF 50V CERAMIC	H
C892	QCBB1HK-471	470PF 50V CERAMIC	G
C892	QCBB1HK-471	470PF 50V CERAMIC	H
C901	QCVB1CM-103	0.01MF 16V CERAMIC	
C902	QETB1AM-107	100MF 10V ELECTRO	
C931	QCHB1EZ-223	0.022MF 25V CERAMIC	
C932	QCHB1EZ-223	0.022MF 25V CERAMIC	
C933	QFVB1HJ-104	0.1MF 50V T.FILM	
C934	QFVB1HJ-104	0.1MF 50V T.FILM	
C935	QETB1CM-107	100MF 16V ELECTRO	
C1021	QCGB1HK-102	1000PF 50V CERAMIC	D
C1022	QCGB1HK-102	1000PF 50V CERAMIC	D
C1023	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1024	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1025	QETB1HM-105	1MF 50V ELECTRO	D
C1026	QETB1HM-105	1MF 50V ELECTRO	D
C1027	QFN81HJ-223	0.022MF 50V MYLAR	D
C1028	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1029	QFN81HJ-473	0.047MF 50V MYLAR	D
C1030	QFN81HJ-473	0.047MF 50V MYLAR	D
C1041	QFVB1HJ-334	0.33MF 50V T.FILM	D
C1042	QFVB1HJ-334	0.33MF 50V T.FILM	D
C1043	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1044	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1045	QETB1HM-475	4.7MF 50V ELECTRO	D
C1050	QETB1AM-107	100MF 10V ELECTRO	D
C1051	QETB1AM-476	47MF 10V ELECTRO	D
C1052	QCZ0202-155	1.5MF 25V CERAMIC	D
C1053	QETB1AM-107	100MF 10V ELECTRO	D
C1054	QCVB1CM-103	0.01MF 16V CERAMIC	D
C1055	QCVB1CM-103	0.01MF 16V CERAMIC	D

△ : SAFETY PARTS.

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R803	QRD167J-331	330 1/6W CARBON	
R807	QRD167J-104	100K 1/6W CARBON	
R808	QRD167J-223	22K 1/6W CARBON	
R809	QRD167J-473	47K 1/6W CARBON	
R810	QRD167J-470	47 1/6W CARBON	
R811	QRD167J-102	1K 1/6W CARBON	
R814	QRD167J-103	10K 1/6W CARBON	
R815	QRD167J-103	10K 1/6W CARBON	
R816	QRD167J-103	10K 1/6W CARBON	
R817	QRD167J-103	10K 1/6W CARBON	
R818	QRD167J-103	10K 1/6W CARBON	
R819	QRD167J-222	2.2K 1/6W CARBON	
R820	QRD167J-222	2.2K 1/6W CARBON	
R821	QRD167J-222	2.2K 1/6W CARBON	
R823	QRD167J-103	10K 1/6W CARBON	
R835	QRD167J-151	150 1/6W CARBON	A
R835	QRD167J-471	470 1/6W CARBON	B
R835	QRD167J-151	150 1/6W CARBON	C
R835	QRD167J-151	150 1/6W CARBON	D
R835	QRD167J-151	150 1/6W CARBON	E

△ : SAFETY PARTS.

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R835	QRD167J-151	150	1/6W	CARBON	F
	R835	QRD167J-151	150	1/6W	CARBON	G
	R835	QRD167J-151	150	1/6W	CARBON	H
	R836	QRD161J-221	220	1/6W	CARBON	
	R838	QRD167J-681	680	1/6W	CARBON	
	R839	QRD167J-431	430	1/6W	CARBON	
	R840	QRD167J-563	56K	1/6W	CARBON	
	R841	QRD167J-222	2.2K	1/6W	CARBON	
	R842	QRD167J-102	1K	1/6W	CARBON	
	R843	QRD167J-105	1M	1/6W	CARBON	
	R844	QRD167J-105	1M	1/6W	CARBON	
	R845	QRD167J-683	68K	1/6W	CARBON	
	R846	QRD167J-222	2.2K	1/6W	CARBON	
	R847	QRD167J-472	4.7K	1/6W	CARBON	
	R848	QRD167J-103	10K	1/6W	CARBON	
	R849	QRD167J-222	2.2K	1/6W	CARBON	
	R851	QRD167J-102	1K	1/6W	CARBON	D
	R852	QRD167J-103	10K	1/6W	CARBON	D
	R853	QRD167J-104	100K	1/6W	CARBON	D
	R854	QRD167J-911	910	1/6W	CARBON	D
	R855	QRD167J-472	4.7K	1/6W	CARBON	D
	R856	QRD167J-471	470	1/6W	CARBON	D
	R857	QRD167J-104	100K	1/6W	CARBON	D
	R858	QRD167J-472	4.7K	1/6W	CARBON	D
	R859	QRD167J-332	3.3K	1/6W	CARBON	D
	R860	QRD167J-332	3.3K	1/6W	CARBON	D
	R861	QRD167J-103	10K	1/6W	CARBON	
	R862	QRD167J-103	10K	1/6W	CARBON	
	R863	QRD167J-102	1K	1/6W	CARBON	
	R864	QRD167J-102	1K	1/6W	CARBON	
	R865	QRD167J-102	1K	1/6W	CARBON	
	R869	QRD167J-203	20K	1/6W	CARBON	
	R870	QRD167J-203	20K	1/6W	CARBON	
	R871	QRD167J-682	6.8K	1/6W	CARBON	
	R872	QRD167J-682	6.8K	1/6W	CARBON	
	R873	QRD167J-684	680K	1/6W	CARBON	
	R874	QRD167J-684	680K	1/6W	CARBON	
	R875	QRD167J-151	150	1/6W	CARBON	
	R876	QRD167J-151	150	1/6W	CARBON	
	R877	QRD167J-104	100K	1/6W	CARBON	D
	R878	QRD167J-104	100K	1/6W	CARBON	D
	R891	QRD167J-681	680	1/6W	CARBON	
	R892	QRD167J-681	680	1/6W	CARBON	
	R893	QRD167J-681	680	1/6W	CARBON	
	R894	QRD167J-681	680	1/6W	CARBON	
	R901	QRD167J-105	1M	1/6W	CARBON	
	R903	QRD167J-103	10K	1/6W	CARBON	
	R904	QRD167J-471	470	1/6W	CARBON	
	R921	QRD167J-103	10K	1/6W	CARBON	
	R922	QRD167J-332	3.3K	1/6W	CARBON	
	R923	QRD167J-242	2.4K	1/6W	CARBON	
	R924	QRD167J-562	5.6K	1/6W	CARBON	
	R925	QRD167J-153	15K	1/6W	CARBON	
	R926	QRD167J-392	3.9K	1/6W	CARBON	
	R931	QRD167J-153	15K	1/6W	CARBON	
	R932	QRD167J-153	15K	1/6W	CARBON	
	R933	QRD167J-133	13K	1/6W	CARBON	
	R934	QRD167J-133	13K	1/6W	CARBON	
	R935	QRD167J-563	56K	1/6W	CARBON	
	R936	QRD167J-563	56K	1/6W	CARBON	
	R937	QRD167J-123	12K	1/6W	CARBON	
	R938	QRD167J-123	12K	1/6W	CARBON	
	R939	QRD167J-682	6.8K	1/6W	CARBON	
	R940	QRD167J-682	6.8K	1/6W	CARBON	
△	R941	QRG022J-150AM	15	2W	O.M.FILM	
△	R942	QRG022J-150AM	15	2W	O.M.FILM	
△	R945	QRD14CJ-1R0S	1	1/4W	UNF. CARBON	C
	R951	QRD167J-184	180K	1/6W	CARBON	
	R952	QRD167J-224	220K	1/6W	CARBON	
	R953	QRD167J-224	220K	1/6W	CARBON	
	R954	QRD167J-224	220K	1/6W	CARBON	
	R955	QRD167J-683	68K	1/6W	CARBON	
	R956	QRD167J-153	15K	1/6W	CARBON	
	R957	QRD167J-273	27K	1/6W	CARBON	
	R958	QRD167J-242	2.4K	1/6W	CARBON	
	R961	QRD167J-103	10K	1/6W	CARBON	
	R962	QRD167J-103	10K	1/6W	CARBON	
	R966	QRD167J-431	430	1/6W	CARBON	
	R967	QRD167J-681	680	1/6W	CARBON	
	R968	QRD167J-112	1.1K	1/6W	CARBON	
	R969	QRD167J-222	2.2K	1/6W	CARBON	
	R971	QRD167J-431	430	1/6W	CARBON	
	R972	QRD167J-681	680	1/6W	CARBON	
	R973	QRD167J-112	1.1K	1/6W	CARBON	
	R974	QRD167J-222	2.2K	1/6W	CARBON	
	R975	QRD167J-682	6.8K	1/6W	CARBON	
	R991	QRD161J-221	220	1/6W	CARBON	
	RA802	QRB085J-104	100K	1/8W	R.NETWORK	
	RA803	QRB135J-104	100K	1/8W	R.NETWORK	
	RA902	QRB059J-222	2.2K	1/10W	R.NETWORK	
	RA904	QRB069J-103	10K	1/10W	R.NETWORK	
	R1007	QRD167J-434	430K	1/6W	CARBON	D
	R1021	QRD167J-103	10K	1/6W	CARBON	D
	R1022	QRD167J-103	10K	1/6W	CARBON	D
	R1023	QRD167J-302	3K	1/6W	CARBON	D

△ : SAFETY PARTS

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R1024	QRD167J-153	15K	1/6W	CARBON	D
	R1025	QRD167J-153	15K	1/6W	CARBON	D
	R1026	QRD167J-153	15K	1/6W	CARBON	D
	R1027	QRD167J-203	20K	1/6W	CARBON	D
	R1028	QRD167J-272	2.7K	1/6W	CARBON	D
	R1041	QRD167J-752	7.5K	1/6W	CARBON	D
	R1042	QRD167J-752	7.5K	1/6W	CARBON	D
	R1043	QRD167J-753	75K	1/6W	CARBON	D
	R1044	QRD167J-753	75K	1/6W	CARBON	D
	R1045	QRD167J-475	4.7M	1/6W	CARBON	D
	R1046	QRD167J-331	330	1/6W	CARBON	D
	R1047	QRD167J-273	27K	1/6W	CARBON	D
	R1051	QRD167J-105	1M	1/6W	CARBON	D
	VR851	QVJB84B-E54C	50K		VARIABLE	D
	VR891	QVDB94B-E15C	100K		VARIABLE	D
	VR951	QVPG401-103	10K		VARIABLE	D

△ : SAFETY PARTS

Others

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	J851	QMS3R30-E40S	MINI JACK(MICJACK)			D
	J891	QMS3R30-E40S	MINI JACK(HEADPHONE)			
	J991	EMV5142-903	PLUG ASSY(3PIN) VOL INDICATOR			
	K901	ENZ8101-007	INDUCTOR			G
	K901	ENZ8101-007	INDUCTOR			H
	L991	EQL3001-101K	INDUCTOR			D
	P921	VMC0234-P04	CONNECT TERMINAL(4PIN) DECK A			
	P922	VMC0234-P08	CONNECT TERMINAL(8PIN) DECK B			
	P923	VMC0234-P07	CONNECT TERMINAL(7PIN) CAM A			
	P924	VMC0234-P07	CONNECT TERMINAL(7PIN) CAM B			
	P992	EMV5109-005A	PLUG ASSY(SPIN) TO DIGITAL ECHO			D
	S807	ESPO001-023M	TACT SWITCH(RANDOM)			
	S808	ESPO001-023M	TACT SWITCH(JUST EDIT)			
	S809	ESPO001-023M	TACT SWITCH(REPEAT)			
	S810	ESPO001-023M	TACT SWITCH(SIDE A/B)			
	S811	ESPO001-023M	TACT SWITCH(PROGRAM)			
	S812	ESPO001-023M	TACT SWITCH(BACKWARD SKIP)			
	S813	ESPO001-023M	TACT SWITCH(FORWARD SKIP)			
	S815	ESPO001-023M	TACT SWITCH(FM)			
	S816	ESPO001-023M	TACT SWITCH(AM)			
	S817	ESPO001-023M	TACT SWITCH(TUNING UP)			
	S818	ESPO001-023M	TACT SWITCH(TUNING DOWN)			
	S819	ESPO001-023M	TACT SWITCH(PLAY/PAUSE)			
	S820	ESPO001-023M	TACT SWITCH(STOP)			
	S821	ESPO001-023M	TACT SWITCH(SLEEP)			
	S825	ESPO001-023M	TACT SWITCH(PRESET DOWN)			
	S826	ESPO001-023M	TACT SWITCH(PRESET UP)			
	S827	ESPO001-023M	TACT SWITCH(OPEN/CLOSE)			
	S828	ESPO001-023M	TACT SWITCH(RETIMER)			
	S829	ESPO001-023M	TACT SWITCH(CLOCK ADJUST)			
	S830	ESPO001-023M	TACT SWITCH(FM MODE, MUTE)			
	S831	ESPO001-023M	TACT SWITCH(MEMORY)			
	S833	ESPO001-023M	TACT SWITCH(AUX)			
	S834	ESPO001-023M	TACT SWITCH(LIVE-5)			
	S835	ESPO001-023M	TACT SWITCH(POWER)			
	S921	ESB1100-007	LEAF SWITCH(A PACK)			
	S922	ESB1100-007	LEAF SWITCH(A C/O2)			
	S923	ESB1100-007	LEAF SWITCH(REV REC)			
	S924	ESB1100-007	LEAF SWITCH(B C/O2)			
	S925	ESB1100-007	LEAF SWITCH(B PACK)			
	S926	ESB1100-007	LEAF SWITCH(FWD REC)			
	S966	ESPO001-023M	TACT SWITCH(REWIND)			
	S967	ESPO001-023M	TACT SWITCH(REVERSE)			
	S968	ESPO001-023M	TACT SWITCH(STOP)			
	S969	ESPO001-023M	TACT SWITCH(PLAY)			
	S970	ESPO001-023M	TACT SWITCH(FAST FORWARD)			
	S971	ESPO001-023M	TACT SWITCH(DOLBY B)			
	S972	ESPO001-023M	TACT SWITCH(REV. MODE)			
	S973	ESPO001-023M	TACT SWITCH(CD DIRECT REC)			
	S974	ESPO001-023M	TACT SWITCH(HIGH SPEED DUBBING)			
	S975	ESPO001-023M	TACT SWITCH(REC PAUSE)			
	S976	ESPO001-023M	TACT SWITCH(A/B)			
	BC203	EWS26E-A120	SOCKET WIRE(14PIN) TO DECK			
	BC512	EWS293-09120	SOCKET WIRE(3PIN) MIC CB			
	BC991	EWS323-A912	SOCKET WIRE(3PIN) TO VOLUME IND.			
	BC992	EWS265-A417	SOCKET WIRE(5PIN) DIGITAL ECHO			D
	FL801	ELU0001-153	FL TUBE			
	FS820	E3400-431	FELT SPACER			
	FS903	E3400-431	FELT SPACER			
	FW101	EWR37B-16LST	FLAT WIRE(7PIN) TO TUNER CB			
	FW531	EWR35B-30LST	FLAT WIRE(5PIN) HEADPHONE			
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			A
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			B
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			C
	FW851	EWR38B-20LST	FLAT WIRE(8PIN) MIC CB			D
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			E
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			F
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			G
	FW851	EWR37B-20LST	FLAT WIRE(7PIN) MIC CB			H
	FW901	EWR35B-13LST	FLAT WIRE(5PIN) FL-AP			

△ : SAFETY PARTS

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
FW902	EWR36B-13LST	FLAT WIRE(6PIN) SPK/POWER CONT.	
FW911	EWR36B-30LST	FLAT WIRE(6PIN) TO CD CB	
JA701	EMV7123-025R	CONNECTOR(25PIN) TO CD CB	
JA801	EMV5123-J070	PLUG ASSY(18PIN) TO KEY CB	
JA851	EMV7123-017R	CONNECTOR(17PIN) TO DECK CONTROL CB	

△ SAFETY PARTS

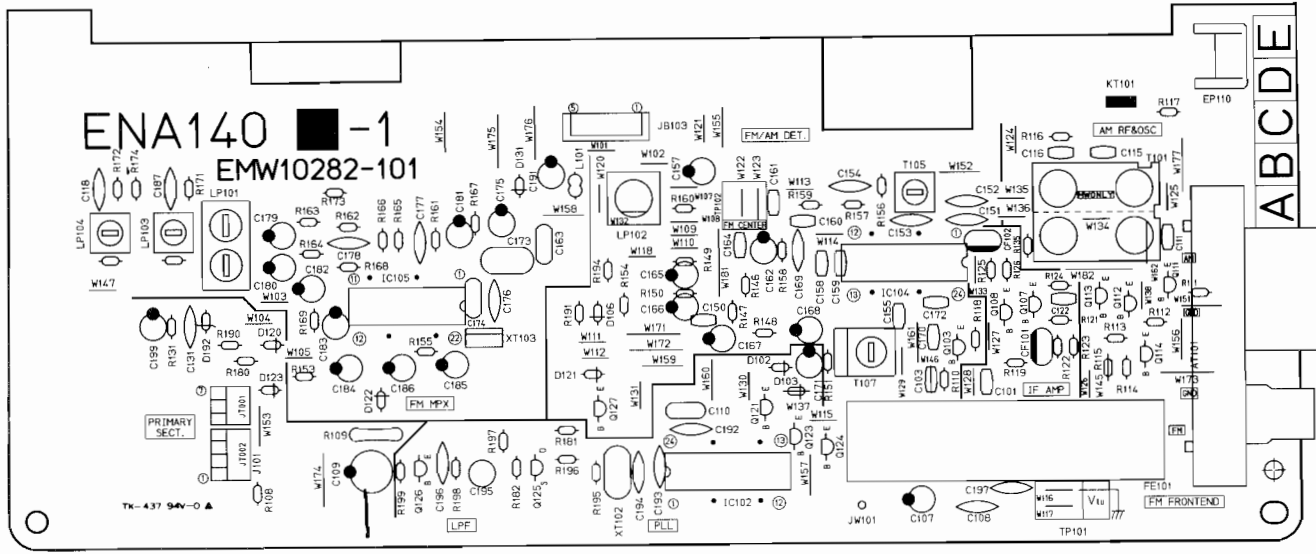
Others

ITEM	PART NUMBER	DESCRIPTION	AREA
JB801	EMV7124-009	CONNECTOR(9PIN) KEY CB	
JB811	EMV7124-008	CONNECTOR(8PIN) KEY CB	
JB851	EMV7123-017R	CONNECTOR(17PIN) DECK CONTROL CB	
TC801	ENZ1003-015	TRIMMER	
XT801	ECX4194-304CF	RESONATOR	
XT901	ECX0004-194KM	RESONATOR	
XT991	ECX0004-194KM	RESONATOR	D

△ SAFETY PARTS

■ ENA-140 Tuner PC Board Ass'y

Note : ENA-140 varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENA-140 [A]	the U.S.A. , Canada
ENA-140 [B]	Taiwan , Universal Type
ENA-140 [C]	Australia
ENA-140 [D]	Scandinavia Continental Europe
ENA-140 [E]	Germany
ENA-140 [F]	the U.K.
ENA-140 [G]	Italy
ENA-140 [H]	East Europe

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q103	2SC461(B,C)	SILICON HITACHI	
Q107	2SC535(B,C)	SILICON HITACHI	
Q108	2SC461(B,C)	SILICON HITACHI	
Q111	2SD2144S(VW)	SILICON ROHM	D
Q111	2SD2144S(VW)	SILICON ROHM	E
Q111	2SD2144S(VW)	SILICON ROHM	F
Q111	2SD2144S(VW)	SILICON ROHM	G
Q111	2SD2144S(VW)	SILICON ROHM	H
Q112	2SD2144S(VW)	SILICON ROHM	D
Q112	2SD2144S(VW)	SILICON ROHM	E
Q112	2SD2144S(VW)	SILICON ROHM	F
Q112	2SD2144S(VW)	SILICON ROHM	G
Q112	2SD2144S(VW)	SILICON ROHM	H
Q113	2SD2144S(VW)	SILICON ROHM	D
Q113	2SD2144S(VW)	SILICON ROHM	E
Q113	2SD2144S(VW)	SILICON ROHM	F
Q113	2SD2144S(VW)	SILICON ROHM	G
Q113	2SD2144S(VW)	SILICON ROHM	H
Q114	2SC1740S(R,S)	SILICON ROHM	D
Q114	2SC1740S(R,S)	SILICON ROHM	E
Q114	2SC1740S(R,S)	SILICON ROHM	F
Q114	2SC1740S(R,S)	SILICON ROHM	G
Q114	2SC1740S(R,S)	SILICON ROHM	H
Q121	DTA144ES	SILICON ROHM	D
Q121	DTA144ES	SILICON ROHM	E
Q121	DTA144ES	SILICON ROHM	F
Q121	DTA144ES	SILICON ROHM	G
Q121	DTA144ES	SILICON ROHM	H
Q123	DTA144ES	SILICON ROHM	
Q124	DTA144ES	SILICON ROHM	
Q125	2SK301(Q2)	F.E.T MATSUSHITA	
Q126	2SC458(D)	SILICON HITACHI	
Q127	DTC144ES	SILICON ROHM	

△ SAFETY PARTS

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC102	LC7218	I.C. SANYO	
IC104	LA1266A	I.C. SANYO	
IC105	LA3401	I.C. SANYO	

SAFETY PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D102	1SS133	SILICON ROHM	D
D102	1SS133	SILICON ROHM	E
D102	1SS133	SILICON ROHM	F
D102	1SS133	SILICON ROHM	G
D102	1SS133	SILICON ROHM	H
D103	1SS133	SILICON ROHM	D
D103	1SS133	SILICON ROHM	E
D103	1SS133	SILICON ROHM	F
D103	1SS133	SILICON ROHM	G
D103	1SS133	SILICON ROHM	H
D106	1SS133	SILICON ROHM	
D120	1SS133	SILICON ROHM	
D121	1SS133	SILICON ROHM	
D122	1SS133	SILICON ROHM	
D123	1SS133	SILICON ROHM	
D192	MTZ5.1JC	ZENER ROHM	

SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C101	QCHB1EZ-223	0.022MF 25V CERAMIC	
C103	QCHB1EZ-223	0.022MF 25V CERAMIC	H
C107	QETB1EM-226	22MF 25V ELECTRO	E
C107	QETB1EM-226	22MF 25V ELECTRO	G
C109	QETB1CM-227	220MF 16V ELECTRO	
C110	QCZ0202-155	1.5MF 25V CERAMIC	
C111	QCHB1EZ-223	0.022MF 25V CERAMIC	
C112	QCS21HJ-101	100PF 50V CERAMIC	
C115	QCHB1EZ-223	0.022MF 25V CERAMIC	
C116	QCT30CH-120	12PF 50V CERAMIC	
C122	QCHB1EZ-223	0.022MF 25V CERAMIC	
C131	QCF21HP-223	0.022MF 50V CERAMIC	
C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
C151	QCF21HP-223	0.022MF 50V CERAMIC	
C152	QCF21HP-223	0.022MF 50V CERAMIC	
C153	QCC21EM-223	0.022MF 25V CERAMIC	
C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
C157	QETB1HM-474	0.47MF 50V ELECTRO	
C158	QCB1HK-101	100PF 50V CERAMIC	
C159	QCB1HK-101	100PF 50V CERAMIC	
C160	QCB1HK-221	220PF 50V CERAMIC	
C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
C162	QETB1HM-106	10MF 50V ELECTRO	
C163	QCF21HP-102	1000PF 50V CERAMIC	
C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
C165	QETB1HM-474	0.47MF 50V ELECTRO	
C166	QETB1HM-225	2.2MF 50V ELECTRO	
C167	QETB1HM-225	2.2MF 50V ELECTRO	
C168	QETB1HM-475	4.7MF 50V ELECTRO	
C169	QCF21HP-223	0.022MF 50V CERAMIC	
C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
C171	QETB1HM-106	10MF 50V ELECTRO	
C172	QCVB1CM-103	0.01MF 16V CERAMIC	
C173	QFN81HJ-393	0.039MF 50V MYLAR	A
C173	QFN81HJ-393	0.039MF 50V MYLAR	B
C173	QFN81HJ-393	0.039MF 50V MYLAR	C
C173	QFN81HJ-223	0.022MF 50V MYLAR	D
C173	QFN81HJ-223	0.022MF 50V MYLAR	E
C173	QFN81HJ-223	0.022MF 50V MYLAR	F
C173	QFN81HJ-223	0.022MF 50V MYLAR	G
C173	QFN81HJ-223	0.022MF 50V MYLAR	H
C174	QFLB1HK-473	0.047MF 50V MYLAR	
C175	QETB1HM-106	10MF 50V ELECTRO	
C176	QCY21HK-102	1000PF 50V CERAMIC	
C177	QCS21HJ-821	820PF 50V CERAMIC	A
C177	QCS21HJ-391	390PF 50V CERAMIC	B
C177	QCS21HJ-471	470PF 50V CERAMIC	C
C177	QCS21HJ-471	470PF 50V CERAMIC	D
C177	QCS21HJ-471	470PF 50V CERAMIC	E
C177	QCS21HJ-471	470PF 50V CERAMIC	F
C177	QCS21HJ-471	470PF 50V CERAMIC	G
C177	QCS21HJ-471	470PF 50V CERAMIC	H
C178	QCS21HJ-821	820PF 50V CERAMIC	A
C178	QCS21HJ-821	820PF 50V CERAMIC	B
C178	QCS21HJ-391	390PF 50V CERAMIC	C
C178	QCS21HJ-471	470PF 50V CERAMIC	D
C178	QCS21HJ-471	470PF 50V CERAMIC	E
C178	QCS21HJ-561	560PF 50V CERAMIC	F
C178	QCS21HJ-471	470PF 50V CERAMIC	G
C178	QCS21HJ-471	470PF 50V CERAMIC	H

SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C179	QETB1HM-225	2.2MF 50V ELECTRO	
C180	QETB1HM-225	2.2MF 50V ELECTRO	
C181	QCF21HP-473	0.047MF 50V CERAMIC	
C182	QETB1HM-225	2.2MF 50V ELECTRO	
C183	QETB1HM-105	1MF 50V ELECTRO	
C184	QETB1HM-105	1MF 50V ELECTRO	
C185	QETB1HM-225	2.2MF 50V ELECTRO	
C186	QETB1HM-474	0.47MF 50V ELECTRO	
C187	QCY21HK-332	3300PF 50V CERAMIC	
C188	QCY21HK-332	3300PF 50V CERAMIC	
C191	QETB1HM-475	4.7MF 50V ELECTRO	
C192	QCC21EM-473	0.047MF 25V CERAMIC	
C193	QCS21HJ-180	18PF 50V CERAMIC	
C194	QCS21HJ-180	18PF 50V CERAMIC	
C195	QEN51HM-474	0.47MF 50V NON POLE	
C196	QCY21HK-102	1000PF 50V CERAMIC	
C197	QCF21HP-223	0.022MF 50V CERAMIC	

SAFETY PARTS

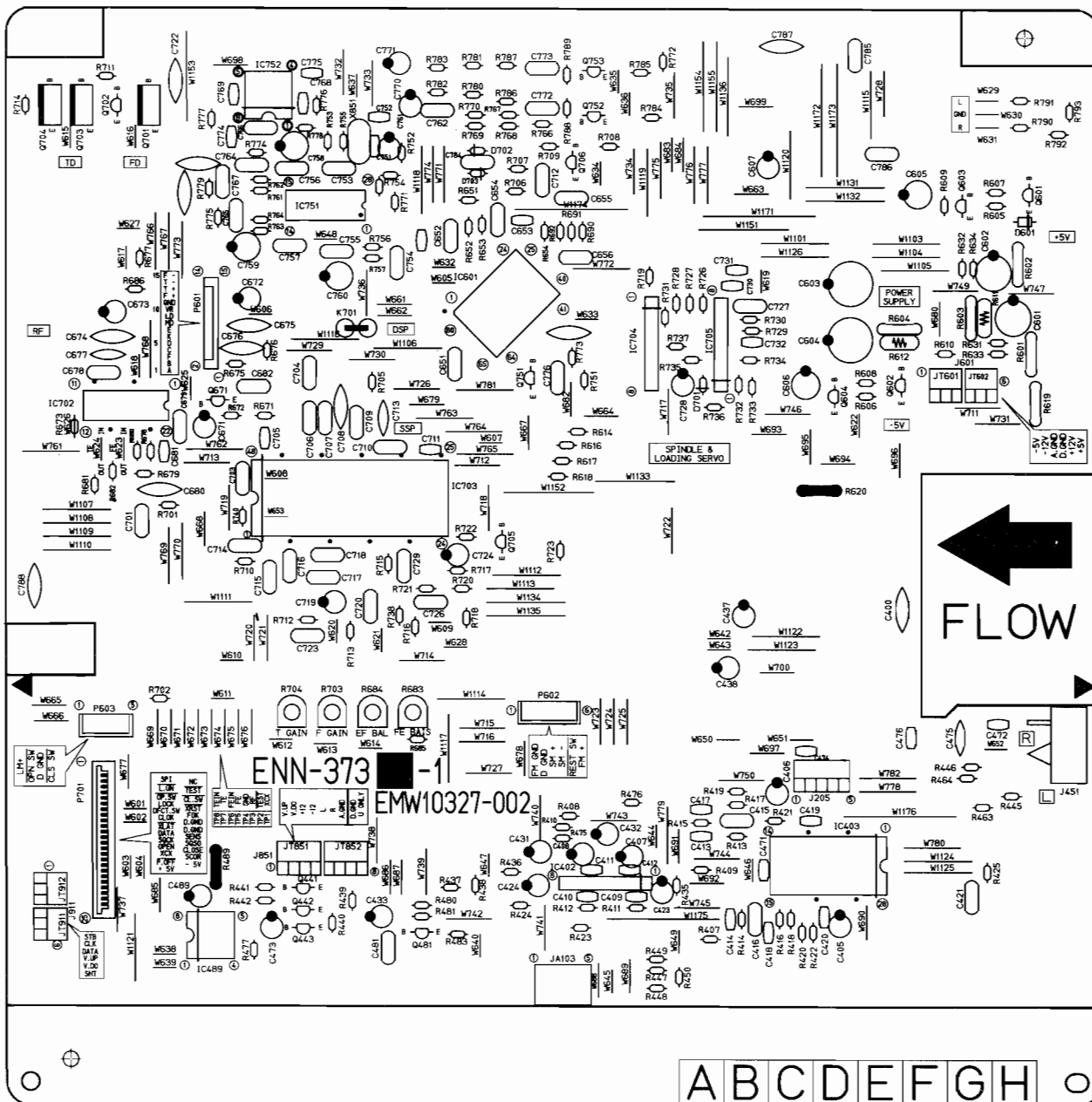
Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R108	QRD167J-103	10K 1/6W CARBON	
R109	QRZ0077-680	68 1/4W FUSIBLE	
R110	QRD167J-473	47K 1/6W CARBON	H
R111	QRD167J-472	4.7K 1/6W CARBON	D
R111	QRD167J-472	4.7K 1/6W CARBON	E
R111	QRD167J-472	4.7K 1/6W CARBON	F
R111	QRD167J-472	4.7K 1/6W CARBON	G
R111	QRD167J-472	4.7K 1/6W CARBON	H
R112	QRD167J-472	4.7K 1/6W CARBON	D
R112	QRD167J-472	4.7K 1/6W CARBON	E
R112	QRD167J-472	4.7K 1/6W CARBON	F
R112	QRD167J-472	4.7K 1/6W CARBON	G
R112	QRD167J-472	4.7K 1/6W CARBON	H
R113	QRD167J-472	4.7K 1/6W CARBON	D
R113	QRD167J-472	4.7K 1/6W CARBON	E
R113	QRD167J-472	4.7K 1/6W CARBON	F
R113	QRD167J-472	4.7K 1/6W CARBON	G
R113	QRD167J-472	4.7K 1/6W CARBON	H
R114	QRD167J-103	10K 1/6W CARBON	D
R114	QRD167J-103	10K 1/6W CARBON	E
R114	QRD167J-103	10K 1/6W CARBON	F
R114	QRD167J-103	10K 1/6W CARBON	G
R114	QRD167J-103	10K 1/6W CARBON	H
R115	QRD167J-101	100 1/6W CARBON	E
R115	QRD167J-101	100 1/6W CARBON	G
R116	QRD167J-104	100K 1/6W CARBON	
R117	QRD167J-103	10K 1/6W CARBON	D
R117	QRD167J-103	10K 1/6W CARBON	E
R117	QRD167J-103	10K 1/6W CARBON	F
R117	QRD167J-103	10K 1/6W CARBON	G
R117	QRD167J-103	10K 1/6W CARBON	H
R118	QRD167J-332	3.3K 1/6W CARBON	
R119	QRD161J-221	220 1/6W CARBON	
R121	QRD167J-391	390 1/6W CARBON	
R122	QRD167J-272	2.7K 1/6W CARBON	
R123	QRD167J-102	1K 1/6W CARBON	
R124	QRD167J-681	680 1/6W CARBON	
R125	QRD167J-332	3.3K 1/6W CARBON	
R126	QRD161J-221	220 1/6W CARBON	
R131	QRD167J-222	2.2K 1/6W CARBON	
R135	QRD167J-470	47 1/6W CARBON	
R146	QRD167J-560	56 1/6W CARBON	
R147	QRD167J-103	10K 1/6W CARBON	
R148	QRD167J-103	10K 1/6W CARBON	
R149	QRD167J-223	22K 1/6W CARBON	
R150	QRD167J-103	10K 1/6W CARBON	
R151	QRD167J-222	2.2K 1/6W CARBON	
R153	QRD167J-103	10K 1/6W CARBON	
R154	QRD167J-103	10K 1/6W CARBON	
R155	QRD167J-562	5.6K 1/6W CARBON	
R156	QRD167J-822	8.2K 1/6W CARBON	
R157	QRD167J-103	10K 1/6W CARBON	
R158	QRD167J-183	18K 1/6W CARBON	A
R158	QRD167J-273	27K 1/6W CARBON	B
R158	QRD167J-273	27K 1/6W CARBON	C
R158	QRD167J-273	27K 1/6W CARBON	D
R158	QRD167J-273	27K 1/6W CARBON	E
R158	QRD167J-273	27K 1/6W CARBON	F
R158	QRD167J-273	27K 1/6W CARBON	G
R158	QRD167J-273	27K 1/6W CARBON	H
R159	QRD167J-561	560 1/6W CARBON	
R160	QRD167J-562	5.6K 1/6W CARBON	A
R160	QRD167J-562	5.6K 1/6W CARBON	B
R160	QRD167J-183	18K 1/6W CARBON	C
R160	QRD167J-183	18K 1/6W CARBON	D
R160	QRD167J-183	18K 1/6W CARBON	E
R160	QRD167J-822	8.2K 1/6W CARBON	F
R160	QRD167J-183	18K 1/6W CARBON	G
R160	QRD167J-183	18K 1/6W CARBON	H
R161	QRD167J-823	82K 1/6W CARBON	A

SAFETY PARTS

■ ENN-373 □ CD & Source Selector PC Board Ass'y

Note : ENN-373 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-373 A	the U.S.A. , Canada
ENN-373 B	Australia , Scandinavia Continental Europe the U.K. , East Europe
ENN-373 C	Germany , Italy
ENN-373 D	Taiwan , Universal Type

Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q441	2SD2144S(VW)	SILICON ROHM	
	Q442	2SD2144S(VW)	SILICON ROHM	
	Q443	DTA144ES	SILICON ROHM	
	Q481	2SC1685(R,S)	SILICON MATSUSHITA	
	Q601	2SA934(Q,R)	SILICON ROHM	
	Q602	2SC1685(R,S)	SILICON MATSUSHITA	
	Q603	DTC144ES	SILICON ROHM	
	Q604	DTA144WS	SILICON ROHM	
	Q671	2SA934(Q,R)	SILICON ROHM	
	Q701	2SD2037(E,F)	SILICON ROHM	
	Q702	2SA934(Q,R)	SILICON ROHM	
	Q703	2SD2037(E,F)	SILICON ROHM	
	Q704	2SB1357(E,F)	SILICON ROHM	
	Q705	DTC144ES	SILICON ROHM	
	Q706	2SC1685(R,S)	SILICON MATSUSHITA	
	Q751	DTA144ES	SILICON ROHM	
	Q752	2SC1685(R,S)	SILICON MATSUSHITA	
	Q753	2SC1685(R,S)	SILICON MATSUSHITA	

Δ : SAFETY PARTS

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC402	BA15218N	I.C. ROHM	
IC403	TC9164N	I.C. TOSHIBA	
IC489	LB1639-CV	I.C. SANYO	
IC701	CXD2500BQ	I.C. 1680	
IC702	CXA1571S	I.C. 1680	
IC703	CXA1372S	I.C. 1680	
IC704	STA341M(A)	I.C. SANKEN	
IC705	M5218AL	I.C. MITSUBISHI	
IC751	MN35501	I.C. MATSUSHITA	
IC752	BA15218	I.C. ROHM	

△ SAFETY PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D601	1SR139-200	SILICON ROHM	
D701	1SS119	SILICON HITACHI	
D702	1SS133	SILICON ROHM	
D703	1SS133	SILICON ROHM	

△ SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C405	QETB1HM-475	4.7MF 50V ELECTRO	
C406	QETB1HM-475	4.7MF 50V ELECTRO	
C407	QETB1HM-106	10MF 50V ELECTRO	
C408	QETB1HM-106	10MF 50V ELECTRO	
C409	QCSB1HJ-100	10PF 50V CERAMIC	
C410	QCSB1HJ-100	10PF 50V CERAMIC	
C411	QCSB1HJ-470	47PF 50V CERAMIC	
C412	QCSB1HJ-470	47PF 50V CERAMIC	
C413	QCBB1HK-181	180PF 50V CERAMIC	
C414	QCBB1HK-181	180PF 50V CERAMIC	
C415	QFN81HJ-153	0.015MF 50V MYLAR	
C416	QFN81HJ-153	0.015MF 50V MYLAR	
C417	QCXB1CM-222	2200PF 16V CERAMIC	
C418	QCXB1CM-222	2200PF 16V CERAMIC	
C419	QCBB1HK-471	470PF 50V CERAMIC	
C420	QCBB1HK-471	470PF 50V CERAMIC	
C421	QCY21HK-562	5600PF 50V CERAMIC	
C423	QETB1HM-475	4.7MF 50V ELECTRO	
C424	QETB1HM-475	4.7MF 50V ELECTRO	
C431	QETB1CM-476	47MF 16V ELECTRO	
C432	QETB1CM-476	47MF 16V ELECTRO	
C433	QETB1HM-225	2.2MF 50V ELECTRO	
C437	QETB1CM-107	100MF 16V ELECTRO	
C438	QETB1CM-107	100MF 16V ELECTRO	
C471	QCBB1HK-561	560PF 50V CERAMIC	
C472	QCVB1CM-103	0.01MF 16V CERAMIC	C
C473	QETB1HM-105	1MF 50V ELECTRO	
C474	QCHB1EZ-223	0.022MF 25V CERAMIC	C
C475	QCF21HP-223	0.022MF 50V CERAMIC	C
C481	QFN81HJ-223	0.022MF 50V MYLAR	
C489	QETB1AM-476	47MF 10V ELECTRO	
C603	QETB1CM-108	1000MF 16V ELECTRO	
C604	QETB1CM-108	1000MF 16V ELECTRO	
C605	QETBOJM-227	220MF 6.3V ELECTRO	
C606	QETBOJM-107	100MF 6.3V ELECTRO	
C607	QETB1HM-106	10MF 50V ELECTRO	
C651	QCZ0202-155	1.5MF 25V CERAMIC	
C652	QFN81HJ-473	0.047MF 50V MYLAR	
C653	QCHB1EZ-223	0.022MF 25V CERAMIC	
C654	QFN81HJ-152	1500PF 50V MYLAR	
C655	QFN81HJ-102	1000PF 50V MYLAR	
C656	QCZ0202-155	1.5MF 25V CERAMIC	
C671	QETB1AM-107	100MF 10V ELECTRO	
C673	QETB1AM-476	47MF 10V ELECTRO	
C674	QCS21HJ-100	10PF 50V CERAMIC	
C675	QCS21HJ-820	82PF 50V CERAMIC	
C676	QCS21HJ-101	100PF 50V CERAMIC	
C677	QCS21HJ-100	10PF 50V CERAMIC	
C678	QCZ0202-155	1.5MF 25V CERAMIC	
C679	QCZ0202-155	1.5MF 25V CERAMIC	
C680	QCS21HJ-220	22PF 50V CERAMIC	
C681	QCHB1EZ-223	0.022MF 25V CERAMIC	
C701	QFN81HJ-182	1800PF 50V MYLAR	
C703	QFN81HJ-222	2200PF 50V MYLAR	
C704	QFN81HJ-222	2200PF 50V MYLAR	
C705	QCHB1EZ-223	0.022MF 25V CERAMIC	
C706	QFN81HJ-333	0.033MF 50V MYLAR	
C707	QFN81HJ-103	0.01MF 50V MYLAR	
C708	QCF21HP-223	0.022MF 50V CERAMIC	
C709	QFN81HJ-333	0.033MF 50V MYLAR	
C710	QFV81HJ-104	0.1MF 50V T.FILM	
C711	QCHB1EZ-223	0.022MF 25V CERAMIC	
C712	QFN81HJ-104	0.1MF 50V MYLAR	
C714	QFN81HJ-104	0.1MF 50V MYLAR	
C715	QFN81HJ-333	0.033MF 50V MYLAR	

△ SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C716	QFN81HJ-473	0.047MF 50V MYLAR	
C717	QFN81HJ-473	0.047MF 50V MYLAR	
C718	QFN81HJ-473	0.047MF 50V MYLAR	
C719	QETB1HM-106	10MF 50V ELECTRO	
C720	QFN81HJ-104	0.1MF 50V MYLAR	
C722	QCF21HP-223	0.022MF 50V CERAMIC	
C723	QFN81HJ-333	0.033MF 50V MYLAR	
C724	QETB1HM-106	10MF 50V ELECTRO	
C726	QFN81HJ-223	0.022MF 50V MYLAR	
C727	QFN81HJ-103	0.01MF 50V MYLAR	
C728	QETB1HM-475	4.7MF 50V ELECTRO	
C729	QFN81HJ-393	0.039MF 50V MYLAR	
C730	QCHB1EZ-223	0.022MF 25V CERAMIC	
C731	QCHB1EZ-223	0.022MF 25V CERAMIC	
C732	QCBB1HK-681	680PF 50V CERAMIC	
C751	QCT30CH-8R2	8.2PF 50V CERAMIC	
C752	QCT30CH-3R9	3.9PF 50V CERAMIC	
C753	QFV81HJ-104	0.1MF 50V T.FILM	
C755	QFV81HJ-104	0.1MF 50V T.FILM	
C756	QFV81HJ-104	0.1MF 50V T.FILM	
C757	QFV81HJ-104	0.1MF 50V T.FILM	
C758	QETBOJM-227	220MF 6.3V ELECTRO	
C759	QETBOJM-227	220MF 6.3V ELECTRO	
C760	QETBOJM-227	220MF 6.3V ELECTRO	
C761	QETB1AM-476	47MF 10V ELECTRO	
C762	QFN81HJ-122	1200PF 50V MYLAR	
C764	QFN81HJ-122	1200PF 50V MYLAR	
C765	QFN81HJ-122	1200PF 50V MYLAR	
C766	QFN81HJ-122	1200PF 50V MYLAR	
C767	QFN81HJ-122	1200PF 50V MYLAR	
C768	QCBB1HK-101	100PF 50V CERAMIC	
C769	QCBB1HK-101	100PF 50V CERAMIC	
C770	QETB1EM-226	22MF 25V ELECTRO	
C771	QETB1EM-226	22MF 25V ELECTRO	
C772	QFN81HJ-683	0.068MF 50V MYLAR	
C773	QFN81HJ-683	0.068MF 50V MYLAR	
C774	QCHB1EZ-223	0.022MF 25V CERAMIC	
C775	QCHB1EZ-223	0.022MF 25V CERAMIC	
C784	QFV81HJ-104	0.1MF 50V T.FILM	
C788	QCF21HP-223	0.022MF 50V CERAMIC	

△ SAFETY PARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R407	QRD167J-104	100K 1/6W CARBON	
R408	QRD167J-104	100K 1/6W CARBON	
R409	QRD167J-393	39K 1/6W CARBON	
R410	QRD167J-393	39K 1/6W CARBON	
R411	QRD167J-104	100K 1/6W CARBON	
R412	QRD167J-104	100K 1/6W CARBON	
R413	QRD167J-104	100K 1/6W CARBON	
R414	QRD167J-104	100K 1/6W CARBON	
R415	QRD167J-473	47K 1/6W CARBON	
R416	QRD167J-473	47K 1/6W CARBON	
R417	QRD167J-822	8.2K 1/6W CARBON	
R418	QRD167J-822	8.2K 1/6W CARBON	
R419	QRD167J-203	20K 1/6W CARBON	
R420	QRD167J-203	20K 1/6W CARBON	
R421	QRD167J-393	39K 1/6W CARBON	
R422	QRD167J-393	39K 1/6W CARBON	
R423	QRD167J-104	100K 1/6W CARBON	
R424	QRD167J-104	100K 1/6W CARBON	
R425	QRD167J-273	27K 1/6W CARBON	
R435	QRD167J-472	4.7K 1/6W CARBON	
R436	QRD167J-472	4.7K 1/6W CARBON	
R437	QRD167J-332	3.3K 1/6W CARBON	A
R437	QRD167J-332	3.3K 1/6W CARBON	B
R437	QRD167J-332	3.3K 1/6W CARBON	C
R438	QRD167J-332	3.3K 1/6W CARBON	A
R438	QRD167J-332	3.3K 1/6W CARBON	B
R438	QRD167J-332	3.3K 1/6W CARBON	C
R439	QRD167J-224	220K 1/6W CARBON	
R440	QRD167J-224	220K 1/6W CARBON	
R441	QRD167J-103	10K 1/6W CARBON	
R442	QRD167J-103	10K 1/6W CARBON	
R445	QRD167J-303	30K 1/6W CARBON	
R446	QRD167J-303	30K 1/6W CARBON	
R447	QRD167J-432	4.3K 1/6W CARBON	
R448	QRD167J-432	4.3K 1/6W CARBON	
R449	QRD167J-132	1.3K 1/6W CARBON	
R450	QRD167J-132	1.3K 1/6W CARBON	
R463	QRD167J-243	24K 1/6W CARBON	
R464	QRD167J-243	24K 1/6W CARBON	
R475	QRD167J-271	270 1/6W CARBON	
R476	QRD167J-271	270 1/6W CARBON	
R477	QRD167J-102	1K 1/6W CARBON	
R480	QRD167J-222	2.2K 1/6W CARBON	
R481	QRD167J-105	1M 1/6W CARBON	
R483	QRD167J-222	2.2K 1/6W CARBON	

△ SAFETY PARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R489	QRD14CJ-220S	22 1/4W UNF. CARBON	A
R601	QRD14CJ-100S	10 1/4W UNF. CARBON	B
R601	QRZ0077-100	10 1/4W FUSIBLE	A
R601	QRZ0077-100	10 1/4W FUSIBLE	C
R601	QRZ0077-100	10 1/4W FUSIBLE	D
R602	QRD14CJ-100S	10 1/4W UNF. CARBON	A
R602	QRZ0077-100	10 1/4W FUSIBLE	A
R602	QRZ0077-100	10 1/4W FUSIBLE	B
R602	QRZ0077-100	10 1/4W FUSIBLE	C
R602	QRZ0077-100	10 1/4W FUSIBLE	D
R605	QRD167J-472	4.7K 1/6W CARBON	
R606	QRD167J-472	4.7K 1/6W CARBON	
R607	QRD167J-471	470 1/6W CARBON	
R608	QRD167J-182	1.8K 1/6W CARBON	
R609	QRD167J-103	10K 1/6W CARBON	
R610	QRD167J-472	4.7K 1/6W CARBON	
R611	PTH61G25AR4R7M	FUSIBLE RE SI	
R612	PTH61G25AR4R7M	FUSIBLE RE SI	
R614	QRD167J-102	1K 1/6W CARBON	
R616	QRD167J-102	1K 1/6W CARBON	
R617	QRD167J-391	390 1/6W CARBON	
R618	QRD167J-102	1K 1/6W CARBON	
R619	QRD14CJ-5R6S	5.6 1/4W UNF. CARBON	A
R619	QRZ0077-5R6	5.6 1/4W FUSIBLE	B
R619	QRZ0077-5R6	5.6 1/4W FUSIBLE	C
R619	QRZ0077-5R6	5.6 1/4W FUSIBLE	D
R620	QRD14CJ-470S	47 1/4W UNF. CARBON	A
R620	QRZ0077-470	47 1/4W FUSIBLE	B
R620	QRZ0077-470	47 1/4W FUSIBLE	C
R620	QRZ0077-470	47 1/4W FUSIBLE	D
R651	QRD167J-332	3.3K 1/6W CARBON	
R652	QRD167J-682	6.8K 1/6W CARBON	
R653	QRD167J-103	10K 1/6W CARBON	
R654	QRD167J-103	10K 1/6W CARBON	
R671	QRD167J-100	10 1/6W CARBON	
R672	QRD167J-120	12 1/6W CARBON	
R673	QRD167J-102	1K 1/6W CARBON	
R675	QRD167J-183	18K 1/6W CARBON	
R676	QRD167J-183	18K 1/6W CARBON	
R677	QRD167J-121	120 1/6W CARBON	
R678	QRD167J-103	10K 1/6W CARBON	
R679	QRD167J-332	3.3K 1/6W CARBON	
R680	QRD167J-822	8.2K 1/6W CARBON	
R681	QRD167J-113	11K 1/6W CARBON	
R682	QRD167J-104	100K 1/6W CARBON	
R683	QVPA601-203A	20K VARIABLE	
R684	QVPA601-203A	20K VARIABLE	
R685	QRD167J-103	10K 1/6W CARBON	
R686	QRD167J-910	91 1/6W CARBON	
R690	QRD167J-102	1K 1/6W CARBON	
R691	QRD167J-102	1K 1/6W CARBON	
R692	QRD167J-102	1K 1/6W CARBON	
R701	QRD167J-472	4.7K 1/6W CARBON	
R702	QRD167J-472	4.7K 1/6W CARBON	
R703	QVPA601-203A	20K VARIABLE	
R704	QVPA601-203A	20K VARIABLE	
R705	QRD167J-102	1K 1/6W CARBON	
R706	QRD167J-104	100K 1/6W CARBON	
R707	QRD167J-103	10K 1/6W CARBON	
R708	QRD167J-273	27K 1/6W CARBON	
R709	QRD167J-273	27K 1/6W CARBON	
R710	QRD167J-224	220K 1/6W CARBON	
R711	QRD167J-2R2	2.2 1/6W CARBON	
R712	QRD167J-164	160K 1/6W CARBON	
R713	QRD167J-134	130K 1/6W CARBON	
R714	QRD167J-2R2	2.2 1/6W CARBON	
R715	QRD167J-224	220K 1/6W CARBON	
R716	QRD167J-333	33K 1/6W CARBON	
R717	QRD167J-103	10K 1/6W CARBON	
R718	QRD167J-514	510K 1/6W CARBON	
R719	QRD167J-2R2	2.2 1/6W CARBON	
R720	QRD167J-123	12K 1/6W CARBON	
R721	QRD167J-333	33K 1/6W CARBON	
R722	QRD167J-124	120K 1/6W CARBON	
R723	QRD167J-472	4.7K 1/6W CARBON	
R726	QRD167J-203	20K 1/6W CARBON	
R727	QRD167J-273	27K 1/6W CARBON	
R728	QRD167J-752	7.5K 1/6W CARBON	
R729	QRD167J-752	7.5K 1/6W CARBON	
R730	QRD167J-333	33K 1/6W CARBON	
R731	QRD167J-2R2	2.2 1/6W CARBON	
R732	QRD167J-513	51K 1/6W CARBON	
R733	QRD167J-513	51K 1/6W CARBON	
R734	QRD167J-683	68K 1/6W CARBON	
R735	QRD167J-683	68K 1/6W CARBON	
R736	QRD167J-684	680K 1/6W CARBON	
R737	QRD161J-221	220 1/6W CARBON	
R738	QRD167J-823	82K 1/6W CARBON	
R740	QRD167J-275	2.7M 1/6W CARBON	
R751	QRD167J-103	10K 1/6W CARBON	
R752	QRD167J-101	100 1/6W CARBON	
R753	QRD167J-103	10K 1/6W CARBON	
R754	QRD167J-103	10K 1/6W CARBON	
R755	QRD167J-330	33 1/6W CARBON	
R756	QRD167J-560	56 1/6W CARBON	
R761	QRD167J-183	18K 1/6W CARBON	

SAFETY PARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R762	QRD167J-183	18K 1/6W CARBON	
R763	QRD167J-183	18K 1/6W CARBON	
R764	QRD167J-183	18K 1/6W CARBON	
R766	QRD167J-271	270 1/6W CARBON	
R767	QRD167J-682	6.8K 1/6W CARBON	
R768	QRD167J-332	3.3K 1/6W CARBON	
R769	QRD167J-271	270 1/6W CARBON	
R770	QRD167J-102	1K 1/6W CARBON	
R771	QRD167J-102	1K 1/6W CARBON	
R774	QRD167J-392	3.9K 1/6W CARBON	
R775	QRD167J-392	3.9K 1/6W CARBON	
R776	QRD167J-223	22K 1/6W CARBON	
R777	QRD167J-223	22K 1/6W CARBON	
R778	QRD167J-103	10K 1/6W CARBON	
R779	QRD167J-103	10K 1/6W CARBON	
R780	QRD167J-561	560 1/6W CARBON	
R781	QRD167J-561	560 1/6W CARBON	
R784	QRD167J-392	3.9K 1/6W CARBON	
R785	QRD167J-392	3.9K 1/6W CARBON	
R786	QRD161J-221	220 1/6W CARBON	
R787	QRD161J-221	220 1/6W CARBON	
R788	QRD167J-104	100K 1/6W CARBON	
R789	QRD167J-104	100K 1/6W CARBON	
R790	QRD167J-272	2.7K 1/6W CARBON	
R791	QRD167J-272	2.7K 1/6W CARBON	
R792	QRD167J-432	4.3K 1/6W CARBON	
R793	QRD167J-432	4.3K 1/6W CARBON	

SAFETY PARTS

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
J205	EMV7122-005	CONNECTOR (5PIN) DECK PLAY/REC	
J451	EMN00TV-201A	2P PIN JACK(AUX INPUT)	A
J451	EMN00TV-201A	2P PIN JACK(AUX INPUT)	B
J451	EMN00TV-209A	2P PIN JACK(AUX INPUT)	C
J451	EMN00TV-201A	2P PIN JACK(AUX INPUT)	D
P601	EMV7144-015	CONNECTOR(15PIN) TO PICKUP	
P602	EMV5109-006A	PLUG ASSY(6PIN) TO CD MECHA.	
P603	EMV5109-005A	PLUG ASSY(5PIN) TO LOADING MECHA.	
P701	EMV7123-025	CONNECTOR(25PIN) TO FRONT CB	
X851	ECX0169-344EA	RESONATOR	
JA103	EMV7125-005R	CONNECTOR(5PIN) TO TUNER CB	
JT601	EMV7122-103	CONNECTOR(3PIN) PART OF J601	
JT602	EMV7122-103	CONNECTOR(3PIN) PART OF J601	
JT851	EMV7122-004	CONNECTOR(4PIN) PART OF J851	
JT852	EMV7122-103	CONNECTOR(3PIN) PART OF J851	A
JT852	EMV7122-103	CONNECTOR(3PIN) PART OF J851	B
JT852	EMV7122-103	CONNECTOR(3PIN) PART OF J851	C
JT852	EMV7122-004	CONNECTOR(4PIN) PART OF J851	D
JT911	EMV7122-103	CONNECTOR(3PIN) PART OF J911	
JT912	EMV7122-103	CONNECTOR(3PIN) PART OF J911	

SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1965A	INSTRUCTION BOOK	1		J
	E30580-1966A	INSTRUCTION BOOK	1		A
	E30580-1966ABS	INSTRUCTION BOOK	1		BS
	E30580-1967A	INSTRUCTION BOOK	1		EN
	E30580-1968A	INSTRUCTION BOOK	1		C
	E30580-1968A	INSTRUCTION BOOK	1		EF
	E30580-1968A	INSTRUCTION BOOK	1		G
	E30580-1968A	INSTRUCTION BOOK	1		GI
	E30580-1969A	INSTRUCTION BOOK	1		U
	E30580-1969A	INSTRUCTION BOOK	1		UT
	E30580-1970A	INSTRUCTION BOOK	1		VX
	BT-51006-1	SAFETY REGISTRATION CARD	1		J
	BT-20025K	WARRANTY CARD	1		C
	BT20060	WARRANTY CARD	1		BS
	BT-20134	WARRANTY CARD	1		G
	BT-20122	WARRANTY CARD	1		A
	BT-20122-1	STICKER	1		A
	BT-20044G	SAFETY INSTRUCRION SHEET	1		J
	BT20071A	SERVICE CENTER LIST	1		C
	BT-20066A	EEC AGENCY	1		BS
	E35497-019	CAUTION SHEET	1	220V	U
	E35497-019	CAUTION SHEET	1	220V	UT
⚠	E04056	SIEMENS PLUG	1		U
⚠	E04056	SIEMENS PLUG	1		UT
	E306858-002	CAUTION SHEET	1		UT
	RM-SEMXS2U	WIRE-LESS REMOTE CONTROLLOR	1		
	R03BPA-2STS	BATTERY	1		J
	R03BPA-2STS	BATTERY	1		C
	UM-4NJ-2PSA	BATTERY	1		A
	UM-4NJ-2PSA	BATTERY	1		BS
	UM-4NJ-2PSA	BATTERY	1		EF
	UM-4NJ-2PSA	BATTERY	1		EN
	UM-4NJ-2PSA	BATTERY	1		G
	UM-4NJ-2PSA	BATTERY	1		GI
	UM-4NJ-2PSA	BATTERY	1		VX
	UM-4NJ-2PSA	BATTERY	1		U
	UM-4NJ-2PSA	BATTERY	1		UT
	EMZ2001-014	AC ADAPTOR	1		J
	EMZ2001-014	AC ADAPTOR	1		C
	EMZ2001-014	AC ADAPTOR	1		A
	EMZ2001-014	AC ADAPTOR	1		BS
	EMZ2001-014	AC ADAPTOR	1		EF
	EMZ2001-014	AC ADAPTOR	1		EN
	EMZ2001-014	AC ADAPTOR	1		GI
	EMZ2001-014	AC ADAPTOR	1		VX
	EMZ2001-014	AC ADAPTOR	1		U
	EMZ2001-014	AC ADAPTOR	1		UT
	E43486-340A	SAFETY SHEET	1		BS
	EQB4001-015	LOOP ANTENNA	1		
	EWP502-005K	BILT-IN ANTENNA	1		J
	EWP502-005K	BILT-IN ANTENNA	1		C
	EWP502-005K	BILT-IN ANTENNA	1		A
	EWP502-005K	BILT-IN ANTENNA	1		BS
	EWP502-005K	BILT-IN ANTENNA	1		EF
	EWP502-005K	BILT-IN ANTENNA	1		EN

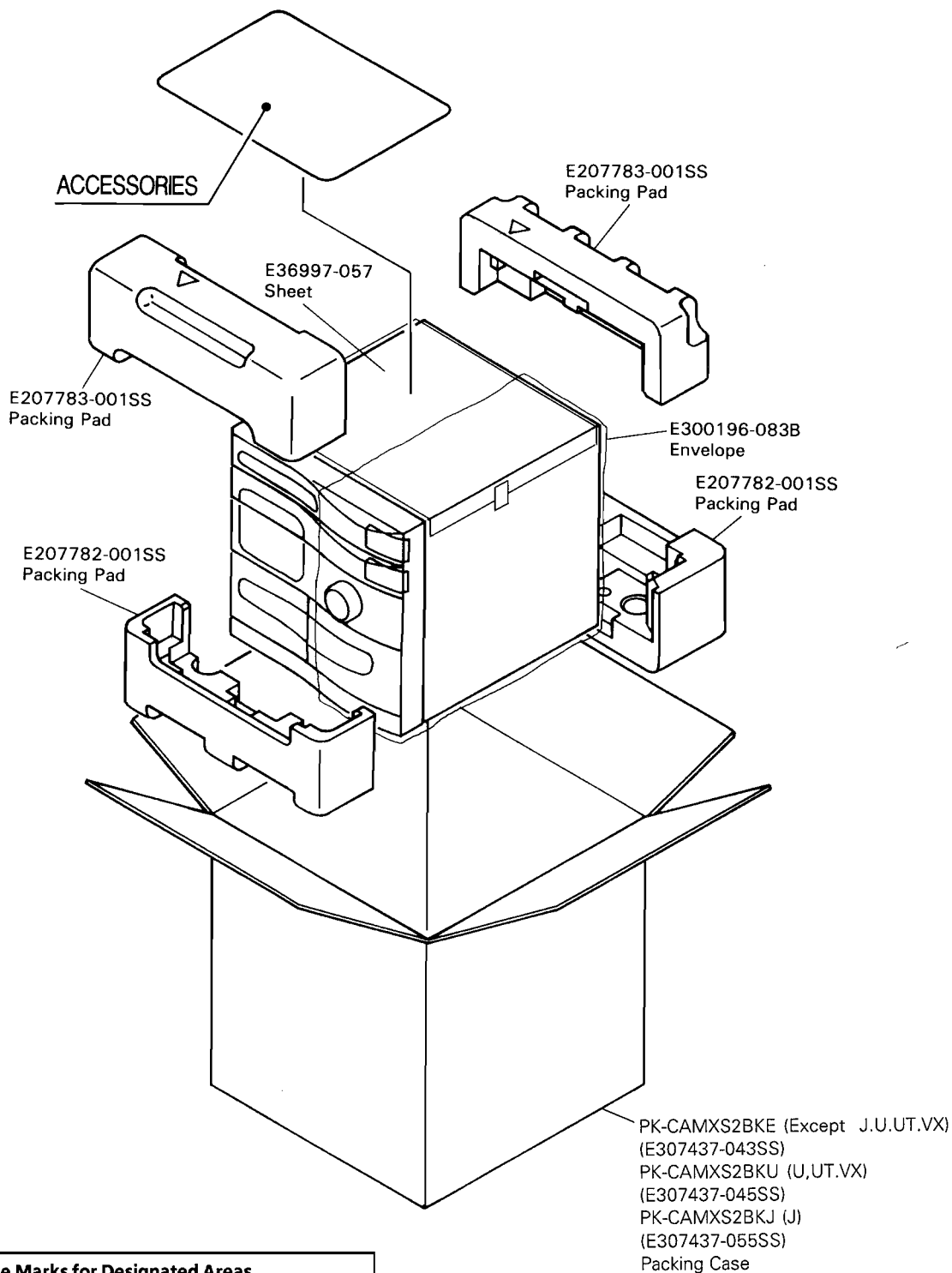
⚠	Part Number	Part Name	Q'ty	Description	Areas
	EWP502-005K	BILT-IN ANTENNA	1		GI
	EWP502-005K	BILT-IN ANTENNA	1		VX
	EWP502-005K	BILT-IN ANTENNA	1		U
	EWP502-005K	BILT-IN ANTENNA	1		UT
	E67007-001	WIRE ANTENNA	1		G
	QPGA025-03505B	ENVELOPE	1		J
	QPGA025-03505B	ENVELOPE	1		C
	QPGA025-03505B	ENVELOPE	1		A
	QPGA025-03505B	ENVELOPE	1		BS
	QPGA025-03505B	ENVELOPE	1		EF
	QPGA025-03505B	ENVELOPE	1		EN
	QPGA025-03505B	ENVELOPE	1		G
	QPGA025-03505B	ENVELOPE	1		GI
	QPGA025-03505B	ENVELOPE	1		VX
	QPGA025-03505B	ENVELOPE	1		U
	QPGA025-03505B	ENVELOPE	1		UT

⚠ SAFETY PARTS

The Marks for Designated Areas

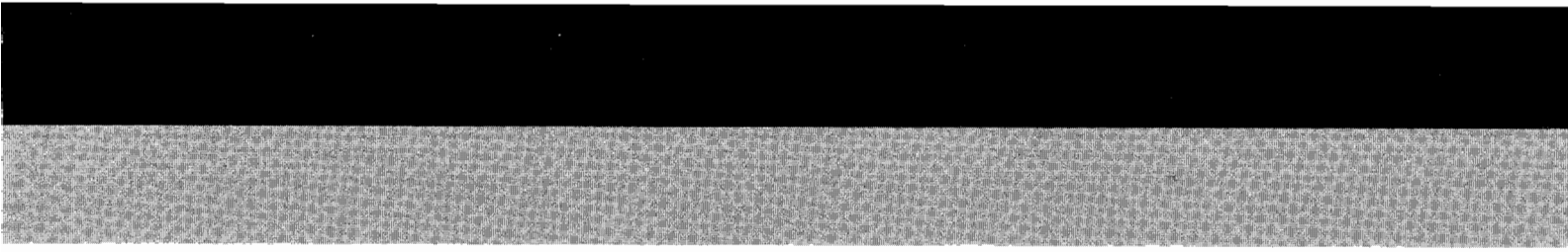
J	the U.S.A.	C	Canada	A	Australia	EN	Scandinavia
EF	Continental Europe	U	Universal	BS	the U.K.	G	Germany
GI	Italy	VX	East Europe	No mark indicates all areas.			

Packing Materials and Part Numbers



The Marks for Designated Areas

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



JVC

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