

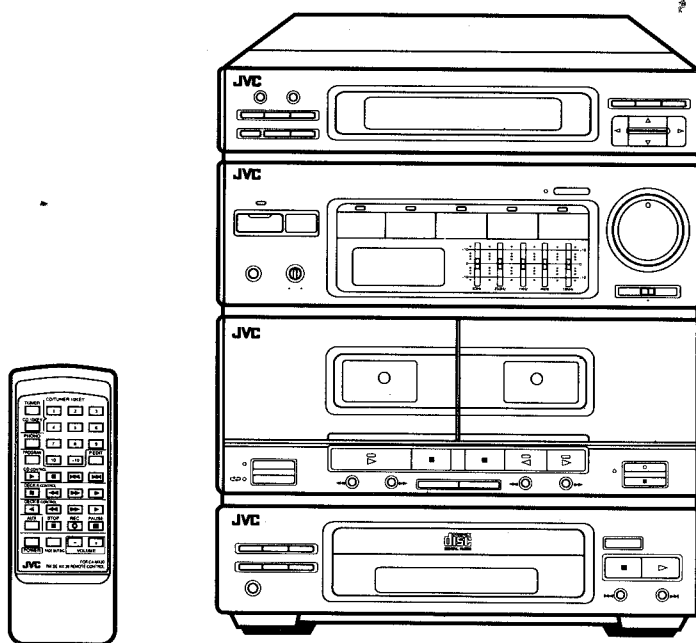
JVC

SERVICE MANUAL

STEREO RECEIVER

MODEL No. **CA-MX30BK**

〒105 東京都港区日本橋本町1-1-1
 日本ビクター株式会社
 サービス部 部品管理課



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.).

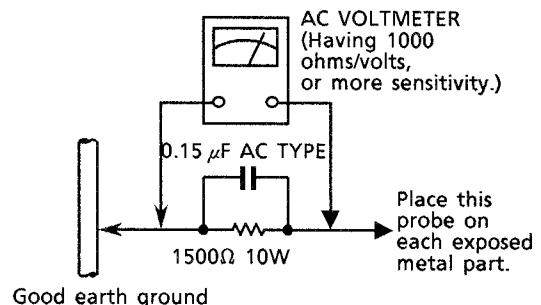
- Alternate check method

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.

VARNING : 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.

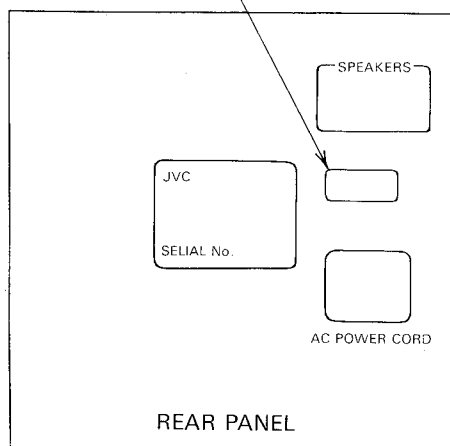
ADVARSEL : Usynlig laserstrålning ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

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

REPRODUCTION AND POSITION OF LABELS

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

CLASS 1
LASER PRODUCT



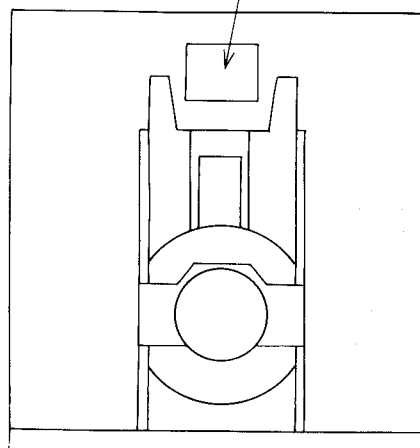
WARNING LABEL (Except for the U.S.A.)

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

VARNING: 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)



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Getting started

The CA-MX30BK produces a full, powerful sound. With JVC's newly developed labyrinth port system speakers, the CA-MX30BK can produce a sound comparable to a large stereo system.

Features

It has a variety of functions, which are equivalent to those of large, expensive stereo systems.

- Programmable timers for setting recording, wake-up music, and fall-asleep music.
- Storage of 40 radio stations (FM and AM) in memory.
- Fade-out of last track during direct CD-to-tape recording.
- CD tracks can be recorded on both sides of a cassette tape without splitting songs at the end of a side.
- CD tracks can be played back or recorded on both sides of a cassette tape in any order.

Input terminals for connecting a Digital Audio Tape (DAT) Deck, the sound portion of Video Cassette Recorder (VCR) and Turntable.

Introduction

Thank you for purchasing this JVC CA-MX30BK Compact Component Stereo System. We hope it will be a valued addition to your home, giving you years of enjoyment.

Be sure to read this instruction manual carefully before operating your new stereo system. Here you will find all the information you need to set up and use the system.

For questions that cannot be answered in this manual, please contact your dealer.

CAUTION

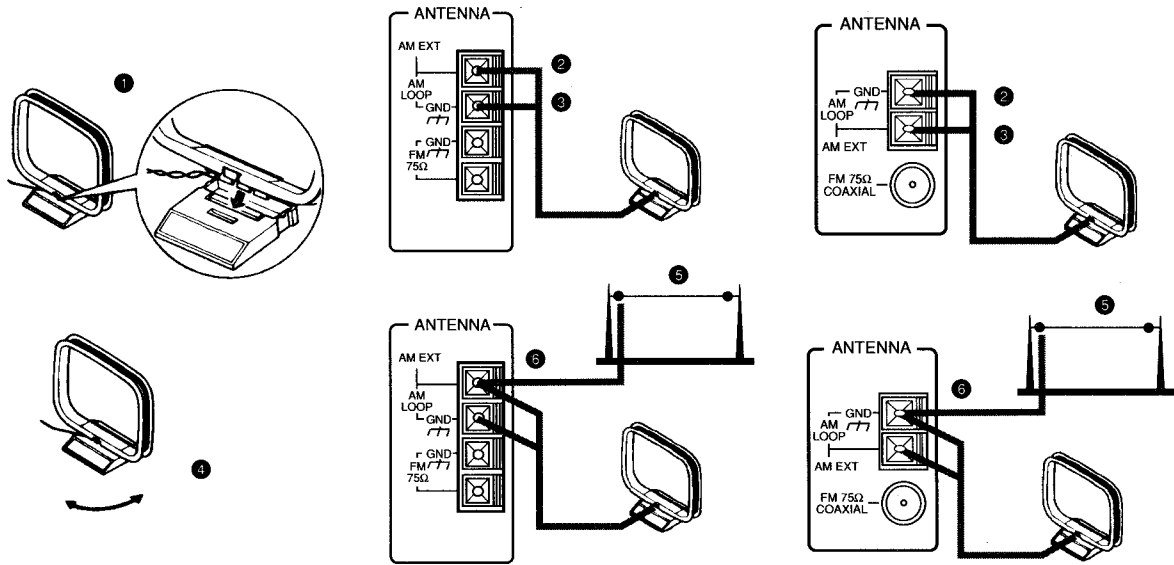
To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

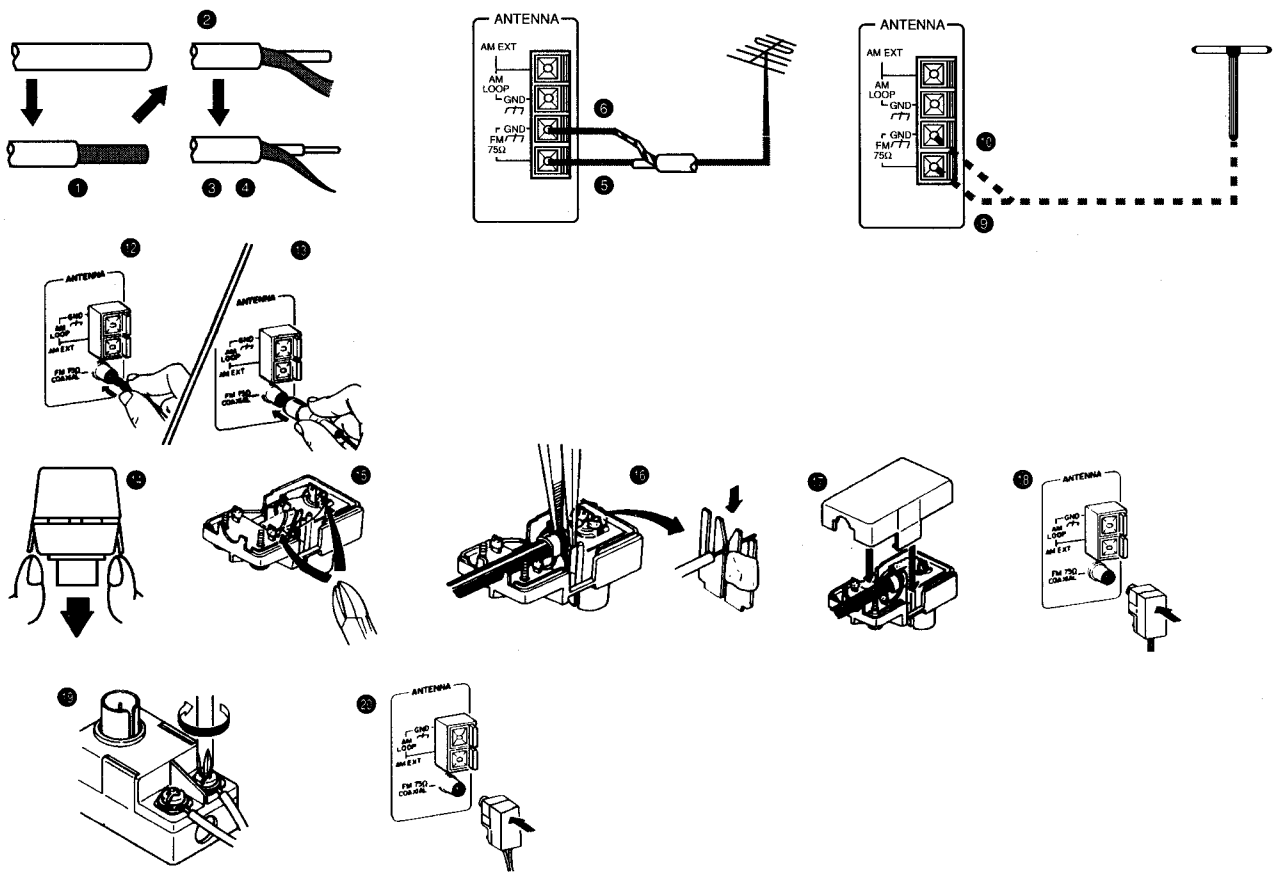
Only use compact-discs bearing the mark shown below.



AM Antenna Connections MW/LW-Antennenanschluss Raccordement des antennes MA
AMantenne aansluiting Conexion de la antenna de AM ANSLUTNING AV AM-antenn



FM Antenna Connections UKW-Antennenschlüsse Raccordement d'une antenne MF
FM antenne aansluiting Conexion de la antena de FM Anslutning av AV-antenn



Connecting the System Components

Connection Notes

- Before you plug in the system, you must make all the necessary connections.

AM Antenna Connections

To receive AM broadcasts you will have to connect an AM antenna to the CA-MX30BK.

An AM loop antenna is included with your system. Connect the antenna as follows.

1. Fold out the loop from the antenna base.
2. Connect one AM antenna wire to one of the AM Loop terminals at the rear of the CA-MX30BK. Either the GND or the AM EXT terminal.
3. Connect the remaining AM antenna wire to the other AM LOOP terminal.
4. Adjust the loop antenna as needed to get the best result.

AM Outdoor Antenna

If your AM(MW/LW) broadcast reception is unsatisfactory, you should connect an AM outdoor antenna in addition to the loop antenna.

Important ! The AM loop antenna must be installed to receive AM broadcasts. Do not disconnect the loop antenna when installing an outdoor antenna.

5. Install a single vinyl covered antenna wire outdoors. The antenna wire should be about 16 to 40 feet (5 to 12 meters long).
6. Connect one end of the antenna to the AM loop terminal marked AM EXT.

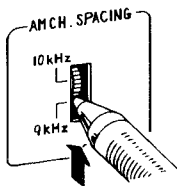
Note: Except for the connection make sure no uninsulated antenna wire touches the rear panel of the CA-MX 30BK. Otherwise you may not receive AM (MW/LW) broadcasts.

AM channel spacing

AM CH. SPACING switch is provided on the rear panel to select between 9 KHz or 10 KHz steps depending on the area in which the receiver is used. (Not provided on units for Canada, Australia, United Kingdom and continental Europe.)

Area	Band	FM	AM (MW)	AM (LW)
Canada		100 kHz	10 kHz	—
Europe, U.K.		50 kHz	9 kHz	1 kHz
Australia		50 kHz	9 kHz	—
Others area		50 kHz	9 kHz* or 10 kHz	—

Note: *Preset at the factory.



First, turn the power ON press the FM button to set to the FM mode, then disconnect the power cord. Wait for a few seconds and switch over the AM CH. SPACING switch as shown in figure using the tip of a ballpoint pen.

FM Antenna Connections

To receive FM broadcasts, you should connect an FM antenna to the CA-MX30BK.

FM antennas use one of two cable types. They are the coaxial cable and the flat feeder cable.

Connecting a Coaxial Antenna Cable

1. Strip of about an inch of the coaxial cable's outer sheathing. This will expose the braid underneath.
2. Strip back the braid without removing it about half an inch. This will expose the conductor wire underneath.
3. Twist the braid so that it tapers to a point.
4. Open the antenna terminals.
5. Place the conductor wire in the FM antenna terminal.
6. Place the braid into the GND terminal.
7. Close the antenna terminals.

Connecting a Flat Feeder Antenna Cable

8. Open the antenna terminals.
9. Place one of the two antenna cable wires into the FM antenna terminal.
10. Place the other wire into the GND terminal.
11. Close the antenna terminals.

— For R.F.Germany —

12. The FM wire antenna provided can be connected to a FM 75Ω COAXIAL as a temporary measure.
13. A 75-ohm antenna with coaxial type connector (DIN 45 332) should be connected to the FM 75 Ω COAXIAL terminal.

— For Continental Europe and U.K. —

FM 75-ohm antenna Cable

14. Open the claws at both sides and remove the cover.
15. Cut both ends of the cord and remove it. (only when using coaxial cable)
16. Fix the coaxial cable and its core.
17. Put on the cover.
18. Connect the FM connector the FM 75 Ω COAXIAL terminal.

FM Feeder Antenna Cable

19. Attach the feeder antenna to the FM connector as shown in the figure.
20. Connect the FM connector to the FM 75 Ω COAXIAL terminal.

Connecting The Speakers

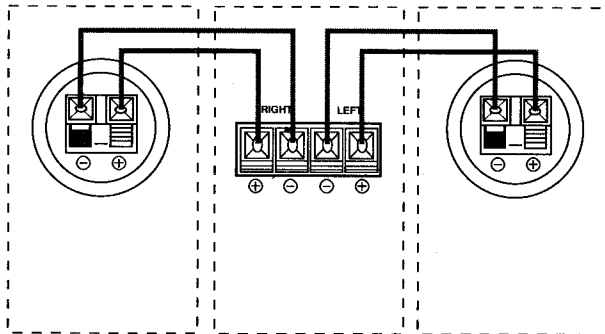
Speaker Terminals

1. When connecting speakers, open each terminal and insert the end of the speaker wire as shown.
2. Close the terminals as shown to clamp the speaker wires in place.

Speakers

3. Connect the red (+) and black (-) terminals of the right side speaker to the red (+) and black (-) terminals marked RIGHT on the CA-MX30BK.
4. Connect the red (+) and black (-) terminals of the left side speaker to the red (+) and black (-) terminals marked LEFT on the CA-MX30BK.

Important! Be sure to match the polarity of the speaker terminals with the polarity of the terminals on the CA-MX30BK. (+) red to (+) red and (-) black to (-) black. The CA-MX30BK is only for use with speakers having impedance of 8 ohms. Check your speaker specifications to make sure the speakers have the correct impedance.



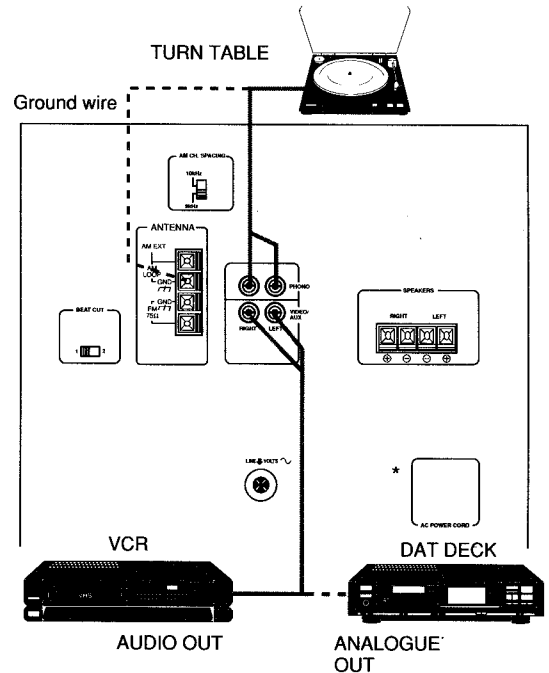
Laying Out The System

Allow a gap between the CA-MX30BK and the speakers so that heat can diffuse.

Connecting Other Components

The CA-MX30BK can also be connected to a Turntable, a Video Cassette Recorder (VCR) and a Digital Audio Tape (DAT) Deck.

Attach these components as shown below.

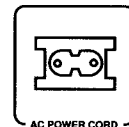


*AC power connection

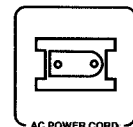
Caution: To prevent electric shock, turn all stereo components off before you install or remove power cord.

Important! Before you plug the power cord into an outlet, make sure all stereo components are connected correctly.

The AC power cord is supplied separately and must be connected to the unit before use. Plug the power cord on the back of the CA-MX30BK into a AC household electrical outlet.



AC POWER CORD
Continental Europe
U.K.
Australia
Other areas



AC POWER CORD
Canada

* Voltage Selector

Not provided on units for the U.K., Canada, Australia and Continental Europe.

When this equipment is used in an area where the supply voltage is different from the preset voltage, reset the voltage selector to the correct position.

Using the Amplifier

Using the Power Switch

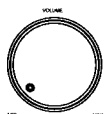


1. Press the **POWER** switch to turn on the CA-MX30BK stereo system.

When the **POWER** switch is not pressed and the power cord is plugged in, the stereo is in **STANDBY** mode and **STANDBY/RECEIVED** lamp lights. In **STANDBY** mode, the stereo uses a small amount of power (15 watts) for the clock, memory contents, and any timers which are set.

2. To disconnect power completely, unplug the power cord.

Adjusting the Volume Controls



Volume

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



Balance

Slide the **BALANCE** knob to adjust the left-and-right sound balance in the speakers or headphones.



Using the SEA Graphic Equalizer

By adjusting the frequency levels in the five available frequency ranges you can create your own sound.

Recording With The SEA Graphic Equalizer

The SEA setting for a source such as CD will be reproduced when the source material is recorded.

This SEA effect can be eliminated by setting all the SEA control slides at zero.

When the slide lever controls on the SEA Graphic Equalizer are moved in the direction of the plus the sound range will increase. The range will decrease when the levers are moved in the direction of the minus.

Using VCR, DAT or a Turntable

In addition to the CD player, Tuner, and Cassette Tape Deck, the CA-MX30BK can also play a DAT, a VCR or a turntable. To connect these sources see Connecting Other Components on page

Playing a Video Cassette

When a VCR is connected, the sound is heard through the speakers.

1. Put a video cassette in the VCR.
2. Press the **VIDEO/AUX** button on the CA-MX30BK.
3. To operate the VCR, refer to its instruction manual.



Playing a DAT

1. Put a DAT cassette in the DAT deck.
2. Press the **VIDEO/AUX** button on the Amplifier.
3. To operate the DAT deck, refer to its instruction manual.



Playing a Turntable

1. Put a record on the turntable platter.
2. Press the **Phono** button on the Amplifier.
3. To operate the turntable, refer to its instruction manual.



Microphone Mixing

When the separately sold microphone is connected to the MIC terminal you can mix in your own singing or speaking voice.

1. **Connect the microphone.**
When connecting or disconnecting the microphone set the **MIXING LEVEL** knob to **Source**.
2. **The source you choose is played.**
3. **Use the mixing level knob to balance the music level with the microphone level.**



Caution

When the mixing level is extreme, howling may occur. If this occurs

1. **Avoid pointing the microphone towards the speaker and move away from the speakers.**
2. **Turn down the microphone level using the mixing knob.**
3. **Turn down the volume.**

SURROUND



Using surround you can enjoy a concert hall sound in your own home.

Using the CD Player

Starting Playback



1. Press the **OPEN/CLOSE** button on the CD Player.
The CD tray slides out.
2. Place a CD (with the label facing up) in the tray, and press the **OPEN/CLOSE** button again.
The tray slides back in.



3. Press the **PLAY/PAUSE** button on the CD Player, or the **CD** button on the Amplifier.
The CD Player begins playing the first track on the CD.

Stopping Playback and Ejecting the CD



1. Press the **STOP/CLEAR** button.
2. Press the **OPEN/CLOSE** button, and take the CD out of the tray.



3. Press the **OPEN/CLOSE** button again to close the tray.

Stopping and Restarting Playback



1. Press the **PLAY/PAUSE** button.
Playback stops temporarily.
2. Press the **PLAY/PAUSE** button again.
Playback restarts.

Selecting a Track to Play

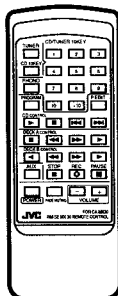
Press the **SEARCH** buttons to scan through the track numbers.



Press the **◀◀** button to find tracks with decreasing numbers, and the **▶▶** button to find tracks with increasing numbers.

- If you press the **SEARCH** buttons when the CD Player is in the **PAUSE/STOP** mode, you will find the track you selected. You can restart playback by pressing the **PLAY/PAUSE** button.
- If you press the **SEARCH** buttons continuously during playback, the CD will advance rapidly in the direction of the button.

Using the Remote Controller to Select a Track



There are two ways to select a track with the Remote Controller.

Numerical keypad

◀◀ or ▶▶ buttons

Using the Numeric Keypad



1. Press the **CD 10KEY** button on the Remote Controller.
2. Enter the track's number with the number keys.
 - If the track you want to hear is the 8th track, press the [8] key.
 - If the track you want to hear is the 15th track, press the [+10] key and the [5] key.
 - If the track you want to hear is the 27th track, press the [+10] key twice and the [7] key once.

Using the SEARCH Buttons



Press the **SEARCH** ◀◀ or ▶▶ button on the Remote Controller. See "Selecting a Track to Play".

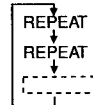
Listening Repeatedly



Using the **REPEAT** button, you can play the entire CD or a selected track repeatedly.

Playing the Entire CD Repeatedly

- During playback, press the **REPEAT** button once.
The CD will play through the last track and then start over again. It will keep repeating until you cancel the repetition.



Playing a Selected Track Repeatedly

- During playback, press the **REPEAT** button twice.
The current track will play to the end and then start over again. It will keep repeating until you cancel the repetition.

Cancelling Repetition

Press the **REPEAT** button again.

Each track will play to the end and not repeat.

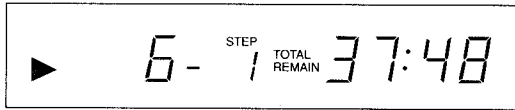
Display Layout

Time display

When the display button is pressed the time display will change.

EACH	The total elapsed playing time since the beginning of playback of the current track.
EACH REMAIN	The time remaining until the end of the current track.
TOTAL	The total elapsed playing time since the beginning of playback of the CD.
TOTAL REMAIN	The total remaining time until the end of the CD.

For Example:



Display mode: TOTAL REMAIN
 Current track: 6th
 Total remaining time: 37 minutes, 48 seconds

Programming Your Own Playback Sequence

You can program the CD Player to play back the tracks of a CD in any order.



1. Press the STOP/CLEAR button on the CD Player.
 This puts the CD Player in STOP mode and clears existing programs from the memory.



2. Press the PROGRAM button on the Remote Controller.



3. Press the CD 10KEY button on the Remote Controller.
 Pressing the CD10KEY button places the Remote Controller in CD mode. This means only buttons concerned with the CD are active.

4. Enter the track numbers in the order you want them played back.

- **For example:** if the first three tracks you want to hear played back are tracks 17, 5, and 10, press the [+10] key and the [7] key (for track 17). Then press the [5] key (for track 5) and the [10] key (for track 10).
- You can program up to 32 tracks.

If the total time of all the programmed tracks is 100 minutes or more, the display will show "—:—" (since the highest time the display can show is "99:59").



5. Press the PLAY/PAUSE button on the CD Player, or the ► button on the Remote Controller.
 Playback begins with the first track in the program.

- To make a change in the program, press the STOP/CLEAR button and go back to step 4.

Checking the Program

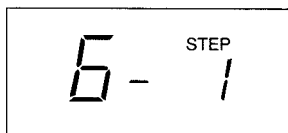
You can check the programmed sequence of playback to determine which tracks will be played in which order.

Note: The program contents cannot be displayed during playback. Press the STOP/CLEAR button if the CD Player is in play mode.



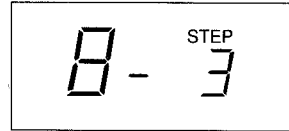
1. Press the SEARCH button once.
 The first track in the program is displayed, along with its sequence number.

For example: this display shows that the 6th track will be played first.



2. Press the SEARCH button repeatedly.
 The rest of the tracks in the program are displayed, along with their sequence numbers.

For example: this display shows that the 8th track will be played third.



Listening to Programmed Tracks Repeatedly



1. Press the REPEAT button to listen to the programmed sequence of playback repeatedly



2. Then press the PLAY/PAUSE button.

Updating the Program

You can add tracks to the program.

Adding Tracks to the Program



1. Press the CD 10KEY button on the Remote Controller.
 Pressing the CD 10KEY button puts the numeric keys in CD mode.

2. Enter the track numbers with the numeric keys in the order you want them played back.
 The track numbers you enter are added to the end of the program.

Updating the Entire Program

You can replace the old program with a new one.



1. Press the STOP/CLEAR button on the CD Player.
 This clears the programmed sequence of playback from memory.

To clear the program during playback:

- Press the STOP/CLEAR button twice (once to stop, twice to clear the program from memory)
- Press the STOP/CLEAR button after pressing the STOP button on the Remote Controller.



2. Press the PROGRAM button on the Remote Controller.



3. Press the CD 10KEY button on the Remote Controller.
 Pressing the CD 10KEY button puts the numeric keys in CD mode.

4. Enter the track numbers with the numeric keys in the order you want them played back.

cancelling Programmed Playback

PROGRAM



1. Press the **PROGRAM** button on the Remote Controller. This puts the CD Player in normal playback mode. The tracks will play back in their regular order.

Note: When Tuner is selected as the source, cd OFF is displayed, and only the Open/Close Disk Tray and Playback buttons can be used. To use other buttons, press the CD button on the Amplifier or the CD Playback button on the Remote Controller first.

Random Play

In RANDOM mode, the CD player selects and plays tracks at random.



1. Press the **RANDOM** button to select the **RANDOM** mode.
2. Press the **STOP/CLEAR** button to stop random play
 - Selections can be made so that each track would be played only once.

Using the Tape Deck

Playing a Tape

The tape deck has an Auto Tape Select feature, which can tell the difference between various types of cassette tape. It can distinguish between Normal (Type I), CrO₂ and High Position (Type II). After it determines the tape type, bias and equalization are automatically set for the tape.

1. Press the **PUSH OPEN** on the corner of the cassette holder.
2. Insert a cassette and shut the cassette holder.

DOLBY B NR

3. If the tape was recorded with Dolby B noise reduction, press the **DOLBY B NR** button. The indicator light will go on.



4. Start playback by either of the following methods:

- Press the **< >** button. Press the **>** button if the tape is wound mostly on the left side. Press the **<** button if the tape is wound mostly on the right side.
- Press the **TAPE** button on the Amplifier.



Note: When cassettes are in both decks A and B, deck B starts first.

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

Stopping Playback and Ejecting the Tape



1. Press the **STOP** on the corner of the cassette holder to open, on the tape deck.
2. Press the **PUSH OPEN** button and remove the tape from the cassette holder.
3. Shut the cassette holder.

Note: If the system is turned off while a tape is playing, you may not be able to eject the tape. You will need to turn the system back on and press the **PUSH OPEN** on the cassette holder to open it.

Stopping and Restarting Playback



1. Press the **PAUSE** button on the tape deck. Playback of the tape in deck B stops temporarily.

Note: The **PAUSE** button only applies to deck B.



2. Press the **<** or **>** button. This restarts playback of the tape in deck B.

Changing the Playback Direction



1. To change the playback direction during playback, press the **<** or **>** button. The other side of the tape will now play.



2. To change the playback direction without starting playback, press the **<** or **>** button while also pressing the **STOP** button. This allows you to set the tape direction for a timed recording.

Fast-Winding the Tape

Press the **<<** or **>>** buttons on the Tape Deck to advance the tape rapidly in the direction of the arrows.

Listening to Tape Continuously

You can set the tape deck up to play the tapes in decks A and B repeatedly.

1. Insert cassettes into decks A and B.

REV MODE

2. Press the **REV. MODE** button

- Deck B will be placed in reverse mode, which means that it will play all of one side of the tape and then all of the other side.
- Deck A moves only in the forward direction.



3. Press the **<** or **>** button of the deck to be started first.
 - Now both sides of deck B's tape and one side of deck A's tape will play repeatedly.
 - If deck B is not placed in reverse mode, only one side of the tape in deck B will play.
 - If you press the **TAPE** button on the Amplifier, deck B will start first.

Music Scanning



The music scan function will detect the blank segments between tracks. The blank should be about 4 seconds long for the music scan to be effective.

You can locate the beginning of the current track or next track quickly by pressing the playback button and the fast-winding button simultaneously.

Searching for Beginning of the Current Track

- If the tape is travelling in the forward direction, press the **<<** fast-winding button while simultaneously pressing the **>** playback button.
- If the tape is travelling in the forward direction, press the **>>** fast-winding button while simultaneously pressing the **<** playback button.

Searching for Beginning of the Next Track

- If the tape is travelling in the forward direction, press the ► fast-winding button while simultaneously pressing the ▷ playback button.
- If the tape is travelling in the forward direction, press the ◀◀ fast-winding button while simultaneously pressing the ◀ playback button.

Note: The deck that is playing will stop if the music scan function is used on the other deck.

The music scan function is not effective:

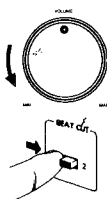
- When the track being scanned contains an area of low sound level.
- When the blank between tracks is short.
- When there is noise, for example, a hum between tracks.

Recording a Tape

- Normal and CrO₂ tape can be used for recording. Metal can only be used for playback.
- To reduce hiss, use the Dolby B noise reduction system. Press the DOLBY B NR button. The indicator light will go on.
- To record on sides A and B continuously, press the REV. MODE button. The indicator light will go on.

The source will be recorded to the end of side A. Then the tape will reverse direction and recording will continue on side B.

- The recording level is set automatically.
- If you don't want to hear the system during recording, turn the VOLUME knob on the Amplifier down.
- If the small tabs on cassette tapes to prevent accidental erasure have been removed, the contents of the tape cannot be recorded over. To record, cover the holes with adhesive tape.
- If you are recording an AM broadcast and you hear interference, move the BEAT CUT switch on the back of the stereo from Position 1 (the normal mode) to Position 2.



Recording from Various Sources

- 1. Insert a cassette for recording into deck B.**
Deck A is used for playback only, and deck B is used both for recording and playback.
- 2. Select the source you are recording from:**
You can record from the CD player, Tape Deck (Deck A), the Tuner, or another component such as a VCR, DAT or a Turntable.
- 3. Press the PAUSE button on the Tape Deck while simultaneously pressing the REC/REC MUTE button.**
This puts the tape deck in REC/PAUSE mode.
- 4. Start the source to be recorded.**
- 5. Press the play ◀ or ▷ button on deck B to start recording.**
- 6. To stop recording, press the STOP button on deck B.**
- 7. To stop recording temporarily, press the PAUSE button on deck B.**
- 8. To restart recording again, press the PLAY button ◀ or ▷.**
This way you can avoid recording unwanted portions of the source such as commercials over a broadcast.

Note: Pre-recorded tape, records or discs should not be re-recorded without the consent of the owners of copyright in the sound recording and in any copyright musical or literary work embodied in that recording as this constitutes an infringement of copyright.

Dubbing a Tape

You can make a tape-to-tape recording at either normal or high speed. Recording from another tape is called dubbing.

Normal-Speed Dubbing

- 1. Insert the cassette for playback into deck A and the cassette for recording into deck B.**
 - Deck A is used for playback only, and deck B is used for both recording and playback.
 - The type of tape (Normal, CrO₂) you record from must be the same as the type of tape you record onto.
 - To dub a tape which was recorded with Dolby B noise reduction, press the DOLBY B NR button on the tape deck to the OFF position (The light will be off)
- 2. Press the PAUSE button while simultaneously pressing the REC/REC MUTE button on deck B.**
This places deck B in REC/PAUSE mode.
- 3. Press the PLAY button ▷ on deck A.**
- 4. Press the PLAY button ◀ or ▷ (depending on which side of the tape you want to record onto) on deck B.**
 - The tape-to-tape recording starts.

Note: You cannot listen to another source during normal-speed dubbing.

- To stop normal-speed dubbing before the end of either the playback or record tape, press the STOP buttons on decks A and B.

High-Speed Dubbing

- 1. Insert the cassette for playback into deck A and the cassette for recording into deck B.**
- 2. Press the HIGH SPEED DUBBING button on the Tape Deck.**
 - The high-speed tape-to-tape recording starts.

Note: You can listen to another source while high-speed dubbing is in progress.

- To stop high-speed dubbing before reaching the end of either the playback or record tape, press the STOP button on deck B.

Note: If a nearby television is on during high-speed dubbing, a beeping noise may be recorded onto the record tape. Turn off the television or move it farther away.

- 3. Press the STOP button on deck A when you hear the end of a track to record from many different tapes (for example, to create a "Greatest Hits" tape)**
Deck A stops playback, and deck B automatically creates about a 4 second blank, then pauses.

Note: If you don't want this blank, press the PAUSE button on deck B before pressing the STOP button.

- 4. Put another tape into deck A.**

- 5. Press the HIGH SPEED DUBBING button on the Tape Deck.**
The high-speed dubbing restarts.

6. To record tracks from other tapes, repeat steps 3 - 5.

Note: The SEA Recording is not effective during high-speed dubbing.

Erasing a Tape



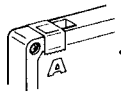
1. **Insert the tape to be erased into deck B.**
 - To erase music on both sides, press the REV. MODE button on the Tape Deck.



2. **Press the PAUSE button while simultaneously pressing the REC/REC MUTE button.**
This puts the deck in REC/PAUSE mode.



3. **Press the TAPE button on the Amplifier.**
4. **Press the < or > button (depending on which side of the tape you want to erase) on deck B.**
The erasure of the tape begins.



- Small tabs are provided on cassette tapes to prevent accidental erasure. If these tabs have been removed, the contents of the tape cannot be erased or recorded over.
- To record or erase, cover the holes with adhesive tape. (The tab in the upper left corner is the tab for the side facing you, and the other tab is for the opposite side.)

Direct Recording from the CD Player

The system sets recording levels automatically.

1. **Insert the cassette for recording into deck B.**
 - Press the REV. MODE button on the Tape Deck if you want to record on both sides of the cassette.
2. **Put a CD in the CD Player.**
 - See "Starting Playback" on page 8 for instructions on how to load a CD.



3. **Press the CD DIRECT REC button on the Tape Deck.**
 - The CD Player and the Tape Deck are activated, and recording begins with the first track of the CD.
 - To stop direct recording, press the STOP button on deck B or the STOP/CLEAR button on the CD Player.



4. **To fade out the CD gradually at the end of the tape, press the FADE button on the CD Player.**
The volume level of the last track on the tape is lowered gradually to 0. This makes a nice ending to your tape and prevents an abrupt cut-off of music if the tape ends before the CD.

5. **To cancel the fade-out function during recording, press the FADE button again on the CD Player.**
The fade-out function operates in both forward and reverse directions.

- When the end of the tape is reached, the tape is rewound to the beginning of the last track.
- The last track is played back again from the CD Player and recorded again on the tape. This time the sound level is reduced gradually at the end.

Recording CD Tracks in Auto-Edit Mode

In Auto-Edit mode, tracks from the CD will automatically be selected to determine which tracks should go on side A of the tape and which should go on side B.

The selection is based on the lengths of the tracks and the length of the tape. This ensures a proper "fit" of the tracks recorded on the tape. It prevents a track from being cut off when the end of the tape is reached.

1. **Insert the cassette for recording in deck B.**
 - Press the REV. MODE button on the Tape Deck if you want to record on both sides of the cassette.

2. **Put the CD in the CD Player.**
See "Starting Playback" on page 8 for instructions on how to load a CD.



3. **Press the STOP/CLEAR button on the CD Player.**



4. **Press the A. EDIT button on the CD Player to tell the system the length of the tape in the Tape Deck.**

- The tape length most suitable for CD recording is displayed first.
- Each time the A. EDIT button is pressed, the next standard tape length blinks, in this order:

→C46→C54→C60→C74→C90→ (back to the beginning)

- You can also enter a non-standard tape length from the Remote Controller using the numeric keys.

For example: to enter a tape length of 50 minutes, press the CD 10KEY button on the Remote Controller, then press the [+10] key four times and the [10] key once.



5. **Press the SIDE A/B button on the CD Player.**

- The CD Player calculates which tracks should be placed on side A and which should be placed on side B, based on the lengths of the tracks and the length of the tape. The number of each track selected for placement on side A or B lights on the display.
- If there are track numbers that do not light after you have pressed the SIDE A/B button, this means that the tape has more room. To add these tracks, use the numeric keys on the Remote Controller.
- If you do not press the SIDE A/B button, the CD Player automatically decides which tracks should be placed on sides A and B about 4 seconds after the A. EDIT button is pressed.

Note: Up to 16 tracks can be allocated for each side of the cassette.



6. **Press the CD DIRECT REC button on the Tape Deck.**

- The tape is automatically rewound to the beginning of side A, and then recording begins.
- After the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. Then it changes direction to side B and begins recording the remaining tracks.
- To stop recording, press the STOP button on deck B, or press the STOP/CLEAR button on the CD Player.
- After the last track has been recorded, a 4 second blank is created. Then the tape stops automatically.



Note: During recording in the Auto-Edit Mode, do not operate the CD Player.

Recording CD Tracks in Programmed-Edit Mode

In Programmed-Edit Mode, you decide which tracks from the CD will be recorded, and in what order.

1. Insert the cassette for recording in deck B.

- Press the REV. MODE button on the Tape Deck if you want to record on both sides of the cassette.

2. Put the CD in the CD Player.

See "Starting Playback" on page 8 for instructions on how to load a CD.



3. Press the STOP/CLEAR button on the CD Player.



4. Press the P. EDIT button on the Remote Controller to tell the system the length of the tape in the Tape Deck.

- Each time the P. EDIT button is pressed, the next standard tape length blinks, in this order:

→C46→C54→C60→C74→C90→ (back to the beginning)

- You can enter a non-standard tape length from the Remote Controller using the numeric keys.

For example: to enter a tape length of 50 minutes, press the CD 10KEY button on the Remote Controller. Then press the [+10] key four times and the [10] key once.



5. Press the SIDE A/B button on the CD Player.

- This tells the system that you will be choosing tracks to be recorded on side A of the tape.
- The length of time for one side of the tape is displayed. This is half of the total tape length. The total time for the tracks you choose for each side cannot exceed this time.
- If you do not press the SIDE A/B button, side A is automatically selected.

Note: During recording in the Programmed-Edit Mode, do not operate the CD Player.



6. Press the CD 10KEY button on the Remote Controller. This places the numeric keys in CD Mode.

7. Enter the numbers of the tracks you want recorded on one side of the tape.

- Tracks on a CD assigned numbers 32 or greater cannot be entered in the program.
- If the length of a track exceeds the remaining tape length, the time indication blinks on the display. Choose a different track number.
- To make a change in the program, press the STOP/CLEAR button and refer back to step 4.
- To add a track to the program, enter the track's number with the numeric keys on the Remote Controller.



8. If you also want to record on the other side of the tape, press the SIDE A/B button on the CD Player and repeat step 7.

If you only want to record on one side of the tape, skip this step.



9. Press the CD DIRECT REC button on the Tape Deck.

- The tape is automatically rewound to the beginning of side A, a 15 second blank is created, and then recording begins.



- After the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. It changes direction to side B, and begins recording the remaining tracks on side B.
- To stop recording, press the STOP button on deck B, or press the STOP/CLEAR button on the CD Player.
- After the last programmed track has been recorded, a 4 second blank is created. Then the tape stops automatically.

Note: The program cannot be edited during recording. To change the program, press the STOP/CLEAR button on the CD Player and begin with step 4 of this procedure.

Recording With the SEA Function

The SEA Function is used to alter the tone of the source by increasing or decreasing the levels of selected frequency ranges.

You can use this function to control the way the tracks from the CD will sound when they are recorded on the tape.

1. Insert the cassette for recording in deck B.

- To create the desired sound, see "Adjusting the Volume Controls" on page 7.



2. Press the < or > button on the Tape Deck while holding down the REC/REC MUTE button. Recording starts.

SEA Function Notes

- The SEA Function cannot be used during high-speed dubbing.
- If the source you are recording from is a cassette in deck A that was created using Dolby B noise reduction, the noise reduction effect is lost when you dub using the SEA Function.
- To keep the noise reduction effect of the cassette in deck A, use either of these methods:
 - High-speed dubbing.
 - Normal speed dubbing, with the SEA Function off and the DOLBY B NR button set to OFF.

Creating a Blank During Recording

Use the Record Muting function when you do not want to record a section of the source.



1. Press the REC/REC MUTE button on the Tape Deck at the beginning of the section you don't want to record. A blank of about 4 seconds is created on the cassette, and then the deck pauses.



2. To start recording again, press the < or > button.

- To create a blank of more than 4 seconds, hold down the REC/REC MUTE button. When you release this button, the deck pauses.
- When the source you are recording from is the CD Player and the CD DIRECT REC button is used, the REC MUTE button will not function.

Recording with the Timer

The CA-MX30BK can be set up to record a tape automatically. This is especially useful for recording broadcasts when you are not around, or late at night when you are asleep.

1. Insert a cassette for recording into deck B.
2. Set the timer, by following the steps in "Setting the Timers" on page 16.

3. Select one of the following sources:

TUNER	Records TUNER preset stations
— —TIMER REC	Records from the source selected before turning off the system

Using the Tuner

The clock will be displayed even when the system is turned off. Pressing the TUNING/TIMER/DIMMER buttons (◀ or ▶) will switch between two brightness levels for the clock.

Setting the Clock



1. Press the **CLOCK ADJUST** button on the Tuner. The hours digits blink.



2. Press the **TUNING/TIMER/DIMMER** button (◀ or ▶) to set the hours digit.

- Press the ▶ button to increase the hour, and press the ◀ button to decrease the hours.
- To enter a new hour digit, press the CANCEL button and repeat step 2.



3. Press the **MEMORY** button on the Tuner. This sets the hour portion of the time.

- The minutes digits will blink.
4. Press the **TUNING/TIMER/DIMMER** button (◀ or ▶) to set the minutes digit.
- It's a good idea to set the minutes digits one minute ahead. Then you can start the clock when it reaches the set time exactly (according to the correct time from the TV, radio, or telephone).
 - To enter a new minute digit, press the CANCEL button and repeat step 4.

5. Press the **MEMORY** button. The clock starts as soon as you press the MEMORY button.

Caution: If there is a power failure, or if you unplug the stereo, the clock time will be lost. Repeat steps 1-5 when power is restored.

Listening to Broadcasts (FM and AM)

The Tuner of the CA-MX30BK can receive FM and AM (MW/LW) broadcasts. Stations can be tuned in manually, automatically, or from preset memory storage.

Manual Tuning



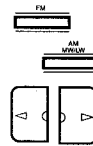
1. Select the broadcast band you want to tune in by pressing the **FM** or **AM (MW/LW)** button on the Tuner.



2. Press the **TUNING/TIMER/DIMMER** button (◀ or ▶) to tune in a station.

3. Hold down the **TUNING/TIMER/DIMMER** button to change the frequency rapidly, then tap the button to set the frequency precisely.

Automatic Tuning



1. Select the broadcast band you want to tune in by pressing the **FM** or **AM (MW/LW)** button on the Tuner.

2. Hold down the **TUNING/TIMER/DIMMER** button (◀ or ▶) for a moment, and then release the button.

- When a station is tuned in, the TUNED indicator lights up.

Note: The Tuner will tune in the nearest strong station.

Presetting stations in Memory

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



1. Select a band by pressing either the **FM** or **AM (MW/LW)** button on the Tuner.



2. Press the **TUNING/TIMER/DIMMER** button (◀ or ▶) to tune in station.



3. Press the **MEMORY** button on the Tuner. The "MEMORY" indicator on the Tuner display blinks for 5 seconds.



4. Press the **PRESET** button (▲ or ▼) on the Tuner to assign a number (1-40) to the station, or enter a number (1-40) on the Remote Controller's numeric keypad.

- If you press another button by mistake, press the MEMROY button again and repeat step 4.
- If the "MEMROY" indicator has stopped blinking, press the MEMROY button again and repeat step 4.
- If the preset number you chose already, has a station assigned to it, the old station will be replaced by the new one.



5. Press the **MEMROY** button again. This stores the station in memroy, with the preset number (1-40) you chose in step 4.

6. Repeat steps 1-5 for each station you want to store in memory with a preset number.

Using Auto-Memory and Preset Scan

Using Auto-Memory

The Auto-Memory function lets you scan a series of radio stations, and preset the ones you want into the CA-MX30's memory. The CA-MX30's tuner will scan radio frequencies and preset the stations, as they are tuned, with ascending channel numbers.



1. Press the AM (MW/LW) or the FM button.



2. Use the TUNING/TIMER/DIMMER button to find the lowest frequency you want to start scanning from.



3. Press the Auto-Memory button. The "MEMORY" indicator lights for about five seconds.



4. After pressing the Tuner button on the Remote Control unit use the Numerical keys to enter the lowest channel number you want to preset.

- You must enter the channel number while the AUTO MEMORY indicator is lighted.
- If the indicator turns off too soon, press the AUTO-MEMORY button and start again.
- When a radio station is tuned in, scanning stops. The TUNED indicator lights, a the first preset channel number blinks on and off for about five seconds.



5. If you do not want to preset the station, press the AUTO-MEMORY button while the channel number is blinking. The CA-MX30BK will start scanning again.

- When the station is preset, the "MEMORY" indicator lights and scanning starts again.
- This process continues automatically until all 40 channels are filled or the upper frequency limit is reached.

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

Cancelling Preset Stations



1. Press the CANCEL button on the Tuner. The "CANCEL" light on the Tuner display blinks for 5 seconds.



2. Press the PRESET button (\triangle or ∇) on the Tuner to select the preset station you want to cancel. If the "CANCEL" light has stopped blinking, press the CANCEL button again and repeat step 2.

3. Press the CANCEL button again. The preset station will be cancelled.

Tuning in Preset Stations

- Press the PRESET button (\triangle or ∇) on the Tuner to select the preset station you want. The preset station numbers are displayed sequentially each time you press the PRESET button.
- You can also select a station by entering its preset number on the Remote Controller's numeric keypad.

FM Reception Modes

There are two FM reception modes: AUTO and MONO.

AUTO: Stations are tuned in with either STEREO or MONO, depending on the strength of the FM signal.

MONO: Stations are tuned in with MONO only. This will reduce interference noise of weak stations and make the reception sound better.



1. Press the FM MODE/MUTE button on the Tuner to switch between the AUTO and MONO reception modes.

- If a stereo broadcast is received when the FM band is selected, the "STEREO" light will be displayed on the Tuner.
- If the FM Reception Mode is MONO, the "STEREO" light will not be displayed.

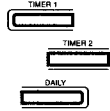
Using the Timers

Setting the Timers

The CA-MX30BK has three timers that are used to turn the system on and off automatically:

TIMER1
TIMER2
DAILY

With the timers you can make tape recordings of broadcasts, CD's, or tapes when you're not around. You can also play these music sources at specified times without recording them.



- Use TIMER1 and TIMER2 to record a radio broadcast when you're not home, or late at night when you're asleep.
- Use the DAILY timer to record a broadcast that occurs at the same time every day.
- The procedure for setting TIMER1, TIMER2, and the DAILY timer is the same. You need to tell the system:
 - The name of the timer (TIMER1, TIMER2, or DAILY).
 - The time the timer should turn the system on.
 - The time the timer should turn the system off.
 - The source the timer should turn on (Tuner, CD, or Tape).
 - The volume level that should be used during recording or playback.

When you have given the system this information, it will know which source to turn on, when to turn it on and off, and how loud to play during this time period.

Note: The clock must be set to the correct time for the timers to be effective. See "Setting the Clock" on page 14.

Choosing a Timer

Press the TIMER1, TIMER2, or DAILY button on the Tuner to select a timer. This puts the system in the Timer Setting mode. The information that the system expects next will blink on the display.

Setting the Start Time



1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn on.**

The ◀ button makes the hour number decrease, and the ▶ button makes the hour number increase.



2. **Press the MEMORY button.**
This stores the hour portion of the start-time in memory.

3. **Press the TUNER/TIMING/DIMMER buttons, as in step 1, to set the minute.**

4. **Press the MEMORY button.**
This stores the minute portion of the start-time in memory.

Setting the Stop Time



1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn off.**

The ◀ button makes the hour number decrease, and the ▶ button makes the hour number increase.



2. **Press the MEMORY button.**
This stores the hour portion of the stop-time in memory.

3. **Press the TUNING/TIMER/DIMMER buttons to set the minute.**

4. **Press the MEMORY button.**

This stores the minute portion of the stop time in memory.

Caution! Do not operate the remote controller when you are programming the timer.

Selecting the Source



1. **Press the TUNING/TIMER/DIMMER button to select a source.**

Repeatedly pressing the ▶ button displays the sources in the following order:

Display	What it means
-----	Plays from whichever source was used just before turning off the system
TUNER	Plays FM or AM (MW/LW) broadcast
TUNER TIMER REC	Records FM or AM (MW/LW) broadcast
CD	Plays a CD
TAPE	Plays a tape
--- -- TIMER REC	Records from whichever source was used just before turning off the system



Note: If you choose an FM or AM radio station as the source, select the station by pressing the PRESET button on the Tuner.



2. **Press the MEMORY button. This stores the source to play or record in memory.**



Note: To change your selection, press the CANCEL button and enter a new value.



Setting the Volume



1. **Press the TUNING/TIMER/DIMMER button to select a volume level.**

Repeatedly pressing the ▶ button displays the volume levels in the following order:

Display	What It Means
Vol — —	Volume set to the level used before beginning this timer setting procedure
Vol — 0	Volume off
Vol — A	Volume barely on
Vol — B	Volume at 1/4 power
Vol — C	Volume at 1/3 power

2. **Press the MEMORY button.**

This stores the volume level for timed playback or recording in memory. To change your selection, press the CANCEL button and enter a new value.



Pressing the Timer Button



This stores the timing information in memory. The timer you chose should blink on the display.

Note: If the timer light does not blink, the timer was not set properly, and you need to set the start time again.

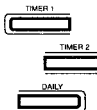
Turning the System Off



Press the POWER button on the Amplifier to turn the system off.

- The system is now programmed to turn on at the preset start-time, and play or record until the stop-time.
- It will record or play the preset source at the preset volume level until the stop-time is reached.
- If you turn the system on before the start-time, the timer will still operate as programmed at the start-time.

Resetting the Timers



To reset a timer, press the button (TIMER1, TIMER2, or DAILY) on the Tuner twice. Now the timer is set again and will use the same start-time, stop-time, source, and volume level as before.

Setting the Wake-Up and Sleep Timers

You can set a timer so it turns on to wake you up or turns off when you go to sleep.

Setting the Wake-Up Timer

The wake-up timer serves as an alarm clock. It turns the system on after a programmed time lapse and plays the source that was used before the system was turned off. You can set a wake-up time from between 5 minutes and 12 hours.



1. Press the POWER switch on the Amplifier so it is off.



2. Press the WAKE UP/SLEEP button on the Tuner. This tells the system that you are going to set the wake-up time.

3. Press the WAKE UP/SLEEP button repeatedly until the desired wake-up time appears. Each time you press the WAKE UP/SLEEP button, the wake-up time lapse changes in the following order:

→ 0:05 → 0:10 → 0:15 → 0:30 → 0:45 → 1:00 → 1:30 → 2:00 → 3:00 → (every hour) → 12:00 → (back to the beginning)



- If you make a mistake, press the CANCEL button on the Tuner and enter a new wake-up time with the WAKE UP/SLEEP button.
- The wake-up timer has priority over TIMER1, TIMER2, and the DAILY timer.

This means that if the start-time for one of the timers occurs before the wake-up time, the system will wait until the wake-up time to turn on.

Note: If CD is the source that will be used, playback begins with the first track.

Setting the Sleep Timer

The sleep timer is used to turn off the system after a specified time lapse. With this timer you can fall asleep listening to music, knowing that the system will shut off automatically and not stay on all night. You can set the sleep timer to turn the system off from between 5 minutes and 2 hours.



1. Press the POWER switch on the Amplifier so it is on.



2. Start the source you want to listen to.
3. Press the WAKE UP/SLEEP button on the Tuner. This tells the system that you are going to set the sleep time.

4. Press the WAKE UP/SLEEP button repeatedly until the desired sleep time appears.

Each time you press the WAKE UP/SLEEP button, the sleep time lapse changes in the following order:

→ 0:05 → 0:10 → 0:15 → 0:30 → 0:45 → 1:00 → 1:30 → 2:00 → (back to the beginning)

- If you make a mistake, press the CANCEL button on the Tuner and enter a new sleep time with the WAKE UP/SLEEP button.

The system will now turn off after this time lapse.

- The sleep timer has priority over TIMER1, TIMER2, and the DAILY timer.

This means that if the stop-time for one of the timers occurs before the sleep time, the system will wait until the sleep time before turning itself off.

Checking the Remaining Time

After setting the wake-up or sleep timer, you can check the time remaining until the system turns on (wake-up time) or shuts off (sleep time).



- Press the WAKE UP/SLEEP button.

The remaining time is displayed for 5 seconds. Then the clock time appears again.

Adding More Time

If you want more time before the wake-up timer turns the system on (or the sleep timer turns the system off), follow these steps:



1. Press the WAKE UP/SLEEP button. The remaining time is displayed for 5 seconds. Then the clock time appears again.
2. Press the WAKE UP/SLEEP button again before the clock time is displayed.

- Keep pressing this button until the desired additional time is reached.
- The added-time will be displayed in the following order:

0:05 → 0:10 → 0:15 → 0:30 → 0:45

Now the system will wait until the added amount of time until turning on or shutting off.

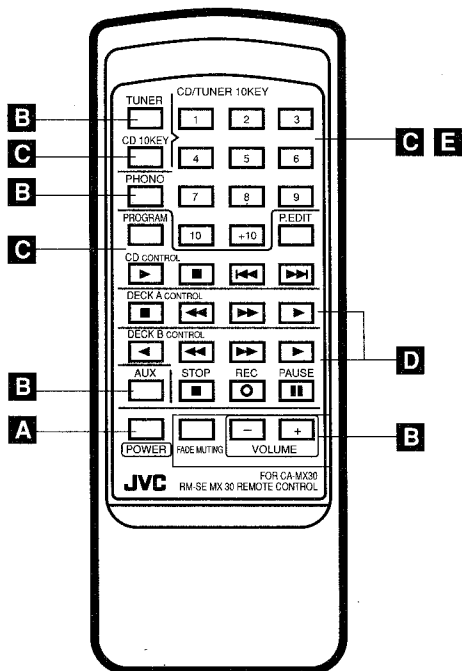
Cancelling the Time Setting

If you decide you don't want the system to wake you up or play music while you fall asleep, you can turn these timers off.



1. To cancel the wake-up timer, press the POWER button on the Amplifier. This turns the power on.
2. To cancel the sleep timer, press the POWER button on the Amplifier. This turns the power off.

Using the Remote Controller

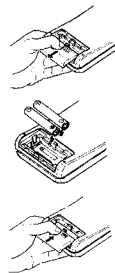


Operating the Remote Controller

You can use the Remote Controller to operate the CA-MX30BK without leaving your chair. You can use it up to a distance of 23 feet.

Point the Remote Controller at the remote sensor on the Amplifier.

Installing Batteries



- 1. Remove the battery compartment lid.**
Press the lid and slide it in the direction of the arrow.
 - 2. Insert the batteries.**
Use two AAA/UM-4/R03 size batteries. Make sure the + and - polarities on the batteries and compartment are the same.
 - 3. Attach the lid.**
Press the lid and slide it in the direction of the arrow.
- Note:** Batteries installed incorrectly may burst or leak. Pay attention to the following:

- When the Remote Controller is not in use for a long period of time, remove the batteries.
- Do not mix old and new batteries.
- Do not mix batteries of different types, even if their shapes are the same.
- When batteries become weak, the operating distance of the Remote Controller is greatly reduced and you will need to replace the batteries.

Remote Controller Buttons

Function	Button(s) To Use
A Turn power on or off	
B Amplifier	
Adjust volume level	
Lower volume level gradually to 0	
Listen to Broadcast	
Listen to a VCR or another component	
Listen to Record	
FADE MUTING Lower volume level gradually	
C CD Player	
Play a CD	
Stop playback of a CD	
Select CD mode	
Select track number	
Scanning music	
Check program contents	
Change a program	
Program playback order	
D Tape Deck	
Play a tape in forward direction	
Play a tape in B deck in reverse direction	
Stop playback in B deck temporarily	
Stop playback	
Fast forwarding or Fast rewinding	
Search for beginning of next track while in forward direction	
Search for beginning of next track while B deck is in reverse direction	
Search for beginning of current track while in forward direction	
Search for beginning of current track while B deck is in reverse direction	
Recording in forward direction	
Recording with B deck in reverse direction	
Pausing recording	
Restarting recording in forward direction	
Restarting recording in reverse direction	
Stopping recording	
Recording from CD in the Programmed-Edit mode	
E Tuner	
First select TUNER mode	
Selecting a preset station	

Note: Where '+' is indicated, press and hold the first button illustrated, then press the second.

General Notes

Care and Handling

You must handle your compact disks, cassette tapes, and tape deck carefully to keep them for a long time.

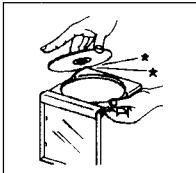
Compact Discs



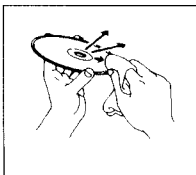
- Remove the CD from the case by holding it at the edges while pressing the center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.



- Place the CD in the tray with the label up.



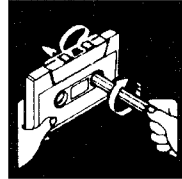
- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.



- If the CD becomes dirty, wipe it with a soft dry cloth in a straight line from center to edge.

Caution! Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzine, etc.)

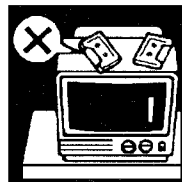
Cassette Tape



- If the tape is loose in the 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.



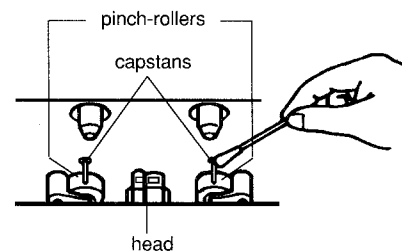
- Do not touch the tape surface.



- 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 head, capstans, and pinch-rollers of the tape deck become dirty, the following will occur:
 - Impaired sound quality
 - Discontinuous sound
 - Fading
 - Incomplete erasure
 - Impossible to record
- Clean the head, capstans, and pinch-rollers with a cotton swab moistened with alcohol.



- If the head becomes magnetized, it will produce noise or lose high frequencies.

To demagnetize the head, turn off the system, and use a head demagnetizer (available at electronics and record shops).

Trouble-shooting

Symptom	Possible Cause	ACTION
No sound is heard.	Connections are incorrect.	Check all connections and make corrections. (see Connections on page 6)
Impossible to record.	Tape tabs are broken.	Cover tabs with adhesive tape.
Hard to listen to broadcasts because of noise.	The antenna is disconnected. The loop antenna is too close to the system. The T bar antenna is not stretched.	Re-connect the antenna securely. Change the position and direction of the loop antenna. Stretch the T bar antenna wire at the best reception position.
The CD sound is discontinuous.	The CD is scratched or stained.	Clean or replace the CD.
Unable to operate the remote controller.	There is an obstruction blocking the remote sensor on the amplifier.	Remove the obstruction.
The CD tray cannot be operated.	The power plug or ribbon cable connector is disconnected. The POWER button is set OFF.	Connect the power plug or ribbon cable connector securely. Set the power button to On.
The CD does not play.	The CD is upside down.	Set the CD 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.
The cassette holder cannot be opened.	The system was turned off because the timer was operated while the tape was running.	Turn On the system..
Color shading or stripes appear on the TV screen.	The TV channel sound only selected by this system is different from the channel selected by the TV.	To prevent this interference, select the same channels on this system and the TV.

Specifications

Amplifier	Output Power	25 watts per channel, min. RMS, both channels driven into 8 ohms, from 40Hz to 20kHz, with no more than 0.9% total harmonic distortion.
		25 watts per channel, min. RMS, both channels driven into 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion (DIN)
	Total Harmonic Distortion at Half-Rated Power	0.07%(at 1kHz)
	Input Sensitivity/ Impedance (1kHz)	
	PHONO	2.5mV/50k ohms
	MIC	1.5 mV/10k ohms
	VIDEO/AUX	220mV/50k ohms
	SEA Center Frequencies	63, 250, 1k, 4k, 16kHz
	SEA Control Range	+10dB ± 1dB -10dB ± 1dB
Compact Disc Player	Dynamic Range (1kHz)	90dB
	Signal-to-Noise Ratio	100dB
	Frequency Response	5Hz-20kHz
	Wow and Flutter	Unmeasurable
Tape Deck	Frequency Response	CrO ₂ : 30-16,000Hz Normal : 30-15,000Hz
	Wow and Flutter (WRMS/DIN)	0.09%/0.22%

FM Tuner	Tuning Range	87.5 MHz ~ 108.0 MHz
	Usable Sensitivity	0.95µV/75 ohms (10.8dBf)
	Signal-to-Noise Ratio	MONO (at 85dBf) 80dB/72dB STEREO (at 85dBf) 73dB/64dB (IHF-A Weighted/DIN)

AM Tuner	Tuning Range	MW

Area	Channel Space	
	9 kHz	10 kHz
Canada	—	530 kHz ~ 1710 kHz
Continental Europe, U. K.	522 kHz ~ 1629 kHz	—
Australia	522 kHz ~ 1629 kHz	—
Other Area	531 kHz ~ 1602 kHz	530 kHz ~ 1600 kHz

LW Tuning Range	144 kHz ~ 353 kHz (For Continental Europe, U.K.)
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General	Dimensions	10-7/8x12-1/2x10-3/4 inches (275x316x273 mm)
	Weight	16.6lbs (7.5kg)

Design and specifications subject to change without notice.

Description of Major LSIs

■ HD614043SA94 (IC621) : SYSTEM CONTROLLER

1. Terminal Layout

TUNER-IND	1	64	
TAPE-IND	2	63	
CD-IND	3	62	
PHONO-IND	4	61	
AUX-IND	5	60	
NC	6	59	SURR- IND
	7	58	STAND-BY IND
VOL-DOWN	8	57	SUR.MUTE
VOL-UP	9	56	MUTE
	10	55	DCS IN
SPEAKER RELAY	11	54	DCS OUT
TUNER INH	12	53	GND
TUNER RESET	13	52	4.19MHz
SURROUND ON/OFF	14	51	4.19MHz
FL OFF	15	50	TEST
DECK POWER	16	49	RESET
POWER OFF	17	48	KEY IN 3
GND	18	47	KEY IN 2
GND	19	46	KEY IN 1
PROTECTOR IN	20	45	KEY IN 0
C/S	21	44	NC
RM.IN	22	43	KEY OUT 2
INH	23	42	KEY OUT 1
	24	41	KEY OUT 0
	25	40	NC
DECK RESET	26	39	NC
CD RESET	27	38	TUNER MUTE
	28	37	
	29	36	STB
	30	35	DATA
NC	31	34	
+5V	32	33	CLK

2. Key Matrix

	KEYO 0 (41PIN)	KEYO 1 (42PIN)	KEYO 2 (43PIN)
KEYI 0 (45PIN)	—	—	CD
KEYI 1 (46PIN)	—	SURR	PHONO
KEYI 2 (47PIN)	—	TAPE	VIDEO/AUX
KEYI 3 (48PIN)	—	TUNER	POWER SW

3. Pin Function

Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	TUNER-IND	O	TUNER Indicator output	33	CLK	O	System Clock output
2	TAPE-IND	O	TAPE Indicator output	34	—	-	Not used
3	CD-IND	O	CD Indicator output	35	DATA	O	Data output
4	PHONO-IND	O	PHONO Indicator output	36	STB	O	Strobe output
5	AUX-IND	O	VIDEO / AUX Indicator output	37	—	-	Not used
6	NC	-	Not used	38	TUNER MUTE	O	TUNER Mute signal
7	—	-	Not used	39	NC	-	Non connect
8	VOL-DOWN	O	Master Volum Down	40	NC	-	Non connect
9	VOL-UP	O	Master Volum Up	41	KEY OUT 0	O	Key matrix output
10	—	-	Not used	42	KEY OUT 1	O	Key matrix output
11	SP.RELAY	O	Speaker Relay Control	43	KEY OUT 2	O	Key matrix output
12	TUNER INH	O	TUNER INH output	44	NC	-	Non connect
13	TUNER RESET	O	TUNER RESET output	45	KEY IN 0	I	Key matrix input
14	SURR ON/OFF	O	Surround ON/OFF	46	KEY IN 1	I	Key matrix input
15	FL OFF	-	Not used	47	KEY IN 2	I	Key matrix input
16	DECK POWER	O	DECK POWER ON/OFF output	48	KEY IN 3	I	Key matrix input
17	POWER OFF	O	Power Control	49	RESET	I	Reset input
18	GND	-	Ground	50	TEST	-	Test input
19	GND	-	Ground	51	4.19MHz	O	X'tal oscillator output
20	PROTECTOR IN	I	Protector Signal input	52	4.19MHz	I	X'tal oscillator input
21	C/S	-	Non connect	53	GND	-	Ground
22	RM.IN	I	REMOCON input	54	DCS OUT	O	Compulink output
23	INH	I	INH input	55	DCS IN	I	Compulink input
24	—	-	Not used	56	MUTE	O	Mute output
25	—	-	Not used	57	SUR.MUTE	-	Not used
26	DECK RESET	O	DECK Reset Output	58	STAND-BY IND	O	STAND-BY indicator output
27	CD RESET	O	CD Reset output	59	SURR- IND	O	Surround indicator output
28	—	-	Not used	60	—	-	Not used
29	—	-	Not used	61	—	-	Not used
30	—	-	Not used	62	—	-	Not used
31	NC	-	Non connect	63	—	-	Not used
32	+5V	-	Power supply	64	—	-	Not used

■ HD614081SC34(IC921) : DECK CONTROLLER

1. Terminal Layout

NR.LED	1	64	A FWD LED
REV MODE LED	2	63	A REV LED
A.SPEED UP	3	62	B FWD LED
B.SPEED UP	4	61	B REV LED
MUSIC IN	5	60	REC LED
B FWD REEL MOTOR	6	59	NR REC
B REV REEL MOTOR	7	58	BIAS
B REV CAM MOTOR	8	57	NR.OFF
B FWD CAM MOTOR	9	56	REC.MUTE
A CAM SW 2	10	55	DCS IN
A CAM SW 1	11	54	DCS OUT
A CAM SW 0	12	53	GND
A PULSE IN	13	52	OSC IN
B CAM SW 2	14	51	OSC IN
B CAM SW 1	15	50	TO VDD
B CAM SW 0	16	49	RESET IN
B PULSE IN	17	48	KEY&SW IN4
POWER OFF IN	18	47	KEY&SW IN3
GND	19	46	KEY&SW IN2
A FWD REEL MOTOR	20	45	KEY&SW IN1
A REV REEL MOTOR	21	44	KEY OUT4
A REV CAM MOTOR	22	43	KEY OUT3
A FWD CAM MOTOR	23	42	KEY OUT2
CHIP SELECT	24	41	KEY OUT1
PLAY BACK EQ	25	40	SW OUT2
B.PLAY/PAUSE	26	39	SW OUT1
PLAY MUTE	27	38	HI-SPEED DUBBING
CAP MOTOR ON	28	37	H.S CrO2
REC	29	36	H.S METAL
FADE CTRL	30	35	H.S NORM.
BEQ	31	34	CrO2
+5V	32	33	METAL

2. Key Matrix

	KEY1 1 (45PIN)	KEY1 2 (46PIN)	KEY1 3 (47PIN)	KEY1 4 (48PIN)
KEYO 1 (41PIN)	—	A ◀	A ▶	A ▶
KEYO 2 (42PIN)	B ◀	B ◀	B ▶	B ▶
KEYO 3 (43PIN)	A ■	B ■	B ●	B ■
KEYO 4 (44)PIN	A ▶ B	DOLBY	REV MODE	CD . REC
SWO 1 (39PIN)	A . CrO2	B . CrO2	—	—
SWO 2 (40PIN)	B PACK	REV REC	FWD REC	A PACK

3. Pin Function

Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	NR.LED	O	NR indicator output	33	METAL	-	Not used
2	REV MODE LED	O	REV MODE indicator output	34	CrO2	O	"H" with normal speed and CrO2 position
3	A.SPEED UP	O	A deck Speed Control output	35	H.S NORM.	--	Not used
4	B.SPEED UP	O	B deck Speed Control output	36	H.S METAL	--	Not used
5	MUSIC IN	I	Music scan input	37	H.S CrO2	O	"H" with high speed and CrO2 position
6	B FWD REEL	O	B deck reel Motor FORWARD Control	38	HS DUBBING	O	High speed dubbing
7	B REV REEL	O	B deck reel Motor REVERSE Control	39	SWO1	I	CrO2 detect Switch input
8	B REV CAM	O	B deck CAM Motor REVERSE Control	40	SWO2	I	Pack detect Switch input
9	B FWD CAM	O	B deck CAM Motor FORWARD Control	41	KO1	O	Key matrix output
10	A CAM SW 2	I	A CAM SW input	42	KO2	O	Key matrix output
11	A CAM SW 1	I	A CAM SW input	43	KO3	O	Key matrix output
12	A CAM SW 0	I	A CAM SW input	44	KO4	O	Key matrix output
13	A PULSE IN	I	A deck reel pulse input	45	KI1	I	Key matrix input
14	B CAM SW 2	I	B CAM SW 2 input	46	KI2	I	Key matrix input
15	B CAM SW 1	I	B CAM SW 1 input	47	KI3	I	Key matrix input
16	B CAM SW 0	I	B CAM SW 0 input	48	KI4	I	Key matrix input
17	B PULSE IN	I	B deck reel pulse input	49	RESET IN	I	Reset input
18	POWER OFF IN	I	POWER OFF input	50	TO VDD	I	+5V
19	GND	--	Ground	51	OSC IN	I/O	Clock oscillation input
20	A FWD REEL	O	A deck reel Motor FORWARD Control	52	OSC IN	I/O	Clock oscillation output
21	A REV REEL	O	A deck reel Motor REVERSE Control	53	GND	--	Ground
22	A REV CAM	O	A deck CAM Motor REVERSE Control	54	DCS OUT	O	Conpulink output
23	A FWD CAM	O	A deck CAM Motor FORWARD Control	55	DCS IN	I	Conpulink input
24	CHIP SELECT	I	CHIP SELECT input : to Vdd	56	REC.MUTE	O	Recording mute control signal output
25	PLAY BACK EQ	O	Play back EQ control output	57	NR.OFF	O	NR ON/OFF output
26	B.PLAY/PAUSE	O	B deck play/pause switching output	58	BIAS	O	BIAS Circuit ON
27	PLAY MUTE	O	Play Mute output	59	NR REC	O	Dolby IC PLAY/Recording Switching
28	CAP MO ON	O	Capstan motor control	60	REC LED	O	Recording indicator signal output
29	REC	O	Recording control	61	B REV LED	O	B REV indicator signal output
30	FADE CTRL	O	Fade control signal output	62	B FWD LED	O	B FWD indicator signal output
31	BEQ	O	B deck CrO2 switch OFF	63	NC	--	Non Connect
32	+5V	-	Power supply	64	A FWD LED	O	A FWD indicator signal output

HD614089SC35(IC501) : TUNER CONTROLLER

1. Terminal Layout

G5	1	64	G6
G4	2	63	G7
G3	3	62	G8
G2	4	61	G9
G1	5	60	G10
S1	6	59	G11
S2	7	58	G12
S3	8	57	G13
S4	9	56	
S5	10	55	DCS IN
S6	11	54	DCS OUT
S7	12	53	GND
S8	13	52	OSC 2
S9	14	51	OSC 1
S10	15	50	TEST
S11	16	49	RST IN
S12	17	48	K IN1
	18	47	K IN2
-BP	19	46	K IN3
	20	45	K IN4
KO9	21	44	KO1
FREQ.OUT	22	43	KO2
RM IN	23	42	KO3
	24	41	KO4
STEREO IN	25	40	
TUNED IN	26	39	
INH IN	27	38	KO7
	28	37	KO8
MUTE	29	36	CE
MONO	30	35	DATA OUT
	31	34	DATA IN
VDD	32	33	CLK

2. Key Matrix

	KEYO 1 (44PIN)	KEYO 2 (43PIN)	KEYO 3 (42PIN)	KEYO 4 (41PIN)	KEYO 7 (38PIN)
KEYI 1 (48PIN)	—	W-UP /SLEEP	UP	FM	—
KEYI 2 (47PIN)	TIMER1	CLOCK ADJ.	DOWN	AM	—
KEYI 3 (46PIN)	TIMER2	CANCEL	PRESET UP	FM MODE/MUTE	—
KEYI 4 (45PIN)	DAILY	MEMORY	PRESET DOWN	—	AUTO MEMORY

3. Pin Function

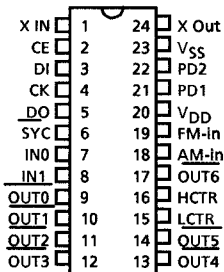
PIN NO.	Symbol	I/O	Functions and Operations	PIN NO.	Symbol	I/O	Functions and Operations
1	G5	O	FL grid control output.	33	CLK	O	Clock output.
2	G4	O	FL grid control output.	34	DATA IN	I	To DATA out (IC102).
3	G3	O	FL grid control output.	35	DATA OUT	O	To DATA in (IC102).
4	G2	O	FL grid control output.	36	CE	O	Chip Enable output (IC102).
5	G1	O	FL grid control output.	37	KO8	O	Key matrix output.
6	S1	O	FL segment control output.	38	KO7	O	Key matrix output.
7	S2	O	FL segment control output.	39	—	--	Not used.
8	S3	O	FL segment control output.	40	—	--	Not used.
9	S4	O	FL segment control output.	41	KO4	O	Key matrix output.
10	S5	O	FL segment control output.	42	KO3	O	Key matrix output.
11	S6	O	FL segment control output.	43	KO2	O	Key matrix output.
12	S7	O	FL segment control output.	44	KO1	O	Key matrix output.
13	S8	O	FL segment control output.	45	K IN4	I	Key matrix input.
14	S9	O	FL segment control output.	46	K IN3	I	Key matrix input.
15	S10	O	FL segment control output.	47	K IN2	I	Key matrix input.
16	S11	O	FL segment control output.	48	K IN1	I	Key matrix input.
17	S12	O	FL segment control output.	49	RST IN	I	Reset input.
18	—	--	Not used.	50	TEST	I	Test input.
19	-BP	--	FL Display Power supply.	51	OSC 1	O	X'tal oscillator output.
20	—	--	Not used.	52	OSC 2	I	X'tal oscillator input.
21	KO9	O	Key matrix output.	53	GND	--	Ground.
22	FREQ.OUT	O	Frequency output.	54	DCS OUT	O	Compulink output.
23	RM IN	I	Remote control input.	55	DCS IN	I	Compulink input.
24	—	--	To GND.	56	—	--	Not used.
25	STEREO IN	I	STEREO Indicator input.	57	G13	O	FL grid control output.
26	TUNED IN	I	TUNED Indicator input.	58	G12	O	FL grid control output.
27	INH IN	I	INH input.	59	G11	O	FL grid control output.
28	—	--	Not used.	60	G10	O	FL grid control output.
29	MUTE	O	MUTE output.	61	G9	O	FL grid control output.
30	MONO	O	STEREO / MONO output.	62	G8	O	FL grid control output.
31	—	--	Not used.	63	G7	O	FL grid control output.
32	VDD	--	Power supply. (+ 5V)	64	G6	O	FL grid control output.

■ LC7218 (IC102): PLL Synthesizer

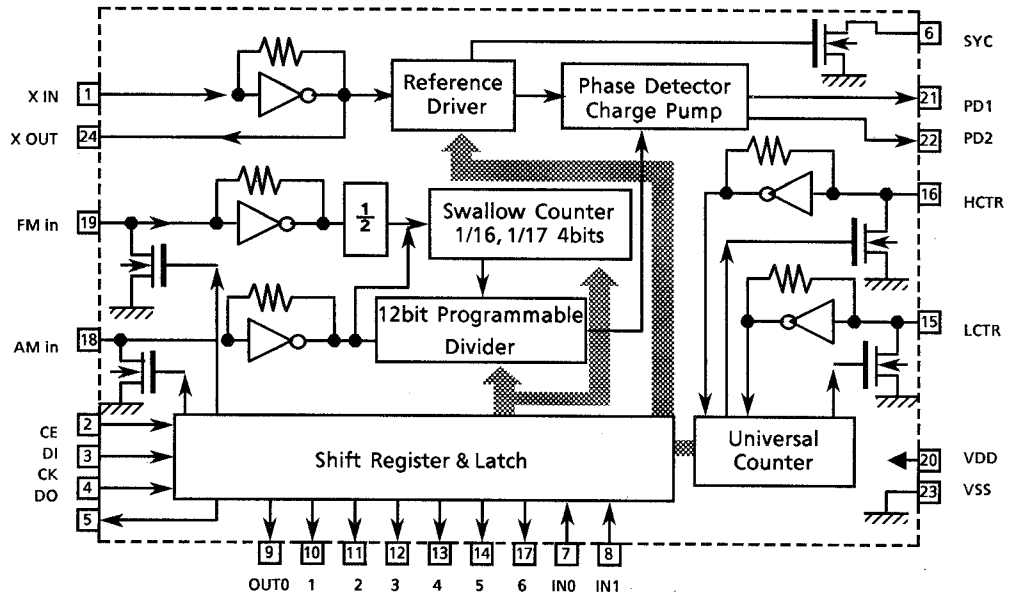
1. The main function descriptions

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

2. Terminal Layout



3. Block Diagram



4. Pin Function Description

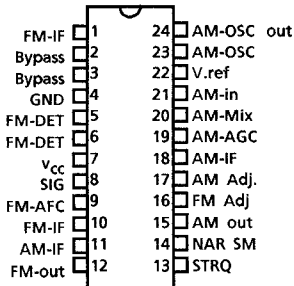
Pin No.	Symbol	Name	I/O	Functions and Operations
1, 24	X in, X out	X in, X out	I/O	Crystal oscillator (7.2MHz).
2	CE	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	DI	I	Receive the control data from the controller (IC421).
4	CK	CK	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	DO	O	Transmit the data from LC7218 to the controller which is synchronized with CK.
6	SYNC	SYNC	—	Not use
7	IN0	Tuned in	I	Receive the tuned signal from IC101 (LA1266A).
8	IN1	Stop in	I	Not use
9	OUT 0	POWER	---	Not use
10	OUT 1	QSC	---	Not use
11	OUT2	MONO	---	MONO
12	OUT3	FM	O	It is "L" on FM mode.
13	OUT4	MW	O	It is "L" on AM mode.
14	OUT5	LW	—	Not use
15	LCTR	AM-IF	I	Universal counter input for AM-IF from IC101 (LA1266A).
16	HCTR	FM-IF	I	Universal counter input for FM-IF from IC101(LA1266A).
17	OUT6	IF REQ	O	Output the "IF-signal request" to IC101 when the pin-7 (tuned in) goes to "H".
18	AM in	AM osc	I	Input the local oscillator signal of AM.
19	FM in	FM osc	I	Input the local oscillator signal of FM.
20	V _{DD}	V _{DD}	—	This is a terminal of power supply.
21	PD1	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	PD2	O	Not use
23	V _{SS}	V _{SS}	—	GND

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

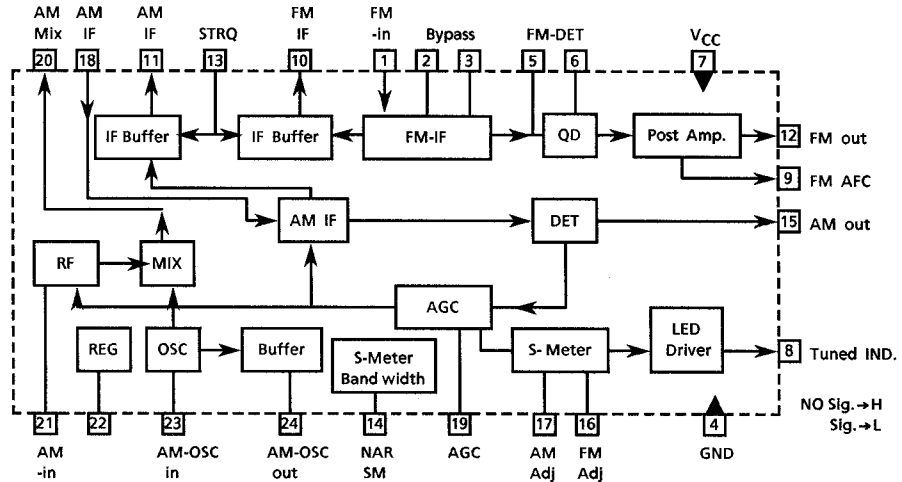
1. The main function descriptions

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

2. Top View



3. Block Diagram



4. Pin Function Description

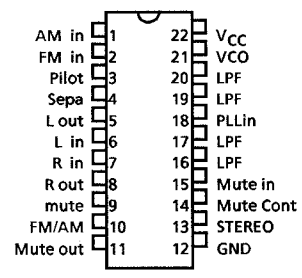
Pin No.	Symbol	I/O	Functions and Operations
1	FM IF	I	This is an input terminal of FM IF Signal.
2, 3	Bypass		Bypass of FM IF Amp.
4	GND	---	This is the device ground terminal.
5, 6	FM DET	I	FM detect transformer.
7	V _{CC}	---	This is the power supply terminal.
8	SIGNAL	O	Mute drive and signal stop drive output when tuning. Active Low
9	FM AFC	O	This is an output terminal of voltage for FM-AFC.
10	FM IF	O	When the IF REQ signal of IC251(LC7218) applies to pin13, the signal of FM IF outputs.
11	AM IF	O	When the IF REQ signal of IC251(LC7218) applies to pin13, the signal of AM IF outputs.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal goes to "High".
14	NAR SM	O	Control the Band-width of AM signal meter.
15	AM out	O	AM detection output.
16	FM Adj	I	For adjust the stop level (or mute level) of FM.
17	AM Adj	I	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	O	Control the Band-width of FM signal meter.
23	AM-OSC	I	This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

LA3401 (IC105): FM MPX Detector

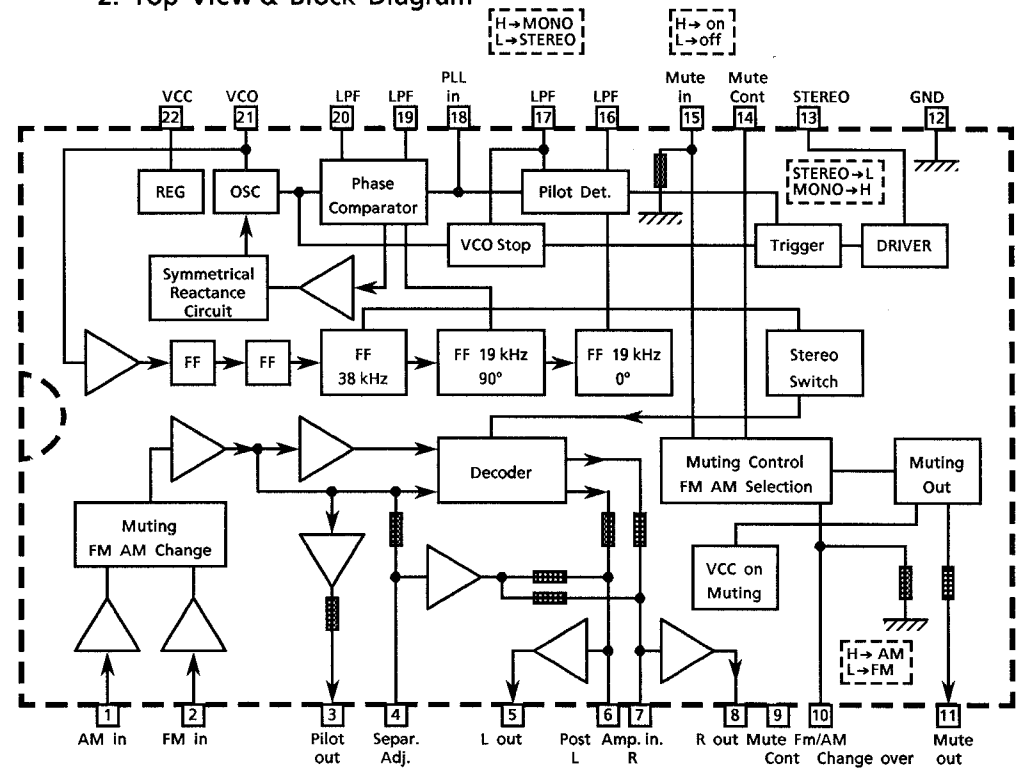
1. The main function descriptions

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

(1) Terminal Layout



2. Top View & Block Diagram



3. 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.	O	Separation adjustment.
5	L. out	O	Left channel signal output.
6	L	O	Reversal output of Pin5.
7	R	O	Reversal output of Pin8.
8	R out	O	Right channel signal output
9	Mute Cont	O	The mute time is controlled by the connected capacitor when turning the power switch on.
10	FM/AM	I	Change over the FM/AM input. "H": AM, "L": FM
11	Mute out	---	Not use
12	GND	---	Ground terminal.
13	Stereo	O	Stereo indicator output. Stereo: "L", Mono: "H"
14	Mute Cont	O	The mute time is controlled by the connected capacitor when changing over the FM/AM .
15	Mute in	I	Mute signal input. "H": Mute on, "L": Mute off.
16	LPF		Low pass filter of pilot detector.
17	LPF		While this terminal goes to "H", the VCO stop.
18	Pilot in	I	PLL input.
19	LPF		Low-pass filter of PLL.
20	LPF		Low-pass filter of PLL.
21	VCO	O	Voltage controlled oscillator terminal.
22	Vcc	---	Power supply.

■ HD404019RB14S(IC901) : CD CONTROLLER

1. Terminal Layout

8G	1	64	9G
7G	2	63	10G
6G	3	62	11G
5G	4	61	NC
S9	5	60	NC
4G	6	59	NC
3G	7	58	NC
2G	8	57	7121/3805
1G	9	56	DCS OUT
S1	10	55	DCS IN
S2	11	54	A. IND
S3	12	53	GND
S4	13	52	OSC2
S5	14	51	OSC1
S6	15	50	TEST
S7	16	49	RESET
S8	17	48	KEY 13
NC	18	47	KEY 12
-V DISP	19	46	KEY 11
MUTE	20	45	KEY 10
NC	21	44	KEY 03
NC	22	43	KEY 02
R/W	23	42	KEY 01
CL. SW	24	41	NC
OP. SW	25	40	
R. SW	26	39	P.OFF
TEST	27	38	DDRP.MU.
CLOSE	28	37	L.ON
OPEN	29	36	WQ
TLOF	30	35	D IN (SO)
GU	31	34	D OUT (SI)
VDD	32	33	SCK

2. Key Matrix

	KEY 10 (45PIN)	KEY 11 (46PIN)	KEY 12 (47PIN)	KEY 13 (48PIN)
KEY O 1 (42PIN)	STOP/ CLEAR	▶▶	PLAY/ PAUSE	OPEN/ CLOSE
KEY O 2 (43PIN)	DISPLAY	A.EDIT	◀◀	FADE
KEY O 3 (44PIN)	REPEAT ALL / 1	SIDE A/B	—	RANDOM

3. Pin Function

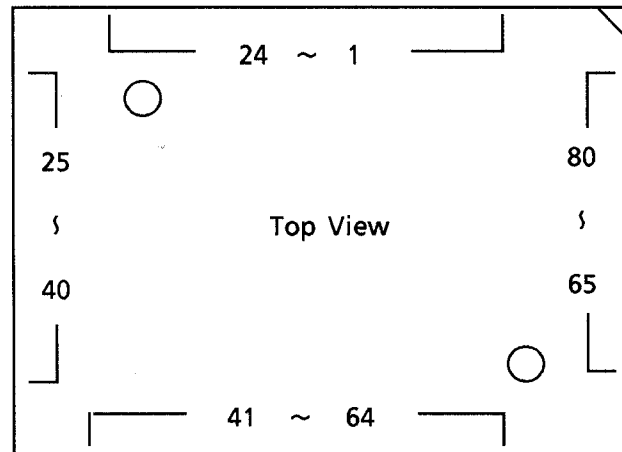
PIN NO.	Symbol	I/O	Functions and Operations	PIN NO.	Symbol	I/O	Functions and Operations
1	8G	O	FL grid control output	33	SCK	O	Clock output for data transfers
2	7G	O	FL grid control output	34	SI	O	Serial data output
3	6G	O	FL grid control output	35	SO	I	Serial data input
4	5G	O	FL grid control output	36	WQ	I	Write request input
5	S9	O	FL segment control output	37	L.ON	O	Laser ON output
6	4G	O	FL grid control output	38	DDRP.MU	--	Not used
7	3G	O	FL grid control output	39	P.OFF	O	Power supply off output
8	2G	O	FL grid control output	40	—	--	Not used
9	1G	O	FL grid control output	41	NC	--	Non connect
10	S1	O	FL segment control output	42	KEY01	O	Key matrix output
11	S2	O	FL segment control output	43	KEY02	O	Key matrix output
12	S3	O	FL segment control output	44	KEY03	O	Key matrix output
13	S4	O	FL segment control output	45	KEY 10	I	Key matrix input
14	S5	O	FL segment control output	46	KEY 11	I	Key matrix input
15	S6	O	FL segment control output	47	KEY 12	I	Key matrix input
16	S7	O	FL segment control output	48	KEY 13	I	Key matrix input
17	S8	O	FL segment control output	49	RESET	I	Reset input
18	NC	--	Non connect	50	TEST	--	Pull Up (+5V)
19	-V DISP	I	FL Power supply	51	OSC 1	I	Clock Oscillation input
20	MUTE	--	Mute signal output	52	OSC 2	O	Clock Oscillation output
21	NC	--	Non connect	53	GND	--	Ground
22	NC	--	Non connect	54	A. IND	--	Not used
23	R/W	O	Reed / Light output	55	DCS IN	I	Compu-link signal input
24	CL. SW	I	Close signal input	56	DCS OUT	O	Compu-link signal output
25	OP. SW	I	Open signal input	57	7121/3805	--	IC Select : To GND
26	R. SW	I	REST Switch input	58	NC	--	Non connect
27	TEST	--	Pull Up (+5V)	59	NC	--	Non connect
28	CLOSE	O	TRAY Close signal output	60	NC	--	Non connect
29	OPEN	O	TRAY Open signal output	61	NC	--	Non connect
30	TLOF	O	Tracking servo off	62	11G	O	FL grid control output
31	GU	O	Increases tracking gain	63	10G	O	FL grid control output
32	VDD	--	Power supply	64	9G	O	FL grid control output

■ YM3805-H (IC841)

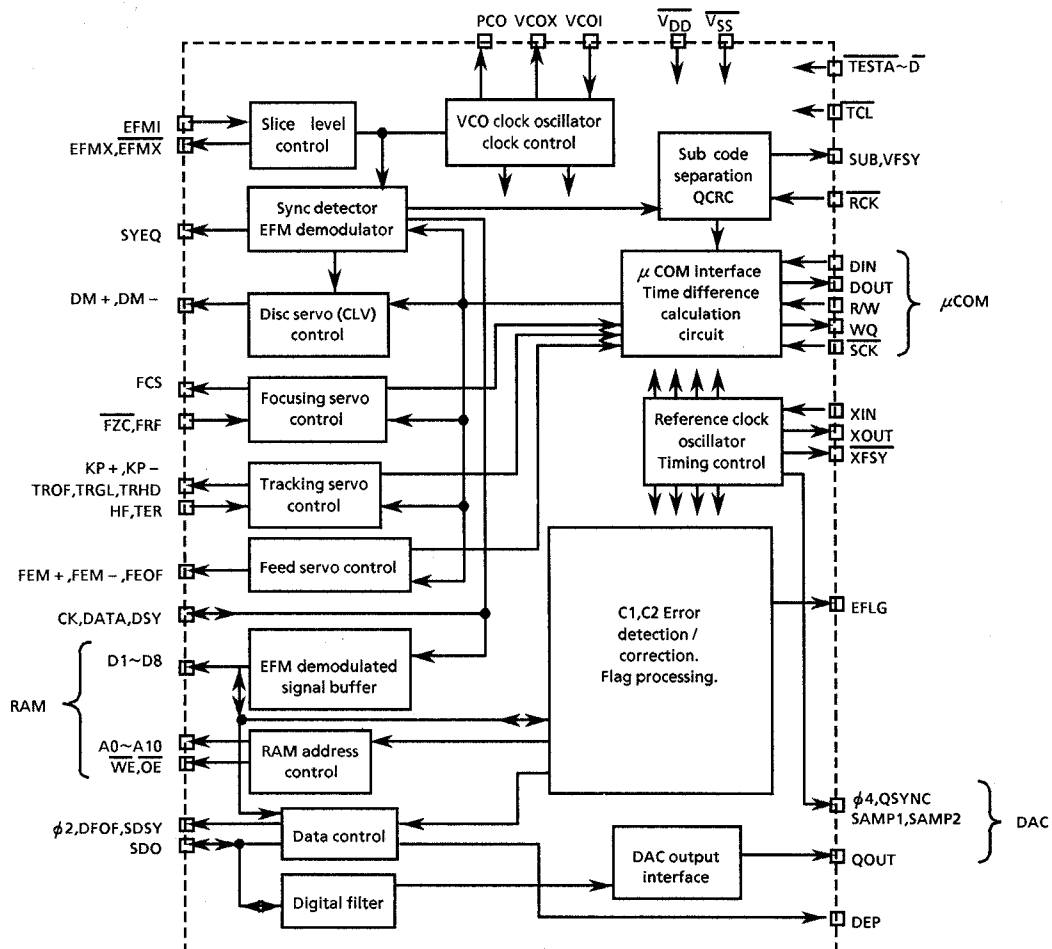
1. Outline:

YM3805-H is a C-MOS LSI for signal processing (SGP) and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the laser pickup, detection / correction of the error signal, signal processing in digital filtering, etc. and for various servo controls (focusing, tracking, spindle and feed servos).

2. Terminal Layout



3. Internal Block Diagram

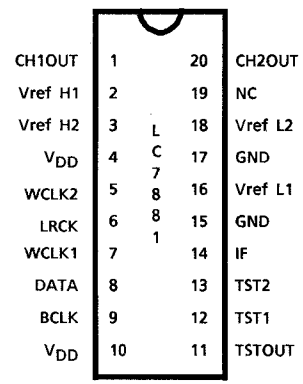


4. Pin Functions Description

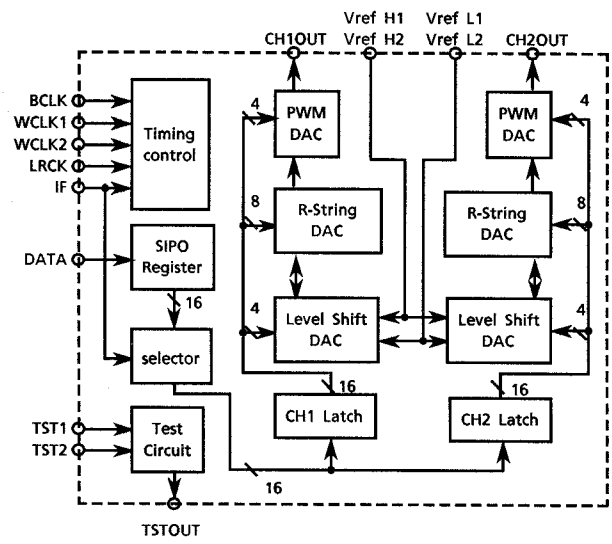
Pin No.	Symbol	I/O	Functions and Operations
1 32 72	V _{DD}	-	These are +5V power supply terminals.
2 - 3	VCOX VCOI	O I	These terminals are used for oscillating VCO (Voltage Controlled Oscillator) clock. (8.6436MHz)
4	PCO	O	This terminal is control output terminal for VCO clock, and sets oscillation circuit to rise frequency when average voltage is high.
5 - 9 41 - 78	V _{SS}	-	These are ground terminals.
6 7	EFMX EFMX	O O	These terminals connect with EFM signal slice level control circuit. Amplified EFM signal by limited amplitude comes from these terminals.
8	EFMI	I	Input the EFM signal (1~2Vpp) to the this terminal.
10	SYEQ	O	This is a monitor output terminal. It becomes "H" when there is a agreement synchronizing signal in EFM signal and inner counter.
11 12	DM+ DM-	O O	They are output terminals controlling disc motor drive circuit. These do not become "H" at the same time.
13 14	FCS FZC	O I	This is an output terminal for taking in focus. This is a terminal to get FZC signal which changing "H" to "L" when pick-up is in focus.
15	FRF	I	Input "H" signal when there is reflected light of compact disc at this terminal.
16 17	HF TER	I I	This is a terminal inputting envelope of EFM. This is a terminal inputting tracking error signal.
19	TROF	O	This is a terminal for cutting off the tracking error signal of tracking servo circuit.
20	TRGL	O	This is an output terminal for getting down the gain of tracking servo circuit.
21	TRHD	O	This is an output terminal for holding tracking error signal of tracking servo circuit while following KP+ or KP- are output.
22 23	KP+ KP-	O O	They are connected with tracking servo circuit. They are terminals for searching.
24 25 26	FEOF FEM+ FEM-	O O O	This is an output terminal for cutting off the input signal of feed servo circuit. There are output signals for high speed feed and they are connected with feed servo circuit.
27	CK	I/O	This is the check terminal. It has a 4.3218MHz; half of VCO.
35	WQ	O	This connects with microcomputer. It is a request output terminal for demanding to send the data from SVC to microcomputer.
36	R/W	I	This connects with microcomputer and it is an output terminal for switching data transmission mode. It enables to transmit data from SVC to microcomputer when R/W is "L" and from microcomputer to SVC when R/W is "H". (Read/Write)
37	DOUT	O	This is a data output terminal. It enables to transmit the data from SVC to microcomputer according SCK clock input when R/W is "L".
38	DIN	I	This is a data input terminal. It enables to transmit the data from microcomputer to SVC according SCK clock input when R/W is "H".
39	SCK	I	It is a clock input terminal needed for transmitting the data.
40 42~50 53	A0 A1~A9 A10	O	These are address output terminals and are connected to the RAM.
51	\overline{WE}	O	This terminal is connected to the RAM; the RAM is set to the write mode when this terminal is "L". (Write enable)
52	\overline{OE}	O	This terminal is connected to the RAM; the RAM is set to the read mode when this terminal is "L". (Output enable)
54~61	D8~D1	I/O	These are data Input and Output terminals and are connected to the RAM.
62	DEP	O	This terminal a Flag for de-emphasis. De-emphasis is necessary when this terminal is "H".
64	QSYNC	I/O	This terminal output the clock signals to find that the serial data is channel 1 or channel 2.
65	QOUT	O	This terminal output the digitalized audio signal. they come out channel 1 and channel 2 alternately.
68	$\Phi 4$	O	$\Phi 4$ is a 4.3218MHz crystal clock.
76 77	SAMP1 SAMP2	O O	These terminals connect with D/A converter. These signal are use to make deglitching signal.
79 80	XIN XOUT	I O	A crystal resonator (8.6436MHz) is connected.
18 28~31 33 - 34 63 66 - 67 69~71 73~75			Not used.

LC7881-C (IC873): D/A converter

1. Terminal Layout



2. Block Diagram

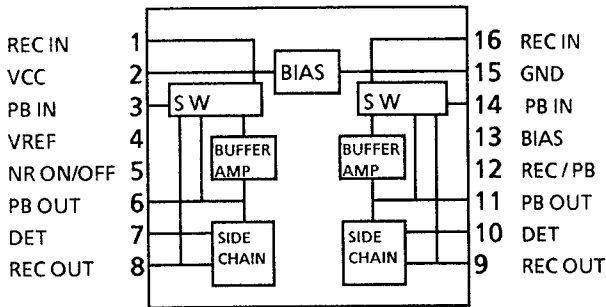


3. Pin Functions

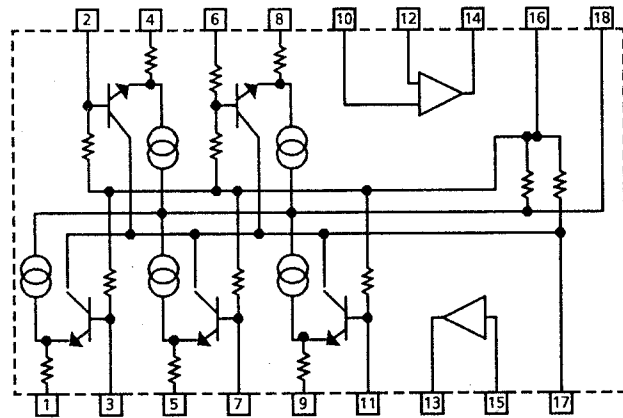
Pin No	Symbol	I/O	Functions and Operations
1	CH1 OUT	O	Channel 1 Output pin.
2	Vref H1	I	Reference voltage "H" input pin1.
3	Vref H2	I	Reference voltage "H" input pin2.
4	V _{DD}	-	Power supply, +5V.
5	WCLK2	I	Word clock 2 input pin. When IF pin is at high level, WCLK2 pin should be set at low level. When IF pin is at low level, this generates the internal signal used to latch the CH1 data of the digital audio signal, using the falling edge of WCLK2.
6	LRCK	I	LR clock input pin. This shows the CH1 and CH2 of the input digital audio data. When LRCK is at high level, it corresponds to CH1 data. When LRCK is at low level, it corresponds to CH2 data.
7	WCLK1	I	Word clock 1 input pin. When IF pin is at high level, this pin generates the internal signal used to latch both the CH1 and CH2 data, using the falling edge of WCLK1. When IF pin is at low level, it generates the internal signal used to latch the CH2 data.
8	DATA	I	Digital audio data input pin. When IF pin is at high level, the data signal is input by each bit serially from the MSB. When IF pin is at low level, the data signal is input by each bit serially from the LSB.
9	BCLK	I	Bit clock pin. This clock signal is used when reading the digital audio data by each bit serially, and also used for PWM D/A converter.
10	V _{DD}	-	Power supply, +5V.
11	TST OUT	O	Test signal output pin. Normally leave this pin open.
12	TST1	I	Test signal input pin. Normally connect to GND terminal.
13	TST2	I	
14	IF	I	Interface select pin. When IF pin is at high level, the digital audio data is input from the MSB first. When IF pin is at low level, the digital audio data is input from the LSB first.
15	GND	-	Ground.
16	Vref L1	I	Reference voltage "L" input pin1.
17	GND	-	Ground.
18	Vref L2	I	Reference voltage "L" input pin2.
19	NC	-	No connection.
20	CH2 OUT	O	Channel 2 output pin.

Internal Block of Others ICs

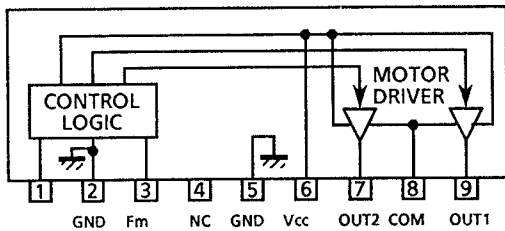
■ HA12136A (IC351)
: Noise Reduction Amplifier



■ BA3812L (IC651, 652)
: SEA Equalizer Amplifier



■ BA6218 (IC931~934): Motor Drive IC

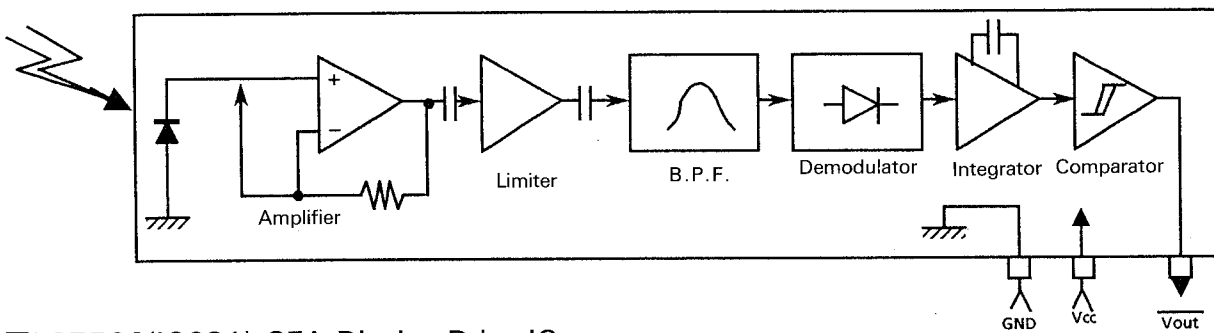


● Input Truth Table

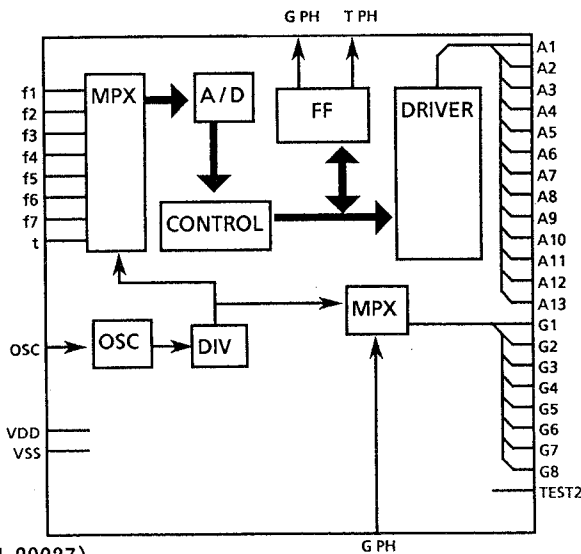
3pin (IN)	1pin (IN)	7pin (OUT)	9pin (OUT)
H	L	H	L
L	H	L	H
H	H	L	L
L	L	OPEN	OPEN

Note: The input level "H" must be 2.0V or higher and the input level "L" must be 0.8V or lower.

■ SPS-420-1 (IC623): Remote Control Receiving IC



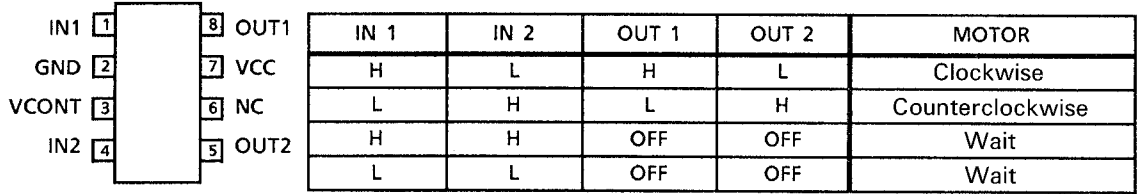
■ LC7566 (IC631): SEA Display Drive IC



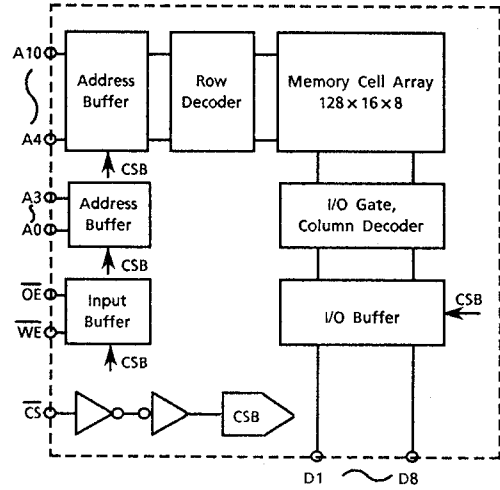
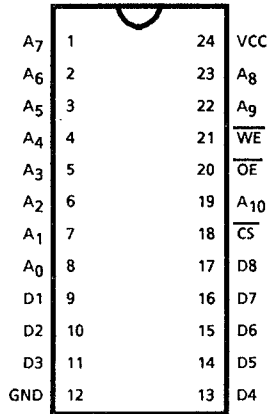
Explanation of Terminals

Pin no.	Terminal Name	Function
1, 23	TEST1, TEST2	Test Terminal
2~14	A1~A13	Anode Noise Terminal
15~18, 33	NC	Not Connected
24	T	Rectified Voltage Input of Audio Signal
25~31	f7~f1	Grid Noise
34~41	G8~G1	Power Supply
42	VDD	GND
19	VSS	GND
21	G.PH	Peak Holding Reset Time Setting
22	T.PH	Total Display Reset Time Setting
32	DIM	Dimmer Control (Dimmer Turned on 1 and off at 0)
20	OSC	Oscillation Terminal

■LB1639-CV(IC622):Motor Driver



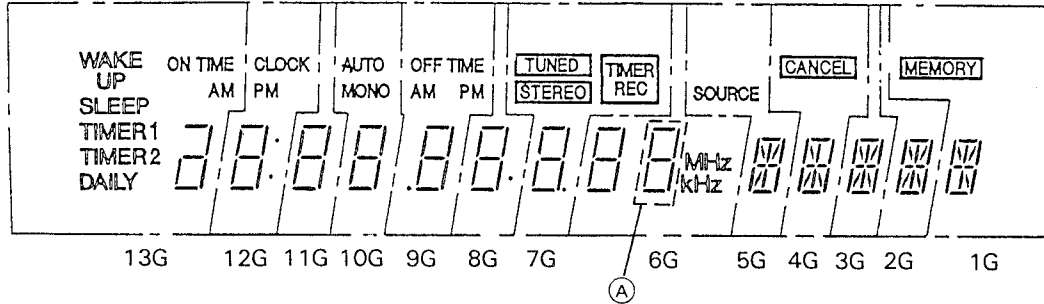
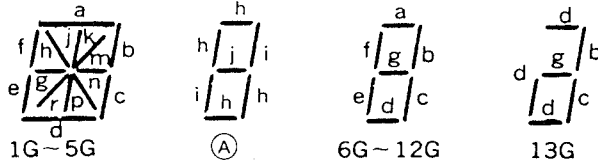
■LC3517BS-15(IC842):Static RAM



Internal Connections for the FL Display Tube

■ FL501 : ELU0001-101

(1) Grid Division



(2) Terminal Connections

PIN CONNECTION

PIN 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
CONNECTION	F1	F1	NP	NC	13G	S1	S2	13G	S3	S4	12G	12G	S5	11G	S6	10G	S7	9G	9G	S8	S9	8G	S10	7G	S11	6G	S12	NC	NC	NC

PIN NO.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
CONNECTION	6G	NC	5G	NC	4G	4G	NC	3G	NC	2G	NC	1G	NC	NC	F2	F2

Notes F: Filament G: Grid P: Anode NP: No Pin NC: No Connection

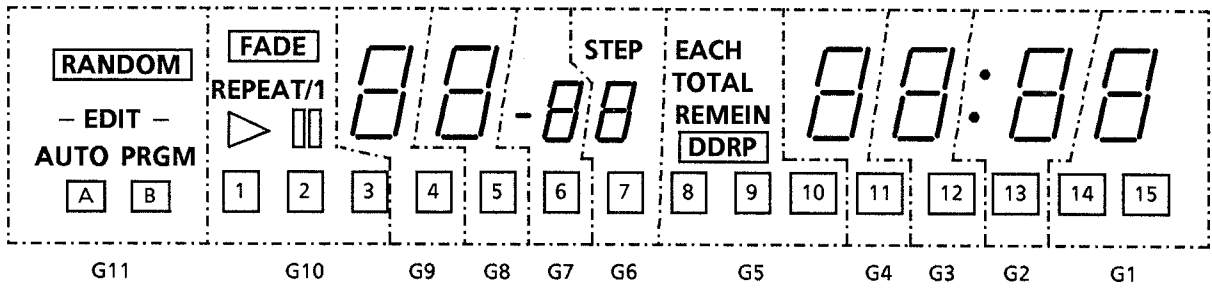
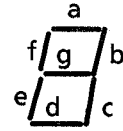
(3) Anode Connection Table

Inside Connections

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	d	d	d	d	d	d	d	d	d	d	d	d	d
S2	/	e	e	e	e	e	e	e	e	e	e	e	e
S3	c	c	c	c	c	c	c	c	c	c	c	c	c
S4	g	/	/	/	/	/	/	KHz	r	r	r	r	m
S5	b	DP (:)	/	/	DP (.)	DP (:)	DP (.)	MHz	k	n	n	n	n
S6	DAILY	/	/	/	AM	/	STEREO	i	j, p	j, p	j, p	j, p	j, p
S7	TIMER 2	g	g	g	g	g	g	g	g, m	g, m	g, m	g, m	g
S8	TIMER 1	f	f	f	f	f	f	f	f	f	f	f	f
S9	SLEEP	b	b	b	b	b	b	b	b	b	b	b	b
S10	WAKE UP	a	a	a	a	a	a	a	a	a	a	a	a
S11	AM	PM	/	MONO	PM	/	TUNED	j	h	h	h	h	h, k
S12	ON TIME	CLOCK	/	AUTO	OFF TIME	/	TIMER REC	h	SOURCE	CANCEL	k	k	MEMORY

■ ELU0001-114 (FL901) : FL DISPLAY FOR CD

1. Grid Layout



2. Pin Functions

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ELECTRODE	F	F	NP	NC	11G	10G	9G	8G	7G	6G	5G	P1	4G	3G	2G	1G	P2	P3	P4

Terminal No	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
ELECTRODE	P5	P6	P7	P8	P9	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NP	F	F

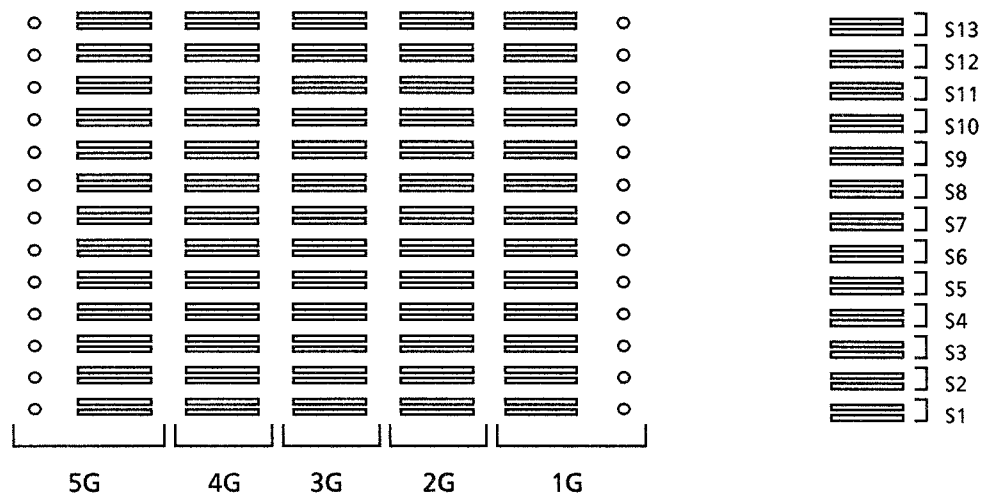
注) F: Filament NP: No Pin
 G: Grid NC: No Connection
 P: Anode

3. Anode Connection Tables

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	-EDIT-	II	a	a	a	a	EACH	a	a	a	a
S2	AUTO	FADE	b	b	b	b	TOTAL	b	b	b	b
S3	PRGM		f	f	f	f	REMAIN	f	f	f	f
S4	B	REPEAT	g	g	g	g	DDRP	g	g	g	g
S5	A	1	c	c	c	c	10	c	c	c	c
S6	RANDOM	1	e	e	e	e	9	e	e	e	e
S7		2	d	d	d	d	8	d	d	d	d
S8		3	4	5	6	7		11	12	13	14
S9		▶			-	STEP			°	°	15

■ ELU0001-117 (FL631) : FL DISPLAY FOR SPECTRO PEEK INDICATOR

1. Grid Layout



2. Pin Functions

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
CONNECTION	F1	F1	S1	S2	5G	S3	S4	S5	4G	S6	S7	3G	S8	S9	2G	S10	S11	1G	S12	S13	F2	F2

[CAUTION] F: Filament S: Segment G: Grid

Disassembly procedures

1. How to remove the top cover

- (1) Remove the four screws on the rear side and the other two screws on the both sides.
- (2) Remove the top cover.

2. How to remove the rear panel

- (1) Remove the top cover.
- (2) Remove the 13 screws.
- (3) Remove the rear panel.

3. How to remove the tuner board (ENA-116)

- (1) Remove the top cover.
- (2) Remove the rear panel (without fail).
- (3) Remove the plastic rivet, then disconnect the connectors JB103 and JB104 from the board, then remove the board.

4. How to remove the source selector board (ENN-279-6)

- (1) Remove the top cover.
- (2) Remove the rear panel.
- (3) Disconnect the connector (JA501) from the board, then remove the board.

5. How to remove the CD tray

- (1) Remove the top cover and the rear panel.
- (2) Rotate the screw (A) under the front panel, to the direction of the arrow.
- (3) Remove the rear panel, then remove the stopper screw (D); then pull out the tray to front side.

6. How to remove the front panel assembly

- (1) Remove the top cover.
- (2) Remove the mixing level knob and volume control knob.
- (3) Remove the fixing nut of the volume control knob, then remove ENC-088-4.
- (4) Remove the fitting in front of the tray. (Unlatch the pawls under the fitting, then remove the fitting upward.)
- (5) Remove the two screws on each side of the front panel and four screws (B) under the panel.
- (6) Remove the front panel assembly from the chassis and disconnect the connectors at the same time.

7. How to remove the main circuit board (ENJ-049-1)

- (1) Remove the top cover.
- (2) Remove the rear panel.
- (3) Remove the six screws from the main circuit board.
- (4) Lift the main circuit board a little and remove it by pulling toward the rear panel.
- (5) If necessary, remove the wires.

8. How to remove the CD mechanism assembly

- (1) Remove the front panel assembly.
- (2) Disconnect the connectors (P701 and P702).
- (3) Remove the two screws (E) fastening the clamber assembly, then remove the clamber assembly.
- (4) Remove the three screws (F) fastening the mechanical assembly.
- (5) Remove the mechanism assembly.

9. How to remove the system front board (ENC-088-1)

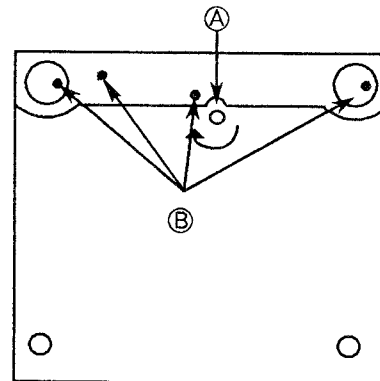
- (1) Remove the top cover.
- (2) Remove the front panel assembly.
- (3) Remove the 13 screws fastening the board, then remove the board.

10. How to remove the CD front board (ENN-278-9)

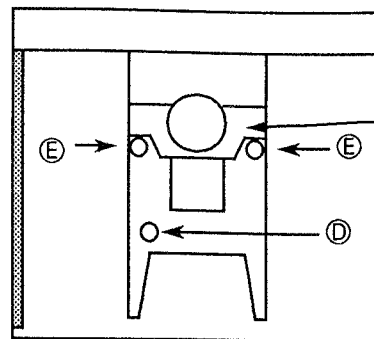
- (1) Remove the top cover.
- (2) Remove the front panel.
- (3) Remove the 5 screws fastening the board, then remove the board.

11. How to remove the cassette mechanism assembly (including the microcomputer board)

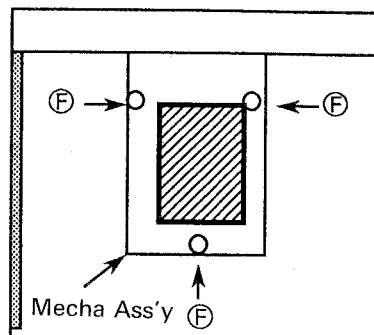
- (1) Remove the top cover.
- (2) Remove the front panel assembly.
- (3) Disconnect the flat wires J943 and J944.
- (4) Remove the 8 screws (blue).
- (5) Open the cassette door and remove the cassette mechanism assembly (Both A and B mechanisms are Jointed to each other by the bracket).



Bottom Side



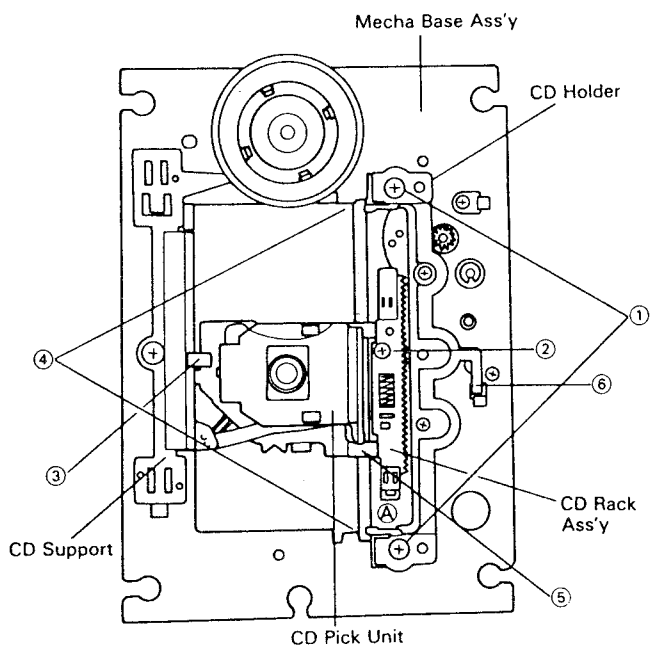
Clamber Ass'y



Mecha Ass'y

12. Removing the Laser Pickup

- (1) Remove the top cover, tray assembly and the clamp.
- (2) Move the Pickup Unit from rest position to the center pushing ⑤ point with finger.
- (3) Remove the screw ② from the CD RACK assembly, and remove the CD RACK assembly.
- (4) Remove the screw ① from the mechanical base assembly.
- (5) Remove the CD HOLDER fastening the shaft from the mechanical base assembly. (Release the hook ⑥)
- (6) Remove the CD Pick Unit with the shaft.

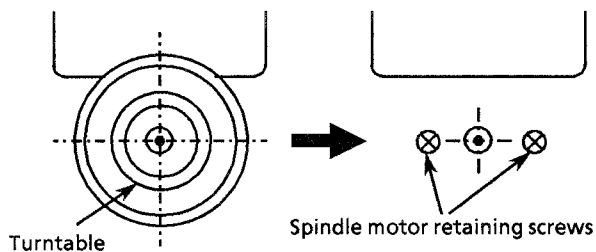


13. Laser Pickup installation

- (1) Connect two wires with the connectors of P.C. Board.
- (2) While installing the ③ in the CD Support, set the shaft on the base hook ④.
- (3) Install the CD Holder.
- (4) Install THE CD Rack assembly in CD Pick Unit.
 - 1) Fit end ①
 - 2) Fix screw ②.

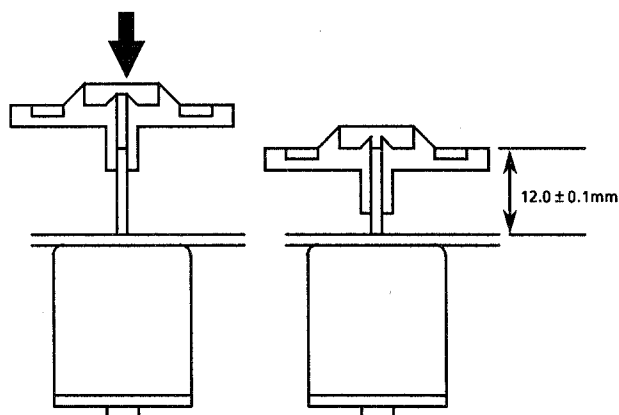
14. Spindle motor removal

- (1) Remove the Mechanism assembly.
- (2) Remove the Clamp assembly.
- (3) Remove the turntable, and remove the two screws retaining the spindle motor.
- (4) Remove the screw retaining the Spindle and Feed Motor P.C. Board and unsolder it.

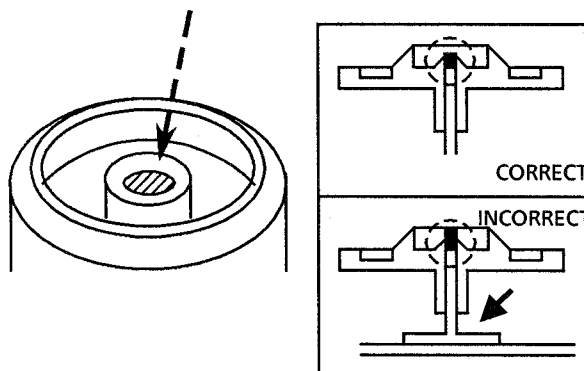


15. Spindle motor installation

- (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 top of the turntable is exactly 12.0 ± 0.1 mm.



- (4) After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).



- (5) Use "LOKTTITE" #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 allow in the figure on the right.)

Disassembly of cassette mechanism (Disassembly after "How to remove the cassette Mechanism assembly" explained before)

■ How to remove the microcomputer board.

1. Remove the mechanism assembly
2. Remove the two screws (b)
3. Remove the flat wires FW931-934 and leaf switch boards (A and B). then remove the board.
(Take care of part (a) in Fig. 1.)

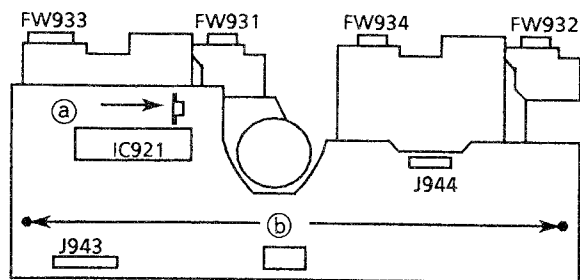


Fig. 1

■ How to remove the head assembly

1. Remove the mechanism assembly.
2. Remove the flexible wire from the relay board, then remove the two screws (f) fastening the head assembly (Fig. 6).

Assembling of head

Since the head moves the reverse gear by means of the cam to right or left to set FWD or REV mode, the reverse gear must be installed to the same position at the time when it was removed. The positioning method of the reverse gear is shown in Fig. 3.

(Note: If the reverse gear is installed in the opposite direction, the mechanism will operate wrongly.)

■ How to remove the pinch roller assembly (FWD/REV)

1. Remove the pinch roller return spring (Fine spring at the lower position) from the hook (Fig. 6).
2. Unlatch the pawls of the pinch roller arm assembly, then remove the pinch roller arm assembly (Fig. 4).

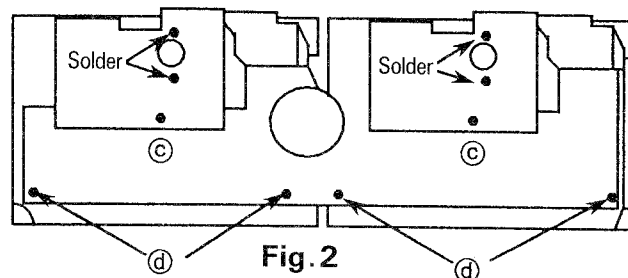
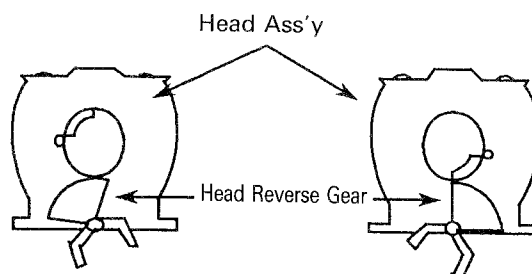


Fig. 2

■ How to remove the reel motor board

1. Remove the mechanism assembly.
2. Remove the microcomputer board.
3. Remove the one screw (c) fastening the reel motor board (Fig. 2).
4. Remove the solder from the reel motor.
5. Remove the board.

If a force is applied to the motor terminal by pulling the reel motor board to remove it, the motor may be broken. Take care.



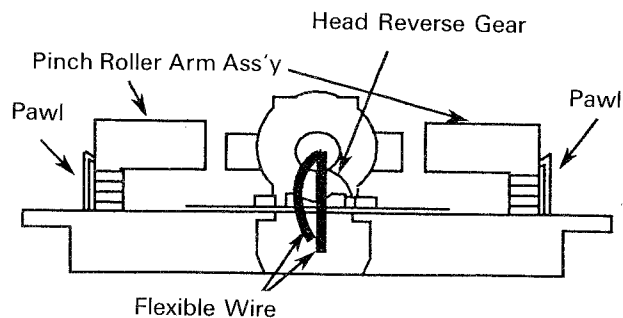
When Head is on FWD Side When Head is on REV Side

Bottom side of Head Ass'y

Fig. 3

■ How to remove the capstan motor

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Remove the four screws (d) fastening the bracket (Fig. 2).
4. Unlatch the pawls fastening the bracket, then remove the bracket together with the capstan motor.
5. Remove the two screws fastening the capstan motor, then remove the motor.



Bottom side of Cassette Mechanism

Fig. 4

* How to remove cassette lids

Open the cassette door, then slide the lids in the directions of arrows to remove them.

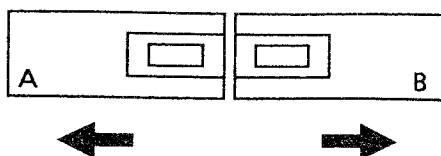


Fig. 5

■ How to remove the reel motor

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Pull out the FR arm assembly (Fig.6).
4. Remove the screws ⑤ fastening the reel motor.
5. Unlatch the pawls of the motor, then remove the motor.

■ How to remove the flywheel

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Remove the four screws ④ fastening the capstan bracket (Fig.2). Remove the bracket together with the belt.
4. Remove the oil thrower washer on the pinch roller side, then remove the flywheel.

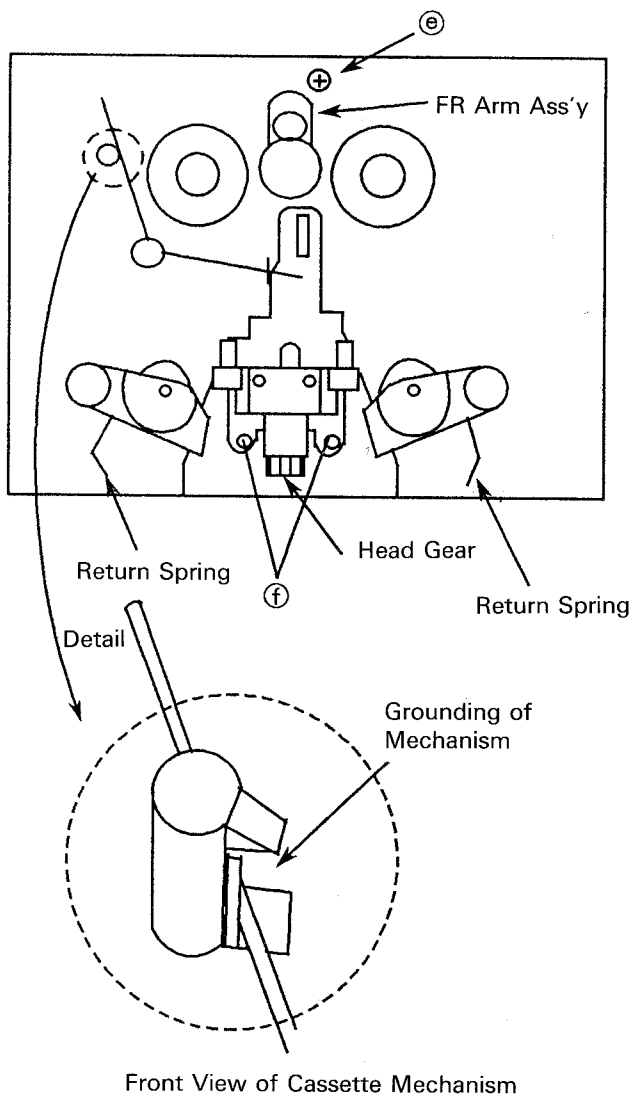
Installation

Install the flywheel and belt first as shown in Fig.8. Install the belt B to the temporary belt hanger B, then install the belt A. Install the capstan motor bracket, then re-install the belt to the pulley (Fig.8).

■ How to remove cam switch board

1. Remove the flywheel.
2. Remove the pawls of the cam switch board to remove the board.

(When installing the cam switch board, align the grooves of ⑨ and ⑩ with each other (Fig.7)).



Front View of Cassette Mechanism
Fig. 6

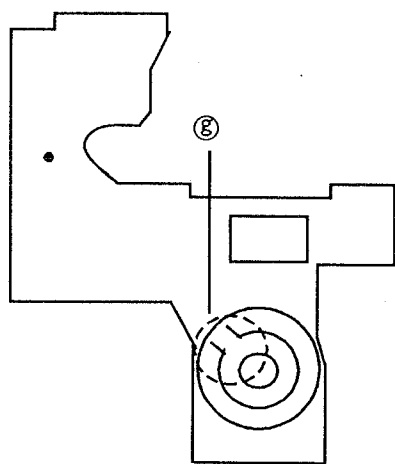


Fig. 7

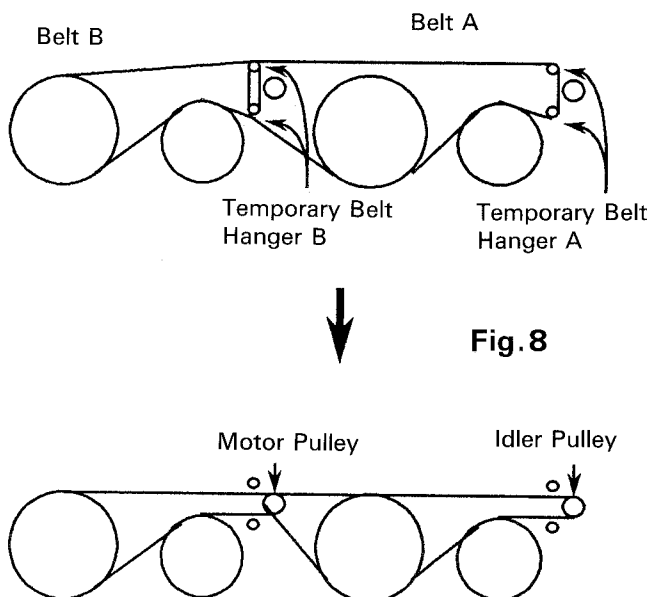
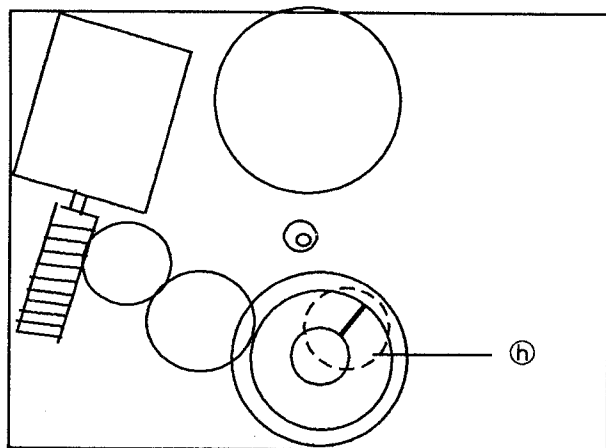


Fig. 8

Examples of electric check method

Deck section

1. Remove the front panel.
2. Remove the system front board from the front panel assembly and connect it to the main board.
At this time the system front board is fixed by only the connectors JB201, 202 and 203.
*The operation of the deck can be checked even if the head wire connectors P331 and P333 of the cassette are disconnected.
When sound does not come out (a trouble has occurred after the head), the operation can be checked with the main circuit board without removing the front panel assembly.

CD section

1. If the RF pattern is output, the wave form can be checked by simply removing the top cover.
2. When checking the operation of the mechanism at the same time.
 - 1) Remove the front panel assembly.
 - 2) Disconnect the CD front board from the front panel assembly and connect it to the CD board.
At this time, the CD front board is fixed by only the connectors P711 and P712.
 - 3) Remove the system front board from the front panel assembly and connect it to the main board. (The CD front board does not work if the system front board is disconnected.)
 - 4) When checking the laser or operation of the pickup, remove the mechanism.

Tuner section




1. When checking the tuner board from rear side, remove the source selector board.
Although sound does not come out, the signals can be followed up on the board.
*At this time, disconnect all the flat wires from the source selector board.
If any one of them is connected, a trouble may occur.

System front board section

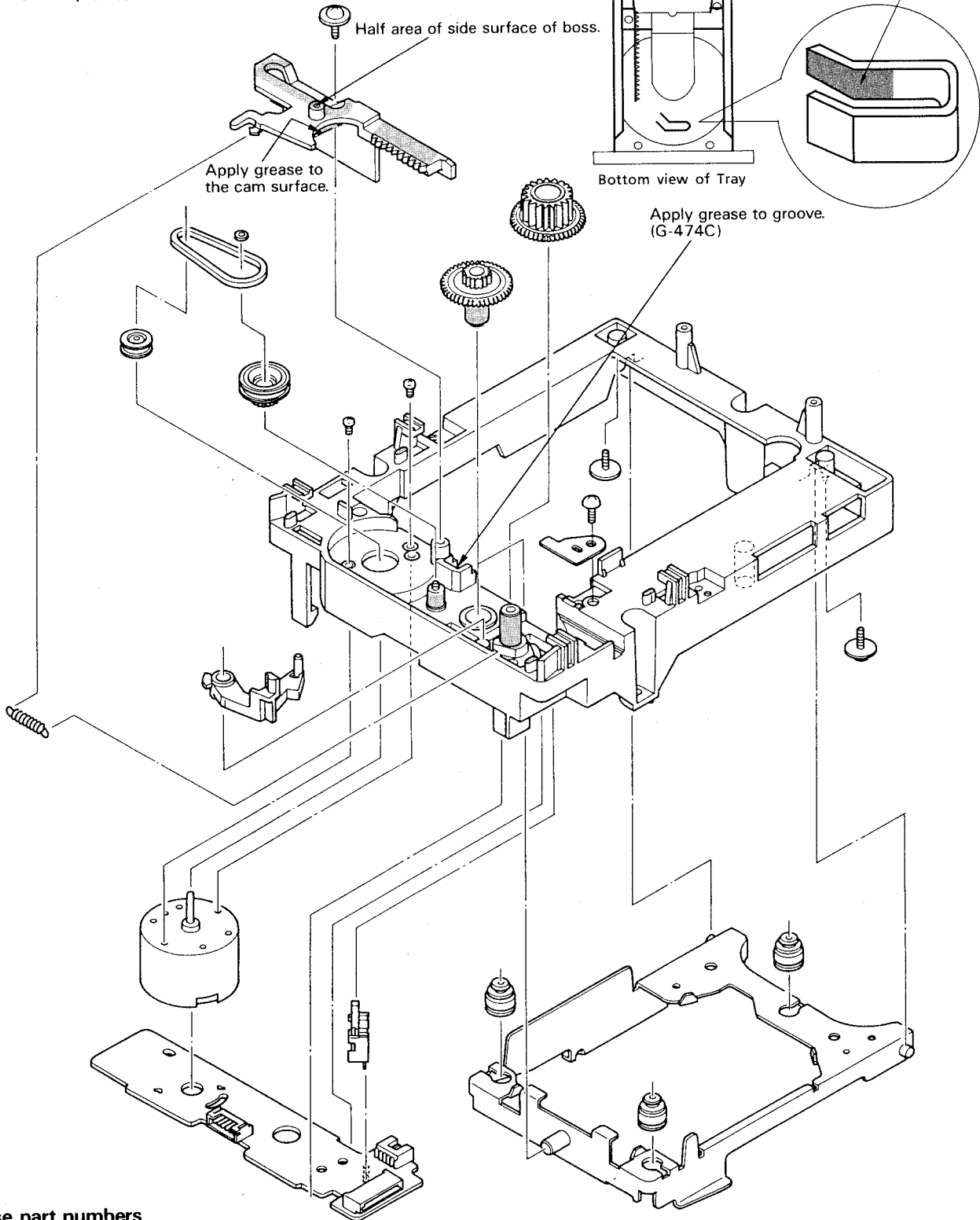
1. Remove the tuner board and source selector board and check from the rear side of the board.
When checking from the front side, remove the front panel assembly and fix only the system front board to the main board with the connectors JB201, 202 and 203.

Application Points for Grease

Grease used

-  G-334 (Shin-Etsu Chemical Co., Ltd.)
-  G-474C (Kanto Chemical Co., Ltd.)
-  G-31KB (Kanto Chemical Co., Ltd.)

Apply grease to groove.
(G-31KB)
* Shaded area only



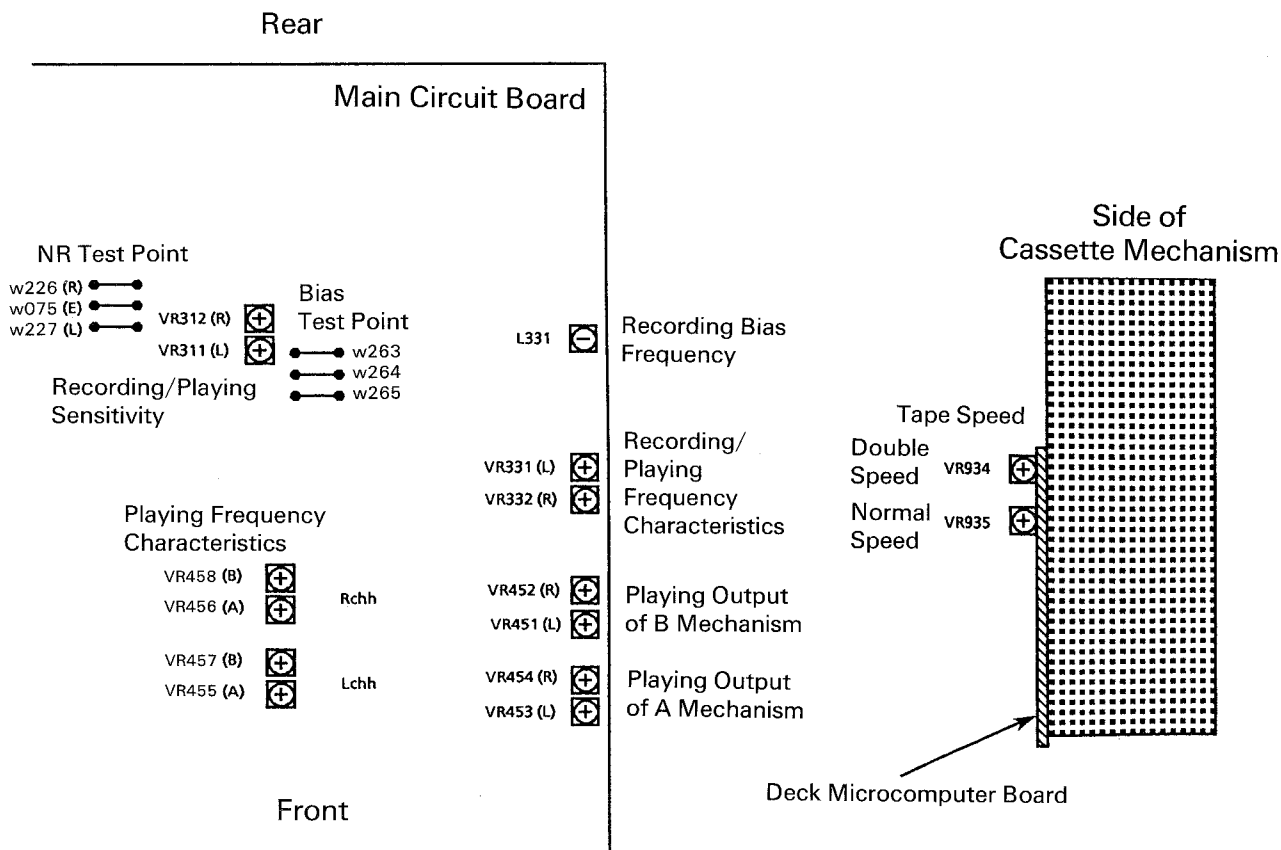
Grease part numbers

- G-334: EBS0006-009B
- G-474C: EBS0006-019B
- G-31KB: EBS0006-013B

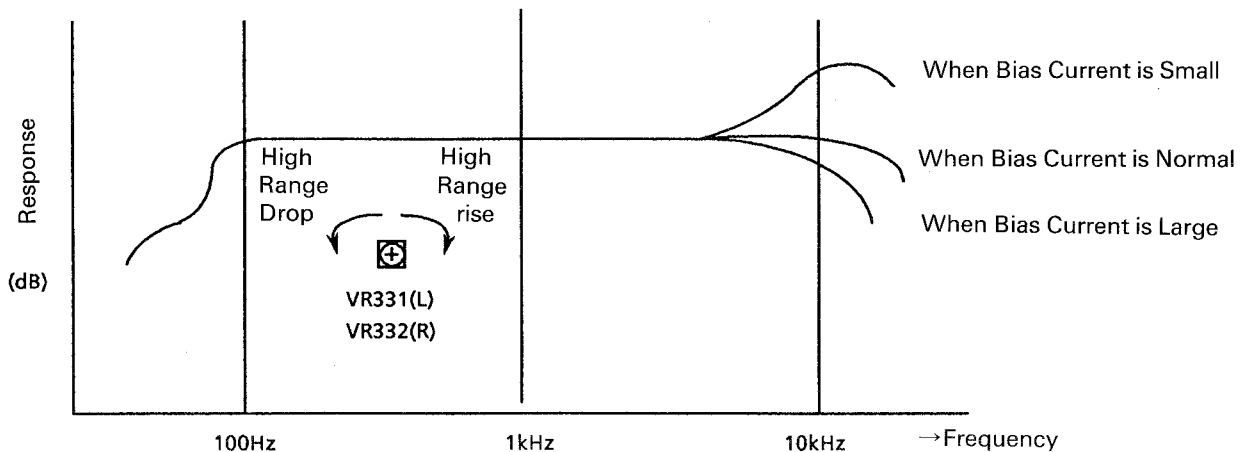
3. Adjustment of electric circuit

- Perform the following adjustment after the head angle has been adjusted.
- Perform the following adjustment according to the given procedure, as a rule.
- Perform the following adjustment with the NR switch turned off.

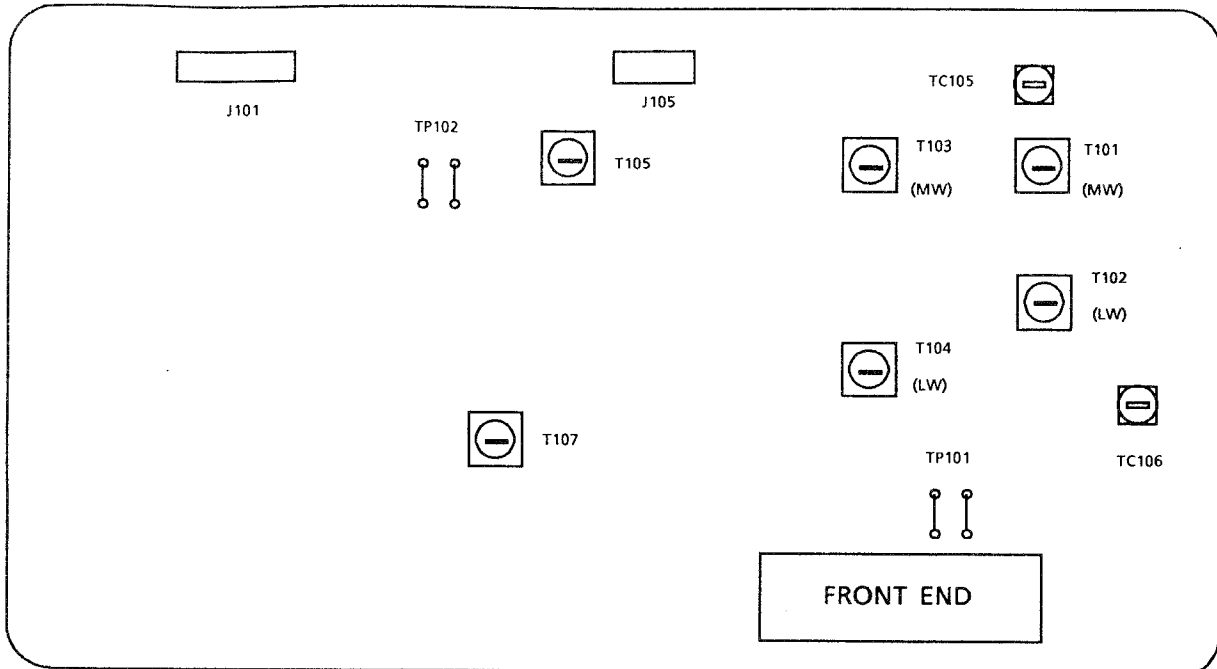
Item	Adjusting method	Adjusting parts	Standard value	Remarks
Tape speed (Be sure to adjust the normal speed first.)	1. Connect a frequency counter to the SPK OUT terminal and play VTT-712. 2. Normal speed adjustment Play the B mechanism and adjust VR935 so that 3,000 Hz will be obtained. 3. Double-speed adjustment Set a recording tape in the B deck and adjust VR934 so that the 6000 Hz will be obtained in the high-speed dubbing mode.	Semi-fixed resistor on the cassette main board VR935 VR934	3000 ±10Hz 6000 ±20Hz	In case of a wow-and-flutter meter having a frequency counter in it, simply connect the output to its INPUT terminal.
Playing output	1. Play VTT-724 (1 kHz) and adjust the output of the w227(L) and W226(R) to 400 mV.	A VR453(L) VR454(R) B VR451(L) VR452(R)	400mV	The playing level changes when the head is replaced. Adjust it in this case. The impedance of the electronic voltmeter must be 100kΩ minimum.
Playing frequency characteristics	1. Play VTT-703L (10kHz, -10dB) and adjust the output of the W227(L) and W226(R) to 200 mV.	A VR455(L) VR456(R) B VR457(L) VR458(R)	200mV	
Recording bias frequency	Connect a frequency counter between W263 and W264 of the bias TP, then adjust by recording no signals on the chromium tape.	L331	105kHz + 5kHz - 10kHz	



Item	Adjusting method	Adjusting parts	Standard value	Remarks
Recording/Playing frequency characteristics	<ol style="list-style-type: none"> Turn off the NR switch and input 1 kHz (30 mV) to the VIDEO/AUX terminal to record it. Further record 100 Hz/10 kHz, then play it and so adjust VR331(L) and VR332(R) that the difference between the output of 1 kHz and that of 100 Hz/10 kHz will satisfy the standard value. (Basically, so adjust that the output of 1 kHz and 10 kHz will be flat.) 	VR331(L) VR332(R)	Output of 100 Hz must be 0 ± 3 dB and that of 10 kHz must be 0 ± 2 dB on the basis of that of 1 kHz.	<ol style="list-style-type: none"> As a rule, adjust the recording/playing frequency characteristics of the cassette deck by adjusting the bias, since the former relies more on the bias current compared with the open reel deck. If the bias current is not adjusted correctly, the recording characteristics will be as shown below. Adjust by using a normal tape. As for chromium tape, confirm that the output is in the normal range.
Recording/playing sensitivity	<ol style="list-style-type: none"> Input 1 kHz (300 mV) to the VIDEO/AUX terminal and record it on a normal tape. Adjust the recording signal current so that the output of W227(L) and W226(R) will be 400 mV when the above 1 kHz is played. 	VR311(L) VR312(R)	400mV	Adjust by using a normal tape. As for chromium tape, confirm that its level difference is 1.5 dB maximum and the level difference between right and left signals is 1.0 dB maximum.
Confirmation of recording/playing distortion	<ol style="list-style-type: none"> Input 1-kHz (300 mV) signal to the VIDEO/AUX terminal to record it. Play the above signal and confirm with a distortion meter that the SPK OUT output satisfies the standard value. 		Normal tape: 3%max. Chromium tape: 3%max.	Perform this confirmation after the adjustment of recording/playing frequency characteristics and recording/playing sensitivity.
Confirmation of recording/playing S/N	<ol style="list-style-type: none"> Input 1-kHz (300 mV) signal to the VIDEO/AUX terminal and record it. While recording, disconnect the input to record no signals (or press the REC MUTE button). Play the above tape and measure the ratio of the outputs of 300 mV and no signals with an electronic voltmeter. The ratio must satisfy the standard value. (Use SPK OUT.) 		Normal tape: 45 dB min. Chromium tape: 45 dB min.	
Confirmation of erasability	<ol style="list-style-type: none"> Input 400Hz (950 mV) signal to VIDEO/AUX terminal to record it. Rewind the tape and erase it partly. Measure the ratio of the output of the recorded part to that of the erased part with an electronic voltmeter. 		55 dB min.	When measuring, connect BPF (Band Pass Filter) of 400Hz between the deck and electronic voltmeter. Perform this test with a chromium tape.
Confirmation of music scan	<ol style="list-style-type: none"> Use TMT.6247. The tune selecting operation must be performed at the end of winding in the REW SCAN mode and the start of winding in the REW SCAN Mode. TMT.6237 must not perform tune selecting operation. 			



Adjustment Procedures (FM/AM Tuner)



1. FM section

■ FM oscillator

- (1) Set the frequency display to "108.0MHz"(74.0MHz).
 - (2) Confirm that the FM inter-station noise is received.
 - (3) Confirm that the voltage of test point "TP101" becomes $8.0V \pm 2.0V(7.7 \pm 1.3V)$.
 - (4) Set the frequency display to "87.5MHz"(64.0MHz) and confirm the voltage of test point "TP101" becomes $1.6V \pm 1.0V(2.2 \pm 1.0V)$.
- Note : () : Rumania , Poland and U.S.S.R

■ FM detector coil : T105

- (1) Connect a digital voltmeter to test point "TP 102", and receive to "100.1MHz" (69.0MHz) signal with SSG ATT 70dB.
- (2) Adjust T105 so that the digital voltmeter reads $0 \pm 1.5mV$.

2. MW section

Note : () : Australia, the U.K. and Continental Europe
 { } : Channel space 9KHz for universal version
 [] : Channel space 10KHz for universal version
 [] : U.S.A., Canada

■ MW oscillator : T103

- (1) Set the frequency display to (522KHz) (531KHz)[530KHz][530KHz] and confirm that the voltage of test point TP101 become $(0.9V \pm 0.2V)$ { $1.0V \pm 0.2V$ } [$1.0V \pm 0.2V$] $(0.9V \pm 0.2V)$
- (2) Set the frequency display to (1629KHz) (1602KHz)[1600KHz][1710KHz] and confirm that the voltage of test point TP101 becomes $(7.5V \pm 0.8V)$ { $7.2V \pm 0.7V$ } [$7.2V \pm 0.7V$] $(8.0V \pm 0.8V)$

- (3) If its voltage exceeds the allowance, adjust T103 to obtain the voltage.

■ MW antenna coil : T101

- (1) Connect a loop antenna to the "AM Loop" terminal on the rear panel.
- (2) Adjust T101 to obtain the best receiving sensitivity on 600KHz or 603KHz.

■ MW antenna trimmer : TC105

- (1) Adjust TC105 to obtain the best receiving sensitivity on 1400KHz or 1404KHz.

3. LW section

Note : [] for Italy

■ LW oscillator : T104

- (1) Set the frequency display to 144KHz and adjust T104 so that the voltage of TP101 becomes $0.8V \pm 0.1V$ [$0.8V \pm 0.1V$].
- (2) Set the frequency display to 353KHz [290KHz] and confirm that the voltage of test point TP101 becomes $7.7V \pm 0.6V$ [$5.7V \pm 0.5V$].

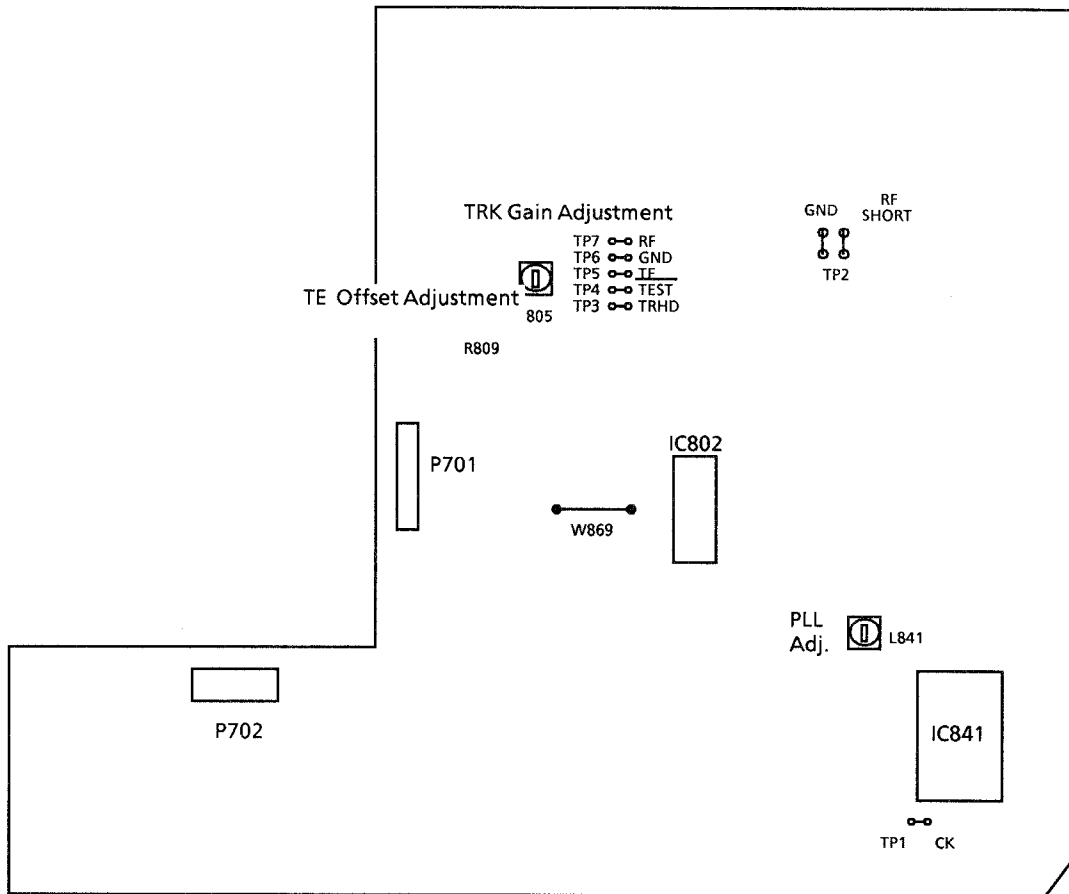
■ LW antenna coil : T102

- (1) Connect a loop antenna to the "AM Loop" terminal on the rear panel.
- (2) Adjust T102 to obtain the best receiving sensitivity on 164KHz [164KHz].

■ LW antenna trimmer : TC106

- (1) Adjust TC106 to obtain the best receiving sensitivity on 353KHz [245KHz].

Adjustment Procedures (CD)



(1) PLL free-running adjustment

- a. Measuring instrument
Frequency counter
- b. Adjusting procedure
 1. Connect a frequency counter with TP1 (CK) and TP6 (GND) on the main PC board..
 2. Adjust L841 for setting the frequency counter's value becomes $4.320 \pm 0.005\text{MHz}$. (On the STOP MODE)
 3. Perform this adjustment immediately after the power is turned on.

(2) Tracking gain adjustment

- a. Measuring instruments
Oscilloscope, Normal disc
- b. Adjusting procedure
 1. Connect an oscilloscope with TP5 (TE) and TP6 (GND) on the main PC board.
 2. Play the disc.
 3. Short circuit TP4 (TEST) to TP6 (GND).
 4. Adjust R805 for setting tracking error signal becomes $2.0 V_{p-p}$.

(3) Tracking offset adjustment

- a. Measuring instruments
Oscilloscope, Normal disc
- b. Adjusting procedure
 1. Connect an oscilloscope with TP5 (TE) and TP6 (GND) on the main PC board.
 2. Play the disc.
 3. Short circuit TP4 (TEST) to TP6 (GND).
 4. Adjust R809 for setting the DC level of the tracking error (offset) becomes 0.

Note: Adjust R809 for setting the waveform becomes symmetrical around the 0 level.

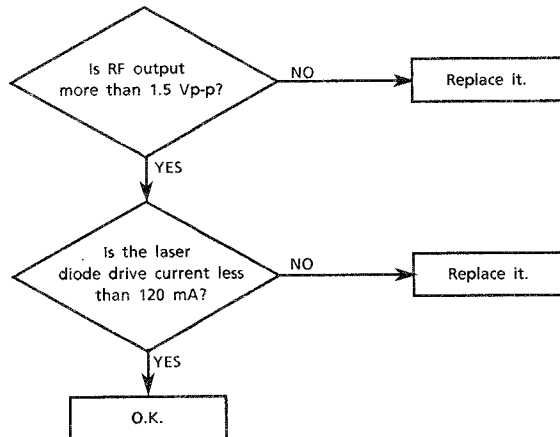
Maintenance of Laser Pickup

(1) Life of the laser diode

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

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

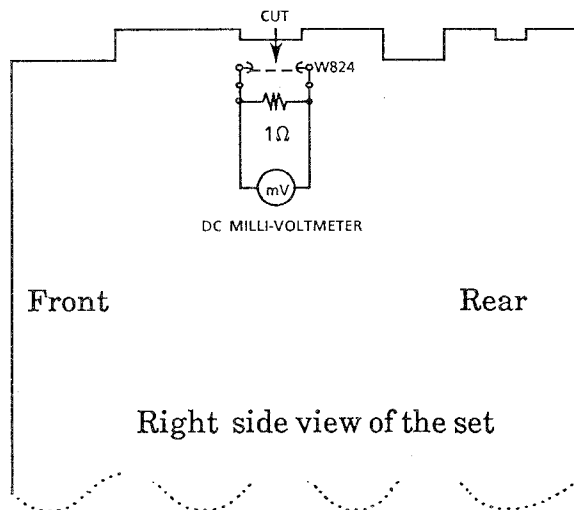
In such a case, check the life of the laser diode following the flowchart below



(2) Measurement of laser diode drive current

Replace the jump wire (W824) shown below with the resistor (1Ω).

Measure the voltage across the resistor with a milli-voltmeter. If the voltage is more than 120mV, the life of the laser diode has expired



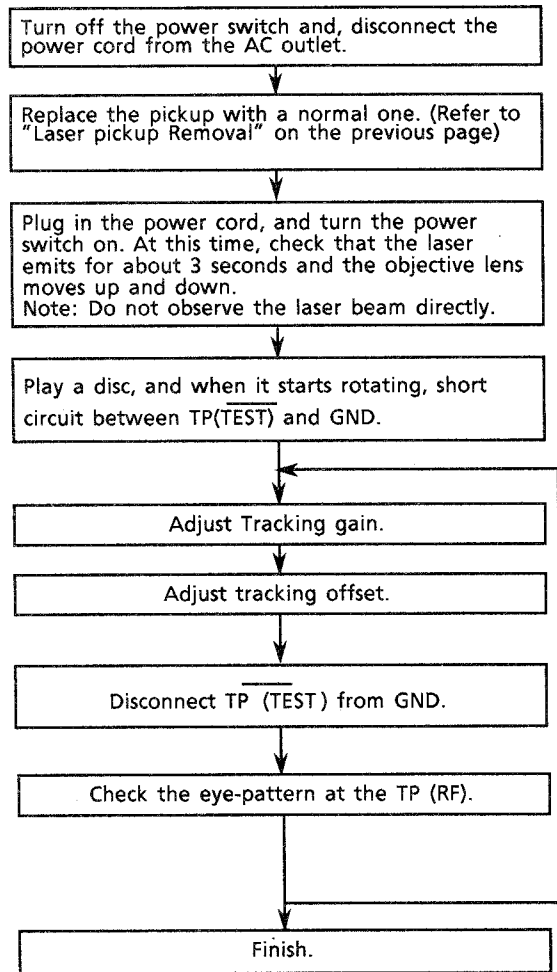
(3) Semi-fixed resistor on the APC PC board

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.

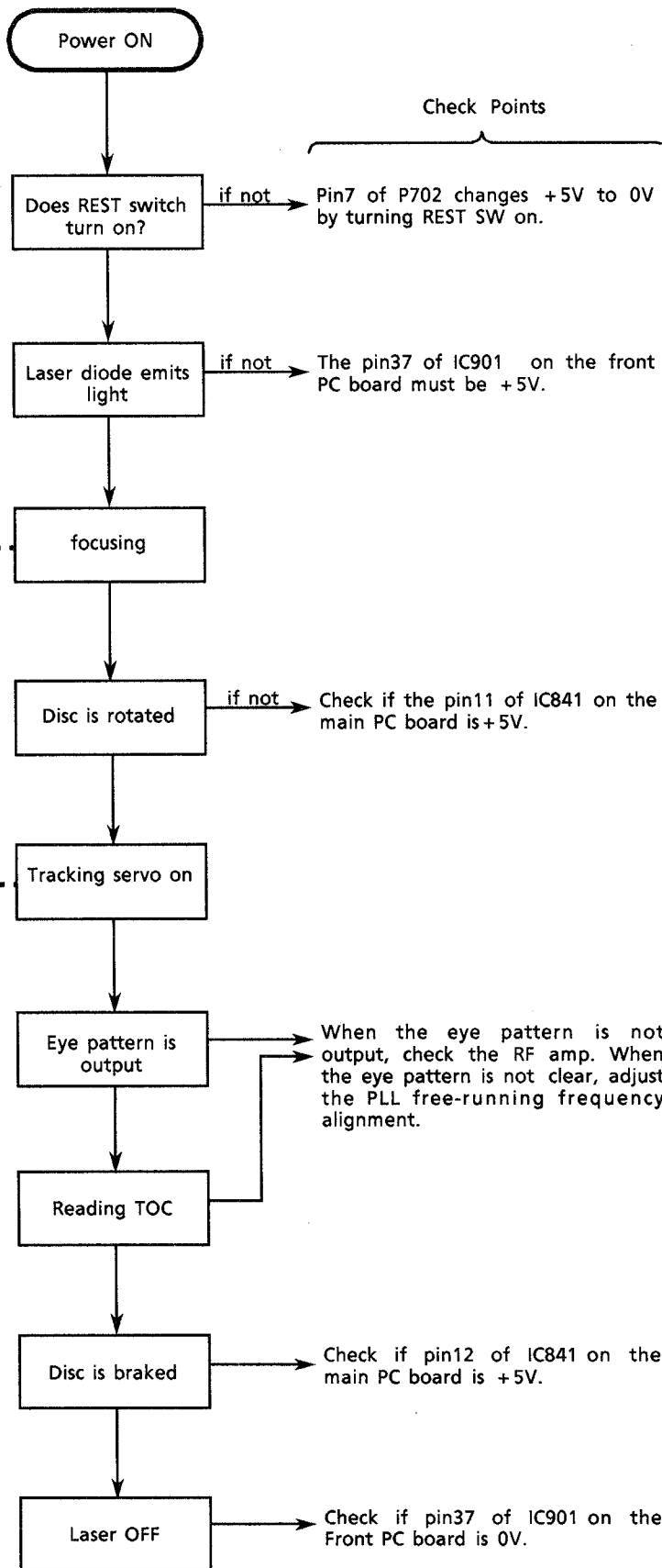
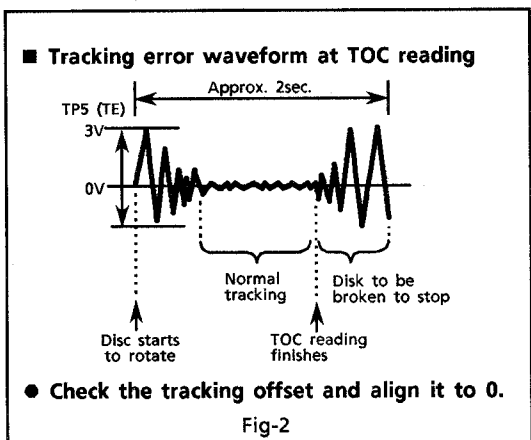
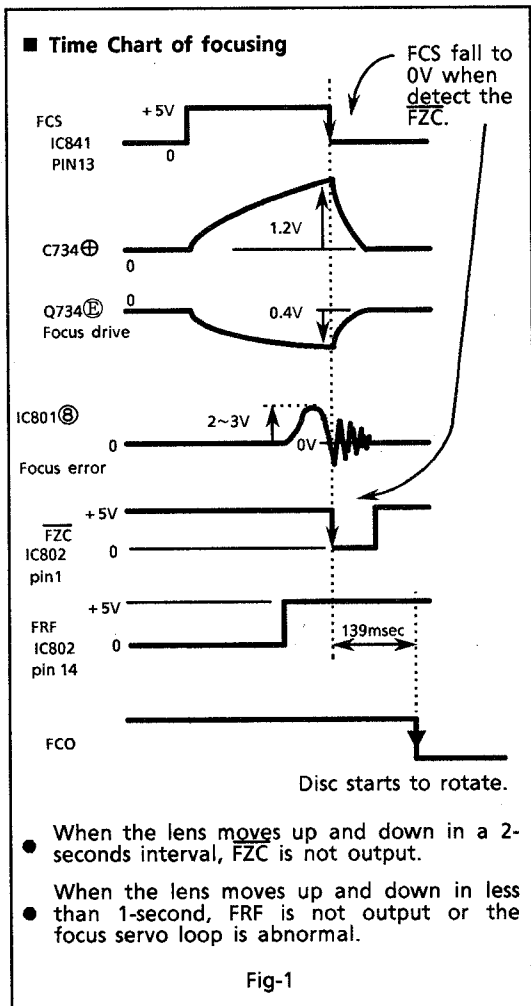
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup

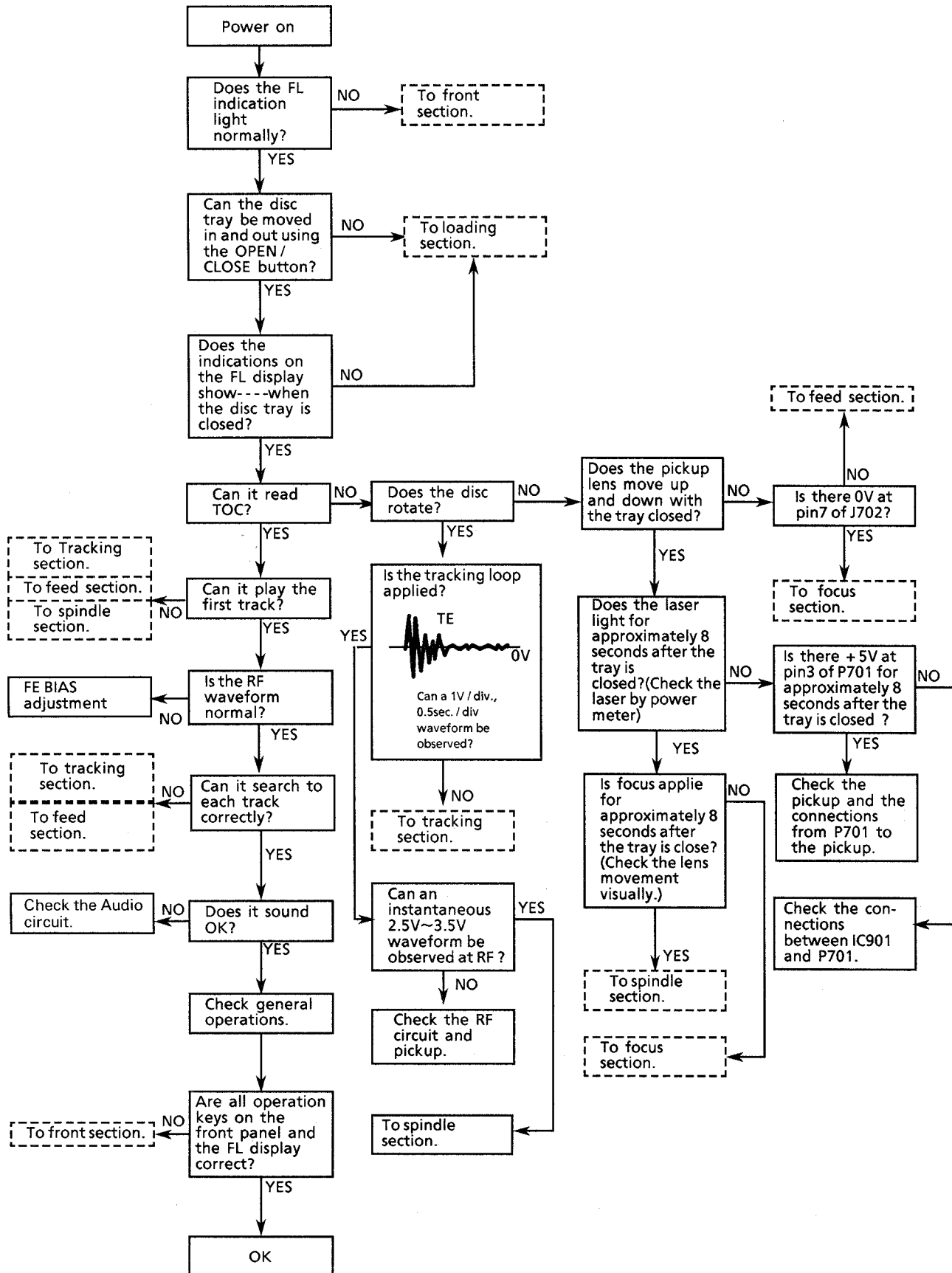


Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

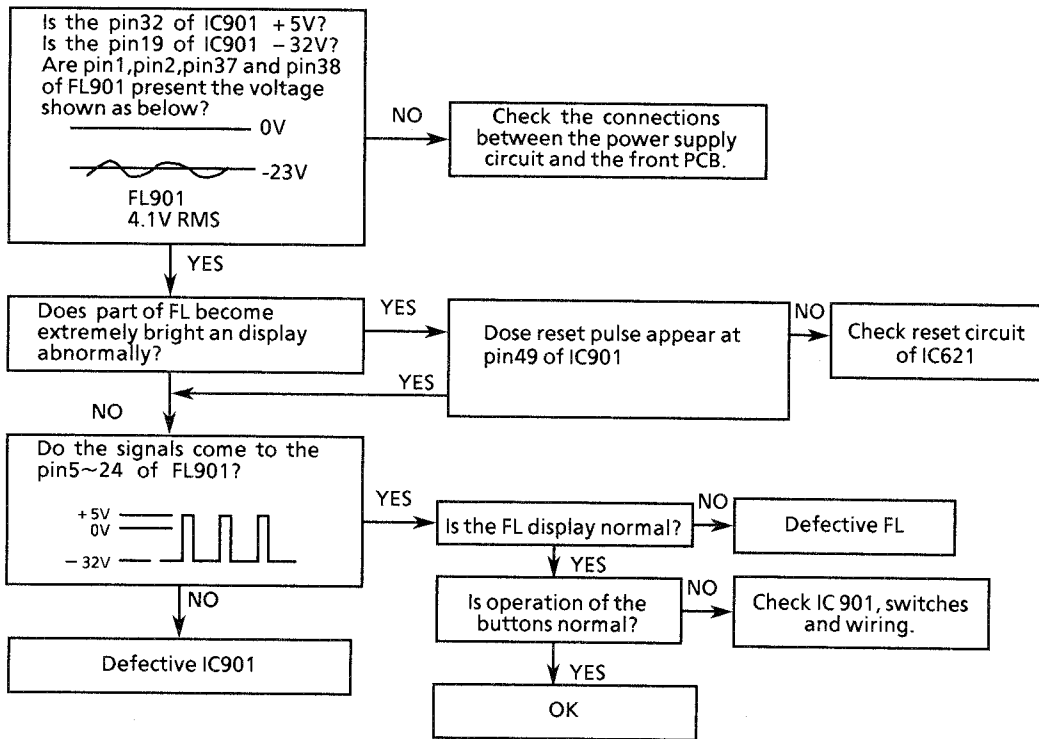
Flow of Functional Operation Until TOC is Read



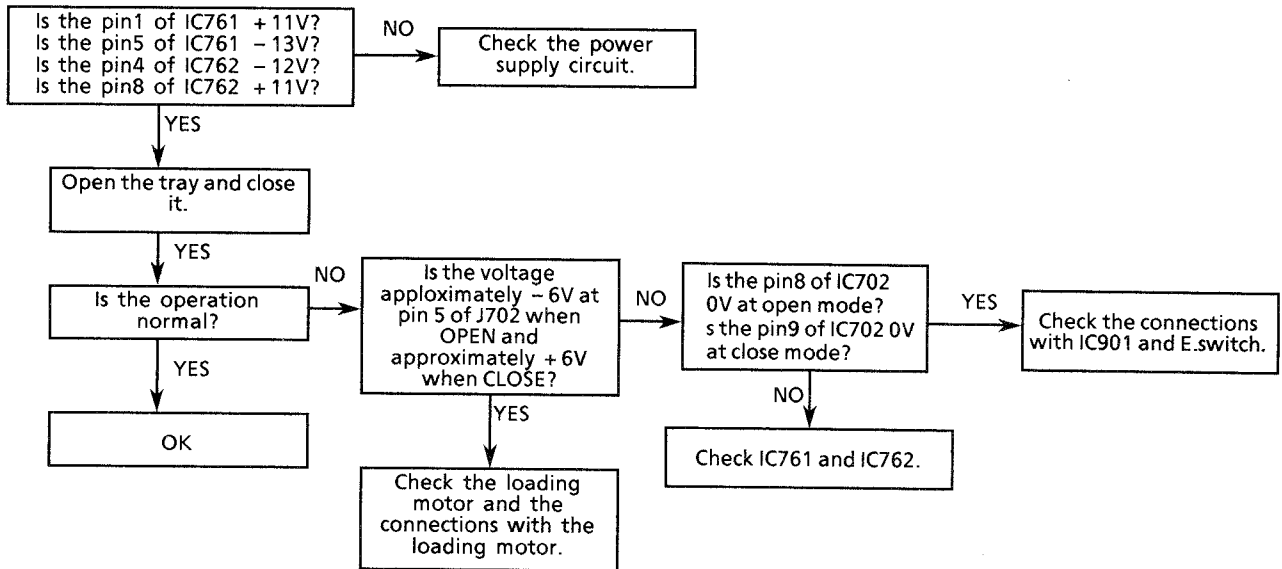
Troubleshooting



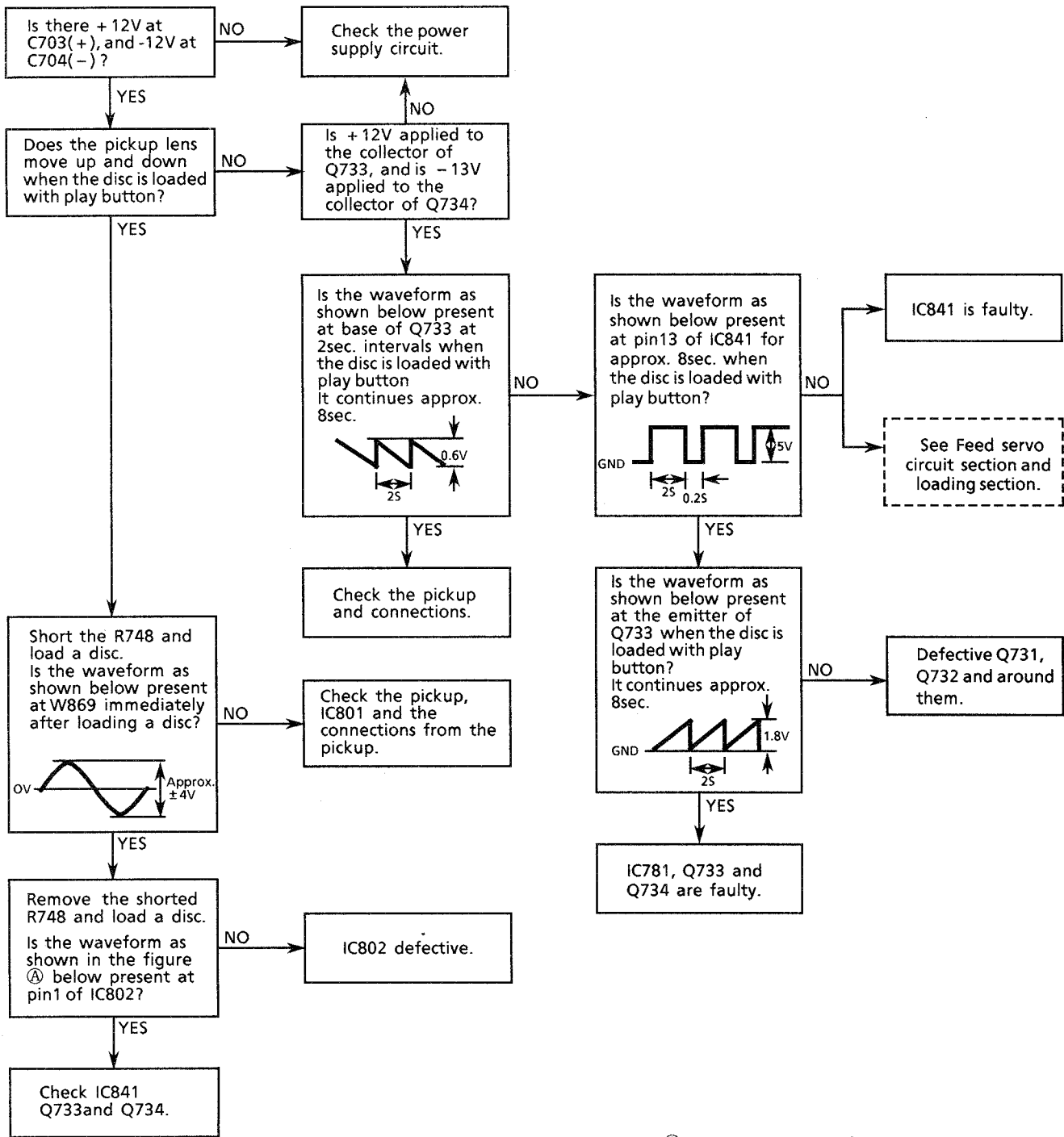
Front Section



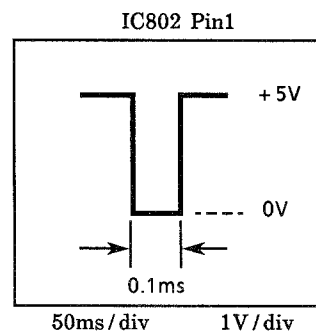
Loading section



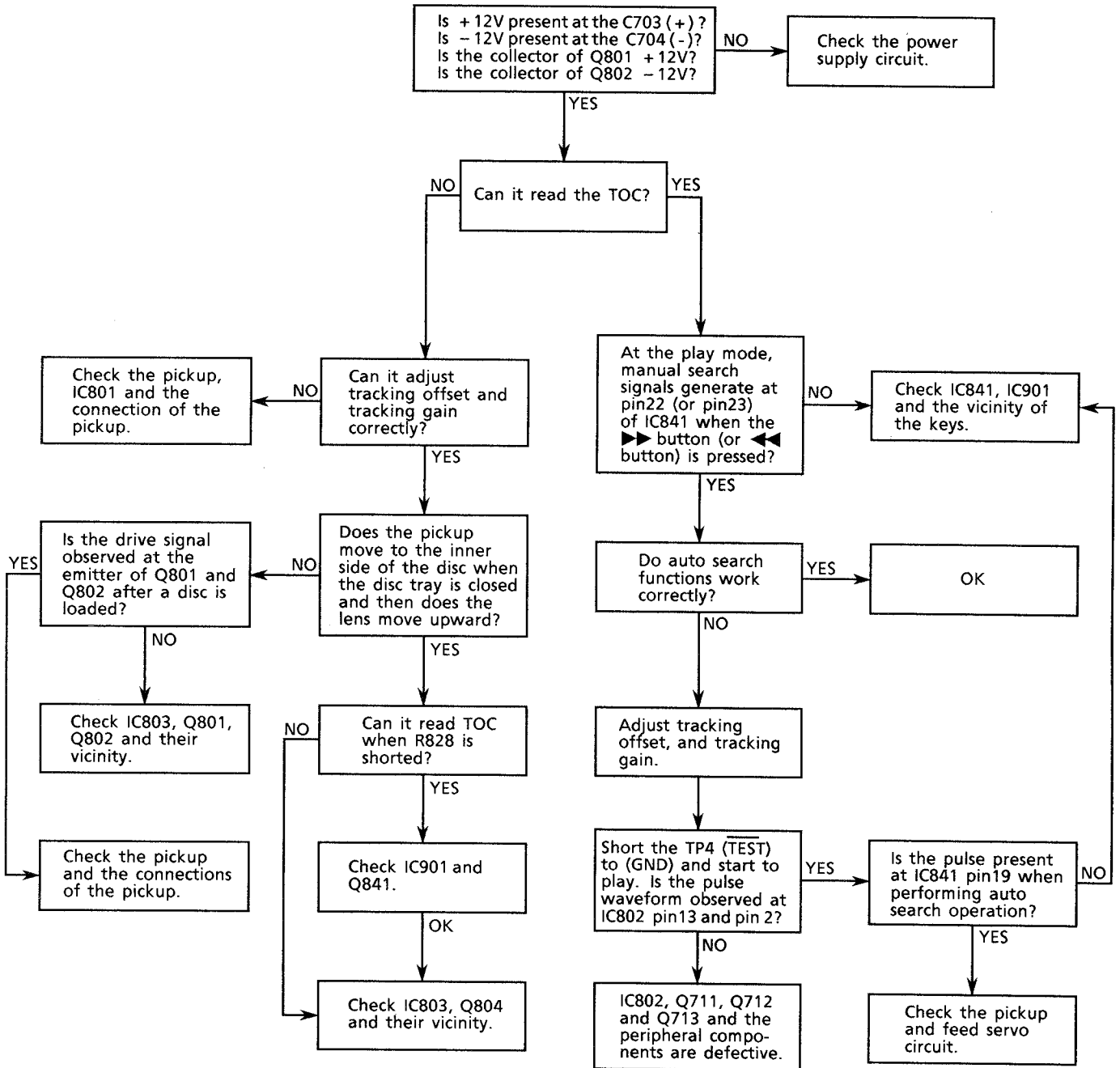
Focus servo circuit section



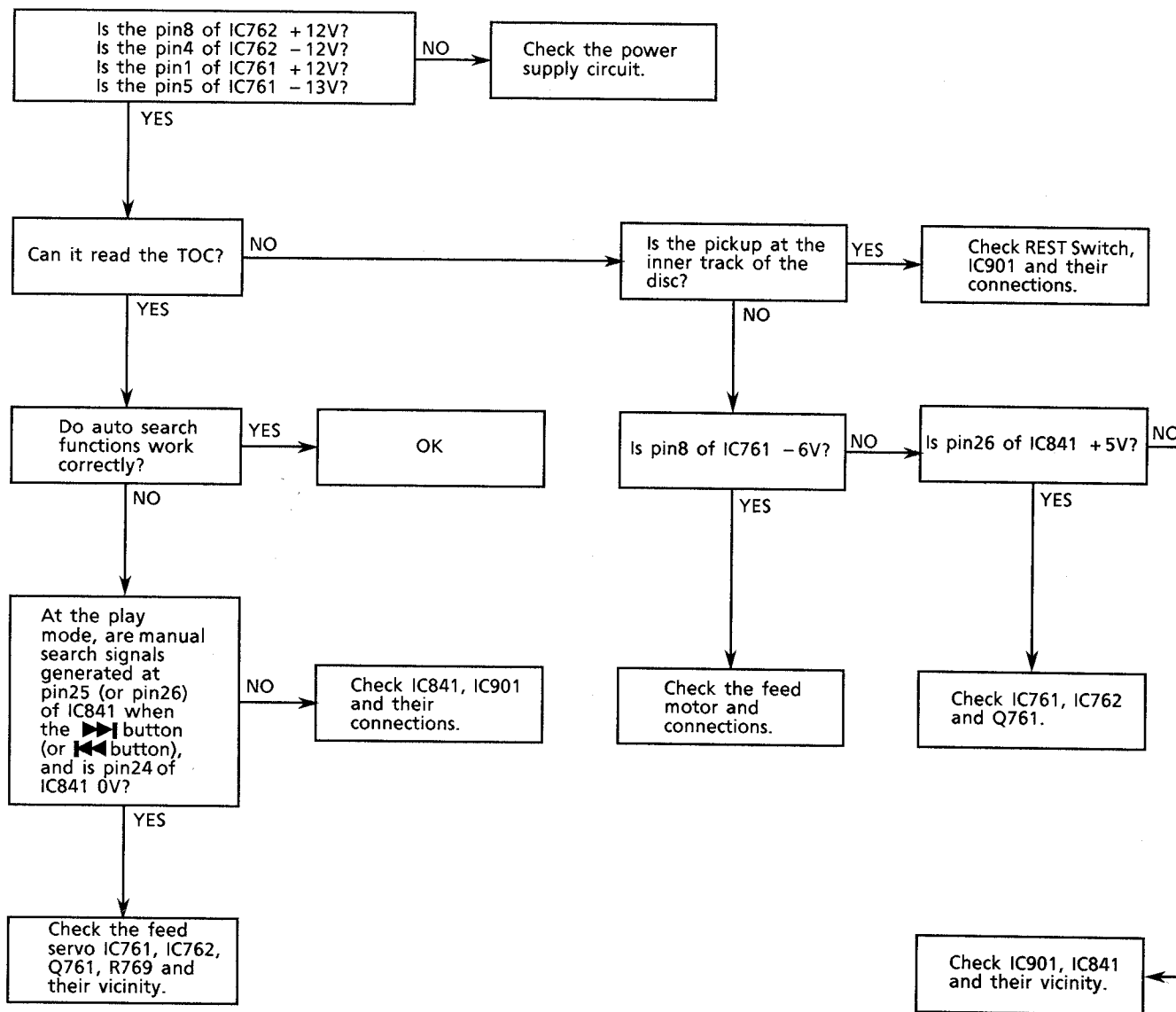
(A) Focus zero cross pulse.



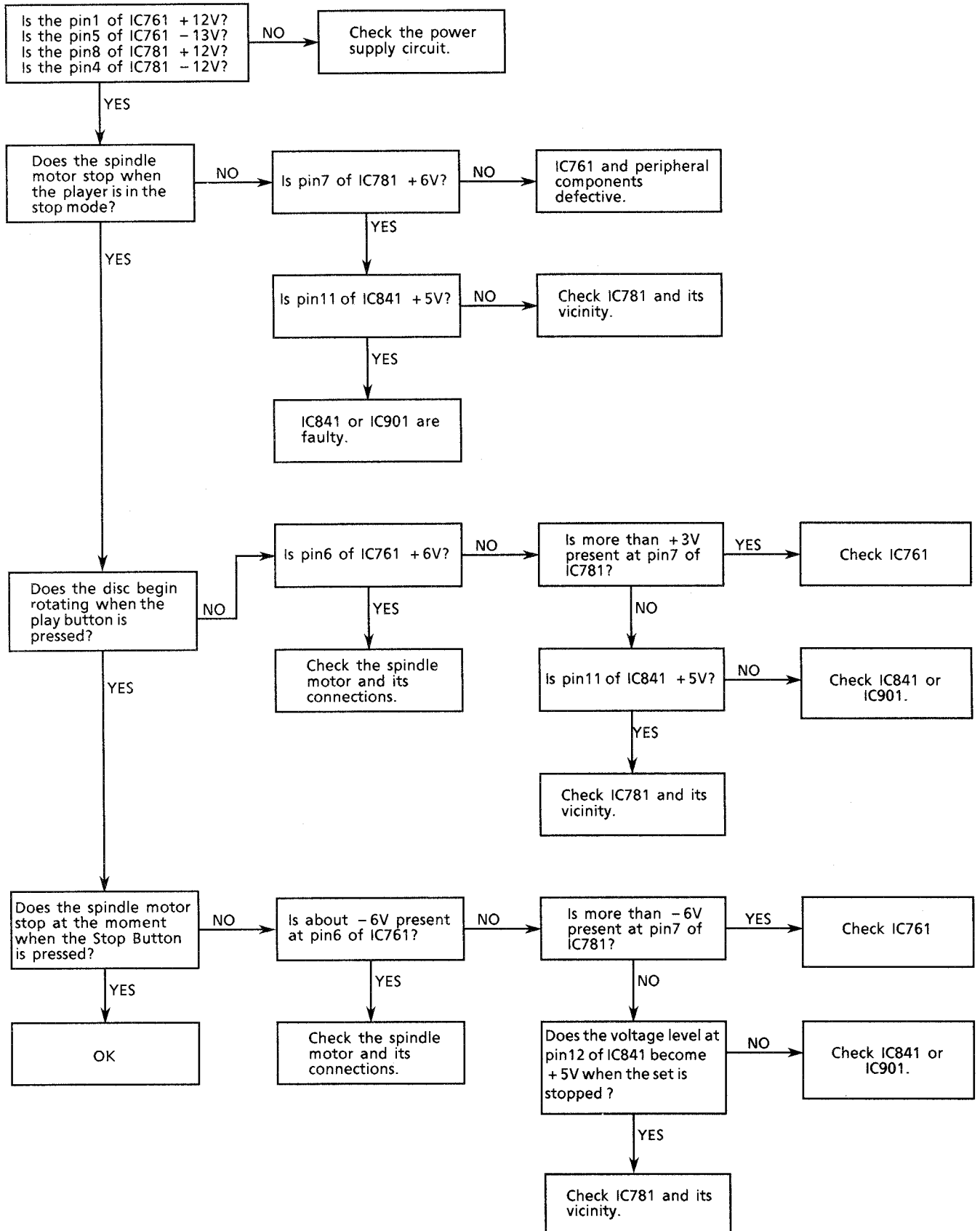
Tracking servo circuit section



Feed servo circuit section



Spindle servo circuit section

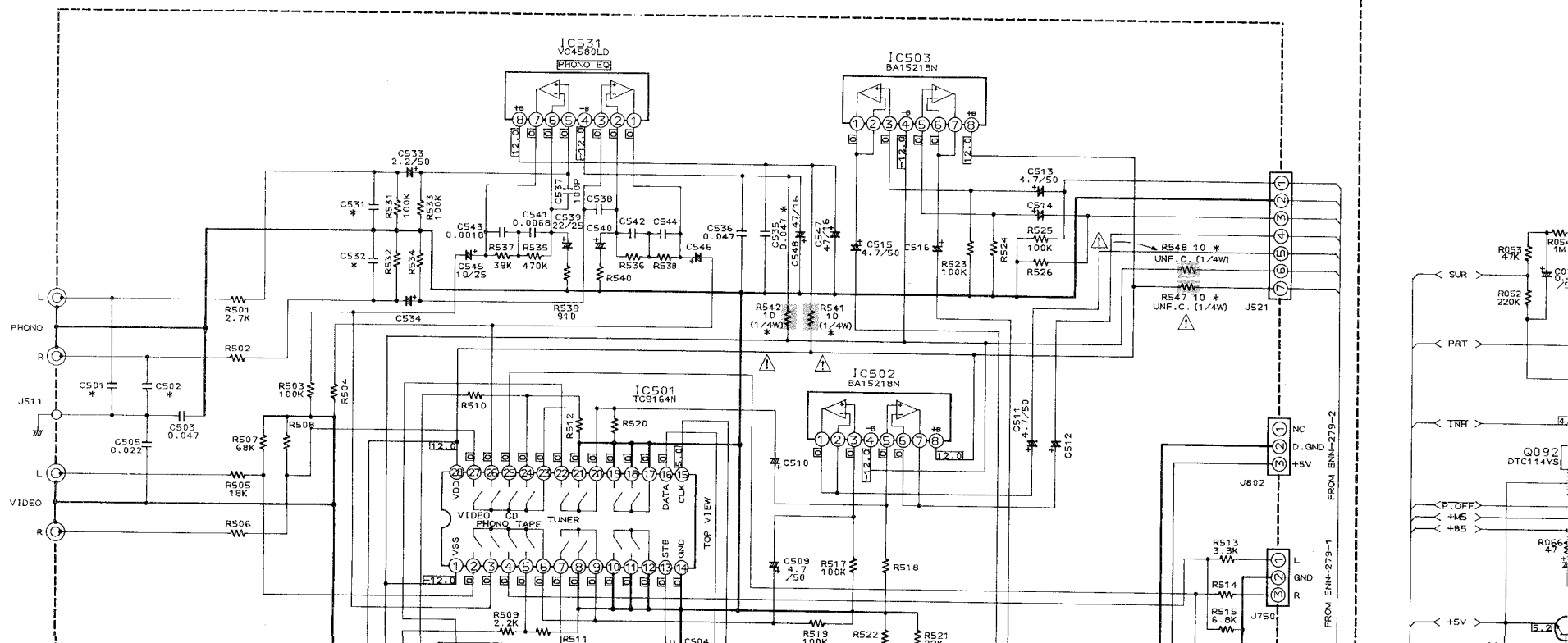


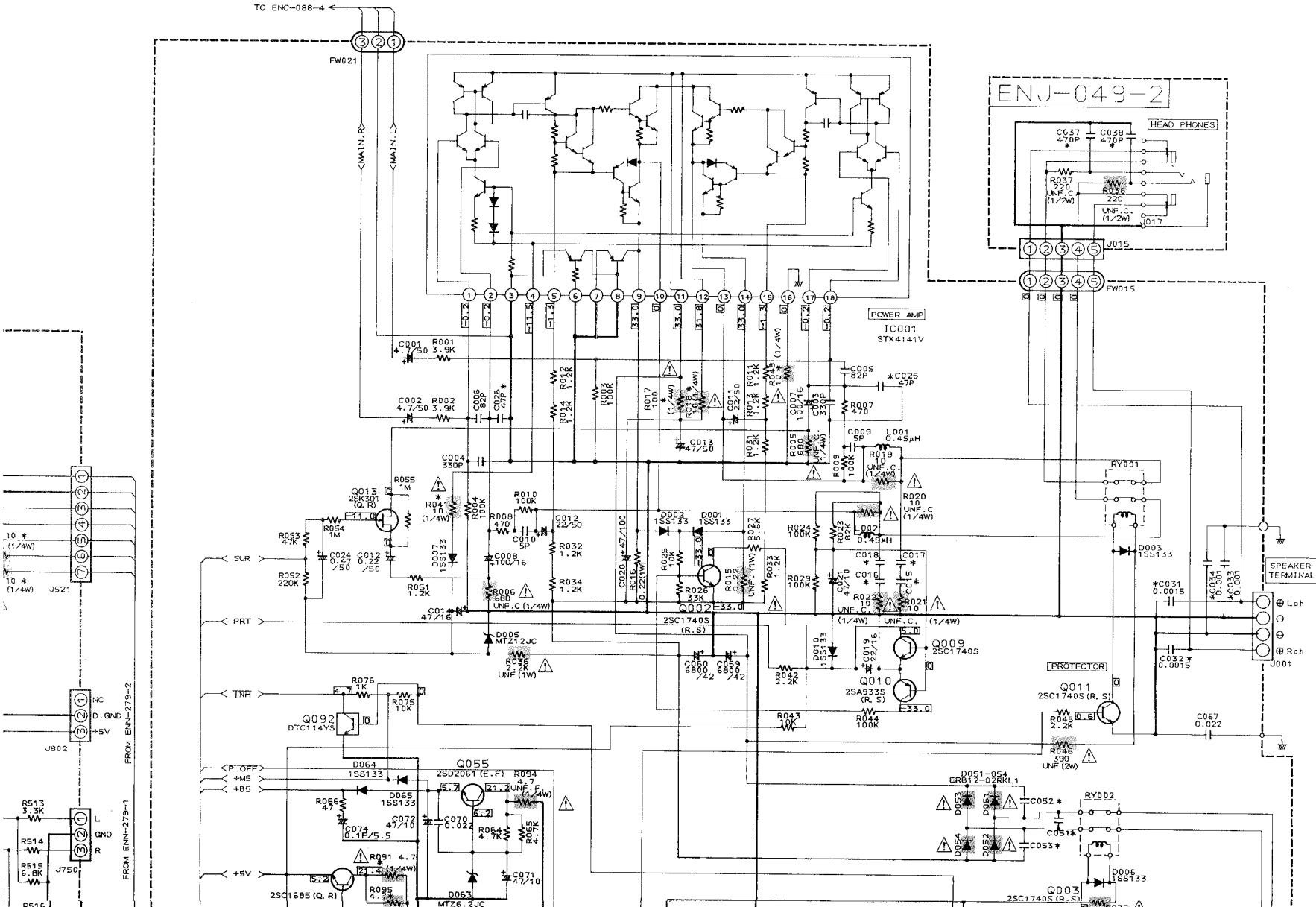
SCHEMATIC DIAGRAMS

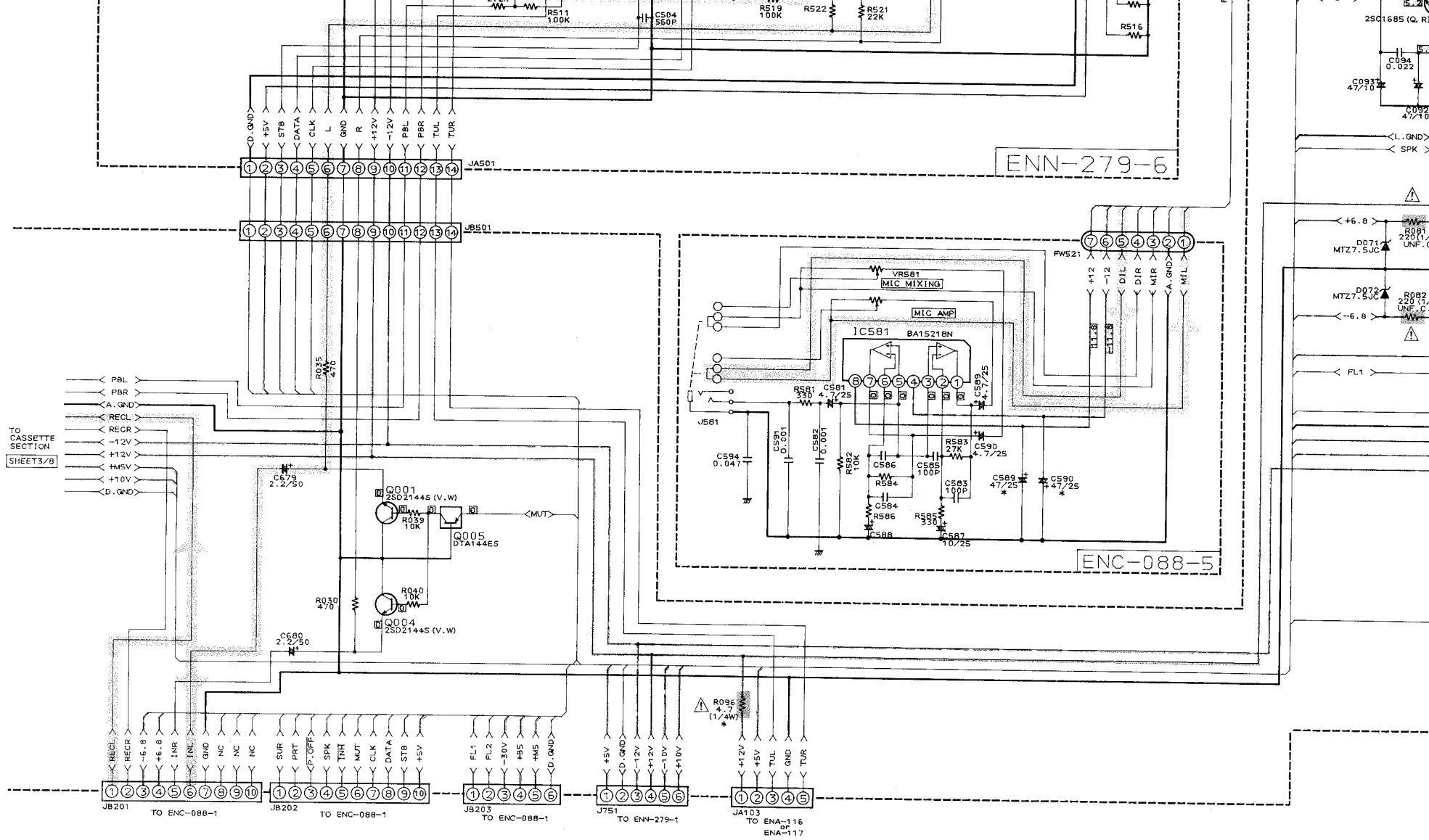
INPUT SELECTOR & POWER SOURCE SECTION

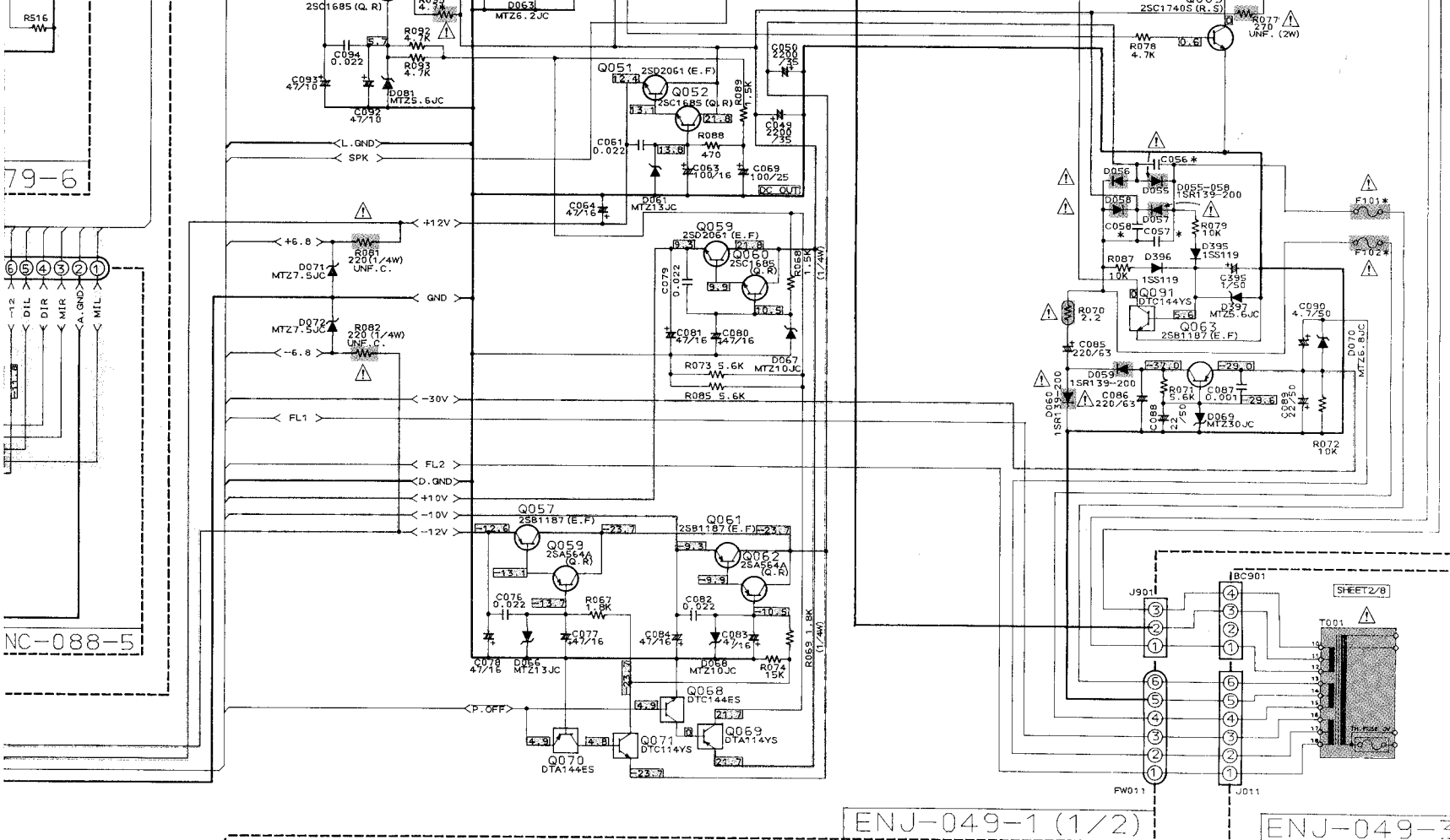
* LIST

VERSION	J . C	U . A	E, EF, G, Gi BS, V, VX	VERSION	J . C	U . A	E, EF, G, Gi BS, V, VX
C037, C038	NONE	NONE	USED	C051	0.01/100	0.01/100	0.1/100
C031, C032	NONE	NONE	USED	C052, C053	0.01/100	0.01/100	0.1/100
C033, C034	NONE	NONE	USED	C056	0.01/100	0.01/100	0.1/100
C025, C026	NONE	NONE	USED	C057, C058	0.01/100	0.01/100	0.1/100
C015, C016	0.047	0.1	0.1	C501, C502	100P	100P	330P
C017, C018	SHORT	0.1	0.1	C531, C532	100P	100P	270P
R041, R017				F101, F102	1.6A-125V	T1.25A	T1.25A
R018, R048	UNF.C	UNF.F	UNF.F				
R091, R094							
R095, R096							
R541, R542							
R547, R548	USED	SHORT	SHORT				
R589, R590	USED	NONE	NONE				





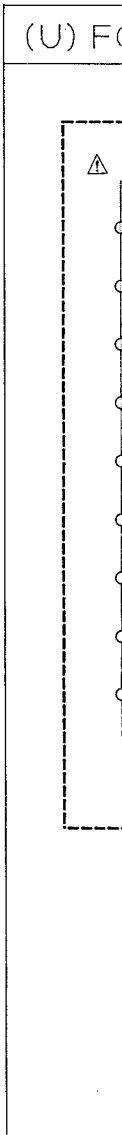
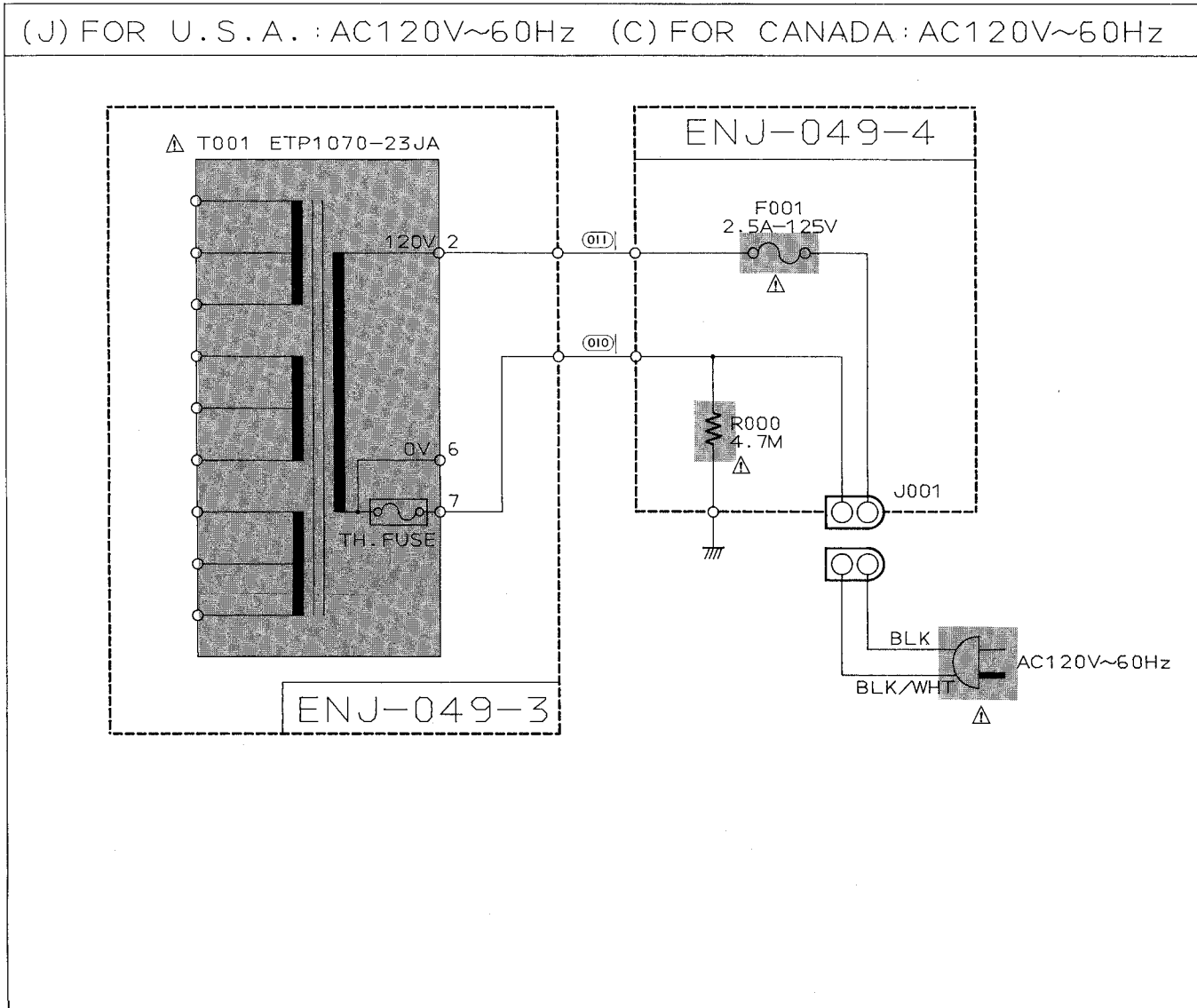




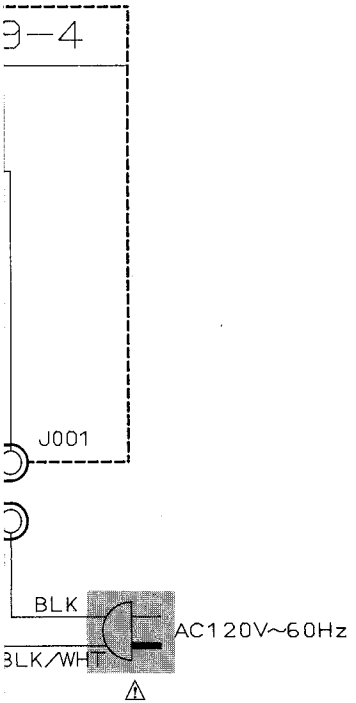
Notes:

1. ——— indicates + B power supply.
2. - - - - - indicates - B power supply.
3. [Shaded area] indicates signal path.
4. [Shaded area] shows voltage.
5. When replacing the parts in the shaded area ([Shaded area]) and those marked with Δ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
The design and contents are subject to change without notice.

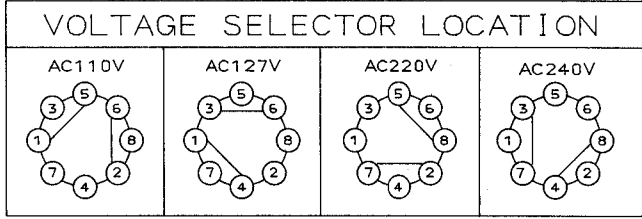
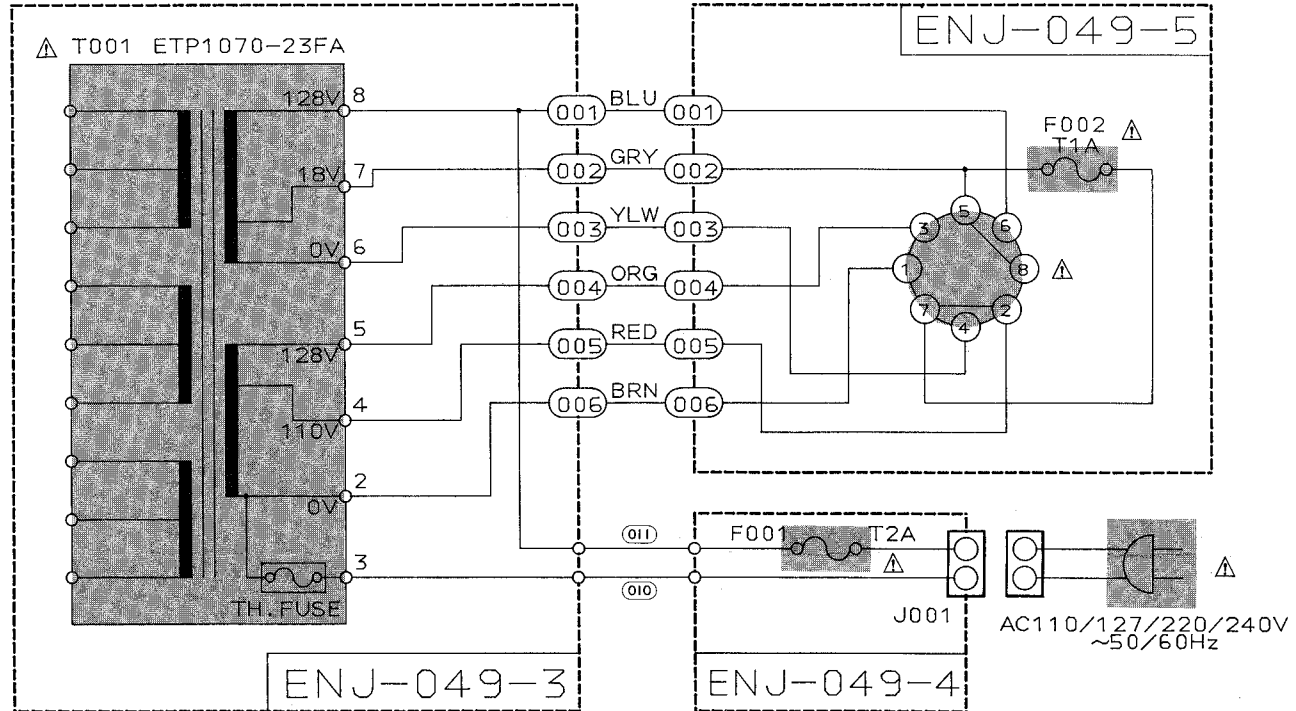
■ POWER TRANS & VOLTAGE SELECTOR SECTION



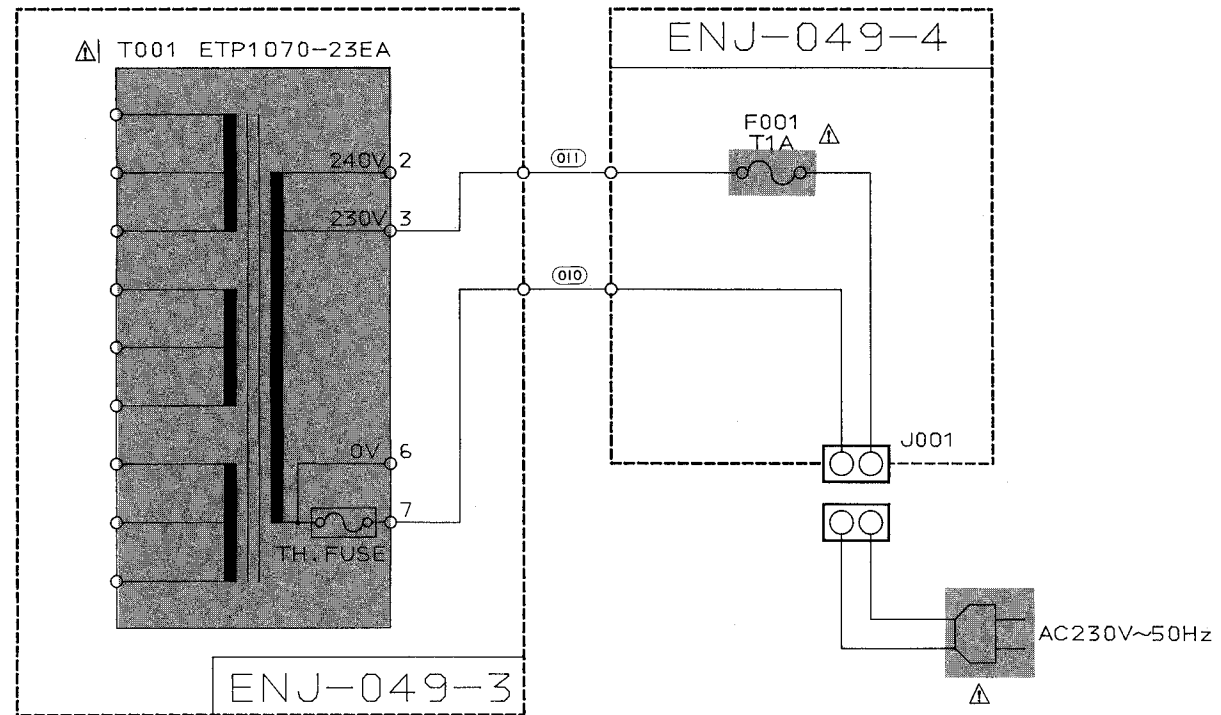
DA: AC120V~60Hz



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

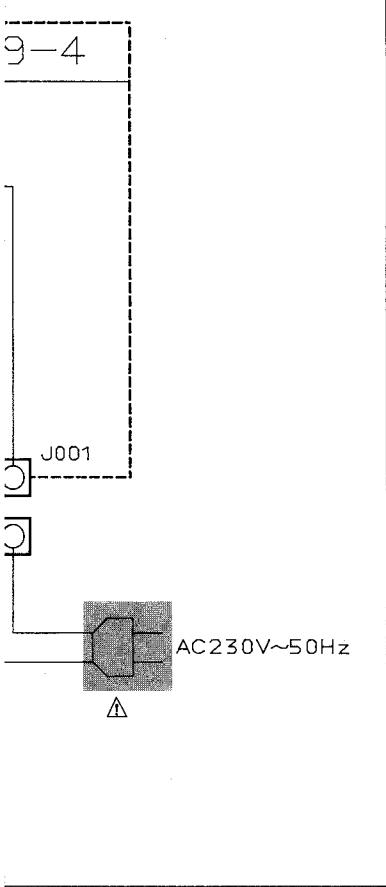


(E), (EF), (V), (VX) FOR CONTINTAL EUROPE
(G) FOR F.R. GERMANY (GI) FOR ITALY : AC230V~50Hz

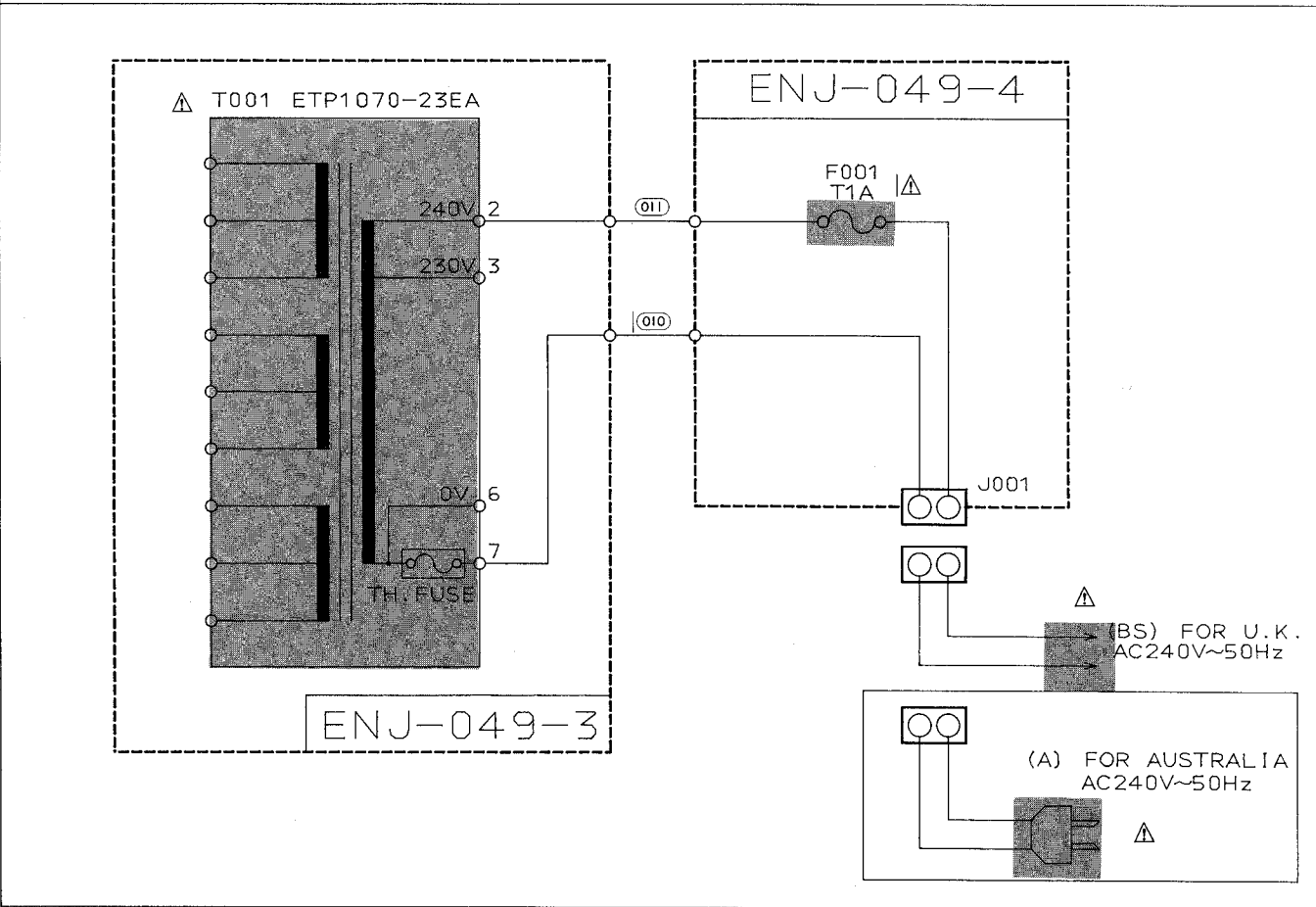


(BS)
(A)

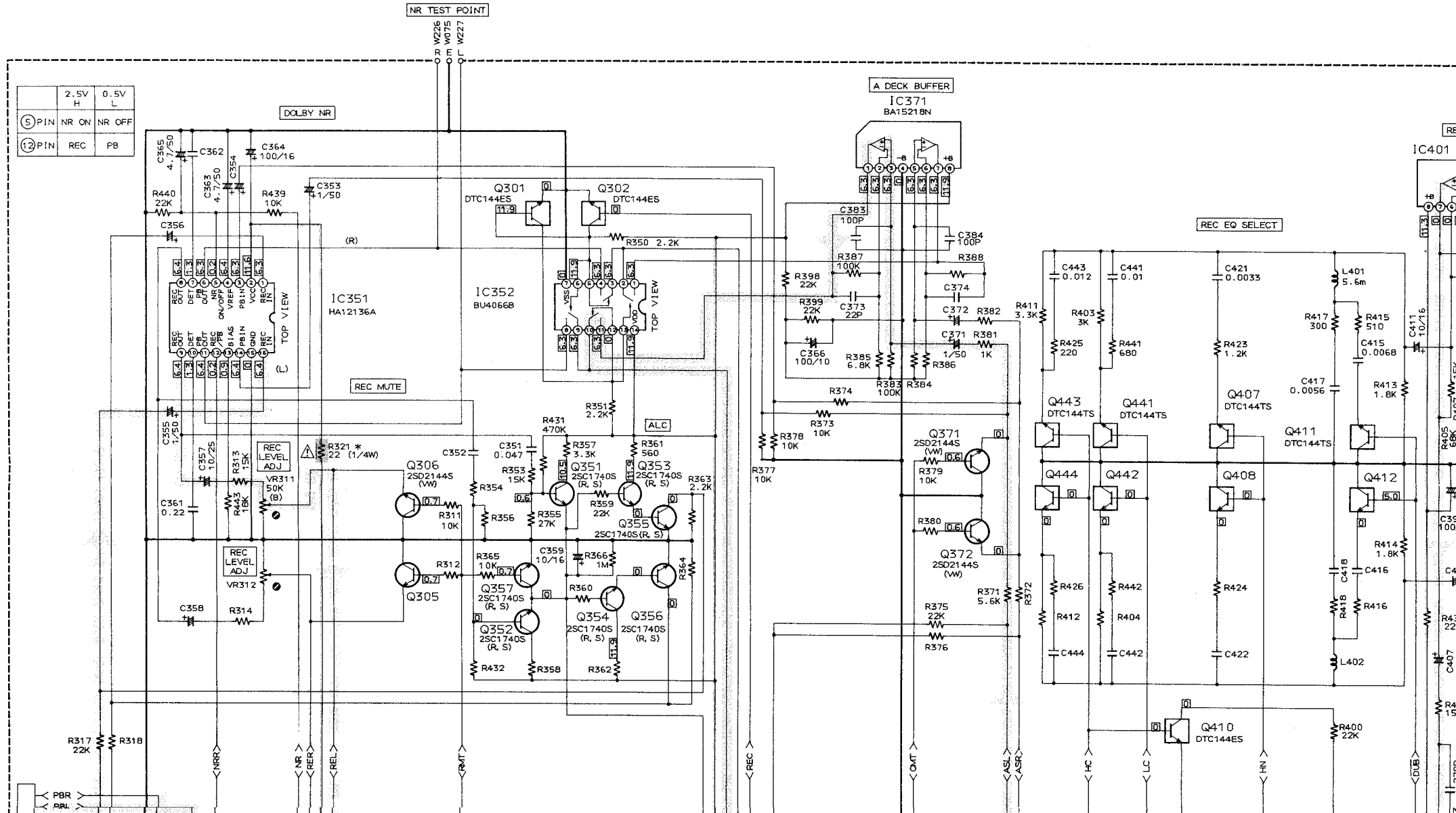
AC230V~50Hz



(BS) FOR U.K.: AC240V~50Hz
(A) FOR AUSTRALIA: AC240V~50Hz

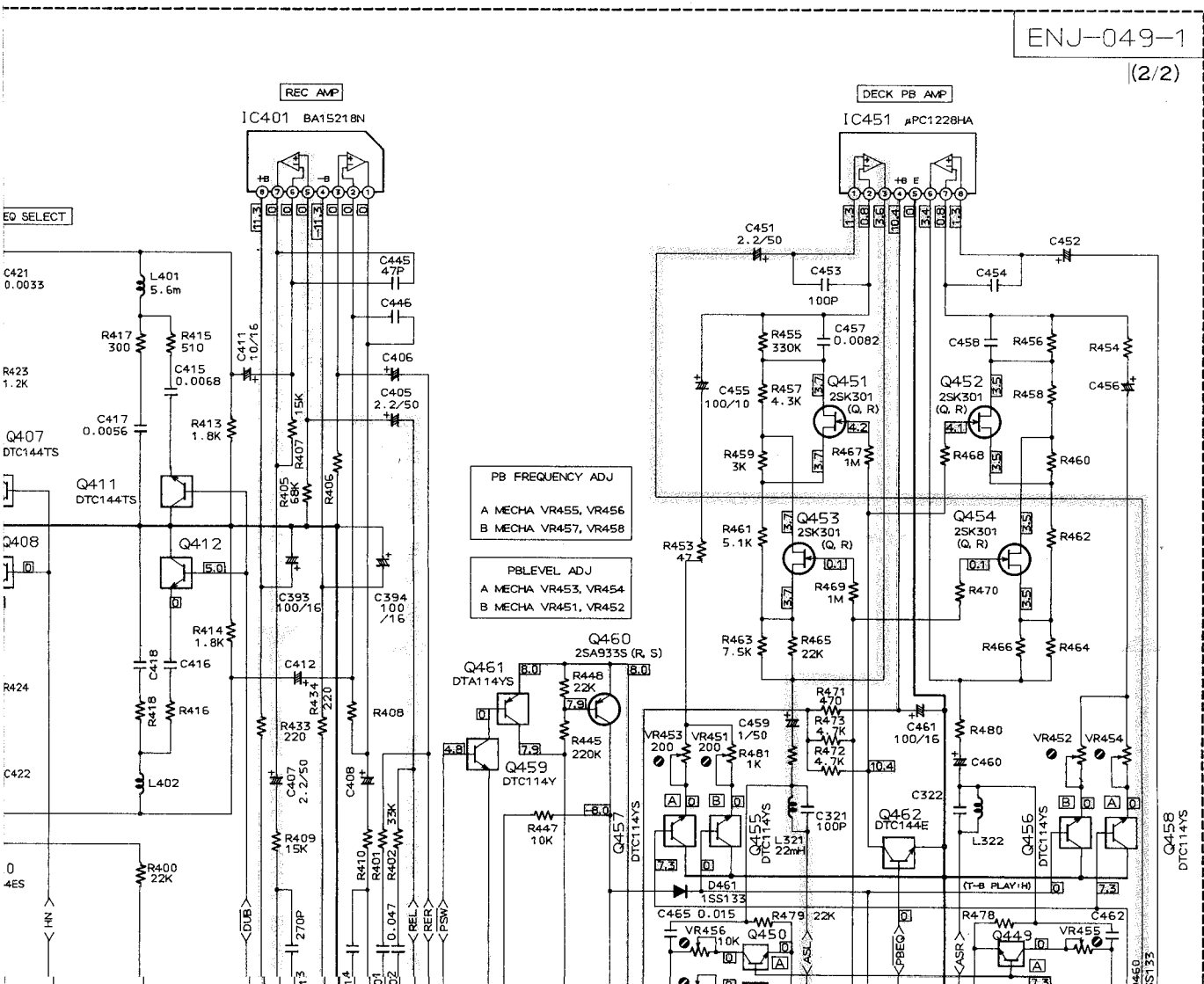


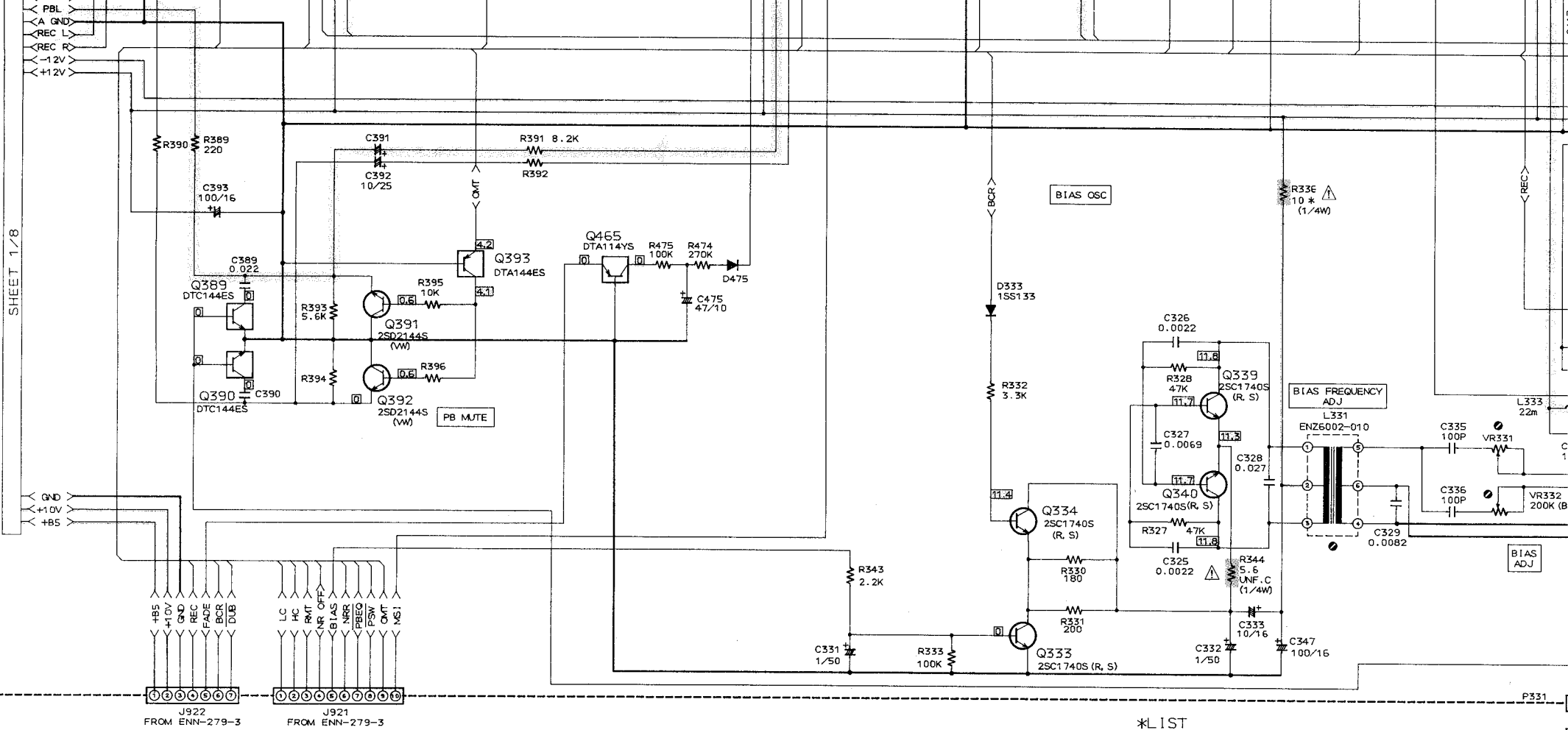
CASSETTE DECK SECTION



ENJ-049-1

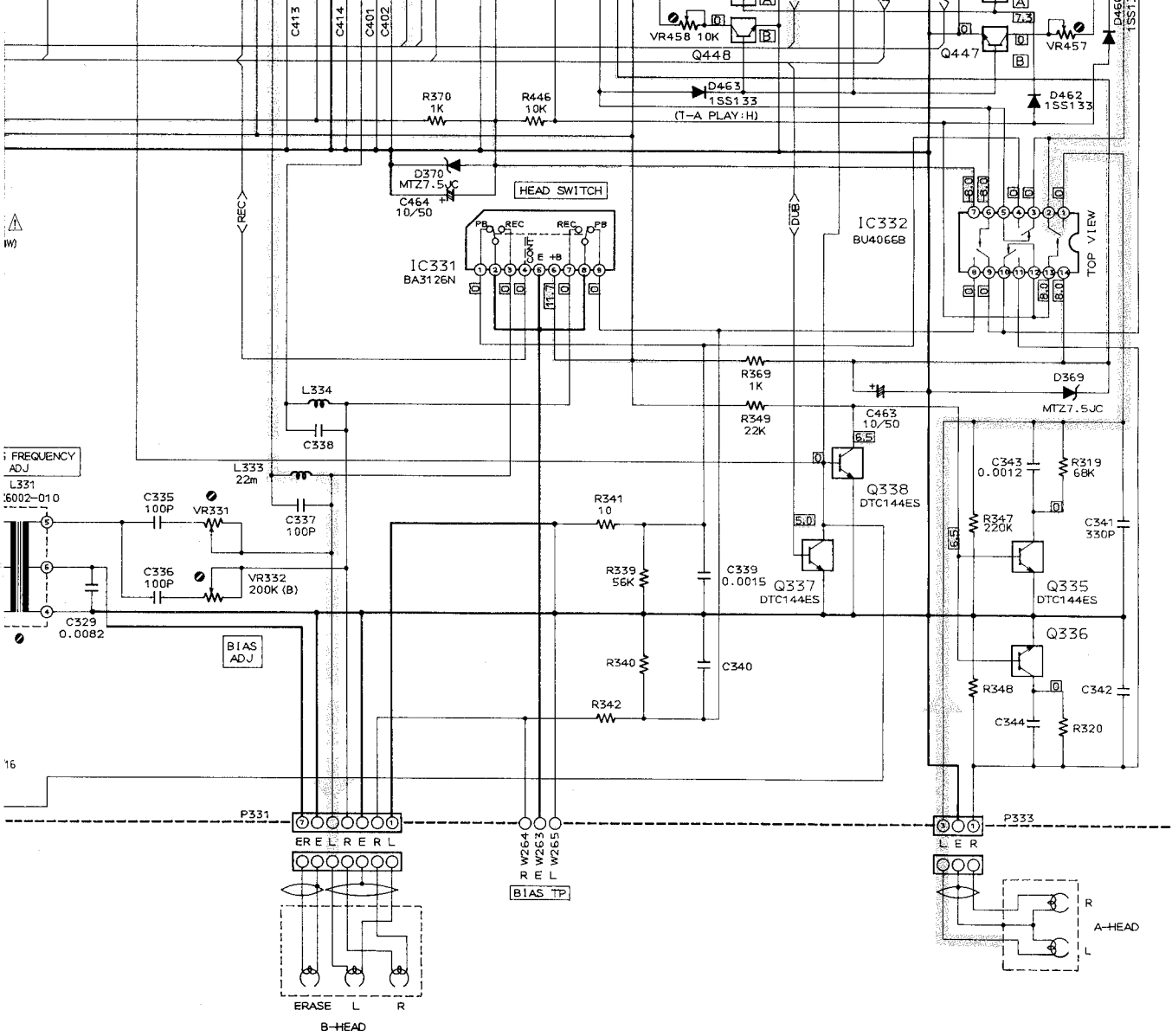
(2/2)



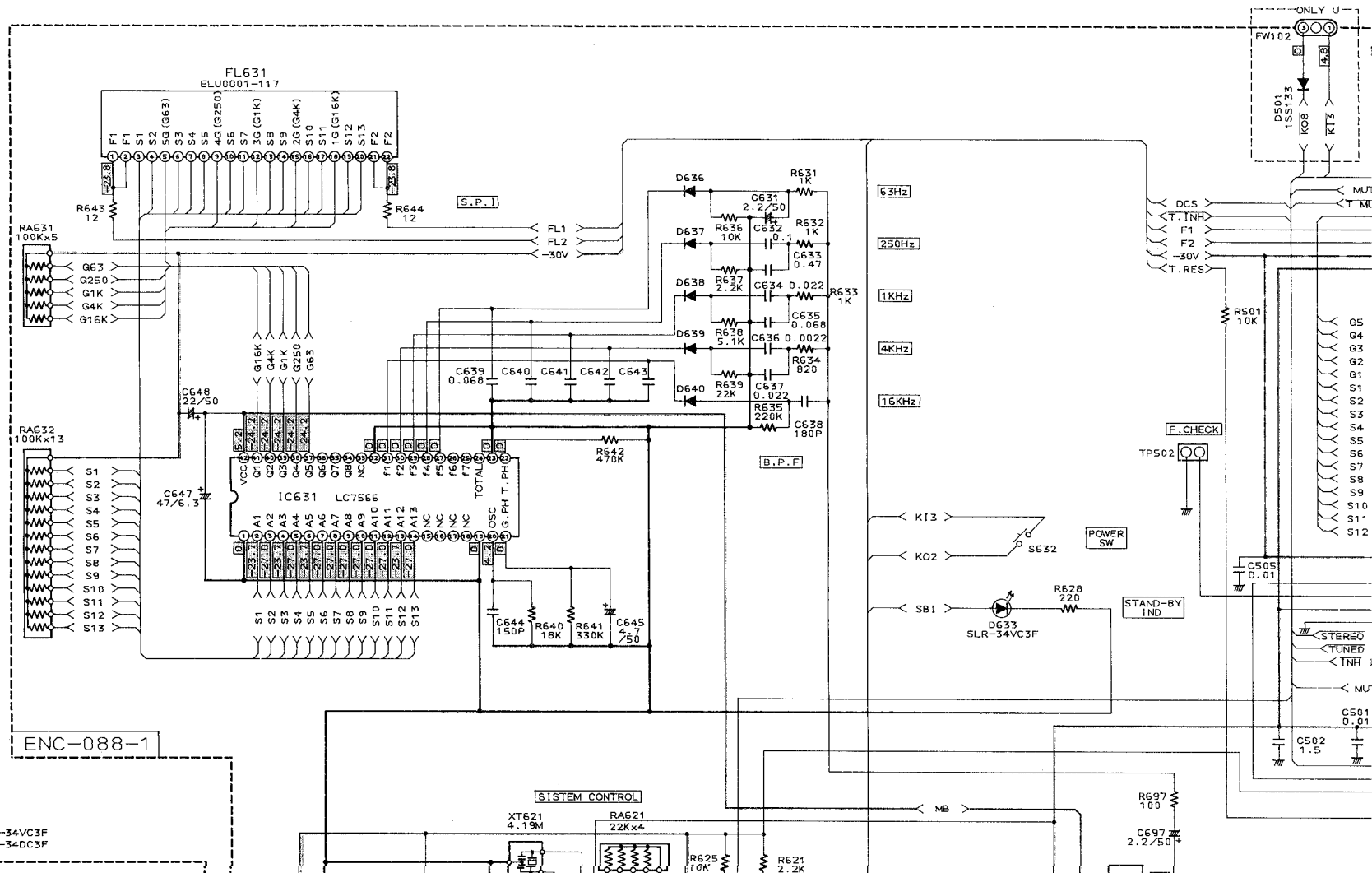


*LIST

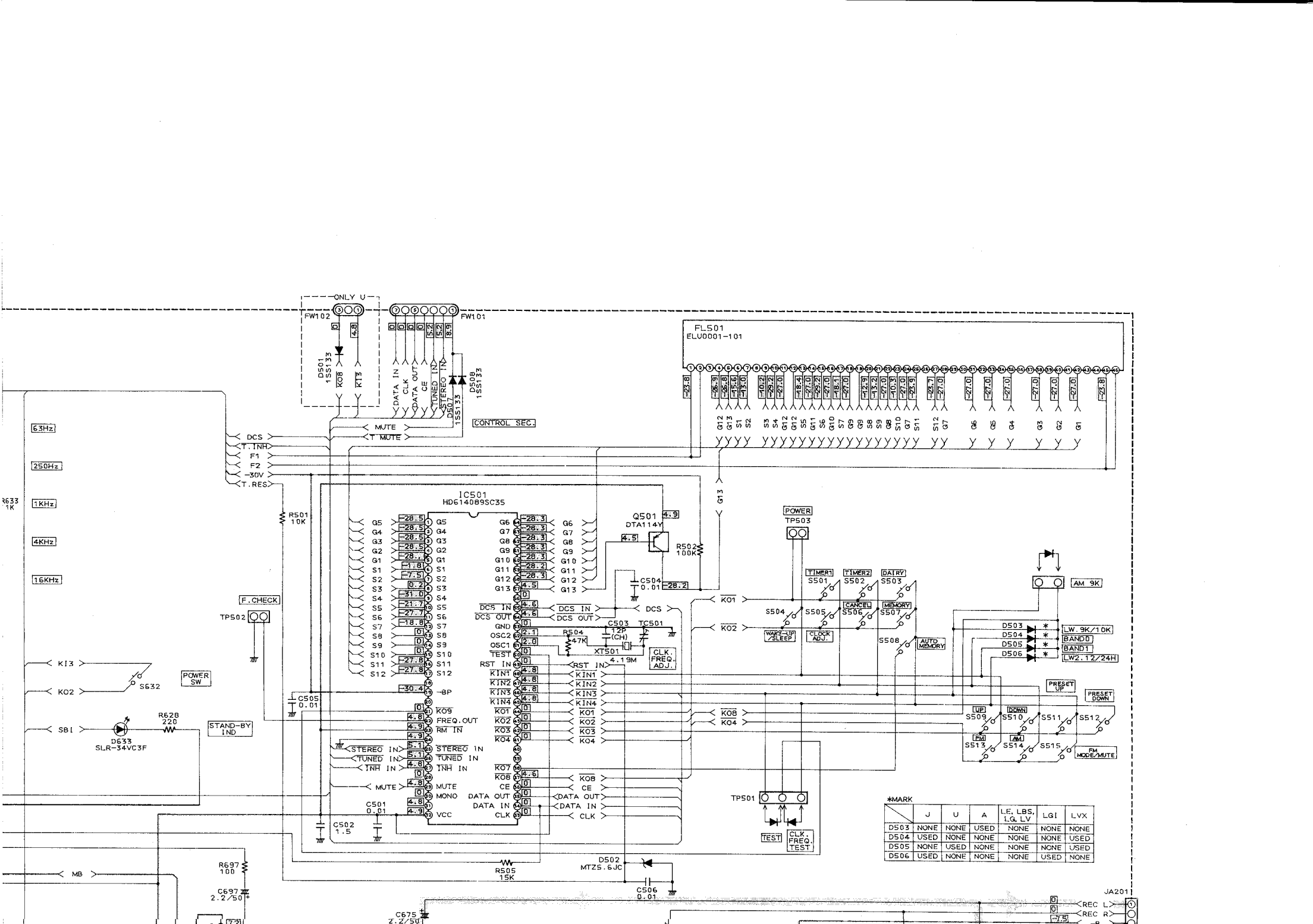
U, C	E, EF, BS, V, VX & G, U, A
R336	UNF. C UNF. F
R321	UNF. C UNF. F

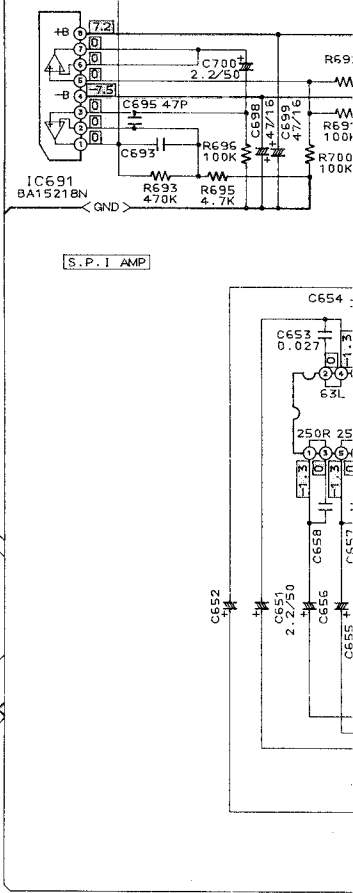
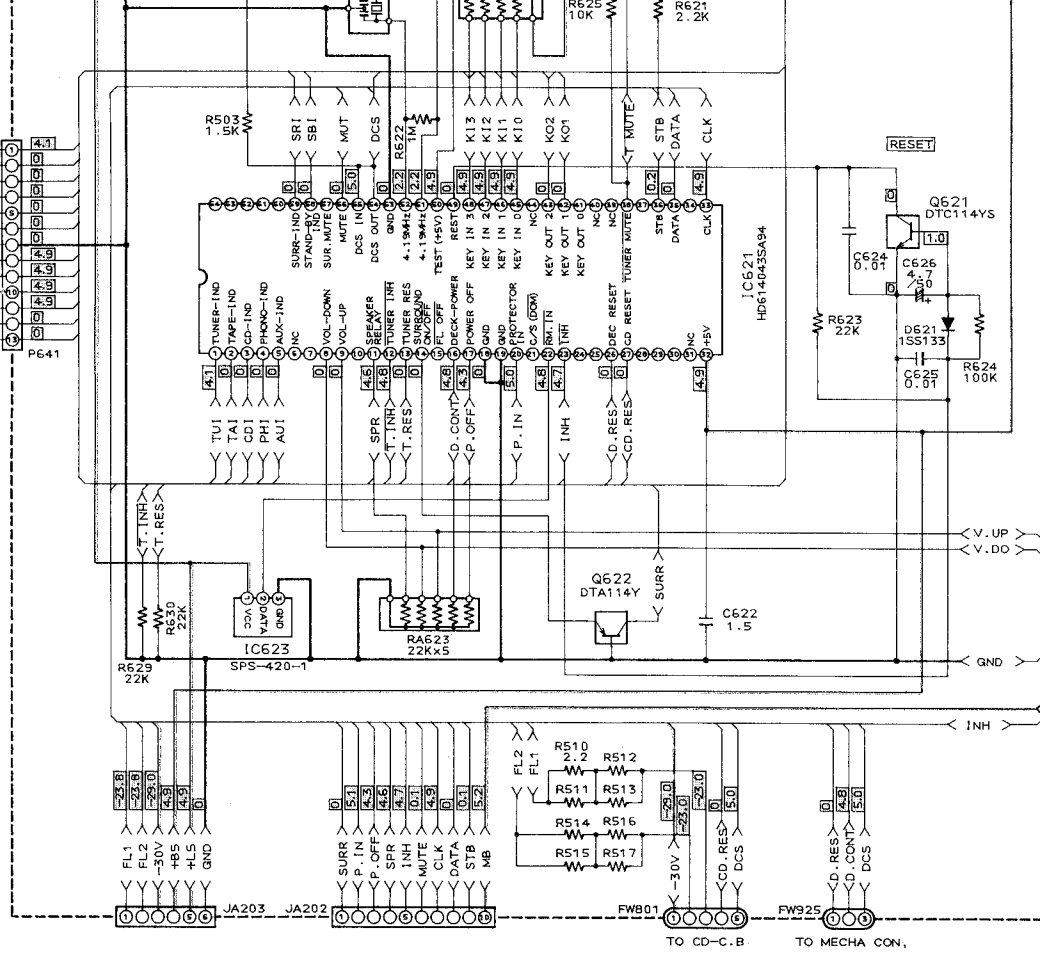
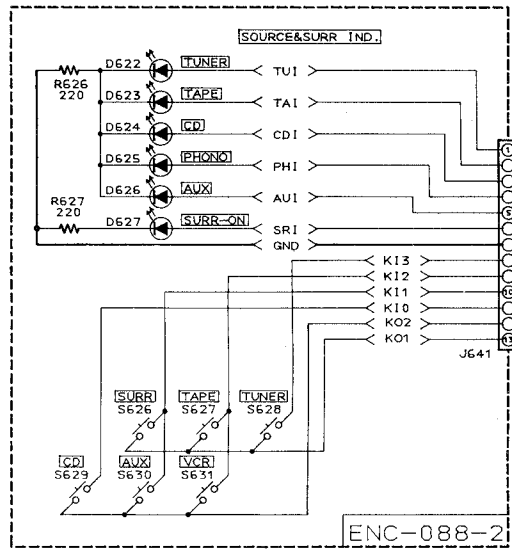


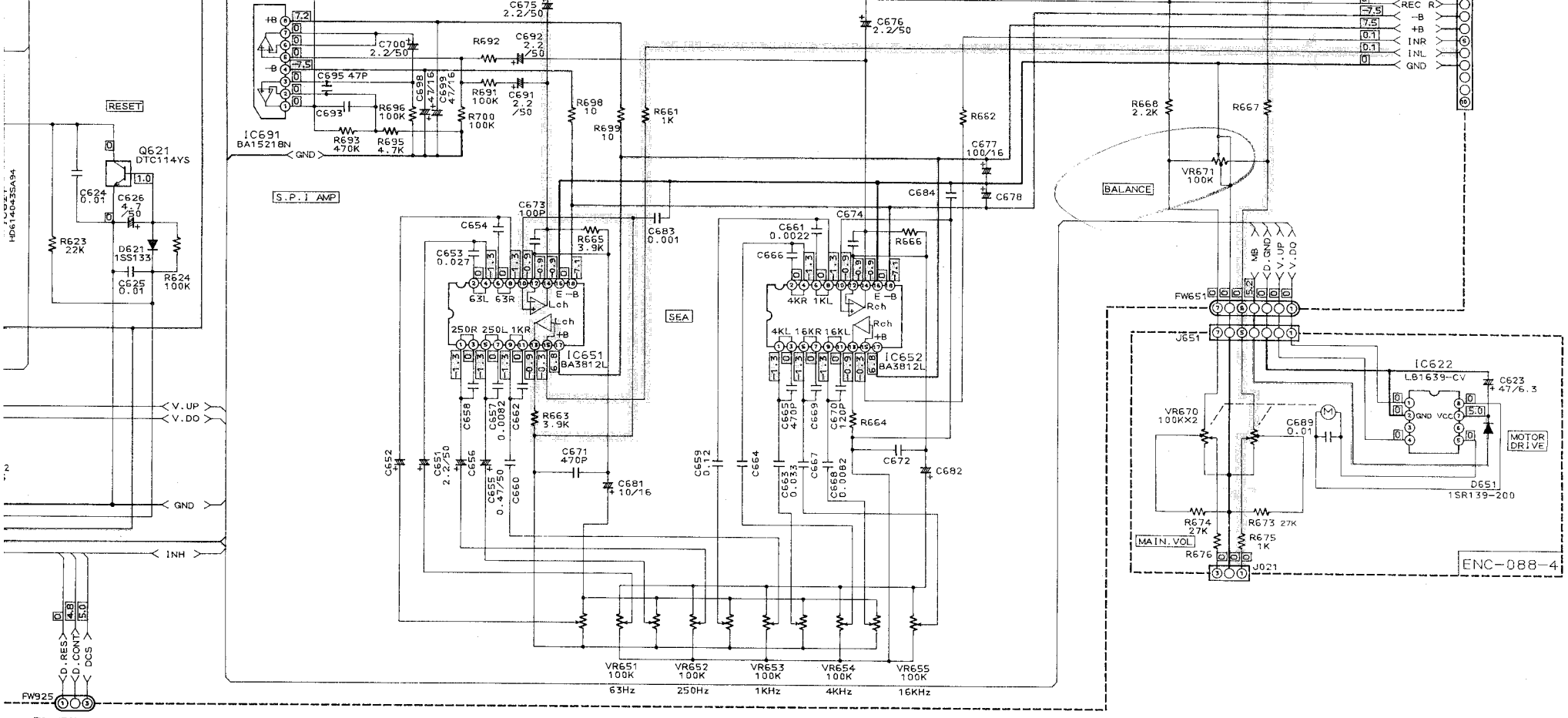
SYSTEM CONTROL & SEA SECTION



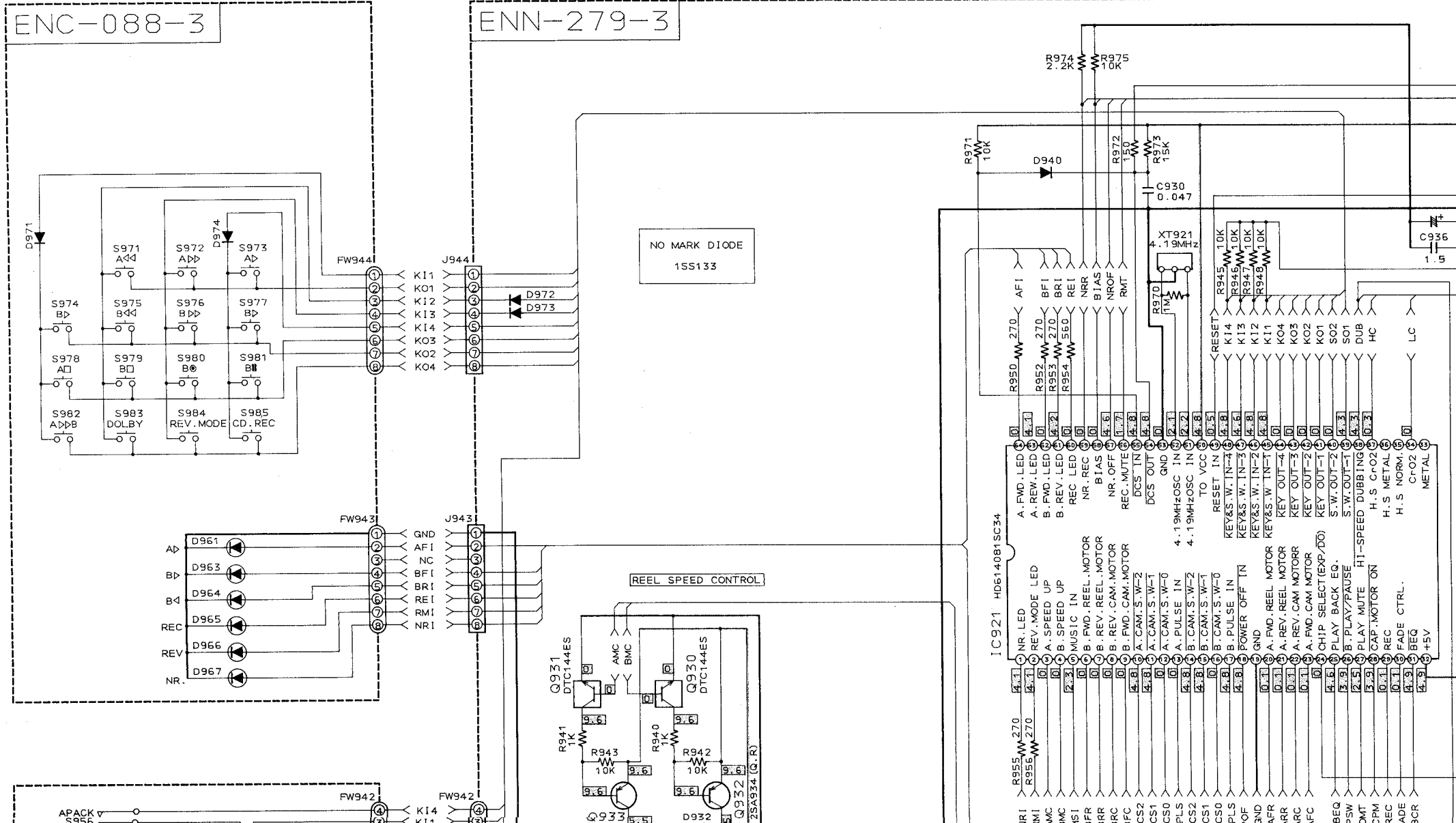
D622-D626 : SLR-34VC3F
D627 : SLR-34DC3F

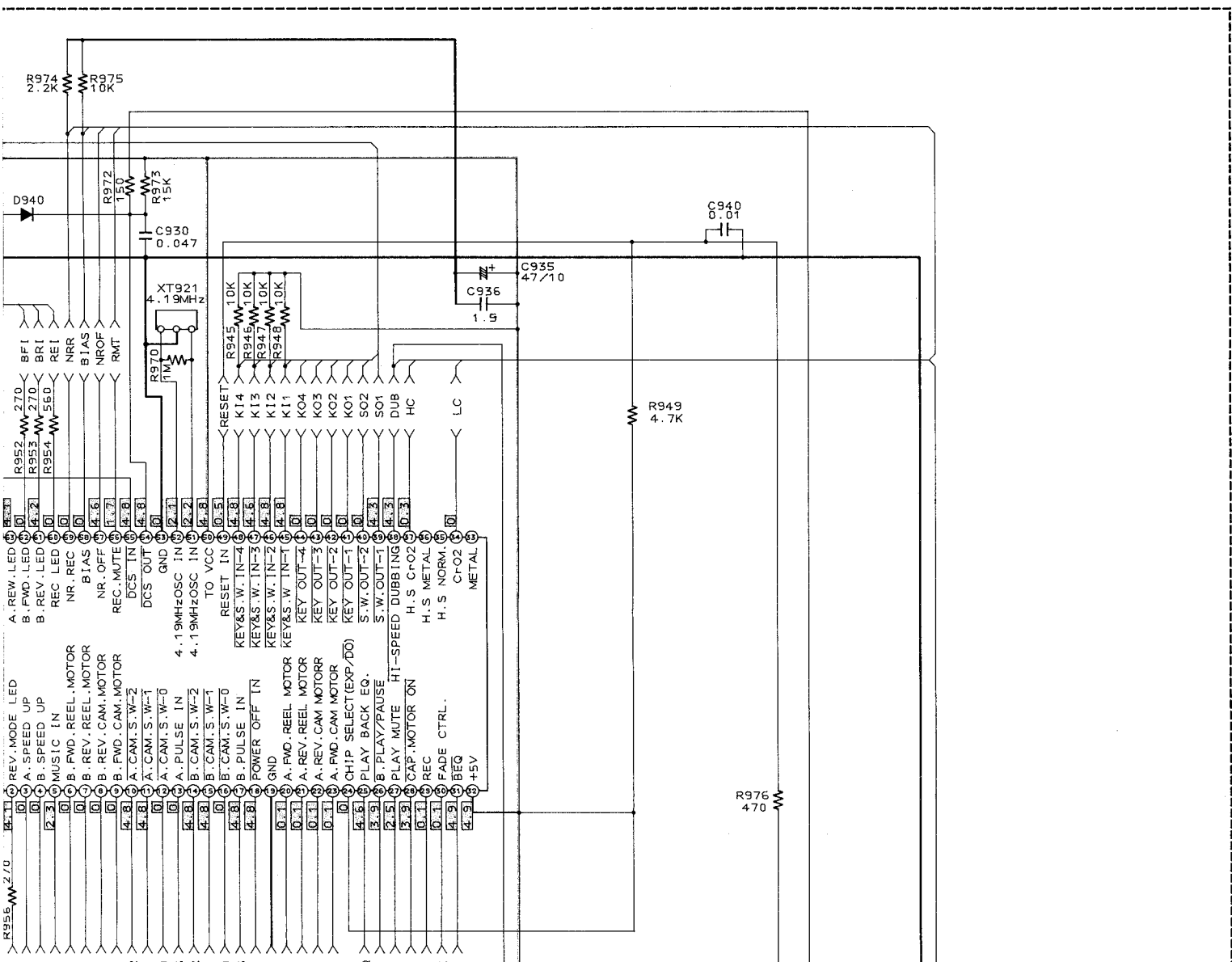


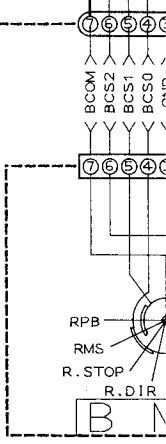
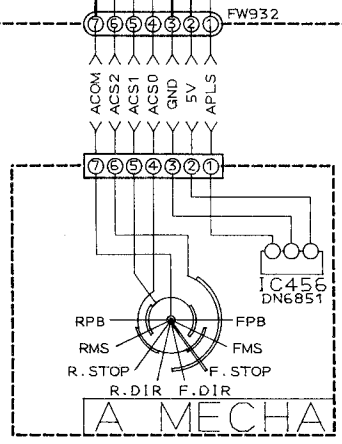
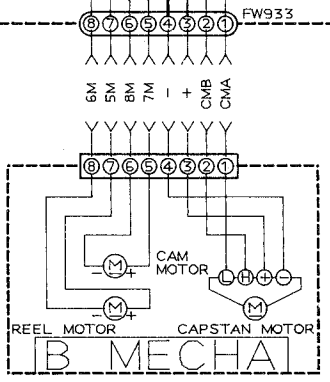
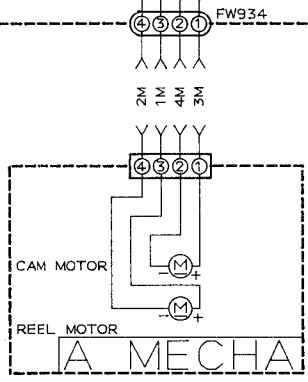
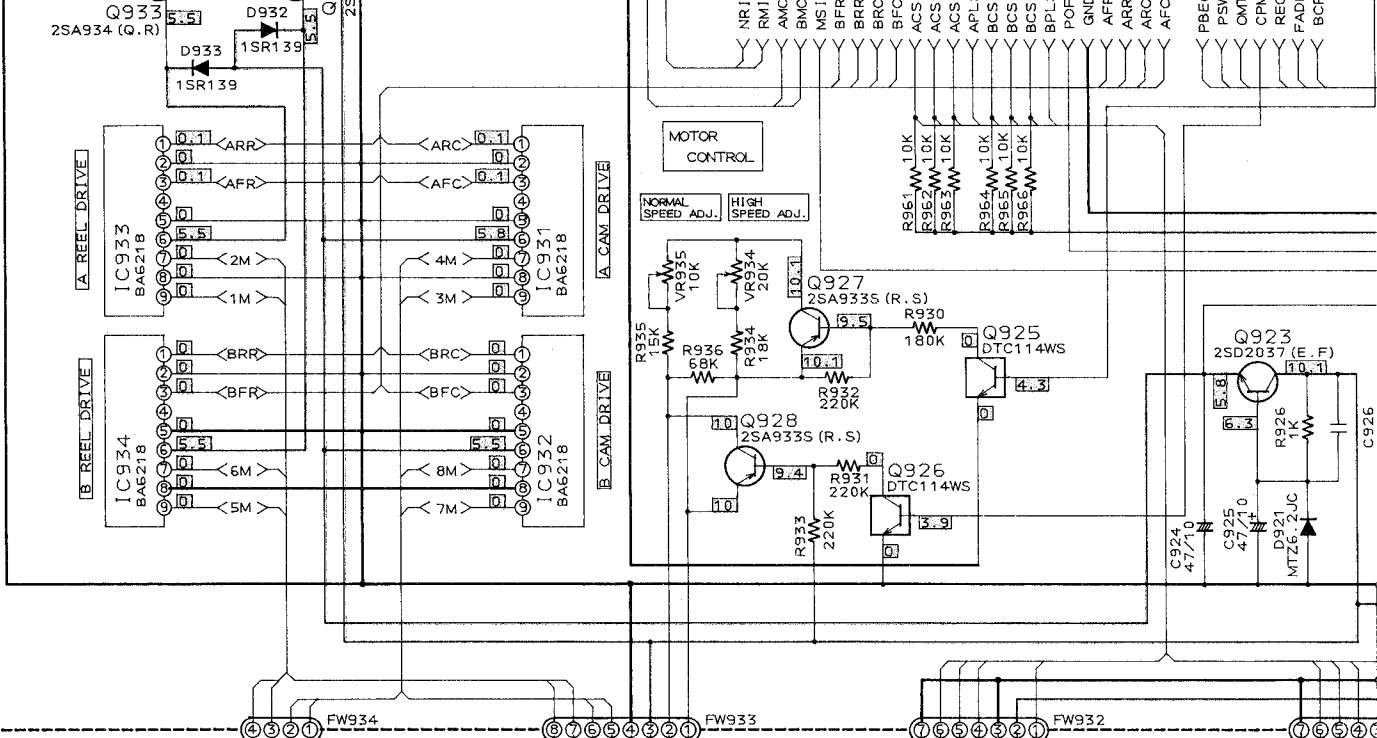
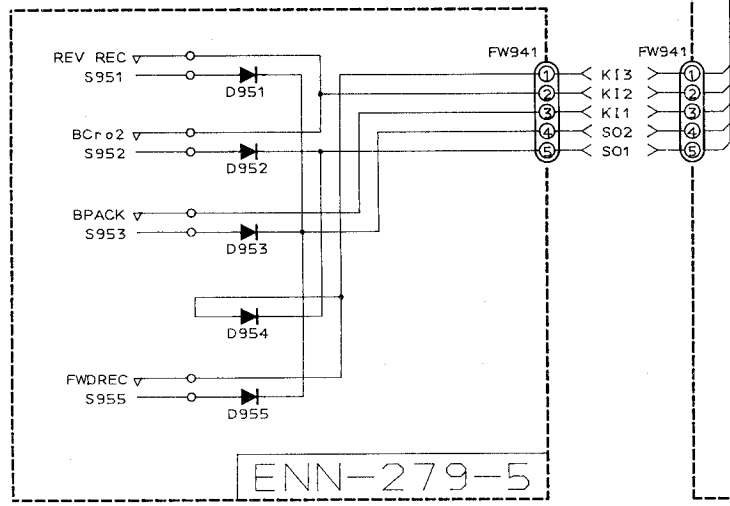
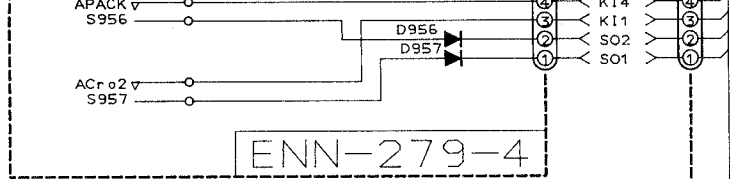


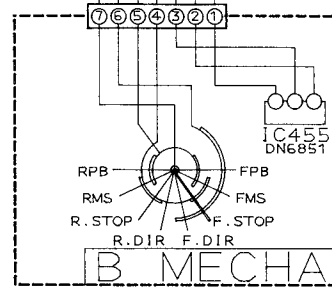
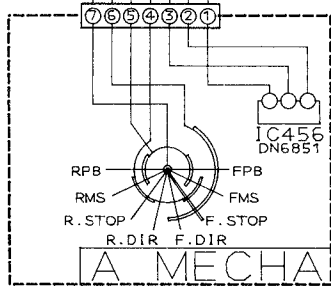
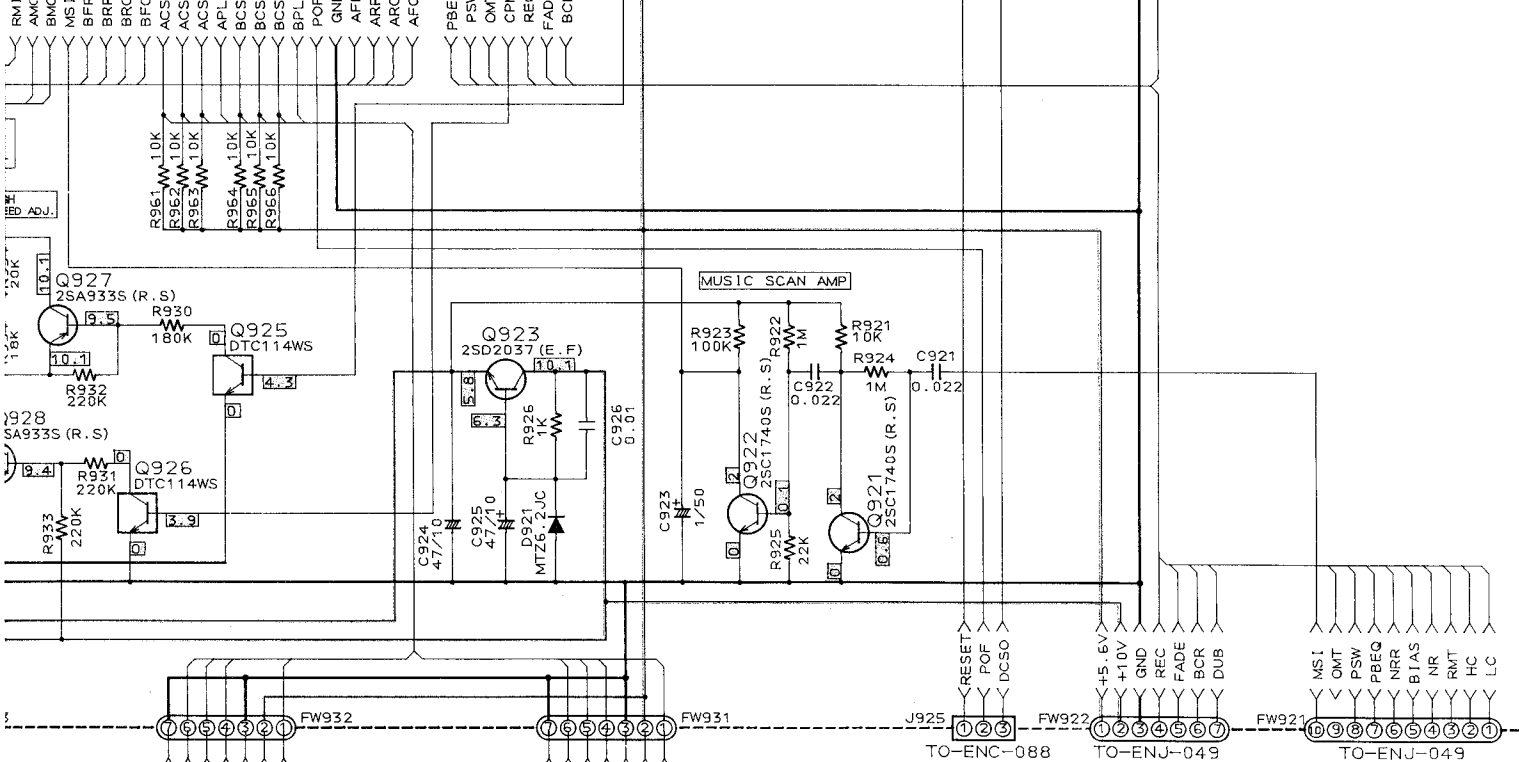


DECK CONTROL SECTION



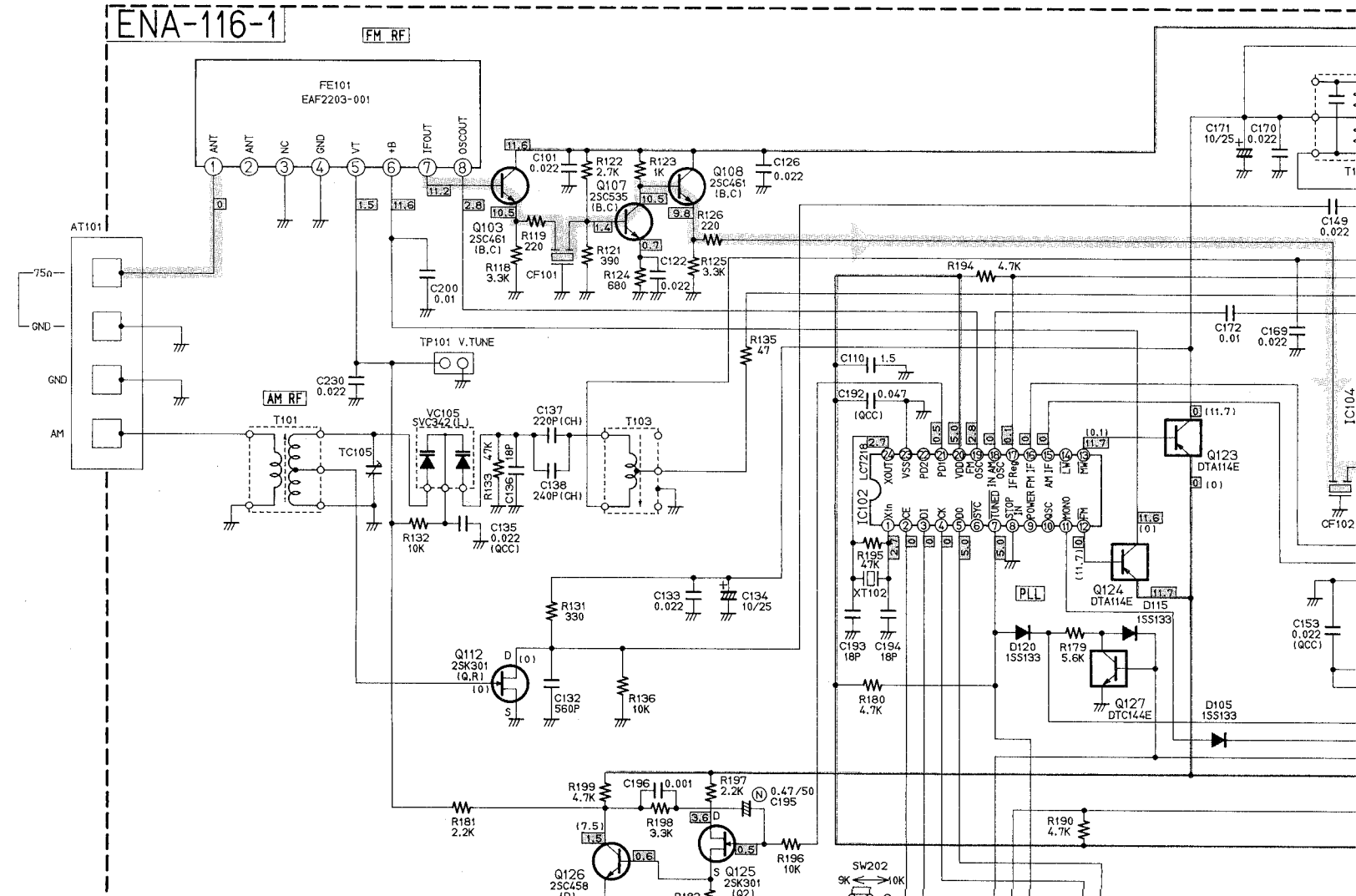


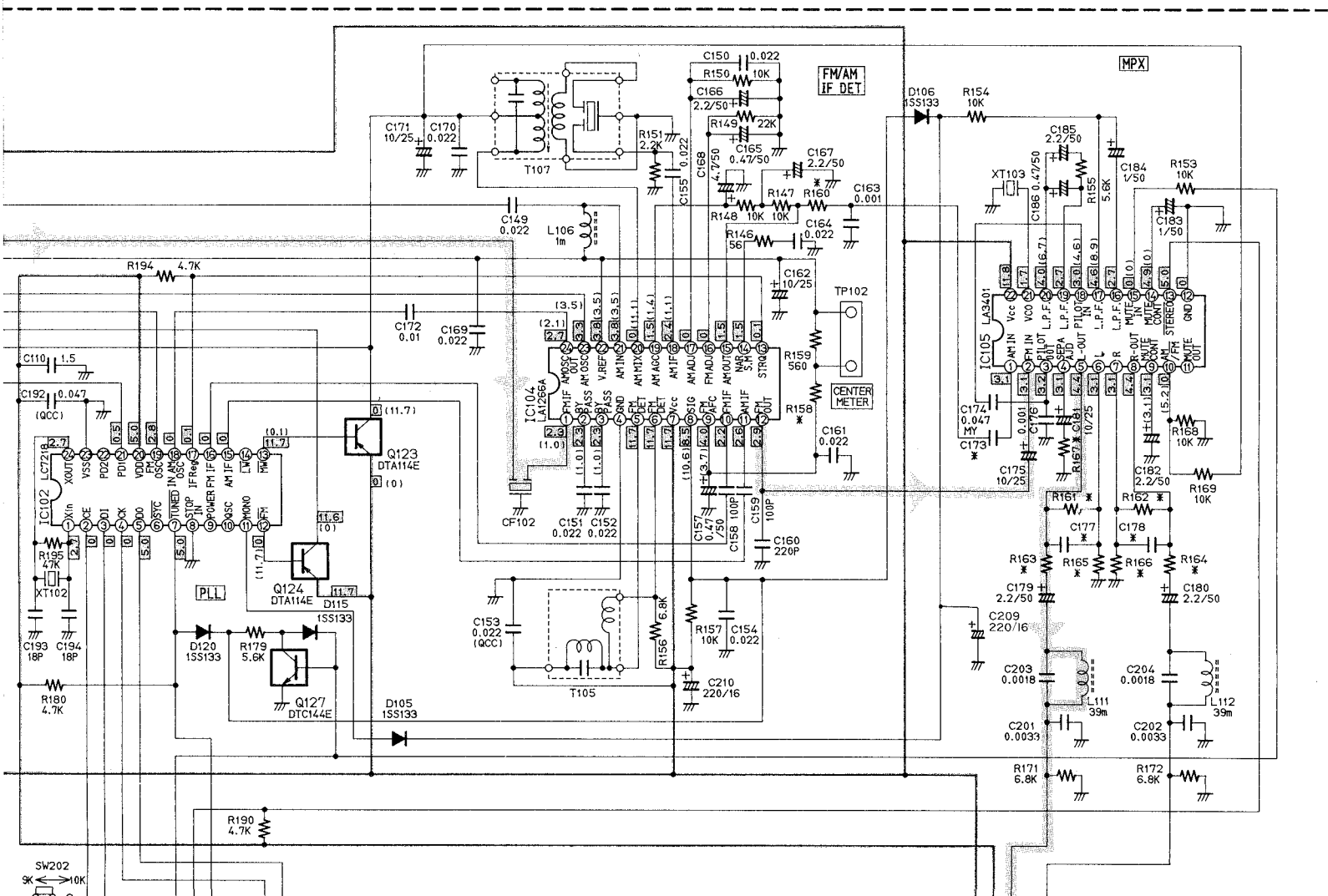




■ TUNER SECTION

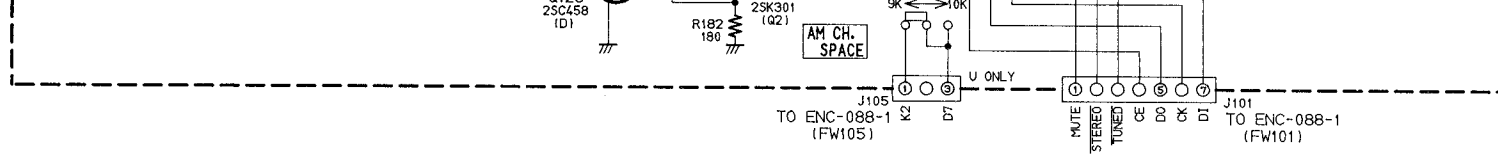
FOR A.U.J.C



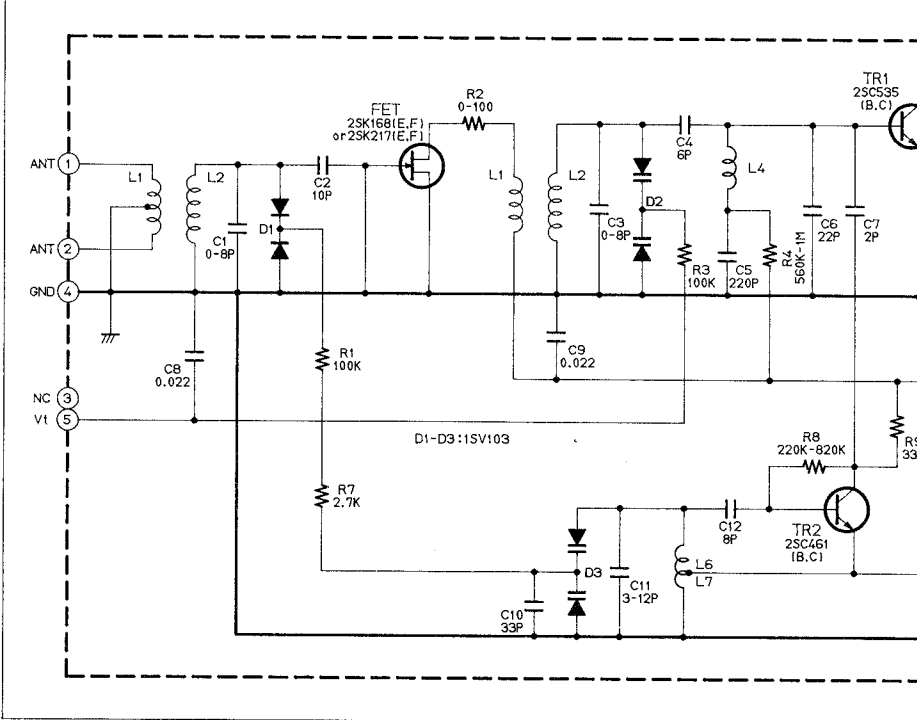


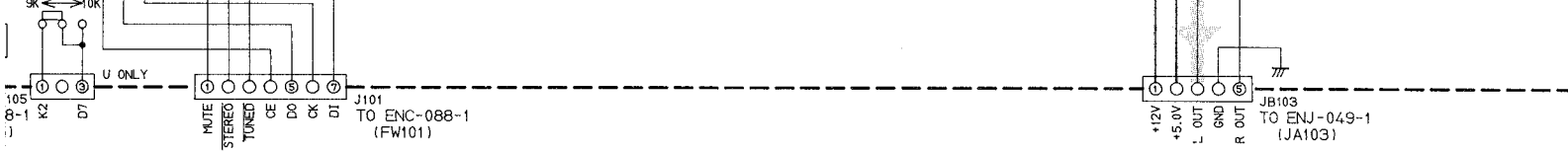
* MARK

	U	A	J,C
R158	27K	27K	18K
R160	5.6K	18K	15K
R161,162	82K	120K	150K
R163,164	4.7K	3.9K	4.7K
R165,166	180K	270K	180K
R167	39K	47K	39K
C173	0.039	0.022	0.022
C177,178	820P	390P	470P



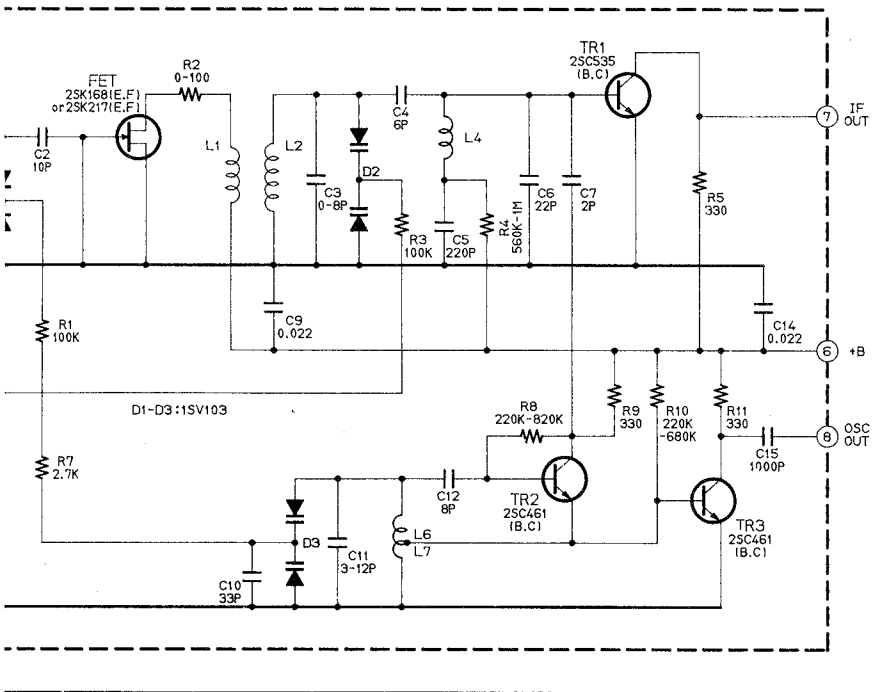
FRONTEND PACK EAF2203-001





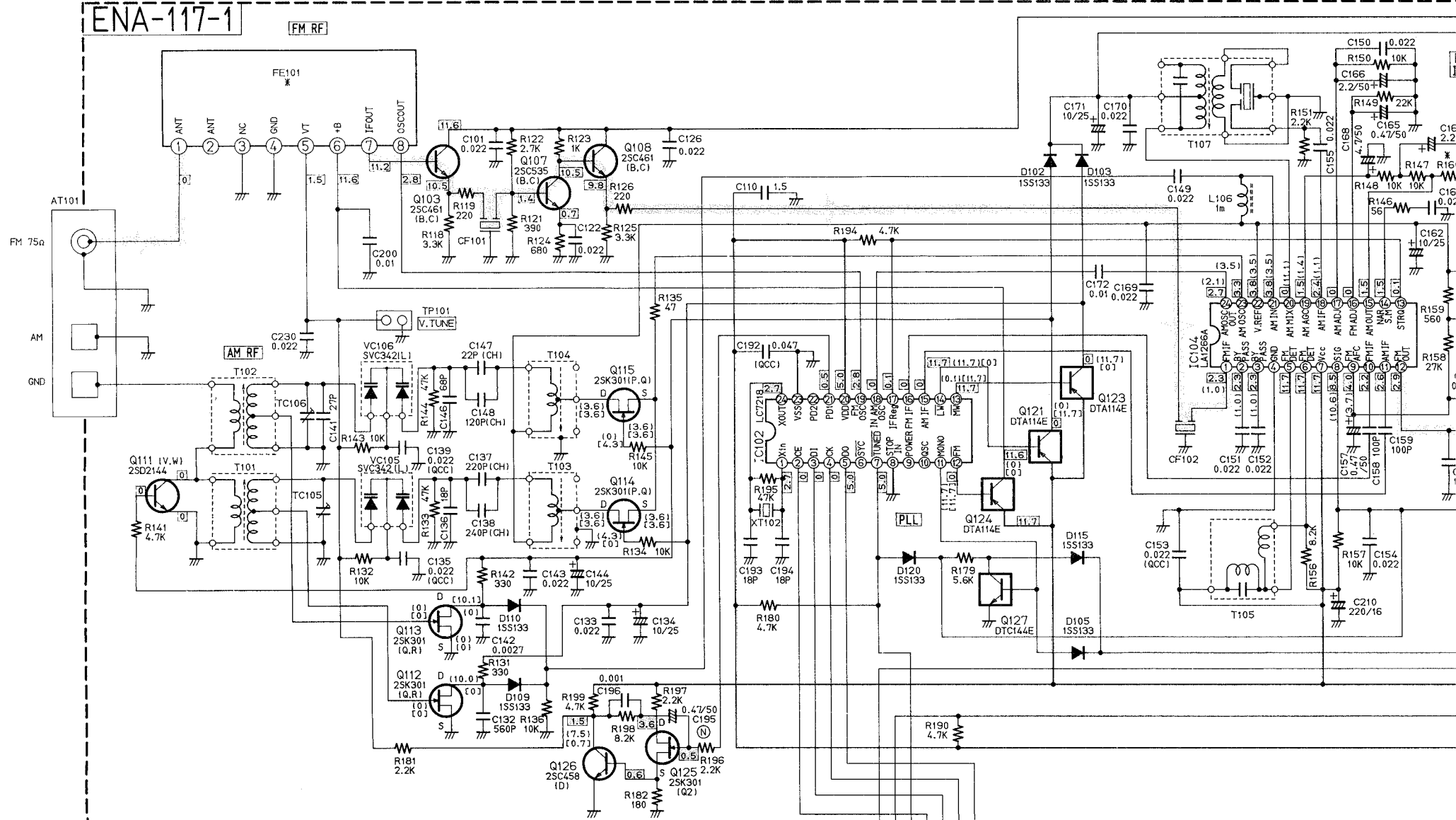
FM AUTO NO SIGNAL
 MW NO SIGNAL

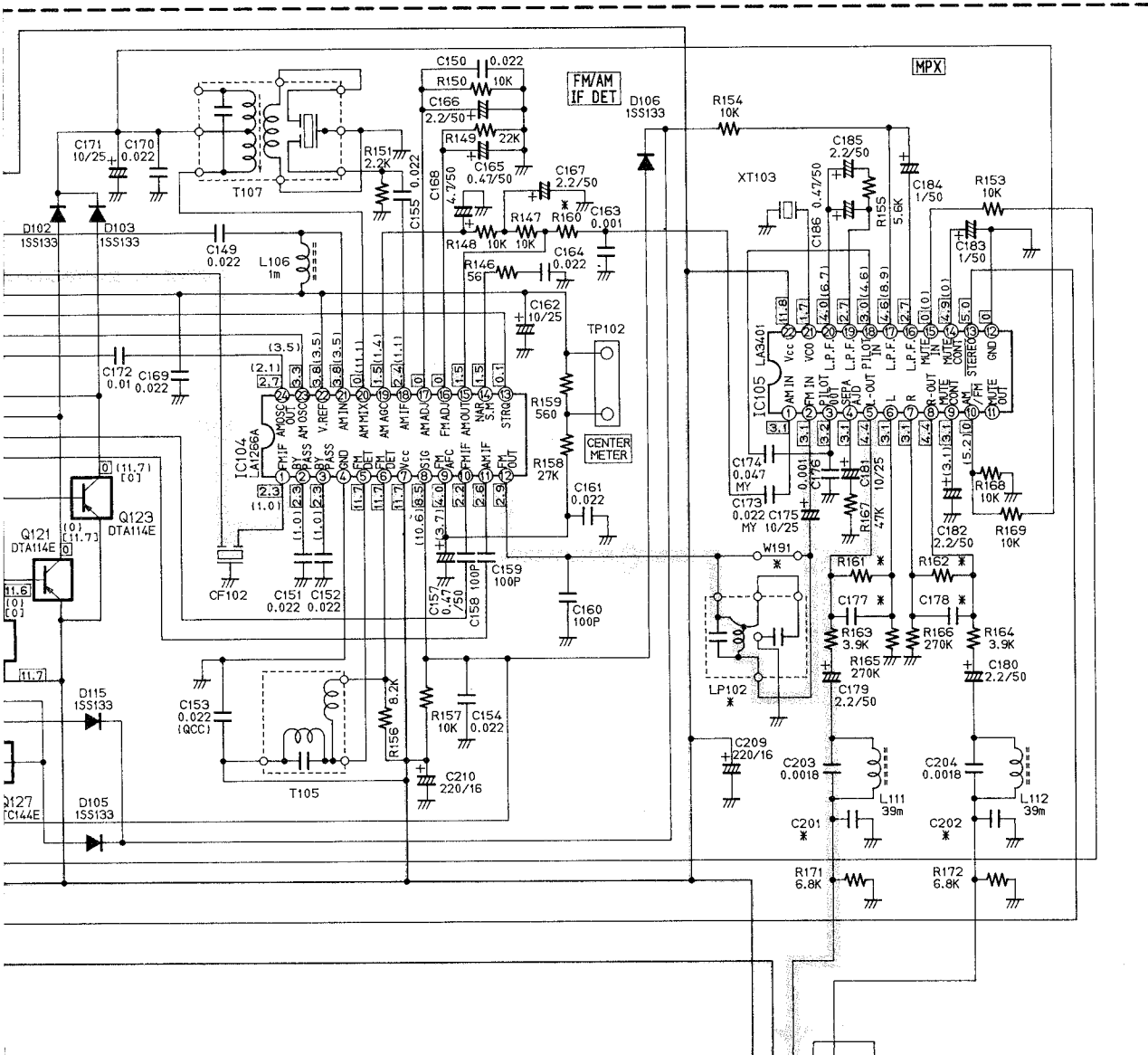
PACK EAF2203-001



TUNER SECTION

FOR BS,G,GI,E,EF,V,VX

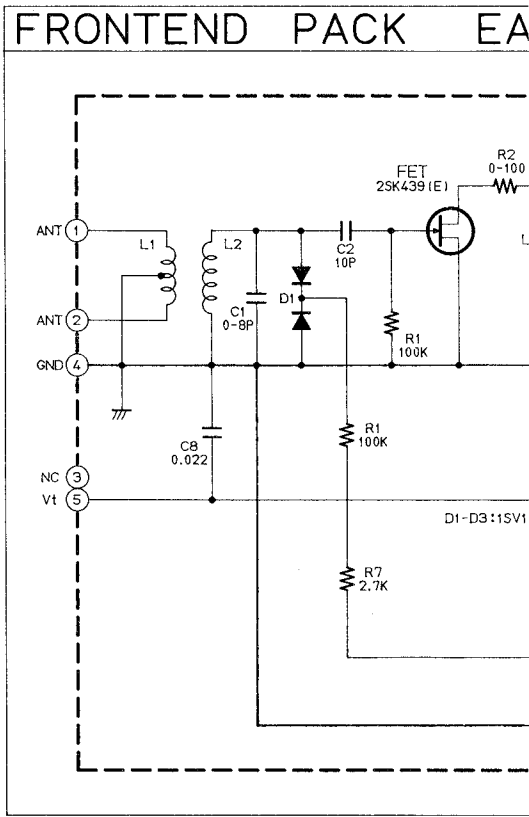
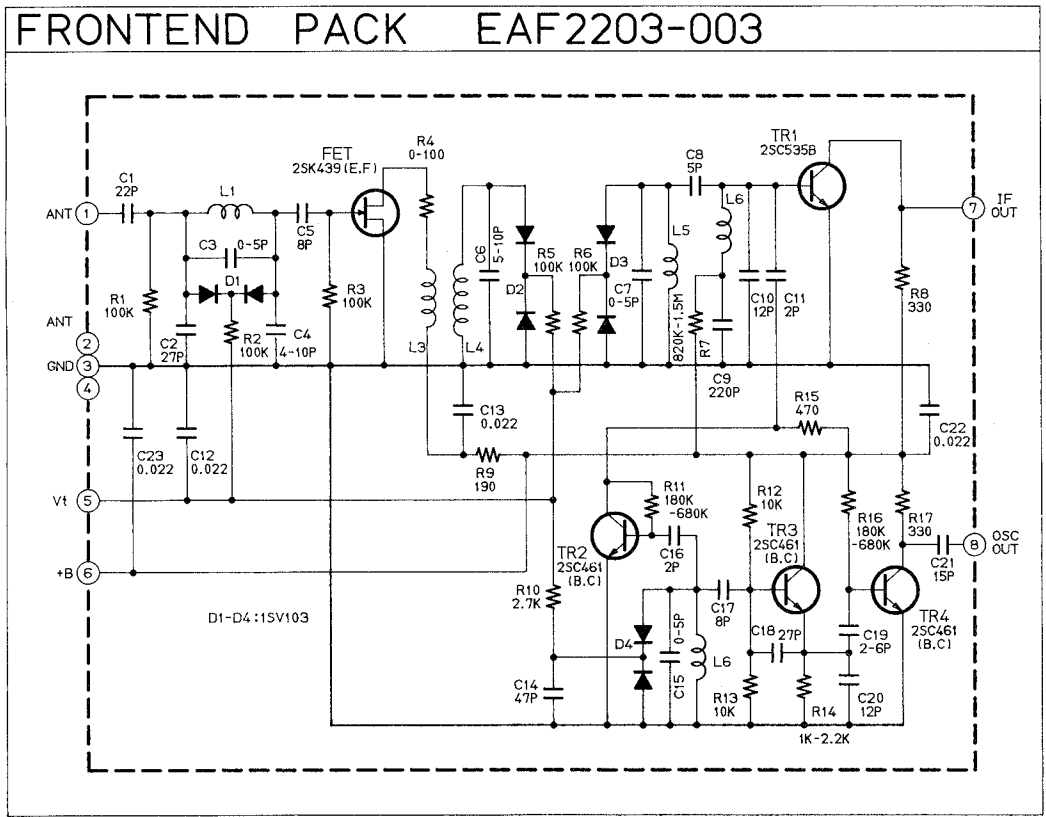
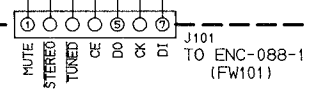


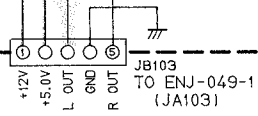


* MARK

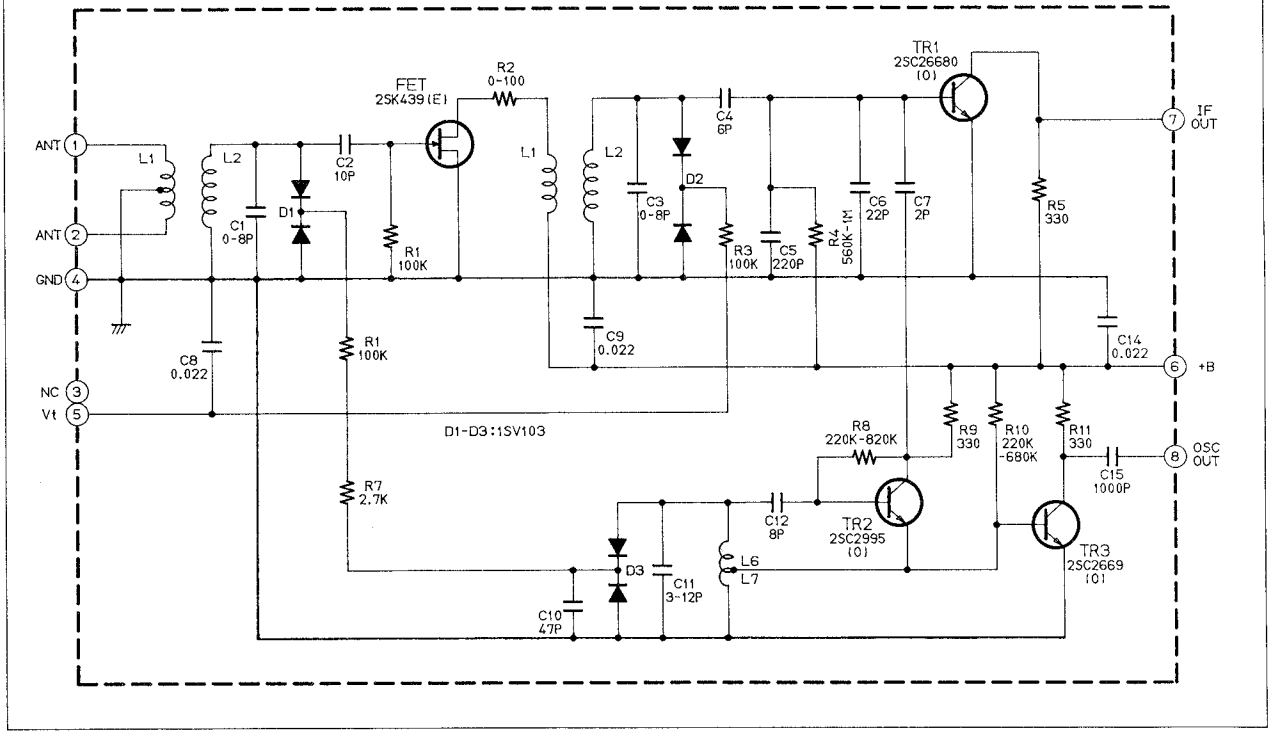
	LBS	LG, LG1, LE, LEF, LV	VX
R160	8.2K	18K	18K
R161, 162	82K	120K	120K
C177, 178	560P	470P	470P
C201, 202	0.0033	0.001	0.001
FE101	EAF2203-003	EAF2203-003	EAF2301-001
W191	NONE	NONE	USED
LP102	USED	USED	NONE

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

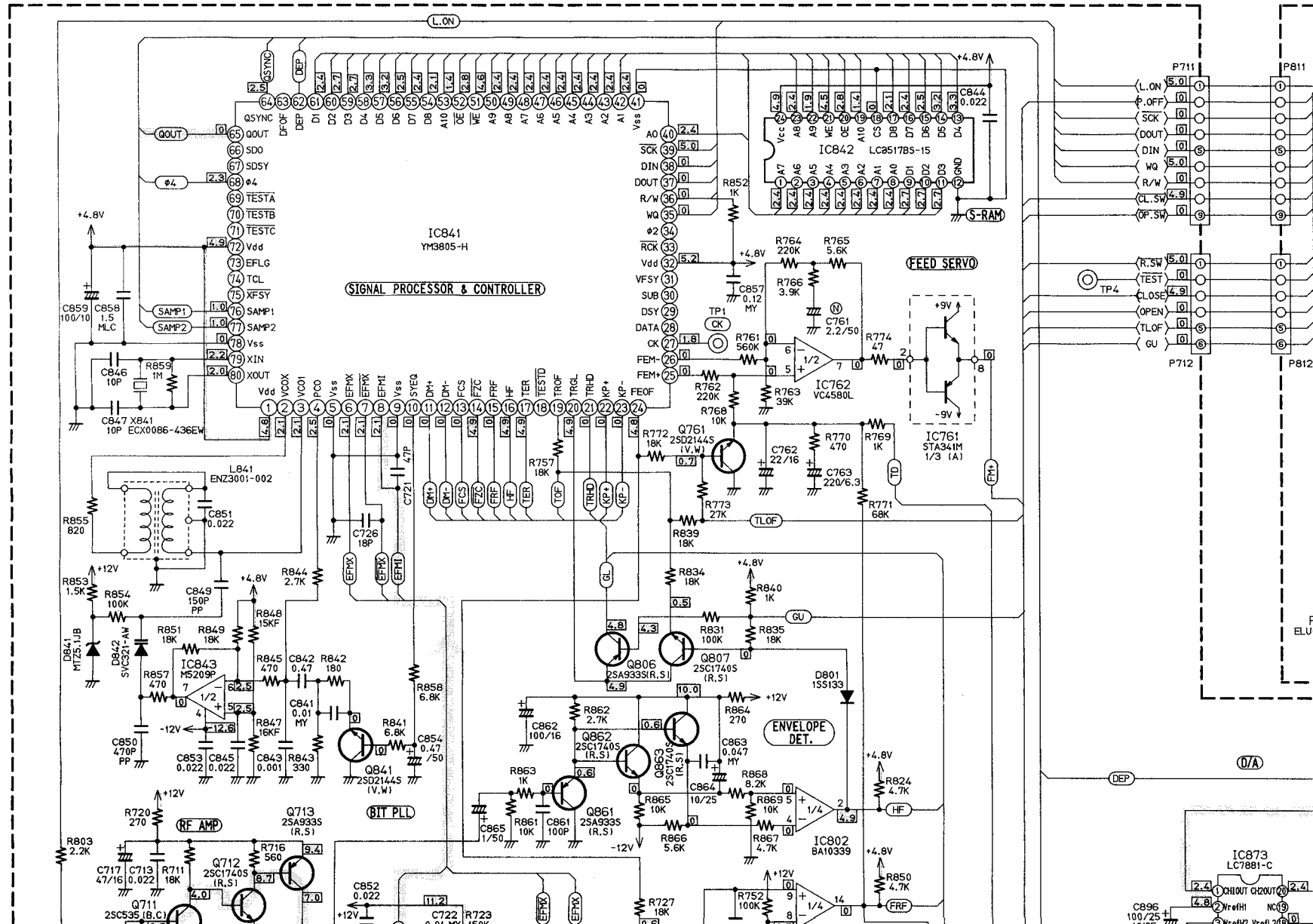


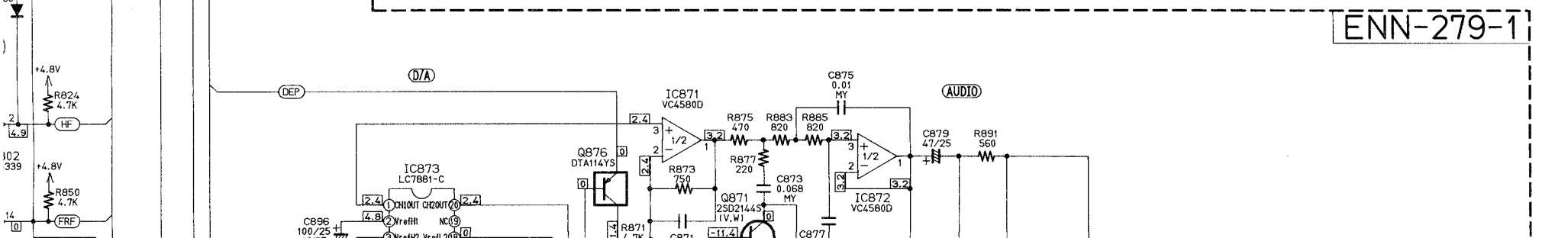
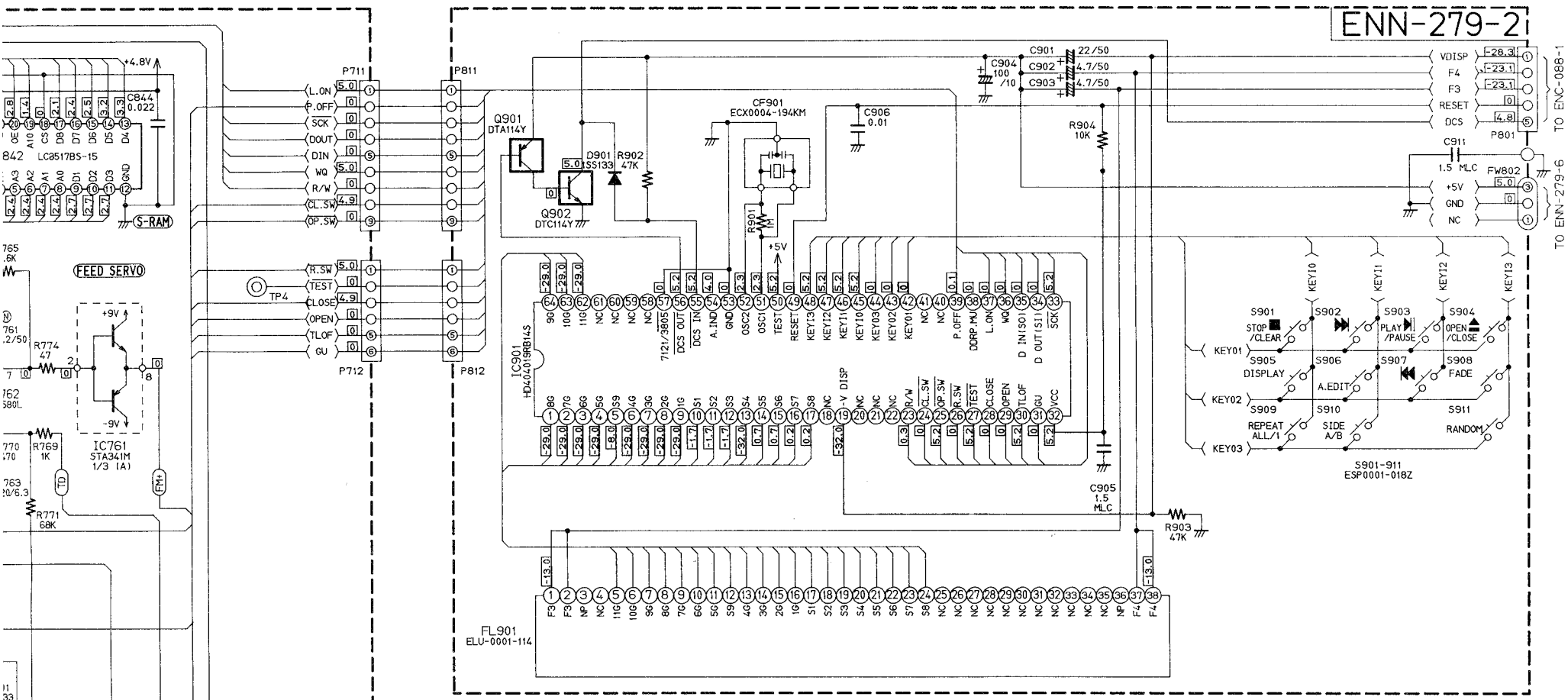


FRONTEND PACK EAF2301-001



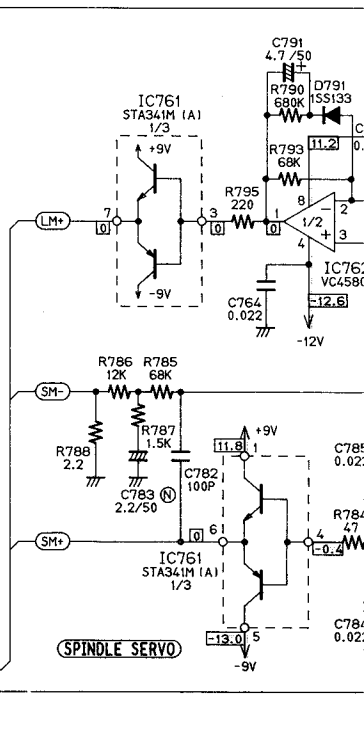
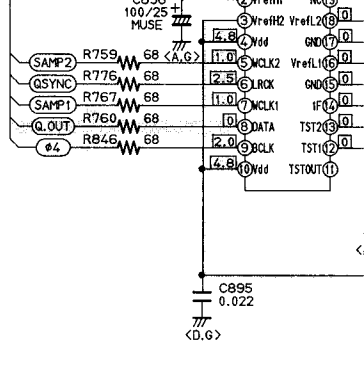
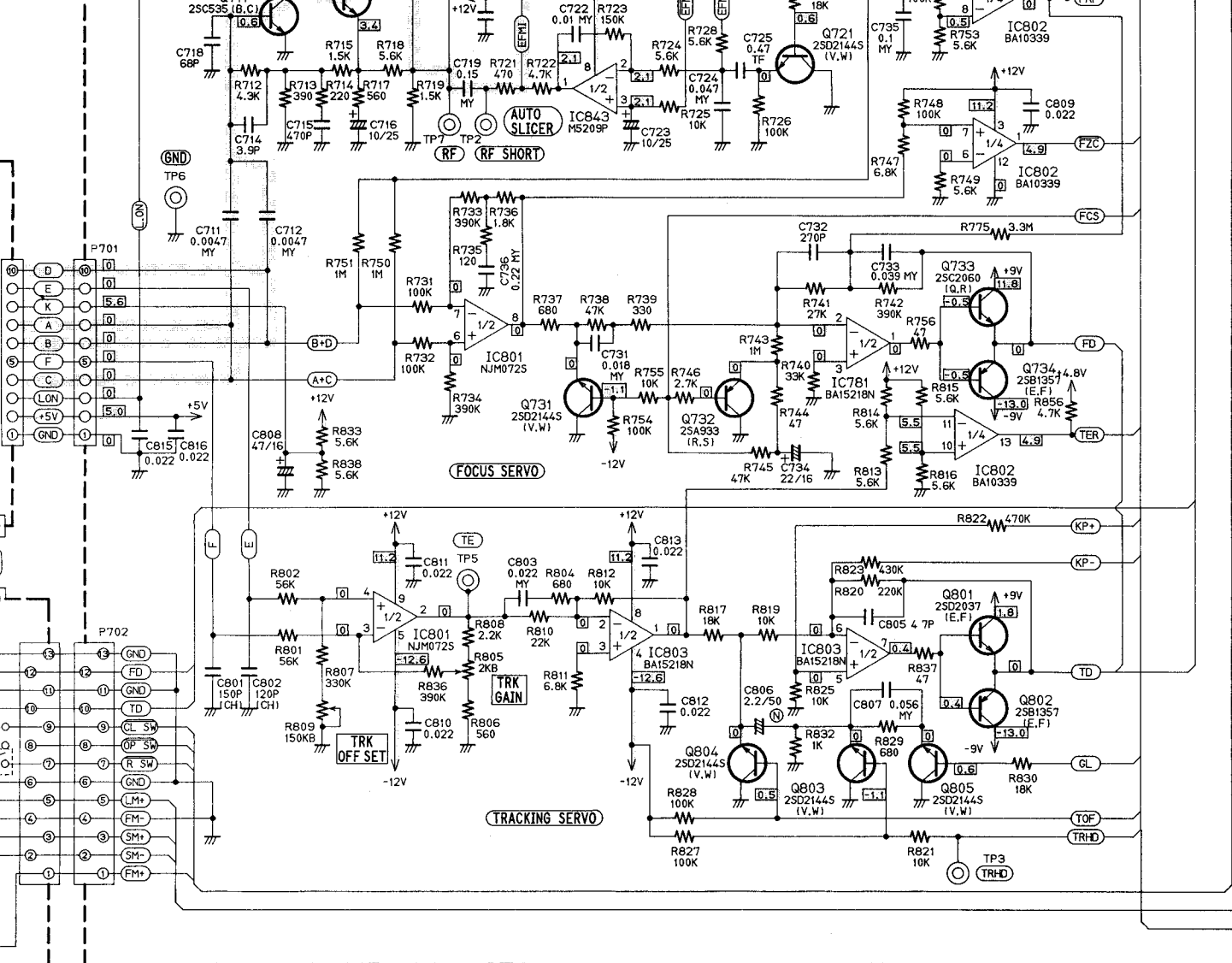
CD SECTION

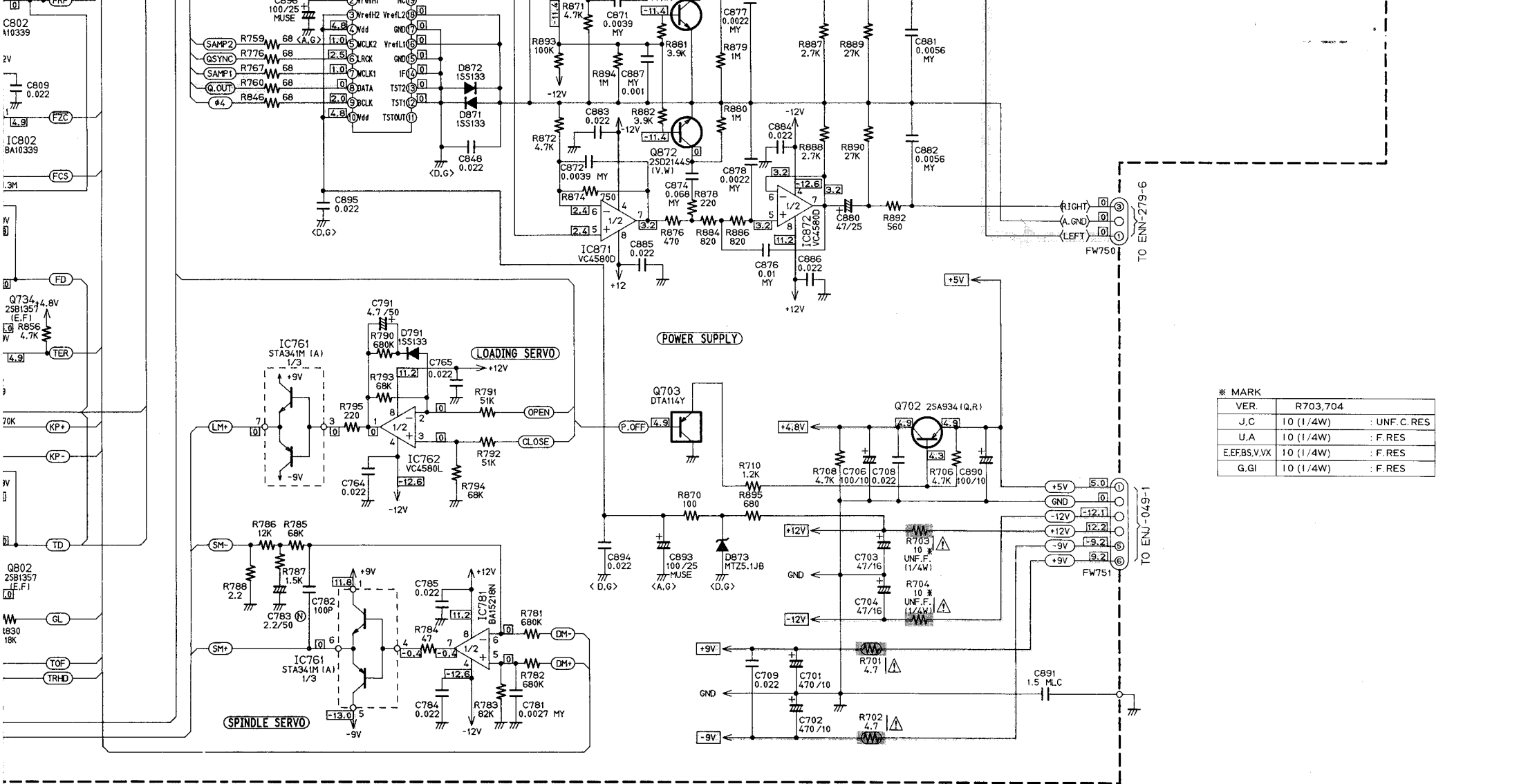




TO ENC-088-1
TO ENN-279-6

PICK-UP OPTIMA-5



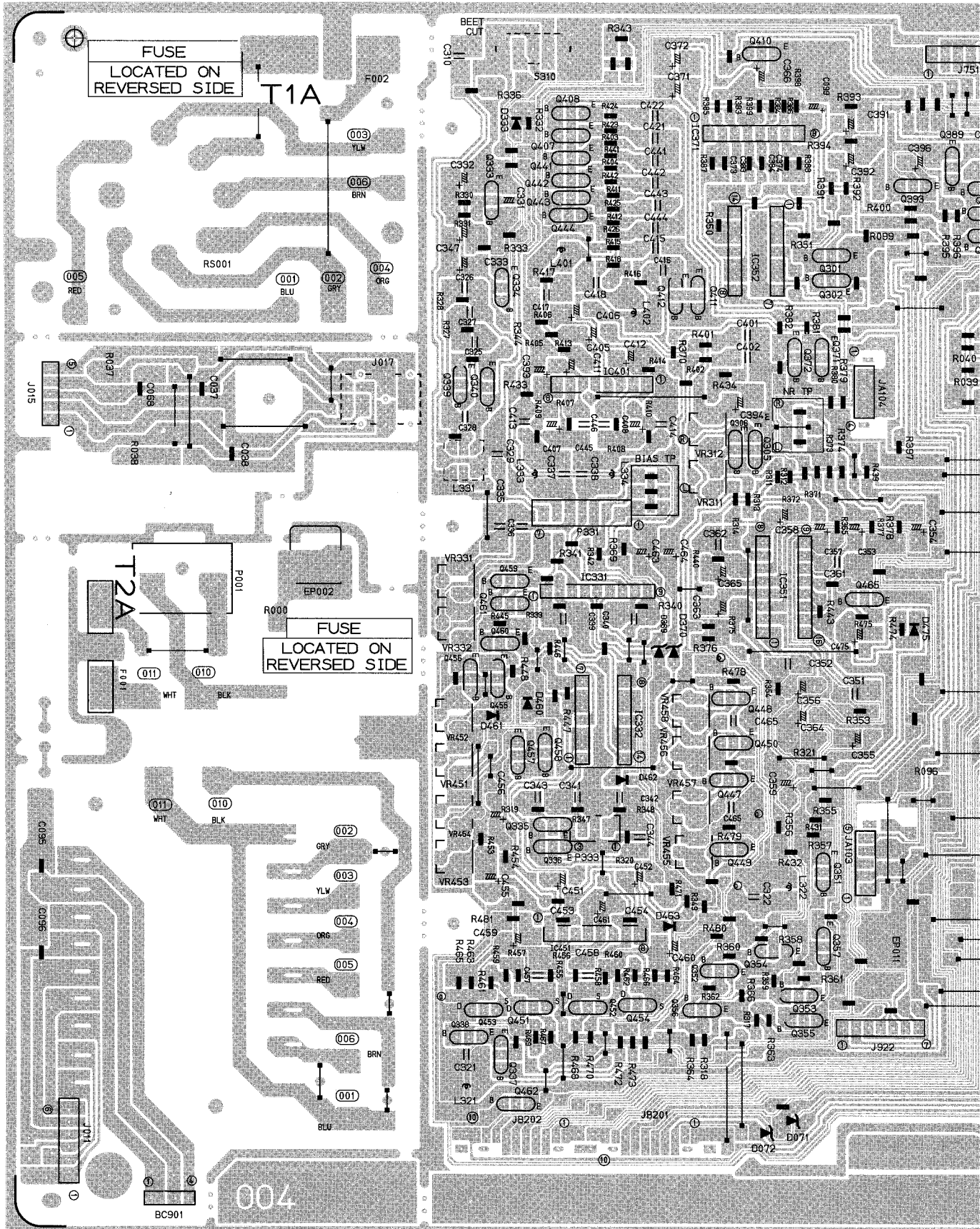


* MARK

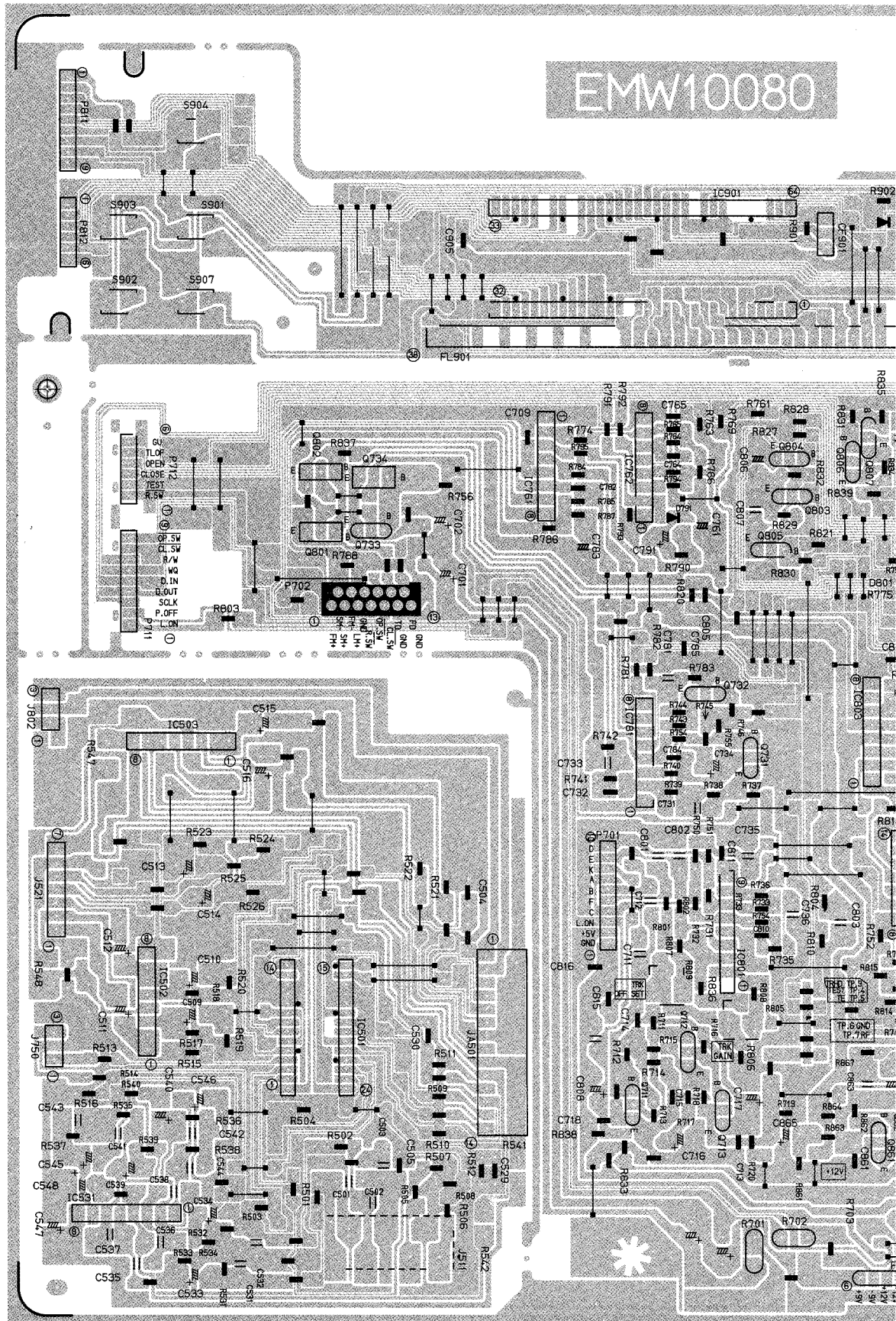
VER.	R703,704	
J.C	10 (1/4W)	: UNF. C. RES
U.A	10 (1/4W)	: F. RES
E.EFBS,V.VX	10 (1/4W)	: F. RES
G.GI	10 (1/4W)	: F. RES

Printed Circuit Boards

■ Cassette and Amp PCB (ENJ-049)

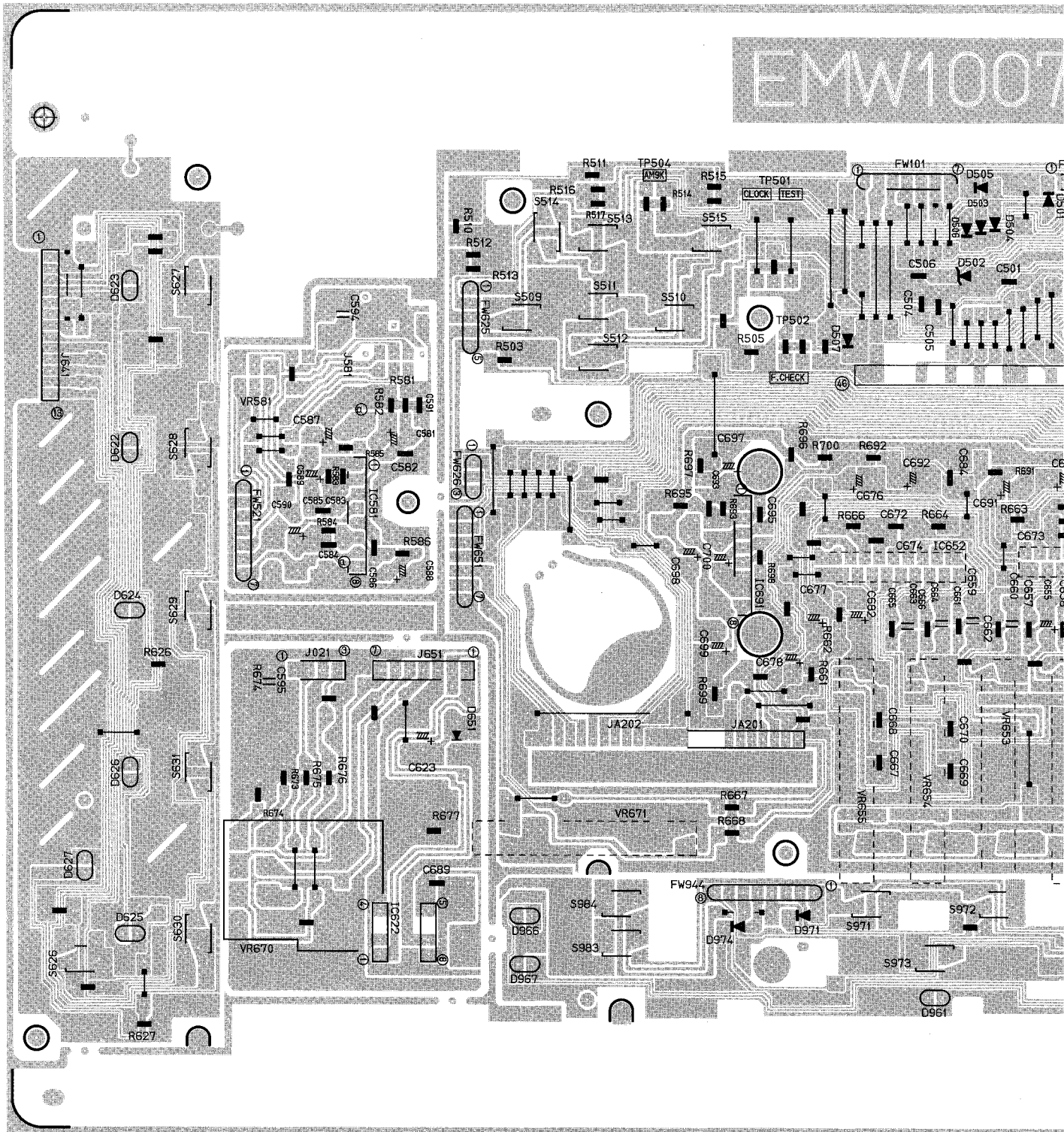


■ CD and Cassette Mecha Control PCB (ENN-279)

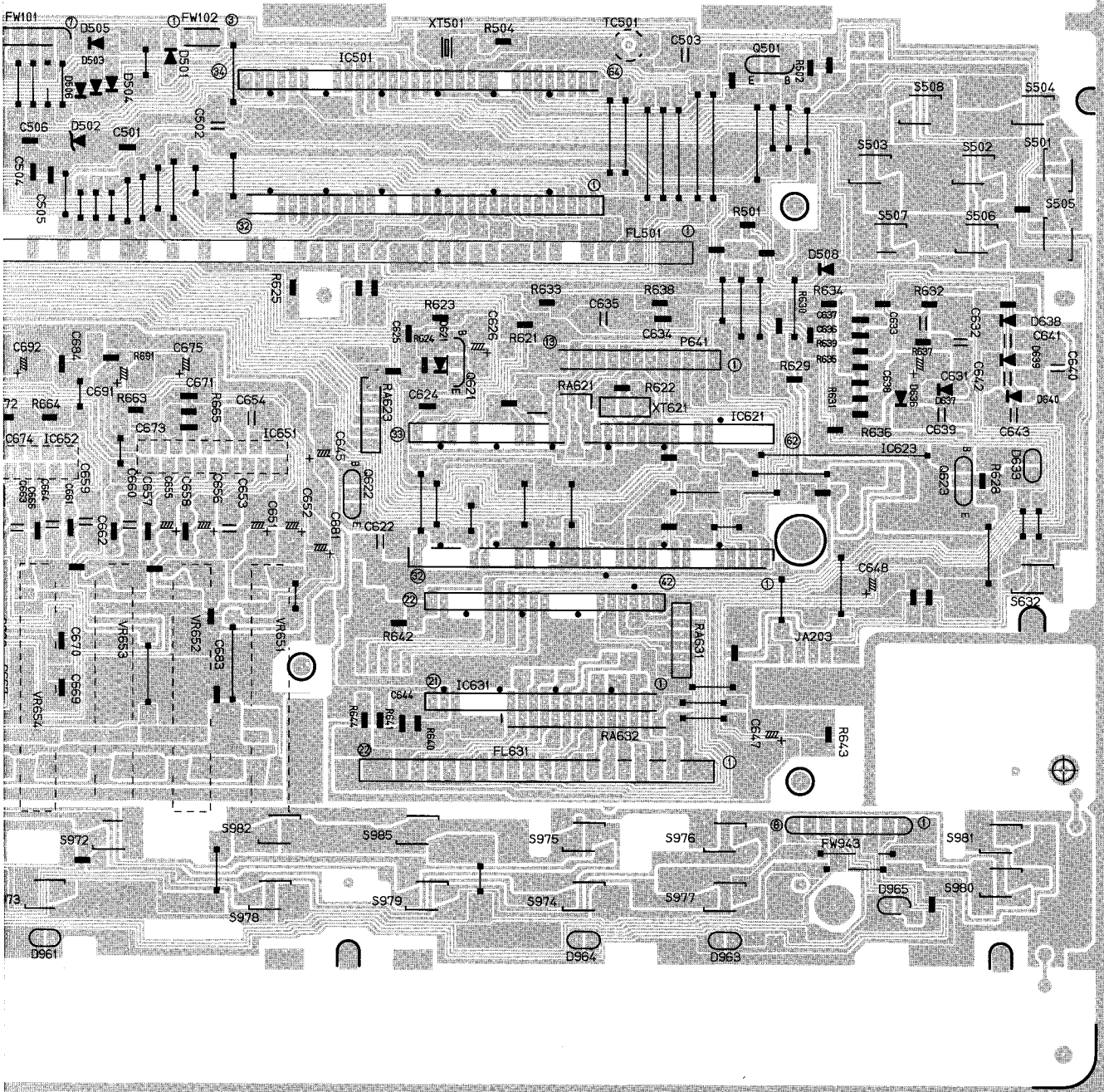


EMW10080

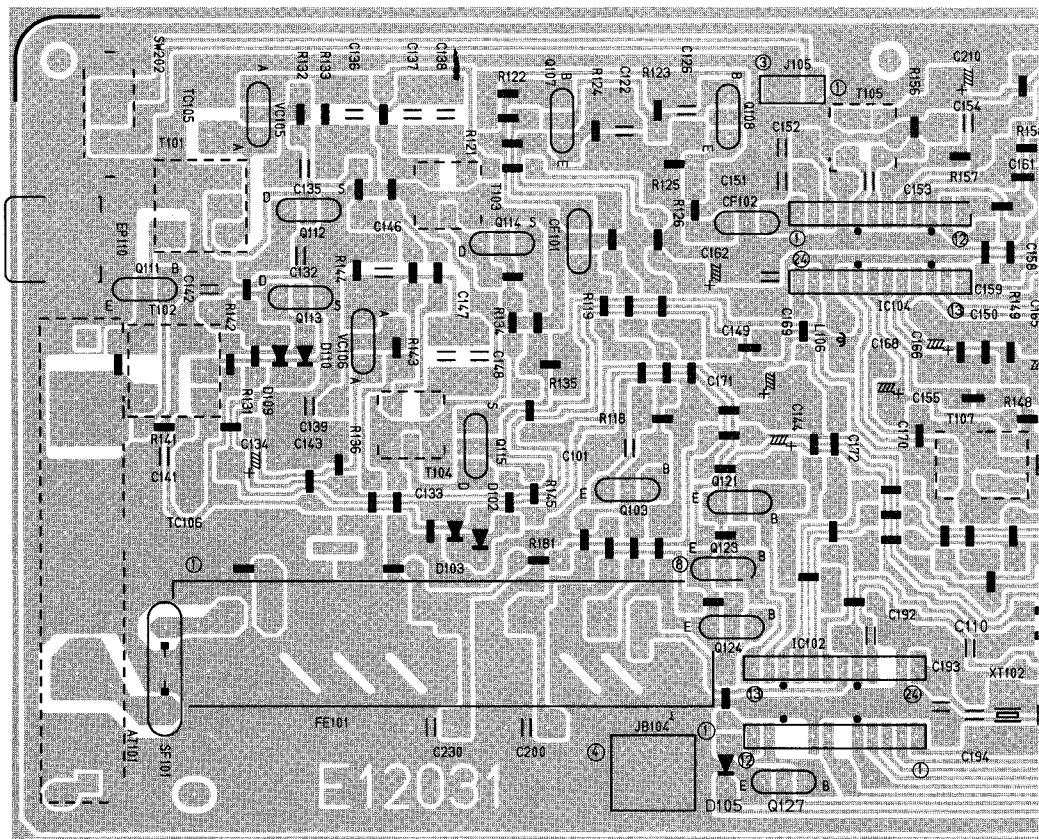
■ System Control and Source SW PCB (ENC-088)



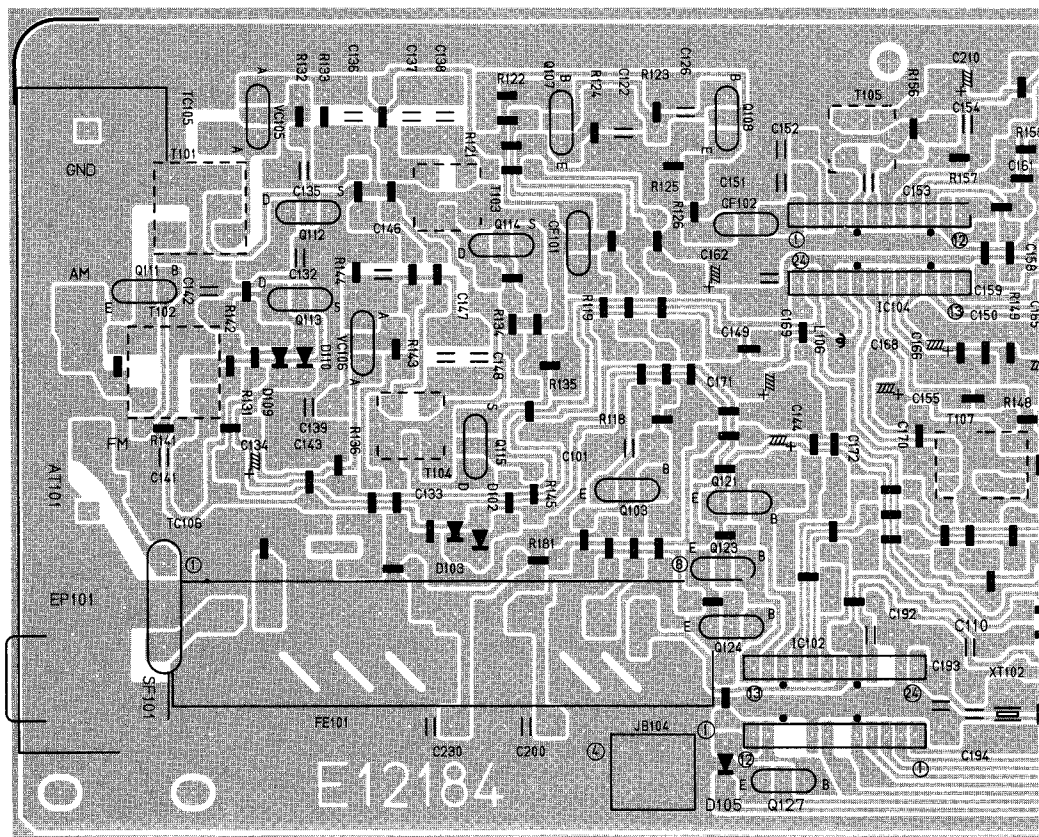
10079

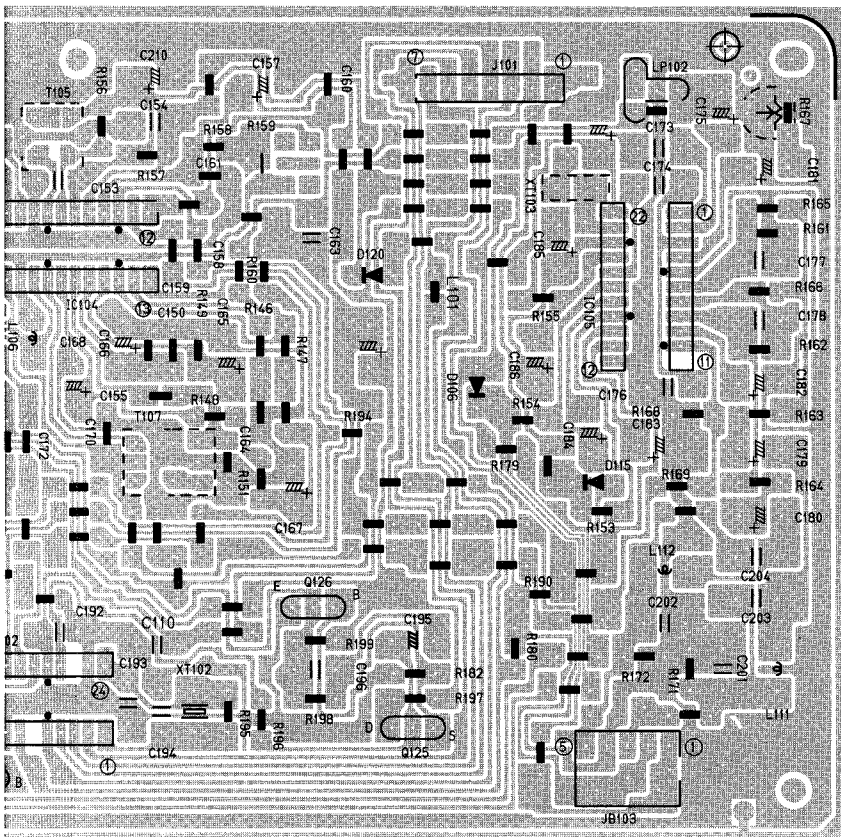
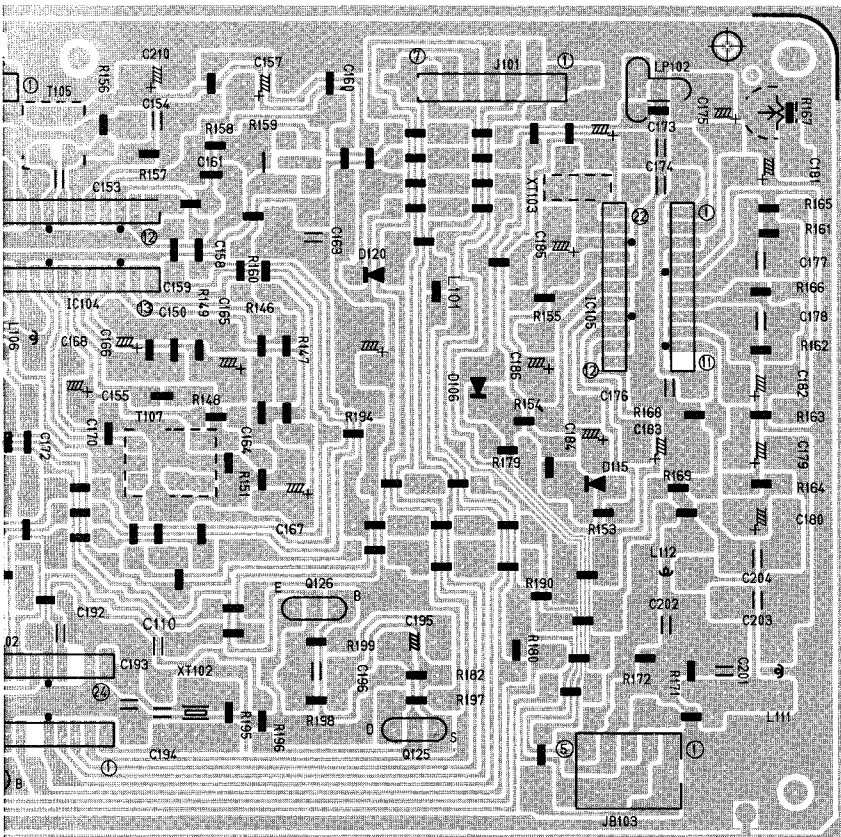


■ TUNER PCB (ENA-116) FOR A, U, J, C

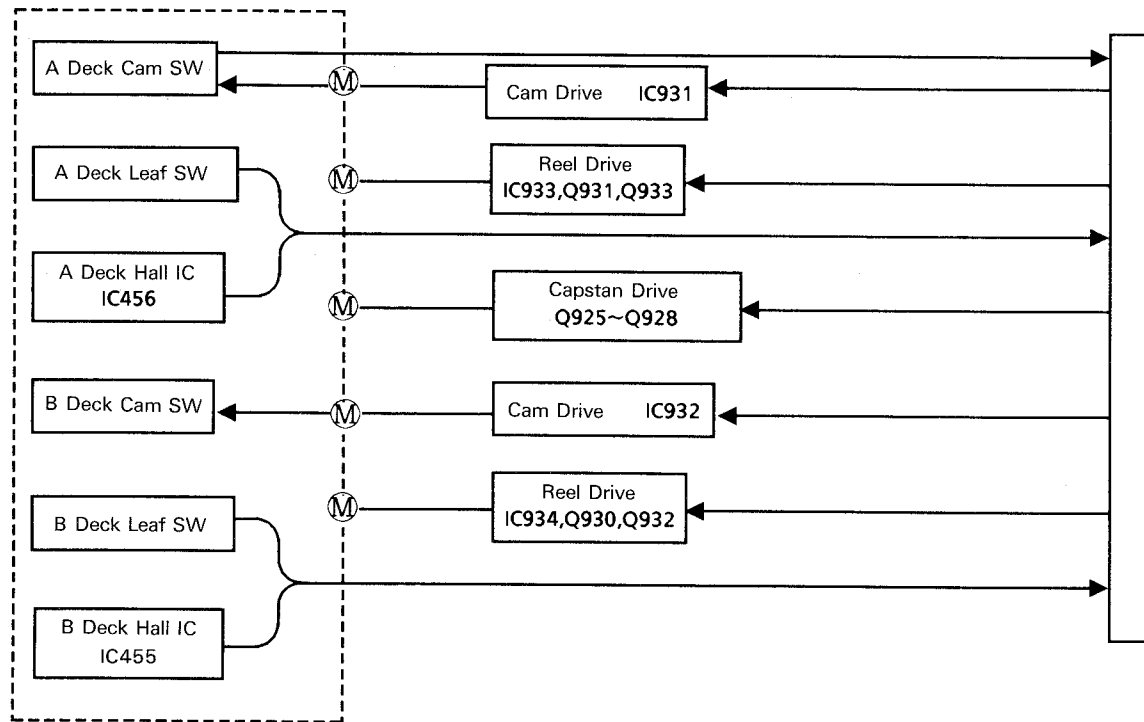
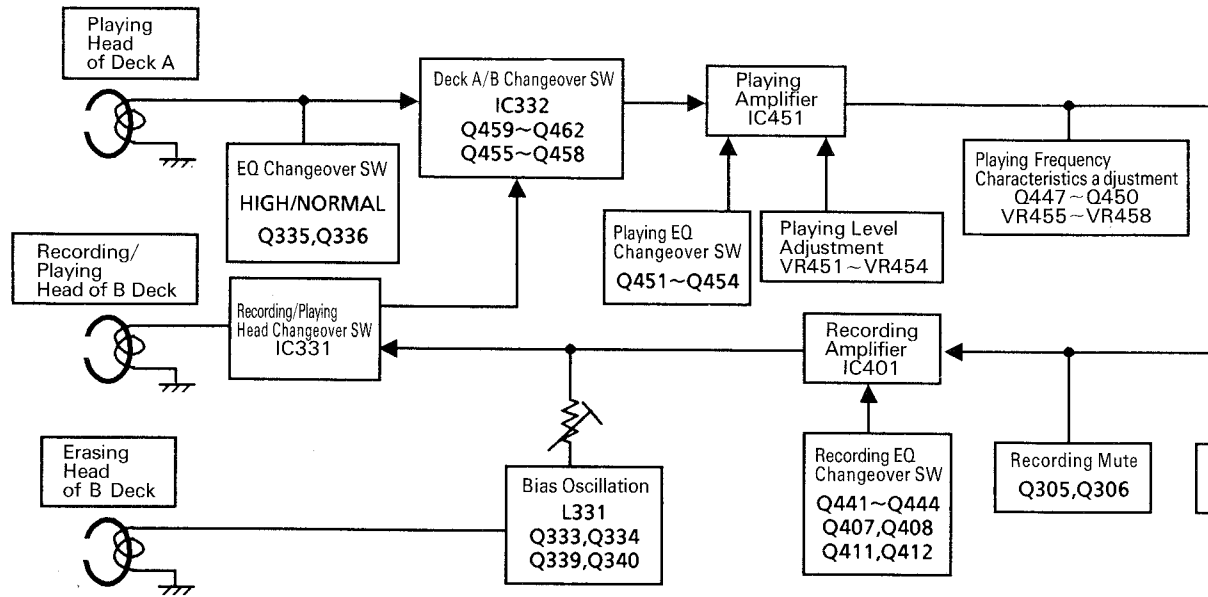


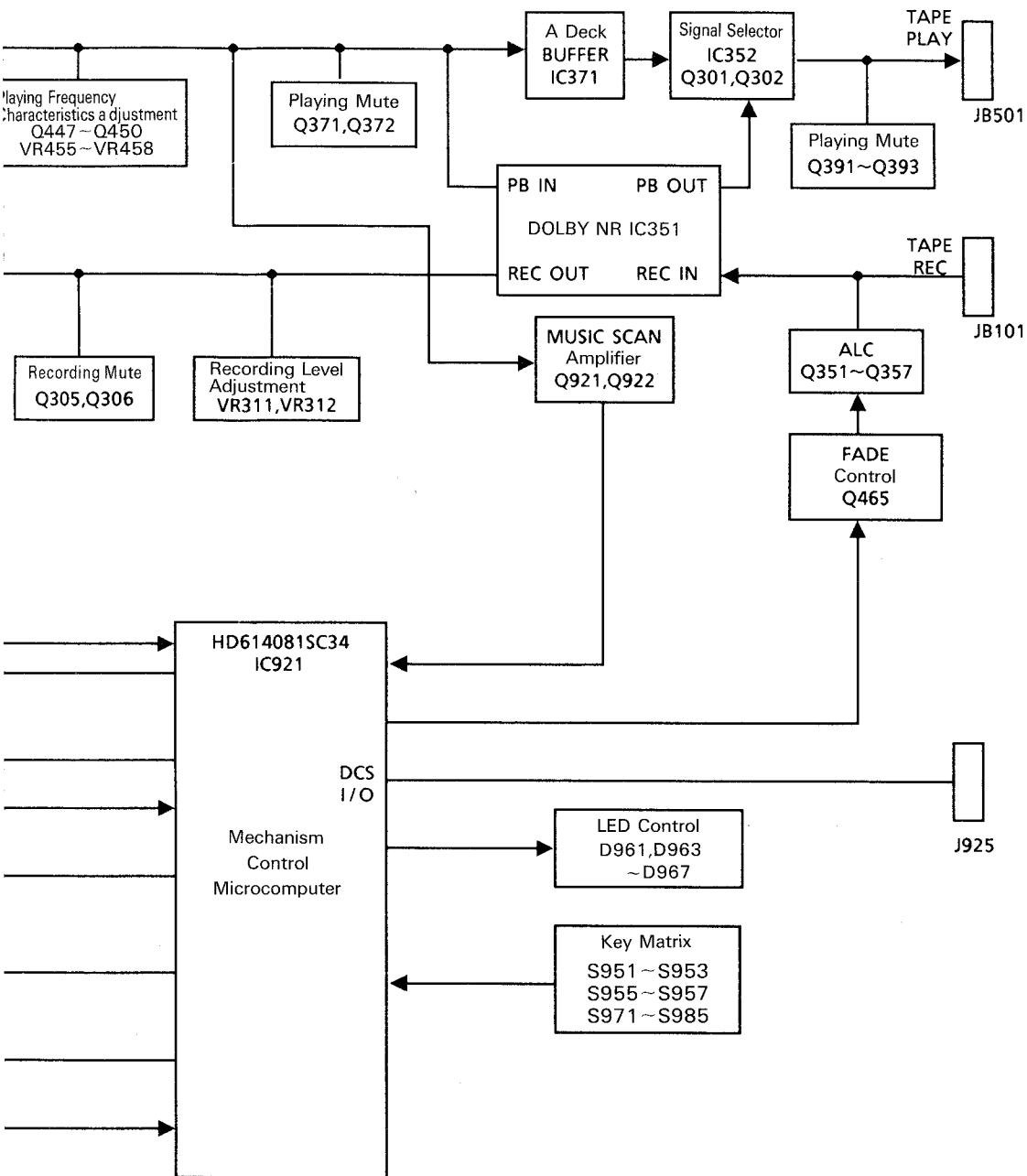
■ TUNER PCB (ENA-117) FOR BS, G, GI, E, EF, V, VX





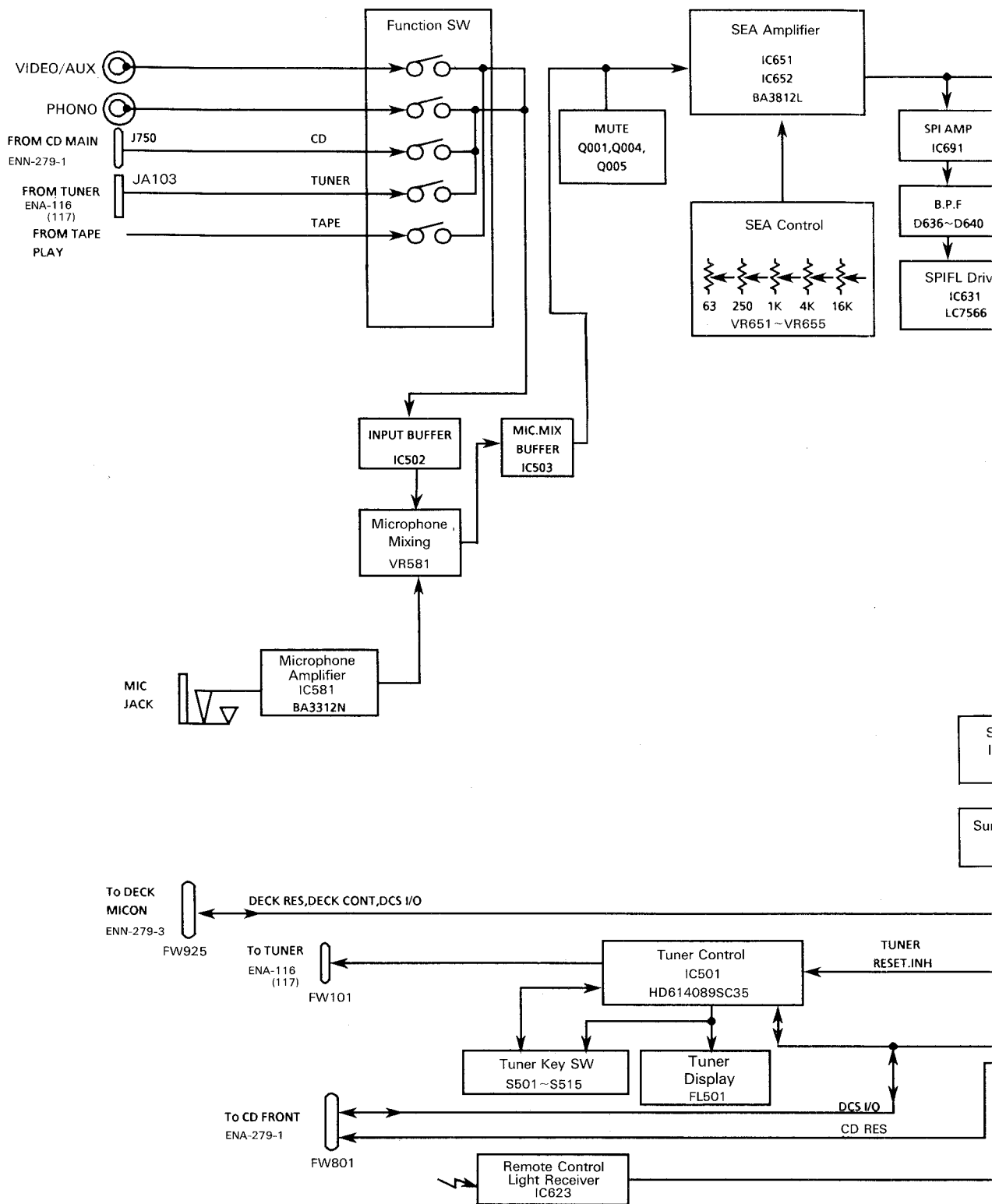
■ Cassette Deck Section

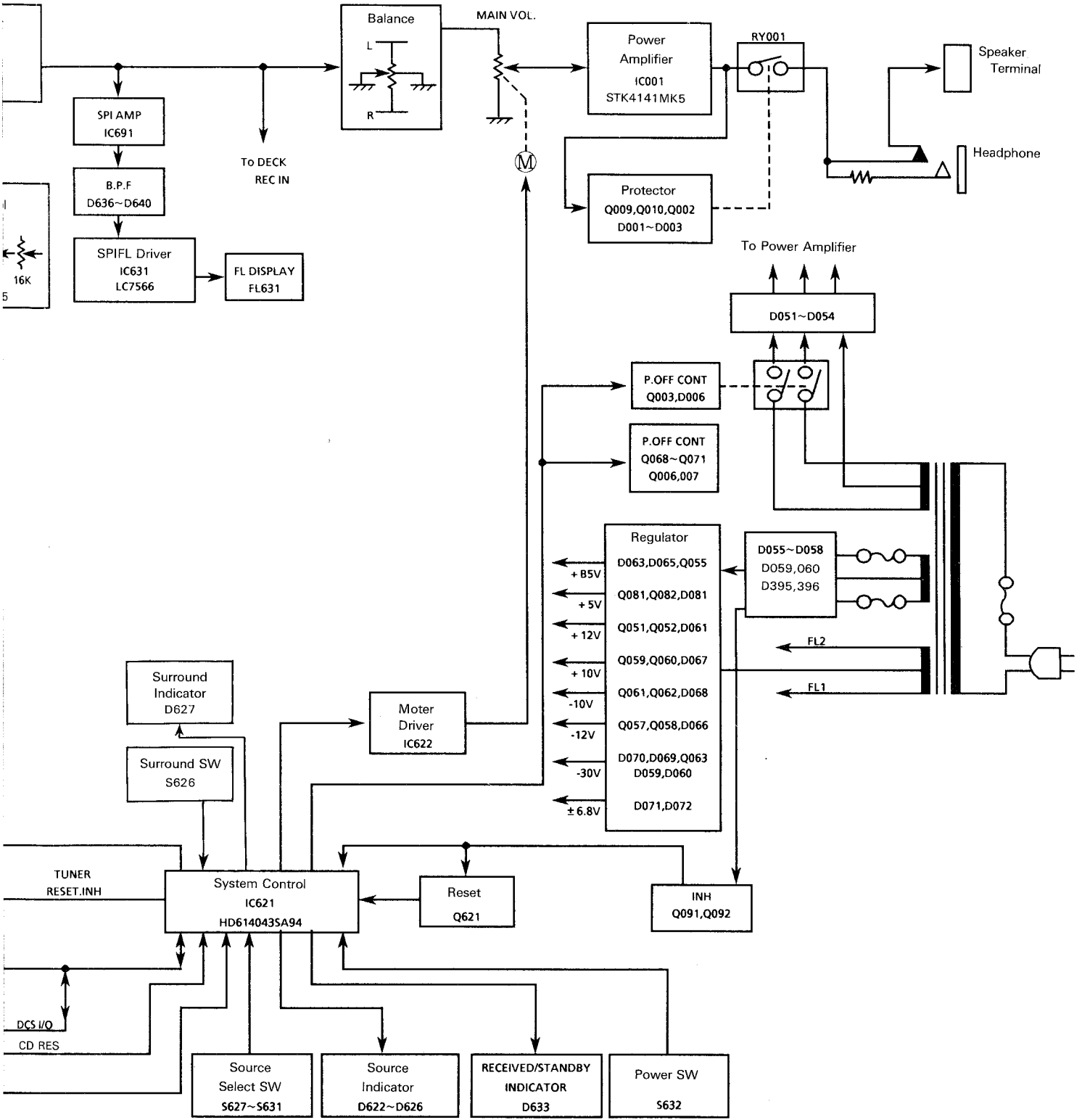




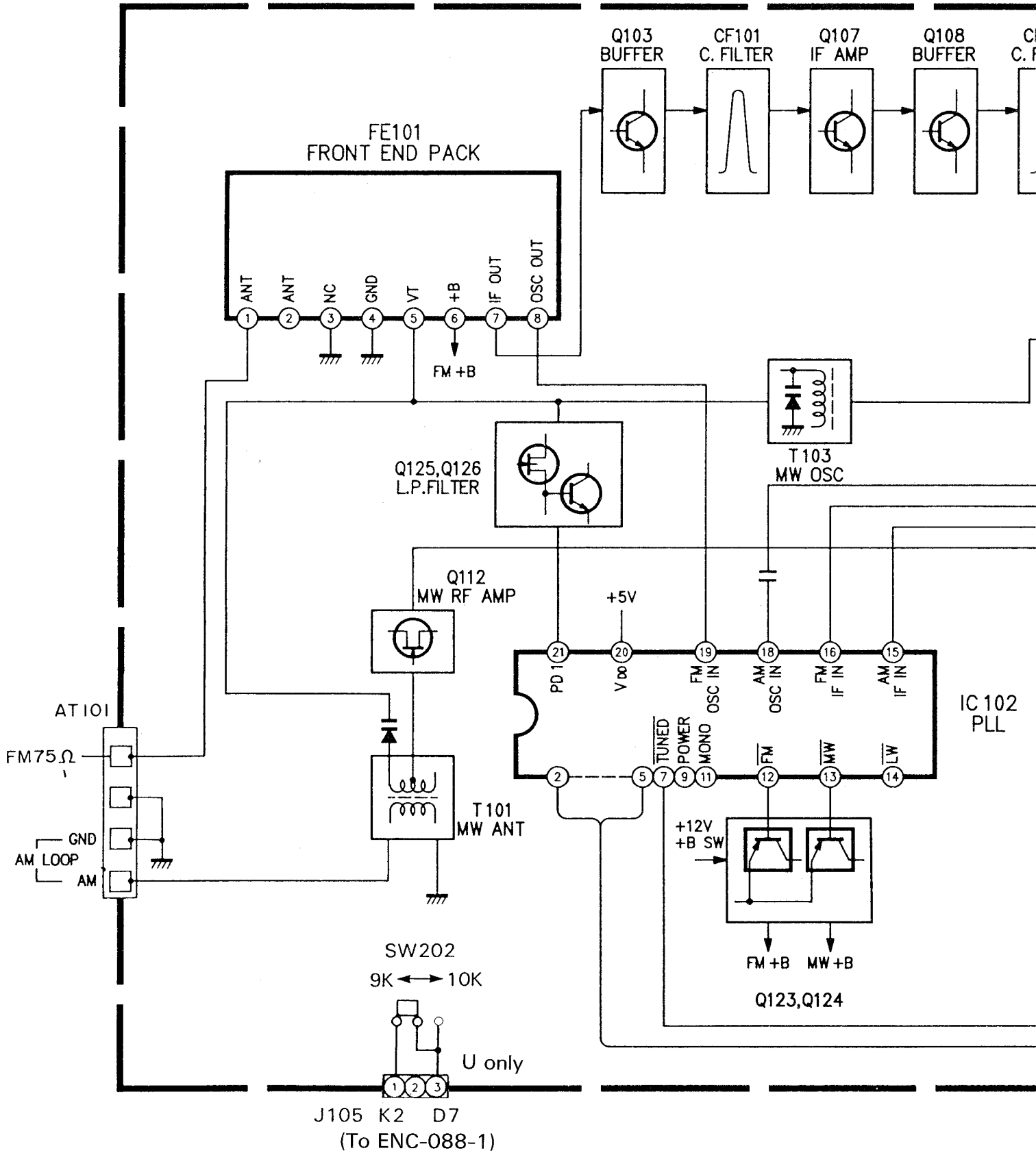
Block Diagrams

■ System Control & Audio Section

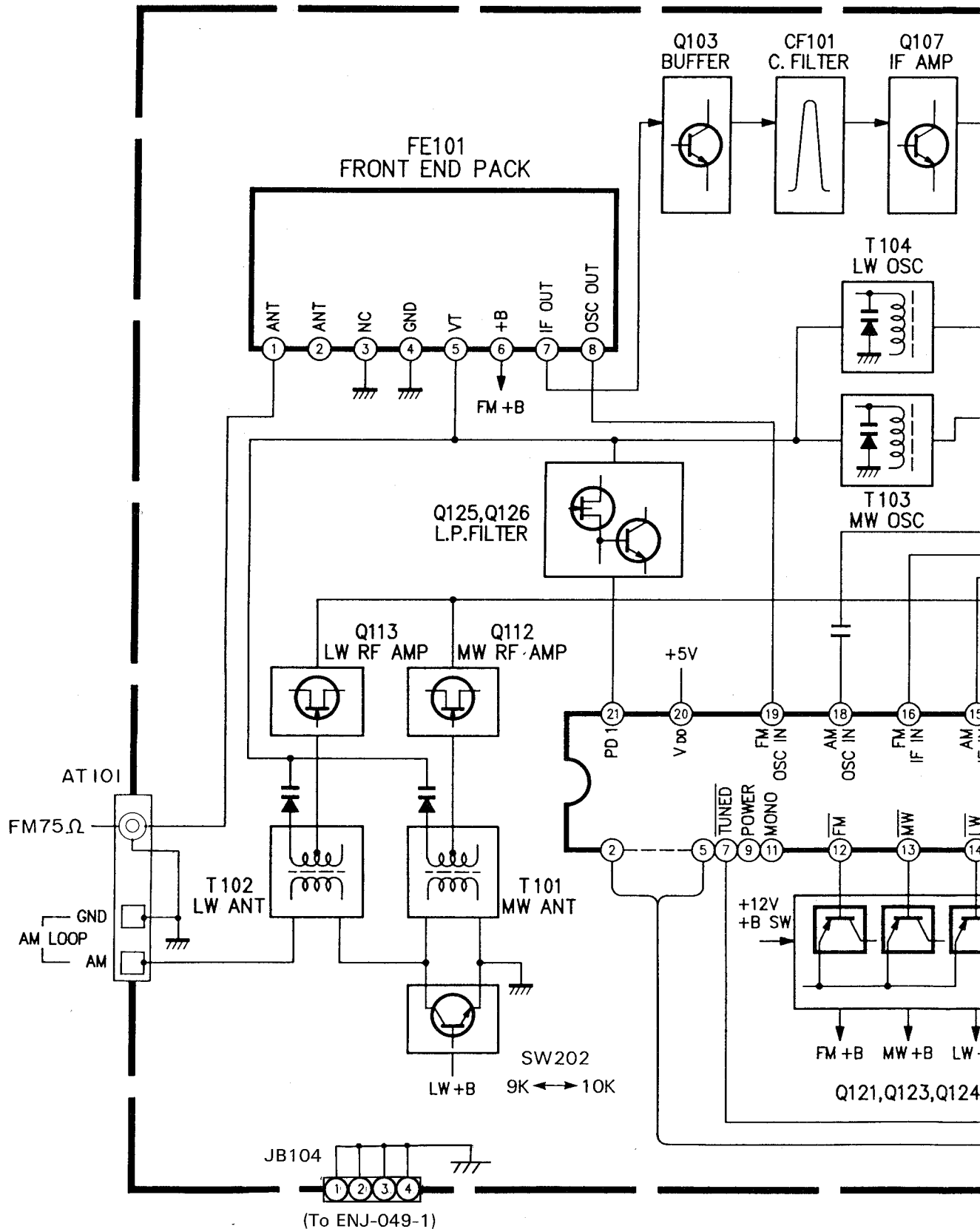


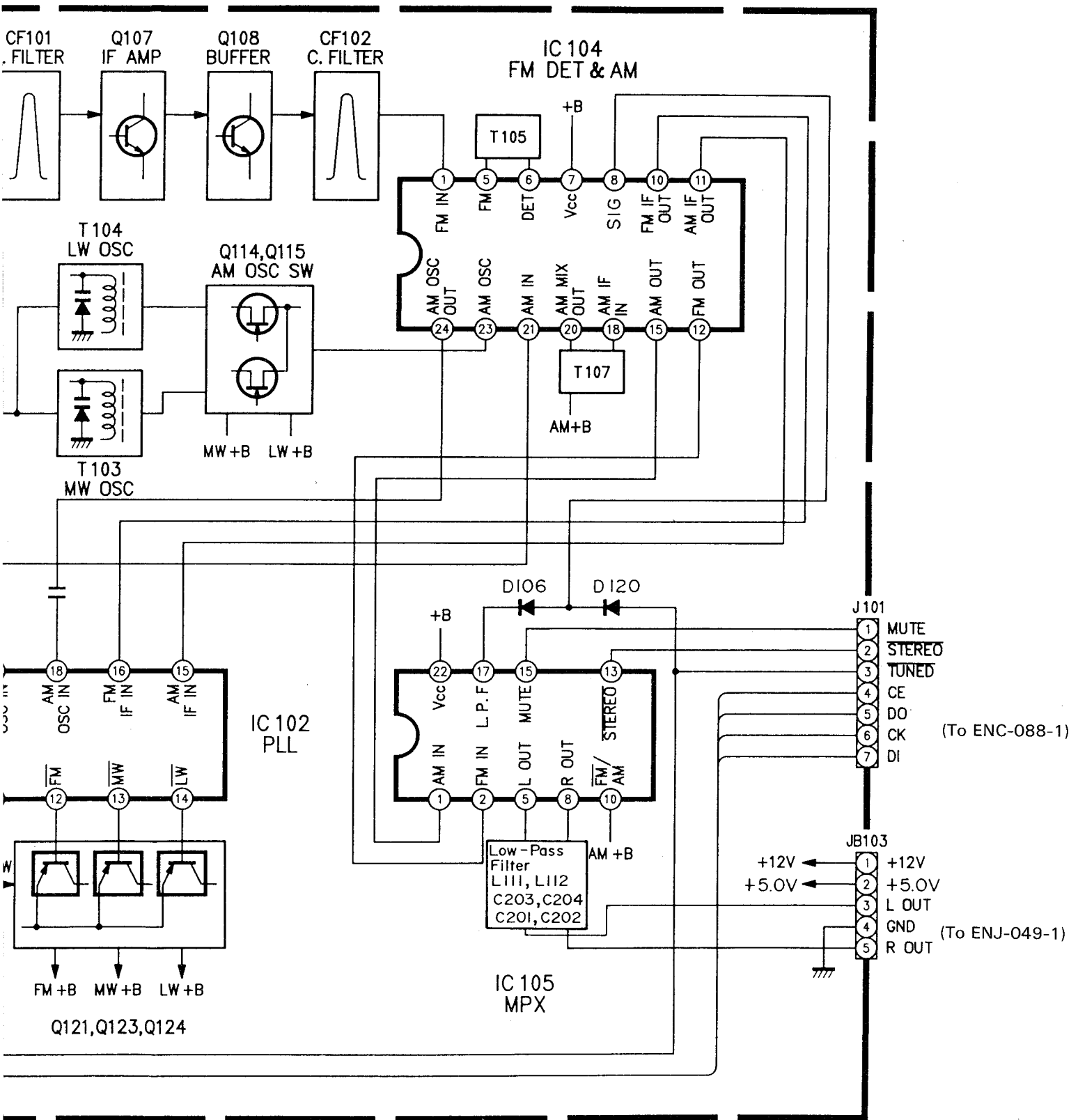


■ Tuner Section (For A, U, J, C)

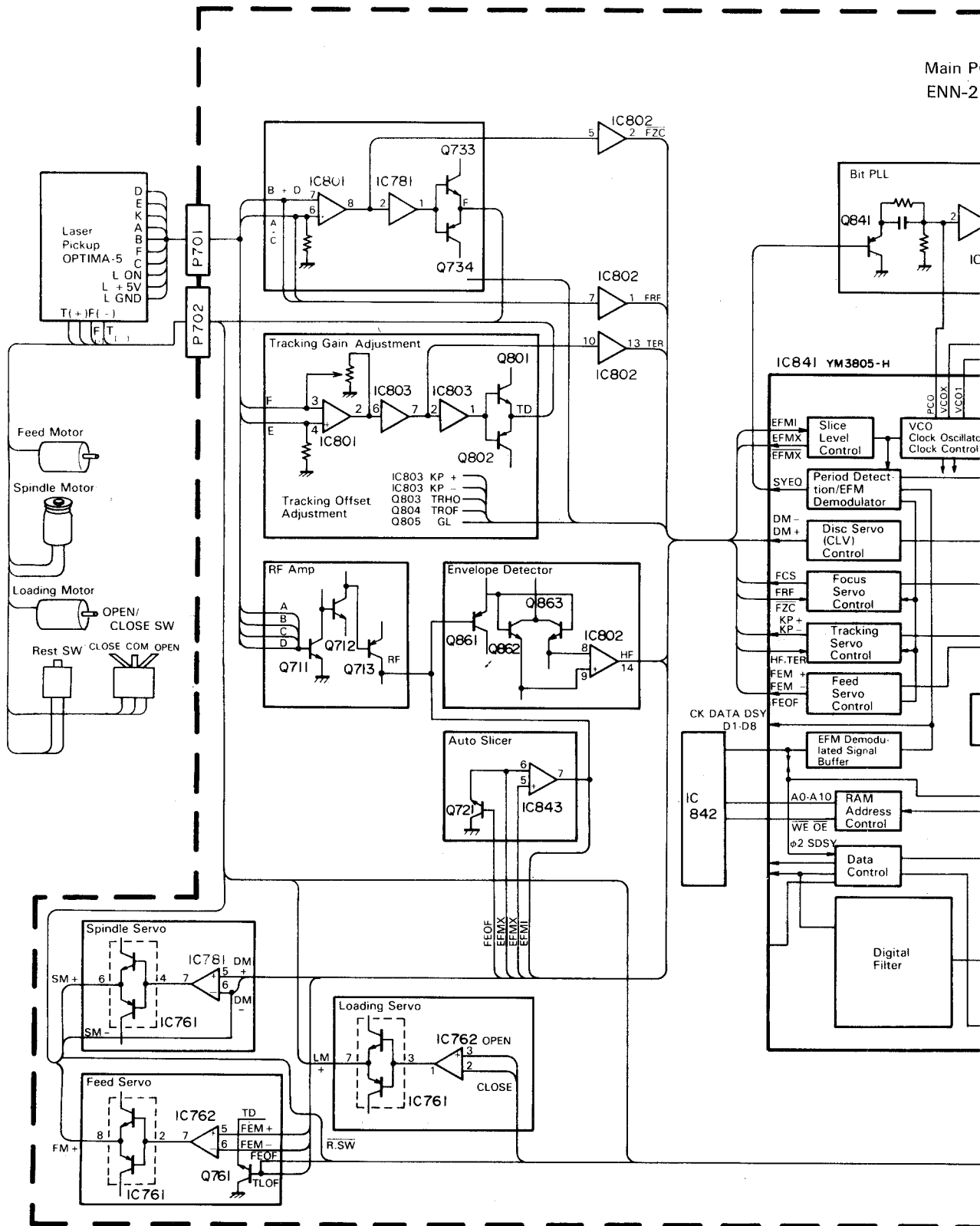


■ Tuner Section (For LBS, LG, LGI, LE, LEF, LV, LVX)



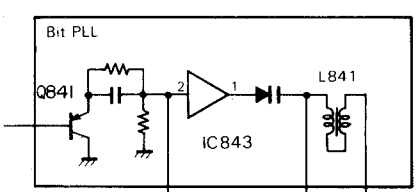


CD Section

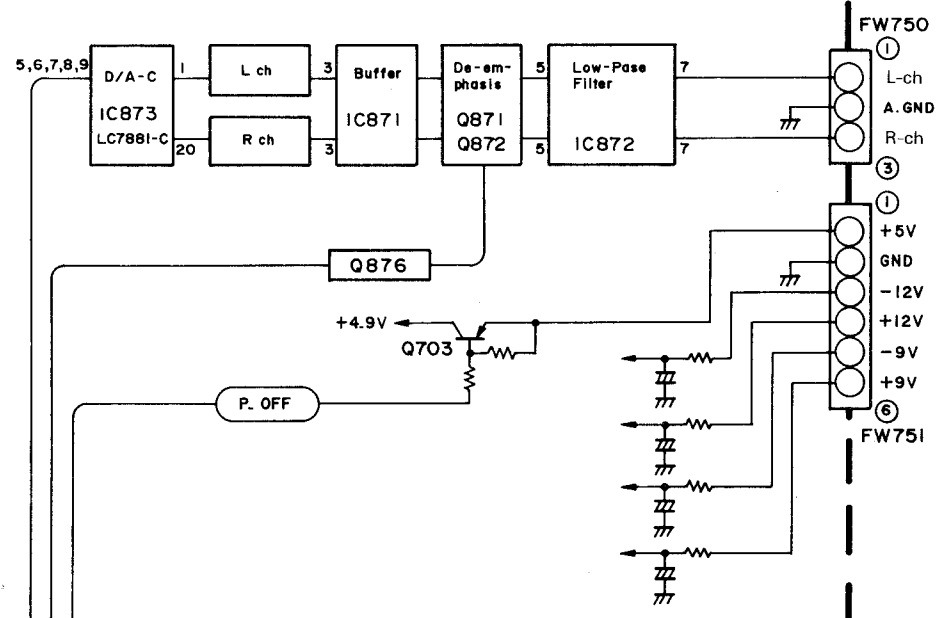
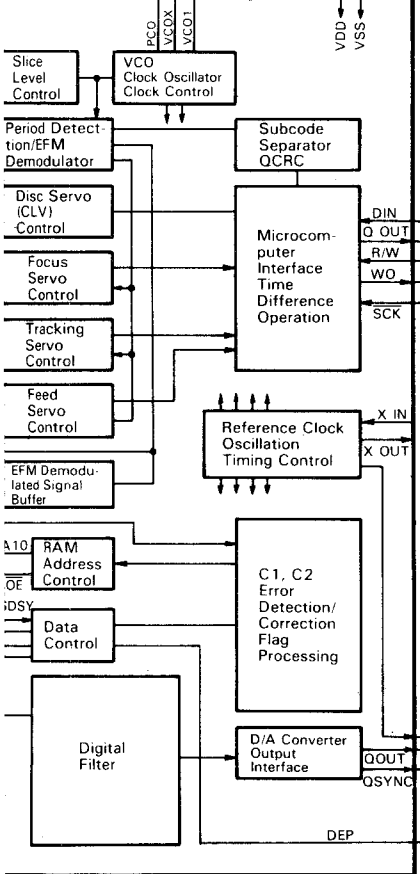


Main P
ENN-2

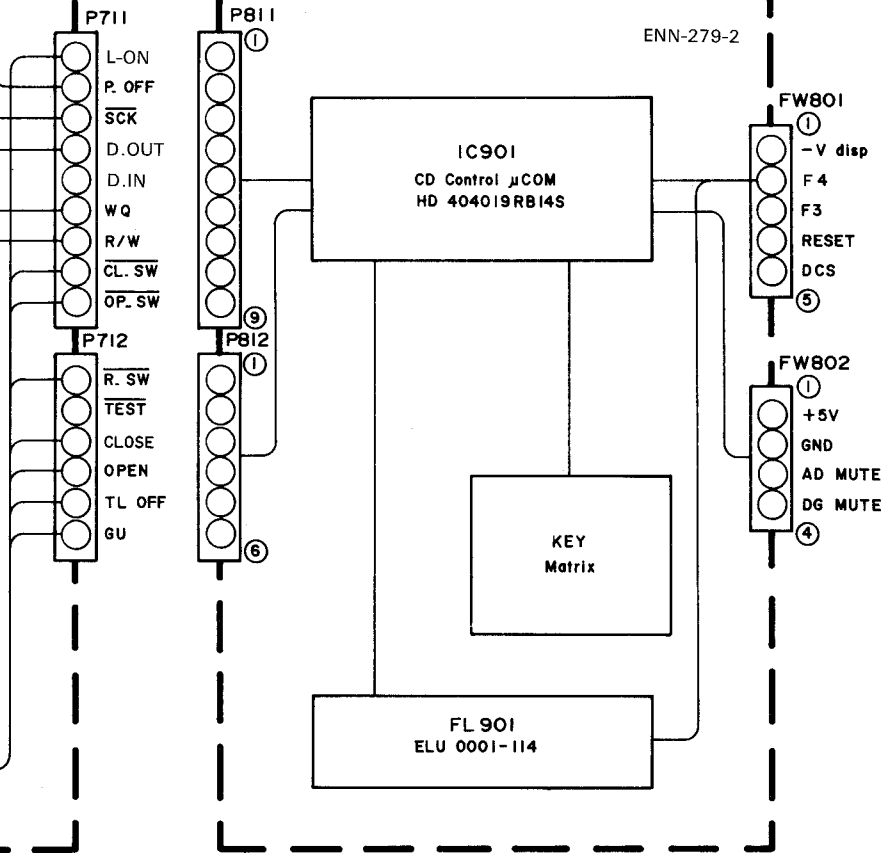
Main PC Board
ENN-279-1



YM3805-H



ENN-279-2



PARTS LIST

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General Exploded View and Parts List

Parts List

△	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-CAMX30BKU(S)	Front Panel Ass'y	1		J, C, U, A
	1-1	EFP-CAMX30BKE(S)	Front Panel Ass'y	1		Except J, C, U, A
		E102408-001SS	Front Panel	1		J, C, U, A
		E102408-002SS	Front Panel	1		Except J, C, U, A
	1-2	E307381-002	Window	1	Tuner	
	1-3	E307383-004	Window	1	Amp	
	1-4	E307387-002	Window	1	CD	
	1-5	E406451-221SS	Remote Plate	1		
	1-6	E406462-001SS	CD FL Screen	1		
	1-7	E406566-002SS	Tuner FL Screen	1		
	1-8	E406567-002SS	Amp FL Screen	1		
	1-9	E60912-003	Speed Nut	3		
	1-10	E69777-003	Reflector Plate	2		
	1-11	PQ42561	JVC Mark	3		
	2	E307378-221SS	CD Fitting	1		
	3	E307404-221SA	Cassette Lid Ass'y	1	A	
	3-1	E307404-221SS	Cassette Lid	1	A	
	3-2	E307385-001	Cassette Lens	1	A	
	3-3	E60912-003	Speed Nut	1	A	
	3-4	PQ42561	JVC Mark	1	A	
	4	E307406-221SA	Cassette Lid Ass'y	1	B	
	4-1	E307406-221SS	Cassette Lid	1	B	
	4-2	E307385-001	Cassette Lens	1	B	
	5	E207061-222SS	Cassette Holder	1	A	
	6	E75600-001	Shaft	2		
	7	E207062-222SS	Cassette Holder	1	B	
	8	E406085-001	Cassette Spring	4		
	9	E307376-221SS	Volume Knob	1		
	10	E307377-221SS	Knob	1	Mic	
	11	SBSG3008M	Screw	4		
	12	E75896-001	Felt Spacer	2	for Front Foot	
	13	GBSG3008Z	Screw	2		
	14	E305654-003	Damper Ass'y	2		
	15	SBSF3008Z	Screw	4		
	16	E307372-221SS	Push Button	1	CD SEL	
	17	SDSF2608Z	Screw	25		
	18	E307374-221SS	Push Button	1	CD Play	
	19	E406449-001	Indicator	1	REV Mode	
	20	E307412-221SS	Push Button	1	Dolby	
	21	E307414-221SS	Push Button	1	REV Mode	
	22	E207072-001	Push Button Ass'y	1	Cassette Play	
	23	E406450-001	Indicator	1	Rec	
	24	E307368-221SS	Push Button	1	Rec	
	25	E307370-221SS	Push Button	1	Pause	
	26	E406444-001	Indicator	1	Power	
	27	E307365-221SS	Push Button	1	Power	
	28	E307408-221SS	Push Button	1	Timer	
	29	E406111-001	Indicator	1	Surround	
	30	E307389-001	Indicator	1	Source	
	31	E207066-001SS	Push Button	1	Source	
	32	E307361-221SS	Push Button	1	Tuning	
	33	E307363-221SS	Push Button	1	PRE. Down	
	34	E207063-221	Metal Cover	1		
	35	SDSG3008M	Screw	9		
	36	E406597-001SS	Protect Cover	1		
	37	EXO010005R95S13	Felt Spacer	1		
	38	E307487-002SS	Holder	1		
	39	E406558-001	Special Screw	3		
	40	E406457-001	Lock Cam Ass'y	1	Right	
	41	E406456-001	Lock Cam Ass'y	1	Left	

△: Safety Parts

△	Item	Part Number	Part Name	Q'ty	Description	Areas
	42	E305914-001	Leaf Spring	1		
	43	E307395-222SS	Holder Bracket	2		
	44	E406459-001SS	Holder Spring	1	Right	
	45	E406458-001SS	Holder Spring	1	Left	
	46	_____	Cassette Mechanism Ass'y	1	See page 2-7	
	47	SBSF3010C	Screw	4		
	48	SBSG3008C	Screw	4		
	49	E72108-001	Wire Clamp	1		
	50	EXO010008R80S13	Spacer	1		
	51	SBSG3008N	Screw	13		
	52	E102403-221SS	Chassis Base	1		
	53	SBST3006Z	Screw	4		
	54	E47227-012	Foot	2	Rear	
	55	SBSG3010N	Screw	2	for Rear Foot	
	56	EXO015004R30S	Spacer	2		
△	57	E406507-001	Mecha Caution Label	1		Except J
△	58	ETP1070-23EAJ	Power Transformer	1		Except J, C, U, BS
△		ETP1070-23JAJ	Power Transformer	1		J, C
△		ETP1070-23FAJ	Power Transformer	1		U
△		ETP1070-23EAJBS	Power Transformer	1		BS
△	59	E65389-004	Special Screw	4		
△	60	QMF51E2-1R0J1	Fuse	1	F001	Except J, C, U, BS
△		QMF51U1-2R5	Fuse	1	F001	J, C
△		QMF51E2-2R0J1	Fuse	1	F001	U
△		QMF51E2-1R0J1BS	Fuse	1	F001	BS
	61	E306805-026	Spacer	1		
	62	E307552-001	Fastener	2		
	63	E307551-001SS	Protect Cover	1		U
	64	E12289-222SS	CD Tray	1		
	65	SBSF3008M	Screw	3		
	66	_____	CD Mechanism Unit Ass'y	1	See page 2-10	
	67	EWR1DE-15TT	H. Card	1	13Pin	
	68	EWS26A-B918	Socket Wire Ass'y	1	10pin	
	69	EWS254-B103	Socket Wire Ass'y	1	4Pin	
	70	EWS256-B102	Socket Wire Ass'y	1	6Pin	
	71	E75871-003	Special Screw	2		
	72	E306837-003	Clamper Base Ass'y	1		
	72-1	E306836-003	Yoke	1		
	72-2	E74897-002	Magnet	1		
	72-3	E26756-001	Clamper Base	1		
	72-4	E306835-001	Clamper	1		
	73	E307451-001SS	Stay Bracket	1	Left	
	74	E307390-222SS	Side Bracket	1	Left	
	75	E307411-221SS	Stay Bracket	1	Right	
	76	E307391-222SS	Side Bracket	1	Right	
	77	E406569-221SS	Shield Plate	1		
	78	E71335-001	Fastener	1		
	79	E307393-222SS	Heat Sink	1		
△	80	QMF51E2-1R25J1	Fuse	2	F101, F102	Except J, C, BS
△		QMF51U1-1R6	Fuse	2	F101, F102	J, C
△	81	QMF51E2-1R2J1BS	Fuse	2	F101, F102	BS
	82	EXO080010H03S11	Spacer	1		
	83	SBSG3012Z	Screw	1		
	84	E48729-008	Plastic Rivet	1		
	84	E307449-221SS	Leaf Spring	1		
△	85	E307566-001SS	Protect Cover	1		U
	86	QMF51E2-1R0J1	Fuse	1	F002	U
	87	E102410-007SS	Rear Panel	1		J
		E102410-008SS	Rear Panel	1		U
		E102410-009SS	Rear Panel	1		A

△: Safety Parts

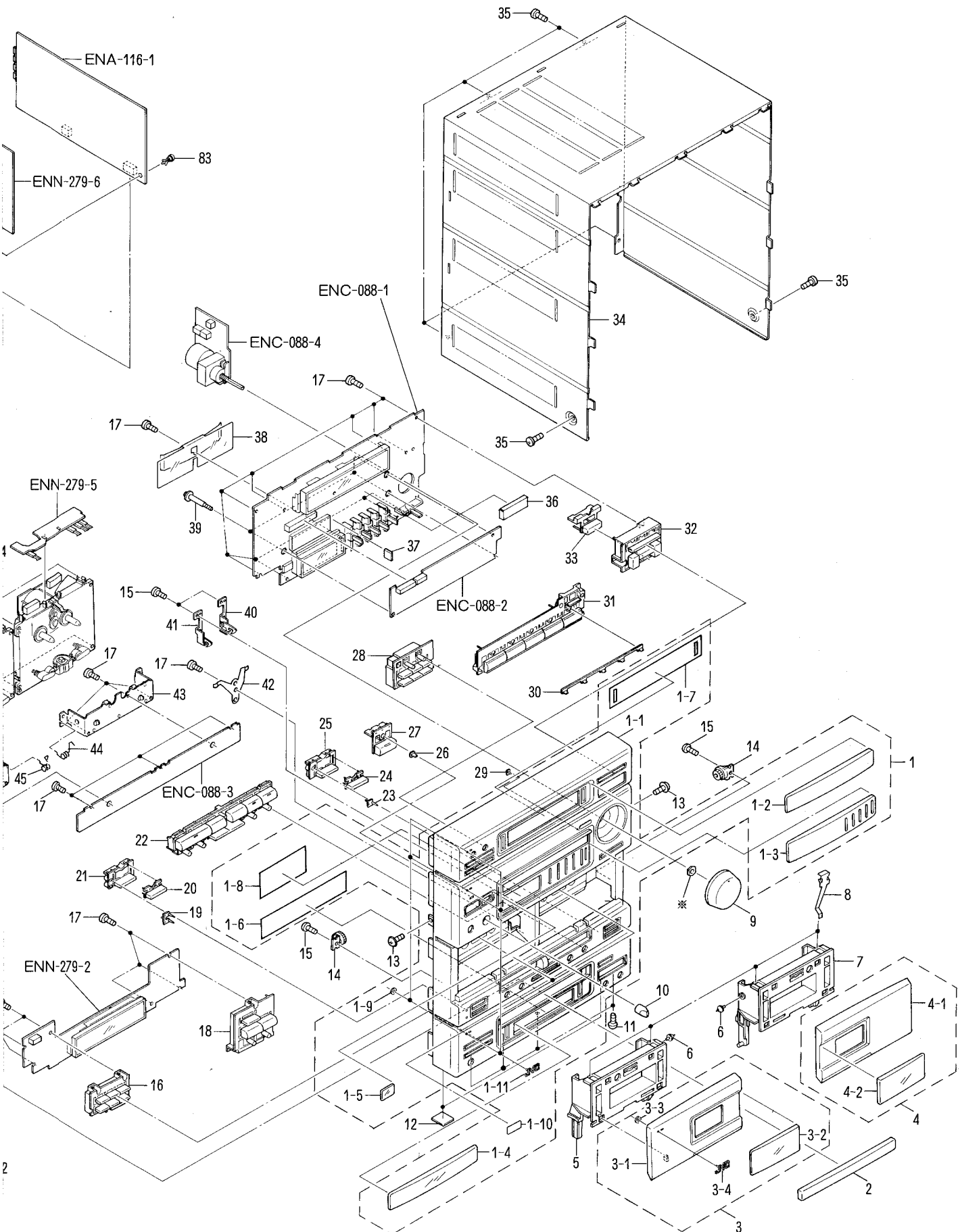
⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
		E102410-010SS	Rear Panel	1		E, EF, GI
		E102410-011SS	Rear Panel	1		BS
		E102410-012SS	Rear Panel	1		G, V, VX
		E102410-014SS	Rear Panel	1		C
	—	E306019-103	Rating Label	1	Made in Singapore	U
	88	E73273-003	Special Screw	14		J, C, A, BS
		E73273-003	Special Screw	15		E, EF, G, GI, V, VX
		E73273-003	Special Screw	16		U
	89	EXO020010R10S	Spacer	2		
	—	E61029-005	Number Label	1		
	—	E70891-001	Class 1 Label	1		Except J, C
	—	E72423-001	Caution Label	1		C
	—	E76016-001	UL Caution Label	1		J
	—	E67199-001	FISE Caution Label	1		J
	—	QZL1001-001	UL Label	1		J
	—	E65507-001	Caution Label	1		C
	—	E45858-002	CSA Label	1		E
	—	E70028-001	Approval Label	1		C
	—	E74792-104	FTZ Label	1		G
	—	E72430-002	Label	1		U

⚠: Safety Parts

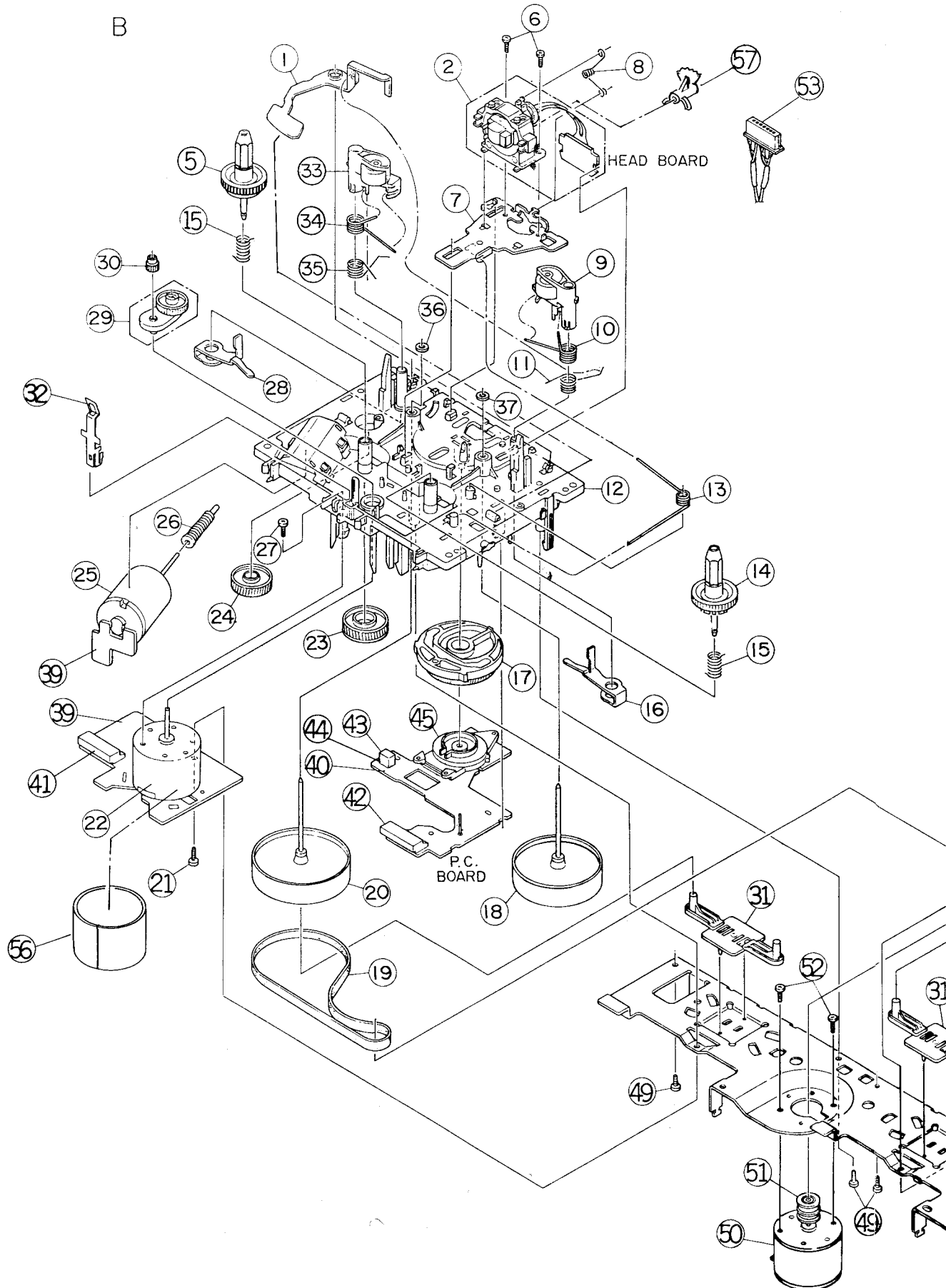
The Marks Designated Areas

J.....the U.S.A.
 C.....Canada
 A.....Australia
 G.....Germany
 GI.....Italy
 BS.....the U.K.

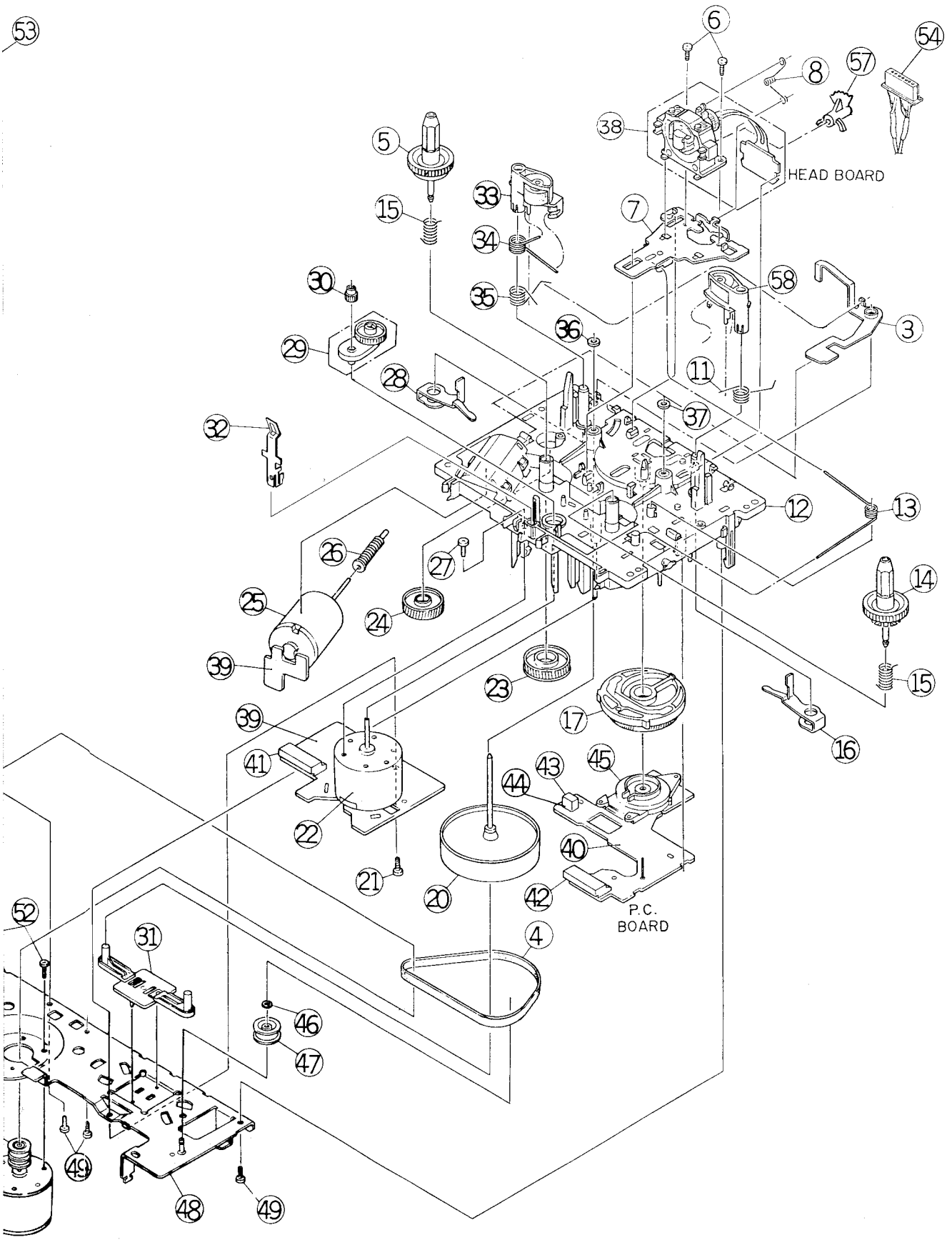
E, EF.....Continental Europe
 V.....East Europe
 U.....Universal Type
 VX.....Poland, Soviet Union and Rumania
 No mark indicates all areas.



Cassette Mechanism Ass'y and Parts List



A

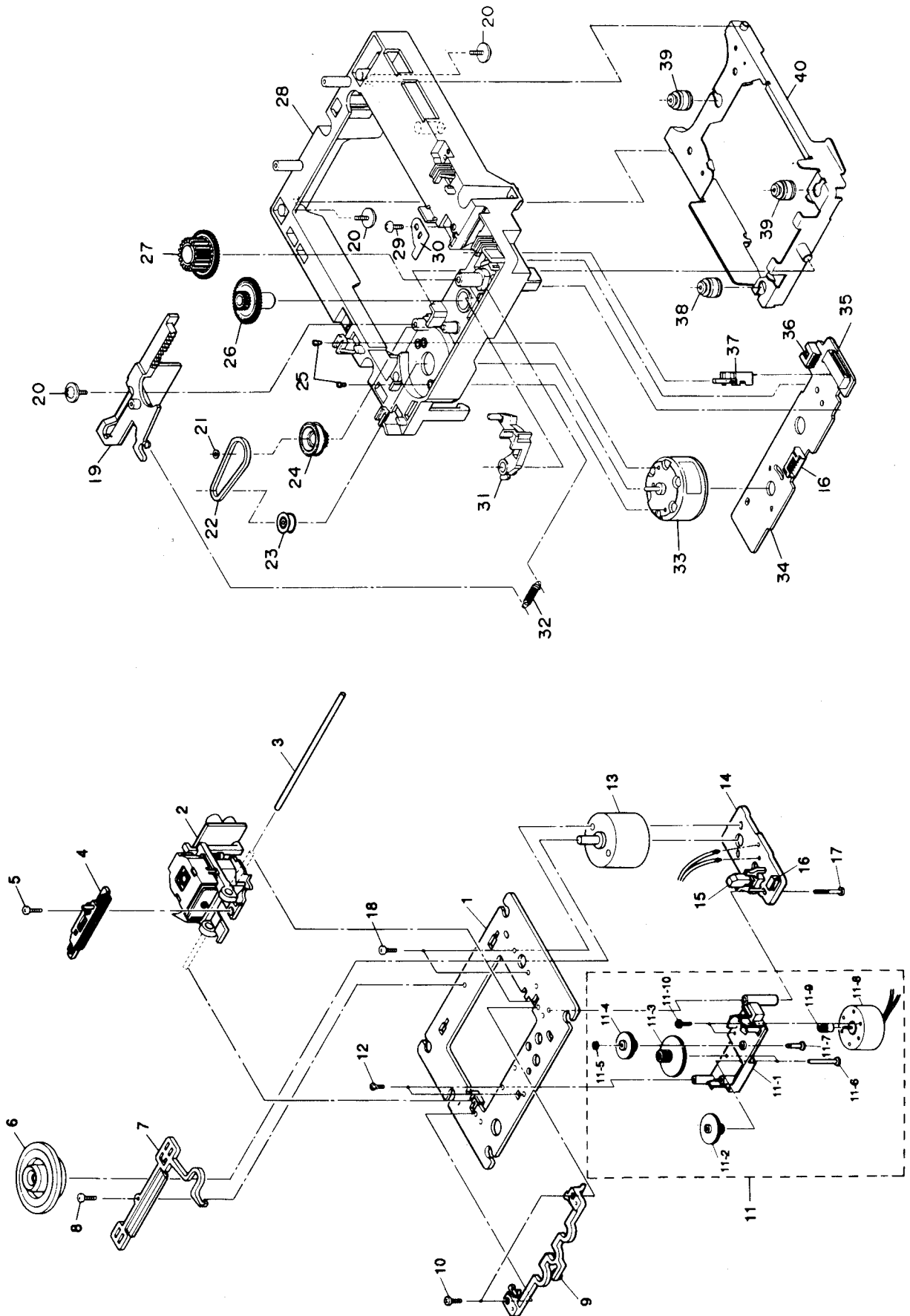


■ Cassette Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	VKL7130-001	Eject Safety	1	B Mechanism	
2	VDG5149-002MB1	Head Mount Ass'y	1	B Mechanism	
3	VKL7131-001	Eject Safety	1	A Mechanism	
4	VKB3001-052	Belt	1	A Mechanism	
5	VKS5321-00A	Reel Ass'y	2	Right	
6	SDST2004Z	Screw	4	Head Mount Ass'y	
7	VKL6942-00B	Head Base Ass'y	2		
8	VKW4914-001	Head Spring	2		
9	VKP4221-00A	Pinch Roller Ass'y	1	B Mechanism (Left)	
10	VKW3006-213	Torsion Spring	1	B Mechanism (Left)	
11	VKW4933-001	Torsion Spring	2	Left	
12	VKS1112-00A	Chassis Base Ass'y	2		
13	VKW4930-002	Return Spring	2		
14	VKS3480-001	Reel Ass'y	2	Left	
15	VKW4928-001	B.T. Spring	4	Reel Ass'y	
16	VKL6940-001	Pinch Roller Lever	2	Left	
17	VKS2209-002	Controller Cam	2		
18	VKF3174-00A	Flywheel Ass'y	1	B Mechanism (Left)	
19	VKB3001-048	Belt	1	B Mechanism	
20	VKF3172-00A	Flywheel Ass'y	2	Right	
21	SDSF2608Z	Screw	2		
22	MMN-6F4RA88	D.C. Motor	2	Reel	
23	VKS5331-001	Gear (6)	2		
24	VKS5330-001	Gear (5)	2		
25	MXN-13FB12F	D.C. Motor	2	Cam	
26	VKS5329-001	Gear (4)	2		
27	SDSP2605Z	Screw	2		
28	VKL6939-001	Pinch Roller Lever	2	Right	
29	VKS5325-00B	FR Arm Ass'y	2		
30	VKS5328-002	Reel Motor Gear	2		
31	VKS5327-002	Trust Plate	2		
32	VKY4628-001	Pack Spring	2		
33	VKP4219-00A	Pinch Roller Ass'y	2	Right	
34	VKW3006-212	Torsion Spring	2	Right	
35	VKW4932-001	Torsion Spring	2	Right	
36	VKZ4035-009	Washer	2	Right	
37	Q03093-527	Washer	2	Left	
38	VDG5149-002MA1	Head Mount Ass'y	1	A Mechanism	
39	VMW3272-001	Printed Board	2		
40	VMW3273-001	Printed Board	2		
41	VMC0107-R08	Connector	1	B Mechanism	
42	VMC0107-R07	Connector	2		
43	DN6851A	Hall IC	2		
44	VKS3487-001	IC Holder	2		
45	VKS3495-00A	Cam Switch Ass'y	2		
46	WDL163525-4	Washer	1		
47	VKR4631-002	Idler Pulley	1		
48	VKM3419-00C	FM Bracket	1		
49	SDSF2605Z	Screw	4		
50	MMI-6H2LWSK	Motor	1	Capstan	
51	VKR4632-001	Motor Pulley	1		
52	SPSP2603Z	Screw	2		
53	VDM007P-040	Head Wire	1	B Mechanism	
54	VDM003P-040	Head Wire	1	A Mechanism	
55	VMC0107-R04	Connector	1	A Mechanism	
56	FE-ZMS514	Shield Cor	1	B Mechanism	
57	VKS3485-002	Head Gear	2		
58	VKP3118-001	Pinch Roller	1	A Mechanism (Left)	

△: Safety Parts

CD Mechanism Ass'y and Parts List



■ CD Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-003	Mechanism Base	1		
2	OPTIMA-5S	Pick up Ass'y	1		
3	E74930-003	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E406064-002	Turn Table Ass'y	1		
7	E306275-003	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11-1	E306276-001	Gear Base	1		
11-2	E75444-001	Gear	1		
11-3	E75443-001	Gear	1		
11-4	E75445-001	Gear	1		
11-5	WDM163550	Slit Washer	1		
11-6	E75494-003	Shaft	2		
11-7	E75494-002	Shaft	1		
11-8	HKN-3A6RDNV	Feed Motor	1		
11-9	E75493-001	Pinion Gear	1		
11-10	LPSH1735Z	Screw	2		
12	E72713-001	Screw	2		
13	E74539-001B	Spindle Motor	1		
14	E12114-005(S)	Circuit Board	1		
15	ESB1100-005	Leaf Switch	1	S001	
16	EMV5109-006B	6P Plug Ass'y	2	P011	
17	E75832-001	Screw	1		
18	SDSP2003N	Screw	2		
19	E306834-001	Cam	1		
20	E65923-003	Screw	3		
21	E72024-001	Speed Nut	1		
22	E75950-002	Belt	1		
23	E75984-001	Motor Pulley	1		
24	E75985-001	Gear (1)	1		
25	SPSK2640Z	Screw	2		
26	E75986-002	Gear (2)	1		
27	E75987-001	Gear (3)	1		
28	E12288-002	Loading Base	1		
29	SBSF3008Z	Screw	1		
30	E75988-001	Plate	1		
31	E306833-001	Lever	1		
32	E75989-001	Spring	1		
33	MMN-6F1LB8Q	Loading Motor	1		
34	EMW10060-002(S)	Circuit Board	1		
35	EMV7123-013R	Connector	1	13Pin	
36	EMV5109-004B	Plug Ass'y	1	4Pin	
37	ESS1200-002	Switch	1		
38	E75609-002	Insulator	1		
39	E75609-001	Insulator	2		
40	E307087-001	Elevator Base Ass'y	1		

△: Safety Parts

Note(1)

PC Board Ass'y	Designated Areas
ENJ-049 A	the U.S.A. , Canada
ENJ-049 B	Universal Type
ENJ-049 C	Australia
ENJ-049 D	Continental Europe , East Europe , Poland , Soviet Union and Rumania
ENJ-049 E BS	the U.K.
ENJ-049 F	Germany , Italy

Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q001	2SD2144S(VW)	SILICON	ROHM	
	Q002	2SC1740S(R,S)	SILICON	ROHM	
	Q003	2SC1740S(R,S)	SILICON	ROHM	
	Q004	2SD2144S(VW)	SILICON	ROHM	
	Q005	DTA144ES	SILICON	ROHM	
	Q009	2SC1740S(R,S)	SILICON	ROHM	
	Q010	2SA933S(R,S)	SILICON	ROHM	
	Q011	2SC1740S(R,S)	SILICON	ROHM	
	Q013	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q051	2SD2061(E,F)	SILICON	ROHM	
	Q052	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q055	2SD2061(E,F)	SILICON	ROHM	
	Q057	2SB1187(E,F)	SILICON	ROHM	
	Q058	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q059	2SD2061(E,F)	SILICON	ROHM	
	Q060	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q061	2SB1187(E,F)	SILICON	ROHM	
	Q062	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q063	2SB1187(E,F)	SILICON	ROHM	
	Q068	DTC144ES	SILICON	ROHM	
	Q069	DTA114YS	SILICON	ROHM	
	Q070	DTA144ES	SILICON	ROHM	
	Q071	DTC114YS	SILICON	ROHM	
	Q081	2SD2061(E,F)	SILICON	ROHM	
	Q091	DTC114YS	SILICON	ROHM	
	Q092	DTC114YS	SILICON	ROHM	
	Q301	DTC144ES	SILICON	ROHM	
	Q302	DTC144ES	SILICON	ROHM	
	Q305	2SD2144S(VW)	SILICON	ROHM	
	Q306	2SD2144S(VW)	SILICON	ROHM	
	Q333	2SC1740S(R,S)	SILICON	ROHM	
	Q334	2SC1740S(R,S)	SILICON	ROHM	
	Q335	DTC144ES	SILICON	ROHM	
	Q336	DTC144ES	SILICON	ROHM	
	Q337	DTC144ES	SILICON	ROHM	
	Q338	DTC144ES	SILICON	ROHM	
	Q339	2SC1740S(R,S)	SILICON	ROHM	
	Q340	2SC1740S(R,S)	SILICON	ROHM	
	Q351	2SC1740S(R,S)	SILICON	ROHM	
	Q352	2SC1740S(R,S)	SILICON	ROHM	
	Q353	2SC1740S(R,S)	SILICON	ROHM	
	Q354	2SC1740S(R,S)	SILICON	ROHM	
	Q355	2SC1740S(R,S)	SILICON	ROHM	
	Q356	2SC1740S(R,S)	SILICON	ROHM	
	Q357	2SC1740S(R,S)	SILICON	ROHM	
	Q371	2SD2144S(VW)	SILICON	ROHM	
	Q372	2SD2144S(VW)	SILICON	ROHM	
	Q389	DTC144ES	SILICON	ROHM	
	Q390	DTC144ES	SILICON	ROHM	
	Q391	2SD2144S(VW)	SILICON	ROHM	
	Q392	2SD2144S(VW)	SILICON	ROHM	
	Q393	DTA144ES	SILICON	ROHM	
	Q407	DTC144TS	SILICON	ROHM	
	Q408	DTC144TS	SILICON	ROHM	
	Q410	DTC144ES	SILICON	ROHM	
	Q411	DTC144TS	SILICON	ROHM	
	Q412	DTC144TS	SILICON	ROHM	
	Q441	DTC144TS	SILICON	ROHM	
	Q442	DTC144TS	SILICON	ROHM	
	Q443	DTC144TS	SILICON	ROHM	
	Q444	DTC144TS	SILICON	ROHM	
	Q447	DTC114YS	SILICON	ROHM	
	Q448	DTC114YS	SILICON	ROHM	
	Q449	DTC114YS	SILICON	ROHM	
	Q450	DTC114YS	SILICON	ROHM	
	Q451	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q452	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q453	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q454	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q455	DTC114YS	SILICON	ROHM	

Δ : SAFETY PARTS

Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q456	DTC114YS	SILICON	ROHM	
	Q457	DTC114YS	SILICON	ROHM	
	Q458	DTC114YS	SILICON	ROHM	
	Q459	DTC114YS	SILICON	ROHM	
	Q460	2SA933S(R,S)	SILICON	ROHM	
	Q461	DTA114YS	SILICON	ROHM	
	Q462	DTC144ES	SILICON	ROHM	
	Q465	DTA114YS	SILICON	ROHM	

Δ : SAFETY PARTS

I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC001	STK4141MK5	I.C.	SANYO	
	IC331	BA3126N	I.C.	ROHM	
	IC332	BU4066B	I.C.	ROHM	
	IC351	HA12136A	I.C.	HITACHI	
	IC352	BU4066B	I.C.	ROHM	
	IC371	BA15218N	I.C.	ROHM	
	IC401	BA15218N	I.C.	ROHM	
	IC451	UPC1228HA	I.C.	NEC	

Δ : SAFETY PARTS

Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	D001	1SS133	SILICON	ROHM	
	D002	1SS133	SILICON	ROHM	
	D003	1SS133	SILICON	ROHM	
	D005	MTZ12JC	ZENER	ROHM	
	D006	1SS133	SILICON	ROHM	
	D007	1SS133	SILICON	ROHM	
	D010	1SS133	SILICON	ROHM	
	D051	ERB12-02RKL1	SILICON	KYODOU	
	D052	ERB12-02RKL1	SILICON	KYODOU	
	D053	ERB12-02RKL1	SILICON	KYODOU	
	D054	ERB12-02RKL1	SILICON	KYODOU	
	D055	1SR139-200	SILICON	ROHM	
	D056	1SR139-200	SILICON	ROHM	
	D057	1SR139-200	SILICON	ROHM	
	D058	1SR139-200	SILICON	ROHM	
	D059	1SR139-200	SILICON	ROHM	
	D060	1SR139-200	SILICON	ROHM	
	D061	MTZ13JC	ZENER	ROHM	
	D063	MTZ6.2JC	ZENER	ROHM	
	D064	1SS133	SILICON	ROHM	
	D065	1SS133	SILICON	ROHM	
	D066	MTZ13JC	ZENER	ROHM	
	D067	MTZ10JC	ZENER	ROHM	
	D068	MTZ10JC	ZENER	ROHM	
	D069	MTZ30JC	ZENER	ROHM	
	D070	MTZ6.8JC	ZENER	ROHM	
	D071	MTZ7.5JC	ZENER	ROHM	
	D072	MTZ7.5JC	ZENER	ROHM	
	D081	MTZ5.6JC	ZENER	ROHM	
	D333	1SS133	SILICON	ROHM	
	D369	MTZ7.5JC	ZENER	ROHM	
	D370	MTZ7.5JC	ZENER	ROHM	
	D395	1SS119	SILICON	HITACHI	
	D396	1SS119	SILICON	HITACHI	
	D397	MTZ5.6JC	ZENER	ROHM	
	D460	1SS133	SILICON	ROHM	
	D461	1SS133	SILICON	ROHM	
	D462	1SS133	SILICON	ROHM	
	D463	1SS133	SILICON	ROHM	
	D475	1SS133	SILICON	ROHM	

Δ : SAFETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QETB1HM-475	4.7MF	50V	ELECTRO	
	C002	QETB1HM-475	4.7MF	50V	ELECTRO	
	C003	QCBB1HK-331	330PF	50V	CERAMIC	
	C004	QCBB1HK-331	330PF	50V	CERAMIC	
	C005	QCBB1HK-820	82PF	50V	CERAMIC	
	C006	QCBB1HK-820	82PF	50V	CERAMIC	
	C007	QETB1CM-107	100MF	16V	ELECTRO	
	C008	QETB1CM-107	100MF	16V	ELECTRO	
	C009	QCS21HJ-5R0	SPF	50V	CERAMIC	
	C010	QCS21HJ-5R0	SPF	50V	CERAMIC	

Δ : SAFETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C011	QETB1HM-226	22MF	50V	ELECTRO	
	C012	QETB1HM-226	22MF	50V	ELECTRO	
	C013	QETB1HM-476	47MF	50V	ELECTRO	
	C014	QETB1CM-476	47MF	16V	ELECTRO	
	C015	QFLB1HJ-473	0.047MF	50V	MYLAR	A
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C016	QFLB1HJ-473	0.047MF	50V	MYLAR	A
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C019	QETB1CM-226	22MF	16V	ELECTRO	
	C020	QETB2AM-476	47MF	100V	ELECTRO	
	C021	QETB1AM-476	47MF	10V	ELECTRO	
	C023	QEK51HM-226G	0.22MF	50V	ELECTRO	
	C024	QETB1HM-474	0.47MF	50V	ELECTRO	
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	D
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	EBS
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	F
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	D
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	D
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	EBS
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	F
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	D
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	EBS
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	F
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	D
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	EBS
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	F
	C037	QCB1HK-471	470PF	50V	CERAMIC	D
	C037	QCB1HK-471	470PF	50V	CERAMIC	EBS
	C037	QCB1HK-471	470PF	50V	CERAMIC	F
	C038	QCB1HK-471	470PF	50V	CERAMIC	D
	C038	QCB1HK-471	470PF	50V	CERAMIC	EBS
	C038	QCB1HK-471	470PF	50V	CERAMIC	F
	C049	QETB1VM-228N	2200MF	35V	ELECTRO	
	C050	QETB1VM-228N	2200MF	35V	ELECTRO	
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C059	EEW4205-688T	6800MF		ELECTRO	
	C060	EEW4205-688T	6800MF		ELECTRO	
	C061	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C063	QETB1CM-107	100MF	16V	ELECTRO	
	C064	QETB1CM-476	47MF	16V	ELECTRO	
	C067	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C069	QETB1EM-107	100MF	25V	ELECTRO	
	C070	QCHB1EZ-223	0.022MF	25V	CERAMIC	

Δ (H)S(A)P(E)T(Y) P(P)ART(S)

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C071	QETB1AM-476	47MF	10V	ELECTRO	
	C072	QETB1AM-476	47MF	10V	ELECTRO	
	C074	QEA40HZ-10AB				
	C076	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C077	QETB1CM-476	47MF	16V	ELECTRO	
	C078	QETB1CM-476	47MF	16V	ELECTRO	
	C079	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C080	QETB1CM-476	47MF	16V	ELECTRO	
	C081	QETB1CM-476	47MF	16V	ELECTRO	
	C082	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C083	QETB1CM-476	47MF	16V	ELECTRO	
	C084	QETB1CM-476	47MF	16V	ELECTRO	
	C085	QETB1JM-227	220MF	63V	ELECTRO	
	C086	QETB1JM-227	220MF	63V	ELECTRO	
	C087	QCGB1HK-102	1000PF	50V	CERAMIC	
	C088	QETB1HM-226	22MF	50V	ELECTRO	
	C089	QETB1HM-226	22MF	50V	ELECTRO	
	C090	QETB1HM-475	4.7MF	50V	ELECTRO	
	C092	QETB1AM-476	47MF	10V	ELECTRO	
	C093	QETB1AM-476	47MF	10V	ELECTRO	
	C094	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C310	QCS21HJ-471	470PF	50V	CERAMIC	
	C321	QCS21HJ-101	100PF	50V	CERAMIC	
	C322	QCS21HJ-101	100PF	50V	CERAMIC	
	C325	QFLB1HJ-222	2200PF	50V	MYLAR	
	C326	QFLB1HJ-222	2200PF	50V	MYLAR	
	C327	QFLB1HJ-682	6800PF	50V	MYLAR	
	C328	QFLB1HJ-273	0.027MF	50V	MYLAR	
	C329	QFP81HJ-822	8200PF	50V	POLY	
	C331	QEK51HM-105G	1MF	50V	ELECTRO	
	C332	QEK51HM-105G	1MF	50V	ELECTRO	
	C333	QEK51CM-106G	10MF	16V	ELECTRO	
	C335	QCS21HJ-101	100PF	50V	CERAMIC	
	C336	QCS21HJ-101	100PF	50V	CERAMIC	
	C337	QCS21HJ-101	100PF	50V	CERAMIC	
	C338	QCS21HJ-101	100PF	50V	CERAMIC	
	C339	QCY21HK-152	1500PF	50V	CERAMIC	
	C340	QCY21HK-152	1500PF	50V	CERAMIC	
	C341	QCS21HJ-331	330PF	50V	CERAMIC	
	C342	QCS21HJ-331	330PF	50V	CERAMIC	
	C343	QCY21HK-122	1200PF	50V	CERAMIC	
	C344	QCY21HK-122	1200PF	50V	CERAMIC	
	C347	QETB1CM-107	100MF	16V	ELECTRO	
	C351	QCF21HP-473	0.047MF	50V	CERAMIC	
	C352	QCF21HP-473	0.047MF	50V	CERAMIC	
	C353	QEK51HM-105G	1MF	50V	ELECTRO	
	C354	QEK51HM-105G	1MF	50V	ELECTRO	
	C355	QEK51HM-105G	1MF	50V	ELECTRO	
	C356	QEK51HM-105G	1MF	50V	ELECTRO	
	C357	QETB1EM-106	10MF	25V	ELECTRO	
	C358	QETB1EM-106	10MF	25V	ELECTRO	
	C359	QEK51CM-106G	10MF	16V	ELECTRO	
	C361	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C362	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C363	QETB1HM-475	4.7MF	50V	ELECTRO	
	C364	QETB1CM-107	100MF	16V	ELECTRO	
	C365	QETB1HM-475	4.7MF	50V	ELECTRO	
	C366	QETB1AM-107	100MF	10V	ELECTRO	
	C371	QEK51HM-105G	1MF	50V	ELECTRO	
	C372	QEK51HM-105G	1MF	50V	ELECTRO	
	C373	QCSB1HJ-220	22PF	50V	CERAMIC	
	C374	QCSB1HJ-220	22PF	50V	CERAMIC	
	C383	QCB1HK-101	100PF	50V	CERAMIC	
	C384	QCB1HK-101	100PF	50V	CERAMIC	
	C389	QCF21HP-223	0.022MF	50V	CERAMIC	
	C390	QCF21HP-223	0.022MF	50V	CERAMIC	
	C391	QEK51CM-106G	10MF	16V	ELECTRO	
	C392	QEK51CM-106G	10MF	16V	ELECTRO	
	C393	QETB1CM-107	100MF	16V	ELECTRO	
	C394	QETB1CM-107	100MF	16V	ELECTRO	
	C395	QETB1HM-105	1MF	50V	ELECTRO	
	C396	QETB1CM-476	47MF	16V	ELECTRO	
	C401	QCF21HP-473	0.047MF	50V	CERAMIC	
	C402	QCF21HP-473	0.047MF	50V	CERAMIC	
	C405	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C406	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C407	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C408	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C411	QEK51CM-106G	10MF	16V	ELECTRO	
	C412	QEK51CM-106G	10MF	16V	ELECTRO	
	C413	QCS21HJ-271	270PF	50V	CERAMIC	
	C414	QCS21HJ-271	270PF	50V	CERAMIC	
	C415	QFLB1HJ-682	6800PF	50V	MYLAR	
	C416	QFLB1HJ-682	6800PF	50V	MYLAR	
	C417	QFLB1HJ-562	5600PF	50V	MYLAR	
	C418	QFLB1HJ-562	5600PF	50V	MYLAR	
	C421	QFLB1HJ-332	3300PF	50V	MYLAR	
	C422	QFLB1HJ-332	3300PF	50V	MYLAR	
	C441	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C442	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C443	QFLB1HJ-123	0.012MF	50V	MYLAR	
	C444	QFLB1HJ-123	0.012MF	50V	MYLAR	
	C445	QCS21HJ-470	47PF	50V	CERAMIC	
	C446	QCS21HJ-470	47PF	50V	CERAMIC	
	C451	QEK51HM-225G	2.2MF	50V	ELECTRO	

Δ (H)S(A)P(E)T(Y) P(P)ART(S)

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C452	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C453	QCBB1HK-101	100PF	50V	CERAMIC	
	C454	QCBB1HK-101	100PF	50V	CERAMIC	
	C455	QETB1AM-107	100MF	10V	ELECTRO	
	C456	QETB1AM-107	100MF	10V	ELECTRO	
	C457	QFLB1HJ-822	8200PF	50V	MYLAR	
	C458	QFLB1HJ-822	8200PF	50V	MYLAR	
	C459	QEK51HM-105G	1MF	50V	ELECTRO	
	C460	QEK51HM-105G	1MF	50V	ELECTRO	
	C461	QEK51CM-107	100MF	16V	ELECTRO	
	C462	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C463	QETB1HM-106	10MF	50V	ELECTRO	
	C464	QETB1HM-106	10MF	50V	ELECTRO	
	C465	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C475	QETB1AM-476	47MF	10V	ELECTRO	
	C679	QETB1HM-225	2.2MF	50V	ELECTRO	
	C680	QETB1HM-225	2.2MF	50V	ELECTRO	

Δ SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R054	QRD167J-105	1M	1/6W	CARBON	
	R055	QRD167J-105	1M	1/6W	CARBON	
	R064	QRD167J-472	4.7K	1/6W	CARBON	
	R065	QRD167J-472	4.7K	1/6W	CARBON	
	R066	QRD167J-470	47	1/6W	CARBON	
	R067	QRD167J-182	1.8K	1/6W	CARBON	
Δ	R068	QRV144F-1501	1.5K	1/4W	M.FILM	
	R069	QRV144F-1801	1.8K	1/4W	M.FILM	
Δ	R070	PTH61G30BD2R2N			FUSIBLE RESI	
	R071	QRD167J-562	5.6K	1/6W	CARBON	
	R072	QRD167J-103	10K	1/6W	CARBON	
	R073	QRD167J-562	5.6K	1/6W	CARBON	
	R074	QRD167J-153	15K	1/6W	CARBON	
	R075	QRD167J-103	10K	1/6W	CARBON	
	R076	QRD167J-102	1K	1/6W	CARBON	
Δ	R077	GRG022J-271AM	270	2W	O.M.FILM	
	R078	QRD167J-472	4.7K	1/6W	CARBON	
	R079	QRD167J-103	10K	1/6W	CARBON	
Δ	R081	QRD14CJ-221S	220	1/4W	UNF.CARBON	
Δ	R082	QRD14CJ-221S	220	1/4W	UNF.CARBON	
	R085	QRD167J-562	5.6K	1/6W	CARBON	
	R087	QRD167J-103	10K	1/6W	CARBON	
	R088	QRD167J-471	470	1/6W	CARBON	
	R089	QRD167J-152	1.5K	1/6W	CARBON	
Δ	R091	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
Δ	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
Δ	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
Δ	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
Δ	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
Δ	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
	R092	QRD167J-472	4.7K	1/6W	CARBON	
	R093	QRD167J-472	4.7K	1/6W	CARBON	
Δ	R094	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
Δ	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
Δ	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
Δ	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
Δ	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
Δ	R095	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
Δ	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
Δ	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
Δ	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
Δ	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
Δ	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
Δ	R096	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
Δ	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
Δ	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
Δ	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
Δ	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
Δ	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
	R311	QRD167J-103	10K	1/6W	CARBON	
	R312	QRD167J-103	10K	1/6W	CARBON	
	R313	QRD167J-153	15K	1/6W	CARBON	
	R314	QRD167J-153	15K	1/6W	CARBON	
	R317	QRD167J-223	22K	1/6W	CARBON	
	R318	QRD167J-223	22K	1/6W	CARBON	
	R319	QRD167J-683	68K	1/6W	CARBON	
	R320	QRD167J-683	68K	1/6W	CARBON	
Δ	R321	QRD14CJ-220S	22	1/4W	UNF.CARBON	A
Δ	R321	QRZ0077-220	22	1/4W	FUSIBLE	B
Δ	R321	QRZ0077-220	22	1/4W	FUSIBLE	C
Δ	R321	QRZ0077-220	22	1/4W	FUSIBLE	D
Δ	R321	QRZ0077-220	22	1/4W	FUSIBLE	EBS
Δ	R321	QRZ0077-220	22	1/4W	FUSIBLE	F
Δ	R327	QRD167J-473	47K	1/6W	CARBON	
	R328	QRD167J-473	47K	1/6W	CARBON	
	R330	QRD167J-181	180	1/6W	CARBON	
	R331	QRD167J-201	200	1/6W	CARBON	
	R332	QRD167J-332	3.3K	1/6W	CARBON	
	R333	QRD167J-104	100K	1/6W	CARBON	
Δ	R336	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
Δ	R336	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R336	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R336	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R336	QRZ0077-100	10	1/4W	FUSIBLE	EBS
Δ	R336	QRZ0077-100	10	1/4W	FUSIBLE	F
Δ	R339	QRD167J-563	56K	1/6W	CARBON	
	R340	QRD167J-563	56K	1/6W	CARBON	
	R341	QRD167J-100	10	1/6W	CARBON	
	R342	QRD167J-100	10	1/6W	CARBON	
Δ	R343	QRD167J-222	2.2K	1/6W	CARBON	
Δ	R344	QRD14CJ-5R6S	5.6	1/4W	UNF.CARBON	
	R347	QRD167J-224	220K	1/6W	CARBON	
	R348	QRD167J-224	220K	1/6W	CARBON	
	R349	QRD167J-223	22K	1/6W	CARBON	
	R350	QRD167J-222	2.2K	1/6W	CARBON	
	R351	QRD167J-222	2.2K	1/6W	CARBON	
	R353	QRD167J-153	15K	1/6W	CARBON	
	R354	QRD167J-153	15K	1/6W	CARBON	
	R355	QRD167J-273	27K	1/6W	CARBON	
	R356	QRD167J-273	27K	1/6W	CARBON	
	R357	QRD167J-332	3.3K	1/6W	CARBON	
	R358	QRD167J-332	3.3K	1/6W	CARBON	
	R359	QRD167J-223	22K	1/6W	CARBON	
	R360	QRD167J-223	22K	1/6W	CARBON	

Δ SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
Δ	R	QRC128K-275EM	2.7M	1/2W	COMPOSI	A
	R001	QRD167J-392	3.9K	1/6W	CARBON	
	R002	QRD167J-392	3.9K	1/6W	CARBON	
	R003	QRD167J-104	100K	1/6W	CARBON	
	R004	QRD167J-104	100K	1/6W	CARBON	
Δ	R005	QRD14CJ-681S	680	1/4W	UNF.CARBON	
Δ	R006	QRD14CJ-681S	680	1/4W	UNF.CARBON	
	R007	QRD167J-471	470	1/6W	CARBON	
	R008	QRD167J-471	470	1/6W	CARBON	
	R009	QRD167J-104	100K	1/6W	CARBON	
	R010	QRD167J-104	100K	1/6W	CARBON	
	R011	QRD167J-122	1.2K	1/6W	CARBON	
	R012	QRD167J-122	1.2K	1/6W	CARBON	
	R013	QRD167J-122	1.2K	1/6W	CARBON	
	R014	QRD167J-122	1.2K	1/6W	CARBON	
Δ	R015	QRX012J-R22AM	0.22	1W	M.FILM	
Δ	R016	QRX012J-R22AM	0.22	1W	M.FILM	
Δ	R017	QRD14CJ-101S	100	1/4W	UNF.CARBON	A
Δ	R017	QRZ0077-101	100	1/4W	FUSIBLE	B
Δ	R017	QRZ0077-101	100	1/4W	FUSIBLE	C
Δ	R017	QRZ0077-101	100	1/4W	FUSIBLE	D
Δ	R017	QRZ0077-101	100	1/4W	FUSIBLE	EBS
Δ	R017	QRZ0077-101	100	1/4W	FUSIBLE	F
Δ	R018	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
Δ	R018	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R018	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R018	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R018	QRZ0077-100	10	1/4W	FUSIBLE	EBS
Δ	R018	QRZ0077-100	10	1/4W	FUSIBLE	F
Δ	R019	QRD14CJ-100S	10	1/4W	UNF.CARBON	
Δ	R020	QRD14CJ-100S	10	1/4W	UNF.CARBON	
Δ	R021	QRD14CJ-100S	10	1/4W	UNF.CARBON	
Δ	R022	QRD14CJ-100S	10	1/4W	UNF.CARBON	
Δ	R023	QRD167J-823	82K	1/6W	CARBON	
Δ	R024	QRD167J-104	100K	1/6W	CARBON	
	R025	QRD167J-562	5.6K	1/6W	CARBON	
	R026	QRD167J-333	33K	1/6W	CARBON	
	R027	QRD167J-562	5.6K	1/6W	CARBON	
	R029	QRD167J-104	100K	1/6W	CARBON	
	R030	QRD167J-471	470	1/6W	CARBON	
	R031	QRD167J-122	1.2K	1/6W	CARBON	
	R032	QRD167J-122	1.2K	1/6W	CARBON	
	R033	QRD167J-122	1.2K	1/6W	CARBON	
	R034	QRD167J-122	1.2K	1/6W	CARBON	
	R035	QRD167J-471	470	1/6W	CARBON	
Δ	R036	QRG012J-222AM	2.2K	1W	O.M.FILM	
Δ	R037	QRG012J-221AM	220	1W	O.M.FILM	
Δ	R038	QRG012J-221AM	220	1W	O.M.FILM	
	R039	QRD167J-103	10K	1/6W	CARBON	
	R040	QRD167J-103	10K	1/6W	CARBON	
Δ	R041	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
Δ	R041	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R041	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R041	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R041	QRZ0077-100	10	1/4W	FUSIBLE	EBS
Δ	R041	QRZ0077-100	10	1/4W	FUSIBLE	F
Δ	R042	QRD167J-222	2.2K	1/6W	CARBON	
	R043	QRD167J-103	10K	1/6W	CARBON	
	R044	QRD167J-104	100K	1/6W	CARBON	
	R045	QRD167J-222	2.2K	1/6W	CARBON	
Δ	R046	QRG022J-391AM	390	2W	O.M.FILM	
Δ	R048	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
Δ	R048	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R048	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R048	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R048	QRZ0077-100	10	1/4W	FUSIBLE	EBS
Δ	R048	QRZ0077-100	10	1/4W	FUSIBLE	F
	R051	QRD167J-122	1.2K	1/6W	CARBON	
	R052	QRD167J-224	220K	1/6W	CARBON	
	R053	QRD167J-473	47K	1/6W	CARBON	

Δ SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R361	QRD167J-561	560	1/6W	CARBON	
	R362	QRD167J-561	560	1/6W	CARBON	
	R363	QRD167J-222	2.2K	1/6W	CARBON	
	R364	QRD167J-222	2.2K	1/6W	CARBON	
	R365	QRD167J-103	10K	1/6W	CARBON	
	R366	QRD167J-105	1M	1/6W	CARBON	
	R369	QRD167J-102	1K	1/6W	CARBON	
	R370	QRD167J-102	1K	1/6W	CARBON	
	R371	QRD167J-562	5.6K	1/6W	CARBON	
	R372	QRD167J-562	5.6K	1/6W	CARBON	
	R373	QRD167J-103	10K	1/6W	CARBON	
	R374	QRD167J-103	10K	1/6W	CARBON	
	R375	QRD167J-223	22K	1/6W	CARBON	
	R376	QRD167J-223	22K	1/6W	CARBON	
	R377	QRD167J-103	10K	1/6W	CARBON	
	R378	QRD167J-103	10K	1/6W	CARBON	
	R379	QRD167J-103	10K	1/6W	CARBON	
	R380	QRD167J-103	10K	1/6W	CARBON	
	R381	QRD167J-102	1K	1/6W	CARBON	
	R382	QRD167J-102	1K	1/6W	CARBON	
	R383	QRD167J-104	100K	1/6W	CARBON	
	R384	QRD167J-104	100K	1/6W	CARBON	
	R385	QRD167J-682	6.8K	1/6W	CARBON	
	R386	QRD167J-682	6.8K	1/6W	CARBON	
	R387	QRD167J-104	100K	1/6W	CARBON	
	R388	QRD167J-104	100K	1/6W	CARBON	
	R389	QRD167J-221	220	1/6W	CARBON	
	R390	QRD167J-221	220	1/6W	CARBON	
	R391	QRD167J-822	8.2K	1/6W	CARBON	
	R392	QRD167J-822	8.2K	1/6W	CARBON	
	R393	QRD167J-562	5.6K	1/6W	CARBON	
	R394	QRD167J-562	5.6K	1/6W	CARBON	
	R395	QRD167J-103	10K	1/6W	CARBON	
	R396	QRD167J-103	10K	1/6W	CARBON	
	R397	QRD167J-102	1K	1/6W	CARBON	
	R398	QRD167J-223	22K	1/6W	CARBON	
	R399	QRD167J-223	22K	1/6W	CARBON	
	R400	QRD167J-223	22K	1/6W	CARBON	
	R401	QRD167J-333	33K	1/6W	CARBON	
	R402	QRD167J-333	33K	1/6W	CARBON	
	R403	QRD167J-302	3K	1/6W	CARBON	
	R404	QRD167J-302	3K	1/6W	CARBON	
	R405	QRD167J-683	68K	1/6W	CARBON	
	R406	QRD167J-683	68K	1/6W	CARBON	
	R407	QRD167J-153	15K	1/6W	CARBON	
	R408	QRD167J-153	15K	1/6W	CARBON	
	R409	QRD167J-153	15K	1/6W	CARBON	
	R410	QRD167J-153	15K	1/6W	CARBON	
	R411	QRD167J-332	3.3K	1/6W	CARBON	
	R412	QRD167J-332	3.3K	1/6W	CARBON	
	R413	QRD167J-182	1.8K	1/6W	CARBON	
	R414	QRD167J-182	1.8K	1/6W	CARBON	
	R415	QRD167J-511	510	1/6W	CARBON	
	R416	QRD167J-511	510	1/6W	CARBON	
	R417	QRD167J-301	300	1/6W	CARBON	
	R418	QRD167J-301	300	1/6W	CARBON	
	R423	QRD167J-122	1.2K	1/6W	CARBON	
	R424	QRD167J-122	1.2K	1/6W	CARBON	
	R425	QRD167J-221	220	1/6W	CARBON	
	R426	QRD167J-221	220	1/6W	CARBON	
	R431	QRD167J-474	470K	1/6W	CARBON	
	R432	QRD167J-474	470K	1/6W	CARBON	
	R433	QRD167J-221	220	1/6W	CARBON	
	R434	QRD167J-221	220	1/6W	CARBON	
	R439	QRD167J-103	10K	1/6W	CARBON	
	R440	QRD167J-223	22K	1/6W	CARBON	
	R441	QRD167J-681	680	1/6W	CARBON	
	R442	QRD167J-681	680	1/6W	CARBON	
	R443	QRD167J-183	18K	1/6W	CARBON	
	R445	QRD167J-224	220K	1/6W	CARBON	
	R446	QRD167J-103	10K	1/6W	CARBON	
	R447	QRD167J-103	10K	1/6W	CARBON	
	R448	QRD167J-223	22K	1/6W	CARBON	
	R453	QRD167J-470	47	1/6W	CARBON	
	R454	QRD167J-470	47	1/6W	CARBON	
	R455	QRD167J-334	330K	1/6W	CARBON	
	R456	QRD167J-334	330K	1/6W	CARBON	
	R457	QRD167J-432	4.3K	1/6W	CARBON	
	R458	QRD167J-432	4.3K	1/6W	CARBON	
	R459	QRD167J-302	3K	1/6W	CARBON	
	R460	QRD167J-302	3K	1/6W	CARBON	
	R461	QRD167J-512	5.1K	1/6W	CARBON	
	R462	QRD167J-512	5.1K	1/6W	CARBON	
	R463	QRD167J-752	7.5K	1/6W	CARBON	
	R464	QRD167J-752	7.5K	1/6W	CARBON	
	R465	QRD167J-223	22K	1/6W	CARBON	
	R466	QRD167J-223	22K	1/6W	CARBON	
	R467	QRD167J-105	1M	1/6W	CARBON	
	R468	QRD167J-105	1M	1/6W	CARBON	
	R469	QRD167J-105	1M	1/6W	CARBON	
	R470	QRD167J-105	1M	1/6W	CARBON	
	R471	QRD167J-471	470	1/6W	CARBON	
	R472	QRD167J-472	4.7K	1/6W	CARBON	
	R473	QRD167J-472	4.7K	1/6W	CARBON	
	R474	QRD167J-274	270K	1/6W	CARBON	

Δ IS SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R475	QRD167J-104	100K	1/6W	CARBON	
	R478	QRD167J-223	22K	1/6W	CARBON	
	R479	QRD167J-223	22K	1/6W	CARBON	
	R480	QRD167J-102	1K	1/6W	CARBON	
	R481	QRD167J-102	1K	1/6W	CARBON	
	R999	QRG022J-102AM	1K	2W	O.M.FLLM	
	VR311	QVPA601-503A	50K		VARIABLE	
	VR312	QVPA601-503A	50K		VARIABLE	
	VR331	QVPA601-204A	200K		VARIABLE	
	VR332	QVPA601-204A	200K		VARIABLE	
	VR451	QVPA601-201A	200		VARIABLE	
	VR452	QVPA601-201A	200		VARIABLE	
	VR453	QVPA601-201A	200		VARIABLE	
	VR454	QVPA601-201A	200		VARIABLE	
	VR455	QVPA601-103A	10K		VARIABLE	
	VR456	QVPA601-103A	10K		VARIABLE	
	VR457	QVPA601-103A	10K		VARIABLE	
	VR458	QVPA601-103A	10K		VARIABLE	

Δ IS SAFETY PARTS

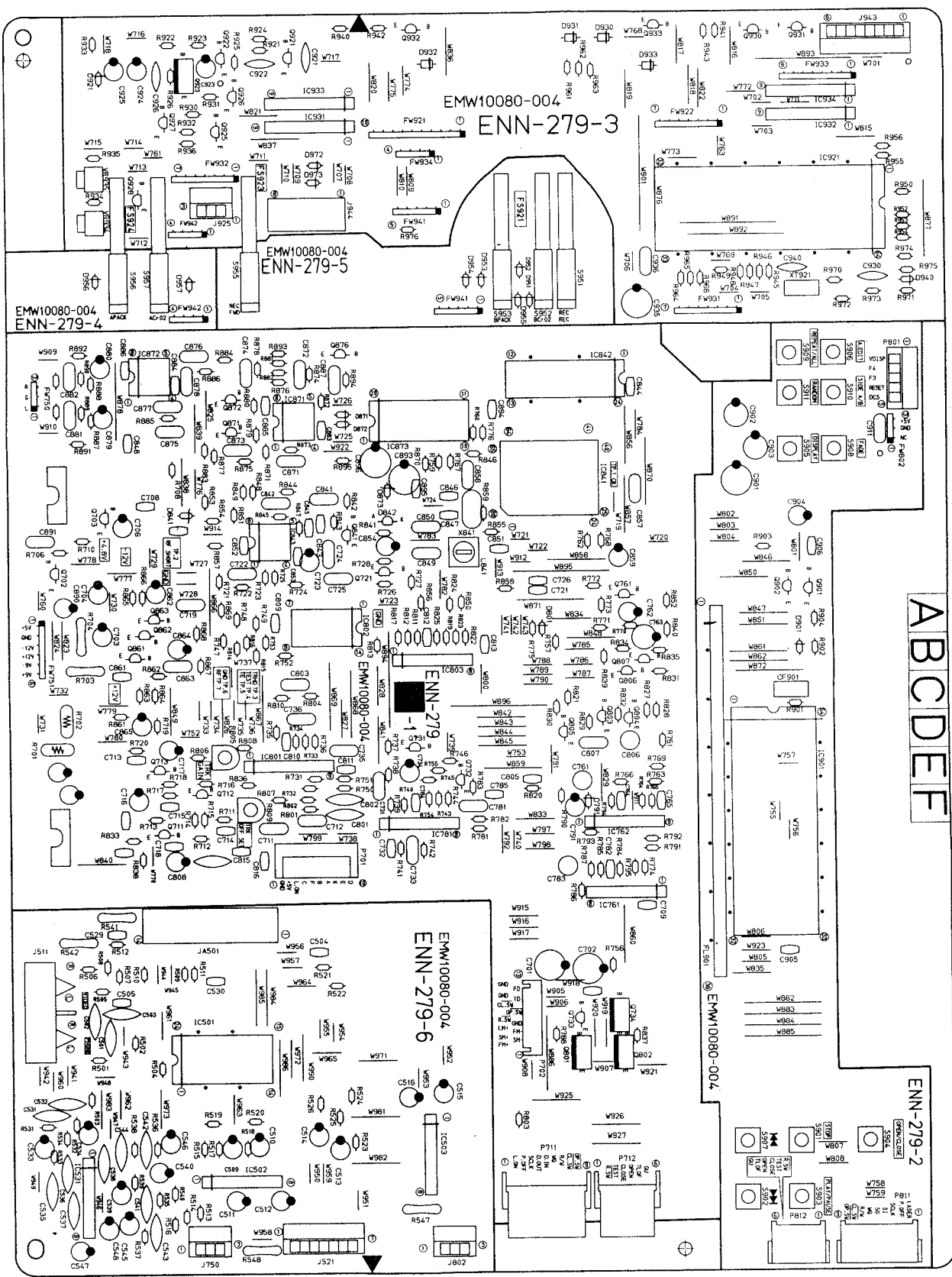
Others

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
		QWE350-10DD			WIRE	
		QWE370-04BB			WIRE	
		EMW10078-102			PRINTED BOARD	A
		EMW10078-004			PRINTED BOARD	B
		EMW10078-201			PRINTED BOARD	C
		EMW10078-201			PRINTED BOARD	D
		EMW10078-201BS			PRINTED BOARD	EBS
		EMW10078-201			PRINTED BOARD	F
	J001	EMB90YV-401A			SPEAKER TERMINAL	
	J011	VMC0107-R06			CONNECTOR(6PIN)	
	J015	VMC0107-005			CONNECT TERMINAL(5PIN)	
	J017	QMS3L10-6DOH			MINI JACK	
	J751	VMC0107-006			CONNECT TERMINAL(6PIN)	
	J901	EMV5133-003K			PLUG ASSY(3PIN)	
	J921	VMC0107-010			WIRE CONNECTOR(10PIN)	
	J922	VMC0107-007			CONNECT TERMINAL(7PIN)	
	L001	EGL0001-R45			INDUCTOR	
	L002	EGL0001-R45			INDUCTOR	
	L321	EQL2106-223			INDUCTOR	
	L322	EQL2106-223			INDUCTOR	
	L331	ENZ6002-010			OSCILLATOR COIL	
	L333	EQL2106-223			INDUCTOR	
	L334	EQL2106-223			INDUCTOR	
	L401	EQL2106-562			INDUCTOR	
	L402	EQL2106-562			INDUCTOR	
	P001	QMCB001-E03H			AC INLET	A
	P001	QMCB001-E02H			AC SOCKET	B
	P001	QMCB001-E02H			AC SOCKET	C
	P001	QMCB001-E02H			AC SOCKET	D
	P001	QMCB001-E02HBS			AC SOCKET	EBS
	P001	QMCB001-E02H			AC SOCKET	F
	P331	QMV5011-007K			PLUG ASSY(7PIN)	
	P333	QMV5011-003K			PLUG ASSY(3PIN)	
	S310	QSS7A12-E01			SLIDE SWITCH	
	BC901	EWS243-035T			SOCKET WIRE(4PIN)	
	EP001	E70225-002			EARTH PLATE	
	EP002	E70225-002			EARTH PLATE	
	EP005	E70859-001			EARTH PLATE	D
	EP005	E70859-001			EARTH PLATE	EBS
	EP005	E70859-001			EARTH PLATE	F
	EP006	E70859-001			EARTH PLATE	
	EP011	E406519-221			P.W.BOARD BRACKET	
	FT001	VMZ0087-001			FUSE CLIP	
	FT002	VMZ0087-001			FUSE CLIP	
	FT003	VMZ0087-001			FUSE CLIP	
	FT004	VMZ0087-001			FUSE CLIP	
	FT101	VMZ0087-001			FUSE CLIP	B
	FT102	VMZ0087-001			FUSE CLIP	B
	FT103	VMZ0087-001			FUSE CLIP	
	FT104	VMZ0087-001			FUSE CLIP	
	FW011	EWR36B-20LST			FLAT WIRE(6PIN)	
	FW015	EWR35B-35LST			FLAT WIRE(5PIN)	
	FW021	EWR23C-35LN			FLAT WIRE(3PIN)	
	JA103	EMV5125-005			PLUG ASSY(5PIN)	
	JB201	VMC0193-S10			CONNECT TERMINAL(10PIN)	
	JB202	VMC0193-S10			CONNECT TERMINAL(10PIN)	
	JB203	VMC0193-S06			CONNECT TERMINAL(6PIN)	
	JB501	EMV5125-014			PLUG ASSY(14PIN)	
	RS001	QSR0085-018			VOLTAGE SELECTOR	B
	RY001	ESK8D24-212			RELAY	
	RY002	ESK1D12-211M			RELAY	

Δ IS SAFETY PARTS

■ ENN-279 □ CD PC Board Ass'y

Note : ENN-279 □ varies according to the areas employed. See note (1) when placing an order.



Note(1)

PC Board Ass'y	Designated Areas
ENN-279 A	the U.S.A. , Canada
ENN-279 B	Australia , Universal Type
ENN-279 C	the U.K. , Continental Europe , East Europe , Poland , Soviet Union and Rumania
ENN-279 D	Germany , Italy

Transistors

△ ITEM	PART NUMBER	DESCRIPTION	AREA
Q702	2SA934(Q,R)	SILICON ROHM	
Q703	DTA114YS	SILICON ROHM	
Q711	2SC535(B,C)	SILICON HITACHI	
Q712	2SC1740S(R,S)	SILICON ROHM	
Q713	2SA933S(R,S)	SILICON ROHM	
Q721	2SD2144S(VW)	SILICON ROHM	
Q731	2SD2144S(VW)	SILICON ROHM	
Q732	2SA933S(R,S)	SILICON ROHM	
Q733	2SC2060(Q,R)	SILICON ROHM	
Q734	2SB1357(E,F)	SILICON ROHM	
Q761	2SD2144S(VW)	SILICON ROHM	
Q801	2SD2037(E,F)	SILICON ROHM	
Q802	2SB1357(E,F)	SILICON ROHM	
Q803	2SD2144S(VW)	SILICON ROHM	
Q804	2SD2144S(VW)	SILICON ROHM	
Q805	2SD2144S(VW)	SILICON ROHM	
Q806	2SA933S(R,S)	SILICON ROHM	
Q807	2SC1740S(R,S)	SILICON ROHM	
Q841	2SD2144S(VW)	SILICON ROHM	
Q861	2SA933S(R,S)	SILICON ROHM	
Q862	2SC1740S(R,S)	SILICON ROHM	
Q863	2SC1740S(R,S)	SILICON ROHM	
Q871	2SD2144S(VW)	SILICON ROHM	
Q872	2SD2144S(VW)	SILICON ROHM	
Q876	DTA114YS	SILICON ROHM	
Q901	DTA114YS	SILICON ROHM	
Q902	DTC114YS	SILICON ROHM	
Q921	2SC1740S(R,S)	SILICON ROHM	
Q922	2SC1740S(R,S)	SILICON ROHM	
Q923	2SD2037(E,F)	SILICON ROHM	
Q925	DTC114YS	SILICON ROHM	
Q926	DTC114YS	SILICON ROHM	
Q927	2SA933S(R,S)	SILICON ROHM	
Q928	2SA933S(R,S)	SILICON ROHM	
Q930	DTC144ES	SILICON ROHM	
Q931	DTC144ES	SILICON ROHM	
Q932	2SA934(Q,R)	SILICON ROHM	
Q933	2SA934(Q,R)	SILICON ROHM	

△ HSA/PETY PARTS

I.C.s

△ ITEM	PART NUMBER	DESCRIPTION	AREA
IC501	TC9164N	I.C. TOSHIBA	
IC502	BA15218N	I.C. ROHM	
IC503	BA15218N	I.C. ROHM	
IC531	VC4580LD	I.C. DAINICHI	
IC761	STA341M(A)	I.C. SANKEN	
IC762	VC4580L	I.C. DAINICHI	
IC781	BA15218N	I.C. ROHM	
IC801	NJM072S	I.C. DAINICHI	
IC802	BA10339	I.C. ROHM	
IC803	BA15218N	I.C. ROHM	
IC841	YM3805-H	I.C. YAMAHA	
IC842	LC3517BS-15	I.C. SANYO	
IC843	MS209P	I.C. MITSUBISHI	
IC871	VC4580D	I.C. DAINICHI	
IC872	VC4580D	I.C. DAINICHI	
IC873	YC7881-C	I.C. SANYO	
IC901	HD404019RB14S	I.C. HITACHI	
IC921	HD614081SC34	I.C. HITACHI	
IC931	BA6218	I.C. ROHM	
IC932	BA6218	I.C. ROHM	
IC933	BA6218	I.C. ROHM	
IC934	BA6218	I.C. ROHM	

△ HSA/PETY PARTS

Diodes

△ ITEM	PART NUMBER	DESCRIPTION	AREA
D791	1SS133	SILICON ROHM	
D801	1SS133	SILICON ROHM	
D841	MTZ5.1JB	ZENER ROHM	
D842	SVC321-AW	VARICAP SANYO	
D871	1SS133	SILICON ROHM	
D872	1SS133	SILICON ROHM	
D873	MTZ5.1JB	ZENER ROHM	
D901	1SS133	SILICON ROHM	
D921	MTZ6.2JC	ZENER ROHM	
D932	1SR139-200	SILICON ROHM	
D933	1SR139-200	SILICON ROHM	
D940	1SS133	SILICON ROHM	
D951	1SS133	SILICON ROHM	
D952	1SS133	SILICON ROHM	
D953	1SS133	SILICON ROHM	
D954	1SS133	SILICON ROHM	
D955	1SS133	SILICON ROHM	
D956	1SS133	SILICON ROHM	
D957	1SS133	SILICON ROHM	
D972	1SS133	SILICON ROHM	
D973	1SS133	SILICON ROHM	

△ HSA/PETY PARTS

Capacitors

△ ITEM	PART NUMBER	DESCRIPTION	AREA
C501	QCS21HJ-101	100PF 50V CERAMIC	A
C501	QCS21HJ-101	100PF 50V CERAMIC	B
C501	QCS21HJ-331	330PF 50V CERAMIC	C
C501	QCS21HJ-331	330PF 50V CERAMIC	D
C502	QCS21HJ-101	100PF 50V CERAMIC	A
C502	QCS21HJ-101	100PF 50V CERAMIC	B
C502	QCS21HJ-331	330PF 50V CERAMIC	C
C502	QCS21HJ-331	330PF 50V CERAMIC	D
C503	QCF21HP-473	0.047MF 50V CERAMIC	
C504	QCB1HK-561	560PF 50V CERAMIC	
C505	QCHB1EZ-223	0.022MF 25V CERAMIC	
C509	QETB1HM-475	4.7MF 50V ELECTRO	
C510	QETB1HM-475	4.7MF 50V ELECTRO	
C511	QETB1HM-475	4.7MF 50V ELECTRO	
C512	QETB1HM-475	4.7MF 50V ELECTRO	
C513	QETB1HM-475	4.7MF 50V ELECTRO	
C514	QETB1HM-475	4.7MF 50V ELECTRO	
C515	QETB1HM-475	4.7MF 50V ELECTRO	
C516	QETB1HM-475	4.7MF 50V ELECTRO	
C531	QCS21HJ-101	100PF 50V CERAMIC	A
C531	QCS21HJ-101	100PF 50V CERAMIC	B
C531	QCS21HJ-271	270PF 50V CERAMIC	C
C531	QCS21HJ-271	270PF 50V CERAMIC	D
C532	QCS21HJ-101	100PF 50V CERAMIC	A
C532	QCS21HJ-101	100PF 50V CERAMIC	B
C532	QCS21HJ-271	270PF 50V CERAMIC	C
C532	QCS21HJ-271	270PF 50V CERAMIC	D
C533	QETB1HM-225	2.2MF 50V ELECTRO	
C534	QETB1HM-225	2.2MF 50V ELECTRO	
C535	QCF21HP-473	0.047MF 50V CERAMIC	
C536	QCF21HP-473	0.047MF 50V CERAMIC	
C537	QCS21HJ-101	100PF 50V CERAMIC	
C538	QCS21HJ-101	100PF 50V CERAMIC	
C539	QETB1EM-226	22MF 25V ELECTRO	
C540	QETB1EM-226	22MF 25V ELECTRO	
C541	QCY21HK-682	6800PF 50V CERAMIC	
C542	QCY21HK-682	6800PF 50V CERAMIC	
C543	QCY21HK-182	1800PF 50V CERAMIC	
C544	QCY21HK-182	1800PF 50V CERAMIC	
C545	QETB1HM-225	2.2MF 50V ELECTRO	
C546	QETB1HM-225	2.2MF 50V ELECTRO	
C547	QETB1CM-476	47MF 16V ELECTRO	
C548	QETB1CM-476	47MF 16V ELECTRO	
C701	QETB1AM-477	470MF 10V ELECTRO	
C702	QETB1AM-477	470MF 10V ELECTRO	
C703	QETB1CM-476	47MF 16V ELECTRO	
C704	QETB1CM-476	47MF 16V ELECTRO	
C706	QETB1AM-107	100MF 10V ELECTRO	
C708	QCHB1EZ-223	0.022MF 25V CERAMIC	
C709	QCHB1EZ-223	0.022MF 25V CERAMIC	
C711	QFLB1HJ-472	4700PF 50V MYLAR	
C712	QFLB1HJ-472	4700PF 50V MYLAR	
C713	QCHB1EZ-223	0.022MF 25V CERAMIC	
C714	QCSB1HK-3R9	3.9PF 50V CERAMIC	
C715	QCB1HK-471	470PF 50V CERAMIC	
C716	QETB1EM-106	10MF 25V ELECTRO	
C717	QETB1CM-476	47MF 16V ELECTRO	
C718	QCSB1HJ-680	68PF 50V CERAMIC	
C719	QFLB1HJ-154	0.15MF 50V MYLAR	
C721	QCSB1HJ-470	47PF 50V CERAMIC	

△ HSA/PETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C722	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C723	QETB1EM-106	10MF	25V	ELECTRO	
	C724	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C725	QFV81HJ-474	0.47MF	50V	T.FILM	
	C726	QCSB1HJ-180	18PF	50V	CERAMIC	
	C731	QFLB1HJ-183	0.018MF	50V	MYLAR	
	C732	QCBB1HK-271	270PF	50V	CERAMIC	
	C733	QFLB1HJ-393	0.039MF	50V	MYLAR	
	C734	QETB1CM-226	22MF	16V	ELECTRO	
	C735	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C736	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C761	QEN51HM-225	2.2MF	50V	NON POLE	
	C762	QETB1CM-226	22MF	16V	ELECTRO	
	C763	QETB0JM-227	220MF	6.3V	ELECTRO	
	C764	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C765	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C781	QFLB1HJ-272	2700PF	50V	MYLAR	
	C782	QCBB1HK-101	100PF	50V	CERAMIC	
	C783	QEN51HM-225	2.2MF	50V	NON POLE	
	C784	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C785	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C791	QETB1HM-475	4.7MF	50V	ELECTRO	
	C801	QCT26CH-151	150PF	50V	CERAMIC	
	C802	QCT26CH-121	120PF	50V	CERAMIC	
	C803	QFLB1HJ-223	0.022MF	50V	MYLAR	
	C805	QCSB1HJ-470	47PF	50V	CERAMIC	
	C806	QEN51HM-225	2.2MF	50V	NON POLE	
	C807	QFLB1HJ-563	0.056MF	50V	MYLAR	
	C808	QETB1CM-476	47MF	16V	ELECTRO	
	C809	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C810	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C811	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C812	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C813	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C815	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C816	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C841	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C842	QFV81HJ-474	0.47MF	50V	T.FILM	
	C843	QCGB1HK-102	1000PF	50V	CERAMIC	
	C844	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C845	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C846	QCSB1HJ-100	10PF	50V	CERAMIC	
	C847	QCSB1HJ-100	10PF	50V	CERAMIC	
	C848	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C849	QFPB1HJ-151	150PF	50V	POLY	
	C850	QFPB1HJ-471	470PF	50V	POLY	
	C851	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C852	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C853	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C854	QETB1HM-474	0.47MF	50V	ELECTRO	
	C857	QFLB1HJ-124	0.12MF	50V	MYLAR	
	C858	QCZ0202-155	1.5MF	25V	CERAMIC	
	C859	QETB1AM-107	100MF	10V	ELECTRO	
	C861	QCBB1HK-101	100PF	50V	CERAMIC	
	C862	QETB1CM-107	100MF	16V	ELECTRO	
	C863	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C864	QETB1EM-106	10MF	25V	ELECTRO	
	C865	QETB1HM-105	1MF	50V	ELECTRO	
	C871	QFLB1HJ-392	3900PF	50V	MYLAR	
	C872	QFLB1HJ-392	3900PF	50V	MYLAR	
	C873	QFLB1HJ-683	0.068MF	50V	MYLAR	
	C874	QFLB1HJ-683	0.068MF	50V	MYLAR	
	C875	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C876	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C877	QFLB1HJ-222	2200PF	50V	MYLAR	
	C878	QFLB1HJ-222	2200PF	50V	MYLAR	
	C879	QEK51EM-476	47MF	25V	ELECTRO	
	C880	QEK51EM-476	47MF	25V	ELECTRO	
	C881	QFLB1HJ-562	5600PF	50V	MYLAR	
	C882	QFLB1HJ-562	5600PF	50V	MYLAR	
	C883	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C884	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C885	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C886	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C887	QFLB1HJ-102	1000PF	50V	MYLAR	
	C890	QETB1AM-107	100MF	10V	ELECTRO	
	C891	QCZ0202-155	1.5MF	25V	CERAMIC	
	C893	EEZ2505-107	100MF		ELECTRO	
	C894	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C895	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C896	EEZ2505-107	100MF		ELECTRO	
	C901	QER61HM-226	22MF	50V	ELECTRO	
	C902	QEK51HM-475	4.7MF	50V	ELECTRO	
	C903	QEK51HM-475	4.7MF	50V	ELECTRO	
	C904	QETB1AM-107	100MF	10V	ELECTRO	
	C905	QCZ0202-155	1.5MF	25V	CERAMIC	
	C906	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C911	QCZ0202-155	1.5MF	25V	CERAMIC	
	C921	QCF21HP-223	0.022MF	50V	CERAMIC	
	C922	QCF21HP-223	0.022MF	50V	CERAMIC	
	C923	QETB1HM-105	1MF	50V	ELECTRO	
	C924	QETB1AM-476	47MF	10V	ELECTRO	
	C925	QETB1AM-476	47MF	10V	ELECTRO	
	C926	QCF21HP-103	0.01MF	50V	CERAMIC	
	C930	QCF21HP-473	0.047MF	50V	CERAMIC	

Δ IS SAFETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C935	QETB1AM-476	47MF	10V	ELECTRO	
	C936	QCZ0202-155	1.5MF	25V	CERAMIC	
	C940	QCF21HP-103	0.01MF	50V	CERAMIC	

Δ IS SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R501	QRD167J-272	2.7K	1/6W	CARBON	
	R502	QRD167J-272	2.7K	1/6W	CARBON	
	R503	QRD167J-104	100K	1/6W	CARBON	
	R504	QRD167J-104	100K	1/6W	CARBON	
	R505	QRD167J-183	18K	1/6W	CARBON	
	R506	QRD167J-183	18K	1/6W	CARBON	
	R507	QRD167J-683	68K	1/6W	CARBON	
	R508	QRD167J-683	68K	1/6W	CARBON	
	R509	QRD167J-222	2.2K	1/6W	CARBON	
	R510	QRD167J-222	2.2K	1/6W	CARBON	
	R511	QRD167J-104	100K	1/6W	CARBON	
	R512	QRD167J-104	100K	1/6W	CARBON	
	R513	QRD167J-332	3.3K	1/6W	CARBON	
	R514	QRD167J-332	3.3K	1/6W	CARBON	
	R515	QRD167J-682	6.8K	1/6W	CARBON	
	R516	QRD167J-682	6.8K	1/6W	CARBON	
	R517	QRD167J-104	100K	1/6W	CARBON	
	R518	QRD167J-104	100K	1/6W	CARBON	
	R519	QRD167J-104	100K	1/6W	CARBON	
	R520	QRD167J-104	100K	1/6W	CARBON	
	R521	QRD167J-223	22K	1/6W	CARBON	
	R522	QRD167J-223	22K	1/6W	CARBON	
	R523	QRD167J-104	100K	1/6W	CARBON	
	R524	QRD167J-104	100K	1/6W	CARBON	
	R525	QRD167J-104	100K	1/6W	CARBON	
	R526	QRD167J-104	100K	1/6W	CARBON	
	R531	QRD167J-104	100K	1/6W	CARBON	
	R532	QRD167J-104	100K	1/6W	CARBON	
	R533	QRD167J-104	100K	1/6W	CARBON	
	R534	QRD167J-104	100K	1/6W	CARBON	
	R535	QRD167J-474	470K	1/6W	CARBON	
	R536	QRD167J-474	470K	1/6W	CARBON	
	R537	QRD167J-393	39K	1/6W	CARBON	
	R538	QRD167J-393	39K	1/6W	CARBON	
	R539	QRD167J-911	910	1/6W	CARBON	
	R540	QRD167J-911	910	1/6W	CARBON	
Δ	R541	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R541	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R541	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R541	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R542	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R542	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R542	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R542	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R547	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R548	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R701	PTH61G25AR4R7M			FUSIBLE RE SI	
Δ	R702	PTH61G25AR4R7M			FUSIBLE RE SI	
Δ	R703	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R703	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R703	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R703	QRZ0077-100	10	1/4W	FUSIBLE	D
Δ	R704	QRD14CJ-100S	10	1/4W	UNF. CARBON	A
Δ	R704	QRZ0077-100	10	1/4W	FUSIBLE	B
Δ	R704	QRZ0077-100	10	1/4W	FUSIBLE	C
Δ	R704	QRZ0077-100	10	1/4W	FUSIBLE	D
	R706	QRD167J-472	4.7K	1/6W	CARBON	
	R708	QRD167J-472	4.7K	1/6W	CARBON	
	R710	QRD167J-122	1.2K	1/6W	CARBON	
	R711	QRD167J-183	18K	1/6W	CARBON	
	R712	QRD167J-432	4.3K	1/6W	CARBON	
	R713	QRD167J-391	390	1/6W	CARBON	
	R714	QRD167J-221	220	1/6W	CARBON	
	R715	QRD167J-152	1.5K	1/6W	CARBON	
	R716	QRD167J-561	560	1/6W	CARBON	
	R717	QRD167J-561	560	1/6W	CARBON	
	R718	QRD167J-562	5.6K	1/6W	CARBON	
	R719	QRD167J-152	1.5K	1/6W	CARBON	
	R720	QRD167J-271	270	1/6W	CARBON	
	R721	QRD167J-471	470	1/6W	CARBON	
	R722	QRD167J-472	4.7K	1/6W	CARBON	
	R723	QRD167J-154	150K	1/6W	CARBON	
	R724	QRD167J-562	5.6K	1/6W	CARBON	
	R725	QRD167J-103	10K	1/6W	CARBON	
	R726	QRD167J-104	100K	1/6W	CARBON	
	R727	QRD167J-183	18K	1/6W	CARBON	
	R728	QRD167J-562	5.6K	1/6W	CARBON	
	R731	QRD167J-104	100K	1/6W	CARBON	
	R732	QRD167J-104	100K	1/6W	CARBON	
	R733	QRD167J-394	390K	1/6W	CARBON	

Δ IS SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R734	QRD167J-394	390K	1/6W	CARBON	
	R735	QRD167J-121	120	1/6W	CARBON	
	R736	QRD167J-182	1.8K	1/6W	CARBON	
	R737	QRD167J-681	680	1/6W	CARBON	
	R738	QRD167J-473	47K	1/6W	CARBON	
	R739	QRD167J-331	330	1/6W	CARBON	
	R740	QRD167J-333	33K	1/6W	CARBON	
	R741	QRD167J-273	27K	1/6W	CARBON	
	R742	QRD167J-394	390K	1/6W	CARBON	
	R743	QRD167J-105	1M	1/6W	CARBON	
	R744	QRD167J-470	47	1/6W	CARBON	
	R745	QRD167J-473	47K	1/6W	CARBON	
	R746	QRD167J-272	2.7K	1/6W	CARBON	
	R747	QRD167J-682	6.8K	1/6W	CARBON	
	R748	QRD167J-104	100K	1/6W	CARBON	
	R749	QRD167J-562	5.6K	1/6W	CARBON	
	R750	QRD167J-105	1M	1/6W	CARBON	
	R751	QRD167J-105	1M	1/6W	CARBON	
	R752	QRD167J-104	100K	1/6W	CARBON	
	R753	QRD167J-562	5.6K	1/6W	CARBON	
	R754	QRD167J-104	100K	1/6W	CARBON	
	R755	QRD167J-103	10K	1/6W	CARBON	
	R756	QRD167J-470	47	1/6W	CARBON	
	R757	QRD167J-183	18K	1/6W	CARBON	
	R759	QRD167J-680	68	1/6W	CARBON	
	R760	QRD167J-680	68	1/6W	CARBON	
	R761	QRD167J-564	560K	1/6W	CARBON	
	R762	QRD167J-224	220K	1/6W	CARBON	
	R763	QRD167J-393	39K	1/6W	CARBON	
	R764	QRD167J-224	220K	1/6W	CARBON	
	R765	QRD167J-562	5.6K	1/6W	CARBON	
	R766	QRD167J-392	3.9K	1/6W	CARBON	
	R767	QRD167J-680	68	1/6W	CARBON	
	R768	QRD167J-103	10K	1/6W	CARBON	
	R769	QRD167J-102	1K	1/6W	CARBON	
	R770	QRD167J-471	470	1/6W	CARBON	
	R771	QRD167J-683	68K	1/6W	CARBON	
	R772	QRD167J-183	18K	1/6W	CARBON	
	R773	QRD167J-273	27K	1/6W	CARBON	
	R774	QRD167J-470	47	1/6W	CARBON	
	R775	QRD167J-335	3.3M	1/6W	CARBON	
	R776	QRD167J-680	68	1/6W	CARBON	
	R781	QRD167J-684	680K	1/6W	CARBON	
	R782	QRD167J-684	680K	1/6W	CARBON	
	R783	QRD167J-823	82K	1/6W	CARBON	
	R784	QRD167J-470	47	1/6W	CARBON	
	R785	QRD167J-683	68K	1/6W	CARBON	
	R786	QRD167J-123	12K	1/6W	CARBON	
	R787	QRD167J-152	1.5K	1/6W	CARBON	
	R788	QRD167J-2R2	2.2	1/6W	CARBON	
	R790	QRD167J-684	680K	1/6W	CARBON	
	R791	QRD167J-513	51K	1/6W	CARBON	
	R792	QRD167J-513	51K	1/6W	CARBON	
	R793	QRD167J-683	68K	1/6W	CARBON	
	R794	QRD167J-683	68K	1/6W	CARBON	
	R795	QRD167J-221	220	1/6W	CARBON	
	R801	QRD167J-563	56K	1/6W	CARBON	
	R802	QRD167J-563	56K	1/6W	CARBON	
	R803	QRD167J-222	2.2K	1/6W	CARBON	
	R804	QRD167J-681	680	1/6W	CARBON	
	R805	QVPA601-202A	2K		VARIABLE	
	R806	QRD167J-561	560	1/6W	CARBON	
	R807	QRD167J-334	330K	1/6W	CARBON	
	R808	QRD167J-222	2.2K	1/6W	CARBON	
	R809	QVPA601-154A	150K		VARIABLE	
	R810	QRD167J-223	22K	1/6W	CARBON	
	R811	QRD167J-682	6.8K	1/6W	CARBON	
	R812	QRD167J-103	10K	1/6W	CARBON	
	R813	QRD167J-562	5.6K	1/6W	CARBON	
	R814	QRD167J-562	5.6K	1/6W	CARBON	
	R815	QRD167J-562	5.6K	1/6W	CARBON	
	R816	QRD167J-562	5.6K	1/6W	CARBON	
	R817	QRD167J-183	18K	1/6W	CARBON	
	R819	QRD167J-103	10K	1/6W	CARBON	
	R820	QRD167J-224	220K	1/6W	CARBON	
	R821	QRD167J-103	10K	1/6W	CARBON	
	R822	QRD167J-474	470K	1/6W	CARBON	
	R823	QRD167J-434	430K	1/6W	CARBON	
	R824	QRD167J-472	4.7K	1/6W	CARBON	
	R825	QRD167J-103	10K	1/6W	CARBON	
	R827	QRD167J-104	100K	1/6W	CARBON	
	R828	QRD167J-104	100K	1/6W	CARBON	
	R829	QRD167J-681	680	1/6W	CARBON	
	R830	QRD167J-183	18K	1/6W	CARBON	
	R831	QRD167J-104	100K	1/6W	CARBON	
	R832	QRD167J-102	1K	1/6W	CARBON	
	R833	QRD167J-562	5.6K	1/6W	CARBON	
	R834	QRD167J-183	18K	1/6W	CARBON	
	R835	QRD167J-183	18K	1/6W	CARBON	
	R836	QRD167J-394	390K	1/6W	CARBON	
	R837	QRD167J-470	47	1/6W	CARBON	
	R838	QRD167J-562	5.6K	1/6W	CARBON	
	R839	QRD167J-183	18K	1/6W	CARBON	
	R840	QRD167J-102	1K	1/6W	CARBON	
	R841	QRD167J-682	6.8K	1/6W	CARBON	

Δ : SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R842	QRD167J-181	180	1/6W	CARBON	
	R843	QRD167J-331	330	1/6W	CARBON	
	R844	QRD167J-272	2.7K	1/6W	CARBON	
	R845	QRD167J-471	470	1/6W	CARBON	
	R846	QRD167J-680	68	1/6W	CARBON	
Δ	R847	QRV144F-1602	16K	1/4W	M.FILM	
Δ	R848	QRV144F-1502	15K	1/4W	M.FILM	
	R849	QRD167J-183	18K	1/6W	CARBON	
	R850	QRD167J-472	4.7K	1/6W	CARBON	
	R851	QRD167J-183	18K	1/6W	CARBON	
	R852	QRD167J-102	1K	1/6W	CARBON	
	R853	QRD167J-152	1.5K	1/6W	CARBON	
	R854	QRD167J-104	100K	1/6W	CARBON	
	R855	QRD167J-821	820	1/6W	CARBON	
	R856	QRD167J-472	4.7K	1/6W	CARBON	
	R857	QRD167J-471	470	1/6W	CARBON	
	R858	QRD167J-682	6.8K	1/6W	CARBON	
	R859	QRD167J-105	1M	1/6W	CARBON	
	R861	QRD167J-103	10K	1/6W	CARBON	
	R862	QRD167J-272	2.7K	1/6W	CARBON	
	R863	QRD167J-102	1K	1/6W	CARBON	
	R864	QRD167J-271	270	1/6W	CARBON	
	R865	QRD167J-103	10K	1/6W	CARBON	
	R866	QRD167J-562	5.6K	1/6W	CARBON	
	R867	QRD167J-472	4.7K	1/6W	CARBON	
	R868	QRD167J-822	8.2K	1/6W	CARBON	
	R869	QRD167J-103	10K	1/6W	CARBON	
	R870	QRD167J-101	100	1/6W	CARBON	
	R871	QRD167J-472	4.7K	1/6W	CARBON	
	R872	QRD167J-472	4.7K	1/6W	CARBON	
	R873	QRD167J-751	750	1/6W	CARBON	
	R874	QRD167J-751	750	1/6W	CARBON	
	R875	QRD167J-471	470	1/6W	CARBON	
	R876	QRD167J-471	470	1/6W	CARBON	
	R877	QRD167J-221	220	1/6W	CARBON	
	R878	QRD167J-221	220	1/6W	CARBON	
	R879	QRD167J-105	1M	1/6W	CARBON	
	R880	QRD167J-105	1M	1/6W	CARBON	
	R881	QRD167J-392	3.9K	1/6W	CARBON	
	R882	QRD167J-392	3.9K	1/6W	CARBON	
	R883	QRD167J-821	820	1/6W	CARBON	
	R884	QRD167J-821	820	1/6W	CARBON	
	R885	QRD167J-821	820	1/6W	CARBON	
	R886	QRD167J-821	820	1/6W	CARBON	
	R887	QRD167J-272	2.7K	1/6W	CARBON	
	R888	QRD167J-272	2.7K	1/6W	CARBON	
	R889	QRD167J-273	27K	1/6W	CARBON	
	R890	QRD167J-273	27K	1/6W	CARBON	
	R891	QRD167J-561	560	1/6W	CARBON	
	R892	QRD167J-561	560	1/6W	CARBON	
	R893	QRD167J-104	100K	1/6W	CARBON	
	R894	QRD167J-105	1M	1/6W	CARBON	
	R895	QRD167J-681	680	1/6W	CARBON	
	R901	QRD167J-105	1M	1/6W	CARBON	
	R902	QRD167J-473	47K	1/6W	CARBON	
	R903	QRD167J-473	47K	1/6W	CARBON	
	R904	QRD167J-103	10K	1/6W	CARBON	
	R921	QRD167J-103	10K	1/6W	CARBON	
	R922	QRD167J-105	1M	1/6W	CARBON	
	R923	QRD167J-104	100K	1/6W	CARBON	
	R924	QRD167J-105	1M	1/6W	CARBON	
	R925	QRD167J-223	22K	1/6W	CARBON	
	R926	QRD167J-102	1K	1/6W	CARBON	
	R930	QRD167J-184	180K	1/6W	CARBON	
	R931	QRD167J-224	220K	1/6W	CARBON	
	R932	QRD167J-224	220K	1/6W	CARBON	
	R933	QRD167J-224	220K	1/6W	CARBON	
	R934	QRD167J-183	18K	1/6W	CARBON	
	R935	QRD167J-153	15K	1/6W	CARBON	
	R936	QRD167J-683	68K	1/6W	CARBON	
	R940	QRD167J-102	1K	1/6W	CARBON	
	R941	QRD167J-102	1K	1/6W	CARBON	
	R942	QRD167J-103	10K	1/6W	CARBON	
	R943	QRD167J-103	10K	1/6W	CARBON	
	R945	QRD167J-103	10K	1/6W	CARBON	
	R946	QRD167J-103	10K	1/6W	CARBON	
	R947	QRD167J-103	10K	1/6W	CARBON	
	R948	QRD167J-103	10K	1/6W	CARBON	
	R949	QRD167J-472	4.7K	1/6W	CARBON	
	R950	QRD167J-271	270	1/6W	CARBON	
	R952	QRD167J-271	270	1/6W	CARBON	
	R953	QRD167J-271	270	1/6W	CARBON	
	R954	QRD167J-391	390	1/6W	CARBON	
	R955	QRD167J-391	390	1/6W	CARBON	
	R956	QRD167J-391	390	1/6W	CARBON	
	R961	QRD167J-103	10K	1/6W	CARBON	
	R962	QRD167J-103	10K	1/6W	CARBON	
	R963	QRD167J-103	10K	1/6W	CARBON	
	R964	QRD167J-103	10K	1/6W	CARBON	
	R965	QRD167J-103	10K	1/6W	CARBON	
	R966	QRD167J-103	10K	1/6W	CARBON	
	R970	QRD167J-105	1M	1/6W	CARBON	
	R971	QRD167J-103	10K	1/6W	CARBON	
	R972	QRD167J-151	150	1/6W	CARBON	
	R973	QRD167J-153	15K	1/6W	CARBON	

Δ : SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	R974	QRD167J-222	2.2K 1/6W CARBON	
	R975	QRD167J-103	10K 1/6W CARBON	
	R976	QRD167J-471	470 1/6W CARBON	
	VR934	QVPA603-203A	20K VARIABLE	
	VR935	QVPA603-103A	10K VARIABLE	

Δ (SAFETY) PARTS

Others

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10080-004	PRINTED BOARD	
		EWT011-078	TERMINAL WIRE	
		EWT011-133	TERMINAL WIRE	
		EWT011-137	TERMINAL WIRE	
		E306951-221SS	FL DISPLAY HOLDER	
		E3400-420	FELT SPACER	
		E70859-001	EARTH PLATE	
	J511	EMN00TV-405A	4P PIN JACK	
	J521	VMC0107-007	CONNECT TERMINAL(7PIN)	
	J750	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J802	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J925	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J943	VMC0107-008	CONNECT TERMINAL(8PIN)	
	J944	VMC0107-008	CONNECT TERMINAL(8PIN)	
	L841	ENZ3001-002	OSCILLATOR COIL	
	P701	EMV5109-010B	PLUG ASSY(10PIN)	
	P702	EMV7123-013R	CONNECTOR(13PIN)	
	P711	VMC0193-S09	CONNECT TERMINAL(9PIN)	
	P712	VMC0193-S06	CONNECT TERMINAL(6PIN)	
	P801	VMC0107-005	CONNECT TERMINAL(5PIN)	
	P811	VMC0193-P09	CONNECT TERMINAL(9PIN)	
	P812	VMC0193-P06	CONNECT TERMINAL(6PIN)	
	S901	ESP0001-018	TACT SWITCH(STOP/CLEAR)	
	S902	ESP0001-018	TACT SWITCH(▶▶)	
	S903	ESP0001-018	TACT SWITCH(PLAY/PAUSE)	
	S904	ESP0001-018	TACT SWITCH(OPEN/CLOSE)	
	S905	ESP0001-018	TACT SWITCH(DISPLAY)	
	S906	ESP0001-018	TACT SWITCH(A.EDIT)	
	S907	ESP0001-018	TACT SWITCH(◀◀)	
	S908	ESP0001-018	TACT SWITCH(FADE)	

Δ (SAFETY) PARTS

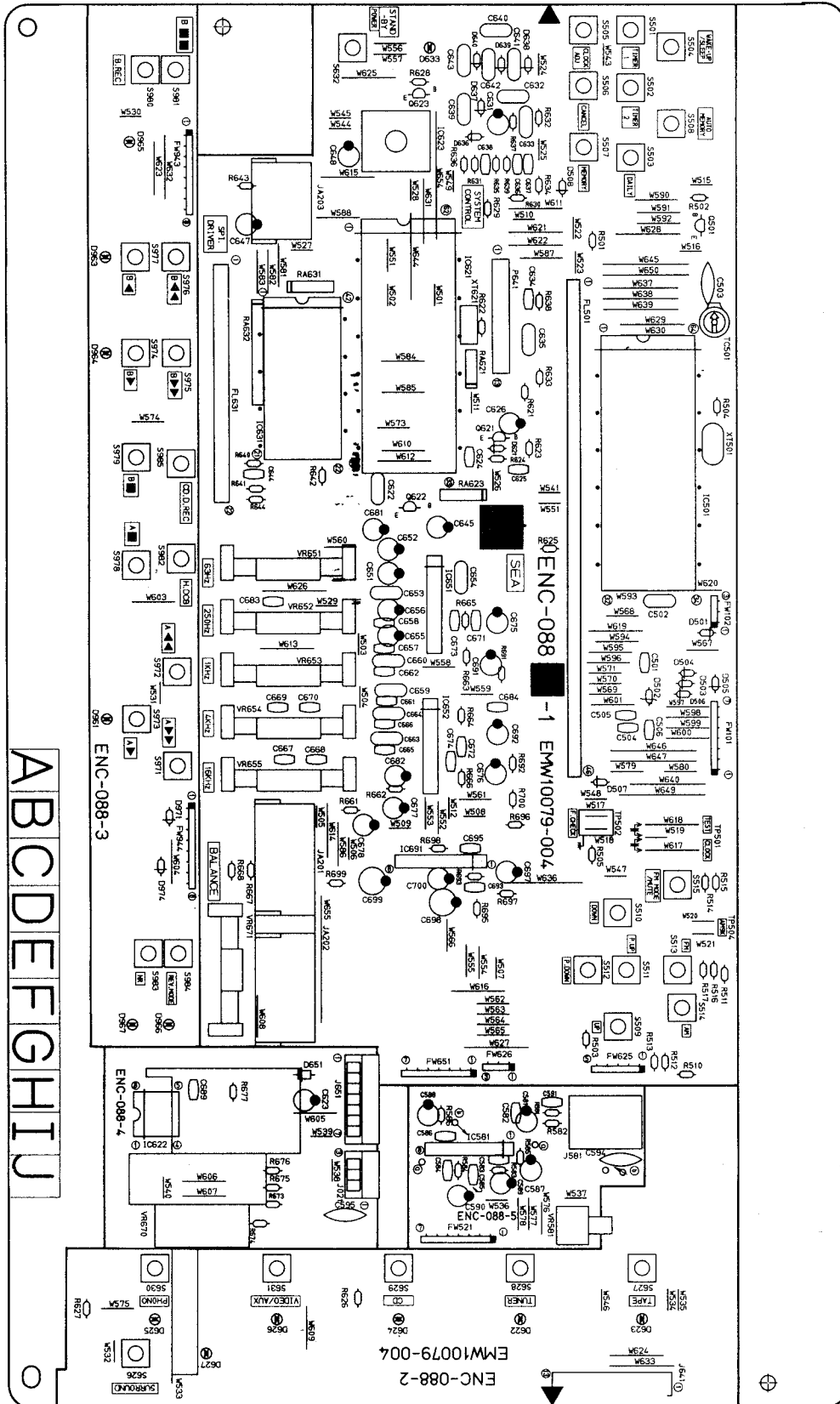
Others

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	S909	ESP0001-018	TACT SWITCH(RBPEAT)	
	S910	ESP0001-018	TACT SWITCH(SIDE A/B)	
	S911	ESP0001-018	TACT SWITCH(RANDOM)	
	S951	ESB1100-003	LEAF SWITCH(RBV RBC)	
	S952	ESB1100-003	LEAF SWITCH(B CRO2)	
	S953	ESB1100-003	LEAF SWITCH(B PACK)	
	S955	ESB1100-003	LEAF SWITCH(PWD RBC)	
	S956	ESB1100-003	LEAF SWITCH(A PACK)	
	S957	ESB1100-003	LEAF SWITCH(A CRO2)	
	X841	ECX0086-436EF	RESONATOR	
	CF901	ECX0004-194KM	RESONATOR	
	FL901	ELU0001-114	FL TUBE	
	FS921	EX0020005N10S	SPACER	
	FS923	EX0010005N10S	SPACER	
	FS924	EX0015005N10S	SPACER	
	FW750	EWR33B-30LST	FLAT WIRE(3PIN)	
	FW751	EWR36B-25LST	FLAT WIRE(6PIN)	
	FW802	EWR33B-45LST	FLAT WIRE(3PIN)	
	FW921	EWR3AB-25LST	FLAT WIRE(10PIN)	
	FW922	EWR37B-25LST	FLAT WIRE(7PIN)	
	FW931	EWR37B-13LST	FLAT WIRE(7PIN)	
	FW932	EWR37B-16LST	FLAT WIRE(7PIN)	
	FW933	EWR38B-16LST	FLAT WIRE(8PIN)	
	FW934	EWR34B-13LST	FLAT WIRE(4PIN)	
	FW941	EWR35B-20SST	FLAT WIRE(5PIN)	
	FW942	EWR34B-13SST	FLAT WIRE(4PIN)	
	JA501	EMV7125-014R	CONNECTOR(14PIN)	
	XT921	ECX0004-194KM	RESONATOR	

Δ (SAFETY) PARTS

■ ENC-088 □ Front PC Board Ass'y

Note : ENC-088 □ varies according to the areas employed. See note (1) when placing an order.



Note(1)

PC Board Ass'y	Designated Areas
ENC-088 A	the U.S.A. , Canada
ENC-088 B	Universal Type
ENC-088 C	Australia
ENC-088 D	the U.K. , Continental Europe , East Europe
ENC-088 E	Italy
ENC-088 F	Poland , Soviet Union and Rumania
ENC-088 G	Germany

Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q501	DTA114YS	SILICON	ROHM	
	Q621	DTC114YS	SILICON	ROHM	
	Q622	DTA114YS	SILICON	ROHM	

Δ ISIAPIETTY IPIARTIS

I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC501	HD614089SC35	I.C.	HITACHI	
	IC581	BA15218N	I.C.	ROHM	
	IC621	HD614043SA94	I.C.	HITACHI	
	IC622	LB1639-CV	I.C.	SANYO	
	IC623	SPS-420-1	I.C.	SANYO	
	IC631	LC7566	I.C.	SANYO	
	IC651	BA3812L	I.C.	ROHM	
	IC652	BA3812L	I.C.	ROHM	
	IC691	BA15218N	I.C.	ROHM	

Δ ISIAPIETTY IPIARTIS

Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	D501	1SS133	SILICON	ROHM	B
	D502	MTZ5.6JC	ZENER	ROHM	
	D503	1SS133	SILICON	ROHM	C
	D504	1SS133	SILICON	ROHM	A
	D504	1SS133	SILICON	ROHM	F
	D505	1SS133	SILICON	ROHM	B
	D505	1SS133	SILICON	ROHM	F
	D506	1SS133	SILICON	ROHM	A
	D506	1SS133	SILICON	ROHM	E
	D507	1SS133	SILICON	ROHM	
	D508	1SS133	SILICON	ROHM	
	D621	1SS133	SILICON	ROHM	
	D622	SLR-34VC3F	L.E.D.	ROHM	
	D623	SLR-34VC3F	L.E.D.	ROHM	
	D624	SLR-34VC3F	L.E.D.	ROHM	
	D625	SLR-34VC3F	L.E.D.	ROHM	
	D626	SLR-34VC3F	L.E.D.	ROHM	
	D627	SLR-34DC3F	L.E.D.	ROHM	
	D633	SLR-34VC3F	L.E.D.	ROHM	
	D636	1SS133	SILICON	ROHM	
	D637	1SS133	SILICON	ROHM	
	D638	1SS133	SILICON	ROHM	
	D639	1SS133	SILICON	ROHM	
	D640	1SS133	SILICON	ROHM	
	D651	1SR139-200	SILICON	ROHM	
	D961	SLR-34MC3F	L.E.D.	ROHM	
	D963	SLR-34MC3F	L.E.D.	ROHM	
	D964	SLR-34MC3F	L.E.D.	ROHM	
	D965	SLR-34VC3F	L.E.D.	ROHM	
	D966	SLR-34VC3F	L.E.D.	ROHM	
	D967	SLR-34VC3F	L.E.D.	ROHM	
	D971	1SS133	SILICON	ROHM	
	D974	1SS133	SILICON	ROHM	

Δ ISIAPIETTY IPIARTIS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C501	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C502	QCZ0202-155	1.5MF	25V	CERAMIC	
	C503	QCT26CH-120	12PF	50V	CERAMIC	
	C504	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C505	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C506	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C581	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C582	QCGB1HK-102	1000PF	50V	CERAMIC	
	C583	QCBB1HK-101	100PF	50V	CERAMIC	
	C584	QCBB1HK-101	100PF	50V	CERAMIC	
	C585	QCBB1HK-101	100PF	50V	CERAMIC	
	C586	QCBB1HK-101	100PF	50V	CERAMIC	
	C587	QER51EM-106	10MF	25V	ELECTRO	
	C588	QER51EM-106	10MF	25V	ELECTRO	
	C589	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C590	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	
	C594	QCF21HP-473	0.047MF	50V	CERAMIC	
	C595	QCF21HP-473	0.047MF	50V	CERAMIC	
	C622	QCZ0202-155	1.5MF	25V	CERAMIC	
	C623	QER60JM-476	47MF	6.3V	ELECTRO	
	C624	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C625	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C626	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C631	QER51HM-225G	2.2MF	50V	ELECTRO	
	C632	QFV81HJ-104	0.1MF	50V	T.FILM	
	C633	QFV81HJ-474	0.47MF	50V	T.FILM	
	C634	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C635	QFV81HJ-333	0.033MF	50V	T.FILM	
	C636	QCXB1CM-222	2200PF	16V	CERAMIC	
	C637	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C638	QCBB1HK-181	180PF	50V	CERAMIC	
	C639	QFV81HJ-683	0.068MF	50V	T.FILM	
	C640	QFV81HJ-683	0.068MF	50V	T.FILM	
	C641	QFV81HJ-683	0.068MF	50V	T.FILM	
	C642	QFV81HJ-683	0.068MF	50V	T.FILM	
	C643	QFV81HJ-683	0.068MF	50V	T.FILM	
	C644	QCBB1HK-151	150PF	50V	CERAMIC	
	C645	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C647	QER60JM-476	47MF	6.3V	ELECTRO	
	C648	QEK51HM-226	22MF	50V	ELECTRO	
	C651	QER51HM-225G	2.2MF	50V	ELECTRO	
	C652	QER51HM-225G	2.2MF	50V	ELECTRO	
	C653	QFV81HJ-273	0.027MF	50V	T.FILM	
	C654	QFV81HJ-273	0.027MF	50V	T.FILM	
	C655	QER51HM-474G	0.47MF	50V	ELECTRO	
	C656	QER51HM-474G	0.47MF	50V	ELECTRO	
	C657	QCVB1CM-822	8200PF	16V	CERAMIC	
	C658	QCVB1CM-822	8200PF	16V	CERAMIC	
	C659	QFV81HJ-124	0.12MF	50V	T.FILM	
	C660	QFV81HJ-124	0.12MF	50V	T.FILM	
	C661	QCXB1CM-222	2200PF	16V	CERAMIC	
	C662	QCXB1CM-222	2200PF	16V	CERAMIC	
	C663	QFV81HJ-333	0.033MF	50V	T.FILM	
	C664	QFV81HJ-333	0.033MF	50V	T.FILM	
	C665	QCBB1HK-471	470PF	50V	CERAMIC	
	C666	QCBB1HK-471	470PF	50V	CERAMIC	
	C667	QCVB1CM-822	8200PF	16V	CERAMIC	
	C668	QCVB1CM-822	8200PF	16V	CERAMIC	
	C669	QCBB1HK-121	120PF	50V	CERAMIC	
	C670	QCBB1HK-121	120PF	50V	CERAMIC	
	C671	QCBB1HK-471	470PF	50V	CERAMIC	
	C672	QCBB1HK-471	470PF	50V	CERAMIC	
	C673	QCBB1HK-101	100PF	50V	CERAMIC	
	C674	QCBB1HK-101	100PF	50V	CERAMIC	
	C675	QER51HM-225G	2.2MF	50V	ELECTRO	
	C676	QER51HM-225G	2.2MF	50V	ELECTRO	
	C677	QER51CM-107	100MF	16V	ELECTRO	
	C678	QER51CM-107	100MF	16V	ELECTRO	
	C681	QER51CM-106G	10MF	16V	ELECTRO	
	C682	QER51CM-106G	10MF	16V	ELECTRO	
	C683	QCGB1HK-102	1000PF	50V	CERAMIC	
	C684	QCGB1HK-102	1000PF	50V	CERAMIC	
	C689	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C691	QER51HM-225G	2.2MF	50V	ELECTRO	
	C692	QER51HM-225G	2.2MF	50V	ELECTRO	
	C693	QCSB1HJ-100	10PF	50V	CERAMIC	
	C695	QCSB1HJ-470	47PF	50V	CERAMIC	
	C697	QER51HM-225G	2.2MF	50V	ELECTRO	
	C698	QER51CM-476	47MF	16V	ELECTRO	
	C699	QER51CM-476	47MF	16V	ELECTRO	
	C700	QER51HM-225G	2.2MF	50V	ELECTRO	

Δ ISIAPIETTY IPIARTIS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	R501	QRD167J-103	10K 1/6W CARBON	
	R502	QRD167J-104	100K 1/6W CARBON	
	R503	QRD167J-153	15K 1/6W CARBON	
	R504	QRD167J-473	47K 1/6W CARBON	
	R505	QRD167J-153	15K 1/6W CARBON	
	R510	QRD167J-2R2	2.2 1/6W CARBON	
	R511	QRD167J-2R2	2.2 1/6W CARBON	
	R512	QRD167J-2R2	2.2 1/6W CARBON	
	R513	QRD167J-2R2	2.2 1/6W CARBON	
	R514	QRD167J-2R2	2.2 1/6W CARBON	
	R515	QRD167J-2R2	2.2 1/6W CARBON	
	R516	QRD167J-2R2	2.2 1/6W CARBON	
	R517	QRD167J-2R2	2.2 1/6W CARBON	
	R581	QRD167J-331	330 1/6W CARBON	
	R582	QRD167J-103	10K 1/6W CARBON	
	R583	QRD167J-273	27K 1/6W CARBON	
	R584	QRD167J-273	27K 1/6W CARBON	
	R585	QRD167J-331	330 1/6W CARBON	
	R586	QRD167J-331	330 1/6W CARBON	
	R621	QRD167J-222	2.2K 1/6W CARBON	
	R622	QRD167J-105	1M 1/6W CARBON	
	R623	QRD167J-223	22K 1/6W CARBON	
	R624	QRD167J-104	100K 1/6W CARBON	
	R625	QRD167J-103	10K 1/6W CARBON	
	R626	QRD167J-221	220 1/6W CARBON	
	R627	QRD167J-221	220 1/6W CARBON	
	R628	QRD167J-221	220 1/6W CARBON	
	R629	QRD167J-223	22K 1/6W CARBON	
	R630	QRD167J-223	22K 1/6W CARBON	
	R631	QRD167J-102	1K 1/6W CARBON	
	R632	QRD167J-102	1K 1/6W CARBON	
	R633	QRD167J-102	1K 1/6W CARBON	
	R634	QRD167J-821	820 1/6W CARBON	
	R635	QRD167J-224	220K 1/6W CARBON	
	R636	QRD167J-512	5.1K 1/6W CARBON	
	R637	QRD167J-512	5.1K 1/6W CARBON	
	R638	QRD167J-222	2.2K 1/6W CARBON	
	R639	QRD167J-153	15K 1/6W CARBON	
	R640	QRD167J-183	18K 1/6W CARBON	
	R641	QRD167J-334	330K 1/6W CARBON	
	R642	QRD167J-474	470K 1/6W CARBON	
	R643	QRD167J-120	12 1/6W CARBON	
	R644	QRD167J-120	12 1/6W CARBON	
	R661	QRD167J-102	1K 1/6W CARBON	
	R662	QRD167J-102	1K 1/6W CARBON	
	R663	QRD167J-392	3.9K 1/6W CARBON	
	R664	QRD167J-392	3.9K 1/6W CARBON	
	R665	QRD167J-392	3.9K 1/6W CARBON	
	R666	QRD167J-392	3.9K 1/6W CARBON	
	R667	QRD167J-222	2.2K 1/6W CARBON	
	R668	QRD167J-222	2.2K 1/6W CARBON	
	R673	QRD167J-273	27K 1/6W CARBON	
	R674	QRD167J-273	27K 1/6W CARBON	
	R675	QRD167J-102	1K 1/6W CARBON	
	R676	QRD167J-102	1K 1/6W CARBON	
	R691	QRD167J-104	100K 1/6W CARBON	
	R692	QRD167J-104	100K 1/6W CARBON	
	R693	QRD167J-474	470K 1/6W CARBON	
	R695	QRD167J-472	4.7K 1/6W CARBON	
	R696	QRD167J-104	100K 1/6W CARBON	
	R697	QRD167J-101	100 1/6W CARBON	
	R698	QRD167J-100	10 1/6W CARBON	
	R699	QRD167J-100	10 1/6W CARBON	
	R700	QRD167J-104	100K 1/6W CARBON	
	RA621	QRB049J-223	22K 1/10W R.NETWORK	
	RA623	QRB059J-223	22K 1/10W R.NETWORK	
	RA631	QRB059J-104	100K 1/10W R.NETWORK	
	RA632	QRB139J-104	100K 1/10W R.NETWORK	
	VR581	QVAB77B-E54B	50K VARIABLE	
	VR651	QVXB06W-E15B	100K VARIABLE	
	VR652	QVXB06W-E15B	100K VARIABLE	
	VR653	QVXB06W-E15B	100K VARIABLE	
	VR654	QVXB06W-E15B	100K VARIABLE	
	VR655	QVXB06W-E15B	100K VARIABLE	
	VR670	QVDB91B-E15F	100K VARIABLE	
	VR671	QVXB06W-E15C	100K VARIABLE (1122)	

Δ IS SAFETY PARTS

Others

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	J641	EMV7124-013	CONNECTOR(13PIN)	
	J651	VMC0107-007	CONNECT TERMINAL(7PIN)	
	P641	EMV5123-D094	PLUG ASSY(13PIN)	
	S501	ESP0001-018	TACT SWITCH(TIMER 1)	
	S502	ESP0001-018	TACT SWITCH(TIMER 2)	
	S503	ESP0001-018	TACT SWITCH(DIARY)	
	S504	ESP0001-018	TACT SWITCH(WAKE-UP/SLEEP)	
	S505	ESP0001-018	TACT SWITCH(CLOCK ADJ.)	
	S506	ESP0001-018	TACT SWITCH(CANCEL)	
	S507	ESP0001-018	TACT SWITCH(MEMORY)	
	S508	ESP0001-018	TACT SWITCH(AUTO MEMORY)	
	S509	ESP0001-018	TACT SWITCH(UP)	
	S510	ESP0001-018	TACT SWITCH(DOWN)	
	S511	ESP0001-018	TACT SWITCH(PRESET UP)	
	S512	ESP0001-018	TACT SWITCH(PRESET DOWN)	
	S513	ESP0001-018	TACT SWITCH(FM)	
	S514	ESP0001-018	TACT SWITCH(AM)	
	S515	ESP0001-018	TACT SWITCH(PM MODE/MUTE)	
	S626	ESP0001-018	TACT SWITCH(SURROUND)	
	S627	ESP0001-018	TACT SWITCH(TAPE)	
	S628	ESP0001-018	TACT SWITCH(TUNER)	
	S629	ESP0001-018	TACT SWITCH(CD)	
	S630	ESP0001-018	TACT SWITCH(AUX)	
	S631	ESP0001-018	TACT SWITCH(VCR)	
	S632	ESP0001-018	TACT SWITCH(POWER SWITCH)	
	S971	ESP0001-018	TACT SWITCH(A DECK REV)	
	S972	ESP0001-018	TACT SWITCH(A DECK P.FWD)	
	S973	ESP0001-018	TACT SWITCH(A DECK PLAY)	
	S974	ESP0001-018	TACT SWITCH(B DECK REV.PLAY)	
	S975	ESP0001-018	TACT SWITCH(B DECK REV)	
	S976	ESP0001-018	TACT SWITCH(B DECK P.FWD)	
	S977	ESP0001-018	TACT SWITCH(B DECK PLAY)	
	S978	ESP0001-018	TACT SWITCH(A DECK STOP)	
	S979	ESP0001-018	TACT SWITCH(B DECK STOP)	
	S980	ESP0001-018	TACT SWITCH(B DECK REC)	
	S981	ESP0001-018	TACT SWITCH(B DECK PAUSE)	
	S982	ESP0001-018	TACT SWITCH(H.DUBBING)	
	S983	ESP0001-018	TACT SWITCH(DOLBY)	
	S984	ESP0001-018	TACT SWITCH(REV. MODE)	
	S985	ESP0001-018	TACT SWITCH(CD REC)	
	BK501	E306958-221	FL DISPLAY HOLDER	
	BK631	E307397-221	FL DISPLAY HOLDER	
	FL501	ELU0001-101	FL TUBE	
	FL631	ELU0001-117	FL TUBE	
	FS501	E3400-449	SPACER	
	FS631	E306805-014	FELT SPACER	
	FS671	E3400-431	SPACER	
	FS672	E3400-431	SPACER	
	FW101	EWR37B-20LST	FLAT WIRE(7PIN)	
	FW102	EWR33B-25LST	FLAT WIRE(3PIN)	B
	FW521	EWR37B-30LST	FLAT WIRE(7PIN)	
	FW651	EWR37B-16LST	FLAT WIRE(7PIN)	
	FW801	EWR35B-55LST	FLAT WIRE(5PIN)	
	FW925	EWR33B-35LST	FLAT WIRE(3PIN)	
	FW943	EWR38B-25LST	FLAT WIRE(8PIN)	
	FW944	EWR38B-25LST	FLAT WIRE(8PIN)	
	JA201	VMC0193-P10	CONNECT TERMINAL(10PIN)	
	JA202	VMC0193-P10	CONNECT TERMINAL(10PIN)	
	JA203	VMC0193-P06	CONNECT TERMINAL(6PIN)	
	TC501	ENZ1003-015	TRIMMER	
	TW581	VVE350-10A3NT	TERMINAL WIRE	
	XT501	ECX4194-304CF	RESONATOR	
	XT621	ECX0004-194KM	RESONATOR	

Δ IS SAFETY PARTS

Others

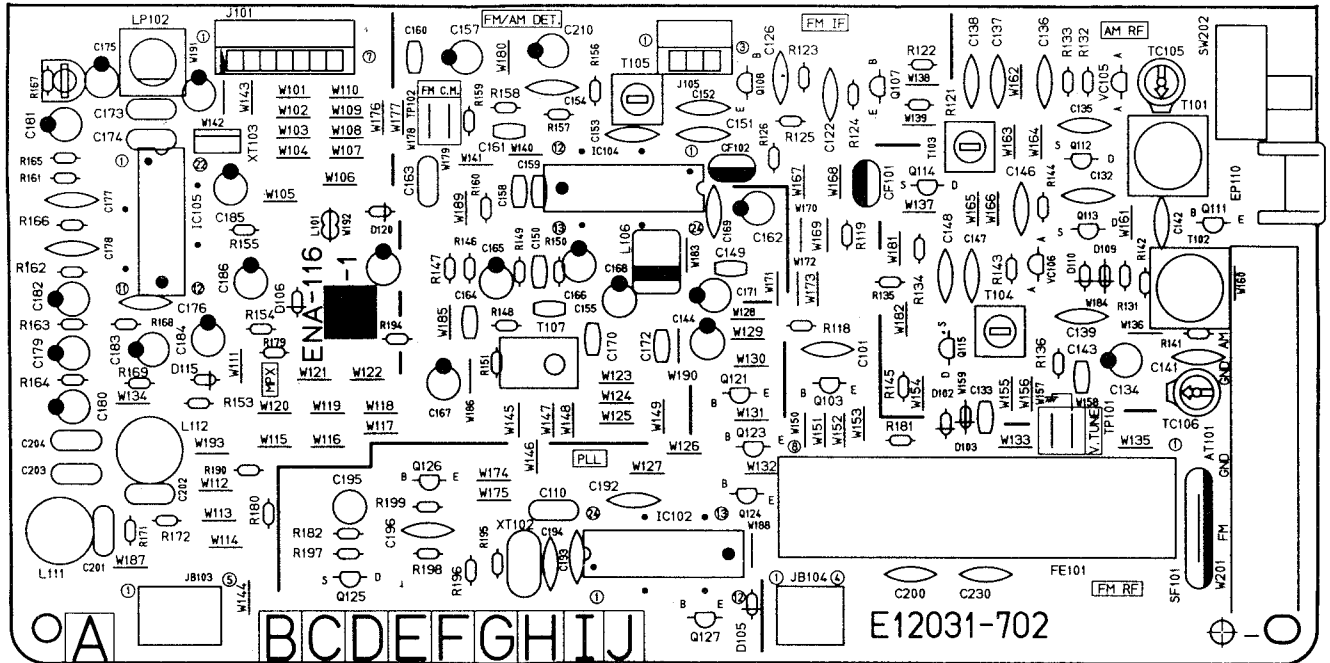
Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10079-004	PRINTED BOARD	
		QWE350-04DD	WIRE	
		QWE370-04BB	WIRE	
	J021	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J581	QMS3L10-EDOH	MINI JACK	

Δ IS SAFETY PARTS

■ ENA-116 □ Tuner PC Board Ass'y

Note : ENA-116 □ varies according to the areas employed. See note (1) when placing an order.

(Only for the U.S.A. , Canada , Australia , Universal Type)



Note(1)

PC Board Ass'y	Designated Areas
ENA-116 A	the U.S.A. , Canada
ENA-116 B	Universal Type ,
ENA-116 C	Australia

Transistors

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
Q103	2SC461(B,C)	SILICON HITACHI	
Q107	2SC535(B,C)	SILICON HITACHI	
Q108	2SC461(B,C)	SILICON HITACHI	
Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
Q123	DTA114YS	SILICON ROHM	
Q124	DTA114YS	SILICON ROHM	
Q125	2SK301(Q2)	F.E.T MATSUSHITA	
Q126	2SC458(D)	SILICON HITACHI	
Q127	DTC144ES	SILICON ROHM	

Δ ISIA/FETY PARTS

I.C.s

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

Δ ISIA/FETY PARTS

Diodes

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
D105	1SS133	SILICON ROHM	
D106	1SS133	SILICON ROHM	
D115	1SS133	SILICON ROHM	
D120	1SS133	SILICON ROHM	
VC105	SVC342(L)	VARICAP SANYO	

Δ ISIA/FETY PARTS

Capacitors

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
C101	QCF21HP-223	0.022MF 50V CERAMIC	
C110	QCZ0202-155	1.5MF 25V CERAMIC	
C122	QCF21HP-223	0.022MF 50V CERAMIC	
C126	QCF21HP-223	0.022MF 50V CERAMIC	
C132	QCS21HJ-561	560PF 50V CERAMIC	
C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
C134	QETB1EM-106	10MF 25V ELECTRO	
C135	QCC21EM-223	0.022MF 25V CERAMIC	
C136	QCT26CH-180	18PF 50V CERAMIC	
C137	QCT26CH-221	220PF 50V CERAMIC	
C138	QCT26CH-241	240PF 50V CERAMIC	
C149	QCHB1EZ-223	0.022MF 25V 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	
C154	QCF21HP-223	0.022MF 50V CERAMIC	
C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
C157	QETB1HM-474	0.47MF 50V ELECTRO	
C158	QCBB1HK-101	100PF 50V CERAMIC	
C159	QCBB1HK-101	100PF 50V CERAMIC	
C160	QCBB1HK-221	220PF 50V CERAMIC	
C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
C162	QETB1EM-106	10MF 25V ELECTRO	
C163	QCY21HK-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	QETB1EM-106	10MF 25V ELECTRO	
C172	QCVB1CM-103	0.01MF 16V CERAMIC	
C173	QFLB1HJ-393	0.039MF 50V MYLAR	A
C173	QFLB1HJ-393	0.039MF 50V MYLAR	B
C173	QFLB1HJ-223	0.022MF 50V MYLAR	C
C174	QFLB1HJ-473	0.047MF 50V MYLAR	
C175	QETB1EM-106	10MF 25V ELECTRO	
C176	QCY21HK-102	1000PF 50V CERAMIC	
C177	QCS21HJ-821	820PF 50V CERAMIC	A
C177	QCS21HJ-821	820PF 50V CERAMIC	B
C177	QCS21HJ-391	390PF 50V CERAMIC	C
C178	QCS21HJ-821	820PF 50V CERAMIC	A
C178	QCS21HJ-821	820PF 50V CERAMIC	B
C178	QCS21HJ-391	390PF 50V CERAMIC	C
C179	QETB1HM-225	2.2MF 50V ELECTRO	
C180	QETB1HM-225	2.2MF 50V ELECTRO	
C181	QETB1EM-106	10MF 25V ELECTRO	
C182	QETB1HM-225	2.2MF 50V ELECTRO	

Δ ISIA/FETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	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	
	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	
	C200	QCF21HP-103	0.01MF	50V	CERAMIC	
	C201	QCY21HK-332	3300PF	50V	CERAMIC	
	C202	QCY21HK-332	3300PF	50V	CERAMIC	
	C203	QCY21HK-182	1800PF	50V	CERAMIC	
	C204	QCY21HK-182	1800PF	50V	CERAMIC	
	C209	QETB1CM-227	220MF	16V	ELECTRO	
	C210	QETB1CM-227	220MF	16V	ELECTRO	
	C230	QCF21HP-103	0.01MF	50V	CERAMIC	

Δ IS SAFETY PARTS

Others

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
		E12031-702(S)	PRINTED BOARD			
	J101	VMC0107-007	CONNECT TERMINAL(7PIN)			
	J105	VMC0107-003	CONNECT TERMINAL(3PIN)			B
	L106	EQL3001-102K	INDUCTOR			
	L111	EQL2103-393	INDUCTOR			
	L112	EQL2103-393	INDUCTOR			
	T101	EQR1111-014	AM RF COIL			
	T103	EQR1207-015	MW OSC COIL			
	T105	EQT2140-017	I.F. TRANSFORMER			
	T107	ECB1560-008	CERAMIC FILTER			
	AT101	EMB90YV-401K	ANTENNA TERMINAL			
	CF101	ECB2123-006R	CERAMIC FILTER			
	CF102	ECB2123-006R	CERAMIC FILTER			
	EP110	E70225-001	EARTH PLATE			
	FE101	EAF2203-001	FRONT END			
	JB103	EMV7125-005R	CONNECTOR (5PIN)			
	SW205	QSS7A12-E01	SLIDE SWITCH			B
	TC105	ENZ1003-006	TRIMMER			
	XT102	ECX0007-200KC	RESONATOR			
	XT103	ECX0000-456KR	RESONATOR			

Δ IS SAFETY PARTS

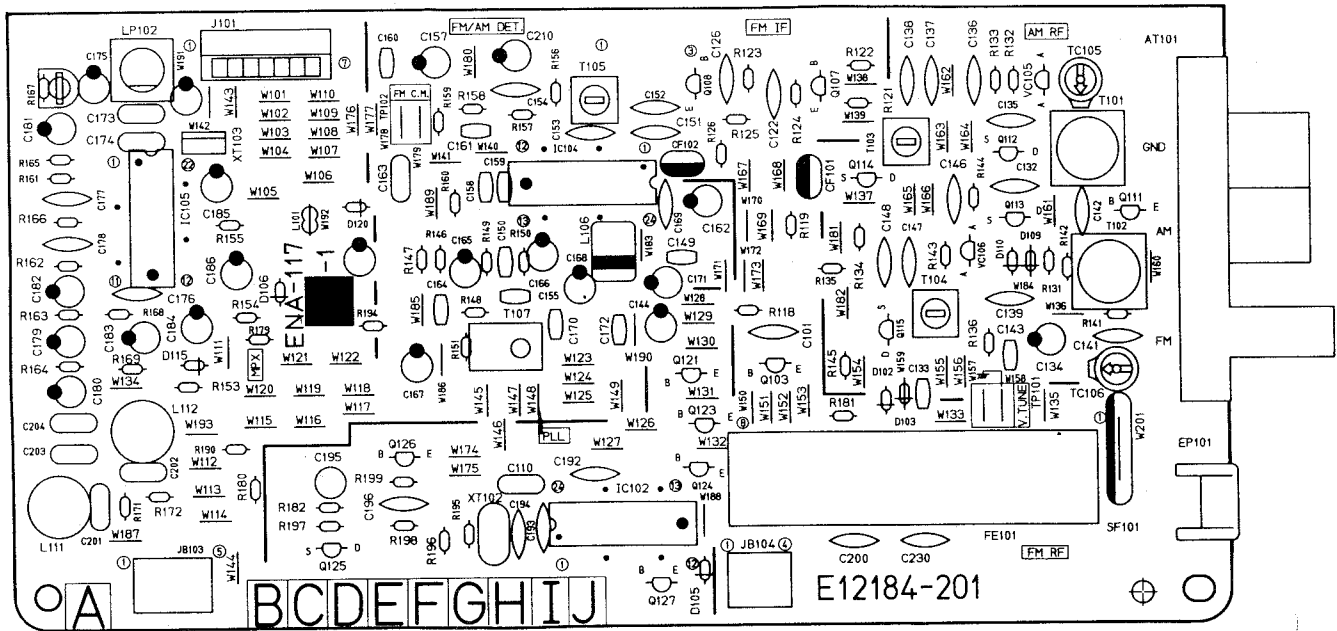
Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R118	QRD167J-332	3.3K	1/6W	CARBON	
	R119	QRD167J-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	QRD167J-221	220	1/6W	CARBON	
	R131	QRD167J-331	330	1/6W	CARBON	
	R132	QRD167J-103	10K	1/6W	CARBON	
	R133	QRD167J-473	47K	1/6W	CARBON	
	R135	QRD167J-470	47	1/6W	CARBON	
	R136	QRD167J-103	10K	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-682	6.8K	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
	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
	R161	QRD167J-823	82K	1/6W	CARBON	A
	R161	QRD167J-823	82K	1/6W	CARBON	B
	R161	QRD167J-124	120K	1/6W	CARBON	C
	R162	QRD167J-823	82K	1/6W	CARBON	A
	R162	QRD167J-823	82K	1/6W	CARBON	B
	R162	QRD167J-124	120K	1/6W	CARBON	C
	R163	QRD167J-472	4.7K	1/6W	CARBON	A
	R163	QRD167J-472	4.7K	1/6W	CARBON	B
	R163	QRD167J-392	3.9K	1/6W	CARBON	C
	R164	QRD167J-472	4.7K	1/6W	CARBON	A
	R164	QRD167J-472	4.7K	1/6W	CARBON	B
	R164	QRD167J-392	3.9K	1/6W	CARBON	C
	R165	QRD167J-184	180K	1/6W	CARBON	A
	R165	QRD167J-184	180K	1/6W	CARBON	B
	R165	QRD167J-274	270K	1/6W	CARBON	C
	R166	QRD167J-184	180K	1/6W	CARBON	A
	R166	QRD167J-184	180K	1/6W	CARBON	B
	R166	QRD167J-274	270K	1/6W	CARBON	C
	R167	QRD167J-393	39K	1/6W	CARBON	A
	R167	QRD167J-393	39K	1/6W	CARBON	B
	R167	QRD167J-473	47K	1/6W	CARBON	C
	R168	QRD167J-103	10K	1/6W	CARBON	
	R169	QRD167J-103	10K	1/6W	CARBON	
	R171	QRD167J-682	6.8K	1/6W	CARBON	
	R172	QRD167J-682	6.8K	1/6W	CARBON	
	R179	QRD167J-562	5.6K	1/6W	CARBON	
	R180	QRD167J-472	4.7K	1/6W	CARBON	
	R181	QRD167J-222	2.2K	1/6W	CARBON	
	R182	QRD167J-181	180	1/6W	CARBON	
	R190	QRD167J-472	4.7K	1/6W	CARBON	
	R194	QRD167J-472	4.7K	1/6W	CARBON	
	R195	QRD167J-473	47K	1/6W	CARBON	
	R196	QRD167J-103	10K	1/6W	CARBON	
	R197	QRD167J-222	2.2K	1/6W	CARBON	
	R198	QRD167J-332	3.3K	1/6W	CARBON	
	R199	QRD167J-472	4.7K	1/6W	CARBON	

Δ IS SAFETY PARTS

■ ENA-117 □ Tuner PC Board Ass'y

Note : ENA-117 □ varies according to the areas employed. See note (1) when placing an order.
 (Except the U.S.A. , Canada , Australia , Universal Type)



Note(1)

PC Board Ass'y	Designated Areas
ENA-117 A	Continental Europe , East Europe
ENA-117 B	the U.K.
ENA-117 C	Poland , Soviet Union and Rumania
ENA-117 D	Germany , Italy

Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	
	D103	1SS133	SILICON ROHM	
	D105	1SS133	SILICON ROHM	
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	
	D110	1SS133	SILICON ROHM	
	D115	1SS133	SILICON ROHM	
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARICAP SANYO	
	VC106	SVC342(L)	VARICAP SANYO	

Δ : ISAFETY PARTS

Transistors

Δ	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	
	Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q114	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q115	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q121	DTA114YS	SILICON ROHM	
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	
	Q127	DTC144ES	SILICON ROHM	

Δ : ISAFETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223	0.022MF 50V CERAMIC	
	C110	QCZ0202-155	1.5MF 25V CERAMIC	
	C122	QCF21HP-223	0.022MF 50V CERAMIC	
	C126	QCF21HP-223	0.022MF 50V CERAMIC	
	C132	QCS21HJ-561	560PF 50V CERAMIC	
	C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C134	QETB1EM-106	10MF 25V ELECTRO	
	C135	QCC21EM-223	0.022MF 25V CERAMIC	
	C136	QCT26CH-180	18PF 50V CERAMIC	
	C137	QCT26CH-221	220PF 50V CERAMIC	
	C138	QCT26CH-241	240PF 50V CERAMIC	
	C139	QCC21EM-223	0.022MF 25V CERAMIC	
	C141	QCS21HJ-270	27PF 50V CERAMIC	
	C142	QCY21HK-272	2700PF 50V CERAMIC	
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C144	QETB1EM-106	10MF 25V ELECTRO	
	C146	QCT26CH-680	68PF 50V CERAMIC	
	C147	QCT26CH-220	22PF 50V CERAMIC	
	C148	QCT26CH-121	120PF 50V CERAMIC	
	C149	QCHB1EZ-223	0.022MF 25V 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	
	C154	QCF21HP-223	0.022MF 50V 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	

Δ : ISAFETY PARTS

I.C.s

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

Δ : ISAFETY PARTS

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	C161	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C162	QETB1EM-106	10MF	25V	ELECTRO	
	C163	QCY21HK-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	QETB1EM-106	10MF	25V	ELECTRO	
	C172	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C173	QFLB1HJ-223	0.022MF	50V	MYLAR	
	C174	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C175	QETB1EM-106	10MF	25V	ELECTRO	
	C176	QCY21HK-102	1000PF	50V	CERAMIC	
	C177	QCS21HJ-471	470PF	50V	CERAMIC	A
	C177	QCS21HJ-561	560PF	50V	CERAMIC	B
	C177	QCS21HJ-471	470PF	50V	CERAMIC	C
	C177	QCS21HJ-471	470PF	50V	CERAMIC	D
	C178	QCS21HJ-471	470PF	50V	CERAMIC	A
	C178	QCS21HJ-561	560PF	50V	CERAMIC	B
	C178	QCS21HJ-471	470PF	50V	CERAMIC	C
	C178	QCS21HJ-471	470PF	50V	CERAMIC	D
	C179	QETB1HM-225	2.2MF	50V	ELECTRO	
	C180	QETB1HM-225	2.2MF	50V	ELECTRO	
	C181	QETB1EM-106	10MF	25V	ELECTRO	
	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	
	C192	QCC21EM-473	0.047MF	25V	CERAMIC	
	C193	QCS21HJ-180	18PF	50V	CERAMIC	
	C194	QCS21HJ-180	18PF	50V	CERAMIC	
	C195	QENS1HM-474	0.47MF	50V	NON POLE	
	C196	QCY21HK-102	1000PF	50V	CERAMIC	
	C200	QCF21HP-103	0.01MF	50V	CERAMIC	
	C201	QCY21HK-102	1000PF	50V	CERAMIC	A
	C201	QCY21HK-332	3300PF	50V	CERAMIC	B
	C201	QCY21HK-102	1000PF	50V	CERAMIC	C
	C201	QCY21HK-102	1000PF	50V	CERAMIC	D
	C202	QCY21HK-102	1000PF	50V	CERAMIC	A
	C202	QCY21HK-332	3300PF	50V	CERAMIC	B
	C202	QCY21HK-102	1000PF	50V	CERAMIC	C
	C202	QCY21HK-102	1000PF	50V	CERAMIC	D
	C203	QCY21HK-182	1800PF	50V	CERAMIC	
	C204	QCY21HK-182	1800PF	50V	CERAMIC	
	C209	QETB1CM-227	220MF	16V	ELECTRO	
	C210	QETB1CM-227	220MF	16V	ELECTRO	
	C230	QCF21HP-103	0.01MF	50V	CERAMIC	

Δ (S) SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R158	QRD167J-273	27K	1/6W	CARBON	
	R159	QRD167J-561	560	1/6W	CARBON	
	R160	QRD167J-183	18K	1/6W	CARBON	
	R161	QRD167J-124	120K	1/6W	CARBON	A
	R161	QRD167J-823	82K	1/6W	CARBON	B
	R161	QRD167J-124	120K	1/6W	CARBON	C
	R161	QRD167J-124	120K	1/6W	CARBON	D
	R162	QRD167J-124	120K	1/6W	CARBON	A
	R162	QRD167J-823	82K	1/6W	CARBON	B
	R162	QRD167J-124	120K	1/6W	CARBON	C
	R162	QRD167J-124	120K	1/6W	CARBON	D
	R163	QRD167J-392	3.9K	1/6W	CARBON	
	R164	QRD167J-392	3.9K	1/6W	CARBON	
	R165	QRD167J-274	270K	1/6W	CARBON	
	R166	QRD167J-274	270K	1/6W	CARBON	
	R167	QRD167J-473	47K	1/6W	CARBON	
	R168	QRD167J-103	10K	1/6W	CARBON	
	R169	QRD167J-103	10K	1/6W	CARBON	
	R171	QRD167J-682	6.8K	1/6W	CARBON	
	R172	QRD167J-682	6.8K	1/6W	CARBON	
	R179	QRD167J-562	5.6K	1/6W	CARBON	
	R180	QRD167J-472	4.7K	1/6W	CARBON	
	R181	QRD167J-222	2.2K	1/6W	CARBON	
	R182	QRD167J-181	180	1/6W	CARBON	
	R190	QRD167J-472	4.7K	1/6W	CARBON	
	R194	QRD167J-472	4.7K	1/6W	CARBON	
	R195	QRD167J-473	47K	1/6W	CARBON	
	R196	QRD167J-222	2.2K	1/6W	CARBON	
	R197	QRD167J-222	2.2K	1/6W	CARBON	
	R198	QRD167J-822	8.2K	1/6W	CARBON	
	R199	QRD167J-472	4.7K	1/6W	CARBON	

Δ (S) SAFETY PARTS

Others

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	J101	E12184-201(S)	PRINTED BOARD			
	L106	VMC0107-007	CONNECT TERMINAL(TPIN)			
	L111	EQL2103-393	INDUCTOR			
	L112	EQL2103-393	INDUCTOR			
	T101	EQR1111-014	AM RF COIL			
	T102	EQR1111-005	AM RF COIL			
	T103	EQR1207-015	MW OSC COIL			
	T104	EQR1307-009	LW OSC COIL			
	T105	EQT2140-017	I.F. TRANSFORMER			
	T107	ECB1560-008	CERAMIC FILTER			
	AT101	EMB41YV-301K	ANTENNA TERMINAL			
	CF101	ECB2118-007R	CERAMIC FILTER			
	CF102	ECB2118-007R	CERAMIC FILTER			
	EP101	E70225-001	EARTH PLATE			
	FE101	EAF2203-003	FRONT END			A
	FE101	EAF2203-003	FRONT END			B
	FE101	EAF2301-001	FRONT END			C
	FE101	EAF2203-003	FRONT END			D
	JB103	EMV7125-005R	CONNECTOR(5PIN)			
	LP102	EQF0102-001	LOW PASS FILTER			A
	LP102	EQF0102-001	LOW PASS FILTER			B
	LP102	EQF0102-001	LOW PASS FILTER			D
	TC105	ENZ1003-006	TRIMMER			
	TC106	ENZ1003-006	TRIMMER			
	XT102	ECX0007-200KC	RESONATOR			
	XT103	ECX0000-456KR	RESONATOR			

Δ (S) SAFETY PARTS

Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION			AREA
	R118	QRD167J-332	3.3K	1/6W	CARBON	
	R119	QRD167J-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	QRD167J-221	220	1/6W	CARBON	
	R131	QRD167J-331	330	1/6W	CARBON	
	R132	QRD167J-103	10K	1/6W	CARBON	
	R133	QRD167J-473	47K	1/6W	CARBON	
	R134	QRD167J-103	10K	1/6W	CARBON	
	R135	QRD167J-470	47	1/6W	CARBON	
	R136	QRD167J-103	10K	1/6W	CARBON	
	R141	QRD167J-472	4.7K	1/6W	CARBON	
	R142	QRD167J-331	330	1/6W	CARBON	
	R143	QRD167J-103	10K	1/6W	CARBON	
	R144	QRD167J-473	47K	1/6W	CARBON	
	R145	QRD167J-103	10K	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-682	6.8K	1/6W	CARBON	
	R157	QRD167J-103	10K	1/6W	CARBON	

Δ (S) SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1722A E30580-1691B E30580-1691BBS E30580-1692A E30580-1721A	Instruction Book Instruction Book Instruction Book Instruction Book Instruction Book	1 1 1 1 1		J C, U, A, E, EF, G BS GI V, VX
	BT-20025K BT-20117 BT-20122 BT20060 BT-20122-1	Warranty Card Warranty Card Warranty Card Warranty Card Sticker	1 1 1 1 1		C G A BS A
	BT20066A BT20071A E43486-340A E72360-001 QZL1008-001	EEC Agency Service Center List Safety Sheet Caution Sheet FTZ Information Sheet	1 1 1 1 1		BS C BS C G
	E67007-001 EQB4001-015 EWP103-009U EWP502-005K EMZ2001-011	Wire Antenna AM Loop Antenna Speaker Cord Ass'y Built in Antenna Adapter	1 1 2 1 1		G Except G E, EF, BS, GI, V, VX
⚠ ⚠	BT-20047E BT-20108A E66416-003 E04056 QMP1E00-183	Warranty Card Service Information Envelope Siemens Plug Power Cord	1 1 1 1 1	for Warranty Card	J J J U J, C
⚠ ⚠ ⚠ ⚠	QMP7530-183 QMP25C0-183 QMP3950-183E QMP5510-183BS UMI-4NJ-2PSA	Power Cord Power Cord Power Cord Power Cord Battery	1 1 1 1 1		U A Except J, C, U, A, BS BS
	RM-SEM30 RM-SR85UBATC E35497-019 QPGA025-03505	Remote Controller Battery Cover Caution Sheet Envelope	1 1 1 1	220V	

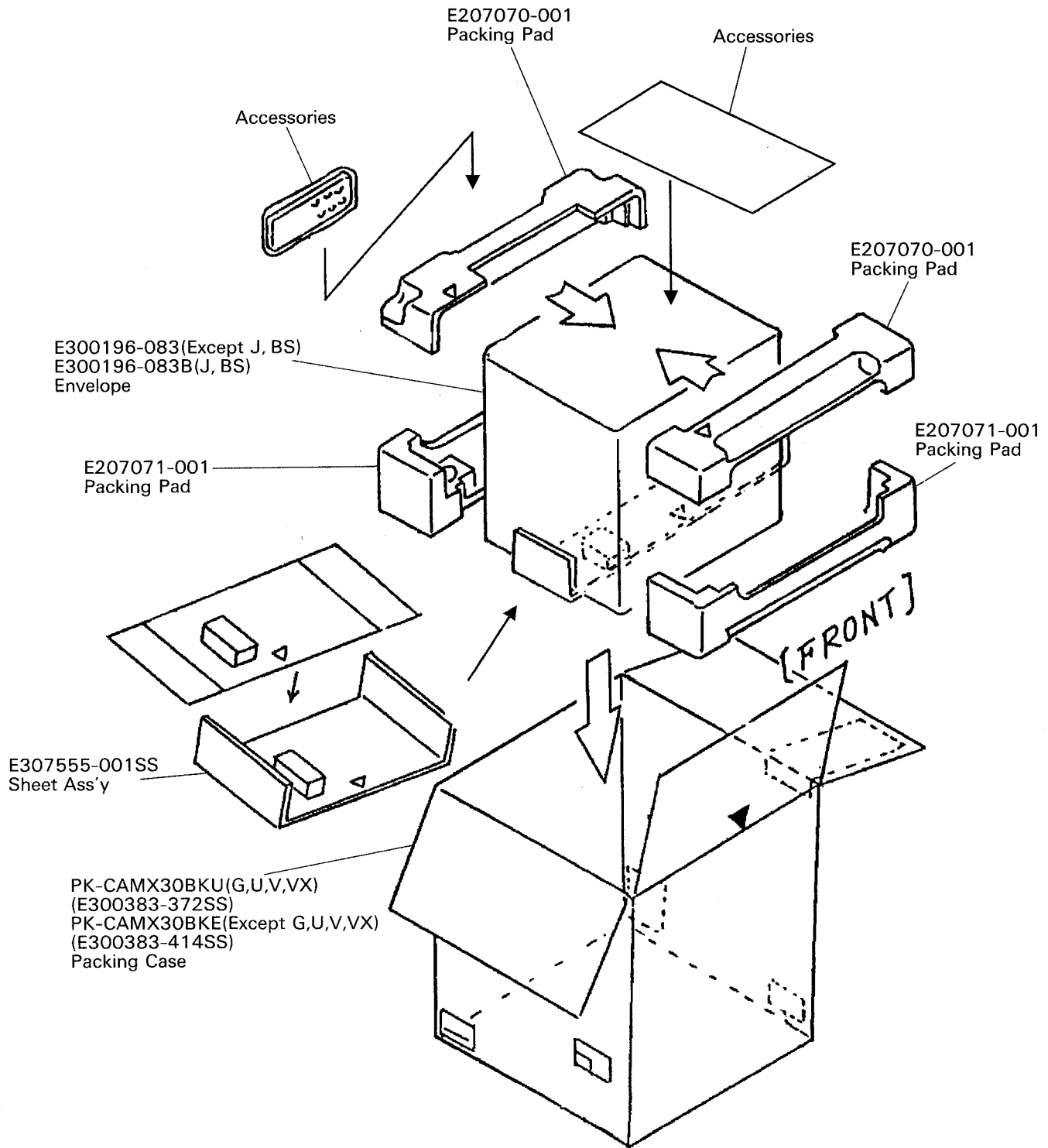
⚠: Safety Parts

The Marks Designated Areas

J.....the U.S.A.
C.....Canada
A.....Australia
G.....Germany
GI.....Italy
BS.....the U.K.

E, EF.....Continental Europe
V.....East Europe
U.....Universal Type
VX.....Poland, Soviet Union and Rumania
No mark indicates all areas.

Packing Materials and Part Numbers



The Marks Designated Areas

J.....the U.S.A.	E , EF.....Continental Europe
C.....Canada	V.....East Europe
A.....Australia	U.....Universal Type
G.....Germany	VX.....Poland , Soviet Union and Rumania
GI.....Italy	No mark indicates all areas.
BS.....the U.K.	

JVC

VICTOR COMPANY OF JAPAN, LIMITED

AUDIO PRODUCTS DIVISION, YAMATO PLANT, 1644, SIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

