JVC

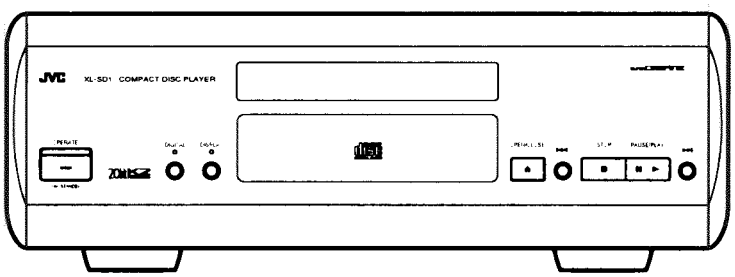
SERVICE MANUAL

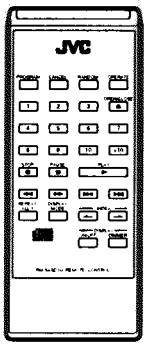
COMPACT DISC PLAYER

XL-SD1GD

PICK UP	OPTIMA-150S
DIGITAL SERVO LSI	MN662720RB

Area Suffix
BS .... the U.K.
EN .... Nordic Countries





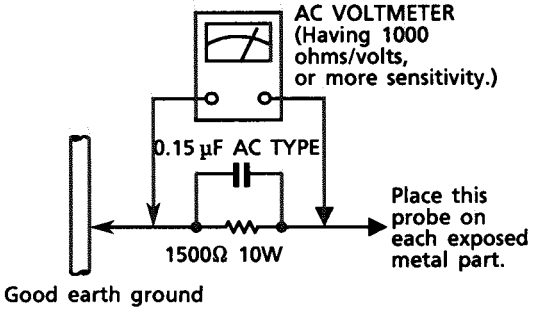
COMPACT disc DIGITAL AUDIO

Contents

No. 20600
Sept. 1996

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 (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. 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.

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 laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

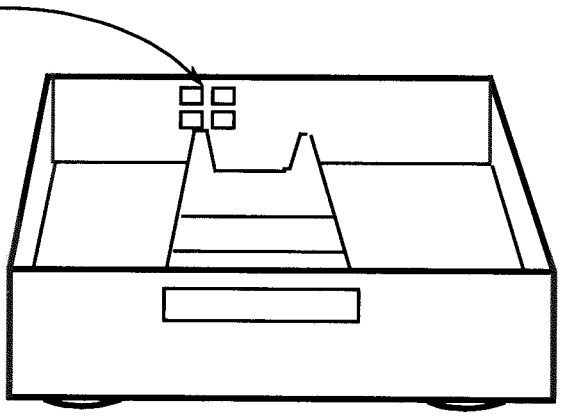
(Except for the U. S. A.)

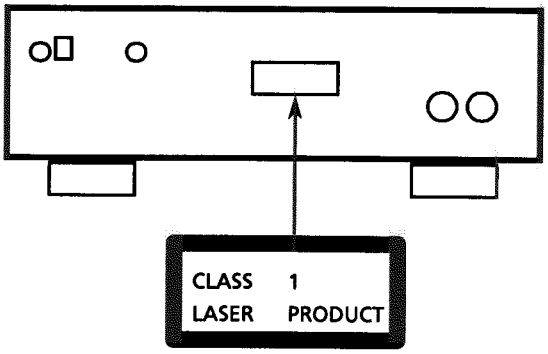
DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

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





CLASSIFICATION LABEL

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

Table of Contents

General Information

Welcome !

We would like to thank you for purchasing one of our JVC products. Before connecting this unit to the wall outlet, please read the instructions carefully to ensure that you obtain the best possible performance. If you have any questions, please consult your JVC dealer.

Important cautions

Installation of the Unit

- Select a place which is level, dry and neither too hot nor too cold (Between 5°C and 35°C or 41°F-95°F).
- Leave sufficient distance between the Unit and a TV.
- Be sure to place the Unit in a location with good ventilation.
- Do not use the Unit in a place subject to vibrations.
- Do not place the Unit on a carpet.
- Do not place the Unit on top of another heat-generating piece of equipment.

Power cord

- Do not handle the power cord with wet hands!
- When unplugging the Unit from the wall outlet, always pull the plug, not the power cord.

Malfunctions, etc.

- There are no user serviceable parts inside. If anything goes wrong, turn off the power immediately. If the same problem re-occurs when the power is turned on once more, turn off the power again, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the Unit.

For safe use, observe the following

Avoid moisture, water and dust
Do not set your machine in moist or dusty places.

Avoid high temperatures
Do not expose your machine to direct sunlight or set near a heating device.

Provide adequate ventilation
Poor-ventilation may damage your machine. So do not put the unit in a poorly ventilated place.

When you're away
When away on travel or otherwise for an extended period of time, set POWER to OFF and pull the plug from the electrical socket.

Do not insert foreign matter into the machine
Do not insert wires, hairpins, coins, etc. into your machine.

Care of the cabinet
When cleaning your machine, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Avoid applying benzene, thinner or other organic solvents and disinfectants. This may cause deformation or discoloring.

If water gets inside the machine
Cut the POWER switch and pull the plug from the electrical socket, then call the store where you made your purchase. Using the machine in this state may cause a fire or electrical shock.

Precautions

Load compact discs only
Never insert anything other than a compact disc into any part of the player. This unit can only be used with compact discs bearing the mark shown below. Never use discs of other types.

COMPACT disc DIGITAL AUDIO

Volume settings
A CD player has almost zero background noise. Because of this, the technique of listening to the background level and then setting the volume before the music starts, as used with analog turntables or tape decks, cannot be used. If you raise the volume level too high, speaker damage may result.

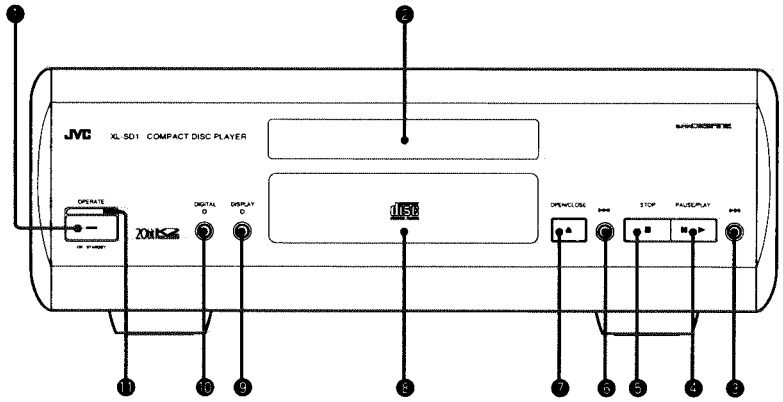
Condensation
The CD player uses optical components. If it is moved from a cold location to a warm one, or is used in a room subject to excessive humidity or where a fire has just been lit, condensation could form on the optical components.
This may prevent the laser beam from being properly transmitted and thus causes noise or even a malfunction.
If condensation has formed and the CD player does not function correctly, we recommend that you leave it turned on for an hour or two. If at the end of this time the CD player still does not function properly, please consult your JVC dealer.

Transporting the unit
When carrying this unit, it is best to avoid either tilting it or turning it upside-down. Where you cannot avoid doing so, please remove the disc first.

Using compact discs
Compact discs are made of plastic and can be easily damaged. If the disc is dirty, scratched, warped or otherwise damaged, the digital information may not be picked up correctly.

Names of Parts

CD player: Front panel



1 OPERATE
Use to switch the CD player between on and standby. The indicator on the button lights red in standby mode or orange when the power is on (see page 11).

2 Display
Provides displays of various information (see pages 7 and 18).

3 ▶▶|
Use to go to the beginning of following tracks or to move playback forward quickly (see page 13).

4 II ► PAUSE / PLAY
Use to start or pause playback (see pages 12 and 14).

5 ■ STOP
Stops playback (see page 12).

6 |◀◀
Use to go to the beginning of the current or previous tracks or to move playback backward quickly (see page 13).

7 ▲ OPEN / CLOSE
Use to open and close the disc tray (see page 11).

8 Disc tray
For loading the compact disc to be played back (see page 11).

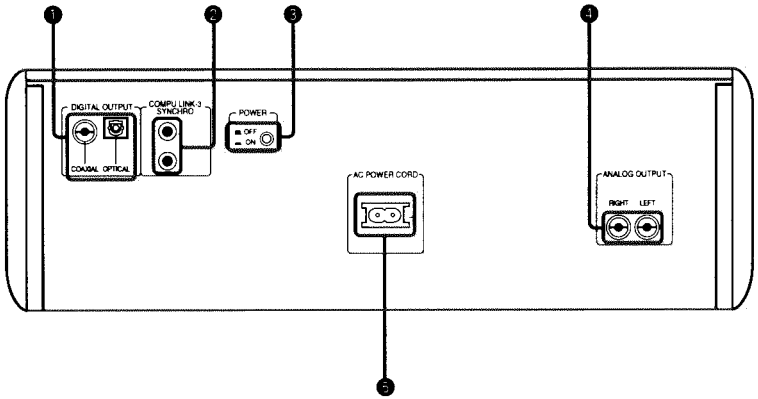
9 DISPLAY
Turns off the display (see page 18).

10 DIGITAL
Turns the output from the DIGITAL OUTPUT terminals on or off (see "Using the DIGITAL OUTPUT" on page 17).

11 Remote sensor

Names of Parts

CD player: Rear panel



● **DIGITAL OUTPUT**
This CD player has two types of digital output terminals, COAXIAL and OPTICAL for connections to other components with digital input terminals (see page 9).

● **COMPU LINK-3 SYNCHRO**
Connect these terminals to other JVC components, to take advantage of the COMPU LINK Remote Control System's automatic operation functions (see COMPU LINK connections on page 20).

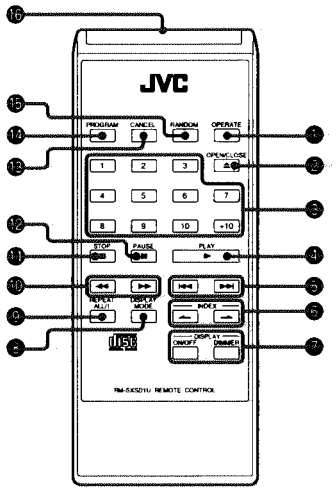
● **POWER**
Press this button to put the CD player in standby (see page 11).

● **ANALOG OUTPUT**
These terminals output analog audio signals. Connect to the audio in terminals of an amplifier (see page 8).

● **AC POWER CORD**
Connect to a wall outlet using the supplied AC power cord (see page 10).

Names of Parts

CD player: Remote control



● **OPERATE**
Turns the CD player on or standby (see page 11).

● **▲ OPEN/CLOSE**
Opens and closes the disc tray (see page 11).

● **Numeric keys**
Use to select track numbers (see pages 13 and 15).

● **► PLAY**
Starts playback (see page 12).

● **|◄◄ ►►| (Skip)**
Use to go to the start of a track (see page 13).

● **INDEX ← →**
Use to go to the start of an index (see page 14).

● **Display function buttons**
DIMMER : selects the display brightness (see page 18).
ON/OFF : turns the display on and off (see page 18).

● **DISPLAY MODE**
Use to switch the time display (see page 18).

● **REPEAT ALL/1**
Selects the repeat play mode (see page 17).

● **◄◄ ►► (Search)**
Use to move playback forward or backward quickly (see page 13).

● **■ STOP**
Stops playback (see page 12).

● **II PAUSE**
Pauses playback (see page 14).

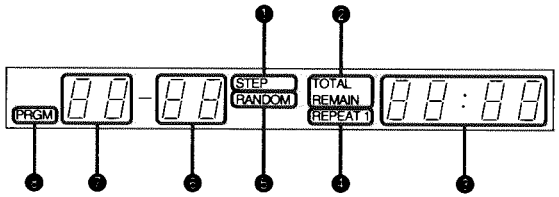
● **CANCEL**
Use to cancel part of a program (see page 16).

● **PROGRAM**
Selects the program play mode (see page 15).

● **RANDOM**
Activates random play mode (see page 16).

● **Remote control signal emitter**
When operating the remote, point the remote control signal emitter towards the remote sensor on the CD player.

CD player: Display



● **STEP**
Lights during PROGRAM play to indicate the step number of the current track (see page 15).

● **Time display mode indicators**
Light to indicate the type of information being displayed in the time display ● (see page 18).

● **Time display (minutes and seconds)**
Displays the time elapsed from the start of the disc, the start of the track, etc (see page 18).

● **REPEAT**
Lights during REPEAT play (see page 17).

● **RANDOM**
Lights during RANDOM play (see page 16).

● **Index and step number display**
During normal play, this sections displays the current index number.
During PROGRAM play, STEP ● lights up and the step number of the program is displayed (see page 15).
Index numbers are display for CDs that have index marks. If the CD does not have any index marks "1" is displayed (see page 14).

● **Track number display**
Numbers representing the order in which the tracks will be played are stored at the beginning of each track. These are called "track numbers". You can use the track numbers to find a track you want to play, or program the order of play (see pages 13 and 15).

● **PRGM**
Lights during PROGRAM play (see page 15).

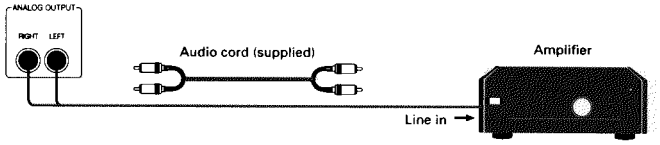
Connections

Before making any connections

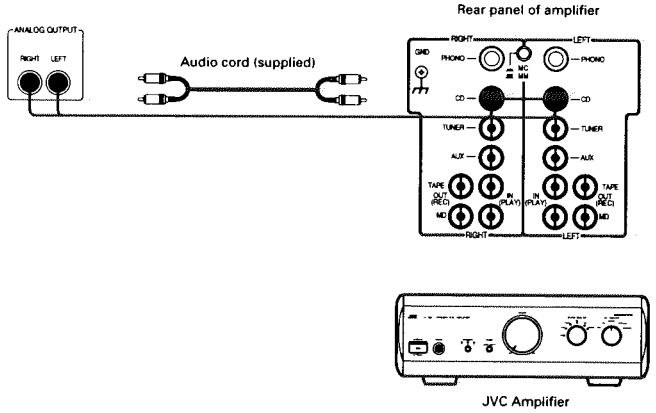
- Be sure to confirm the locations of the left and right, and IN and OUT terminals on each component and make connections correctly and firmly. Incorrect or incomplete connections may result in degradation of the stereo effect, or no sound at all. As a general rule, use the red plugs on the connecting cords to connect the right channels and the white plugs to connect the left channels.
- Keep tuner, TV, and video deck, antennas away from the CD player's rear panel and power cord. Nearby antennas can produce noise in the audio signal. Therefore, we also recommend using shielded coaxial antenna cables whenever possible.
- Since different components often have different terminal names, carefully read the instruction manual supplied with the component you are connecting.
- Do not connect the AC power cord until all other connections are complete.

Analog connections

Connect the ANALOG OUTPUT terminals to the line in terminals on the amplifier. Be sure to connect the LEFT and RIGHT channels correctly and firmly to avoid degradation of the stereo effect.



When connecting the CD player to a JVC amplifier, be sure to connect it to the CD terminals. Never connect the CD player to terminals marked "PHONO".

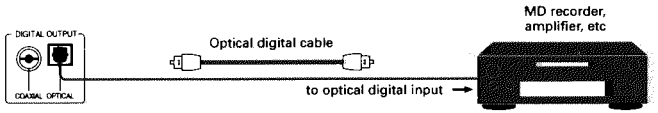


Digital connections

The DIGITAL OUTPUT terminals let you connect the CD player to other components with digital input terminals, like MiniDisc recorders, DAT decks, DCC decks, D/A converters, and amplifiers.

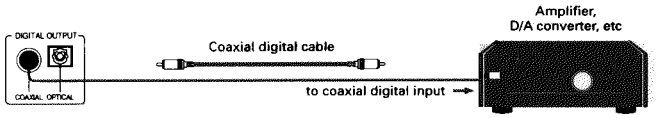
Optical

For optical connections, you will need to purchase an optical digital cable. The CD player's OPTICAL DIGITAL OUTPUT terminal is covered with a safety cap. When making optical connections, remove the safety cap and store it in a safe place. When the OPTICAL terminal is not being used, replace safety cap.



Coaxial

For coaxial connections, you will need to purchase a separate pin plug type digital connecting cord. Never connect the CD player's COAXIAL DIGITAL OUTPUT terminal to a terminal designed for analog signals.



To use the DIGITAL OUTPUT terminals

Press DIGITAL on the front of the CD player to turn output from the DIGITAL OUTPUT terminals on or off. The DIGITAL indicator lights when digital output is turned on.

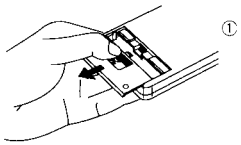
Turn on the digital output when using one of the DIGITAL OUTPUT terminals. Otherwise, leave it set to off. Turning off the digital output provides better sound quality by excluding unnecessary circuitry from the signal path.

CD player: Power connections

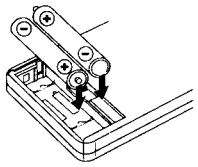
After completing all other connections, use the supplied AC power cord to connect the AC POWER CORD terminal on the back of the CD player to a wall outlet.

Remote control batteries

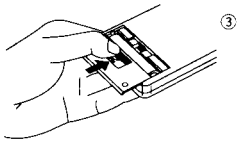
Load the supplied batteries (2) into the remote.



① Open the battery case



② Load the batteries
Match the polarity (+ and –) of the batteries with the + and – marks inside the battery compartment.



③ Close the battery case.

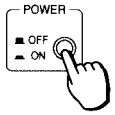
Cautions

Observe the following to avoid battery leakage or explosion:

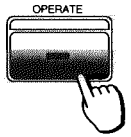
- If the range or effectiveness of the remote control decreases, replace the batteries using R03(UM-4)/AAA(24F) type dry cells.
- Do not use an old battery together with a new one.
- Do not use different types of batteries together.
- Do not disassemble the batteries or subject them to high temperatures, like an open fire.
- Remove the batteries if the remote control will not be used for a long time.

Operations

Turning on the CD player

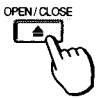


① Set the POWER switch on the rear panel to ON .
This lets you use the OPERATE button on the front panel (or the remote control) to switch the CD player between ON (orange OPERATE indicator) and STANDBY (red OPERATE indicator). When POWER is set to OFF, the OPERATE indicator goes out and the power cannot be turned on. You will probably find it most convenient to leave the POWER button set to ON. However, if you are not going to use the unit for an extended period of time, such as during a vacation, set POWER to OFF to avoid unnecessary power consumption. A small amount of power (11 watts) is always consumed as long as POWER is set to ON.

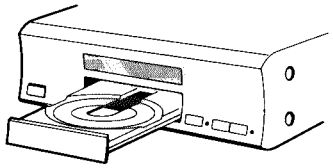


② Press OPERATE to turn on the CD player.
The indicator on the button turns orange.

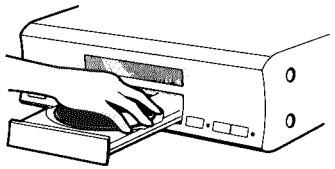
Loading a CD



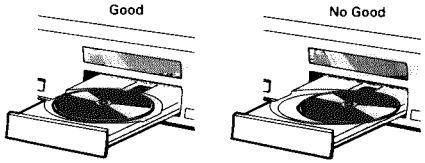
Press ▲ OPEN/CLOSE (or ▲ OPEN/CLOSE on the remote) and the disc tray slides out.



Place a disc, label facing up, onto the disc tray.
Place CD singles (8 cm) in the indentation at the center of the tray.



When loading a disc onto the disc tray, be sure to place the disc so that it lies flat in the grooved depression. Otherwise, the disc may be damaged or stuck in the unit when the tray is closed.



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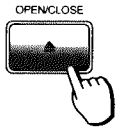
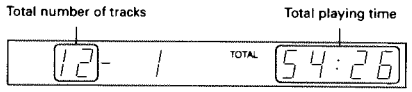


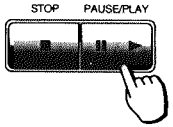
Press ▲ OPEN/CLOSE (or ▲ OPEN/CLOSE on the remote) again and the disc tray slides back in.
The total number of tracks and total playing time are displayed for 4 seconds, then the playing time of the first track is displayed.

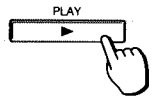


If no disc was inserted

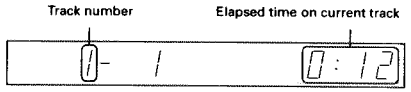
If you press ❚❚ ► PAUSE/PLAY (or ► PLAY on the remote control) when no disc was inserted, or the disc was inserted upside-down, the disc tray will open.

Playing a CD



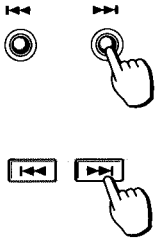


Insert a disc, then press ❚❚ ► PAUSE/PLAY (or ► PLAY on the remote control). Playback starts from the first track. The track number and elapsed time are shown in the display during playback. To stop play, press ■ STOP.



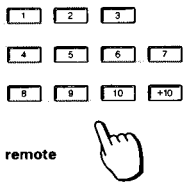
Selecting a track

You can easily select the track you want by using one of the two methods shown below.



To select tracks using ⏮ or ⏭.

Press ⏮ or ⏭ to go back or forward to the track number you desire, then press ► PLAY. During play, you don't have to press ► PLAY after choosing the track.

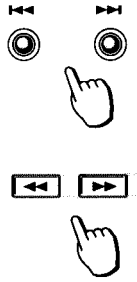


To select tracks using the numeric keys on the remote.

Use the numeric keys on the remote to enter the number if the track you desire, playback starts automatically.

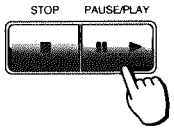
To select a tracks numbered greater than 10, press +10.
Example:
To select "7" : press 7
To select "12" : press +10, then press 2
To select "30" : press +10 twice, then press 10
Playback starts form the selected track.

Moving playback forward or back



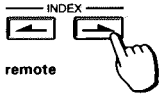
Press ◄◄ or ►► during playback to listen from the middle of a track.
As long as you hold down ◄◄ (or ⏮ on the player), the play position will continue to move back.
As long as you hold down ►► (or ⏭ on the player), the play position will continue to move forward.
Forward and back have two speeds. They start out slowly, but become faster if you continue holding the button.

Pausing

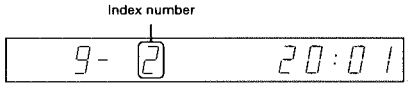


Press ⏸ ► PAUSE/PLAY (or ⏸ PAUSE on the remote control) during playback to pause the playback. During pause, the "⏸" indicator on the ⏸ ► PAUSE/PLAY button lights up. Press ⏸ ► PAUSE/PLAY (or ► PLAY on the remote control) to resume play from the point where it was paused.

Selecting a track index



Press INDEX ← or → to go back or forward to the index you desire, then press ► PLAY. Playback starts from the section you selected.
During playback, you don't have to press ► PLAY after choosing the index number.



It is not possible to use the INDEX search function with discs that do not contain index number information.

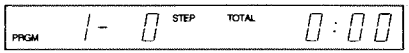
Playing tracks in a specific order (PROGRAM play)

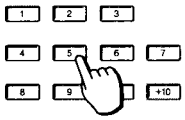
The program function lets you play your favorite tracks in the order you like. By using this function together with REPEAT play, you can listen to them over and over.

Basic PROGRAM play

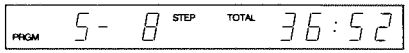
Use the remote control for these operations.

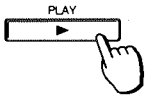
① Stop playback and press PROGRAM.
"PRGM" appears display





② Determine the order of the tracks you desire.
Select the tracks in the order you want them to be played.
To select a track, enter the number of the track you desire using the numeric keys. You can select up to 32 tracks. You can also include the same track more than once.

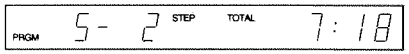


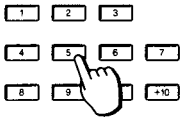


③ Press ► PLAY
Playback starts from the first track you entered and proceeds in the order you selected.

Checking the program

When playback is stopped, press ⏮ or ⏭ repeatedly to display program contents in sequence.

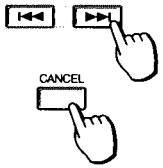




Adding to the program

Use the numeric keys to enter the track number you want to add. The track is automatically added to the end of the program. You can even add tracks during playback.

(continued)



Erasing a single track

Use ⏮ or ⏭ to display the track you want to erase, then press CANCEL.

Erasing the entire program

Press PROGRAM when playback is stopped. Press PROGRAM again to start over and make a new program. You can also erase the program by pressing ■ STOP on the CD player when playback is stopped.

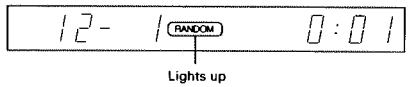
To cancel

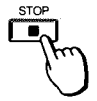
Stop program play and press PROGRAM so that "PRGM" disappears from the display.

Playing tracks at random (RANDOM play)

The random function selects and plays tracks at random so you can listen to a CD without knowing which songs will be played next.
Use the remote control for this operation.

Stop playback, then press RANDOM.
"RANDOM" appears in the display and random playback begins. Random playback stops after each track on the disc has played once. Therefore, one random playback will not play the same track repeatedly.



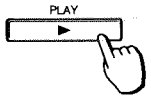


To cancel

Press ■ STOP.

Playing more than once (REPEAT play)

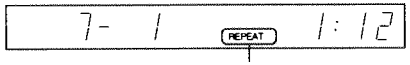
The repeat function lets you play either the current track, or all the tracks repeatedly. PROGRAM play and RANDOM play can also be repeated.
Use the remote control for this operation.



① Start playback.
To repeat PROGRAM or RANDOM play, do the program or random operations beforehand.

② Press REPEAT ALL/1 to select "REPEAT" or "REPEAT 1".
"REPEAT" repeats all the tracks.
"REPEAT 1" repeats the current track.

Selecting "REPEAT" during program play lets you to repeat the entire program in the programmed order. Selecting "REPEAT" during random plays entire disc again, in a different order, after all the tracks have been played back once.



Lights up

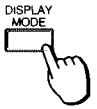
To cancel
Press REPEAT ALL/1 so that "REPEAT" and "REPEAT1" are no longer displayed.

Using the DIGITAL OUTPUT

Press DIGITAL to turn output from the DIGITAL OUTPUT terminals on or off. The DIGITAL indicator lights when the digital output is turned on.
Turn on the digital output when using one of the DIGITAL OUTPUT terminals. Otherwise, leave it set to off. Turning off the digital output provides better sound quality by excluding unnecessary circuitry from the signal path.

Switching the time display

You can switch the time display by pressing DISPLAY MODE on the remote control.
The type of information displayed is indicated by the TOTAL and REMAIN indicators.



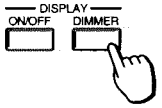
During playback

No indication: elapsed time on current track
↓
REMAIN: remaining time on current track
↓
TOTAL: elapsed time on disc or program.
↓
TOTAL REMAIN: Remaining time on disc or program play.

When playback is stopped

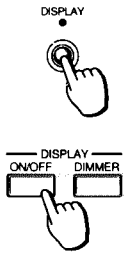
REMAIN: length of current track
↓
TOTAL: (0: 00) time elapsed on current track
↓
TOTAL REMAIN: length of disc or program
↓
No indication: (0: 00) elapsed time on current track

Dimming the display



You can dim (darken) the display by pressing DISPLAY-DIMMER on the remote control.
Press again to return to the original brightness.

Turning off the display



You can turn off the display during playback. Turning off the display provides better sound quality by eliminating signal flow to the display circuit.

Press DISPLAY (or DISPLAY ON/OFF on the remote control), to light the DISPLAY indicator and the display goes out automatically during playback. The display automatically returns in non-playback situations like pause, search, and stop (etc).
To return to the original (full-time) display, press DISPLAY to turn off the DISPLAY indicator.

COMPU LINK Remote Control System

COMPU LINK basics

Buying a separate CD player, cassette deck, MD recorder, amplifier, etc., is a good way to enjoy high-quality sound from the exact combination of components you want. However, since each component has to be operated individually, operation can be somewhat difficult. JVC's COMPU LINK Remote Control System allows you to enjoy the flexibility of single components with the ease of operation found in single unit component systems.
In the descriptions and instructions that follow, the COMPU LINK Remote Control System is referred to as 'COMPU LINK' for the sake of convenience.

Products that are compatible with COMPU LINK have terminals marked either COMPU LINK-1, COMPU LINK-2, or COMPU LINK-3 (referred to collectively as COMPU LINK terminals). Linking components by the COMPU LINK terminals, allows simplified collective operation, like that of a single unit component system.

COMPU LINK versions

- There are currently three versions of COMPU LINK available from JVC; COMPU LINK-1, COMPU LINK-2, and COMPU LINK-3. COMPU LINK 3 is the newest version, with the most functions.
- You can distinguish the COMPU LINK version by looking at the COMPU LINK terminals of the respective components.

COMPU LINK-3 components may be connected to components with earlier version components, but in this case the newest functions may not work.

COMPU LINK-3 functions

The following is a brief overview of the available functions:

One touch play
Lets you listen to a source component, such as a CD player ,without operating the amplifier. All you have to do is start playing the source component (see page 21).

Synchro recording
Lets you start recording automatically when you start playing the source component (see page 21).

Total operation by one remote control
Lets you operate all the source components, such as the CD player, cassette deck, and tuner, from the amplifier's remote control (see the instructions provided with the amplifier).

MiniDisc recorder automatic input switching
When the MiniDisc recorder's input selector is set to digital input, digital signals are input only when the source selector on the amplifier is set to CD. When it is set to other sources, analog signals are input. This saves you the trouble of manually switching the input selector every time you change the source (see the instructions provided with the amplifier).

Timer Operation
Lets you use a component equipped with a timer function to start and stop recording or playback at the time(s) you specify (see the instructions provided with the respective component).

(continued)

Automatic source switching upon reception of desired EON information
When a tuner equipped with RDS EON functions receives the information you desire, the source selector on the amplifier automatically switches to TUNER to allow you to hear the desired information. When the EON broadcast is over, the amplifier switches back to the previous component (see the instructions provided with an RDS tuner).

COMPU LINK connections

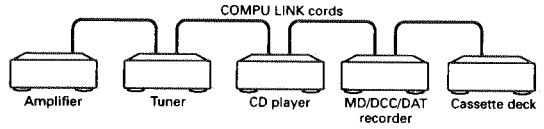
Use COMPU LINK cords (or connecting cables with mono mini plugs) to connect the COMPU LINK terminals of each component.

- When there is more than one COMPU LINK terminal, any terminal can be used.
- Be sure to plug the power cords of the component into UNSWITCHED outlets or a wall outlets. If components are plugged into SWITCHED outlets, the COMPU LINK functions will not work properly.
- When components have POWER switches on the rear panel, that switch must be set to ON in order for COMPU LINK to work properly.
- Some amplifiers may not have specially marked MD or DAT terminals. In such cases, you can connect a DAT deck to the MD terminals or an MiniDisc recorder to the DAT terminals. If the MiniDisc recorder or DAT deck is connected a different set of line input terminals, the COMPU LINK functions will not work properly.

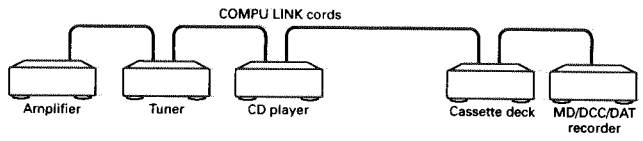
Note
- You can not connect an MD recorder, DCC deck and DAT deck, into the COMPU LINK system at the same time. Select the component you use most, and connect only that component.
- If no amplifier is connected, only the "synchro recording" function will be operable.
- COMPU LINK timer operation is possible only when a JVC tuner equipped COMPU LINK-3 SYNCHRO terminals and a timer function is connected into the COMPU LINK system.

COMPU LINK Connection example

The following is a basic example of COMPU LINK connections for JVC audio components. With these connections, all the functions are bridged, so there is no set order in which the components must be connected.



Some record players or MD recorders only have one COMPU LINK terminal. In such a case, branch the connections as shown below.



COMPU LINK Remote Control System

COMPU LINK operations

One touch play

The one touch play function lets you listen to a source simply by starting playback from the source component.

① Press the play (►) button on the source component.
(For the tuner, press the band selector (FM or AM) button.)

The following operations are done automatically, all you need to do is enjoy!

- The source component and amplifier turn on.
- The source selector on the amplifier switches to the respective source component.
- The source component starts playing.

Selecting a source component with the amplifier's source selector will also start playback from the respective source. The previous source component stops playing.
After the amplifiers turned on, it takes about 5 seconds before any sound is output. Since there will be no sound during this time, even if the source component start playing, the initial section may be left out when playback begins.

Note

If both the amplifier and source component are not COMPU LINK-3 compatible, the power will not turn on automatically. When using components with earlier versions of COMPU LINK, be sure to turn the amplifier and respective components on before operation.

Synchro Recording

The synchro recording function lets you start recording automatically when you start playing the source component. It can also be used for recording PROGRAM play from CD (etc.).

① Load a disc or tape into the source component.
② Load a disc or tape into the recording component.
③ Set the recording component to the record pause (REC PAUSE) mode.
④ Press the play (►) button on the source component.

Recording starts automatically when the source component starts playing.

Notes

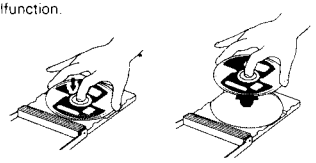
- Synchro recording cannot be done to 2 components (such as an MD recorder and cassette deck) at the same time.
- Synchro recording is not possible when the source component is the cassette deck.
- Synchro recording will stop if you change the recording selector during the synchro recording process. With certain amplifiers, the source selector function is locked during the synchro recording process and cannot be changed when the recording selector is set to SOURCE. Please, do not switch the setting of the recording and source selectors while recording.
- When synchro recording PROGRAM play onto a cassette deck, a 4 second space is automatically created between each track. This is to let you locate the beginning of the tracks by using the cassette deck's MUSIC SCAN function after the tape is recorded, it is not a malfunction.

Additional Information

Care and handling

How to handle CDs

When handling compact discs, do not touch the surface of the disc (reflective silver side - the side without the label).
Since compact discs are made of plastic, they are easily damaged. If the disc gets dirty, dusty, scratched or warped, the sound will not be picked up correctly and, in addition, such discs may cause the CD player to malfunction.

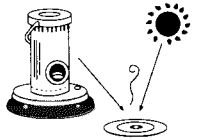


Even on label side

Do not damage the label side, stick paper to it or use any adhesive on this surface.

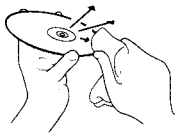
Storage

Make sure that discs are kept in their cases. If discs are piled one on top of another without their protective cases, they can be damaged.
Do not put discs in any location where they can be exposed to direct sunlight - or in any place where humidity or temperature is high. Avoid leaving discs in your car!



Maintenance of discs

When there are fingerprints or other dirt adhering to a disc, wipe the disc with a soft, dry cloth, with motion going from the inside outwards.
If difficult to clean, wipe the disc with a cloth moistened with water.
Never use record cleaners, petrol, alcohol or any antistatic agents.



Troubleshooting

If you experience any difficulty with your CD player, check the following list for a possible solution before calling for service. If you cannot solve the problem from the hints given here, or the CD player has been physically damaged, call a qualified person, such as your dealer, for service.

SYMPTOM	POSSIBLE CAUSE	ACTION
Playback is not possible	• No disc has been loaded.	• Load a disc (see page 11).
	• The disc was inserted upside-down.	• Load the disc so that the label side faces up in the disc tray.
	• The disc is not flat in the groove on the disc tray	• Load the disc so that it lies flat (see page 11).
	• The playback is paused.	• Press ► PLAY.
	• The disc is damaged.	• Load a different disc.
	• Moisture has condensed inside the unit.	• Leave the unit turned on until the moisture evaporates.
Sound is intermittent	• The disc is dirty	• Wipe the surface disc with a soft cloth.
	• The disc is warped or scratched.	• Replace the disc with a new one.
	• The disc is scratched.	• Replace the disc with a new one.
Remote control unit does not function	• Batteries are exhausted.	• Replace both batteries.
	• Polarity (+, –) of batteries is reversed.	• Insert batteries correctly as shown inside the battery case.
	• Obstacle between remote control unit and remote sensor of CD player.	• Remove obstacle.
	• Direct sunlight shining on remote sensor of CD player.	• Shade CD player from direct sunlight.
No sound	• Connections are incorrect or incomplete.	• Check to make sure the all equipment is connected correctly.
	• Volume control on amplifier is turned all the way down.	• Adjust the volume on the amplifier.
	• DIGITAL is turned off.	• Turn on DIGITAL.
Disc tray does not open	• Power cord is not connected.	• Connect the power cord.
	• POWER switch is set to OFF.	• Set power switch to ON (see page 11).
No display	• The display off function is turned on.	• Press DISPLAY (or DISPLAY-ON/OFF on the remote control) to turn on the display.
CD player does not respond	• The power cord is disconnected.	• Connect the power cord.
	• POWER switch is set to OFF.	• Set power switch to ON (see page 11).
	• OPERATE switch is set to STANDBY.	• Press OPERATE to turn the power ON.

Specifications

General

Format	Compact disc digital audio
Signal reading method	Non-contact type optical pickup
Sampling Frequency	44.1 kHz channels
Number of channels	2 channels

Characteristics

Frequency characteristic	2 Hz to 20,000 Hz
Dynamic range	More than 100dB (at 1kHz)
S/N	More than 110dB
Harmonic distortion ratio	Less than 0.0015%
Channel separation	More than 110dB (at 1kHz)
Wow/flutter	Below measurable limits

Digital outputs

Coaxial Output level/ Terminal shape	0.5 Vp-p (terminal impedance 75 ohms) / Pin Jack
Optical Output level/ Terminal shape	-21 dBm to -15 dBm (peak) / TOS-link (square connector)

Analog output

Output level	2.4 Vrms

Other

Power requirements	AC 230 V 50Hz
Power consumption	19 watts (OPERATE ON); 11 watts (OPERATE STANDBY)
Dimensions	360 x 129 x 317 mm (14-3/16 x 5-3/8 x 12-1/2 inches)
Mass	7.4 kg (16.4 lbs)

Supplied Accessories

Remote control unit (RM-SXSD1U)	1
Battery (R03(UM-4)/AAA(24F))	2
Audio cord	1
COMPU LINK cord	1
AC power cord	1

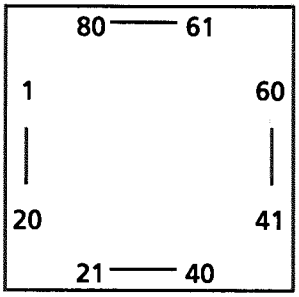
Specifications and appearance subject to change without prior notice.

–MEMO–

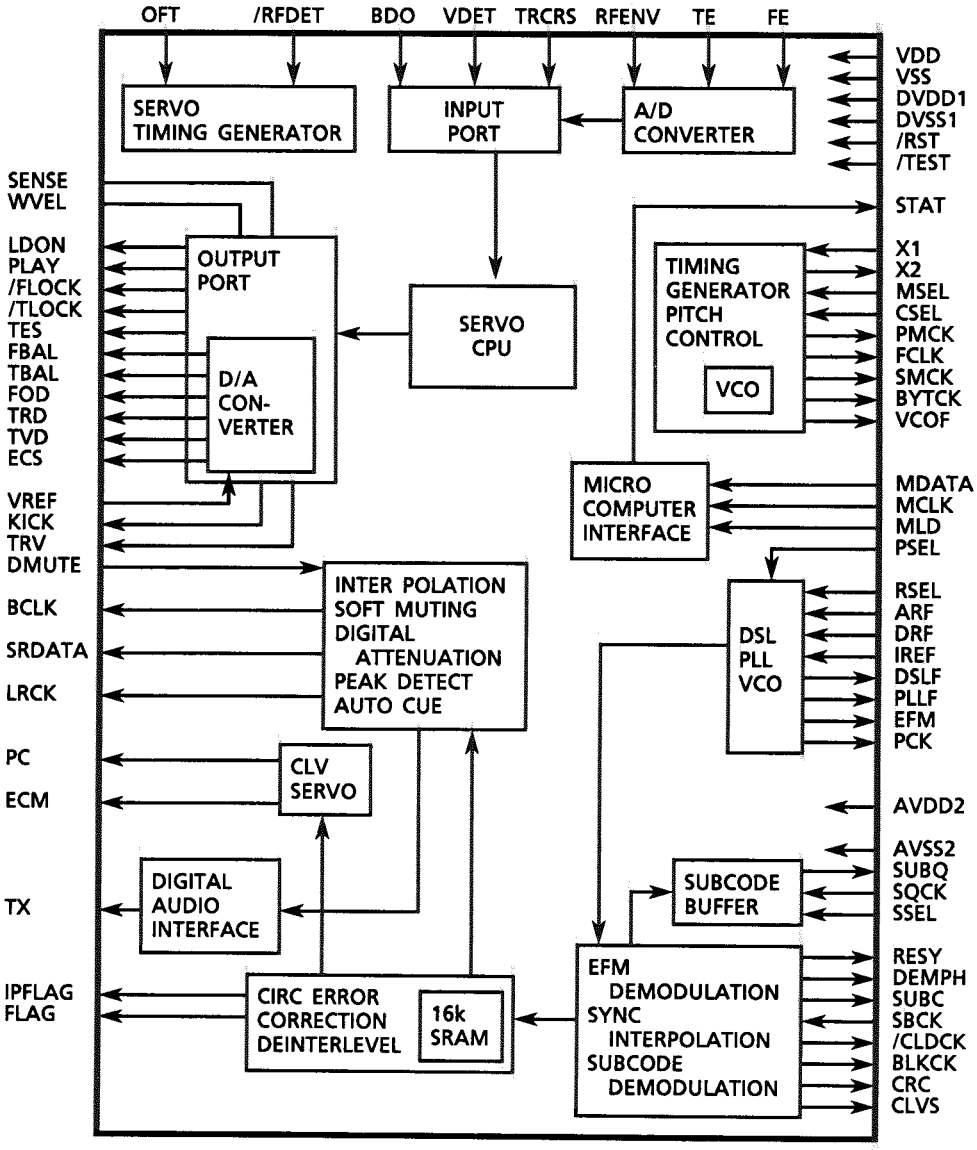
Description of Major LSIs

■ MN662720RB (IC401) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSER

1. Terminal Layout



2. Block Diagram

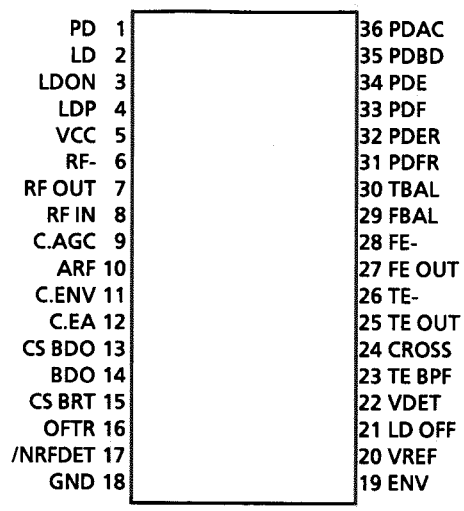


3. Description

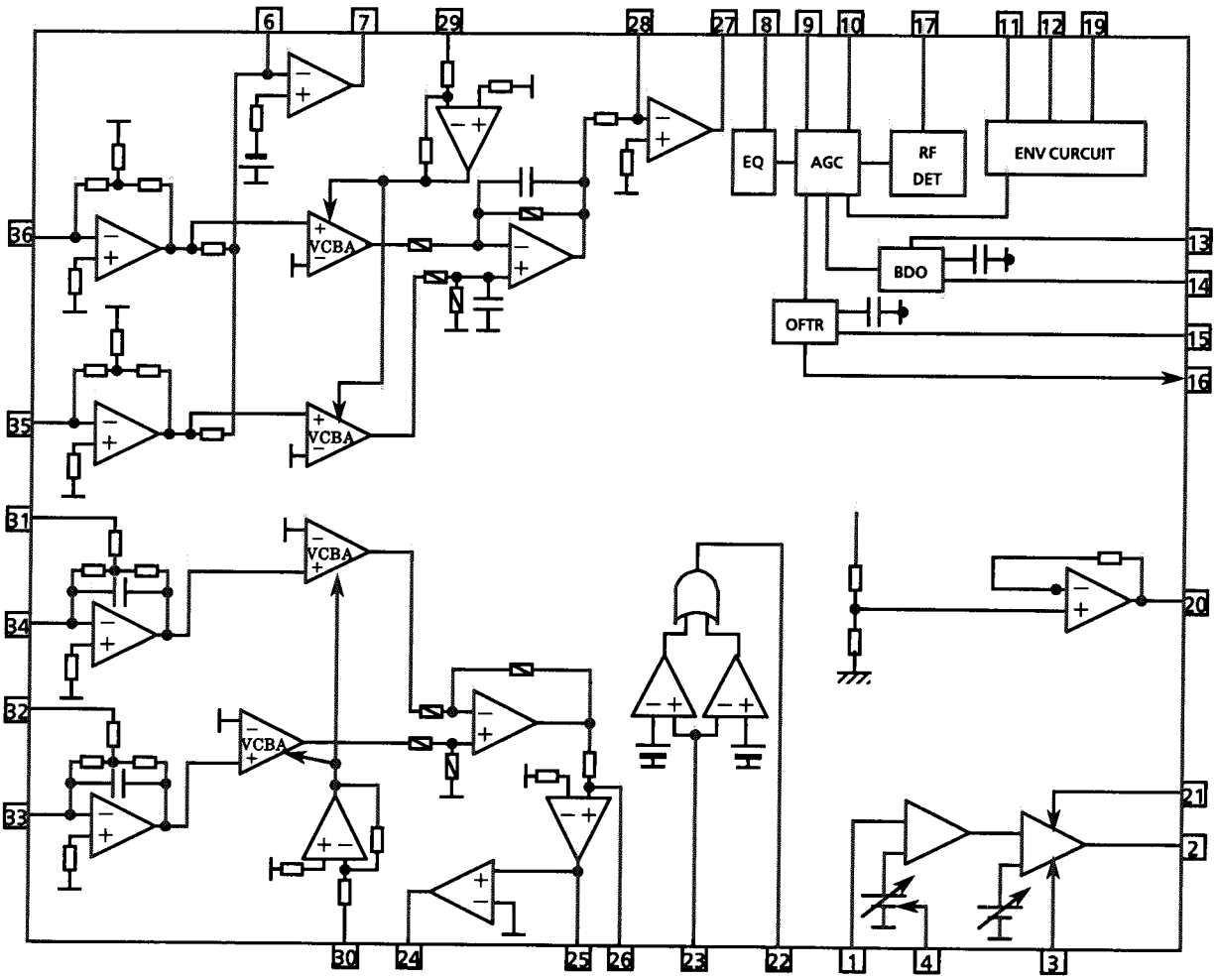
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Bit clock output pin for SRDATA	41	TES	—	Not used
2	LRCK	O	L/R distinction signal output	42	PLAY	—	〃
3	SRDATA	O	Serial data output	43	WVEL	—	〃
4	DVDD1	—	Power supply(Digital)	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND(Digital)	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface signal	46	DRF	I	Bias pin for DSL
7	MCLK	I	μ-com command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	μ-com command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μ-com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sense signal output (OFT,FESL,NACEND,NAJEND,POSAD,SFG)	50	AVDD2	—	Power supply (Analog)
11	/FLOCK	O	Lock signal for Focus L : pull	51	AVSS2	—	Connected to GND(Analog)
12	/TLOCK	O	Lock signal for Tracking L : pull	52	EFM	—	Not used
13	BLKCK	O	Subcode · block · clock signal output	53	PCK	—	〃
14	SQCK	I	Outside lock for sub-code Q resister input	54	PDO	—	〃
15	SUBQ	O	Sub-code Q-code output	55	SUBC	O	Subcode serial output data output
16	DMUTE	I	Muting input (H : MUTE)	56	SBCK	—	Clock input for subcode serial output
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	—	Connected to GND(for X'tal cscillation circuit)
18	/RST	I	Reset signal input (L :Reset)	58	X1	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	—	Not used
20	PMCK	—	Not used	60	VDD	—	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	/CLDCK	O	Subcode · Frame · Clock signal output
23	PC	—	Not used	63	FCLK	O	X'tal frame clock output
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	O	Interpolation flag output H : Interpolation
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	—	Flag output
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	〃
28	FOD	O	Focus drive output	68	DEMPH	O	De-emphasis ON signal (H : ON)
29	VREF	I	Reference voltage input pin for D/A output block(TVD,FOD,FBAL,TBAL)	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	NC1	—	〃
31	TBAL	O	Tracking Balance adjust signal output	71	/TEST	—	Pull up (+5V)
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	—	Power supply (Digital)
33	TE	I	Tracking error signal input(Analog input)	73	NC2	—	Not used
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input(H : detect)	75	NC3	—	Not used
36	OFT	I	Off track signal input(H : off track)	76	RSEL	I	Rf signal polarity appointed pin Light level "H" → RSEL = H Light level "L" → RSEL = L
37	TRCRS	I	Track cross signal input	77	CSEL	I	X'tal oscillation frequency appointed pin L : 16.9344MHz H : 33.8688MHz
38	/RFDET	I	RF detect signal input (L : detect)	78	PSEL	I	Terminal of Test
39	BDO	I	BDO input pin (H : drop out)	79	MSEL	I	SMCK pin output of frequency select terminal L :SMCK+4.2336MHZ H :SMCK+8.4672MHZ
40	LDON	O	Laser ON signal output (H : on)	80	SSEL	—	SUBQ terminal output mode select pin H : Mode for Q code buffer

■ AN8806SB (IC600) : RF & SERVO AMP

1. Terminal Layout



2. Block Diagram

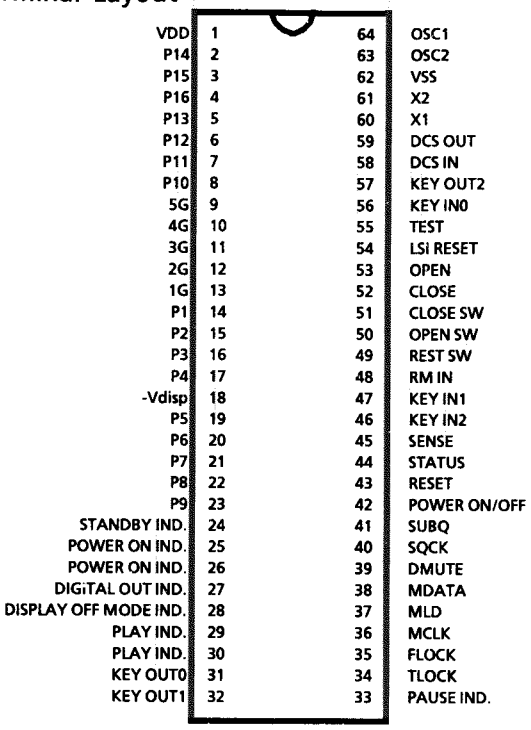


3. Functions

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

■ MN171602JAAA(IC201) : SYSTEM CONTROLLER

1. Terminal Layout

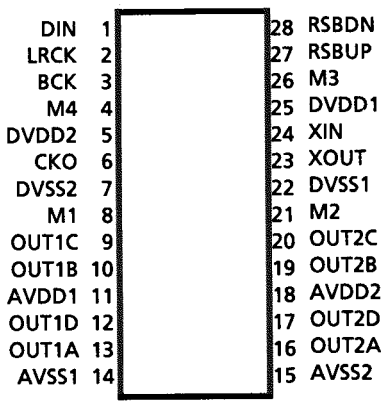


2. Terminal Description

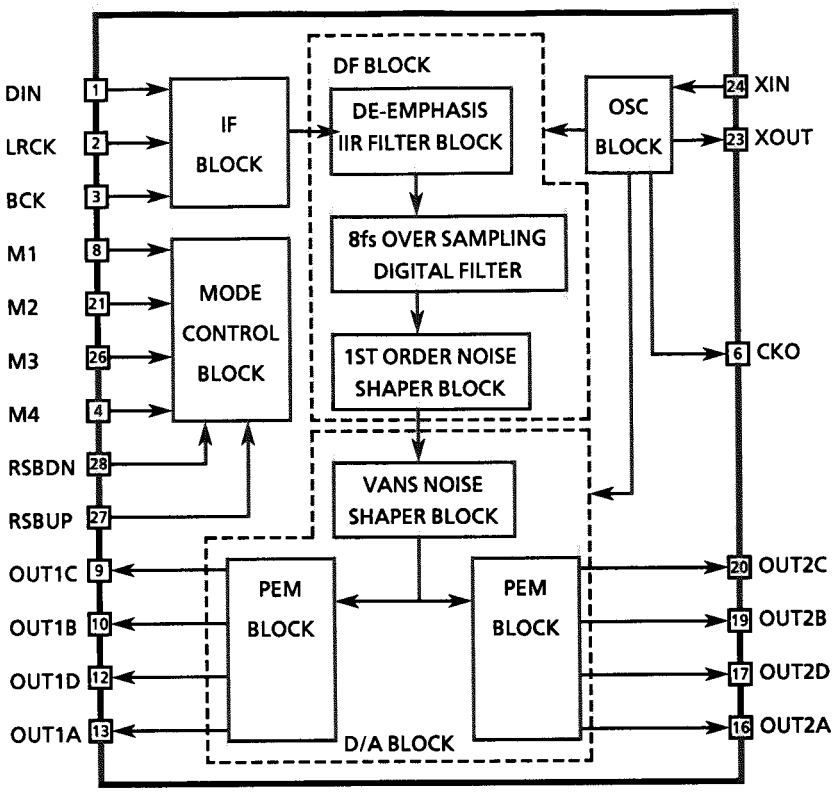
PIN No.	SYMBL	I/O	DEESCRIPTION	PIN No.	SYMBL	I/O	DEESCRIPTION
1	VDD	--	Power suplly (+5V)	43	RESET	I	Reset signal inpit
2~8	P14~P16 P13~P10	O	FL segment control output	44	STATUS	I	Status signal (IC401) input
9~13	5G~1G	O	FL grid control output	45	SENSE	I	Sense signal input
14~17	P1~P4	O	FL segment control output	46,47	KEY IN2,1	I	Key matrix input
18	-Vdisp	--	FLPower suplly	48	RM IN	I	Remort control signal inpit
19~23	P5~P9	O	FL segment control output	49	REST SW	I	REST swtich input
24	STANDBY IND.	O	STANDBY indication signal output	50	OPEN SW	I	Open swtich input
25,26	POWER ON IND.	O	POWER indication signal output	51	CLOSE SW	I	Close swtich input
27	DIGITAL OUT IND.	O	DIGITAL indication signal output	52	CLOSE	O	Close signal output
28	DISPLAY OFF MODE IND.	O	DISPLAY indication signal output	53	OPEN	O	Open signal output
29,30	PLAY IND.	O	PLAY indication signal output	54	LSI RESET	O	Reset signal output
31,32	KEY OUT0,1	O	Key matrix output	55	TEST	I	+5V
33	PAUSE IND.	O	PAUSE indication signal output	56	KEY IN0	I	Key matrix input
34	TLOCK	I	Tracking lock signal input	57	KEY OUT2	O	Key matrix output
35	FLOCK	I	Focus lock signal input	58	DCS IN	I	DCS input
36	MCLK	O	Command clock signal output	59	DCS OUT	O	DCS output
37	MLD	O	Command load signal output	60	X1	--	GND
38	MDATA	O	Command data signal output	61	X2	--	Not use
39	DMUTE	O	Audio Muting output	62	VSS	--	GND
40	SQCK	O	Out side clock terminal for Subcode Q resistor	63	OSC2	O	Oscillation terminal
41	SUBQ	I	Subcode Q code input	64	OSC2	I	Oscillation terminal
42	POWER ON/OFF	O	POWER ON/OFF control output				

■ MN35502 (IC301) : D/A CONVERTER / DIGITAL FILTER

1. Terminal Layout



2. Block Diaglam



3. Terminal Description

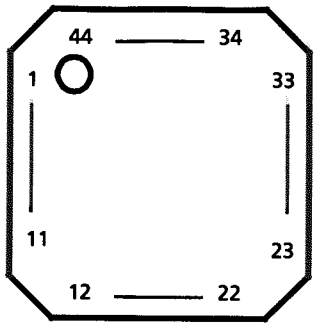
PIN No.	Symbol	I/O	Functions and operations
1	DIN	I	Sirial data input
2	LRCK	I	LR clock input
3	BCK	I	Bit clock input from SRDATA
4	M4	I	Moving mode select pin 4 (Deenfacis ON/OFF,H=ON)
5	DVDD2	--	Power supply 2 of Digital (+5V)
6	CKO	O	Clock output
7	DVSS2	--	Grand 2 of Digital
8	M1	I	Mode select pin 1(Connect to GND)
9,10	OUT1C, OUT1B	O	PEM output signal (channel 1)
11	AVDD1	--	Power suplly 1 of Analog (+5V)
12,13	OUT1D ,OUT1A	O	PEM signal output (channel 1)
14	AVSS1	--	Grand 1 of Analog
15	AVSS2	--	Grand 2 of Analog
16,17	OUT2A, OUT2D	O	PEM signal output (channel 2)
18	AVDD2	--	Power suplly 2 of Analog (+5V)
19, 20	OUT2B, OUT2C	O	PEM signal output (channel 2)
21	M2	I	Mode select pin 2
22	DVSS1	--	Grand 1 of Digital
23,24	XOUT, XIN	--	Connected to X'tal oscollation
25	DVDD1	--	Power suplly 1 of Digital (+5V) (Power suplly fou oscillleation circuit)
26	M3	I	Mode select pin 3(Connected to GND)
27	RS BUP	--	Connected to GND
28	RS BDN	I	Reset pin /Digital attenuation control pin

4. Movement mode

Mode select pin name			
M2	L	L	H
M3	L	H	L
Bit length input	16	16	20
XIN clock (fs)	384	192	384
VANS Over sample (fs)	64	32	64

■ JCE4315(IC305) : 20bit K2 PROCESSER LSI

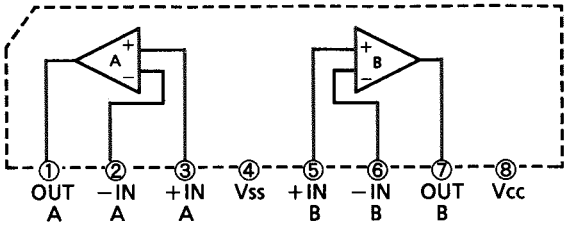
1. Terminal Layout



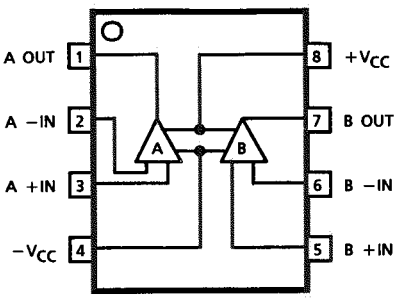
2.Terminal Description

Pin No	symbol	I/O	Description	Pin No	symbol	I/O	Description
1	VDD	--	Power suppy	23	SRDATA	O	20bit digtal data output
2	MEMDO5	--	Not used	24	AV3	I	Setting data average
3	MEMDO4	--	Not used	25	AV5	I	Setting data average
4	MEMDO3	--	Not used	26	RESET	I	Reset signal input
5	MEMDO2	--	Not used	27	LRCK	O	LR clock output for IC301
6	GND	I	GND	28	GND	--	GND
7	MEMDO1	--	Not used	29	GND	--	GND
8	MEMDO0	--	Not used	30	STEST	--	GND
9	MEMA0	--	Not used	31	T2	--	Not used
10	MEMA1	--	Not used	32	T3	--	Not used
11	MEMA2	--	Not used	33	MTEST	--	GND
12	CKO	O	Clock output for IC401	34	MEMDI5	--	Not used
13	FR	--	Pull up	35	TEST-SE	--	Not used
14	NDTR	--	GND	36	BCK	O	Bit clock output for IC301
15	T1	--	Not used	37	MEMDI4	--	Not used
16	BCKI	I	Bit clock input from IC401	38	MEMDI3	--	Not used
17	LRCKI	I	LR clock input	39	GND	--	GND
18	DIN	I	16bit digtal data input	40	MEMDI2	--	Not used
19	CKI	I	Clock input from IC301	41	MDMEI1	--	Not used
20	THR	--	Pull up	42	MEMDI0	--	Not used
21	LRSH	--	Pull up	43	MEMDO7	--	Not used
22	VDD	--	Power suppy	44	MEMDO6	--	Not used

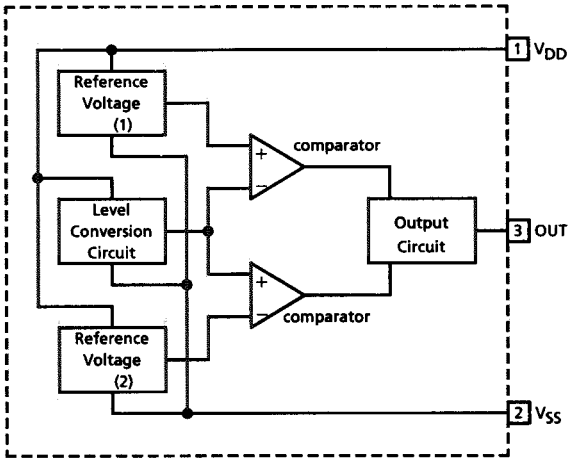
■ NJM4558L (IC851) : DUAL OP AMPLIFIER



■ NJM5532D (IC302,303) :DUAL OP AMPLIFIER



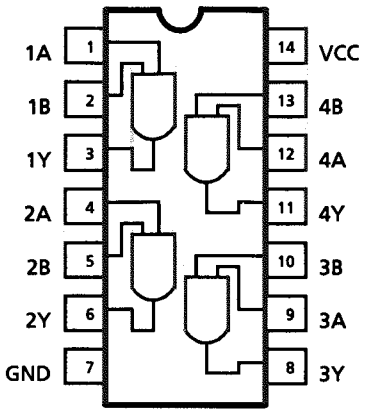
■ MN1281(IC202) :RESET IC



Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

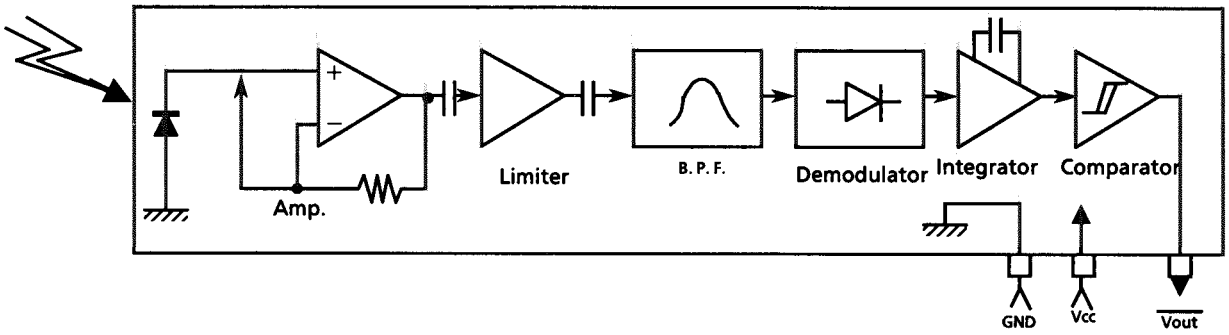
■ TC74HCT08AP (IC451) : 2 CH AND

1. Pin Connection

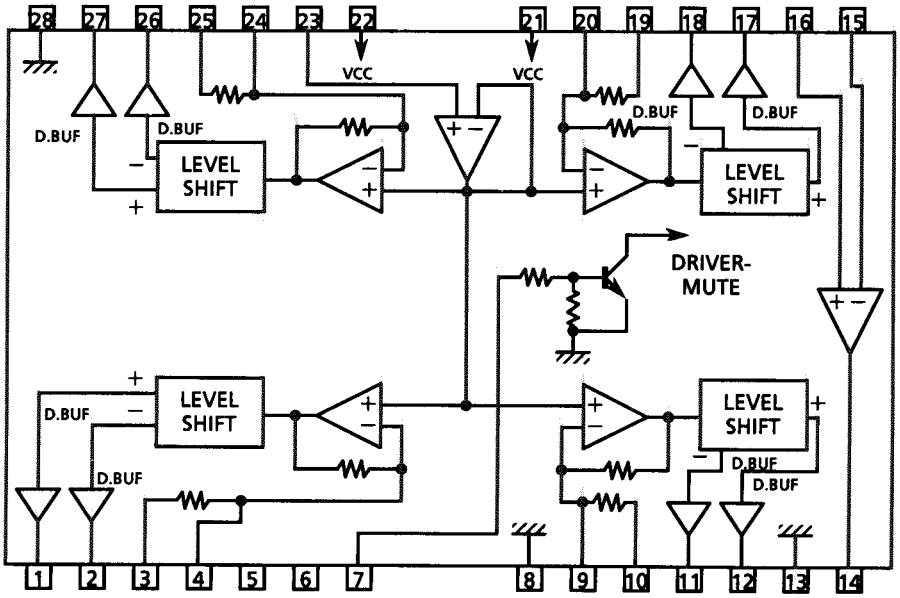


A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

■ GP1U501X (IC203) : Receiver for remote controller



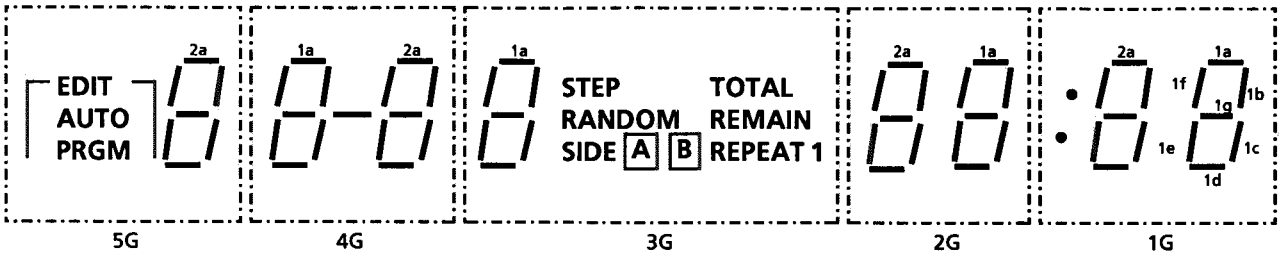
■ BA6393FP(IC860) : BTL DRIVER



Internal Connections of the FL Display

■ELU0001-103 (FL201)

1. Grid Assignment



2. Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Electrode	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	1G	2G	3G	4G	5G

Pin No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Electrode	NC	NC	NC	NC	NC	NC	P10	P11	P12	P13	P14	P15	P16	NP	NP	F2	F2

NOTE) F : Filament, NP : No pin, NC : No connection, G : Grid, P : Anode

3. Anode Connection

	5G	4G	3G	2G	1G
P1	—	▬	REPEAT	—	
P2	2d	1d	1	2d	2d
P3	2e	1e	REMAIN	2e	2e
P4	2c	1c	TOTAL	2c	2c
P5	2g	1g	B	2g	2g
P6	2f	1f	A	2f	2f
P7	2b	1b	SIDE	2b	2b
P8	2a	1a	RANDOM	2a	2a
P9	—	—	STEP	—	—
P10	—	2d	1d	1d	1d
P11	—	2e	1e	1e	1e
P12	—	2c	1c	1c	1c
P13	—	2g	1g	1g	1g
P14	PRGM	2f	1f	1f	1f
P15	AUTO	2b	1b	1b	1b
P16	EDIT	2a	1a	1a	1a

Disassembly Procedures

(1) Removing the Front panel Ass'y

1. Remove 8 screws Ⓐ fastening both sides of said panel. Remove the side panel.
2. Remove 4 screws Ⓑ fastening both sides and remove 2 screws Ⓑ rear side.
3. Remove 3 screws Ⓑ and a screw Ⓒ fastening front panel.
   (Fig.3)
3. Insert a screwdriver through the hole at the bottom and turn it counterclockwise to bring the tray forward.
4. Remove 2 screws Ⓓ,and remove the fitting.
5. Close the tray. Remove the front panel ass'y.

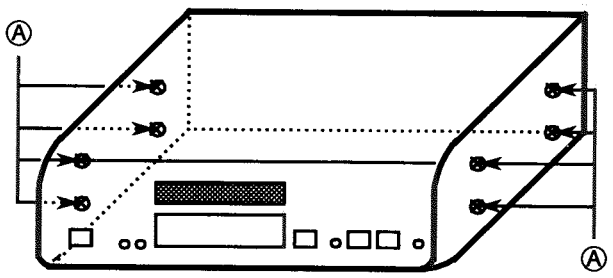


Fig.1

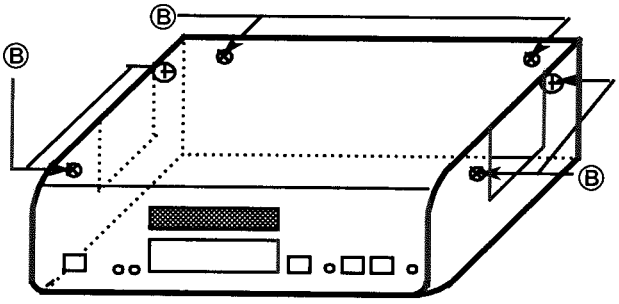


Fig.2 Remove the side panel

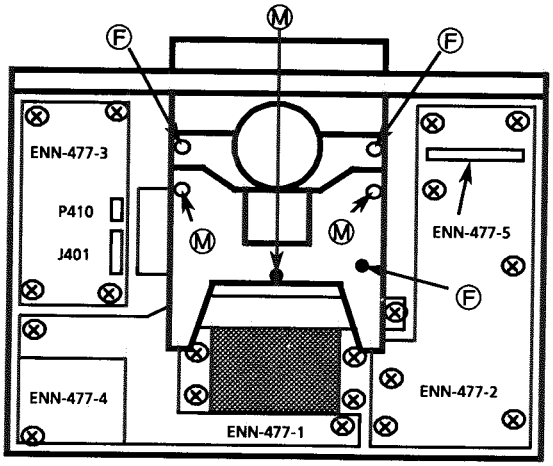


Fig.4 Up side

(2) Removing the CD mechanism and servo PCB

1. Remove the front panel ass'y.
2. Remove a screw Ⓕ on the tray. Remove the tray.
3. Remove 2 screws Ⓕholding the clamp.
4. Remove the 3 screws Ⓜ holding the CD Mechanism assembly.
5. Disconnect the connectors (P410,J401). Remove the CD Mechanism assembly and servo PCB.

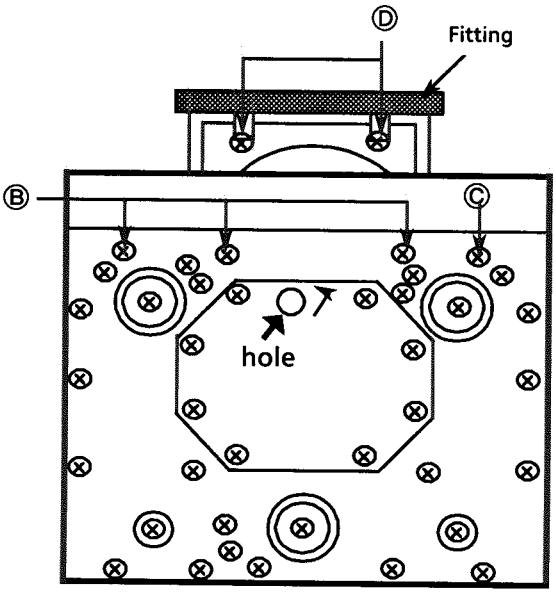


Fig3 Bottom side

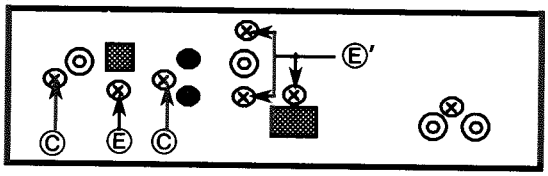


FIG.5 Rear side

Ⓐ .. E74274-003 Ⓑ ... GBSG3008CC Ⓒ ... E408499-002 Ⓓ ... SDSF2608Z
Ⓕ .. SBSF3008M Ⓖ ... E61661-003 Ⓜ ... SBSF3010M

(3) Removing the power trans and PCB(ENN-477-1)

1. Remove the front panel ass'y.
2. Remove a screw Ⓔ and 2 scerws Ⓒ holding the PCB(ENN-477-4). Remove the PCB(ENN-425-4). Remove 3 screws Ⓔ' holding the power switch and PCB(ENN-477-1).(FIG.5)
3. Remove 4 screws Ⓔ holding the PCB(ENN-477-1). Remove 4 screws Ⓖ holding the power trans.
4. Open the tray.
5. Disconnect the connectors (P101,P901). Remove the PCB(ENN-477-1).

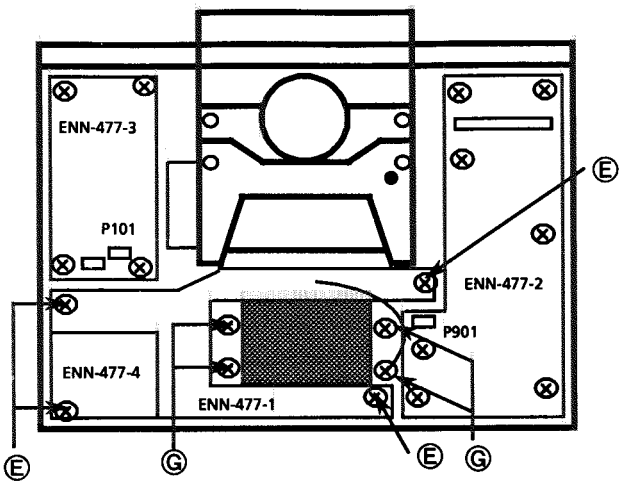
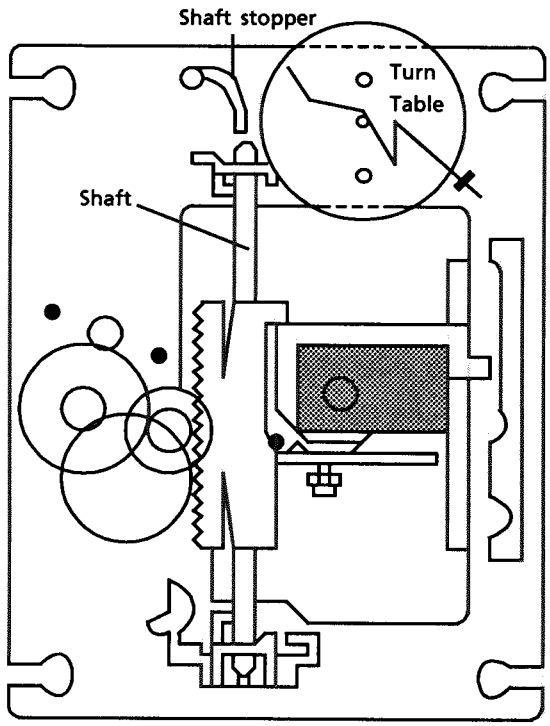


FIG.6

Ⓒ .. E408499-002 ⒺⒺ' ... GBSG3006CC Ⓓ .... SDSF2608Z Ⓖ ... E61661-007

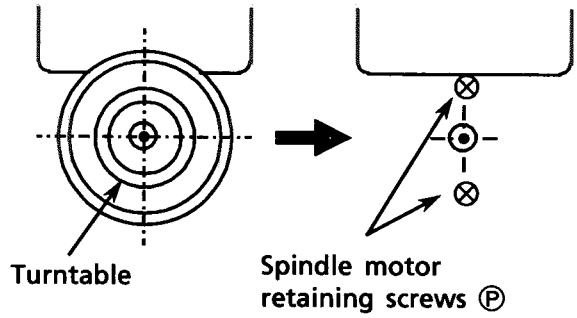
(4) Removing the Pickup

1. Remove the CD mech. assembly.
2. Release the shaft to remove the pickup.



(5) Removing the Spindle motor

1. Remove the CD mech. assembly.
2. Remove the turntable, and remove the 2 screws Ⓟ retaining the spindle motor.
3. Remove the screw retaining the spindle and feed motor circuit board and unsolder it.



(6) 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 mech. base to the turntable is exactly 19.4±0.1mm.

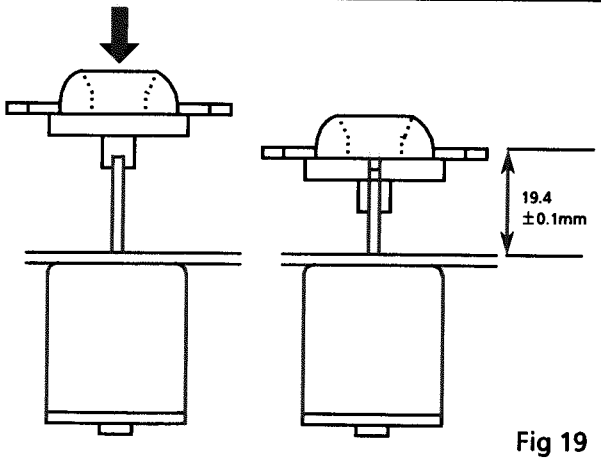
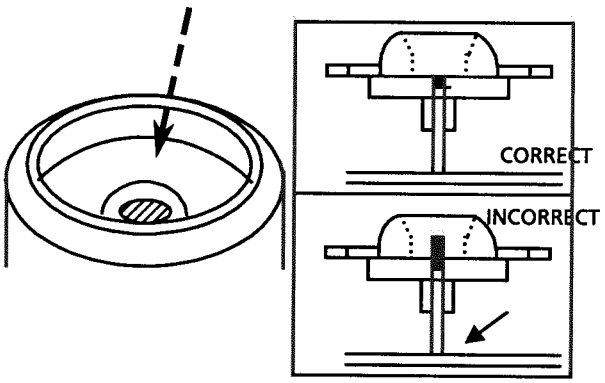


Fig 19

(7) After inserting the turntable, bond the motor shaft and turntable together (at the section marked by an arrow in fig 20 on the left below).



(8) Use "LOCKTITE" #460 bonding agent, and apply as little as possible.

Take care not to allow any excess bonding agent to get onto the turntable.

Be extremely careful not to allow bonding agent to adhere to the motor bearing (the section marked by an allow in fig 20 on the right).

Ⓟ .. SDSP2003N

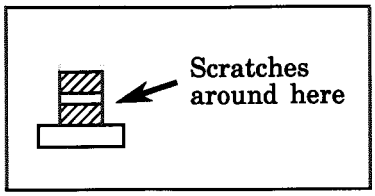
Some working points which affect sound Quality

* The followings show some working points which affect sound Quality in servicing(after disassembling and replacing parts and reassembling)

■ Insulation check for the bracket which has bushings

1) Take care not to cut bushings by top of screws, etc. when removing and setting brackets, etc. (See the right figure.)

2) Follow the removing procedure (See page 3-3) to fix the screws or the bushing is damaged and it can not be insulated.



■ Points which have washers

1) Do not miss washers to put them again.

■ Others and necessary working in servicing

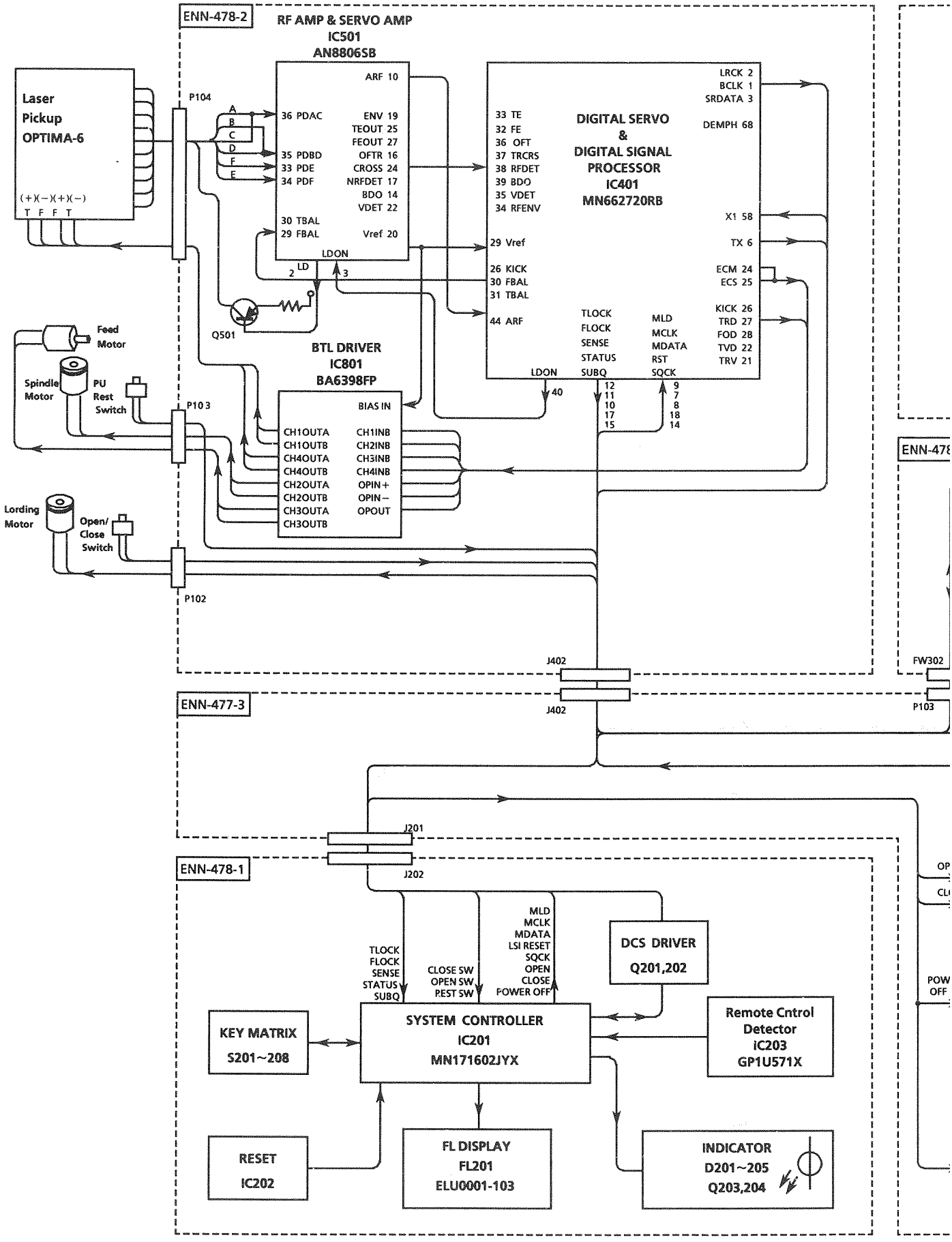
1) Put spacers on the spots which are marked with ▒ on both sides of the PCB. (See page 2-16)

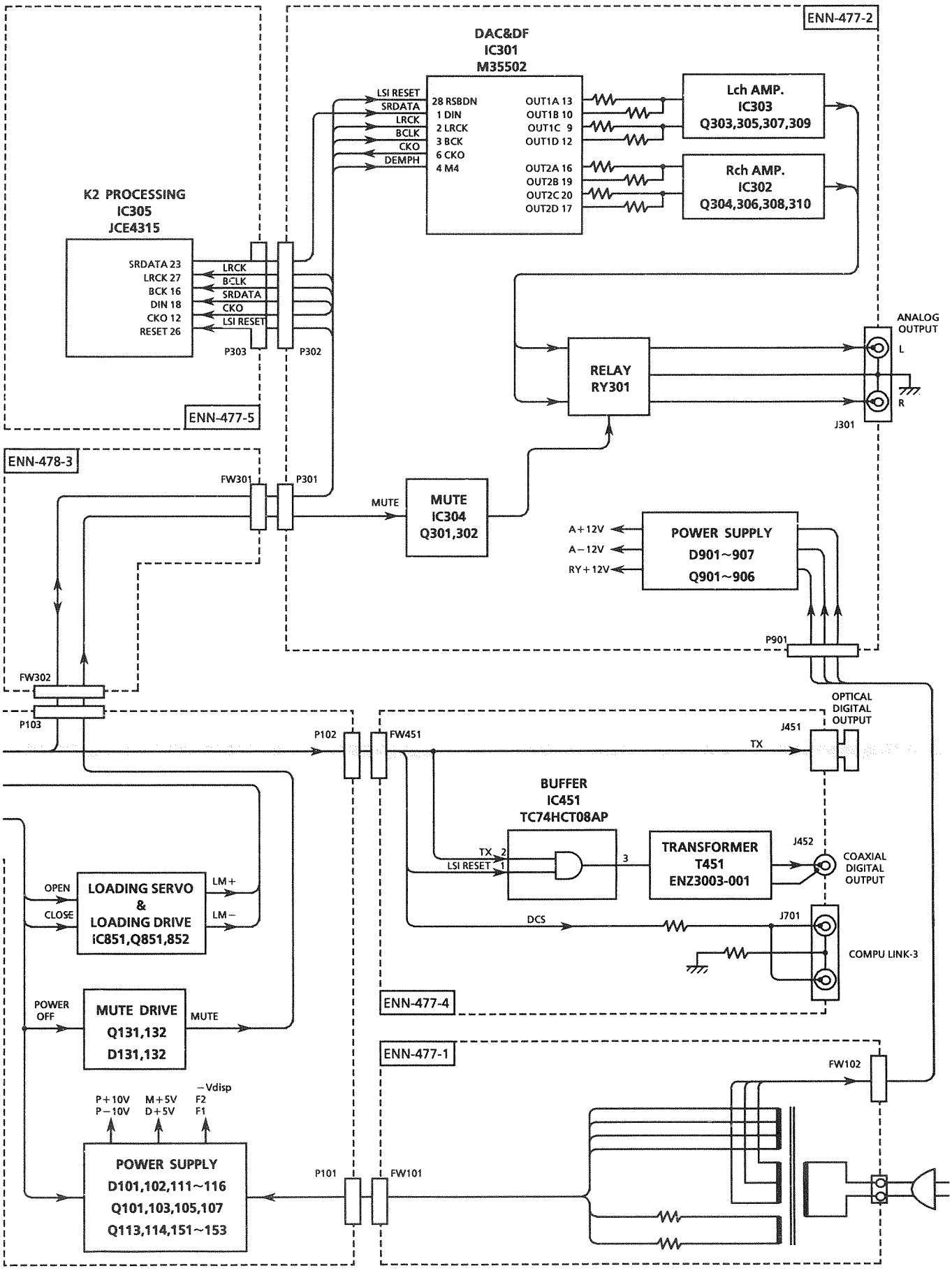
2) Apply glue(#550) on C901, C902, C331, C332, C380, C103, and C907.
Take care not to apply the glue on their wrapping terminals.

3) Put the shield tape on C331, C332, C901, C902, C103, C380, C361, C907, C104, C109 and RY601 to fix it firmly.
Note : Put gloves for safety.
Once-used-shield tape is easy to be detached.
Please replace the shield tape together with C331, C332, C901, C902, C103, C380, C361, C907, C104, C109 and RY601 in case of its replacement.
(Shield tape P/N : E75303-003,E75303-004,E75303-005)

Shield tape P/N	Item
E75303-003	C331,C332,C901,C902,C103
E75303-004	C380,C361,C907,RY301
E75303-005	C104,C109

Block Diagram

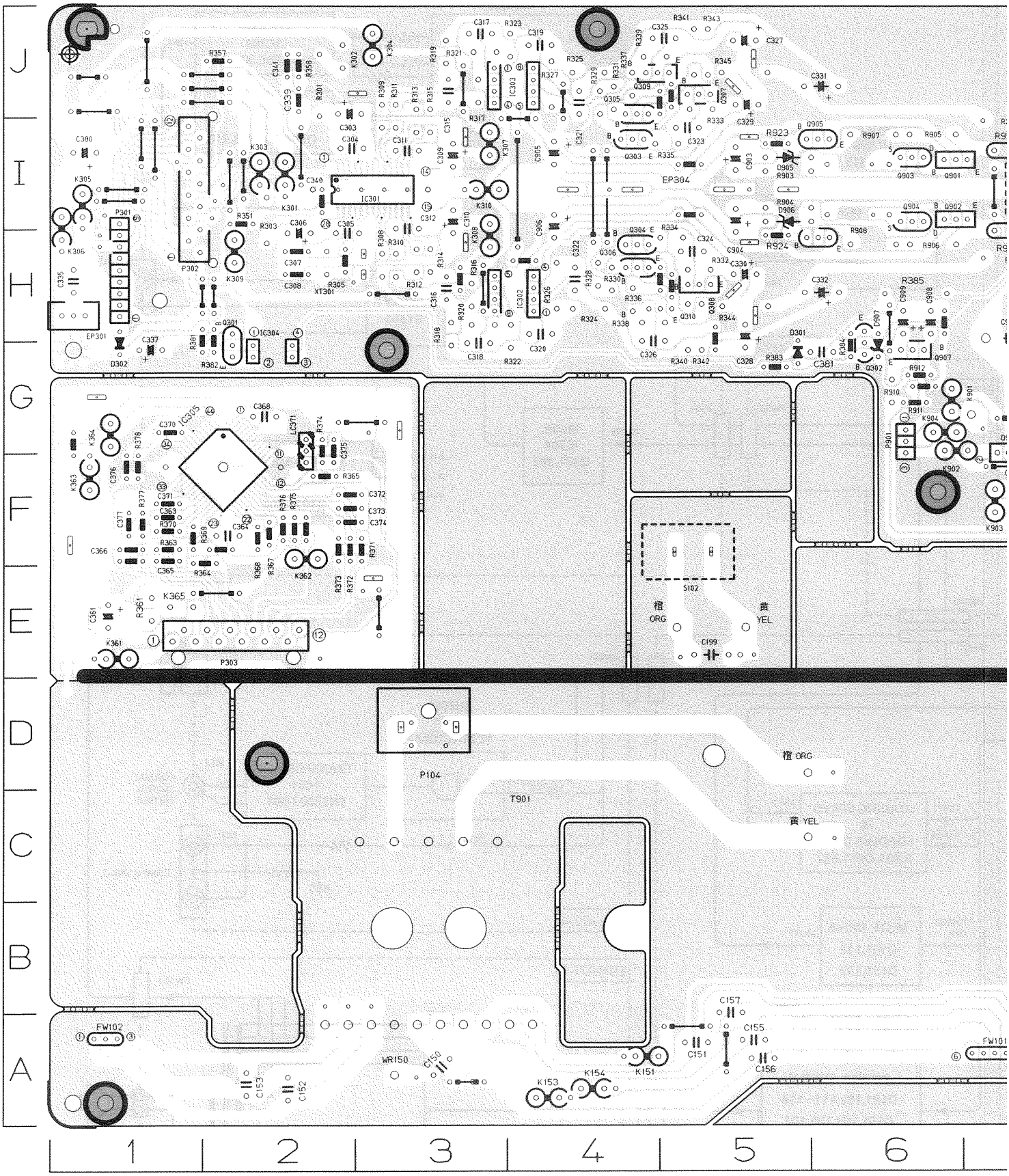



ENN-477-2
DAC&DF
IC301
M35502
LSI RESET
SRDATA
LRCK
BCLK
CKO
DEMPH
28 RSBDN
1 DIN
2 LRCK
3 BCK
6 CKO
4 M4
OUT1A 13
OUT1B 10
OUT1C 9
OUT1D 12
OUT2A 16
OUT2B 19
OUT2C 20
OUT2D 17
Lch AMP.
IC303
Q303,305,307,309
Rch AMP.
IC302
Q304,306,308,310
K2 PROCESSING
IC305
JCE4315
SRDATA 23
LRCK 27
BCK 16
DIN 18
CKO 12
RESET 26
LRCK
BCLK
SRDATA
CKO
LSI RESET
P303
P302
ENN-477-5
RELAY
RY301
ANALOG
OUTPUT
L
R
J301
ENN-478-3
FW301
P301
MUTE
MUTE
IC304
Q301,302
A+12V
A−12V
RY+12V
POWER SUPPLY
D901~907
Q901~906
P901
FW302
P103
OPTICAL
DIGITAL
OUTPUT
J451
TX
P102
FW451
BUFFER
IC451
TC74HCT08AP
TX
LSI RESET
TRANSFORMER
T451
ENZ3003-001
J452
COAXIAL
DIGITAL
OUTPUT
DCS
J701
COMPU LINK-3
OPEN
CLOSE
LOADING SERVO
&
LOADING DRIVE
iC851,Q851,852
LM+
LM−
POWER
OFF
MUTE DRIVE
Q131,132
D131,132
MUTE
ENN-477-4
ENN-477-1
FW102
P+10V
P−10V
M+5V
D+5V
−Vdisp
F2
F1
POWER SUPPLY
D101,102,111~116
Q101,103,105,107
Q113,114,151~153
P101
FW101

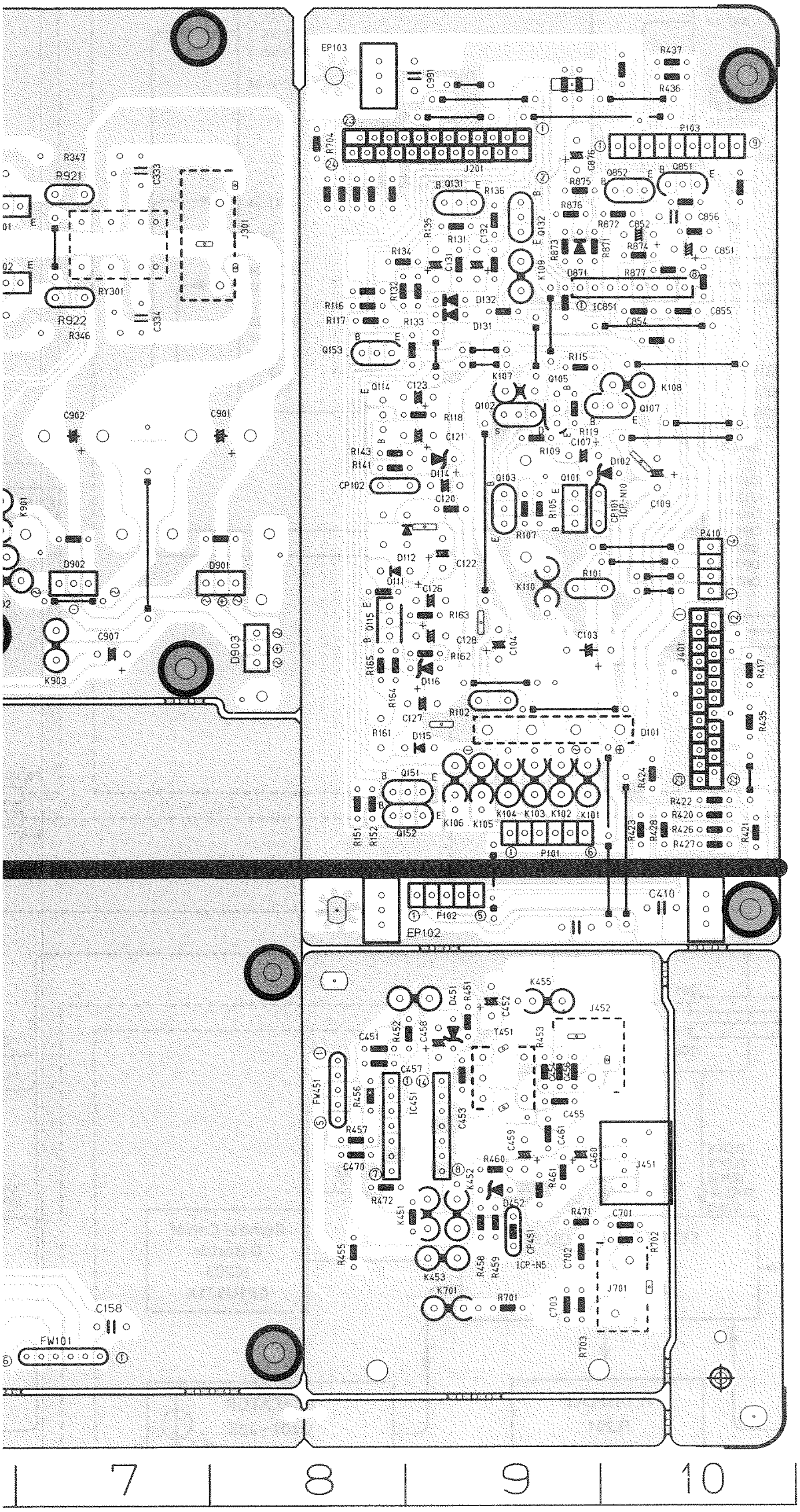
Printed Circuit Boards

PCB. diagram for working: Put 12 spacers (E73967-01
Do not cover holes on the

■ Main P.C. Board(ENN-477)



967-016) on spots marked with ●.
on the PCB.



Location List (ENN-477)

Symbol	X	Y
C103	10	F
C104	9	F
C107	10	G
C109	10	G
C120	9	G
C121	9	H
C122	9	G
C123	9	H
C126	9	F
C127	9	F
C128	9	F
C131	9	I
C132	9	I
C150	3	A
C151	5	A
C152	2	A
C153	2	A
C155	5	A
C156	5	A
C157	5	B
C158	7	A
C199	5	E
C303	2	J
C304	2	I
C305	2	H
C306	2	H
C307	2	H
C308	2	H
C309	3	I
C310	3	H
C311	3	I
C312	3	I
C315	3	J
C316	3	H
C317	3	J
C318	3	G
C319	4	J

Symbol	X	Y
C320	4	H
C321	4	J
C322	4	H
C323	5	I
C324	5	H
C325	4	J
C326	4	H
C327	5	J
C328	5	G
C329	5	J
C330	5	H
C331	6	J
C332	6	H
C333	7	I
C334	7	H
C335	1	H
C337	1	G
C339	2	J
C340	2	I
C341	2	J
C361	1	E
C362	2	F
C363	1	F
C364	2	F
C365	1	F
C366	1	F
C368	2	G
C370	1	G
C371	1	F
C372	2	F
C373	2	F
C374	2	F
C375	2	F
C376	1	F
C377	1	F
C380	1	I
C381	6	G

Symbol	X	Y
C410	10	D
C451	8	C
C452	9	C
C453	9	C
C454	9	C
C455	9	C
C456	9	C
C457	8	C
C458	9	C
C459	9	B
C460	9	B
C461	9	C
C470	8	C
C701	10	B
C702	9	B
C703	9	A
C851	10	I
C852	10	I
C854	10	H
C855	10	H
C856	10	I
C876	9	I
C901	8	H
C902	7	H
C903	5	I
C904	5	H
C905	4	I
C906	4	I
C907	7	F
C908	6	H
C909	6	H
C991	9	J
CP101	10	G
CP102	9	G
CP451	9	B
D101	10	E
D102	10	G

Symbol	X	Y
D111	9	G
D112	9	G
D114	9	G
D115	9	E
D116	9	F
D131	9	H
D132	9	H
D301	5	G
D302	1	H
D451	9	C
D452	9	B
D871	9	I
D901	8	G
D902	7	G
D903	8	F
D905	5	I
D906	6	I
D907	6	H
FW101	7	A
FW102	1	A
FW451	8	C
IC301	3	I
IC302	4	H
IC303	3	J
IC304	2	G
IC305	2	F
IC451	8	C
IC851	9	I
J201	9	J
J301	8	I
J401	10	F
J451	10	B
J452	9	C
J701	10	B
K101	9	E
K102	9	E
K103	9	E

Symbol	X	Y
K104	9	E
K105	9	E
K106	9	E
K107	9	H
K108	10	H
K109	9	I
K110	9	F
K151	4	A
K153	4	A
K154	4	A
K301	2	I
K302	2	J
K303	2	I
K304	3	J
K305	1	I
K306	1	H
K307	3	I
K308	3	H
K309	2	H
K310	3	I
K361	1	E
K362	2	F
K363	1	F
K364	1	G
K365	1	E
K451	9	B
K452	9	B
K453	9	B
K454	8	D
K455	9	D
K701	9	A
K901	6	G
K902	6	G
K903	7	F
K904	6	G
LC371	2	F
P101	9	E

Symbol	X	Y
P102	9	D
P103	10	J
P301	1	I
P302	1	H
P303	1	E
P410	10	G
P901	6	G
Q101	9	G
Q102	9	H
Q103	9	G
Q105	9	H
Q107	9	H
Q114	8	H
Q115	8	F
Q131	9	I
Q132	9	I
Q151	8	E
Q152	8	E
Q153	8	H
Q301	2	H
Q302	6	G
Q303	4	I
Q304	4	H
Q305	4	J
Q306	4	H
Q307	5	J
Q308	5	H
Q309	4	J
Q310	4	H
Q851	10	I
Q852	10	I
Q901	6	I
Q902	6	I
Q903	6	I
Q904	6	I
Q905	5	I
Q906	5	H

Symbol	X	Y
Q907	6	G
R101	9	F
R102	9	F
R105	9	G
R107	9	G
R109	9	H
R115	9	H
R116	8	H
R117	8	H
R118	9	H
R119	9	H
R131	9	I
R132	9	H
R133	9	H
R134	8	I
R135	9	I
R136	9	I
R141	8	G
R143	8	G
R151	8	E
R152	8	E
R161	8	E
R162	9	F
R163	9	F
R164	8	F
R165	8	F
R301	2	J
R303	2	H
R305	2	H
R308	3	H
R309	3	I
R310	3	H
R311	3	I
R312	3	H
R313	3	I
R314	3	H
R315	3	I

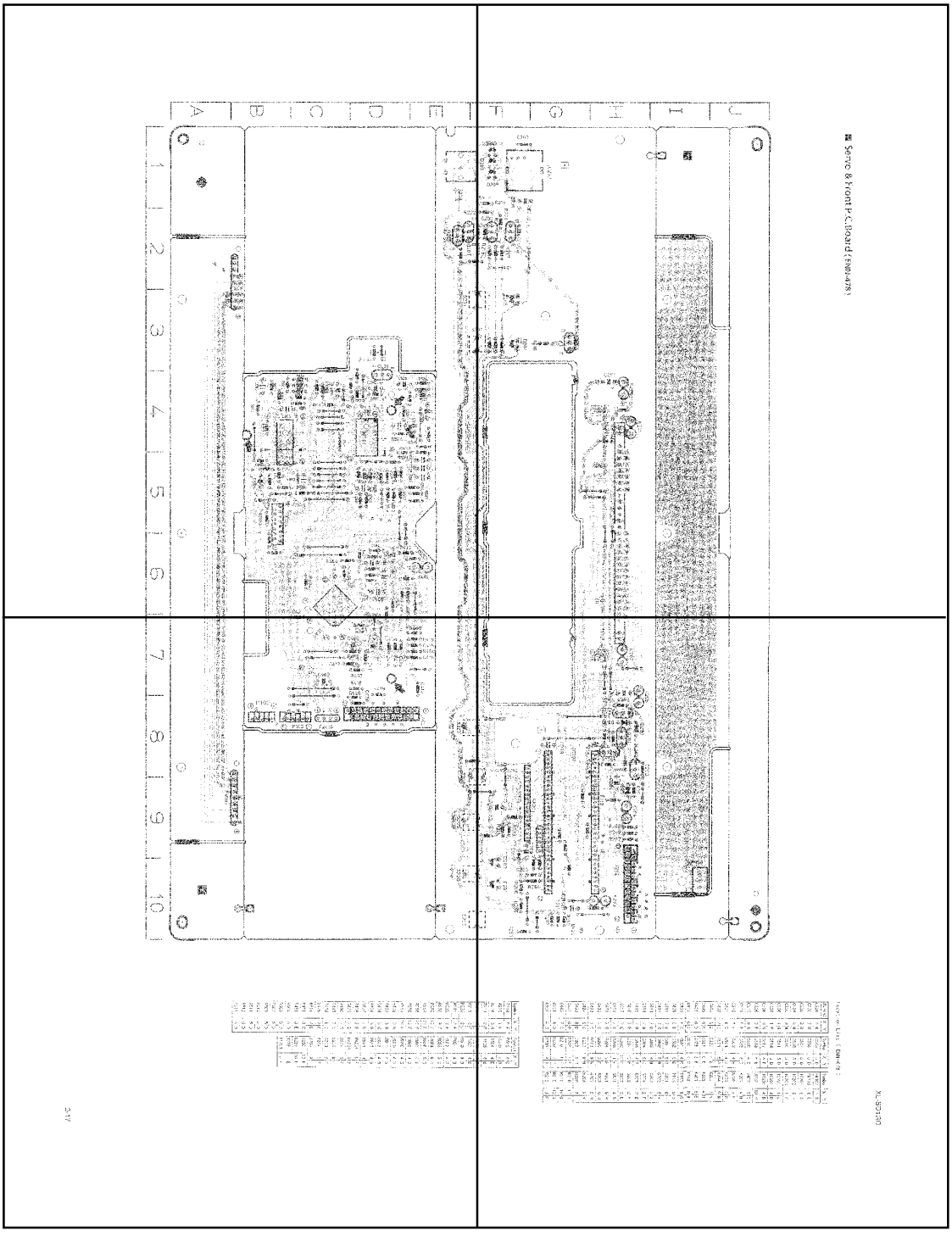
Symbol	X	Y
R316	3	H
R317	3	J
R318	3	H
R319	3	J
R320	3	H
R321	3	J
R322	4	H
R323	4	J
R328	4	H
R329	4	J
R330	4	H
R331	4	J
R332	5	H
R333	5	J
R334	5	H
R335	5	I
R336	4	H
R337	4	J
R338	5	H
R339	5	J
R340	5	G
R341	5	J
R342	5	G
R343	5	J
R344	5	H
R345	5	J
R346	7	H
R347	7	I
R351	2	I
R357	2	J
R358	2	J
R361	1	E
R363	1	F
R364	1	F
R365	2	F
R367	2	F
R368	2	F

Symbol	X	Y
R369	1	F
R370	1	F
R371	3	F
R372	2	F
R373	2	F
R374	2	F
R375	2	F
R376	2	F
R377	1	F
R378	1	F
R381	1	G
R382	2	G
R383	5	G
R384	6	G
R385	6	H
R417	10	F
R420	10	E
R421	10	E
R422	10	E
R423	10	E
R424	10	E
R426	10	E
R427	10	E
R428	10	E
R435	10	E
R436	10	J
R437	10	J
R451	9	C
R452	9	C
R453	9	C
R455	8	B
R456	8	C
R457	8	C
R458	9	B
R459	9	B
R460	9	B
R461	9	B

Symbol	X	Y
R471	9	B
R472	8	B
R701	9	A
R702	10	B
R703	9	A
R704	8	I
R871	9	I
R872	10	I
R873	9	I
R874	10	I
R875	9	I
R876	9	I
R877	10	I
R901	6	I
R902	6	I
R903	5	I
R904	5	I
R905	6	I
R906	6	H
R907	6	I
R908	6	H
R910	6	G
R911	6	G
R912	6	G
R921	7	I
R922	7	H
R923	5	I
R924	5	H
RY301	7	I
S102	5	F
T451	9	C
XT301	2	H

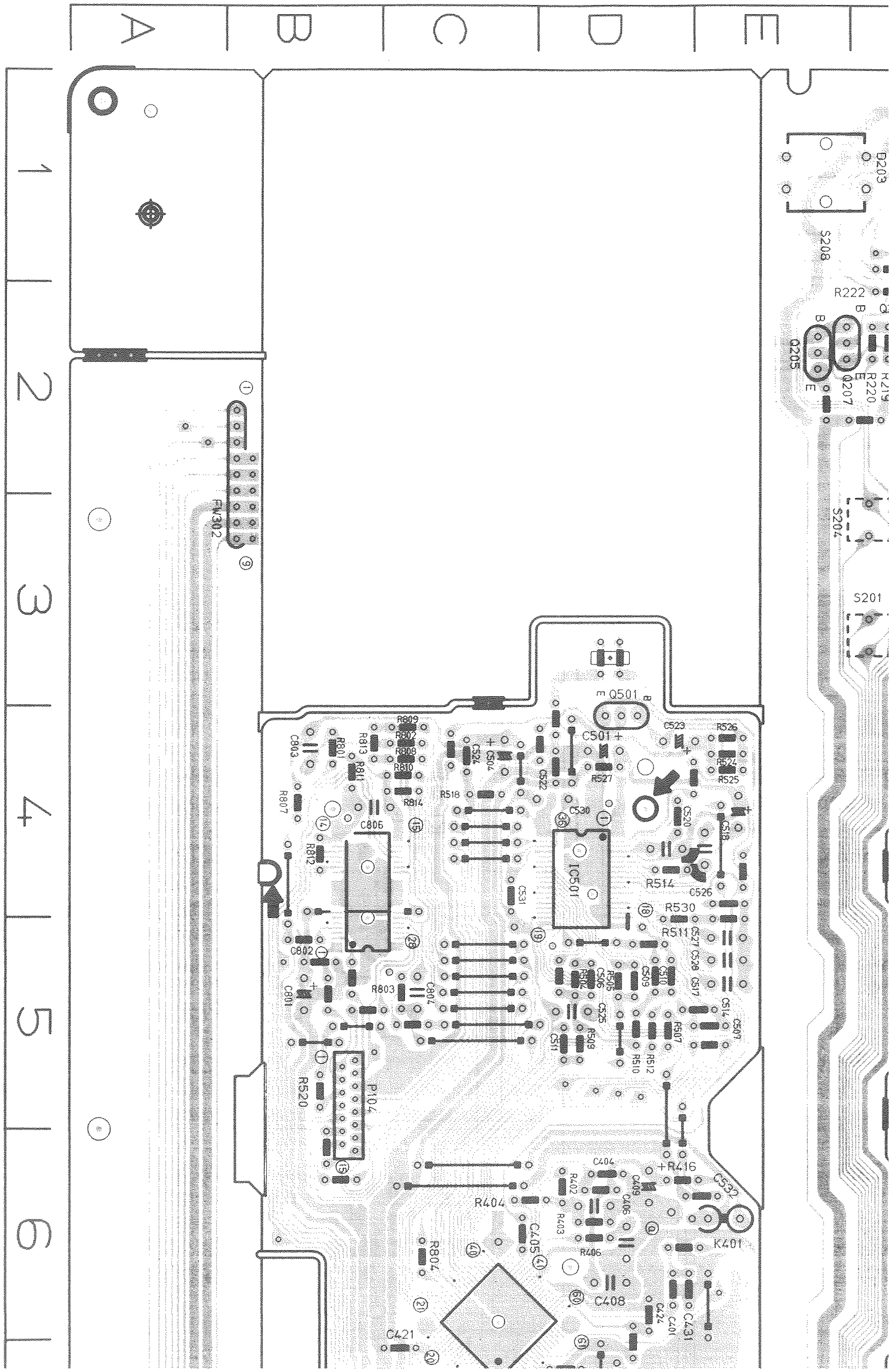
P2-17-a

P2-17-b

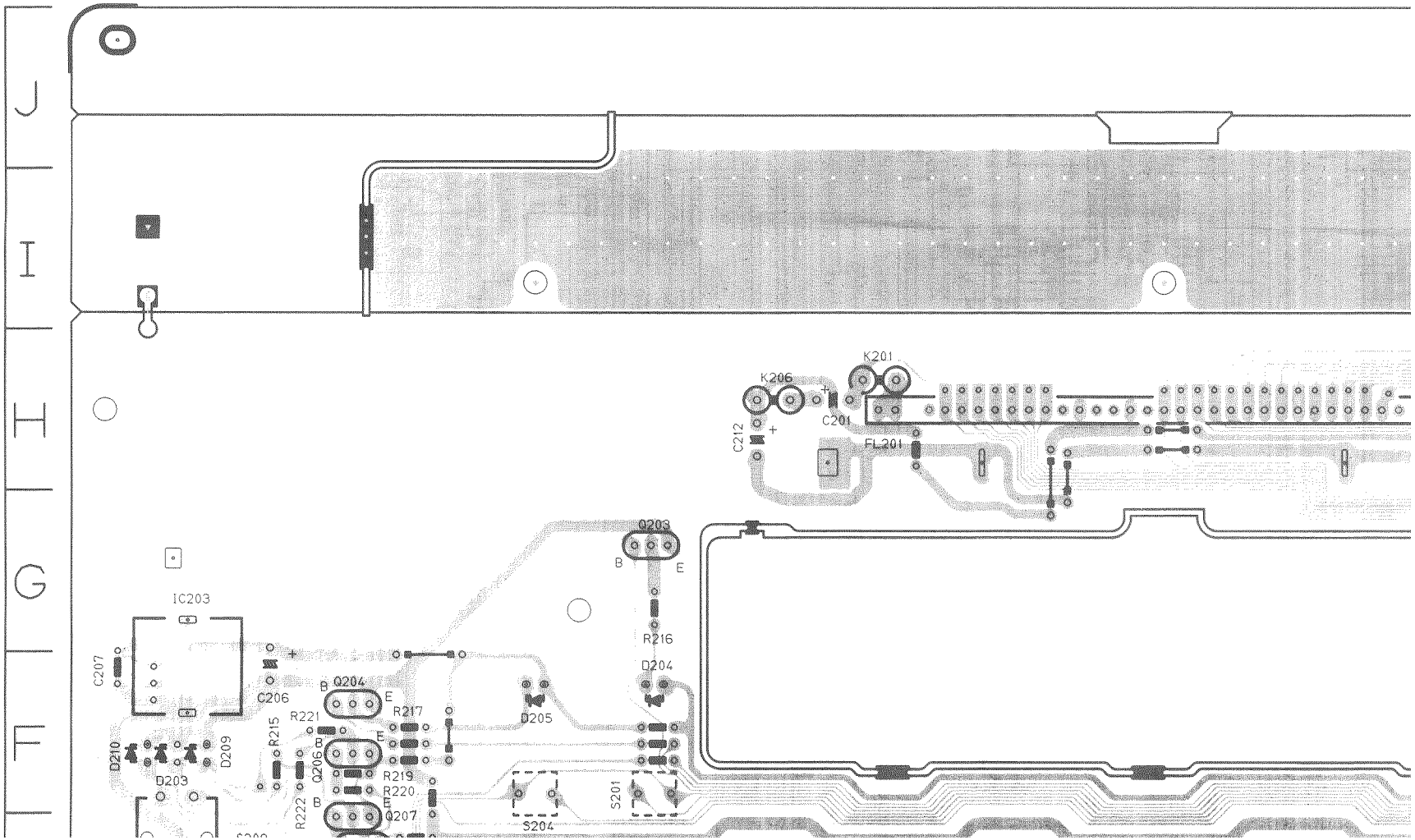


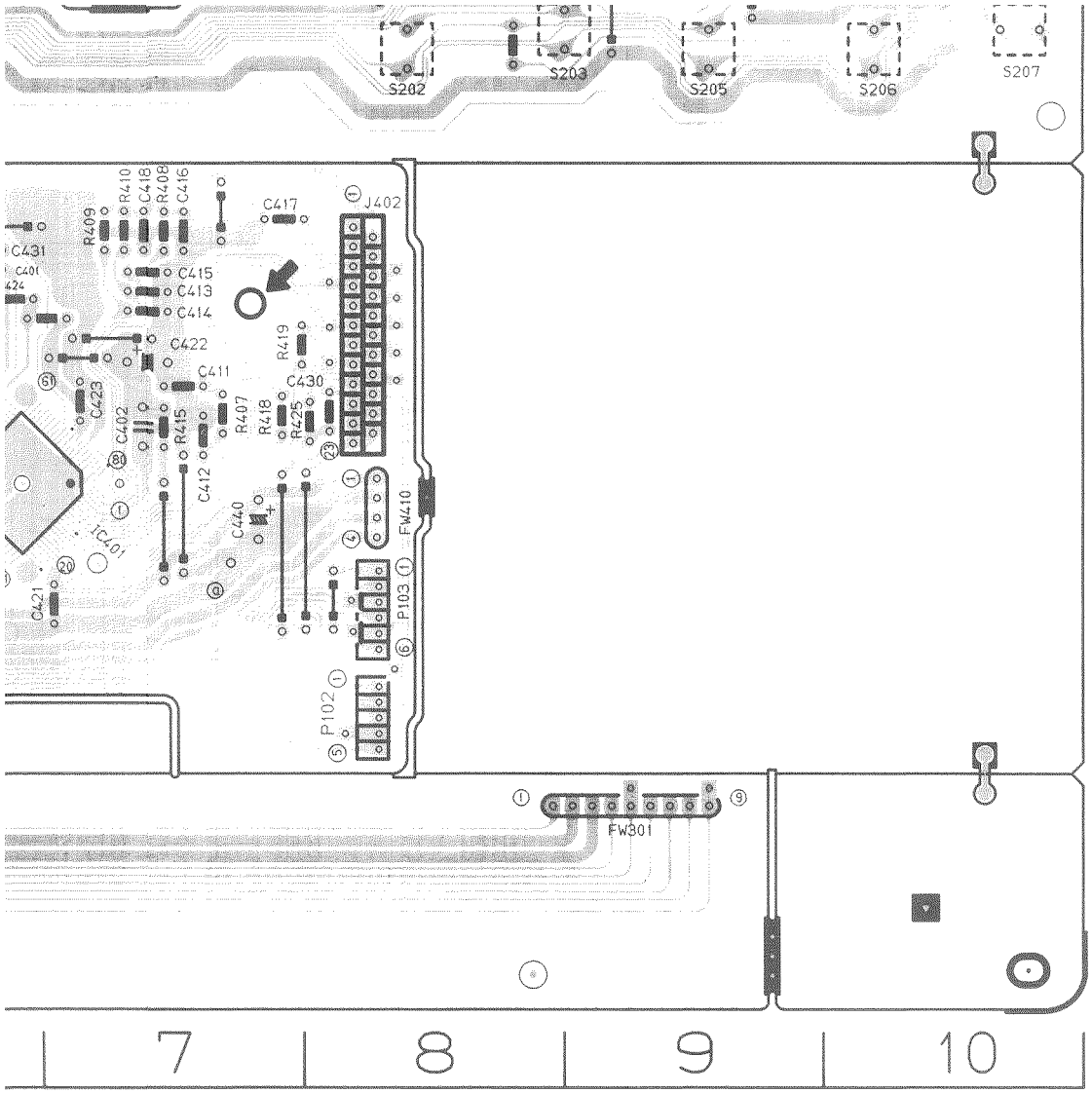
P2-17-c

P2-17-d


A
B
C
D
E
1
2
3
4
5
6
D203
S208
R222
Q205
Q207
R220
R219
FW302
S204
S201
Q501
C501
C523
R526
R524
R525
R527
C522
C524
C504
R809
R802
R808
R810
R814
R813
R811
R801
C803
R807
R812
C806
R518
C530
IC501
C520
C518
R514
C526
R530
R511
C531
C802
C801
R803
C804
C506
C509
C510
C527
C528
C517
C514
C507
R507
C525
R509
C511
R512
R510
R520
P104
C404
R402
C409
R416
C532
R404
C406
R403
C405
R406
K401
R804
C408
C424
C401
C431
C421

■ Servo & Front P.C.Board (ENN-478)

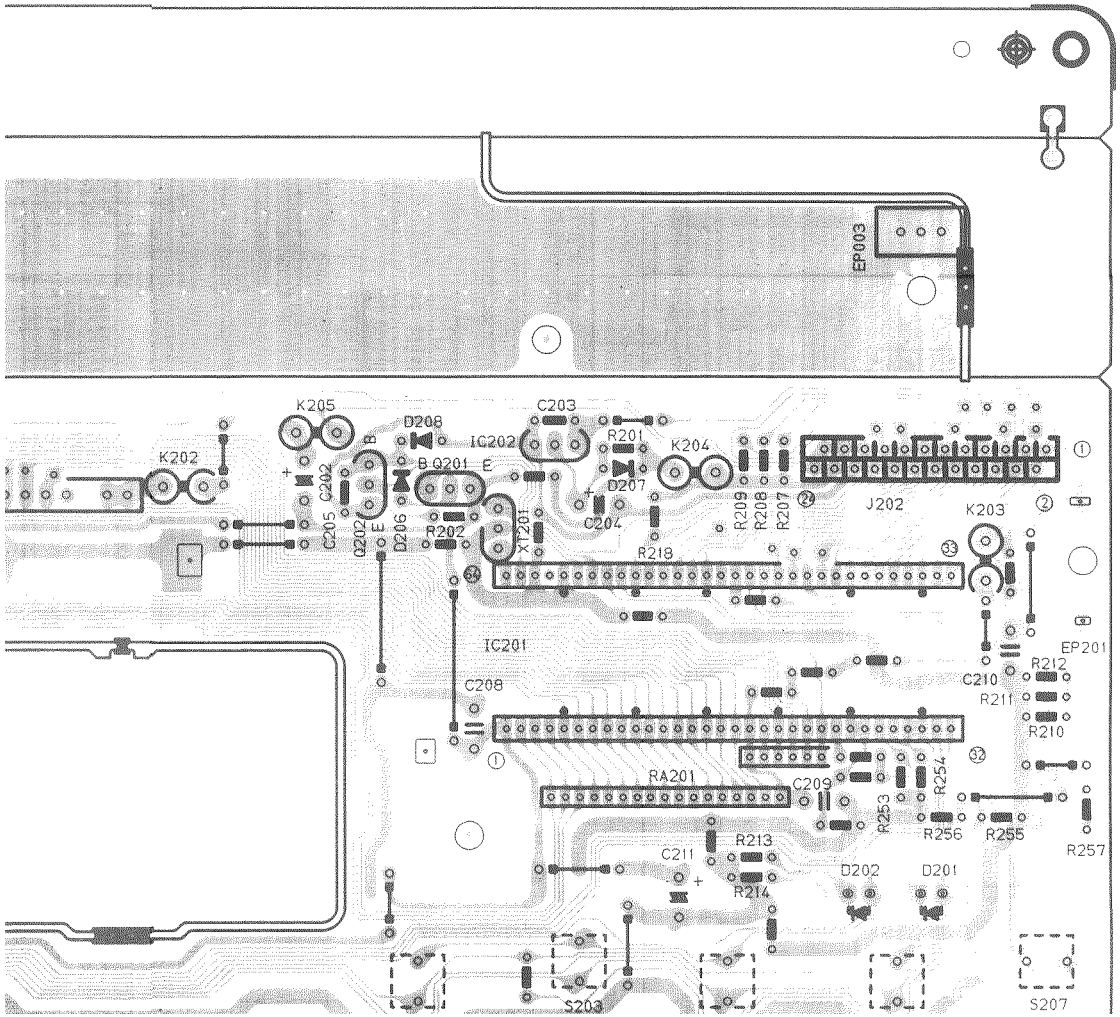




R218	9	H
R219	2	F
R220	2	F
R221	2	F
R222	2	F
R252	9	F
R253	10	F
R254	10	F
R255	10	F
R256	10	F
R257	10	F
R402	6	D
R403	6	D
R404	6	C
R406	6	D
R407	7	D
R408	7	D
R409	7	D
R410	7	D
R415	7	C
R416	6	D
R418	7	D
R419	7	D
R425	8	C
R431	6	E
R504	5	D
R505	5	D
R507	5	D
R509	5	D
R510	5	D
R511	5	D
R512	5	D
R514	4	D

R526	4	E
R527	4	D
R530	5	D
R801	4	B
R802	4	C
R803	5	C
R804	6	C
R806	5	C
R807	4	B
R808	4	C
R809	4	C
R810	4	C
R811	4	B
R812	4	B
R813	4	B
R814	4	C
RA201	9	F
RA202	9	G
S201	3	F
S202	8	F
S203	8	F
S204	3	F
S205	9	F
S206	10	F
S207	10	F
S208	1	E
XT201	8	H

P2-17-c



Location List (ENN-478)

Symbol	X	Y
C201	4	H
C202	7	H
C203	8	H
C204	8	H
C205	8	H
C206	1	G
C207	1	F
C208	8	G
C209	9	F
C210	10	G
C211	9	F
C212	4	H
C401	6	D
C402	7	C
C404	6	D
C405	6	C
C406	6	D
C407	6	D
C408	6	D
C409	6	D
C411	7	D
C412	7	C
C413	7	D
C414	7	D
C415	7	D
C416	7	D
C417	7	E
C418	7	D
C421	7	C
C422	7	D
C423	7	D
C424	6	D
C430	8	D
C431	6	D
C440	7	C
C501	4	D
C504	4	C

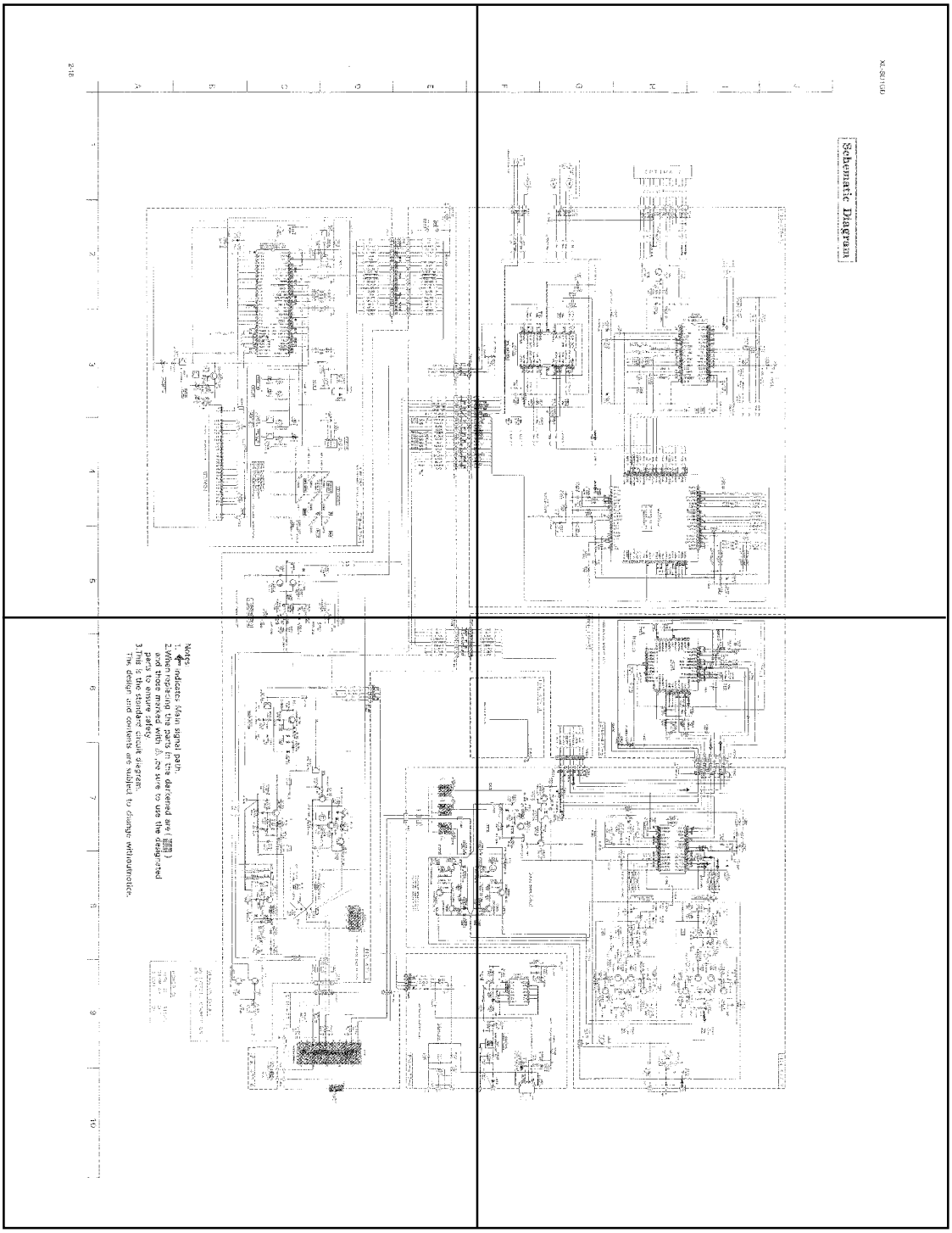
Symbol	X	Y
C505	5	D
C506	5	D
C507	5	D
C509	5	D
C510	5	D
C511	5	D
C514	5	D
C517	5	E
C518	4	E
C520	4	D
C522	4	D
C523	4	E
C524	4	C
C525	5	D
C526	4	E
C527	5	E
C528	5	E
C530	4	C
C531	4	C
C532	6	D
C801	5	B
C802	5	B
C803	4	B
C804	5	C
C806	4	B
D201	10	F
D202	10	F
D203	1	F
D204	3	F
D205	3	F
D206	8	H
D207	9	H
D208	8	H
D209	1	F
D210	1	F
FL201	7	H
FW301	8	B

Symbol	X	Y
FW302	2	B
FW410	8	C
IC201	8	G
IC202	8	H
IC203	1	F
IC401	6	C
IC501	4	D
IC801	4	B
J202	10	H
J402	8	E
K201	4	H
K202	7	H
K203	10	H
K204	9	H
K205	7	H
K206	4	H
K401	6	E
P102	8	B
P103	8	C
P104	5	B
Q201	8	H
Q202	8	H
Q203	3	G
Q204	2	F
Q205	2	E
Q206	2	F
Q207	2	E
Q501	4	D
R201	9	H
R202	8	H
R207	9	H
R208	9	H
R209	9	H
R210	10	G
R211	10	G
R212	10	G
R213	9	F

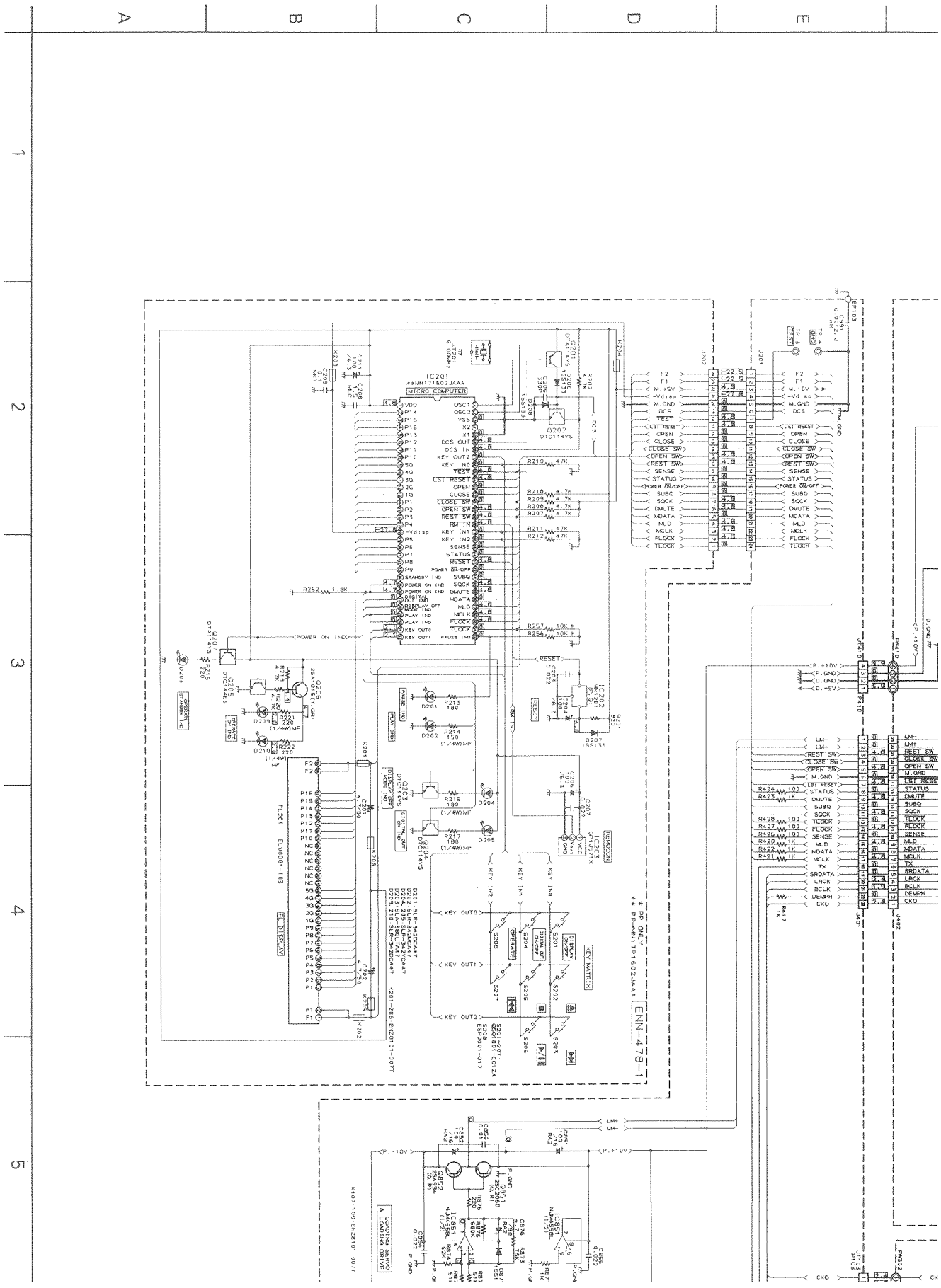
Symbol	X	Y
R214	9	F
R215	1	F
R216	3	G
R217	2	F
R218	9	H
R219	2	F
R220	2	F

Symbol	X	Y
R518	4	C
R520	5	B
R524	4	E
R525	4	E
R526	4	E
R527	4	D
R530	5	D

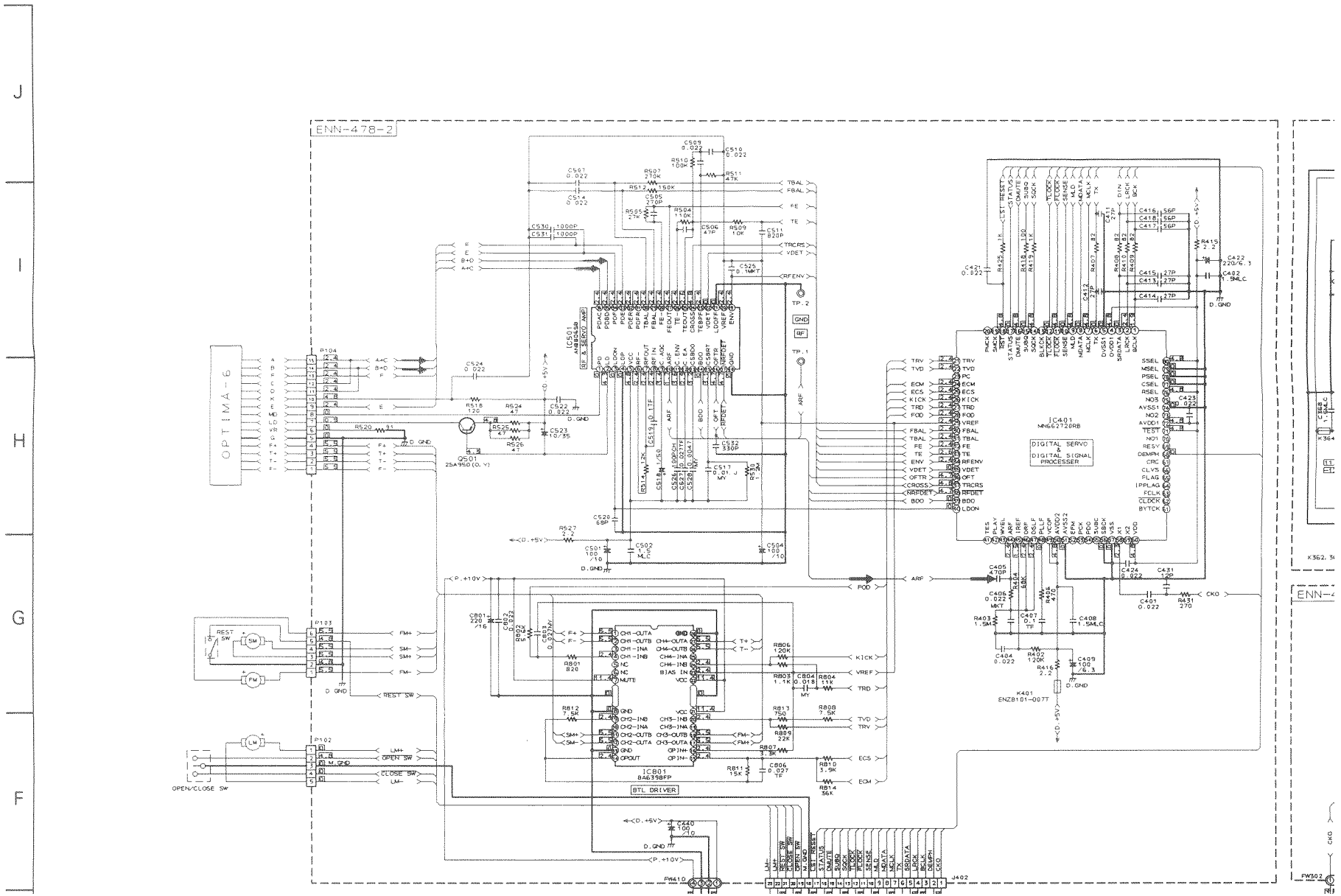
P2-18-a P2-18-b

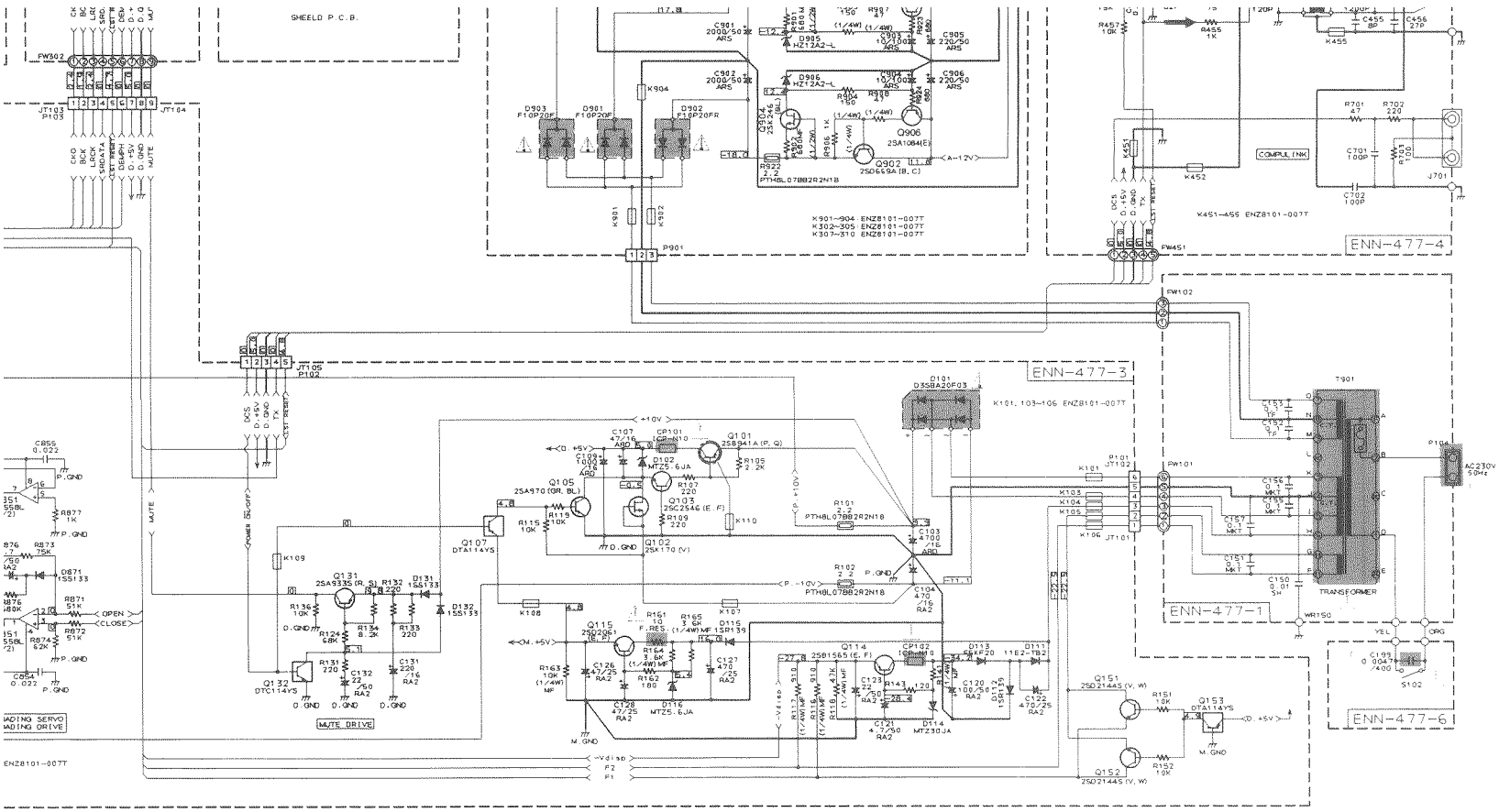


P2-18-c P2-18-d



Schematic Diagram





VERSION CODES

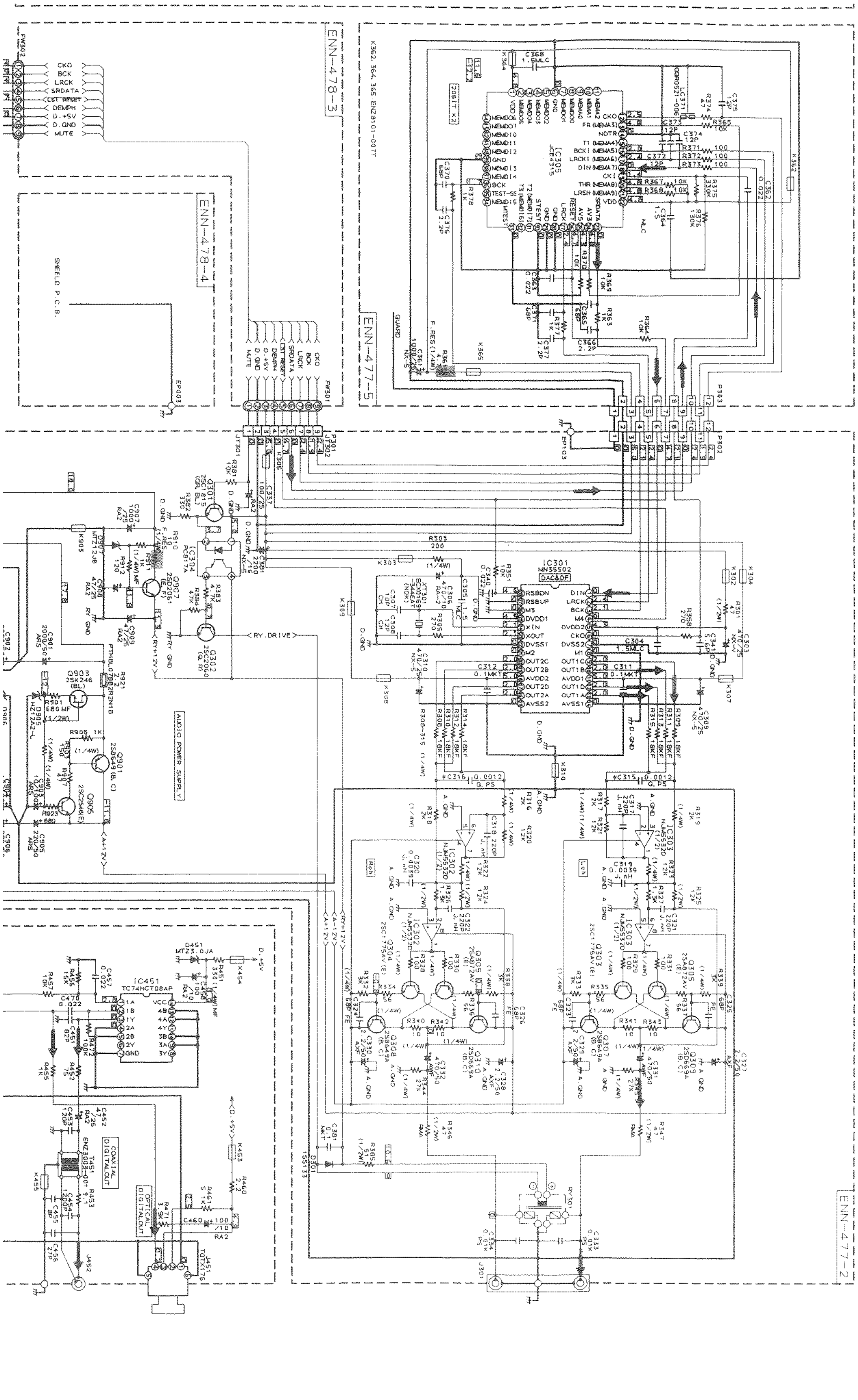
EN NORDIC COUNTRIES
BS U.K.

POWER ON

DISC ﾓｰﾀ	STOP.
DISPLAY	OFF.
D.OUT	OFF.

Notes:

1. ⬅ indicates Main signal path.
2. When replacing the parts in the darkened are (▩) and those marked with ⚠ ,be sure to use the designated parts to ensure safety.
3. This is the standard circuit diagram. The design and contents are subject to change withoutnotice.


ENN-478-3
ENN-478-4
ENN-477-5
ENN-477-2
SHIELD P.C.B.
IC305
IC301
MN35502
IC451
TC74HCT08AP
AUDIO POWER SUPPLY
COAXIAL DIGITAL OUT
OPTICAL DIGITAL OUT

PARTS LIST

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

The Markes for Dasignated Areas.
BS:the U.K. EN:Nordic Countries
No mark indicates all areas.

Contents

General Exploded View and Parts List

Block No. M1MM

(Disassembling diagra

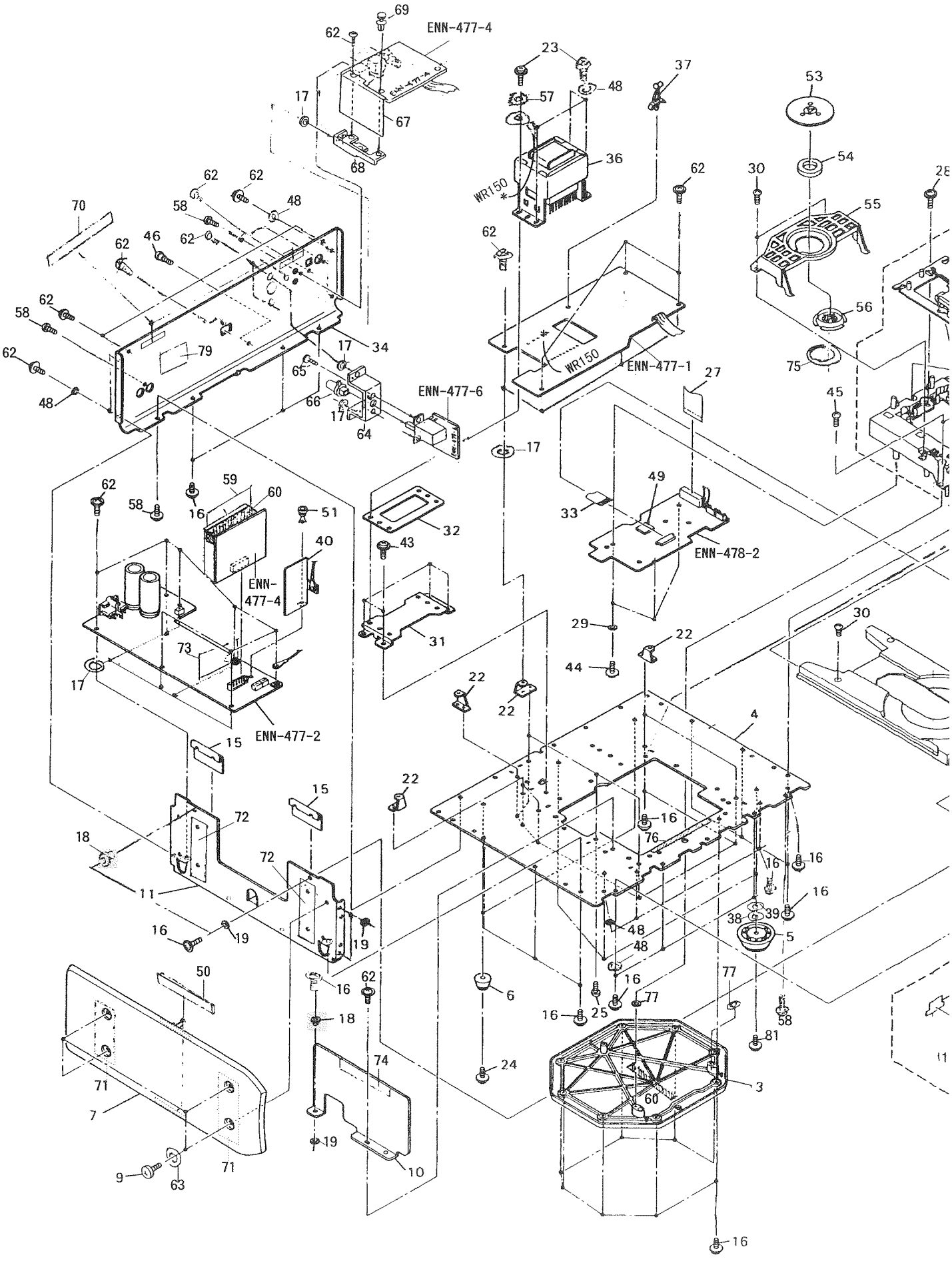
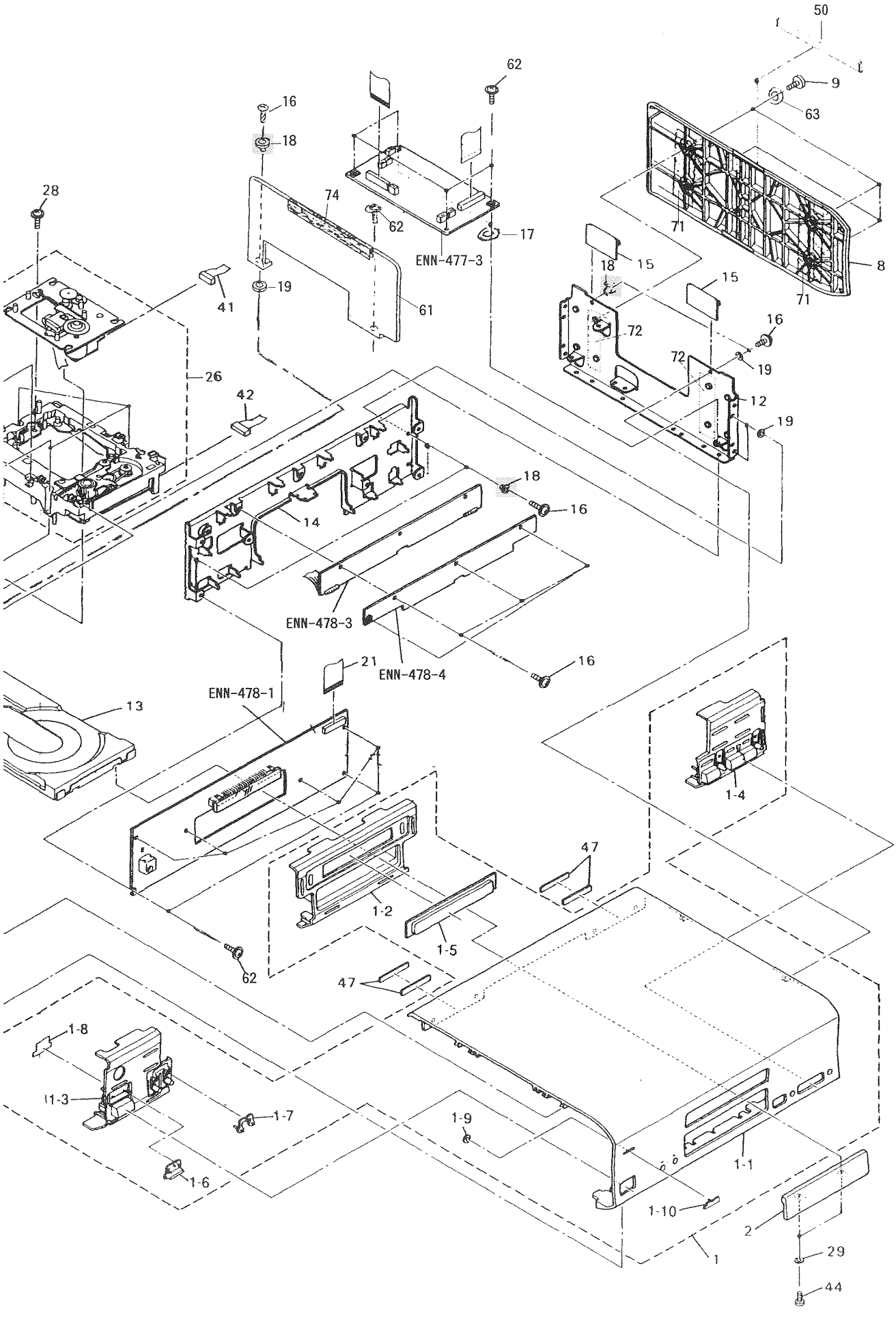


diagram for workings: Shows bushing)



PARTS LIST

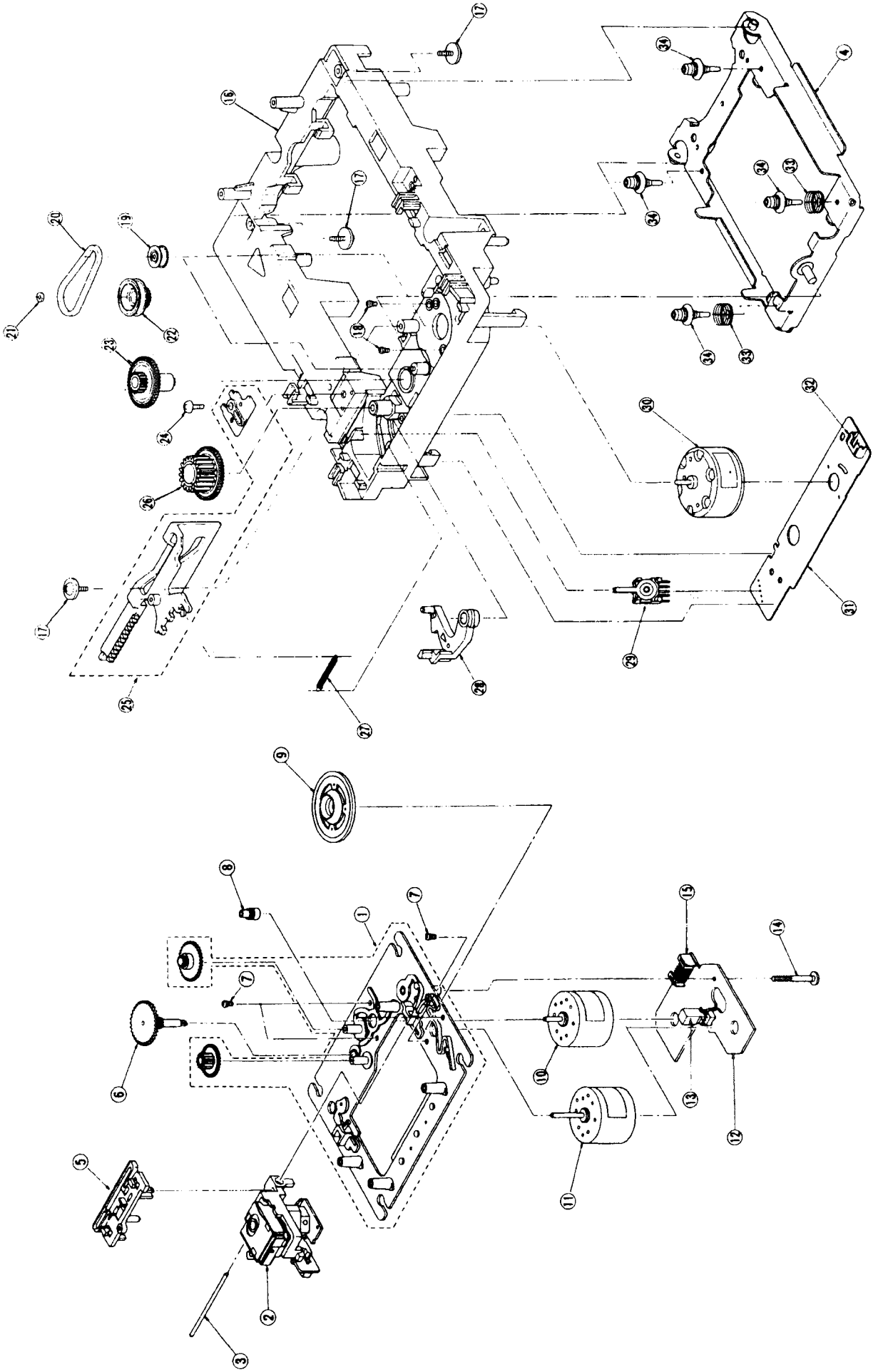
⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	EFP-XLSD1GDE(S)	FRONT PANEL ASS'Y	1		
	1-1	E102982-002	FRONT PANEL	1		
	1-2	E102987-002	FRONT ESCUTCHEON	1		
	1-3	E103019-002	PUSH BUTTON ASSY	1	POWER	
	1-4	E103020-002	PUSH BUTTON ASSY	1	PLAY	
	1-5	E309311-001	WINDOW SCREEN	1		
	1-6	E408526-001	REMOTE CONTROL WINDOW	1		
	1-7	E408533-001	INDICATOR LENS	1		
	1-8	E408747-001	SPACER	1		
	1-9	E60912-003	SPEED NUT	1		
	1-10	E409213-002	JVC MARK	1		
	2	E309309-003	FITTING	1		
	3	E102988-003	MECHA BASE	1		
	4	E102985-001	BOTTOM PLATE	1		
	5	E309292-002	FOOT ASSY	3		
	6	E47227-008	FOOT	2		
	7	E102981-020	SIDE PANEL	1	LEFT	
	8	E102981-019	SIDE PANEL	1	RIGHT	
	9	E74274-003	SPECIAL SCREW	8		
	10	E309483-001	SHIELD BRACKET	1	LEFT	
	11	E208447-008	SIDE BRACKET	1	LEFT	
	12	E208447-005	SIDE BRACKET	1	RIGHT	
	13	E102823-002	CD TRAY	1		
	14	E102986-002	FRONT BRACKET	1		
	15	E408766-001	FELT SPACER	4		
	16	GBSG3008CC	TAPPING SCREW	46		
	17	E73967-016	SPACER	15		
	18	BUSH-PUL	BUSHING	8		
	19	E73967-003	SPACER	6		
	21	VWF1224-12TTB	FFC CABLE	1		
	22	E68587-010	BRACKET	8		
	23	E61661-003	SPECIAL SCREW	4		
	24	SBSG3010CC	TAPPING SCREW	2		
	25	SDSG3008CC	TAPPING SCREW	1		
	26	----------	C.D MECHA	1	See Page 2-5	
	27	VWF1223-08TTB	FFC CABLE	1		
	28	E406293-001	SPECIAL SCREW	1		
	29	E408314-002	SPACER	9		
	30	SBSF3008M	TAPPING SCREW	3		
	31	E309313-003	TRANSFORMER BRACKET	1		
	32	E406471-002	SPACER	1		
	33	EWR115M-08BB	FFC CABLE	1		
	34	E208445-003	REAR PANEL	1		
⚠	36	ETP1020-42EA	POWER TRANSFORMER	1		
	37	E75217-001	WIRE CLAMP	1		
	38	WSS5000CC	WASHER	3		
	39	E409508-001	SPACER	3		
	40	E310207-001	SHIELD PLATE	1		
	41	EWS266-B408	SOCKET WIRE ASSY	1		
	42	EWS265-B412	SOCKET WIRE ASSY	1		
	43	E61660-007	SPECIAL SCREW	4		
	44	SDSF2608Z	SCREW	5		
	45	SBSF3010M	TAPPING SCREW	3		
	46	E66052-006	SPECIAL SCREW	1		
	47	E306805-147	SPACER	4		
	48	E73967-002	SPACER	9		
	49	E75896-001	SPACER	1		
	50	E409366-001	SPACER	4		
	51	E48729-008	PLASTIC RIVET	1		

PARTS LIST

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	53	E306836-005	YOKE PLATE	1		
	54	E74897-002	MAGNET	1		
	55	E26756-003	CLAMPER BASE	1		
	56	E306835-001	CD CLAMPER	1		
	57	WSB4000CC	WASHER	1		
	58	E408499-002	ASSY SCREW	6		
	59	E409407-001	LABEL	1		
	60	E409516-001	VINYL TAPE	2		
	61	E309923-002	SHIELD BRACKET	1	RIGHT	
	62	GBSG3006CC	SCREW	33		
	63	E409352-003	WASHER	8		
	64	E409266-002	SWITCH BRACKET	1		
	65	SBST3006CC	TAPPING SCREW	2		
	66	E407321-002SM	PUSH BUTTON	1		
⚠	67	E310210-001	SHIELD PLATE	1		
	68	E408528-003	P.W.BOARD BRACKET	1		
	69	E48729-007	PLASTIC RIVET	1		
	70	E306805-196	SPACER	2		
	71	E409351-001	SPACER	4		
	72	E408756-002	SPACER	4		
	73	E310209-001	SHIELD PLATE	1		
	74	E409516-002	VINYL TAPE	2		
	75	E409414-001	SPACER	1		
	76	E409546-001	SHIELD TAPE	1		
	77	E73967-010	SPACER	2		
	78	E73968-008SM	SPACER	1		
	79	E406507-001	CAUTION LABEL	1		
	80	E73967-002	SPACER	1		
	81	E65389-006	SPECIAL SCREW	3		
	-	E70891-001	CLASS 1 LABEL	1		
	-	E75303-003	SHIELD TAPE	5	ENN-477:C331, C332, C901, C902, C103	
	-	E75303-004	SHIELD TAPE	4	ENN-477:C380, C361, C907, RY301	
	-	E75303-005	SHIELD TAPE	2	ENN-477:C104, C109	

CD Mechanism Ass'y and Parts List

Blok No. M2MM



PARTS LIST(CD MECHANISM ASS'Y)

⚠	Item	Parts Number	Parts Name	Q'ty	Description
	1	E207244-001	MECHA BASE	1	
	2	OPTIMA-150S	OPTICAL PICK-UP	1	
	3	E406777-001	GUIDE SHAFT	1	
	4	E307179-221	ELEVATOR BASE ASSY	1	
	5	E307746-001	CD RACK	1	
	6	E307745-221SS	CAM GEAR	1	
	7	SDSP2003N	SCREW	4	
	8	E406750-221SS	PINION GEAR	1	
	9	E75807-302	C.D.TURN TABLE	1	
	10	E406784-001	DC MOTOR	1	
	11	E406783-001	DC MOTOR	1	
	12	EMW10190-001(S)	PRINTED BOARD	1	
	13	EBS1100-005	LEAF SWITCH	1	
	14	E75832-001	SPECIAL SCREW	1	
	15	EMV5109-006B	CONNECT TERMINAL	1	
	16	E102357-221	LOADING BASE	1	
	17	E65923-003	TAPPING SCREW	3	
	18	SPSK2640Z	SCREW	2	
	19	E75984-001	MOTOR PULLEY	1	
	20	E75950-002	REEL BELT	1	
	21	E72024-001	SPEED NUT	1	
	22	E75985-001	DRIVE GEAR	1	
	23	E75986-221SS	CD GEAR	1	
	24	SBSF3008Z	TAPPING SCREW	1	
	25	E307252-221	CAM ASSY	1	
	26	E75987-001	REEL GEAR	1	
	27	E75989-001	SPRING	1	
	28	E307162-221	ACTION LEVER	1	
	29	ESS1200-002	LEVER SWITCH	1	
	30	RF-500TB-12560	DC MOTOR	1	
	31	EMW10255-002(S)	PRINTED BOARD	1	
	32	EMV5109-005B	CONNECT TERMINAL	1	
	33	E406871-001	SPRING	2	
	34	E406294-002	INSULATOR	4	

Electrical Parts List(ENN-477)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC301	MN35502	I.C(DIGI-MOS)	
	IC302	NJM5532D	I.C(MONO-ANALOG)	
	IC303	NJM5532D	I.C(MONO-ANALOG)	
	IC304	PC817A	I.C(PHOTO COUPLER)	
	IC305	JCE4315	I.C(M)	
	IC451	TC74HCT08AP	I.C(DIGI-MOS)	
	IC851	NJM4558L	I.C(MONO-ANALOG)	
		DIODES		
⚠	D101	D3SBA20F03	SI.DIODE	
	D102	MTZ5.6JA	ZENER DIODE	
⚠	D111	11E2	SI.DIODE	
⚠	D112	1SR139-200	SI.DIODE	
⚠	D113	F5KF20	GE.DIODE	
	D114	MTZ30JAT-77	ZENER DIODE	
⚠	D115	1SR139-200	SI.DIODE	
	D116	MTZ5.6JA	ZENER DIODE	
	D131	1SS133	SI.DIODE	
	D132	1SS133	SI.DIODE	
	D301	1SS133	SI.DIODE	
	D451	MTZ3.0JAT-77	ZENER DIODE	
	D871	1SS133	SI.DIODE	
⚠	D901	F10P20F	SI.DIODE	
⚠	D902	F10P20FR	SI.DIODE	
⚠	D903	F10P20F	SI.DIODE	
	D905	HZ12A2-L	ZENER DIODE	
	D906	HZ12A2-L	ZENER DIODE	
	D907	MTZ12JB	ZENER DIODE	
		TRANSISTORS		
	Q101	2SB941A(P,Q)	SI.TRANSISTOR	BS
	Q101	2SB941A(P,Q)	SI.TRANSISTOR	EN
	Q102	2SK170(V)	F.E.T.	BS
	Q102	2SK170(V)	F.E.T.	EN
	Q103	2SC2546(D,E)	SI.TRANSISTOR	BS
	Q103	2SC2546(D,E)	SI.TRANSISTOR	EN
	Q105	2SA970(GR)	SI.TRANSISTOR	
	Q107	DTA114YS	DIGITAL TRANSISTOR	
	Q114	2SB1565(E,F)	SI.TRANSISTOR	
	Q115	2SD2061(F,G)	SI.TRANSISTOR	
	Q131	2SA933S(RS)	SI.TRANSISTOR	
	Q132	DTC114YS	DIGITAL TRANSISTOR	
	Q151	2SD2144S(VW)	SI.TRANSISTOR	
	Q152	2SD2144S(VW)	SI.TRANSISTOR	
	Q153	DTA114YS	DIGITAL TRANSISTOR	
	Q301	2SC1815(GR,BL)	SI.TRANSISTOR	
	Q302	2SC2060(Q,R)	SI.TRANSISTOR	
	Q303	2SC1775AV(F1)	SI.TRANSISTOR	BS
	Q303	2SC1775AV(F1)	SI.TRANSISTOR	EN
	Q304	2SC1775AV(F1)	SI.TRANSISTOR	BS
	Q304	2SC1775AV(F1)	SI.TRANSISTOR	EN
	Q305	2SA872AV(E,F)	SI.TRANSISTOR	BS
	Q305	2SA872AV(E,F)	SI.TRANSISTOR	EN
	Q306	2SA872AV(E,F)	SI.TRANSISTOR	BS
	Q306	2SA872AV(E,F)	SI.TRANSISTOR	EN
	Q307	2SB649A(B,C)	SI.TRANSISTOR	
	Q308	2SB649A(B,C)	SI.TRANSISTOR	
	Q309	2SD669A(B,C)	SI.TRANSISTOR	
	Q310	2SD669A(B,C)	SI.TRANSISTOR	
	Q851	2SC2060(Q,R)	SI.TRANSISTOR	
	Q852	2SA934(Q,R)	SI.TRANSISTOR	
	Q901	2SB649A(B,C)	SI.TRANSISTOR	
	Q902	2SD669A(B,C)	SI.TRANSISTOR	
	Q903	2SK246(BL)	F.E.T.	BS
	Q903	2SK246(BL)	F.E.T.	EN
	Q904	2SK246(BL)	F.E.T.	BS
	Q904	2SK246(BL)	F.E.T.	EN

⚠	Item	Parts Number	Description	Area
	Q905	2SC2546(D,E)	SI.TRANSISTOR	BS
	Q905	2SC2546(D,E)	SI.TRANSISTOR	EN
	Q906	2SA1084(D,E)	SI.TRANSISTOR	BS
	Q906	2SA1084(D,E)	SI.TRANSISTOR	EN
	Q907	2SD2061(F,G)	SI.TRANSISTOR	
		CAPACITORS		
	C103	EET1610-478E	4700MF E.CAP.	BS
	C103	EET1610-478E	4700MF E.CAP.	EN
	C104	EETB1CM-477E	470MF 16V E.CAP.	
	C107	EET1610-476E	47MF E.CAP.	BS
	C107	EET1610-476E	47MF E.CAP.	EN
	C109	EET1005-108E	1000MF E.CAP.	BS
	C109	EET1005-108E	1000MF E.CAP.	EN
	C120	EETB1HM-107E	100MF 50V E.CAP.	
	C121	EETB1HM-475E	4.7MF 50V E.CAP.	
	C122	EETB1EM-477E	470MF 25V E.CAP.	
	C123	EETB1HM-226E	22MF 50V E.CAP.	
	C126	EETB1EM-476E	47MF 25V E.CAP.	
	C127	EETB1EM-477E	470MF 25V E.CAP.	
	C128	EETB1EM-476E	47MF 25V E.CAP.	
	C131	EETB1CM-227E	220MF 16V E.CAP.	
	C132	EETB1HM-226E	22MF 50V E.CAP.	
	C150	EFZ0096-103	0.01MF METAL.MYLAR	BS
	C150	EFZ0096-103	0.01MF METAL.MYLAR	EN
	C150	EFZ0101-392S	3900PF POLYPROPY.FILM	
	C151	EFH001J-104	METAL.MYLAR	
	C152	EFZ0101-104S	0.1MF POLYPROPY.FILM	
	C152	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	BS
	C152	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	EN
	C153	EFZ0101-104S	0.1MF POLYPROPY.FILM	
	C153	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	BS
	C153	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	EN
	C155	EFH001J-104	METAL.MYLAR	
	C156	EFH001J-104	METAL.MYLAR	
	C157	EFH001J-104	METAL.MYLAR	
⚠	C199	QCZ9050-472A	4700PF CER.CAP.	
	C303	EET2502-477N	470MF E.CAP.	
	C304	QCZ0205-155	1.5MF 25V C.CAP.	
	C305	QCZ0205-155	1.5MF 25V C.CAP.	
	C306	EETB1AM-477E	470MF 10V E.CAP.	
	C307	QCT30CH-100Y	10PF 50V CER.CAP.	
	C308	QCT30CH-120Y	12PF 50V CER.CAP.	
	C309	EET2502-477N	470MF E.CAP.	
	C310	EET2502-477N	470MF E.CAP.	
	C311	EFH001J-104	METAL.MYLAR	
	C312	EFH001J-104	METAL.MYLAR	
	C315	EFZ0103-122P	1200PF POLYSTYRENE	
	C316	EFZ0103-122P	1200PF POLYSTYRENE	
	C317	EFZ0101-221S	220PF POLYPROPY.FILM	
	C318	EFZ0101-221S	220PF POLYPROPY.FILM	
	C319	EFZ0101-392S	3900PF POLYPROPY.FILM	
	C320	EFZ0101-392S	3900PF POLYPROPY.FILM	
	C321	EFZ0101-221S	220PF POLYPROPY.FILM	
	C322	EFZ0101-221S	220PF POLYPROPY.FILM	
	C323	EFF001J-680	FILM MICA CAP.	BS
	C323	EFF001J-680	FILM MICA CAP.	EN
	C324	EFF001J-680	FILM MICA CAP.	BS
	C324	EFF001J-680	FILM MICA CAP.	EN
	C325	EFF001J-680	FILM MICA CAP.	BS
	C325	EFF001J-680	FILM MICA CAP.	EN
	C326	EFF001J-680	FILM MICA CAP.	BS
	C326	EFF001J-680	FILM MICA CAP.	EN
	C327	EEZ5008-225	2.2MF E.CAP.	
	C328	EEZ5008-225	2.2MF E.CAP.	
	C329	EEZ5008-225	2.2MF E.CAP.	
	C330	EEZ5008-225	2.2MF E.CAP.	

Electrical Parts List(ENN-477)

⚠	Item	Parts Number	Description			Area
	C331	EEZ5006-477	470MF		AL E. CAP.	
	C332	EEZ5006-477	470MF		AL E. CAP.	
	C333	EFZ0097-103	0.01MF		POLYSTYRENE	
	C334	EFZ0097-103	0.01MF		POLYSTYRENE	
	C337	EETB1EM-107E	100MF	25V	E. CAP.	BS
	C337	EETB1EM-107E	100MF	25V	E. CAP.	EN
	C339	QCT30CH-5R6Y	5.6PF	50V	CER. CAP.	
	C340	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C341	QCT30CH-5R6Y	5.6PF	50V	CER. CAP.	
	C361	EET2502-108N	1000MF		E. CAP.	
	C362	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C363	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C364	QCZ0205-155	1.5MF	25V	C. CAP.	
	C365	QCSB1HJ-680	68PF	50V	CER. CAP.	
	C366	QCT30CH-2R2Y	2.2PF	50V	CER. CAP.	
	C368	QCZ0205-155	1.5MF	25V	C. CAP.	
	C369	QCT30CH-5R6Y	5.6PF	50V	CER. CAP.	
	C370	QCSB1HJ-680	68PF	50V	CER. CAP.	
	C371	QCSB1HJ-680	68PF	50V	CER. CAP.	
	C372	QCT30CH-120Y	12PF	50V	CER. CAP.	
	C373	QCT30CH-120Y	12PF	50V	CER. CAP.	
	C374	QCT30CH-120Y	12PF	50V	CER. CAP.	
	C375	QCT30CH-120Y	12PF	50V	CER. CAP.	BS
	C375	QCT30CH-120Y	12PF	50V	CER. CAP.	EN
	C376	QCT30CH-2R2Y	2.2PF	50V	CER. CAP.	
	C377	QCT30CH-2R2Y	2.2PF	50V	CER. CAP.	
	C380	EET1602-228N	2200MF		E. CAP.	
	C381	EFH001J-104			METAL. MYLAR	
	C451	QCBB1HK-820Y	82PF	50V	CER. CAP.	
	C452	EETB1EM-476E	47MF	25V	E. CAP.	
	C453	QCBB1HK-121Y	120PF	50V	CER. CAP.	
	C454	QCXB1CM-122Y	1200PF	16V	CER. CAP.	
	C455	QCT30CH-8R2Y	8.2PF	50V	CER. CAP.	
	C456	QCT30UJ-270Y	27PF	50V	CER. CAP.	
	C457	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C458	EETB1AM-107E	100MF	10V	E. CAP.	
	C460	EETB1AM-107E	100MF	10V	E. CAP.	
	C470	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C701	QCBB1HK-101Y	100PF	50V	CER. CAP.	
	C702	QCBB1HK-101Y	100PF	50V	CER. CAP.	
	C851	EETB1CM-107E	100MF	16V	E. CAP.	
	C852	EETB1CM-107E	100MF	16V	E. CAP.	
	C854	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C855	QCHB1EZ-223	0.022MF	25V	CER. CAP.	
	C856	QCF31HP-103Z	0.01MF	50V	CER. CAP.	
	C876	EETB1HM-475E	4.7MF	50V	E. CAP.	
	C901	EEZ5013-208E	2000MF		E. CAP.	
	C902	EEZ5013-208E	2000MF		E. CAP.	
	C903	EEZ2A01-106ZE			E. CAP.	
	C904	EEZ2A01-106ZE			E. CAP.	
	C905	EEZ5013-227E	220MF		E. CAP.	
	C906	EEZ5013-227E	220MF		E. CAP.	
	C907	EETB1EM-108E	1000MF	25V	AL E. CAP.	
	C908	EETB1EM-476E	47MF	25V	E. CAP.	
	C909	EETB1EM-476E	47MF	25V	E. CAP.	
	C991	EFZ0101-122ZS	1200PF		METAL. MYLAR	
		RESISTORS				
⚠	R101	PTH8L07BB2R2N1B			POSITIVE THE	
⚠	R102	PTH8L07BB2R2N1B			POSITIVE THE	
	R105	QRD161J-222	2.2K	1/6W	CARBON RES.	
	R107	QRD161J-221	220	1/6W	CARBON RES.	
	R109	QRD161J-221	220	1/6W	CARBON RES.	
	R115	QRD161J-103	10K	1/6W	CARBON RES.	BS
	R115	QRD161J-103	10K	1/6W	CARBON RES.	EN
	R116	QRV144F-9100		1/4W	M.F. RES.	BS
	R116	QRV144F-9100		1/4W	M.F. RES.	EN

⚠	Item	Parts Number	Description			Area
	R117	QRV144F-9100		1/4W	M.F. RES.	BS
	R117	QRV144F-9100		1/4W	M.F. RES.	EN
	R118	QRV144F-4702	47K	1/4W	METAL FILM R	BS
	R118	QRV144F-4702	47K	1/4W	METAL FILM R	EN
	R119	QRD161J-103	10K	1/6W	CARBON RES.	
	R131	QRD161J-221	220	1/6W	CARBON RES.	
	R132	QRD161J-221	220	1/6W	CARBON RES.	
	R133	QRD161J-221	220	1/6W	CARBON RES.	
	R134	QRD161J-822	8.2K	1/6W	CARBON RES.	
	R135	QRD161J-683	68K	1/6W	CARBON RES.	
	R136	QRD161J-103	10K	1/6W	CARBON RES.	
	R141	QRV144F-1801	1.8K	1/4W	CONST. METAL	BS
	R141	QRV144F-1801	1.8K	1/4W	CONST. METAL	EN
	R143	QRD161J-121	120	1/6W	CARBON RES.	
	R151	QRD161J-103	10K	1/6W	CARBON RES.	
	R152	QRD161J-103	10K	1/6W	CARBON RES.	
	R161	QRZ0077-100	10	1/4W	FUSIBLE RES.	
	R162	QRD161J-181	180	1/6W	CARBON RES.	
	R163	QRV144F-1002	10K	1/4W	CONST. METAL	BS
	R163	QRV144F-1002	10K	1/4W	CONST. METAL	EN
	R164	QRV144F-3601A	3.6K	1/4W	CONST. METAL	BS
	R164	QRV144F-3601A	3.6K	1/4W	CONST. METAL	EN
	R165	QRV144F-3601A	3.6K	1/4W	CONST. METAL	BS
	R165	QRV144F-3601A	3.6K	1/4W	CONST. METAL	EN
	R301	QRZ0181-470	47	1W	CARBON RES.	
	R303	ERD141J-201S	200	1/4W	CARBON RES.	BS
	R303	ERD141J-201S	200	1/4W	CARBON RES.	EN
	R305	QRD161J-271	270	1/6W	CARBON RES.	
	R306	ERD141J-121S	120	1/4W	CARBON RES.	BS
	R306	ERD141J-121S	120	1/4W	CARBON RES.	EN
	R307	ERD141J-121S	120	1/4W	CARBON RES.	BS
	R307	ERD141J-121S	120	1/4W	CARBON RES.	EN
	R308	ERD004F-183Z	18K		CARBON RES.	
	R309	ERD004F-183Z	18K		CARBON RES.	
	R310	ERD004F-183Z	18K		CARBON RES.	
	R311	ERD004F-183Z	18K		CARBON RES.	
	R312	ERD004F-183Z	18K		CARBON RES.	
	R313	ERD004F-183Z	18K		CARBON RES.	
	R314	ERD004F-183Z	18K		CARBON RES.	
	R315	ERD004F-183Z	18K		CARBON RES.	
	R316	ERD004J-202	2K		R. NETWORK	
	R316	ERD004J-202Z	2K		CARBON RES.	BS
	R316	ERD004J-202Z	2K		CARBON RES.	EN
	R317	ERD004J-202Z	2K		CARBON RES.	BS
	R317	ERD004J-202Z	2K		CARBON RES.	EN
	R318	ERD004J-202Z	2K		CARBON RES.	BS
	R318	ERD004J-202Z	2K		CARBON RES.	EN
	R319	ERD004J-202Z	2K		CARBON RES.	BS
	R319	ERD004J-202Z	2K		CARBON RES.	EN
	R320	ERD004J-123Z	12K		CARBON RES.	
	R321	ERD004J-123Z	12K		CARBON RES.	
	R322	ERD004J-123Z	12K		CARBON RES.	
	R323	ERD004J-123Z	12K		CARBON RES.	
	R324	ERD124J-123	12K	1/2W	CARBON RES.	
	R325	ERD124J-123	12K	1/2W	CARBON RES.	
	R326	ERD124J-132	1.3K	1/2W	CARBON RES.	
	R327	ERD124J-132	1.3K	1/2W	CARBON RES.	
	R328	ERD004J-101Z	100		CARBON RES.	
	R329	ERD004J-101Z	100		CARBON RES.	
	R330	ERD004J-101Z	100		CARBON RES.	
	R331	ERD004J-101Z	100		CARBON RES.	
	R332	ERD004J-302Z	3K		CARBON RES.	
	R333	ERD004J-302Z	3K		CARBON RES.	
	R334	ERD004J-560Z	56		CARBON RES.	
	R335	ERD004J-560Z	56		CARBON RES.	
	R336	ERD004J-560Z	56		CARBON RES.	

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⚠	Item	Parts Number	Description	Area
	R337	ERD004J-560Z	56 CARBON RES.	
	R338	ERD004J-302Z	3K CARBON RES.	
	R339	ERD004J-302Z	3K CARBON RES.	
	R340	ERD141J-100S	10 1/4W CARBON RES.	
	R341	ERD141J-100S	10 1/4W CARBON RES.	
	R342	ERD141J-100S	10 1/4W CARBON RES.	
	R343	ERD141J-100S	10 1/4W CARBON RES.	
	R344	QRD141J-273S	27K 1/4W CARBON RES.	
	R345	QRD141J-273S	27K 1/4W CARBON RES.	
	R346	ERD127J-470	47 1/2W CARBON RES.	
	R347	ERD127J-470	47 1/2W CARBON RES.	
	R351	QRD161J-103	10K 1/6W CARBON RES.	
	R358	QRD161J-271	270 1/6W CARBON RES.	
⚠	R361	QRZ0110-4R7X	4.7 1W FUSIBLE RES.	BS
⚠	R361	QRZ0110-4R7X	4.7 1W FUSIBLE RES.	EN
	R363	QRD161J-102	1K 1/6W CARBON RES.	
	R364	QRD161J-103	10K 1/6W CARBON RES.	
	R365	QRD161J-103	10K 1/6W CARBON RES.	
	R367	QRD161J-103	10K 1/6W CARBON RES.	
	R368	QRD161J-103	10K 1/6W CARBON RES.	
	R369	QRD161J-103	10K 1/6W CARBON RES.	
	R370	QRD161J-103	10K 1/6W CARBON RES.	
	R371	QRD161J-101	100 1/6W CARBON RES.	
	R372	QRD161J-101	100 1/6W CARBON RES.	
	R373	QRD161J-101	100 1/6W CARBON RES.	
	R374	QRD161J-470	47 1/6W CARBON RES.	BS
	R374	QRD161J-470	47 1/6W CARBON RES.	EN
	R375	QRD161J-334	330K 1/6W CARBON RES.	
	R376	QRD167J-134	130K 1/6W CARBON RES.	
	R377	QRD161J-102	1K 1/6W CARBON RES.	
	R378	QRD161J-102	1K 1/6W CARBON RES.	
	R381	QRD161J-103	10K 1/6W CARBON RES.	
	R382	QRD161J-331	330 1/6W CARBON RES.	
	R383	QRD161J-472	4.7K 1/6W CARBON RES.	
	R384	QRD161J-473	47K 1/6W CARBON RES.	
	R385	QRZ0181-510	51 1W CARBON RES.	BS
	R385	QRZ0181-510	51 1W CARBON RES.	EN
	R386	QRD161J-151	150 1/6W CARBON RES.	
	R387	QRD161J-151	150 1/6W CARBON RES.	
	R417	QRD161J-102	1K 1/6W CARBON RES.	
	R420	QRD161J-102	1K 1/6W CARBON RES.	
	R421	QRD161J-102	1K 1/6W CARBON RES.	
	R422	QRD161J-102	1K 1/6W CARBON RES.	
	R423	QRD161J-102	1K 1/6W CARBON RES.	
	R424	QRD161J-101	100 1/6W CARBON RES.	
	R426	QRD161J-101	100 1/6W CARBON RES.	
	R427	QRD161J-101	100 1/6W CARBON RES.	
	R428	QRD161J-101	100 1/6W CARBON RES.	
	R451	QRV144F-3300A	1/4W METAL FILM R	BS
	R451	QRV144F-3300A	1/4W METAL FILM R	EN
	R452	QRD161J-750	75 1/6W CARBON RES.	
	R453	QRD161J-9R1	9.1 1/6W CARBON RES.	
	R455	QRD161J-102	1K 1/6W CARBON RES.	
	R456	QRD161J-153	15K 1/6W CARBON RES.	
	R457	QRD161J-103	10K 1/6W CARBON RES.	
	R460	QRD161J-2R2	2.2 1/6W CARBON RES.	
	R461	QRD161J-512	5.1K 1/6W CARBON RES.	
	R471	QRD161J-392YT	3.9K 1/6W CARBON RES.	
	R472	QRD161J-104	100K 1/6W CARBON RES.	
	R701	QRD161J-470	47 1/6W CARBON RES.	
	R702	QRD161J-221	220 1/6W CARBON RES.	
	R703	QRD161J-101	100 1/6W CARBON RES.	
	R871	QRD161J-513	51K 1/6W CARBON RES.	
	R872	QRD161J-513	51K 1/6W CARBON RES.	
	R873	QRD161J-753	75K 1/6W CARBON RES.	
	R874	QRD161J-623	62K 1/6W CARBON RES.	

⚠	Item	Parts Number	Description	Area
	R875	QRD161J-221	220 1/6W CARBON RES.	
	R876	QRD161J-684	680K 1/6W CARBON RES.	
	R877	QRD161J-102	1K 1/6W CARBON RES.	
	R901	QRV121F-6800	1/2W CONST.METAL	BS
	R901	QRV121F-6800	1/2W CONST.METAL	EN
	R902	QRV121F-6800	1/2W CONST.METAL	BS
	R902	QRV121F-6800	1/2W CONST.METAL	EN
	R903	ERD141J-151S	150 1/4W CARBON RES.	
	R904	ERD141J-151S	150 1/4W CARBON RES.	
	R905	ERD141J-102S	1K 1/4W CARBON RES.	
	R906	ERD141J-102S	1K 1/4W CARBON RES.	
	R907	ERD141J-470S	47 1/4W CARBON RES.	
	R908	ERD141J-470S	47 1/4W CARBON RES.	
⚠	R910	QRZ0077-100	10 1/4W FUSIBLE RES.	
	R911	QRV144F-1001	1K 1/4W CONST.METAL	BS
	R911	QRV144F-1001	1K 1/4W CONST.METAL	EN
	R912	QRD161J-121	120 1/6W CARBON RES.	
⚠	R921	PTH8L07BB2R2N1B	POSITIVE THE	BS
⚠	R921	PTH8L07BB2R2N1B	POSITIVE THE	EN
⚠	R922	PTH8L07BB2R2N1B	POSITIVE THE	BS
⚠	R922	PTH8L07BB2R2N1B	POSITIVE THE	EN
	R923	QRD161J-681	680 1/6W CARBON RES.	BS
	R923	QRD161J-681	680 1/6W CARBON RES.	EN
	R924	QRD161J-681	680 1/6W CARBON RES.	BS
	R924	QRD161J-681	680 1/6W CARBON RES.	EN
		OTHERS		
		EMW10638-002	PRINTED BOARD	BS
		EMW10638-002	PRINTED BOARD	EN
		E309924-001	SHIELD CASE	
		E310208-001	SHIELD PLATE	BS
		E310208-001	SHIELD PLATE	EN
		E406604-001	EARTH BRACKET	
		E408023-001	SHIELD PLATE	BS
		E408023-001	SHIELD PLATE	EN
		E70306-001	HEAT SINK	
		E70306-005	HEAT SINK	
		E73967-016	SPACER	BS
		E73967-016	SPACER	EN
		GBSG3008CC	TAPPING SCREW	
		QWE883-10RR	VINYL WIRE	BS
		QWE883-10RR	VINYL WIRE	EN
		QWE884-10RR	VINYL WIRE	BS
		QWE884-10RR	VINYL WIRE	EN
		QXT6100-005	VINYL TUBE	
		SBSG3008CC	TAPPING SCREW	BS
		SBSG3008CC	TAPPING SCREW	EN
	J201	EMV7123-024	CONNECT TERMINAL	
	J301	EMN00YV-215A	PIN JACK	
	J401	EMV7123-023	MALE CONNECTOR	
	J451	TOTX176	OPTICAL JACK	
	J452	EMN00TV-109A	PIN JACK	
	J701	QMS3501-020	PIN JACK	
	K101	ENZ8101-007	INDUCTOR	BS
	K101	ENZ8101-007	INDUCTOR	EN
	K103	ENZ8101-007	INDUCTOR	BS
	K103	ENZ8101-007	INDUCTOR	EN
	K104	ENZ8101-007	INDUCTOR	BS
	K104	ENZ8101-007	INDUCTOR	EN
	K105	ENZ8101-007	INDUCTOR	BS
	K105	ENZ8101-007	INDUCTOR	EN
	K106	ENZ8101-007	INDUCTOR	BS
	K106	ENZ8101-007	INDUCTOR	EN
	K107	ENZ8101-007	INDUCTOR	
	K108	ENZ8101-007	INDUCTOR	
	K109	ENZ8101-007	INDUCTOR	
	K110	ENZ8101-007	INDUCTOR	

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⚠	Item	Parts Number	Description	Area
	K302	ENZ8101-007	INDUCTOR	
	K303	ENZ8101-007	INDUCTOR	
	K304	ENZ8101-007	INDUCTOR	
	K305	ENZ8101-007	INDUCTOR	BS
	K305	ENZ8101-007	INDUCTOR	EN
	K307	ENZ8101-007	INDUCTOR	
	K308	ENZ8101-007	INDUCTOR	
	K309	ENZ8101-007	INDUCTOR	
	K310	ENZ8101-007	INDUCTOR	
	K362	ENZ8101-007	INDUCTOR	
	K364	ENZ8101-007	INDUCTOR	
	K365	ENZ8101-007	INDUCTOR	BS
	K365	ENZ8101-007	INDUCTOR	EN
	K451	ENZ8101-007	INDUCTOR	
	K452	ENZ8101-007	INDUCTOR	
	K453	ENZ8101-007	INDUCTOR	
	K454	ENZ8101-007	INDUCTOR	
	K455	ENZ8101-007	INDUCTOR	
	K901	ENZ8101-007	INDUCTOR	
	K902	ENZ8101-007	INDUCTOR	
	K903	ENZ8101-007	INDUCTOR	
	K904	ENZ8101-007	INDUCTOR	
⚠	P104	QMCB001-E02H	AC SOCKET	
	P302	EMV5140-012	CONNECT TERMINAL	
	P303	EMV7140-L12R	CONNECT TERMINAL	
⚠	S102	QSP1106-004	PUSH SWITCH	
	T451	ENZ3003-001	I.F. TRANSFORMER	
⚠	CP101	ICP-N10	I.C. PROTECTOR	
⚠	CP102	ICP-N10	I.C. PROTECTOR	
⚠	CP901	ICP-N15	I.C. PROTECTOR	
⚠	CP902	ICP-N15	I.C. PROTECTOR	
	EP101	EMZ4002-001Z	EARTH PLATE	
	EP102	EMZ4002-001Z	EARTH PLATE	BS
	EP102	EMZ4002-001Z	EARTH PLATE	EN
	EP103	EMZ4002-001Z	EARTH PLATE	BS
	EP103	EMZ4002-001Z	EARTH PLATE	EN
	EP301	EMZ4002-001Z	EARTH PLATE	
	EP303	E406656-001	EARTH PLATE	
	EP304	E75717-001	PRESET PLATE	
	FW101	EWR36B-08LST	FLAT WIRE ASSY	
	FW102	EWR33B-08LST	FLAT WIRE ASSY	
	FW451	EWR35B-10LST	FLAT WIRE ASSY	
	JT101	EMV7122-103	CONNECT TERMINAL	
	JT102	EMV7122-103	CONNECT TERMINAL	
	JT103	EMV7122-004Z	CONNECT TERMINAL	
	JT104	EMV7122-005	MALE CONNECTOR	
	JT105	EMV7122-005	MALE CONNECTOR	
	JT301	EMV7122-005	MALE CONNECTOR	
	JT302	EMV7122-004Z	CONNECT TERMINAL	
	JT410	EMV7122-004Z	CONNECT TERMINAL	
	JT901	EMV7122-103	CONNECT TERMINAL	
	LC371	QQR0521-006Z	NOISE FILTER	BS
	LC371	QQR0521-006Z	NOISE FILTER	EN
	RY301	ESK5D12-211	RELAY	
⚠	WR150	EWT015-013	TERMINAL WIRE	BS
⚠	WR150	EWT015-013	TERMINAL WIRE	EN
	XT301	ECX0169-344EA	CRYSTAL	

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⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC201	MN171602JAAA	I.C(MICRO-COMPUTER)	BS
	IC201	MN171602JAAA	I.C(MICRO-COMPUTER)	EN
	IC202	MN1281(P,Q)	I.C(DIGI-MOS)	
	IC203	GP1U571X	INFRARED DETECT	
	IC401	MN662720RB	I.C(DIGI-MOS)	
	IC501	AN8806SB	I.C(MONO-ANALOG)	
	IC801	BA6398FPX	I.C(MONO-ANALOG)	
		DIODES		
	D201	SLR-342MCA47	L.E.D.	
	D202	SLR-342DCA47	L.E.D.	
	D203	SLA-380LT	L.E.D.	
	D204	SLR-342YC3F	L.E.D.	
	D205	SLR-342YC3F	L.E.D.	
	D206	1SS133	SI.DIODE	
	D207	1SS133	SI.DIODE	
	D208	1SS133	SI.DIODE	
	D209	SLR-342DCA47	L.E.D.	
	D210	SLR-342DCA47	L.E.D.	
		TRANSISTORS		
	Q201	DTA114YS	DIGITAL TRANSISTOR	
	Q202	DTC114YS	DIGITAL TRANSISTOR	
	Q203	DTC114YS	DIGITAL TRANSISTOR	
	Q204	DTC114YS	DIGITAL TRANSISTOR	
	Q205	DTC144ES	DIGITAL TRANSISTOR	
	Q206	2SA1015(Y,GR)	SI.TRANSISTOR	
	Q207	DTA114YS	DIGITAL TRANSISTOR	
	Q501	2SA950(O,Y)	SI.TRANSISTOR	
		CAPACITORS		
	C201	QER51HM-475	4.7MF 50V AL E.CAP.	
	C202	QER51HM-475	4.7MF 50V AL E.CAP.	
	C203	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C204	QER50JM-107	100MF 6.3V AL E.CAP.	
	C205	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C206	QER50JM-107	100MF 6.3V AL E.CAP.	
	C207	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C208	QCZ0205-155	1.5MF 25V C.CAP.	
	C209	EFH001J-104	METAL.MYLAR	
	C210	EFZ0101-122ZS	1200PF METAL.MYLAR	
	C211	QER50JM-107	100MF 6.3V AL E.CAP.	
	C401	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C402	QCZ0205-155	1.5MF 25V C.CAP.	
	C404	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C405	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C406	EFH001J-223	METAL.MYLAR	
	C407	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	BS
	C407	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	EN
	C408	QCZ0205-155	1.5MF 25V C.CAP.	
	C409	QETB1AM-107	100MF 10V AL E.CAP.	
	C411	QCT30UJ-270Y	27PF 50V CER.CAP.	
	C412	QCT30UJ-270Y	27PF 50V CER.CAP.	
	C413	QCSB1HJ-560Y	56PF 50V CER.CAP.	
	C414	QCSB1HJ-560Y	56PF 50V CER.CAP.	
	C415	QCSB1HJ-560Y	56PF 50V CER.CAP.	
	C416	QCT30UJ-270Y	27PF 50V CER.CAP.	
	C417	QCT30UJ-270Y	27PF 50V CER.CAP.	
	C418	QCT30UJ-270Y	27PF 50V CER.CAP.	
	C421	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C422	QETB0JM-227	220MF 6.3V E.CAP.	
	C423	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C424	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C431	QCT30CH-120Y	12PF 50V CER.CAP.	BS
	C431	QCT30CH-120Y	12PF 50V CER.CAP.	EN
	C440	QER50JM-107	100MF 6.3V AL E.CAP.	
	C501	QER50JM-107	100MF 6.3V AL E.CAP.	
	C502	QCZ0205-155	1.5MF 25V C.CAP.	

⚠	Item	Parts Number	Description	Area
	C504	QER61AM-107Z	100MF 10V AL E.CAP.	
	C505	QCBB1HK-271Y	270PF 50V CER.CAP.	
	C506	QCSB1HJ-470Y	47PF 50V CER.CAP.	
	C507	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C509	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C510	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C511	QCGB1HK-821	820PF 50V CER.CAP.	
	C514	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C517	QFN31HJ-103Z	0.01MF 50V MYLAR CAP.	
	C518	QEK51HM-105G	1MF 50V AL E.CAP.	
	C519	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C520	QCSB1HJ-680	68PF 50V CER.CAP.	
	C522	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C523	QER51VM-106	10MF 35V AL E.CAP.	
	C524	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C525	EFH001J-104	METAL.MYLAR	
	C526	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C527	QFV81HJ-273	0.027MF 50V THIN FILM CAP.	
	C528	QFN81HJ-472	4700PF 50V MYLAR CAP.	
	C530	QCY31HK-102Z	1000PF 50V CER.CAP.	
	C531	QCGB1HK-102	1000PF 50V CER.CAP.	
	C532	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C801	QETB1CM-227	220MF 16V AL E.CAP.	
	C802	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C803	QFN31HJ-273Z	0.027MF 50V MYLAR CAP.	
	C804	QFN81HJ-183	0.018MF 50V METAL.MYLAR	
	C806	QFV81HJ-273	0.027MF 50V THIN FILM CAP.	
		RESISTORS		
	R201	QRD161J-821	820 1/6W CARBON RES.	
	R202	QRD161J-472	4.7K 1/6W CARBON RES.	
	R207	QRD161J-472	4.7K 1/6W CARBON RES.	
	R208	QRD161J-472	4.7K 1/6W CARBON RES.	
	R209	QRD161J-472	4.7K 1/6W CARBON RES.	
	R210	QRD161J-473	47K 1/6W CARBON RES.	
	R211	QRD161J-473	47K 1/6W CARBON RES.	
	R212	QRD161J-473	47K 1/6W CARBON RES.	
	R213	QRD161J-181	180 1/6W CARBON RES.	
	R214	QRV144F-1500AY	1/4W M.FILM	BS
	R214	QRV144F-1500AY	1/4W M.FILM	EN
	R215	QRD161J-221	220 1/6W CARBON RES.	
	R216	QRV144F-1800	1/4W CONST.METAL	BS
	R216	QRV144F-1800	1/4W CONST.METAL	EN
	R217	QRV144F-1800	1/4W CONST.METAL	BS
	R217	QRV144F-1800	1/4W CONST.METAL	EN
	R218	QRD161J-472	4.7K 1/6W CARBON RES.	
	R219	QRD161J-472	4.7K 1/6W CARBON RES.	
	R220	QRD161J-472	4.7K 1/6W CARBON RES.	
	R221	QRD161J-221	220 1/6W CARBON RES.	
	R221	QRV144F-2200A	1/4W CONST.METAL	BS
	R221	QRV144F-2200A	1/4W CONST.METAL	EN
	R222	QRV144F-2200A	1/4W CONST.METAL	BS
	R222	QRV144F-2200A	1/4W CONST.METAL	EN
	R252	QRD161J-182	1.8K 1/6W CARBON RES.	
	R402	QRD161J-124	120K 1/6W CARBON RES.	
	R403	QRD161J-155	1.5M 1/6W CARBON RES.	
	R404	QRD161J-683	68K 1/6W CARBON RES.	
	R406	QRD161J-471	470 1/6W CARBON RES.	BS
	R406	QRD161J-471	470 1/6W CARBON RES.	EN
	R407	QRD161J-820	82 1/6W CARBON RES.	
	R408	QRD161J-820	82 1/6W CARBON RES.	
	R409	QRD161J-820	82 1/6W CARBON RES.	
	R410	QRD161J-820	82 1/6W CARBON RES.	
	R415	QRD161J-2R2	2.2 1/6W CARBON RES.	
	R416	QRD161J-2R2	2.2 1/6W CARBON RES.	
	R418	QRD161J-101	100 1/6W CARBON RES.	
	R419	QRD161J-102	1K 1/6W CARBON RES.	

Electrical Parts List(ENN-478)

⚠	Item	Parts Number	Description	Area
	R425	QRD161J-102	1K 1/6W CARBON RES.	
	R431	QRD161J-271	270 1/6W CARBON RES.	BS
	R431	QRD161J-271	270 1/6W CARBON RES.	EN
	R504	QRD161J-114	110K 1/6W CARBON RES.	
	R505	QRD161J-273	27K 1/6W CARBON RES.	
	R507	QRD161J-274	270K 1/6W CARBON RES.	
	R509	QRD161J-103	10K 1/6W CARBON RES.	
	R510	QRD161J-104	100K 1/6W CARBON RES.	
	R511	QRD161J-473	47K 1/6W CARBON RES.	
	R512	QRD161J-154	150K 1/6W CARBON RES.	
	R514	QRD161J-123	12K 1/6W CARBON RES.	
	R518	QRD161J-121	120 1/6W CARBON RES.	
	R520	QRD161J-910Y	91 1/6W CARBON RES.	
	R524	QRD161J-470	47 1/6W CARBON RES.	
	R525	QRD161J-470	47 1/6W CARBON RES.	
	R526	QRD161J-470	47 1/6W CARBON RES.	
	R527	QRD161J-2R2	2.2 1/6W CARBON RES.	
	R530	QRD161J-125	1.2M 1/6W CARBON RES.	
	R801	QRD161J-821	820 1/6W CARBON RES.	
	R802	QRD167J-562	5.6K 1/6W CARBON RES.	
	R803	QRD161J-112	1.1K 1/6W CARBON RES.	
	R804	QRD167J-113	11K 1/6W CARBON RES.	
	R806	QRD161J-124	120K 1/6W CARBON RES.	
	R807	QRD161J-332YTT	3.3K 1/6W CARBON RES.	
	R808	QRD161J-752	7.5K 1/6W CARBON RES.	
	R809	QRD161J-223	22K 1/6W CARBON RES.	
	R810	QRD161J-392YT	3.9K 1/6W CARBON RES.	
	R811	QRD161J-153	15K 1/6W CARBON RES.	
	R812	QRD161J-752	7.5K 1/6W CARBON RES.	
	R813	QRD167J-751	750 1/6W CARBON RES.	
	R814	QRD161J-363	36K 1/6W CARBON RES.	
		OTHERS		
		EMW10639-002	PRINTED BOARD	BS
		EMW10639-002	PRINTED BOARD	EN
		E3400-431	FELT SPACER	
		E3400-439	FELT SPACER	
		E406127-001	P.W.BOARD HOLDER	
		E406128-001	P.W.BOARD HOLDER	
		QWE350-09RR	VINYL WIRE	
	J202	EMV7123-024R	MALE CONNECTOR	
	J402	EMV7123-023	MALE CONNECTOR	
	K201	ENZ8101-007	INDUCTOR	
	K202	ENZ8101-007	INDUCTOR	
	K203	ENZ8101-007	INDUCTOR	
	K204	ENZ8101-007	INDUCTOR	
	K205	ENZ8101-007	INDUCTOR	
	K206	ENZ8101-007	INDUCTOR	
	K401	ENZ8101-007	INDUCTOR	BS
	K401	ENZ8101-007	INDUCTOR	EN
	P102	EMV5109-005A	MALE CONNECTOR	
	P103	EMV5109-006A	CONNECT TERMINAL	
	P104	EMV7144-015R	CONNECT TERMINAL	
	S201	QSQ1001-E01ZJ7	PUSH SWITCH	
	S202	QSQ1001-E01ZJ7	PUSH SWITCH	
	S203	QSQ1001-E01ZJ7	PUSH SWITCH	
	S204	QSQ1001-E01ZJ7	PUSH SWITCH	
	S205	QSQ1001-E01ZJ7	PUSH SWITCH	
	S206	QSQ1001-E01ZJ7	PUSH SWITCH	
	S207	QSQ1001-E01ZJ7	PUSH SWITCH	
	S208	ESP0001-017	TACT SWITCH	
	EP003	EMZ4002-001Z	EARTH PLATE	
	EP201	E70859-001	EARTH PLATE	
	FL201	ELU0001-103	FLUORESCENT DISPLAY TUBE	
	FW301	EWR39B-08LST	FLAT WIRE ASSY	
	FW302	EWR39B-08LST	FLAT WIRE ASSY	
	FW410	EWR34B-08LST	FLAT WIRE ASSY	

⚠	Item	Parts Number	Description	Area
	XT201	ECX0060-000EM	CERAMIC RESONATOR	

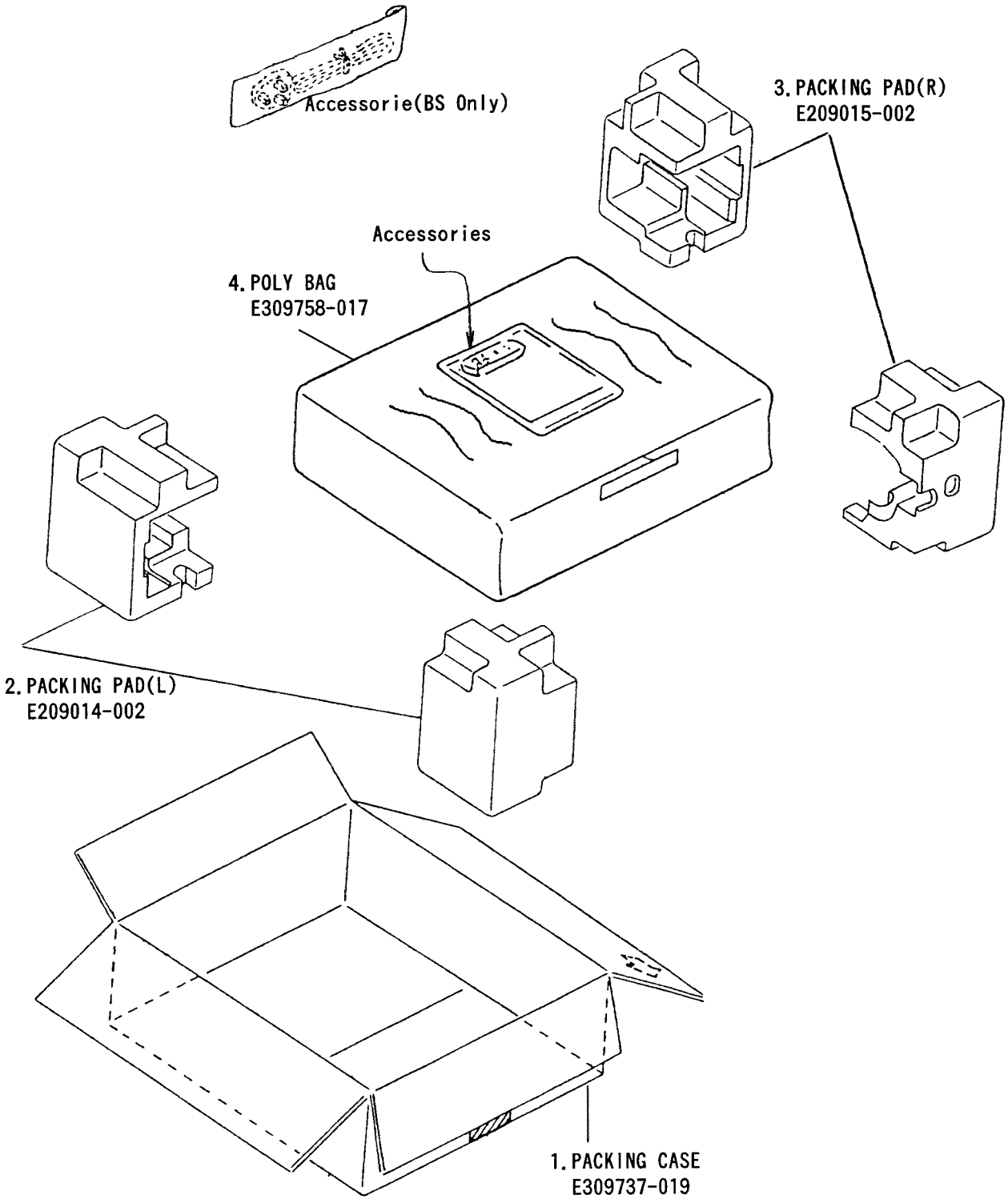
Accessories List

Block No. M3MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	E30580-2473A	INSTRUCTION BOOK	1		
	2	RM-SXSD1U	WIRE-LESS REMOTE CONTROL	1		
	3	R03BPA-2STSA	BATTERY	1		
⚠	4	QMP39F0-183E	POWER CORD	1		EN
⚠	4	QMP5520-1835BS	POWER CORD	1		BS
	5	EWP302-020	SIGNAL CORD	1		
	6	EWP805-012	PLUG WIRE ASSY	1		
	7	E309802-001	POLY BAG	1		
	8	E300196-172	POLY BAG	1		BS
	-	BT-20066A	DISTRIBUTOR LIST	1		BS
	-	BT-54003-1	WARRANTY CARD	1		BS
	-	E43486-340A	SAFETY SHEET	1		BS

Packing Materials and Part Numbers

Block No. M4MM



–MEMO–

XL-SD1GD

JVC

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