

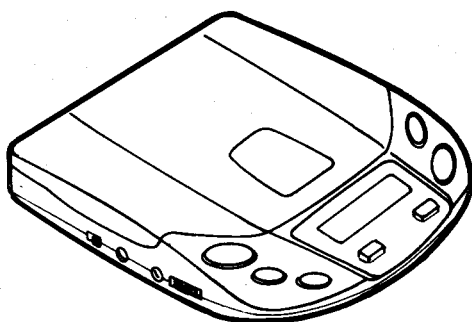
JVC

SERVICE MANUAL

PORTABLE CD PLAYER

XL-P61CR C/J

XL-P61 B/E/G/GI/EN/U



COMPACT
disc
DIGITAL AUDIO

Area Suffix

B	U.K.
C	Canada
E	Continental Europe
G	Germany
J	U.S.A.
GI	Italy
EN	North Europe
U	Other Areas

Contents

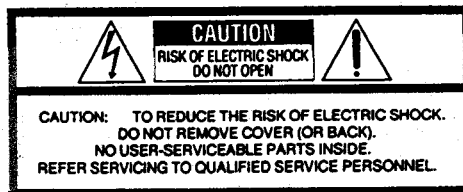
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1.Safety Precautions

IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the rear cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the lid is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.



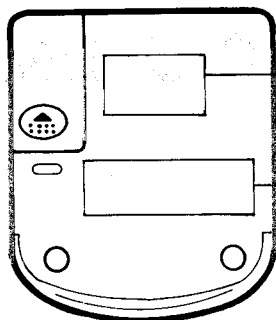
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



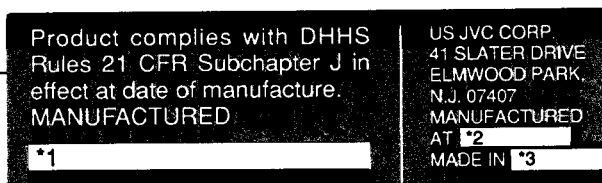
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IDENTIFICATION LABEL AND CERTIFICATION LABEL

• XL-P61CR J



NAME/RATING PLATE



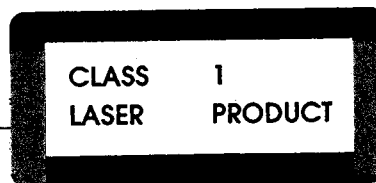
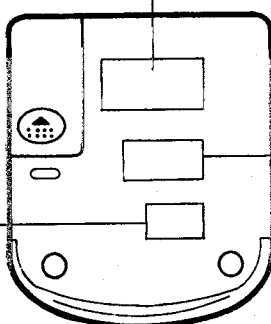
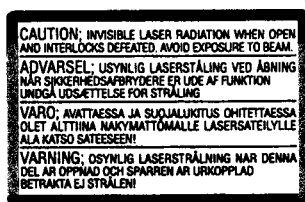
Notes:

- *1 The date of manufacture.
- *2 The ID code of manufacturing plant.
- *3 Marking of country origin.

• XL-P61 B/E/G/GI/EN

ROTULOS Y SU LOCALIZACION

NAME/RATING PLATE



Obs:
Apparaten innehåller laserkomponent av högre laserklass än klass 1

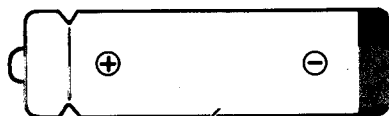
IMPORTANT SAFETY INSTRUCTIONS

(XL-P61CR C/J)

CAUTION:

CHARGE ONLY NI-Cd RECHARGEABLE BATTERIES, TYPE BN-R121 OR BN-R122. OTHER TYPES OF BATTERIES MAY BURST CAUSING PERSONAL INJURY AND DAMAGE.

*For more details, consult your nearest JVC dealer.



Negative (-) side of battery is NOT covered.

(XL-P61 B/E/G/GI/EN)

CAUTION:

CHARGE ONLY NI-Cd RECHARGEABLE BATTERIES, TYPE VSEAA850. OTHER TYPES OF BATTERIES MAY BURST CAUSING PERSONAL INJURY AND DAMAGE.

CONTAIN NICKEL-CADMIUM BATTERY. MUST BE RECYCLED OR DISPOSED PROPERLY.

(XL-P61CR C/J)

1. **AC adapter**
Be sure to unplug the AC adapter from the wall AC outlet when not in use.
2. **Do NOT expose the unit(s) to drips or splashes of water.**
If water gets inside the unit, unplug the AC adapter from the wall AC outlet and consult your dealer.
3. **Do NOT touch the interior parts.**

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

(XL-P61 B/E/G/GI/EN)

1. **AC adapter**
Be sure to unplug the AC adapter from the wall AC outlet when not in use.
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If water gets inside the unit, unplug the AC adapter from the wall AC outlet and consult your dealer.
3. **Do NOT touch the interior parts.**

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Thank you for purchasing this JVC product. Please read these instructions carefully before starting operation to be sure to obtain optimum performance and a longer service life from the unit.

INFORMATION (For U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INFORMATION (For Canada)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

ATTENTION: (For U.S.A.)

The product that you have purchased is powered by a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.



Ni-Cd

2. Specifications

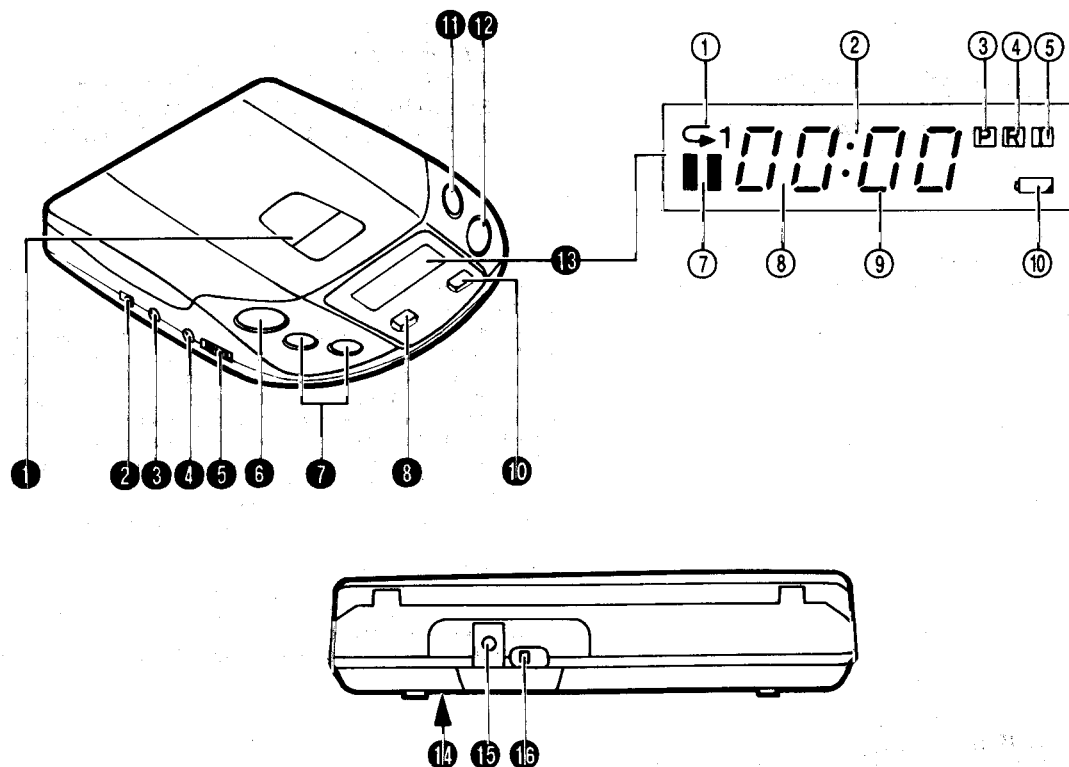
Portable CD player XL-P61

Type	: Compact disc player
Signal detection system	: Non-contact optical pickup (semiconductor laser)
Pickup system	: 3 beam laser
Number of channels	: 2 channels (stereo)
Frequency response	: 20 Hz to 20,000 Hz
Wow & flutter	: Unmeasurable
Output	: Line out (3.5 mm dia. stereo x 1) 800 mV/100 kohms Headphone (3.5 mm dia. stereo x 1) 8 mW/ch at 5 % THD/20 ohms matching impedance (16 ohms to 1 kohm)
Duration of battery (XL-P61CR C/J)	: Approx. 2 hours when using a rechargeable battery (BN-R121/R122) charged for 4 hours, Approx. 7 hours when using an alkaline battery (AA-Panasonic) Approx. 3.5 hours when using a rechargeable battery (VSEAA 850) charged for 6 hours, Approx. 7 hours when using an alkaline battery (LR6-Panasonic)
Power requirements	: DC 6 V (AA size battery x 4) DC 4.8 V (Rechargeable battery [BN-R121/R122] x 4) DC IN 6 V

Dimensions (W x H x D)	: 135 x 30 x 160 mm (5-3/8" x 1-3/16" x 6-5/16") (Excluding buttons and controls)
Weight	: Approx. 270 g (0.60 lbs.) (without batteries)
Accessories provided (XL-P61CR C/J)	: AC adapter x 1 Car adapter x 1 Car audio cassette adapter x 1
(XL-P61 B/E/G/GI/EN/U)	: AC adapter x 1 Headphone x 1 Signal cord x 1 Rechargeable battery (VSEAA 850) x 4 AC plug x 1 (U only)
AC adapter AA-R601J or AA-R602J (XL-P61CR C/J)	
Input power source	: AC 120 V, 60 Hz
Output voltage	: DC 6 V, 450 mA
AC adapter AA-R601E or AA-R602E (XL-P61 B/E/G/GI/EN)	
Input power source	: AC 230 V, 50 Hz
Output voltage	: DC 6 V, 450 mA
AC adapter AA-R601U or AA-R602U (XL-P61 U)	
Input power source	: AC 115 V (110 - 120 V)/230 V, 50/60 Hz
Output voltage	: DC 6 V, 450 mA
Rechargeable battery VSEAA850	
Type	: Ni-Cd rechargeable battery
Battery life	: Repeat recharging approx. 300 times
Output voltage	: DC 1.2 V
Car adapter CA-R603 (XL-P61CR C/J)	
Input voltage	: DC 12 V
Output voltage	: DC 6 V, 500 mA

3. Instructions (Extract)

NAMES OF PARTS AND THEIR FUNCTIONS



- ① Lid
- ② Hyper-Bass sound (HBS) switch
- ③ LINE OUT jack
- ④ PHONES jack
- ⑤ VOLUME control
- ⑥ OPEN button
- ⑦ Search (◀▶) buttons
- ⑧ PROGRAM/DISPLAY button
- ⑩ REPEAT/RANDOM/INTRO button
- ⑪ Stop/clear (□) button
- ⑫ Play/pause (▶||) button
- ⑬ Display window (The display is back lit when power is supplied from the DC IN jack.)
- ① Repeat play (◀ 1) indicator
- ② Track (tune) number display
- ③ Program (P) mode indicator
- ④ Random (R) indicator
- ⑤ Intro scan (I) indicator
- ⑦ Pause (||) indicator
- ⑧ Time (minute)/Program order number display
- ⑨ Time (second) display
- ⑩ Battery (◻) indicator
- ⑭ Battery compartment cover
- ⑮ DC IN 6V (⚡) jack
- ⑯ HOLD switch

Note:

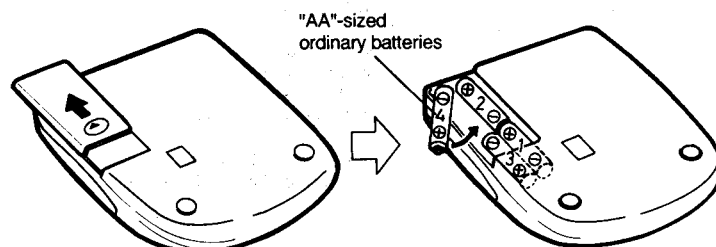
When supplying the power from the DC IN jack, operation buttons ⑦, ⑪, ⑫ only are illuminated.

POWER SUPPLY

- Ordinary and rechargeable batteries are NOT provided with this unit.

A. Operation on ordinary batteries

- Insert batteries.

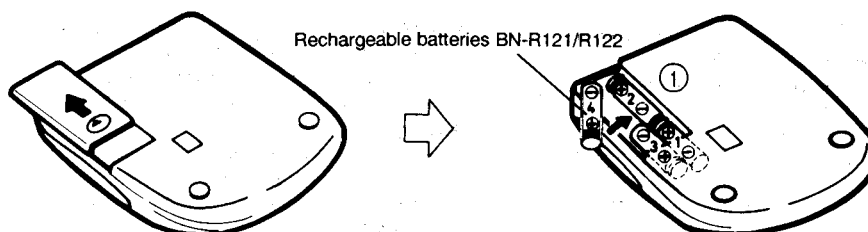


B. Operation with rechargeable batteries

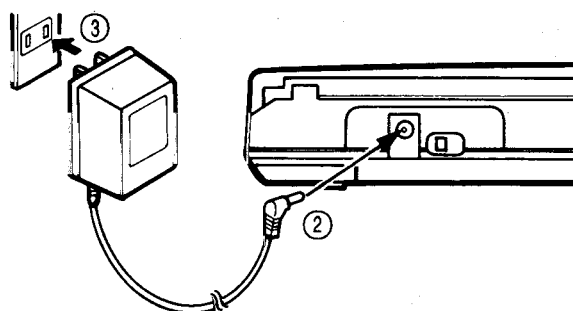
• Recharging

In the following cases, recharge the batteries before using the unit:

- When using the unit for the first time.
- When the battery indicator of the CD player lights.



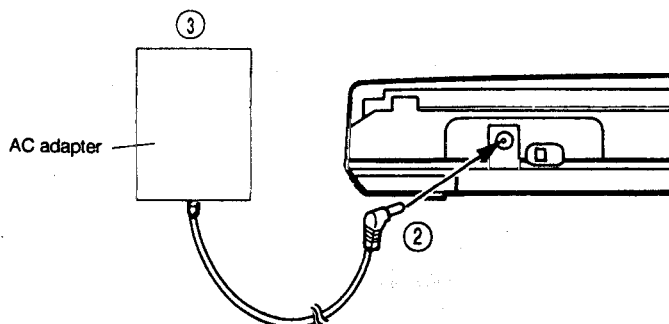
(XL-P61CR C/J)



- ① Insert the rechargeable batteries.
- ② Connect to the DC IN jack.
- ③ Connect to the AC outlet.

- Recharging will be completed after four hours. The batteries' duration is about two hours.

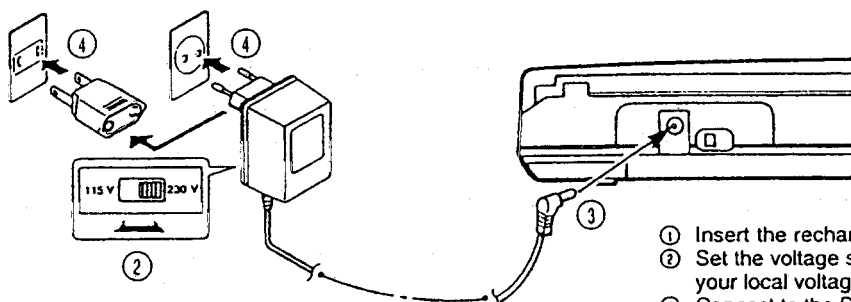
(XL-P61 B/E/G/GI/EN)



- ① Insert the rechargeable batteries.
- ② Connect to the DC IN jack.
- ③ Connect to the AC outlet.

- Recharging will be completed after 6 hours. The batteries' duration is about 3.5 hours.

(XL-P61 U)





- ① Insert the rechargeable batteries.
 - ② Set the voltage selector to 115 V or 230 V according to your local voltage.
 - ③ Connect to the DC IN jack.
 - ④ Connect to the AC outlet.
- If required, use the attached AC plug adaptor.

- Recharging will be completed after six hours. The batteries' duration is about two hours.

Cautions:

- NEVER charge with other than the AC adapter provided.
- Do NOT contact the poles (+ or -) of the rechargeable batteries with a metal object since this could cause short-circuiting.
- After initial charging, or after the battery has not been used for an extended period of time, battery life may become shorter than normal. This should return to normal after the battery is charged and discharged several times.
- When charging is finished, unplug the AC adapter from the DC in jack and wall outlet.
Although there is no safety problem if left plugged in, we recommend that it is unplugged within 10 hours.
- When ordinary batteries have been loaded, they cannot be recharged using the AC adapter.
If an ordinary battery with the seal of its negative \ominus pole damaged is loaded, it might be recharged erroneously.
This is very dangerous; be careful NOT to use damaged batteries.
- When the battery working time becomes short even when the battery is fully charged, this indicates that the battery is near the end of its life. Consult your JVC dealer or service station.
- The batteries become slightly warm during recharging, however, it is NOT a malfunction.
- Do NOT mix new and old batteries, or mix different types of batteries.
- If electrolyte from a damaged battery should get on your skin or clothes, wash off immediately with water.

Battery replacement

When the battery () indicator lights during rechargeable or ordinary battery operation, it shows that the batteries are nearly exhausted. (With some batteries, even though the power is exhausted, the () indicator does NOT light and operation becomes unstable.) In such cases, recharge the batteries or replace them with new ones.

C. Operation on household AC

- Use the provided AC adapter AA-R601J or AA-R602J. (XL-P61CR C/J)
- Use the provided AC adapter AA-R601 or AA-R602E. (XL-P61 B/E/G/GI/EN)

Notes:

- NEVER use an AC adapter other than that specified to avoid malfunctions and accidents.
- Be sure to remove the batteries when the AC adapter is to be used for an extended period of time.

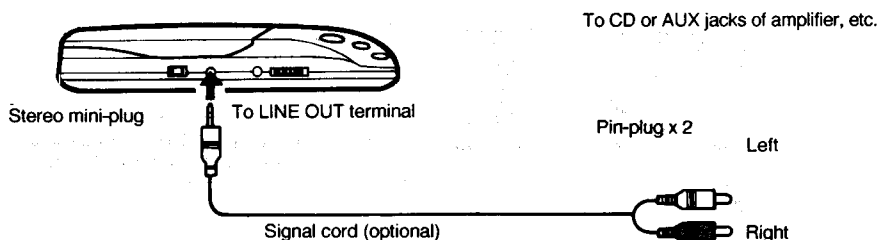
D. Operation using car adapter

- Use the provided car adapter CA-R603 exclusively for this unit. (XL-P61CR C/J)
- Use the car adapter CA-R60 (optional) exclusive.

CONNECTIONS

A. Connection to stereo components

- When the CD player is connected directly to an amplifier, etc...



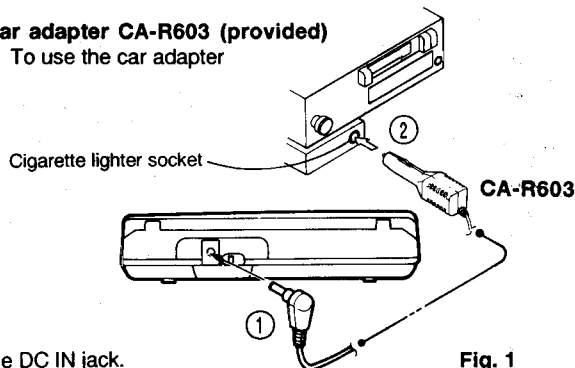
- Do NOT switch the power ON until all the connections are completed.
- Insert plugs firmly; poor contact can cause noise.
- When the LINE OUT terminal is used, the volume control and HBS switch are NOT effective.

B. Connection to car audio system (XL-P61CR C/J)

Power is supplied from the car adapter; use a cassette adapter or noise filter cord to connect the signal cord.

Car adapter CA-R603 (provided)

- To use the car adapter



- ① Connect to the DC IN jack.
- ② Plug into the cigarette lighter socket.

Fig. 1

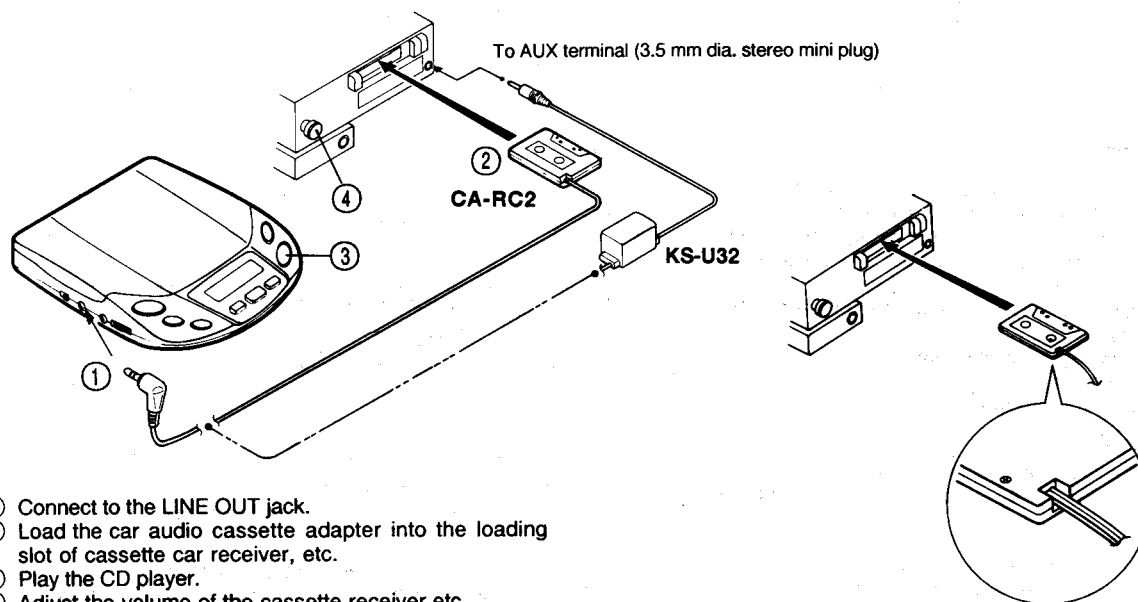
Notes:

- The CA-R603 car adapter is designed to supply power to a JVC CD player with a 6V DC IN jack. (Fig. 1)
- The car adapter is designed for use in cars with a negative ground.
- If the fuse blows frequently, consult a dealer.
- Do NOT connect immediately after using the cigarette lighter.
- When the car adapter is to be used for a long period of time, be sure the engine is running to avoid discharging the battery.
- Do NOT use the car adapter at an extremely high temperature (after the car has been parked in the summer sun, for example).
- Be sure to disconnect the car adapter from the cigarette lighter socket when the CD player is not being used.
- The rechargeable batteries cannot be charged with the car adapter.

Noise filter cord KS-U32 (optional)

Car audio cassette adapter CA-RC2 (provided)

- To use the car audio cassette adapter



Note:

- Load the cassette adapter so that the cord attached to the cassette adapter is towards you as shown in Fig. 2, to avoid any malfunction.

Incompatible cassette car receivers

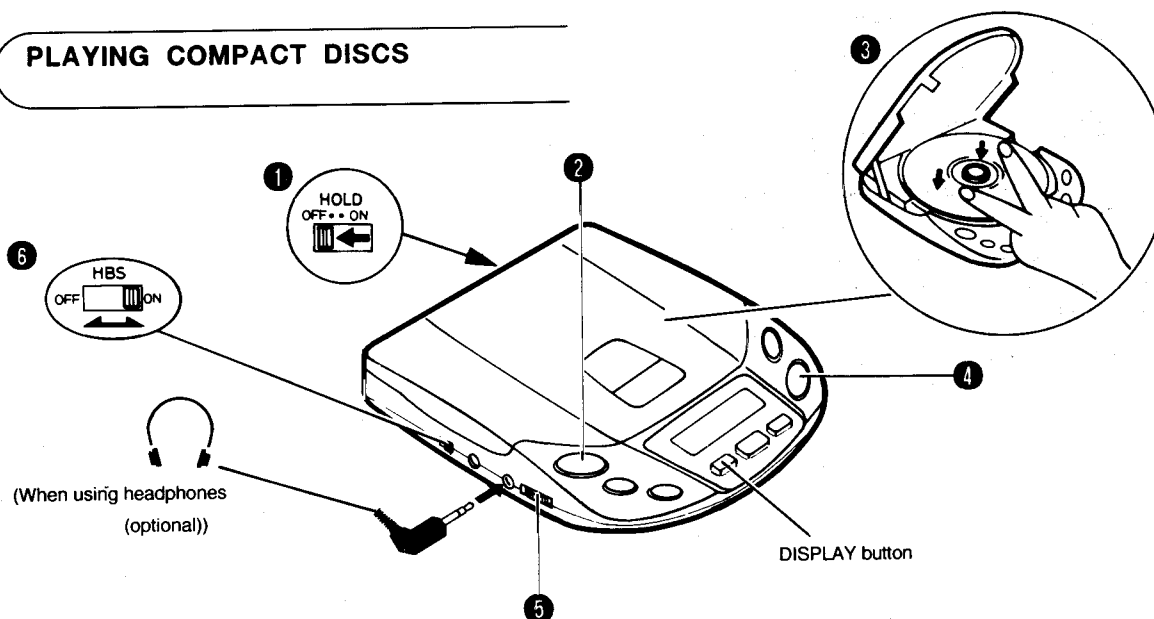
The CA-RC2 CANNOT be used in the following cassette car receivers:

1. Cassette car receivers with heads on the left side.
2. Cassette car receivers with heads in the center back (i.e., the CA-RC2 is loaded with its heads facing backward.)
3. Cassette car receivers that detect tape tension. (When the CA-RC2 is inserted into the cassette car receiver, it is ejected automatically.)
4. Cassette car receivers that are hindered by the cord of CA-RC2 during loading and unloading.

Notes on use:

- When the cassette car receiver has a tape select switch, set to normal (TYPE I) position.
- When the cassette car receiver has a Dolby NR switch, set the NR switch to OFF.
- When NO sound is heard or the sound level is extremely low, if your cassette car receiver has an auto-reverse mechanism, change the tape travel direction.
- To remove the CA-RC2, press the EJECT button of cassette car receiver.
- Do NOT insert the CA-RC2 with its cord downward or toward the cassette car receiver. It may break the cord or cause a malfunction in the cassette car receiver.

PLAYING COMPACT DISCS



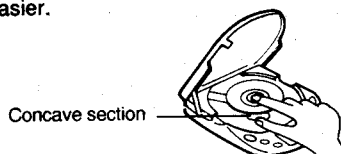
To play all tunes

- 1 Set the HOLD switch to the OFF (release) position.
- 2 Press to open the lid; open further by hand.
- 3 Load a disc with the label facing up. Press the section shown by the arrow until you hear the mechanism engage. Close the lid.
 - It is possible to play CDs with the lid open. (XL-P81CR only)
- 4 Press the ▷|| button to start play.
- 5 Adjust the volume.
- 6 Set the HBS switch as required.

- **DISPLAY button**
During CD play, each time this button is pressed, the track number being played and play time are alternately displayed.
- **HOLD switch**
As long as the HOLD switch is activated, the unit locks onto the current mode and cannot be switched to another mode, even if the latter mode button is pressed. However, volume control and HBS switches function when HOLD is activated.

Notes:

- When this unit is used with the lid open, do not touch the CD being played during playback. Press the stop/clear □ button to stop the disc before replacing it (XL-P81CR only).
- When removing a 8-cm (3-3/16") CD, using the concavity makes removal easier.



Skip play

To listen to the next tune...

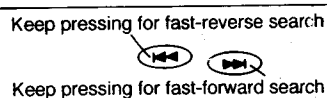
Press the ►► button once to skip to the beginning of the next tune.

To listen to the previous tune...

Press the ◀◀ button to skip to the beginning of the tune being played back and press again to skip to the previous tune.

Search play

- The required position can be located using fast-forward or reverse search during play.

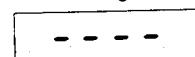


To stop play

- **To stop a disc temporarily**
Press the ▷|| button. When pressed again, play resumes.
- **To stop playback in the middle of a disc**
During play, press the □ button to stop play. The total number of tracks and total playing time are alternately displayed. Then, after a short time, power switches off automatically.
- **Auto power off function**
 - When left in the stop mode for more than approx. 5 seconds, power is switched off automatically. (XL-P61CR)

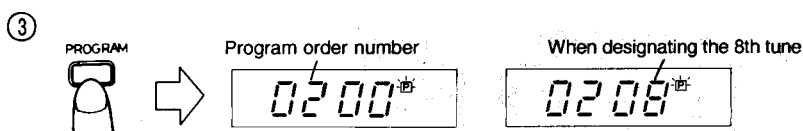
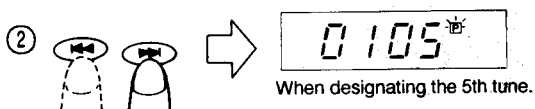
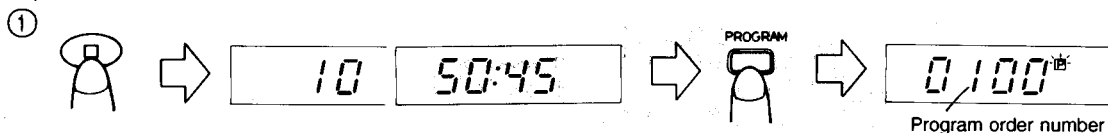
Note:

- The following indication may be shown when a disc is dirty or scratched, or when the disc is loaded upside down. In such a case, check the disc and insert again, and clean or change the disc.



Programmed play

- Programmed play of up to 20 tunes (max.) can be performed in any required order.



- During play, press the button. While the total number of tracks and total playing time are alternately displayed, press the PROGRAM button to enter programming mode.
 - The "P" indicator blinks.
- Press to designate the required track number.
 - To count down the track numbers, press the button.
- Press the PROGRAM button to program the track (tune) number.
 - Repeat steps ② and ③ to program other tunes.
- Press the button when programming is completed. Programmed play starts.

To confirm the numbers of programmed tunes...

During CD Stop mode, each time the PROGRAM button is pressed, the number of programmed tracks are displayed in their programmed order.

To clear programmed tunes...

Press the button twice before starting play or during programmed play.

Note:

- It is impossible to program 21 or more tunes. If it is attempted, "FULL" is shown in the display.

Repeat/Random/Intro scan play

Each time the REPEAT/RANDOM/INTRO button is pressed, the mode will change from single tune repeat, all tune repeat, random, intro to clear mode.



- **Repeat play of a single tune (↺ 1)**
The tune being played can be heard repeatedly.
- **Repeat play of all tunes (↺)**
When playing an entire disc or programmed tunes, all the tunes or the programmed tunes can be heard repeatedly.
- **RANDOM play (R)**
When random mode is set, each tune is played, in random order.
- **INTRO-scan operation (I)**
When intro-scan mode is set before or during play, the first 10 seconds of all tunes or programmed tunes are played.

4. Location of Main Parts

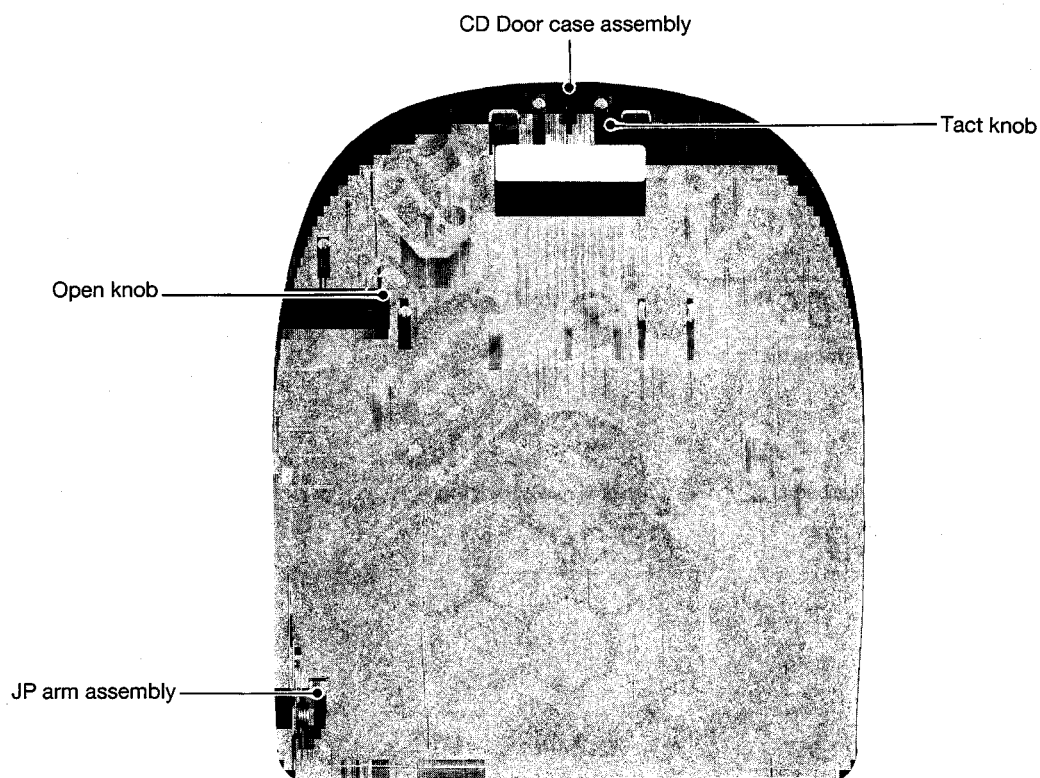


Fig. 4-1

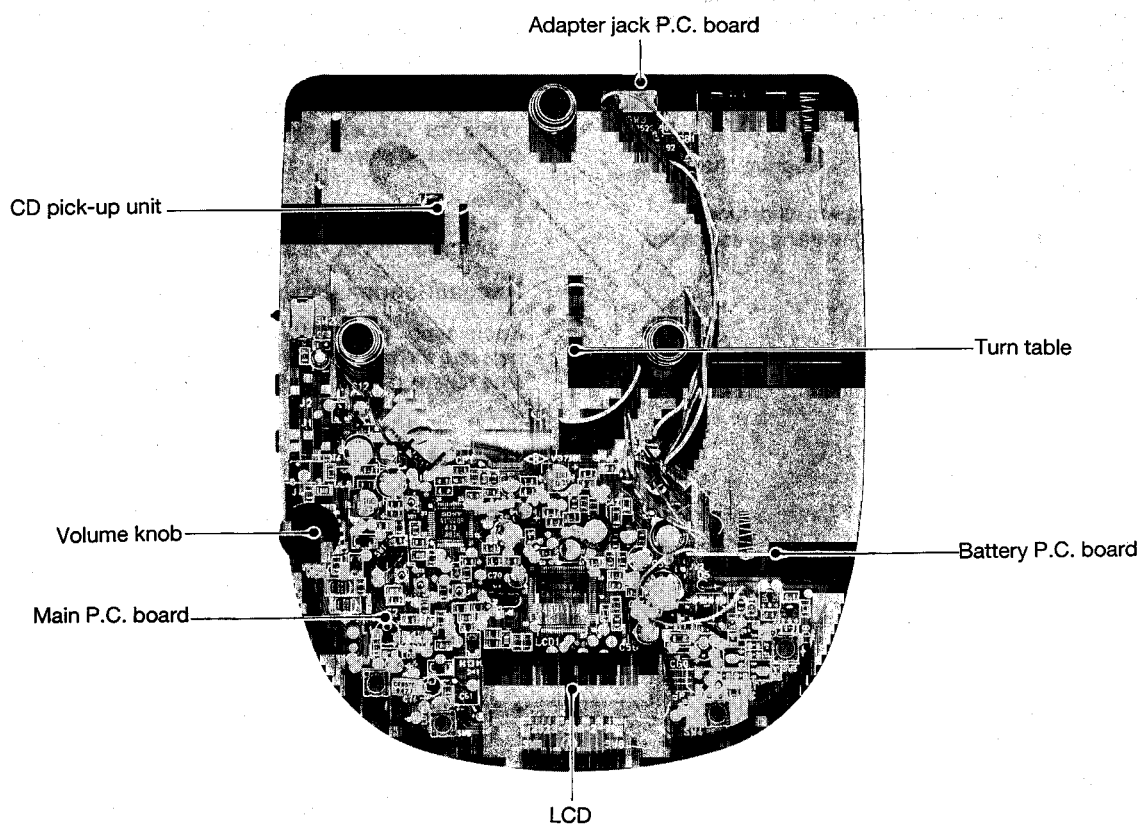


Fig. 4-2

5. Removal of Main Parts

■ Instructions for handling the optical system block pickup

Electrostatic breakdown of the laser diode in the optical system block may occur due to a potential difference caused by electrostatic charge accumulated on clothing on the human body etc. A ground must be provided as follows to prevent any electrostatic charge during unpacking or repair work.

- ① Be sure to wear a grounded band(1M ohm)that is properly grounded to remove any static electricity that may be charged on your body.
- ② Be sure to place a conductive sheet(1M ohm) or copper plate with proper grounding on the workbench or any other surface onwhich the pickup is be to placed.
- ③ Because the static electricity charge on clothing dose not discharge through the body grounding band do not let clothing contact the pickup unit.

INCORRECT



Fig. 5-1

Note: Laser diodes are so susceptible to damage from static electricity that even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly.

CORRECT

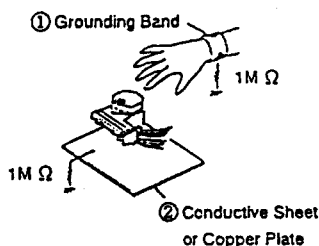


Fig. 5-2

■ Precaution for checking beam emission of laser diode

The laser beam of this unit is focused on reflecting surface of the objective lens in the optical system block.

Therefore, keep your eyes at least 12 inches(30 cm) away from the objective lens when the laser diode is "ON".

■ Operation check method for laser diode and focus search function

When the "POWER"switch is turned "ON"after the chucking arm is removed observe the objective lens and confirm that the following operations are done properly (The optical system block should be positioned at the lead in area when checked.)

- ① The disc table should be at the innermost position after the chucking arm is removed.
- ② The diffused light of the laser beam can be seen when the "POWER"switch is turned "ON".
- ③ Vertical(Up and down)movement of the objective lens (2 or 3 time) will take place.

Caution :

Laser diodes are extremely suseptible to damage from static electricity.

Even if a static dischage does not ruin the diode, It can shorten Its life or cause It to work Improperly.When replacing the pickup use a conductive mat and a grounded soldering Iron to help protect the laser diode from static damage.

Grounded Conductive
Wrist Band for Body

Soldering
Iron with
Ground Wire

Conductive Gum Mat

Ground Line
Less than 10 Ω

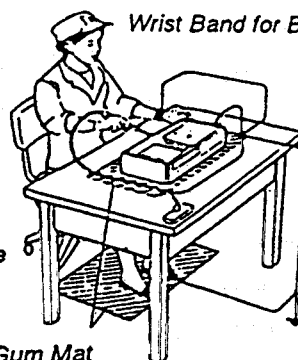


Fig. 5-3

◆ Refer to the "Analytic drawing and parts list" (page 25)

■ Removal of front cover assembly (See Fig. 5-4)

1. Place the set on its front side and remove the battery cover.
2. Remove five screws (① × 4, ② × 1) retaining the front cover assembly.
3. Place the set in the normal position and remove the front cover assembly.

■ Removal of main and adapter P.C. board (See Fig. 5-5)

1. Remove the front cover assembly. (Refer to the "Removal of front cover assembly" mentioned above.)
2. Slightly lift the CD mechanism assembly upward and remove one screw ③ retaining the main P.C. board.
3. Remove the CD mechanism together with the main P.C. board.
4. Remove the one screw ④ retaining the adapter jack P.C. board.

■ Removal of CD mechanism assembly (See Fig. 5-6)

1. Remove the front cover assembly. (Refer to the "Removal of front cover assembly" mentioned above.)
2. Remove the main P.C. board. (Refer to the "Removal of main P.C. board" mentioned above.)
3. Unsolder and disconnect two blue wires whose other ends are connected with the reset switch of the CD mechanism assembly from "P. SET (+)" and "P. SET (-)" on the main P.C. board respectively.
4. Unsolder and disconnect (red & black) whose other ends are connected with the slide motor of the CD mechanism assembly from SL (Red) and SL (White) on the main P.C. board respectively.
5. Unsolder and disconnect two wires (red and white) whose other ends are connected with the slide motor of the CD mechanism assembly from "SL (Red)" and "SL (White)" on the main P.C. board respectively.
6. Unsolder and disconnect two wires (red and black) whose other ends are connected with the spindle motor of the CD mechanism assembly from "SP (Black)" and "SP (Red)" on the main P.C. board respectively.
7. Disconnect the flexible card wire whose other end is connected with the pickup unit from the connector CN1 on the main P.C. board.

Slide the connector CN1 in the direction of the arrow ©.

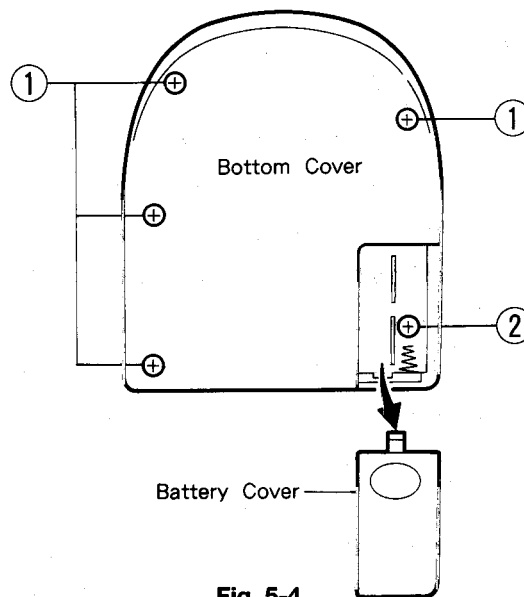


Fig. 5-4

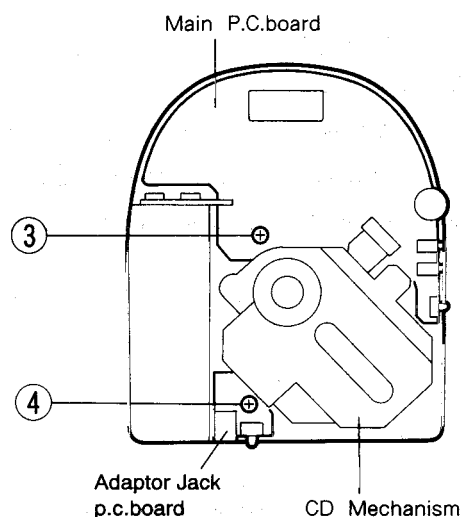


Fig. 5-5

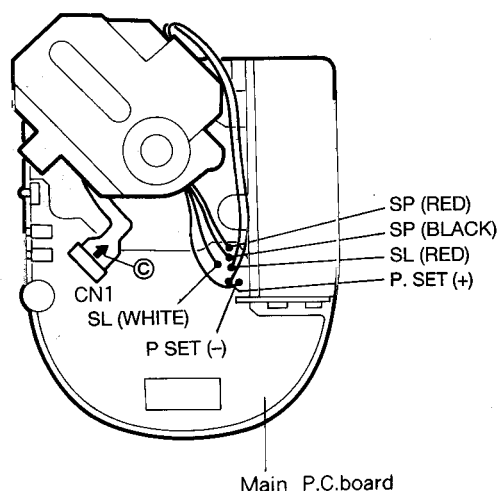


Fig. 5-6

■ Removal of CD door (See Fig. 5-7, 5-8)

1. Remove the front cover assembly. (Refer to the "Removal of front cover assembly" mentioned above.)
2. Press the CD OPEN button to open the CD door.
3. Remove one screw ⑤ retaining the hinge.
4. Remove the pin joining the CD door and the front cover with each other in the following manner. In short, slide the stopper in the direction of the arrow ① while sliding the pin in the direction of the arrow ②.

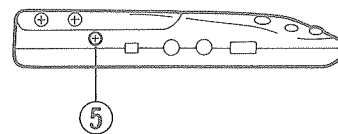


Fig. 5-7

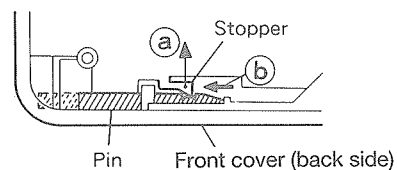


Fig. 5-8

■ Removal of spindle motor and pick-up unit (See Fig. 5-9 ~11)

1. Remove the front cover assembly. (Refer to the "Removal of front cover assembly" mentioned above.)
2. Removal of main P.C. board. (Refer to the "Removal of main P.C. board" mentioned above.)
3. Removal of CD mechanism assembly. (Refer to the "Removal of CD mechanism assembly" mentioned above.)
4. Remove two screws ⑥ holding the motor as shown.
5. Remove one screw ⑦ holding the shaft and mechanism as shown.
6. After you connect the wire connector unsolder and remove the shorting tab.
7. Refer to the exploded view of the compact disc mechanism on page 26 for detailed information.

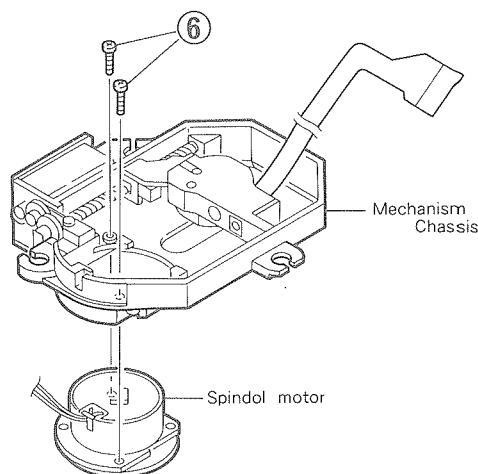


Fig. 5-9

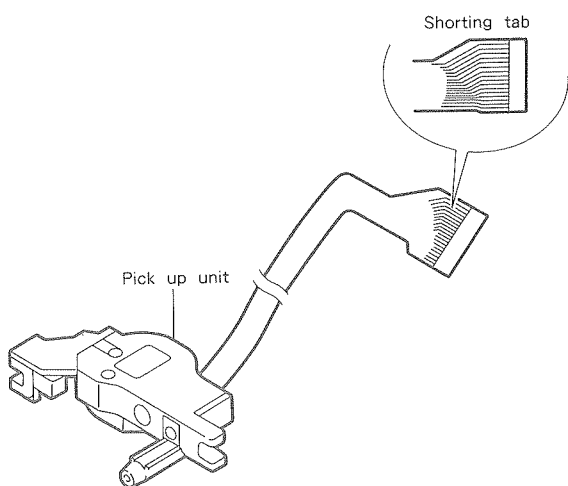


Fig. 5-10

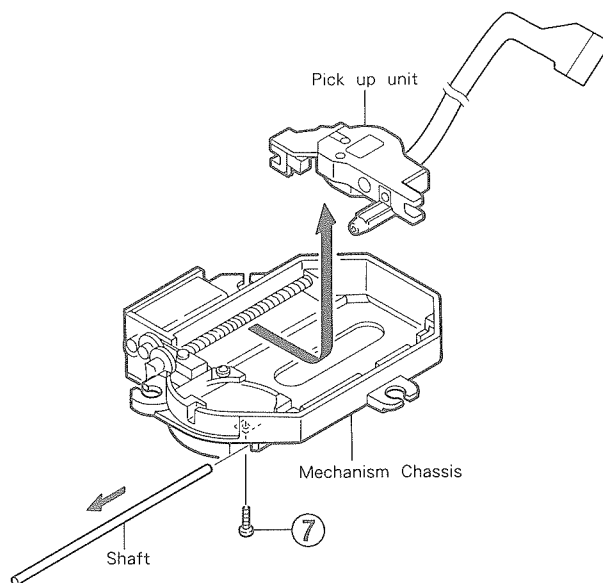


Fig. 5-11

6. Main Adjustment

■ Equipment Required

- Output meter (SSVM)
- Frequency counter
- Oscilloscope
- A regular compact disc
- Test disc "JVC CTS-1000"
- Test disc "CRG1242S"
- Dummy load 10k ohm

■ Location of Adjustment: Main P.C.board bottom view

(Top view)

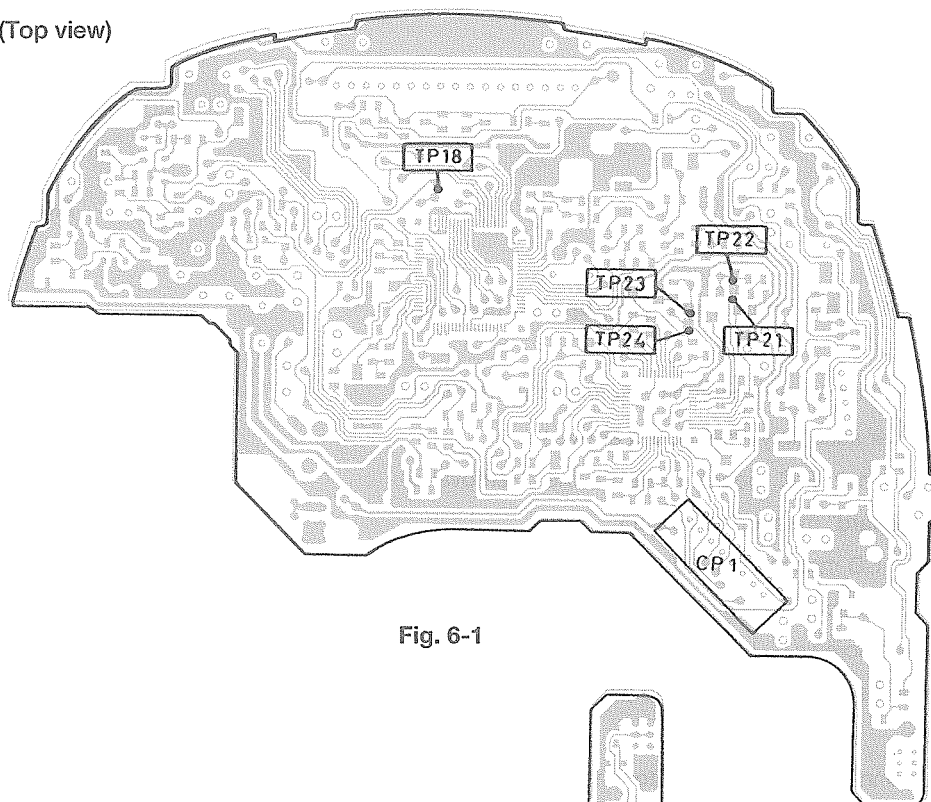


Fig. 6-1

(Bottom view)

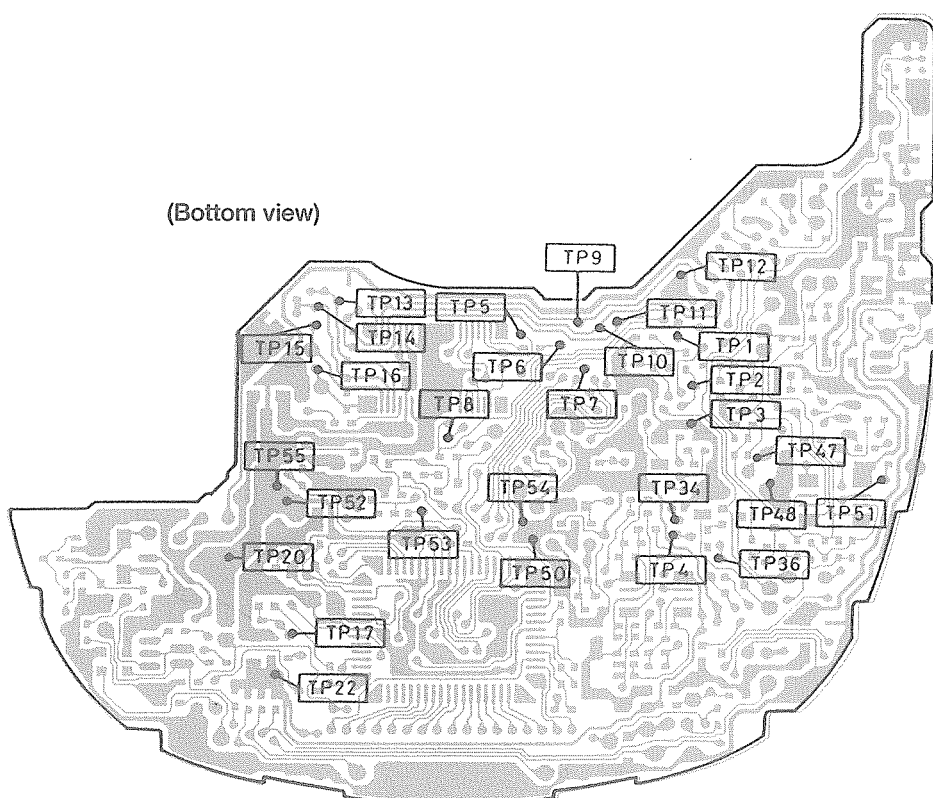
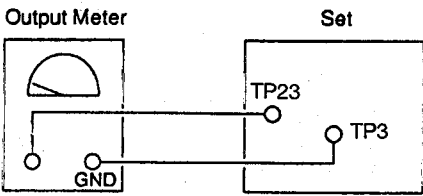
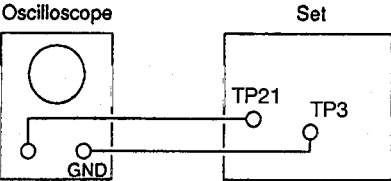
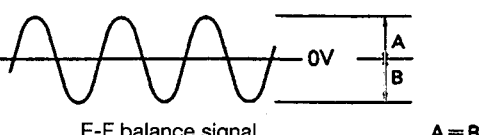
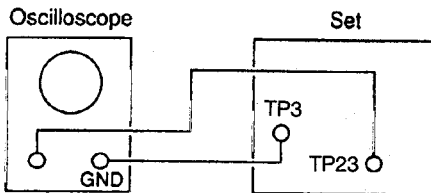
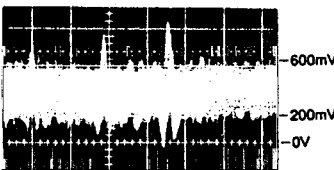


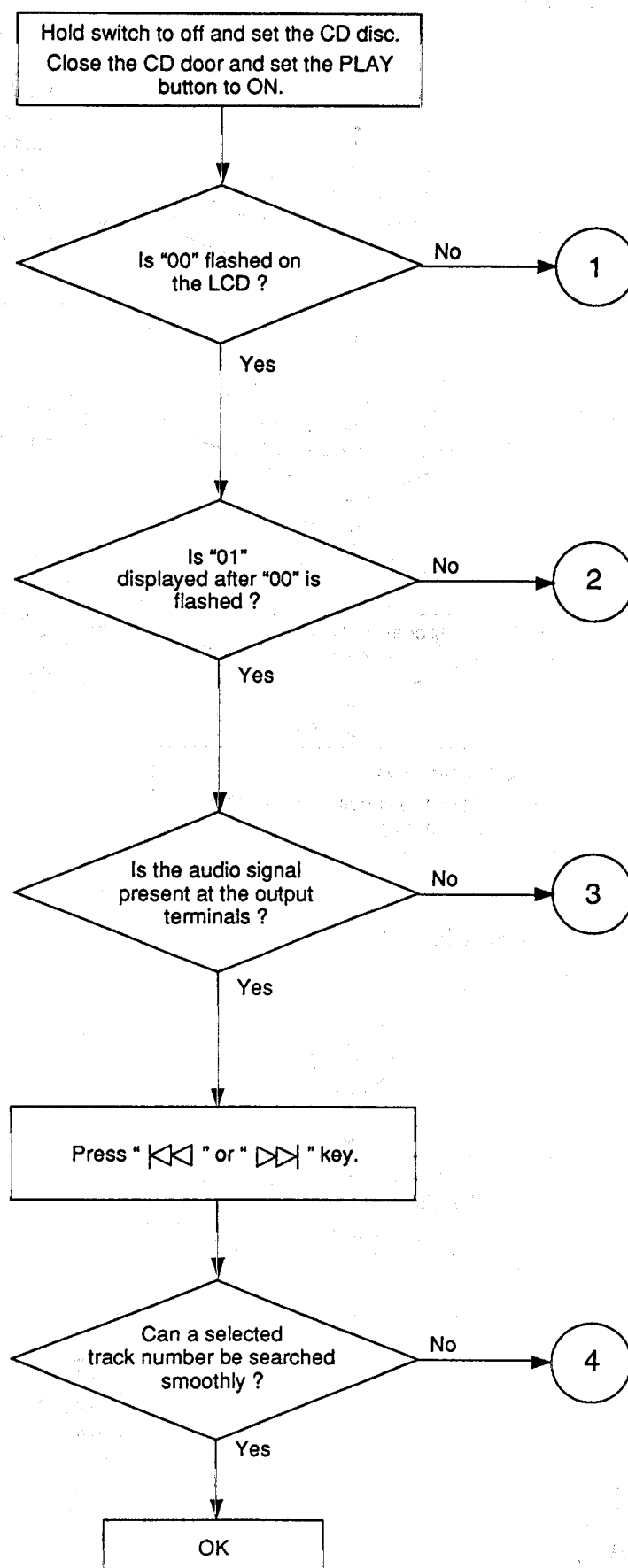
Fig. 6-2

■ Focus servo adjustment

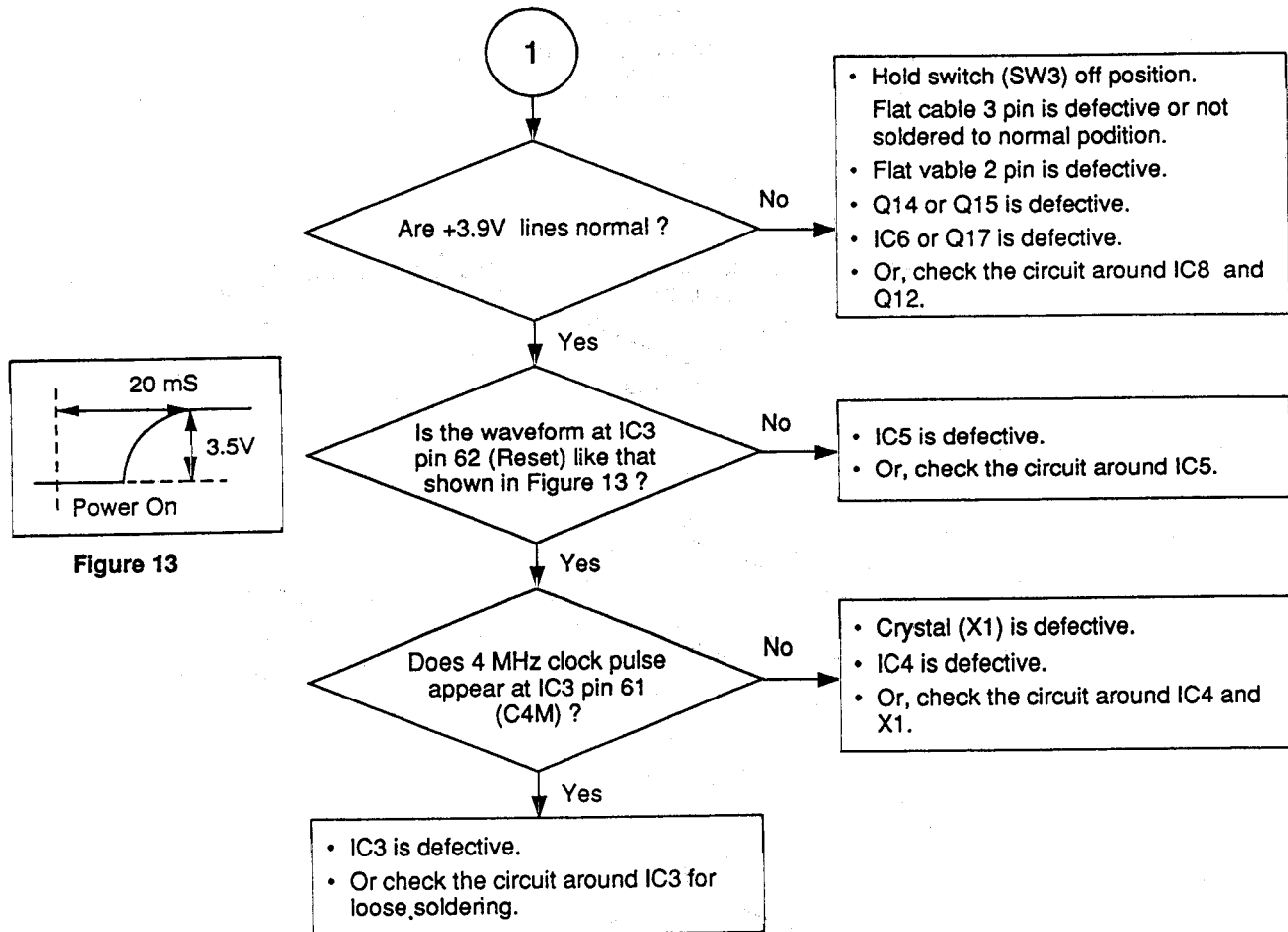
Item	Conditions	Adjustment & Confirmation Methods	Stand. values	Adjust
Offset adjustment	<ul style="list-style-type: none"> Power switch: ON Mode: STOP Test disc : CTS-1000 Test disc : CRG1242S 	<ol style="list-style-type: none"> 1. Remove the case set, CD door. 2. Short the both terminal of SW1. 3. Connect the output meter and TP23, TP3.  <p style="text-align: center;">Fig. 6-3</p> <ol style="list-style-type: none"> 4. With VR1, adjust the focus servo offset so that becomes the output meter reading should be $0V \pm 20mV$. 	$0V \pm 20mV$	VR1
E-F balance adjustment	<ul style="list-style-type: none"> Go on pushing the skip serch bottun. Test disc : CTS - 1000 	<ol style="list-style-type: none"> 1. Connect the oscilloscope and TP21, TP3.  <p style="text-align: center;">Fig. 6-4</p> <ol style="list-style-type: none"> 2. Play the regular disc. 3. With VR2, adjust the E-F balance so that the waveform of oscilloscope becomes A=B.  <p style="text-align: center;">Fig. 6-5</p>		VR2
Gain adjustment		<ol style="list-style-type: none"> 1. Connect the oscilloscope and TP3, TP23.  <p style="text-align: center;">Fig. 6-6</p> <ol style="list-style-type: none"> 2. Play the regular disc. 3. With VR4, adjust gain setting so that becomes the focus error signal of about 400mVp - p. 4. To increase the focus gain, turn VR4 counter clockwise. 	Focus error signal :400mV p - p	VR4
			 <p style="text-align: center;">Fig. 6-7</p>	

Item	Conditions	Adjustment & Confirmation Methods	Stand. values	Adjust
Tracking servo adjustment	<ul style="list-style-type: none"> • Test disk : CRG1242S • Test disc : CTS-1000 	<ol style="list-style-type: none"> 1. Short the both terminal of SW1. 2. Play the test disc "CTS-1000". 3. With VR3, adjust the gain setting so that becomes a tracking drive signal of about 400mVp-p. 4. Swap the test disc for the test disc "CRG1242S" and play if at the black dot of 300 μm. Confirm that there is no skipping. 5. If there is any skipping, adjust VR3 to reduce the tracking servo gain until no skipping occurs. To reduce the gain, turn VR3 clockwise. <div data-bbox="646 750 1093 952" data-label="Diagram"> <p>The diagram illustrates the setup for measuring the tracking drive signal. An oscilloscope is connected to the ground (GND) and a signal point (TP21) on the device (Set). TP3 is also indicated on the Set.</p> </div> <div data-bbox="798 974 893 1008" data-label="Caption"> <p>Fig. 6-8</p> </div> <div data-bbox="718 1131 1077 1276" data-label="Figure"> <p>The figure shows an oscilloscope trace of the tracking drive signal. The signal is a high-frequency waveform oscillating between approximately +200mV and -200mV. The 0V level is marked in the center.</p> </div> <div data-bbox="813 1288 909 1332" data-label="Caption"> <p>Fig. 6-9</p> </div>	Tracking drive signal :400mVp – p	VR3

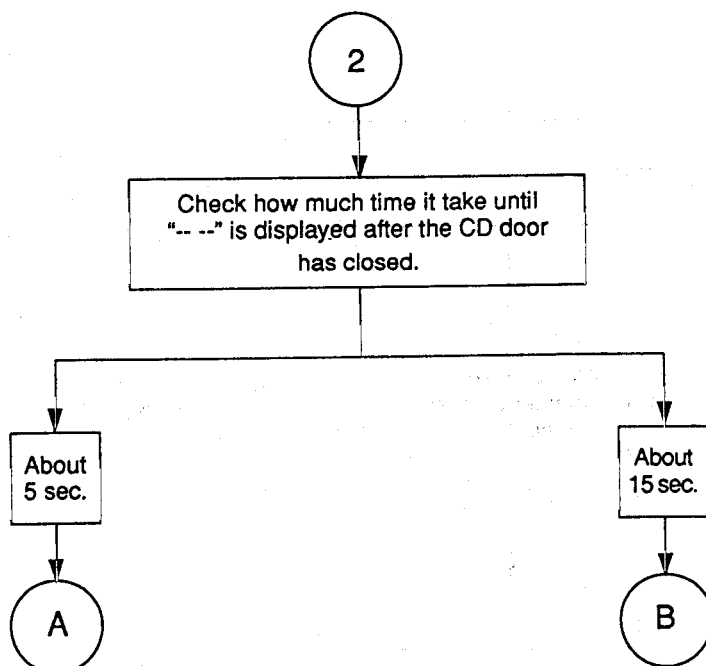
7. Troubleshooting



Repair Item 1: At play button on, "00" is not flashed.

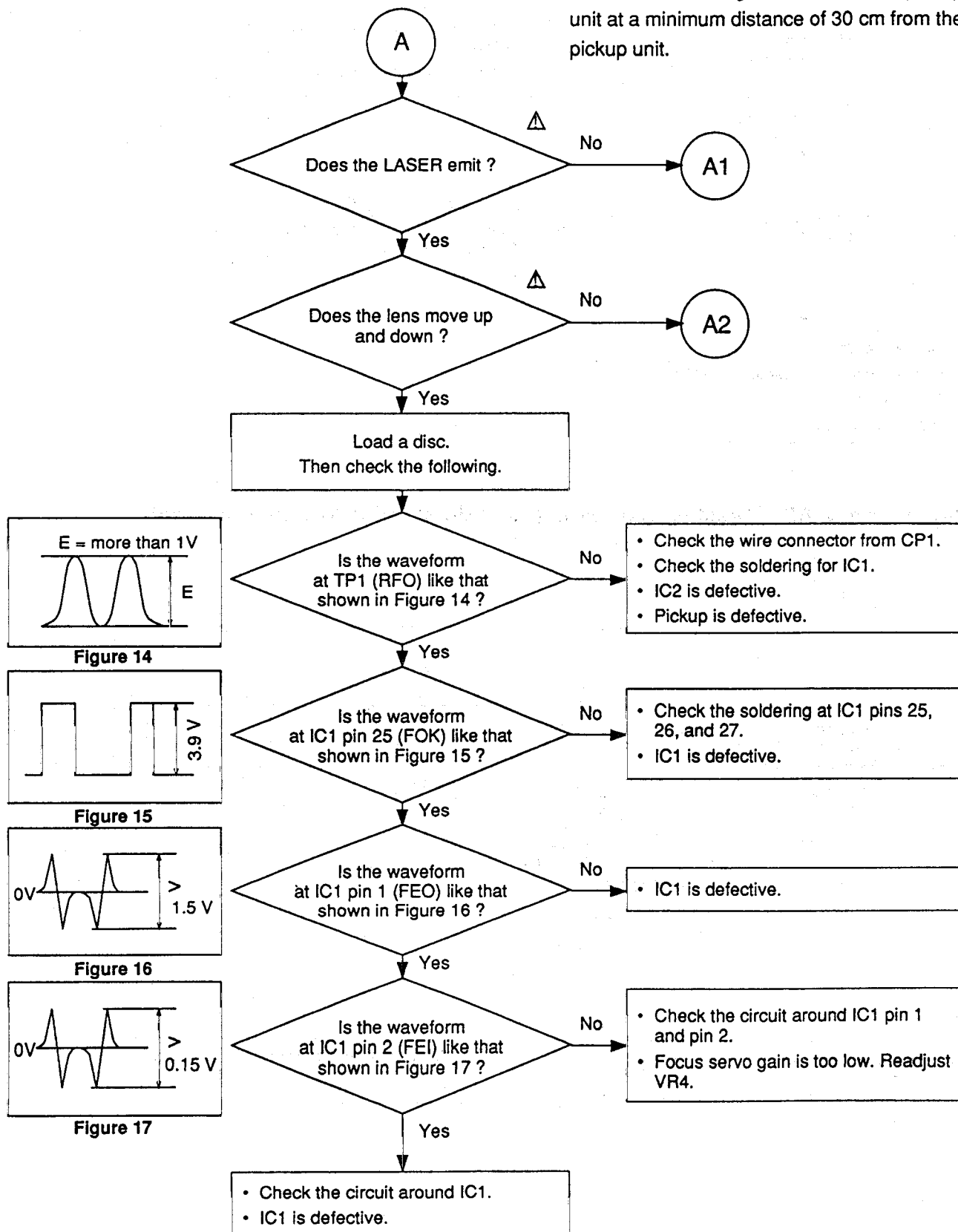


Repair Item 2: "-- --" is displayed.

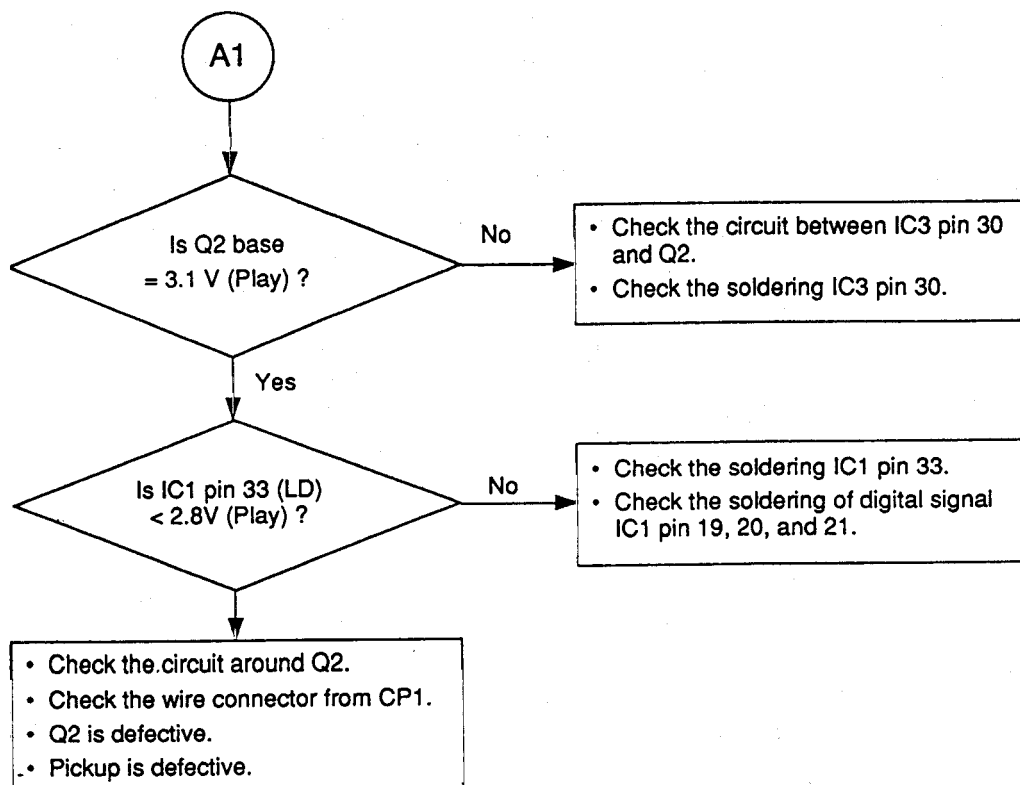


Repair Item 2-A

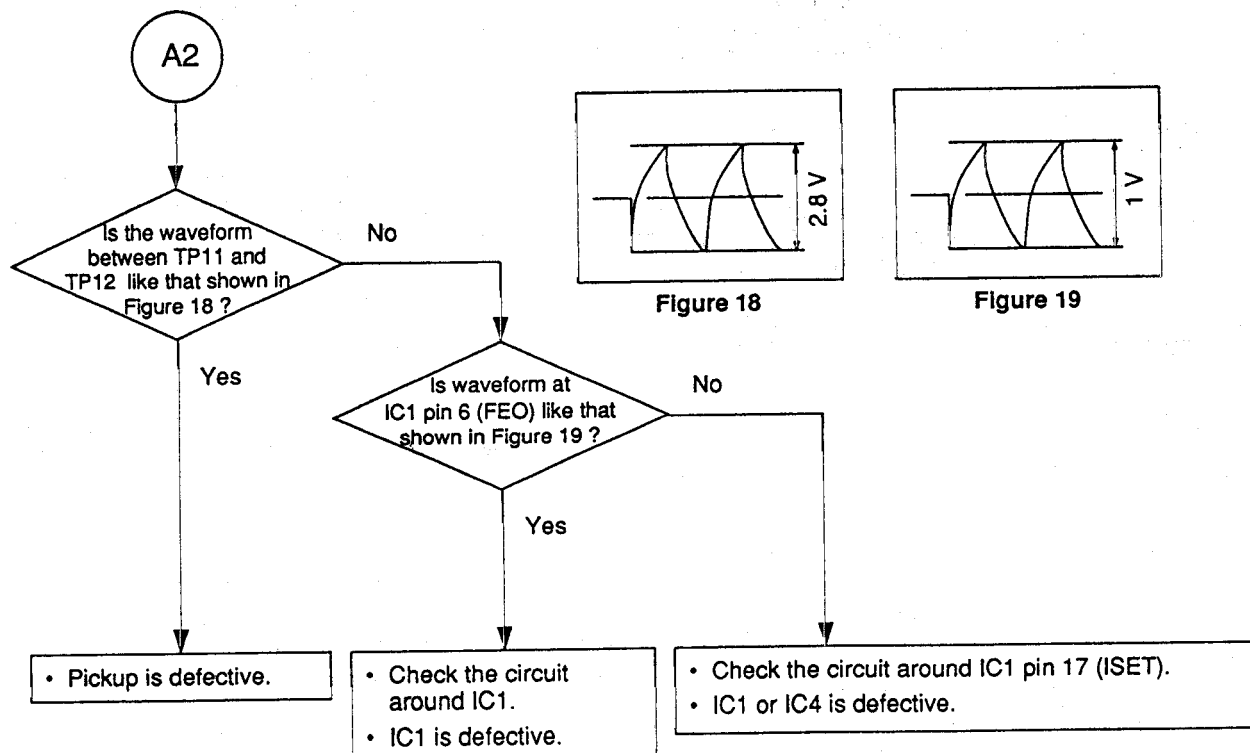
△ **Note:** Connect TP31 to TP32 (Refer to Fig. 8 on Page 8) by removing the top cabinet. Then open the top cover and check the radiation power with an optical power meter. If an optical power meter is not available, watch the radiation through the lens of the pickup unit at a minimum distance of 30 cm from the pickup unit.



Repair Item 2-A1: Laser does not emit.



Repair Item 2-A2: Object lens of pickup unit does not move up and down.



Repair Item 2-B

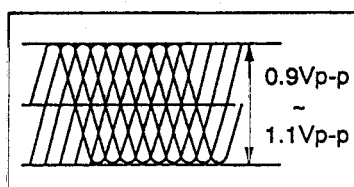
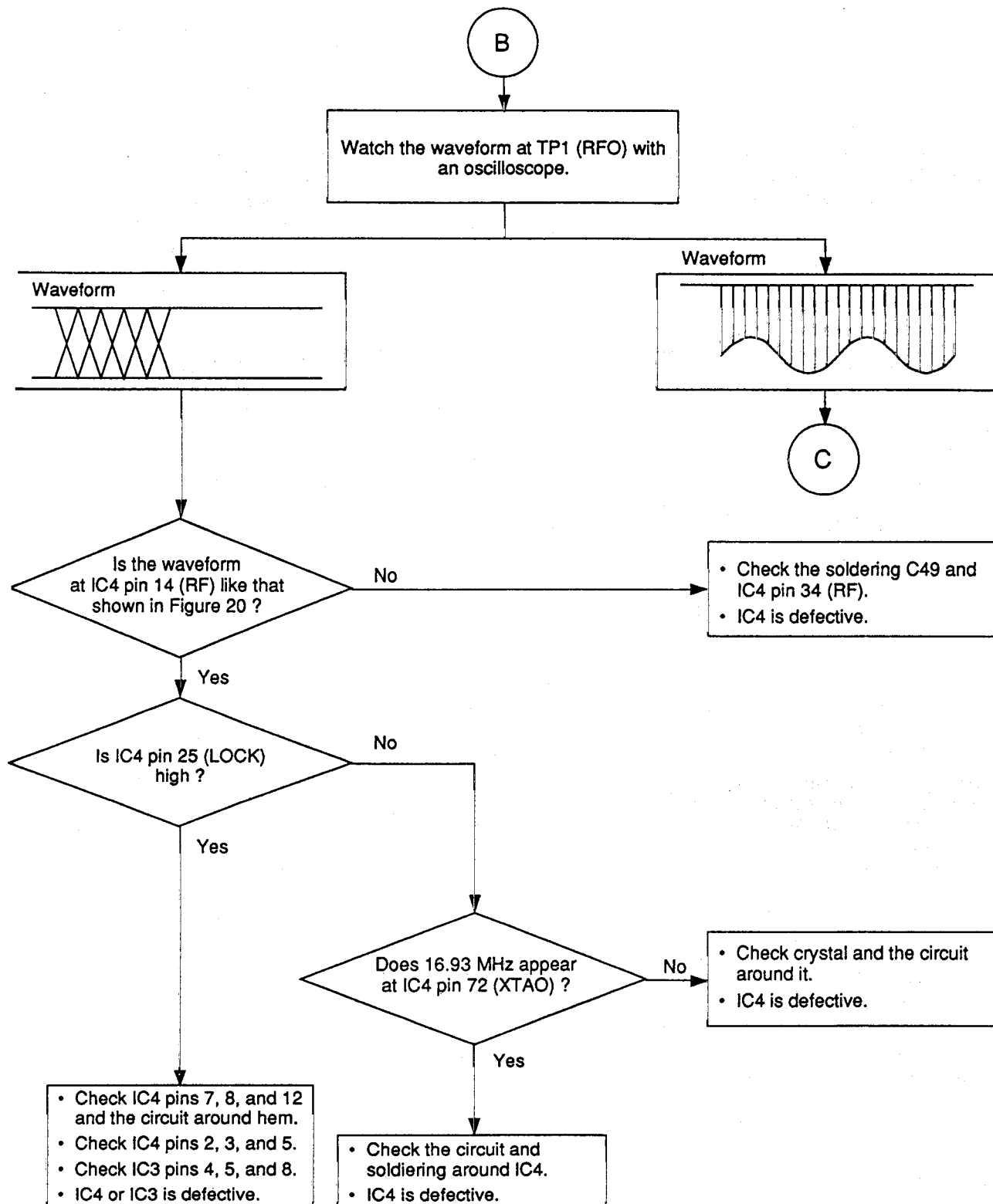


Figure 20

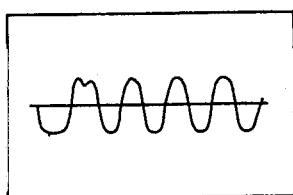
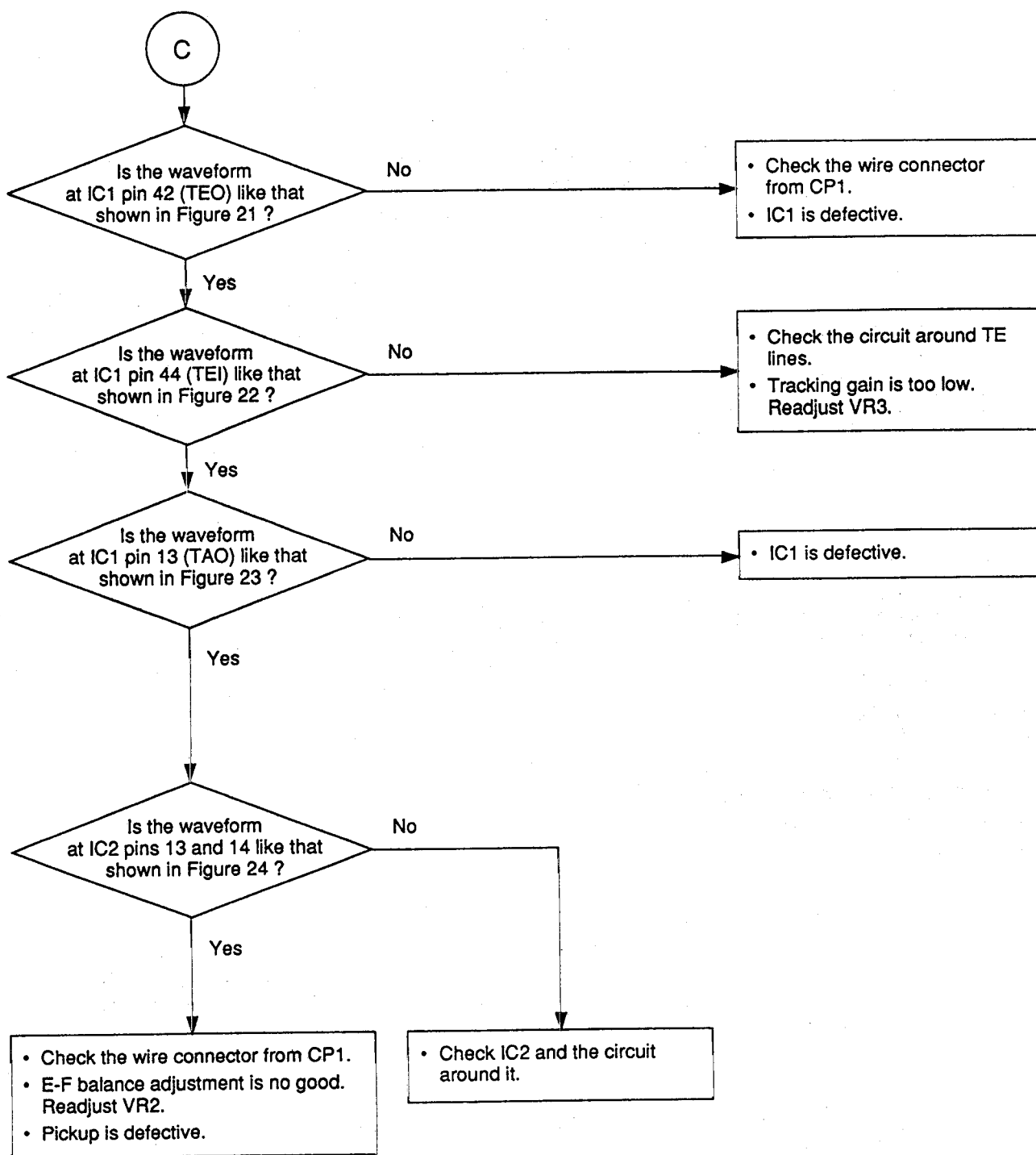


Figure 21

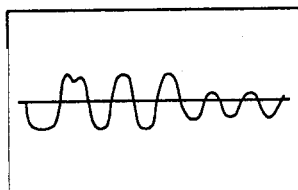


Figure 22

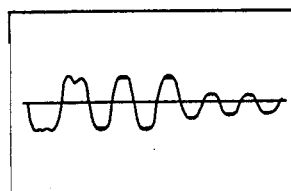


Figure 23

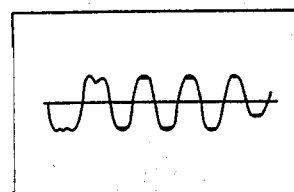
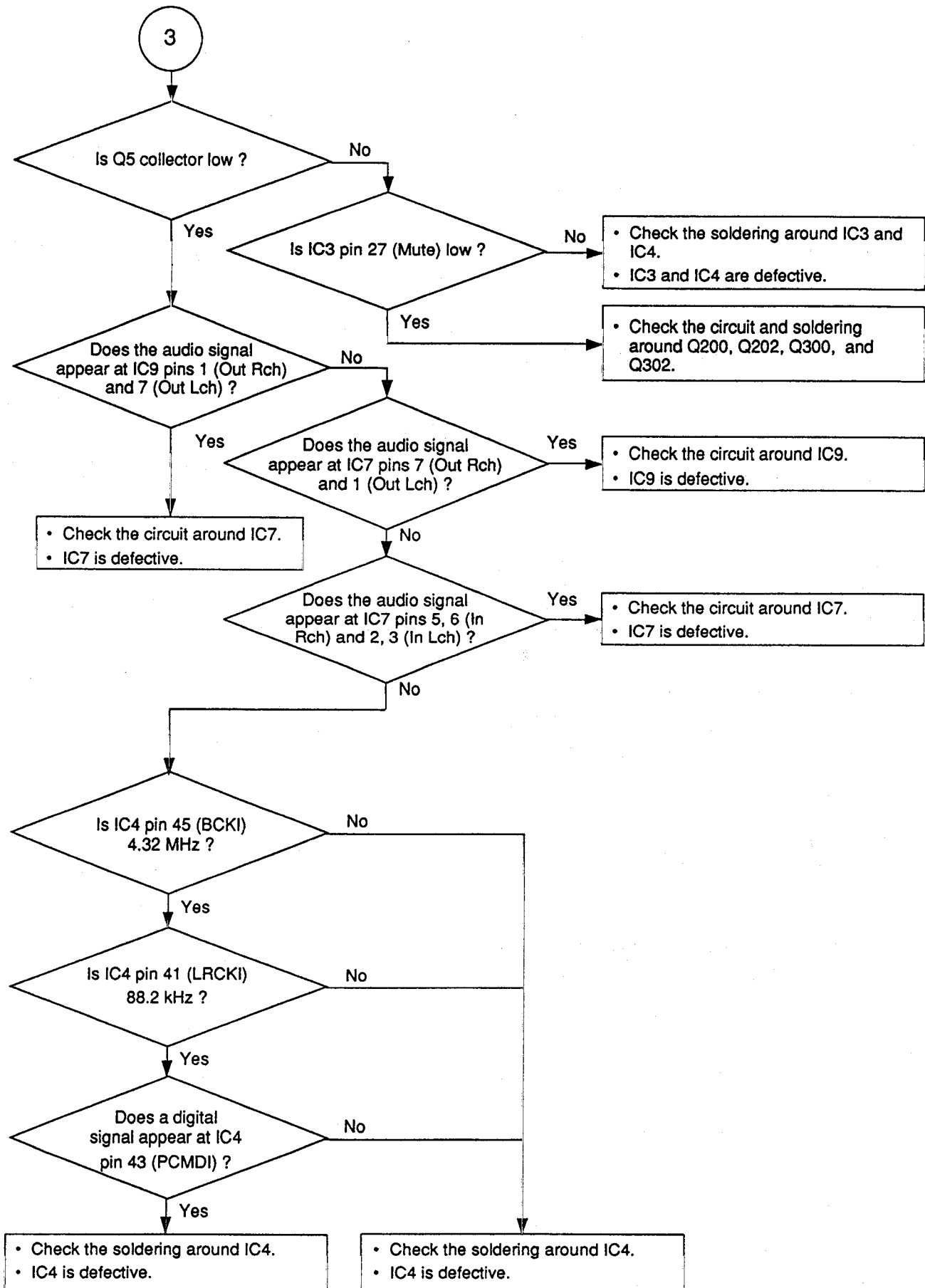
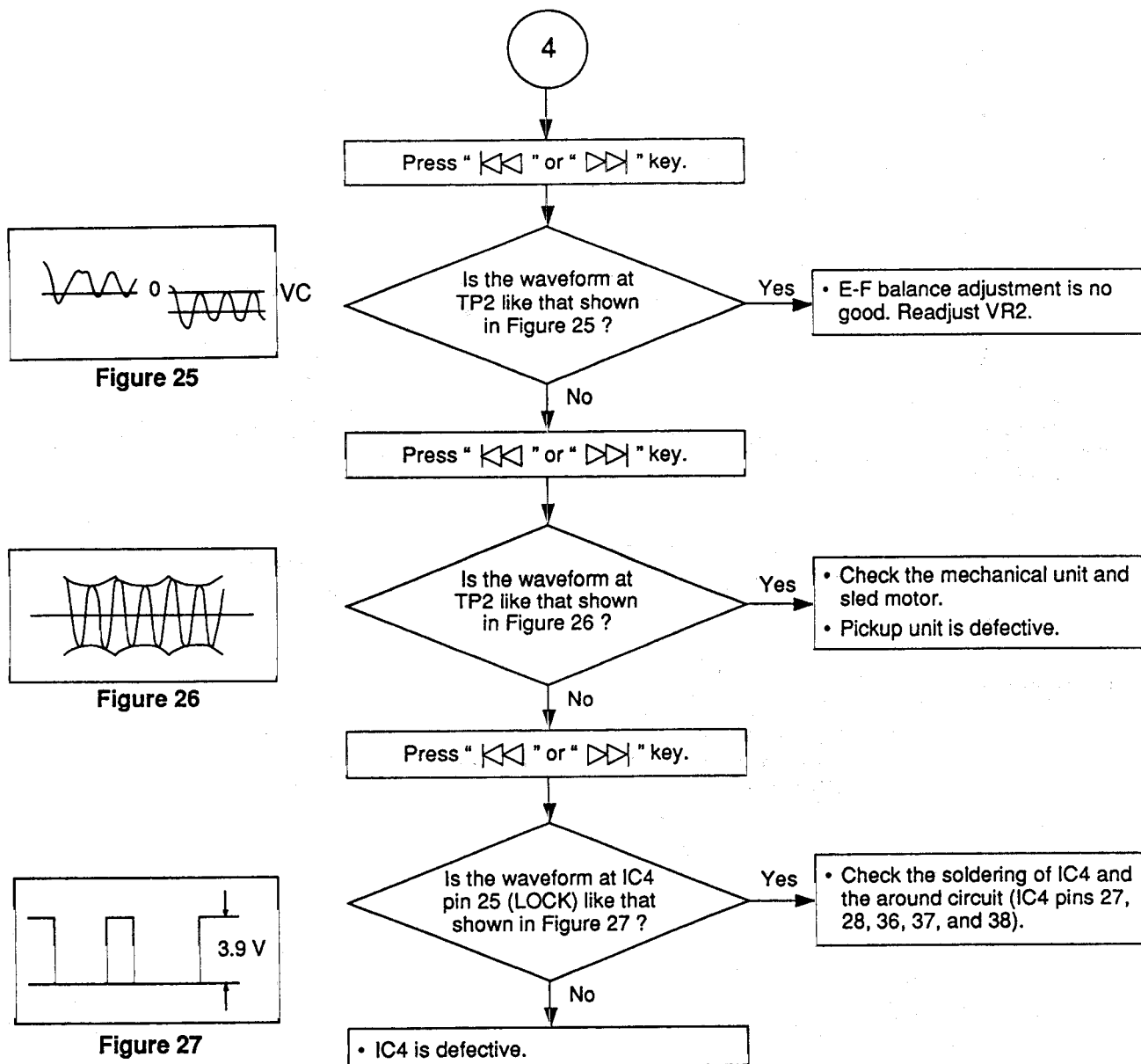


Figure 24

Repair Item 3: No sound signal.



Repair Item 4: Selected track number cannot be searched.



* VC is the reference voltage of the servo circuit (IC1 pin 48).

8. Analytic Drawing and Parts List

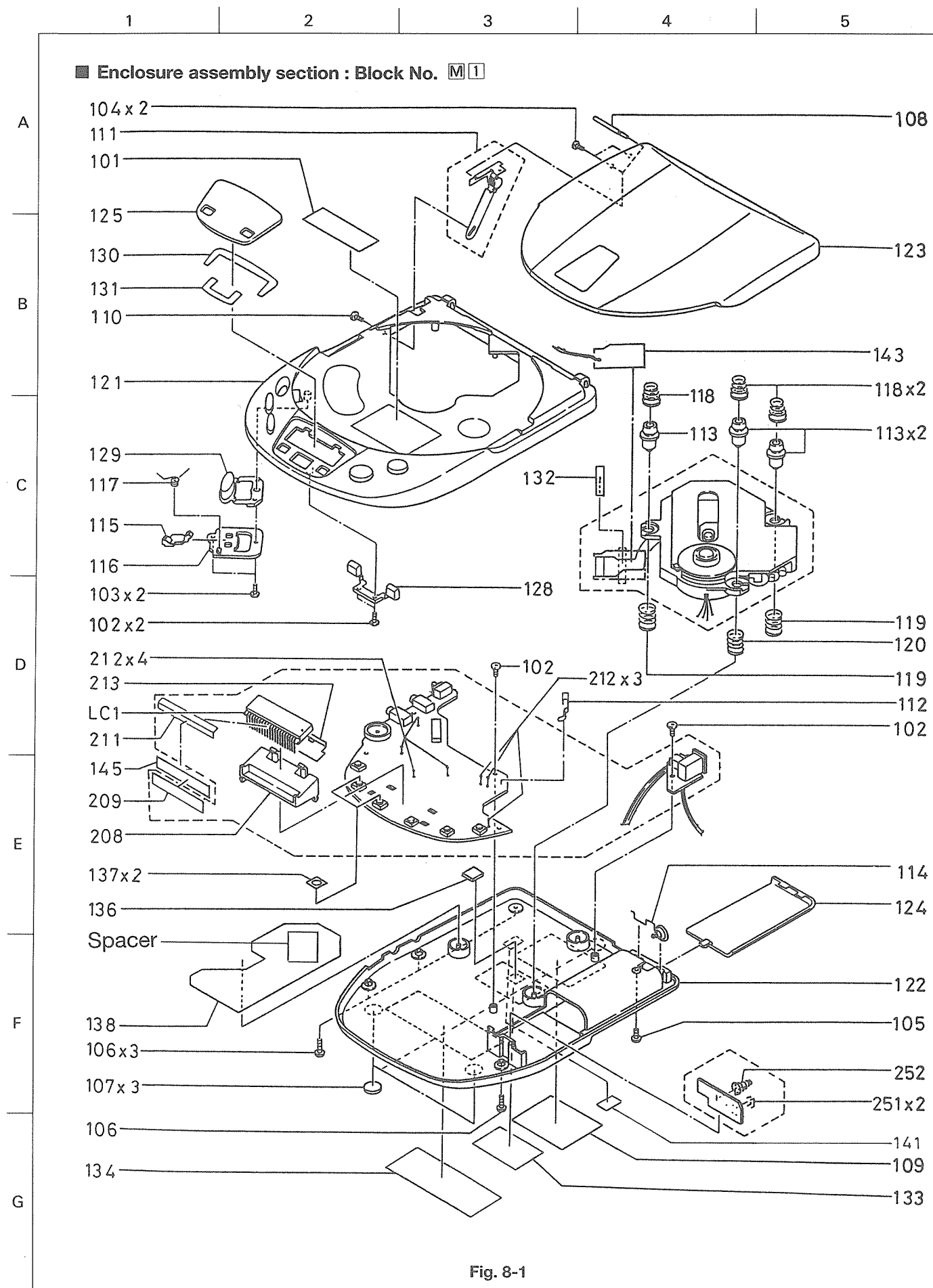


Fig. 8-1

■ Enclosure Assembly Parts List

BLOCK NO. M1MM1111

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	101	0074-193-0-01	CAUTION LABEL		1		
	102	SPSJ1740N	SCREW		1		
	103	0974-354-5-09	SCREW		1		
	104	97590000T	SCREW		1		
	105	95950000T	SCREW		1		
	106	95950000T	SCREW		1		
	107	1105-885-0-00	RUBBER FOOT		1		
	108	2506-230-0-00	SHAFT		1		
	109	2511-850-0-21	NAME PLATE		1		
		2511-850-0-22	NAME PLATE		1	U	
	110	SPSJ1740M	SCREW		1		
	111	2520-130-0-00	UP ARM ASSY		1		
	112	2520-180-0-00	CHARGE TERMINAL		1		
	113	2520-300-0-00	RUBBER CUSHION		1		
	114	2520-875-1-00	BATTERY TERMINA		1		
	115	2523-271-0-00	LOCK LEVER		1		
	116	2523-272-0-00	LEVER SUPPORTER		1		
	117	2523-400-1-00	SPL SPRING		1		
	118	2523-401-0-00	COM SPRING A		1		
	119	2523-402-0-00	COM SPRING B		1		
	120	2522-400-0-00	COM SPRING C		1		
	121	2523-810-0-02	CASE SET		1		
	122	2523-814-0-01	CASE B		1		
	123	2518-806-0-01	CD DOOR		1		
	124	2523-817-0-01	BATTERY COVER		1		
	125	2523-808-0-03	LCD WINDOW		1		
	128	2523-862-0-01	TACT KNOB C		1		
	129	2523-863-0-01	OPEN KNOB		1		
	130	2523-880-0-00	DOUBLE FACE		1		
	131	2523-881-0-00	DOUBLE FACE		1		
	132	2523-882-0-00	HIMELON		1		
	133	2513-852-0-00	CAUTION LABEL		1	J	
		0074-154-0-00	WARNING LABEL		1	B,E,G,GI,EN	
	134	2511-851-0-01	IDENTIFIC LABEL	DHHS LABEL	1	J	
		VND4221-001	CLASS LABEL		1	B,E,G,GI,EN	
	136	2523-883-0-00	CUSHION		1		
	137	2523-885-0-00	SWITCH COVER		1		
	138	2520-540-2-00	SHIELD PLATE		1		
	141	2521-850-0-00	CE MARK LABEL		1	G	
	143	2521-530-0-00	SHIEL PLATE SET		1		
	145	1338-884-0-00	DOUBLE FACE		1		
	208	2523-270-1-02	LCD HOLDER		1		
	209	2523-530-0-00	SHIELD PLATE		1		
	211	2523-884-0-00	HIMELON		1		
	212	0034-476-0-00	CHECK PIN		1		
	213	2518-730-0-00	SPREAD SHEET		1		
	251	1100-435-0-00	PLUS TERMINAL		1		
	252	2520-402-0-00	COM SPRING		1		

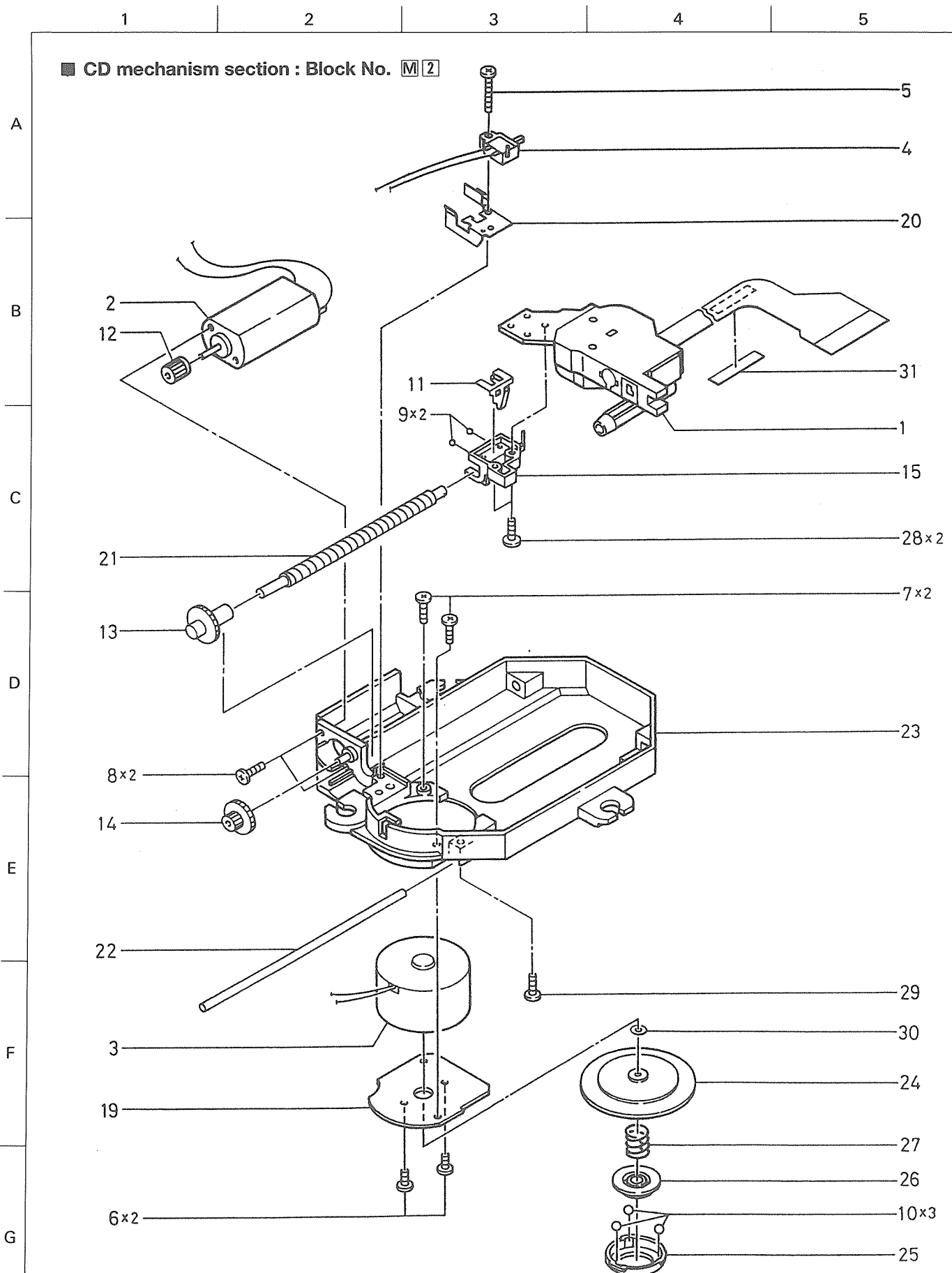


Fig. 8-2

■ CD Mechanism Assembly Parts List

BLOCK NO. M2MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	0020-014-0-00	LASER PICK UP		1		
	2	0022-080-0-00	MOTOR		1		
	3	0022-090-0-00	MOTOR		1		
	4	0036-819-0-00	MICRO SWITCH, SW		1		
	5	95920000T	SCREW		1		
	6	SPSK1720M	SCREW		1		
	7	SPSK1740M	SCREW		1		
	8	SPSK2040M	SCREW		1		
	9	0989-501-5-00	STEEL BALL		1		
	10	0989-503-0-00	STEEL BALL		1		
	11	1497-182-0-00	PU SPRING		1		
	12	1497-255-1-00	MOT GEAR		1		
	13	1497-256-1-00	GEAR A		1		
	14	1497-257-1-00	GEAR B		1		
	15	1497-261-1-00	PU HOLDER		1		
	19	2595-110-1-00	MOTOR HOLDER		1		
	20	2595-181-0-00	THRUST SPRING		1		
	21	2595-201-0-00	LEAD SCREW		1		
	22	2595-210-0-00	SHAFT		1		
	23	2595-250-2-00	MECHA CHASSIS		1		
	24	2595-270-0-00	TURN TABLE		1		
	25	2516-271-0-00	CENTER TABLE		1		
	26	2516-272-0-00	KNOB		1		
	27	2595-400-1-00	COM SPRING		1		
	28	0974-954-5-51	SCREW		1		
	29	SDSF2006M	SCREW		1		
	30	2595-300-0-00	WASHER		1		
	31	2513-888-0-00	DOUBLE FACE		1		

9. Block Diagram

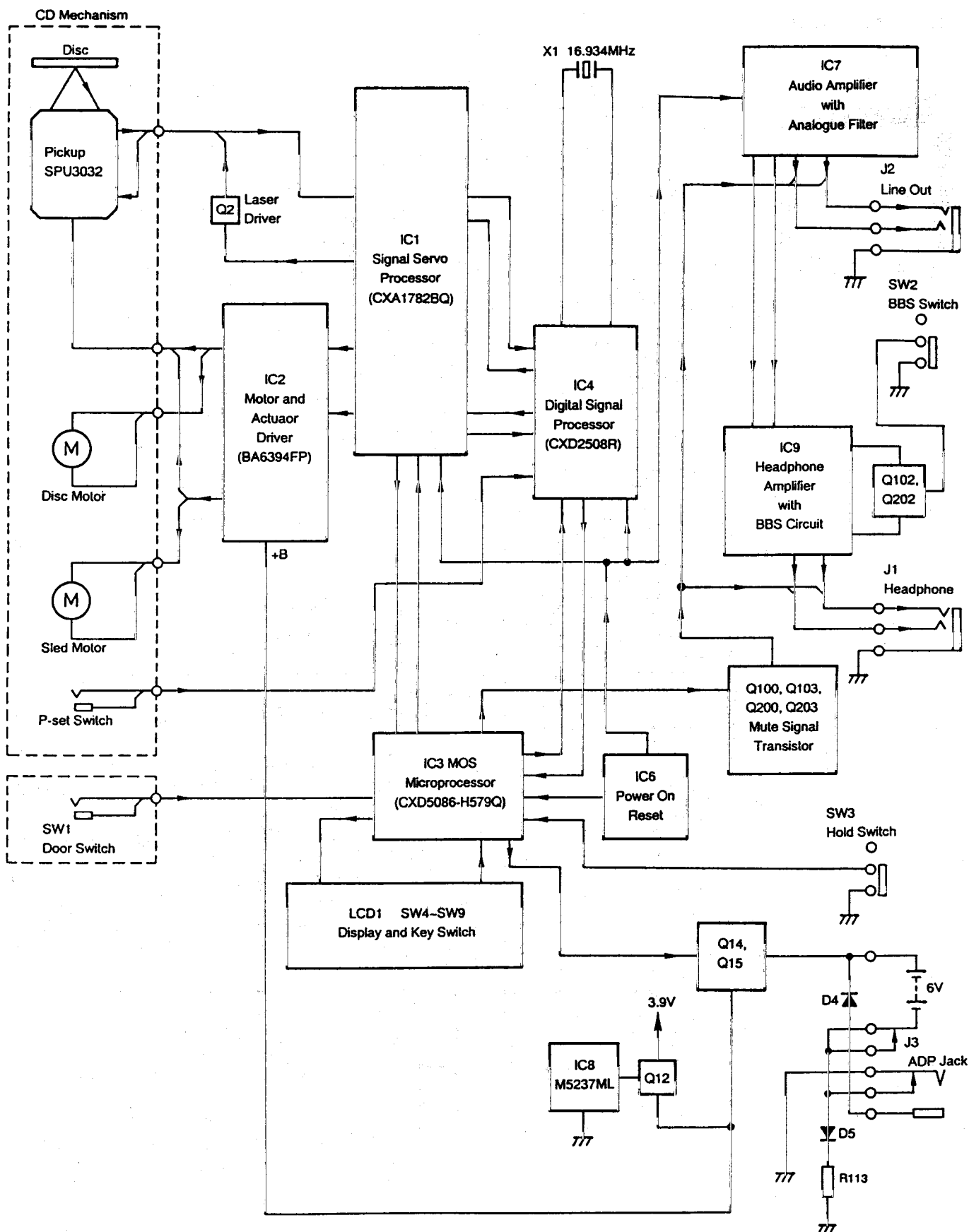
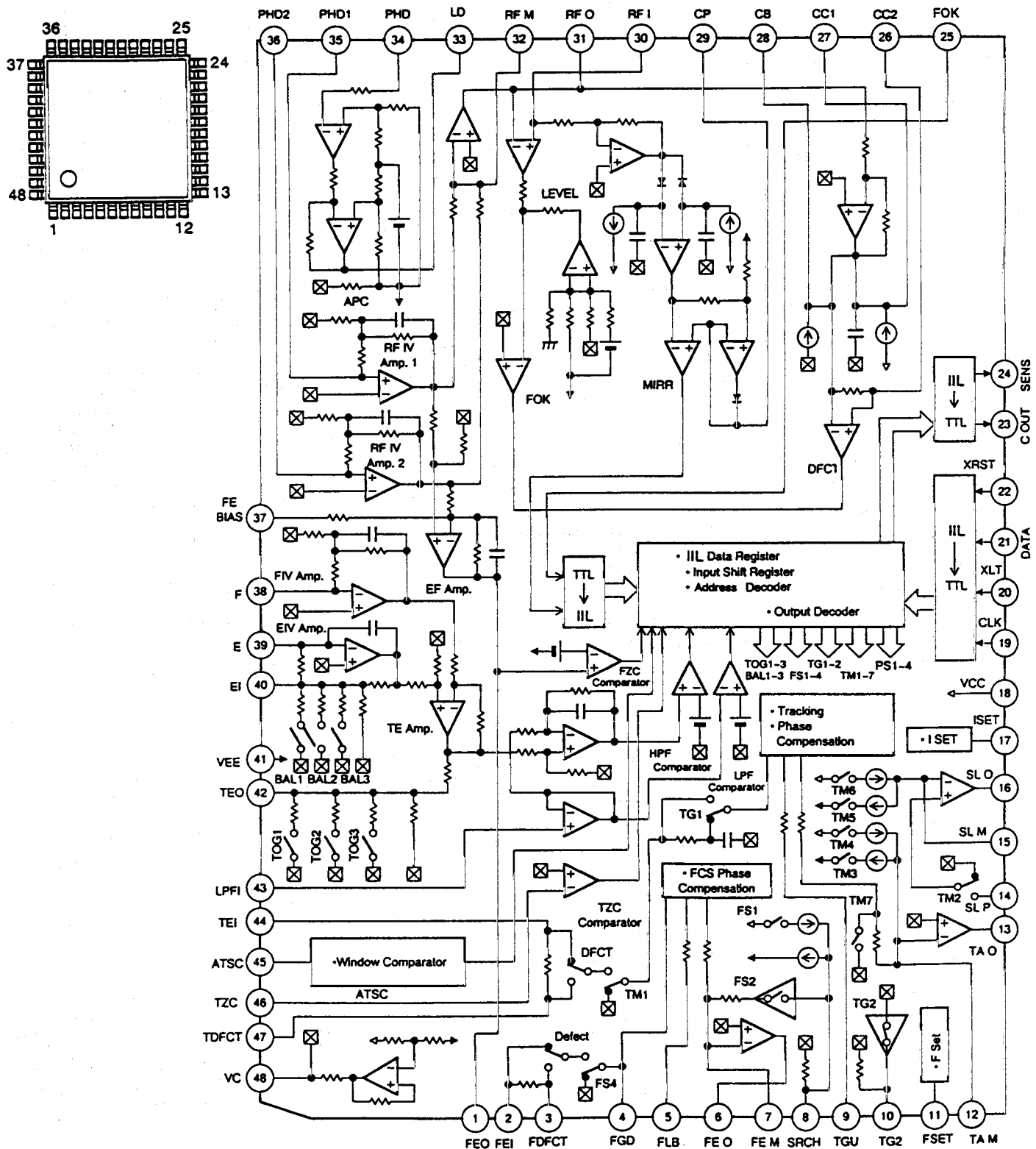


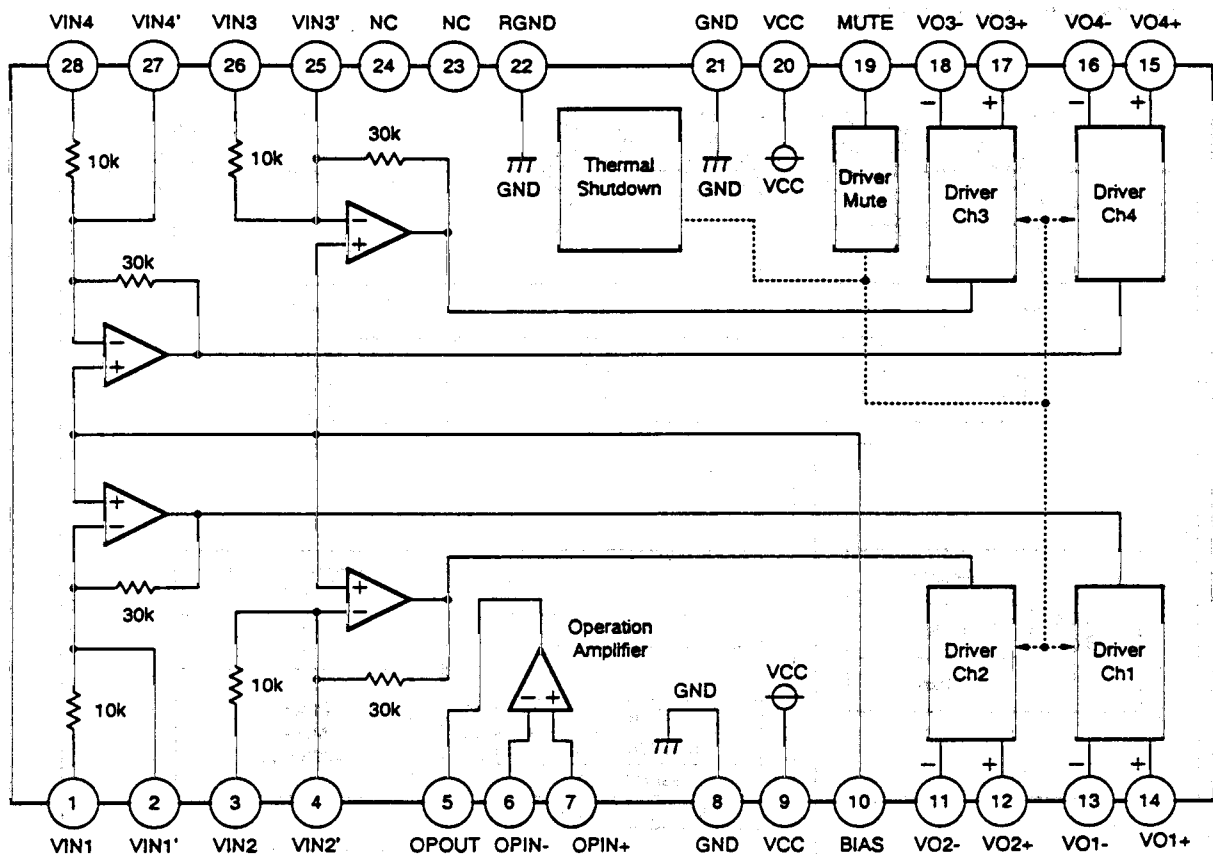
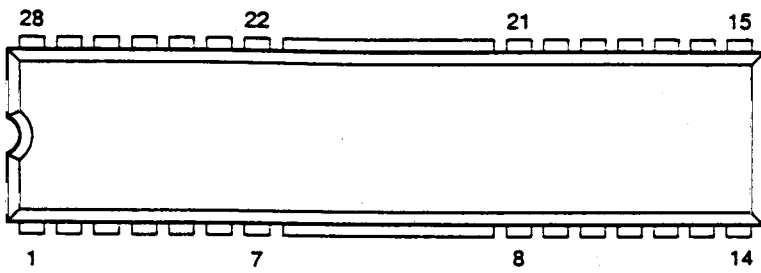
Fig. 9-1

10. IC Block Diagram

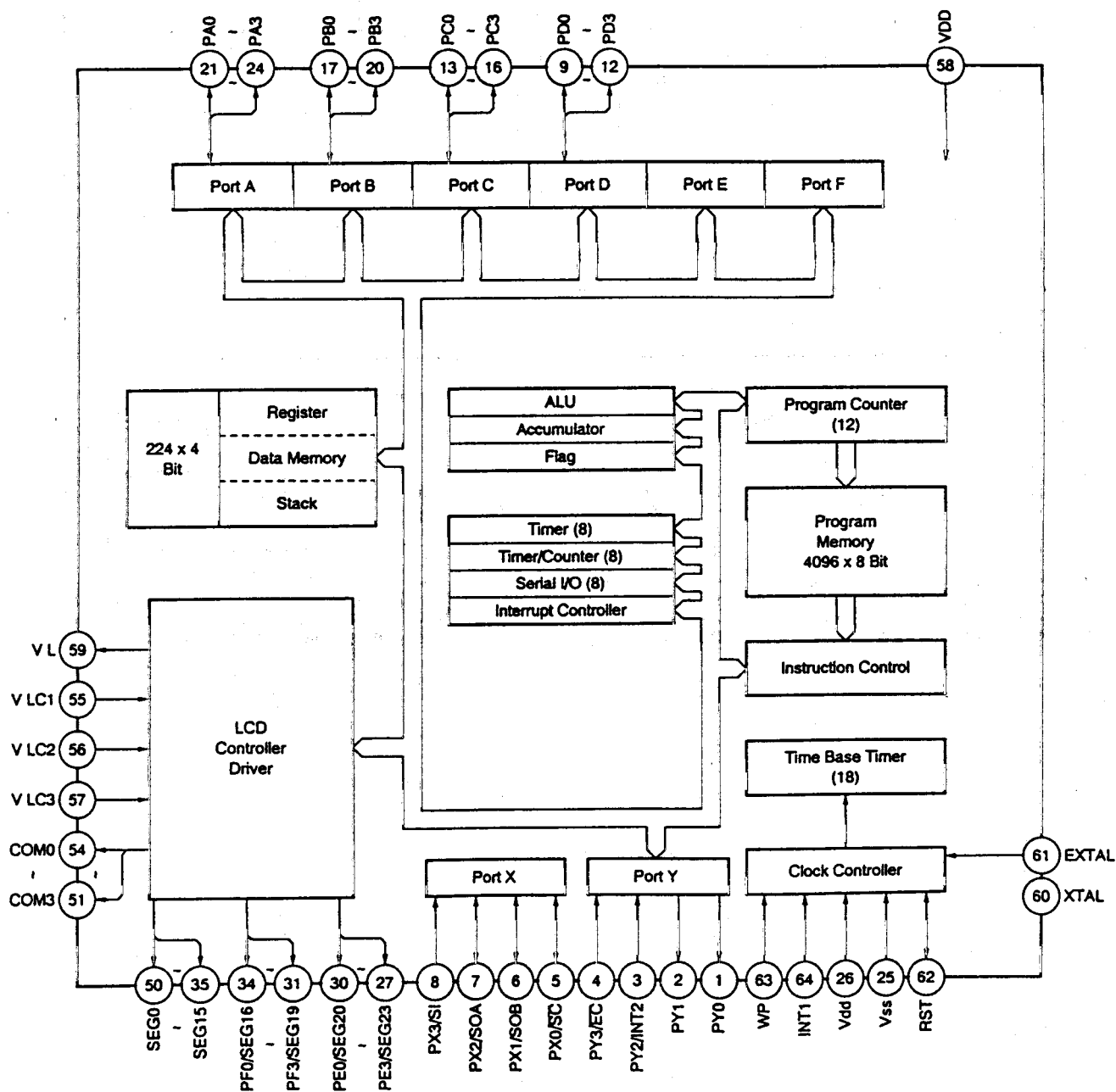
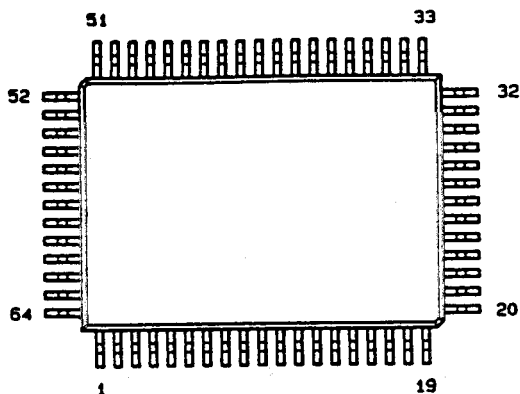
IC1: CXA1782BR



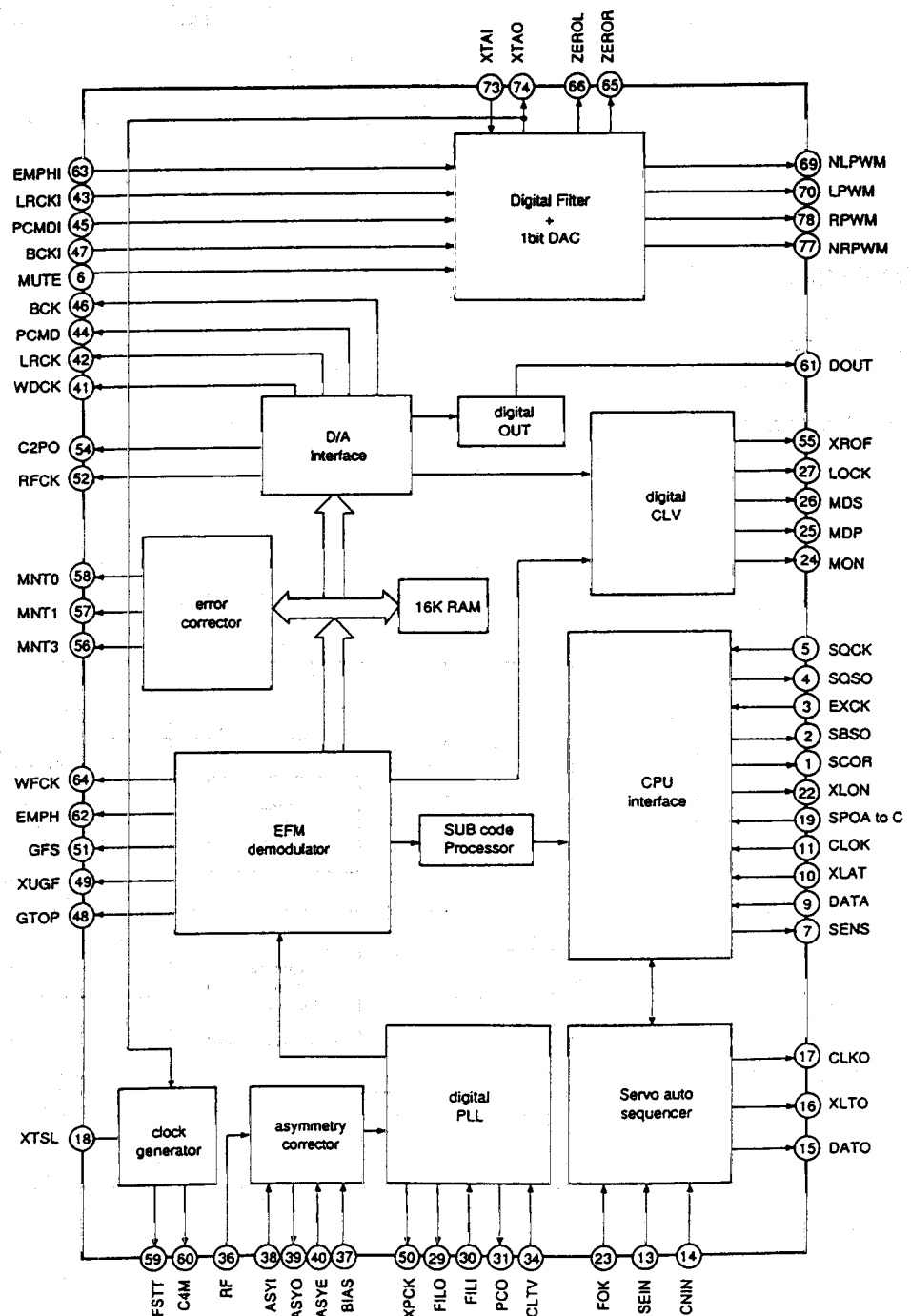
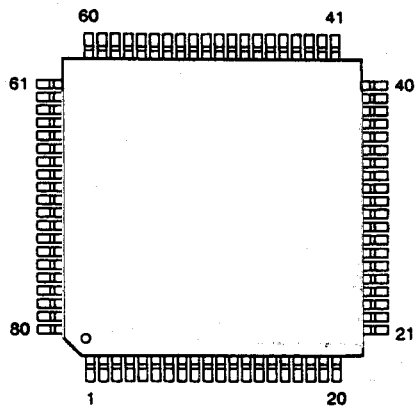
IC2: BA6394FP



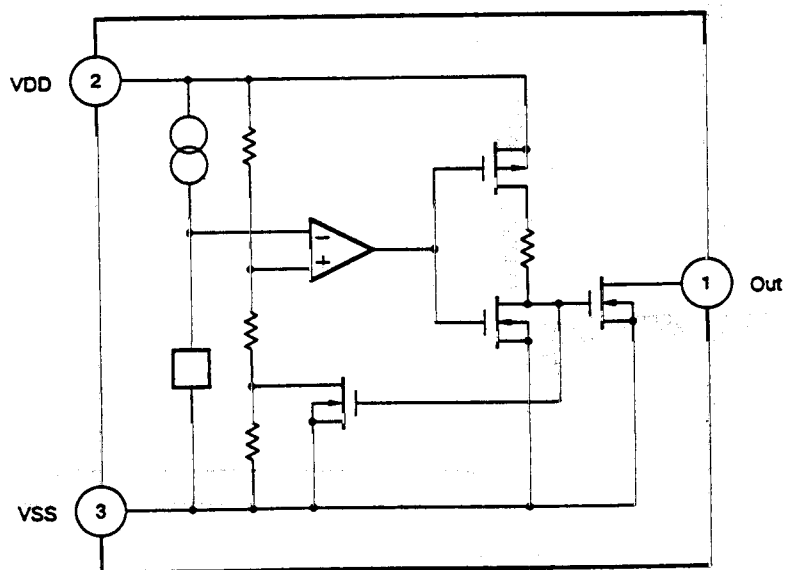
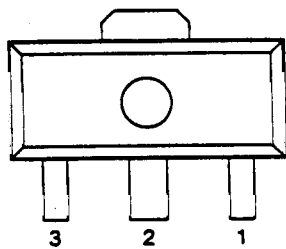
IC3: CXP5086H-597Q



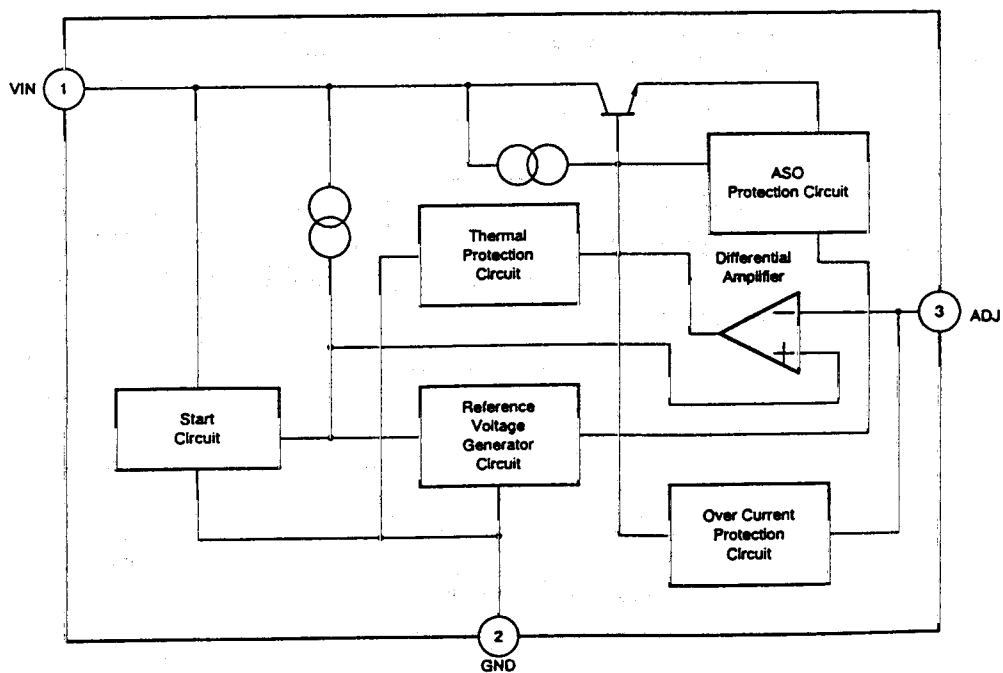
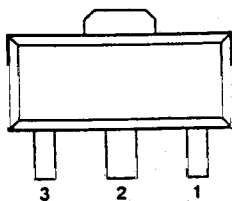
IC4: CXD2508AR



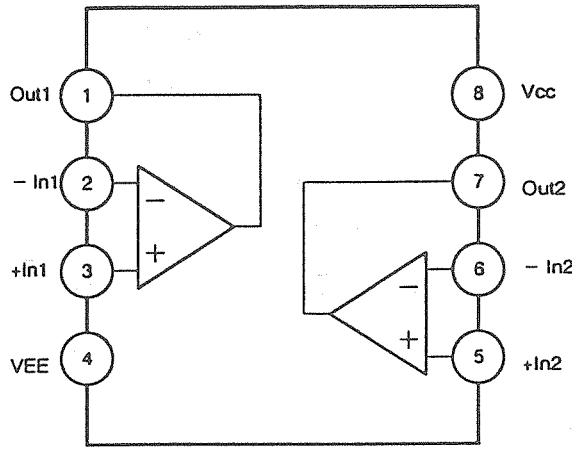
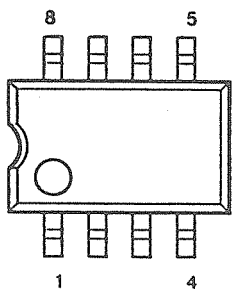
IC5: S-80733AN-DX-T1



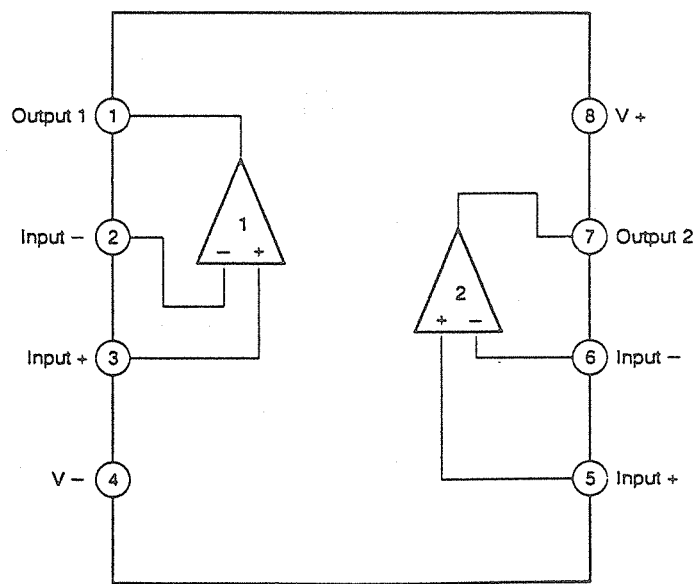
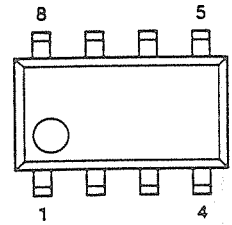
IC6: M5237ML



IC7: BA4510F

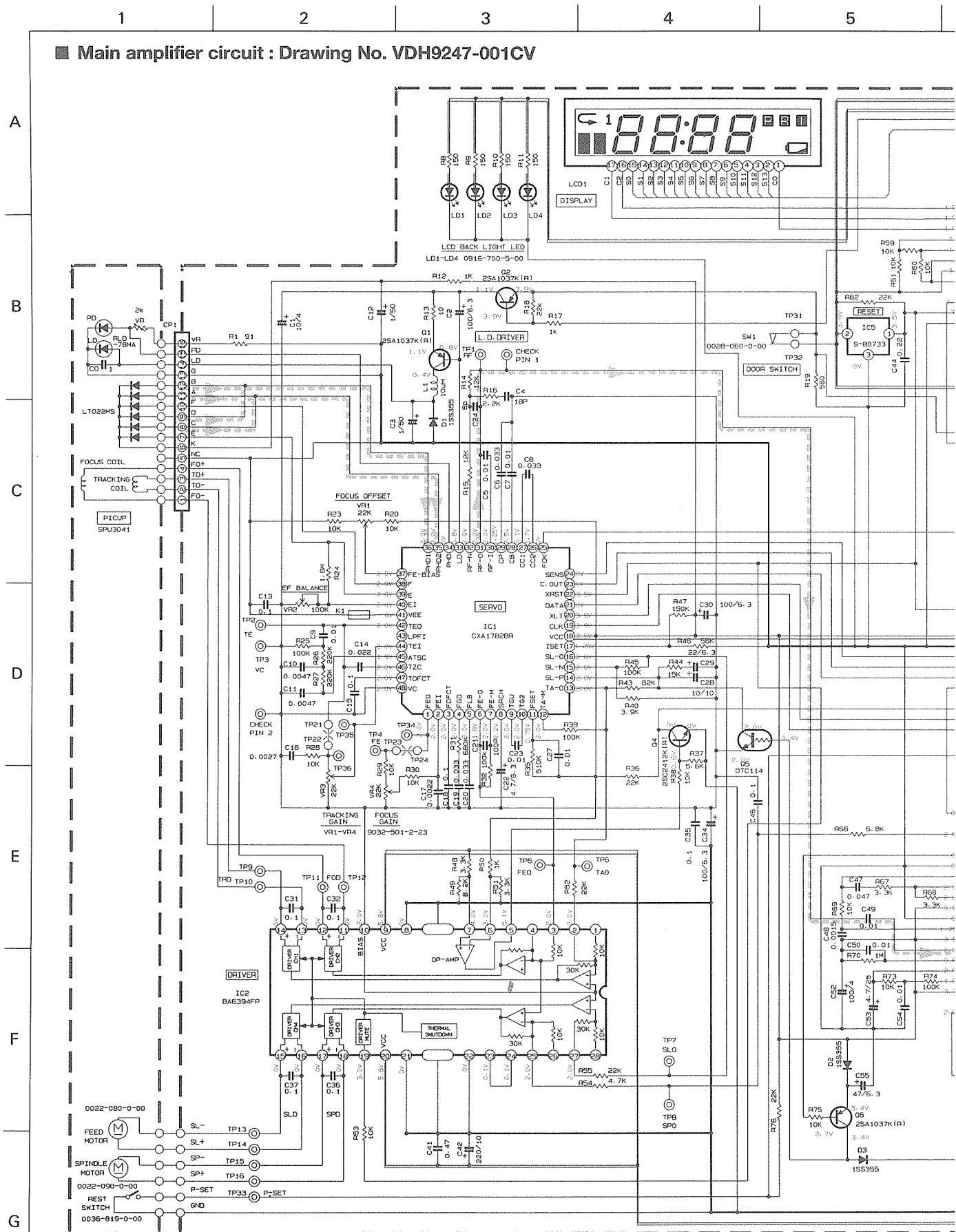


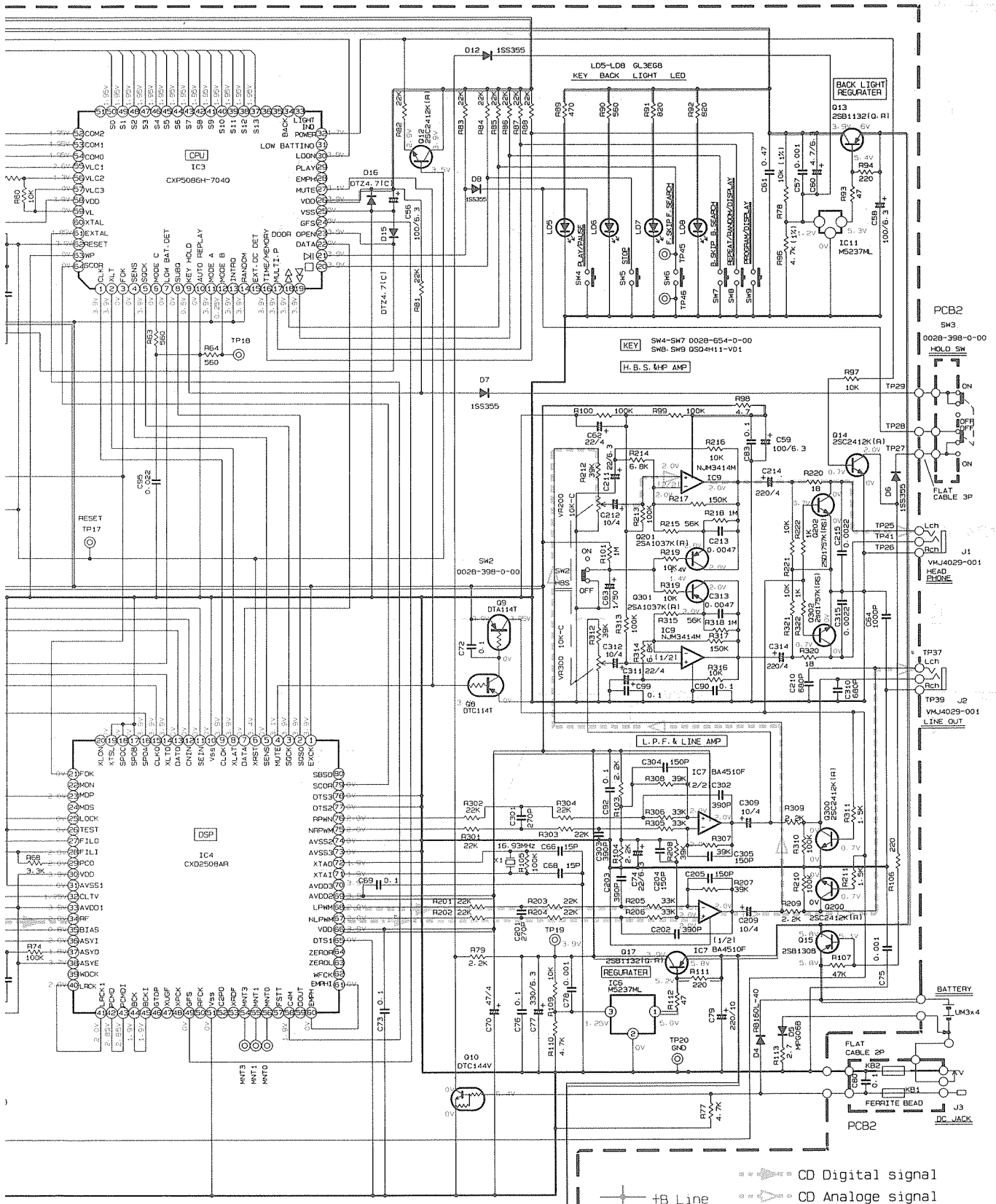
IC9: NJM3414M



11. Standard Schematic Diagram

■ Main amplifier circuit : Drawing No. VDH9247-001CV





■ Pickup circuit

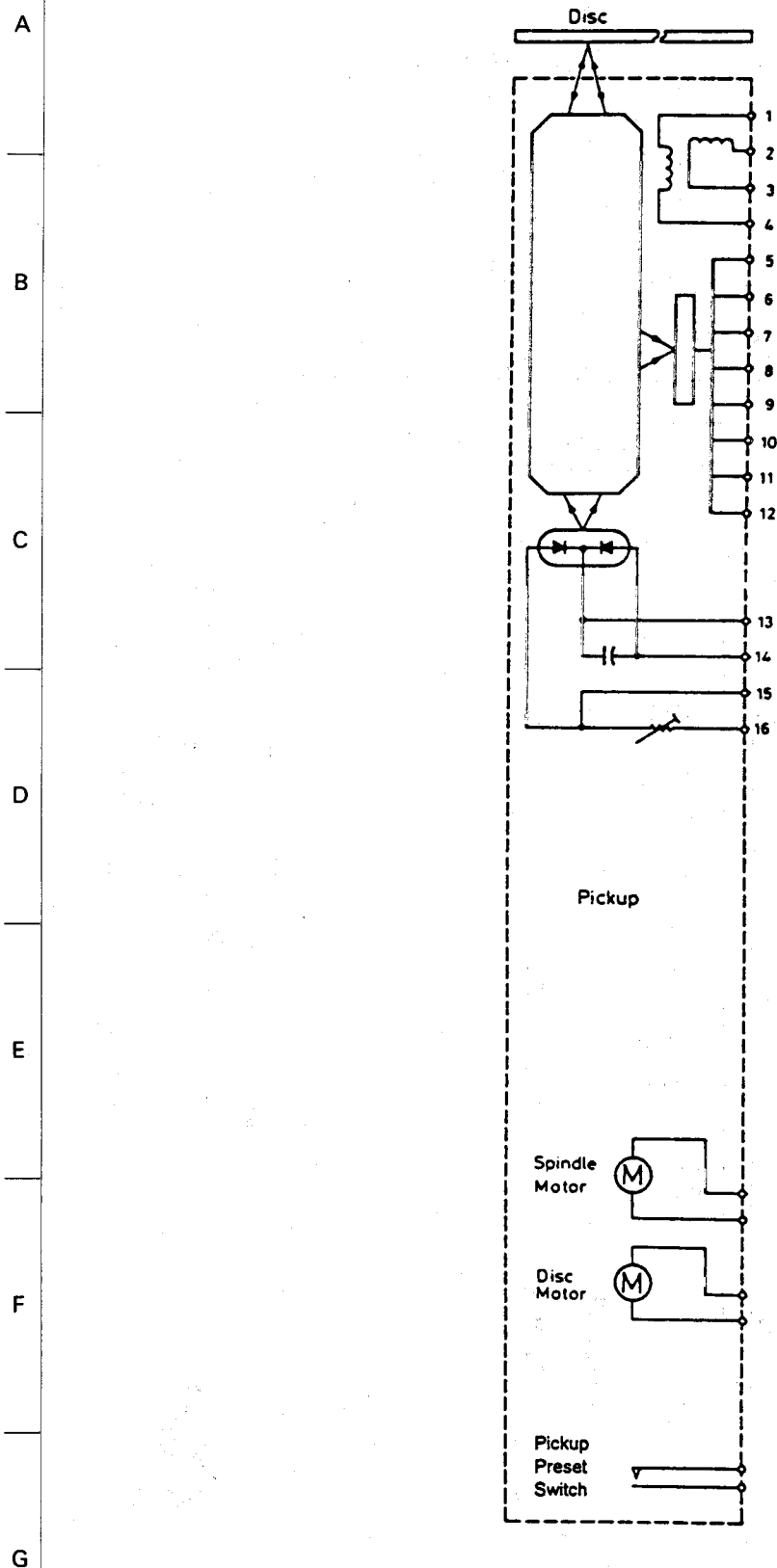


Fig. 11-2

12. Wiring Connections

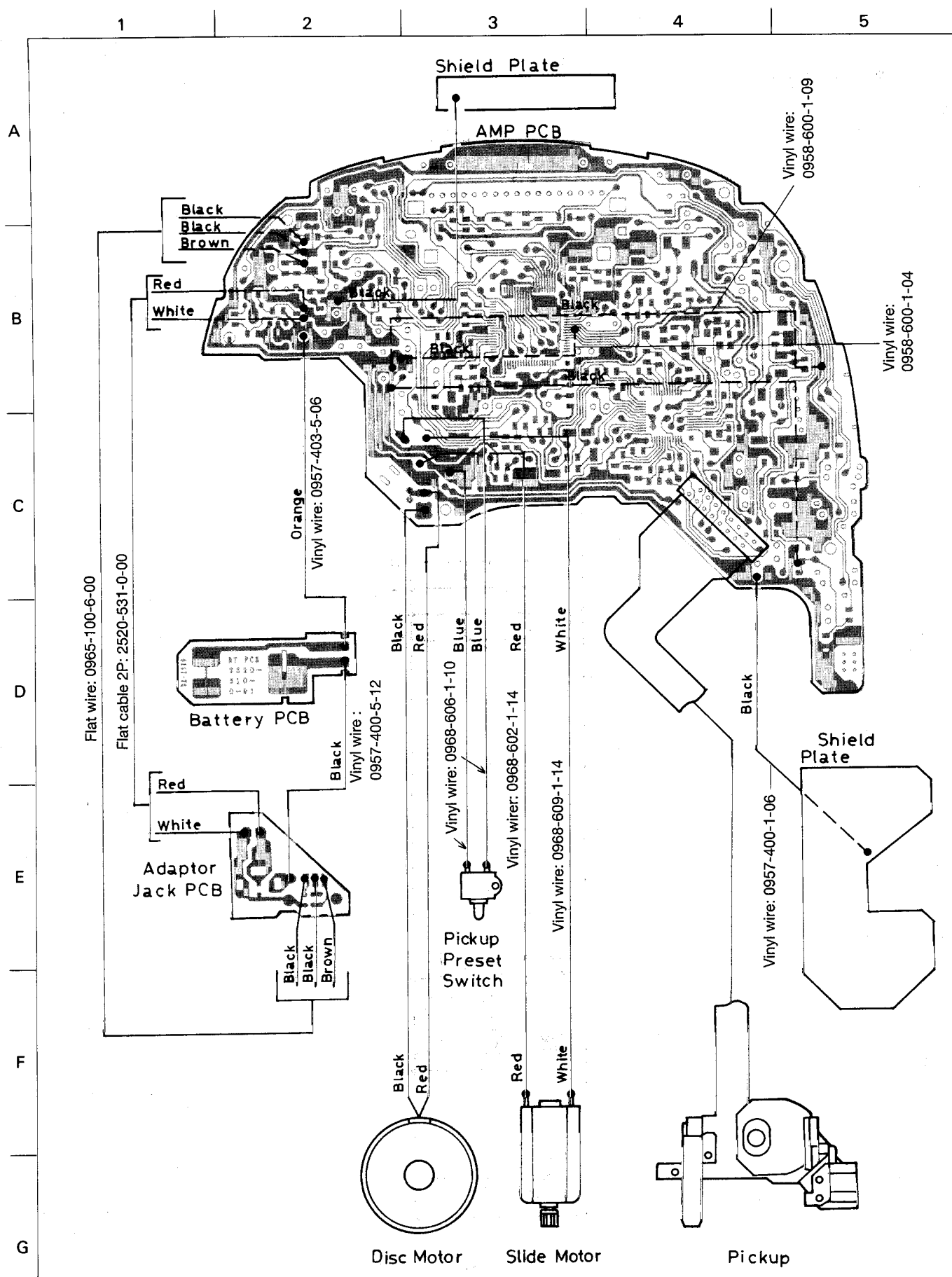


Fig. 12-1

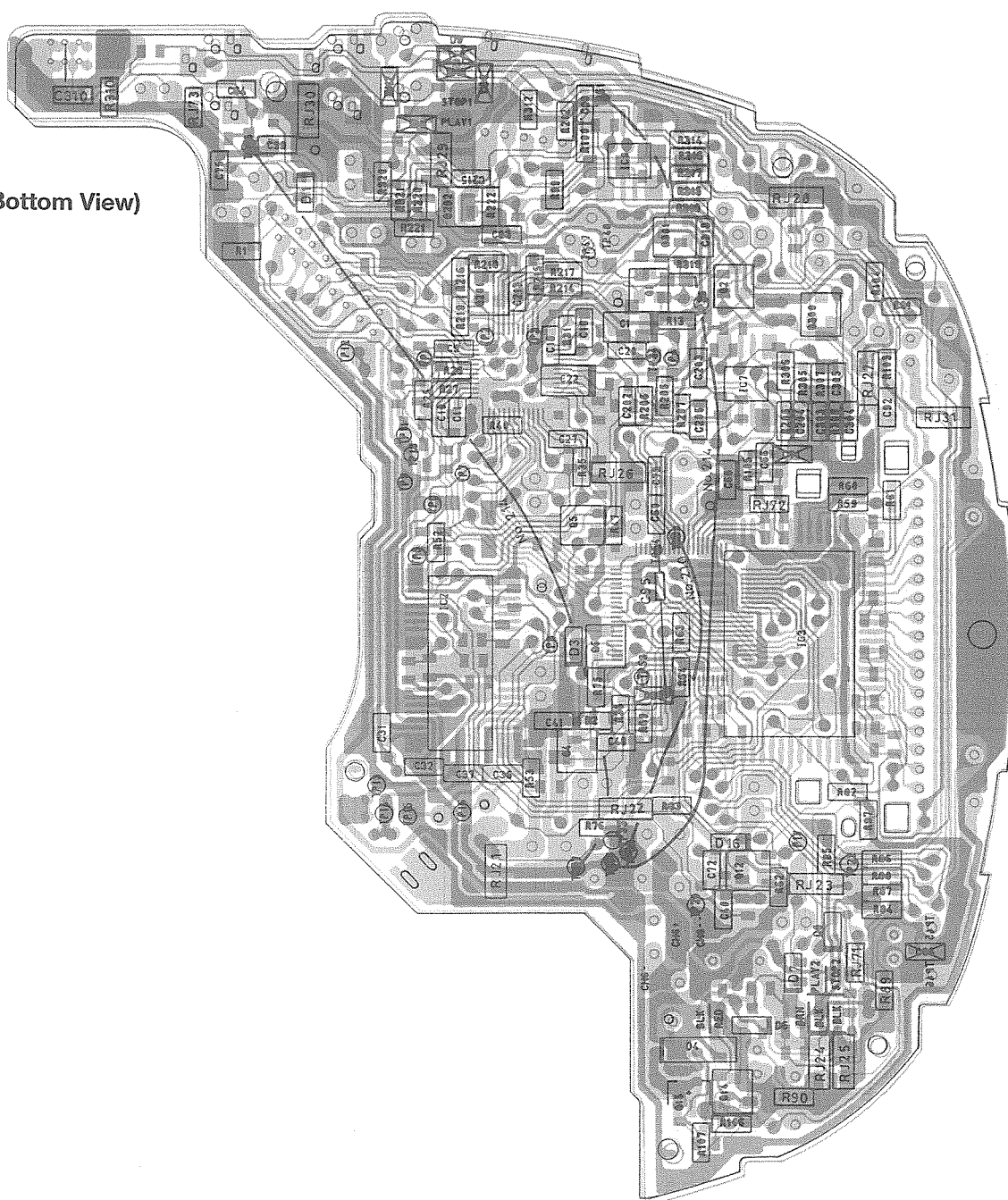
13. Location of P.C. Board



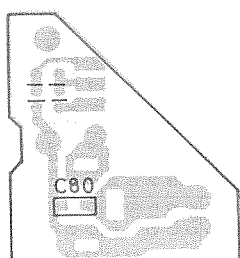
Fig. 13-1

10

(Bottom View)



■ Adapter jack P.C. board



■ Battery P.C. board

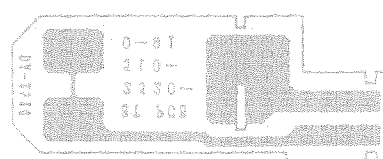


Fig. 13-2

14. Electrical Parts List

XL-P61CR_{C/J}
XL-P61_{B/E/G/GI/EN/U}

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUPPLX
C 068	NC521HJ-150AY	C. CAPACITOR	15PF 5% 50V	
C 069	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 070	QEK60JM-476ZM	E. CAPACITOR	47MF 20% 6.3V	
C 072	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 073	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 074	QEK40JM-226	E. CAPACITOR	22MF 20% 6.3V	
C 075	NC521HJ-102AY	C. CAPACITOR	1000PF 5% 50V	
C 076	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 077	QEK40JM-337	E. CAPACITOR	330MF 20% 6.3V	
C 078	NC521HJ-102AY	C. CAPACITOR	1000PF 5% 50V	
C 079	QER51AM-227	E. CAPACITOR	220MF 20% 10V	
C 080	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 083	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 090	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 092	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 095	NC521HJ-223	C. CAPACITOR	.022MF +80:-20%	
C 099	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 201	NC521HJ-271AY	C. CAPACITOR	270PF 5% 50V	
C 202	NC521HJ-391AY	C. CAPACITOR	390PF 5% 50V	
C 203	NC521HJ-391AY	C. CAPACITOR	390PF 5% 50V	
C 204	NC521HJ-151AY	C. CAPACITOR	150PF 5% 50V	
C 205	NC521HJ-151AY	C. CAPACITOR	150PF 5% 50V	
C 209	ECSTOGY106R	TS E CAPACITOR	680PF 5% 50V	
C 210	NC521HJ-681AY	C. CAPACITOR	22MF 20% 6.3V	
C 211	QEK40JM-226	E. CAPACITOR		
C 212	ECSTOGY106R	TS E CAPACITOR		
C 213	NC521HJ-472AY	C. CAPACITOR	4700PF 10% 50V	
C 214	QEK40JM-227	E. CAPACITOR	220MF 20% 6.3V	
C 215	NC521HJ-222AY	C. CAPACITOR	2200PF 10% 50V	
C 301	NC521HJ-271AY	C. CAPACITOR	270PF 5% 50V	
C 302	NC521HJ-391AY	C. CAPACITOR	390PF 5% 50V	
C 303	NC521HJ-391AY	C. CAPACITOR	390PF 5% 50V	
C 304	NC521HJ-151AY	C. CAPACITOR	150PF 5% 50V	
C 305	NC521HJ-151AY	C. CAPACITOR	150PF 5% 50V	
C 309	ECSTOGY106R	TS E CAPACITOR		
C 310	NC521HJ-681AY	C. CAPACITOR	680PF 5% 50V	
C 311	ECSTOGY226R	E. CAPACITOR		
C 312	ECSTOGY106R	TS E CAPACITOR		
C 313	NC521HJ-472AY	C. CAPACITOR	4700PF 10% 50V	
C 314	QEK40JM-227	E. CAPACITOR	2200PF 10% 50V	
C 315	NC521HJ-222AY	C. CAPACITOR		
D 001	1S3355-X	DIODE C-M		
D 002	1S3355-X	DIODE C-M		
D 003	1S3355-X	DIODE C-M		
D 004	RB160L-40	DIODE		
D 005	MP006B	SI DIODE		
D 006	1S3355-X	DIODE C-M		
D 007	1S3355-X	DIODE C-M		
D 008	1S3355-X	DIODE C-M		
D 012	1S3355-X	DIODE C-M		
D 015	DT4.7(C)-X	Z-DIODE C-M		
D 016	DT4.7(C)-X	Z-DIODE C-M		
IC001	CXA1782BR	IC		
IC002	BA6394FP	IC		
IC003	CXP5086H-704Q	IC		

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUPPLX
C 001	NEF20GM-103AY	TS-E CAPACITOR	10MF 20%	
C 002	QEK40JM-107V	E. CAPACITOR	100MF 20% 6.3V	
C 003	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 004	NC521HJ-180AY	C. CAPACITOR	18PF 5% 50V	
C 005	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 006	NCB21HK-333AY	C. CAPACITOR	.033MF 10% 50V	
C 007	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 008	NCB21HK-333AY	C. CAPACITOR	.033MF 10% 50V	
C 009	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 010	NCB21HK-472AY	C. CAPACITOR	4700PF 10% 50V	
C 011	NCB21HK-472AY	C. CAPACITOR	4700PF 10% 50V	
C 012	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 013	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 014	NCB21HK-223AY	C. CAPACITOR	.022MF 10% 50V	
C 015	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 016	NCB21HK-272AY	C. CAPACITOR	2700PF 10% 50V	
C 017	NCB21HK-222AY	C. CAPACITOR	2200PF 10% 50V	
C 018	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 019	NCB21HK-333AY	C. CAPACITOR	.033MF 10% 25V	
C 020	NCB21HK-333AY	C. CAPACITOR	.033MF 10% 25V	
C 021	NC521HJ-101AY	C. CAPACITOR	100PF 5% 50V	
C 022	ECSTOY475R	TS E CAPACITOR		
C 023	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 024	NC521HJ-103AY	C. CAPACITOR	.010MF 10% 50V	
C 027	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 029	NEA21CN-106NZ	E. CAPACITOR	10MF 20% 16V	
C 029	NEA20JM-226NZ	E. CAPACITOR	22MF 20% 6.3V	
C 030	QEK60JM-107ZM	E. CAPACITOR	100MF 20% 6.3V	
C 031	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 032	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 034	QEK60JM-107ZM	E. CAPACITOR	100MF 20% 6.3V	
C 035	NC521HJ-104AY	C. CAPACITOR	.10MF +80:-20%	
C 036	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 037	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 041	NC521HJ-473AY	C. CAPACITOR	.47MF +80:-20%	
C 042	QER51AM-227	E. CAPACITOR	220MF 20% 10V	
C 044	NC521HJ-224AY	E. CAPACITOR	.22MF +80:-20%	
C 046	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 047	NCB21HK-473AY	C. CAPACITOR	.047MF 10% 25V	
C 048	NCB21HK-152AY	C. CAPACITOR	1500PF 10% 50V	
C 049	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 050	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 052	QEK60JM-107ZM	E. CAPACITOR	100MF 20% 6.3V	
C 053	NEA21EN-475NZ	E. CAPACITOR	4.7MF 20% 25V	
C 054	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 055	NEA20JM-476NZ	E. CAPACITOR	47MF 20% 6.3V	
C 056	QEK60JM-107ZM	E. CAPACITOR	100MF 20% 6.3V	
C 057	NC521HJ-102AY	C. CAPACITOR	1000PF 5% 50V	
C 058	QEK40JM-107V	E. CAPACITOR	100MF 20% 6.3V	
C 059	NEA20JM-107NZ	E. CAPACITOR	100MF 20% 6.3V	
C 060	QEK41EM-475	E. CAPACITOR	4.7MF 20% 25V	
C 062	ECSTOGY226R	E. CAPACITOR		
C 063	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 064	NC521HJ-102AY	C. CAPACITOR	1000PF 5% 50V	
C 066	NC521HJ-150AY	C. CAPACITOR	15PF 5% 50V	

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 020	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 023	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 024	NRSA02J-185NY	RESISTOR	1.8M 5% 1/10W	
	R 025	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 026	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 027	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 028	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 029	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 030	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 031	NRSA02J-684NY	MG RESISTOR	680K 5% 1/10W	
	R 032	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 035	NRSA02J-514NY	MG RESISTOR	510K 5% 1/10W	
	R 036	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 037	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 038	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 039	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 040	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 043	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 044	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
	R 045	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 046	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 047	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 048	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 049	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W	
	R 050	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 051	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 052	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 053	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 054	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 055	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 059	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 060	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 061	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 062	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 063	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	
	R 064	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	
	R 066	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
	R 067	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 068	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 069	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 070	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 073	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 074	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 075	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 076	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 077	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 078	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 079	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 081	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 082	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 083	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 084	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 085	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 086	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 087	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	IC004	CXD250BAR	IC		
	IC005	S-80733AN-DX-T1	IC		
	IC006	M5237ML	DIODE		
	IC007	BA4510F	IC		
	IC009	NJM3414M	IC		
	IC011	M5237ML	DIODE		
	J 001	VMJ4029-001	JACK		
	J 002	VMJ4029-001	JACK		
	J 003	0033-660-0-00	DC JACK		
	JW 01	0048-801-0-00	JUMP WIRE		
	JW 02	0048-801-0-00	JUMP WIRE		
	K 001	0011-850-1-21	EMI BEAD		
	KB 01	0011-813-0-00	FERRITE BEAD		
	KB 02	0011-813-0-00	FERRITE BEAD		
	L 001	0991-851-0-05	COIL		
	LCD 1	0040-576-0-00	LCD		
	LD 01	SML-010MTT87	LED		
	LD 02	SML-010MTT87	LED		
	LD 03	SML-010MTT87	LED		
	LD 04	SML-010MTT87	LED		
	LD 05	GL-3EG8	LED		
	LD 06	GL-3EG8	LED		
	LD 07	GL-3EG8	LED		
	LD 08	GL-3EG8	LED		
	Q 001	2SA1037K(R,S)	TRANSISTOR		
	Q 002	2SA1037K(R,S)	TRANSISTOR		
	Q 004	2SC2412KK1	TRANSISTOR		
	Q 005	DT114TKT146	TRANSISTOR		
	Q 006	2SA1037K(R,S)	TRANSISTOR		
	Q 008	DT114TKT146	TRANSISTOR		
	Q 009	DT114TKT146	TRANSISTOR		
	Q 010	DT114TKT146	TRANSISTOR		
	Q 012	2SC2412KK1	TRANSISTOR		
	Q 013	2SB1132(Q,R,T)	CHIP TRANSISTOR		
	Q 015	2SC2412KK1	TRANSISTOR		
	Q 017	2SB1308	TRANSISTOR		
	Q 017	2SB1132(Q,R,T)	CHIP TRANSISTOR		
	Q 200	2SC2412KK1	TRANSISTOR		
	Q 201	2SA1037K(R,S)	TRANSISTOR		
	Q 202	2SD1757K(RS)	TRANSISTOR		
	Q 300	2SC2412KK1	TRANSISTOR		
	Q 301	2SA1037K(R,S)	TRANSISTOR		
	Q 302	2SD1757K(RS)	TRANSISTOR		
	R 001	NRSA02J-910NY	RESISTOR	91 5% 1/10W	
	R 008	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
	R 009	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
	R 010	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
	R 012	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 013	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 014	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 015	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 016	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 017	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 018	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 019	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	

BLOCK NO. 04

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 311	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 312	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 313	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 314	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
	R 315	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 316	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 317	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 318	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 319	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 320	NRSA02J-180NY	MG RESISTOR	18.5K 1/10W	
	R 321	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 322	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	SW 01	0028-060-0-00	SWITCH		
	SW 02	0028-398-0-00	SWITCH		
	SW 03	0028-398-0-00	SWITCH		
	SW 04	0SQ1B11-V03Z	SWITCH		
	SW 05	0SQ1B11-V03Z	SWITCH		
	SW 06	0SQ1B11-V03Z	SWITCH		
	SW 07	0SQ1B11-V03Z	SWITCH		
	SW 08	0SQ4H11-V01	TACT SWITCH		
	SW 09	0SQ4H11-V01	TACT SWITCH		
	VR 01	9032-501-2-23	VOLUME		
	VR 02	9032-501-1-04	VOLUME		
	VR 03	9032-501-2-23	VOLUME		
	VR 04	9032-501-2-23	VOLUME		
	VR200	0031-645-1-03	VOLUME		
	X 001	0038-964-0-00	CERAMIC RESONAT		

BLOCK NO. 04

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 088	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 089	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 090	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	
	R 091	NRSA02J-821NY	MG RESISTOR	820 5% 1/10W	
	R 092	NRSA02J-821NY	MG RESISTOR	820 5% 1/10W	
	R 093	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
	R 094	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 096	NRVA62D-472NY	MG RESISTOR	4.7K -5% 1/10W	
	R 097	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 098	NRSA02J-477NY	MG RESISTOR	4.7 5% 1/10W	
	R 099	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 100	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 101	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 103	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 104	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 105	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 106	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 107	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 109	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 110	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 111	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 112	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
	R 113	GRD14CJ-2R7S	C RESISTOR	2.7 5% 1/4W	
	R 201	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 202	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 203	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 204	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 205	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 206	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 207	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 208	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 209	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 210	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 211	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 212	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 213	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 214	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
	R 215	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 216	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 217	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 218	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 219	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 220	NRSA02J-180NY	MG RESISTOR	18.5K 1/10W	
	R 221	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 222	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 301	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 302	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 303	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 304	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 305	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 306	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 307	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 308	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 309	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 310	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	

15. Illustration of Packing and Parts List

■ XL-P61CR C/J : Block No. **M3** , **M4**

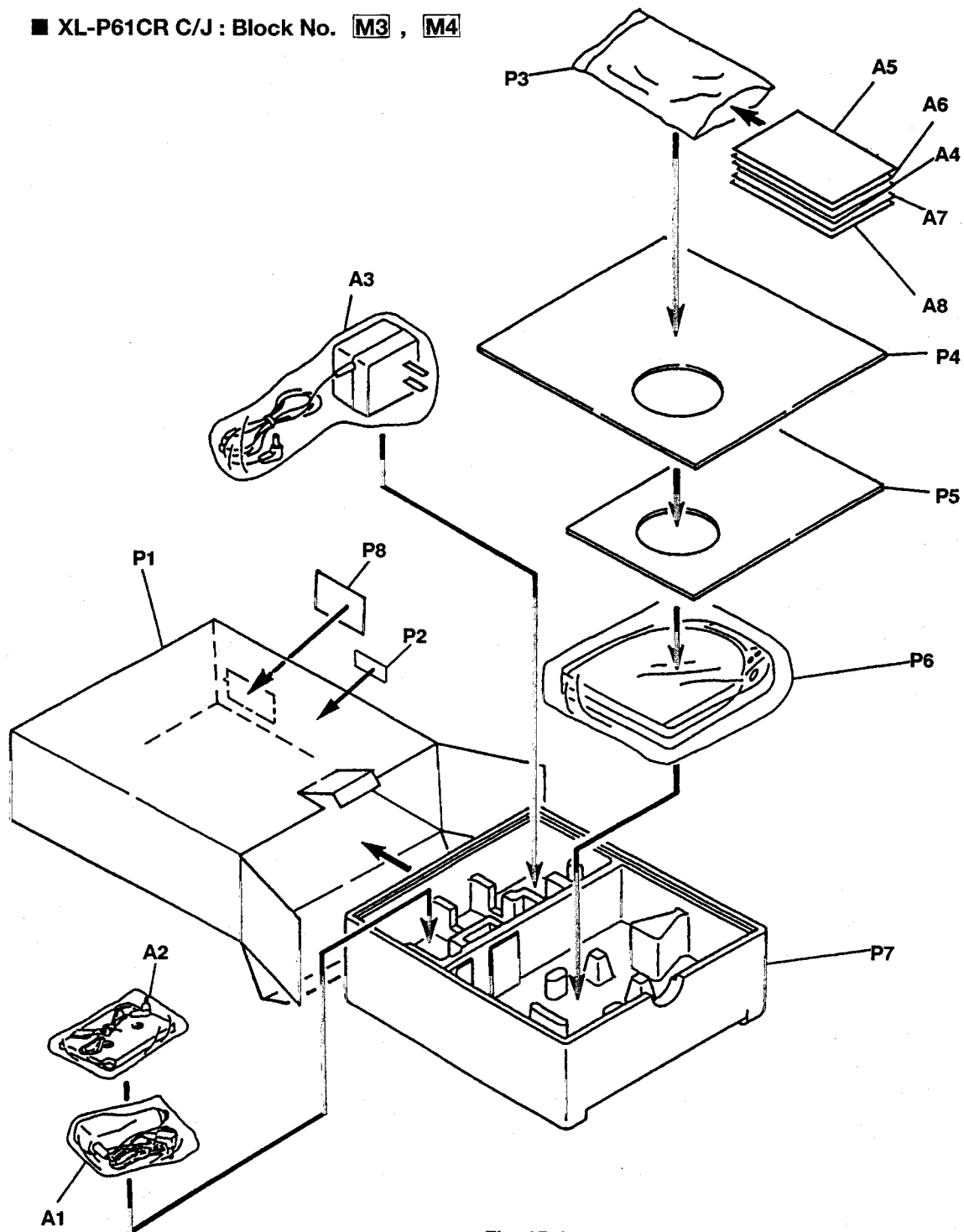


Fig. 15-1

■ Packing Parts List

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	2522-910-0-01	PACKING CASE		1		
	P 2	VND3046-002	NUMBER LABEL		1	J	
		VND3046-006	NUMBER LABEL		1	C	
	P 3	0083-985-0-00	POLY BAG	INSTRUCTIONS	1		
	P 4	2520-907-1-00	SPACER CUSHION		1		
	P 5	2520-908-1-00	SPACER CUSHION		1		
	P 6	0998-000-4-00	POLY BAG	FOR SET	1		
	P 7	2520-901-1-00	SIDE CUSHION		1		
	P 8	2522-856-0-02	GIFT BOX LABEL	WITH BAR CODE	1	C	
		2522-856-0-01	GIFT BOX LABEL	WITH BAR CODE	1	J	

■ Accessories

BLOCK NO. M4MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	VGB0060-015	CAR ADAPTOR		1	C, J	
	A 2	VGA4013-002	CASS. ADAPTOR		1	C, J	
	A 3	VGB0060-008	AC DC CONVERTOR		1		
	A 4	VNN9248-611H	INSTRUCTIONS		1	C, J	
	A 5	BT-20025M	WARRANTY CARD		1	C	
	A 6	BT-20047F	WARRANTY CARD		1	J	
	A 7	BT-20137	SVC CENTER LIST		1	J	
		BT-20071B	SVC CENTER LIST		1	C	
	A 8	BT-20044G	SAFTY INST		1	J	

■ XL-P61 B/E/G/GI/EN/U : Block No. **M5** , **M6**

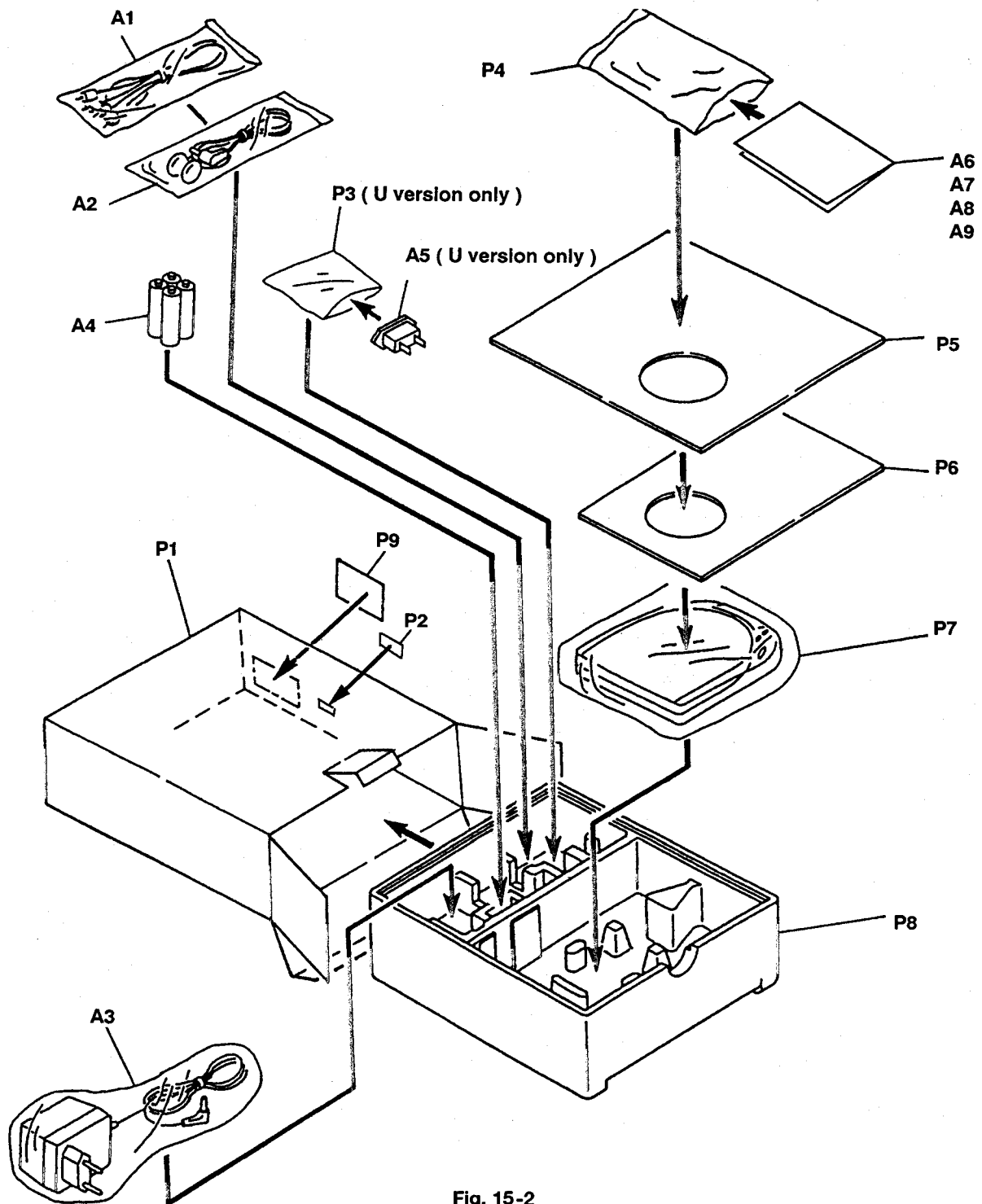


Fig. 15-2

■ Packing Parts List

BLOCK NO. M5MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P	1	2522-910-0-02	PACKING CASE		1		
P	2	VND3046-004	NUMBER LABEL		1	B	
		VND3046-003	NUMBER LABEL		1	E	
		VND3046-005	NUMBER LABEL		1	G	
		VND3046-001	NUMBER LABEL		1	GI,EN,U	
P	3	0998-007-7-00	POLY BAG	FOR AC PLUG	1	U	
P	4	0083-985-0-00	POLY BAG	INSTRUCTIONS	1		
P	5	2520-907-1-00	SPACER CUSHION		1		
P	6	2520-908-1-00	SPACER CUSHION		1		
P	7	0998-000-4-00	POLY BAG	FOR SET	1		
P	8	2520-901-1-00	SIDE CUSHION		1		
P	9	2522-856-0-03	GIFT BOX LABEL	WITH BAR CODE	1	B	
		2522-856-0-04	GIFT BOX LABEL	WITH BAR CODE	1	E	
		2522-856-0-05	GIFT BOX LABEL	WITH BAR CODE	1	EN	
		2522-856-0-06	GIFT BOX LABEL	WITH BAR CODE	1	G	
		2522-856-0-08	GIFT BOX LABEL	WITH BAR CODE	1	U	

■ Accessories

BLOCK NO. M6MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	1	VMP0127-001J	PIN PLUG CORD	0047-317-0-01	1		
A	2	0025-526-0-02	EARPHONE		1		
A	3	VGB0060-011	AC ADAPTOR		1	U	
		VGB0060-009	AC ADAPTOR		1	G,EN,E,GI	
		VGB0060-016	AC ADAPTOR		1	B	
A	4	VGZ006C-001	BATTERY	NI-CD	4		
A	5	V04062-001	AC ADAPTOR PLUG		1	U	
A	6	VNN9248-251H	INSTRUCTIONS		1	E,GI	
		VNN9248-261H	INSTRUCTIONS		1	E,G,EN	
		VNN9248-271H	INSTRUCTIONS		1	EN	
		VNN9248-111H	INSTRUCTIONS		1	U	
		VNN9248-671H	INSTRUCTIONS		1	B	
A	7	BT-20066A	WARRANTY CARD		1	B	
		BT-20135	WARRANTY CARD		1	G	
A	8	E43486-340B	SAFETY SHEET		1	B	
A	9	BT20060	WARRANTY CARD		1	B	

XL-P61CR_{C/J}
XL-P61_{B/E/G/GI/EN/U}

JVC

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