

LOCATION OF CUSTOMER CONTROLS

FRONT

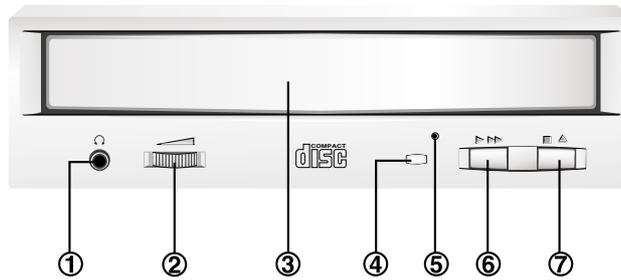


Figure 1. Front View

FRONT VIEW

- | | |
|---|---|
| <p>(1) Headphone Jack 3.5mm jack for monitoring the audio signal from audio CDs.</p> <p>(2) Headphone Volume Control Adjusts the headphone sound level.</p> <p>(3) Disc Drawer Accepts a CD-ROM disc on its tray.</p> <p>(4) Busy Indicator The Busy Indicator lights during initialization and data-read operations.</p> <p>(5) Emergency Eject Hole Insert a paper clip here to eject the drawer manually or when there is no power.</p> | <p>(6) Play/Skip Button When an Audio CD is in the Disc Drawer, pressing this button will start playing audio CDs from the first track. If an audio CD is playing, pressing this button will skip to the next track.</p> <p>(7) Open/Close/Stop Button This button is pressed to open or close the CD tray. The button works only when power is applied to the drive. If an audio CD is playing, pressing this button will stop it, and pressing it again will open the tray.</p> |
|---|---|

REAR

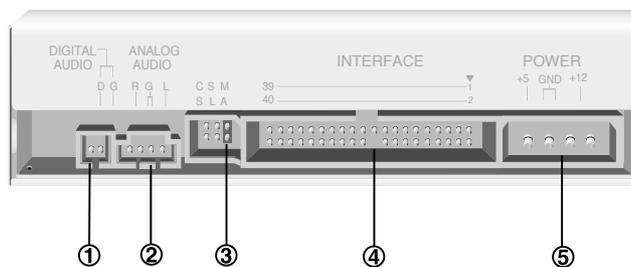


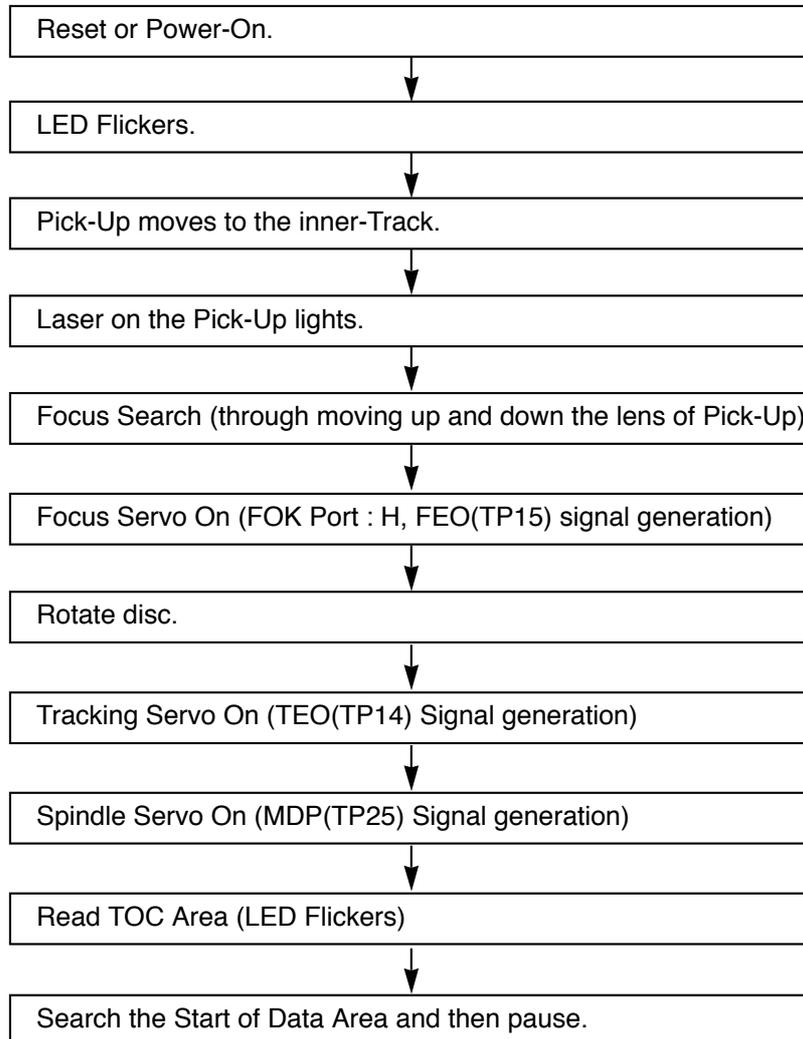
Figure 2. Back View

BACK VIEW

- | | |
|---|---|
| <p>(1) Digital Audio Output Connector This is a digital audio output connector or Video CD output connector. You can connect this to the digital audio system or Video CD Board.</p> <p>(2) Analog Audio Output Connector The Audio Output Connector connects to a sound card. The supplied audio cable is a SoundBlaster® type cable. If you have a different sound card, you will need to contact the sound card manufacturer to obtain the proper cable for that card.</p> | <p>(3) Master / Slave / CSEL Jumper These three jumpers are used to set the CD-ROM Drive to either a Master, Slave, or CSEL drive.</p> <p>(4) Interface Connector This 40-pin connector is used to transfer and control signals between the CD-ROM Drive and your PC. Connect the 40-pin IDE cable in your PC to this connector.</p> <p>(5) Power-in Connector Attach a power cable from the computer to this connector.</p> |
|---|---|

TROUBLESHOOTING GUIDE

1. Initial Lead-in Operation

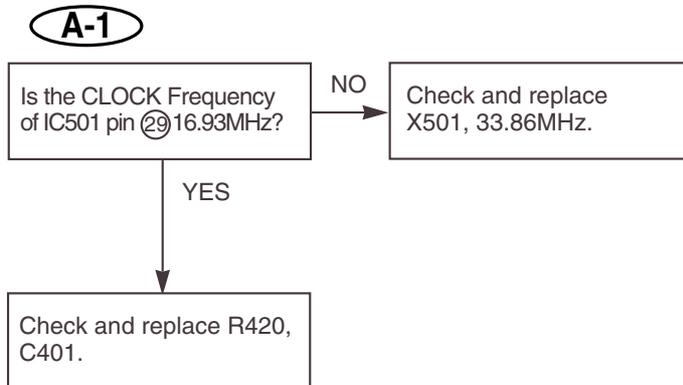
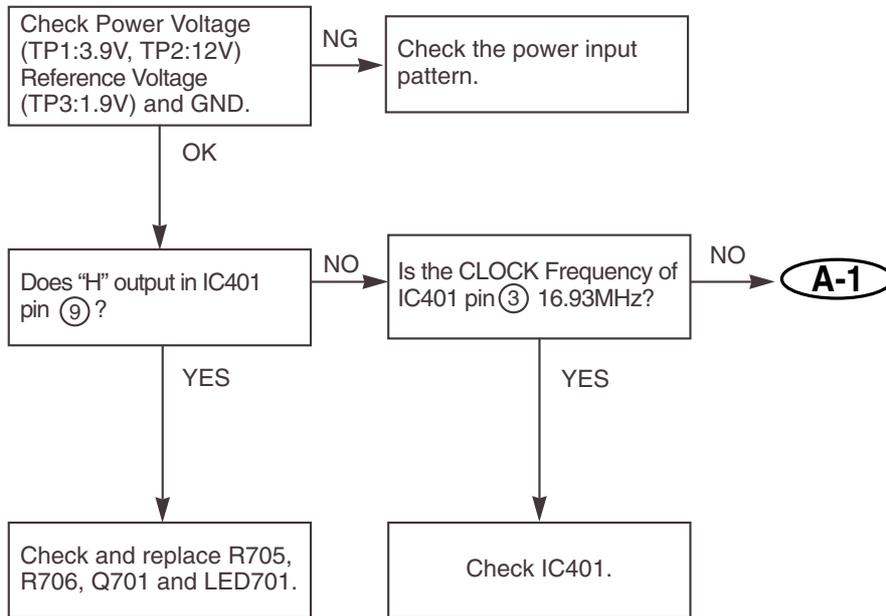


2. Trouble List (Circuit)

- A. LED doesn't light.
- B. Pick-Up doesn't move to the inner-track.
- C. The Laser of Pick-Up doesn't light.
- D. Pick-Up lens doesn't move up and down.
- E. Disc doesn't rotate.
- F. TOC isn't read. (The LED turns on, but doesn't flicker.)
- G. During Audio CD Play, LED flickers, but Speaker is silent.

3. Troubleshooting Guide

A. LED doesn't light.



B. Pick-Up doesn't move to the inner track.

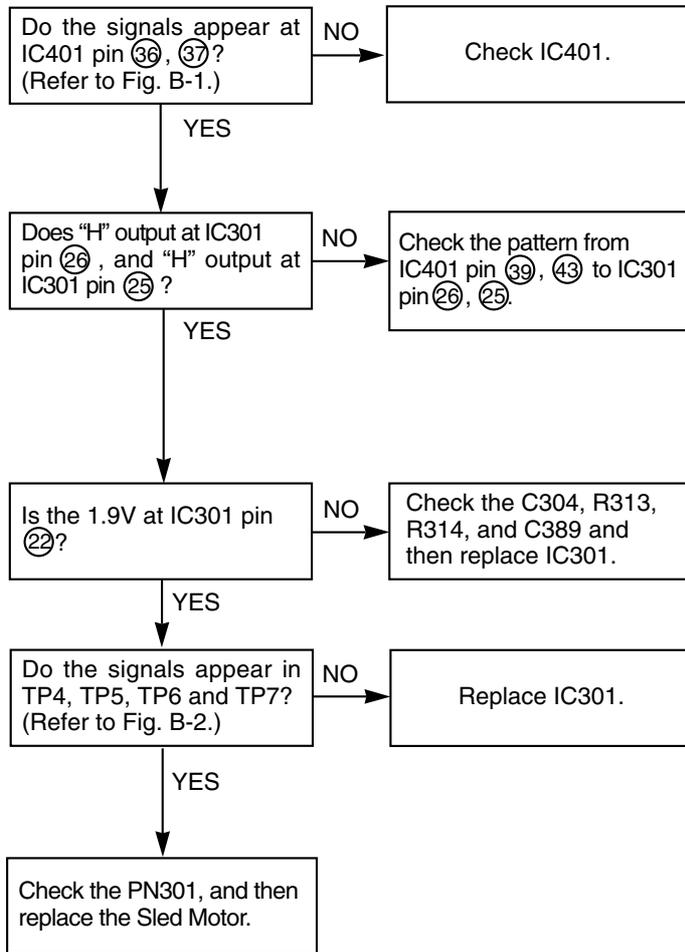


Fig. B-1. DA0 and DA1 Signals

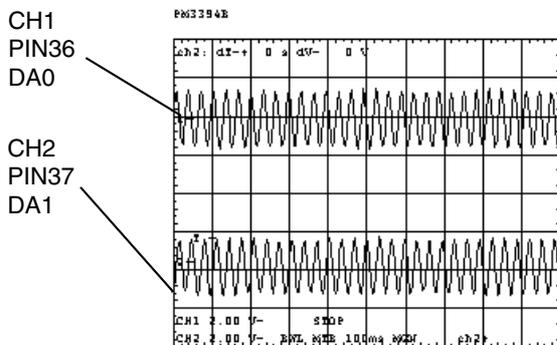
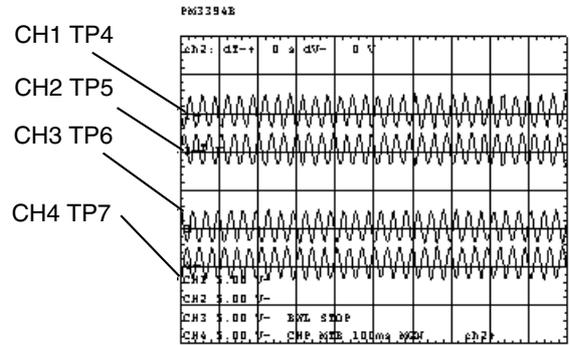
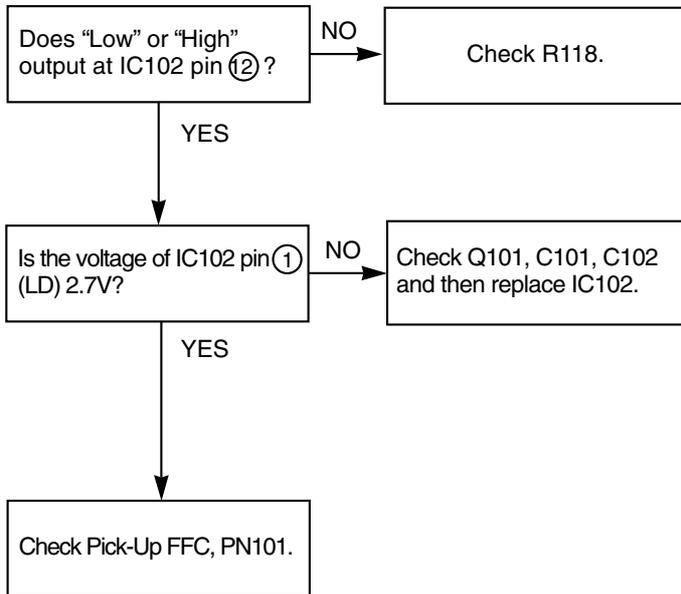


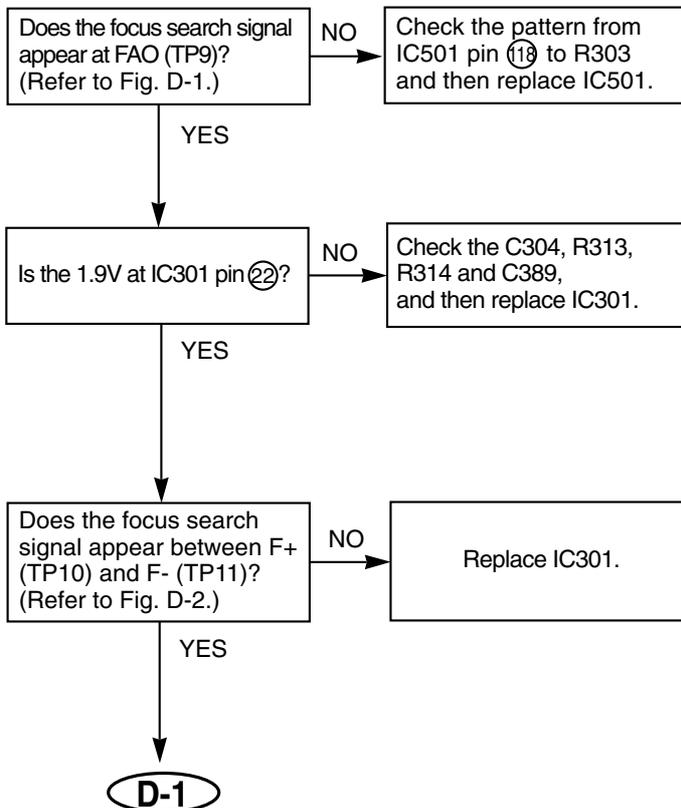
Fig. B-2. TP4, TP5, TP6 and TP7 Signals



C. The Laser of Pick-Up doesn't light.



D. The Pick-UP lens doesn't move up and down.



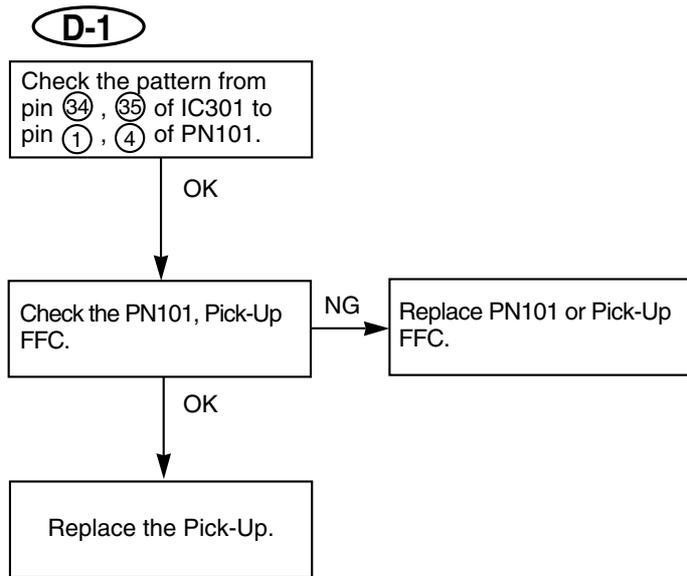


Fig. D-1. FAO Signal

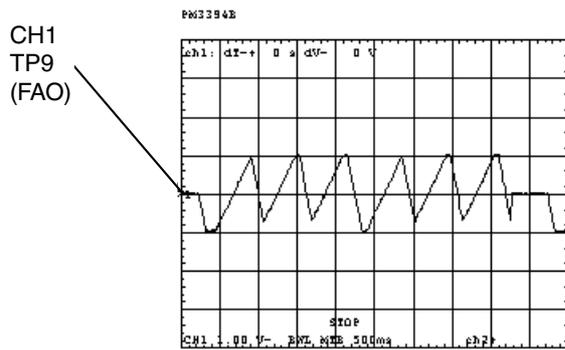
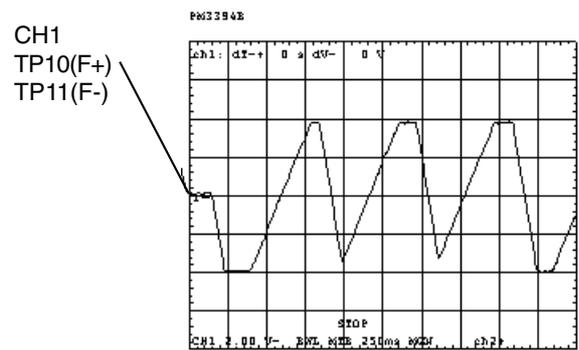


Fig. D-2. Focus Search Signal



E. Disc doesn't rotate.

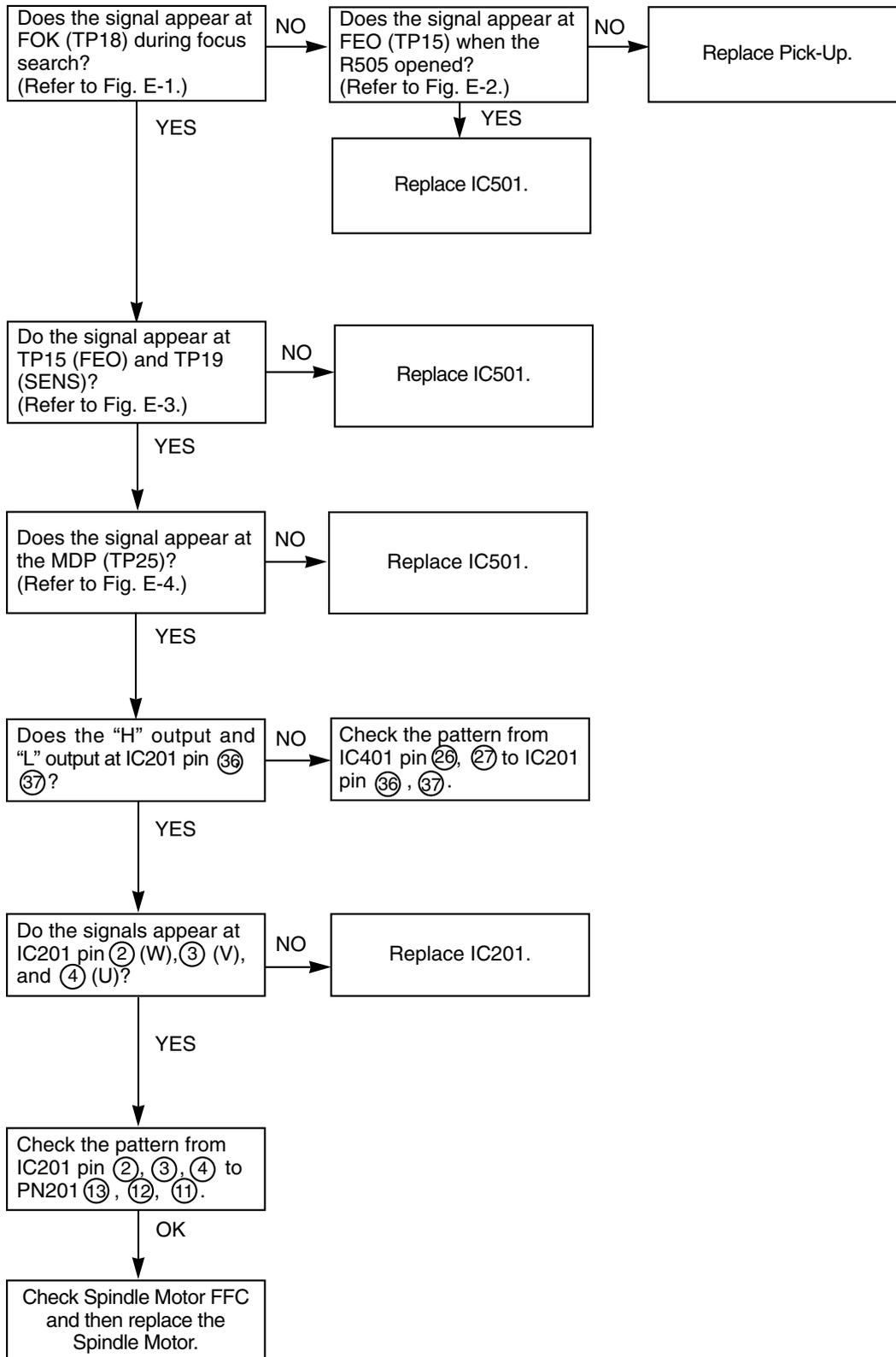


Fig. E-1. FOK, F+ Signal

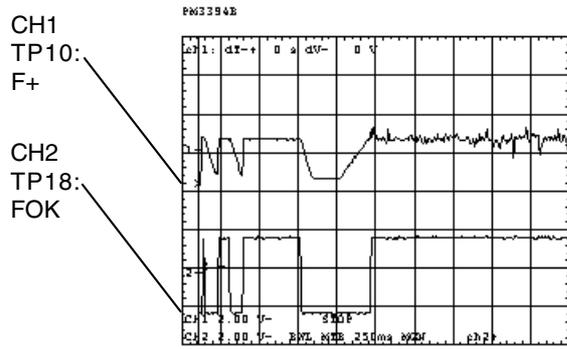


Fig. E-2. S-Curve (R505:Open)

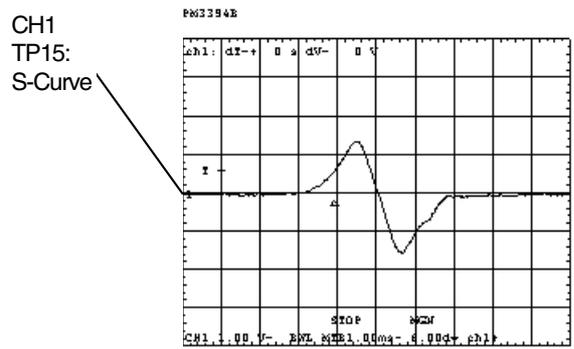


Fig. E-3. FEO, SENS Signal

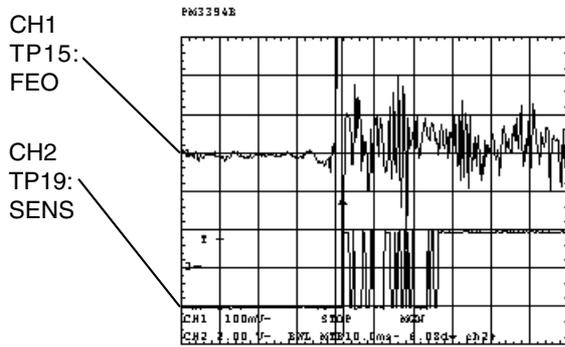
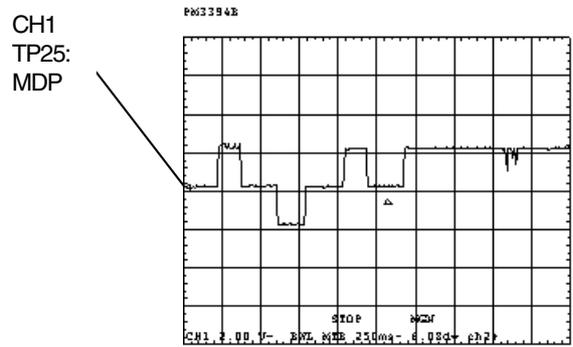
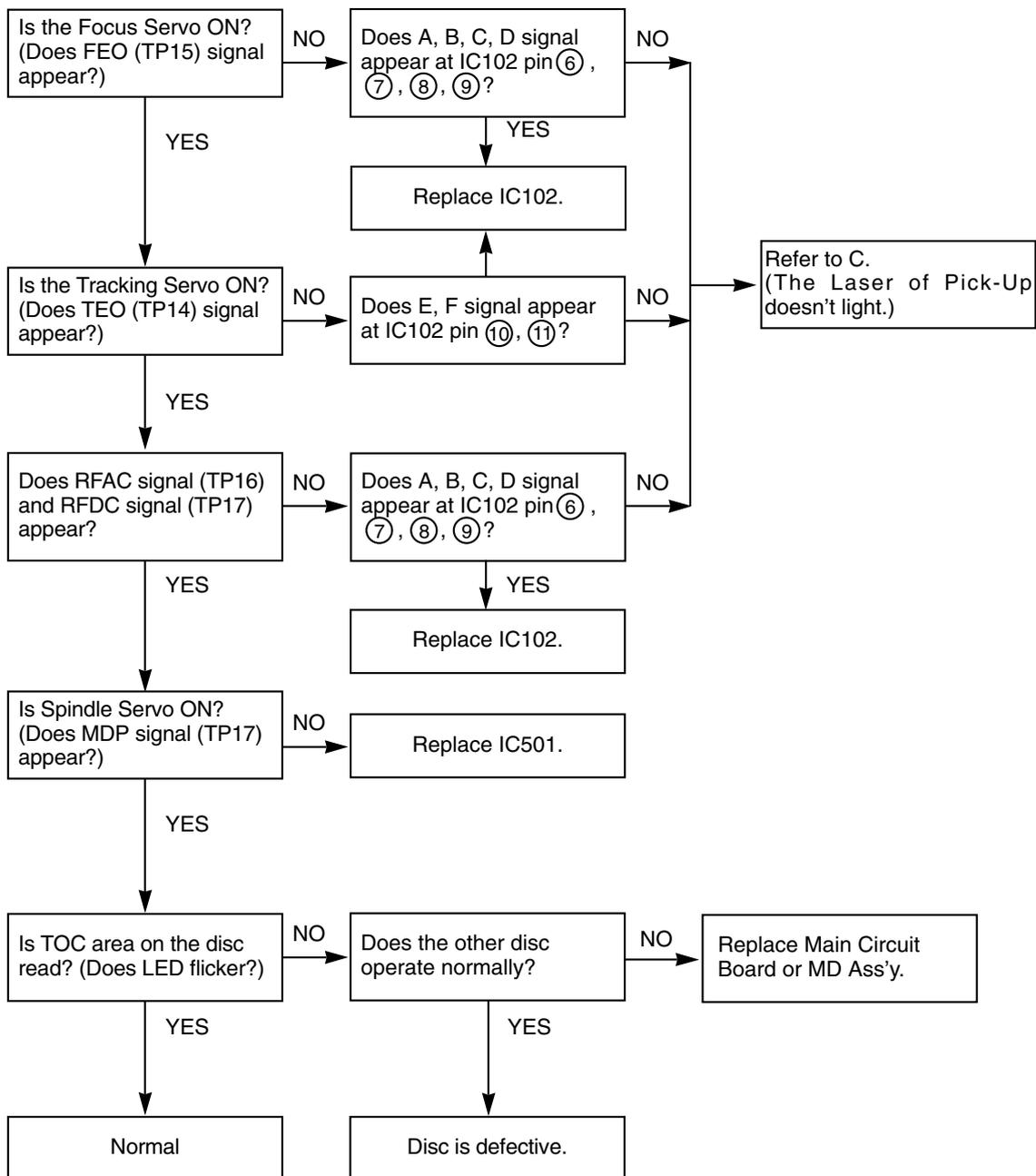


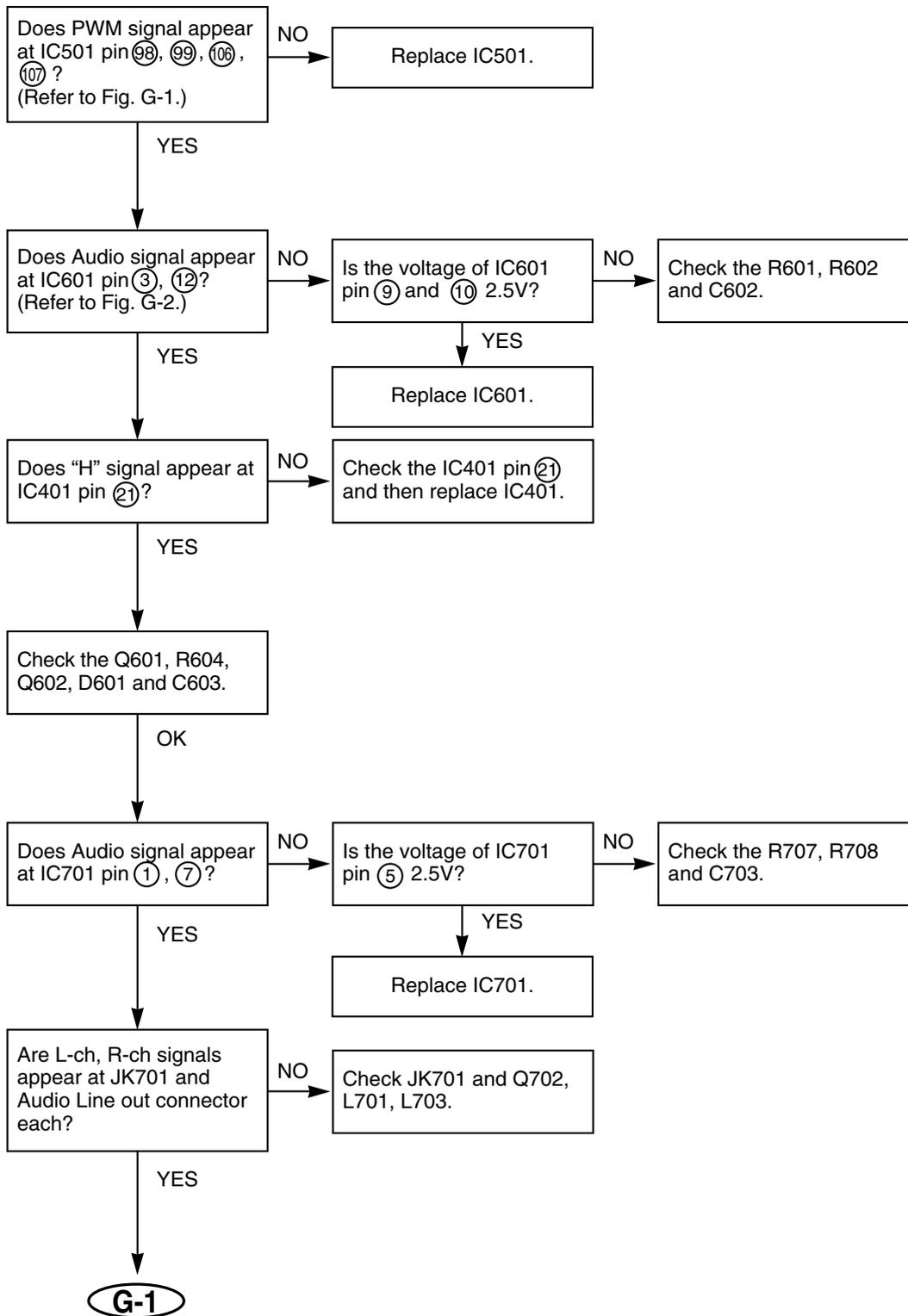
Fig. E-4. MDP Signal



F. TOC isn't read.



G. During Audio CD play, LED flickers, but Speaker is silent.



G-1

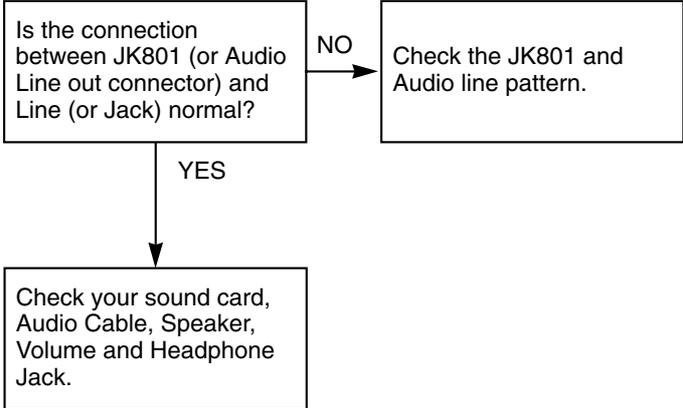


Fig. G-1. PWM Signal

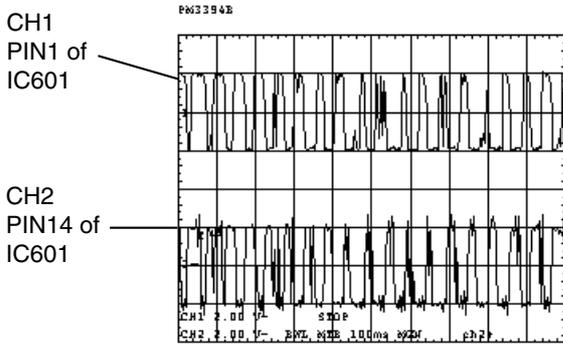
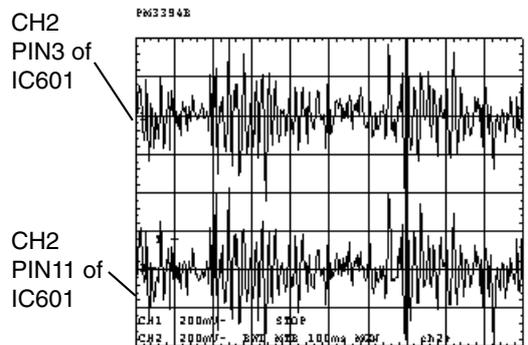


Fig. G-2. Audio Signal

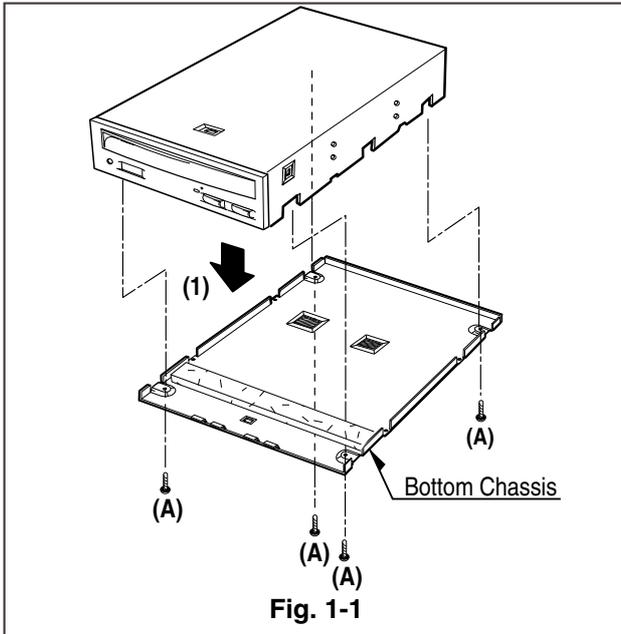


DISASSEMBLY

1. CABINET and CIRCUIT BOARD DISASSEMBLY

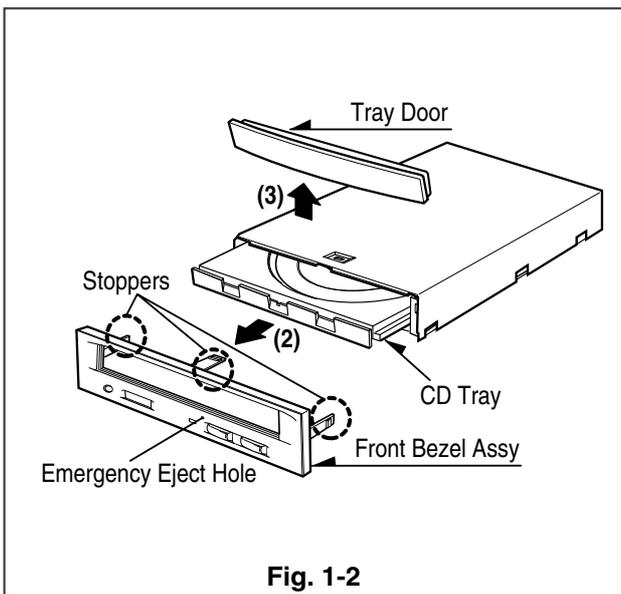
1-1. Bottom Chassis

- A. Release 4 screws (A) and remove the Bottom Chassis in the direction of arrow (1). (See Fig. 1-1)



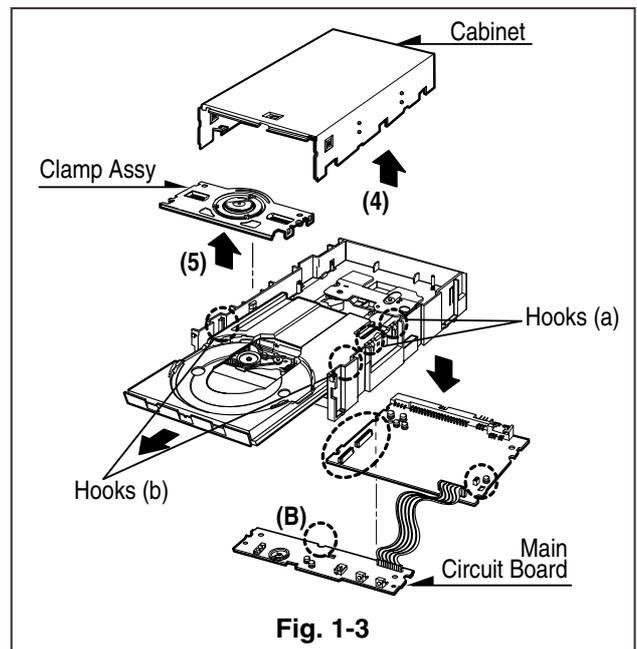
1-2. Front Bezel Assy

- A. Insert and Press a rod in the Emergency Eject Hole and then the CD Tray will open in the direction of arrow (2).
 B. Remove the Tray Door in the direction of arrow (3) by pushing it outward.
 C. Release 3 stoppers and remove the Front Bezel Assy.



1-3. Cabinet and Main Circuit Board

- A. Remove the Cabinet in the direction of arrow (4). (See Fig. 1-3)
 B. Release 2 hooks (a) and remove the Clamp Assy in the direction of arrow (5).
 C. Release 2 hooks (b) and remove the CD Tray.
 D. Remove the Soldering of the LD- and LD+ (B) for the Loading Motor, and then remove the Main Circuit Board.
 E. At this time, be careful not to damage the 3 connectors of the Main Circuit Board.



2. MECHANISM ASSY

- A. Separate the Pick-Up Unit from the Mechanism Assy.
 B. Release 1 screws (C) and then remove the Pick-Up (■).

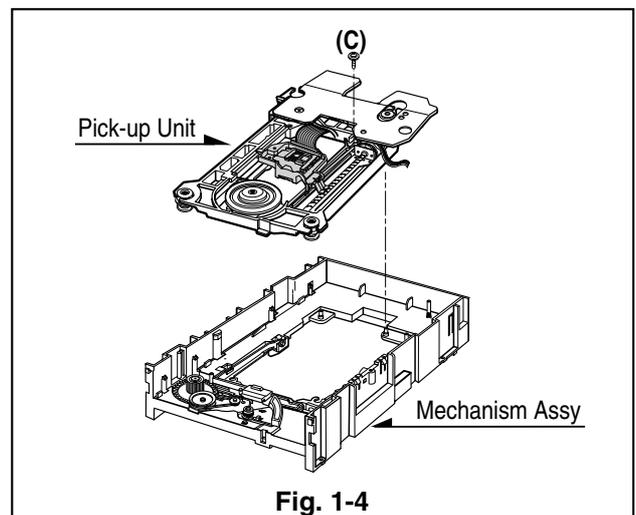
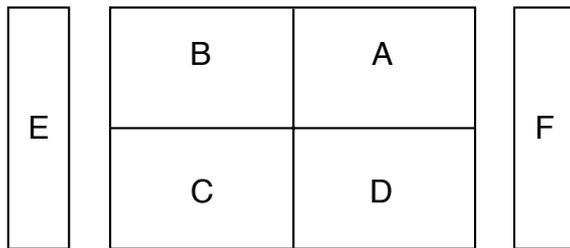
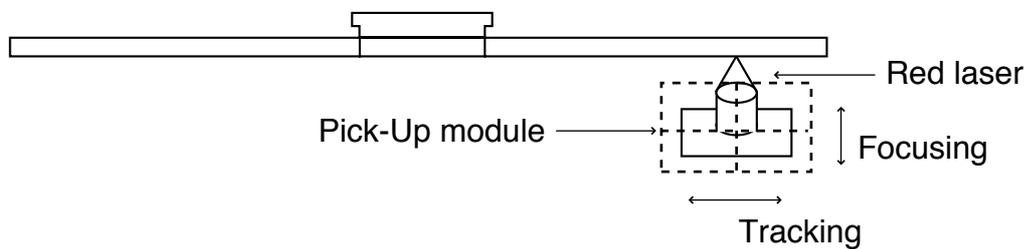


PHOTO DIODE STRUCTURE OF THE PICK-UP



- (1) Focus Error Signal $\rightarrow (A+C)-(B+D)$
(Control the Pick-up's up and down to focus on the Disc)
- (2) Tracking Error Signal $\rightarrow (E-F)$
(Control the Pick-up's left and right shift to find the track on the Disc)
- (3) RF Signal $\rightarrow (A+B+C+D)$
(RF Signal is converted to Data Signal in One Chip IC (IC501))



Three signals (Focus Error Signal, Tracking Error Signal and RF Signal) above are I-V converted and amplified at the IC102, and then are transmitted to One Chip IC (IC501) to generate the Servo Control Signal and Data Signal.

5

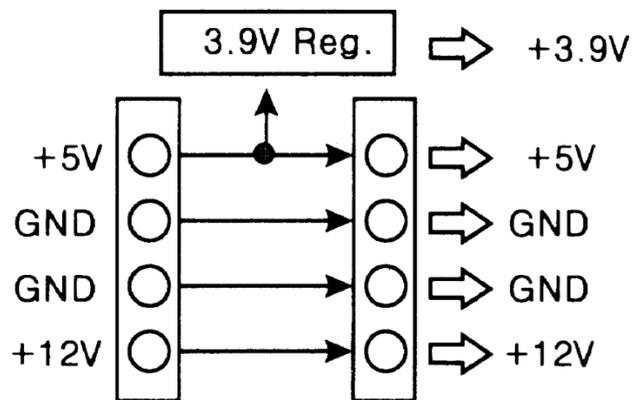
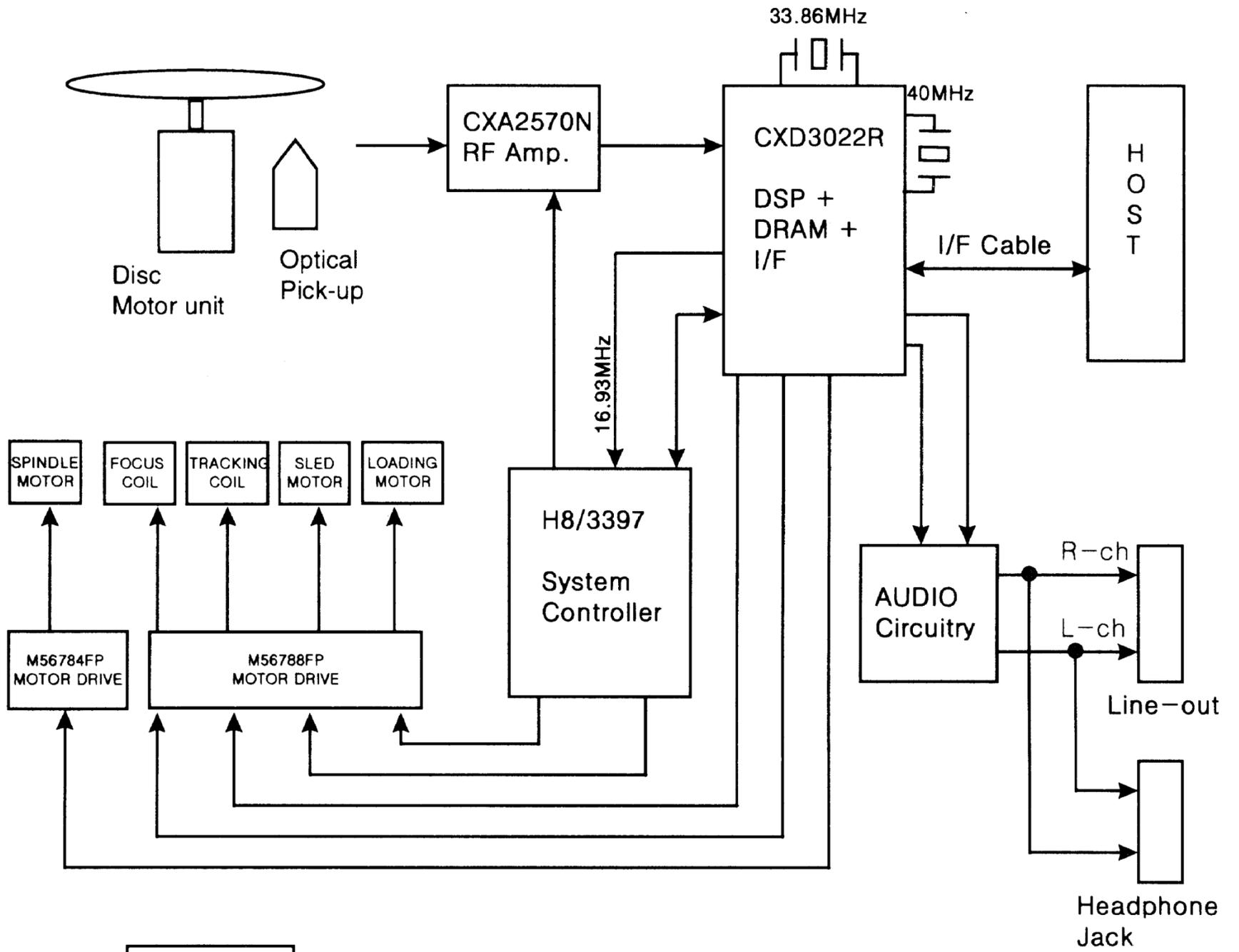
BLOCK DIAGRAM

4

3

2

1



A

B

C

D

EXPLODED VIEW

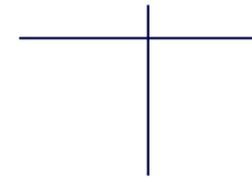
5

4

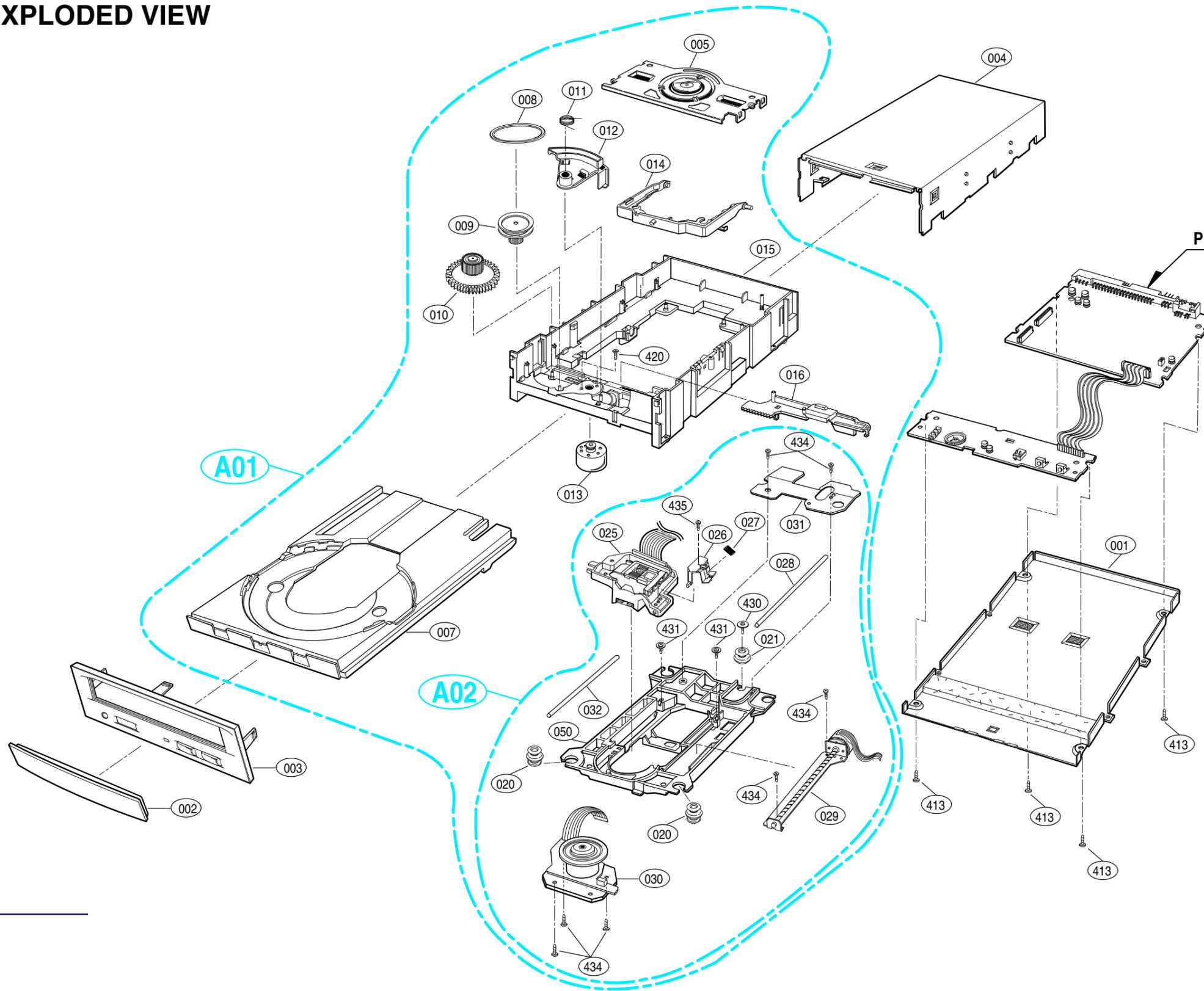
3

2

1



PBM00 (MAIN C.B.A)



A

B

C

D

E

F

G

H

7

8