

Service Manual

AUTOMOTIVE ELECTRONICS



HONDA CQ-EH8160AK

AM/FM MPX ELECTRONIC TUNING
RADIO with Stereo Cassette Tape
Player and 6-Disc CD Changer

HONDA PART No. : 39100-S9A-A200

ID CORD : 1TN0

VEHICLE : CR-V

DESTINATION : North America

PRODUCED AFTER : Feb., 2002

Specification*

General

Power Supply	DC 12V (11V - 16V), Test Voltage 13.2V Negative Ground
Current Consumption	Less than 3.0A (at 0.5W)
Power Output	30W×4
Output Impedance	4Ω
AM Radio	
Frequency Range	530 - 1,710kHz
Usable Sensitivity	24dB/μV (S/N 20dB)
FM Stereo Radio	
Frequency Range	87.7 - 107.9MHz
Usable Sensitivity	6dB/μV (S/N 30dB)
Cassette Player	
Reproduction System	4-Track, 2-Program Stereo
Tape Speed	4.76cm/sec.

Wow and Flutter	Less than 0.2% (WRMS)
Signal to Noise Ratio	More than 38dB (IHF-A)

IDC	
Signal to Noise Ratio	More than 63dB (IHF-A)
Total Harmonic Distortion	Less than 0.4%
Channel Separation	More than 50dB (IHF-A)


Dimensions** (W×H×D)	180×102×170mm
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Weight**	2.4kg
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* Specifications and the design are subject to possible modification without notice due to improvements.

** Dimensions and Weight shown are approximate.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"Dolby" and the double-D symbol  are trade marks of Dolby Laboratories Licensing Corporation.

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1 FEATUERS

- PLL (Phase Locked Loop) synthesized tuning.
- 18-station preset (12-FM, 6-AM).
- Automatic preset setting.
- 6-Disc CD changer (in dash board).
- Dolby noise reduction.
- Adjustable VOL, BAS, TRE, FAD and BAL.

2 LASER PRODUCTS

Do not take apart this unit or attempt to make any changes yourself.

This unit is very intricate that uses a laser pickup to retrieve information from the surface of compact discs. The laser is carefully shielded so that its rays remain inside the cabinet. Therefore, never try to disassemble the player or alter any of its parts since you may be exposed to laser rays and dangerous voltages.

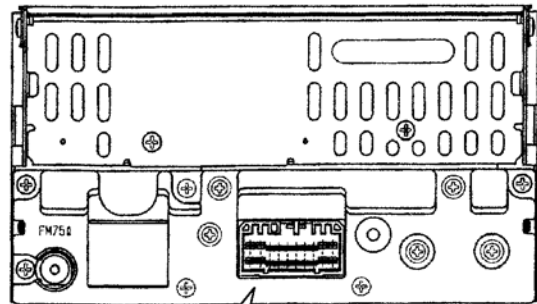
Laser products :

Wave length 780nm
 Laser power No hazardous radiation is emitted with safety protection.

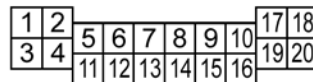
Caution

This product utilizes a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

3 REAR VIEW

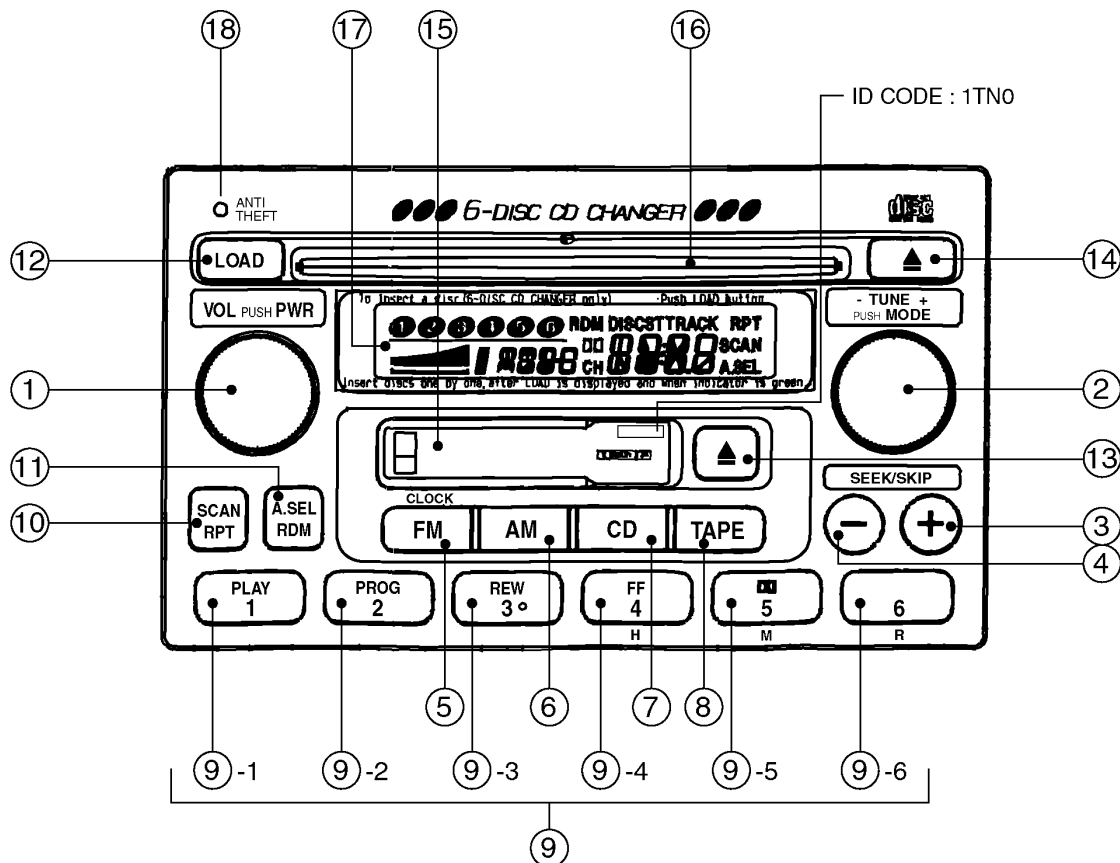


<CN701 20P CONNECTOR>



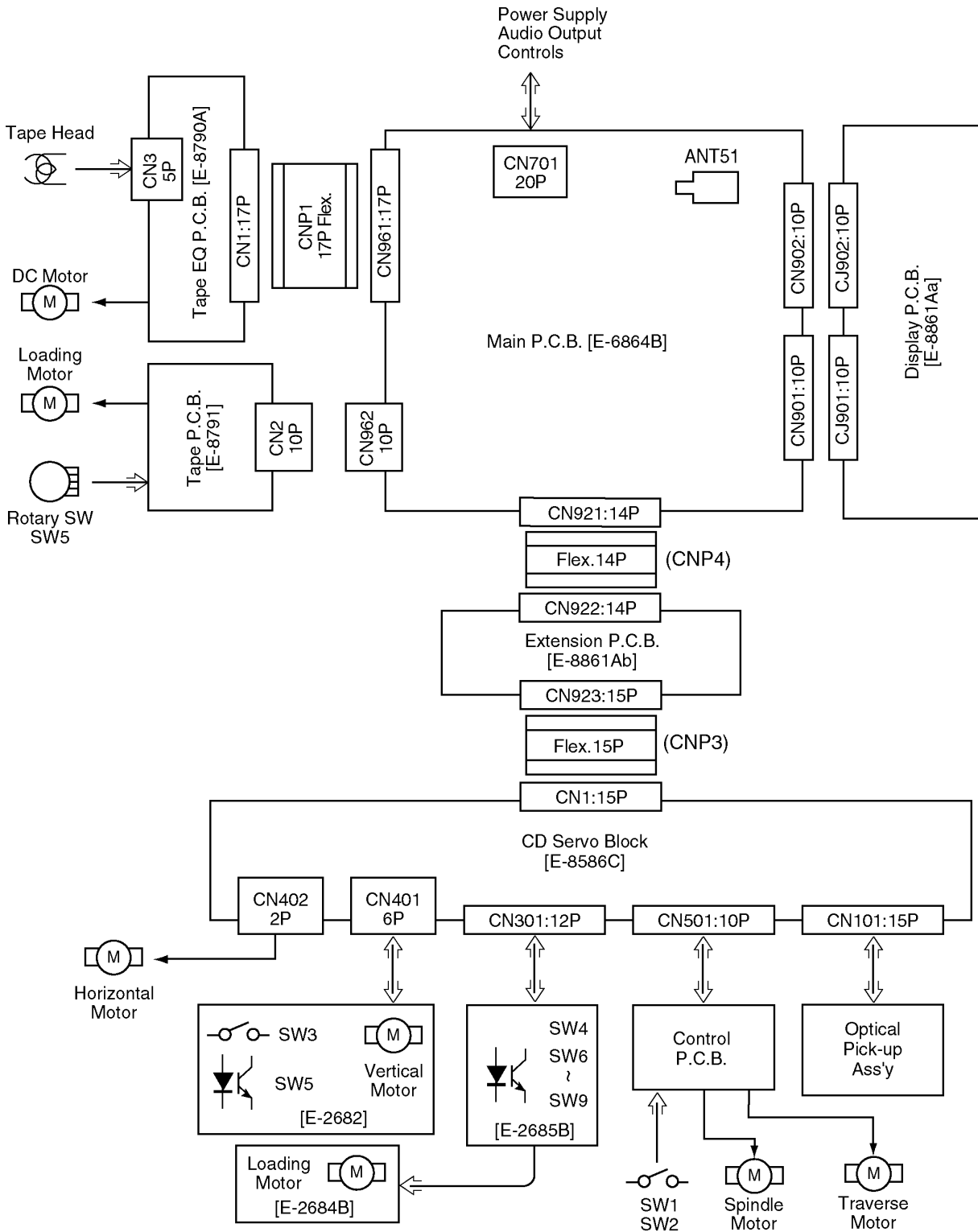
- | | |
|---------------------|---------------------|
| 1. SW+B | 11. No Connection |
| 2. ACC | 12. No Connection |
| 3. No Connection | 13. Speaker, RR (-) |
| 4. No Connection | 14. Speaker, RL (-) |
| 5. Remote | 15. Speaker, FR (-) |
| 6. SEC-IN | 16. Speaker, FL (-) |
| 7. Speaker, RR (+) | 17. Illumi. |
| 8. Speaker, RL (+) | 18. BATT. (+B) |
| 9. Speaker, FR (+) | 19. Illumi (-) |
| 10. Speaker, FL (+) | 20. Ground |

4 FRONT VIEW AND FUNCTIONS



- | | | | |
|-----------------|------------------------------------|----------|------------------------------------|
| ① PWR | : Power on/off. | ⑨-1 PLAY | : Tape play mode. |
| VOL | : Increase/Decrease of volume. | ⑨-2 PLOG | : Tape program change. |
| ② MODE | : Audio adjustment mode selection. | ⑨-3 REW | : Tape rewind. |
| TUNE | : Radio manual tuning. | ⑨-4 FF | : Tape fast forward. |
| ③ SEEK/SKIP (+) | : Radio seek/skip up tuning. | H | : Hour digits increment. |
| | : Tape APC (forward) operation. | ⑨-5 NR | : Tape dolby NR on/off. |
| | : CD disc fast forward. | M | : Minute digitsh increment. |
| ④ SEEK/SKIP (-) | : Radio seek/skip down tuning. | ⑨-6 R | : Minute and hour digits clearing. |
| | : Tape APC (Reverse) operation. | ⑩ SCAN | : Radio scan up tuning. |
| | : CD disc reverse. | RDM | : CD random play. |
| ⑤ FM | : FM radio mode selection. | ⑪ A.SEL | : Radio stations auto-preset. |
| CLOCK | : Clock adjustment mode. | RPT | : Tape/CD repeate play. |
| ⑥ AM | : AM radio mode selection. | ⑫ LOAD | : CD disc loading. |
| ⑦ CD | : CD mode selection. | ⑬ ▲ | : Tape eject. |
| ⑧ TAPE | : TAPE mode selection. | ⑭ ▲ | : CD disc eject. |
| ⑨ 1~6 | : Radio frequency preset/call. | ⑮ | Cassette slot. |
| | : CD changer disc selection. | ⑯ | CD slot. |
| | | ⑰ | LCD display. |
| | | ⑱ | Anti-theft indicator. |

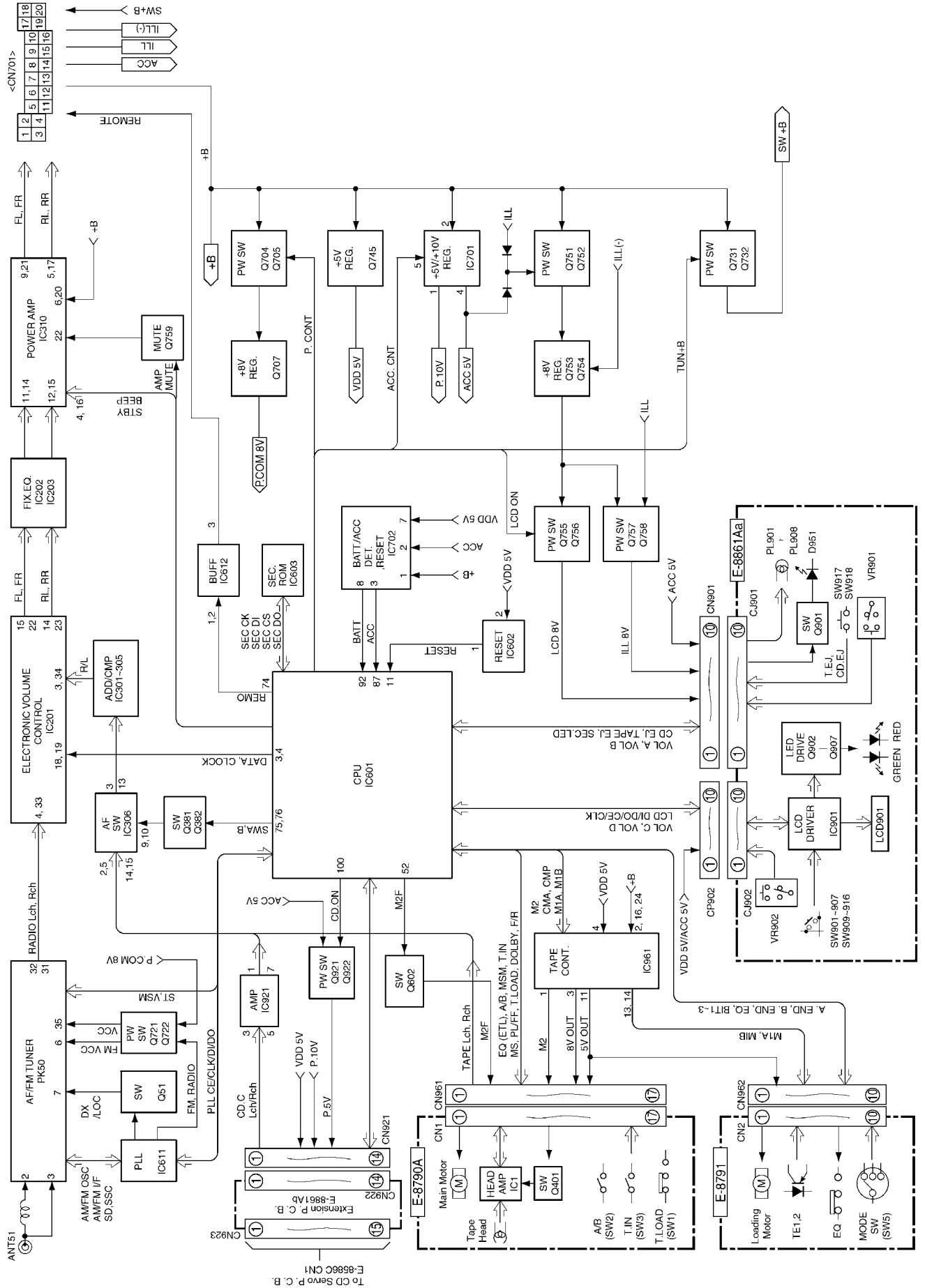
5 WIRING CONNECTIONS



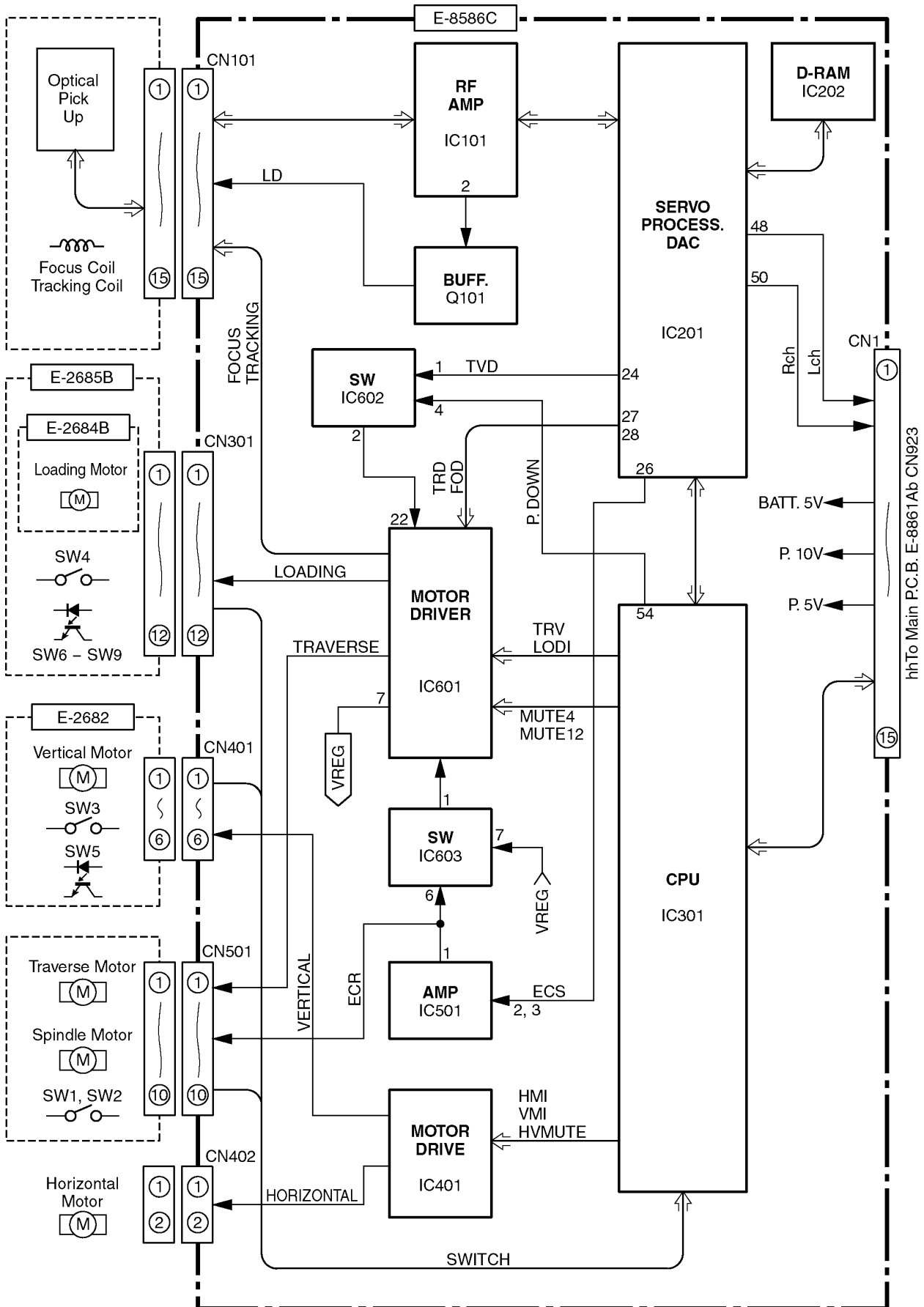
<Note> :

-This mark shows a Ref. No. of connector
-This mark shows a mounting position of connector.

6 BLOCK DIAGRAM (Main, Display, Tape Block)



7 BLOCK DIAGRAM (CD Servo Block)



9 ALIGNMENT INSTRUCTIONS

9.1. Alignment Conditions

- Power Supply Voltage : DC13.2V
- Output Impedance : 4Ω
- Output Power : 0.5W
- Balance, Fader Control : center
- Bass, Treble Control : Center
- Dolby NR: OFF

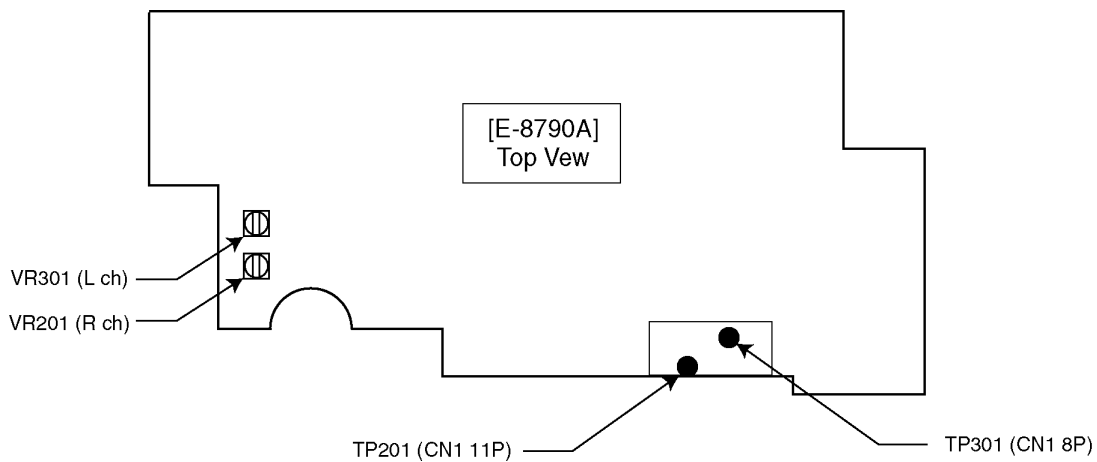
Note :

Do not align the FM/AM package block. When the package block is necessary, it will be supplied already aligned at the factory.

9.2. Dolby NR Alignment

Step	Alignment Item	Test Tape	VTVM Connection	Adjust	Remarks
(1)	DOLBY NR Rch	RFKZ0038	TP201	VR201	Adjust for 388mV \pm 1.0dB
(2)	DOLBY NR Lch	RFKZ0038	TP301	VR301	Adjust for 388mV \pm 1.0dB

10 ALIGNMENT POINTS



11 CD DISC CENTERING ALIGNMENT

- This adjustment is for assuring that compact discs will be placed in the center of the turntable.

<Adjustment Condition / Jig>

- Power Supply Voltage : 13.2V
- Test Disc : TCD-792A

<Adjustment Procedures>

1. Attach the adjusting screw to the upper chassis (See Figure 1.).
2. Insert the test CD (TCD-792A) into the disc No.1 position and play it.
3. After checking whether the disc is centered on the turntable, turn the adjusting screw unit it is in the center.

<Check Items>

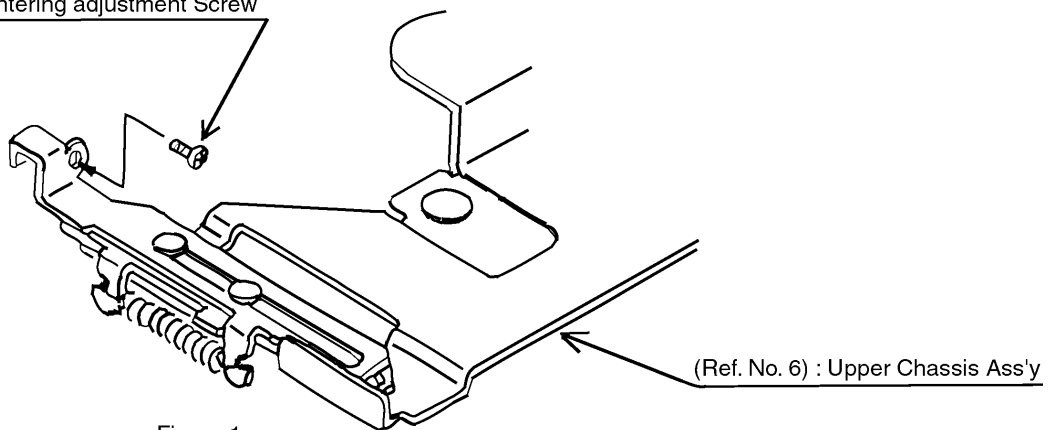
- Check that the disc is correctly centered.
- Check that the disc is securely clamped.
- Check that no abnormal noise is produced when clamping the disc.

[Directions of Turning the Adjusting Screw]

- CD stops before its proper position : Turn the screw counterclockwise.
- CD overruns : Turn the screw clockwise.

4. After the adjustment, lock the screw.

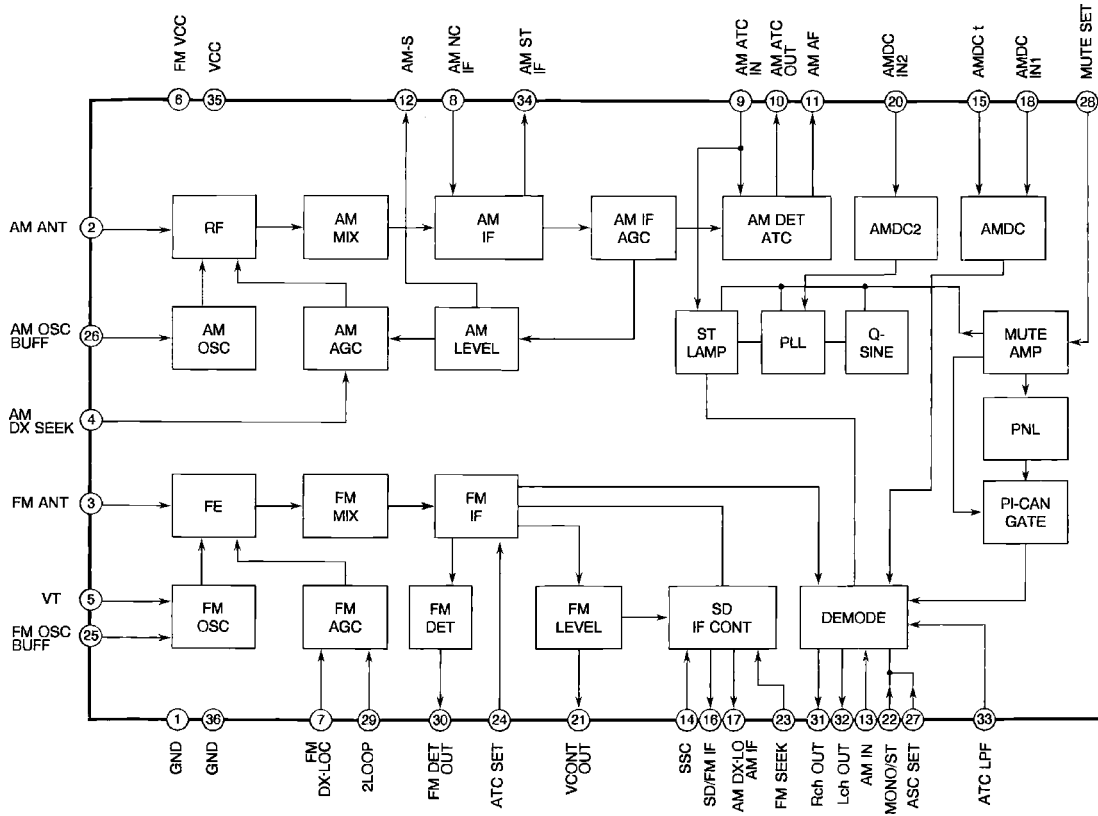
(Ref. No.173) : Centering adjustment Screw



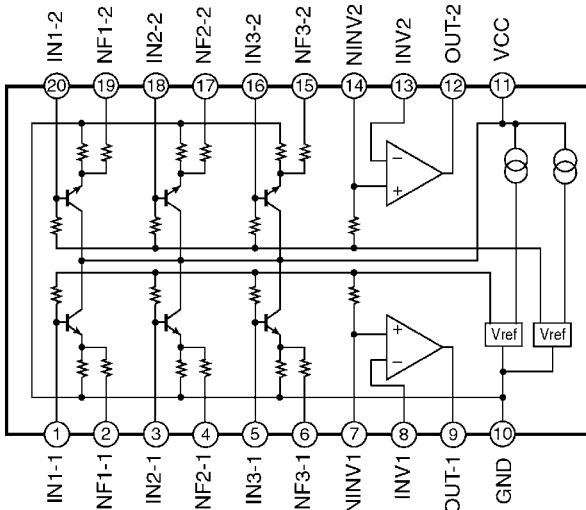
<Figure 1>

12 PACKAGE AND IC BLOCK DIAGRAM

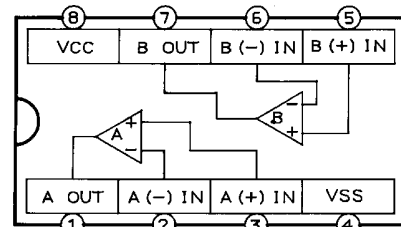
12.1. Main Block



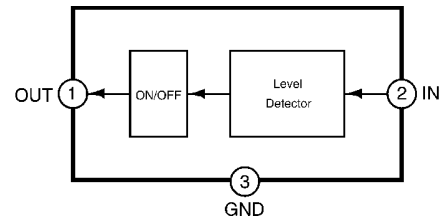
PK50 : YEP0PTA514B0



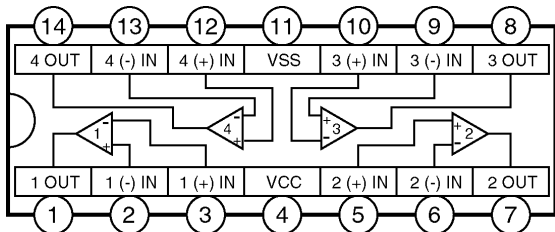
IC202,203 : YEAMM5243FT1



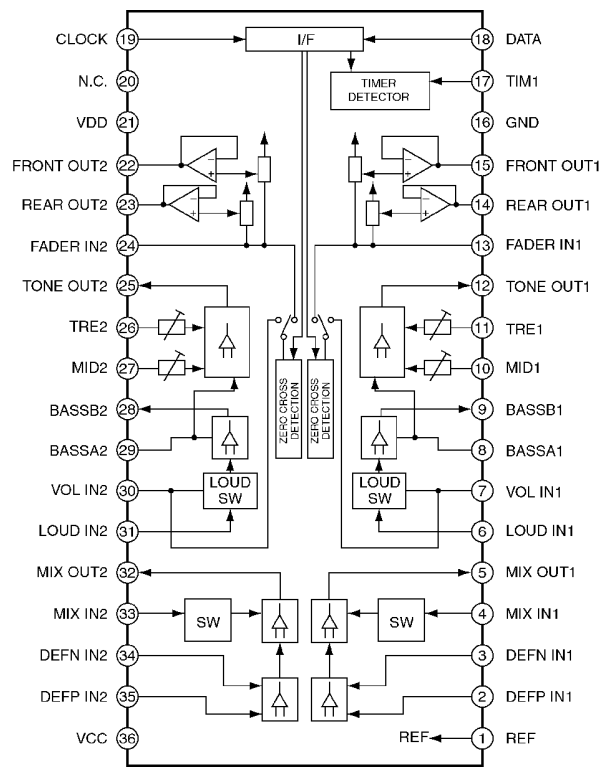
IC305,612,921 : C0ABBB000179



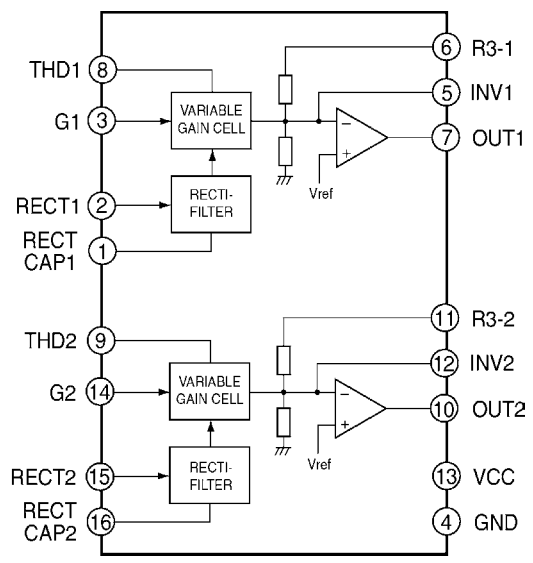
IC602 : MN1382KTX



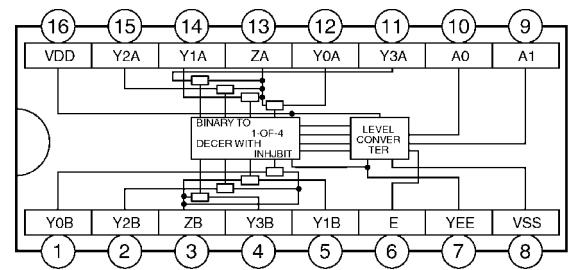
IC301,304 : C0ABCB000038



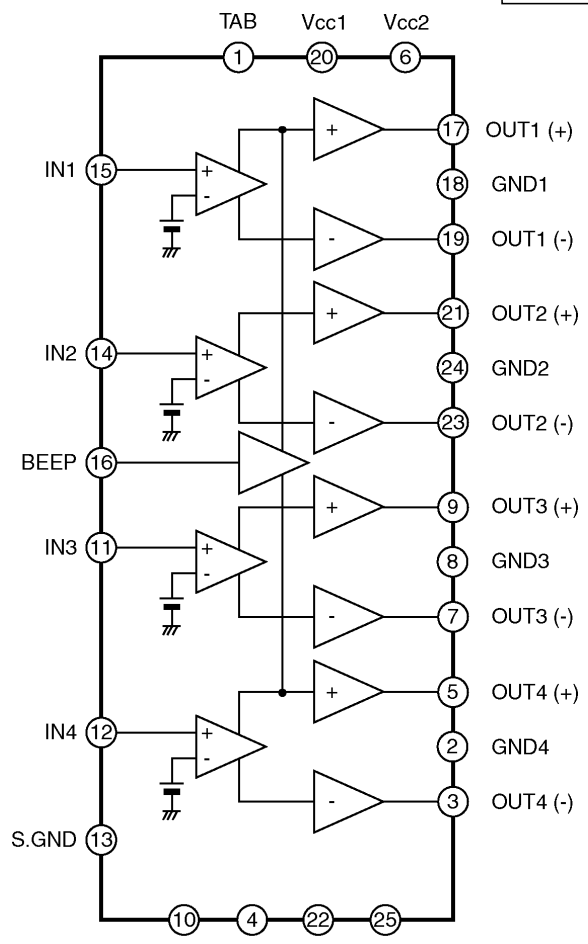
IC201 : C1BB00000284



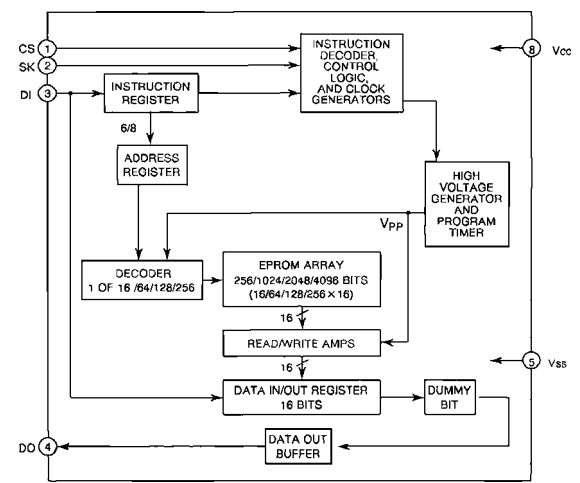
IC302,303 : YEAMSA571D



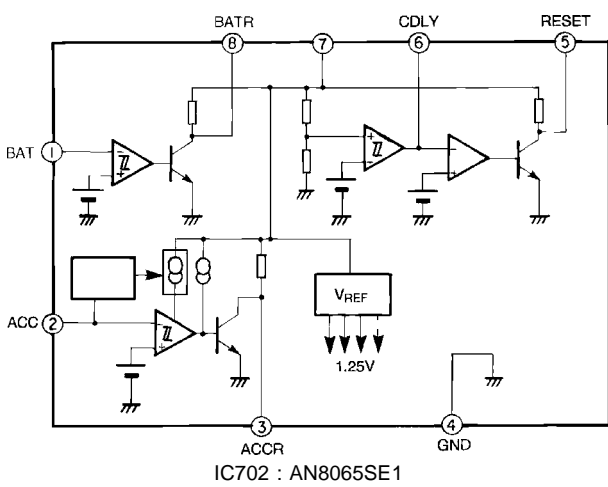
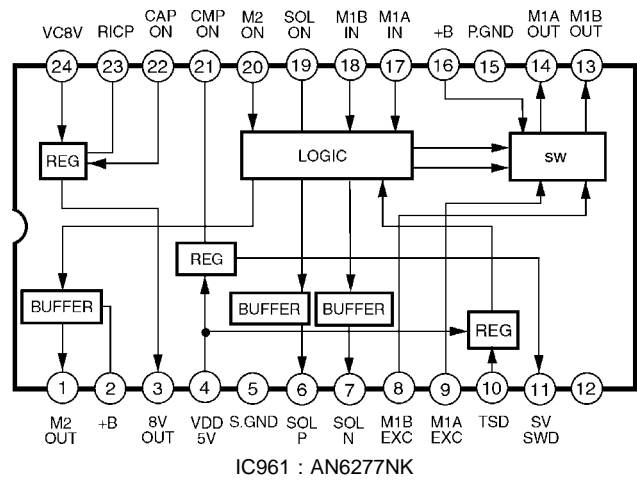
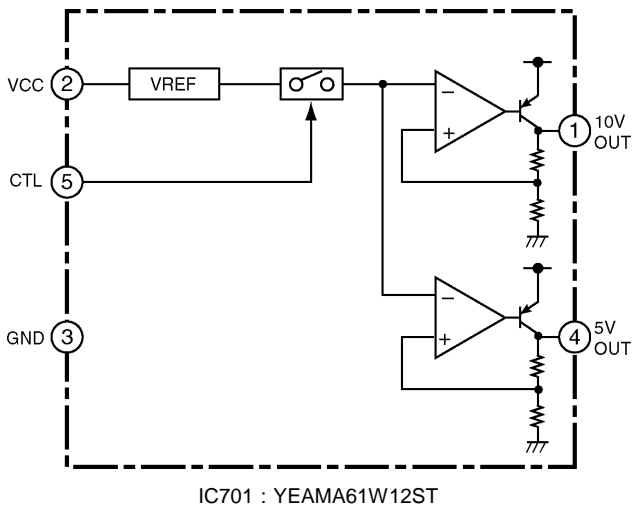
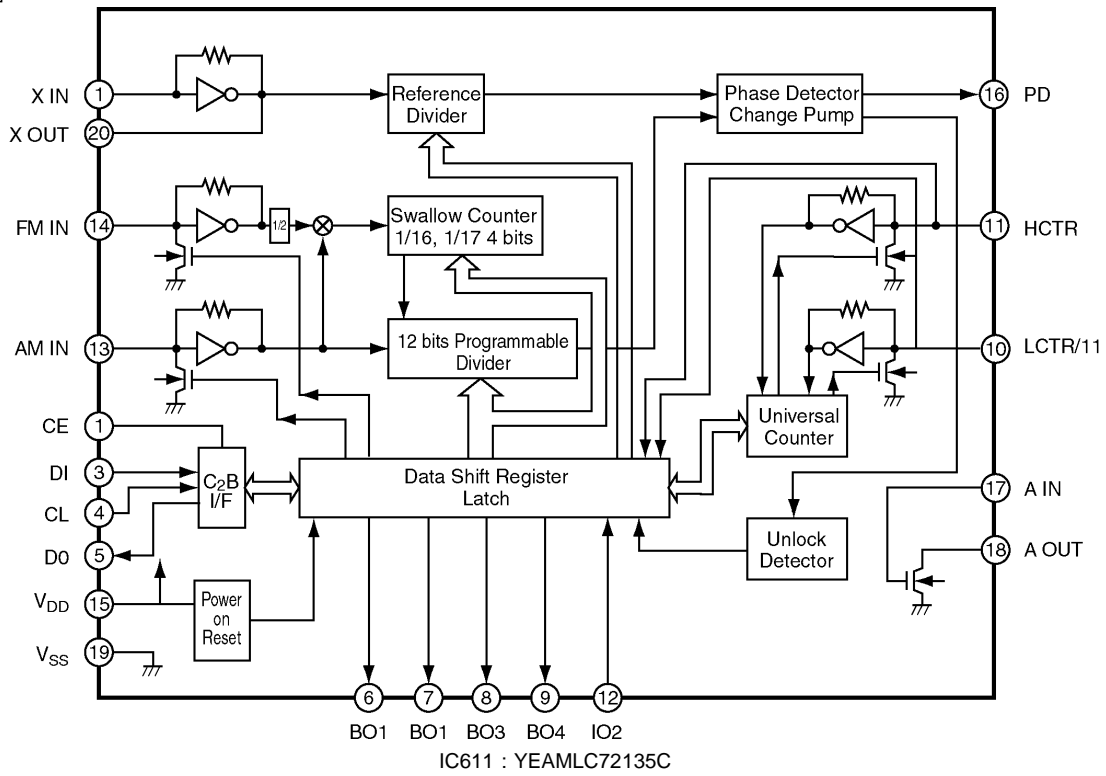
IC306 : YEAMPD4052T2



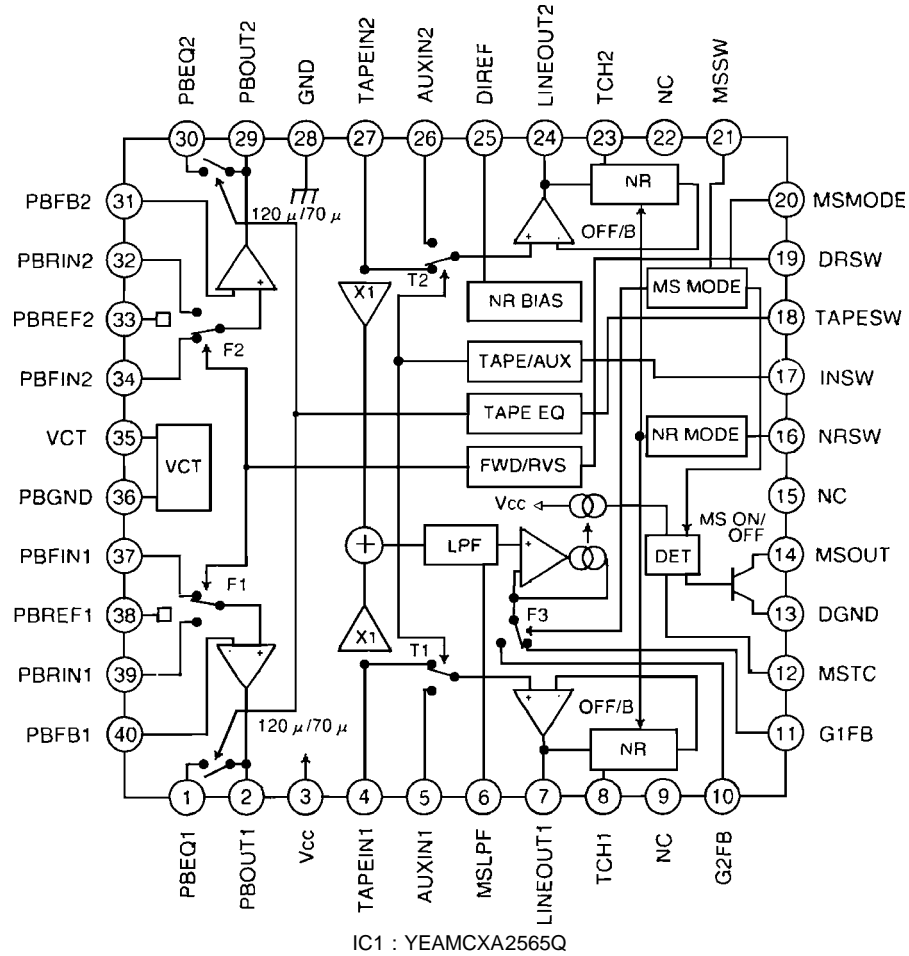
RIP STBY MUTE CLIP
IC310 : C1BA00000332



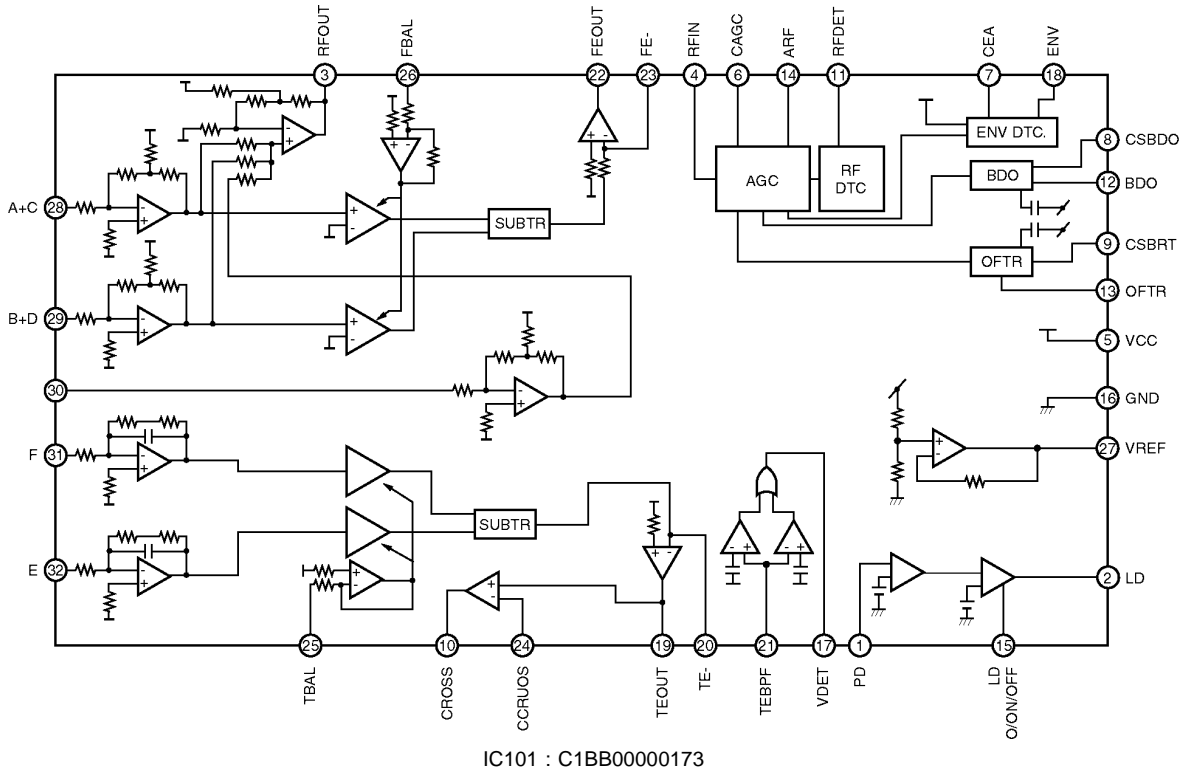
IC603 : C3EBCG000037

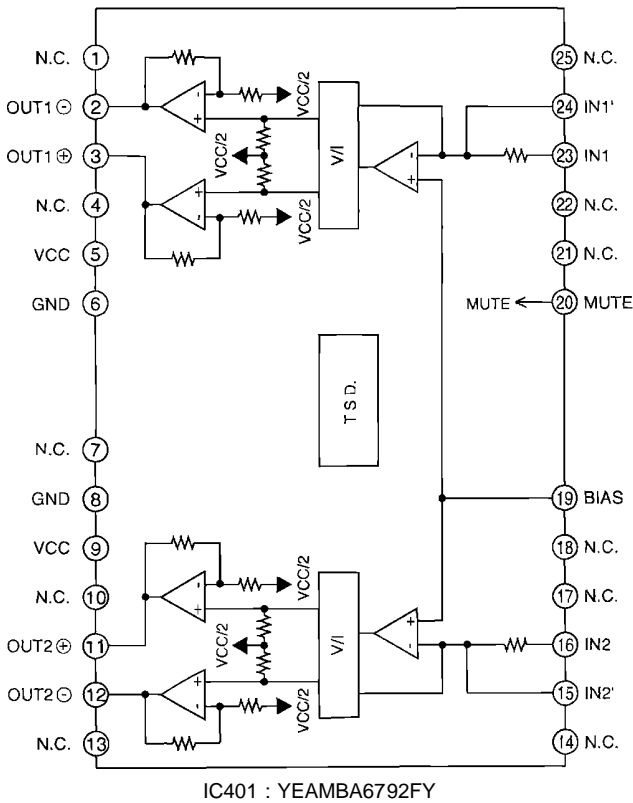
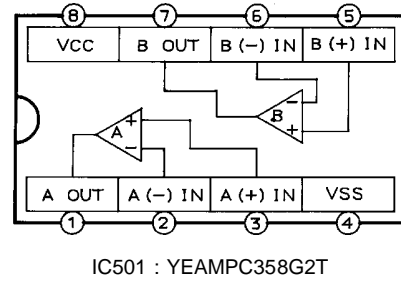
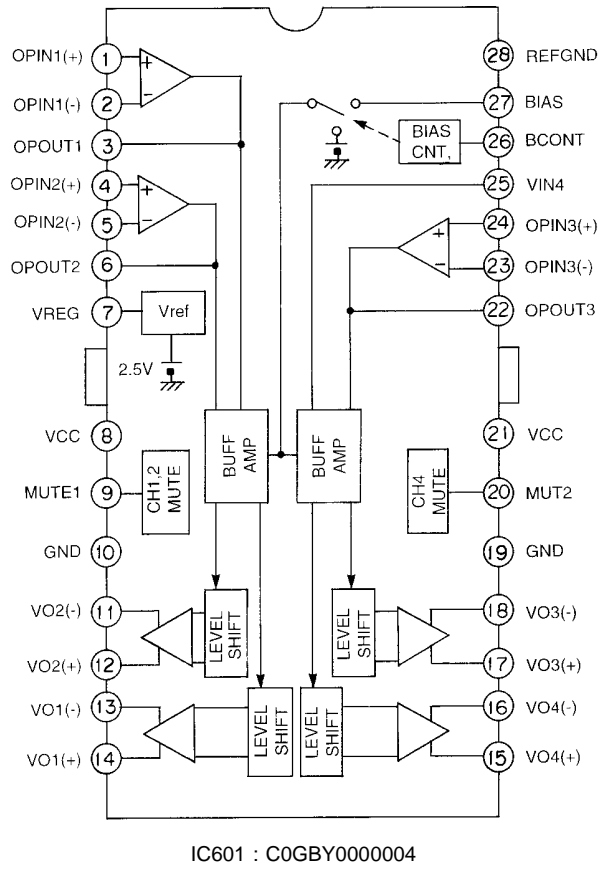
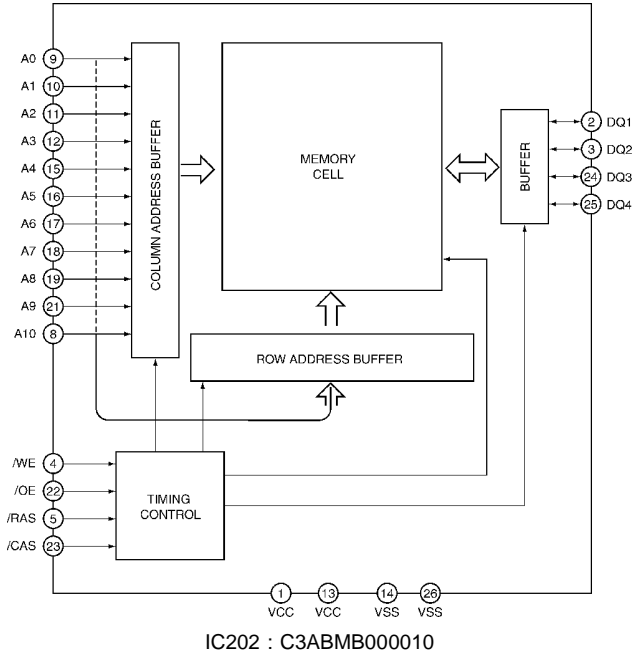
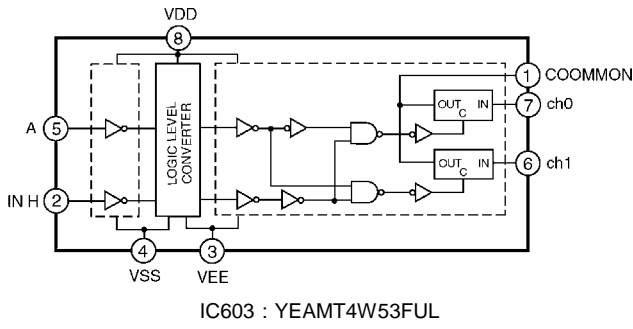


12.2. Tape Block

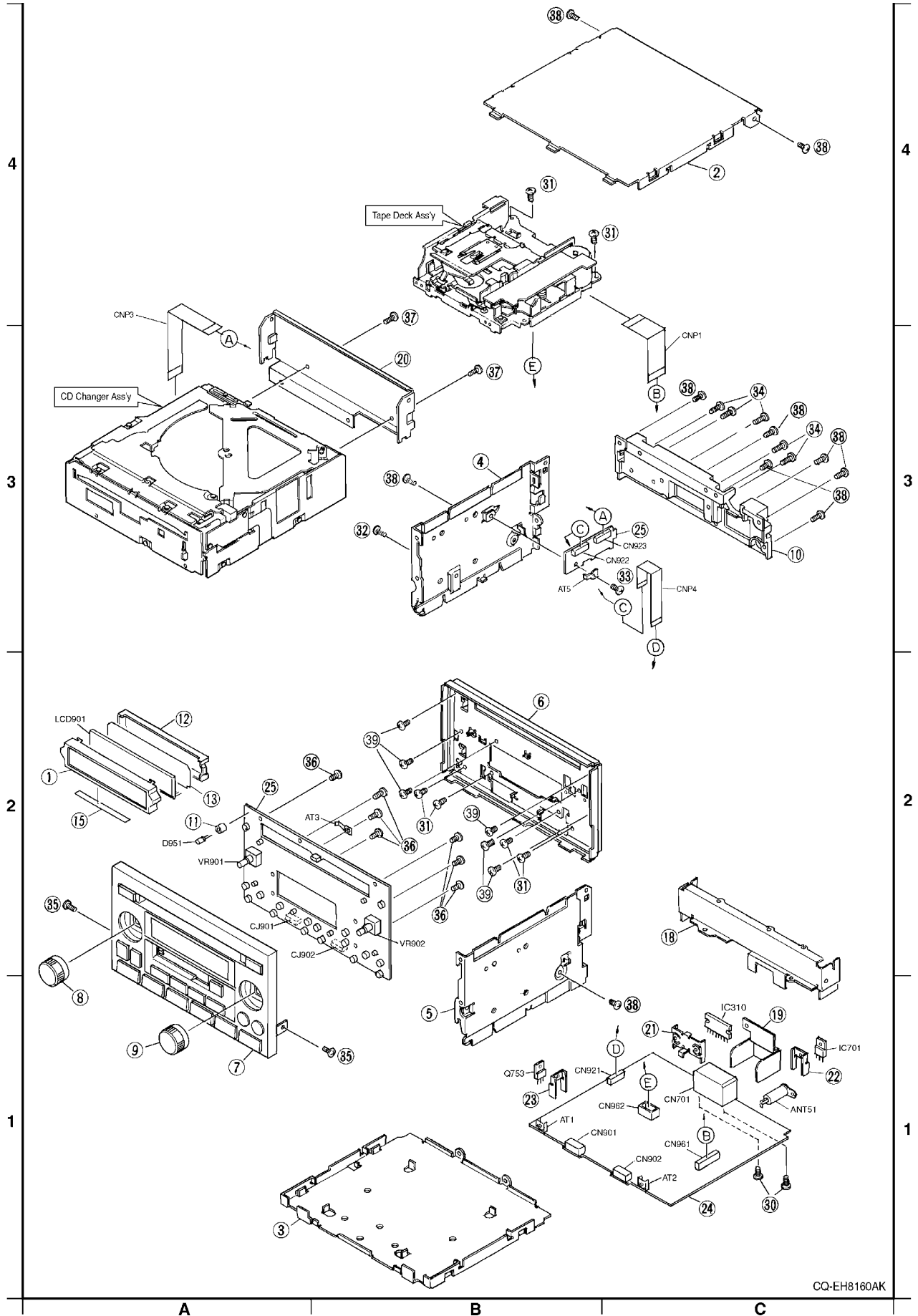


12.3. CD Servo Block



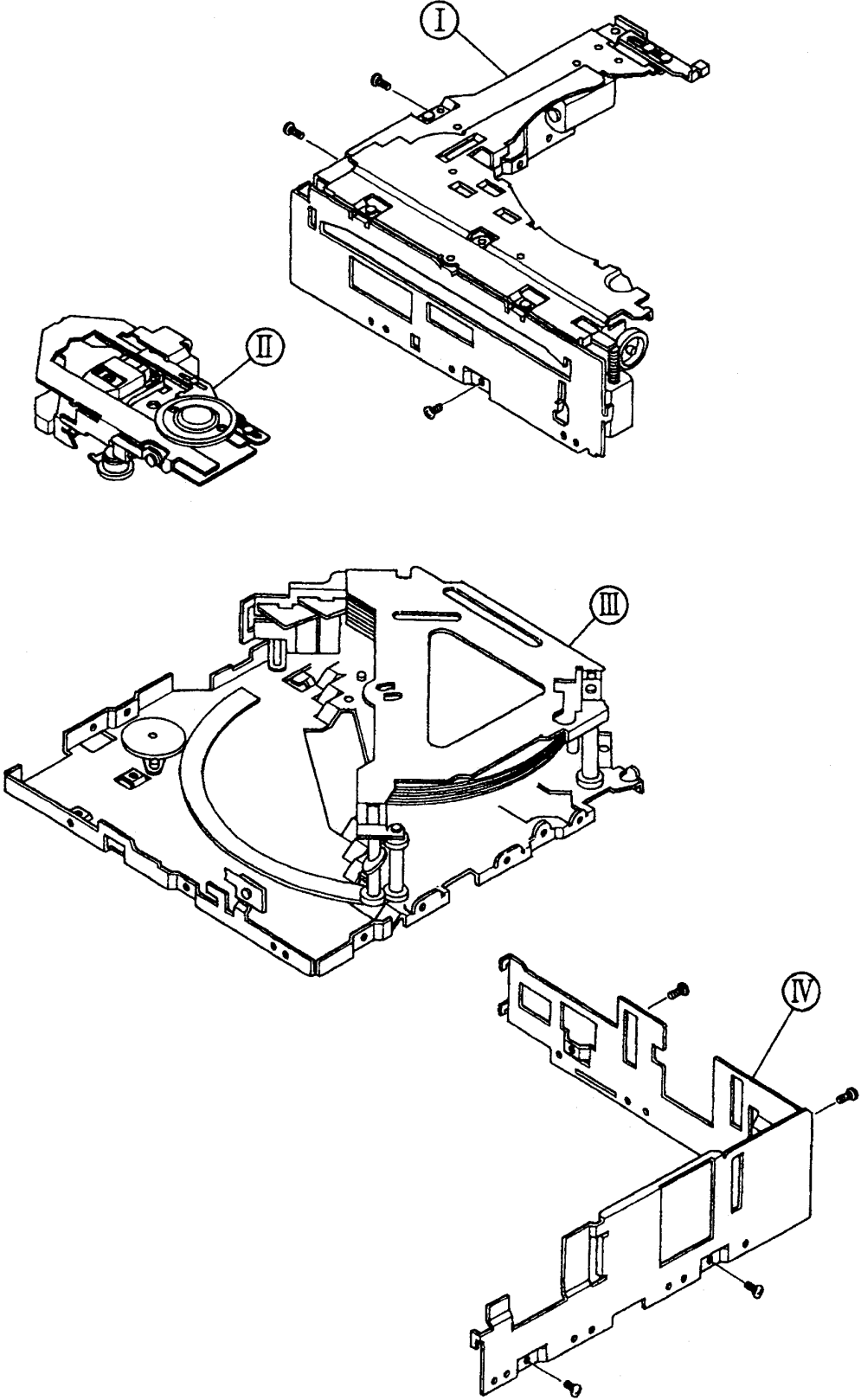


14 EXPLODED VIEW (Unit)

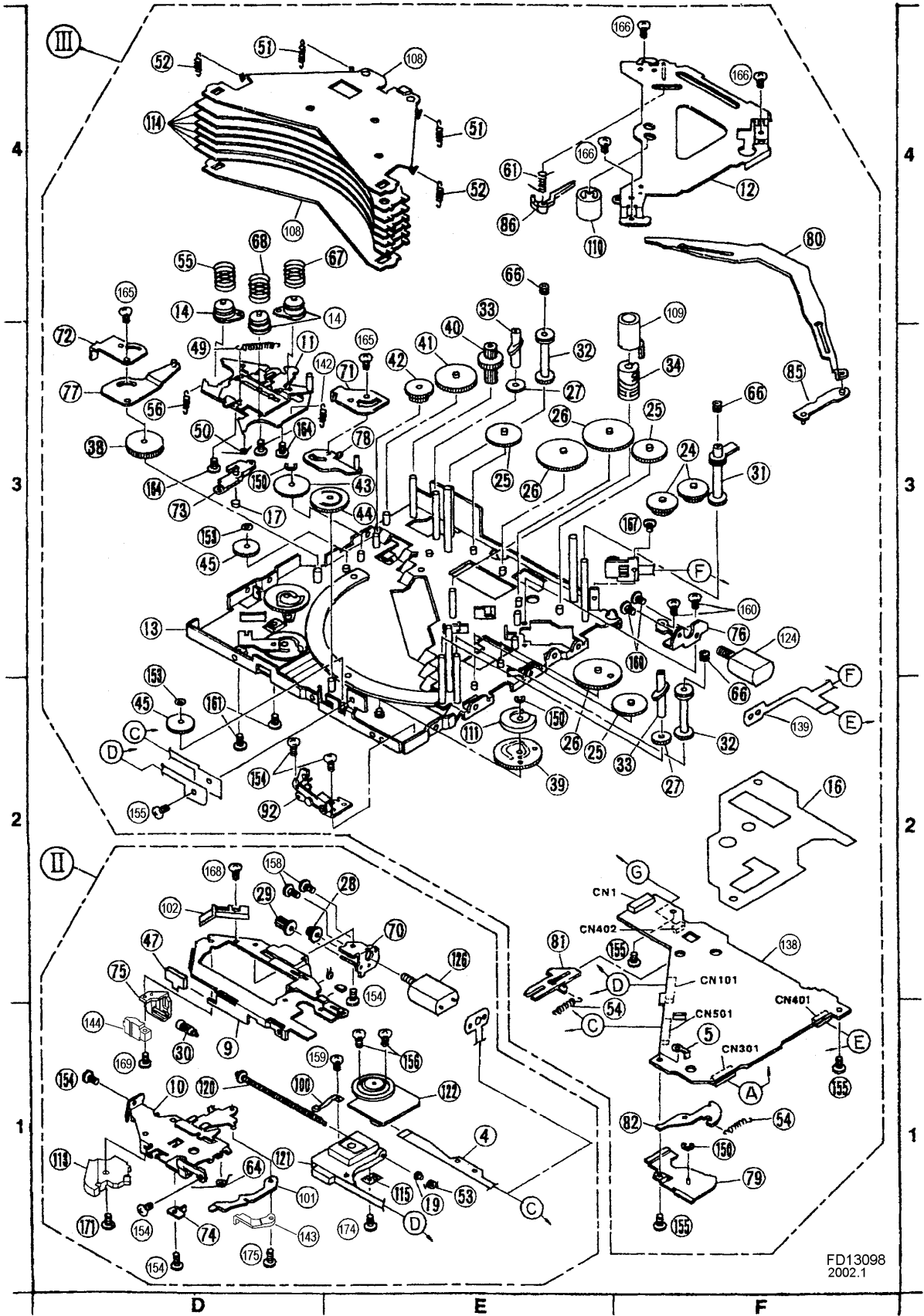


CQ-EH8160AK

16 EXPLODED VIEW (CD Deck-1)

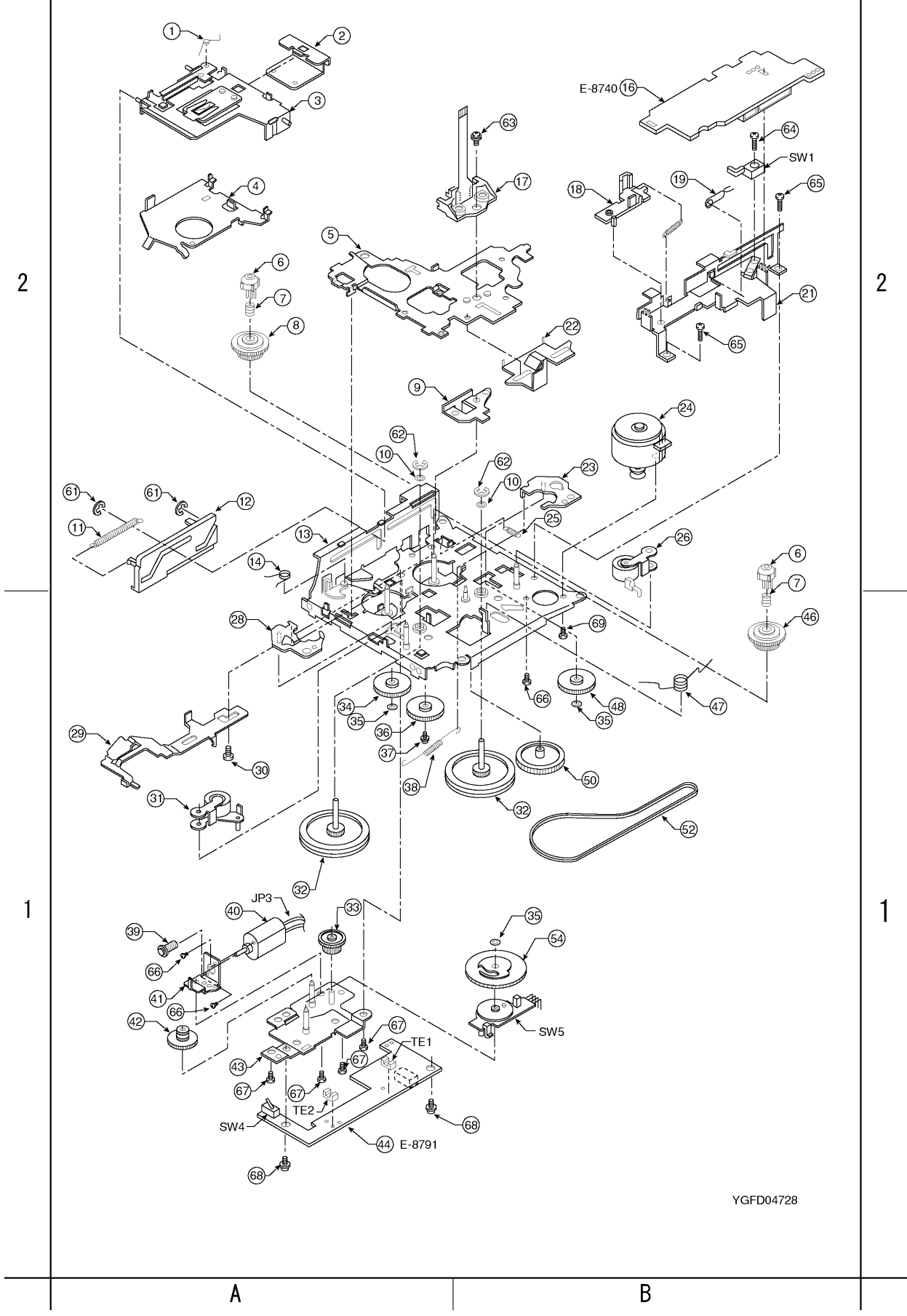


18 EXPLODED VIEW (CD Deck-3)



FD13098
2002.1

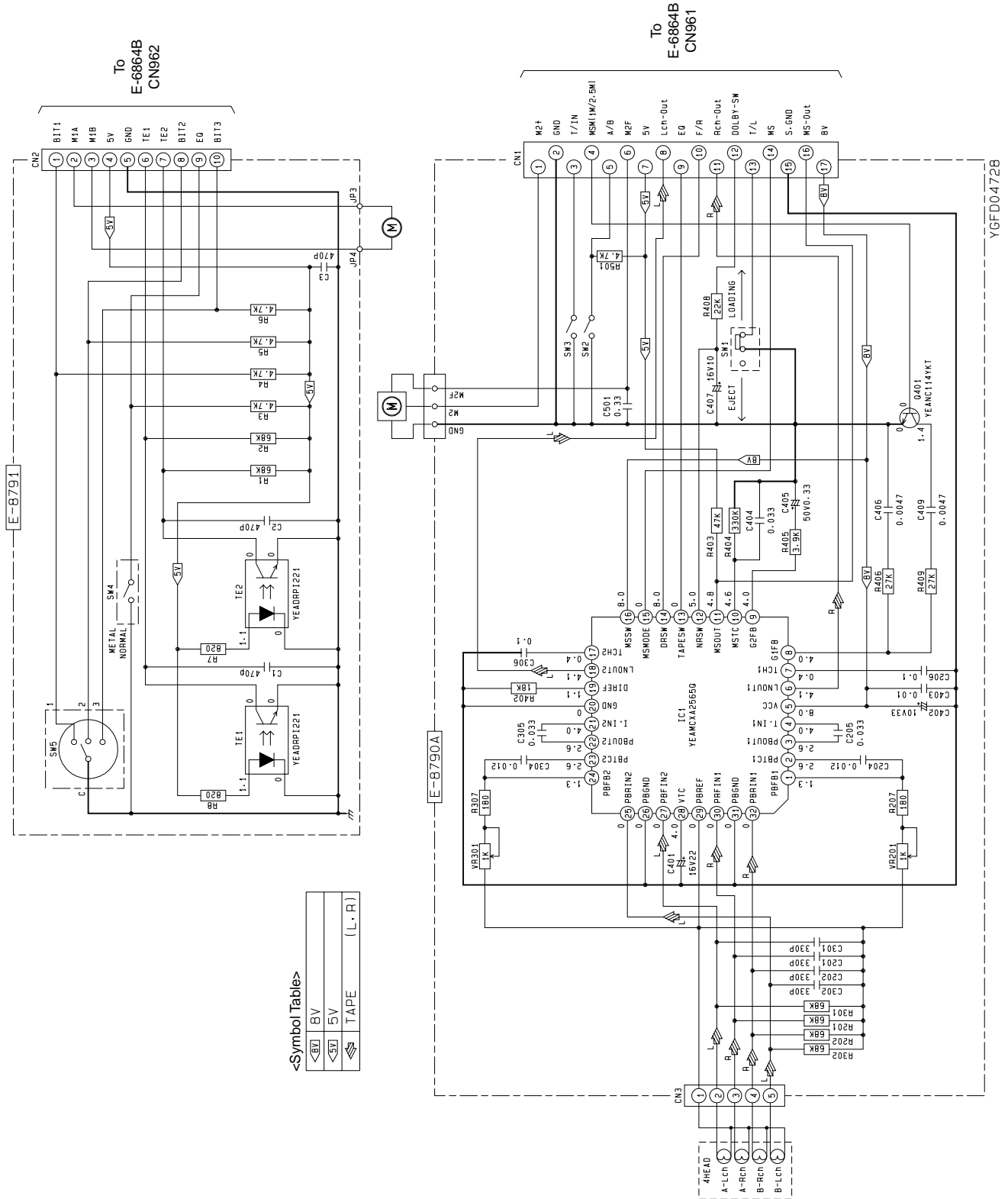
20 EXPLODED VIEW (Tape Deck)



YGFD04728

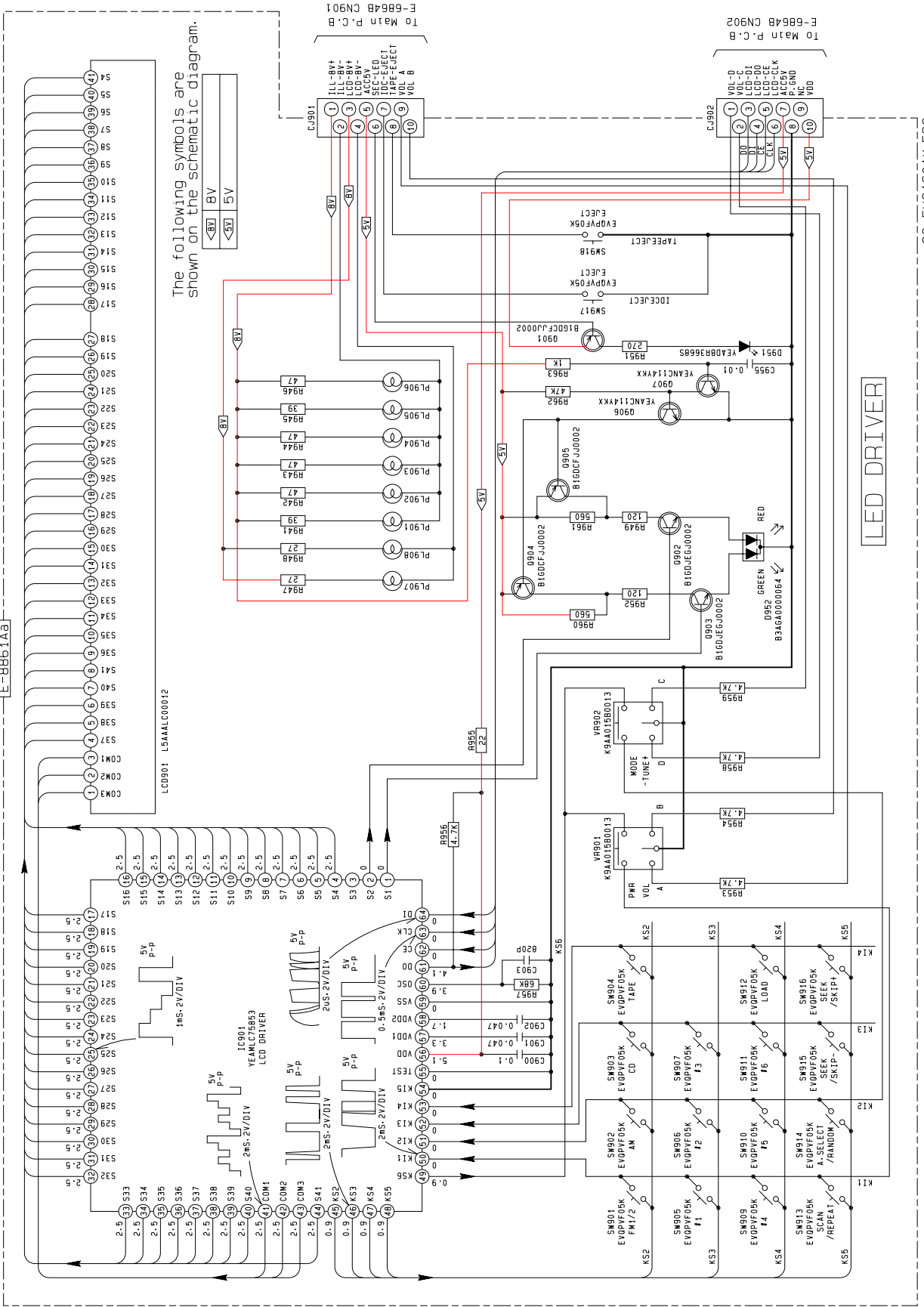
22 SCHEMATIC DIAGRAM (1)

22.1. Tape Block

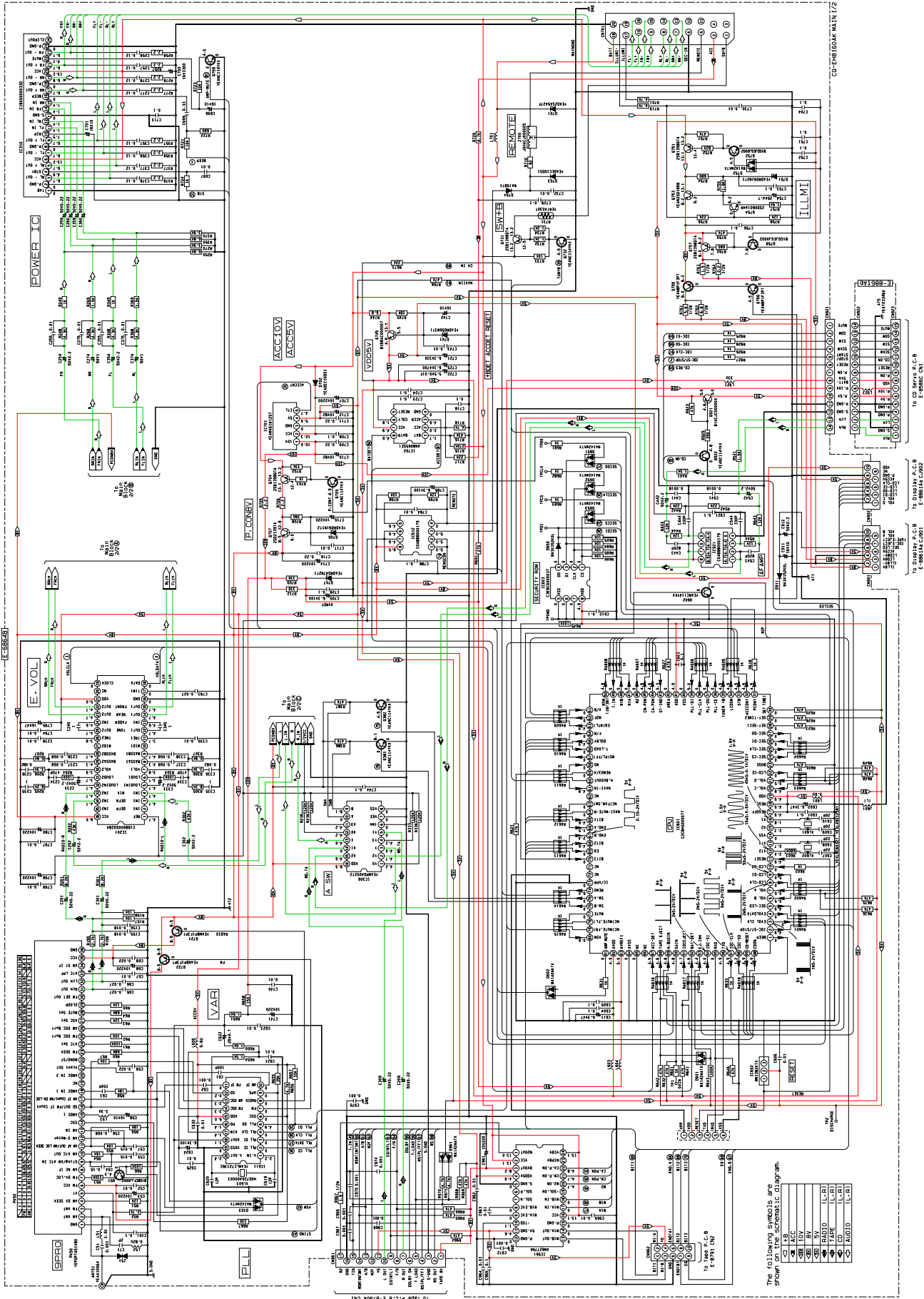


23 SCHEMATIC DIAGRAM (2)

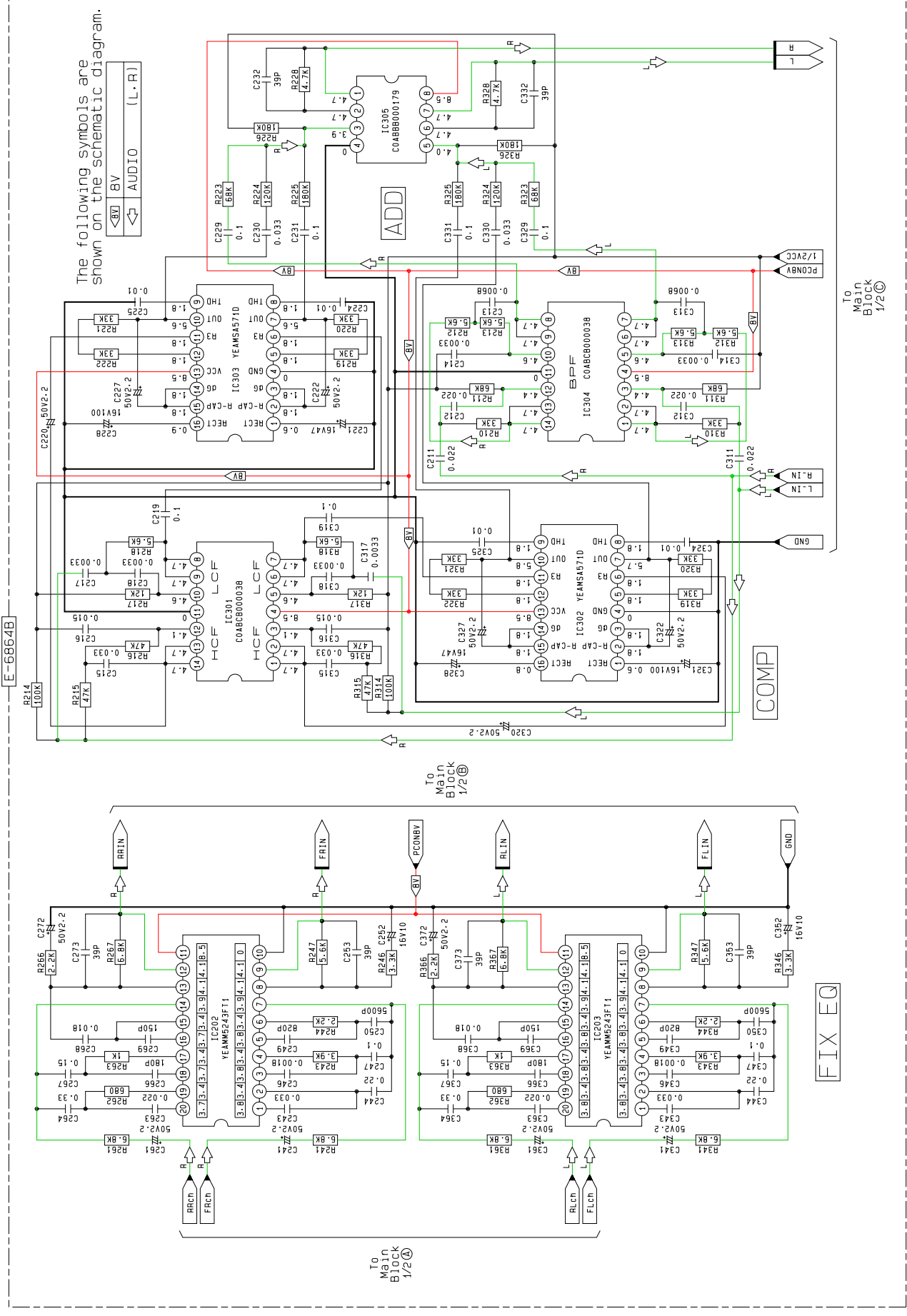
23.1. Display Block



23.2. Main Block -1



23.3. Main Block - 2



The following symbols are shown on the schematic diagram.

BV
 AUDIO (L, R)

To Main Block 1/2

To Main Block 1/2

FIX EQ

COMP

ADD

23.4. CD Servo Block

The following symbols are shown on the schematic diagram.

- <WB 10V
- <SB 1.5V
- <LCD (L,R)

