


**Pioneer** *sound.vision.soul*

***Service  
Manual***

**TOYOTA**

ORDER NO.  
**CRT3021**

 **LEXUS RX330**  
**AUDIO SYSTEM**  
**HEAD UNIT**

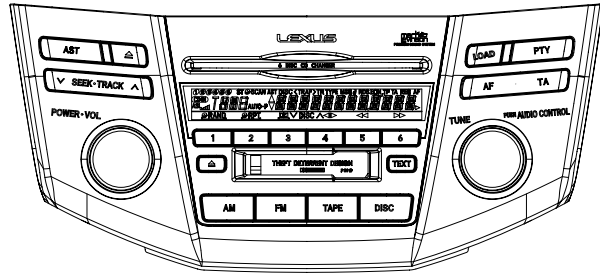
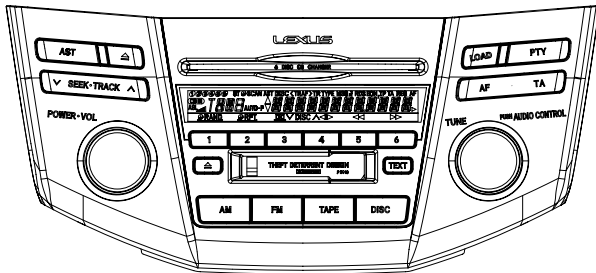
VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LEXUS RX330	EUROPE	February 2003	86120-48210	P3918	FX-MG8037ZT/EW
			86120-48350	P3918	FX-MG8037ZT-91/EW
			86120-48230	P3919	FX-MG8137ZT/EW
			86120-48370	P3919	FX-MG8137ZT-91/EW



For details, refer to "Important symbols for good services".

FX-MG8037ZT/EW(P3918)

FX-MG8137ZT/EW(P3919)



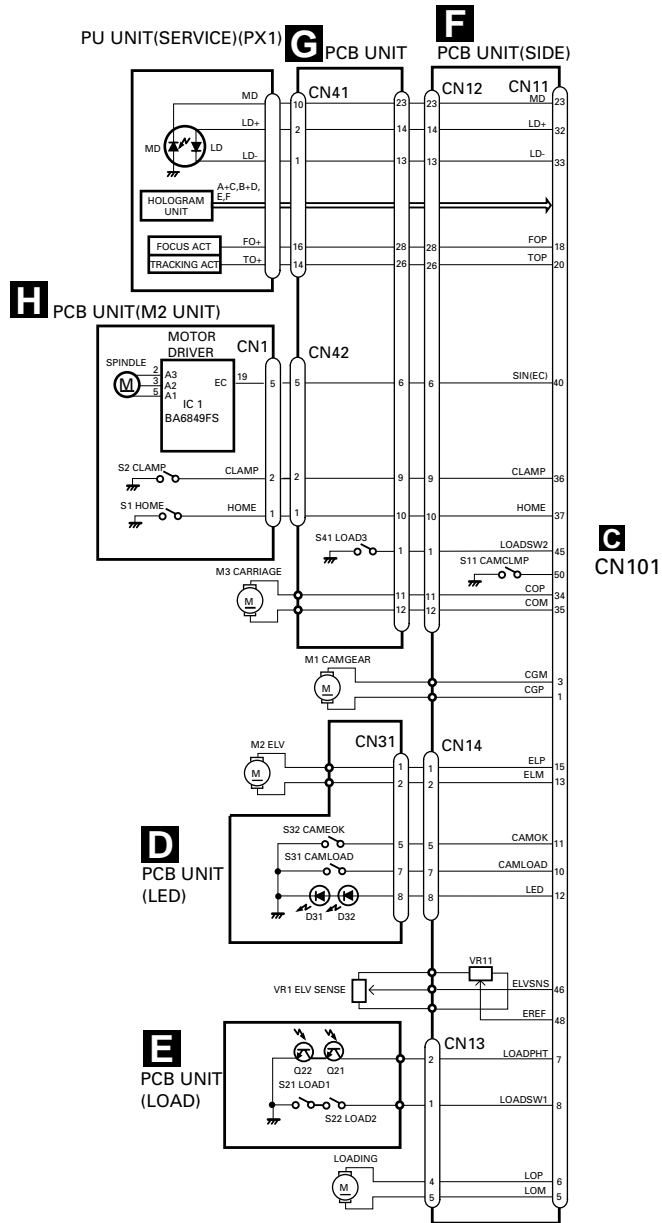
● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-1011	CRT2406	3L	Cassette Mech. Module:Mech.Description, Disassembly
CX-951	CRT2872	G2	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

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

### 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

#### 3.1 BLOCK DIAGRAM(1)



# 3.2 BLOCK DIAGRAM(2)

A

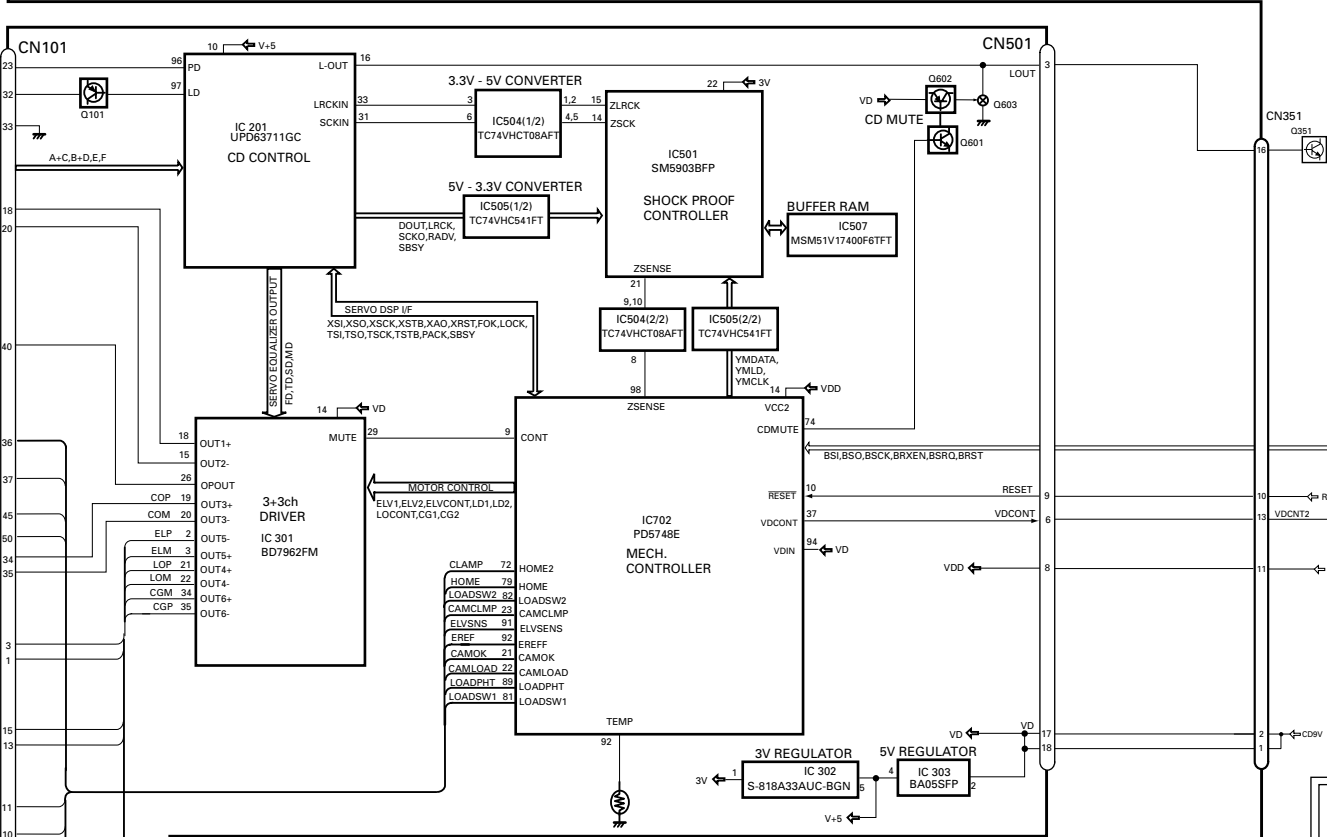
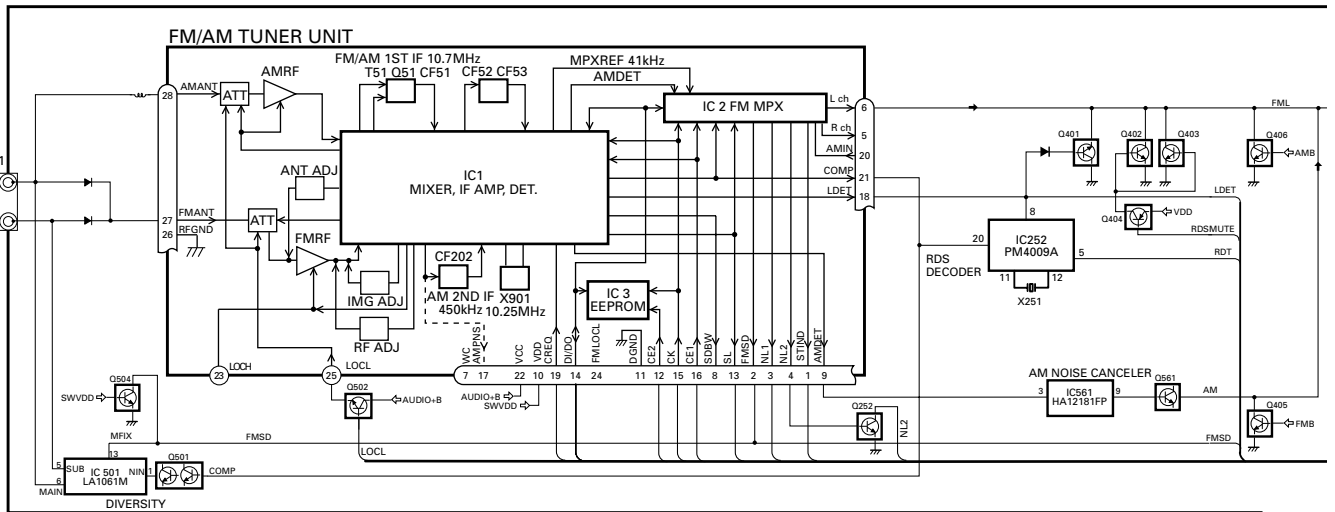
B

C

D

E

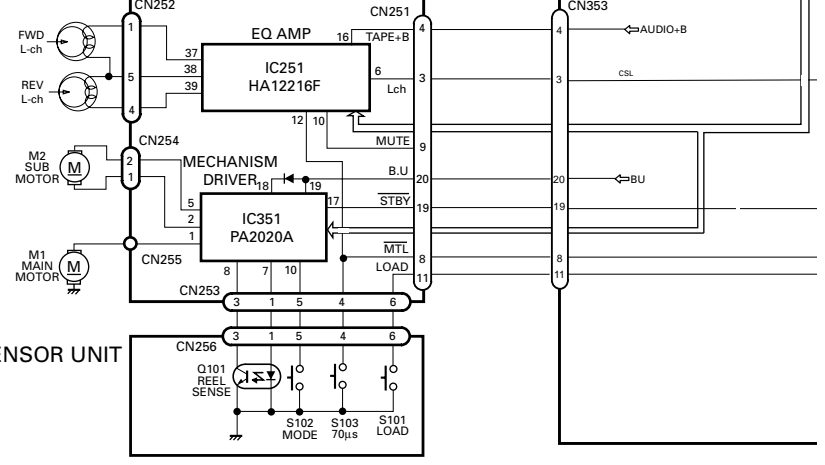
F

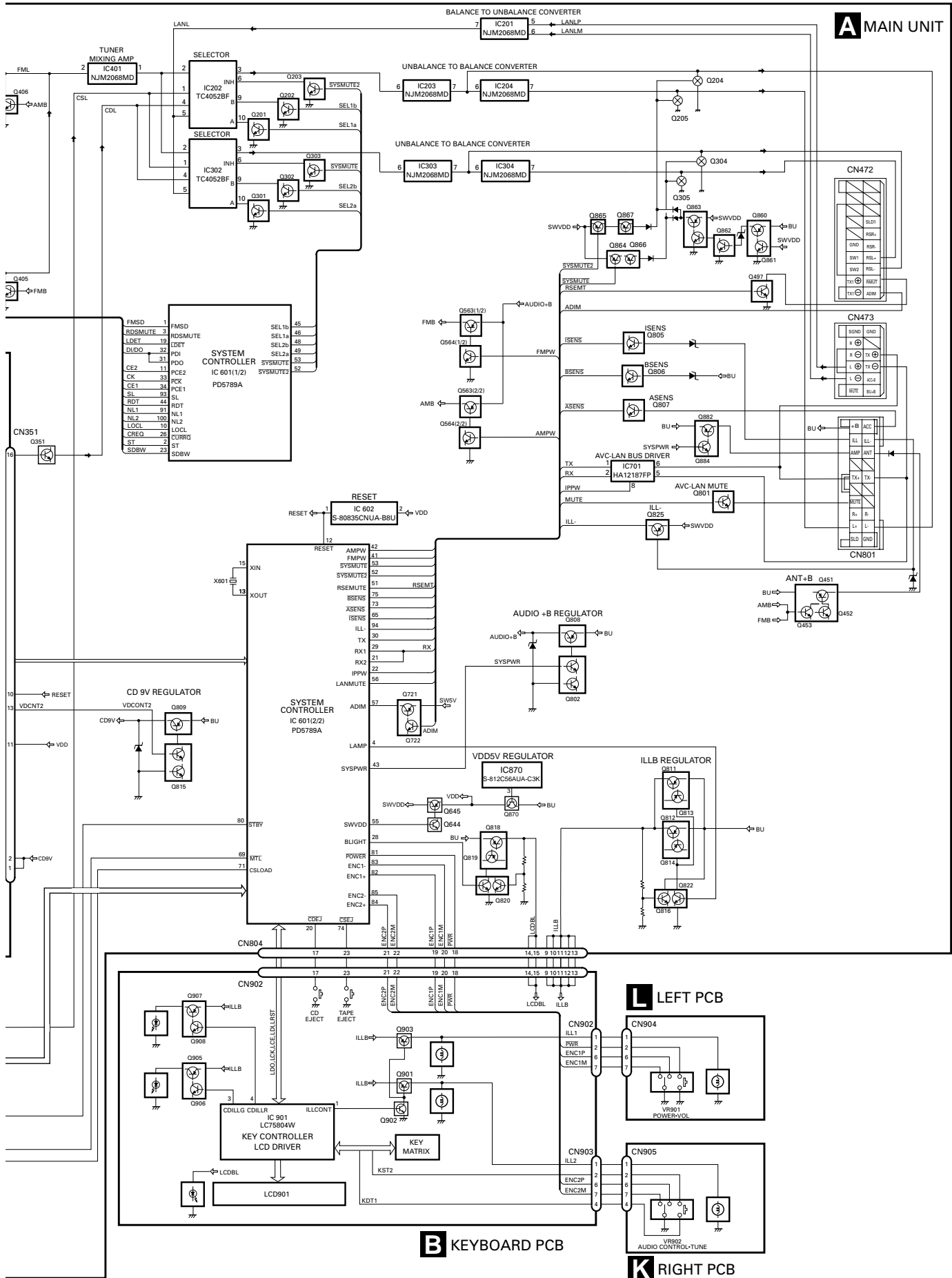


## G CONTROL UNIT (G2T)

## I DECK UNIT

## J SENSOR UNIT





A

B

C

D

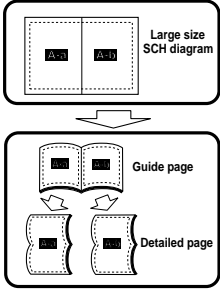
E

F

# 3.3 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A



# A-a

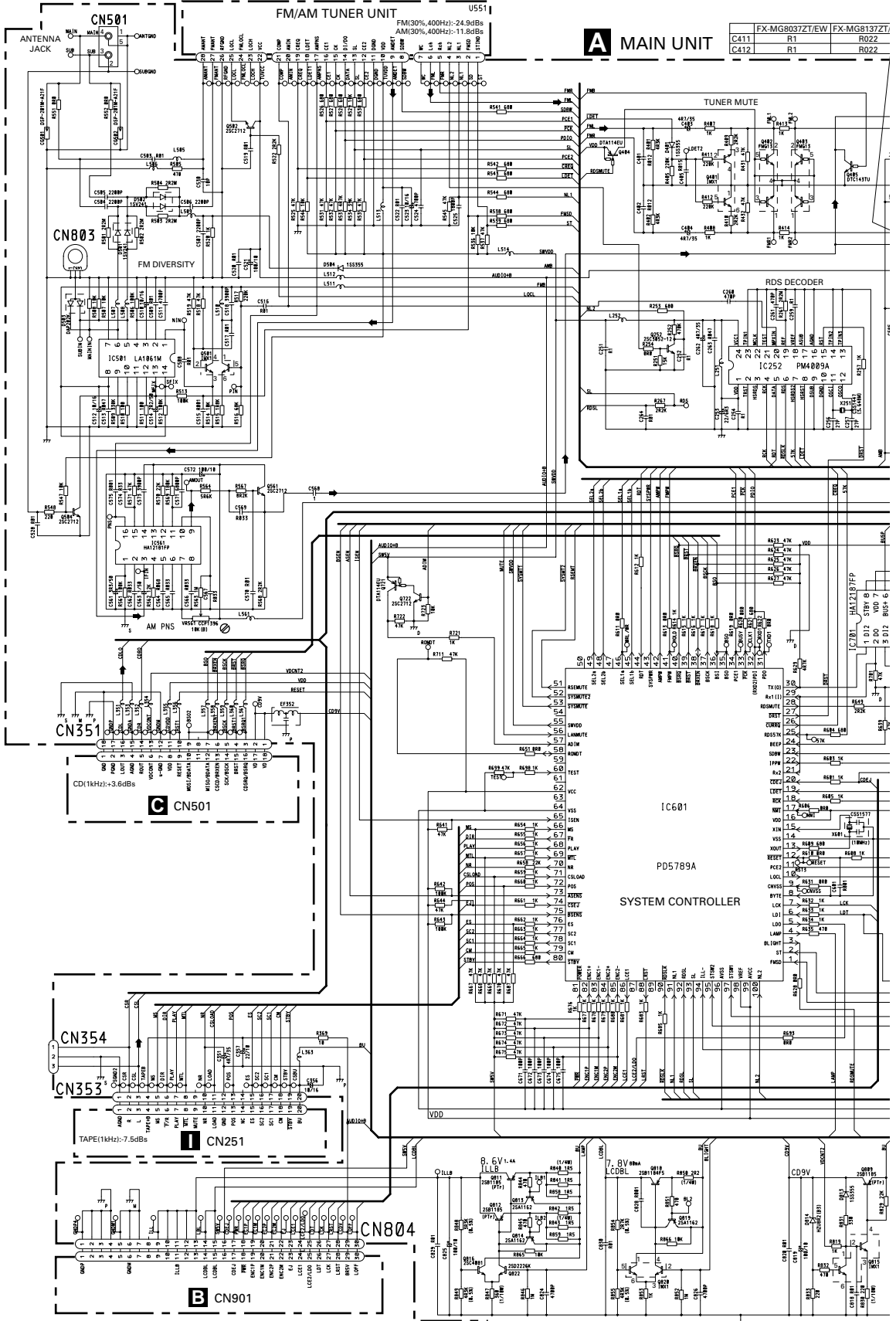
B

C

D

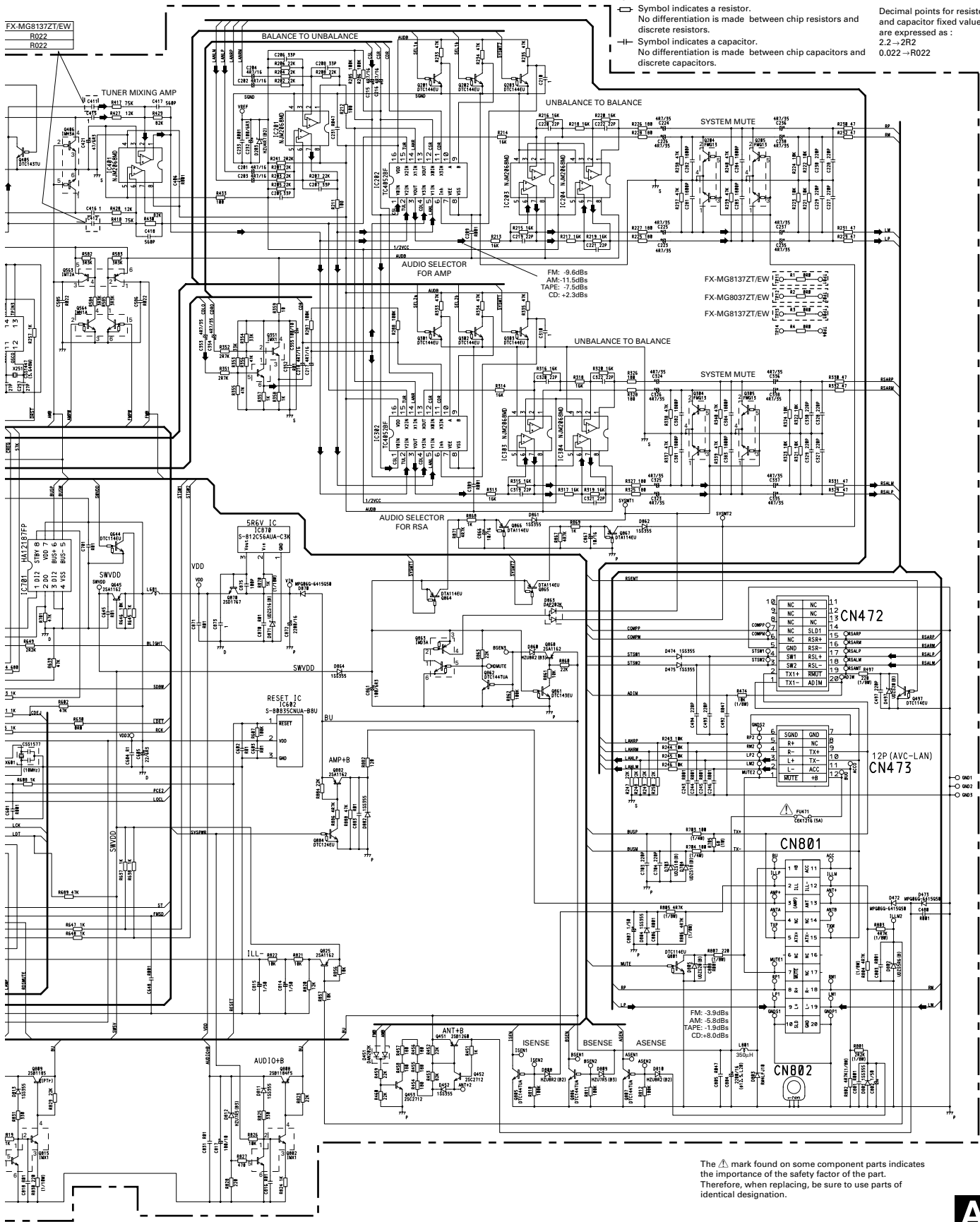
E

F



# A

# A-b



NOTE :  
 □ Symbol indicates a resistor.  
 No differentiation is made between chip resistors and discrete resistors.  
 □ Symbol indicates a capacitor.  
 No differentiation is made between chip capacitors and discrete capacitors.

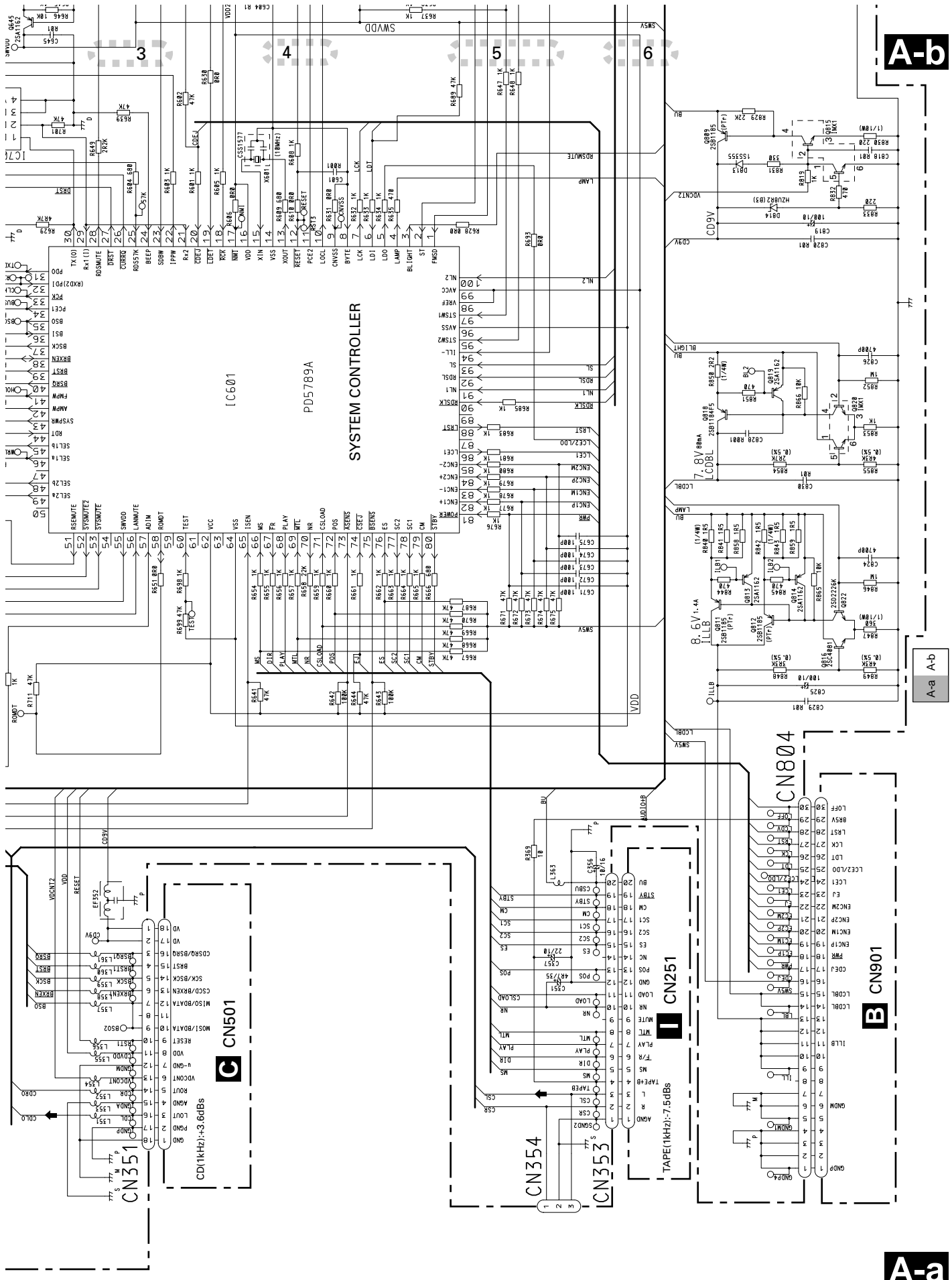
Decimal points for resistor and capacitor fixed values are expressed as :  
 2.2 → 2R2  
 0.022 → R022

The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.









A-b

A-a

B CN901

CN804

CN554

CN553

CN551

CN501

A-a

A

B

C

D

E

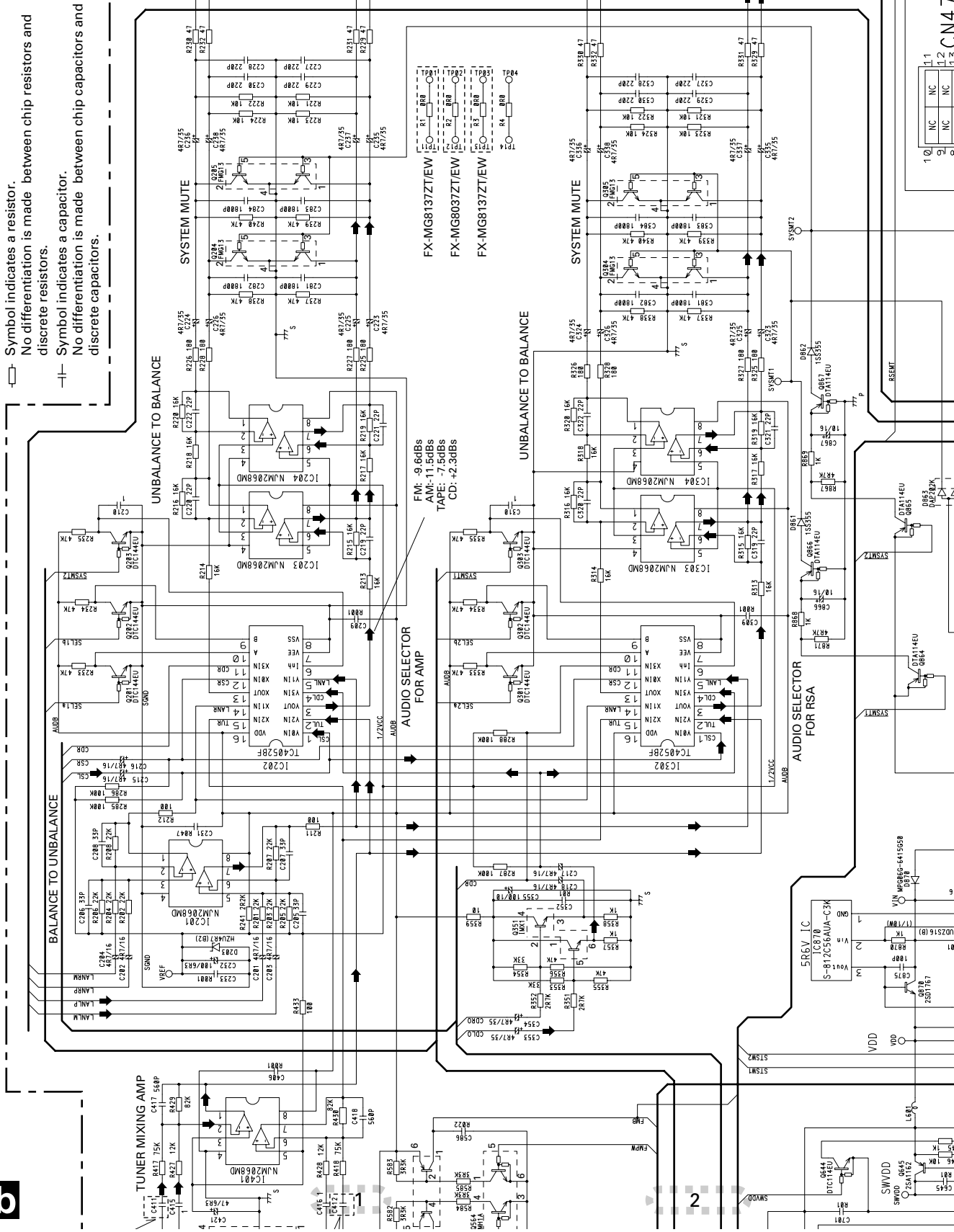
F

NOTE:

- Symbol indicates a resistor.
- No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor.
- No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:  
 2.2 → 2R2  
 0.022 → R022

A-a A-b



FX-MG8137ZT/EW  
 FX-MG8037ZT/EW  
 FX-MG8137ZT/EW

FM: -9.6dBs  
 AM: -11.5dBs  
 TAPE: -7.5dBs  
 CD: -2.3dBs

UNBALANCE TO BALANCE

UNBALANCE TO BALANCE

AUDIO SELECTOR FOR AMP

AUDIO SELECTOR FOR RSA

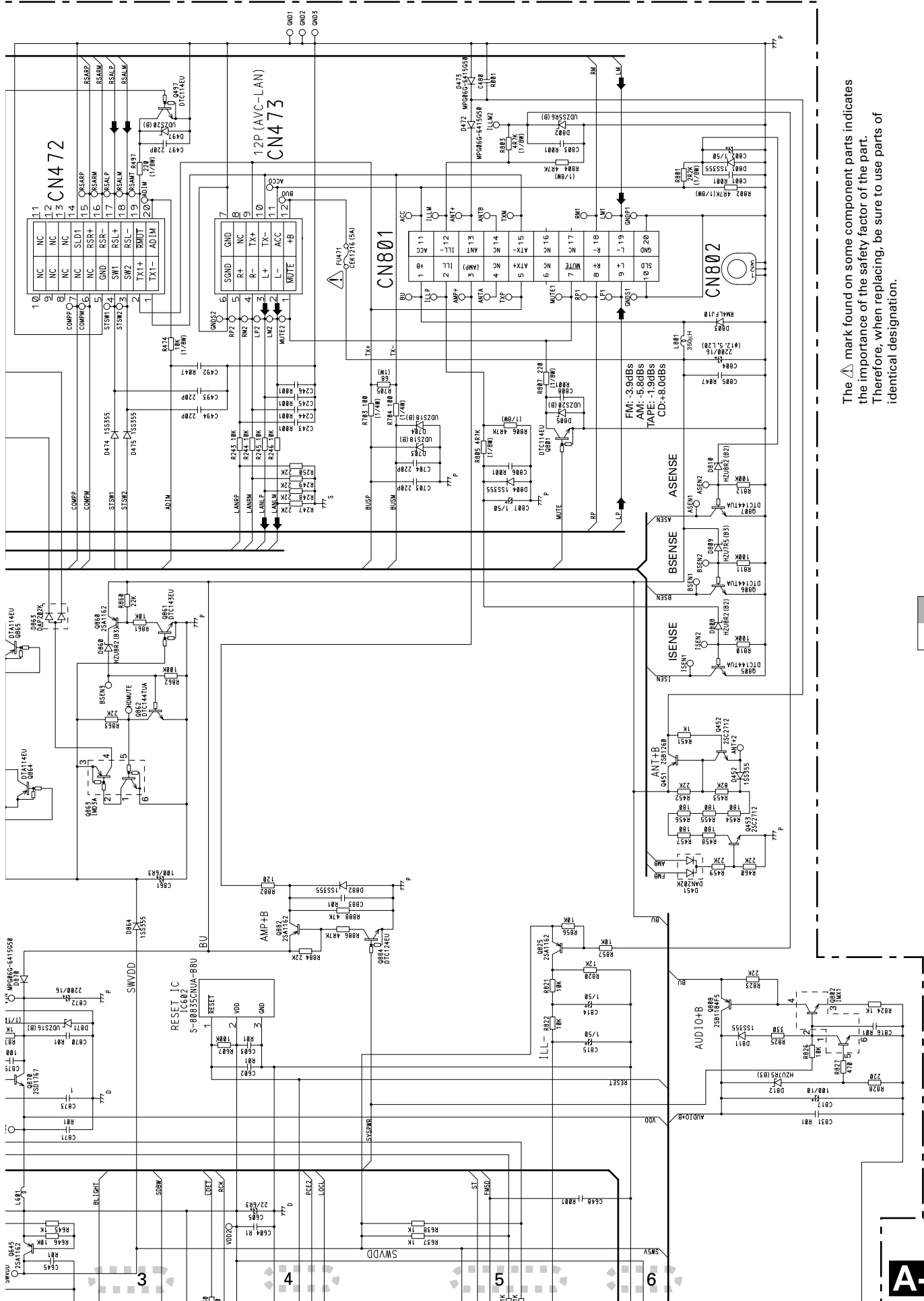
TUNER MIXING AMP

BALANCE TO UNBALANCE

SYSTEM MUTE

10	NC	11	NC
9	NC	12	NC

CN477



The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A-a

A-b

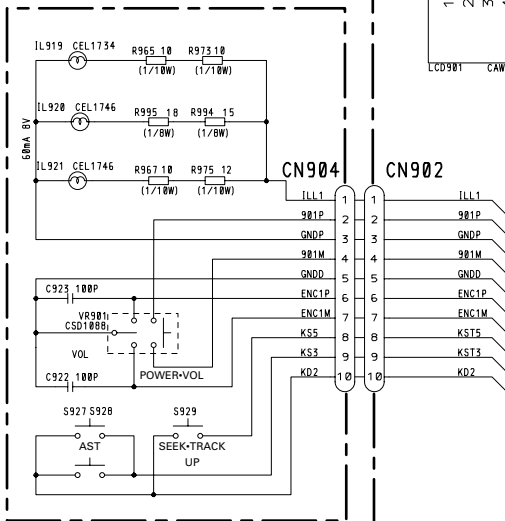
# 3.4 KEYBOARD UNIT

A

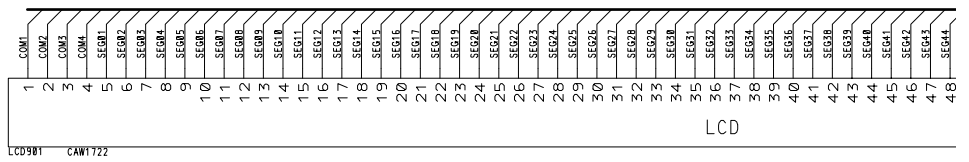
## B KEYBOARD PCB

B

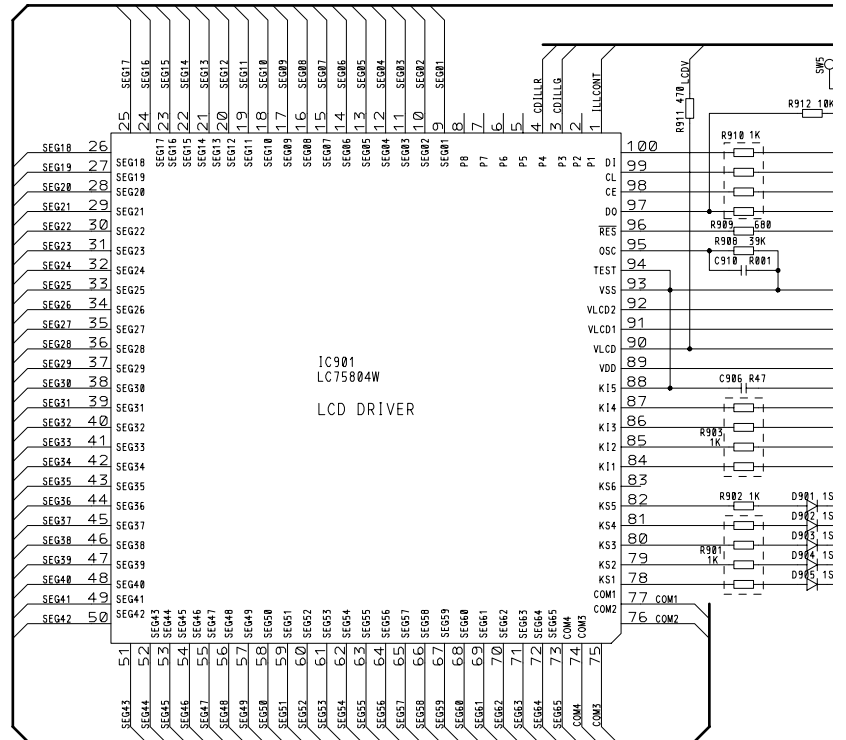
### L LEFT PCB



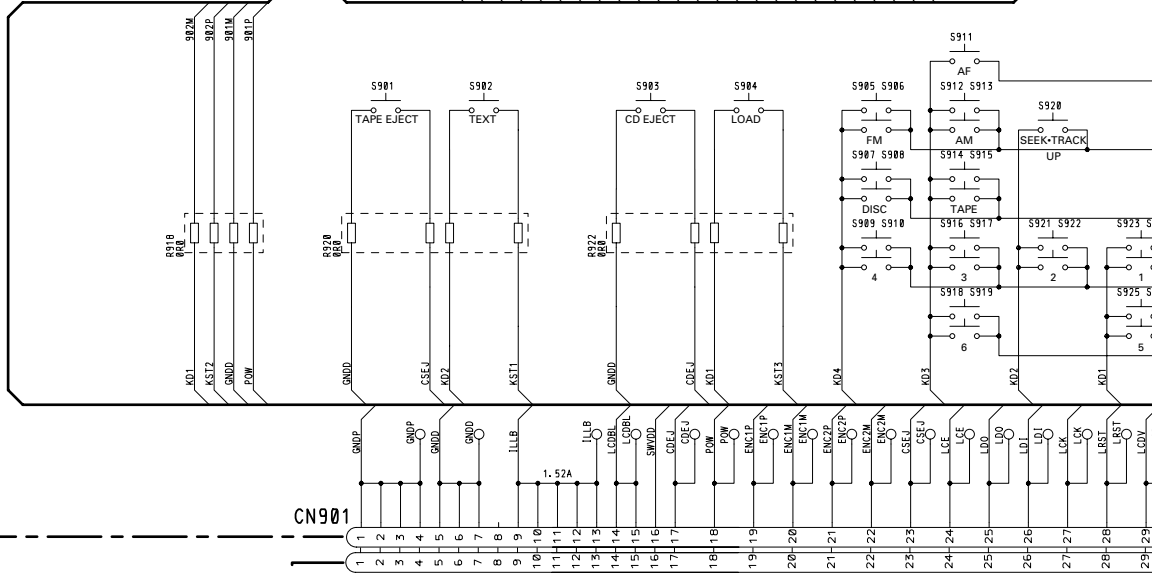
C



D



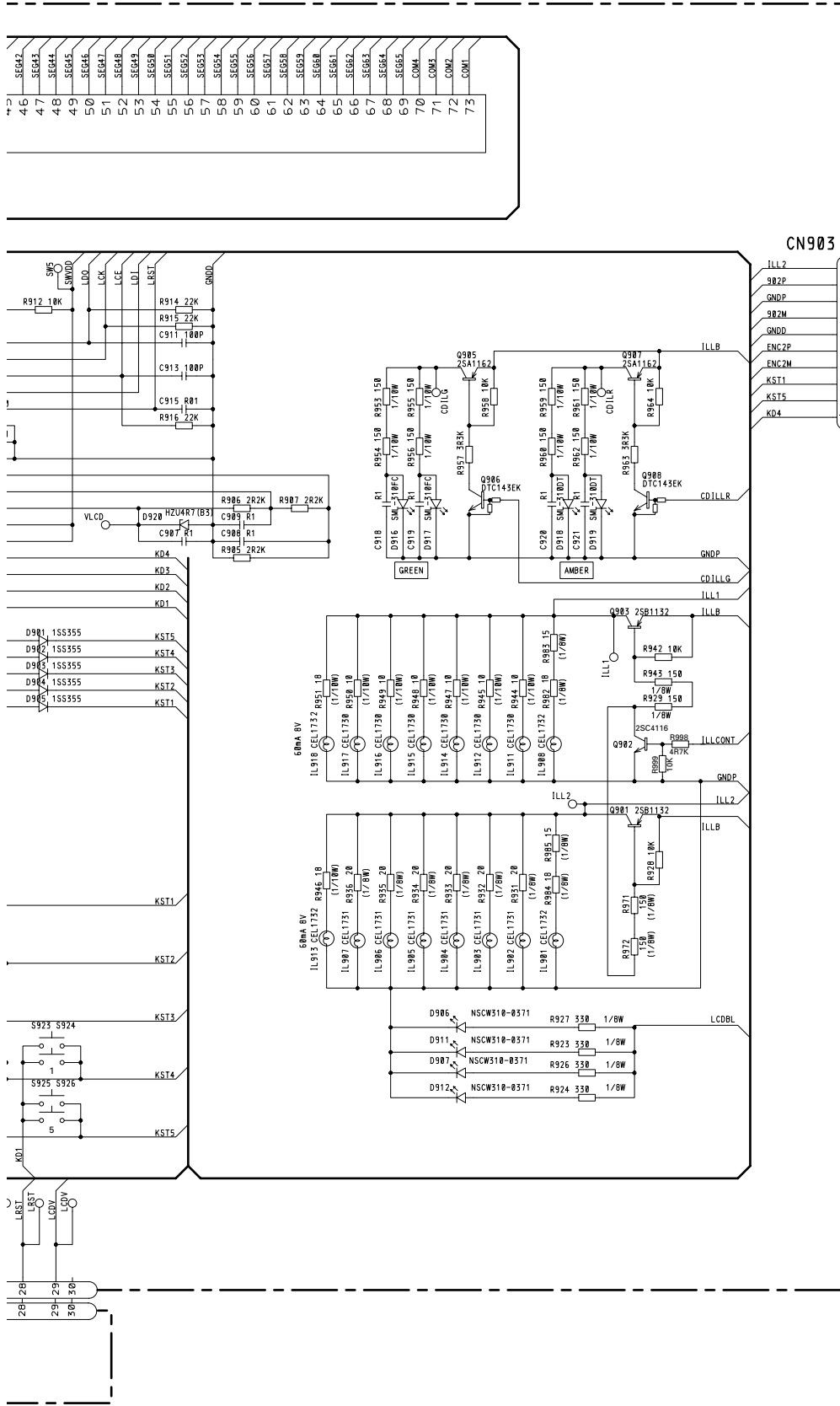
E



F

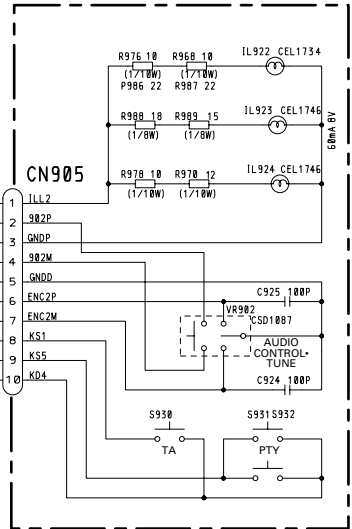
### B L

### A CN804



46	SEC642
47	SEC643
48	SEC644
49	SEC645
50	SEC646
51	SEC647
52	SEC648
53	SEC649
54	SEC650
55	SEC651
56	SEC652
57	SEC653
58	SEC654
59	SEC655
60	SEC656
61	SEC657
62	SEC658
63	SEC659
64	SEC660
65	SEC661
66	SEC662
67	SEC663
68	SEC664
69	SEC665
70	COM4
71	COM5
72	COM2
73	COM1

**K RIGHT PCB**



**KEYBOARD UNIT**  
 Consists of  
 KEYBOARD PCB  
 RIGHT PCB  
 LEFT PCB

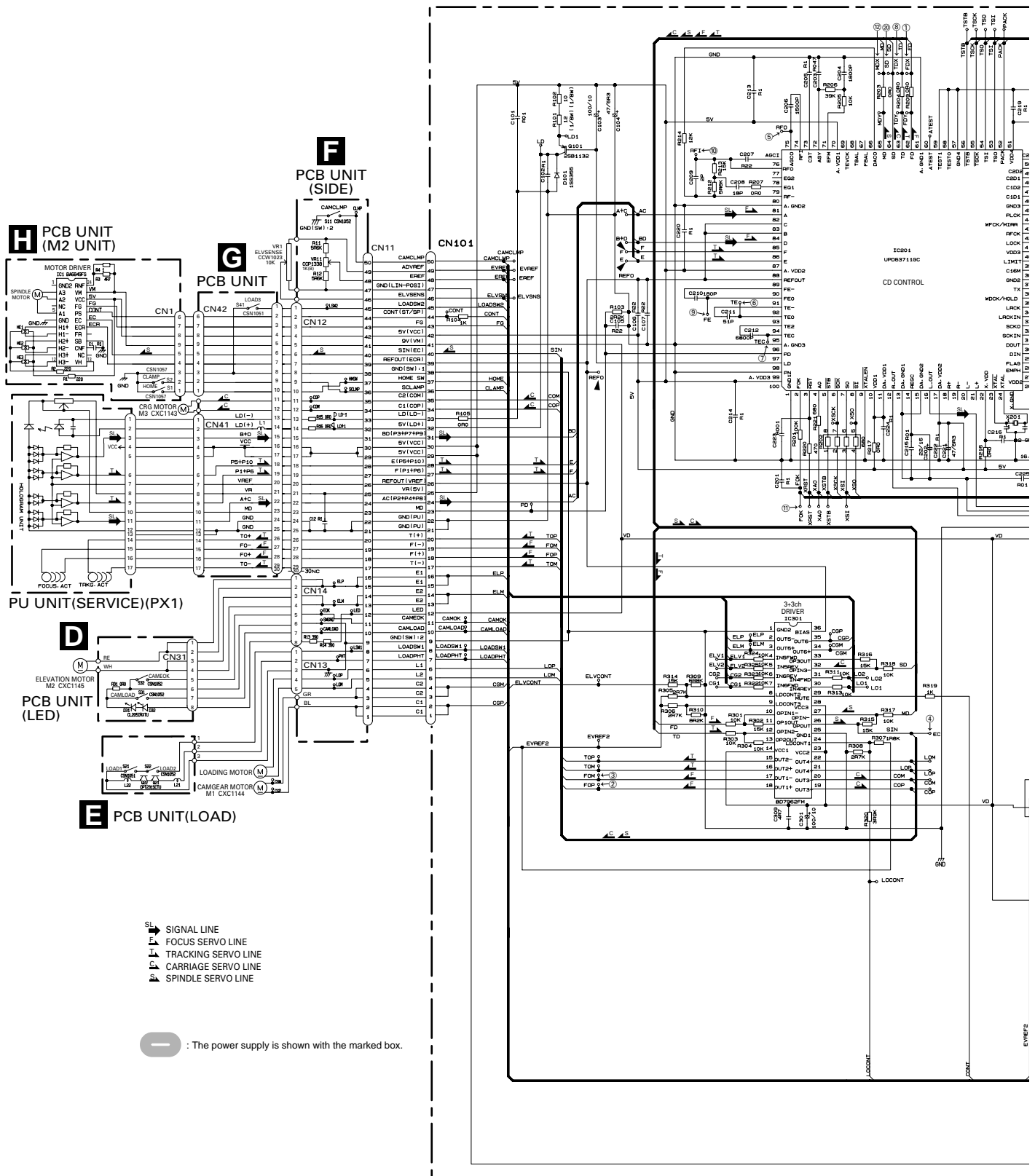
A  
B  
C  
D  
E  
F



# 3.5 CD MECHANISM MODULE(GUIDE PAGE)

## C-a

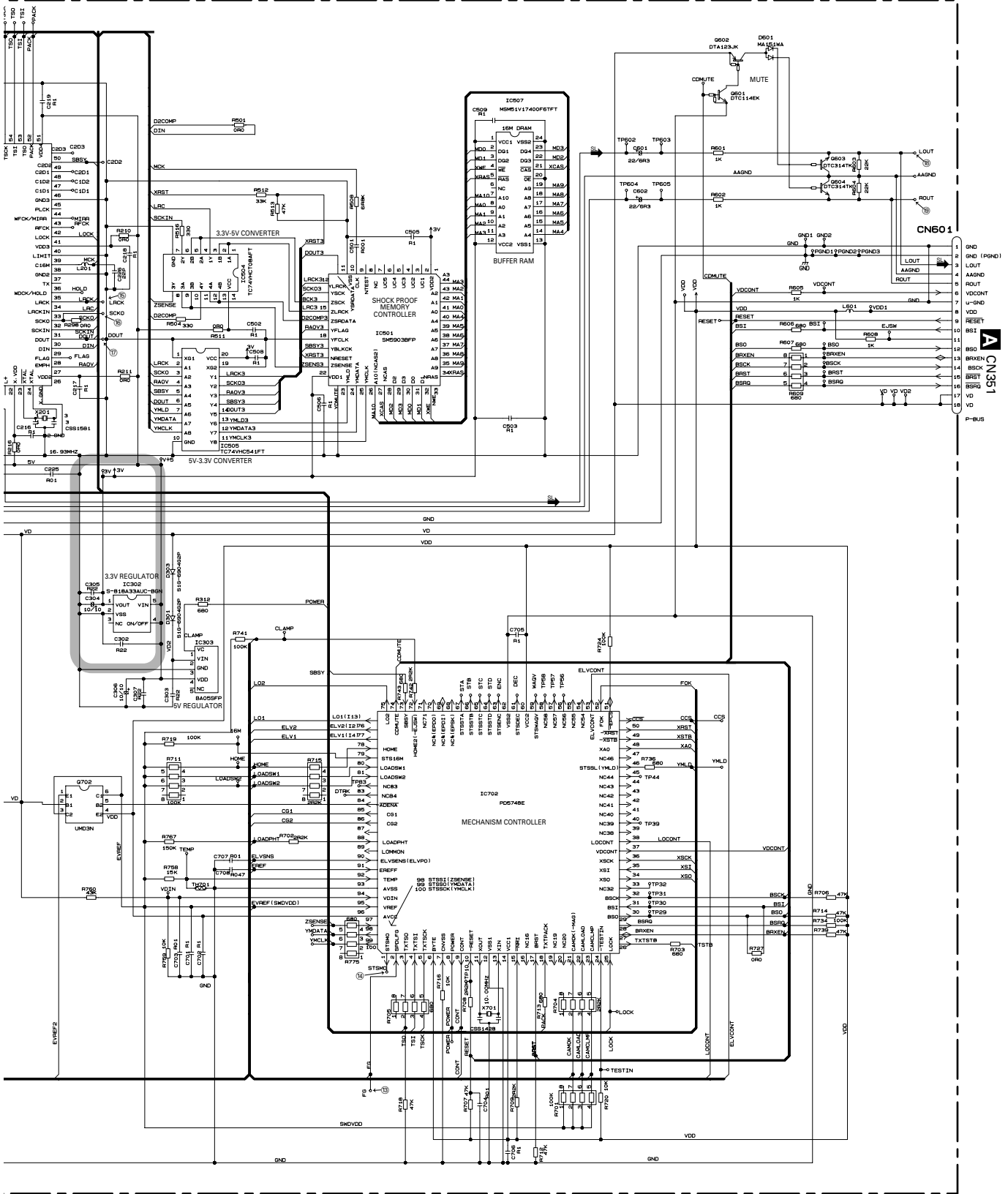
A  
B  
C  
D  
E  
F



**C D E F G H**



C CONTROL UNIT(G2T)



A

B

C

D

E

F



1

2

3

4

32

FX-MG8037ZT/EW

C-a F G H

F

E

D

C

B

A

C-a C-b

C-b

The diagram illustrates the electrical connections between several PCB units:

- PCB UNIT (M2 UNIT):** Features a MOTOR DRIVER (IC1) and SPINDLE MOTOR. It includes pins for VRI, ELVSENSE, and various motor control signals (A1-A3, H1-H3).
- PCB UNIT (M3 UNIT):** Contains a CRG MOTOR (M3, CX1143) and a HOLOGRAM UNIT. It shows connections for VCC, GND, and motor control signals.
- PCB UNIT (SIDE):** Includes a CANCLAMP and various sensor and control pins like CANCLAMP, ELVREF, ELVSEN, and ELVSN.
- CD CONTROL:** Features an IC901 (UPD637166) and various control signals such as WFOCK/A, MDOCK/A, and LF. It includes a 3.3V DRIVER and various timing and control pins.
- PU UNIT (SERVICE)(PX1):** Shows connections for FOCUS, ACT, TRKG, and ACT signals.

The diagram also shows a detailed power supply section with a 5V regulator, decoupling capacitors (C101-C105), and various resistors (R101-R105) for signal conditioning and protection.

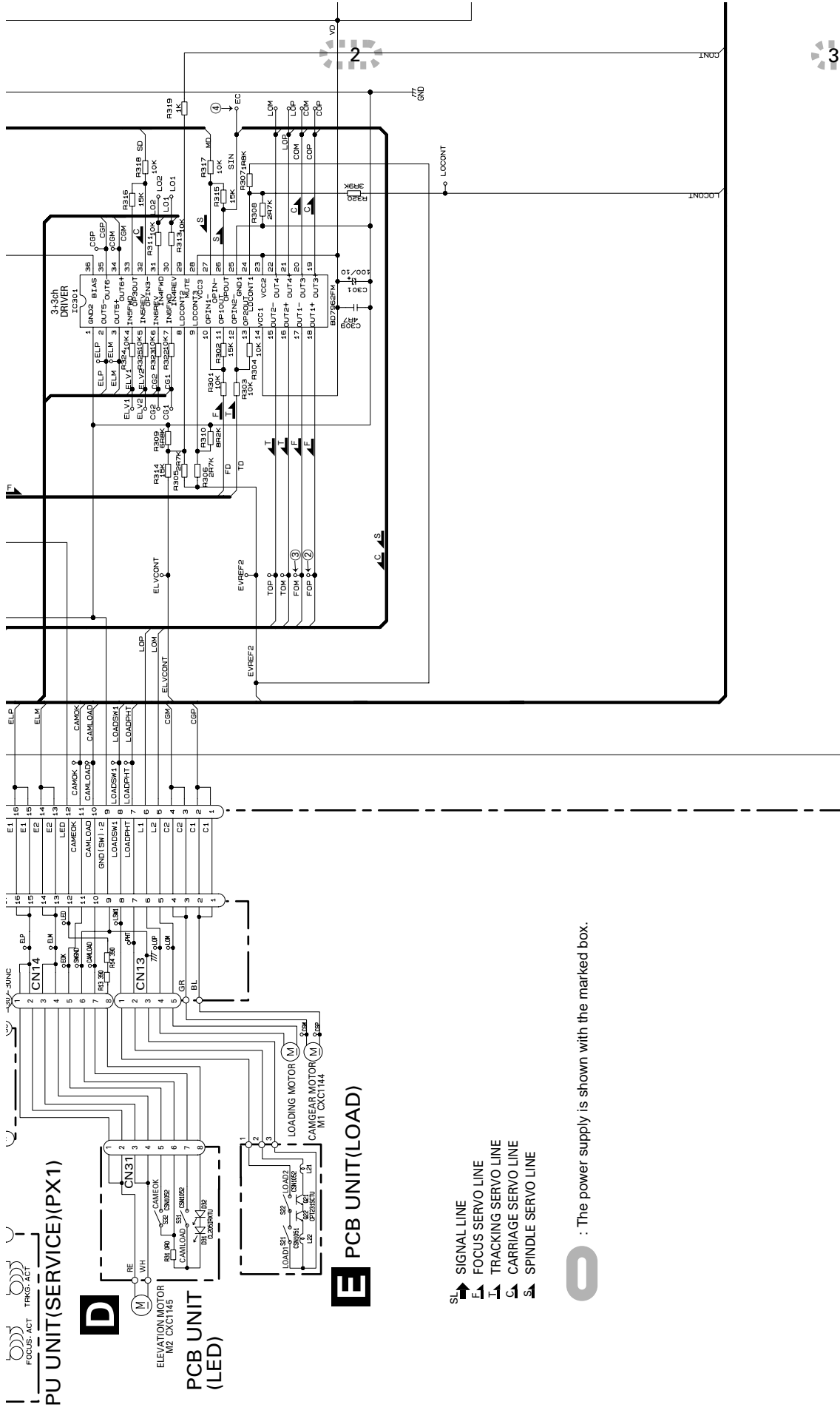
1

2

3

4





3

C-b

C-a C-b

A B C D E F

C-a D E

- SI SIGNAL LINE
- E1 FOCUS SERVO LINE
- T TRACKING SERVO LINE
- C CARRIAGE SERVO LINE
- S SPINDLE SERVO LINE

: The power supply is shown with the marked box.

A

B

C

D

E

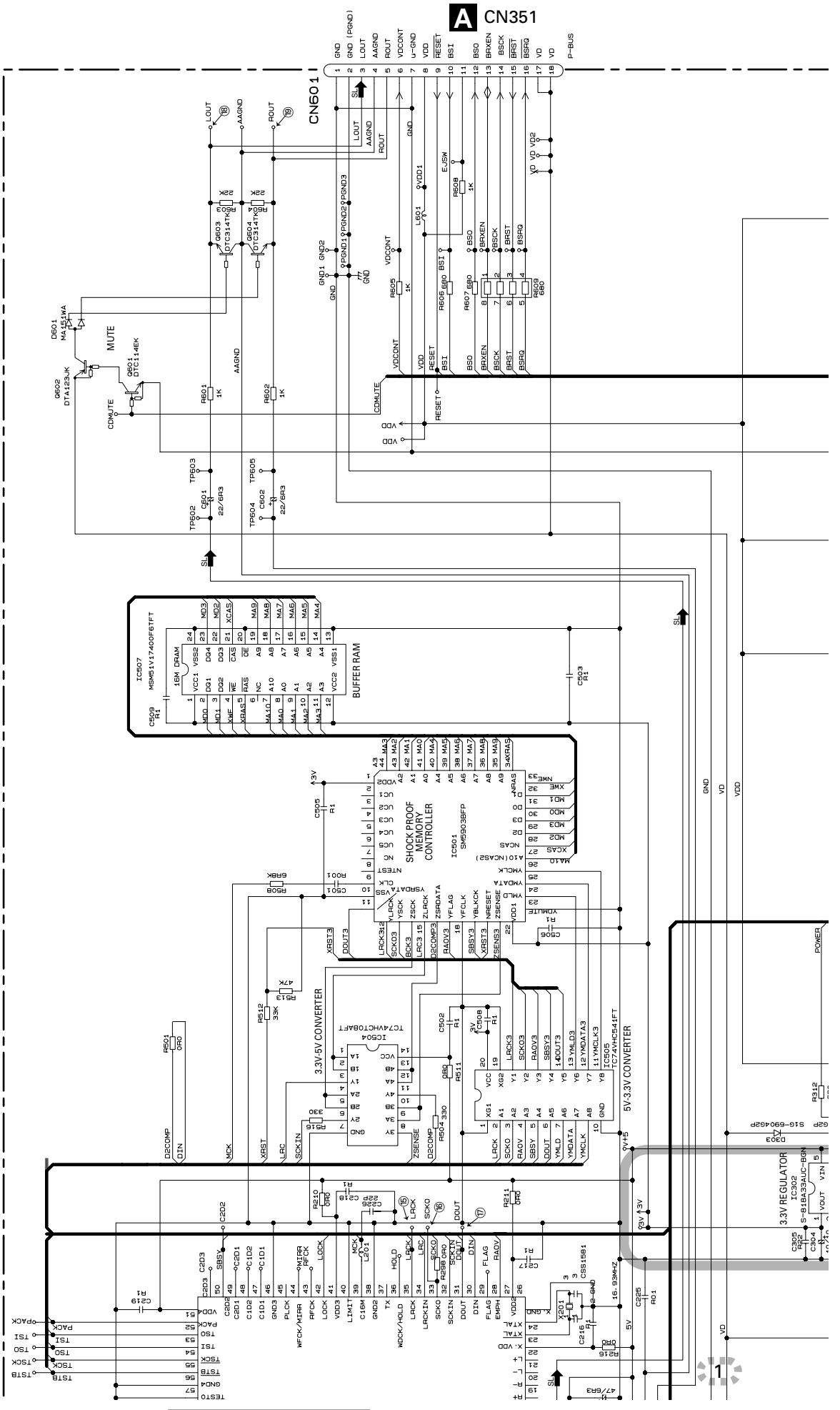
F

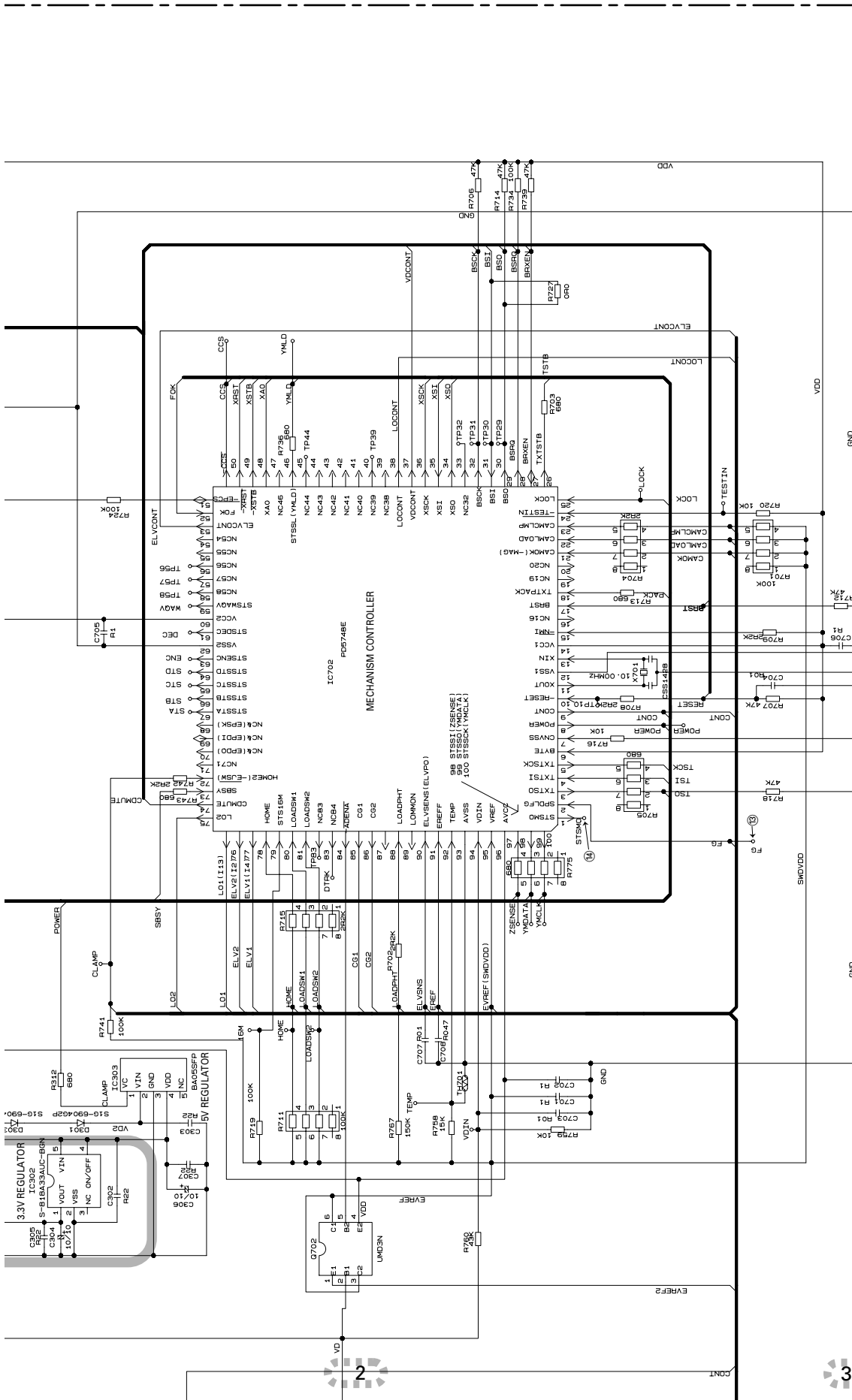
# C CONTROL UNIT(G2T)

## A CN351

C-a C-b

# C-b





C-a C-b

C-b

# 3.6 CASSETTE MECHANISM MODULE

A

B

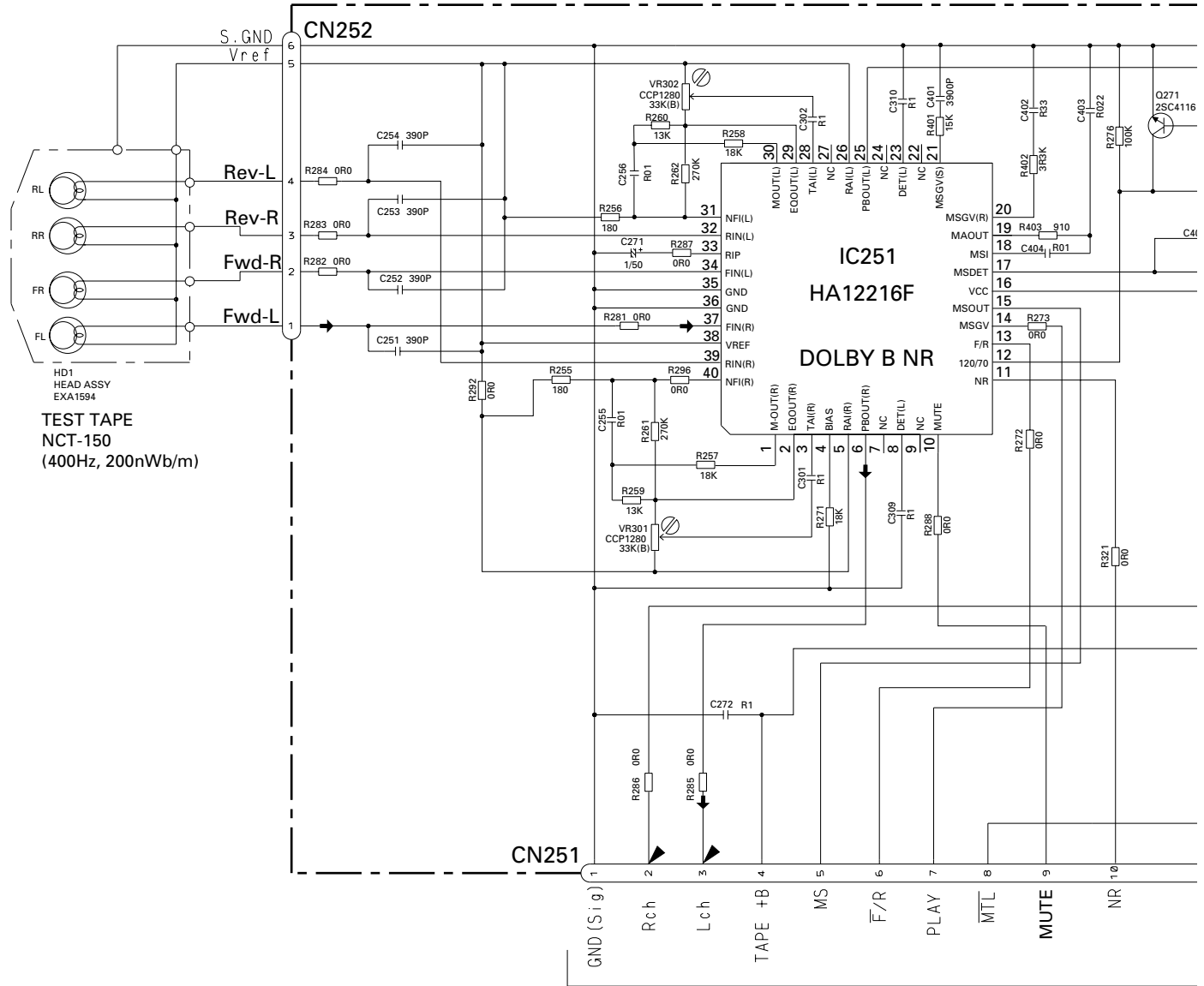
C

D

E

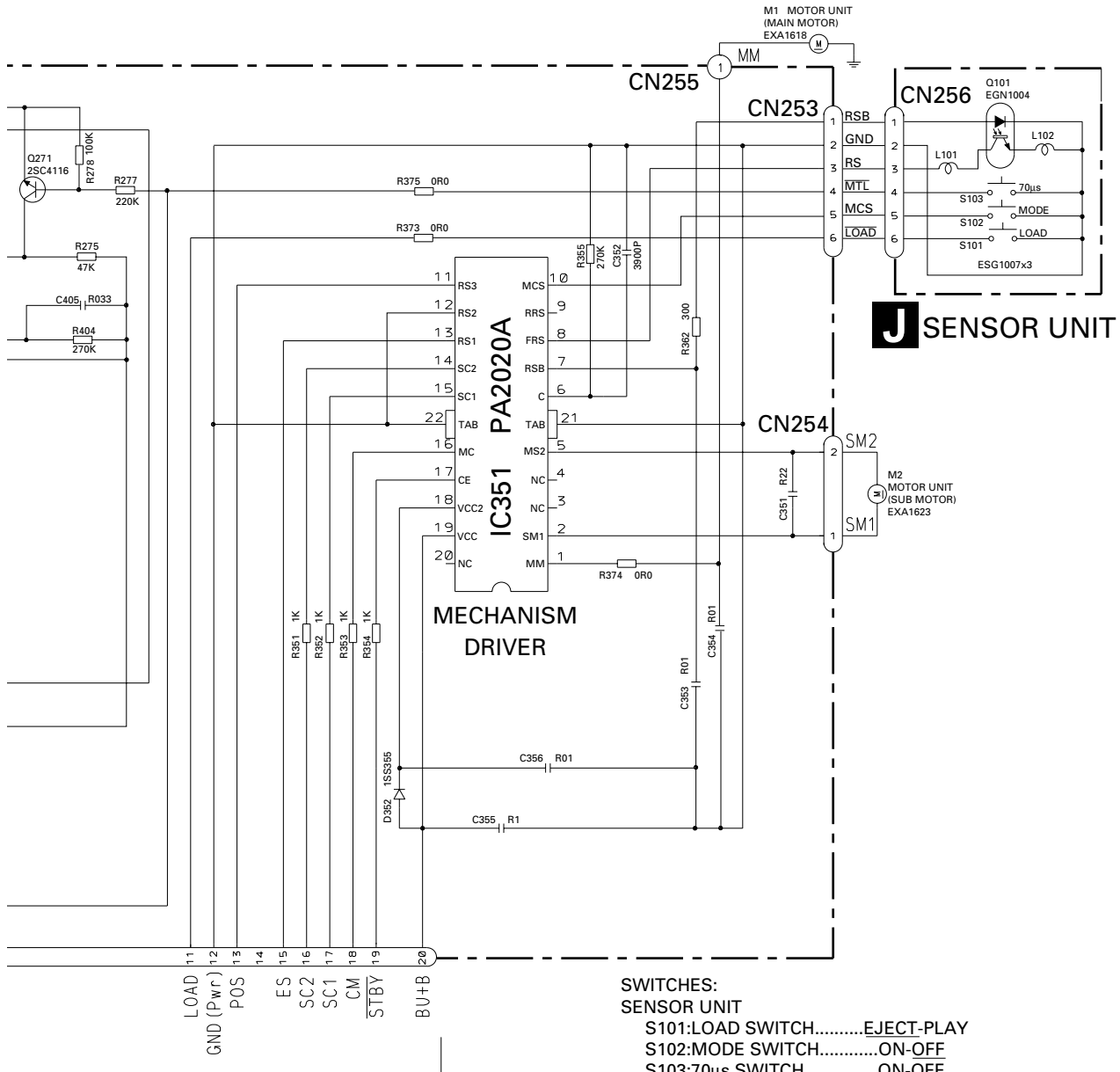
F

## DECK UNIT



-8.24dBs(300mV)±1dB

**A** CN353



A

B

C

D

E

F

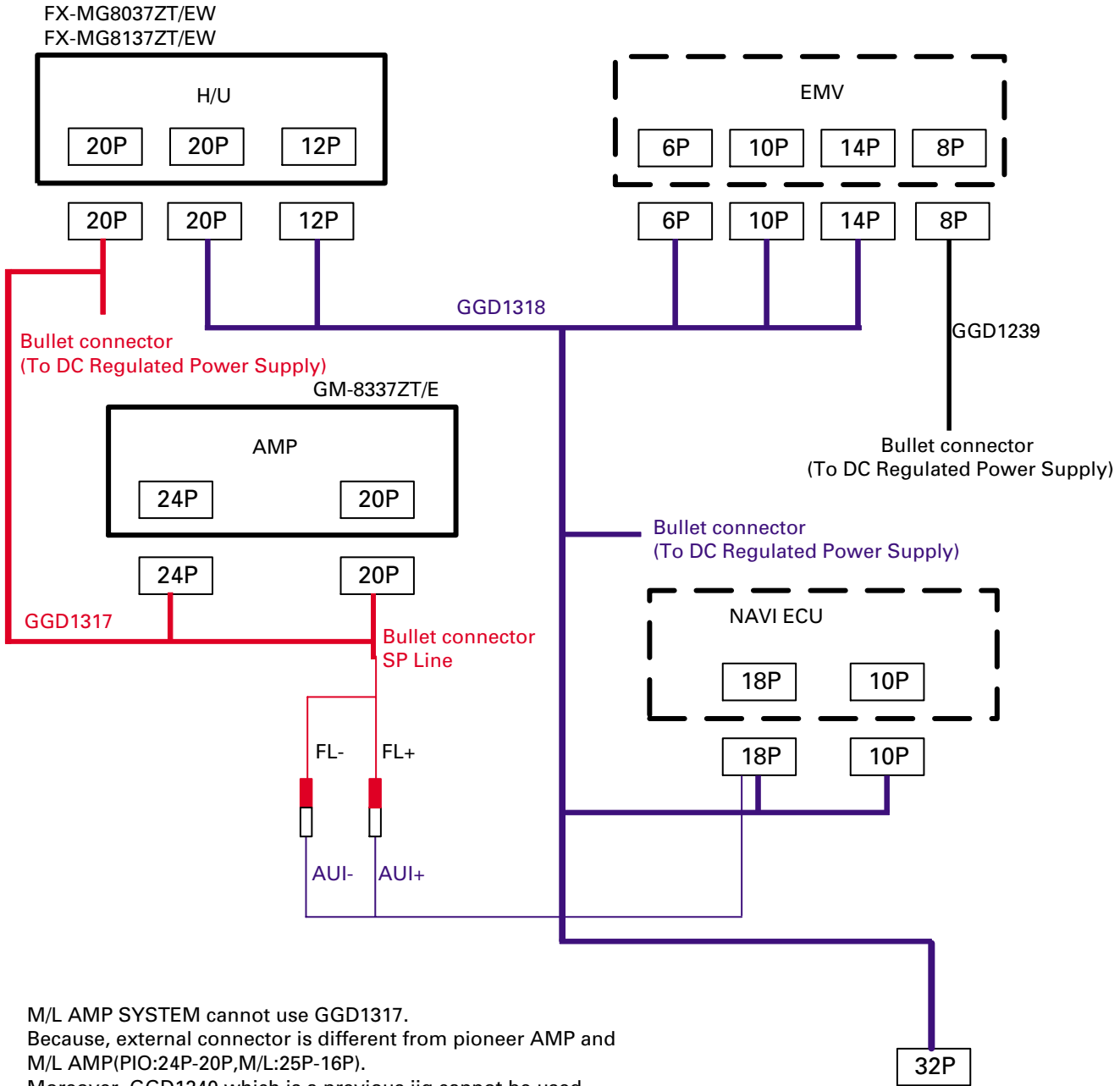


# 6. ADJUSTMENT

## 6.1 CONNECTION DIAGRAM

A

### ● EMV/NAVI SYSTEM(AMP:P AND M/L)



C

D

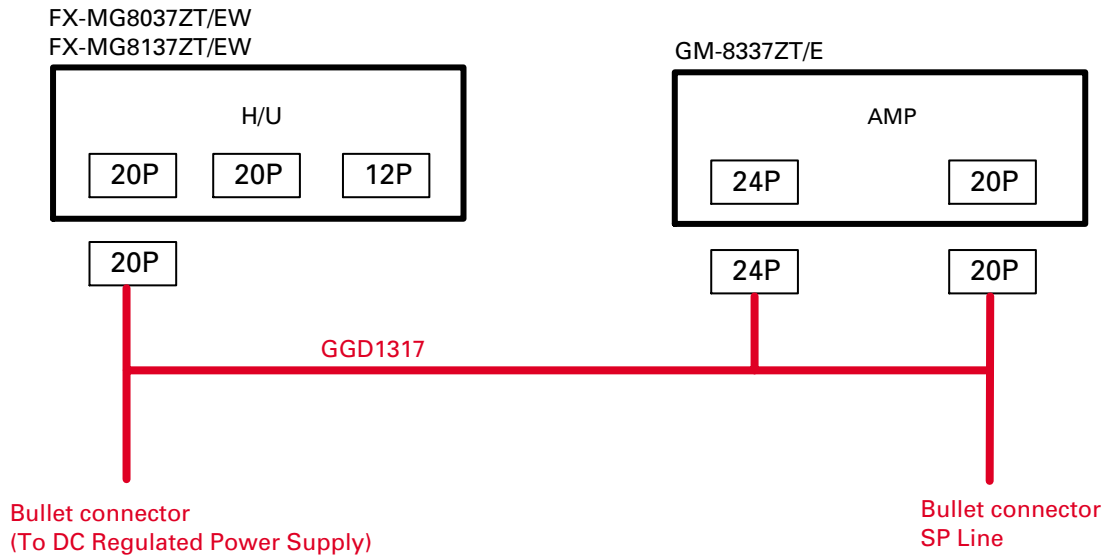
E

M/L AMP SYSTEM cannot use GGD1317.  
 Because, external connector is different from pioneer AMP and M/L AMP(PIO:24P-20P,M/L:25P-16P).  
 Moreover, GGD1240 which is a previous jig cannot be used (Because the signal array is different).  
 Therefore, when the head unit of the M/L AMP system is repaired, pioneer AMP system is used.

- \* P and Pio : Pioneer
- \* M/L : Mark Levinson

F

● STANDARD SYSTEM(AMP:P AND M/L)



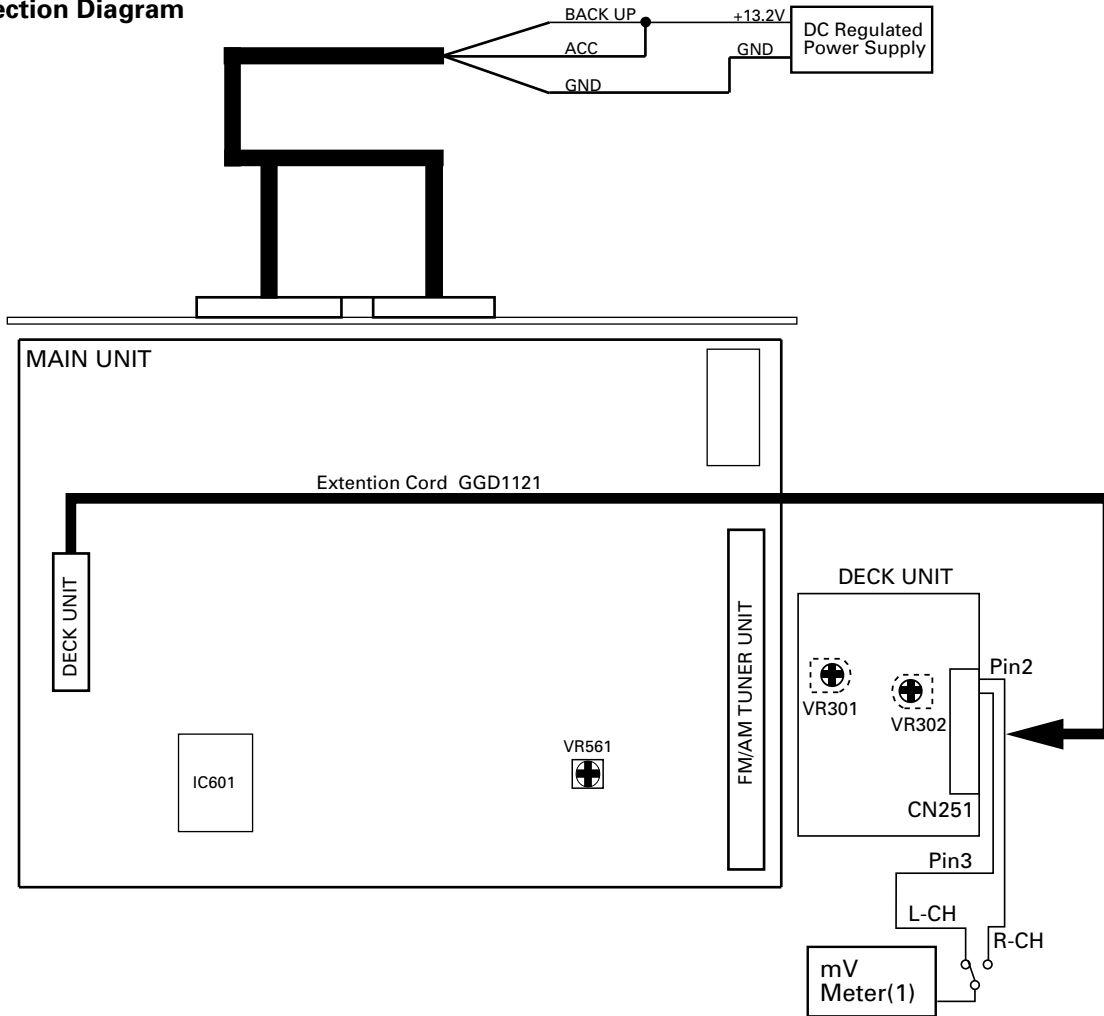
M/L AMP SYSTEM cannot use GGD1317.  
 Because, external connector is different from pioneer AMP and  
 M/L AMP(PIO:24P-20P,M/L:25P-16P).  
 Moreover, GGD1240 which is a previous jig cannot be used  
 (Because the signal array is different).  
 Therefore, when the head unit of the M/L AMP system is  
 repaired, pioneer AMP system is used.

- \* P and Pio : Pioneer
- \* M/L : Mark Levinson

# 6.2 AUDIO, TUNER ADJUSTMENT



## ● Connection Diagram



### DOLBY B NR ADJUSTMENT

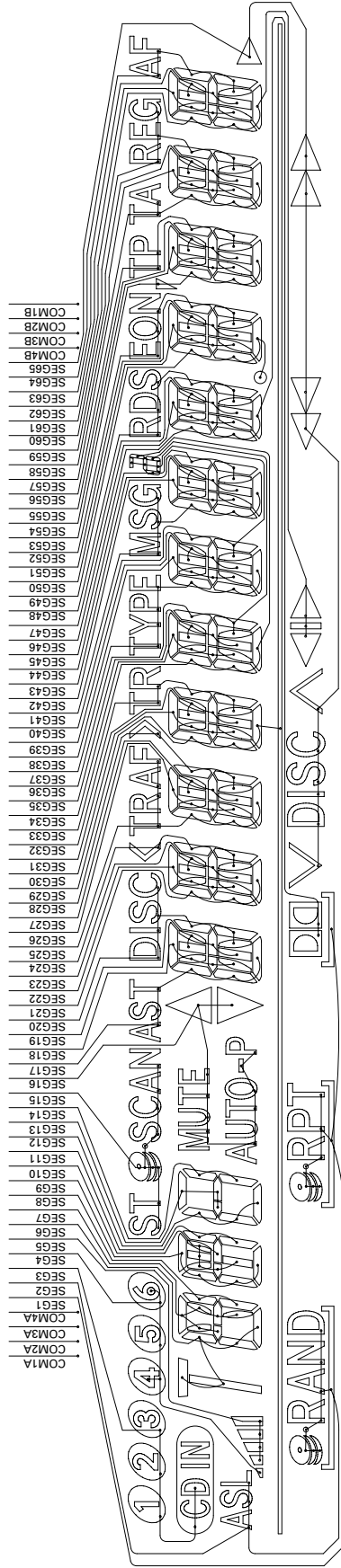
No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter(1) : -8.24dBm(300mV)±1dB (DOLBY NR Switch : OFF)



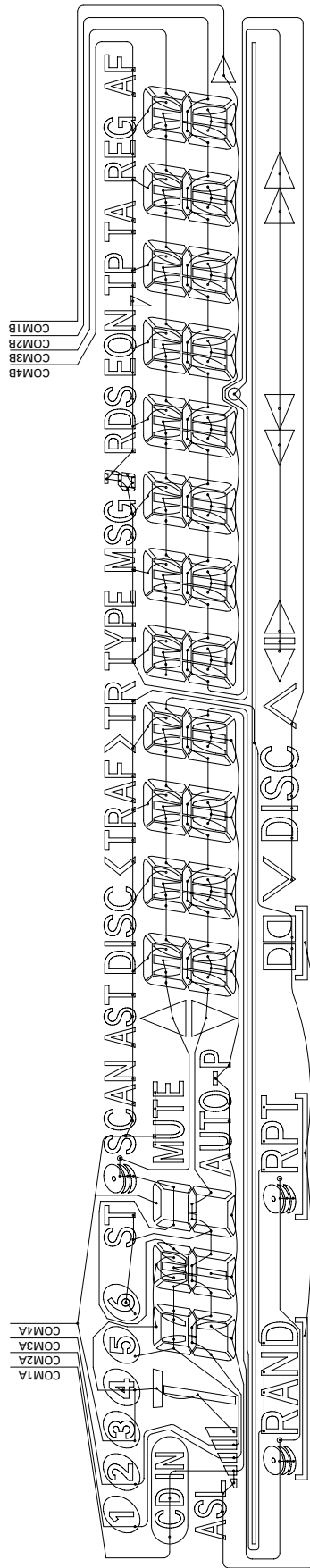
## 7.2.2 DISPLAY

### ● LCD(CAW1722)

SEGMENT



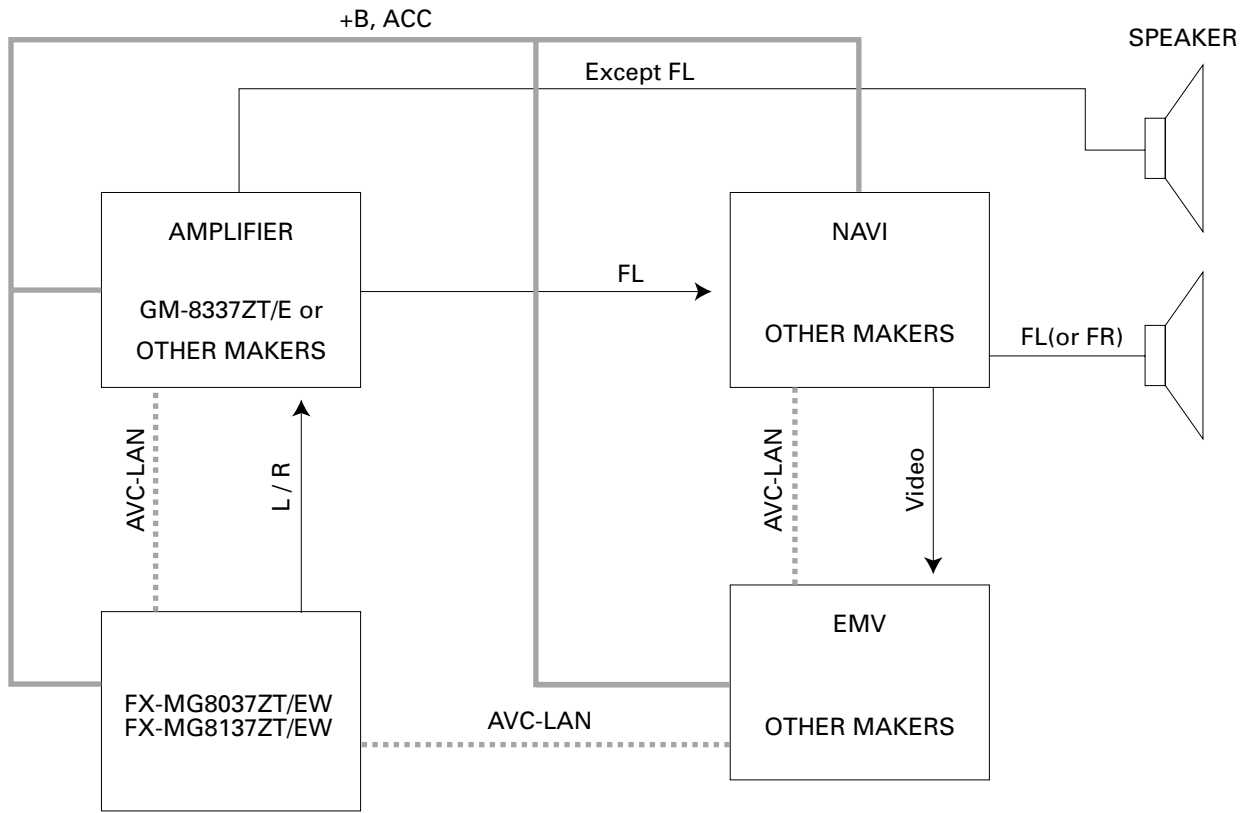
COMMON



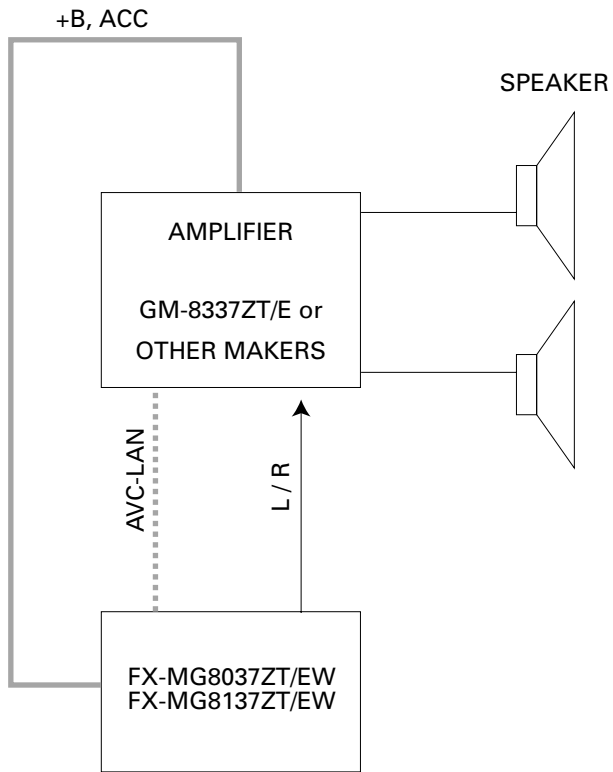
# 7.3 EXPLANATION

## 7.3.1 SYSTEM BLOCK DIAGRAM

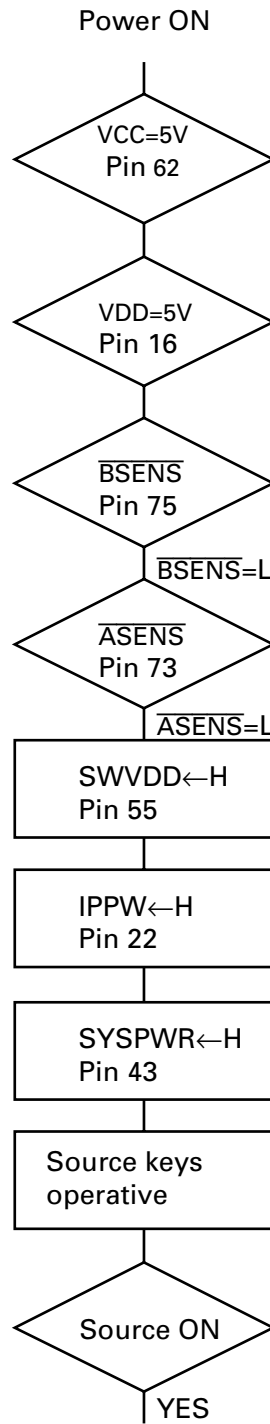
### A ● System 1



### D ● System 2



### 7.3.2 OPERATIONAL FLOW CHART



Completes power-on operation.  
(After that, proceed to each source operation)

## 7.4 NOTES ON SERVICING

### 7.4.1 CLEANING



Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Portions to be cleaned	Cleaning tools
Cassette heads Pinch rollers Capstans	Cleaning paper : GED-008

### 7.4.2 FACTORY SETTINGS



#### ● When the Repair is Complete

When the Repair is Complete, make the CD mechanism ready for transportation.

#### Turning on "Shipment mode" (to prevent damage during shipment)

● Remove all discs loaded in this product, before disconnecting the power supply connector .



● Set this product to the "Shipment mode" and then disconnect the power supply connector before shipping.



● Setting the "Shipment mode"

● Switch ACC OFF, and then, while simultaneously pressing the "SEEK UP" (or "TUNE UP" ) and "DISC" buttons, switch ACC ON.

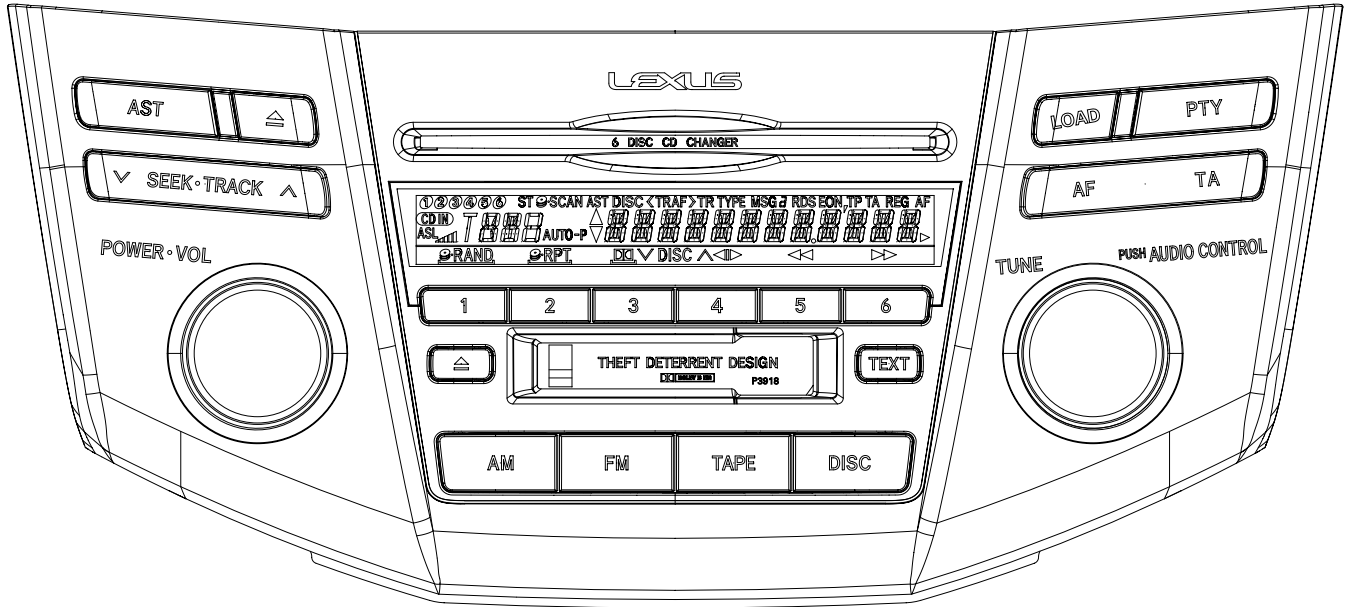


● Confirming "Shipment mode" setting

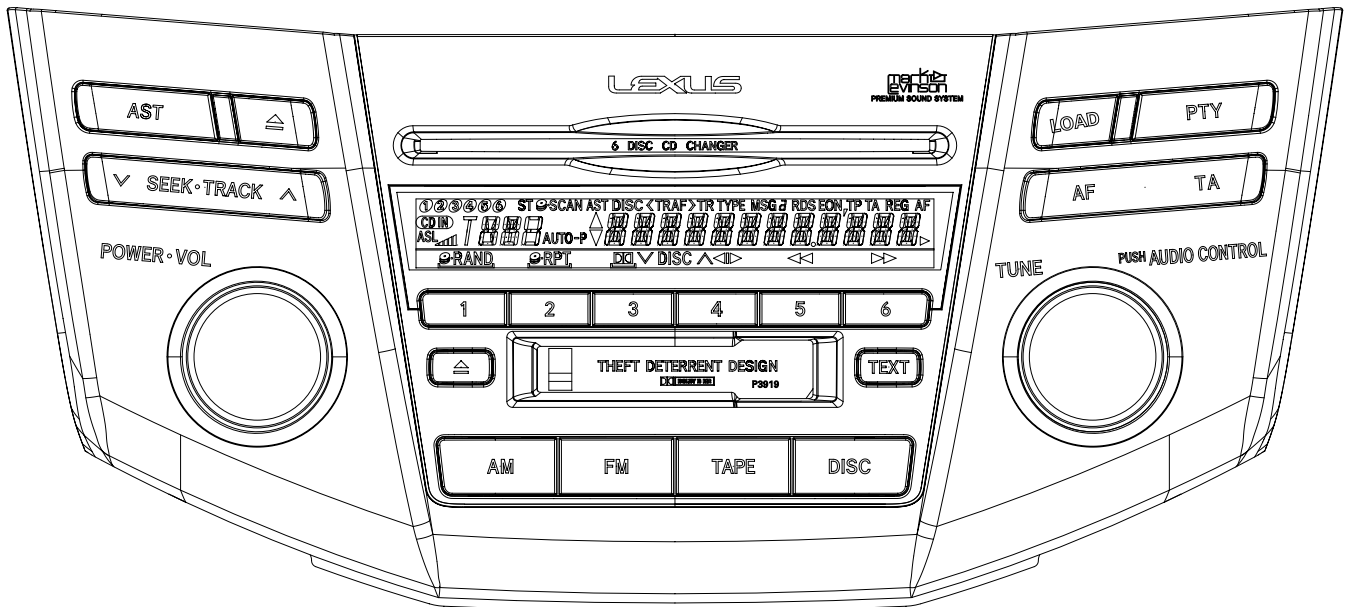
- During Shipment mode setting the CD loading door indicator flashes. when shipment mode setting is completed, it stays lit. (If the radio unit itself has a display, "SHIP" is indicated.)
- After disconnecting the power supply connector and removing this product, confirm that you can see a metal plate through the hole near the "SHIP" mark on the rear chassis.
- Confirm that the door of the CD player is closed.

# 8. OPERATIONS

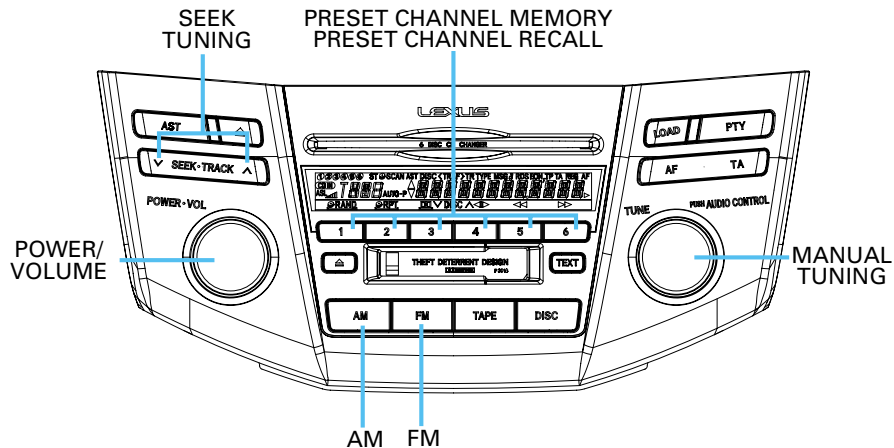
## ● FX-MG8037ZT/EW



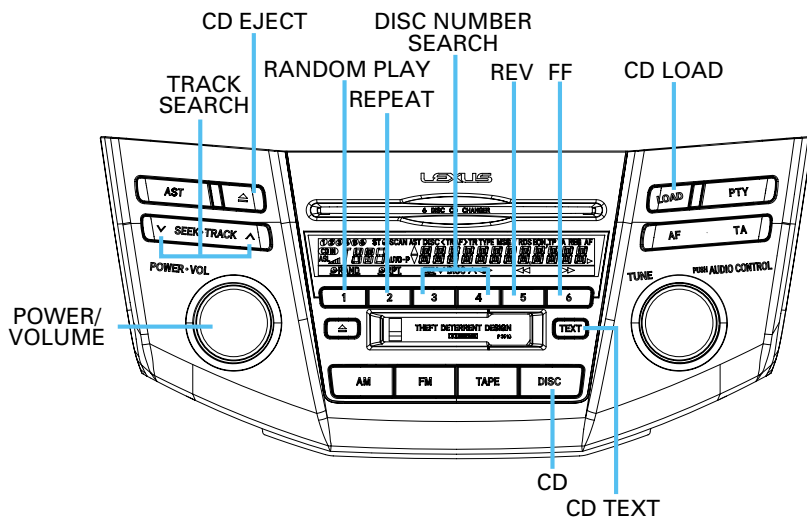
## ● FX-MG8137ZT/EW



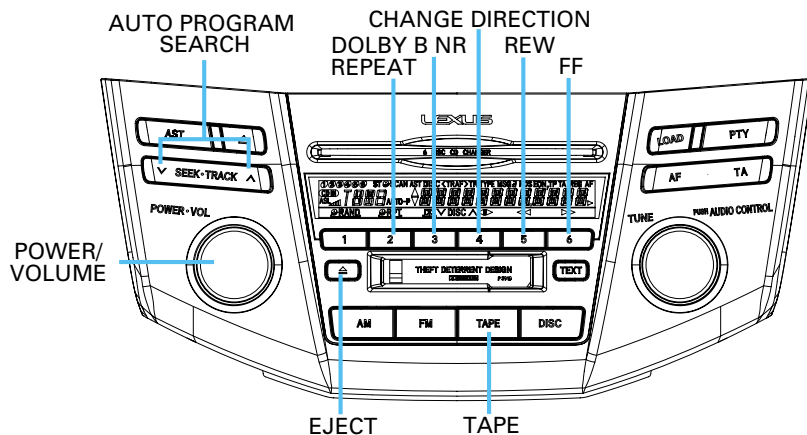
● RADIO



● CD



● CASSETTE



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**PIONEER EUROPE NV** Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium  
**PIONEER ELECTRONICS ASIACENTRE PTE.LTD.** 253 Alexandra Road, #04-01, Singapore 159936