

# HCD-RXD7AV

## SERVICE MANUAL

Ver 1.1 2002.03

US Model  
Canadian Model



HCD-RXD7AV is the Amplifier, CD player, Tape Deck and Tuner section in MHC-RXD7AV.

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CD Section	Model Name Using Similar Mechanism	HCD-RXD3
	CD Mechanism Type	CX3
	Base Unit Name	KSM-213ECM
	Optical Pick-up Name	KSS-213ECM/C2NP
Tape deck Section	Model Name Using Similar Mechanism	HCD-RXD6
	Tape Transport Mechanism Type	CWL-44-RR

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS:

##### US model

#### POWER OUTPUT AND TOTAL

#### HARMONIC DISTORTION :

with 6  $\Omega$  loads, both channels driven, from 70 - 20,000 Hz; rates 60 W per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 mW to rated output.

#### Amplifier section

##### Front Speaker :

Continuous RMS power output (reference)  
70 + 70 W  
(6  $\Omega$  at 1 kHz, 10% THD)  
Total harmonic distortion less than 0.07%  
(6  $\Omega$  at 1 kHz, 35 W)

##### Center Surround Speaker :

Continuous RMS power output (reference)  
30 W  
(6  $\Omega$  at 1 kHz, 1% THD)

##### Rear Surround Speaker :

Continuous RMS power output (reference)  
30 + 30 W  
(6  $\Omega$  at 1 kHz, 1% THD)

#### Inputs

MD/VIDEO IN : voltage 450/250 mV,  
impedance 47 k $\Omega$

#### DVD INPUT

FRONT IN : voltage 450 mV,  
impedance 47 k $\Omega$

CENTER IN : voltage 450 mV,  
impedance 47 k $\Omega$

REAR IN : voltage 450 mV,  
impedance 47 k $\Omega$

WOOFER IN : voltage 450 mV,  
impedance 47 k $\Omega$

#### Outputs

MD/VIDEO OUT : voltage 250 mV  
impedance 1 k $\Omega$

PHONES : accepts headphones of  
(stereo phone jack) 8  $\Omega$  or more

FRONT SPEAKER : accepts impedance of  
6 to 16  $\Omega$  or more

CENTER SPEAKER: accepts impedance of  
6 to 16  $\Omega$  or more

SUPER WOOFER : Voltage 1 V, impedance  
1 k $\Omega$

#### CD player section

System Compact disc and digital audio system

Laser Semiconductor laser ( $\lambda=780\text{nm}$ )

Emission duration: continuous

Max. 44.6  $\mu\text{W}^*$

Laser output

\*This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Frequency response 20 Hz - 20 kHz ( $\pm 0.5$  dB)

Wavelength 780 - 790 nm

Signal-to-noise ratio More than 90 dB

Dynamic range More than 90 dB

#### CD DIGITAL OUT

(Square optical connector jack, rear panel)

Wavelength 600 nm

Output Level -18 dBm

— Continued on next page —

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2002C1600-1  
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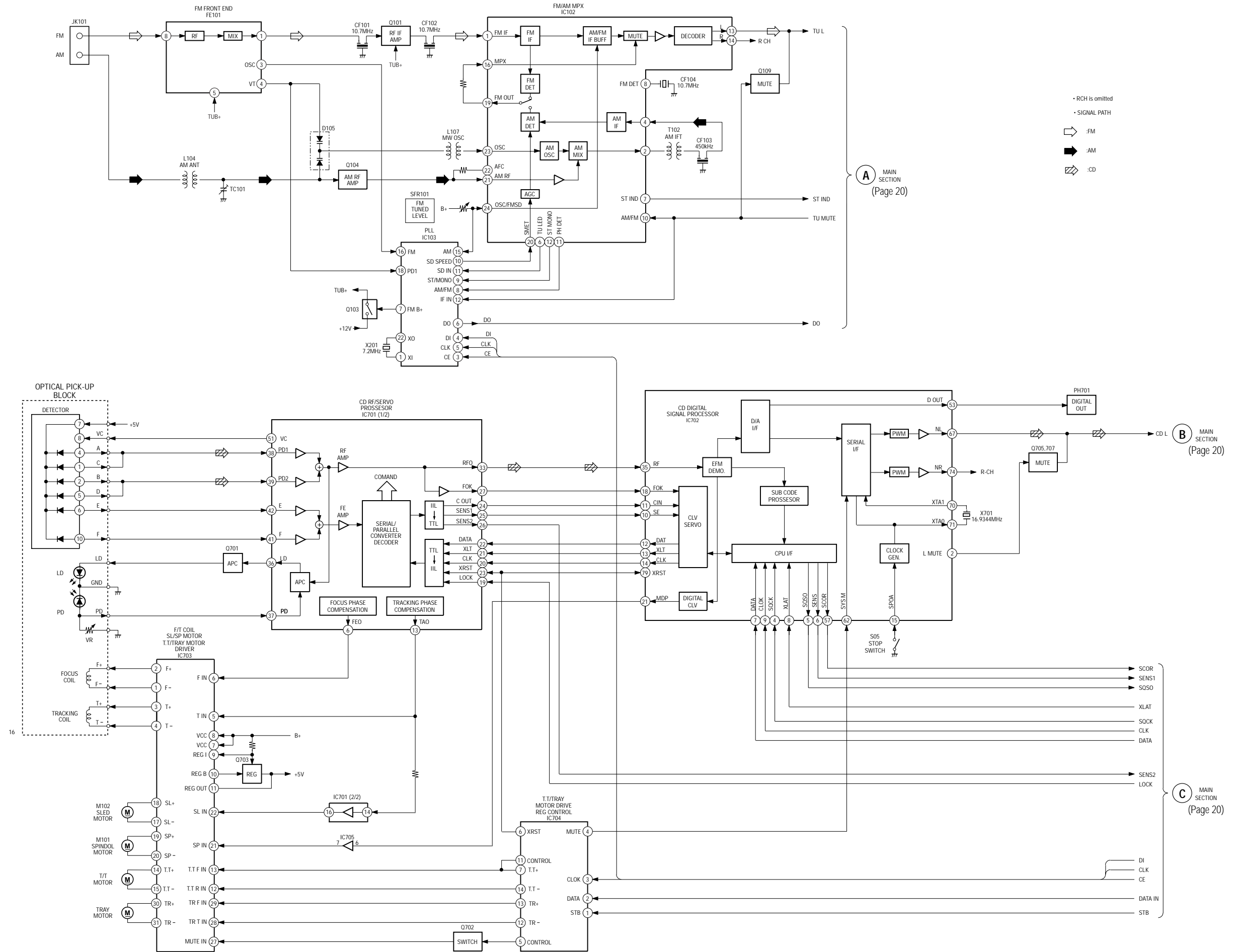
Sony Corporation  
Home Audio Company  
Published by Sony Engineering Corporation

## MINI Hi-Fi COMPONENT SYSTEM

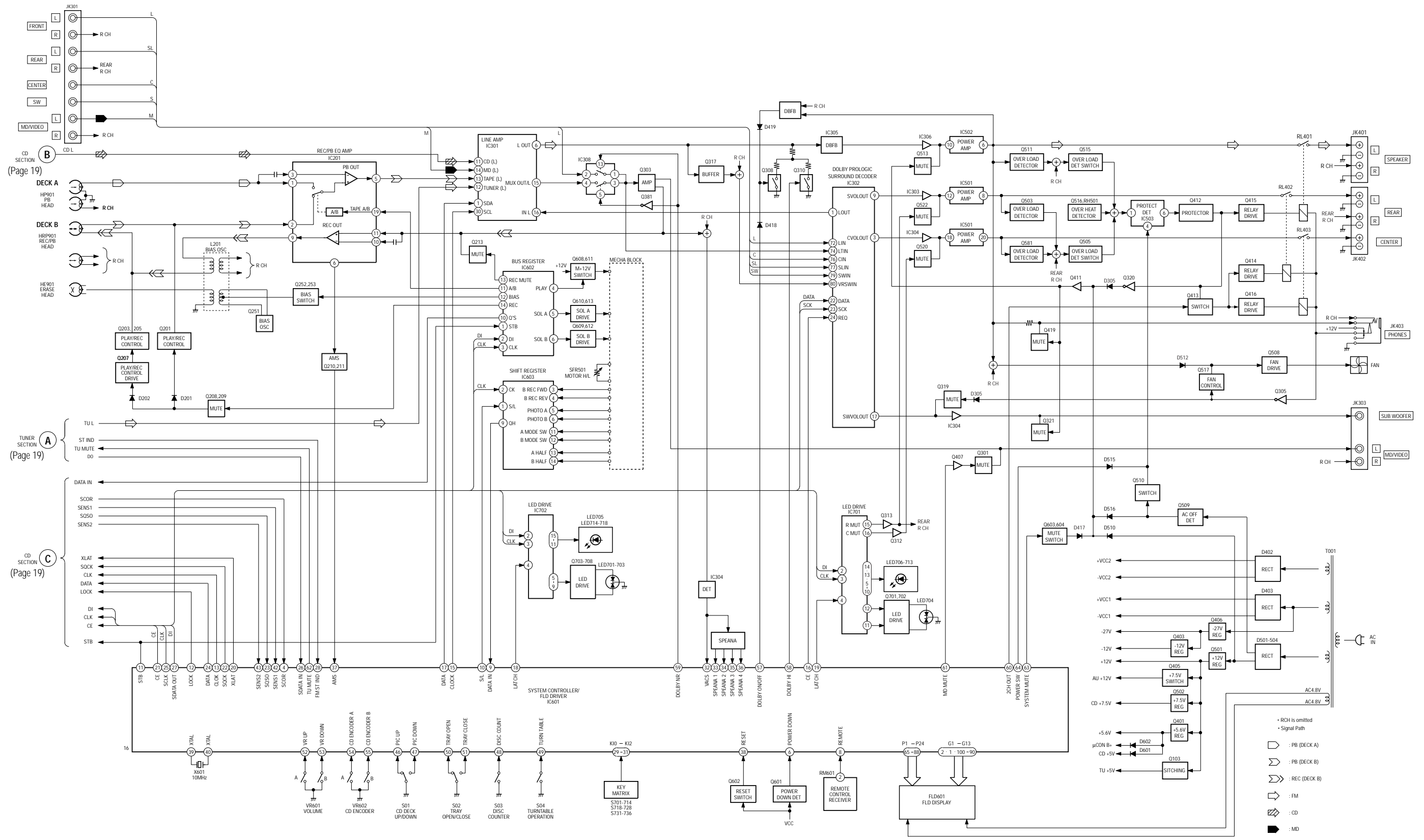
# SONY®

# SECTION 7 DIAGRAMS

## 7-1. BLOCK DIAGRAMS TUNER/CD SECTION

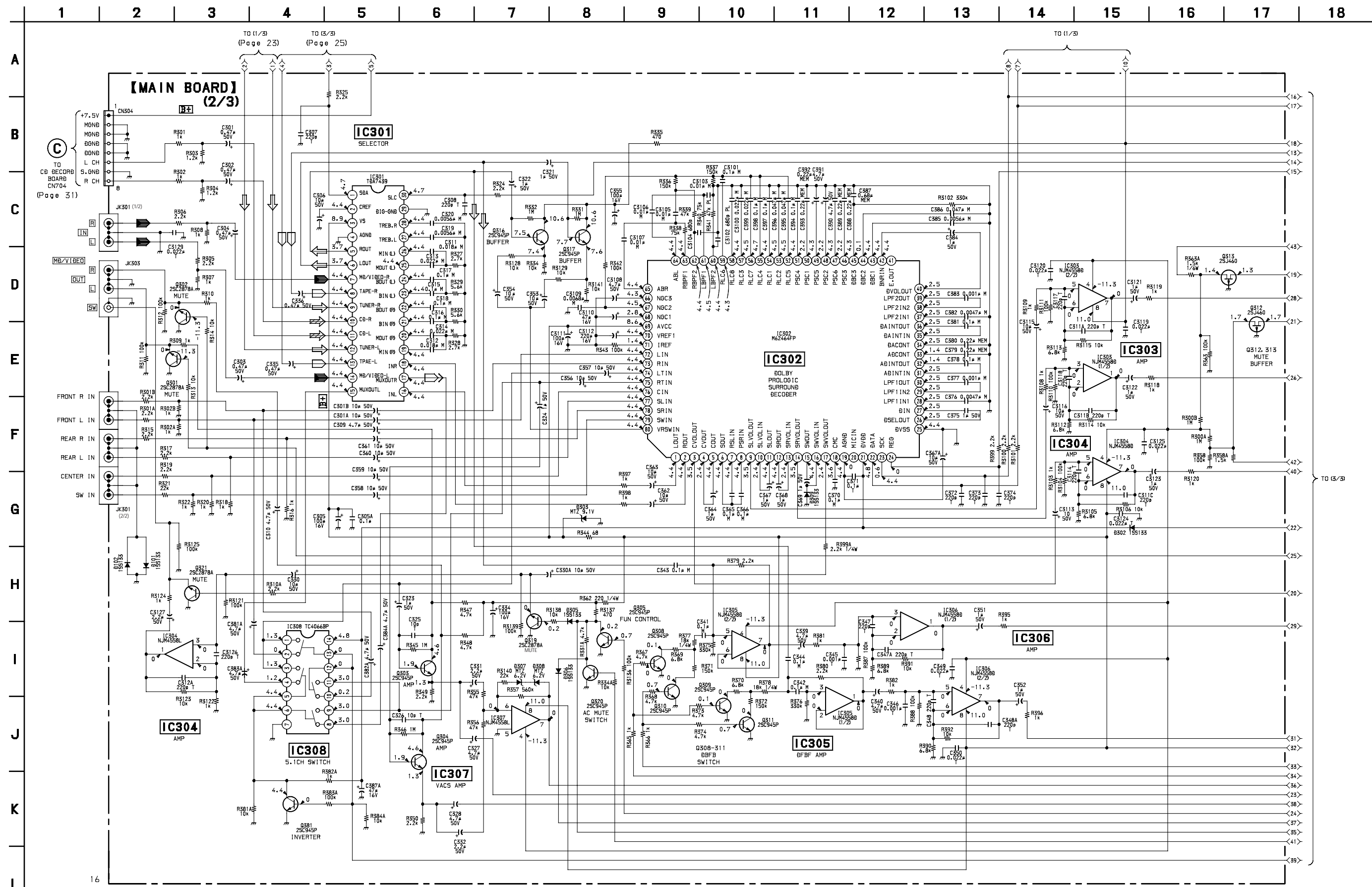


MAIN SECTION



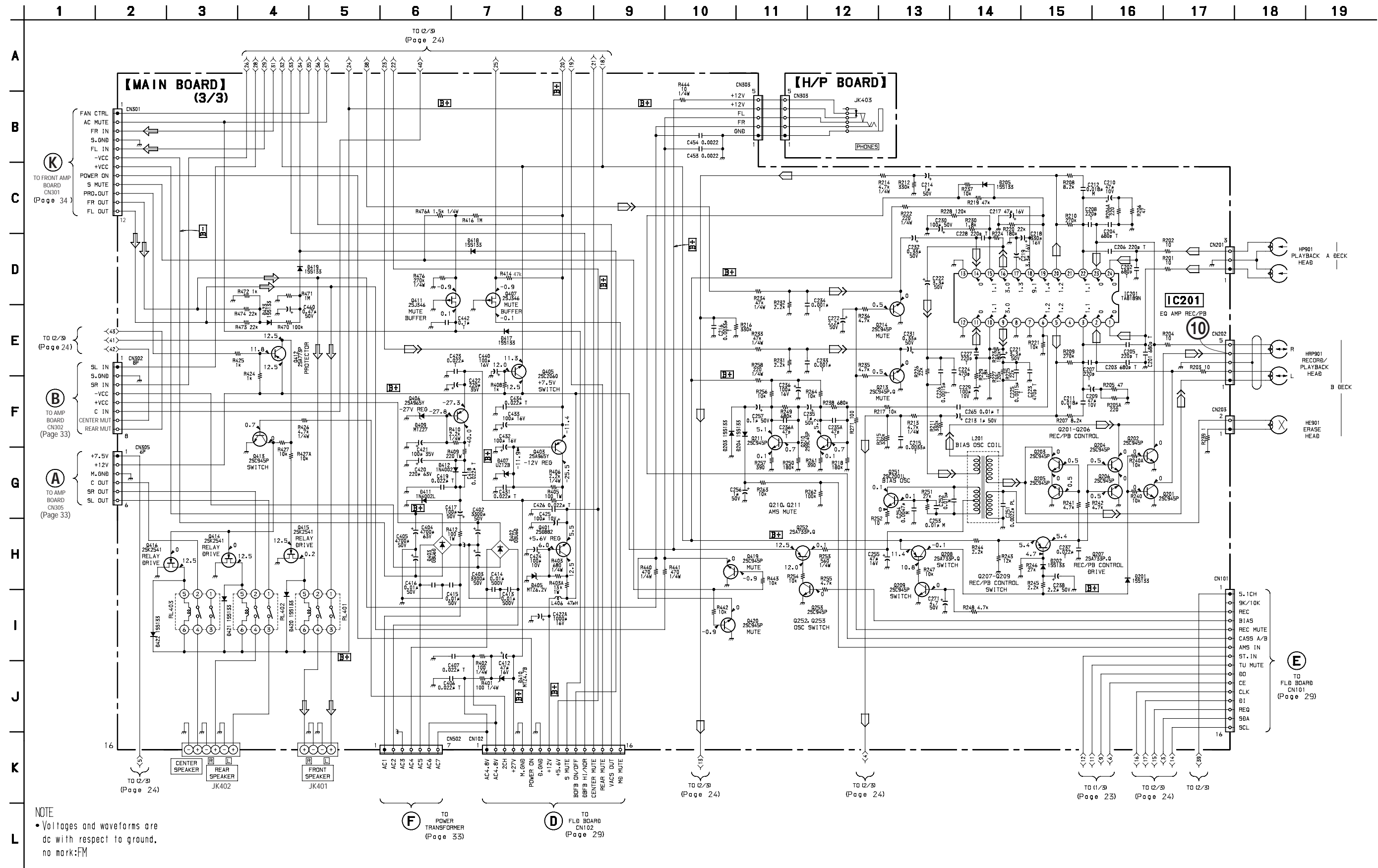


7-5. SCHEMATIC DIAGRAM DOLBY SECTION • Refer to page 21 for Note on Schematic Diagrams. • Refer to page 22 for Printed Wiring Board.



7-6. SCHEMATIC DIAGRAM TEPE/POWER SECTION

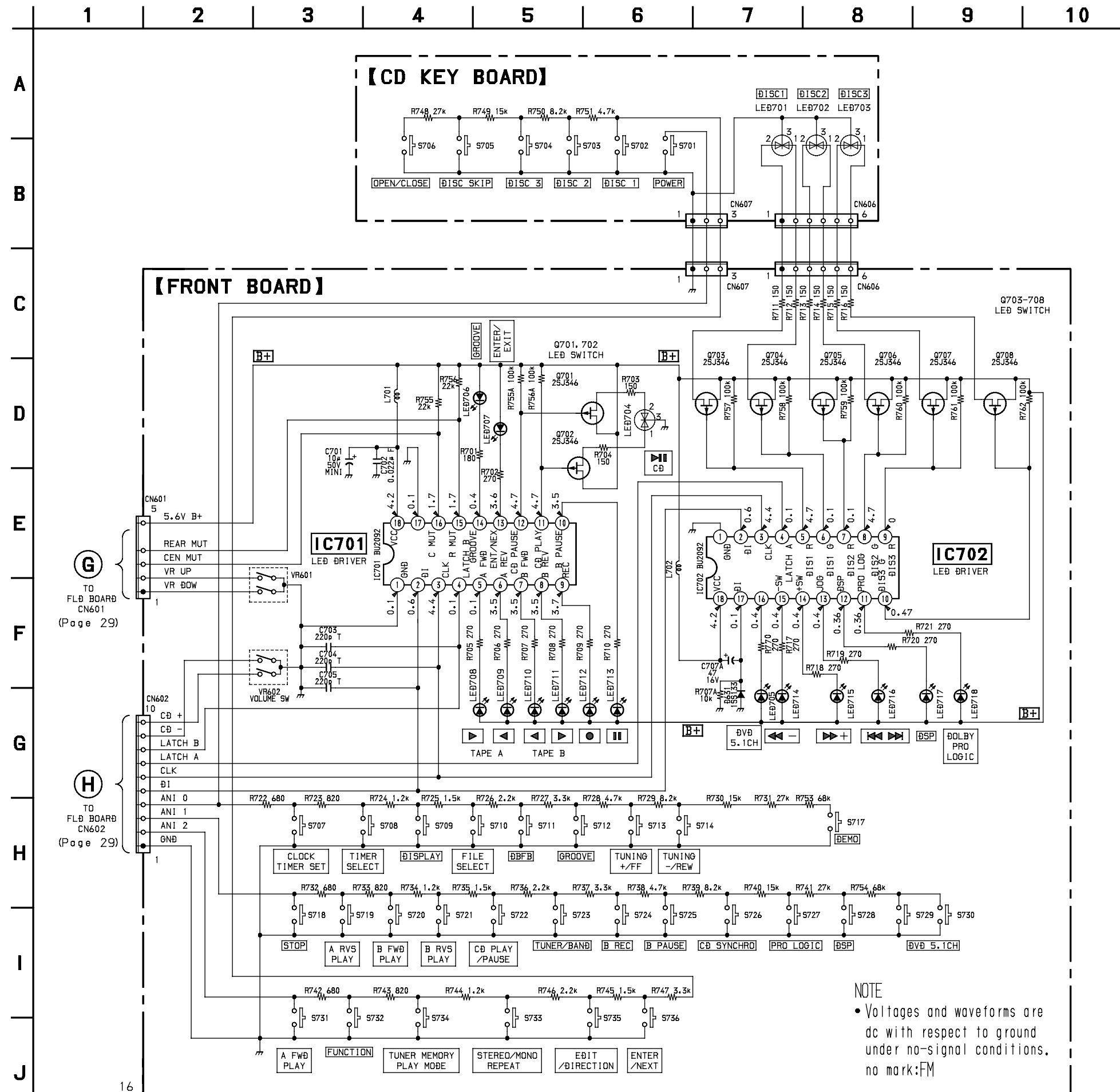
• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 22 for Printed Wiring Board. • Refer to page 39 for IC Block Diagrams.



NOTE  
 • Voltages and waveforms are dc with respect to ground, no mark:FM

7-8. SCHEMATIC DIAGRAM FRONT SECTION

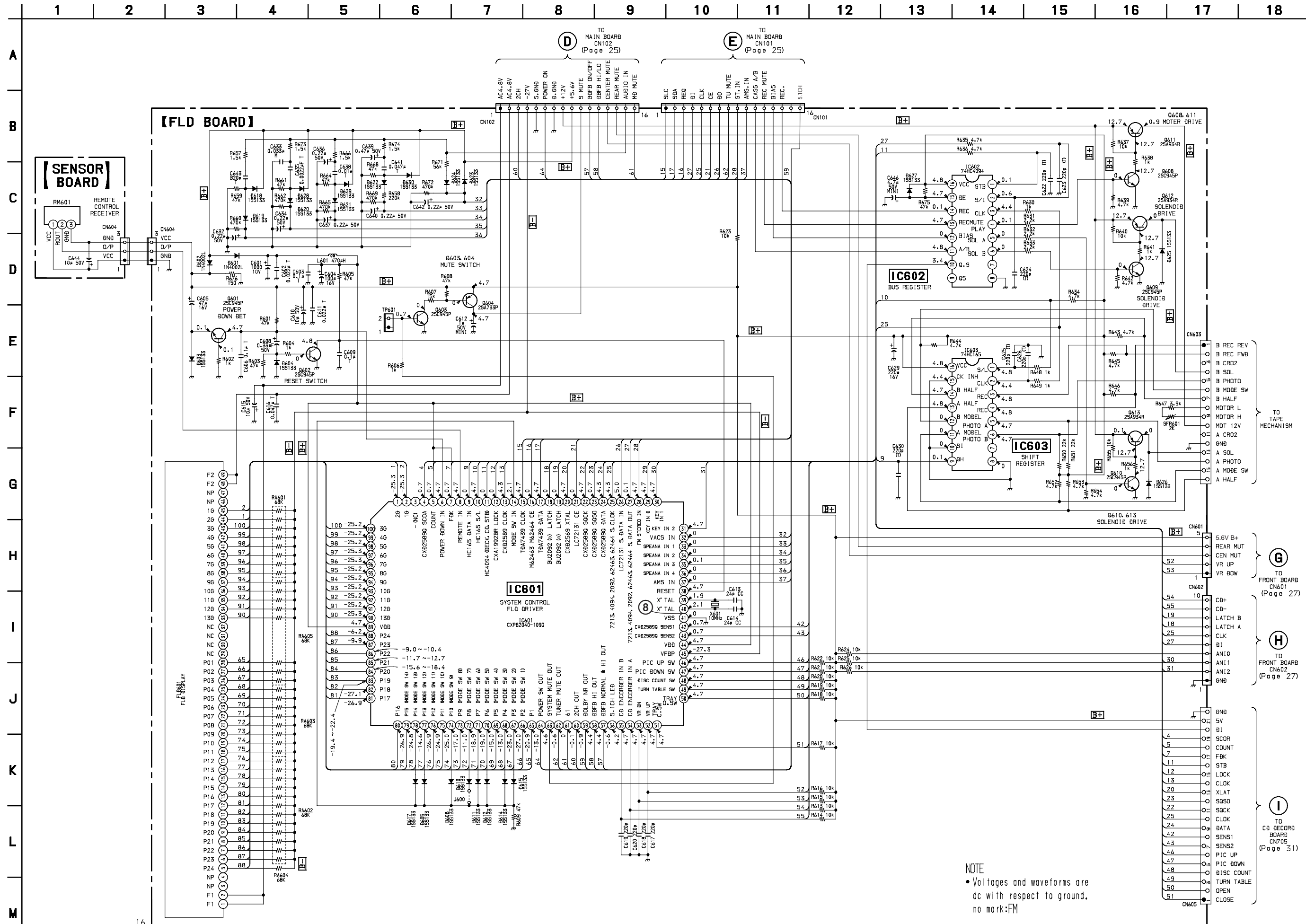
• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 38 for IC Block Diagrams.



NOTE  
 • Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark:FM

7-10. SCHEMATIC DIAGRAM FLD SECTION

• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 21 for Waveforms. • Refer to page 38 for IC Block Diagrams. • Refer to page 40 for IC Pin Function Description.



NOTE  
 • Voltages and waveforms are dc with respect to ground, no mark:FM

TO TAPE MECHANISM  
 B REC REV  
 B REC FWD  
 B CRO2  
 B SOL  
 B PHOTO  
 B MODE SW  
 B HALF  
 MOTOR L  
 MOTOR H  
 MDT 12V  
 A CRO2  
 GND  
 A SOL  
 A PHOTO  
 A MODE SW  
 A HALF

TO FRONT BOARD CN601 (Page 27)  
 5.6V B+  
 REAR MUTE  
 CEN MUTE  
 VR UP  
 VR DOW

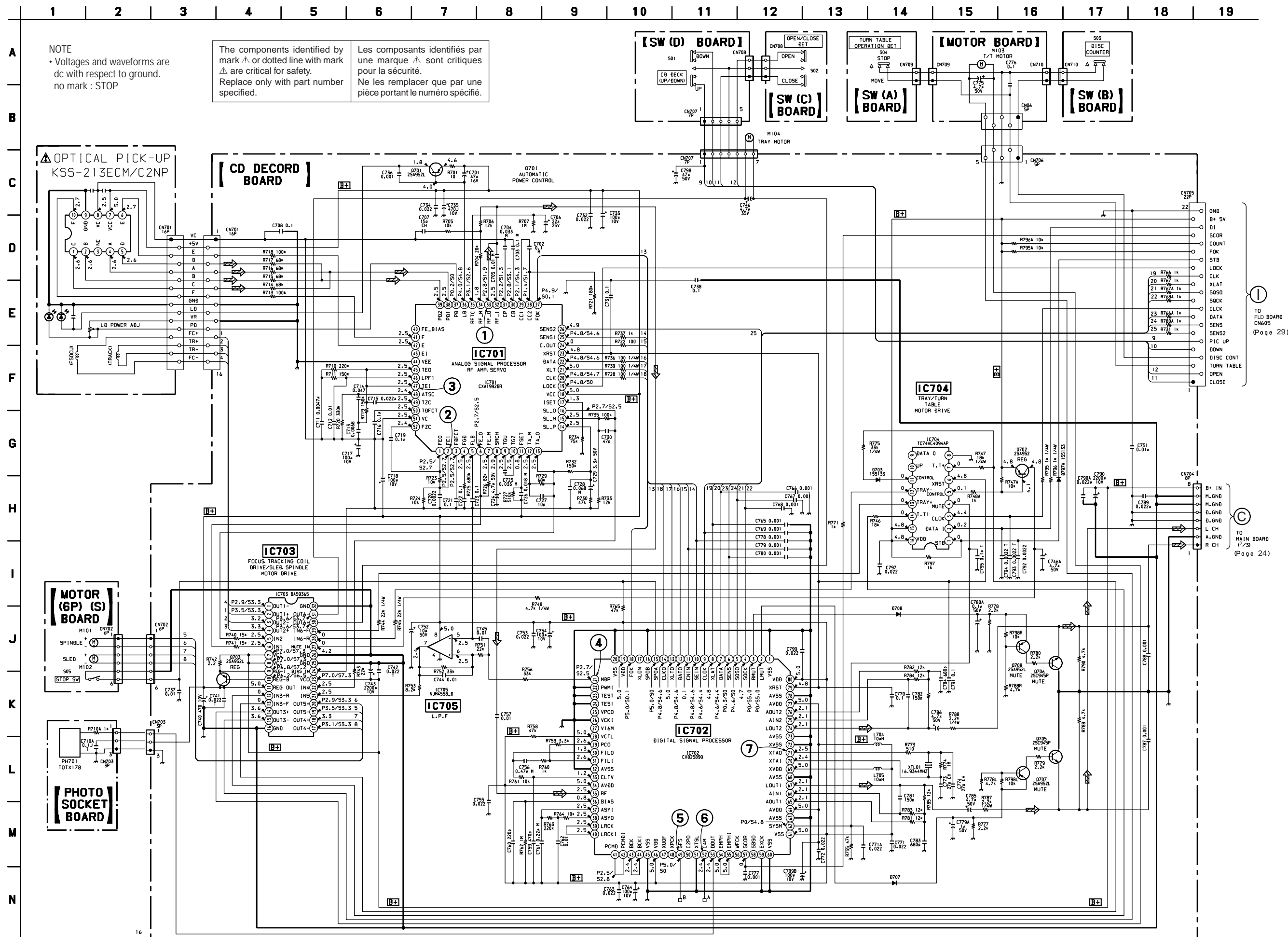
TO FRONT BOARD CN602 (Page 27)  
 CB+  
 CB-  
 LATCH B  
 LATCH A  
 BI  
 AN10  
 AN11  
 AN12  
 GND

TO CB RECORD BOARD CN705 (Page 31)  
 GND  
 B1  
 5V  
 SCOR  
 COUNT  
 FBK  
 STB  
 LOCK  
 CLOK  
 XLAT  
 SQSO  
 23  
 22  
 25  
 24  
 21  
 20  
 19  
 18  
 17  
 16  
 15  
 14  
 13  
 12  
 11  
 10  
 9  
 8  
 7  
 6  
 5  
 4  
 3  
 2  
 1  
 0  
 OPEN  
 CLOSE



7-12. SCHEMATIC DIAGRAM CD SECTION

• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 21 for Waveforms. • Refer to page 36 for IC Block Diagrams.



NOTE  
 • Voltages and waveforms are dc with respect to ground.  
 no mark : STOP

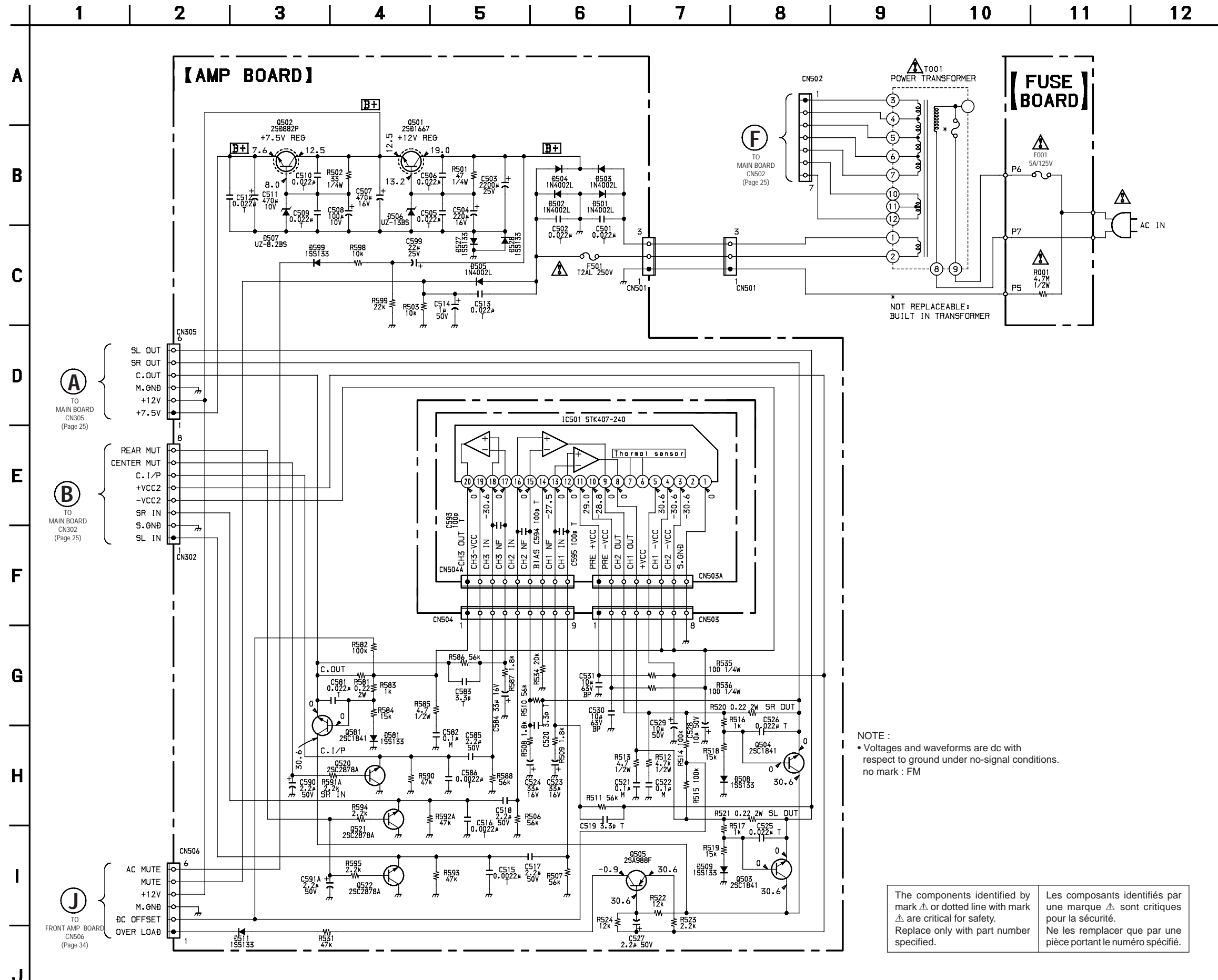
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TO FLD BOARD  
 CN605  
 (Page 29)

TO MAIN BOARD  
 (P.23)  
 (Page 24)

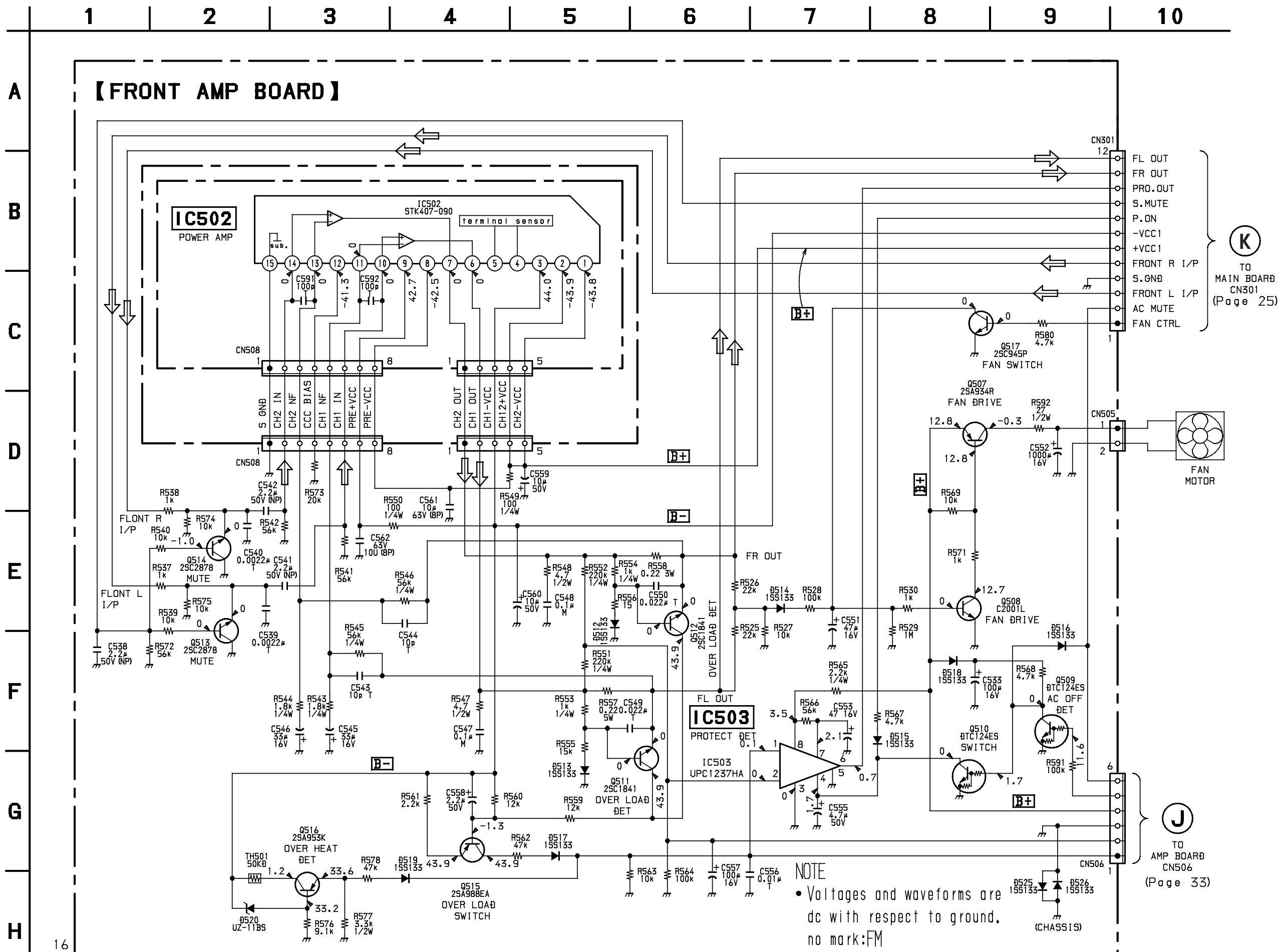
7-14. SCHEMATIC DIAGRAM CENTER/REAR AMP SECTION • Refer to page 21 for Note on Schematic Diagrams.



NOTE :  
 • Voltages and waveforms are dc with respect to ground under no-signal conditions.  
 no mark : FM

The components identified by mark $\Delta$ or dotted line with mark $\Delta$ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque $\Delta$ ou trait en point avec marque $\Delta$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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7-15. SCHEMATIC DIAGRAM FRONT AMP SECTION • Refer to page 21 for Note on Schematic Diagrams.



(K) TO MAIN BOARD CN301 (Page 25)

(J) TO AMP BOARD CN506 (Page 33)