

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 Ω 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 Ω at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07%
(6 Ω at 1 kHz, 35 W)

Center Surround Speaker :

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

Rear Surround Speaker :

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

Inputs

MD/VIDEO IN : voltage 450/250 mV,
impedance 47 k Ω

DVD INPUT

FRONT IN : voltage 450 mV,
impedance 47 k Ω

CENTER IN : voltage 450 mV,
impedance 47 k Ω

REAR IN : voltage 450 mV,
impedance 47 k Ω

WOOFER IN : voltage 450 mV,
impedance 47 k Ω

Outputs

MD/VIDEO OUT : voltage 250 mV
impedance 1 k Ω

PHONES : accepts headphones of
(stereo phone jack) 8 Ω or more

FRONT SPEAKER : accepts impedance of
6 to 16 Ω or more

CENTER SPEAKER: accepts impedance of
6 to 16 Ω or more

SUPER WOOFER : Voltage 1 V, impedance
1 k Ω

CD player section

System Compact disc and digital audio system

Laser Semiconductor laser ($\lambda=780\text{nm}$)
Emission duration: continuous

Max. 44.6 μW *

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 (± 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 —

MINI Hi-Fi COMPONENT SYSTEM

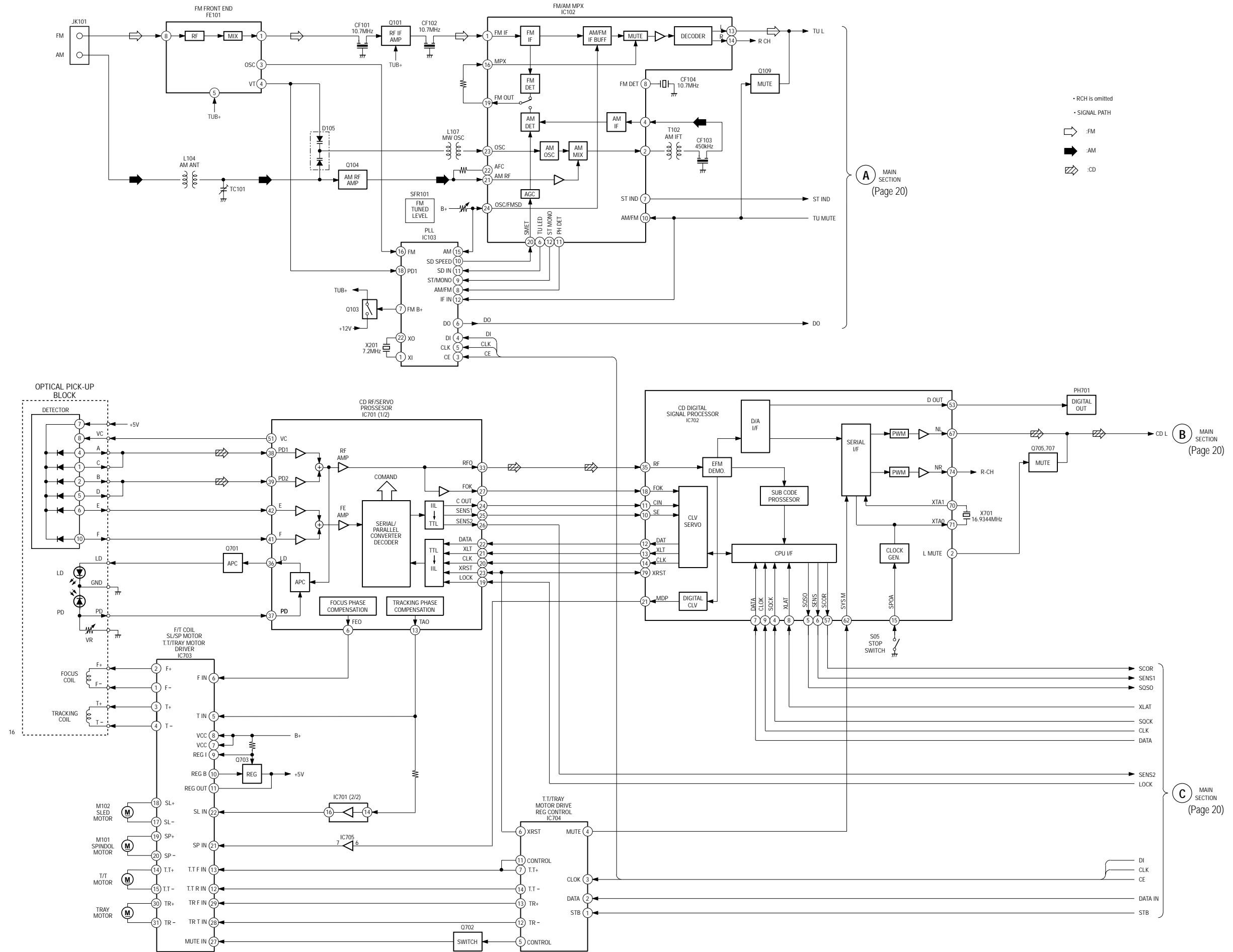
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

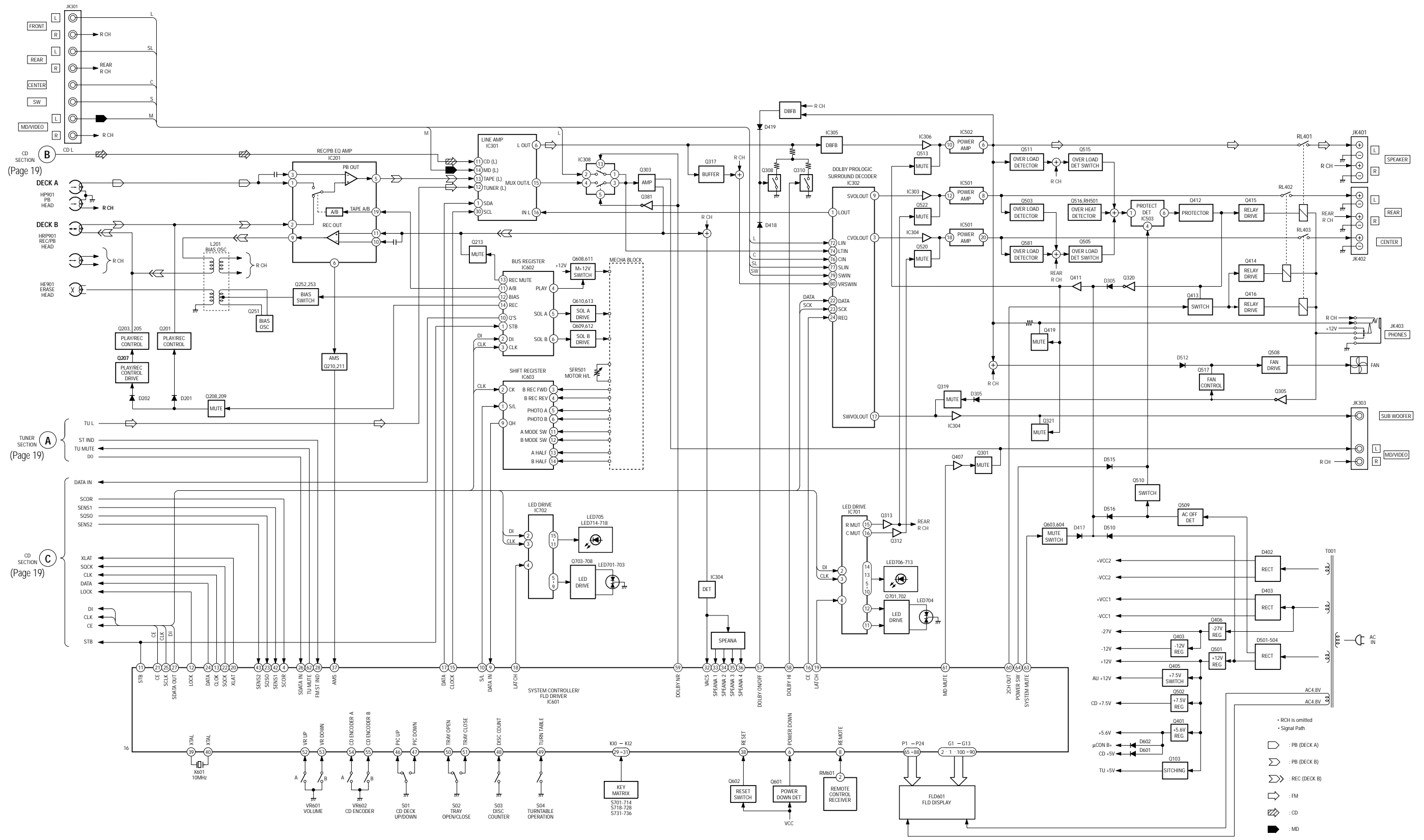
SONY®

SECTION 7
DIAGRAMS

7-1. BLOCK DIAGRAMS
TUNER/CD SECTION



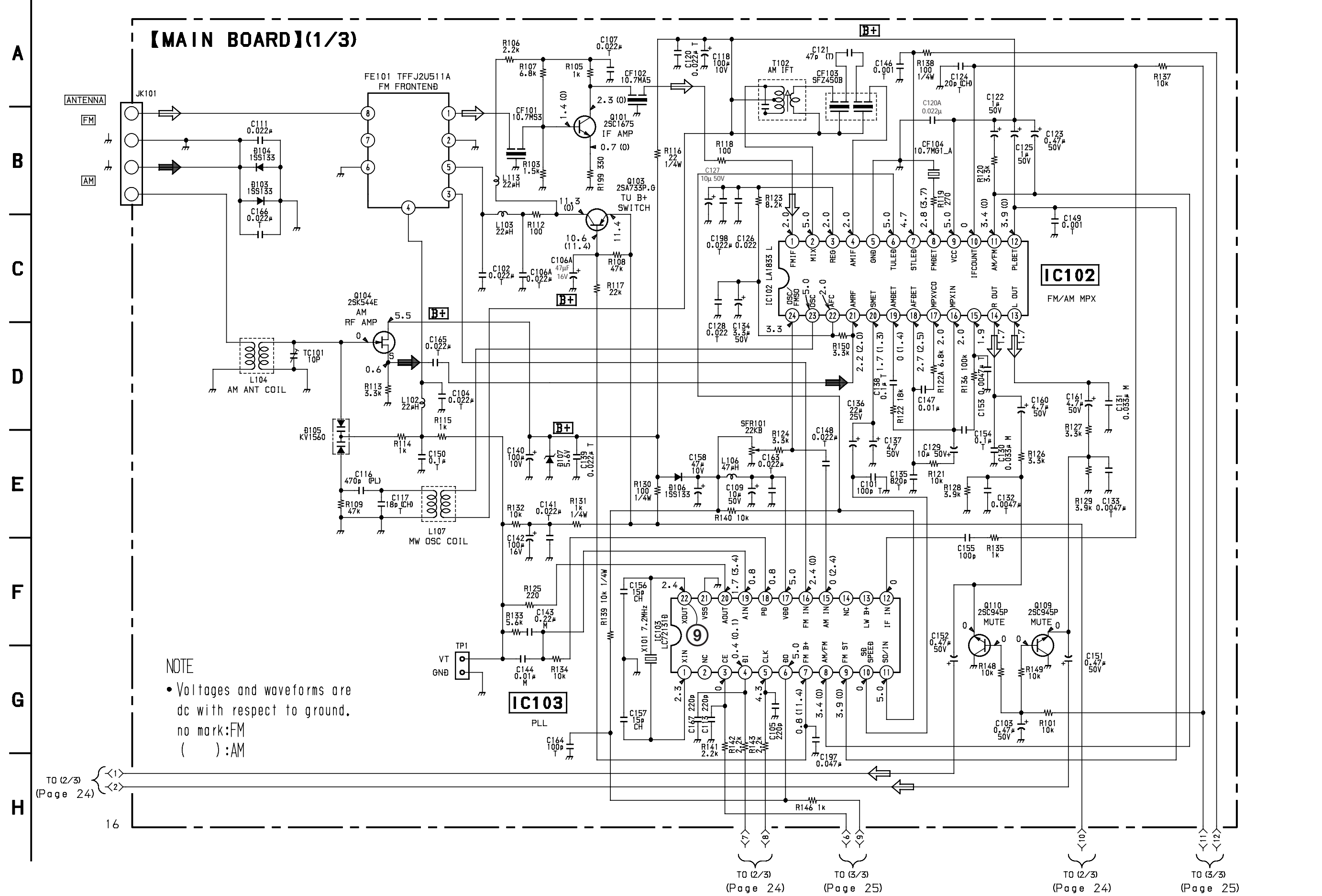
MAIN SECTION



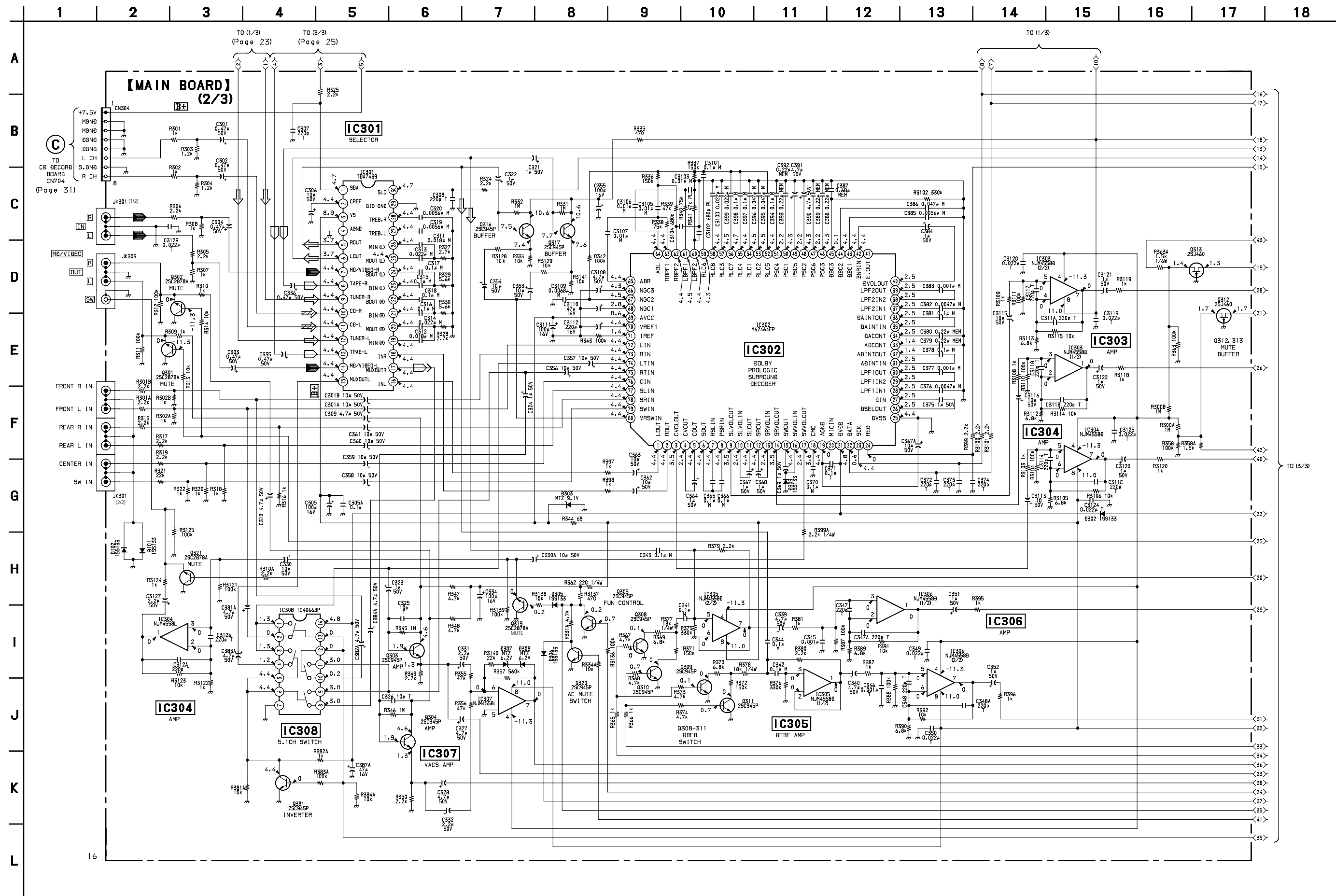
7-4. SCHEMATIC DIAGRAM TUNER SECTION

• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 39 for IC Block Diagrams.

	1	2	3	4	5	6	7	8	9	10	11	12
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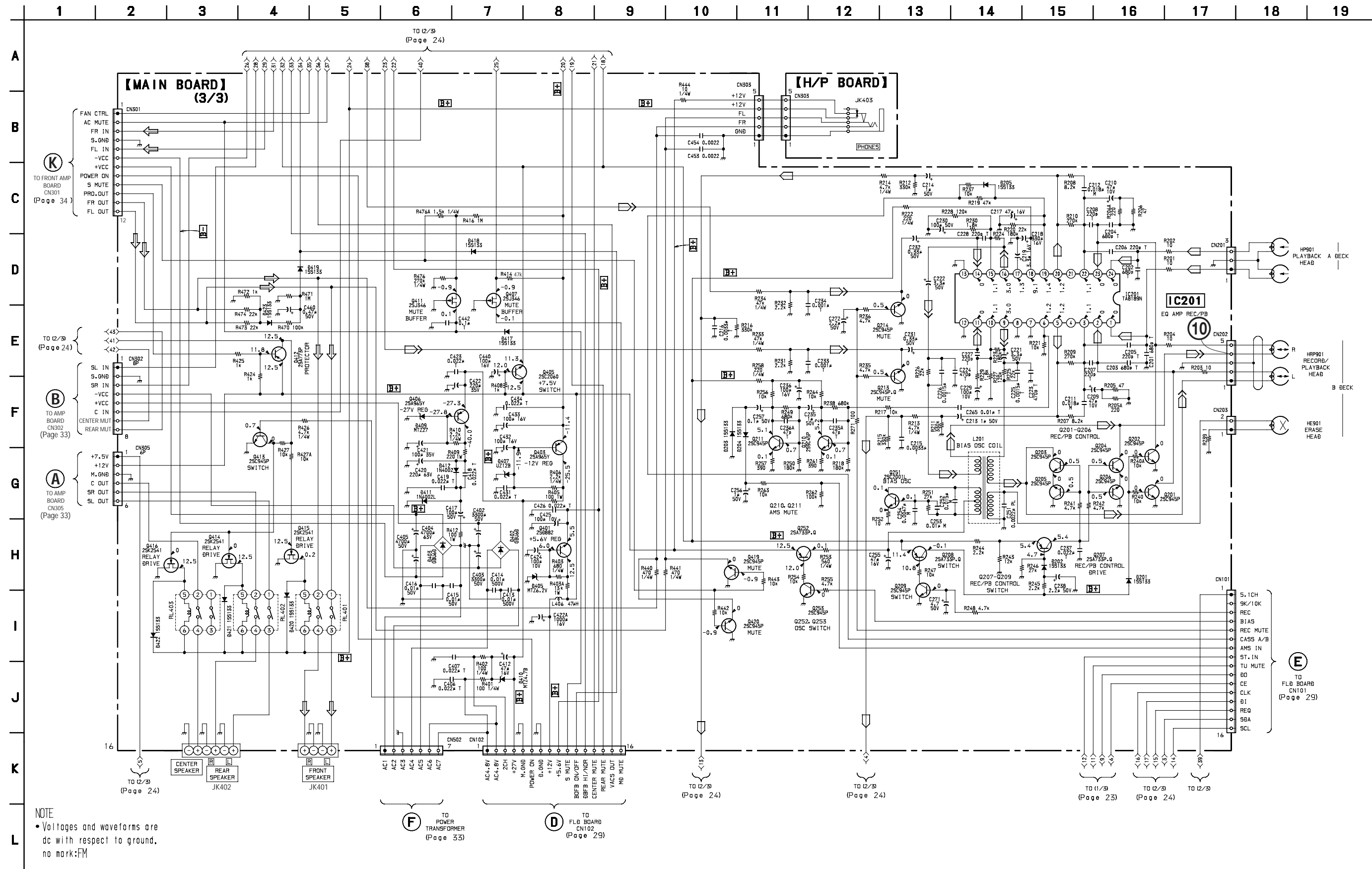


7-5. SCHEMATIC DIAGRAM DOLBY SECTION • Refer to page 21 for Note on Schematic Diagrams. • Refer to page 22 for Printed Wiring Board.



7-6. SCHEMATIC DIAGRAM TEPE/POWER SECTION

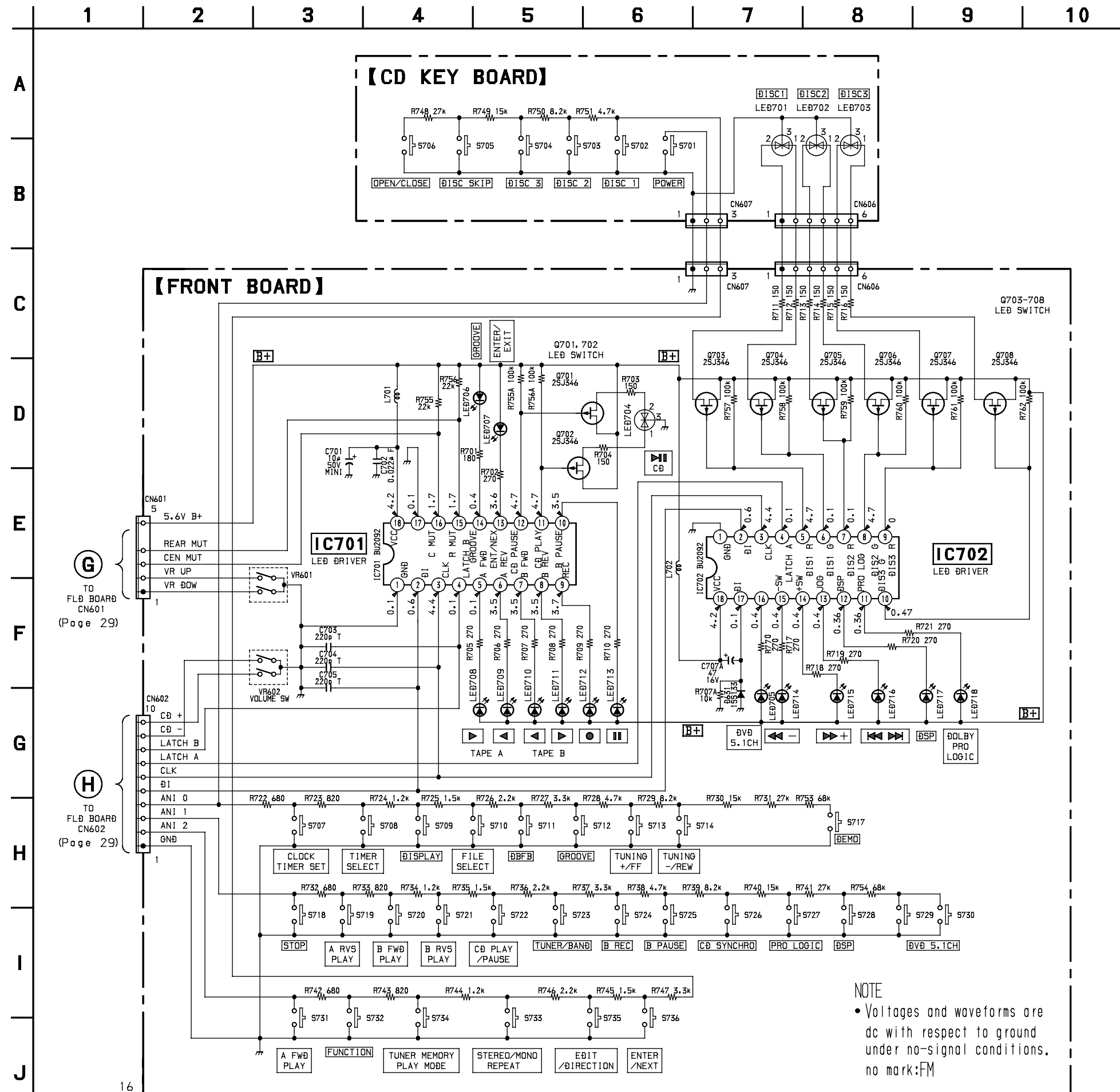
• Refer to page 21 for Note on Schematic Diagrams. • Refer to page 22 for Printed Wiring Board. • Refer to page 39 for IC Block Diagrams.



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

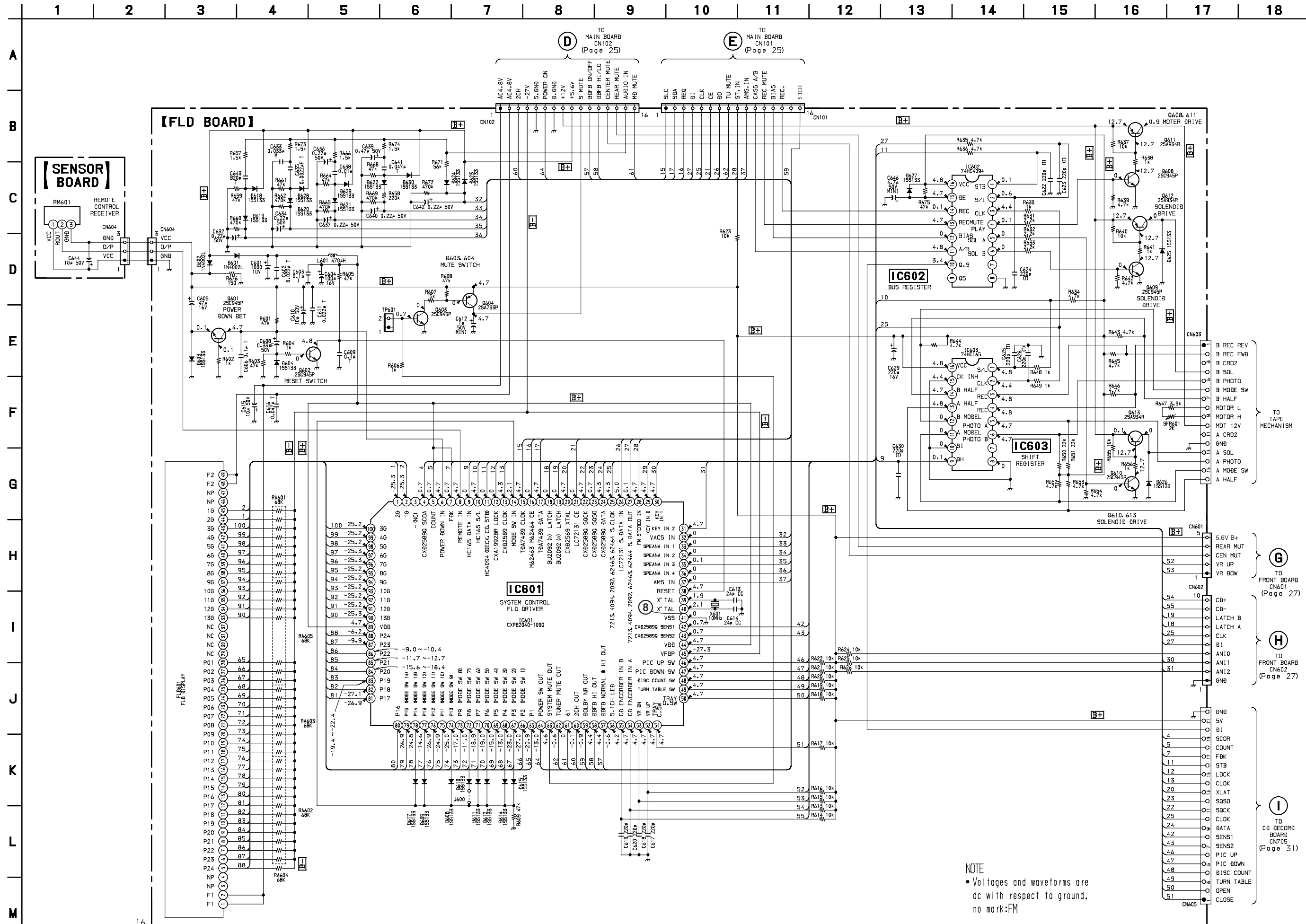
7-8. SCHEMATIC DIAGRAM FRONT SECTION

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



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

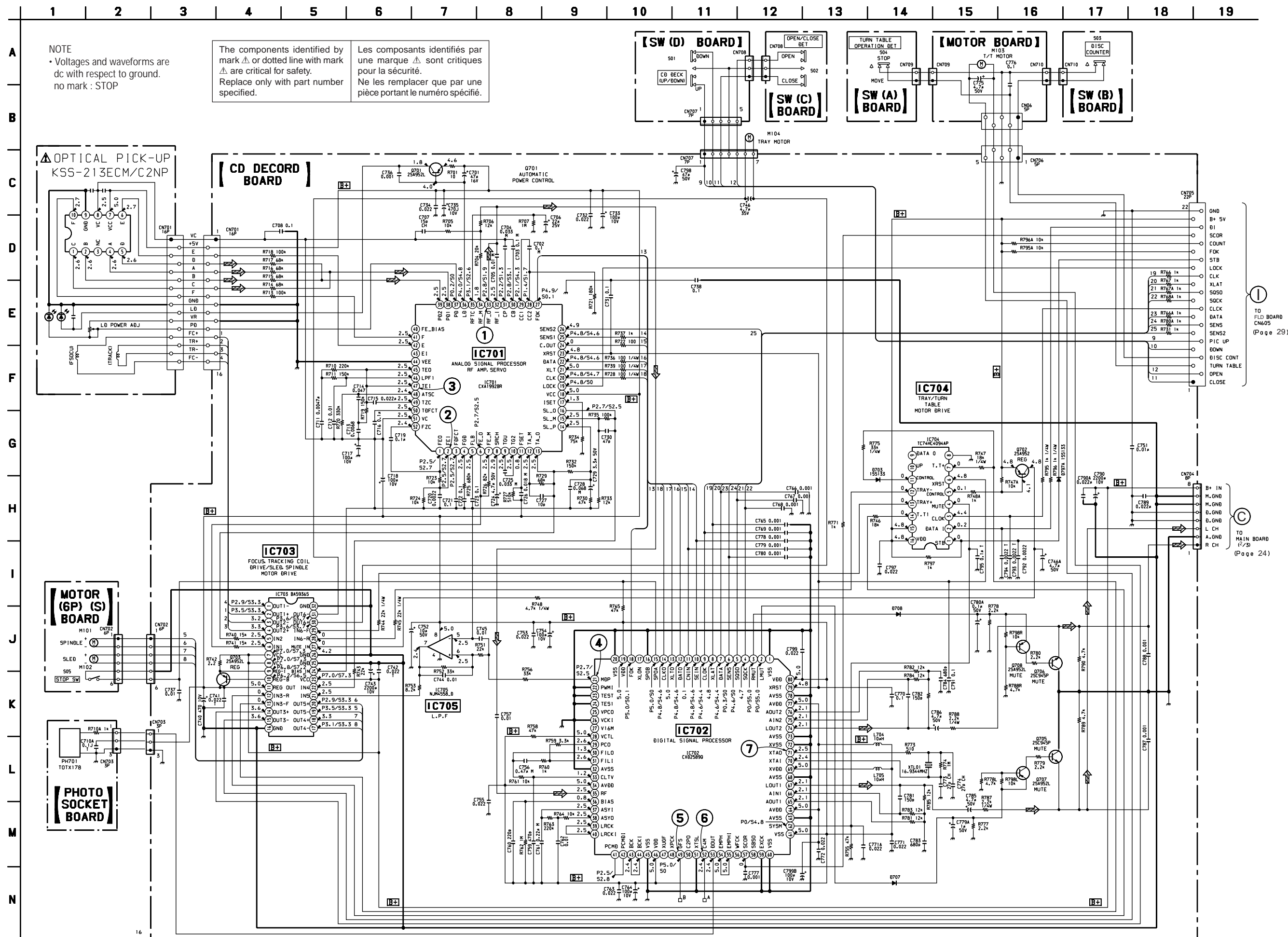
TO FRONT BOARD CN601 (Page 27)
 5.6V B+
 REAR MUT
 CEN MUT
 VR UP
 VR DOW

TO FRONT BOARD CN602 (Page 27)
 CB+
 CB-
 LATCH B
 LATCH A
 CLK
 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
 42
 43
 46
 47
 48
 49
 50
 51
 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

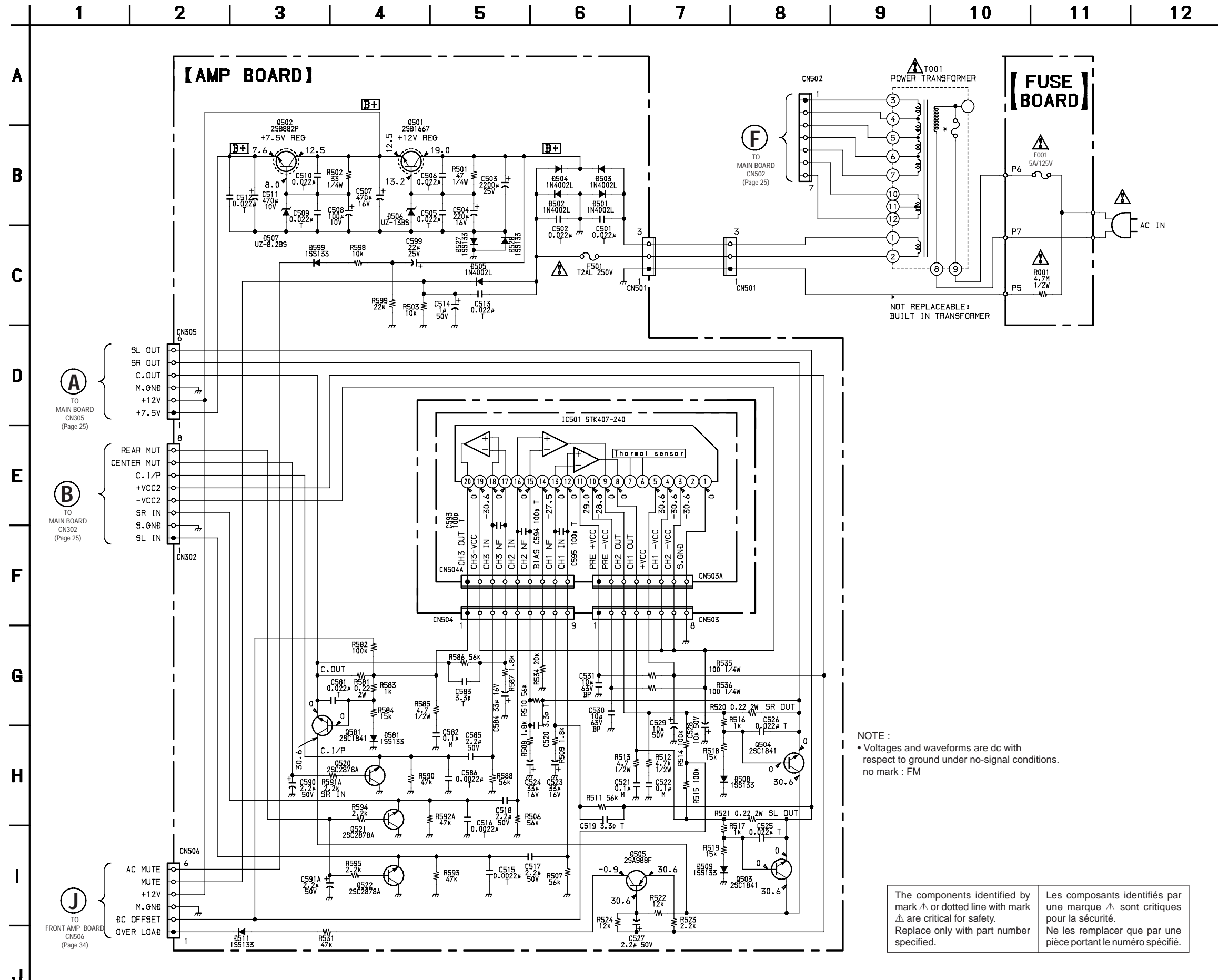
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ 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
 (2/3)
 (Page 24)

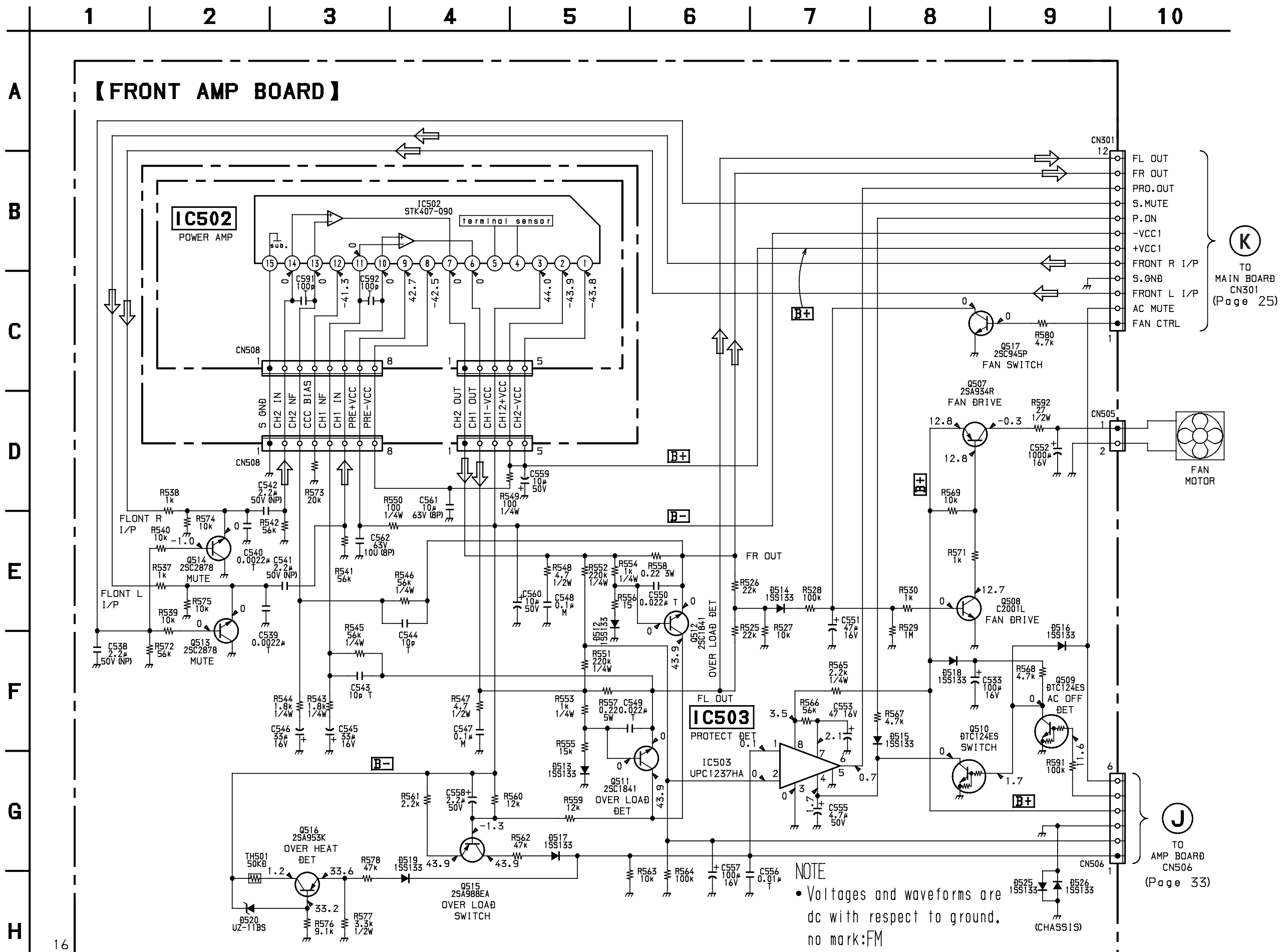
7-14. SCHEMATIC DIAGRAM CENTER/REAR AMP SECTION • Refer to page 21 for Note on Schematic Diagrams.



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

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ ou trait en pointillés avec une marque Δ 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)