

HCD-GRX8/R800/ RX88/RX99

SERVICE MANUAL

AEP Model

UK Model

HCD-RX88/RX99

E Model

HCD-GRX8/R800

Australian Model


HCD-GRX8



Photo: HCD-GRX8

HCD-GRX8/R800/RX88/RX99 is the tuner, deck, CD and amplifier section in MHC-GRX8/R800/RX88/RX99.

This stereo system is equipped with the Dolby B-type noise reduction system*.

* Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

CD SECTION	Model Name Using Similar Mechanism	HCD-H991AV
	CD Mechanism Type	CDM38L-5BD29AL/ CDM38LH-5BD29AL
	Base Unit Type	BU-5BD29AL
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-230AWR1/230PWR1

SPECIFICATIONS

Amplifier section

HCD-RX88/RX99:

DIN power output (rated)

80 + 80 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)

100 + 100 watts
(8 ohms at 1 kHz, 10% THD)

Music power output (reference)

170 + 170 watts
(8 ohms at 1 kHz, 10% THD)

HCD-GRX8/R800:

The following measured at AC 120, 220, 240 V

50/60 Hz

DIN power output (rated)

105 + 105 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)

130 + 130 watts
(8 ohms at 1 kHz, 10% THD)

Peak music power output (reference)

2000 watts

Inputs

VIDEO IN, MD IN:

(phono jacks)

MIX MIC: (phone jack)

voltage 250 mV,
impedance 47 kilohms
sensitivity 1 mV,
impedance 10 kilohms

Outputs

MD OUT:

(phono jacks)

PHONES:

(stereo phone jack)

SPEAKER:

voltage 250 mV
impedance 1 kilohms
accepts headphones of 8 ohms or more
accepts impedance of 8 to 16 ohms

SURROUND SPEAKER: accepts impedance of 16 ohms
SUPER WOOFER: Voltage 1 V, impedance 1 kilohm

CD player section

System

Compact disc and digital audio system

Laser

Semiconductor laser

($\lambda=780\text{nm}$)

Emission duration:

continuous

Max. 44.6 μW^*

*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.

780 - 790 nm

2 Hz - 20 kHz ($\pm 0.5\text{ dB}$)

More than 90 dB

More than 90 dB

Wavelength

Frequency response

Signal-to-noise ratio

Dynamic range

CD OPTICAL DIGITAL OUT

(Square optical connector jack, rear panel)

Wavelength

600 nm

Output Level

-18 dBm

Tape player section

Recording system

4-track 2-channel stereo

Frequency response

40 - 13,000 Hz ($\pm 3\text{ dB}$),

(DOLBY NR OFF)

using Sony TYPE I cassette

40 - 14,000 Hz ($\pm 3\text{ dB}$),

using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range

87.5 - 108.0 MHz

2 band models:

3 band (FM-MW-SW) models:

87.5 - 108.0 MHz

3 band (FM-MW-LW) models:

87.5 - 108.0 MHz

4 band models:

87.5 - 108.0 MHz

Antenna

FM lead antenna

Antenna terminals

75 ohm unbalanced

Intermediate frequency

10.7 MHz

UKV tuner section (East European, CIS model)

Tuning range

65.0 - 74.0 MHz

Stereo plus

— Continued on next page —

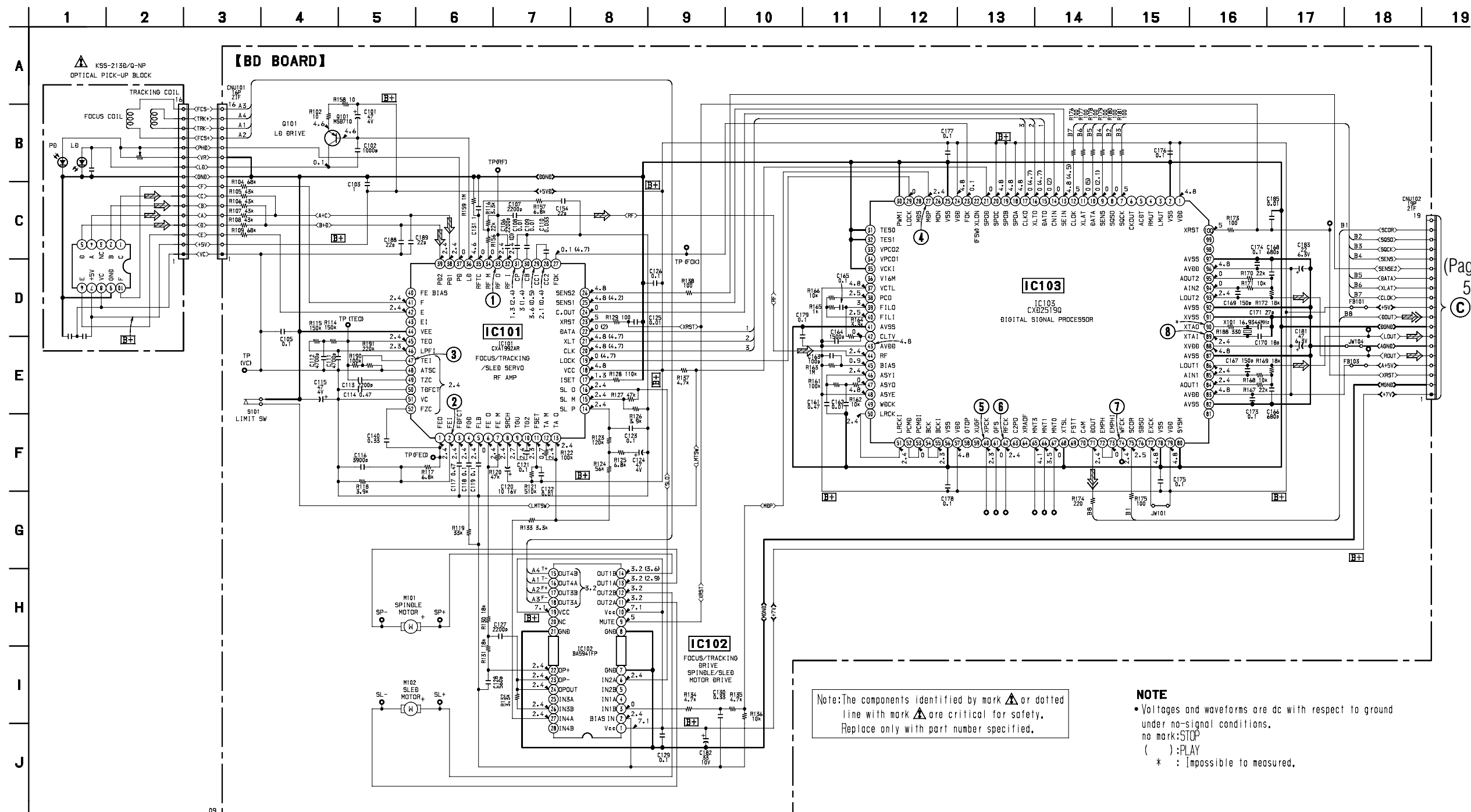
COMPACT DISC DECK RECEIVER



SONY®

7-4. SCHEMATIC DIAGRAM — CD SECTION —

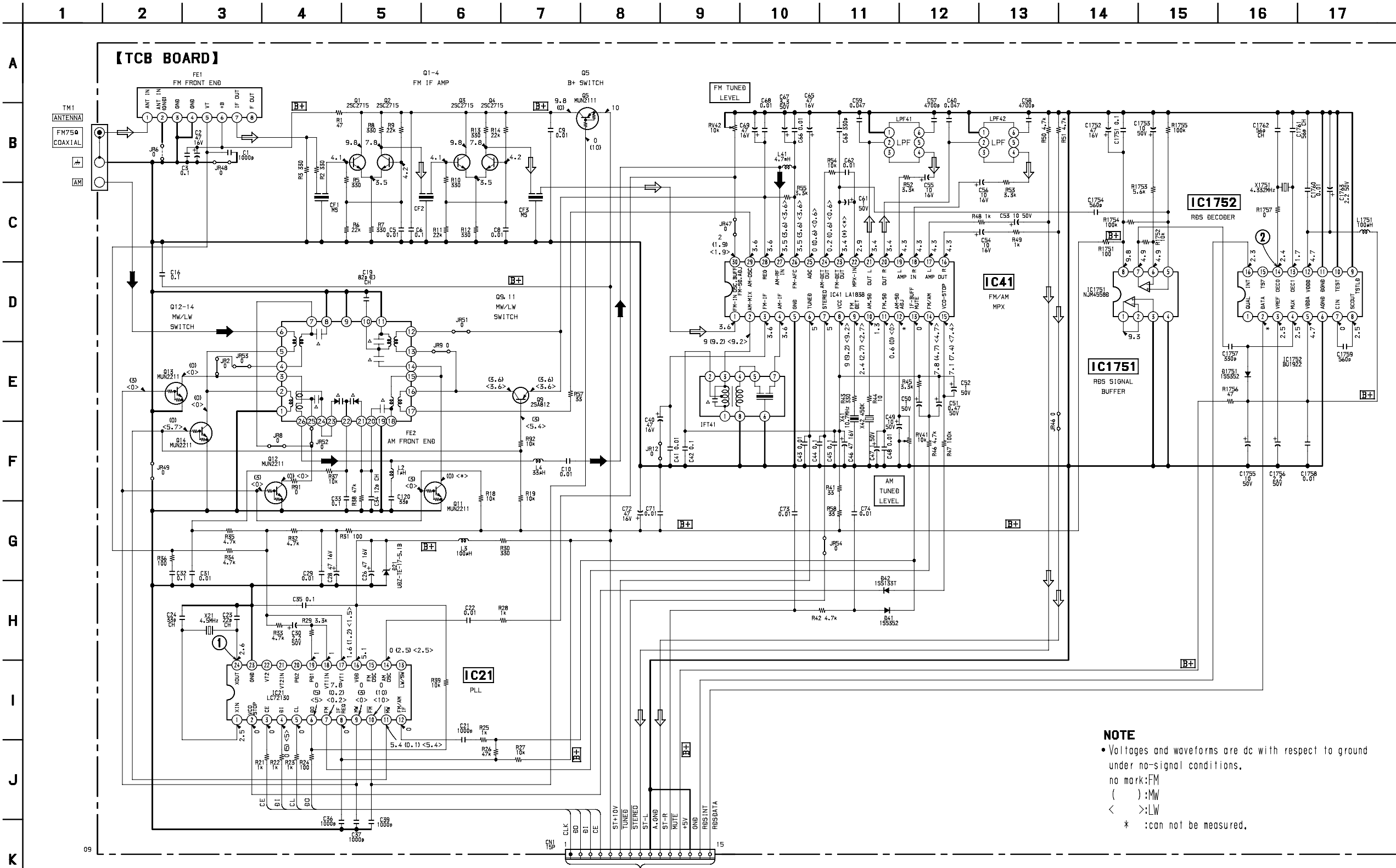
- See page 35 for Waveforms.
- See page 85 for IC Block Diagrams.
- See page 88 for IC Pin Functions.



(Page 56)
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7-5. SCHEMATIC DIAGRAM – TUNER SECTION – (AEP, UK, German model)

- See page 36 for Waveforms.
- See page 83 for IC Block Diagrams.

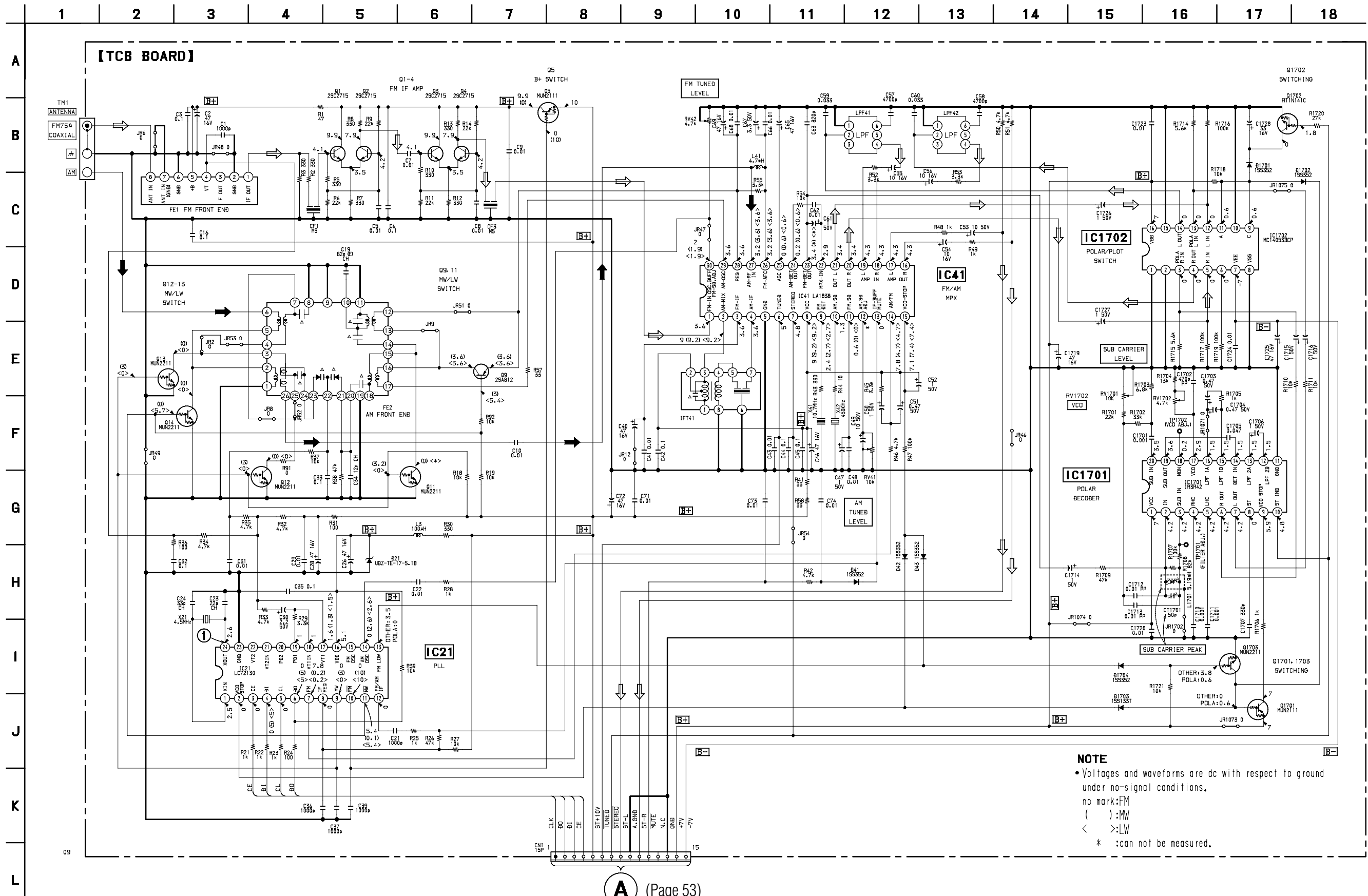


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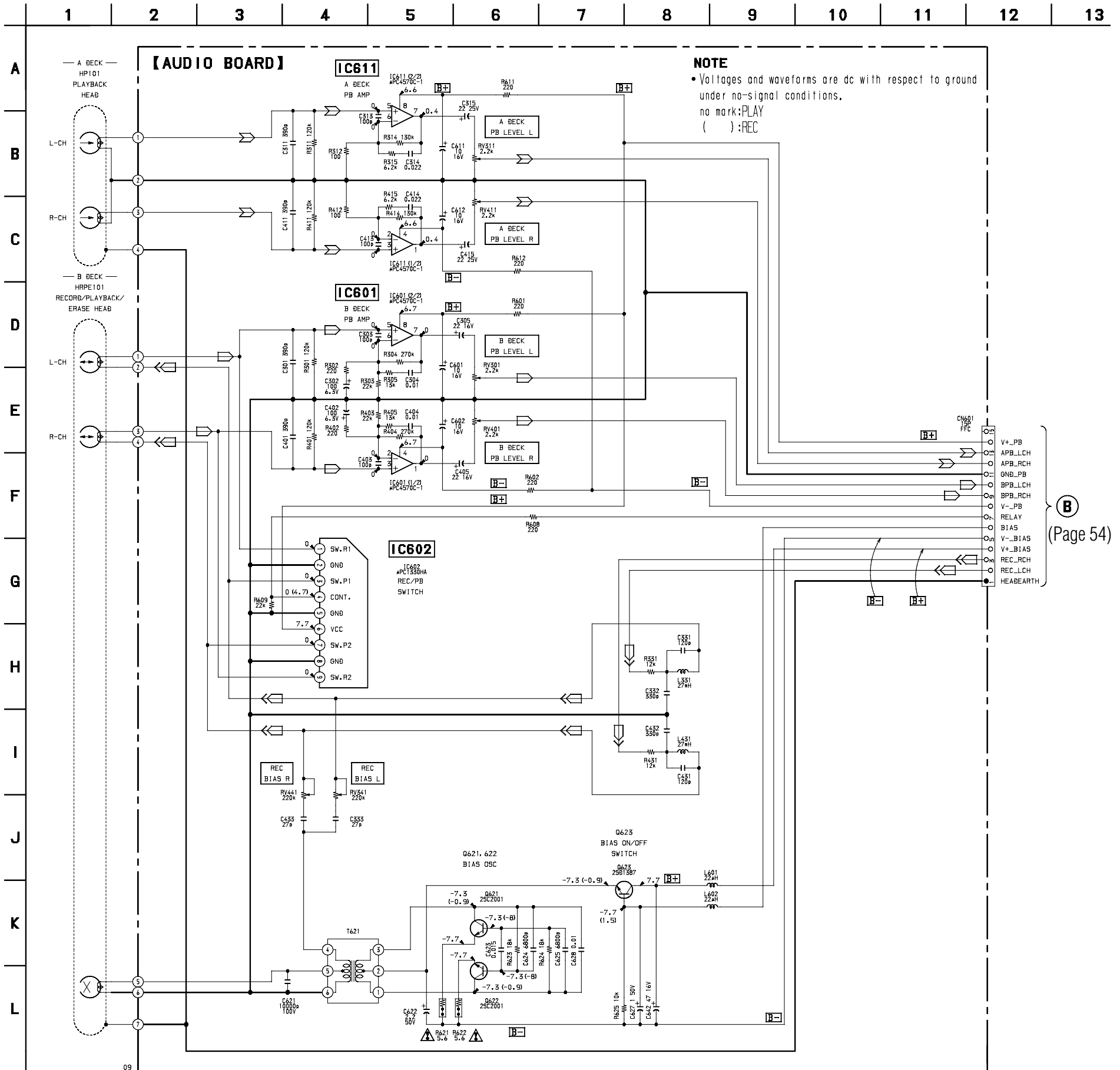
NOTE
 • Voltages and waveforms are dc with respect to ground under no-signal conditions.
 no mark:FM
 ():MW
 < >:LW
 * :can not be measured.

7-8. SCHEMATIC DIAGRAM – TUNER SECTION – (East European, CIS model)

- See page 36 for Waveforms.
- See page 83 for IC Block Diagrams.

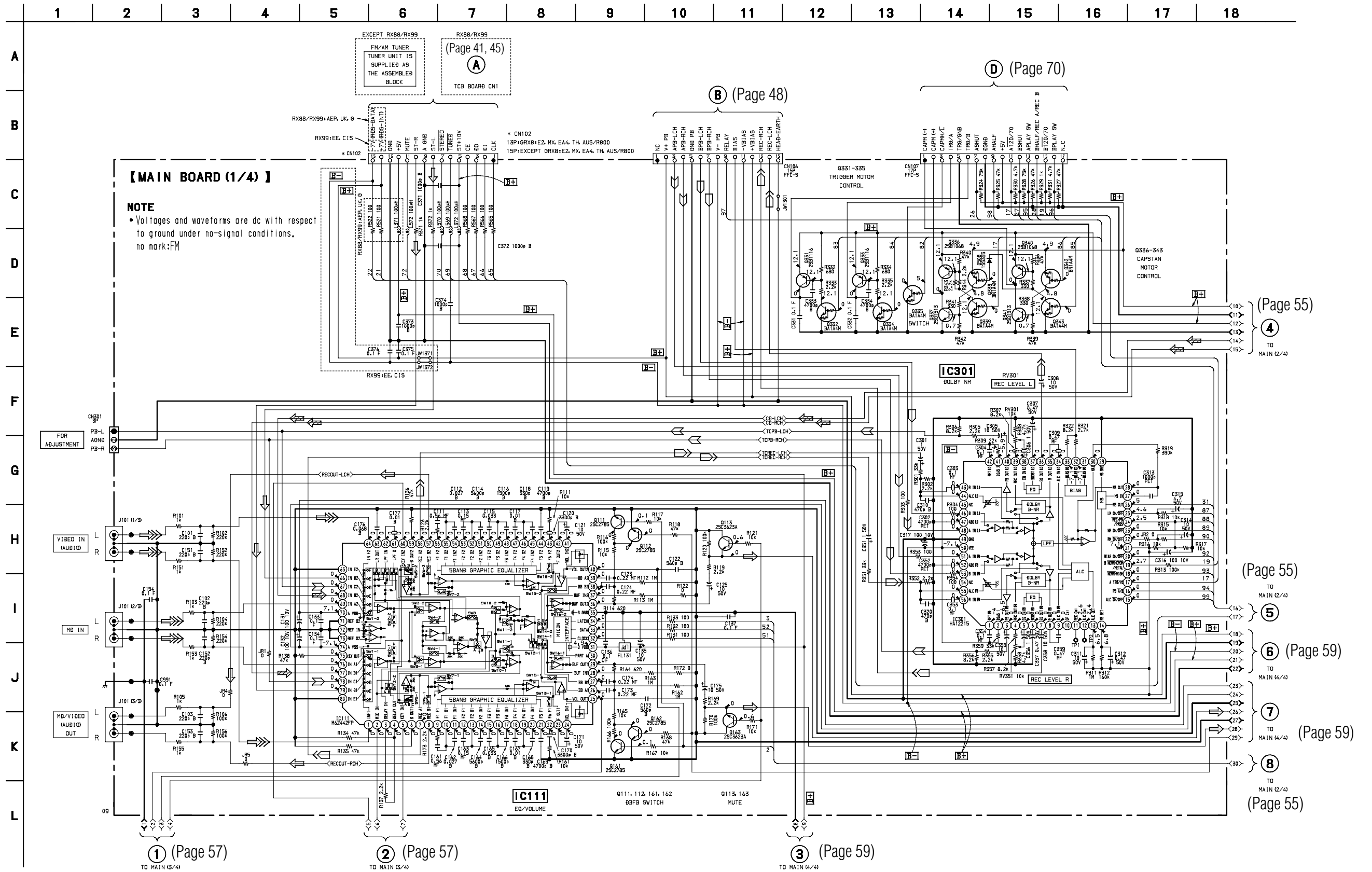


7-9. SCHEMATIC DIAGRAM – DECK SECTION –
 • See page 87 for IC Block Diagrams.



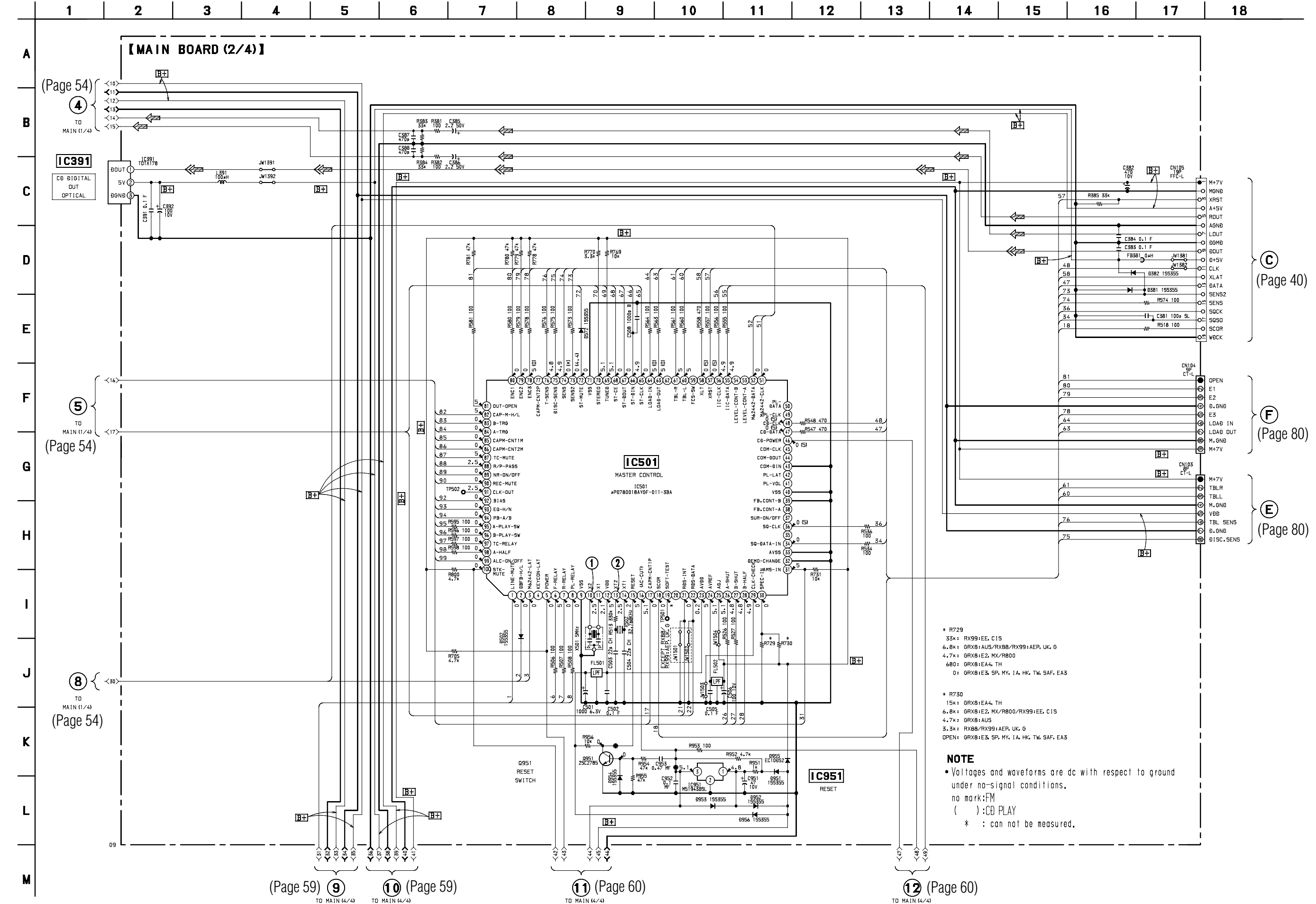
(Page 54)

7-12. SCHEMATIC DIAGRAM - MAIN (1/4) SECTION -

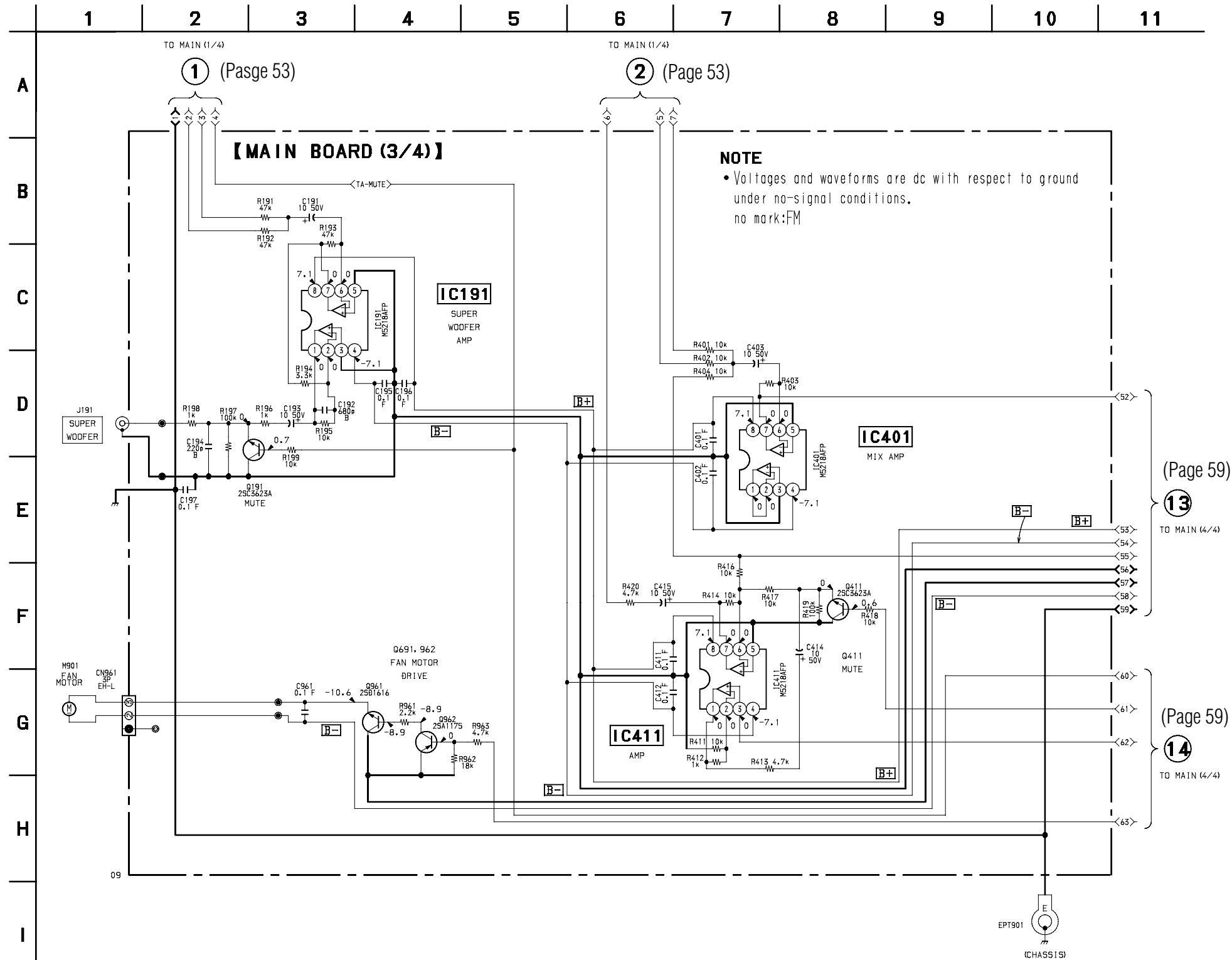


7-13. SCHEMATIC DIAGRAM – MAIN (2/4) SECTION –

- See page 36 for Waveforms.
- See page 51 for Printed Wiring Board.
- See page 93 for IC Pin Functions.



7-14. SCHEMATIC DIAGRAM – MAIN (3/4) SECTION –
 • See page 51 for Printed Wiring Board.

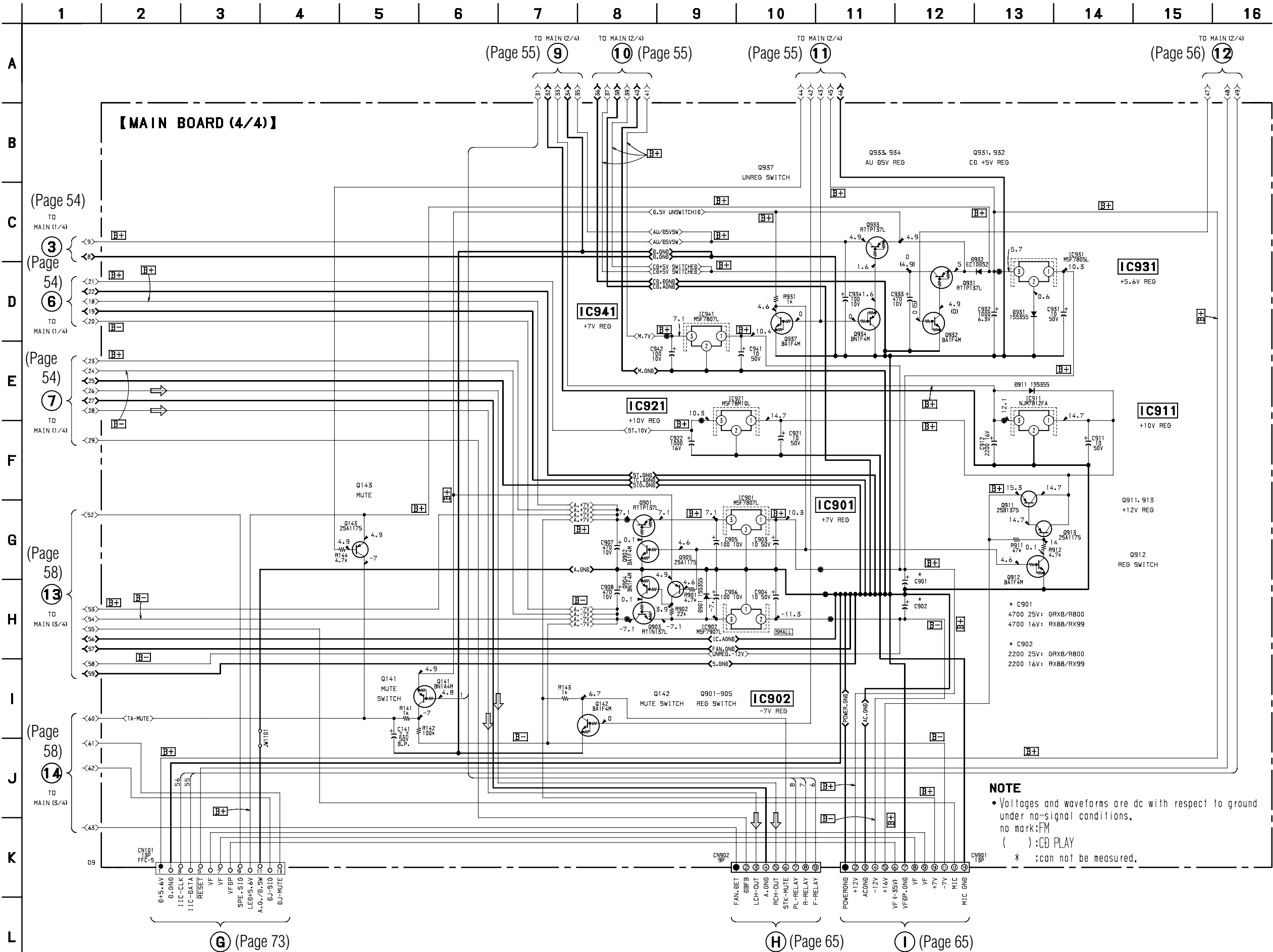


NOTE
 • Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark:FM

(Page 59)
13
 TO MAIN (4/4)

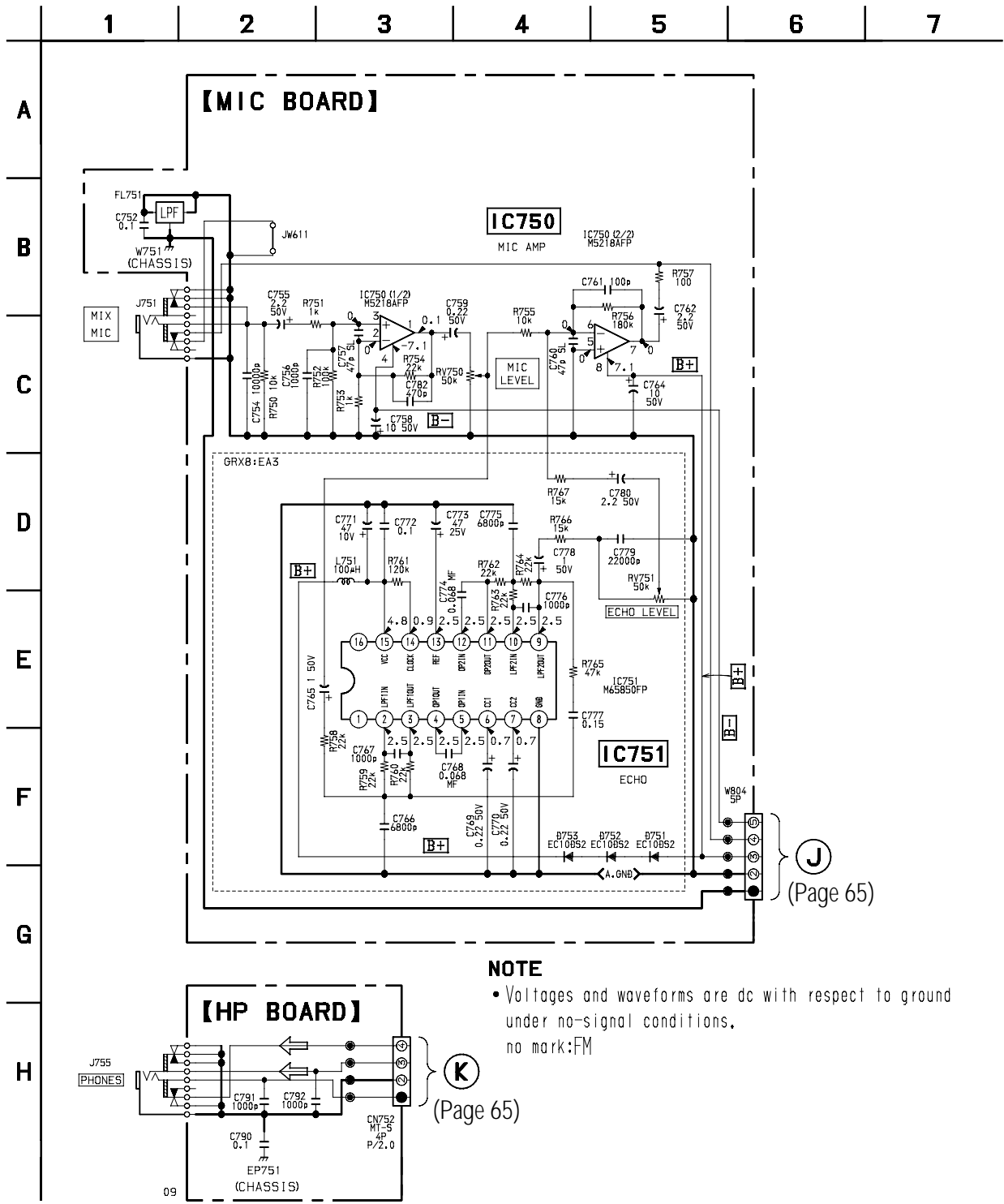
(Page 59)
14
 TO MAIN (4/4)

7-15. SCHEMATIC DIAGRAM – MAIN (4/4) SECTION –
 • See page 51 for Printed Wiring Board.

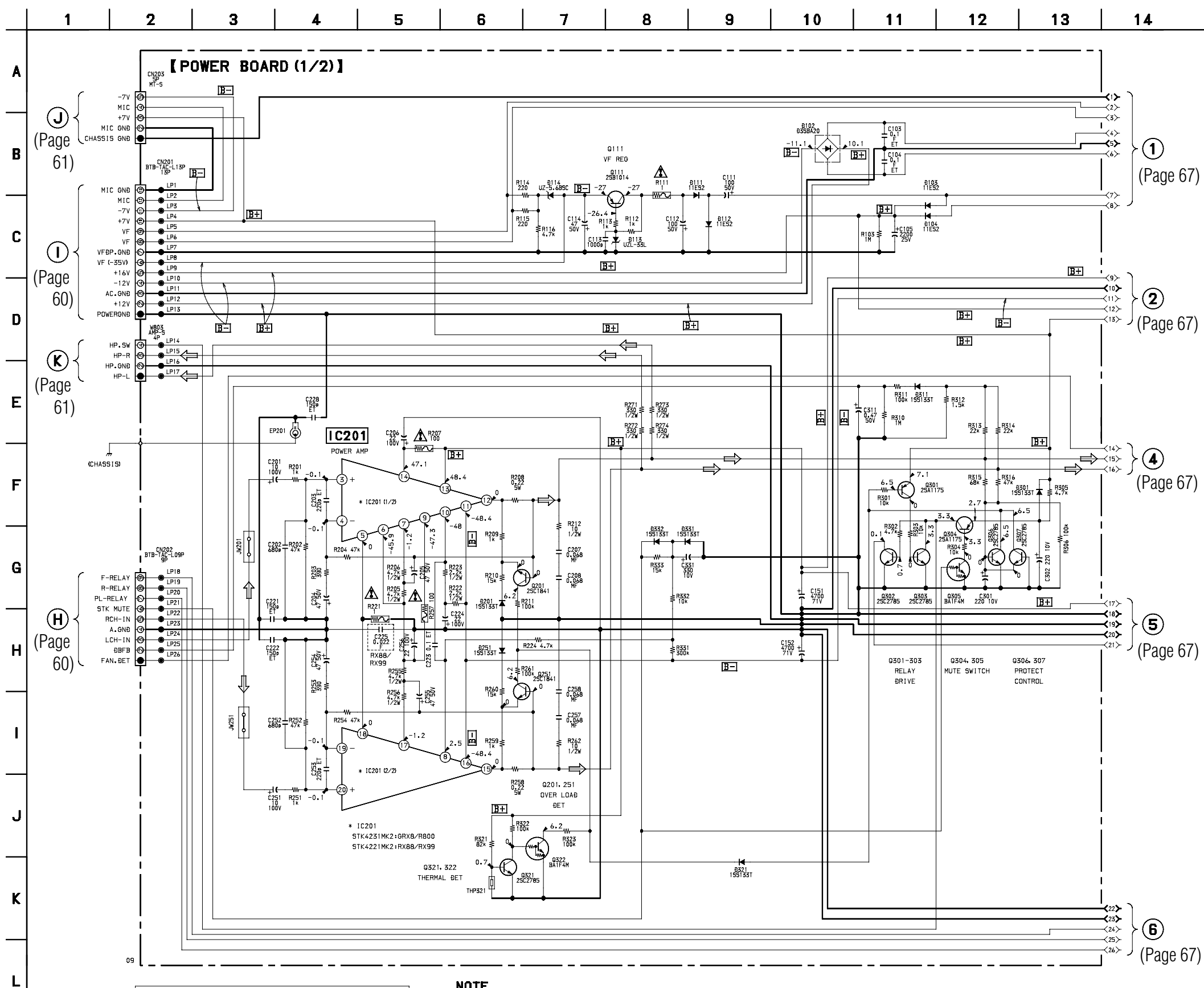


NOTE
 • Voltages and waveforms are dc with respect to ground under no-signal conditions.
 no mark:FM
 () :CD PLAY
 * :can not be measured.

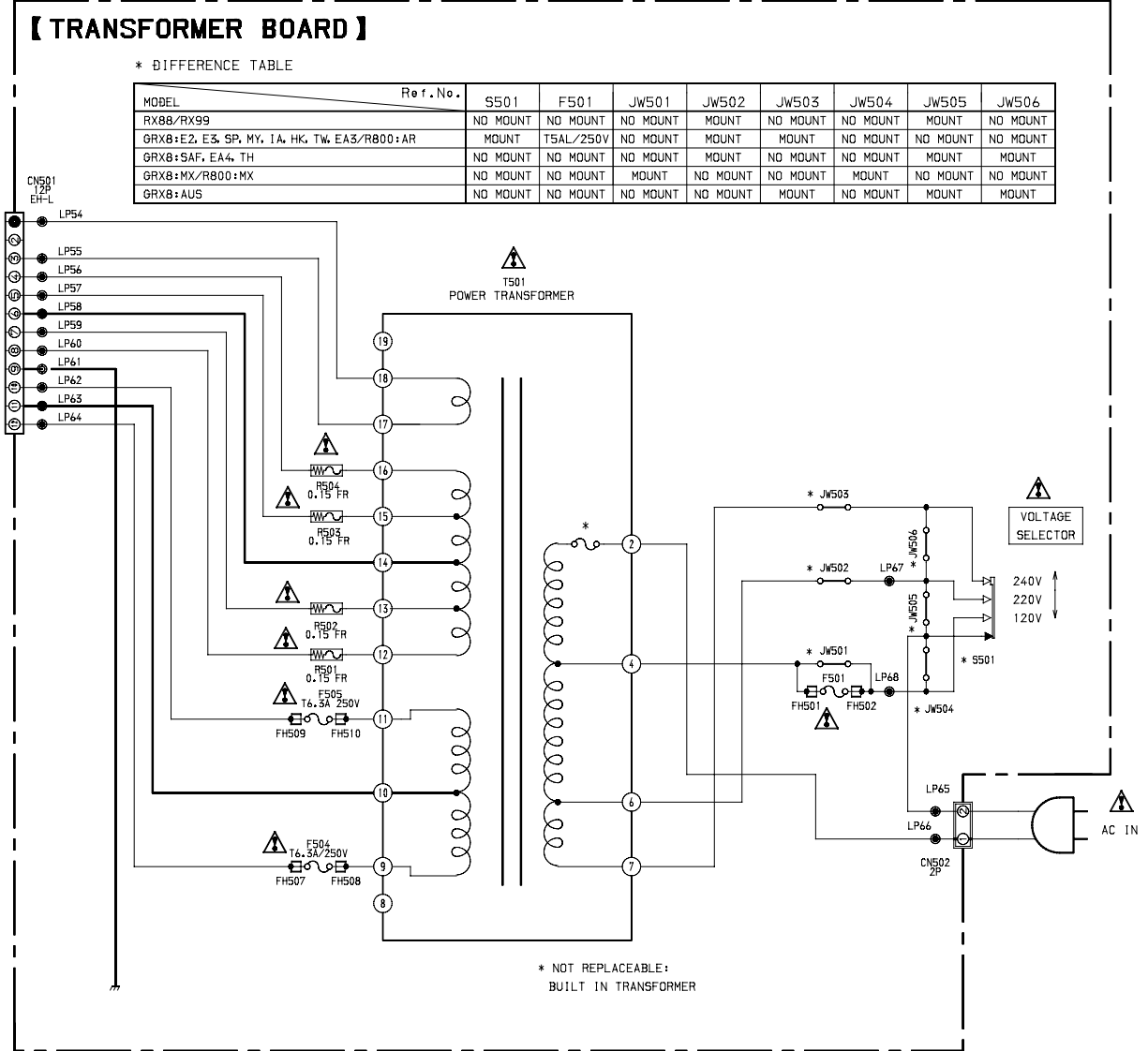
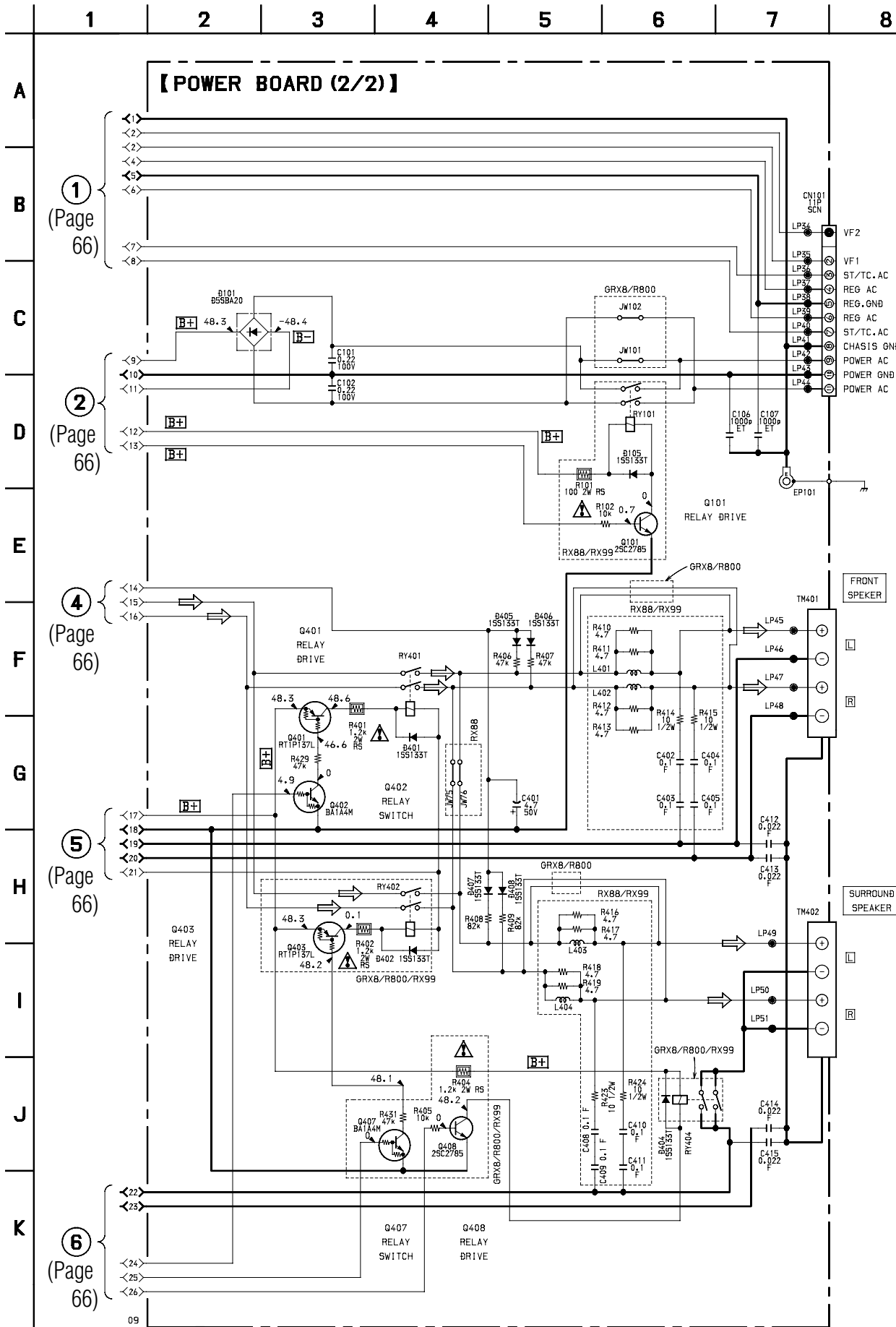
7-16. SCHEMATIC DIAGRAM – MIC/HP SECTION –
 • See page 87 for IC Block Diagrams.



7-19. SCHEMATIC DIAGRAM – POWER SECTION –



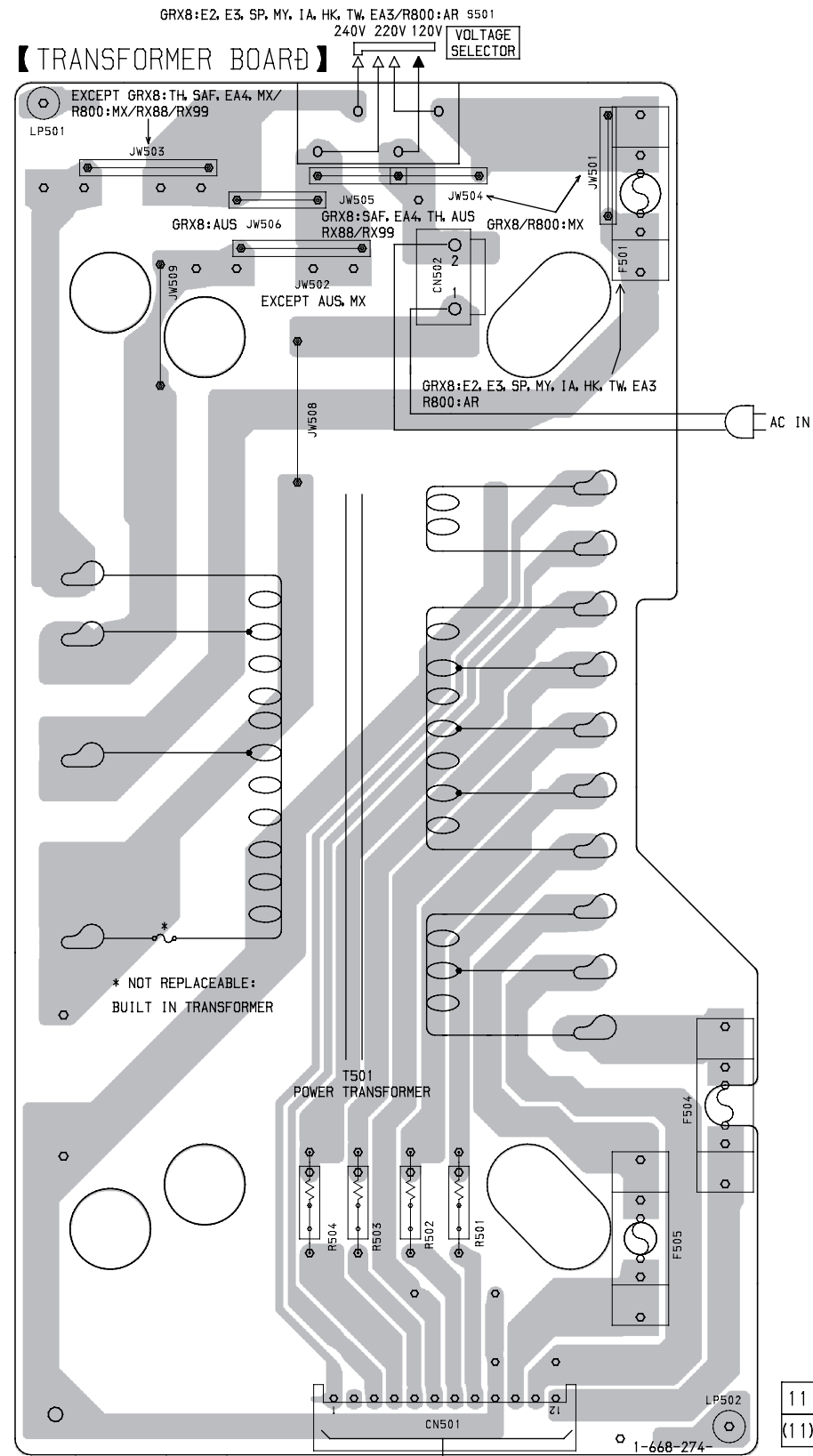
7-20. SCHEMATIC DIAGRAM – TRANSFORMER SECTION –
 • See page 63 for Printed Wiring Board. (POWER BOARD)



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

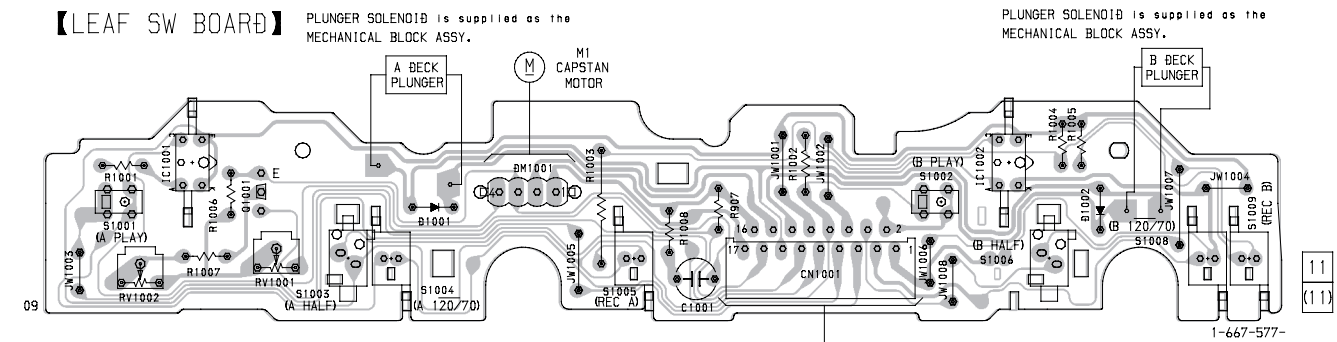
Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

7-21. PRINTED WIRING BOARD – TRANSFORMER SECTION –
 • See page 20 for Circuit Boards Location.

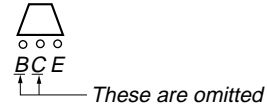


(Page 64)

7-22. PRINTED WIRING BOARD – LEAF SW SECTION –
 • See page 20 for Circuit Boards Location.

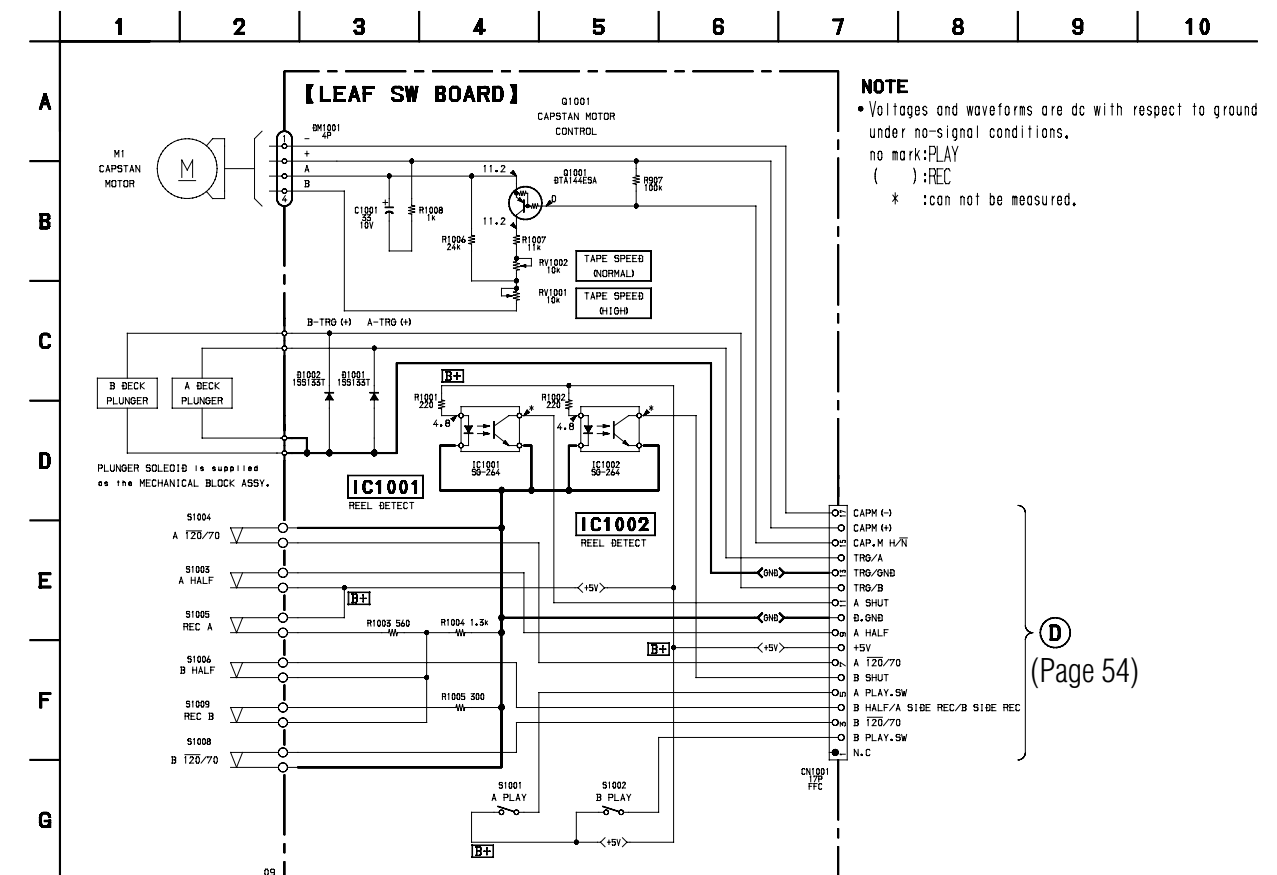


• Indication of transistor



(Page 51)

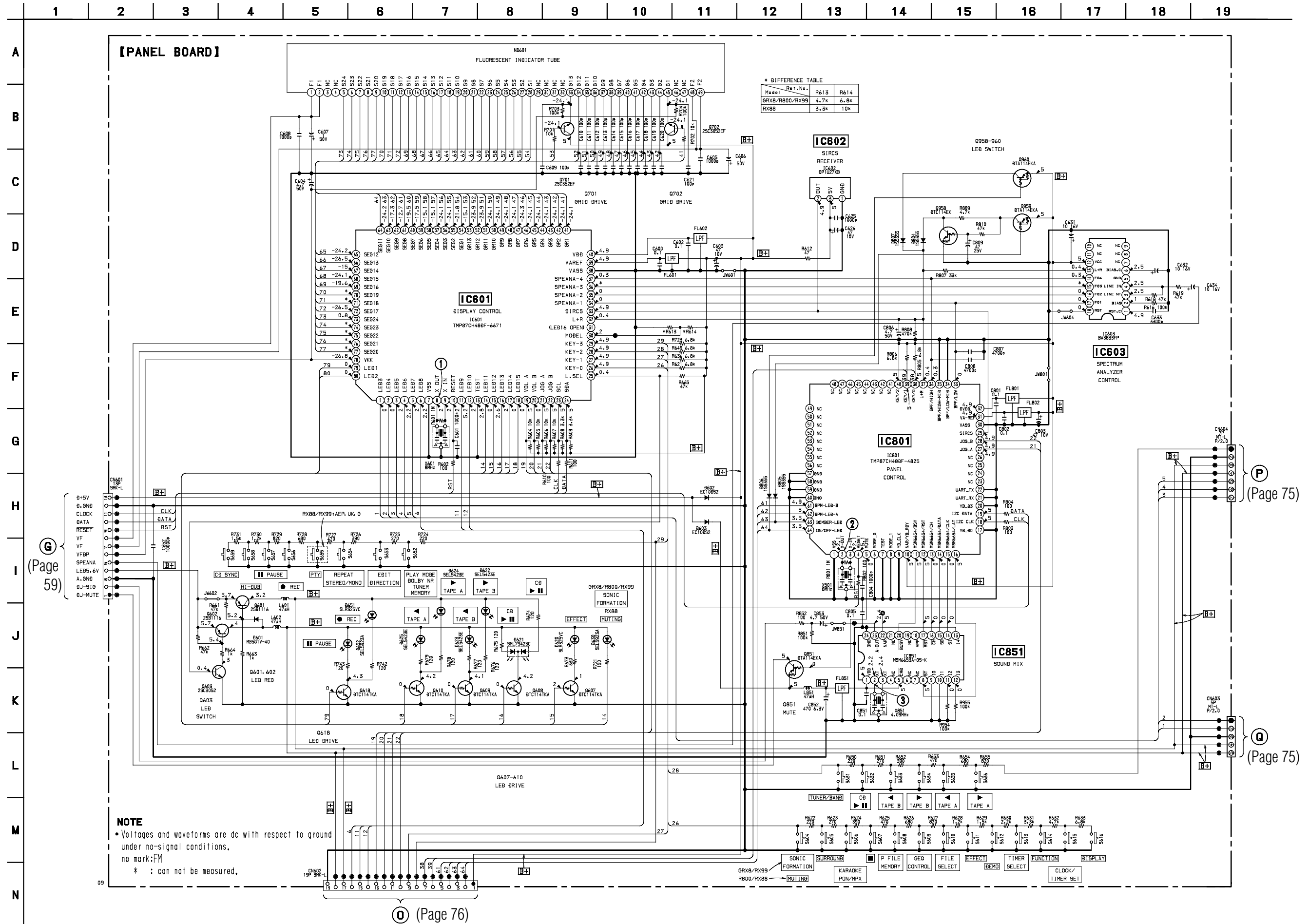
7-23. SCHEMATIC DIAGRAM – LEAF SW SECTION –



(Page 54)

7-25. SCHEMATIC DIAGRAM – DISPLAY SECTION –

- See page 36 for Waveforms.
- See page 87 for IC Block Diagrams.
- See page 96 for IC Pin Functions.



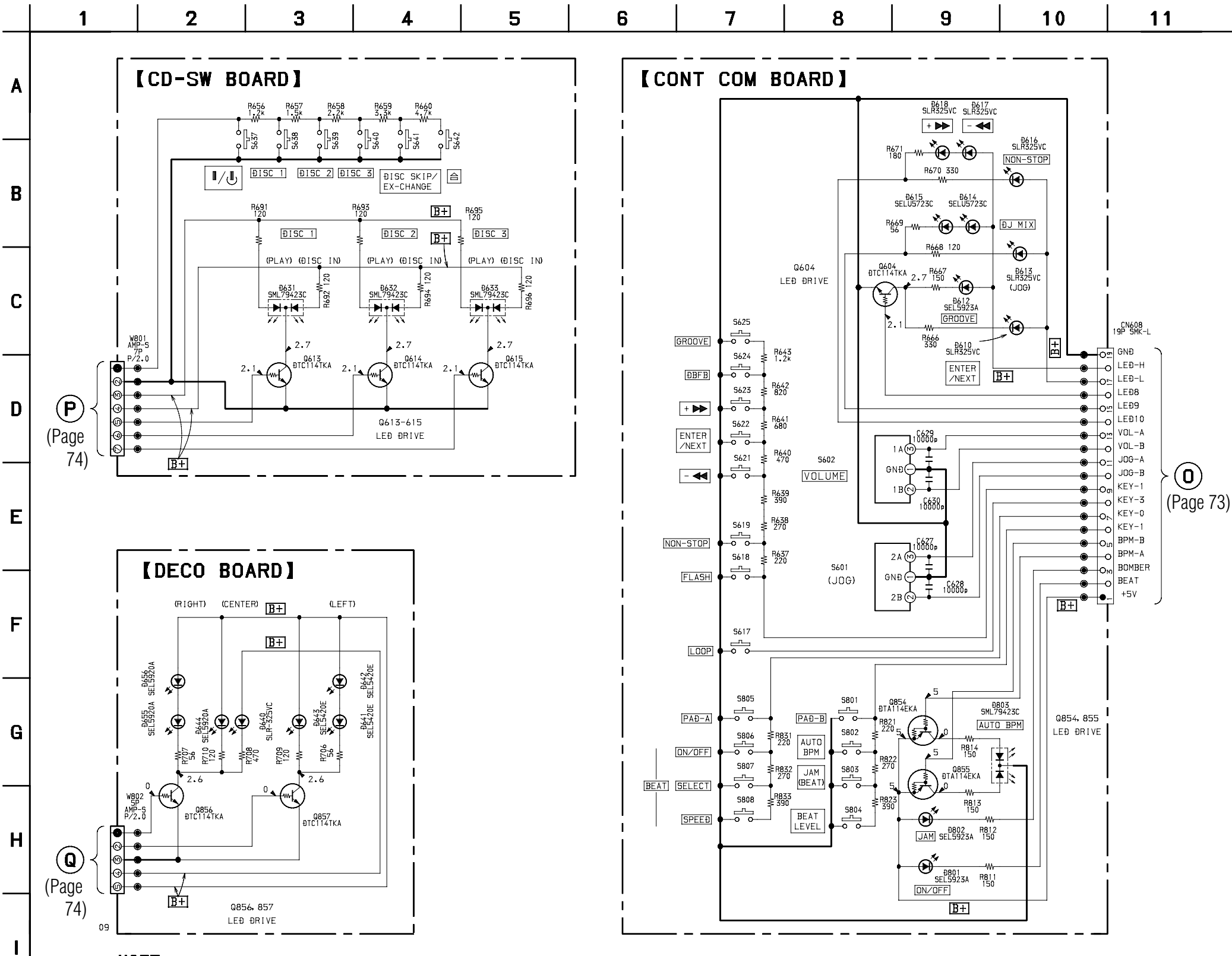
(Page 59)

(Page 75)

(Page 75)

(Page 76)

7-26. SCHEMATIC DIAGRAM – PANEL SECTION –



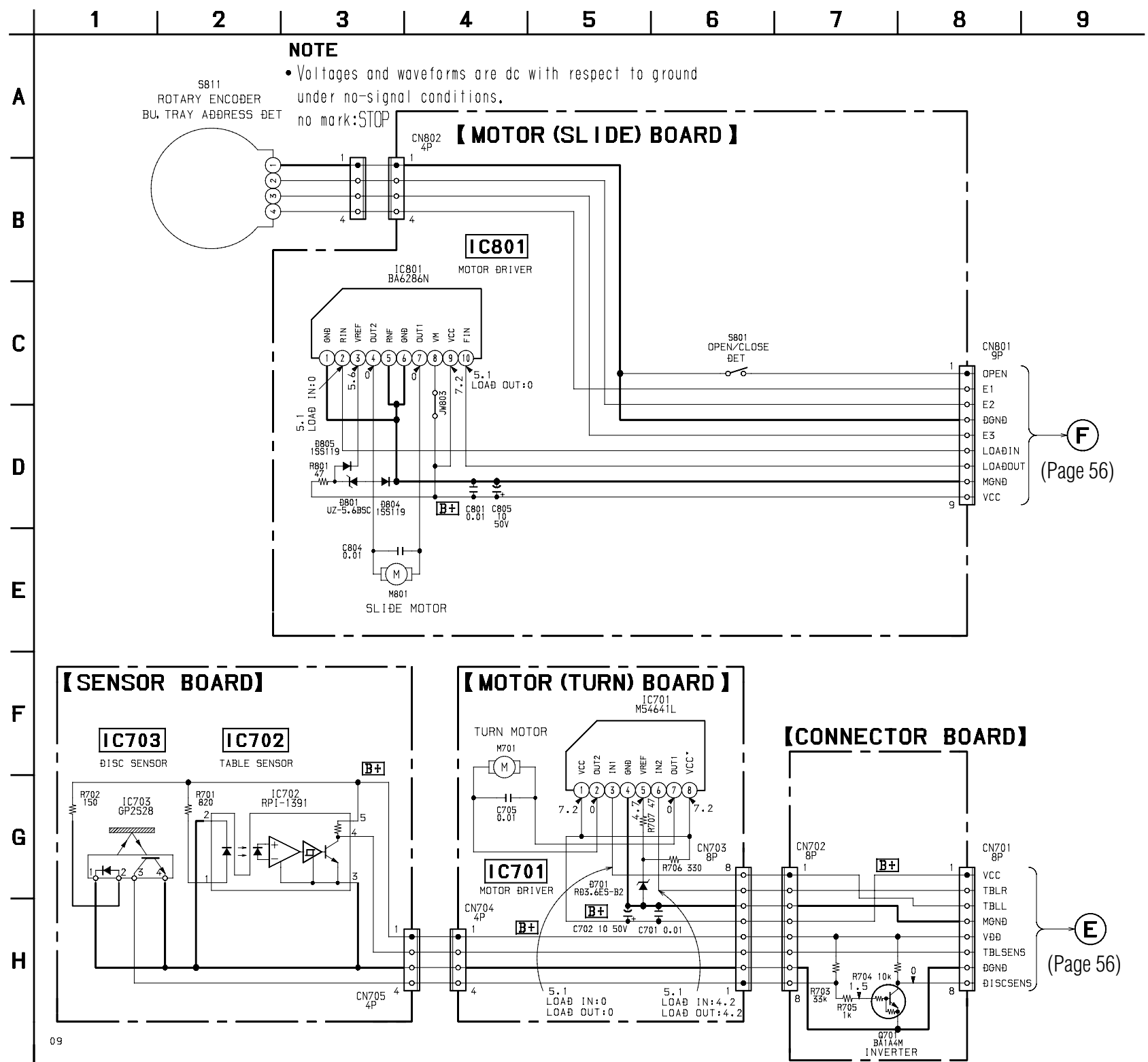
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(Page 73)

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

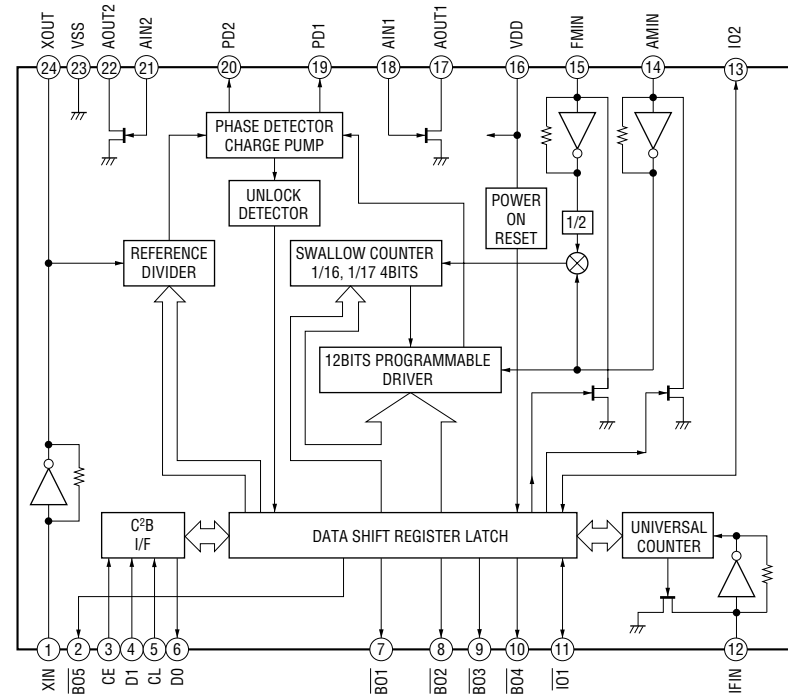
7-28. SCHEMATIC DIAGRAM – CD MOTOR SECTION –
 • See page 87 for IC Block Diagrams.



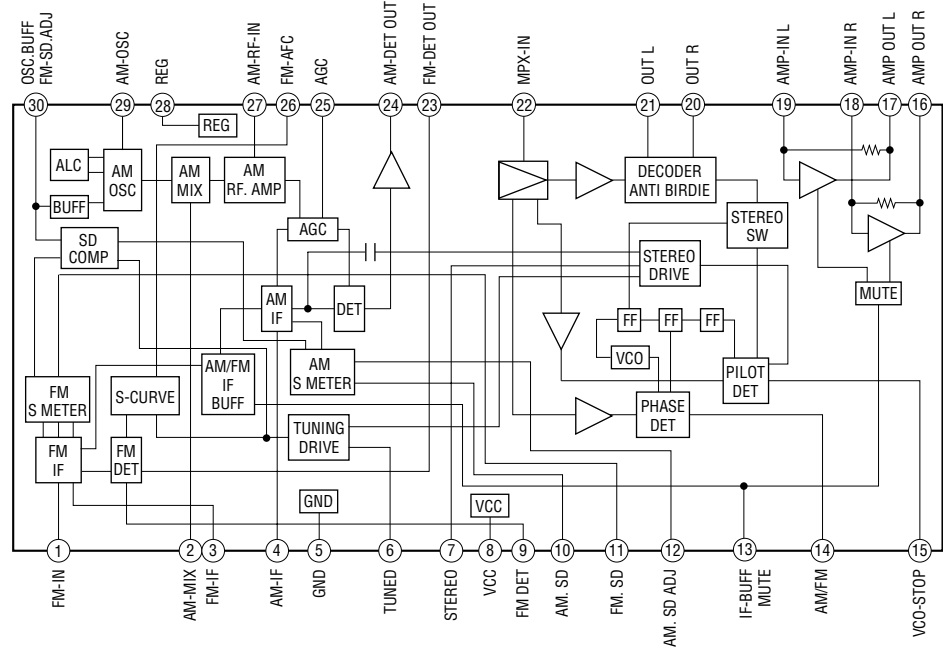
7-30. IC BLOCK DIAGRAMS

•Tuner section

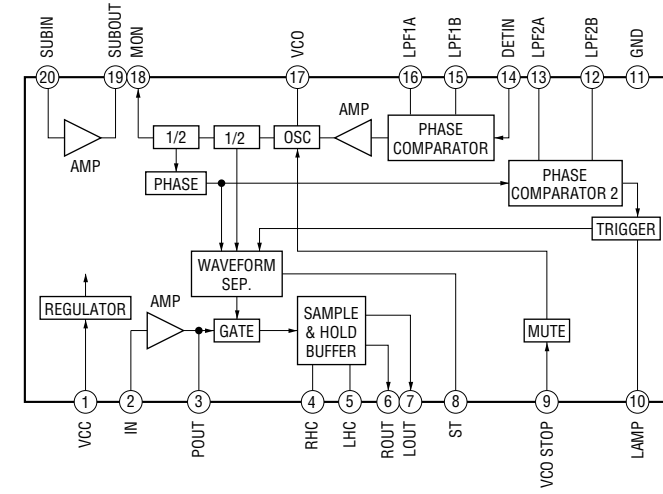
IC21 LC72130



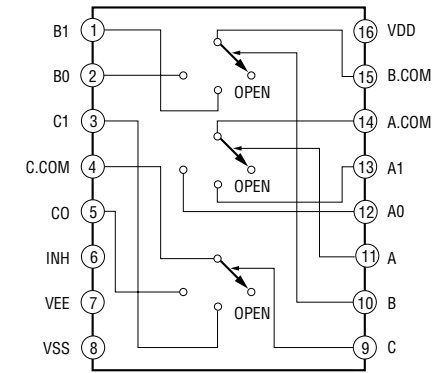
IC41 LA1838



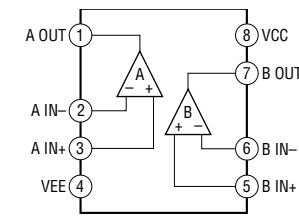
IC1701 IR3R42



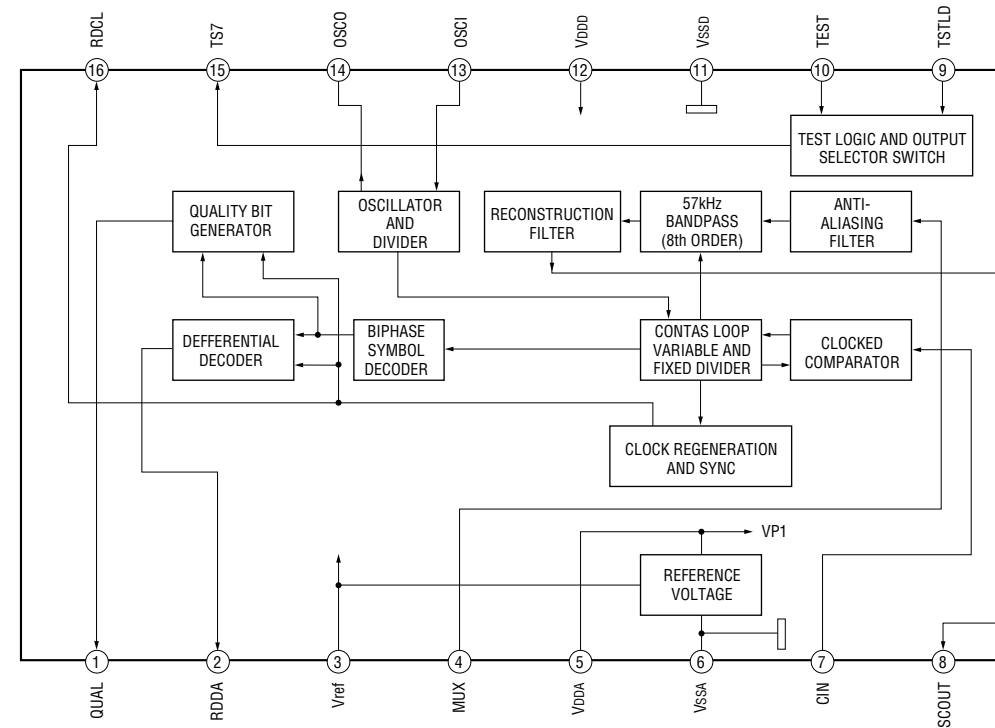
IC1702 MC14053BCP



IC1751 NJM4558D

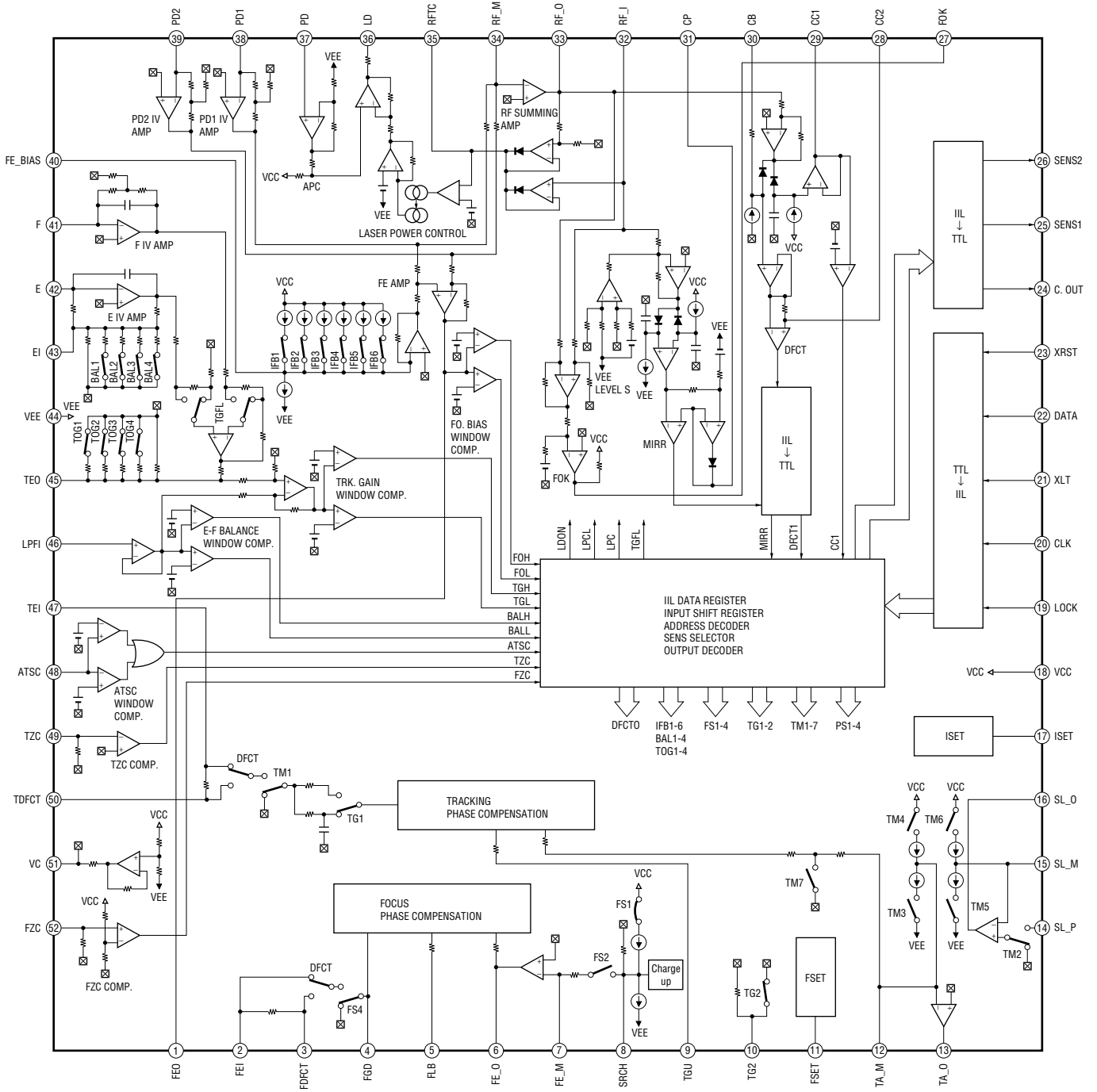


IC1752 BU1922

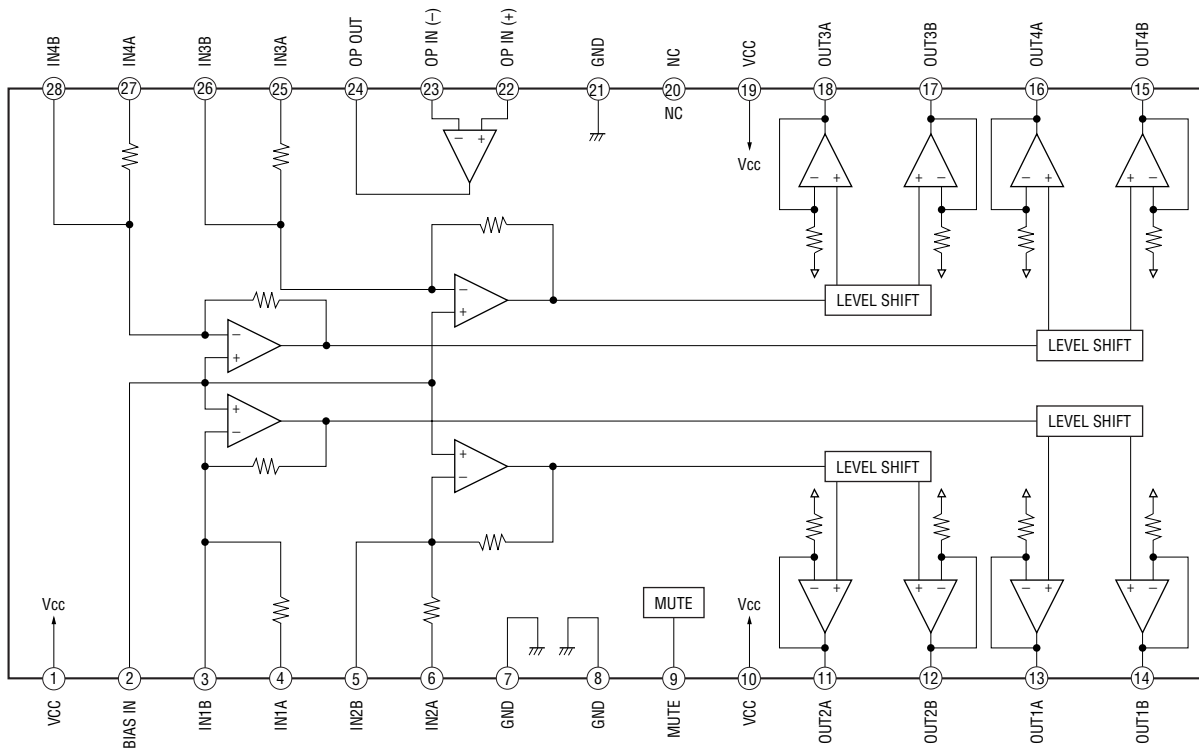


• CD section

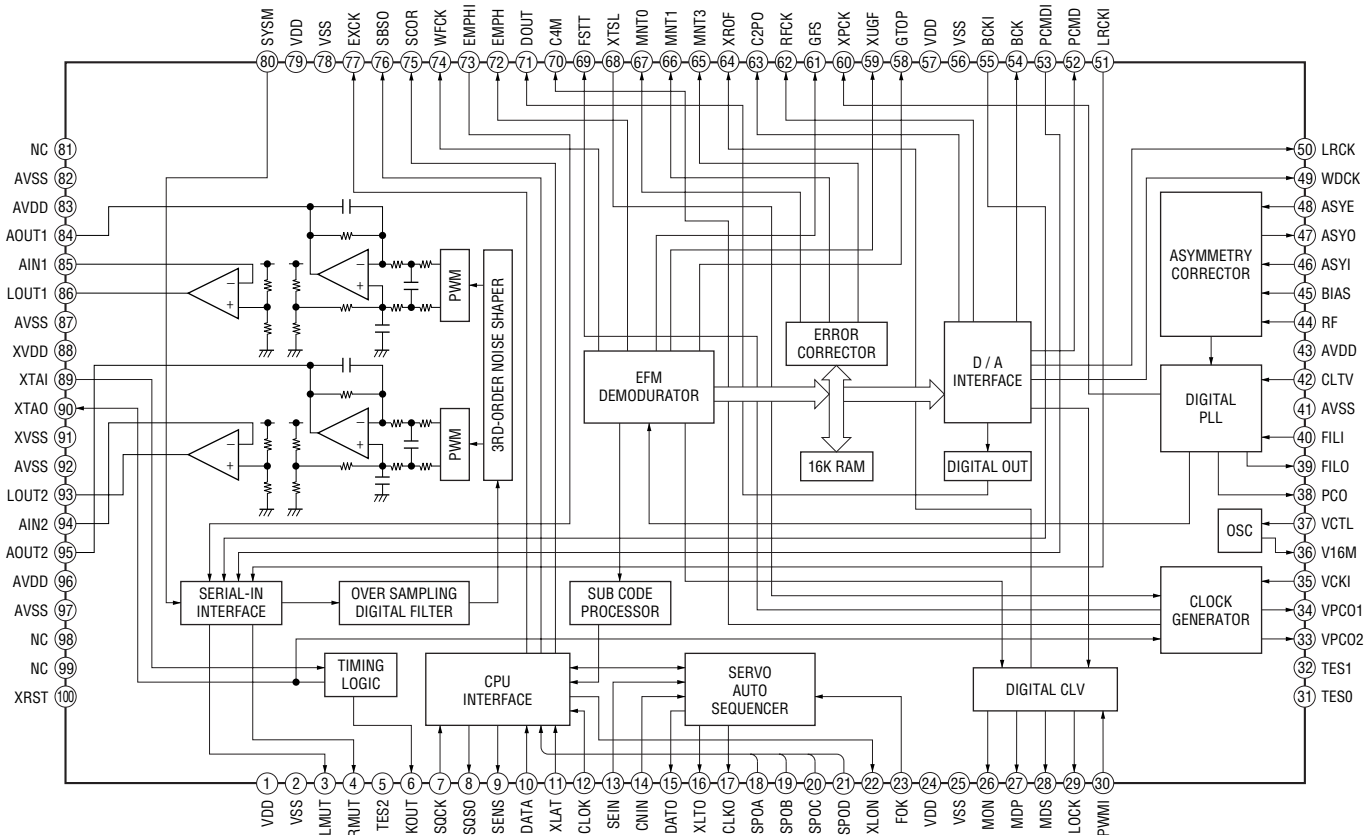
IC101 CXA1992AR



IC102 BA5941FP

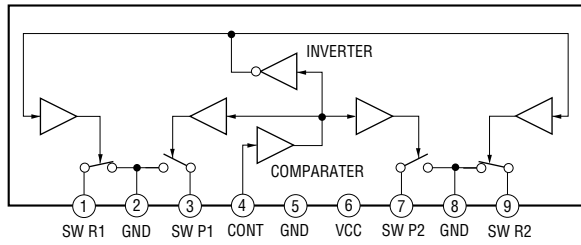


IC103 CXD2519Q



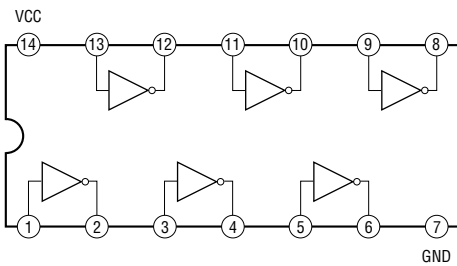
• Deck section

IC602 uPC1330HA



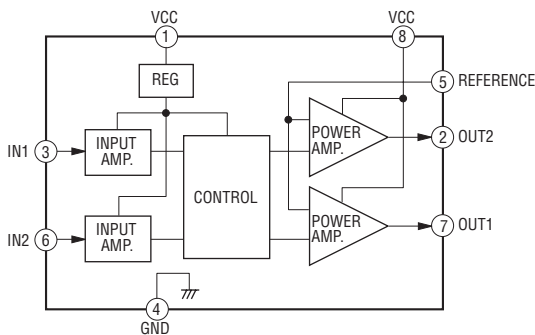
• Main section

IC392 MC74HCU04F

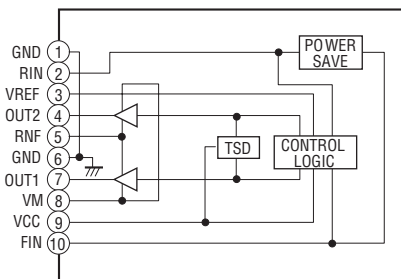


• CD motor section

IC701 M54641L

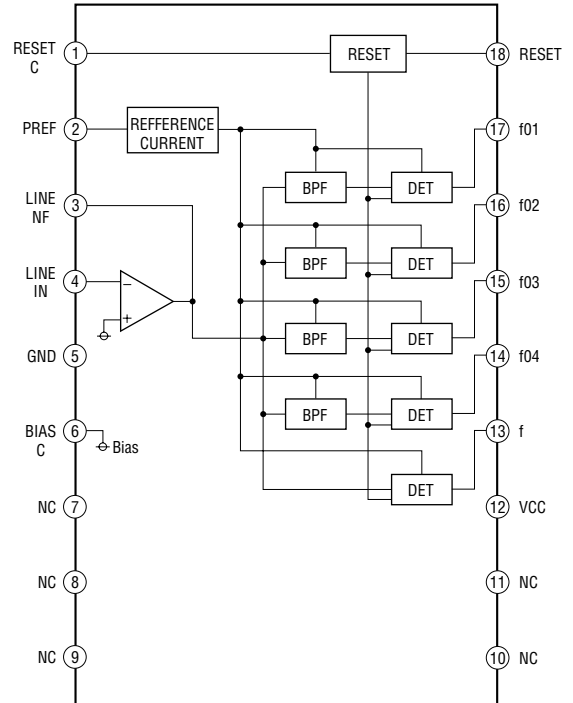


IC801 BA6286N

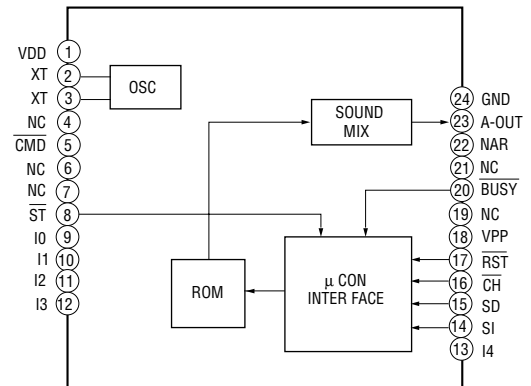


• Display section

IC603 BA3833FP



IC851 MSM6653A-517GS-K



• Mic section

IC751 M65850FP

