HCD-V818

SERVICE MANUAL

E Model



HCD-V818 is the tuner, deck, Video CD and amplifier section in MHC-V818.

This stereo system is equipped with the Dolby B-type noise reduction system*.
* Manufactured under license from Dolby Laboratories Licensing Corporation.
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CD SECTION	Model Name Using Similar Mechanism	HCD-V800
	CD Mechanism Type	CDM38L-5BD24AL
	Base Unit Type	BU-5BD24AL
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-GRX8/R800/RX88/RX99
	Tape Transport Mechanism Type	TCM-230AWR1 TCM-230PWR1

SPECIFICATIONS

Amplifier section

The following measured at AC 120, 220, 240 V 50/60Hz
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 (AUDIO) IN (phono jacks): voltage 250 mV, impedance 47 kilohms
MD IN (phono jacks): voltage 450 mV, impedance 47 kilohms
MIC 1/2 (phone jack): sensitivity 1 mV, impedance 10 kilohms

Outputs
MD OUT (phono jacks): voltage 250 mV impedance 1 kilohms
VIDEO OUT (phono jack): max. output level 1Vp-p, unbalanced, Sync negative, load impedance 75 ohms
S-VIDEO OUT (4-pin/mini-DIN jack): Y: 1Vp-p, unbalanced, Sync negative, C: 0.286Vp-p, load impedance 75 ohms
PHONES (stereo phone jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 8 to 16 ohms
SURROUND SPEAKER: accepts impedance of 16 ohms
SUPER WOOFER: Voltage 1 V, impedance 1 kilohm

VIDEO CD/CD player section

System: Compact disc and digital audio and video system
Laser: Semiconductor laser (λ=780nm) Emission duration: continuous
Laser output: 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.
Wavelength 780 – 790 nm
Frequency response 2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio More than 90 dB
Dynamic range More than 90 dB

Video
Color system format NTSC, PAL

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 (DOLBY NR OFF) 40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

— Continued on next page —

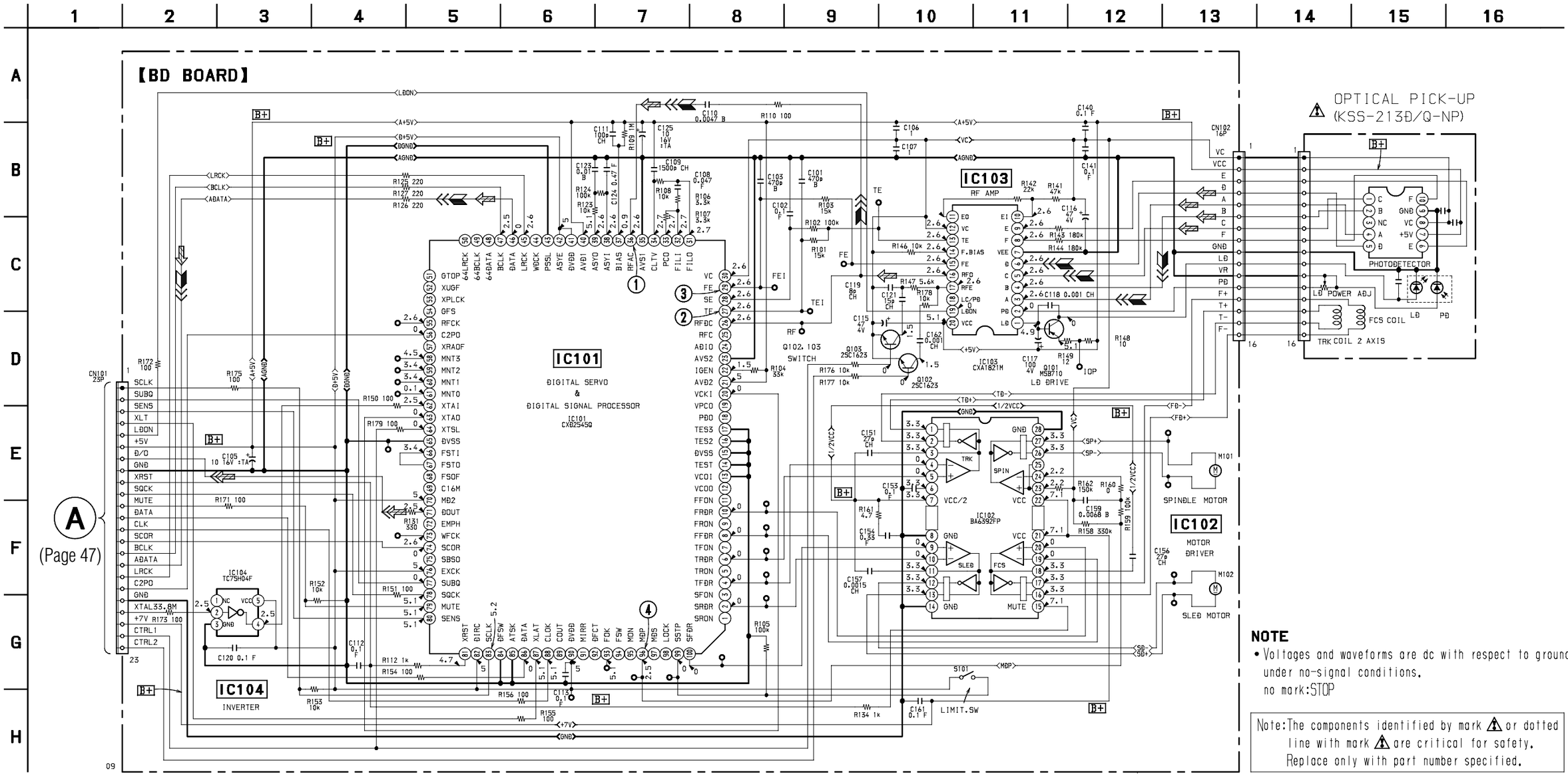
COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

8-3. SCHEMATIC DIAGRAM – CD SECTION –

- **See page 35 for Waveforms.**
- **See page 85 for IC Block Diagrams.**



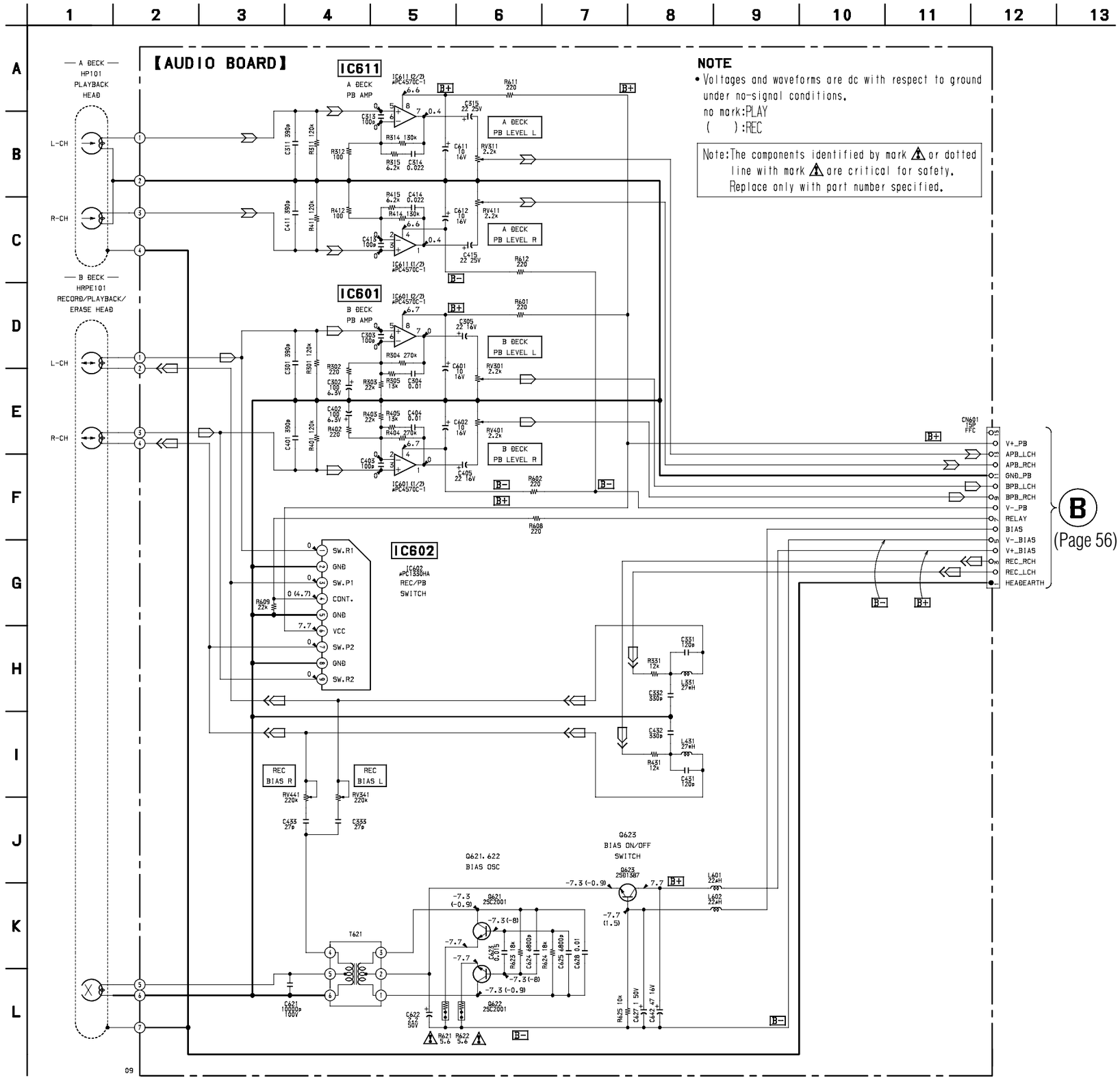
NOTE

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

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

8-5. SCHEMATIC DIAGRAM – DECK SECTION –

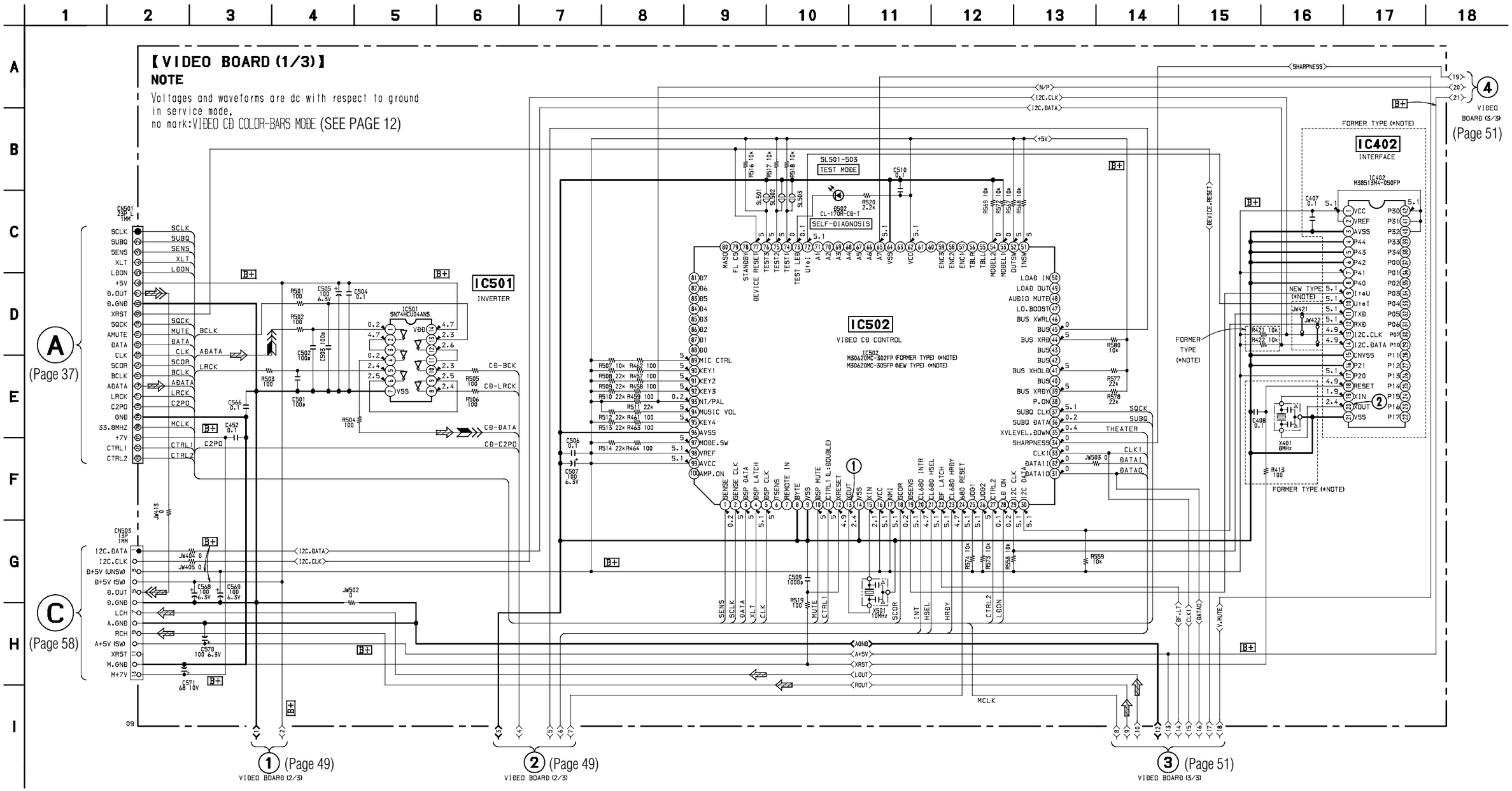
• See page 86 for IC Block Diagrams.



8-8. SCHEMATIC DIAGRAM – VIDEO (1/3) SECTION –

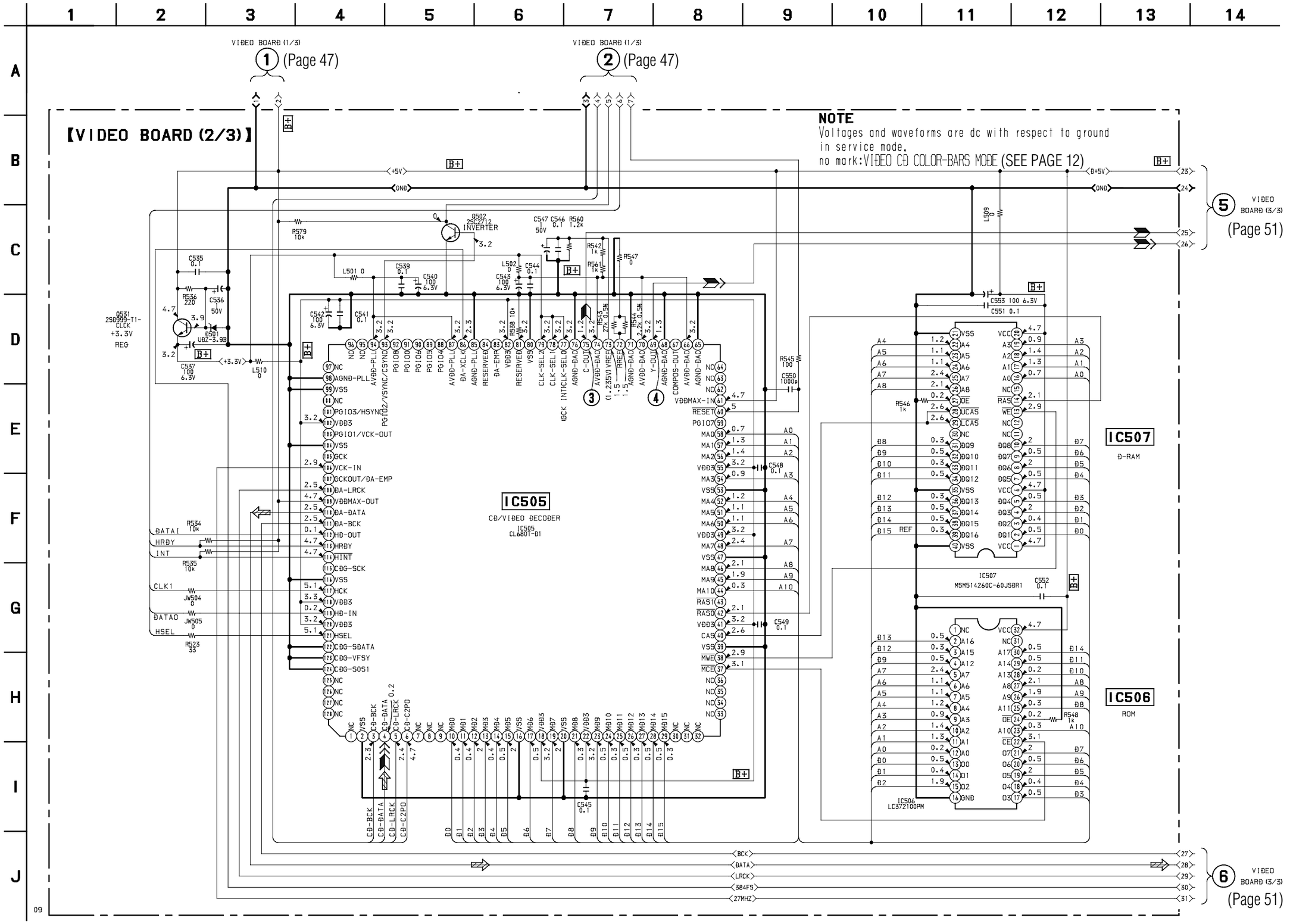
- **See page 36 for Waveforms.**
- **See page 89 for IC Pin Functions.**

* Note
When replacing IC502, refer to "IC502 of video Board" in "Service Note" (page 13).



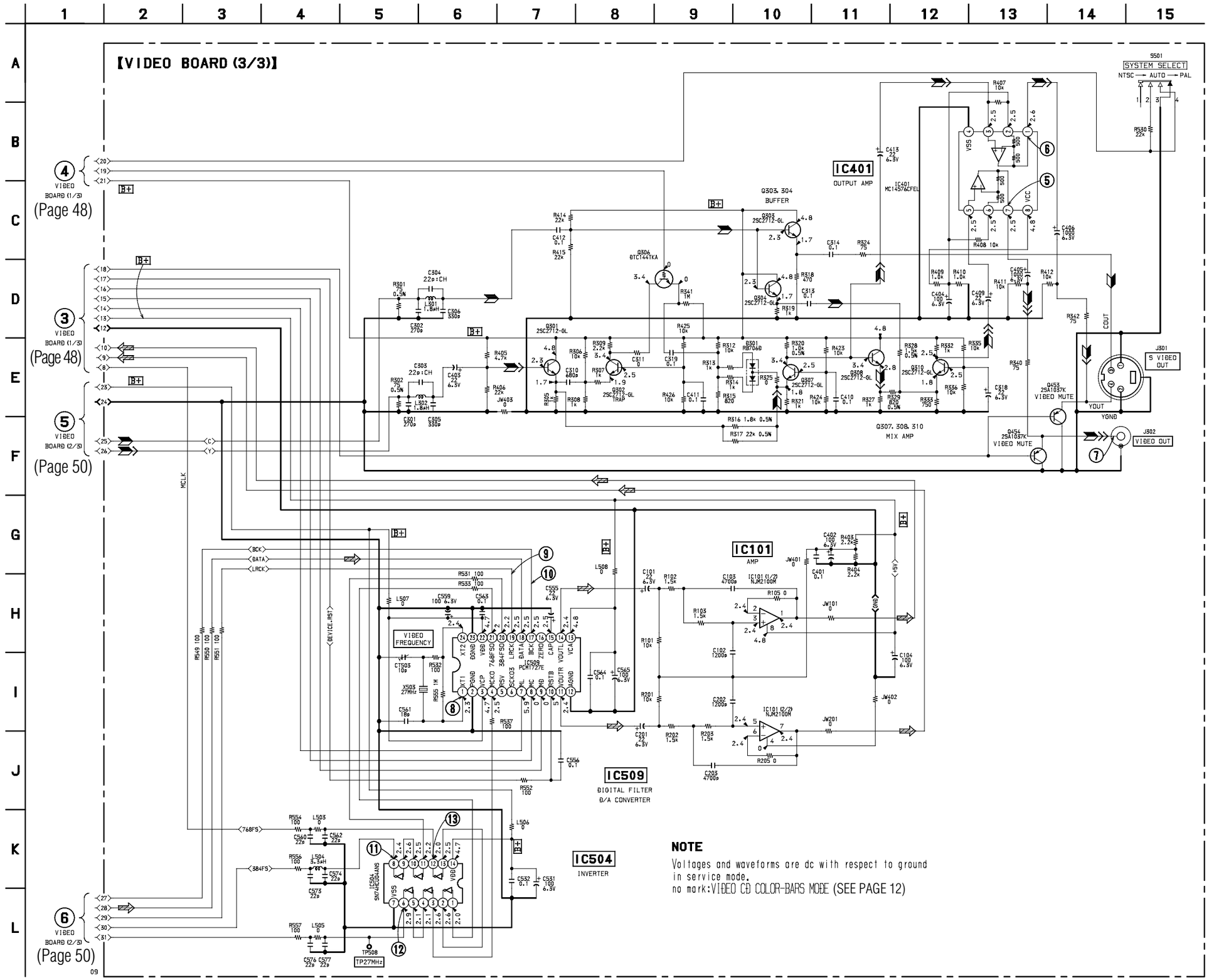
8-9. SCHEMATIC DIAGRAM – VIDEO (2/3) SECTION –

- **See page 36 for Waveforms.**
- **See page 45 for Printed Wiring Board.**
- **See page 94 for IC Pin Functions.**

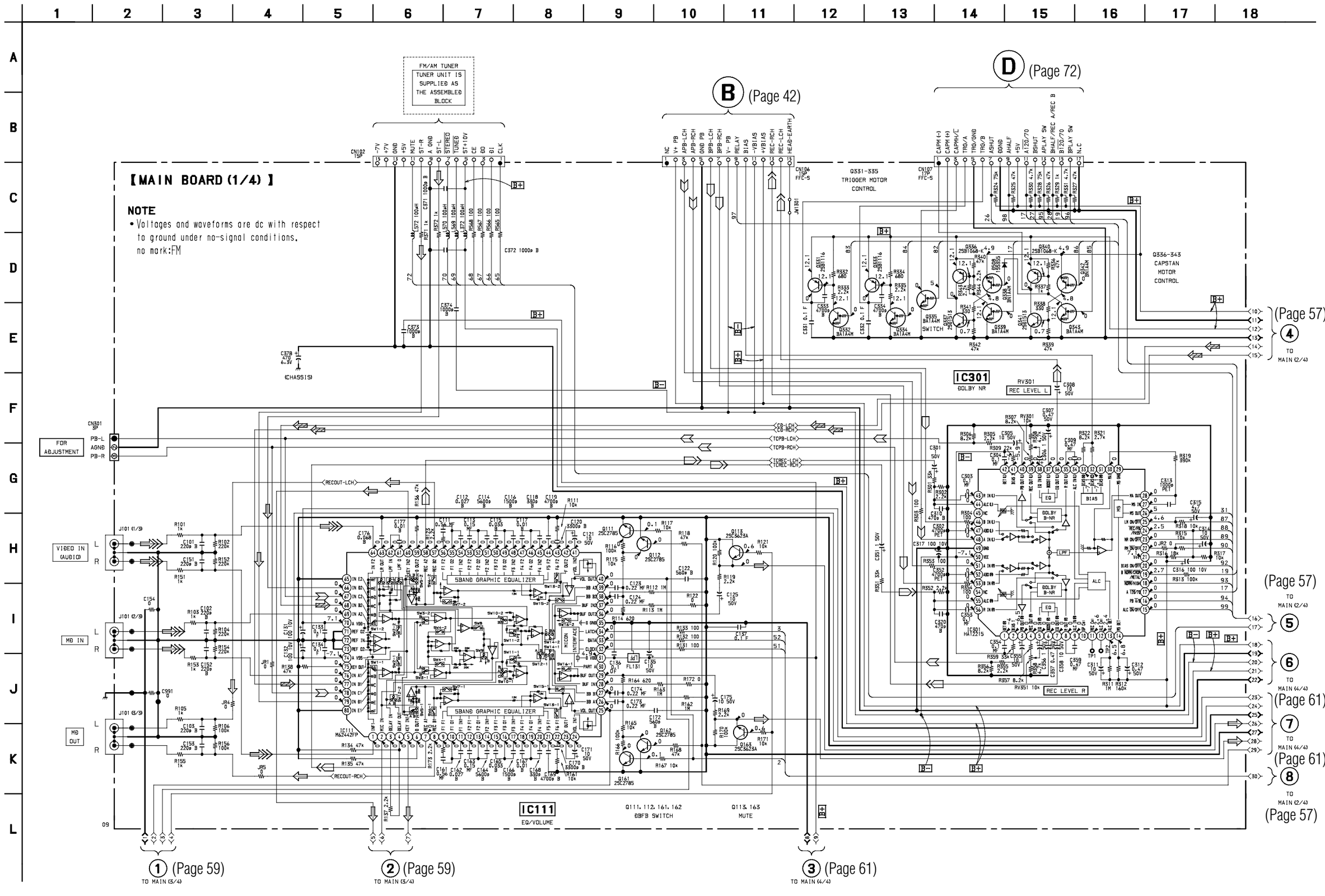


8-10. SCHEMATIC DIAGRAM – VIDEO (3/3) SECTION –

- See page 36 for Waveforms.
- See page 45 for Printed Wiring Board.

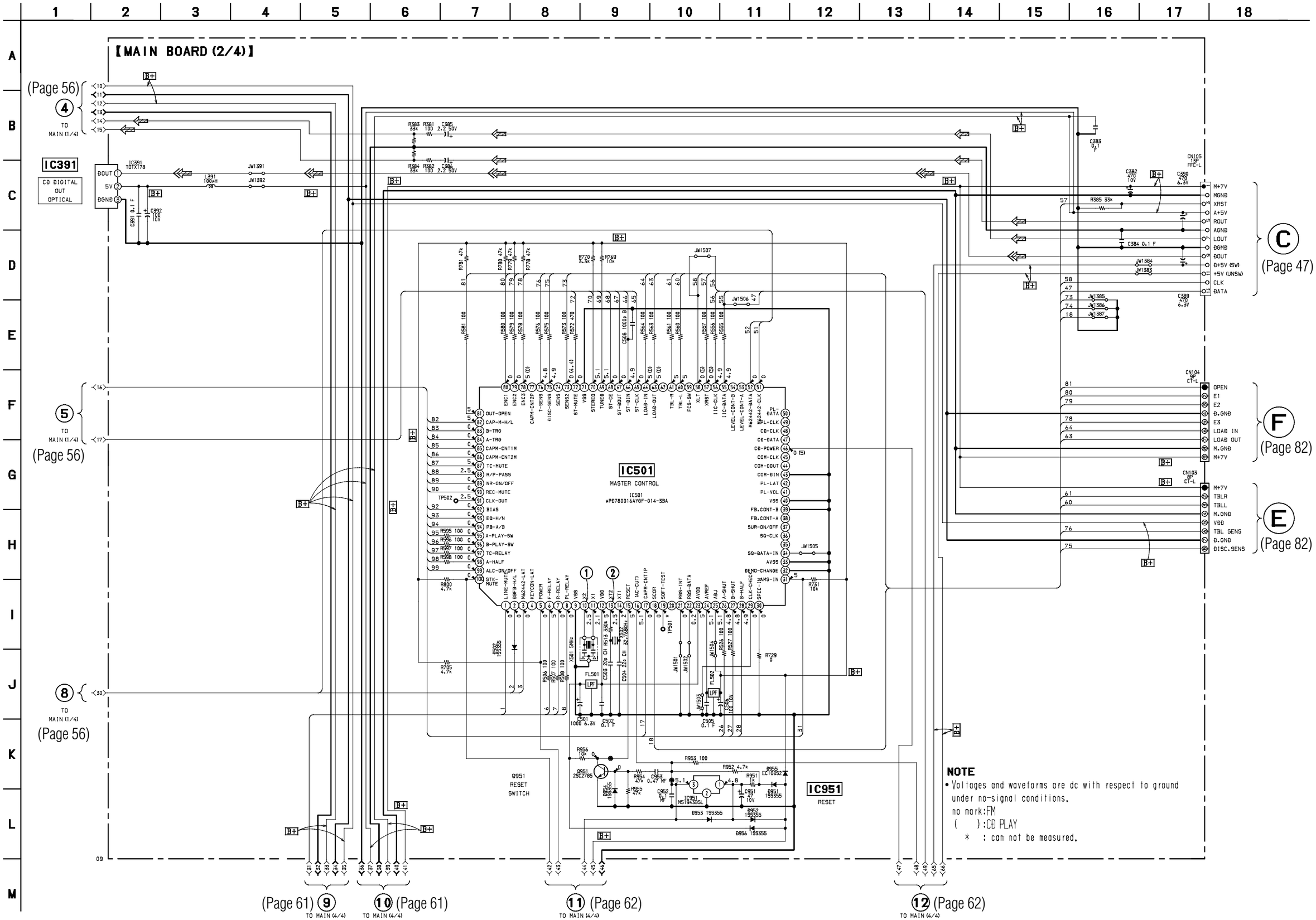


8-12. SCHEMATIC DIAGRAM – MAIN (1/4) SECTION –



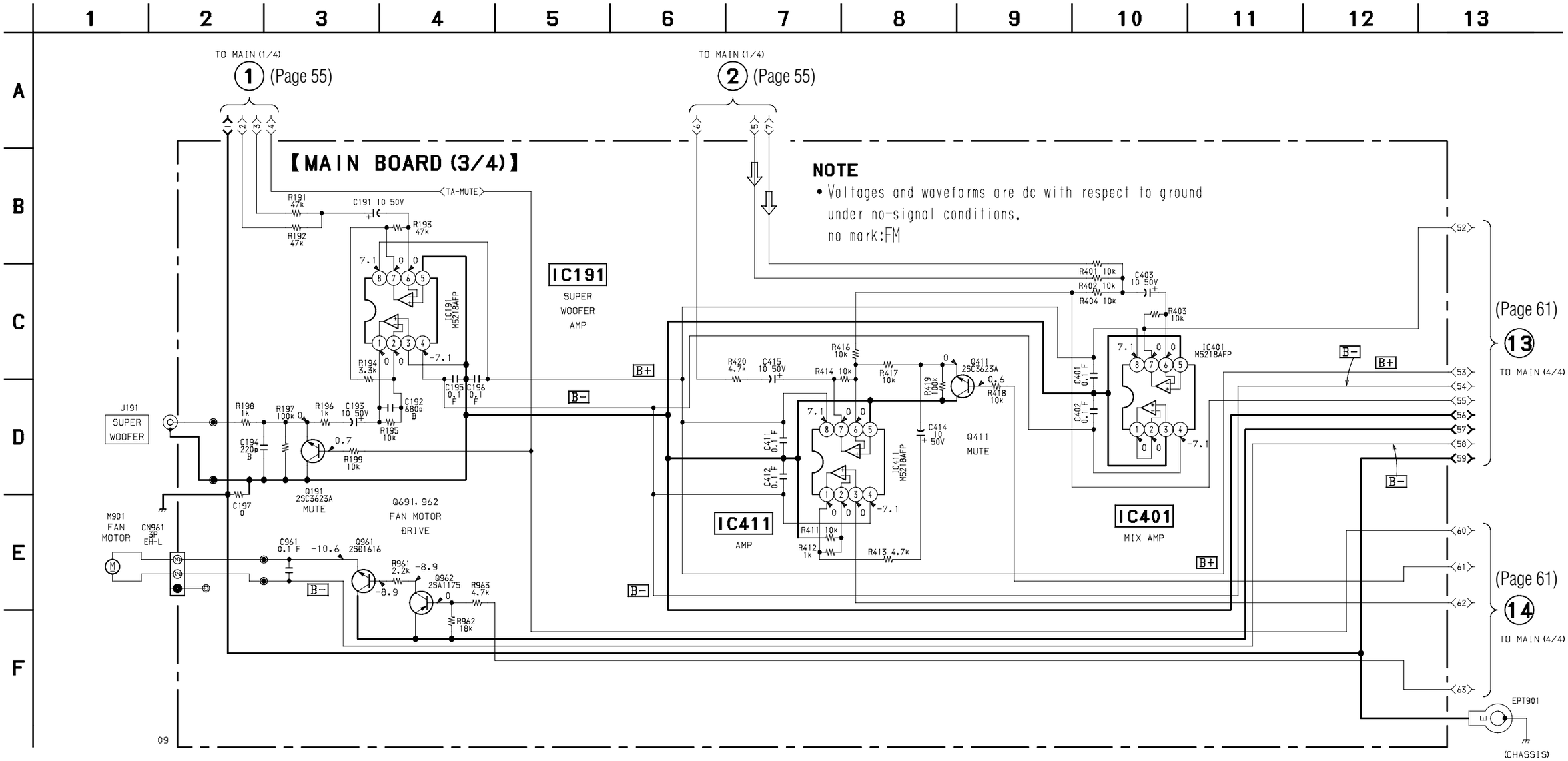
8-13. SCHEMATIC DIAGRAM – MAIN (2/4) SECTION –

- See page 36 for Waveforms.
- See page 53 for Printed Wiring Board.
- See page 89 for IC Pin Functions.



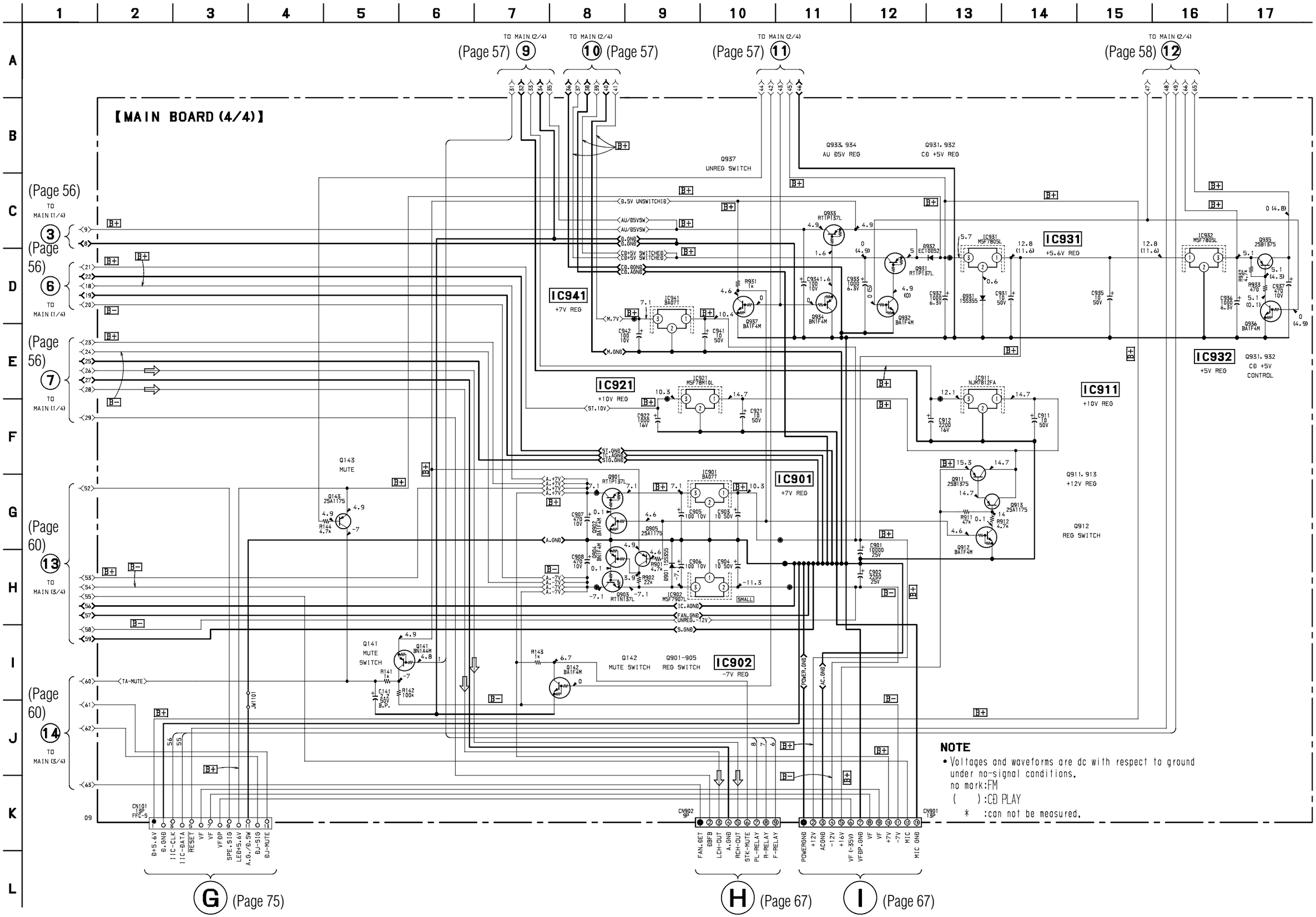
8-14. SCHEMATIC DIAGRAM – MAIN (3/4) SECTION –

• See page 53 for Printed Wiring Board.



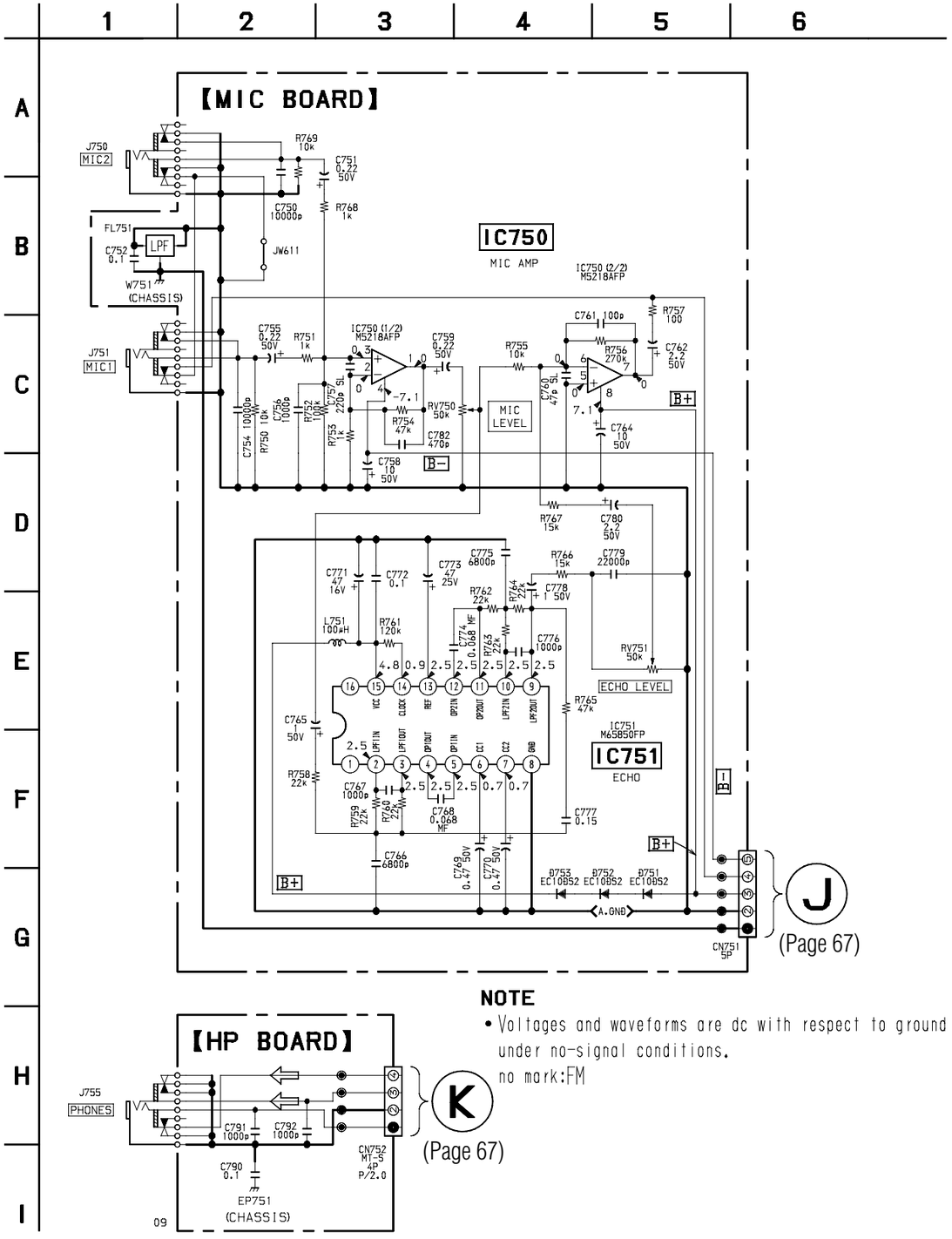
8-15. SCHEMATIC DIAGRAM – MAIN (4/4) SECTION –

• See page 53 for Printed Wiring Board.



8-16. SCHEMATIC DIAGRAM – MIC/HP SECTION –

• See page 86 for IC Block Diagrams.

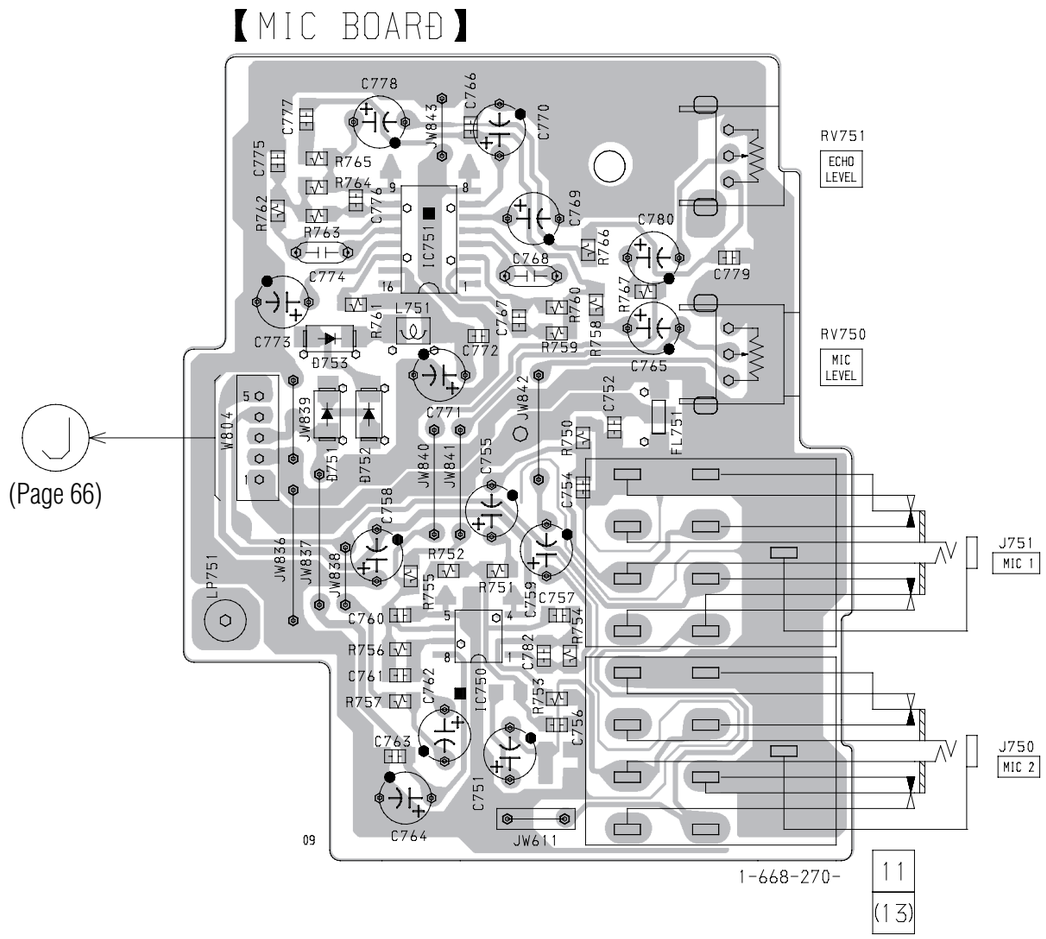


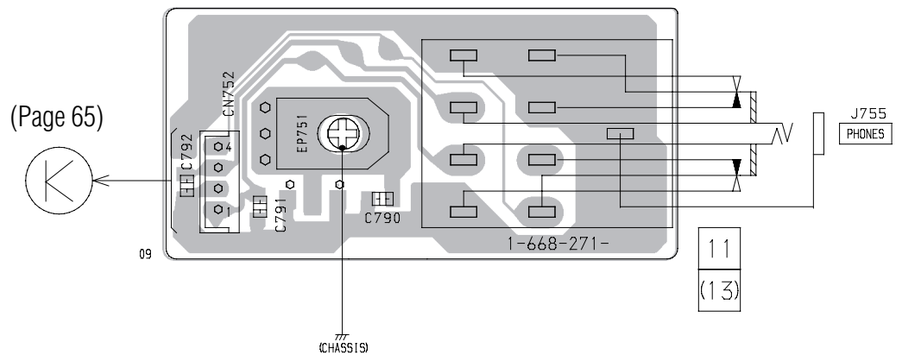
NOTE

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

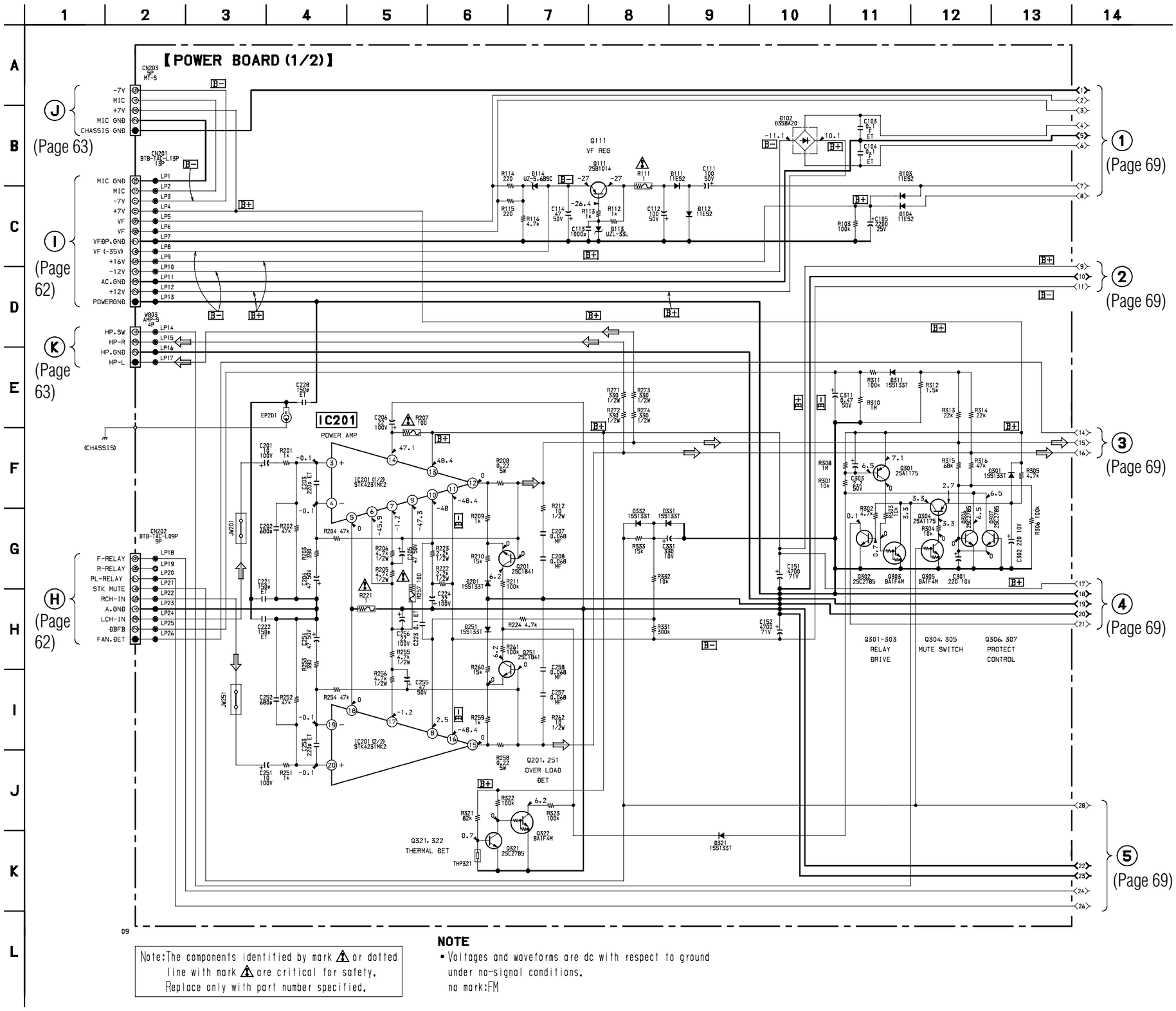
8-17. PRINTED WIRING BOARD – MIC/HP SECTION –

• See page 22 for Circuit Boards Location.





8-19. SCHEMATIC DIAGRAM – POWER AMP SECTION –



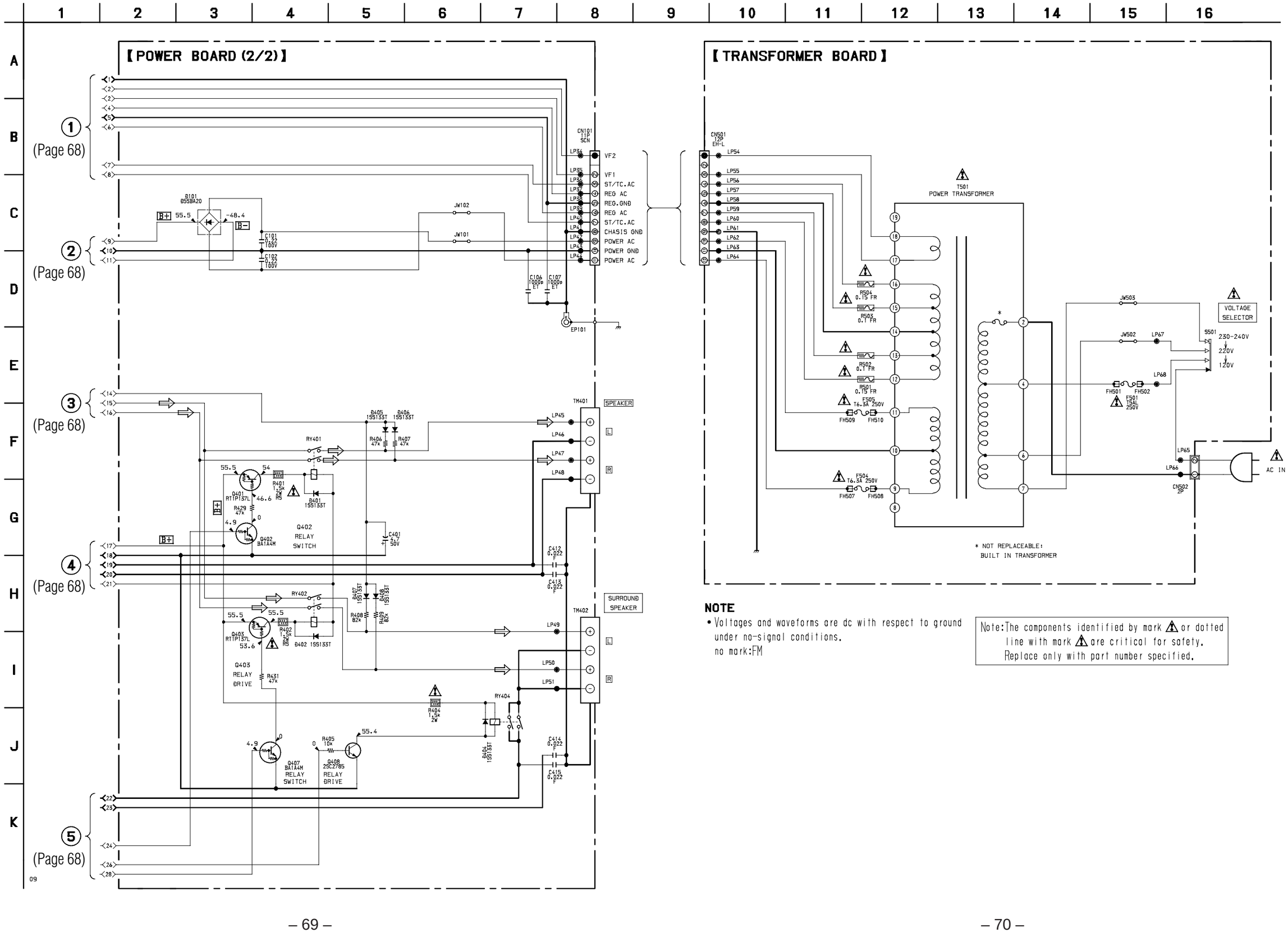
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

NOTE

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

8-20. SCHEMATIC DIAGRAM – TRANSFORMER SECTION –

• See page 65 for Printed Wiring Board. (POWER BOARD)



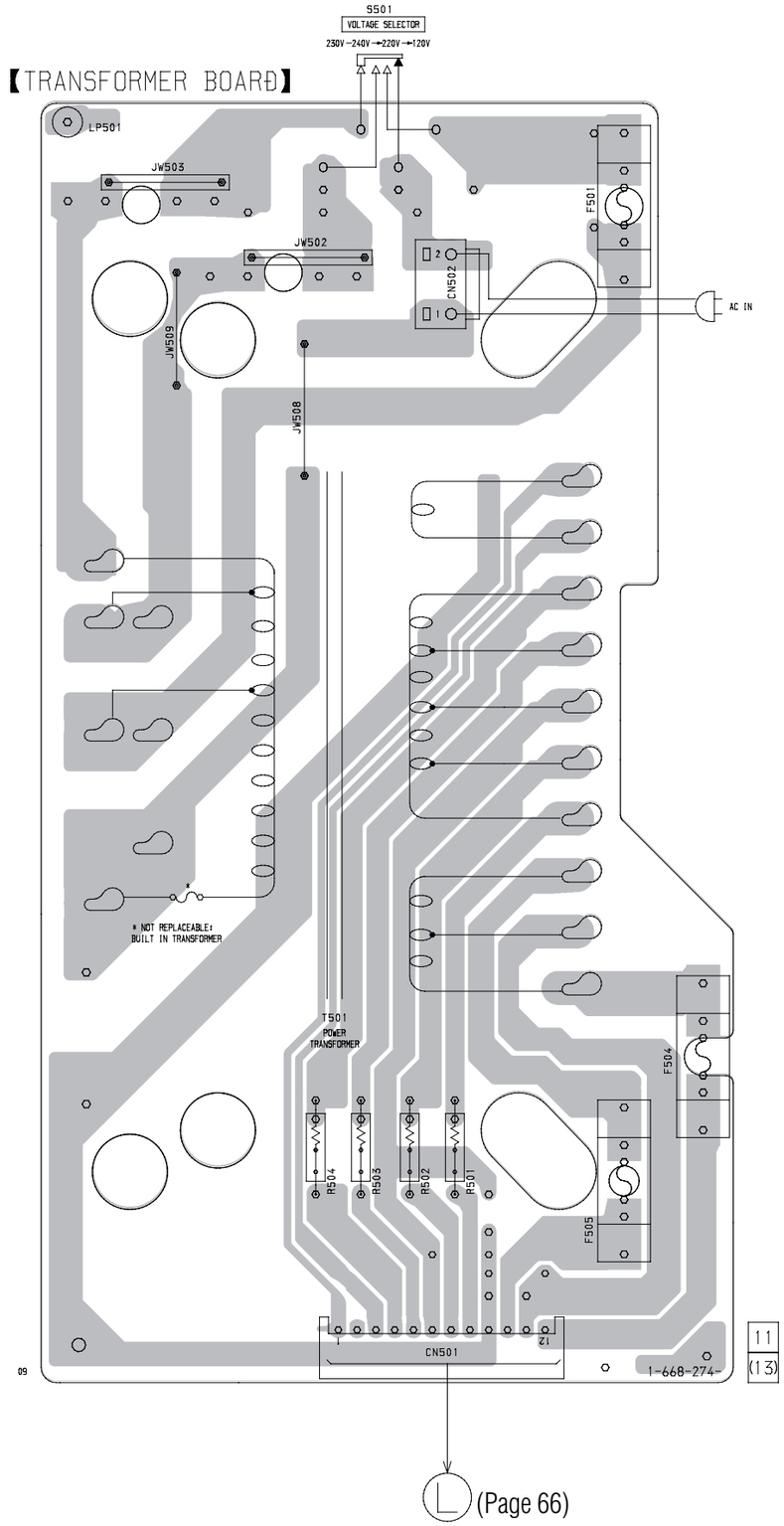
NOTE

- 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.

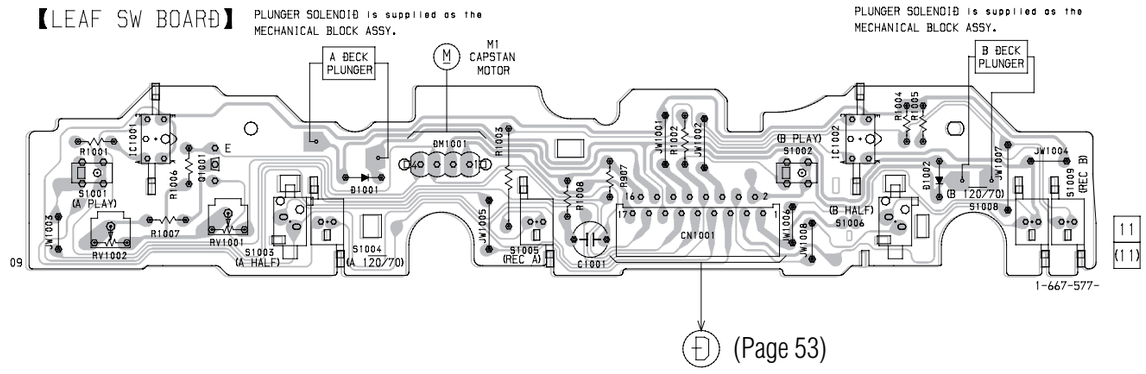
8-21. PRINTED WIRING BOARD – TRANSFORMER SECTION –

• See page 22 for Circuit Boards Location.

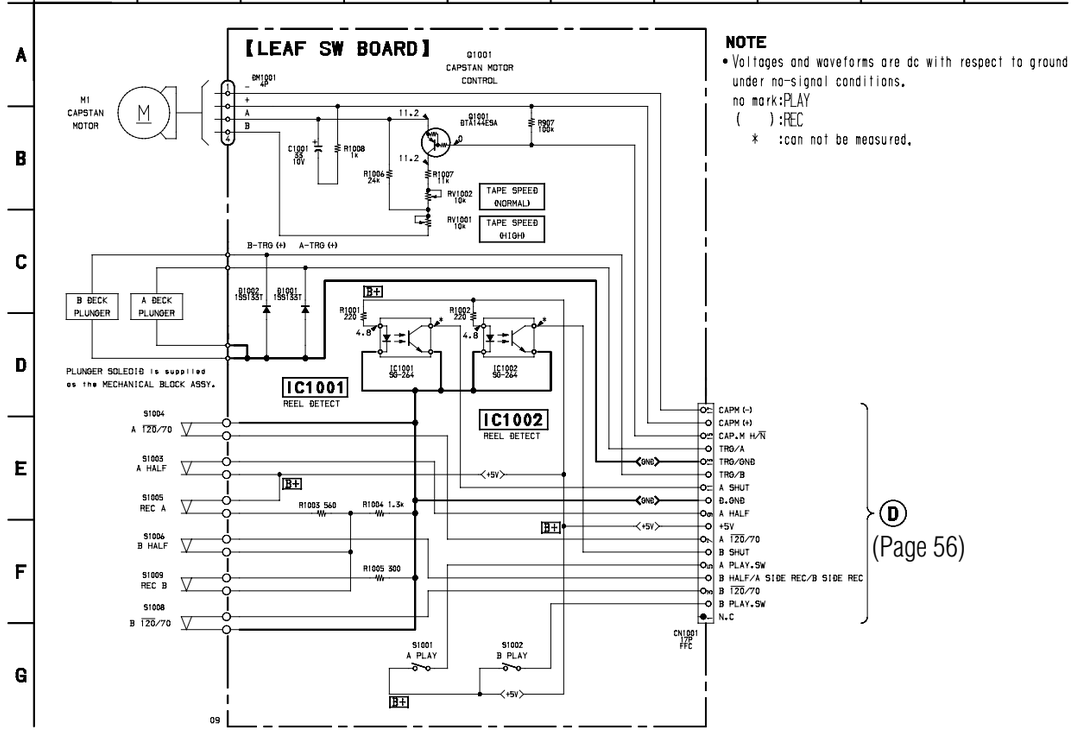


8-22. PRINTED WIRING BOARD – LEAF SW SECTION –

• See page 22 for Circuit Boards Location.

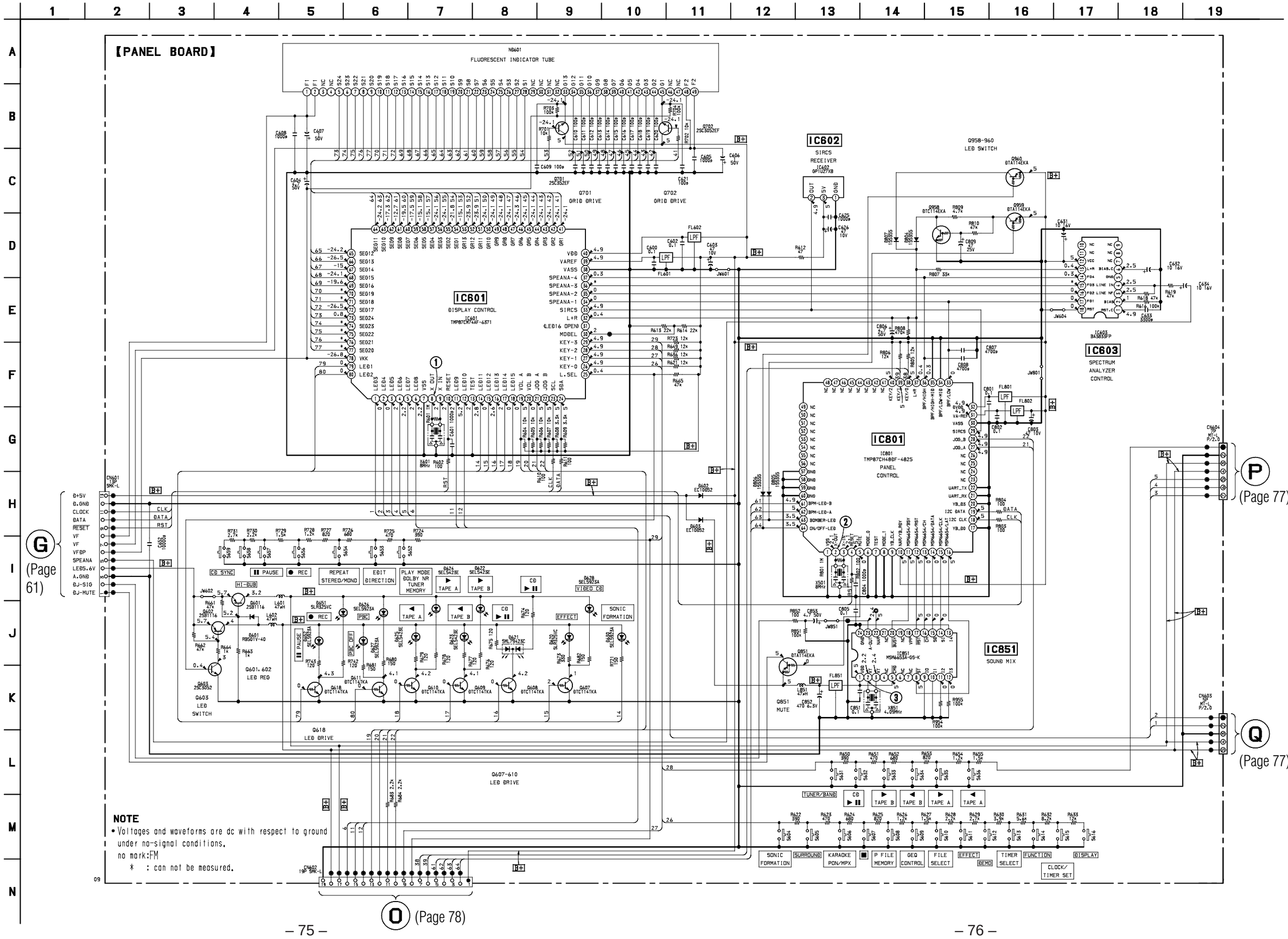


8-23. SCHEMATIC DIAGRAM – LEAF SW SECTION –



8-25. SCHEMATIC DIAGRAM – DISPLAY SECTION –

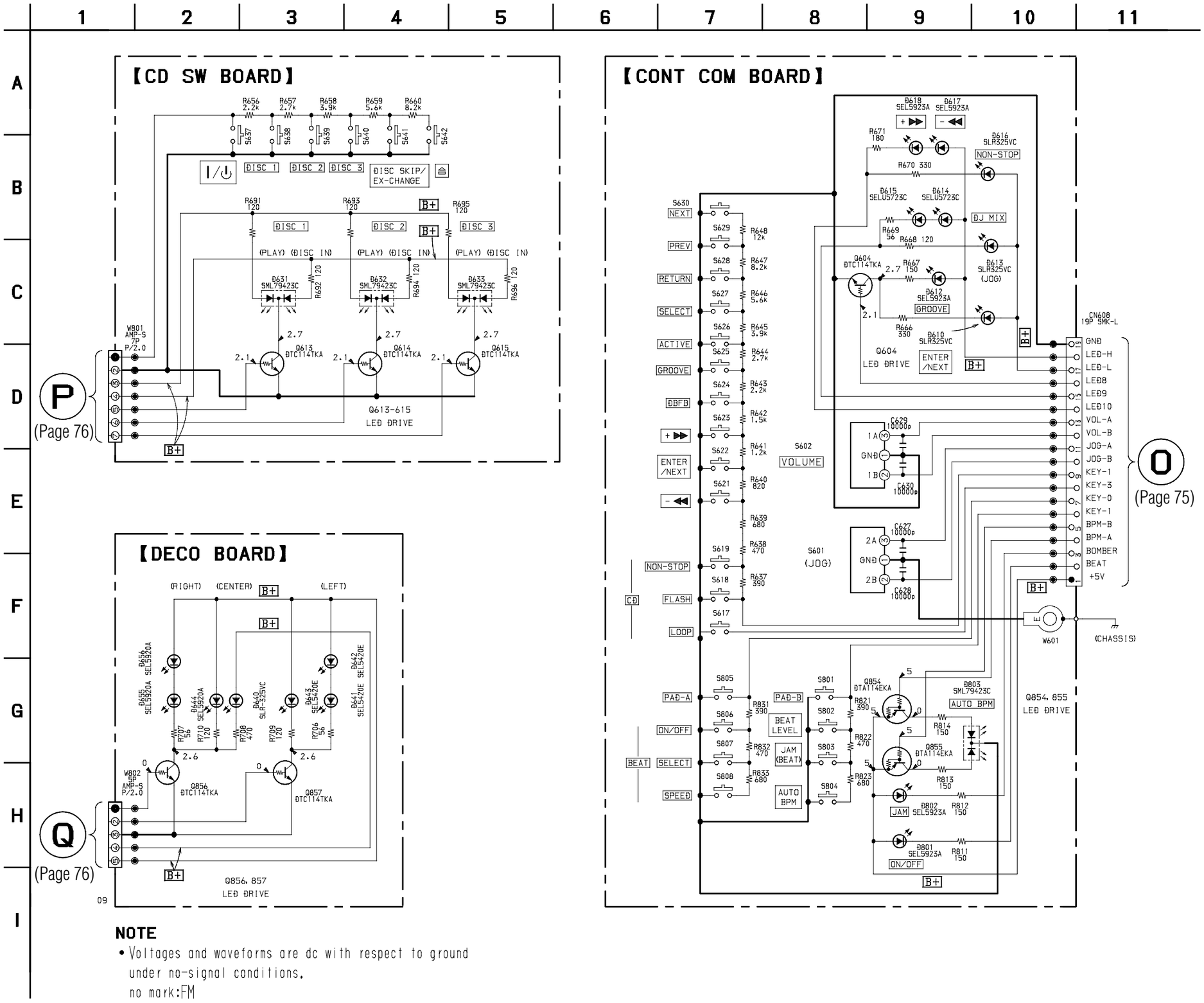
- See page 36 for Waveforms.
- See page 86 for IC Block Diagrams.
- See page 97 for IC Pin Functions.



NOTE

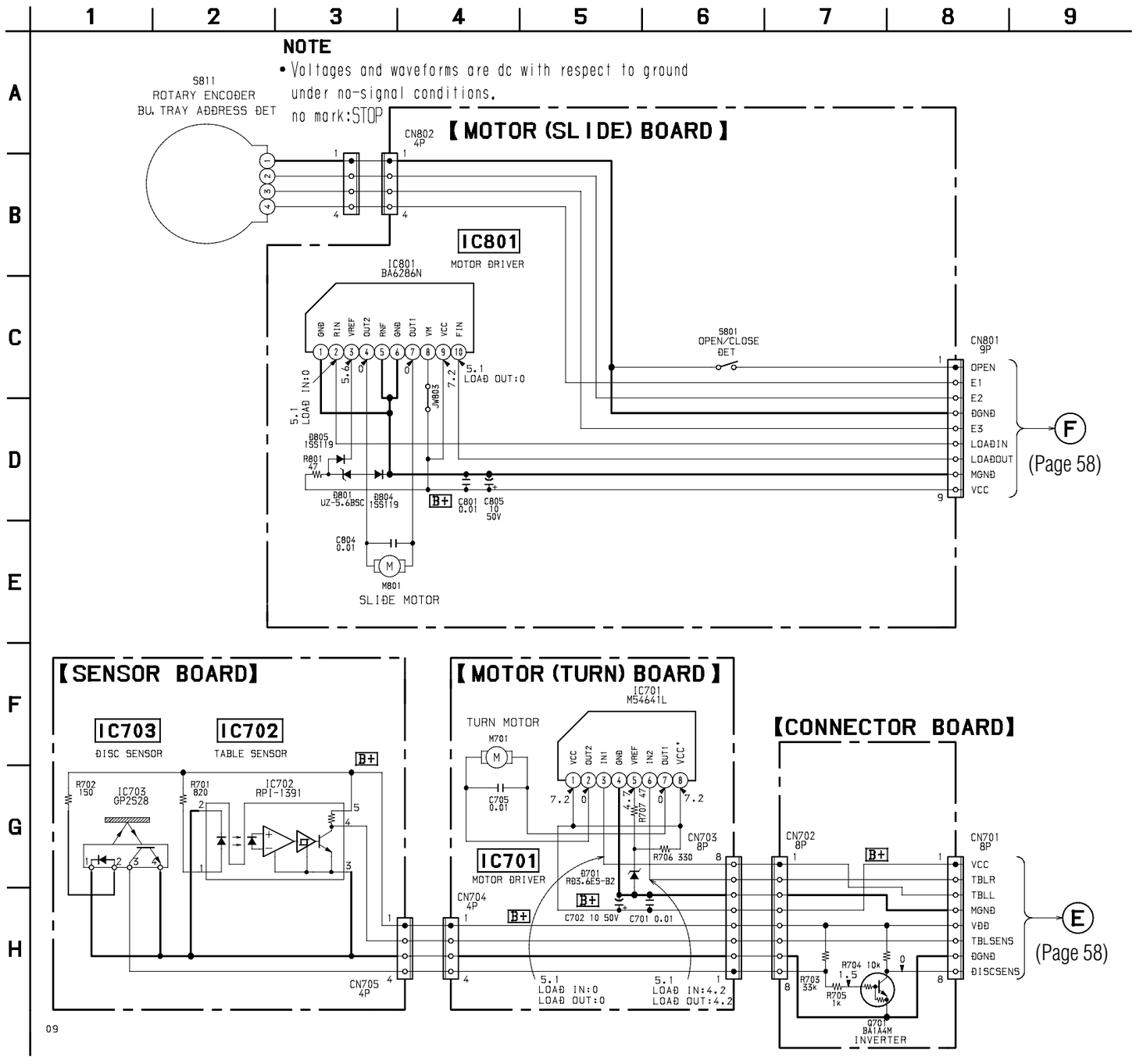
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM
  * : can not be measured.

8-26. SCHEMATIC DIAGRAM – PANEL SECTION –



8-28. SCHEMATIC DIAGRAM – CD MOTOR SECTION –

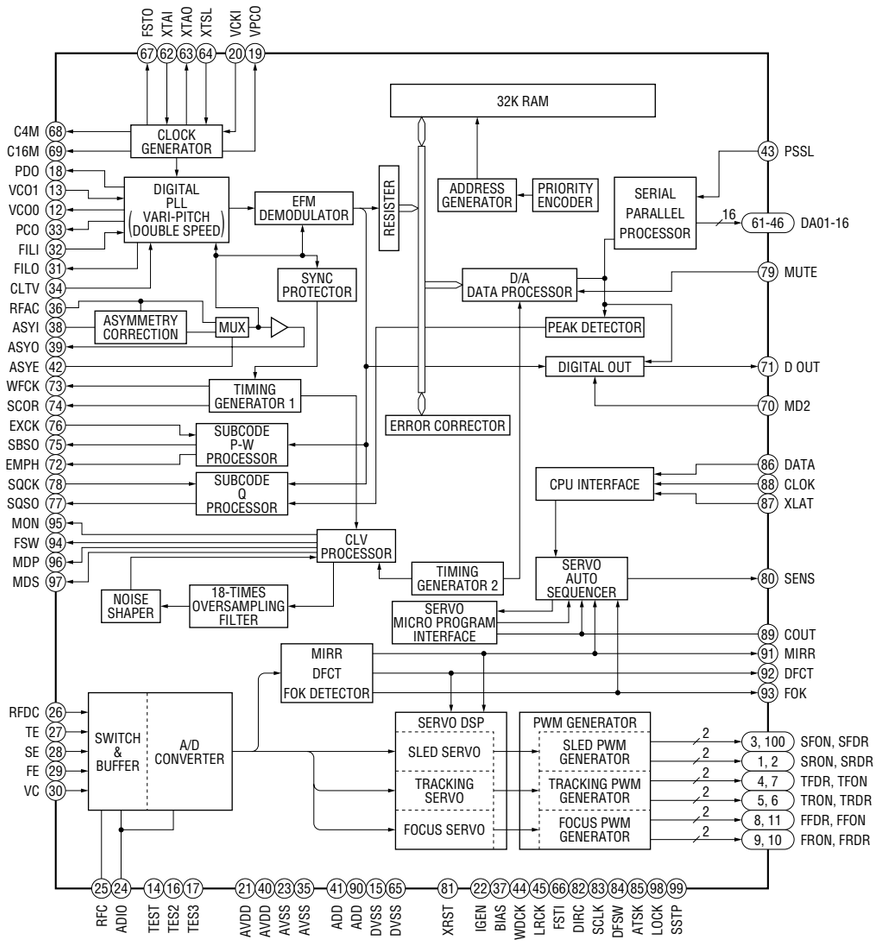
• See page 86 for IC Block Diagrams.



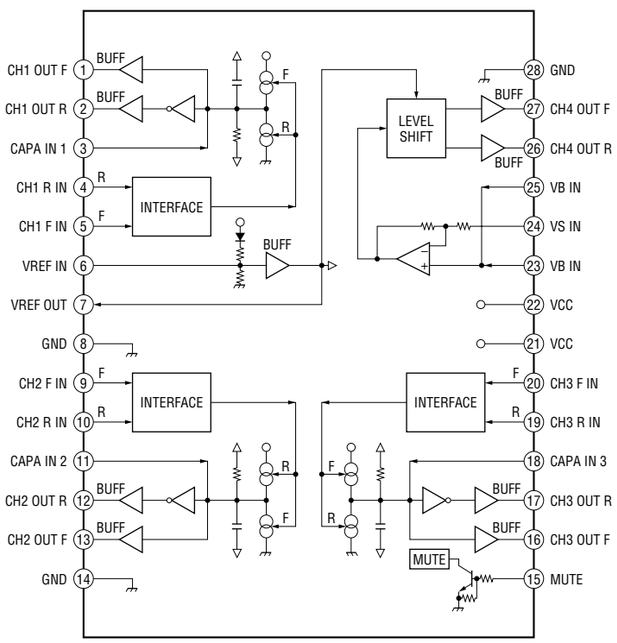
8-30. IC BLOCK DIAGRAMS

• CD section

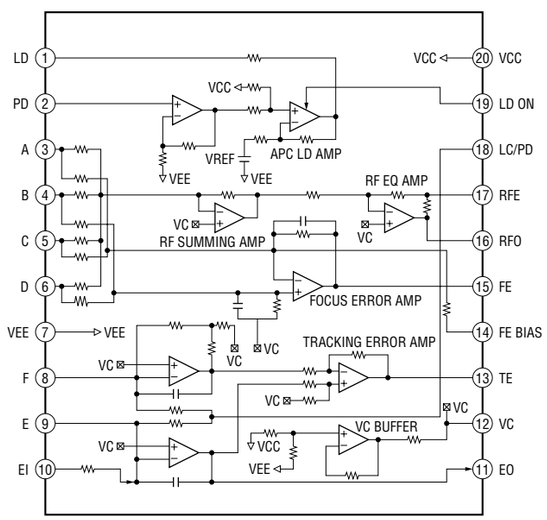
IC101 CXD2545Q



IC102 BA6392FP

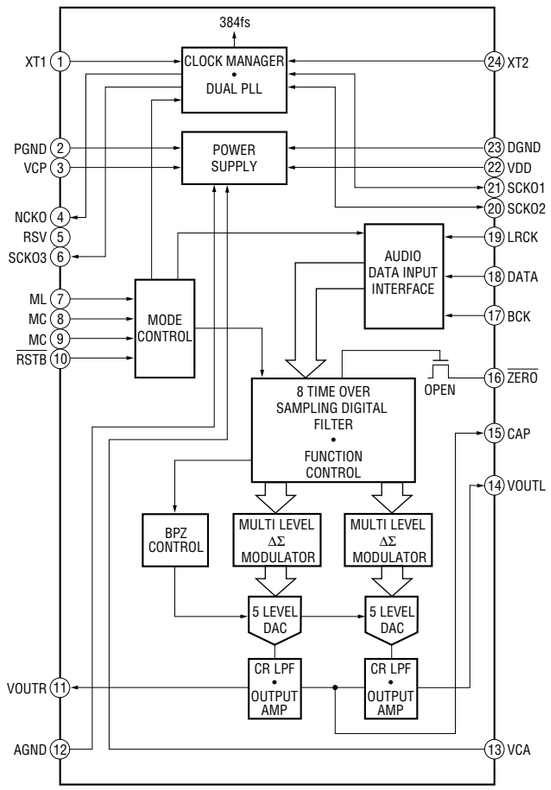


IC103 CXA1821M



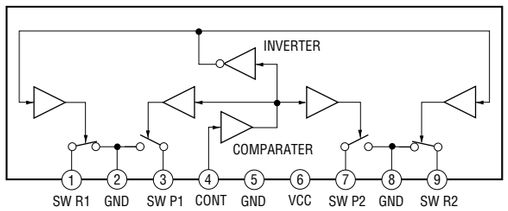
• VIDEO section

IC509 PCM1727E



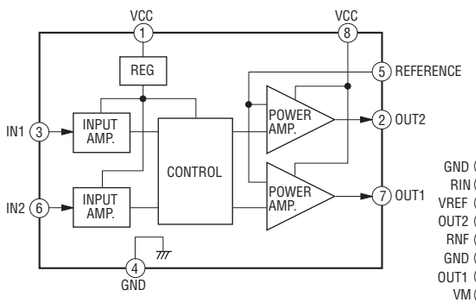
• Deck section

IC602 uPC1330HA

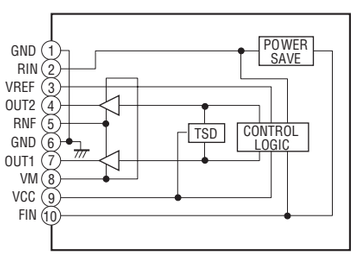


• CD motor section

IC701 M54641L

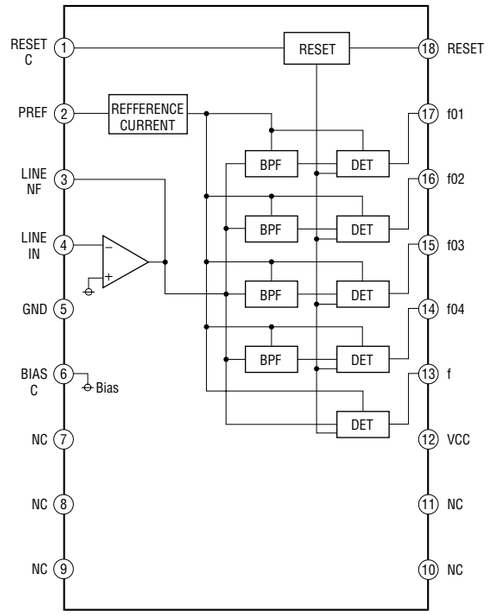


IC801 BA6286N

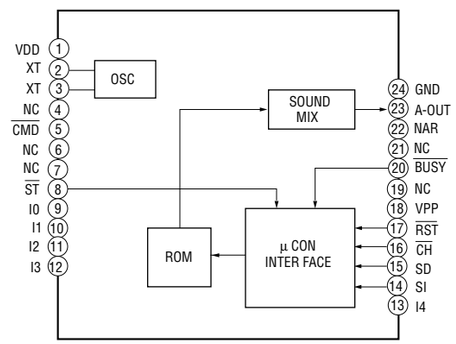


• DISPLAY section

IC603 BA3833F



IC851 MSM6653A-517GS-K



• MIC/HP section

IC751 M65850FP

