HCD-S3000

SERVICE MANUAL

US Model
Canadian Model

HCD-S3000 is the tuner, deck, CD and amplifier section in LBT-S3000.

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CD SECTION	Model Name Using Similar Mechanism	HCD-G2500
	CD Mechanism Type	5CD DISC
	Base Unit Type	KSM-213ECM
	Optical Pick-up Type	KSS-213ECM/C2NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	CWL-44-RR

SPECIFICATIONS

(For the U.S model)
AUDIO POWER SPECIFICATIONS:
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

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

Amplifier section
Continuous RMS power output: 80W + 80W (6 Ω at 1 kHz, 10% THD)
Total harmonics distortion: Less than 0.07% (6 Ω at 1 kHz, 35W)
Inputs
PHONO IN (phono jack): sensitivity 3mV, impedance 47 kΩ
MD/VIDEO IN (phono jacks): sensitivity 250mV, impedance 47 kΩ
Outputs
PHONOS (stereo phono jacks): accepts headphones of 8 W or more
MD/VIDEO OUT (phone jack): voltage 250mV, impedance 1 kΩ
SPEAKER: accepts impedance of 6 to 16 Ω

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6µW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pock-up Block with 7 mm aperture.
Wavelength	780 – 790 nm
Frequency response	20Hz – 20kHz (±0.5 dB)
Signal-to-noise retio	More than 90 dB
Dynamic range	More than 90 dB

DIGITAL OUT (Square optical connector jack, rear panel)

Wavelength	600 nm
Output Level	–18 dBm

Tape deck section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Tuner section
FM stereo, FM/AM superheterodyne tuner

FM tunr section

Tuning range	87.5 – 108.0 MHz (100 kHz step)

AM tuner section

Tuning renge	530 – 1,710 kHz (with the tuning interval set at 10 kHz)
Antenna	AM loop antenna External antenna terminal
Intermediate frequency	450 kHz

— Continued on next page —

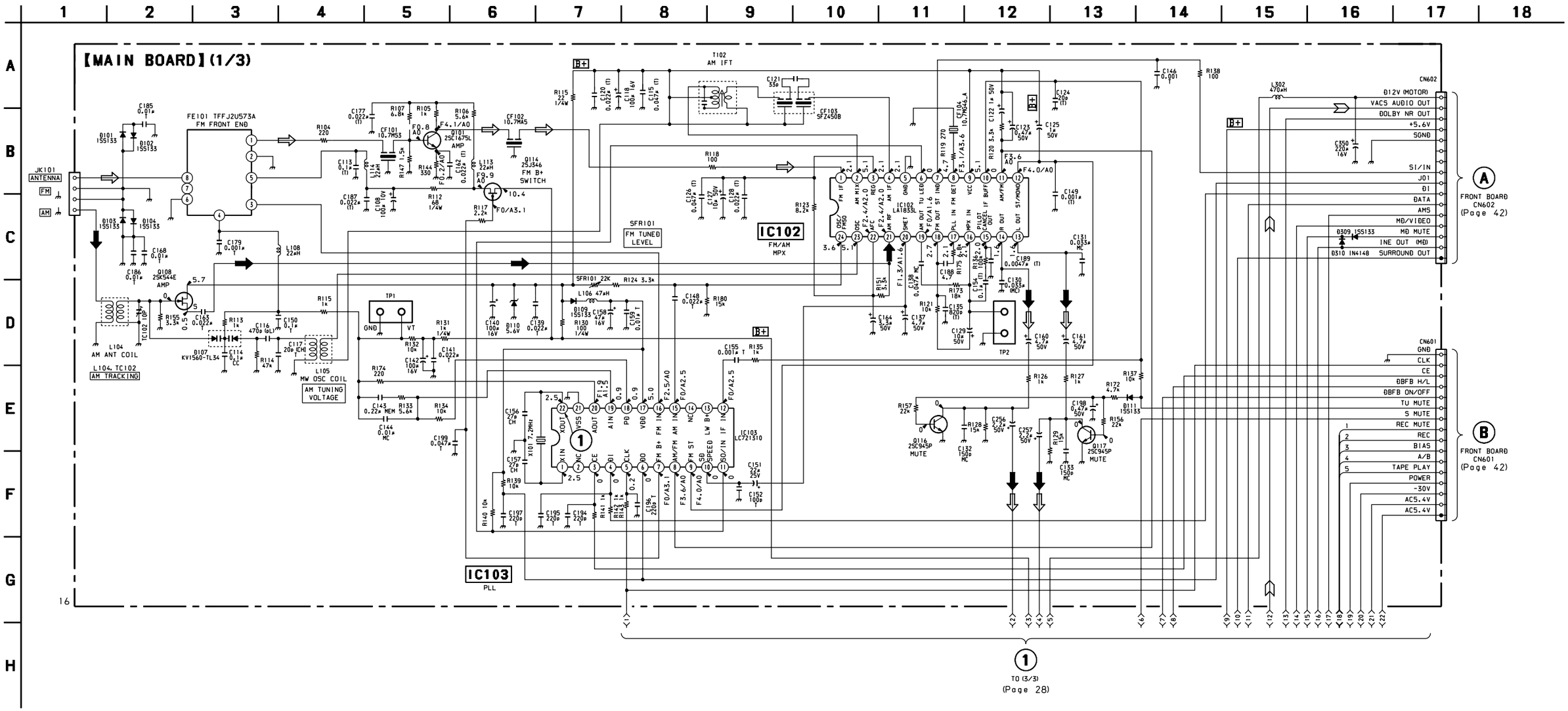
COMPACT Hi-Fi STEREO SYSTEM

MICROFILM

SONY®

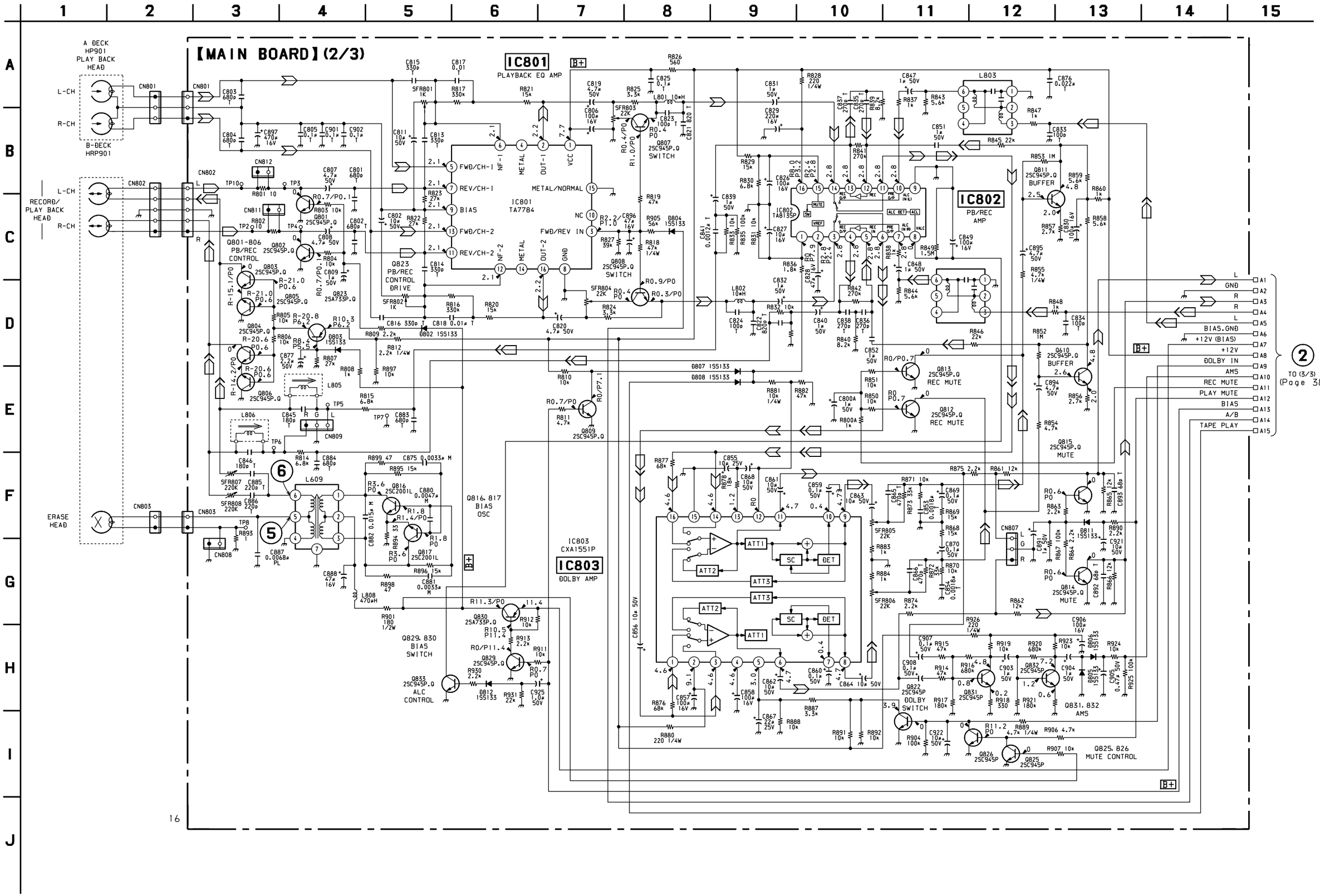
5-4. SCHEMATIC DIAGRAM MAIN (1/3) SECTION

• Refer to page 16 for Waveform. • Refer to page 45 for IC Block Diagrams.



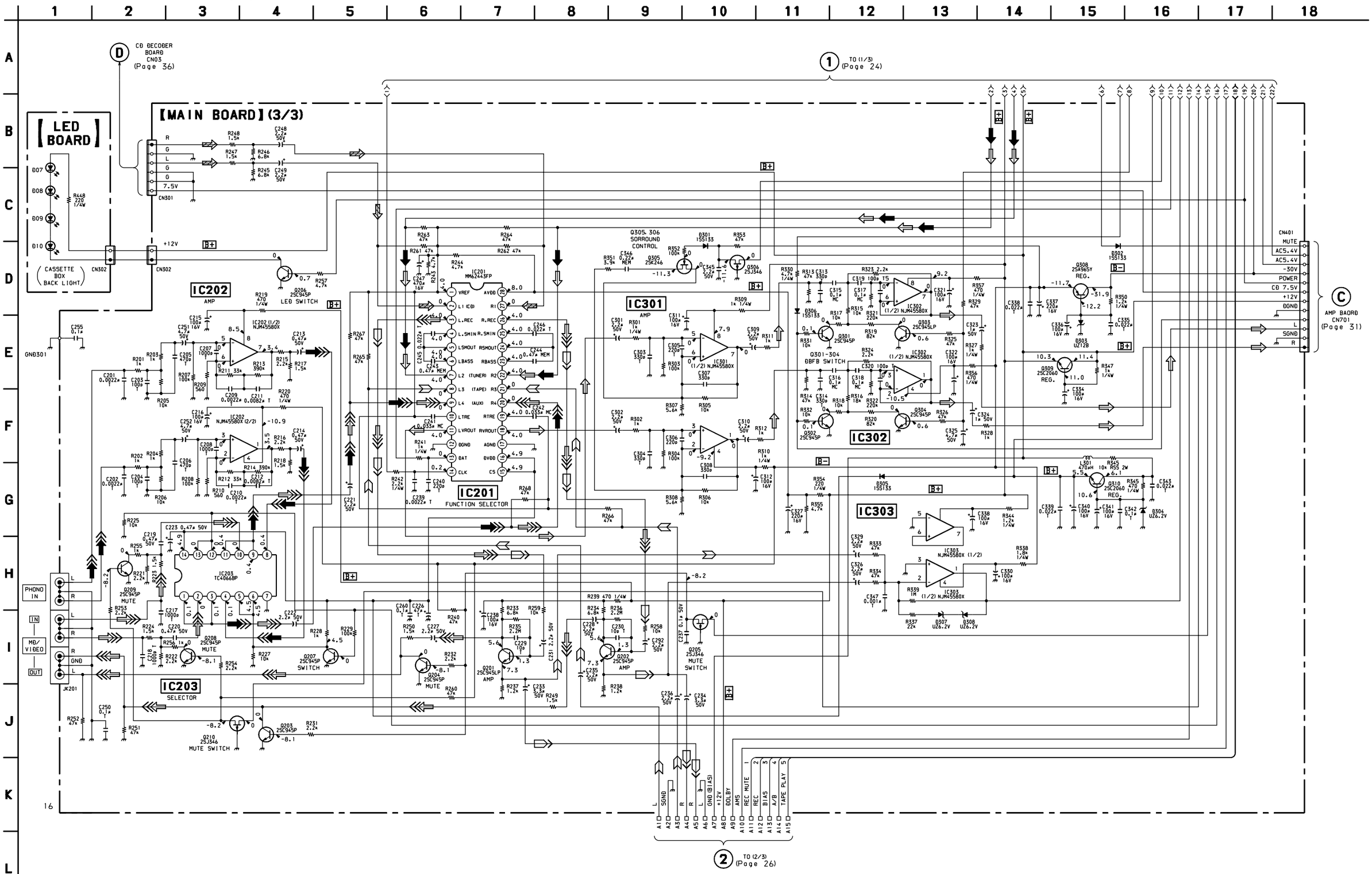
5-5. SCHEMATIC DIAGRAM MAIN (2/3) SECTION

• Refer to page 16 for Waveform. • Refer to page 21 for Printed Wiring Board.


【MAIN BOARD】(2/3)
IC801
PLAYBACK EQ AMP
IC802
PB/REC AMP
IC803
DOLBY AMP
IC801 TA7784
IC802 TA8135P
IC803 CXA1551P
A DECK HP901 PLAY BACK HEAD
B-DECK HRP901
RECORD/ PLAY BACK HEAD
ERASE HEAD
CN801
CN802
CN803
CN807
CN808
CN809
CN811
CN812
L-CH
R-CH
FWD/CH-1
REV/CH-1
BIAS
FWD/CH-2
REV/CH-2
METAL/NORMAL
FWD/REV IN
Q807 2SC945P.Q SWITCH
Q808 2SC945P.Q SWITCH
Q823 PB/REC CONTROL DRIVE
Q801-806 PB/REC CONTROL
Q816 2SC2001L
Q817 2SC2001L
Q829 2SA733P.Q BIAS SWITCH
Q830 2SA733P.Q
Q833 2SC945P.Q ALC CONTROL
Q809 2SC945P.Q
Q810 2SC945P.Q BUFFER
Q811 2SC945P.Q BUFFER
Q813 2SC945P.Q REC MUTE
Q812 2SC945P.Q REC MUTE
Q814 2SC945P.Q MUTE
Q815 2SC945P.Q MUTE
Q822 2SC945P DOLBY SWITCH
Q831 2SC945P
Q832 2SC945P
Q831. 832 AMS
Q825. 826 MUTE CONTROL
Q826 2SC945P
Q825 2SC945P
Q803 2SC945P.Q
Q804 2SC945P.Q
Q805 2SC945P.Q
Q806 2SC945P.Q
Q802 2SC945P.Q
Q801 2SC945P.Q
Q812 2SC945P.Q
Q823 2SA733P.Q
Q829 2SC945P.Q
Q830 2SA733P.Q
D802 1SS133
D804 1SS133
D807 1SS133
D808 1SS133
D812 1SS133
D805 1SS133
D806 1SS133
L801 10mH
L802 10mH
L803
L805
L806
L808 470μH
L609
SFR801 1K
SFR802 1K
SFR803 22K
SFR804 22K
SFR805 22K
SFR806 22K
SFR807 220K
SFR808 220K
B+
TO (3/3) (Page 38)
L
GND
R
R
L
BIAS.GND
+12V (BIAS)
+12V
DOLBY IN
AMS
REC MUTE
PLAY MUTE
BIAS
A/B
TAPE PLAY
Q.4/P0
R1.0/P0
R0.7/P0.1
R-21.0 P0.6
R-15.1/P0
R-20.8 P6.2
R10.3 P6.2
R-20.6 P0.6
R-14.2/P0
R0.7/P0.7
R0/P7.1
R0.7/P0
R0/P0.7
R0 P0.7
R0.6 P0
R0.9/P0
R0.4 P0
R1.8 P0
R1.4/P0
R3.6 P0
R11.3/P0
R10.5 P11.4
R0/P11.4
R0.7 P0
R2.2/P1.0
R2.4/P1.8
R2.8/P2.0
R2.9/P2.1
R3.0/P2.2
R2.8/P2.4
R2.8/P2.6
R2.8/P2.8
R2.8/P2.9
R3.0/P3.0
R3.2/P3.1
R3.2/P3.2
R3.2/P3.3
R3.2/P3.4
R3.2/P3.5
R3.2/P3.6
R3.2/P3.7
R3.2/P3.8
R3.2/P3.9
R4.0/P4.0
R4.2/P4.2
R4.2/P4.4
R4.2/P4.6
R4.2/P4.8
R4.2/P5.0
R4.2/P5.2
R4.2/P5.4
R4.2/P5.6
R4.2/P5.8
R4.2/P6.0
R4.2/P6.2
R4.2/P6.4
R4.2/P6.6
R4.2/P6.8
R4.2/P7.0
R4.2/P7.2
R4.2/P7.4
R4.2/P7.6
R4.2/P7.8
R4.2/P8.0
R4.2/P8.2
R4.2/P8.4
R4.2/P8.6
R4.2/P8.8
R4.2/P9.0
R4.2/P9.2
R4.2/P9.4
R4.2/P9.6
R4.2/P9.8
R4.2/P10.0
R4.2/P10.2
R4.2/P10.4
R4.2/P10.6
R4.2/P10.8
R4.2/P11.0
R4.2/P11.2
R4.2/P11.4
R4.2/P11.6
R4.2/P11.8
R4.2/P12.0

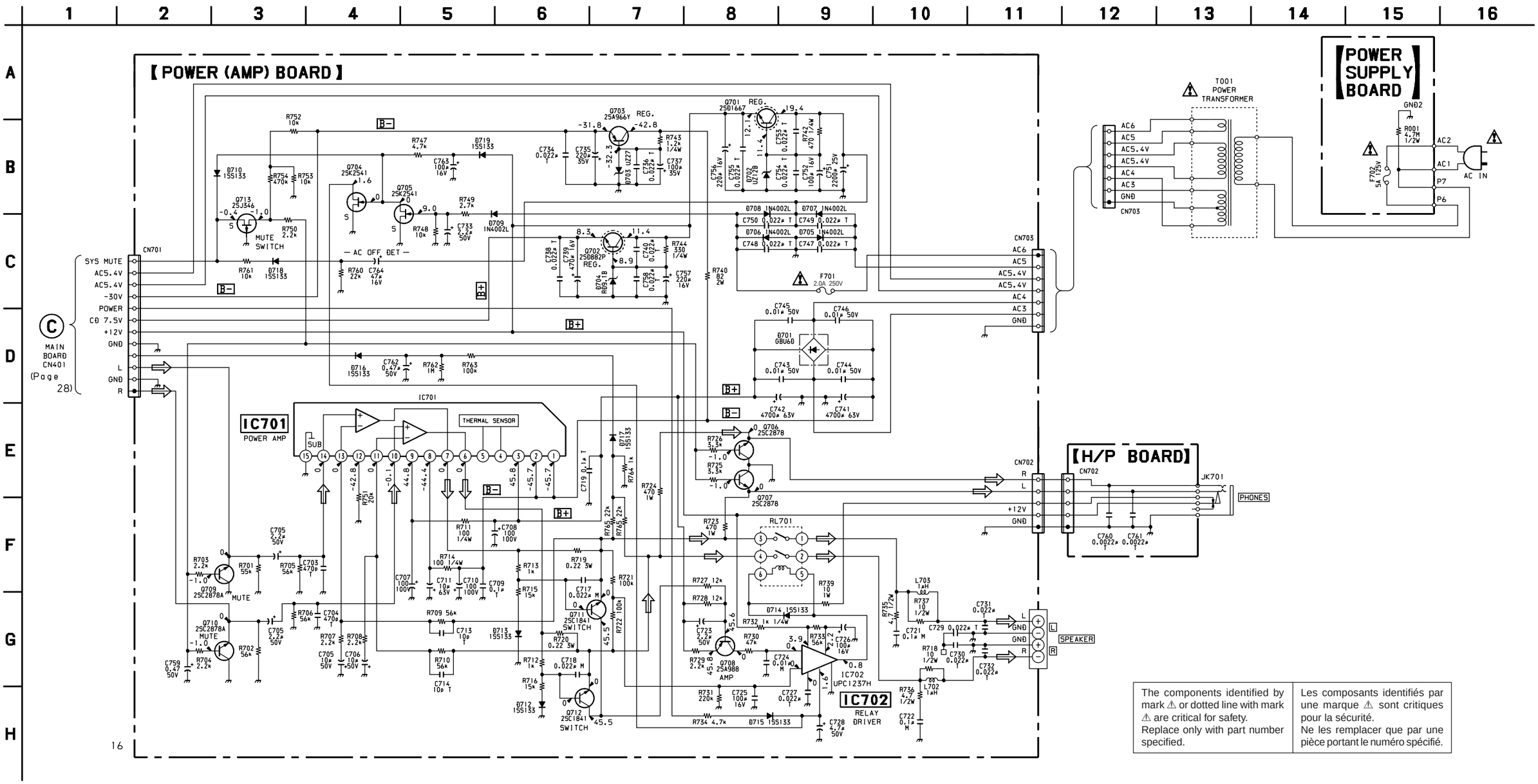
5-6. SCHEMATIC DIAGRAM MAIN (3/3) SECTION

• Refer to page 21 for Printed Wiring Board. • Refer to page 45 for IC Block Diagrams.



5-8. SCHEMATIC DIAGRAM AMP SECTION

• Refer to page 46 for IC Block Diagram.

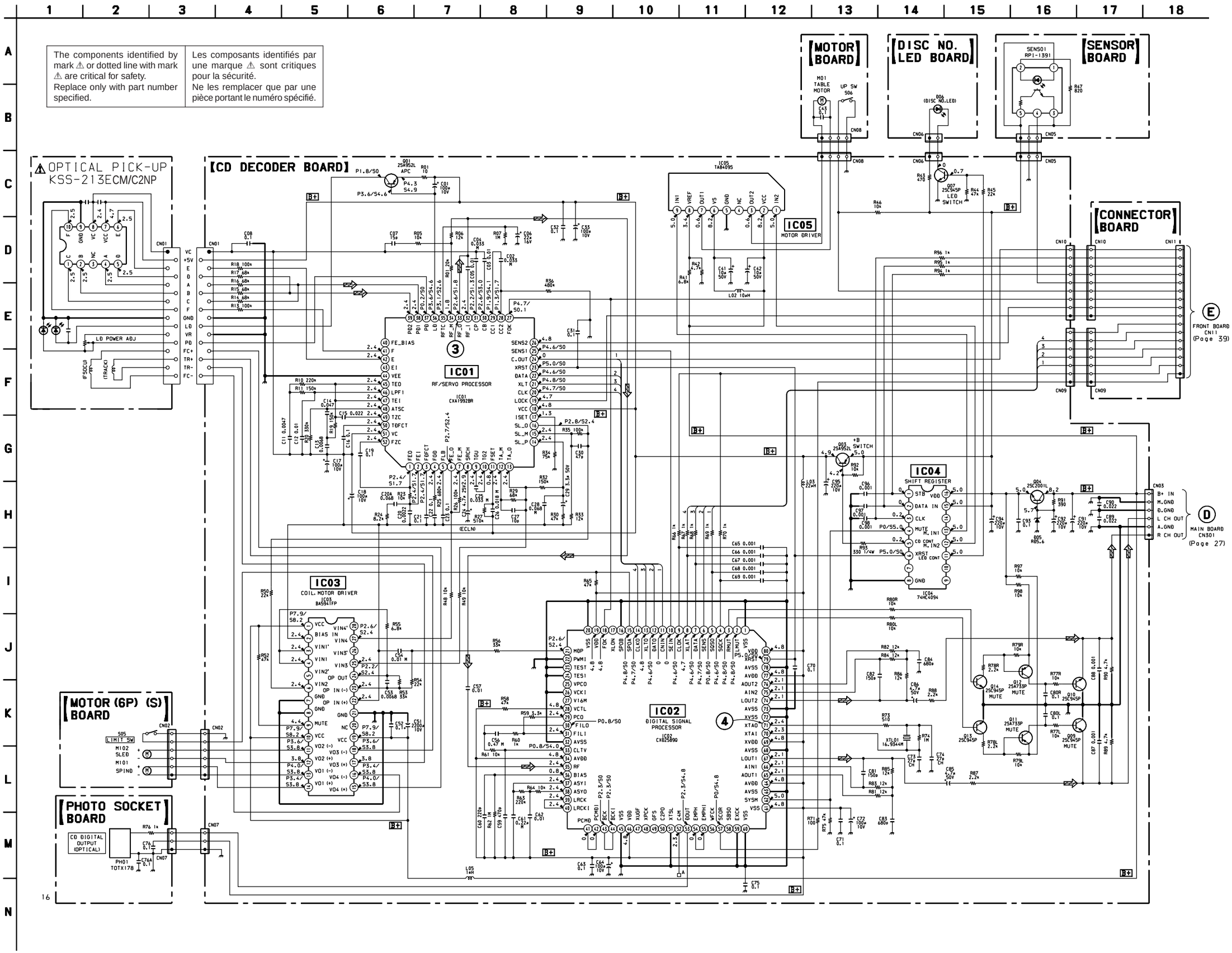


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-10. SCHEMATIC DIAGRAM CD DECORD SECTION

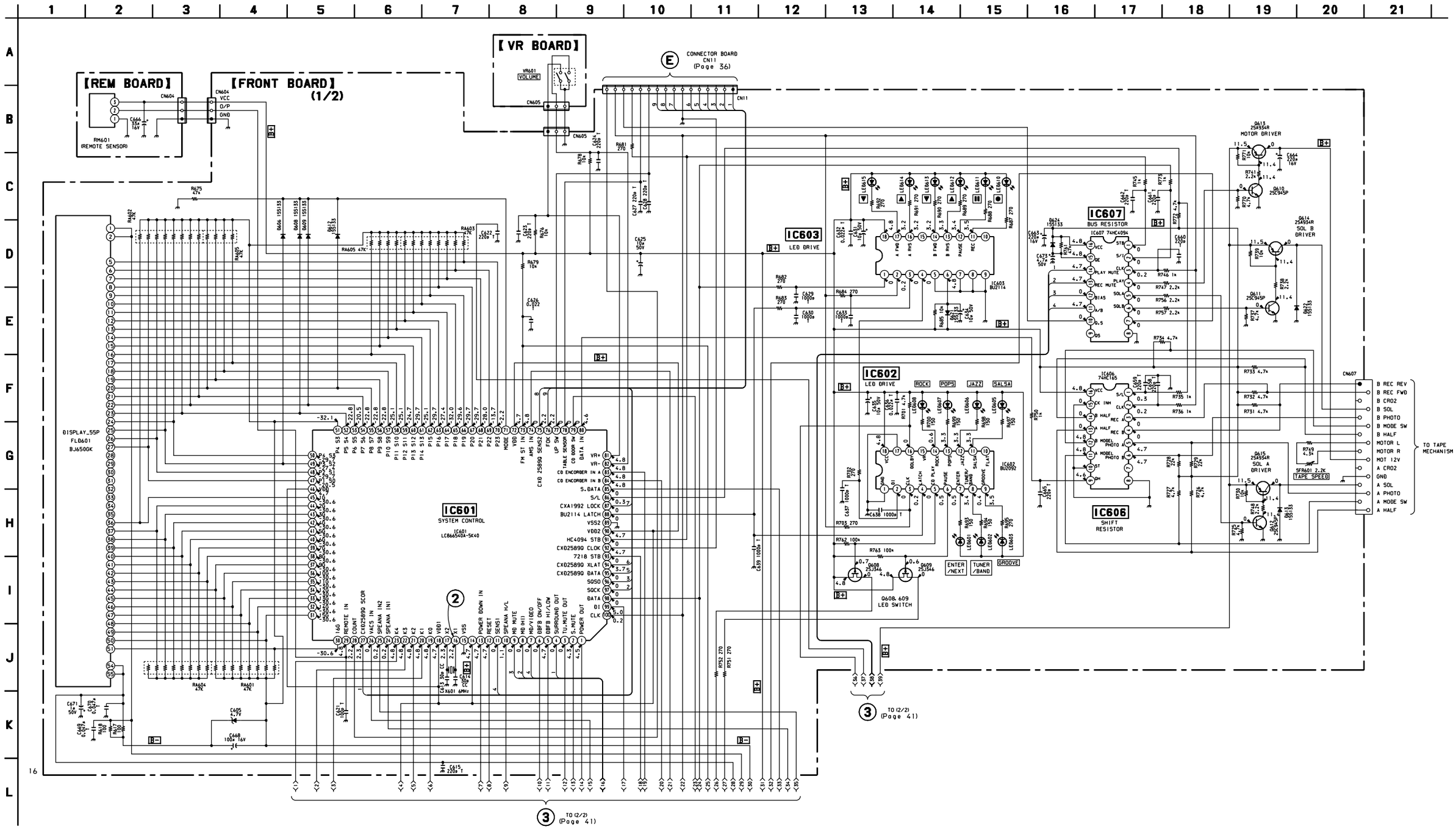
• Refer to page 16 for Waveforms.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



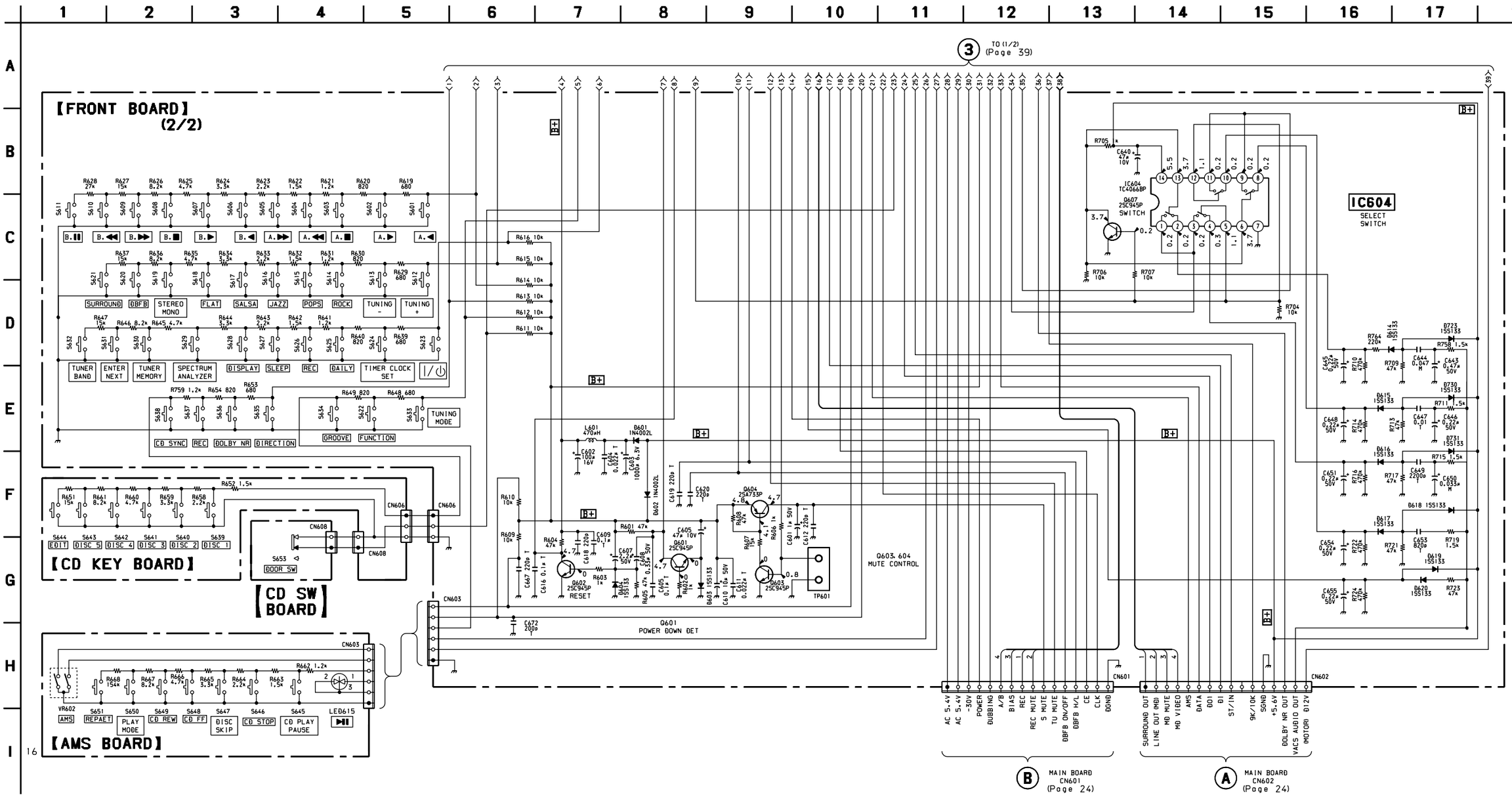
5-12. SCHEMATIC DIAGRAM FRONT (1/2) SECTION

• Refer to page 16 for Waveform. • Refer to page 43 for IC Pin Function Description. • Refer to page 46 for IC Block Diagrams.



5-13. SCHEMATIC DIAGRAM FRONT (2/2) SECTION

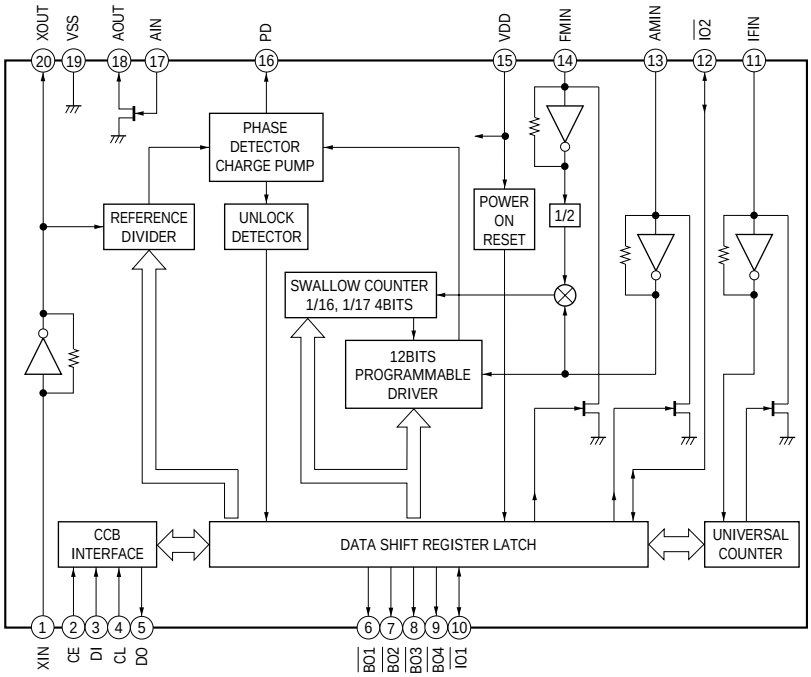
• Refer to page 37 for Printed Wiring Board.



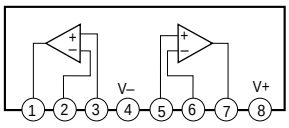
5-15. IC BLOCK DIAGRAMS

MAIN BOARD

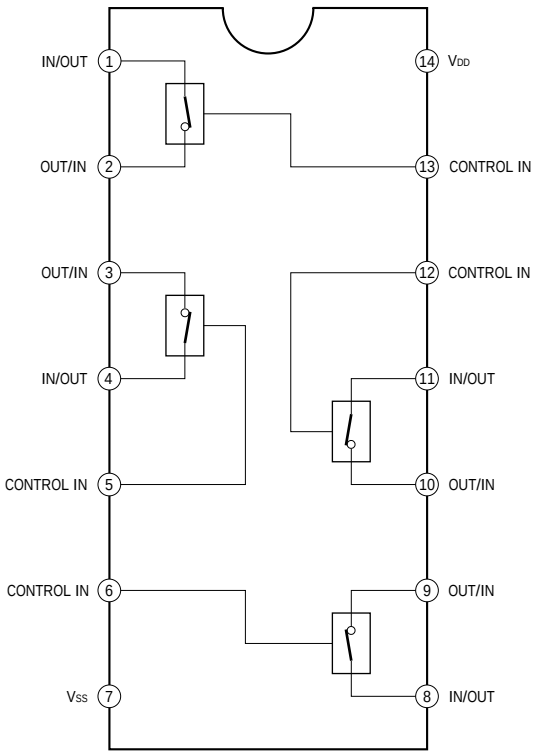
IC103 LC72131M



IC202 M5218AL

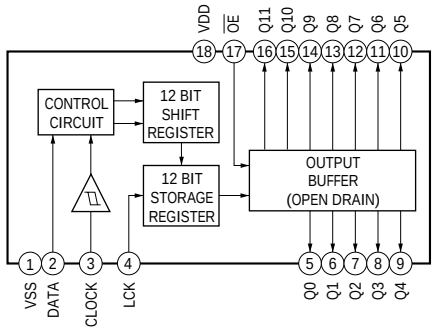


IC203 MC14066BF

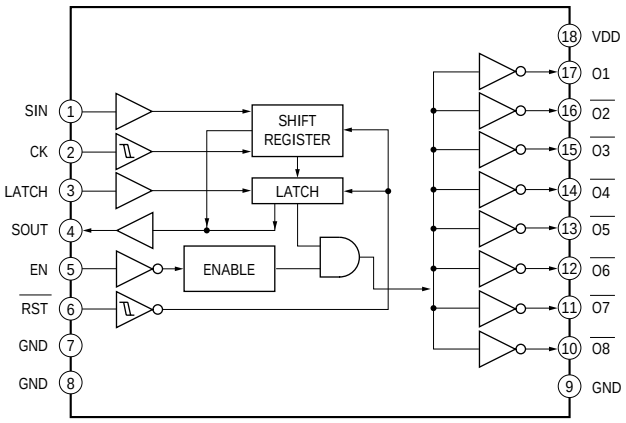


FRONT BOARD

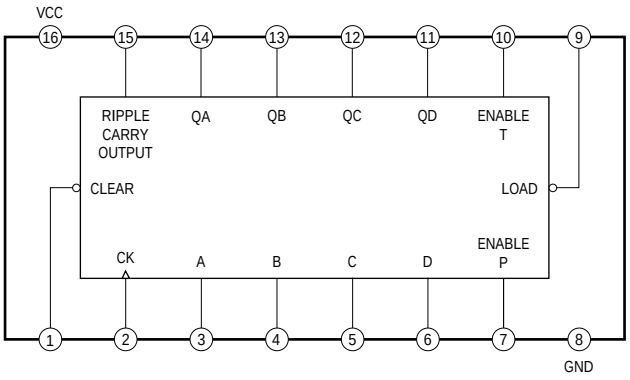
IC602 BU2092F-E2



IC603 BU2114F



IC606 SN74HC161



AMP BOARD

IC702 MPC1237HA