

# HCD-GTR33/GTR55/GTR77

## SERVICE MANUAL

*E Model*

Ver. 1.0 2010.03



Photo: HCD-GTR77 (E4 Model)

- HCD-GTR33 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR33.
- HCD-GTR55 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR55.
- HCD-GTR77 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR77.

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CD Section	Model Name Using Similar Mechanism	HCD-GTZ4/GTZ4i/GTZ5
	CD Mechanism Type	CDM88BL-DVBU101
	Optical Pick-up Name	KHM-313CAB/C2NP
Tape Section (Only for E4 model)	Model Name Using Similar Mechanism	HCD-GT111/GT222/GT444/GT555
	Tape mechanism Type	CS-21SC-900TP

### SPECIFICATIONS

#### Amplifier section

##### MHC-GTR77

The following are measured at Mexican model:

AC 127 V, 60 Hz

Other models:

AC 120 V, 220 V, 240 V, 50/60 Hz

Front/Satellite Speaker

Power Output (rated):

120 W + 120 W (at 6 Ω, 1 kHz, 1% THD)

Front Speaker

RMS output power (reference):

225 W + 225 W (per channel at 8 Ω, 1 kHz)

Satellite Speaker

RMS output power (reference):

100 W + 100 W (per channel at 24 Ω, 1 kHz)

Subwoofer

RMS output power (reference):

130 W + 130 W (12 Ω, 100 Hz)

##### MHC-GTR55

The following are measured at Mexican model:

AC 127 V, 60 Hz

Other models:

AC 120 V, 220 V, 240 V, 50/60 Hz

Front Speaker

Power Output (rated):

110 W + 110 W (at 6 Ω, 1 kHz, 1% THD)

RMS output power (reference):

240 W + 240 W (per channel at 6 Ω, 1 kHz)

Subwoofer

RMS output power (reference):

240 W (6 Ω, 100 Hz)

##### MHC-GTR33

The following are measured at Mexican model:

AC 127 V, 60 Hz

Other models:

AC 120 V, 220 V, 240 V, 50/60 Hz

Front Speaker

Power Output (rated):

75 W + 75 W (at 6 Ω, 1 kHz, 1% THD)

RMS output power (reference):

165 W + 165 W (per channel at 6 Ω, 1 kHz)

Subwoofer

RMS output power (reference):

160 W (6 Ω, 100 Hz)

#### Inputs

PC (AUDIO IN) L/R

Voltage 700 mV, impedance 47 kilohms

MIC

Sensitivity 1 mV, impedance 10 kilohms

• (USB) port: Type A

#### Outputs

PHONES

Accepts headphones of 8 Ω or more

#### USB section

Supported bit rate

MP3 (MPEG 1 Audio Layer-3):

32 kbps – 320 kbps, VBR

WMA: 48 kbps – 192 kbps

AAC: 48 kbps – 320 kbps

Sampling frequencies

MP3 (MPEG 1 Audio Layer-3):

32 kHz/44.1 kHz/48 kHz

WMA: 44.1 kHz

AAC: 44.1 kHz

Transfer speed

Full-Speed

Supported USB device

Mass Storage Class

Maximum current

500 mA

#### Disc player section

System

Compact disc and digital audio system

Laser Diode Properties

Emission Duration: Continuous

Laser Output\*: Less than 44.6 μW

\* This output is the value measurement 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

Signal-to-noise ratio

More than 90 dB

Dynamic range

More than 88 dB

#### Tape deck section (For African model only)

Recording system

4-track 2 channel, stereo

#### Tuner section

FM stereo, FM/AM superheterodyne tuner

##### FM tuner section

Tuning range

North American models:

87.5 MHz – 108.0 MHz (100 kHz step)

Other models:

87.5 MHz – 108.0 MHz (50 kHz step)

Antenna

FM lead antenna

Antenna terminals

75 ohms unbalanced

Intermediate frequency

10.7 MHz

##### AM tuner section

Tuning range

Pan American and Oceanian models:

530 kHz – 1,710 kHz (with 10 kHz tuning interval)

531 kHz – 1,710 kHz (with 9 kHz tuning interval)

Other models:

530 kHz – 1,610 kHz (with 10 kHz tuning interval)

531 kHz – 1,602 kHz (with 9 kHz tuning interval)

Antenna

AM loop antenna, external antenna terminal

Intermediate frequency

450 kHz

#### General

Power requirements

Oceanian model: AC 230 V – 240 V,

50/60 Hz

Mexican model: AC 127 V, 60 Hz

Argentina model: AC 220 V, 50/60 Hz

Other models: AC 120 V, 220 V or

230 V – 240 V, 50/60 Hz, Adjustable with

voltage selector

Power consumption

MHC-GTR77: 260 W

MHC-GTR55: 250 W

MHC-GTR33: 280 W

Dimensions (w/h/d) (excl. speakers)

(Approx.)

231 mm × 361 mm × 429.5 mm

Mass (excl. speakers) (Approx.)

African and Pan Asian models:

HCD-GTR77/HCD-GTR55: 10.7 kg

HCD-GTR33: 10.5 kg

Other models:

HCD-GTR77/HCD-GTR55: 10.2 kg

HCD-GTR33: 10.0 kg

Design and specifications are subject to change without notice.

• Abbreviation

E4 : African model

## COMPACT DISC DECK RECEIVER

9-890-541-01

2010C08-1

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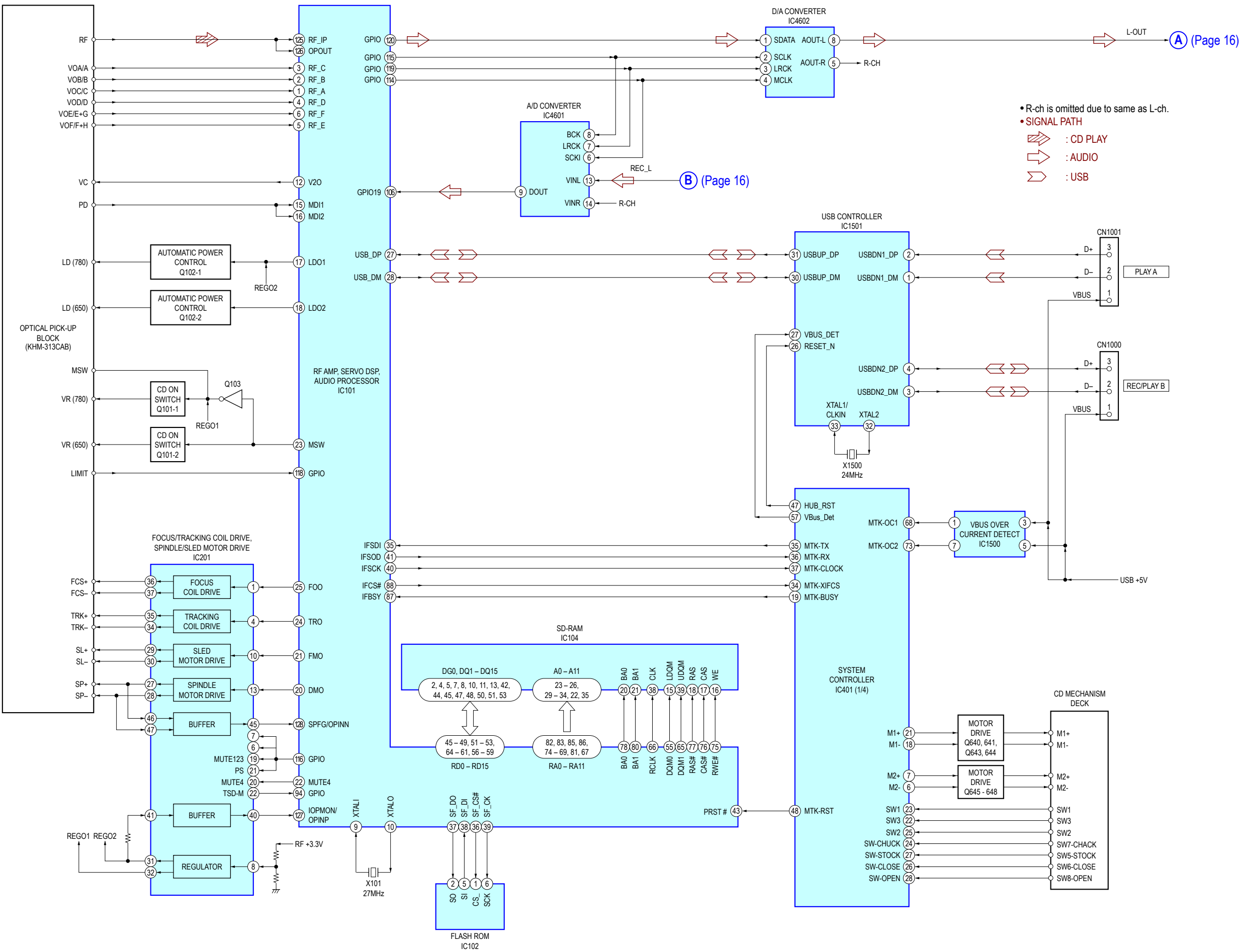
**Audio & Video Business Group**

**Published by Sony EMCS (Malaysia) PG Tec**

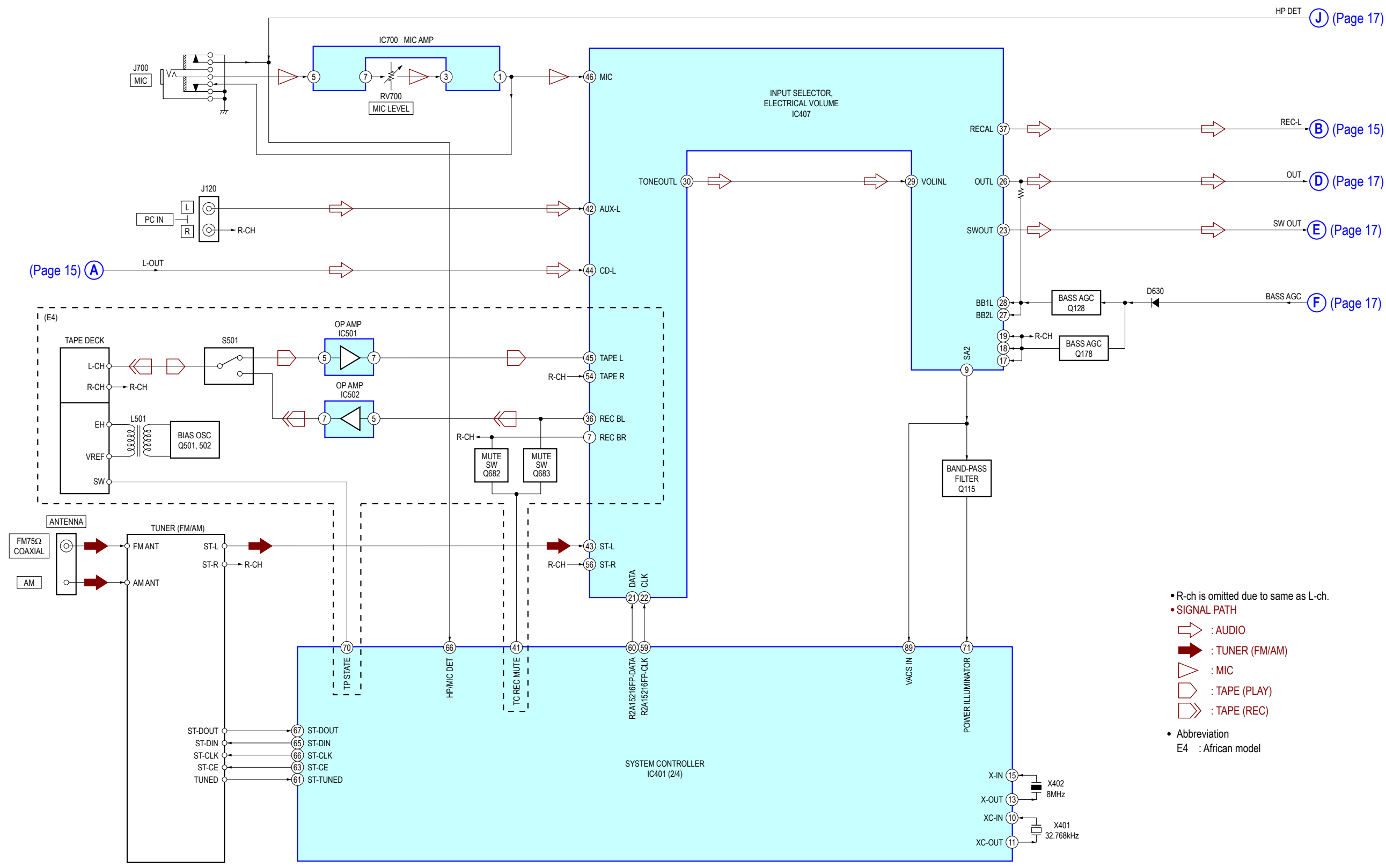
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SECTION 6  
DIAGRAMS

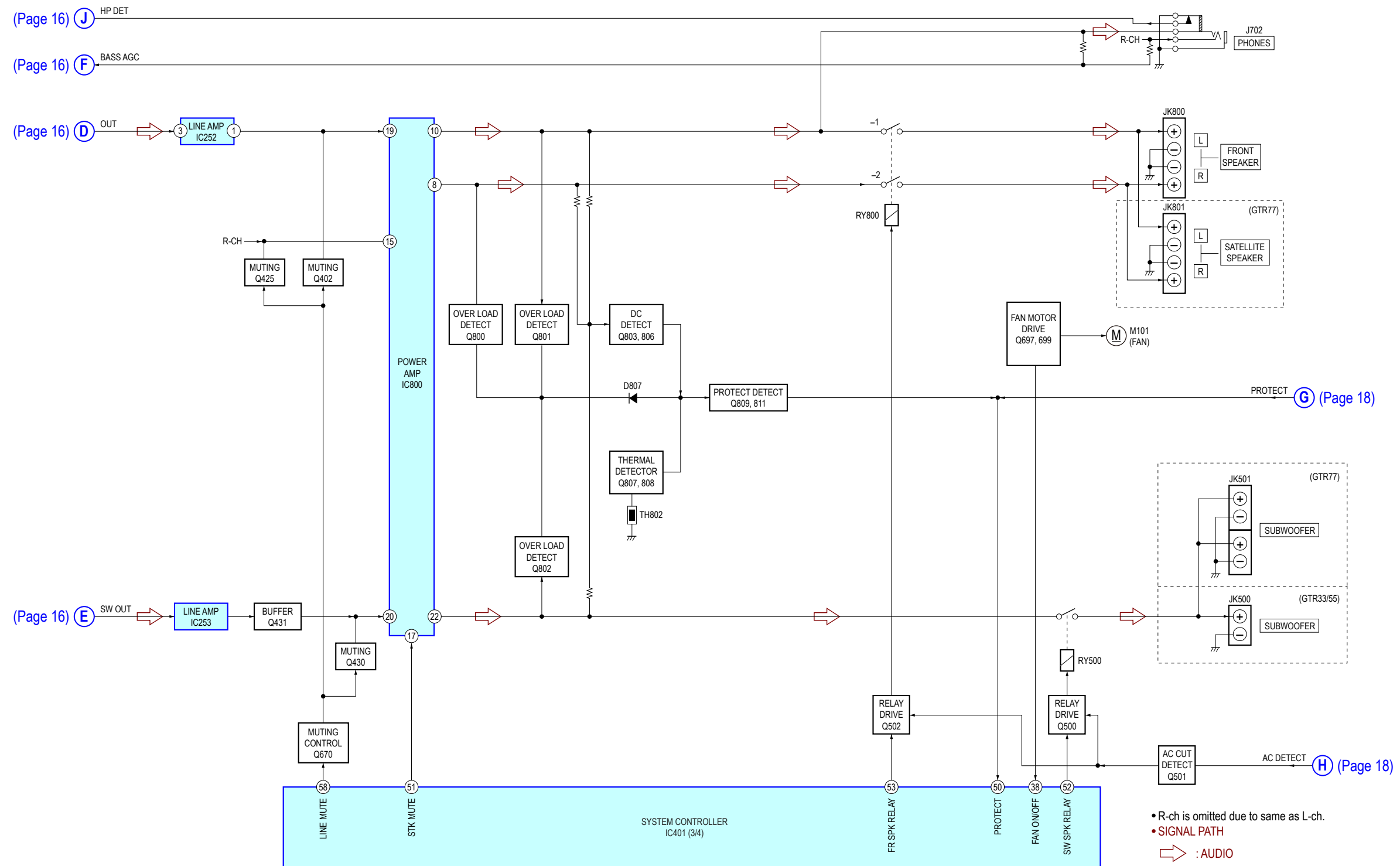
6-1. BLOCK DIAGRAM - RF SERVO, USB Section -



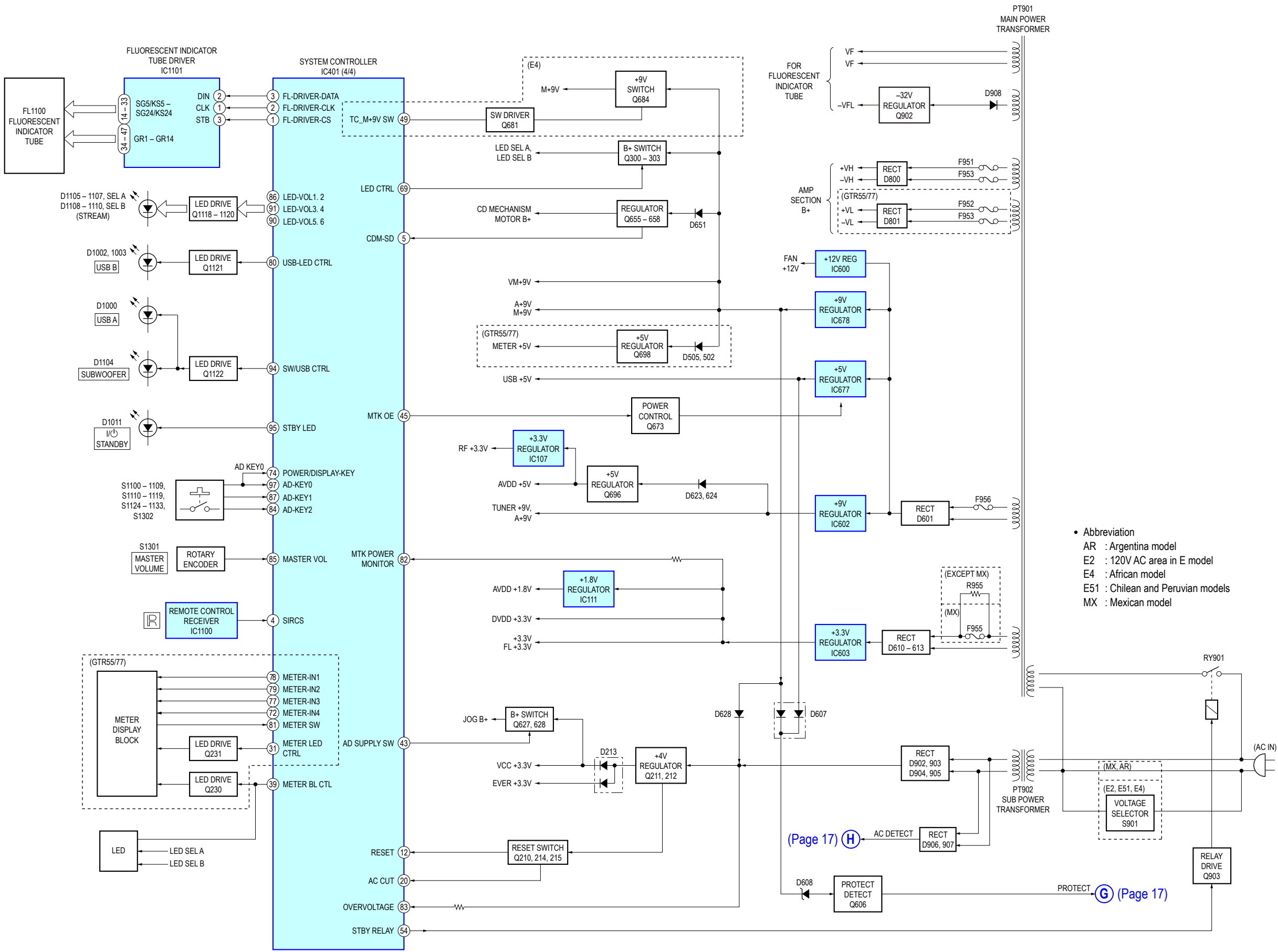
6-2. BLOCK DIAGRAM - MAIN Section -

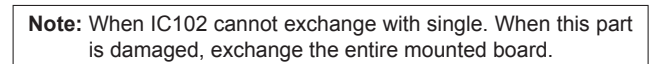


### 6-3. BLOCK DIAGRAM - AMP Section -



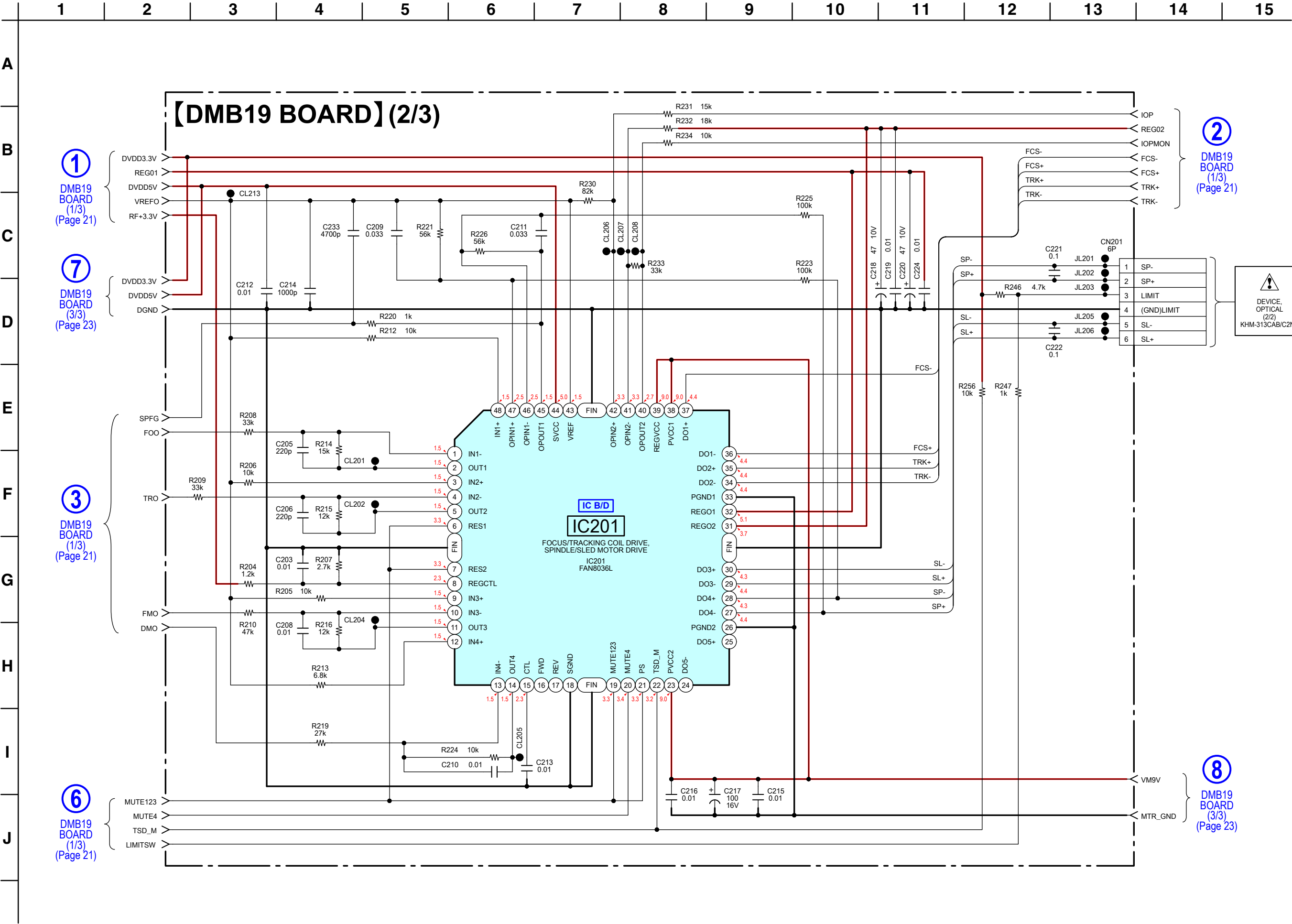
6-4. BLOCK DIAGRAM - PANEL, POWER SUPPLY Section -



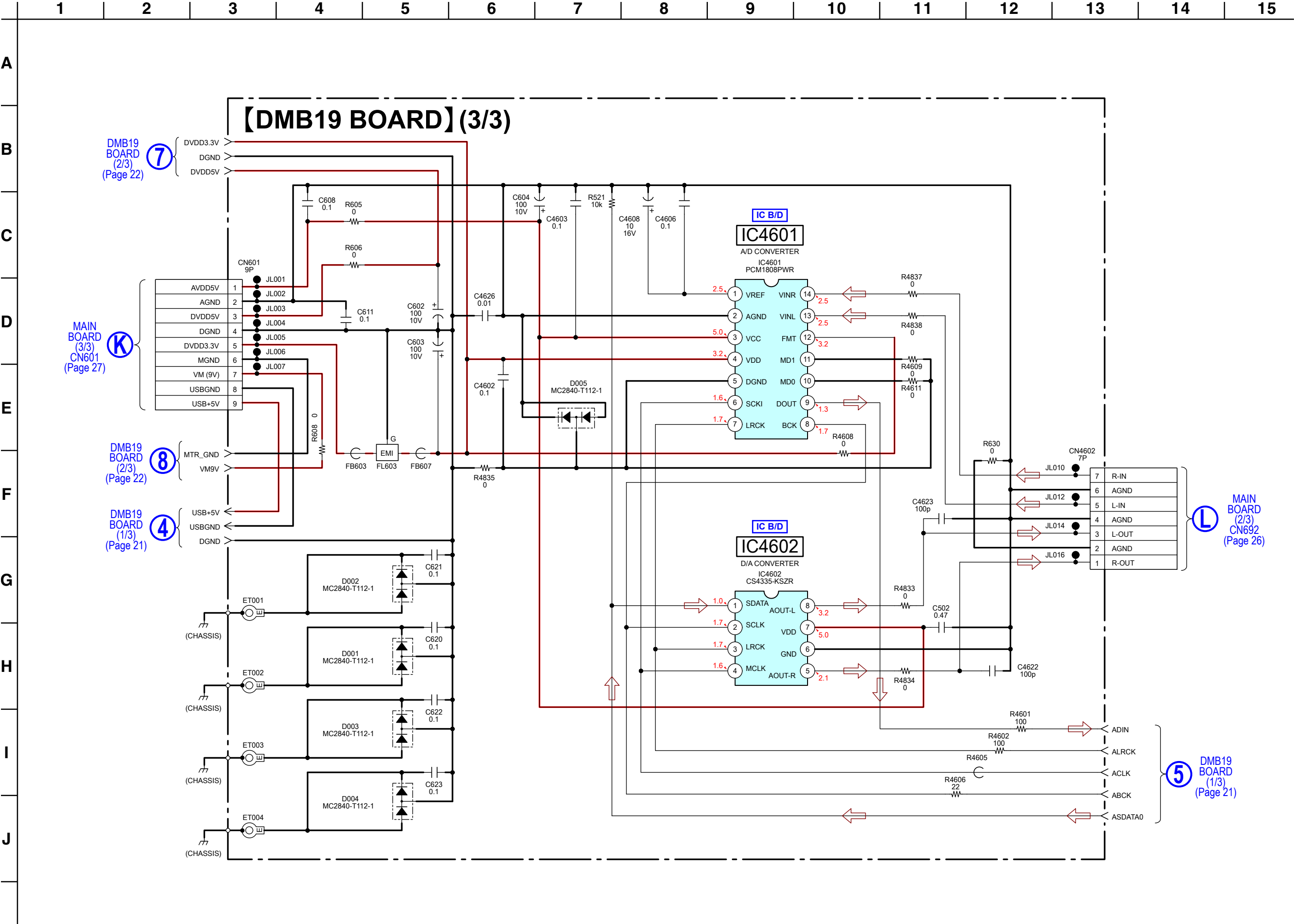




6-7. SCHEMATIC DIAGRAM - DMB19 Board (2/3) - • See page 40 for IC Block Diagrams.

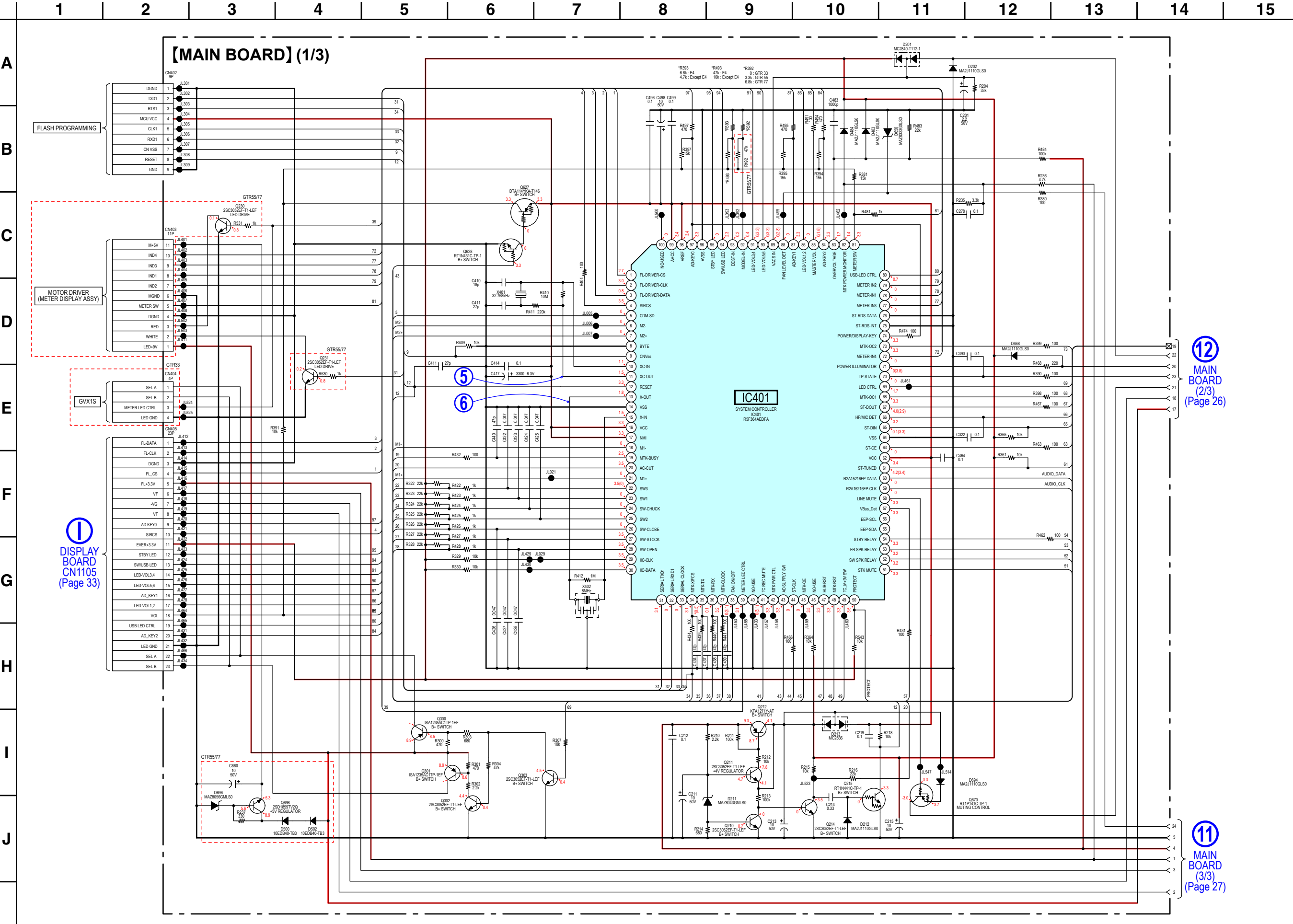


6-8. SCHEMATIC DIAGRAM - DMB19 Board (3/3) - • See page 40 for IC Block Diagrams.

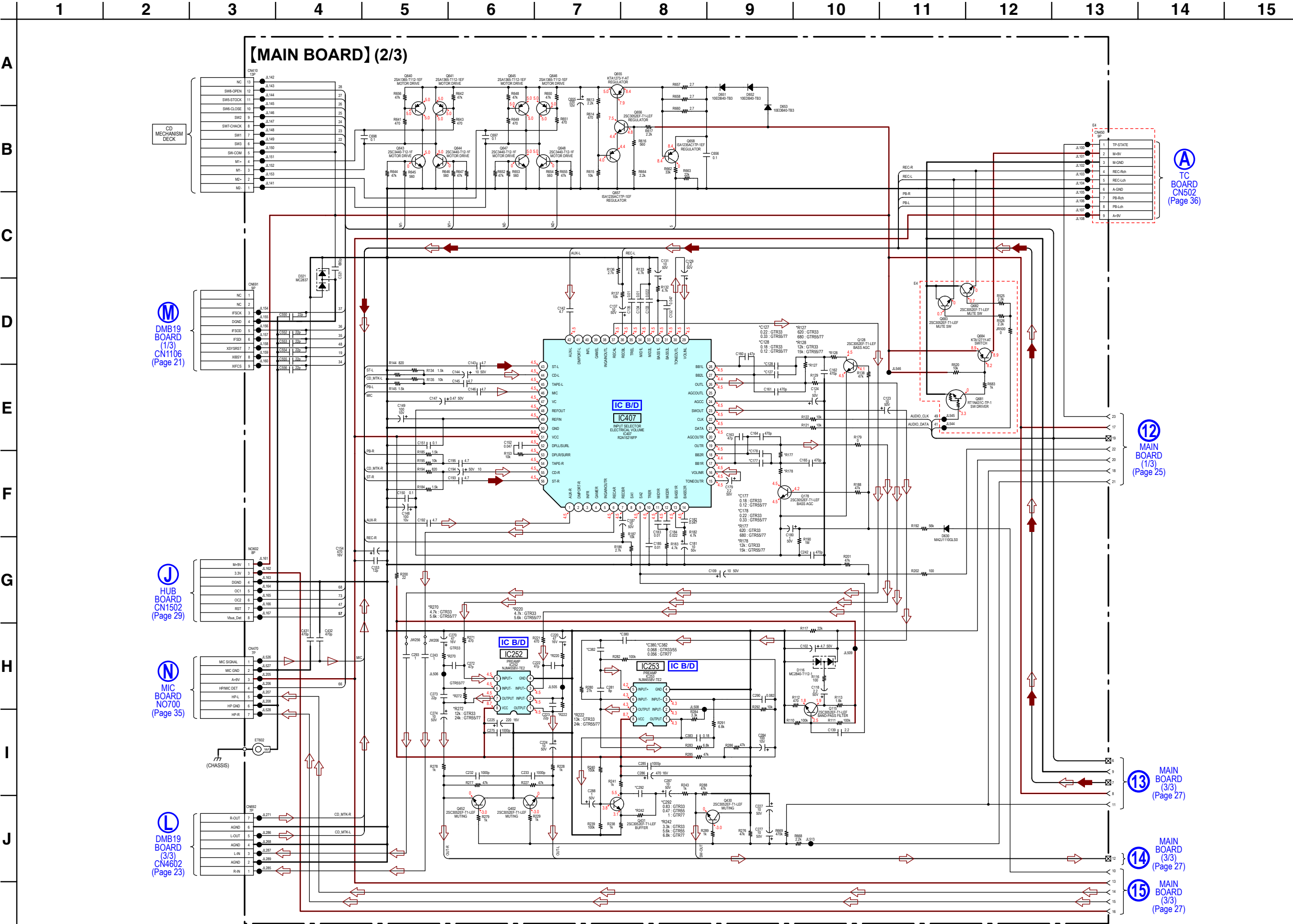




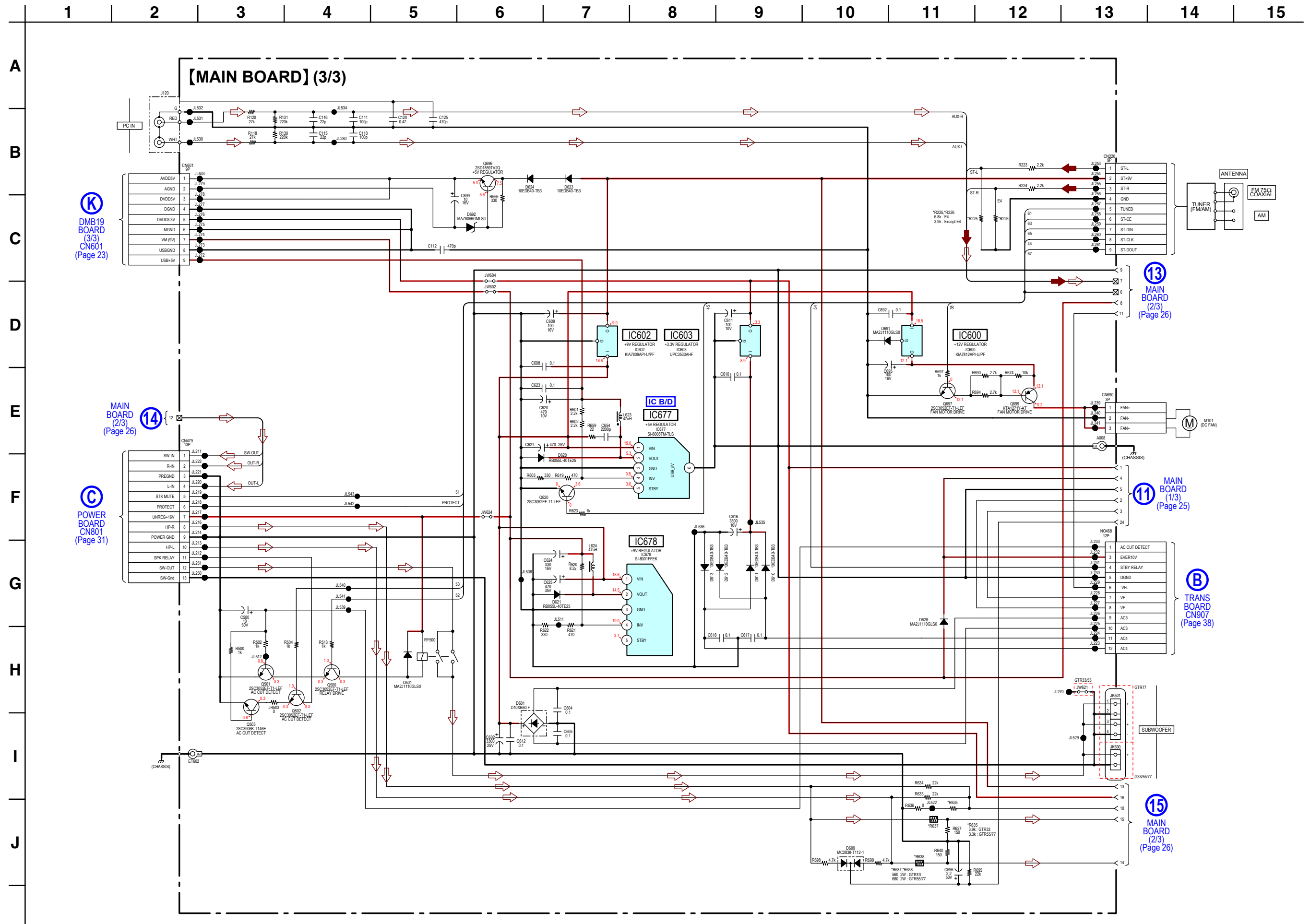
6-10. SCHEMATIC DIAGRAM - MAIN Board (1/3) - • See page 39 for Waveforms. • See page 40 for IC Pin Function Description.



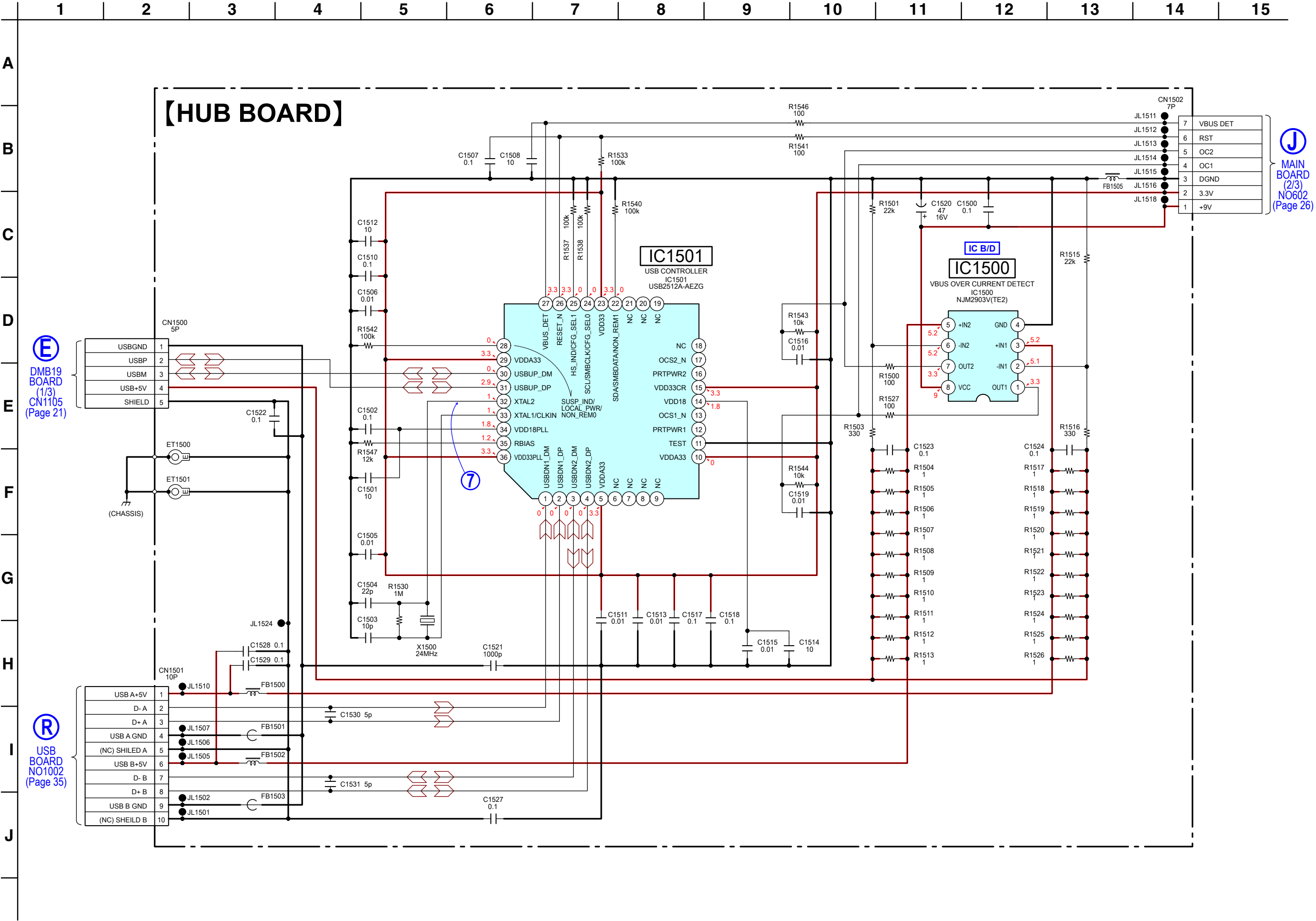
6-11. SCHEMATIC DIAGRAM - MAIN Board (2/3) - • See page 40 for IC Block Diagrams.



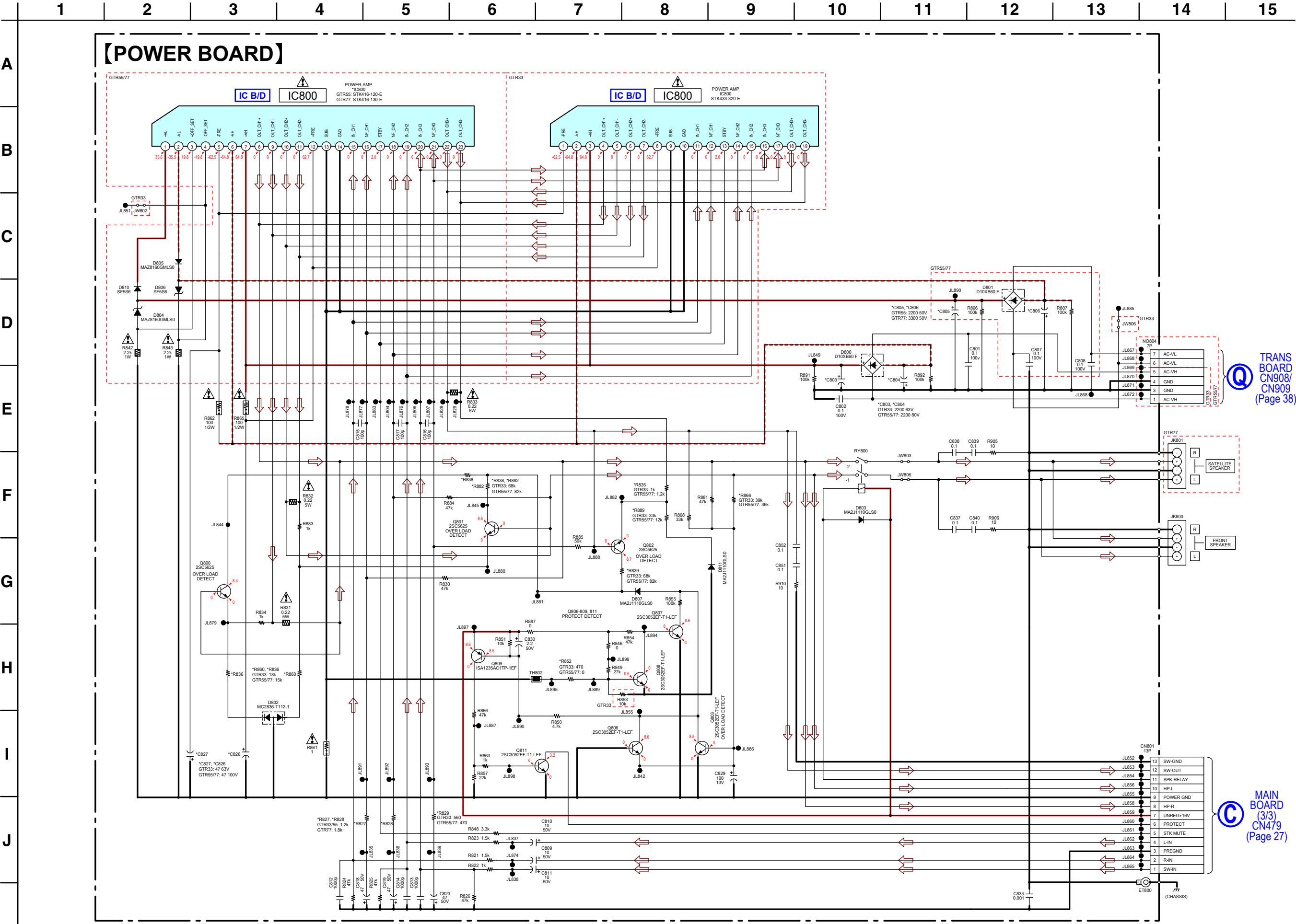
27 27



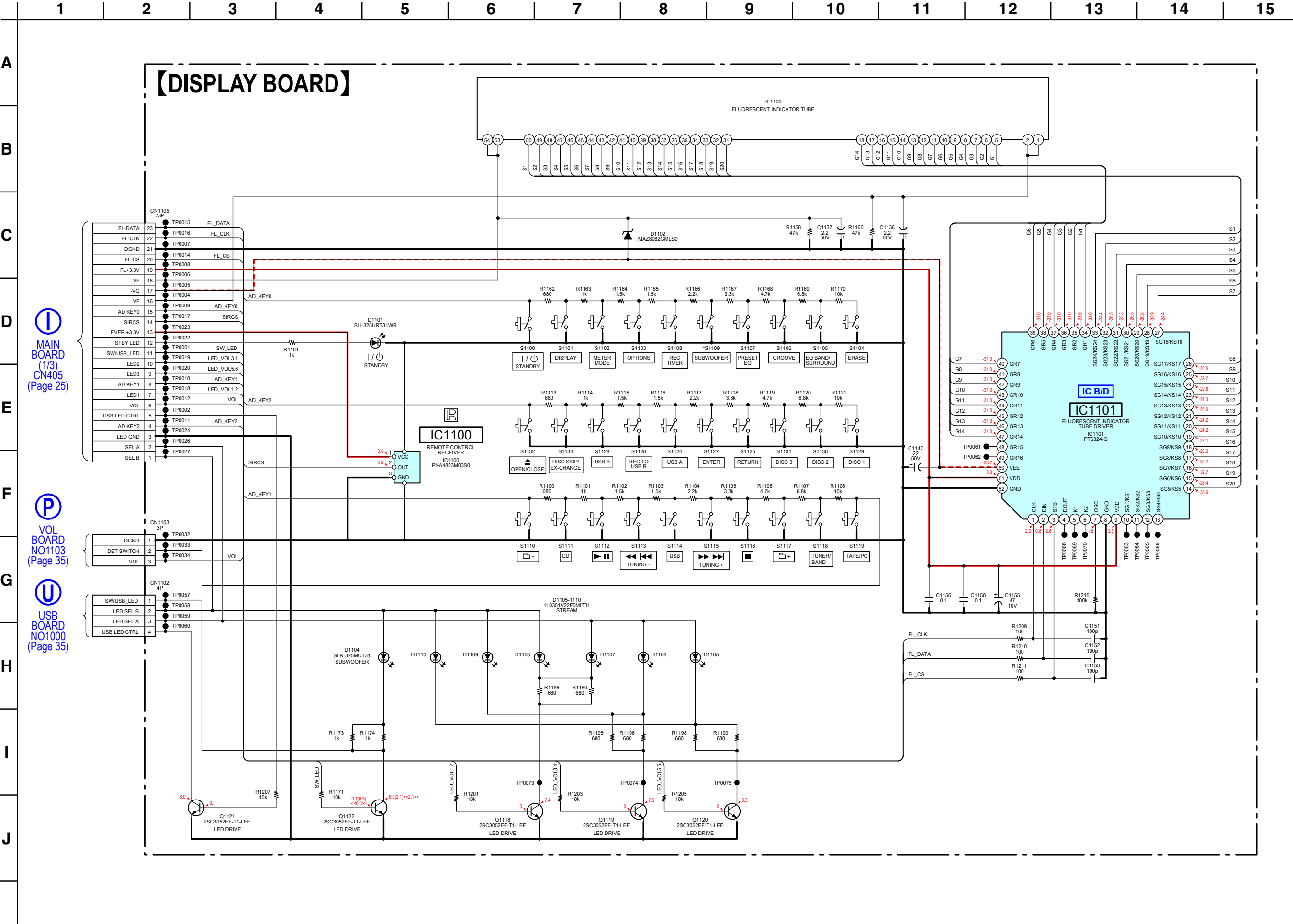
6-14. SCHEMATIC DIAGRAM - HUB Board - • See page 39 for Waveforms. • See page 40 for IC Pin Function Description.



6-16. SCHEMATIC DIAGRAM - POWER Board -

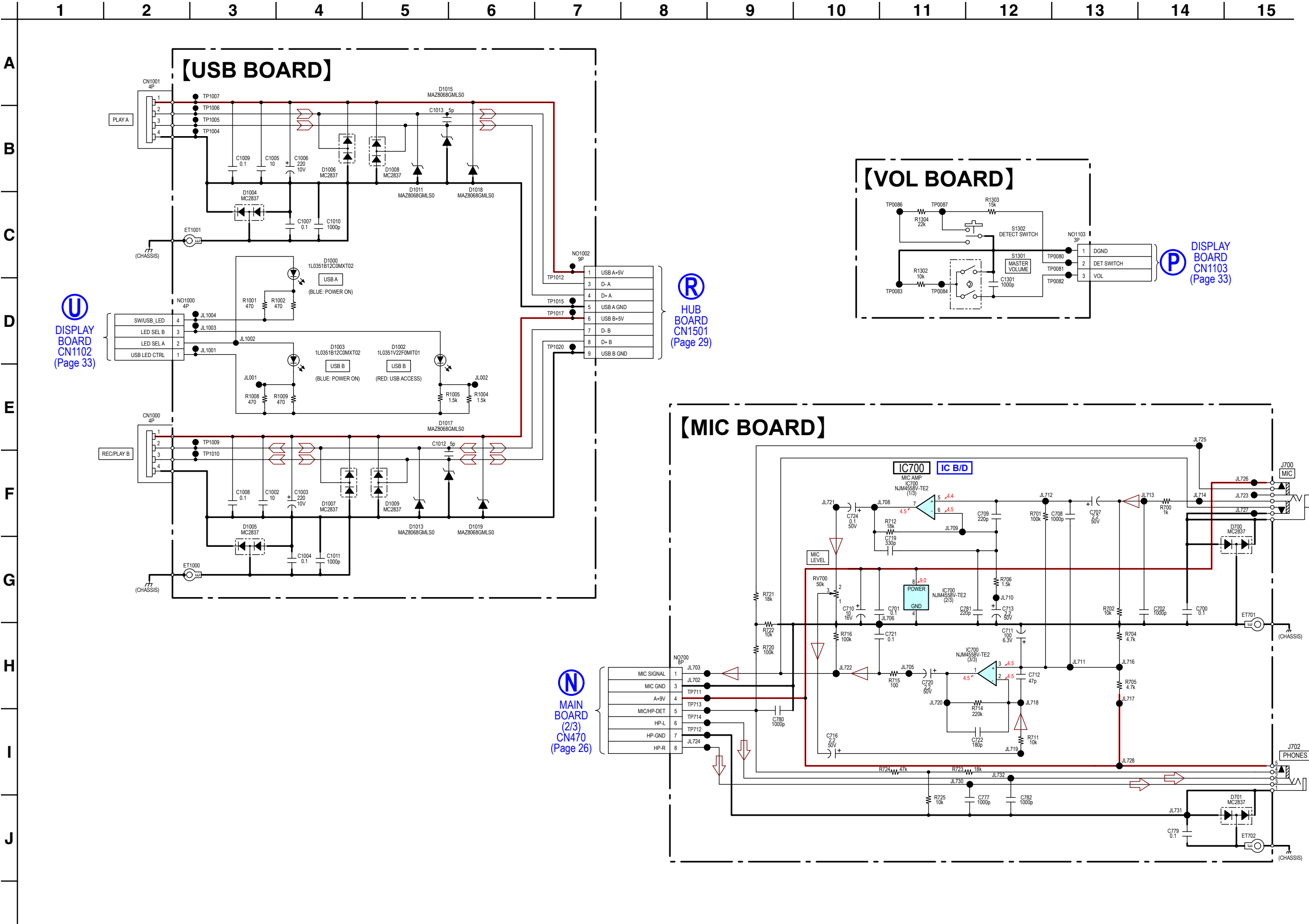


6-18. SCHEMATIC DIAGRAM - DISPLAY Board - • See page 40 for IC Block Diagrams.





6-20. SCHEMATIC DIAGRAM - MIC, USB AND VOL Board - • See page 40 for IC Block Diagrams.



U  
DISPLAY  
BOARD  
CN1102  
(Page 33)

R  
HUB  
BOARD  
CN1501  
(Page 29)

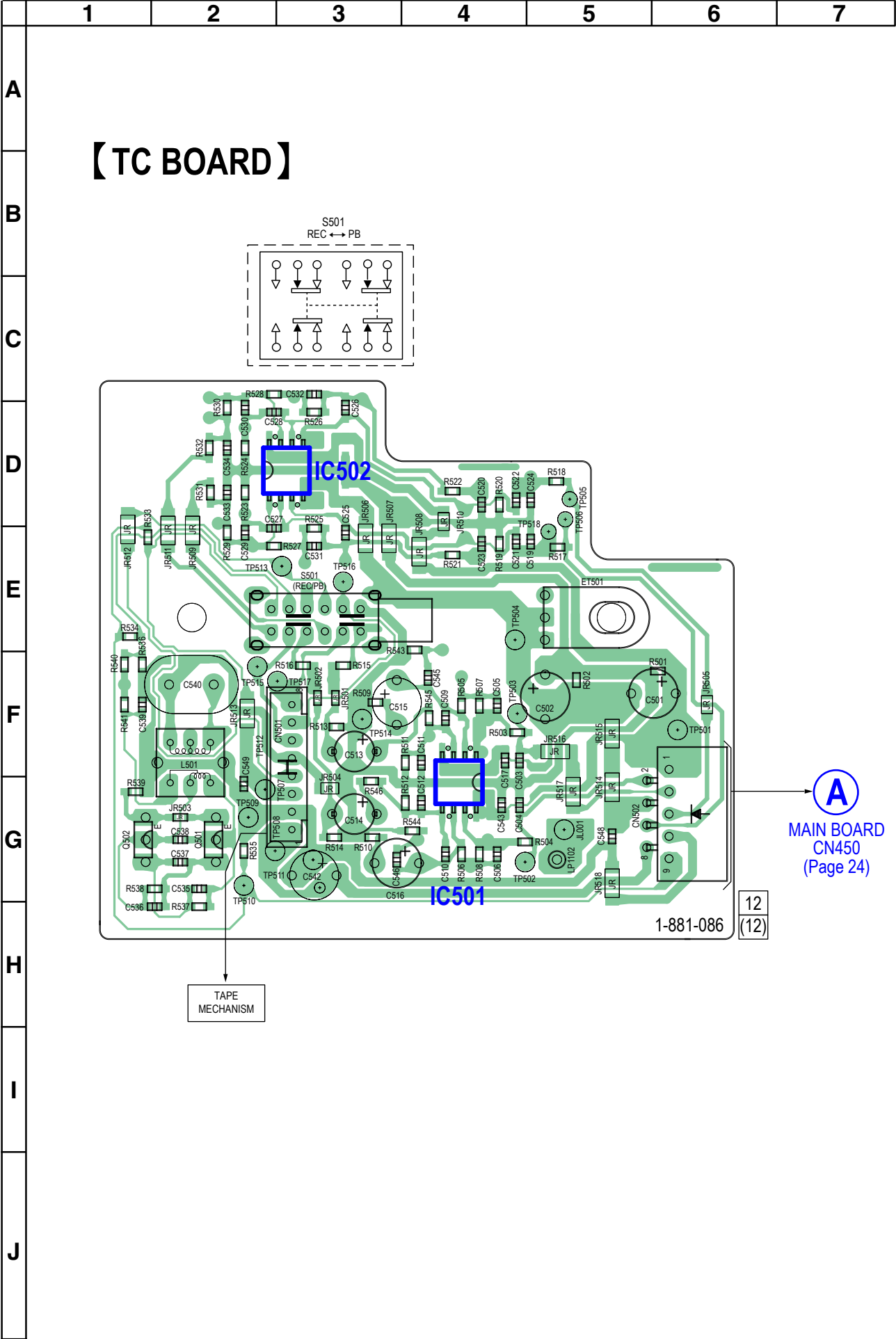
P  
DISPLAY  
BOARD  
CN1103  
(Page 33)

N  
MAIN  
BOARD  
(2/3)  
CN470  
(Page 26)

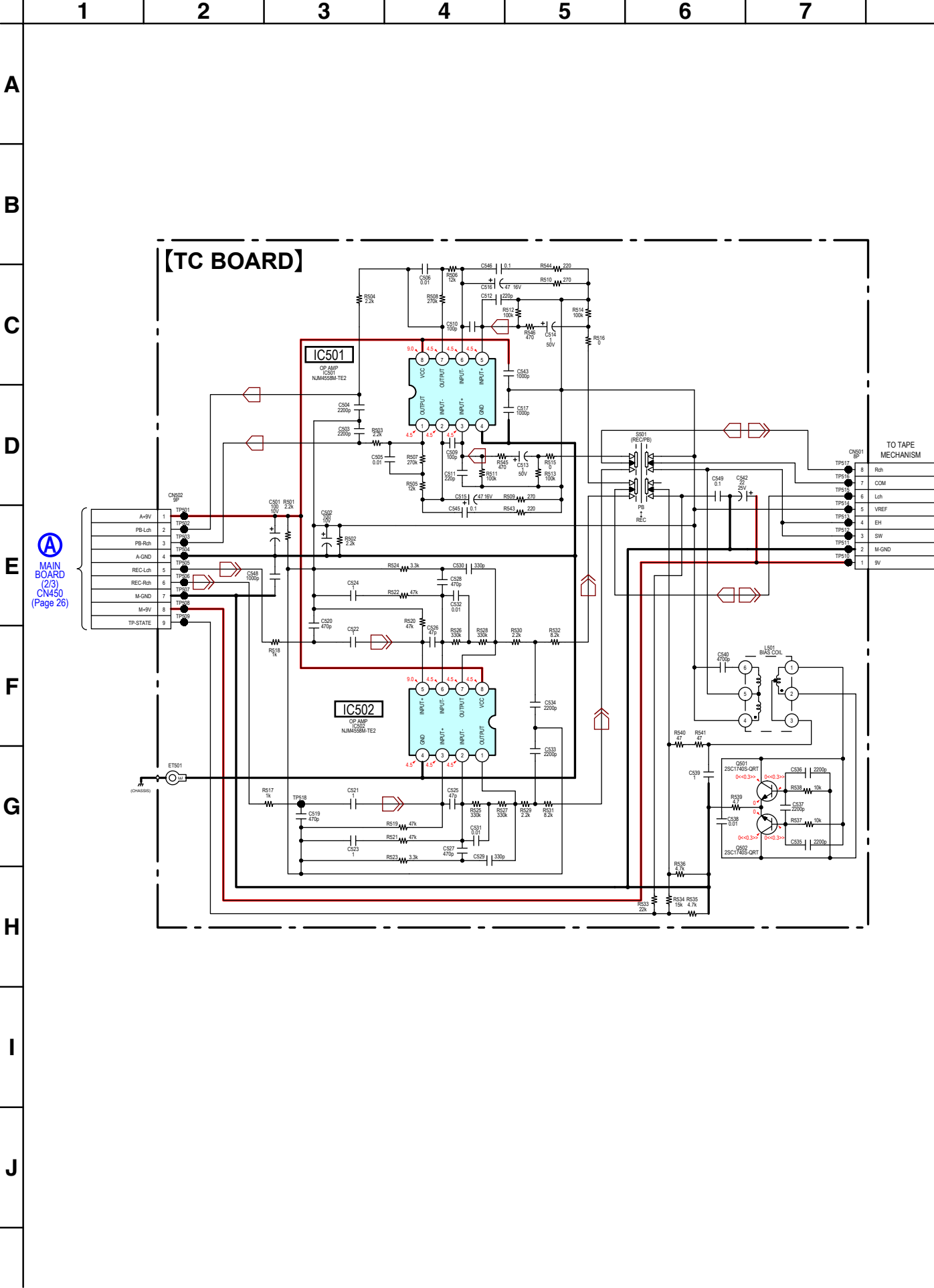


6-21. PRINTED WIRING BOARD - TC Board - (For African model only)

• See page 19 for Circuit Boards Location. •  : Uses unleaded solder.



6-22. SCHEMATIC DIAGRAM - TC Board - (For African model only)



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