

Service Manual

Portable Stereo CD System

Radio Cassette

RX-DS18

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping

**Colour**

(K) Black Type

Areas

E Europe, and Russia.

EB Great Britain.

EG Europe.

TAPE SECTION: SG20 MECHANISM SERIES
CD SECTION : RAE0152Z TRAVERSE DECK SERIES

* MASH is a trademark of NTT.

Specifications

Radio

Frequency range

FM: 87.50 – 108.00 MHz (50 kHz steps)

AM: 522 – 1629 MHz (9 kHz steps)

Intermediate frequency

FM: 10.7 MHz

AM: 459 kHz

SensitivityFM: 7.1 μ V/0.5mW output (Max.)AM: 100 μ V/m/0.5mW output (Max.)

CD player

Sampling frequency: 44.1 kHz**Decoding:** 16 bit linear**Beam source:** Semiconductor laser (wavelength 780 nm)**No. of channels:** 2 channel, stereo**Wow and flutter:** Less than possible measurement data

D/A converter: MASH (1 bit DAC)

Tape recorder

Track system: 4 track, 2 channel, stereo**Monitor system:** Variable sound monitor**Recording system:** AC bias (100 kHz)**Erasing system:** Multi Pole magnet**Frequency range Normal position:** 60 – 14,000 Hz

General

Speakers: 10 cm 6 Ω \times 2**Jacks****Output:** PHONES: 3.5 mm stereo (16 – 32 Ω)**Power requirement****AC:** 230 – 240 V, 50 Hz

Power consumption: 16 W

Battery: 12 V (Eight R20/LR20, D, UM-1 batteries)

• Do not use rechargeable type batteries.

Memory back-up for computer:

6V (Four R6/LR6, AA, UM-3 batteries)

• Do not use rechargeable type batteries.

Dimensions (W \times H \times D): 500 \times 146 \times 263 mm**Weight:** 3.4 kg without batteries

Note:

Specifications are subject to change without notice.

Weight and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Schematic Diagram

Notes:

- **S301-1 ~ S306-6:** Record/Playback select switch in "playback" position.
(P ... Playback, R ... Record)
- **S601:** Motor switch.
- **S602:** CD tray open switch.
- **S701:** Rest switch in "OFF" position.
- **S801:** Tape/power standby switch.
- **S802:** Tuning/CD skip, search (- / ⏪) switch.
- **S803:** Tuning/CD skip, search (+ / ⏩) switch.
- **S804:** CD stop/program clear, tuning mode select switch.
- **S805:** Sleep timer switch.
- **S806:** Volume control (-) switch.
- **S807:** Volume control (+) switch.
- **S808:** CD program, tuner preset switch.
- **S809:** Stereo/monaural, beat proof/CD play mode select switch.
- **S810:** XBS switch
- **S811:** Tuner/band switch
- **S812:** CD play/pause (▶ / ||) switch.
- **S901:** AC/DC select switch in "AC" position. (JK901)

Battery Current:

Vol. min. ...	110 mA (FM)	Vol. max. ...	228 mA (FM)	Measurement condition Radio : FM 60 dB, 30% mod. AM 74 dBm, 30% mod. Tape : 315 Hz, 0 dB CD : 1 kHz, 0 dB
	103 mA (AM)		216.7 mA (AM)	
	141.3 mA (TAPE)		333 mA (TAPE)	
	260 mA (CD)		830 mA (CD)	

• The voltage value and waveforms are the reference voltage of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN Jack)..

Accordingly, there may arise some errors in voltage values and waveforms depending upon the internal impedance of the tester or measuring unit.

No mark DC STOP	() CD playback (1 kHz, L + R, 0 dB)
< > >FM	[] AM
[] Record	(()) Playback

Mesurement conditions:

- * The parenthesized is the voltage for test disc (1 Khz, L + R, 0 dB) in play mode, and the other, for no disc in stop mode.
- * AC adaptor is used for power supply.

Important safety notice:

Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components be sure to use only manufacturer's specified parts shown in the parts list.

Caution!

IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.

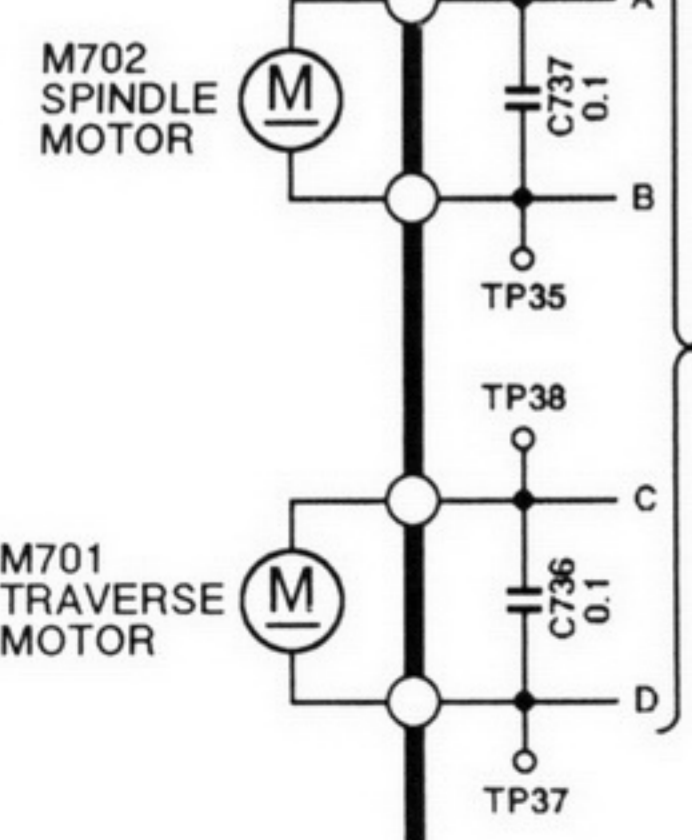
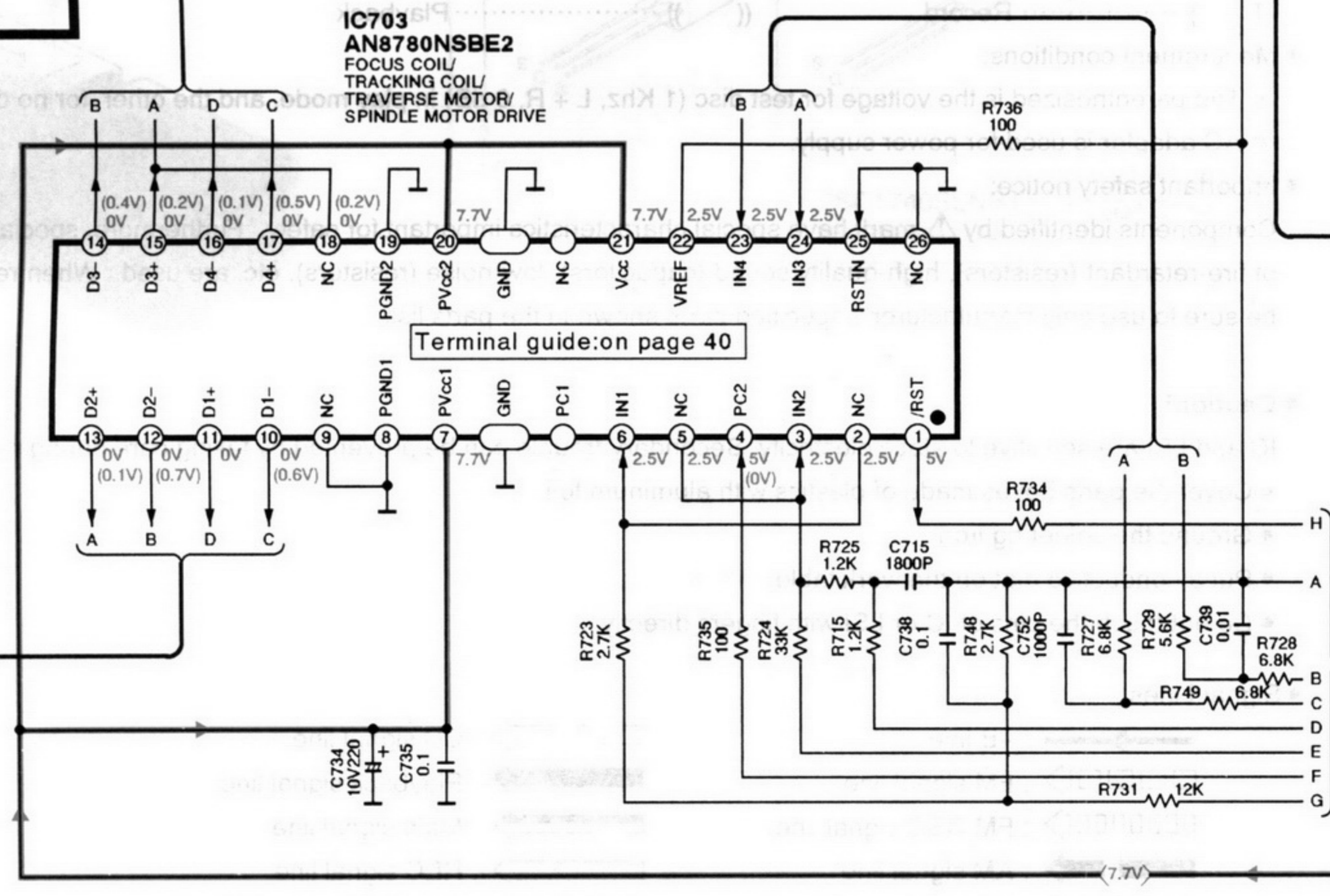
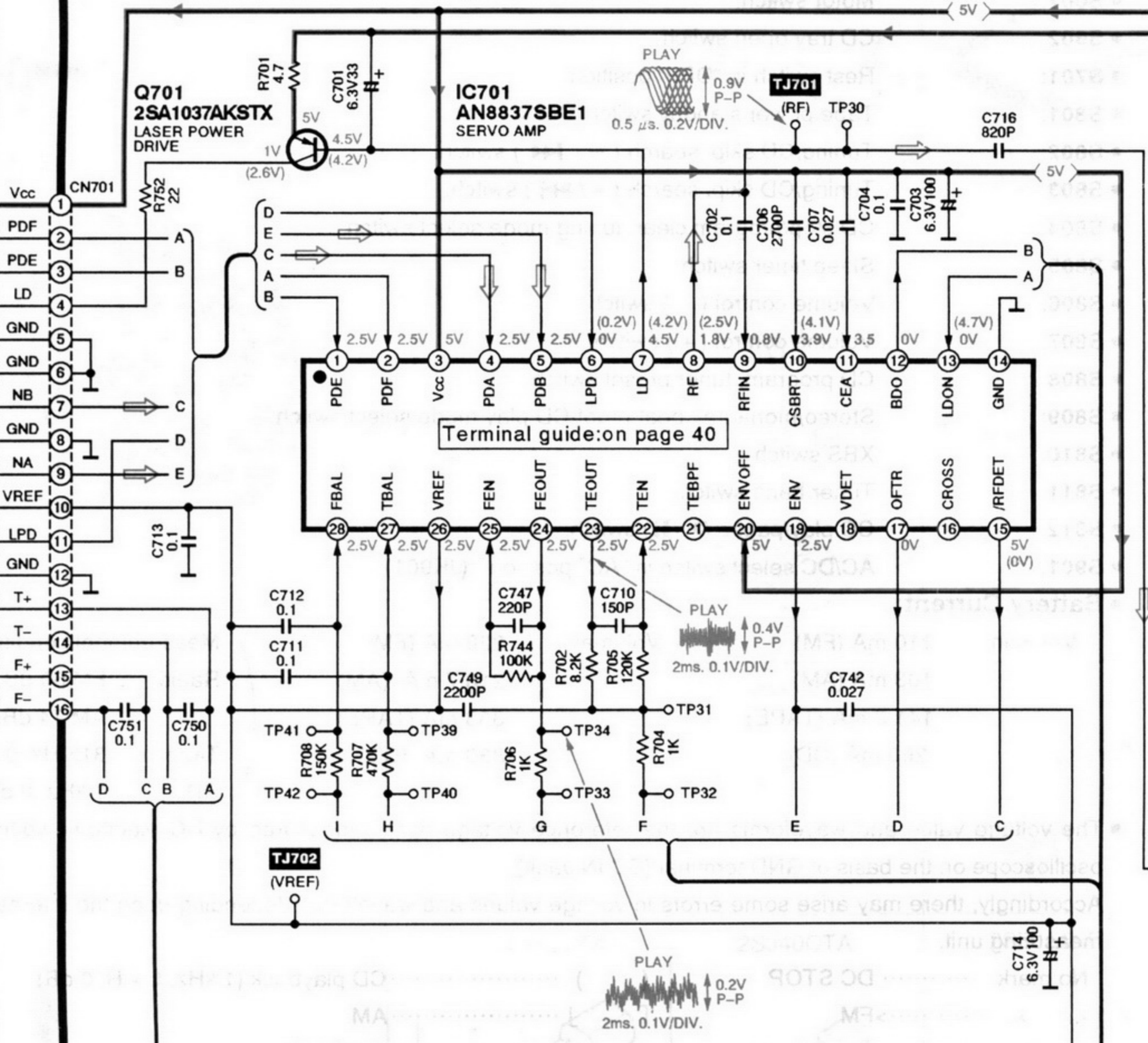
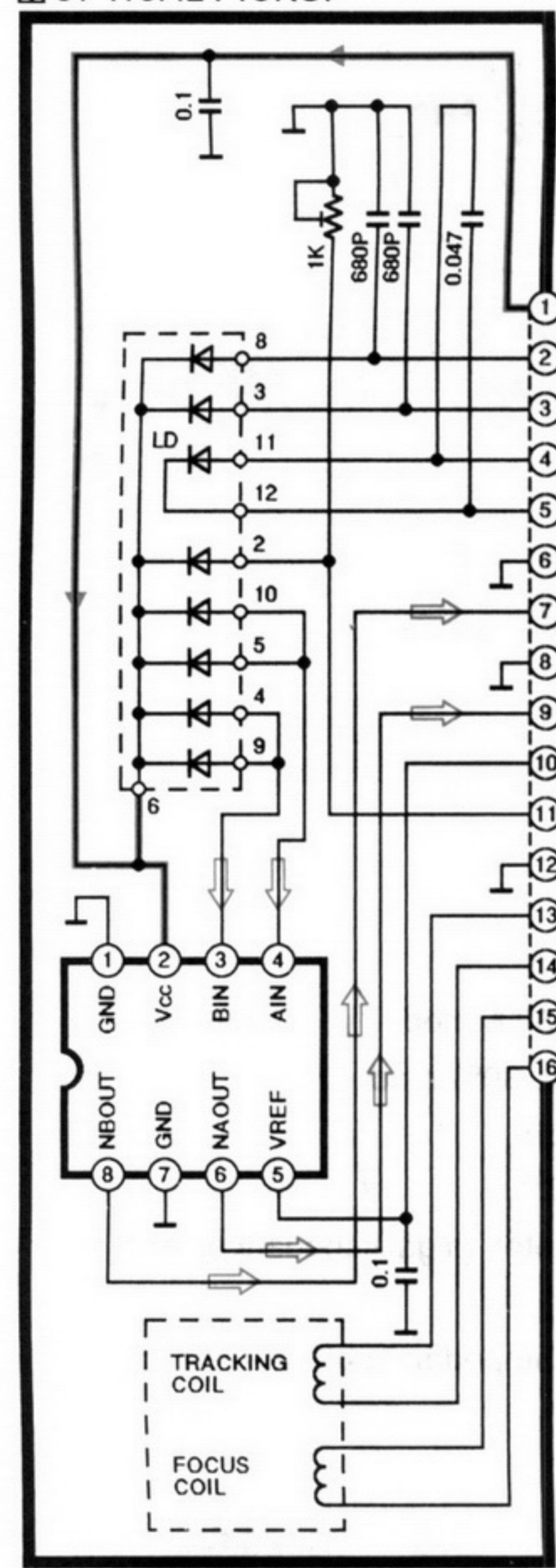
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.

Signal Lines

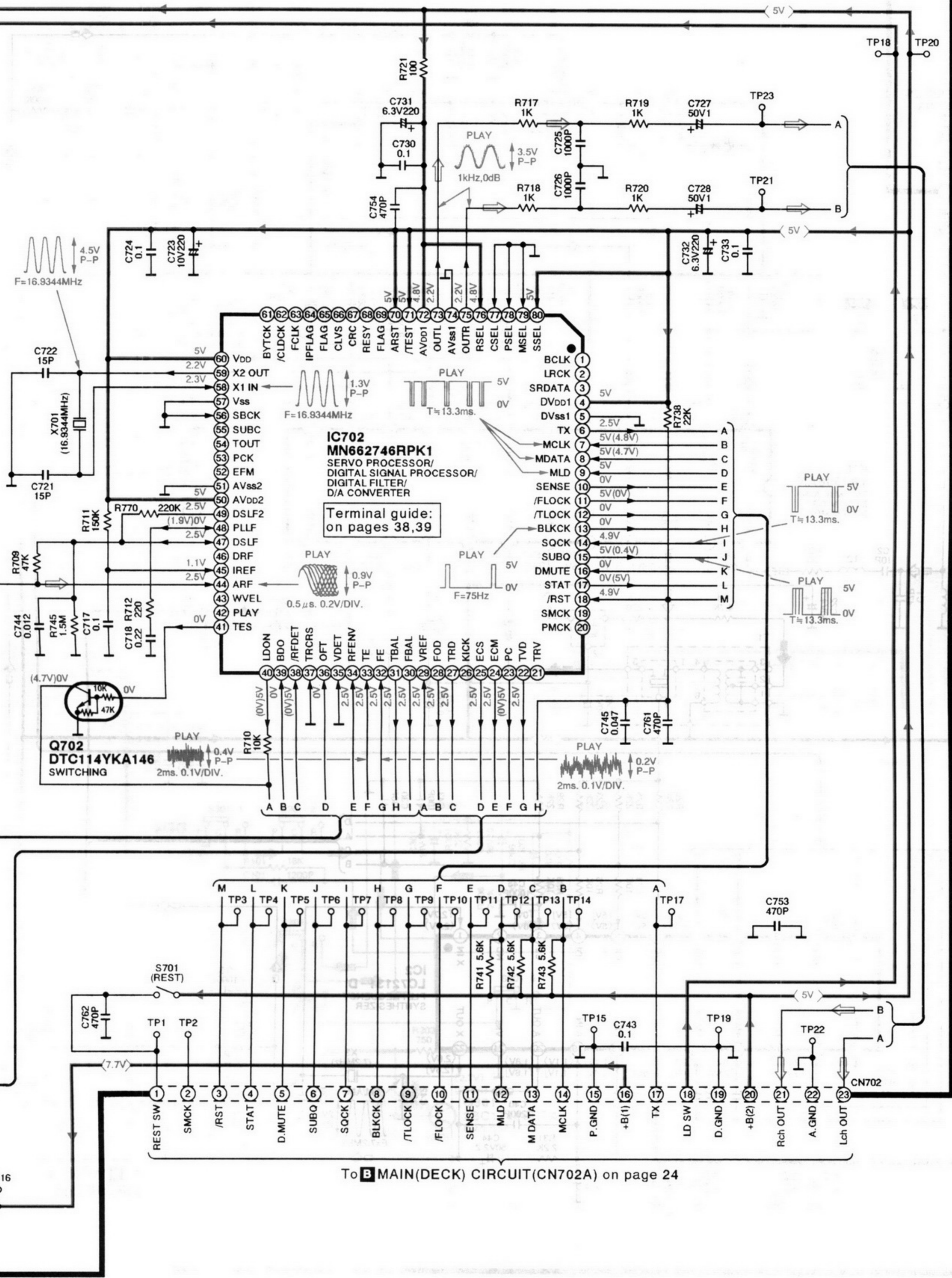
	: +B line		: CD signal line
	: FM signal line		: Playback signal line
	: FM OSC signal line		: Main signal line
	: AM signal line		: REC signal line
	: AM OSC signal line		: FM/AM Vcap signal line

A CD SERVO CIRCUIT (P.C.Board: on page 27)

△ OPTICAL PICKUP

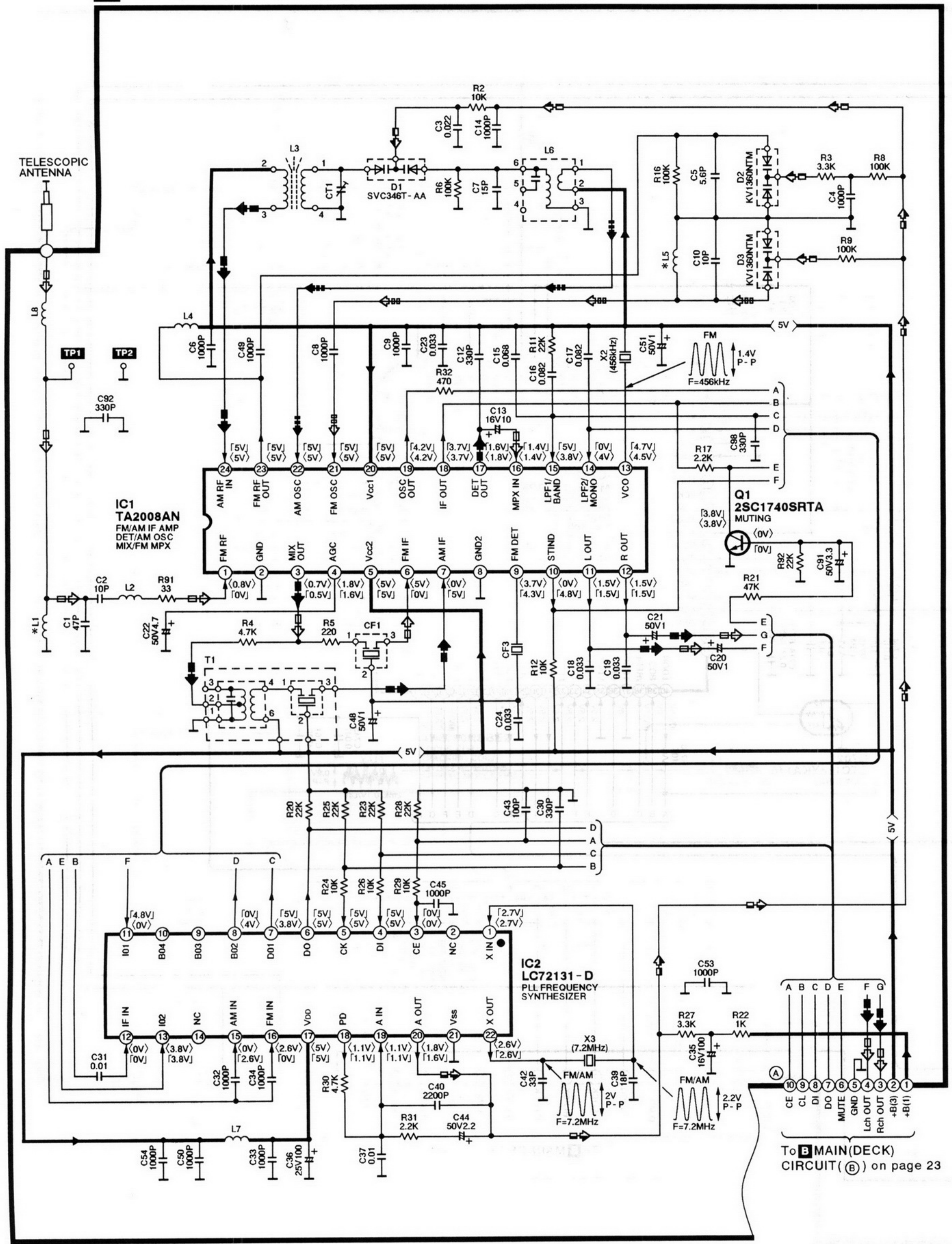


→ : CD signal line → : +B line



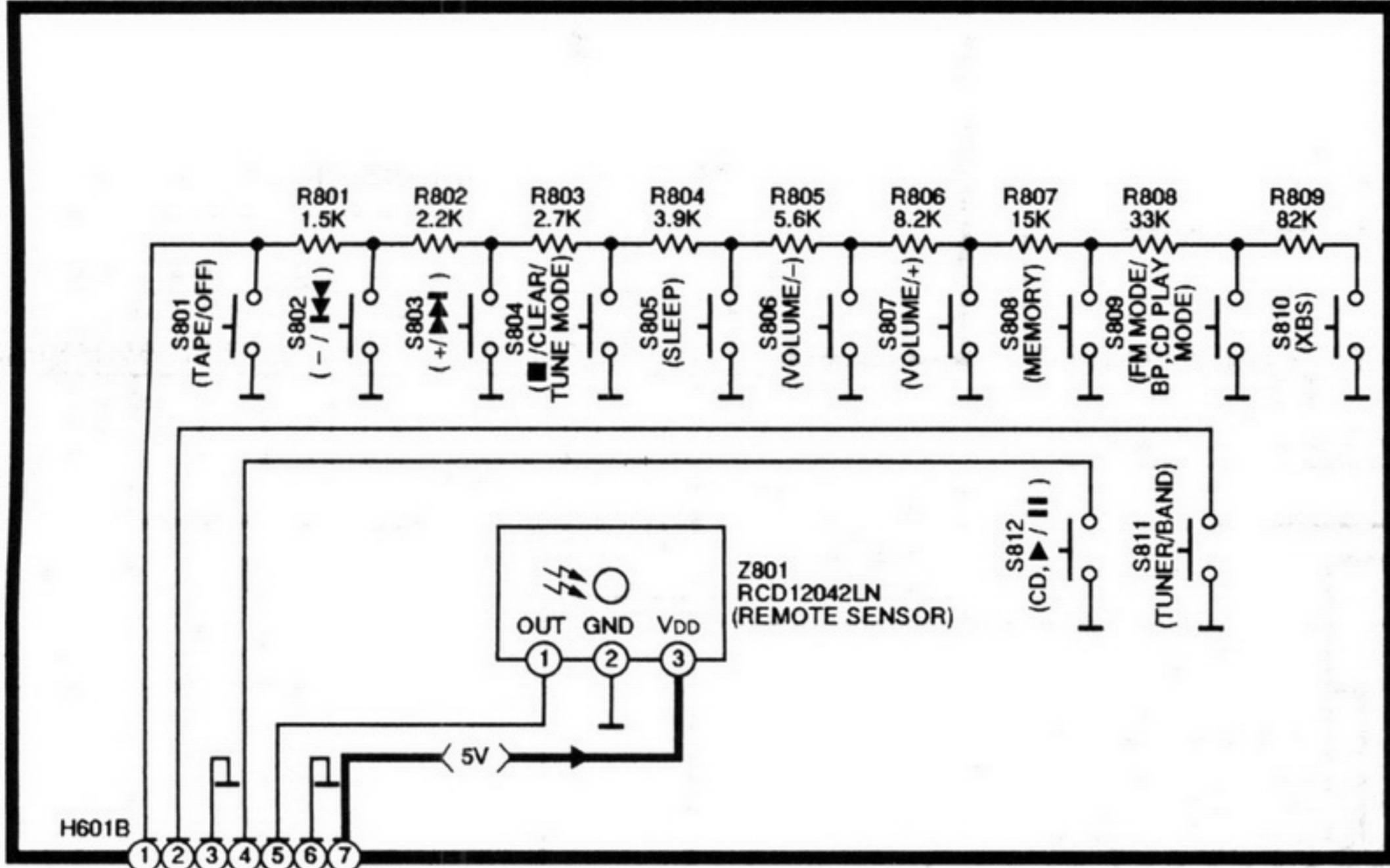
To MAIN(DECK) CIRCUIT(CN702A) on page 24

B MAIN(TUNER) CIRCUIT (P.C.Board: on pages 28,29)

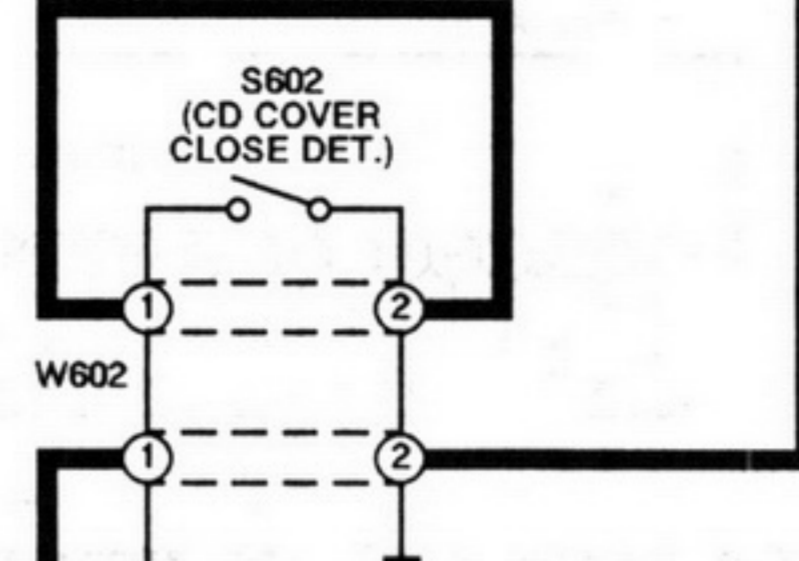


To **B** MAIN(DECK) CIRCUIT (**B**) on page 23

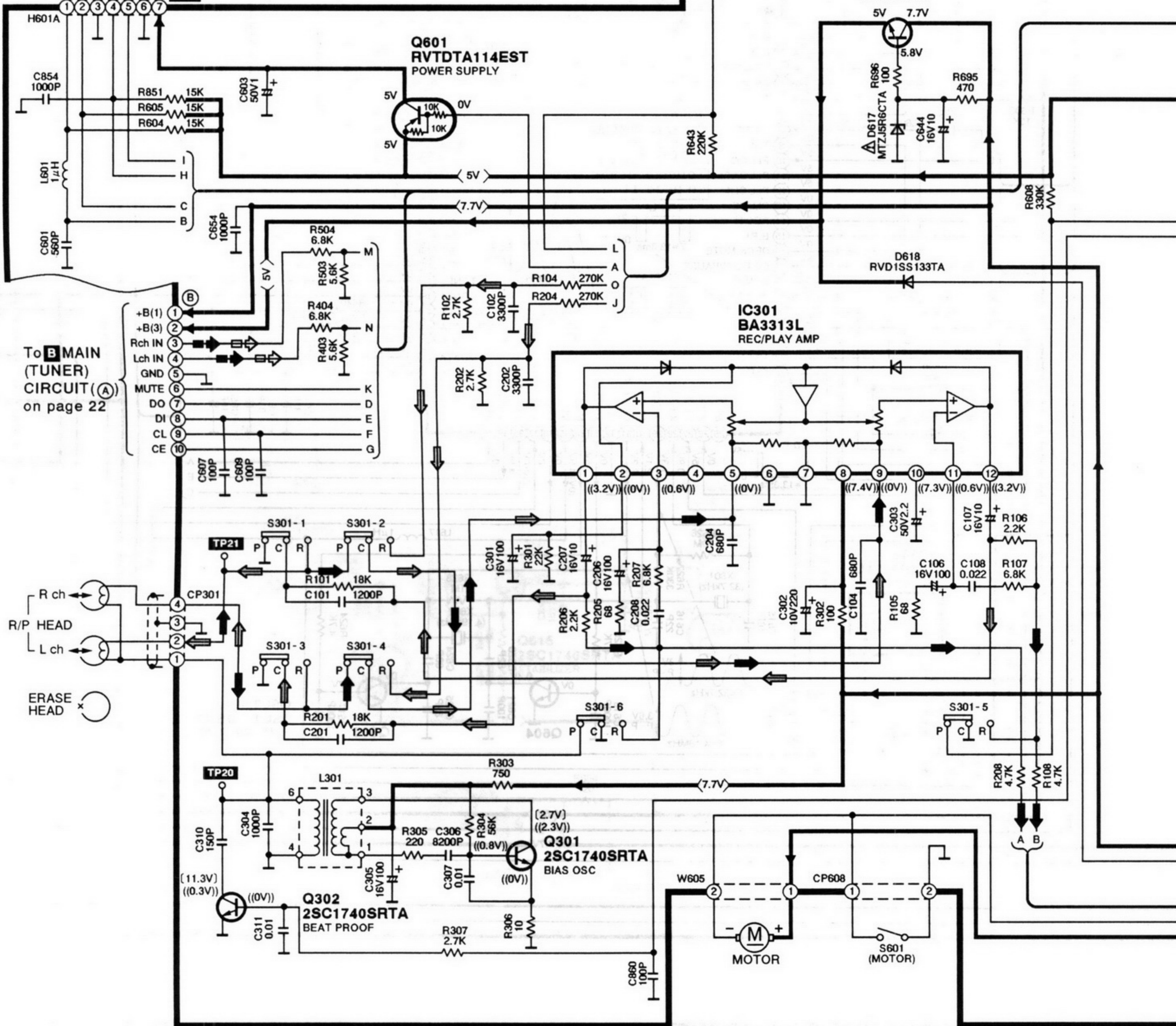
C OPERATION CIRCUIT (P.C.Board: on page 30)



D SWITCH CIRCUIT (P.C.Board: on page 27)



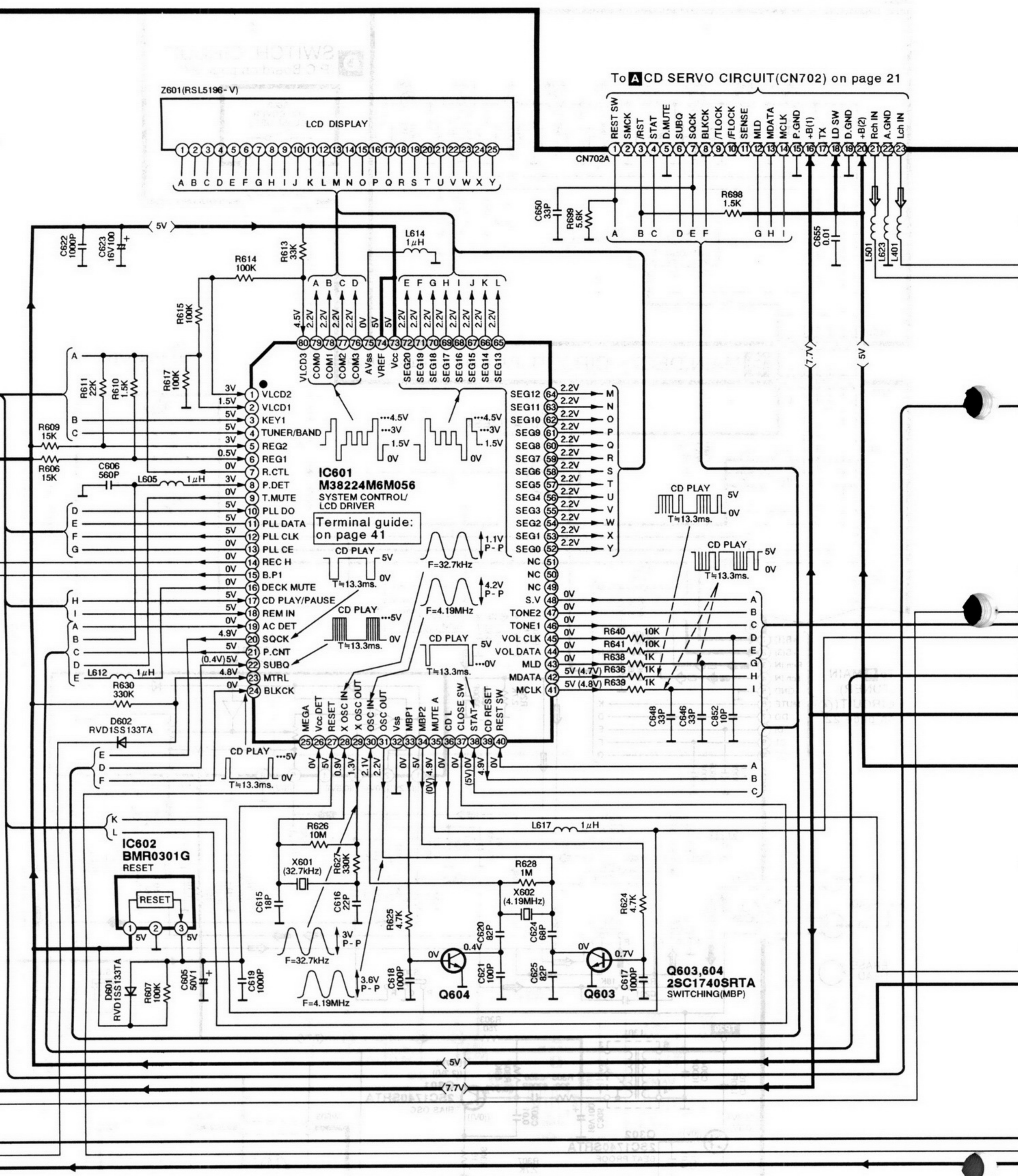
B MAIN (DECK) CIRCUIT (P.C.Board: on pages 28, 29)



To **B** MAIN (TUNER) CIRCUIT (A) on page 22

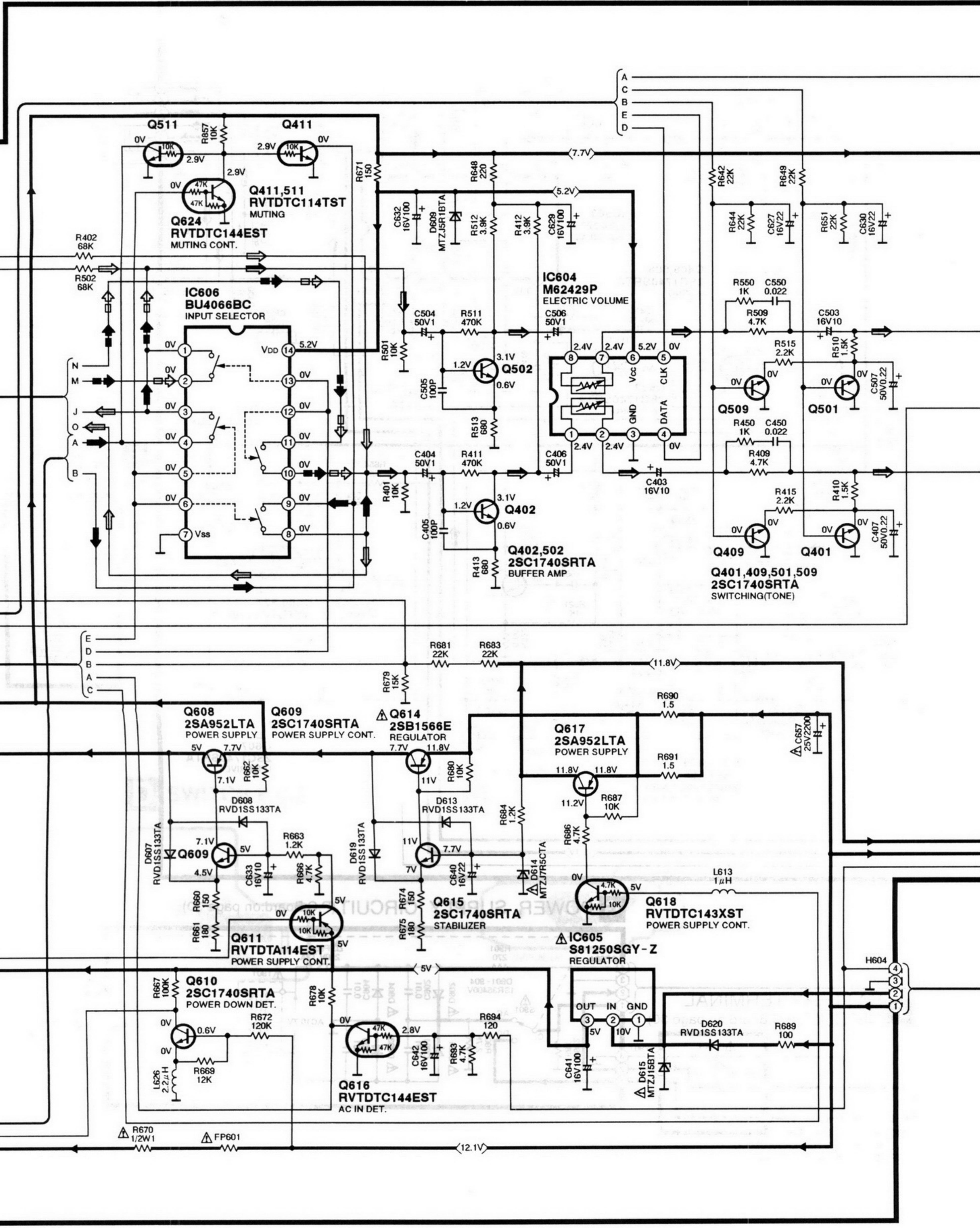
→ : CD signal line

→ : Main signal line

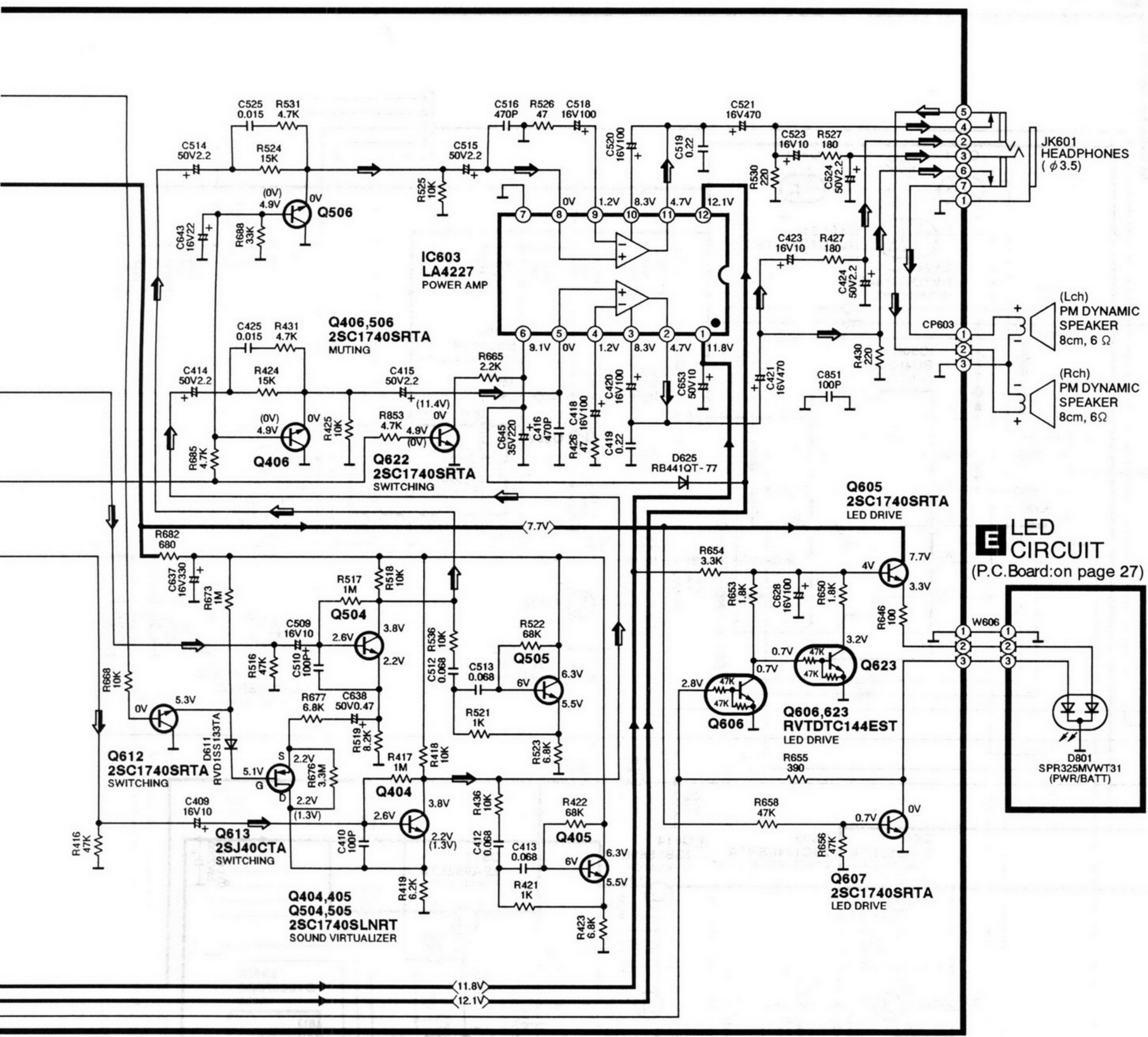


➡ : AM signal line □□□□➡ : FM signal line ➡ : Playback signal line ➡ : REC signal line

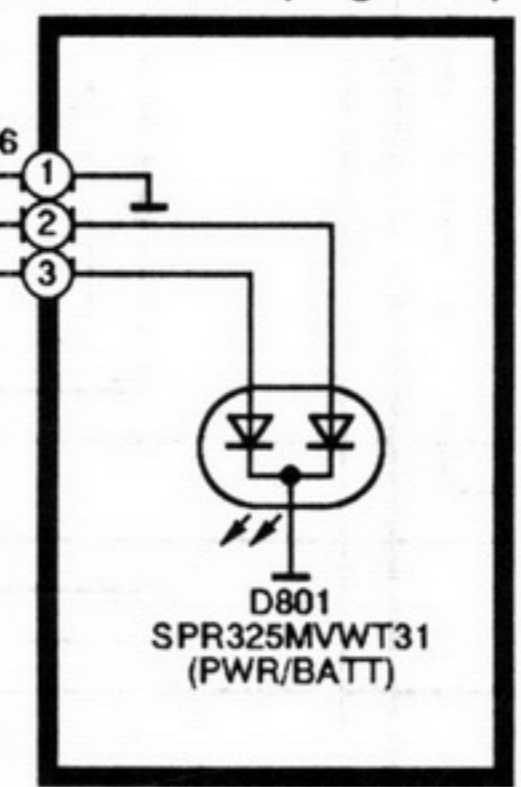
B MAIN(DECK) CIRCUIT (P.C.Board: on pages 28,29)



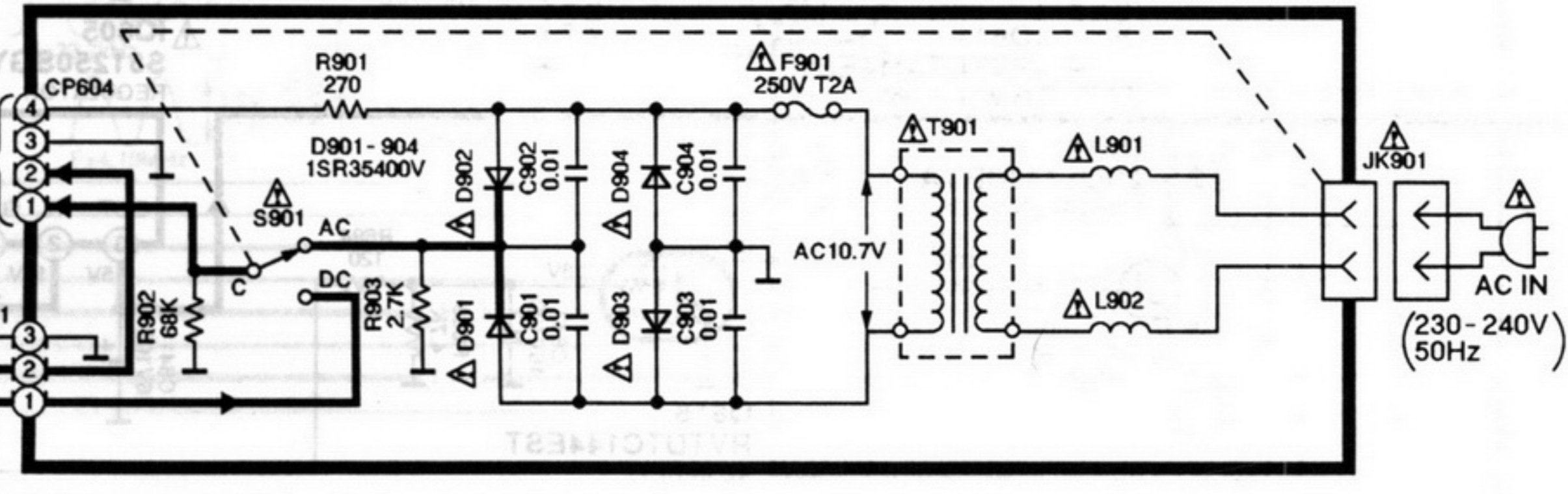
➔ : Main signal line



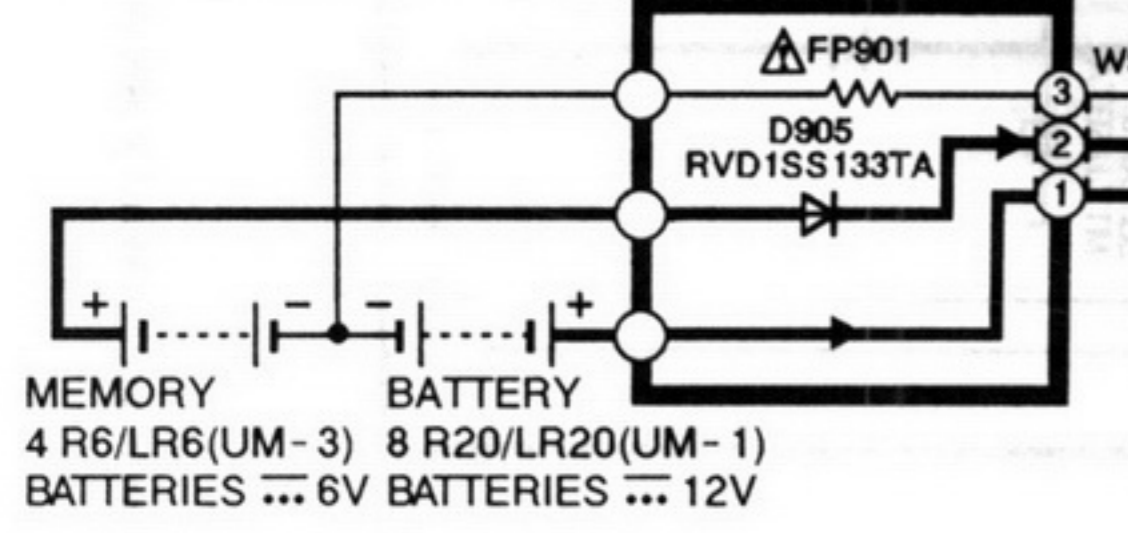
E LED CIRCUIT (P.C.Board: on page 27)



G POWER SUPPLY CIRCUIT (P.C.Board: on page 30)



F BATTERY TERMINAL CIRCUIT (P.C.Board: on page 30)



MEMORY BATTERY
4 R6/LR6(UM-3) 8 R20/LR20(UM-1)
BATTERIES ... 6V BATTERIES ... 12V