

Service Manual

Portable Stereo CD System

Radio Cassette
RX-DT5

Color

(K) Black Type

COMPACT
disc
DIGITAL AUDIO

DIGITAL



Area

Country Code	Areas	Color
(EB)	Great Britain	(K)
(EG)	Continental Europe and F.R. Germany	

RX-DS30 MECHANISM SERIES (AR300)

■ SPECIFICATIONS

General:

Power Requirement: AC; (EB)...240V, 50 Hz
(EG)...220 V, 50 Hz
Battery; 15 V (10 R20/LR20, UM-1 batteries)

Power Consumption: 43 W (AC only)

Power Output: 50 W (25 W×2)...PMPO

Speaker: 12 cm×2 PM Dynamic speaker (2.7Ω)

Input: MIX MIC; 2.5 mV/200~600Ω, Ø3.5
AUX; 200 mV/47 kΩ

Output: HEADPHONES; 32Ω, Ø3.5

Dimensions: 660 (W)×198 (H)×251 (D) mm

Weight: 6.6 kg without batteries

Disc Player Section:

Sampling Frequency: 44.1 kHz

D-A Conversion: 2 DAC 4 time over sampling

Beam Source: Semiconductor laser (wavelength 780 nm)

No. of Channels: 2 channels, stereo

Frequency Range: 20~20,000 Hz (+1/-2 dB)

Dynamic Range: 93 dB (1 kHz)

S/N Ratio: 97 dB (1 kHz)

Wow and Flutter: Unmeasurable

Radio Section:

Frequency Range: FM; 87.5~108 MHz
MW; 522~1611 kHz
LW; 144~288 kHz

Intermediate Frequency: FM; 10.7 MHz
AM; 459 kHz

Sensitivity: FM; 11 dB/50 mW output (-3 dB Lim/Sens)
MW; 34 dB/m/50 mW output
LW; 34 dB/m/50 mW output

Tape Deck Section:

Frequency Range: 40~16,000 Hz (with normal tape)
40~17,000 Hz (with CrO₂ tape)

Recording System: AC bias, AC erase

Tape Speed: 4.8 cm/s

Monitor System: Variable sound monitor

Track System: 4-track 2-channel stereo recording and playback

Timer/Clock:

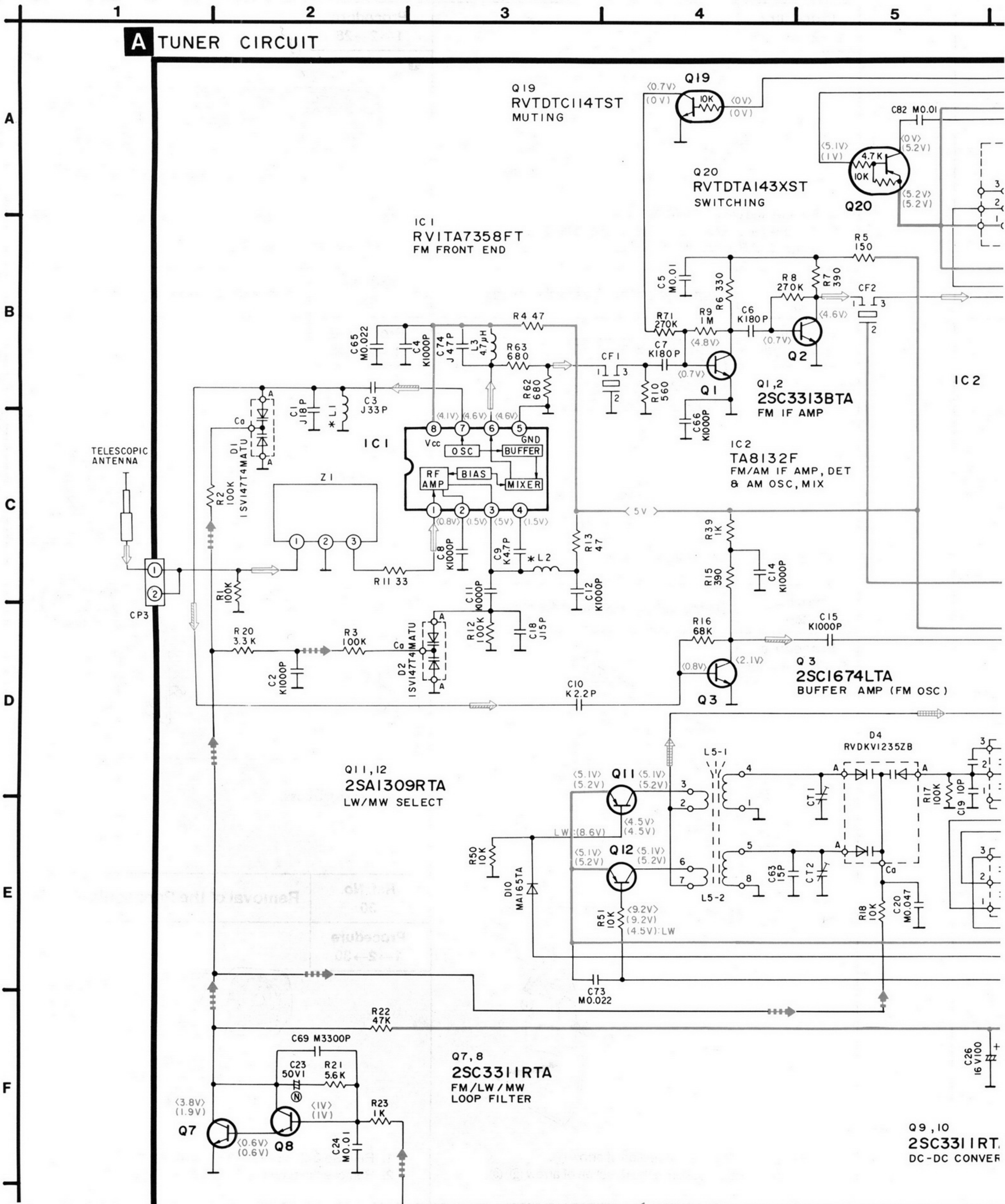
Power Supply: Battery; DC 6 V (4 R6/LR6, UM-3 batteries)

Weights and dimensions shown are approximate.
Design and specifications are subject to change without notice.

Panasonic

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

SCHEMATIC DIAGRAM • TUNER CIRCUIT (Parts list on pages 66~72)



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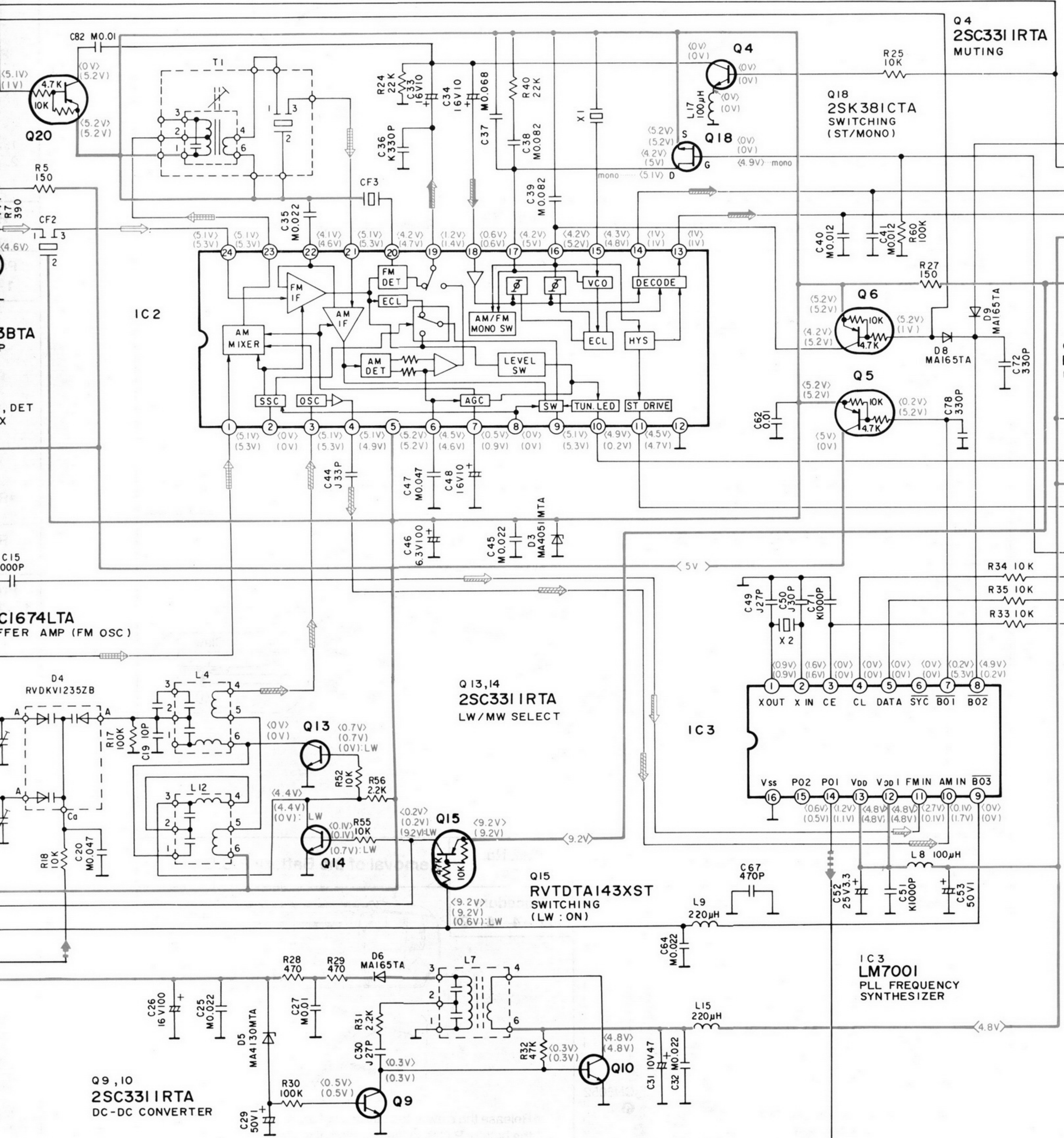
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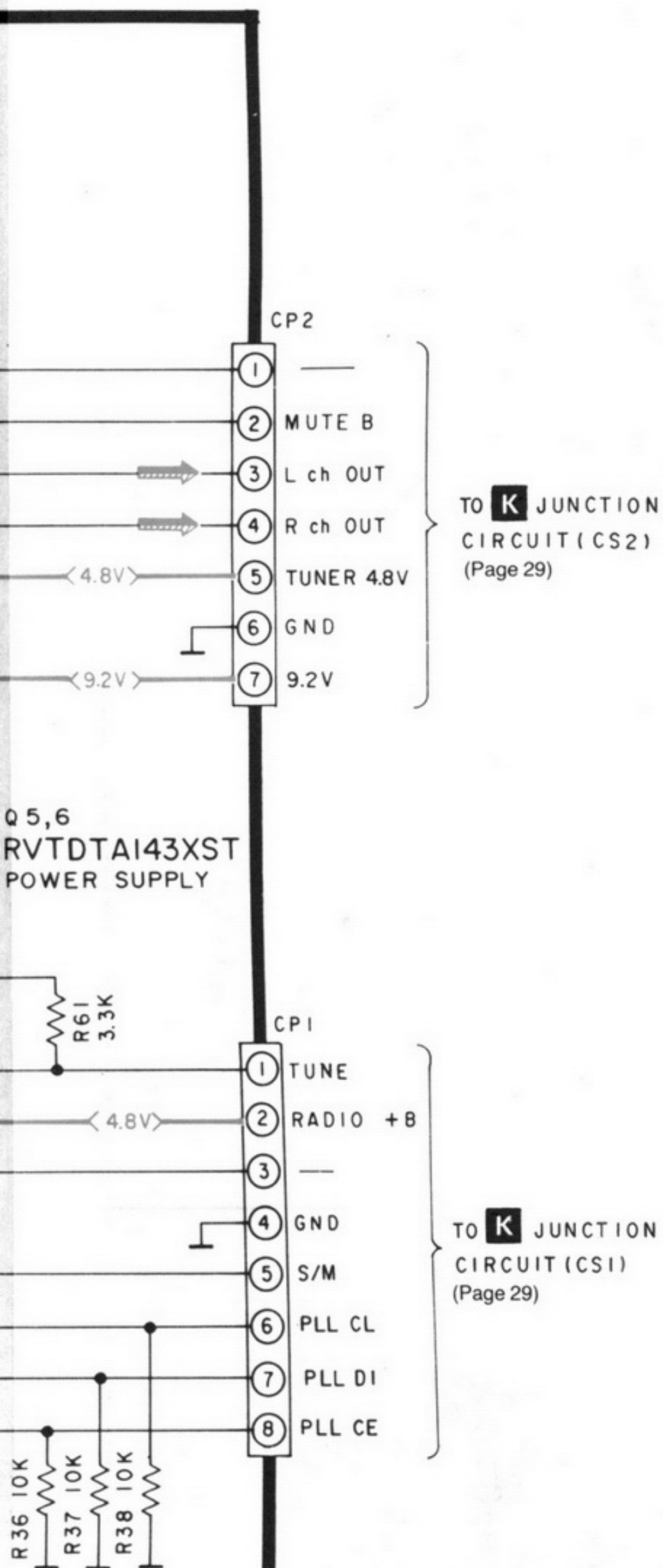
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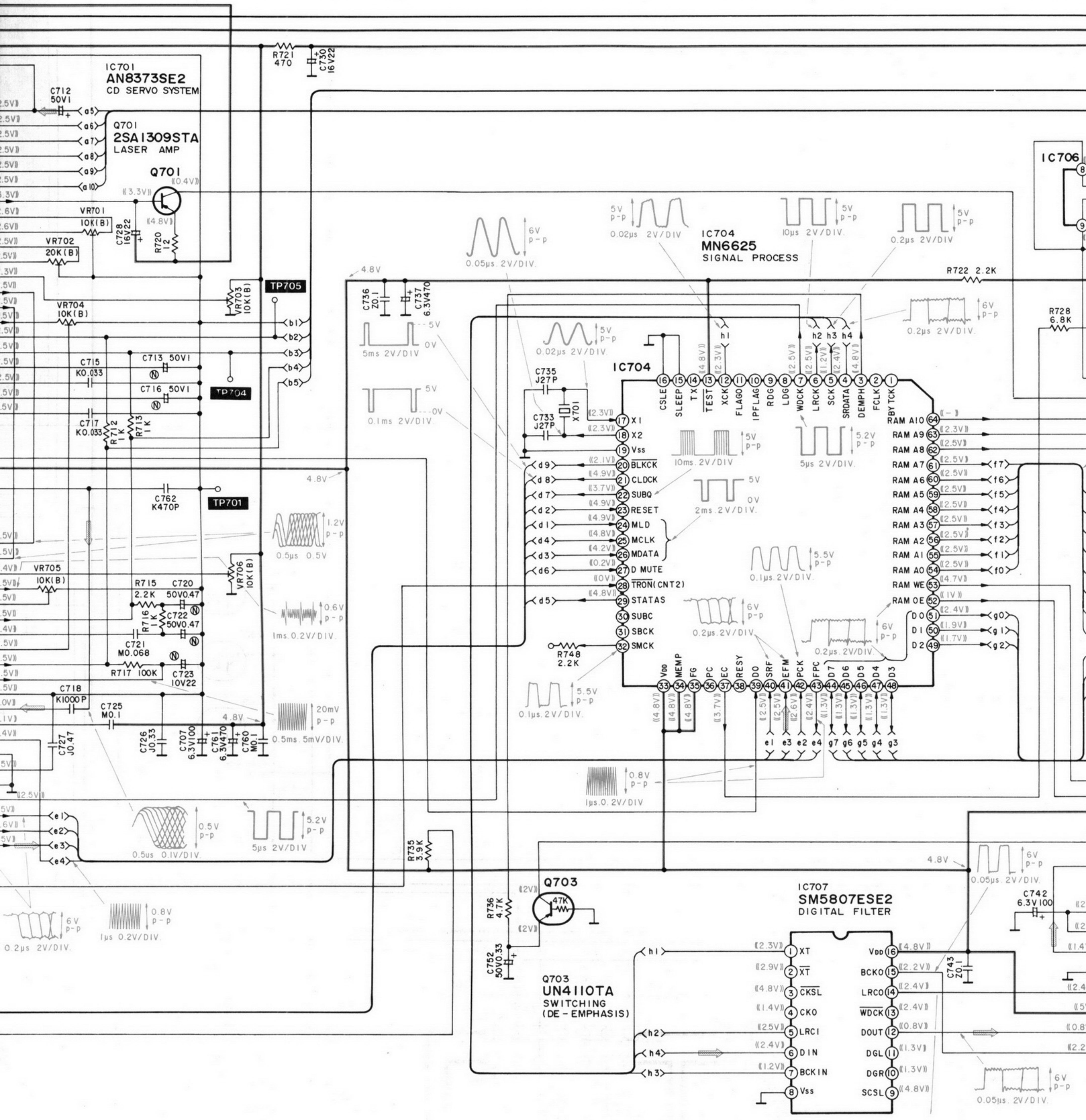
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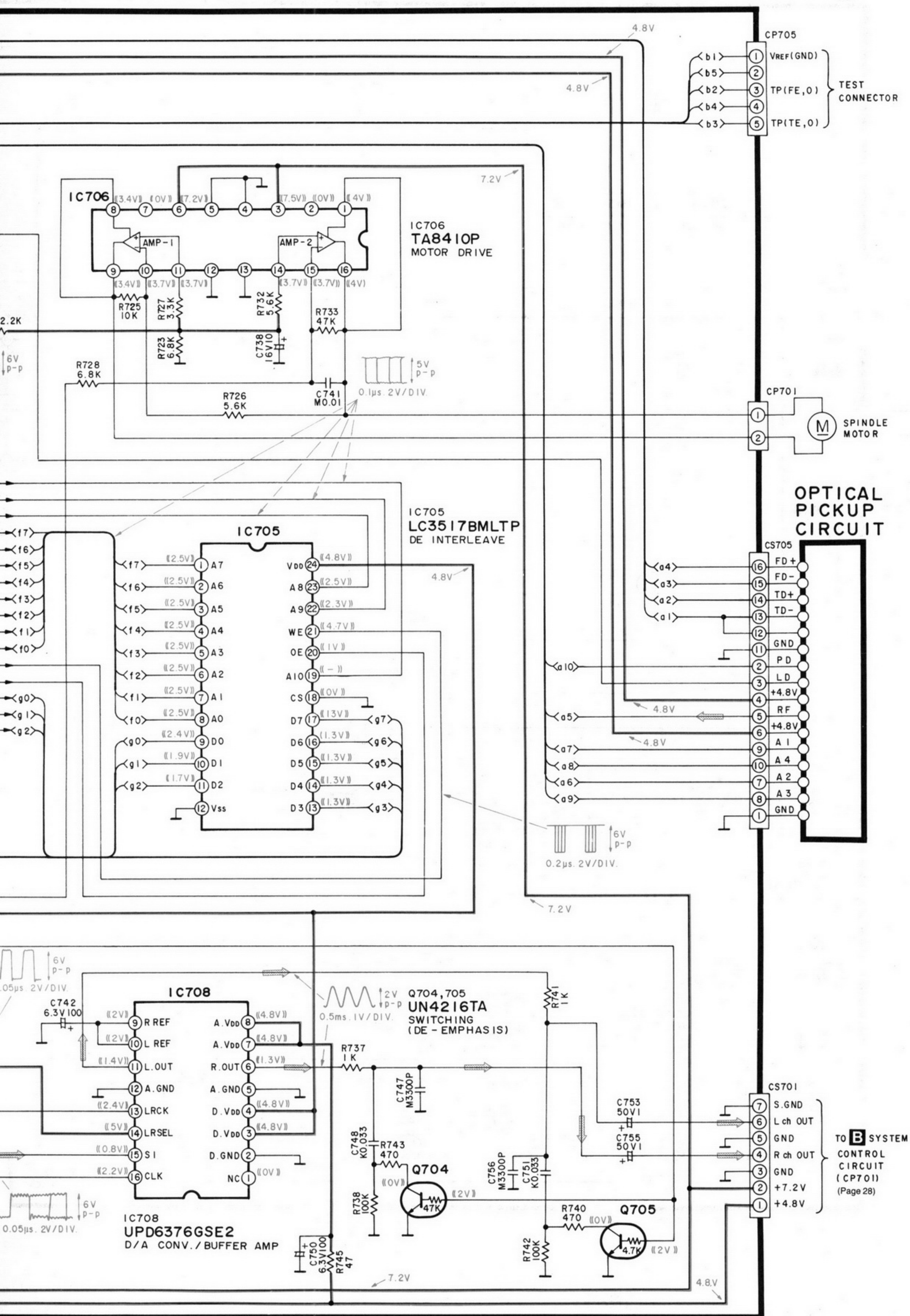
(for Tuner circuit and CD circuit)

1. S701: Reset switch.
2. S899: Laser ON/OFF switch.
3. VR701: Best eye adjustment VR.
4. VR702: Tracking balance adjustment VR.
5. VR703: Focus offset adjustment VR.
6. VR704: Focus gain adjustment VR.
7. VR705: Tracking gain adjustment VR.
8. VR706: Tracking offset adjustment VR.
9. DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
()...MW/LW (())...CD
< >...FM

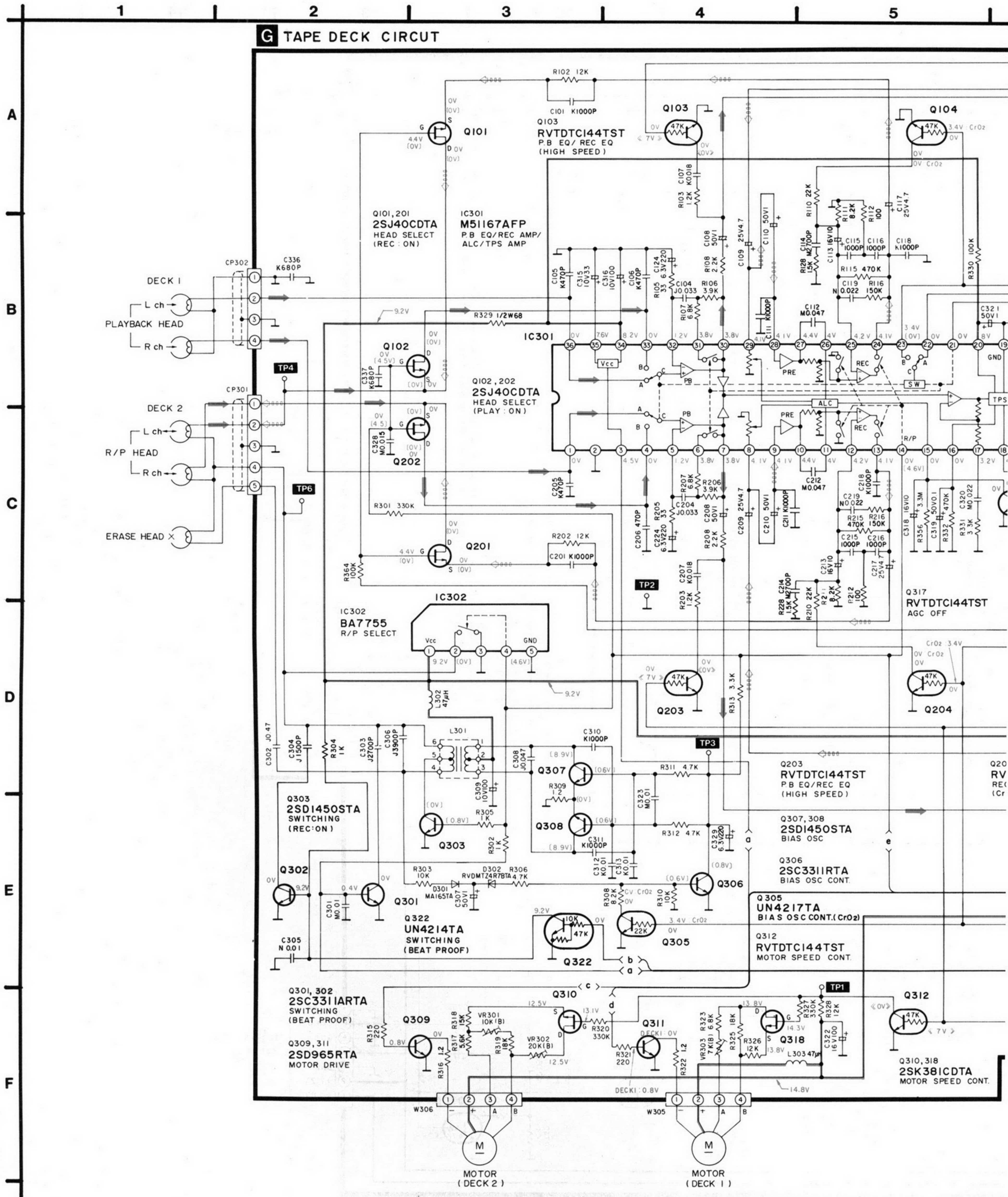
•This schematic diagram may be modified at any time with the development of new technology.

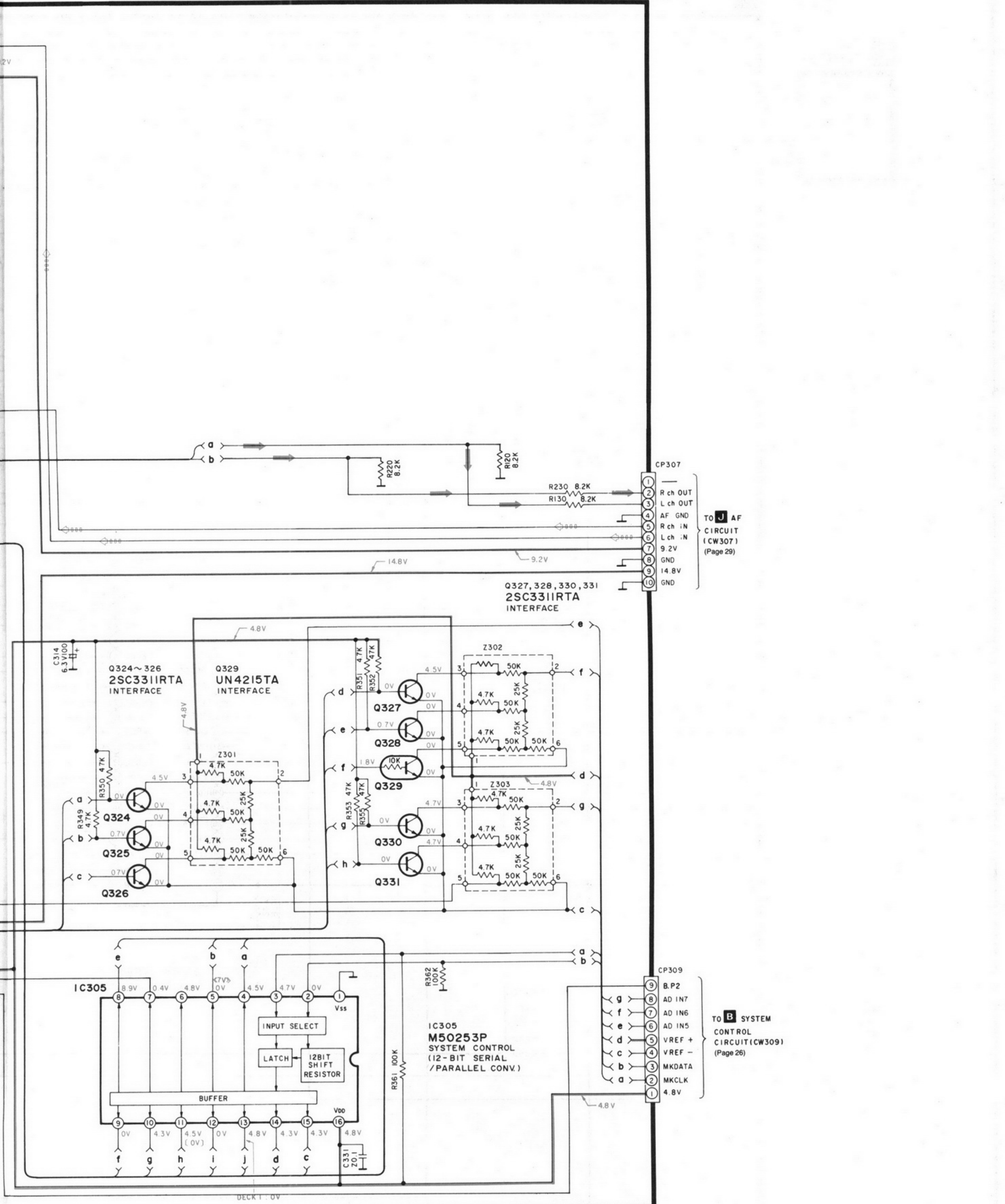
- : FM SIGNAL LINE
- : LW/MW SIGNAL LINE
- : FM/LW/MW SIGNAL LINE
- : FM OSC SIGNAL LINE
- : LW/MW OSC SIGNAL LINE
- : FM/MW/LW V-cap CONTROL SIGNAL LINE
- : CD SIGNAL LINE
- : +B LINE





SCHEMATIC DIAGRAM • TAPE DECK CIRCUIT (Parts list on pages 66~72)





Notes:**for Tape deck circuit**

- S951: Deck 1 mode detect switch.
- S952: Deck 1 cassette tape insertion detect switch.
- S953: Deck 1 CrO₂ tape detect switch.
- S971: Deck 2 mode detect switch.
- S972: Deck 2 cassette tape insertion detect switch.
- S973: Deck 2 record prevention tab detect switch. (REV)

- S974: Deck 2 record prevention tab detect switch. (FWD)
- S975: Deck 2 CrO₂ tape detect switch.
- VR301: Deck 2 tape speed adjustment VR. (HIGH)
- VR302: Deck 2 tape speed adjustment VR. (NORMAL)
- VR303: Deck 1 tape speed adjustment VR.

for System control and operation (Tape deck, Tuner, CD and Timer) circuit

- S800: Tape stop "■" switch.
- S802: CD play/stop "▶/■" switch.
- S803: Power switch.
- S804: Tape reverse side playback "◀" switch.
- S806: CD pause "||" switch.
- S807: Function select "TAPE" switch.
- S808: Display select "DISPLAY" switch.
- S809: Tape fast/TPS "◀◀ [TPS]" switch.
- S811: CD repeat "REPEAT" switch.
- S812: Function select "TUNER/BAND" switch.
- S813: Tape counter reset "COUNTER RESET" switch.
- S814: Tape deck 1 select "DECK 1" switch.
- S816: CD auto edit "AUTO EDIT (A/B)" switch.
- S817: Function select "CD" switch.
- S819: Tape deck select "DECK 2" switch.
- S821: CD skip/search "▶▶/▶▶▶" switch.
- S822: Function select "AUX" switch.
- S823: Tape front side playback "▶" switch.
- S825: Auto CD editing "CANCEL" switch.
- S826: Timer set/tuning "+" switch.
- S827: Tape fast/TPS "[TPS] ▶▶▶" switch.
- S831: Tape reverse mode select "REV MODE" switch.
- S833: CD skip/search "▶▶/▶▶▶" switch.
- S834: Sleep "SLEEP" switch.
- S835: Tape recording pause (REC PAUSE) switch.
- S837: Tape length "TAPE LENGTH" switch.
- S838: Timer "TIMER" switch.
- S839: CD cover open/close detect switch.
- S840: Tape one touch edit "NORMAL" switch.
- S843: Time set/tuning "-" switch.
- S844: Tape one touch edit "HIGH" switch.
- S846: Auto CD editing "ATLS" switch.
- S847: Timer check "TIMER CHECK" switch.
- S849: Auto CD editing "FIT" switch.
- S850: Time adjust "TIME ADJUST" switch.
- S851: FM mode/Beat proof "FM MODE/B.P" switch in "MONO/I" position.
(M/I...MONO/I, S/II...STEREO/II,
S/III...STEREO/III)
- S854: Timer recording "TIMER-REC" switch in "OFF" position.
- S899: Laser power off switch.
- VR470: Tone control VR. (Lch)
- VR472: XBS level control VR. (Lch)
- VR473: Volume control VR. (Lch)
- VR570: Tone control VR. (Rch)
- VR572: XBS level control VR. (Rch)
- VR573: Volume control VR. (Rch)

General

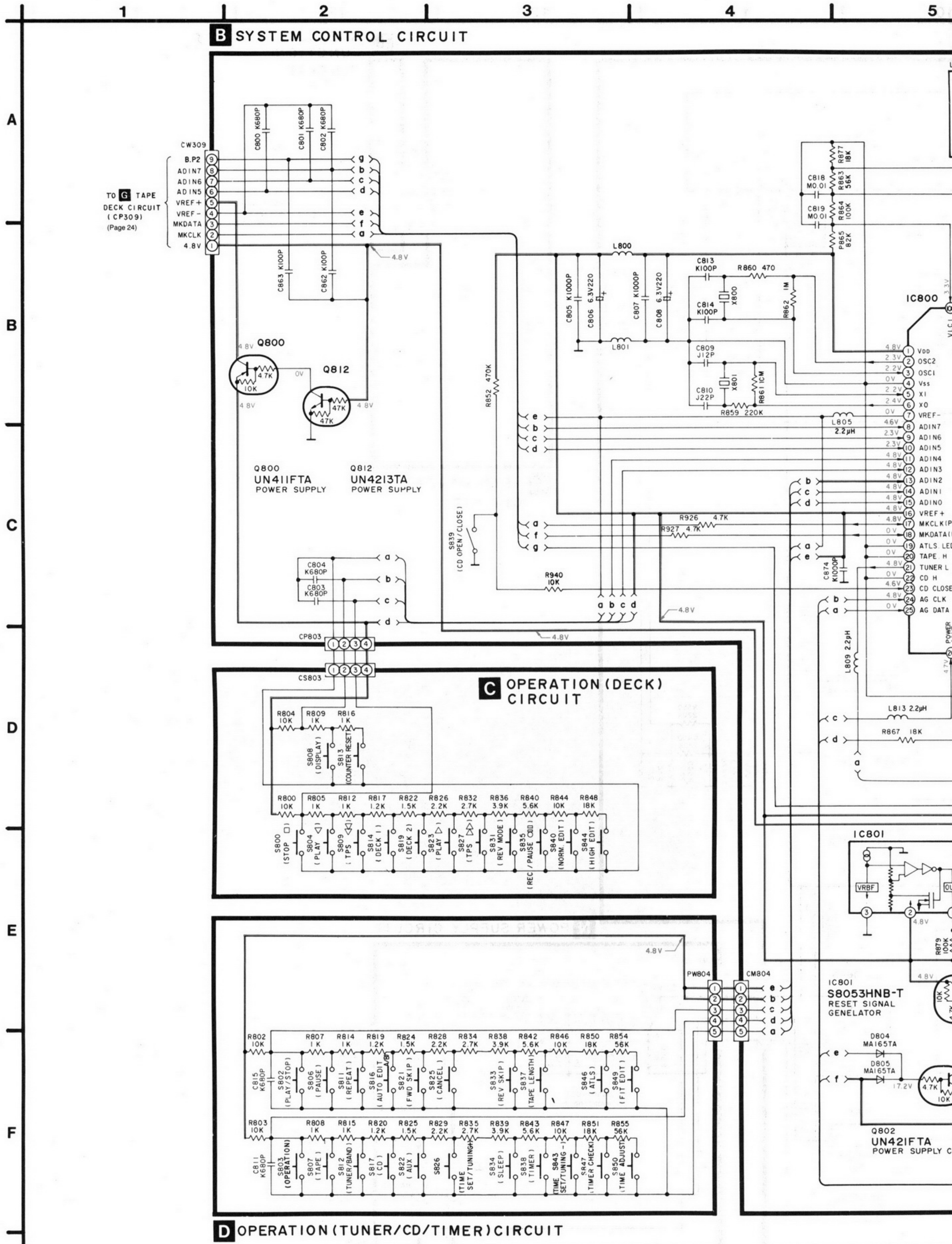
- DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.

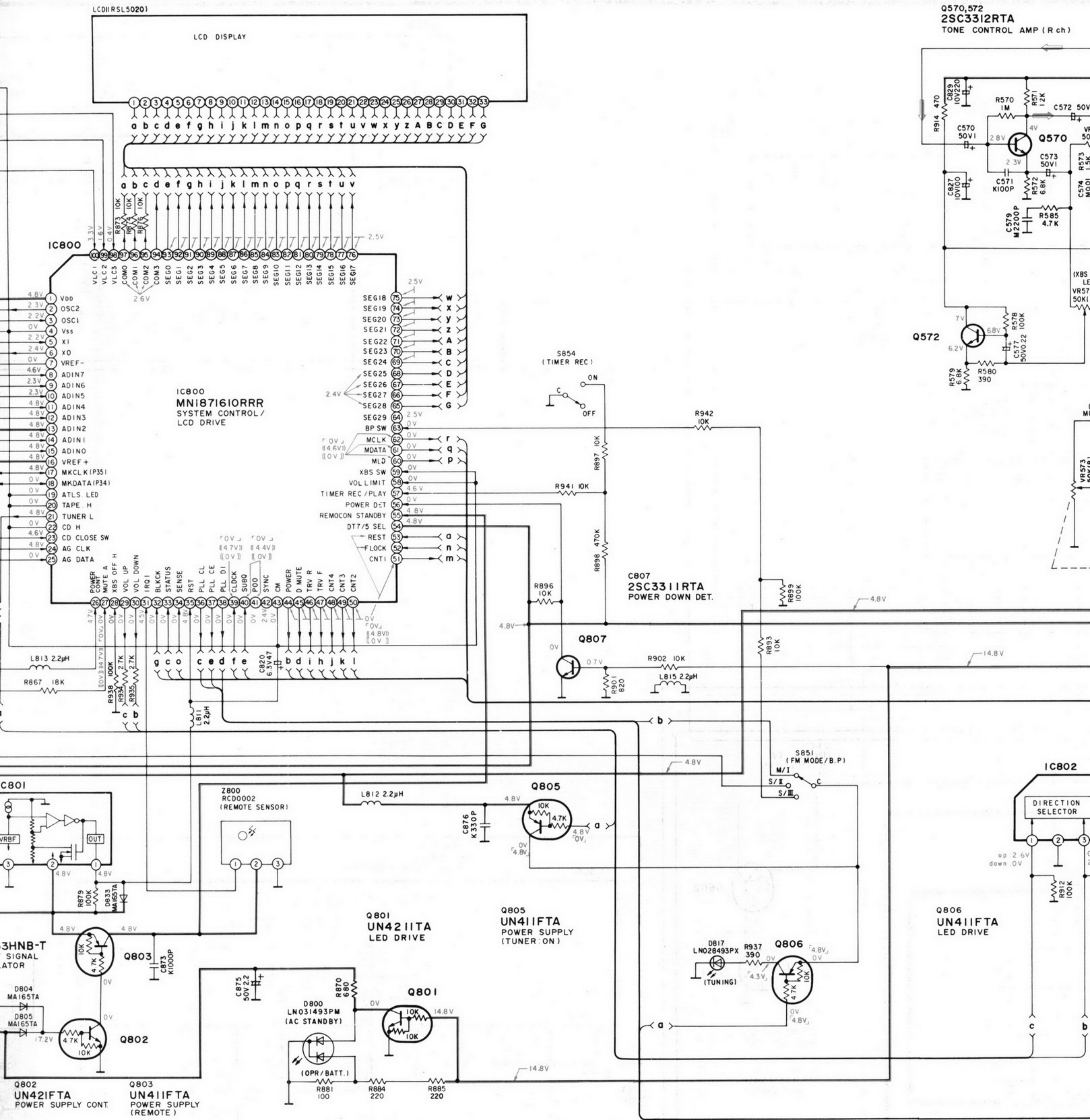
No mark...TAPE PLAYBACK (DECK 2) []...TAPE RECORDING << >>...HIGH SPEED EDITING
(())...CD []...TUNER [[]]...AUX

- This schematic diagram may be modified at any time with the development of new technology.

→ : MAIN SIGNAL LINE → : TAPE PLAYBACK SIGNAL LINE
□□□→ : TAPE RECORDING SIGNAL LINE — : +B LINE

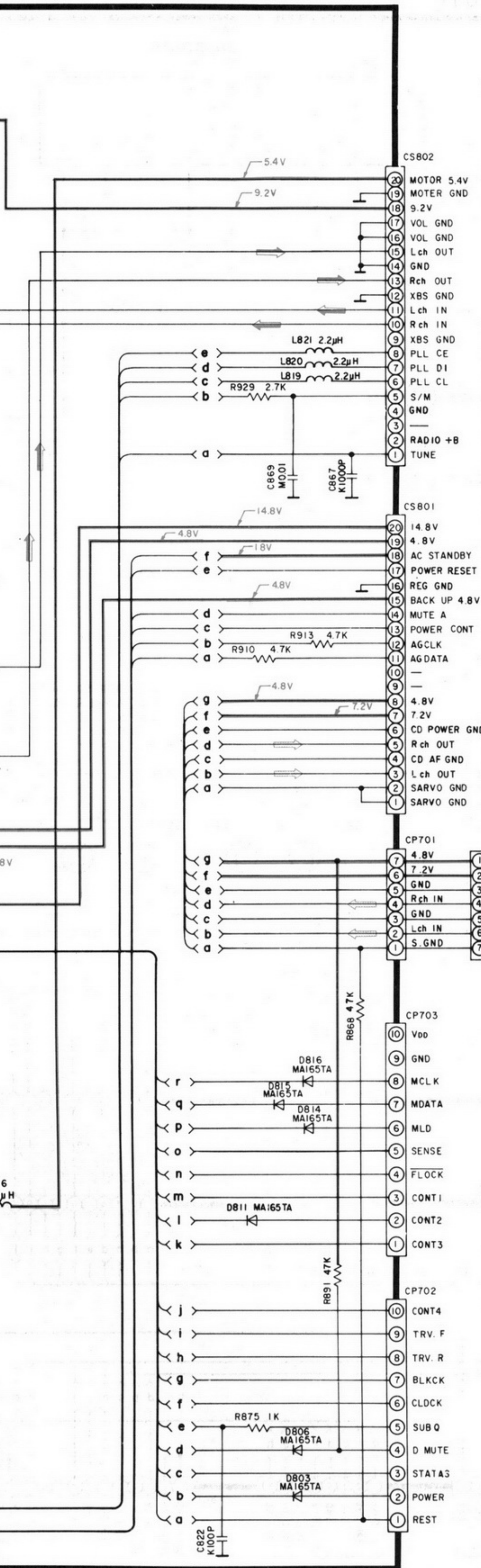
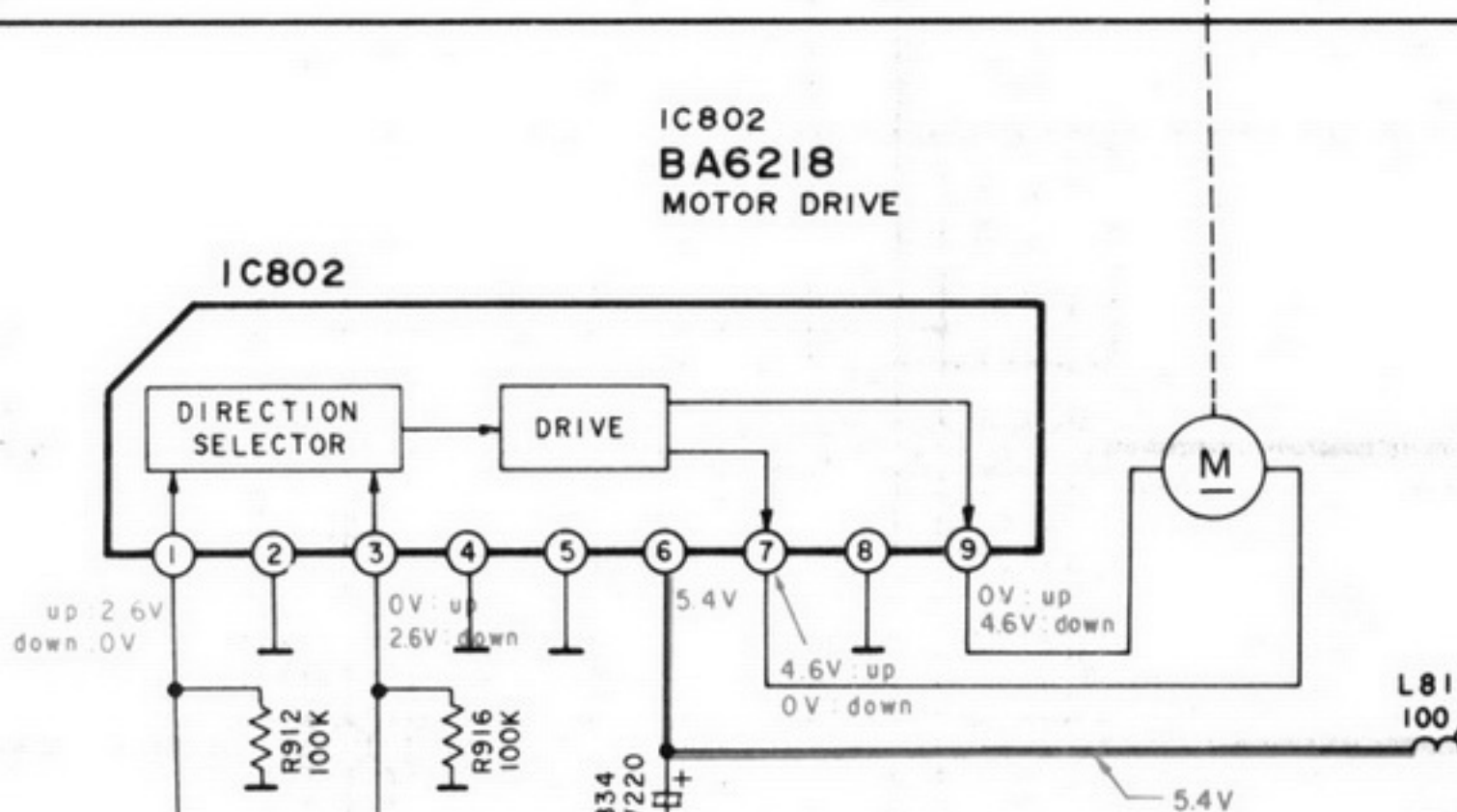
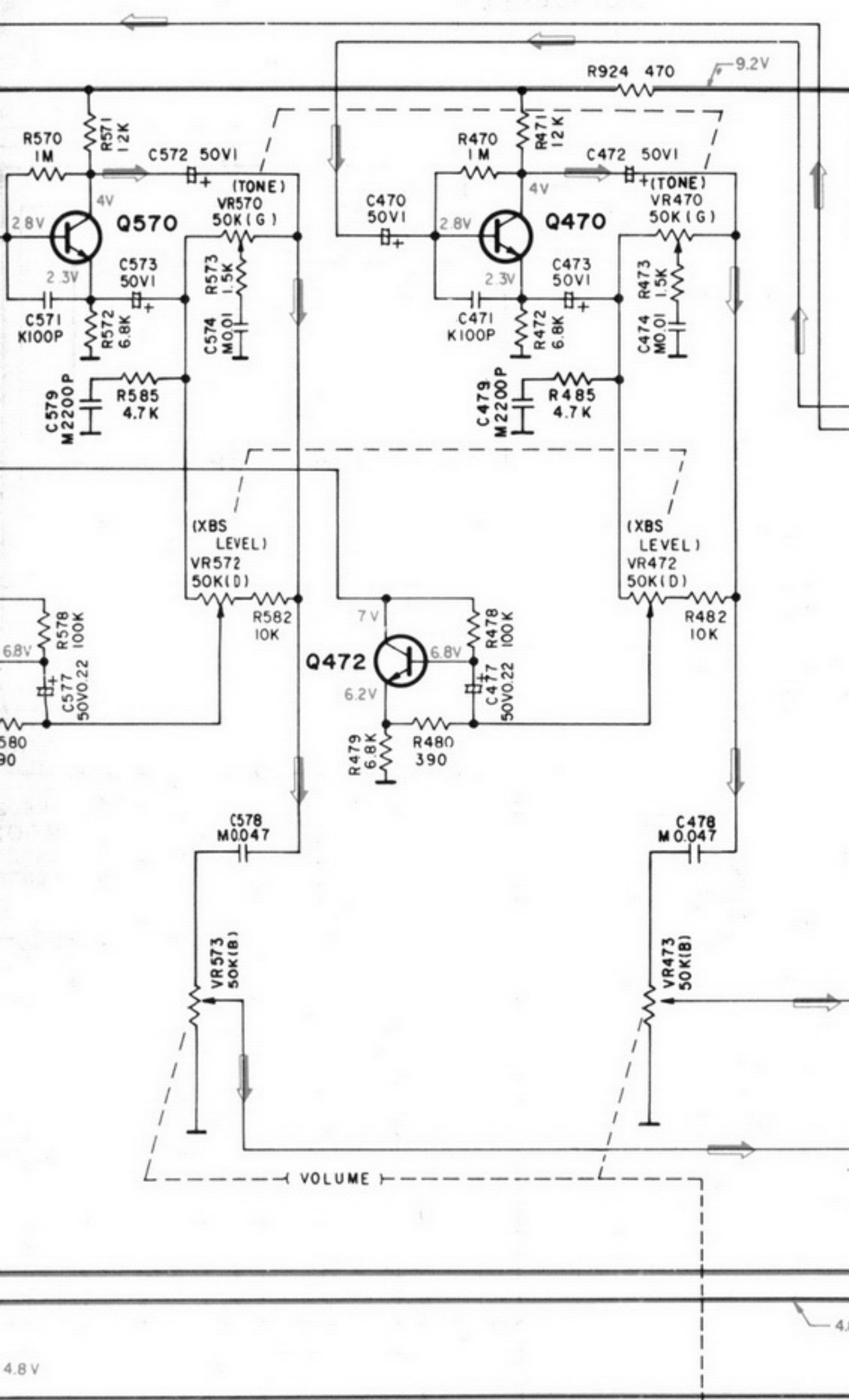
SCHEMATIC DIAGRAM • SYSTEM CONTROL CIRCUIT (Parts list on pages 66~72)





2RTA
CONTROL AMP (R ch)

Q470,472
2SC3312RTA
TONE CONTROL AMP (L ch)



TO K JUNCTION
CIRCUIT
(CP802)
(Page 29)

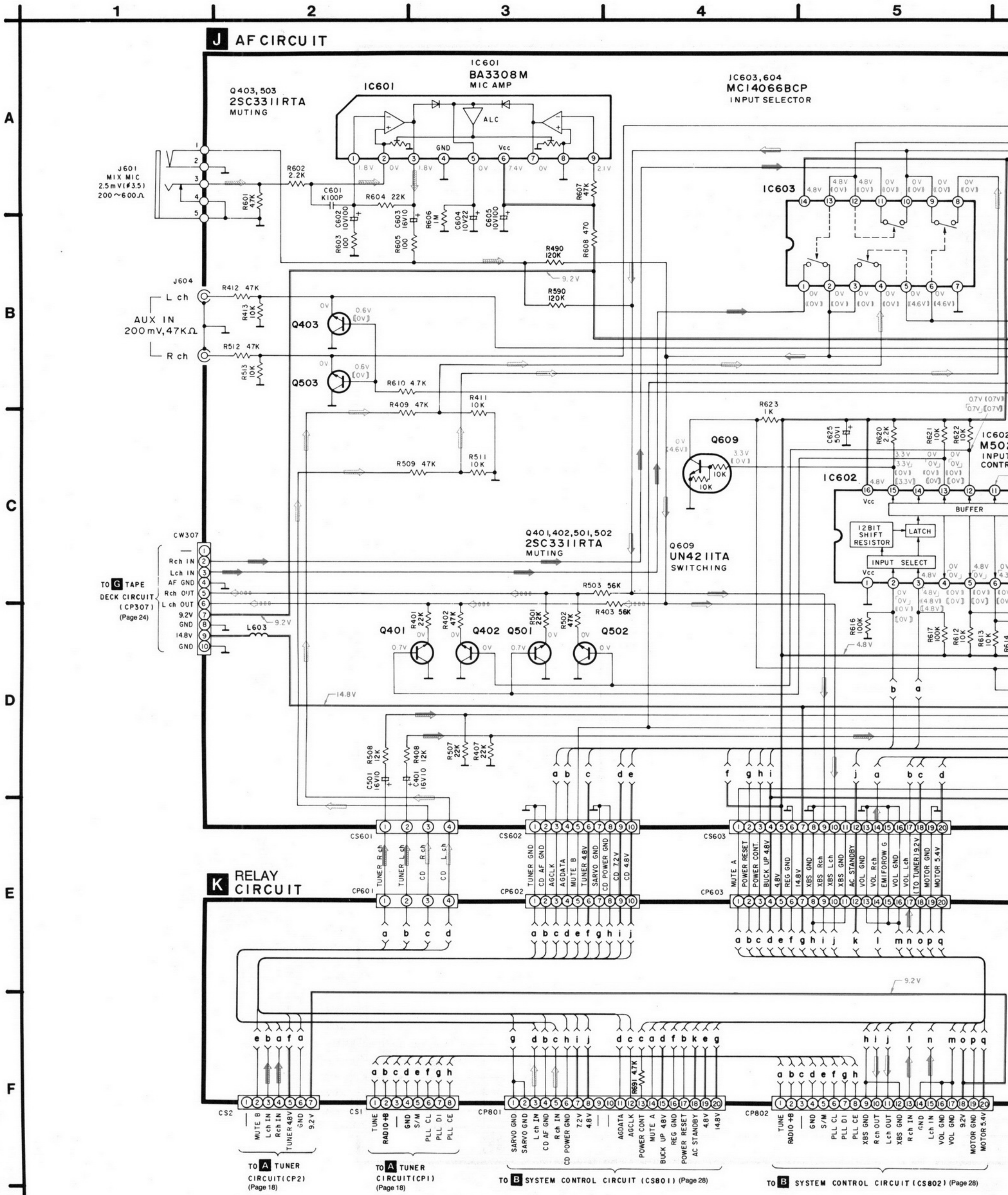
TO K JUNCTION
CIRCUIT
(CP801)
(Page 29)

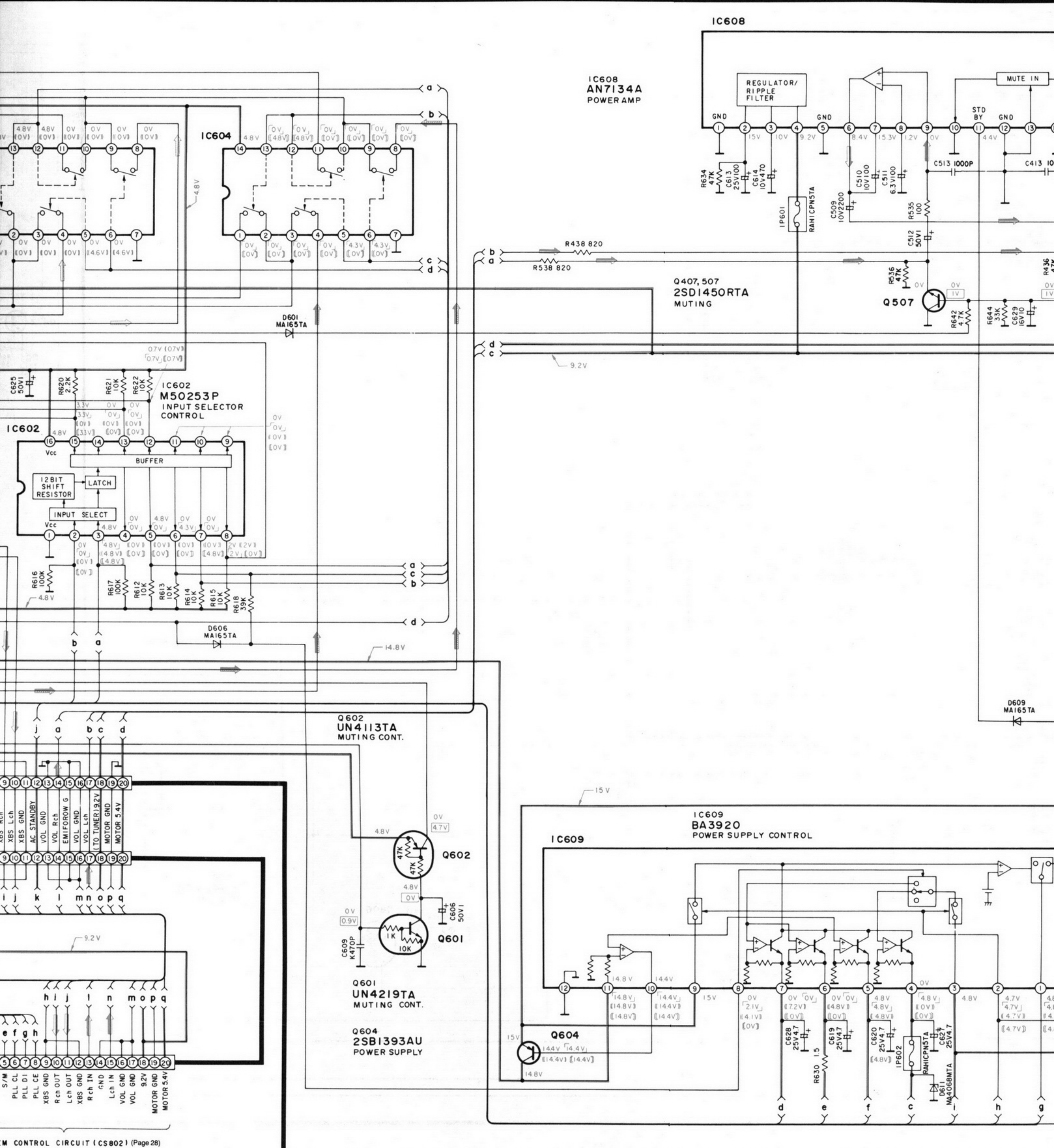
TO F CD
CIRCUIT
(CS701)
(Page 21)

TO F CD
CIRCUIT
(CS703)
(Page 19)

TO F CD
CIRCUIT
(CS702)
(Page 19)

SCHEMATIC DIAGRAM • AF CIRCUIT (Parts list on pages 66~72)





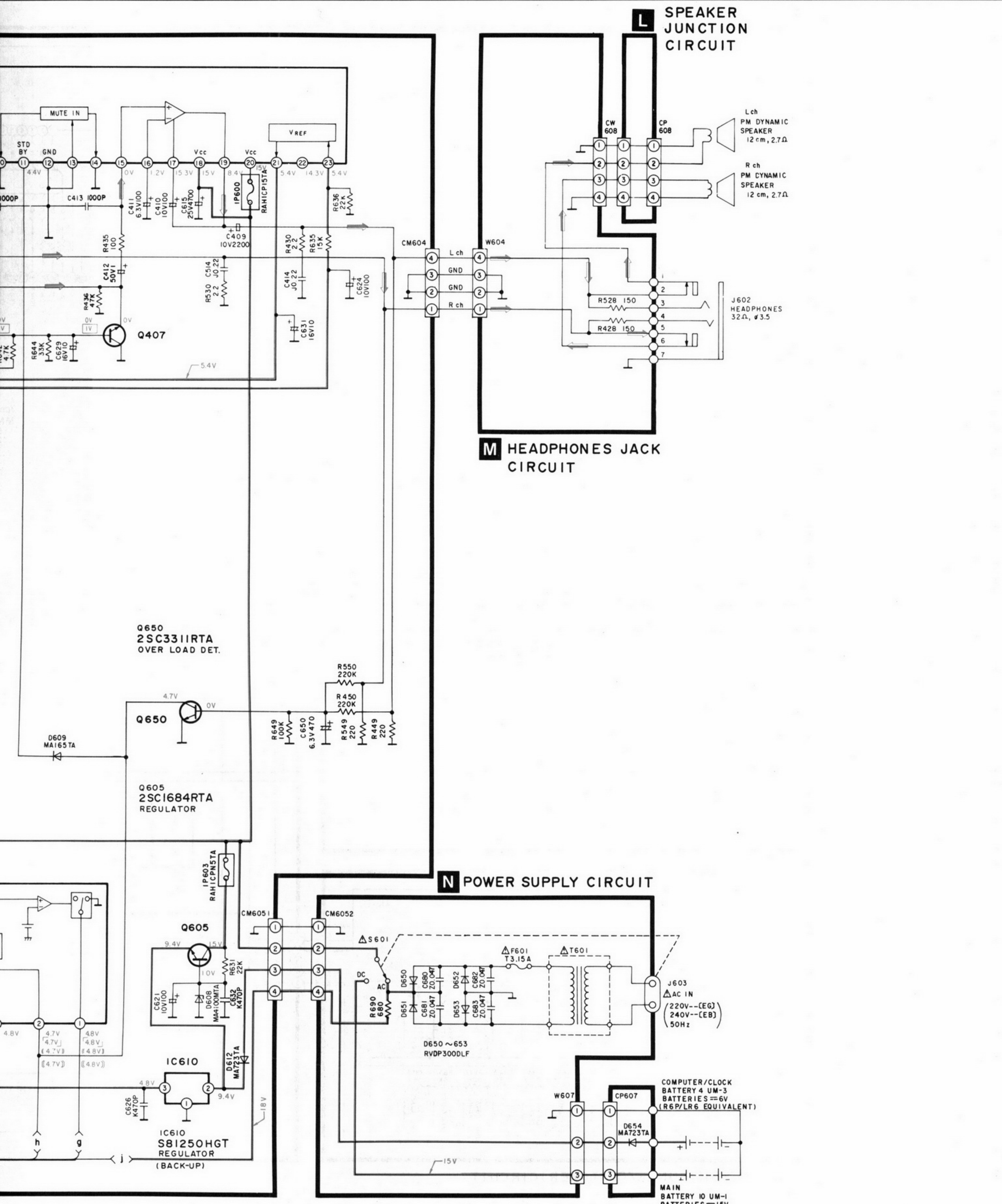
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L SPEAKER JUNCTION CIRCUIT

M HEADPHONES JACK CIRCUIT

N POWER SUPPLY CIRCUIT

Q650
2SC3311RTA
OVER LOAD DET.

Q605
2SC1684RTA
REGULATOR

Q605
IP603
RAH1CPN5TA

IC610
8B1250HGT
REGULATOR
(BACK-UP)

Lch
PM DYNAMIC
SPEAKER
12 cm, 2.7Ω

Rch
PM DYNAMIC
SPEAKER
12 cm, 2.7Ω

J602
HEADPHONES
32Ω, #3.5

J603
AC IN
(220V--(EG)
(240V--(EB)
50Hz

COMPUTER/CLOCK
BATTERY 4 UM-3
BATTERIES = 6V
(R6P/LR6 EQUIVALENT)

MAIN
BATTERY 10 UM-1
BATTERIES = 15V
(R20P/LR20 EQUIVALENT)

Notes:

- S600: AC/DC select switch in "AC" position.
- DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.

No mark...TAPE PLAYBACK (DECK 2) ...MUTING ...TUNER
 (())...CD [[]]...AUX

Battery current:

Vol. min.	195 mA (MW/LW)		XBS min.	XBS max.	
	190 mA (FM)				(MW)
	270 mA (TAPE PLAYBACK)	Vol. max.	840 mA	1050 mA	(LW)
			790 mA	950 mA	(FM)
			1400 mA	1510 mA	(TAPE PLAYBACK)
			1380 mA	1560 mA	(TAPE EDIT)
			1550 mA	1760 mA	(CD)
			1780 mA	1790 mA	

Measurement instruction

(MW/LW: 74 dB/m, 30% Mod. TAPE: 315 Hz, 0 dB)
 (FM: 60 dB, 30% Mod. CD: 1 kHz, 0 dB)

Important safety notice.

Components identified by mark have special characteristics important for safety.
 When replacing any of these components, use only manufacturer's specified parts.

•This schematic diagram may be modified at any time with the development of new technology.

: FM/LW/MW SIGNAL LINE : TAPE PLAYBACK SIGNAL LINE : MIC SIGNAL LINE
 : RECORD SIGNAL LINE : MAIN SIGNAL LINE : CD SIGNAL LINE : +B LINE

DESCRIPTION OF FL PANEL

