

Service Manual

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping

DOLBY B NR

CD Stereo System
SA-AK40

Colour

(K) ... Black Type

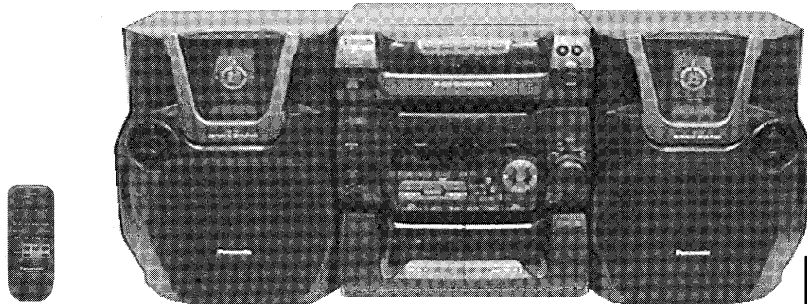
Area

Suffix for Model No.	Area	Colour
(PC)	Canada	(K)

System	Music Center	Speaker
SC-AK40 (PC)	SA-AK40 (PC)	SB-AK40 (P)

* MASH is a trademark of NTT.

** Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.



Remote Control
Transmitter

SB-AK40

SA-AK40

SB-AK40

TAPE SECTION : AR2 MECHANISM SERIES

CD SECTION : RAE0150Z TRAVERSE DECK SERIES

Specifications

Amplifier Section

Rated minimum sine wave RMS/FTS power output	
50 Hz – 12 kHz both channels driven	
0.9% total harmonic distortion	2 x 60W (6 Ω)
1kHz continuous power output, both channels driven 0.9% total harmonic distortion	2 x 70W (6 Ω)
Total harmonic distortion half power at 1 kHz	0.10% (6 Ω)
Frequency response	
CD, AUX	60 Hz – 20 kHz (-3 dB)
Input sensitivity	
AUX	250 mV (57 mV, IHF '66)
Input impedance	
AUX	57 kΩ
Tone Controls	
6 EQ SPACE	HEAVY, CLEAR, SOFT, DISCO, LIVE, HALL
Load impedance	6 Ω

FM Tuner Section

Frequency range	87.5 – 108.0 MHz
Sensitivity	23.3 dBf (4.0 μV, IHF '58)
Total harmonic distortion	
MONO	0.3 %
STEREO	0.5 %
S/N (MONO)	60 dB
Image rejection at 98.1 MHz	35 dB
Stereo separation at 1 kHz	35 dB
Antenna terminal(s)	75 Ω (unbalanced)

AM Tuner Section

Frequency range	520 – 1710 kHz
Sensitivity (For 500 mW)	250 μV/m

CD Section

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser / 780 nm
Number of channels	Stereo
S/N ratio	
CD UNIT OUT	95 dB (JIS A)
SP OUT	87 dB (JIS A)

Wow and flutter	Unmeasurable
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

Cassette Deck Section

Track system	4 track, 2 channel
Heads	
Playback	Solid permalloy head (Rotary)
Record/Playback	Solid permalloy head (Rotary)
Erase	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase, 100 kHz
Tape speed	4.8 cm/s (1 7/8 ips)
Frequency response	
NORMAL	35 Hz – 14 kHz
CrO ₂	35 Hz – 14 kHz
S/N ratio (CrO ₂ type tape)	
Dolby NR off	50 dB (A weighted)
Dolby NR on	60 dB (CCIR)
Wow and flutter	0.18 % (WRMS)
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

General

Power consumption	
System	110 W
Power OFF	9.1 W
Power supply	AC 120 V, 60 Hz
Dimensions (W x H x D)	270 x 330 x 339 mm (10 ⁵ / ₈ " x 13" x 13 ³ / ₈ ")
Weight	7.3 kg (16.1 lb.)

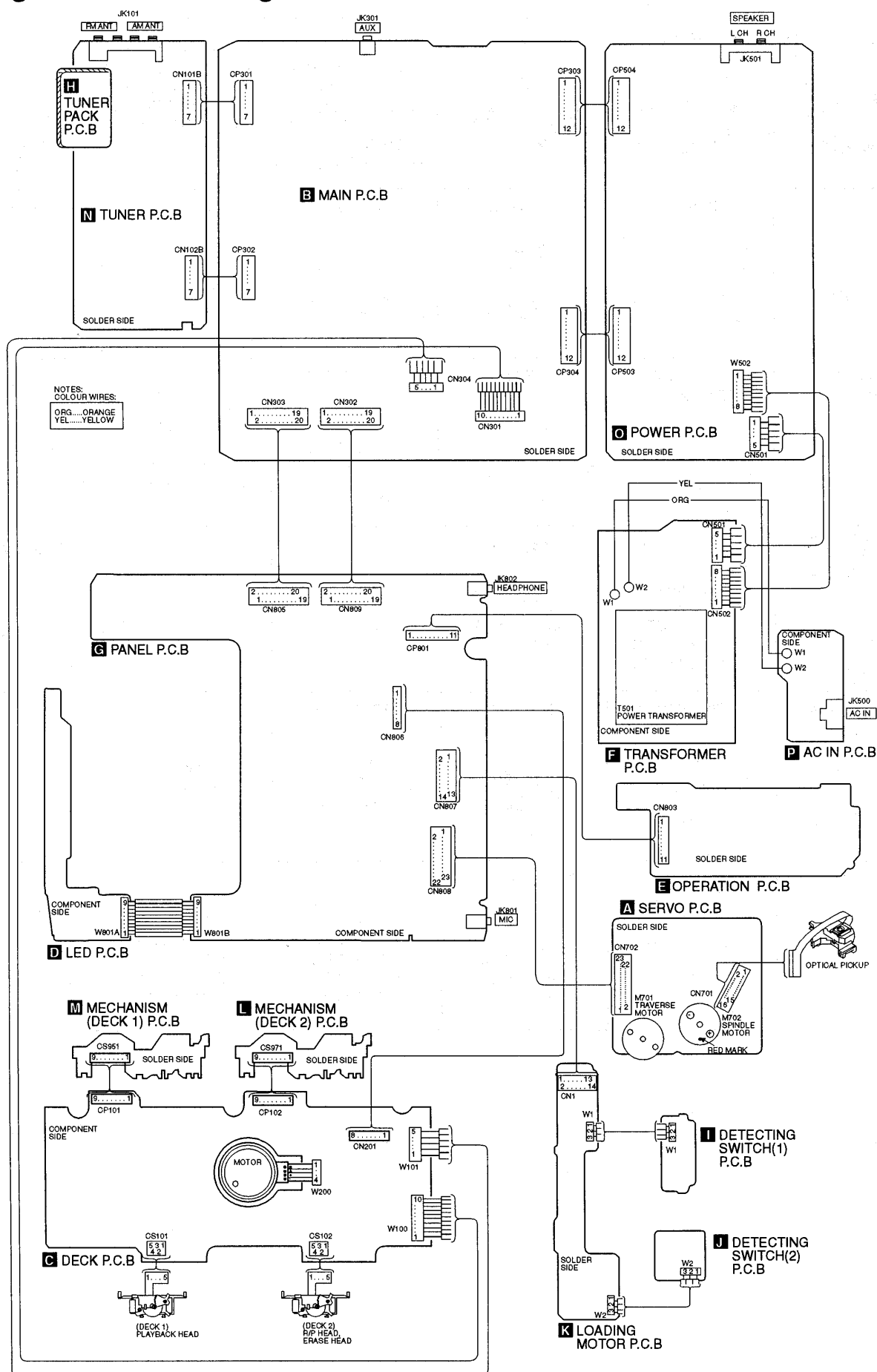
Notes :

- Specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

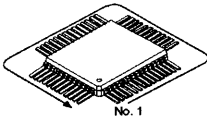
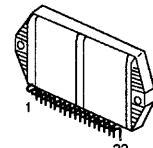
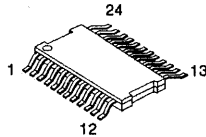
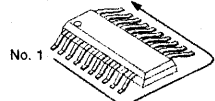
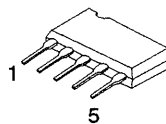
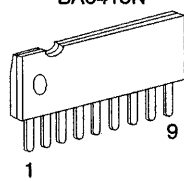
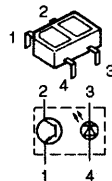
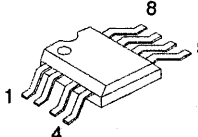
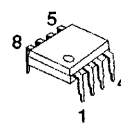
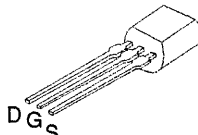
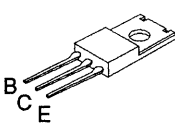
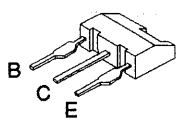
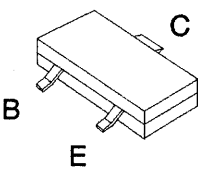
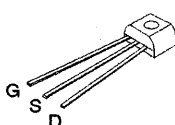
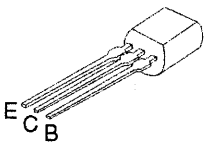
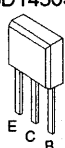
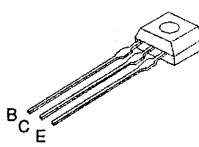
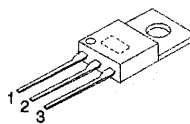
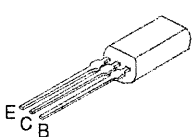

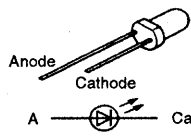
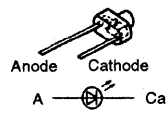
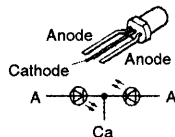
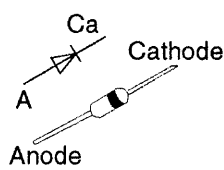
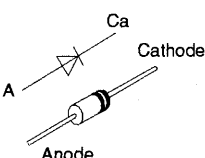
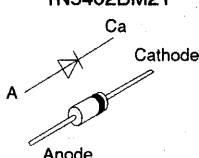
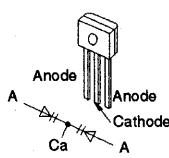
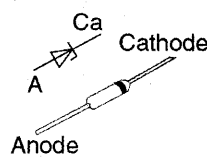
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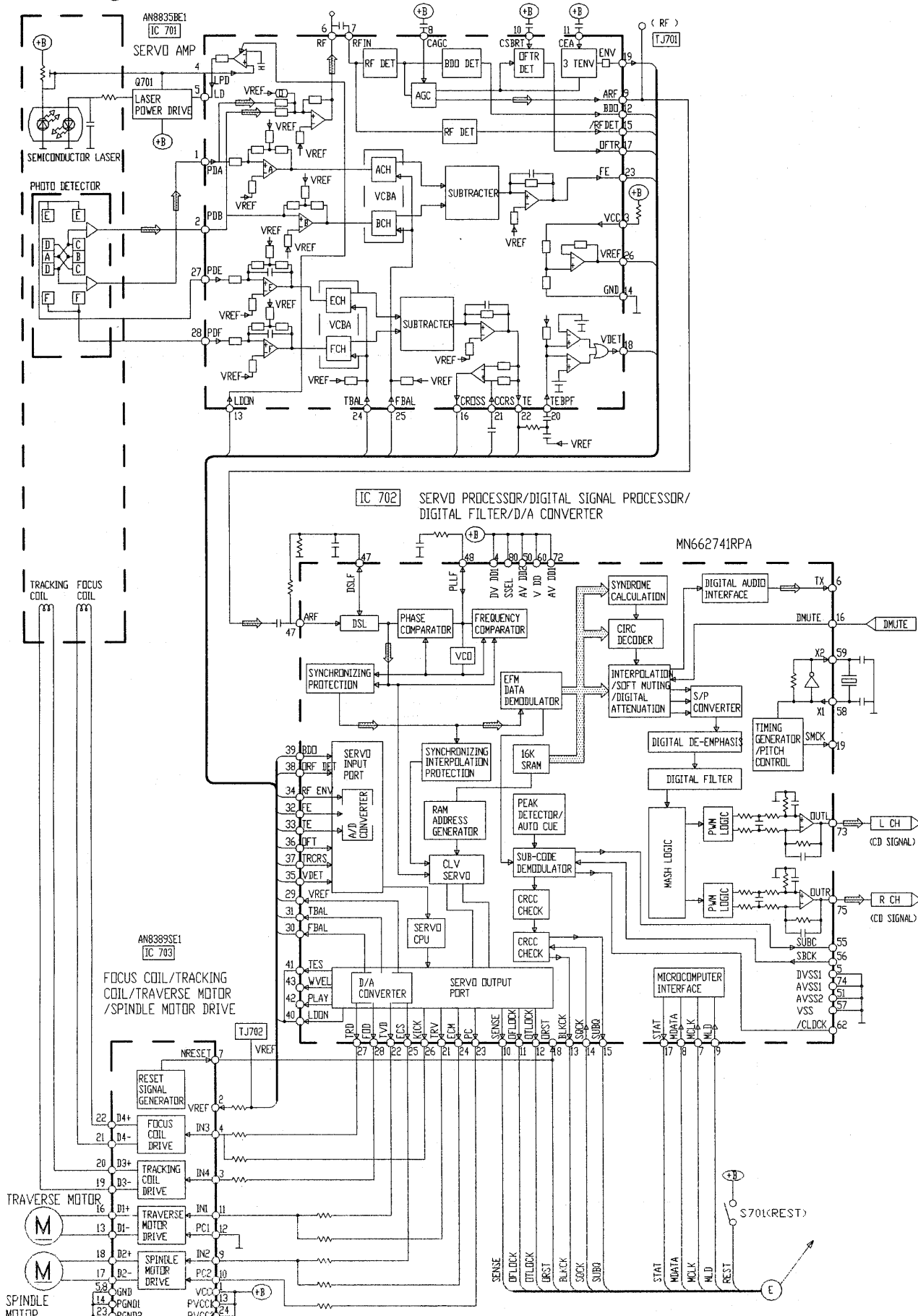
Wiring Connection Diagram

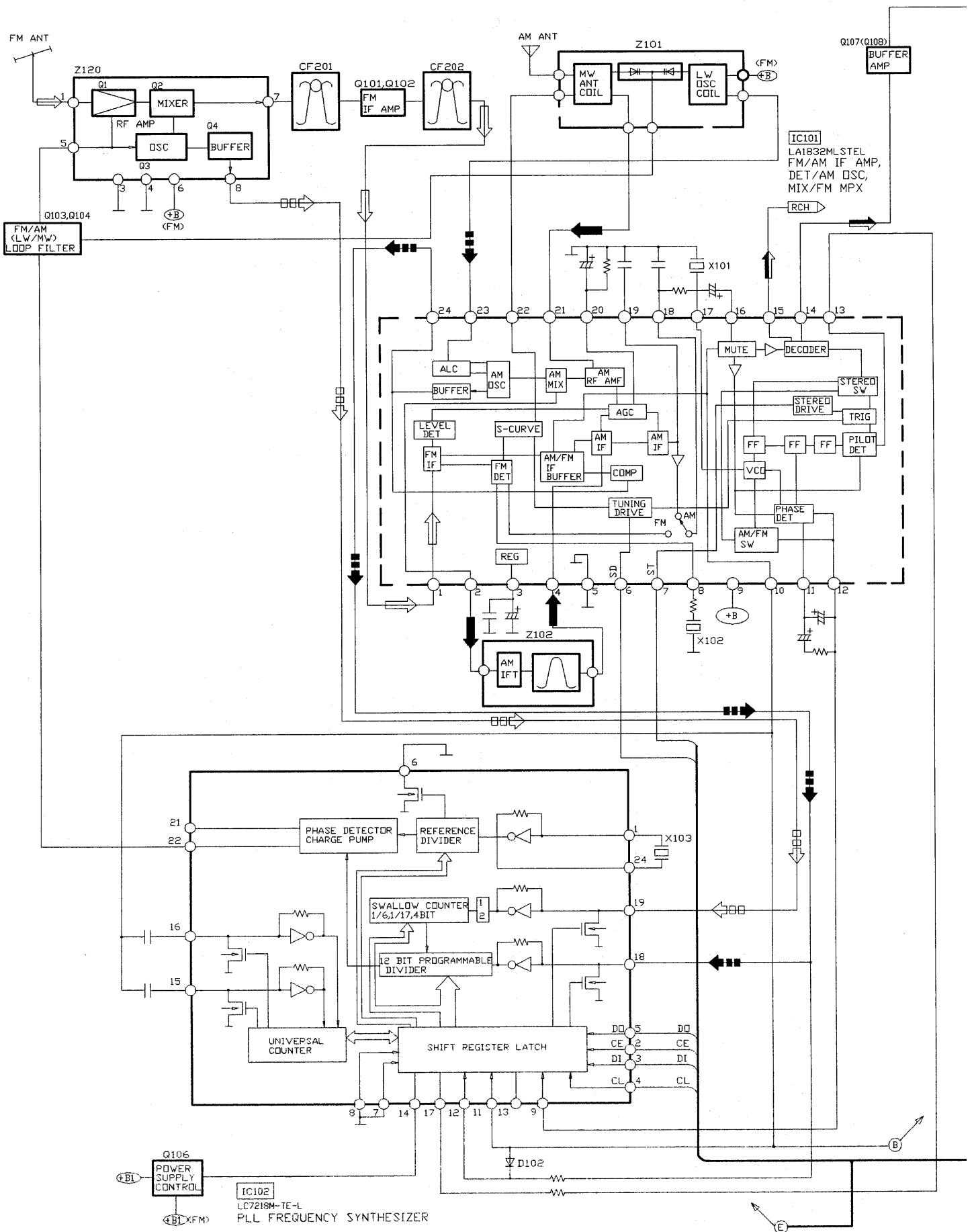


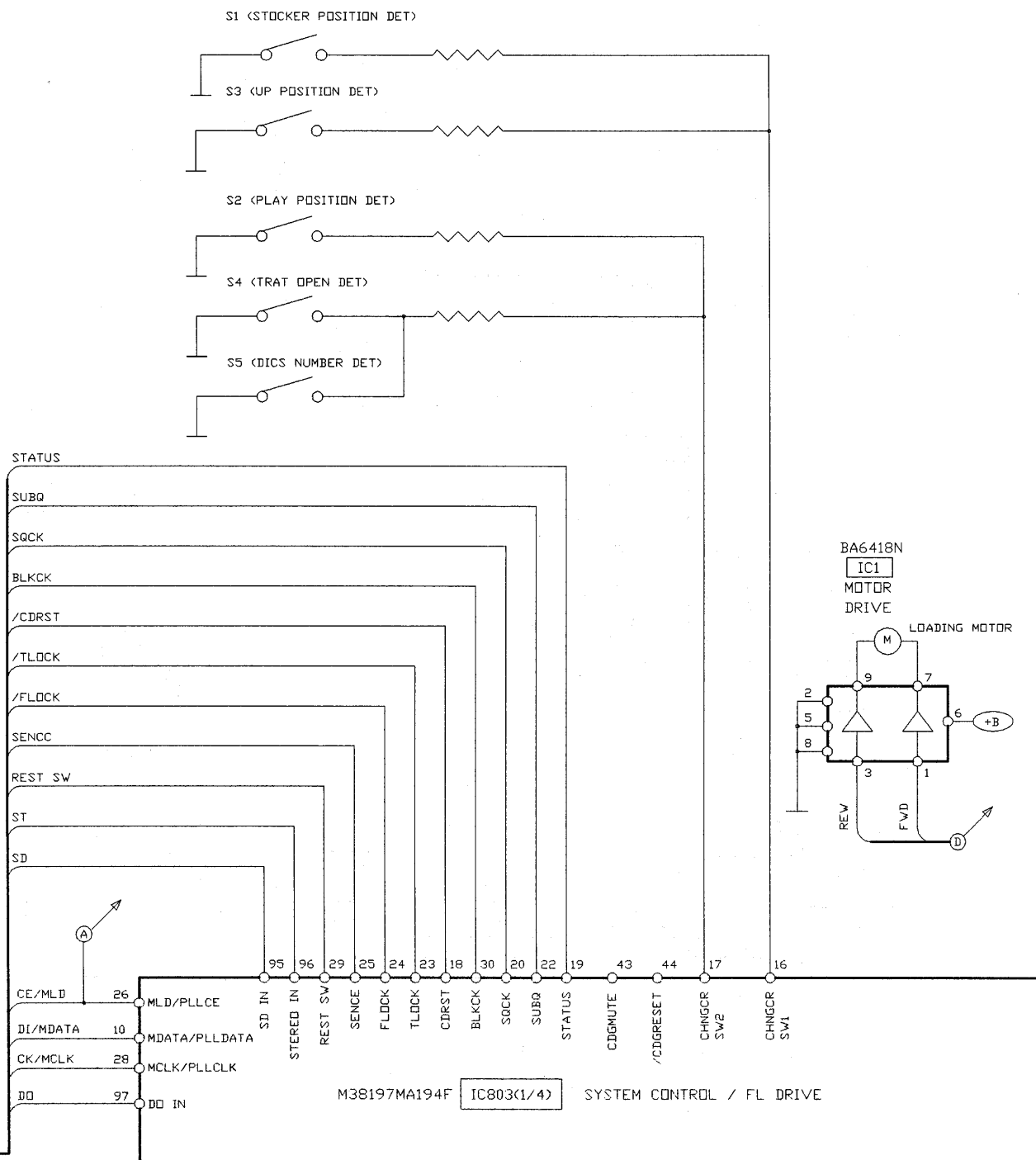
■ Terminal Guide of ICs, Transistors and Diodes

M38197MA194F(100P) MN662741RPA(80P) 	RSN308M24-P 	AN8389SE1 	BA3835F-E2(18P) AN8835SBE1(28P) BU2040F-E2(16P) BU2090F-E2(16P) BU4052BCF-E2(16P) M51167BFP-TB(36P) BH3854AFS-E2(32P) BA3838FE2(16P) BU4066BCF-E2(14P) CXA1102M-T2(16P) LA1832MLSTEL(24P) LC7218M-TE-L(24P) 			
BA7755A 	BA6418N 	0N2180RLC 	BA4558FE2 	M5218AP 	2SK301QTA 	
2SD2395E 2SB1566E 	2SB1238Q 2SD1859QRTV2 	2SB709S 	2SK544F-AC 	2SC1684RTA 2SC2001KTA 2SB621RTA 2SD1302STA 2SD965RTA KSD471ACYGTA 		
2SC2784FTA BA1A4MTA 2SD1450STA 	2SA933SSSTA RVTDTA143XST 2SC1740SLNET RVTDTA144TST 2SC1740SSTA RVTDTA114EST RVTDTA144EST		2SC2786MTA 2SC2785FTA 2SC2787LTA 2SC2787FL1TA 2SD1020HTA BA1A4ZTA 		AN78M05AB 	2SC3940AQSTA 
2SJ164QRTA 	SLR325DCT31 	SLR-325MC 	SPR505MDTT 	1SS254TA 1SS291TA MA165TA 		
RK306LFU1 	1D3E 1N5402BM21 	SVC211SPA-AL 	MTZJ11CTA MTZJ24DTA MTZJ3R6BTA MTZJ4R7BTA MTZJ5R1BTA MTZJ36ATA MTZJ16ATA MTZJ5R1CTA MTZJ5R6BTA MTZJ6R8BTA MTZJ8R2BTA MTZJ9R1CTA 			

■ Block Diagram

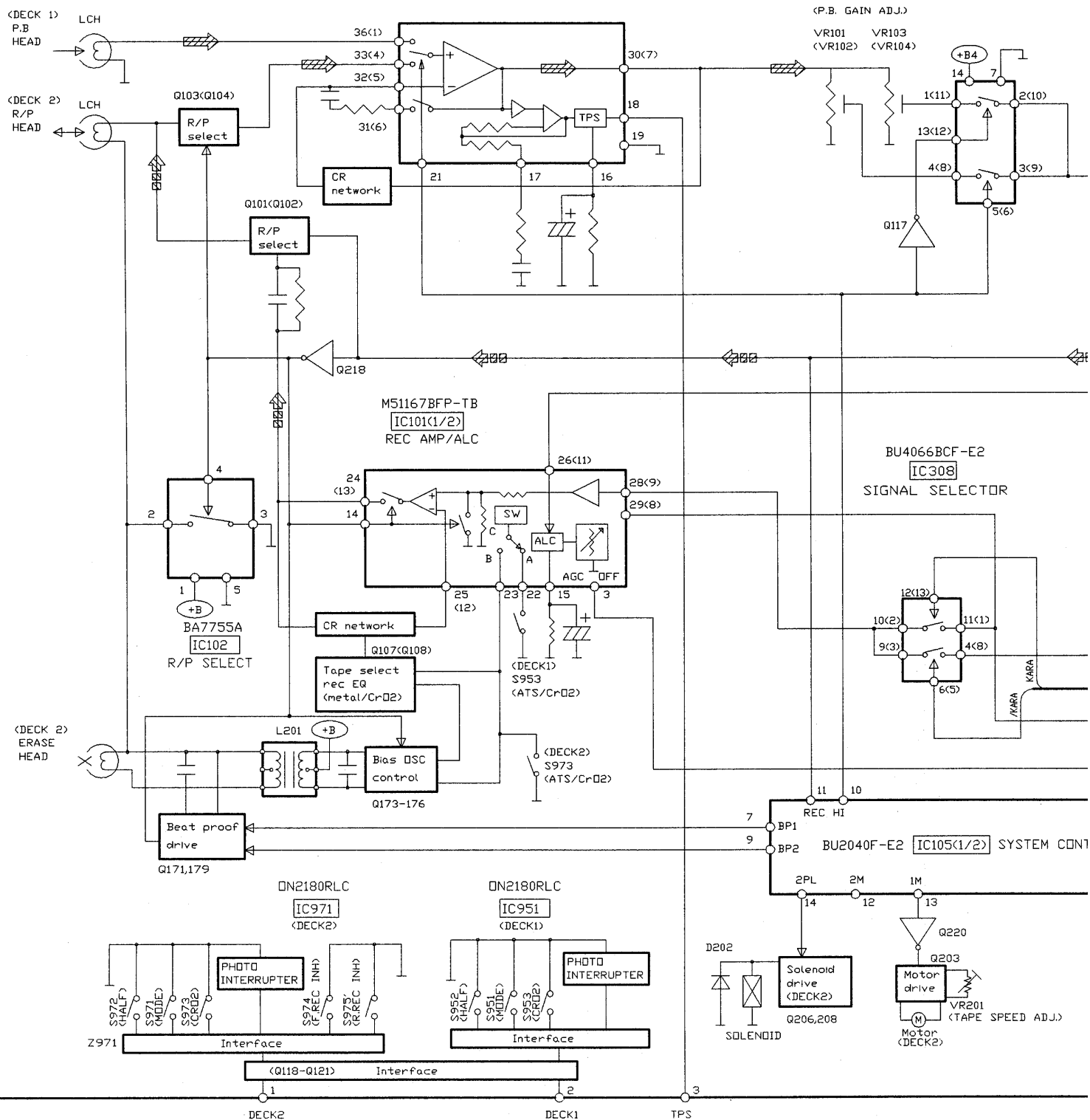




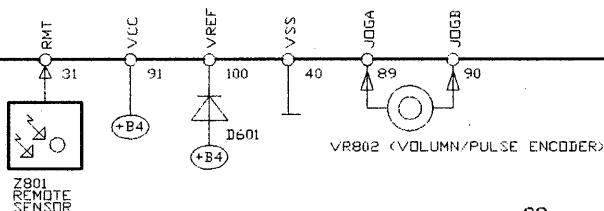


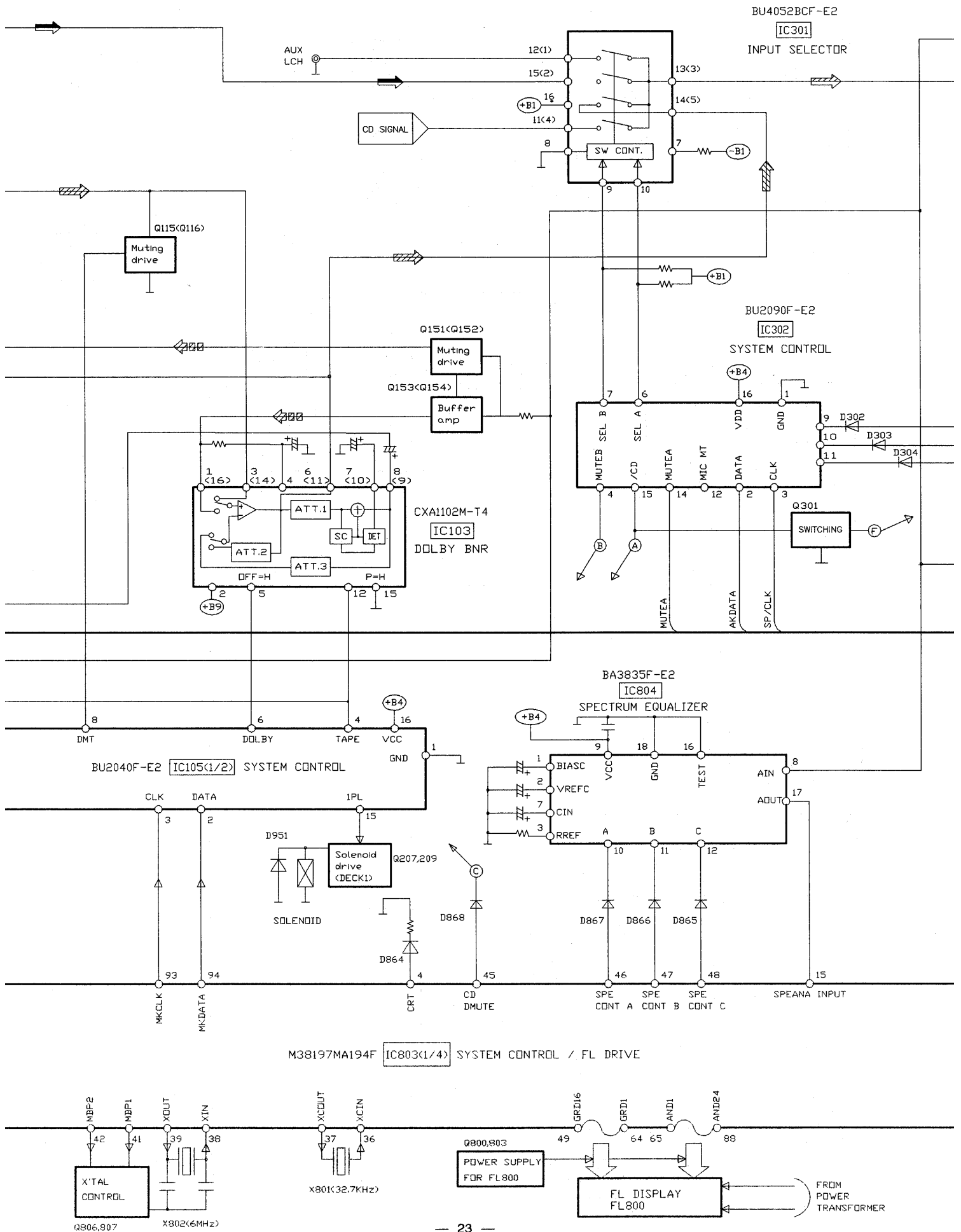
M51167BFP-TB
IC101(1/2)
P.BEQ/TPS AMP

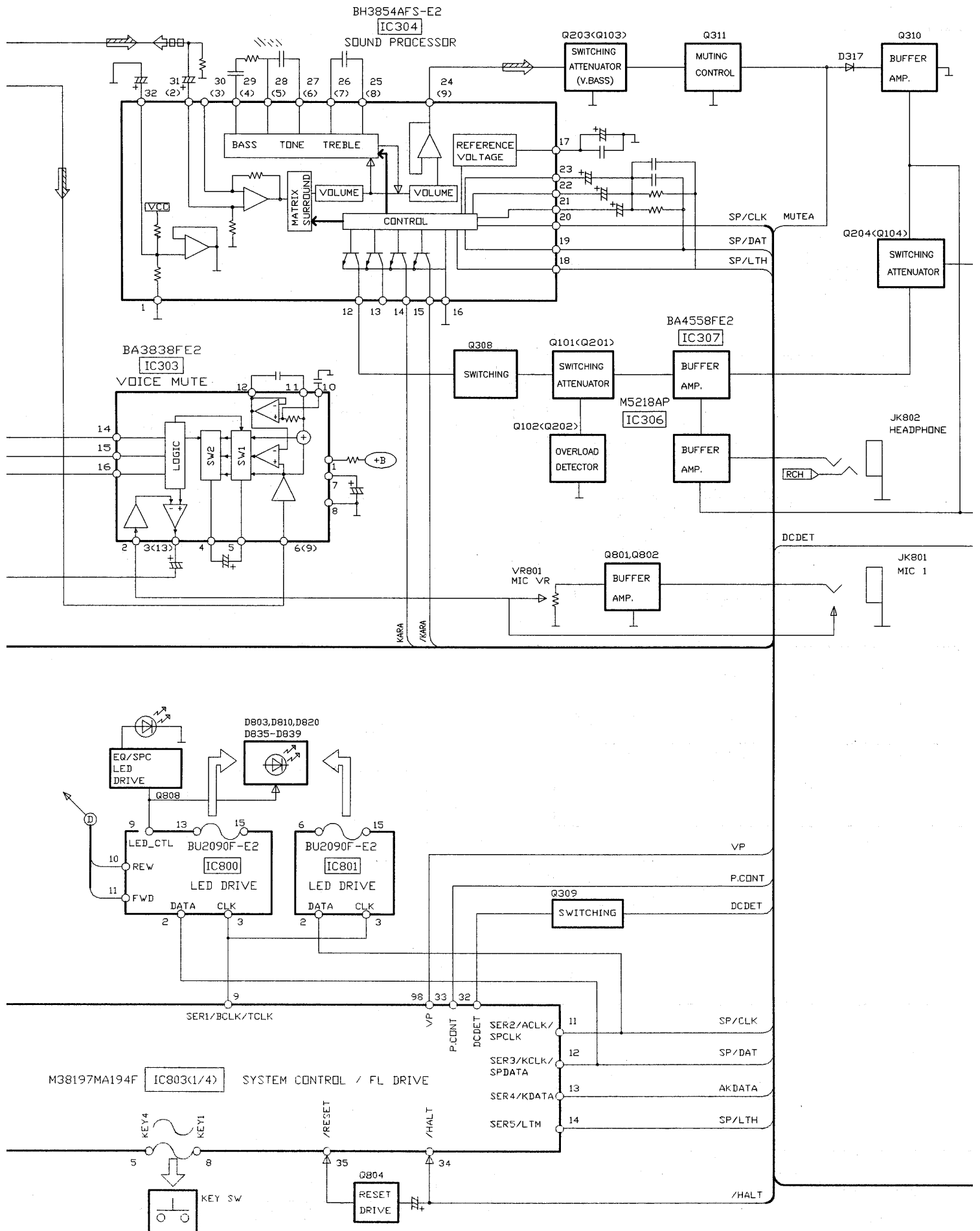
BU4066BCF-E2
IC104
DECK 1/2 SELECIOR

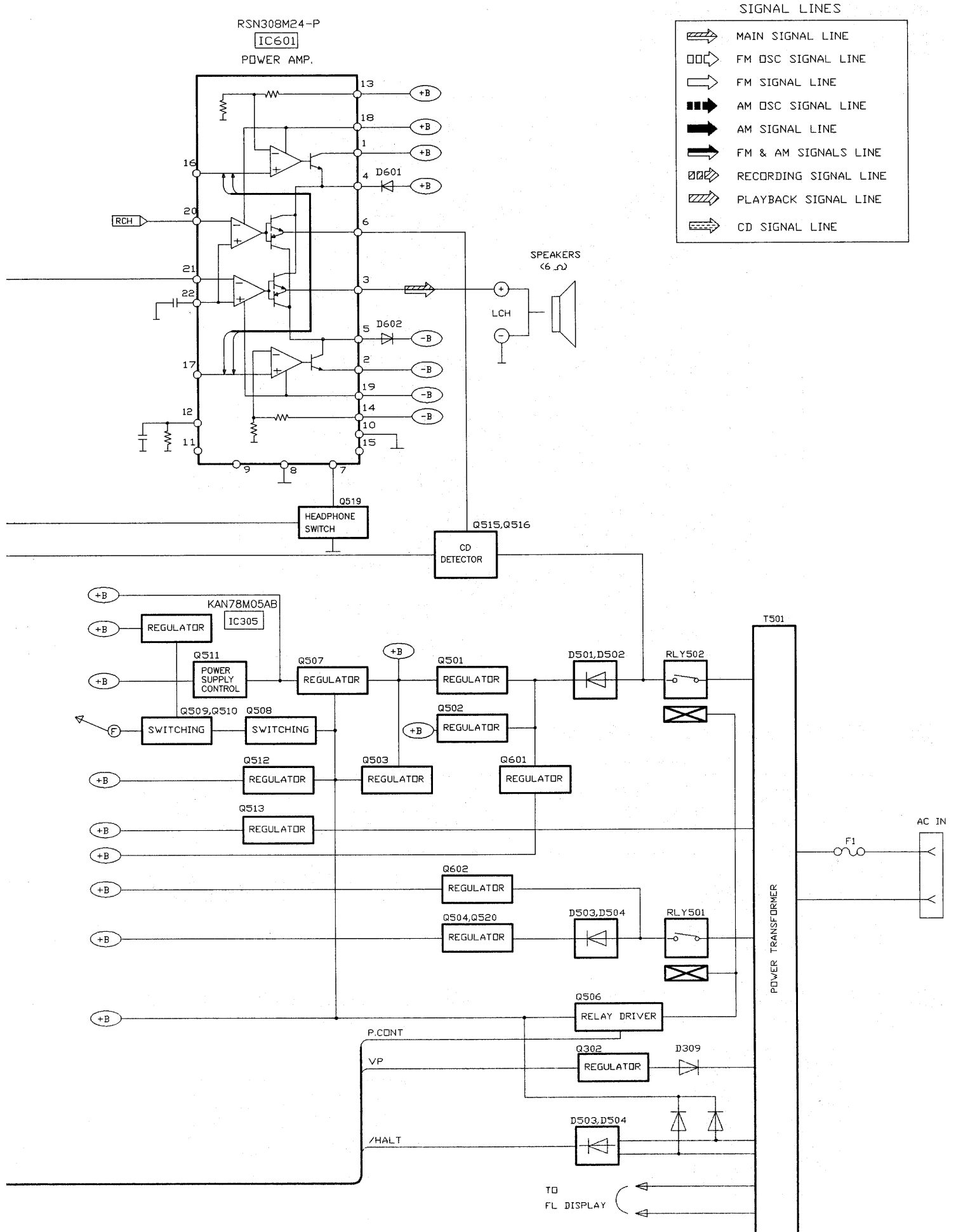


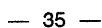
M38197MA194F IC803(1/4) SYSTEM CONTROL / FL DRIVE

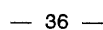


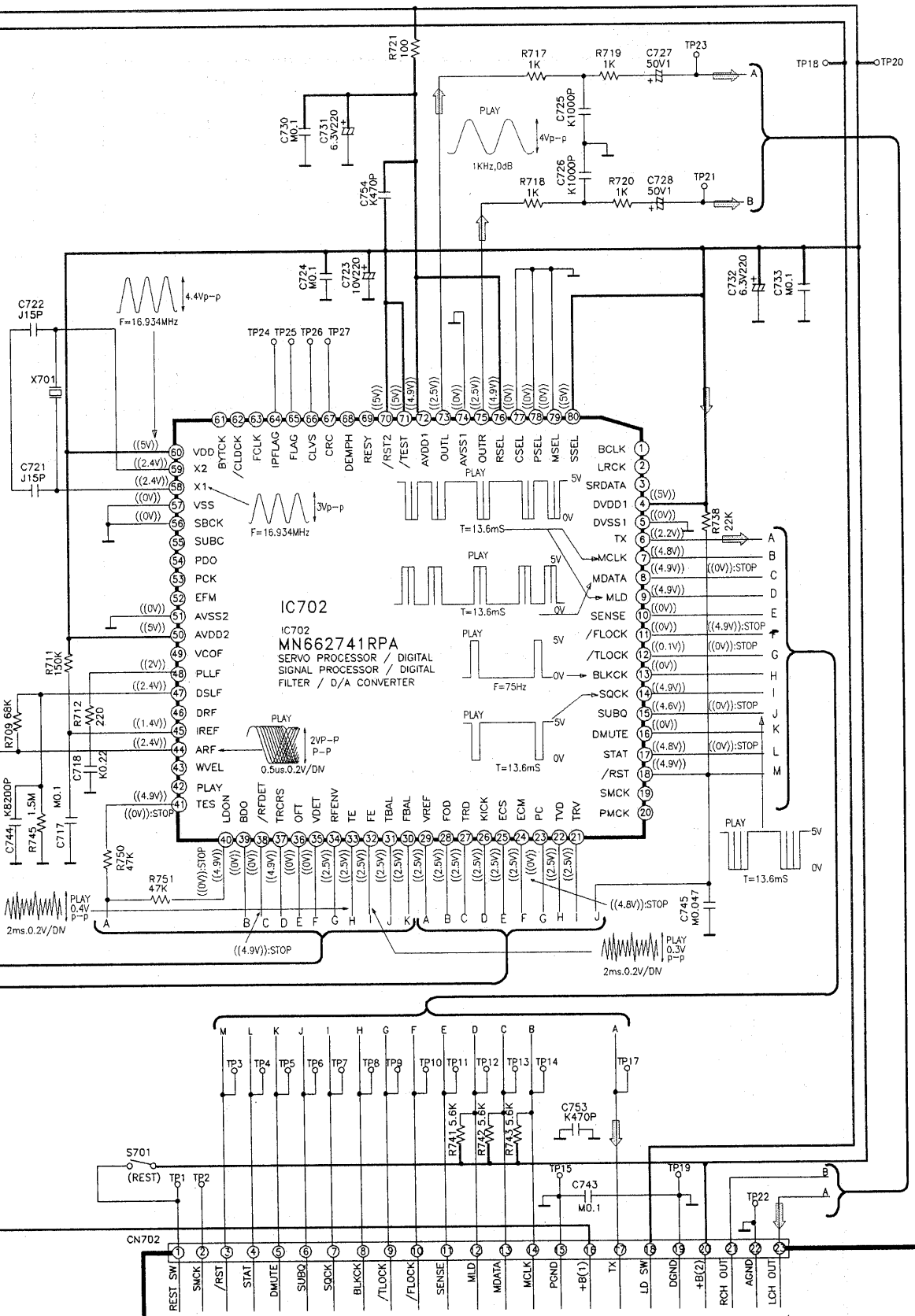


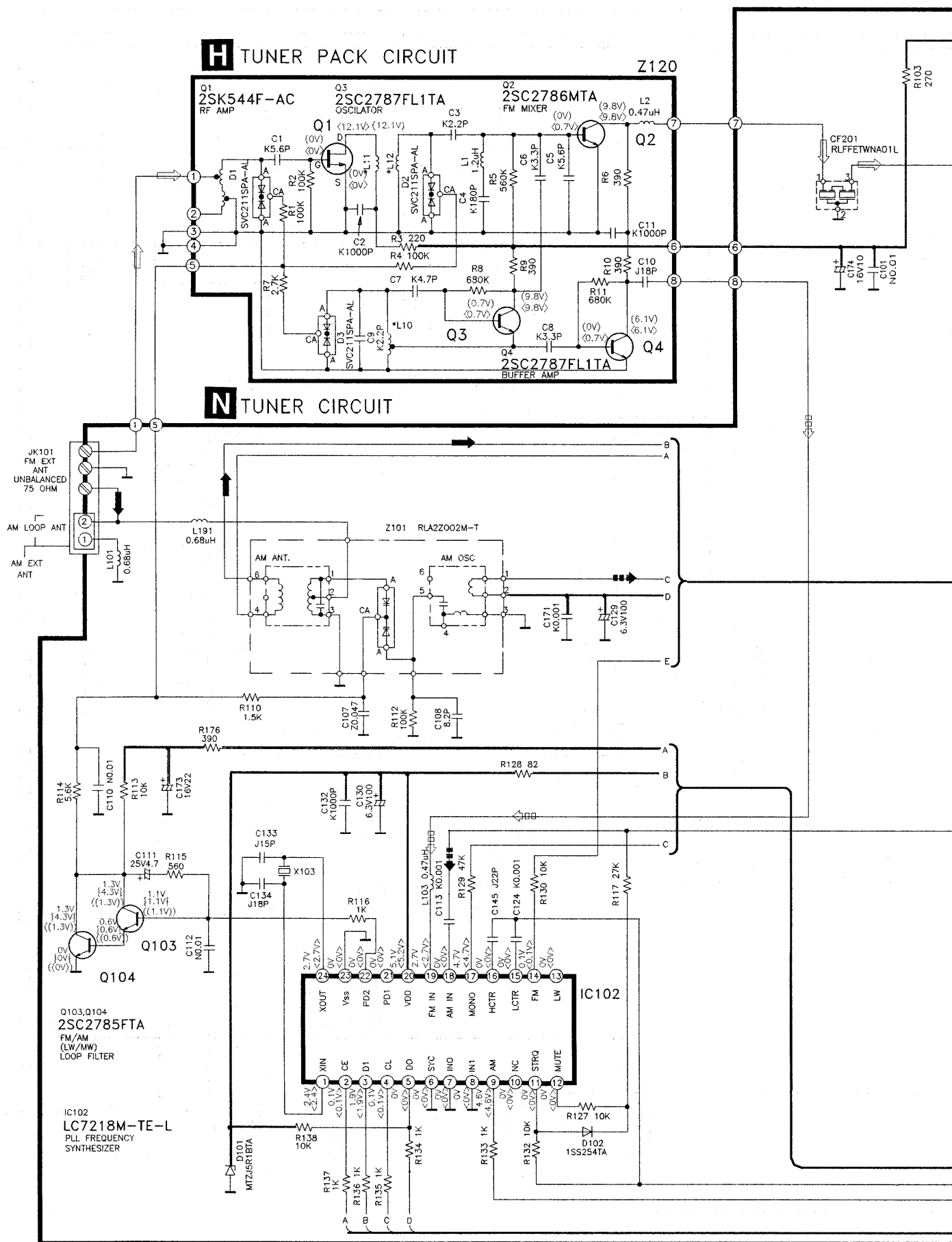


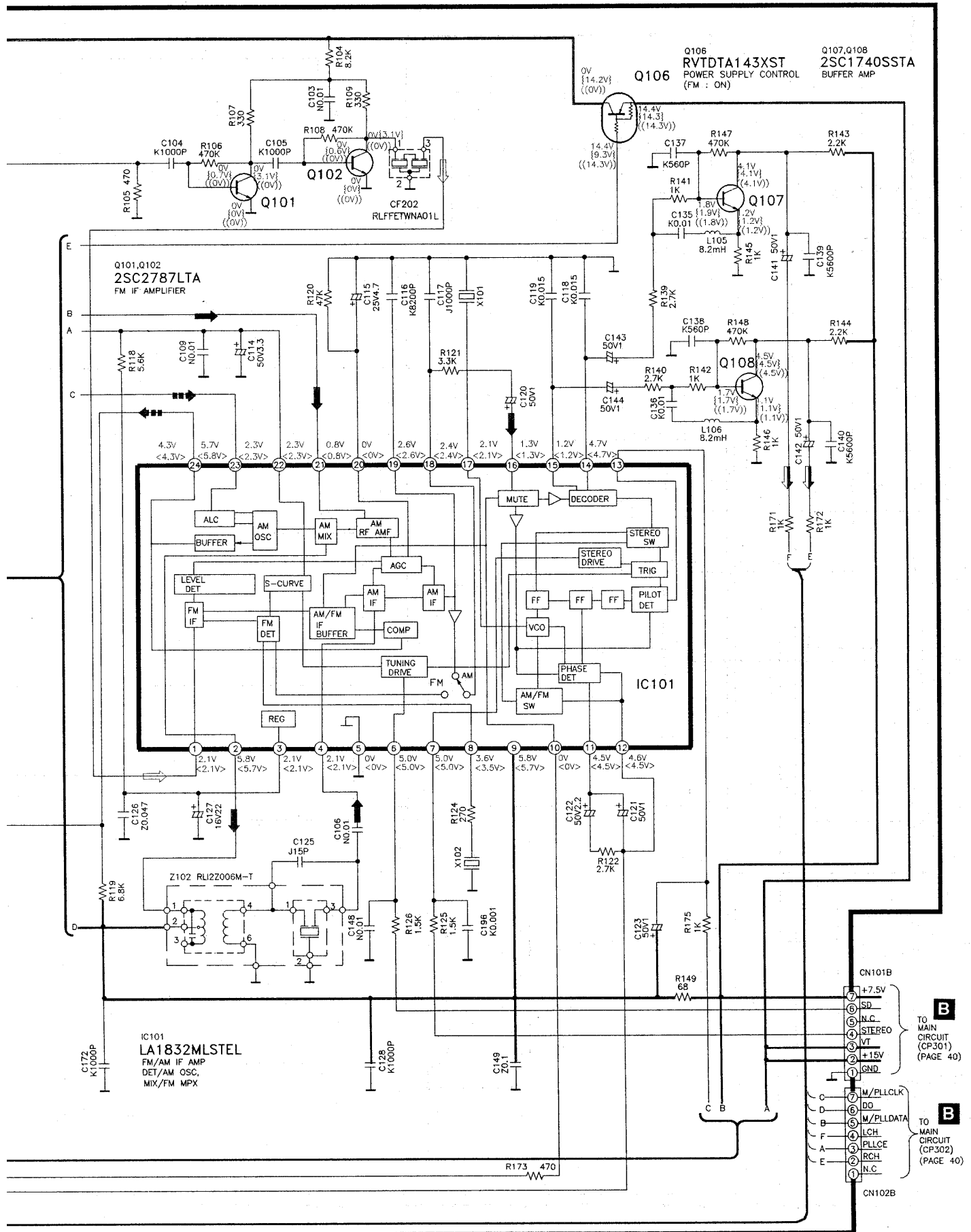


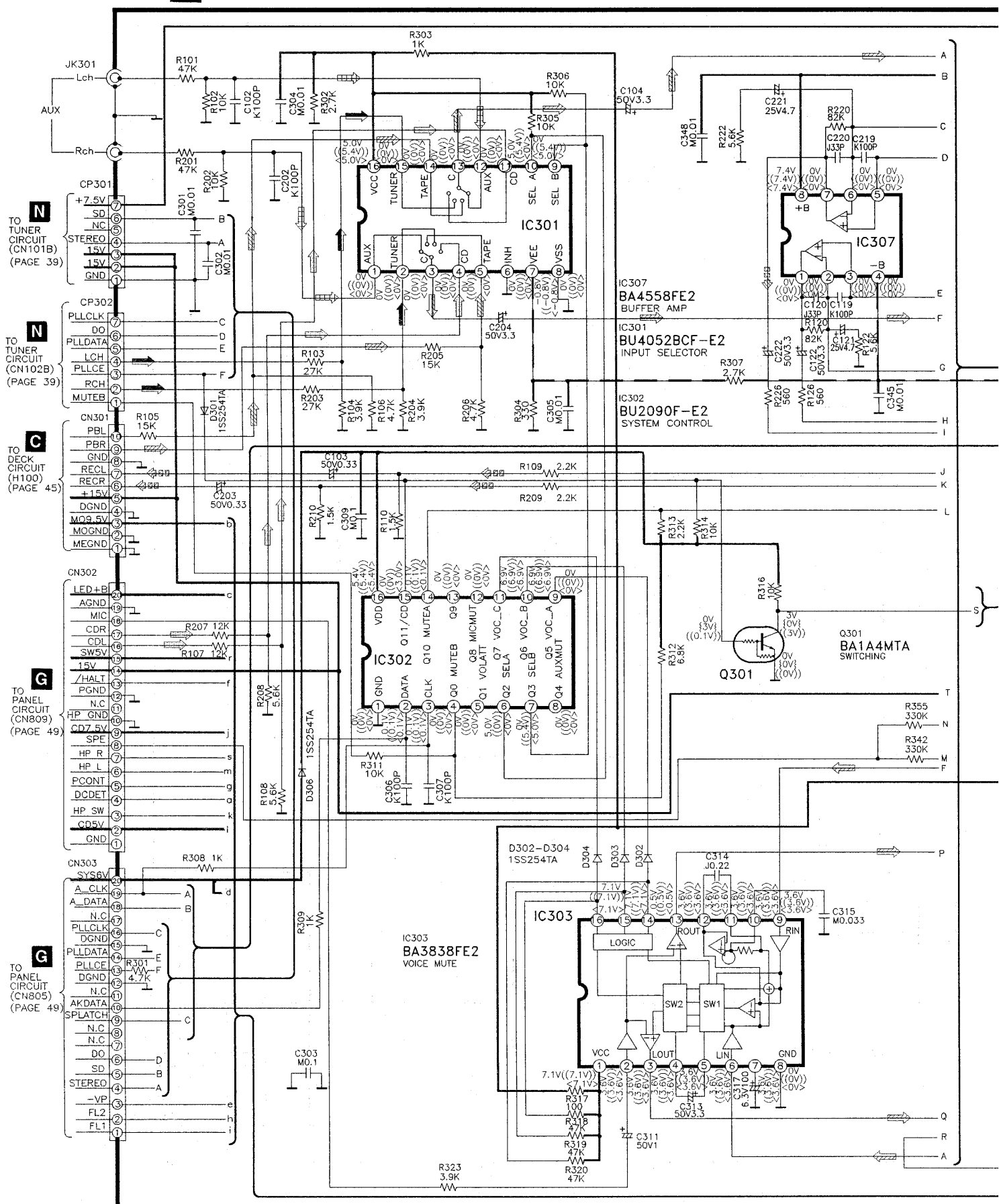


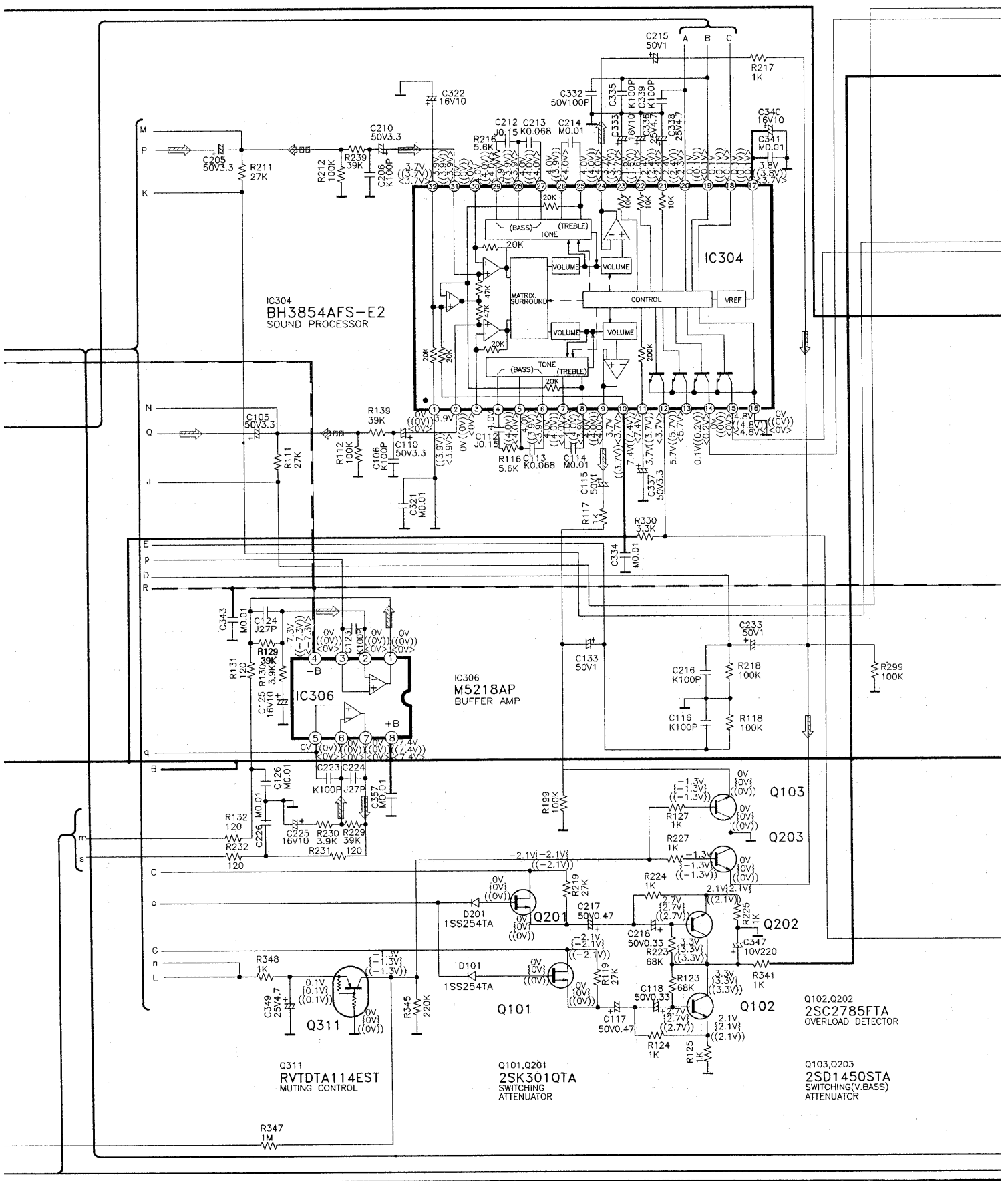


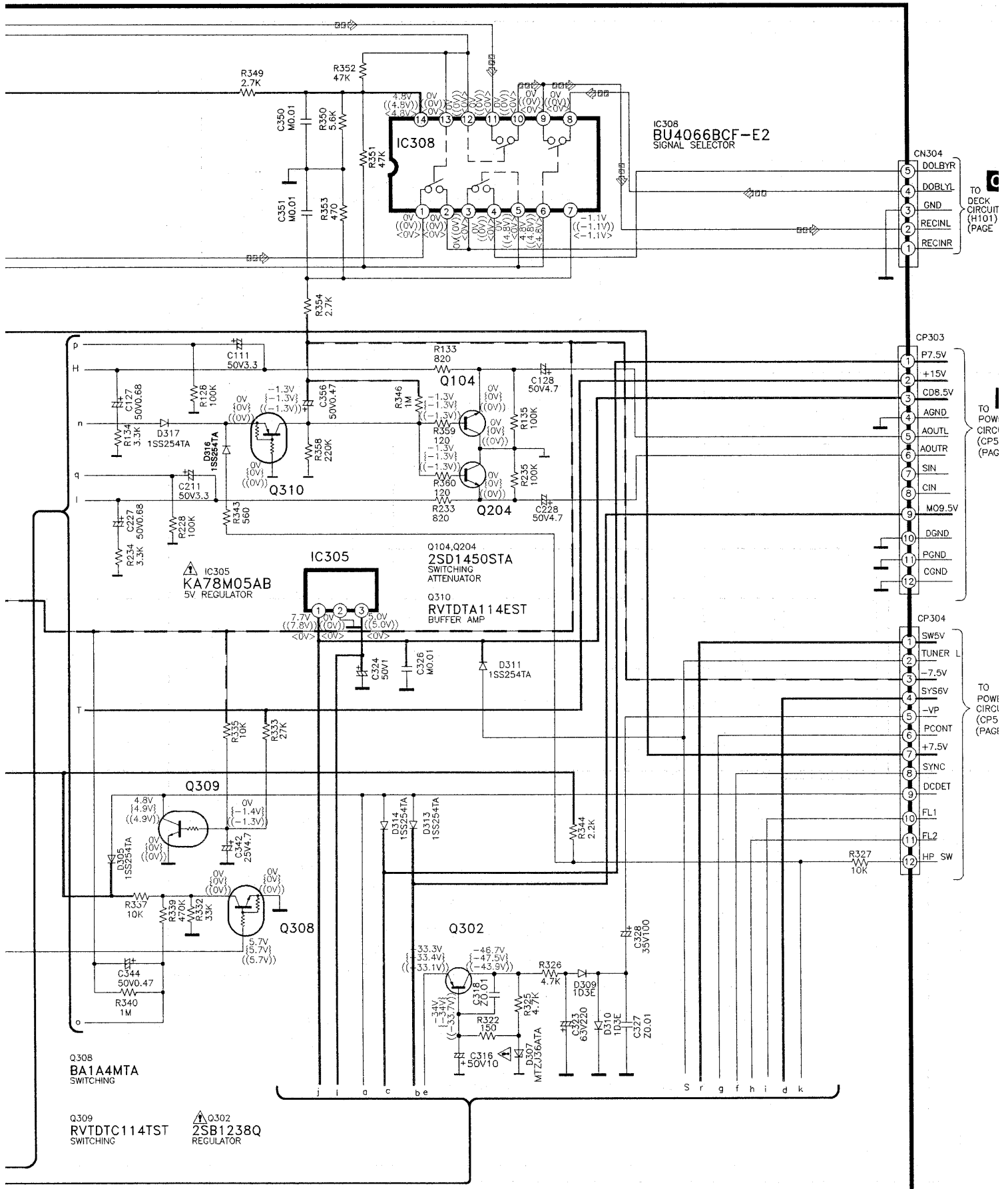




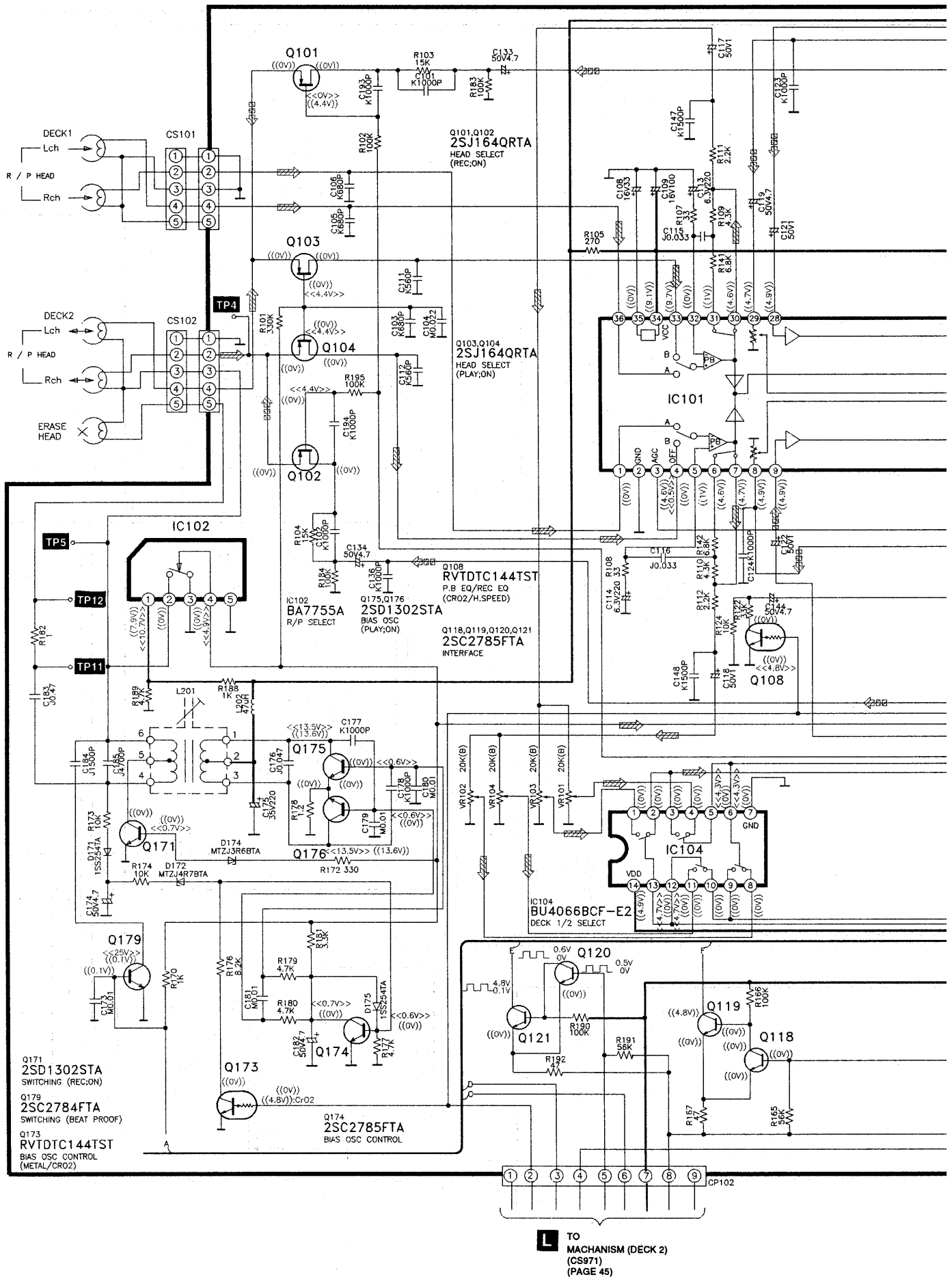


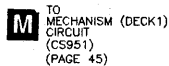
B MAIN CIRCUIT

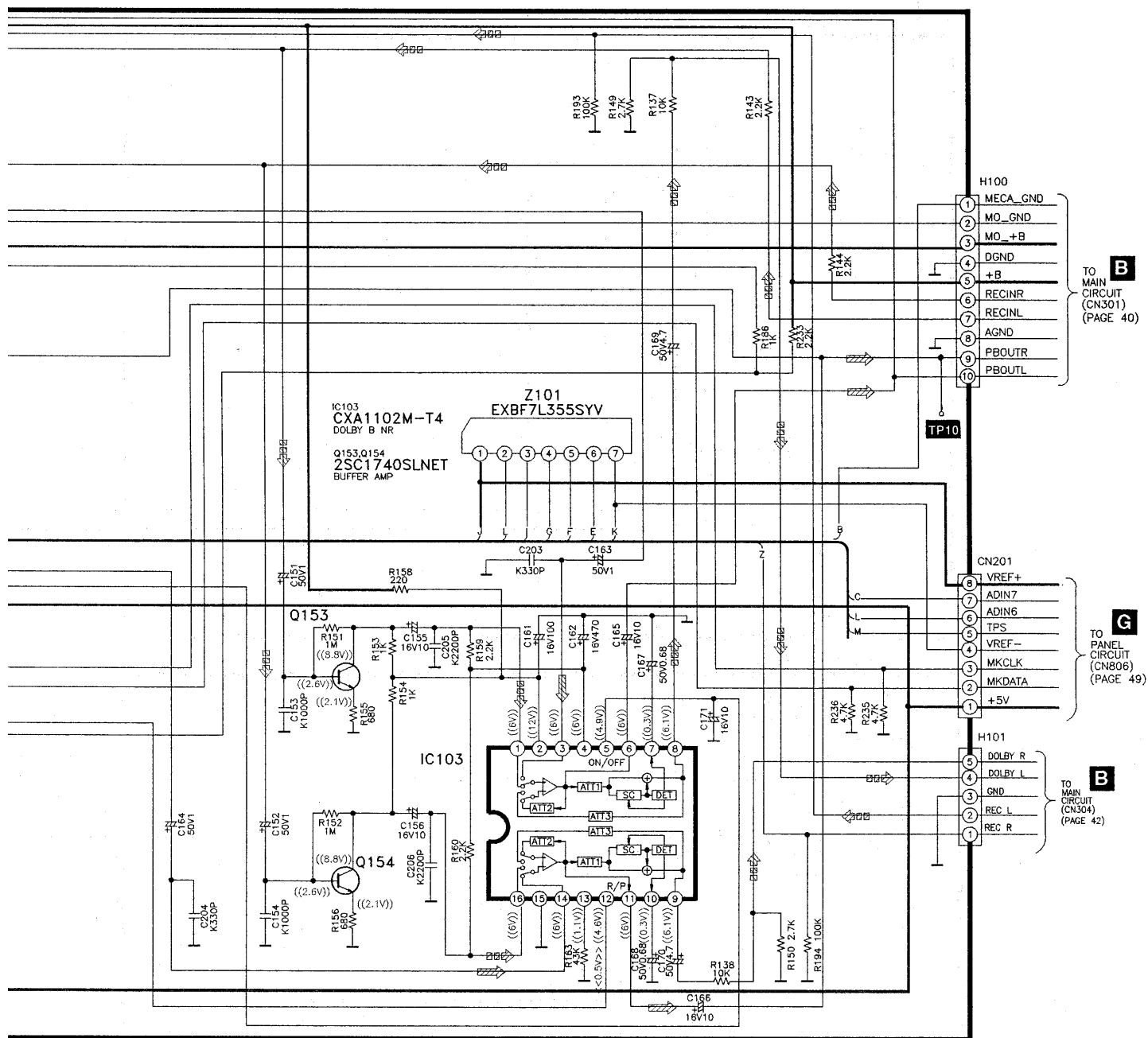




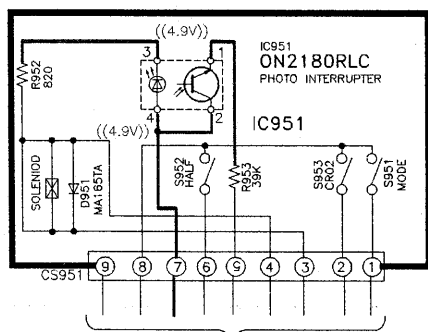
C DECK CIRCUIT





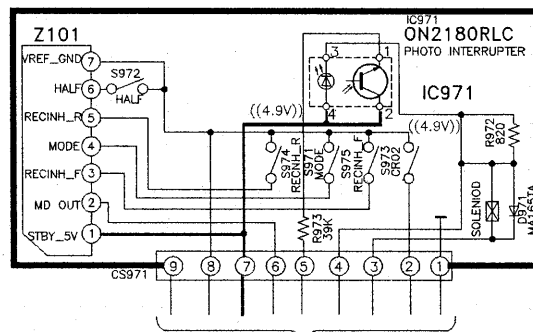


M MECHANISM (DECK 1)
CIRCUIT



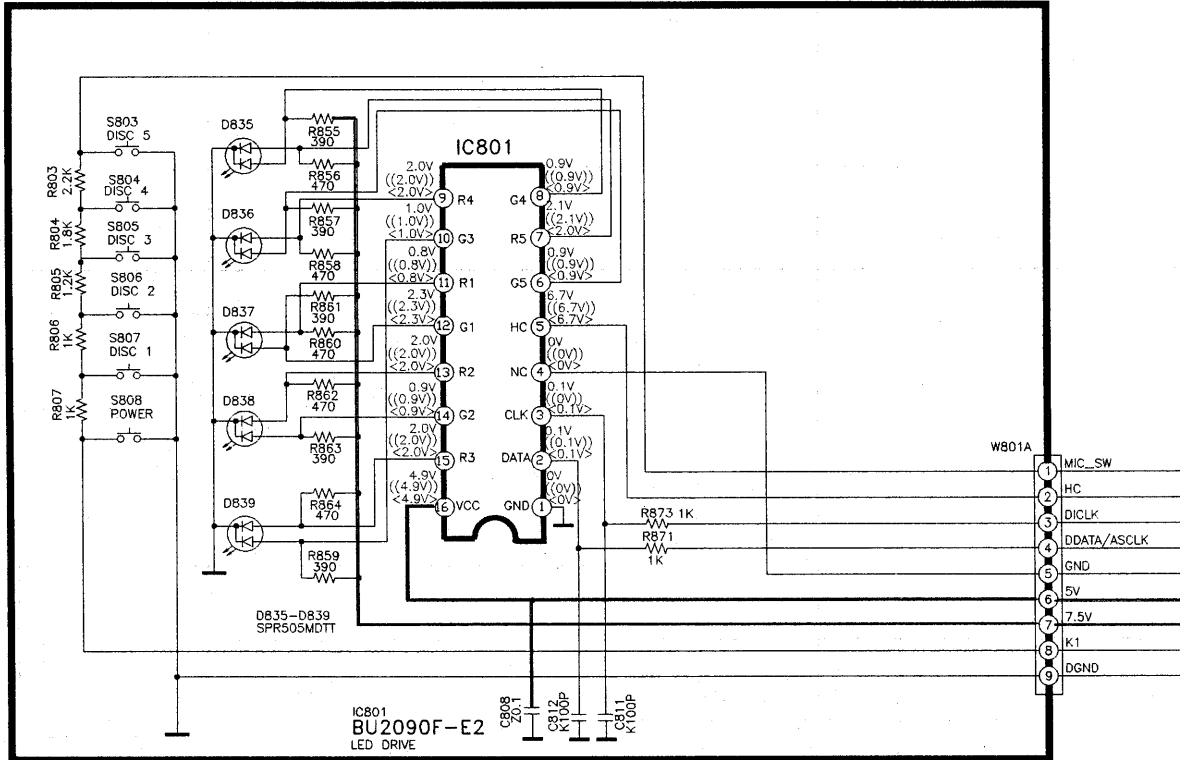
C TO
DECK CIRCUIT
(CP101)
(PAGE 44)

L MECHANISM (DECK 2)
CIRCUIT

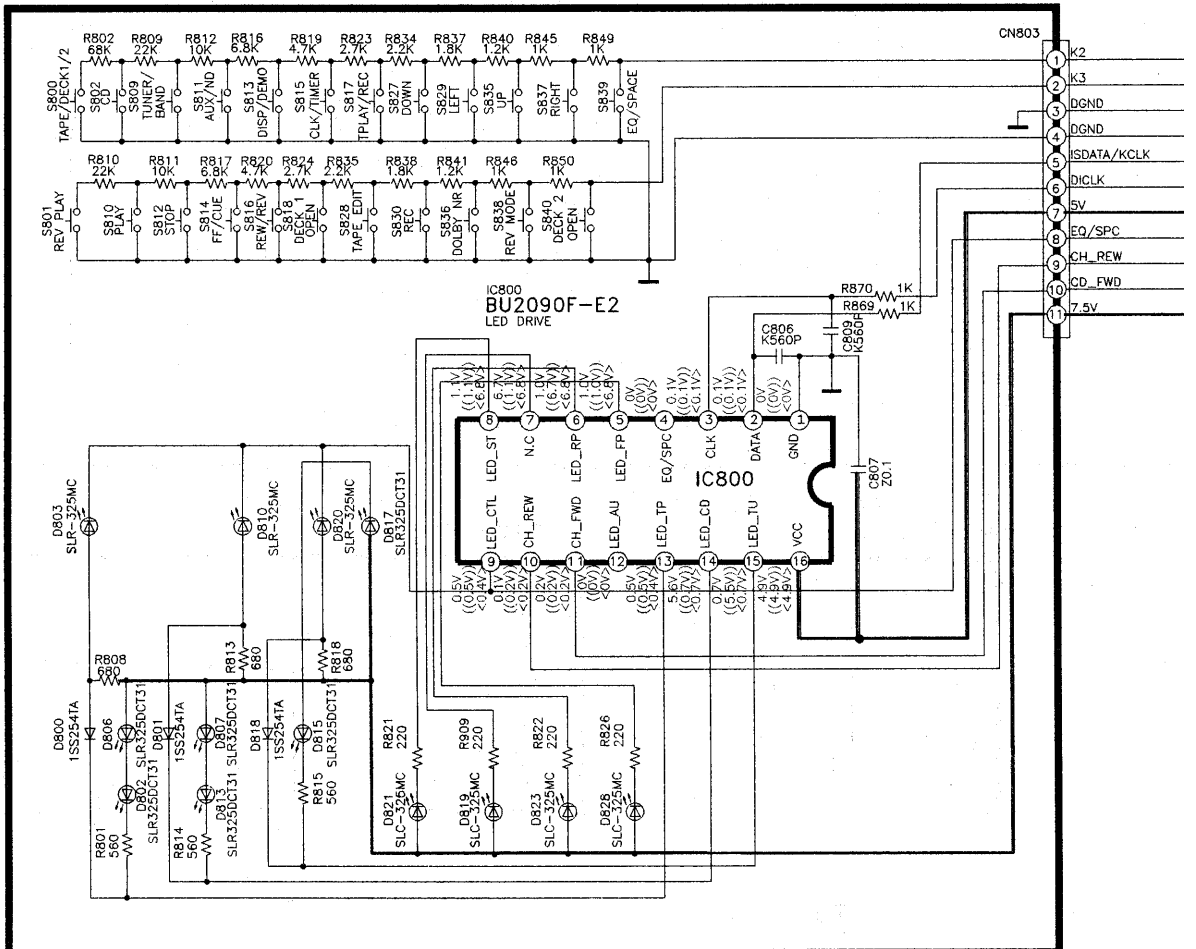


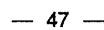
C TO
DECK CIRCUIT
(CP102)
(PAGE 43)

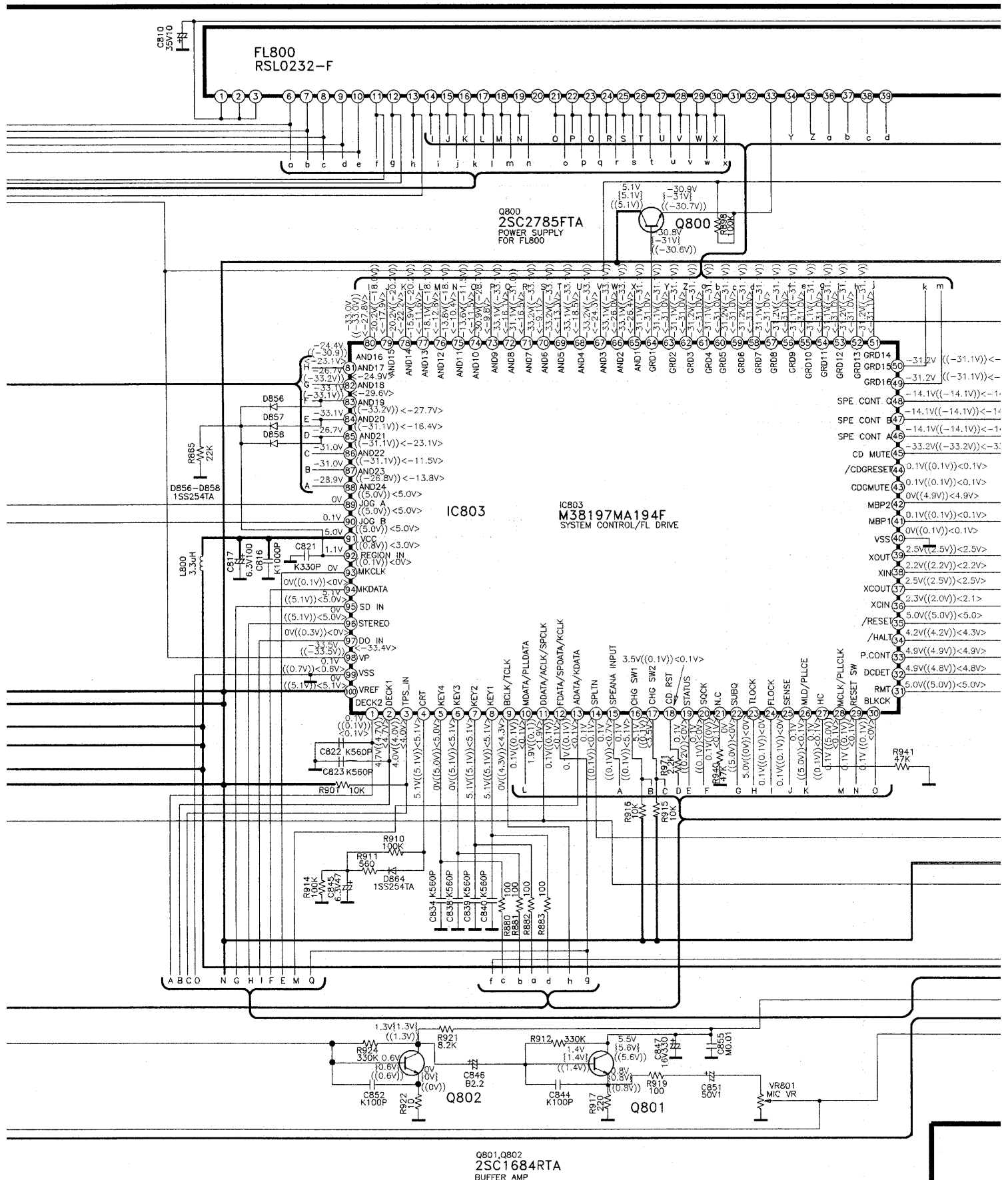
D LED CIRCUIT



E OPERATION CIRCUIT



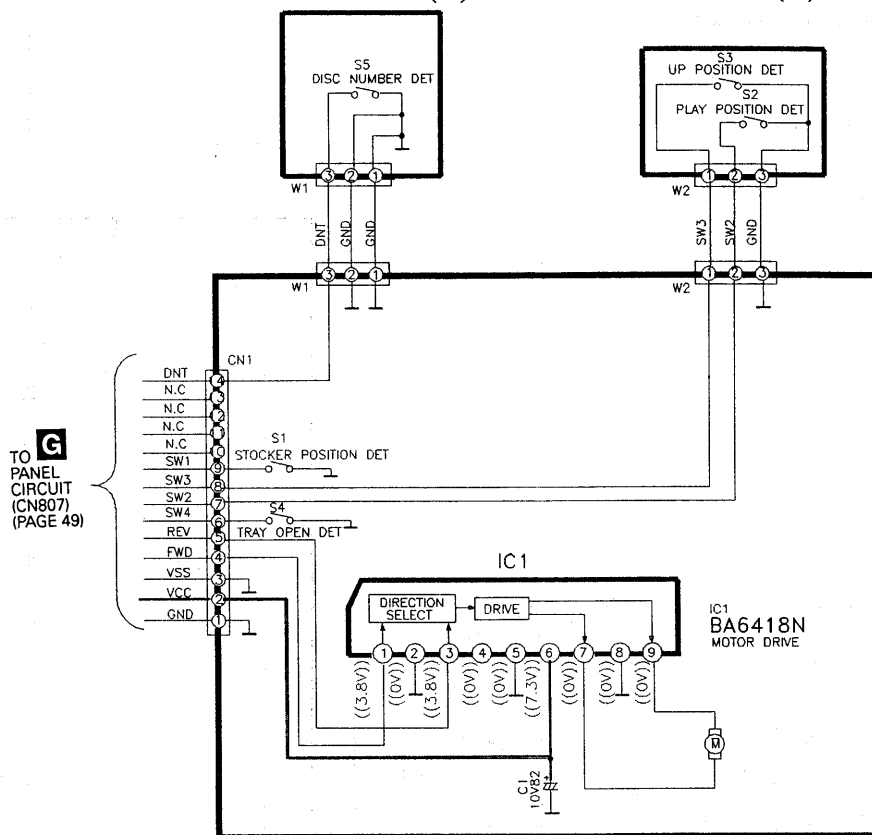






I DETECTING
SWITCH (1) CIRCUIT

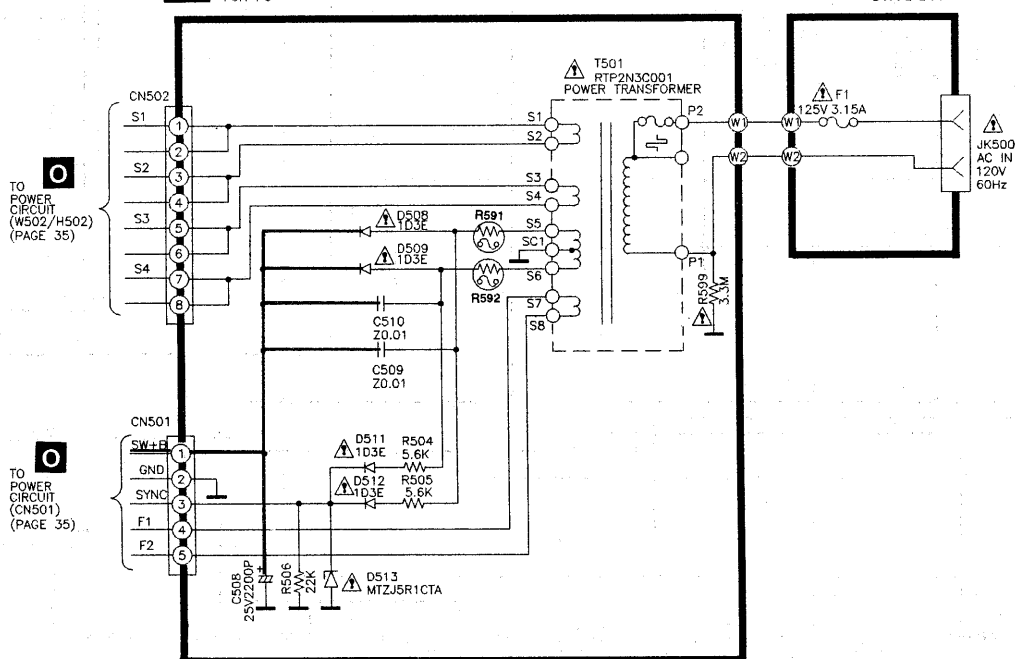
J DETECTING
SWITCH (2) CIRCUIT



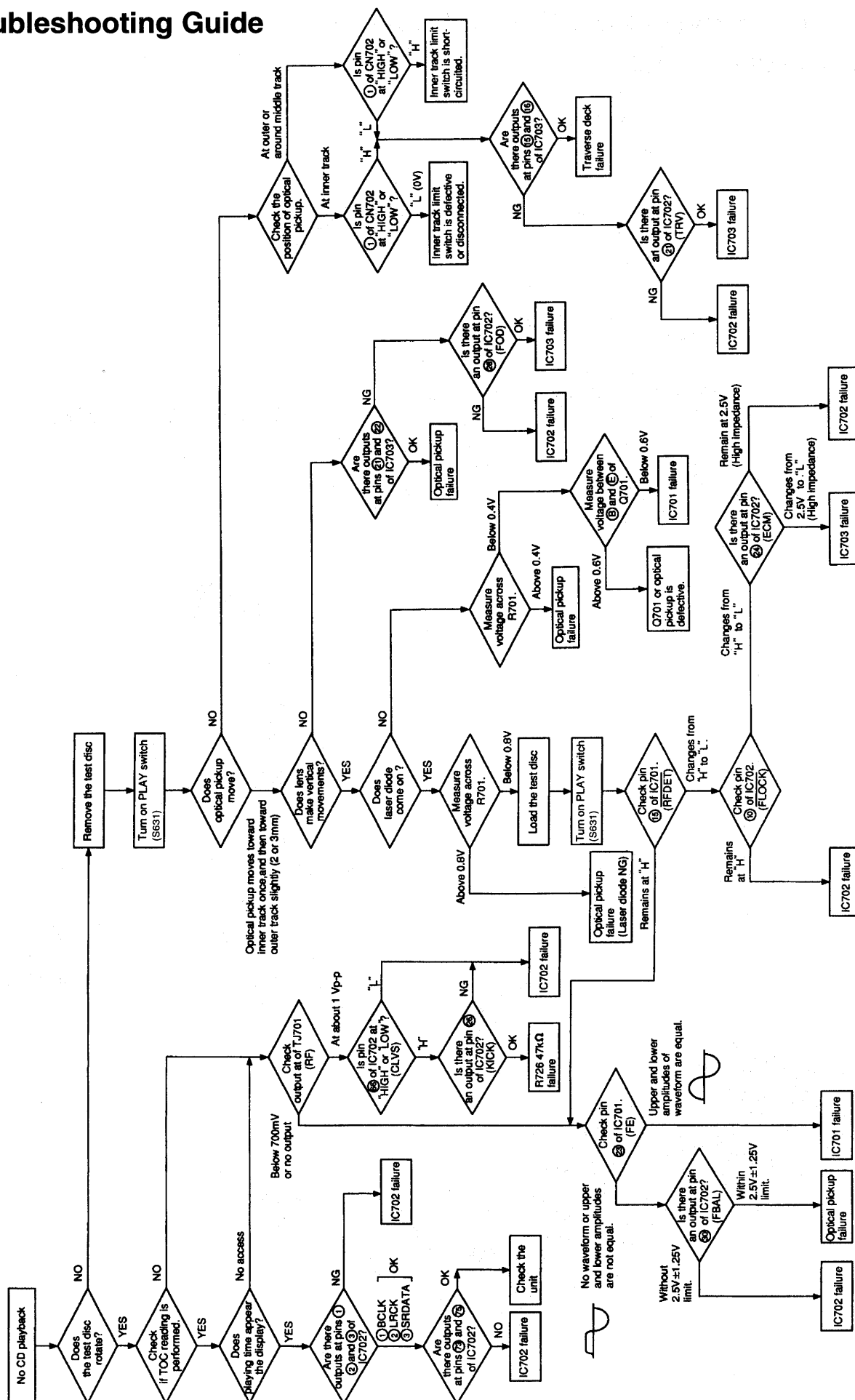
K LOADING MOTOR CIRCUIT

F TRANSFORMER CIRCUIT
FOR PC

P AC IN
CIRCUIT



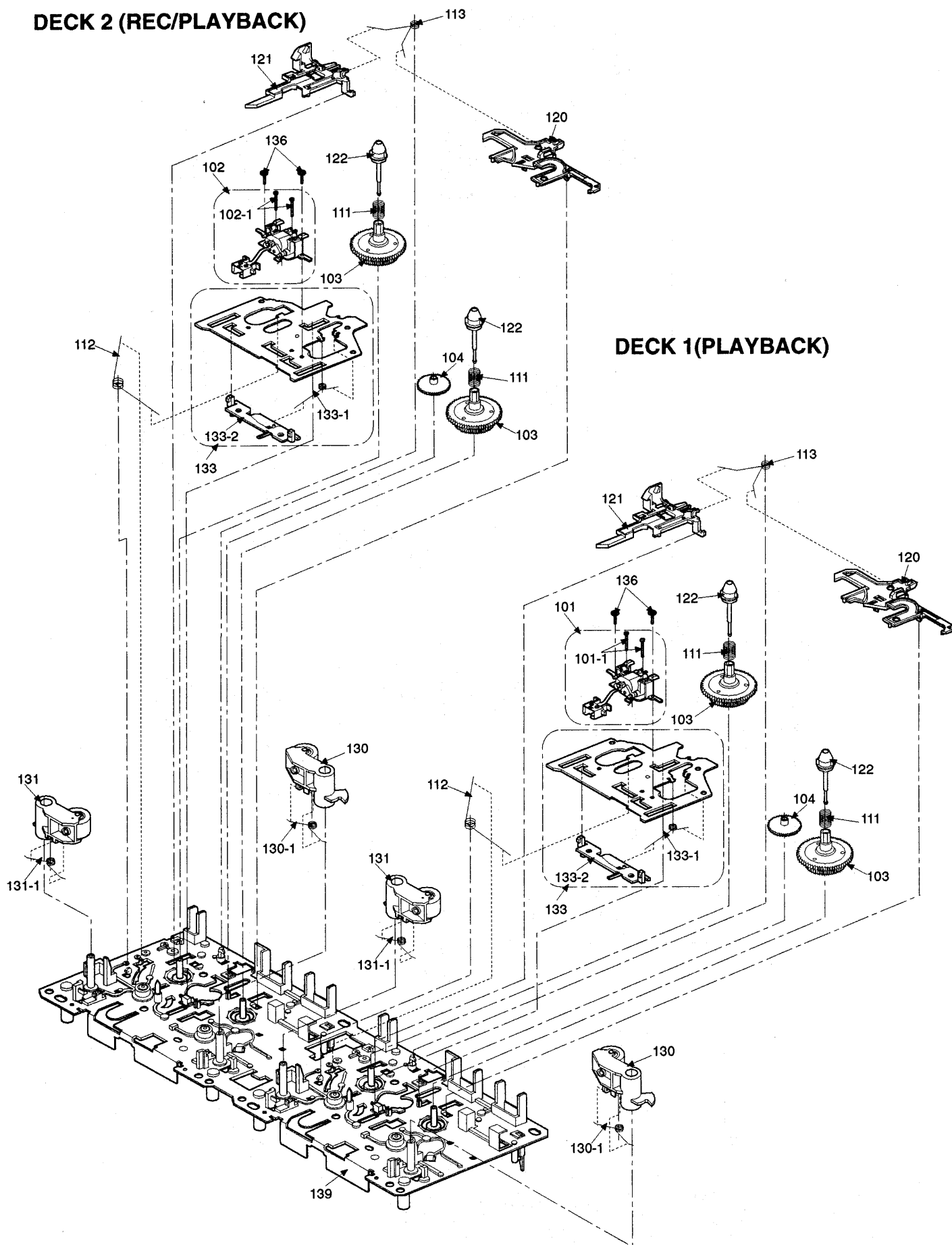
Troubleshooting Guide

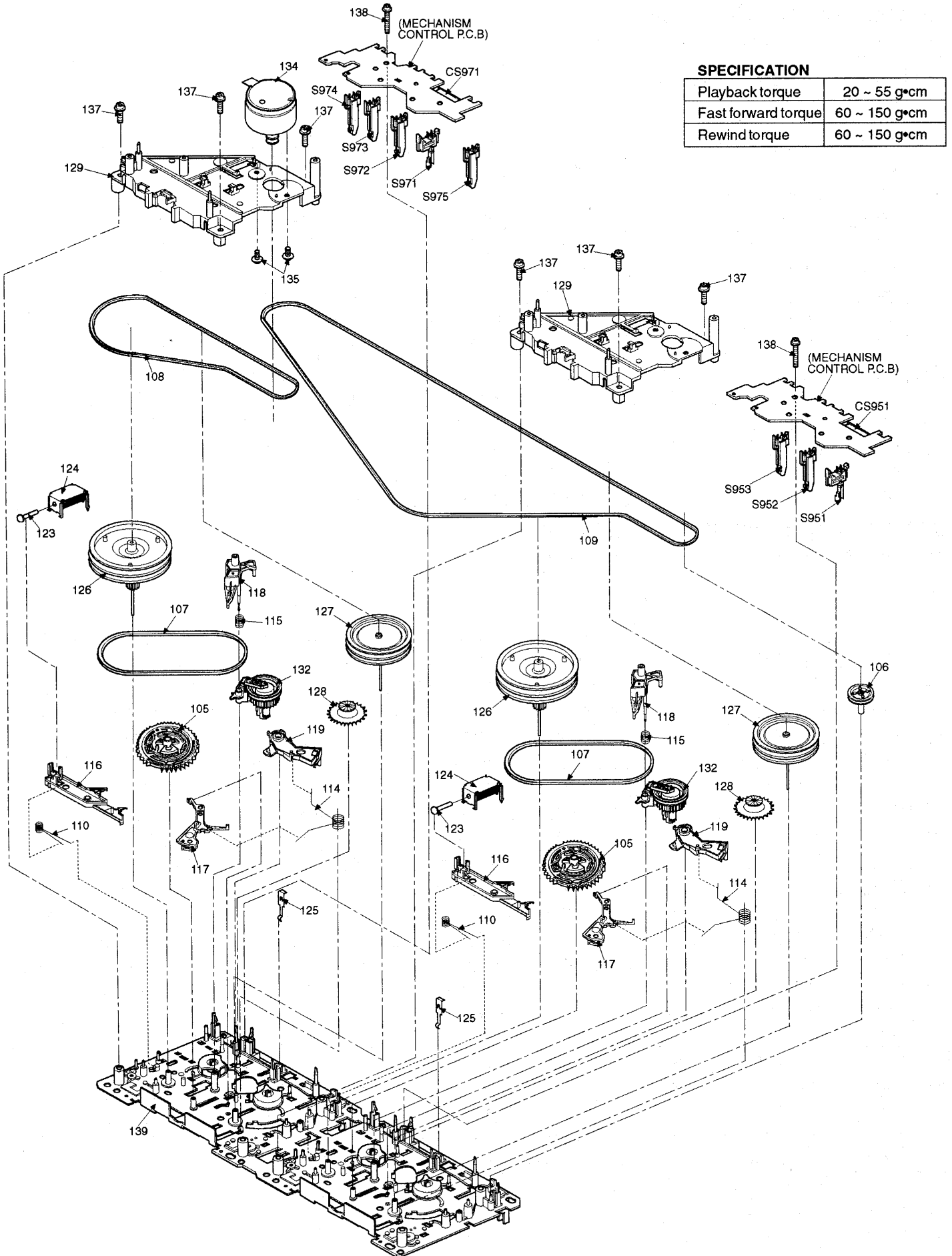


Mechanism Parts Location (RAA3404)

DECK 2 (REC/PLAYBACK)

DECK 1 (PLAYBACK)

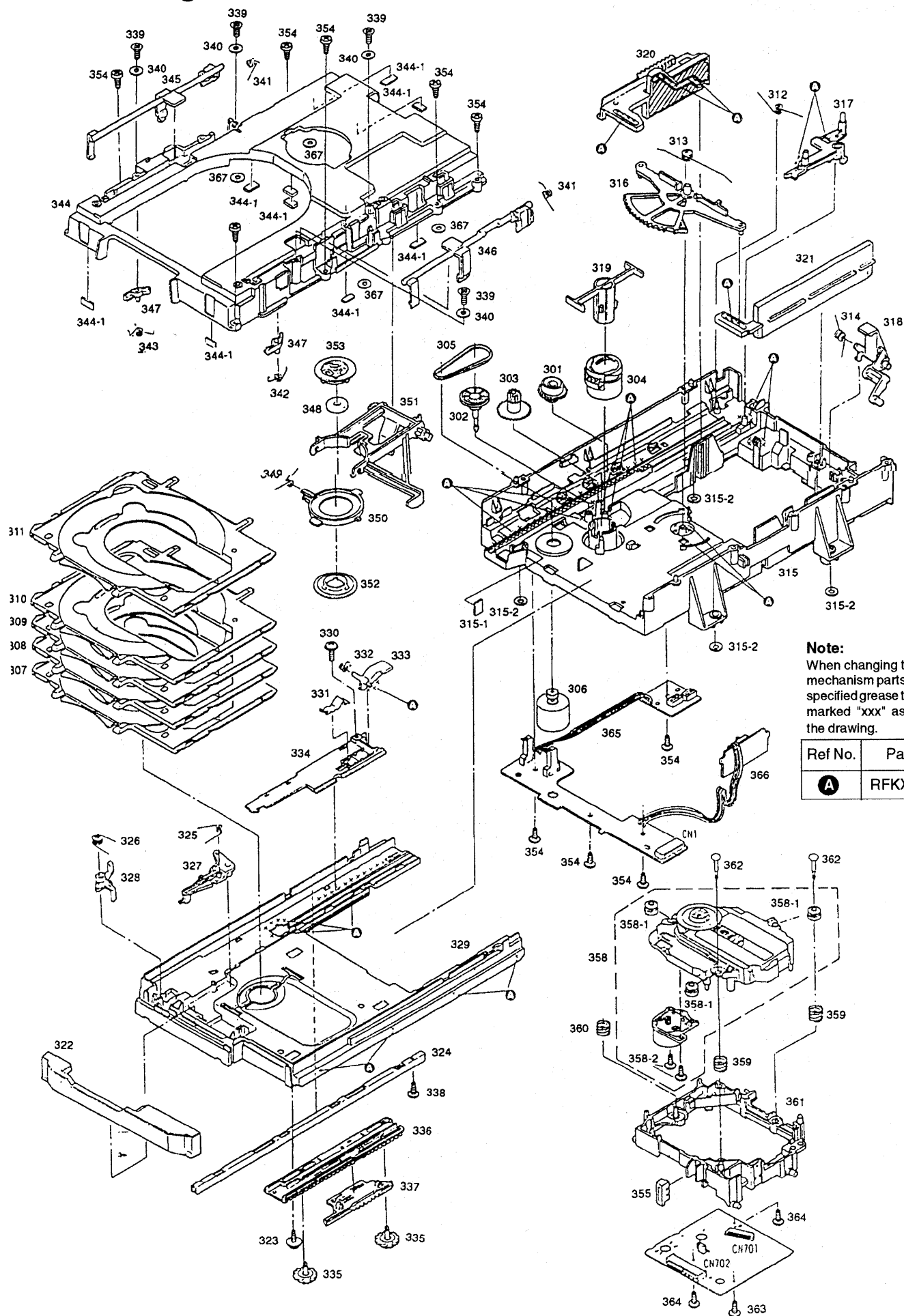




SPECIFICATION

Playback torque	20 ~ 55 g•cm
Fast forward torque	60 ~ 150 g•cm
Rewind torque	60 ~ 150 g•cm

■ CD Loading Unit Parts Location



■ Cabinet Parts Location

