ORDER NO. MD9801004C3

Service Manual

COMPACT disc DIGITAL AUDIO

MASH*1 multi-stage noise shaping

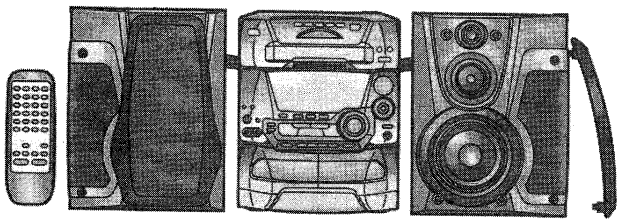
*2 DOLBY B NR

CD Stereo System

SA-AK45

Colour

(S) ... Silver Type



Remote Control Transmitter | SB-AK45 | SA-AK45 | SB-AK45

Area

Suffix for Model No.	Area	Colour
(GC)	Asia, Latin America, Africa and Middle Near East	(S)
(GT)	Taiwan	
(GN)	Oceania	

System	Music Center	Speaker
SC-AK45 (GC)	SA-AK45 (GC)	SB-AK45 (GC)
SC-AK45 (GT)	SA-AK45 (GT)	
SC-AK45 (GN)	SA-AK45 (GN)	

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

*1 MASH is a trademark of NTT.

TAPE SECTION : AR2 MECHANISM SERIES
CD SECTION : RAE0152Z-M TRAVERSE DECK SERIES

■ Specifications

■ Amplifier Section

PMPO (For areas except GN)	1800W (6Ω)
RMS power output	
(For areas except GN)	
THD 10%, both channels driven	90W per channel (6Ω)
(For area GN only)	
THD 10%, both channels driven	100W per channel (6Ω)
(For area GN only)	
1 kHz continuous power output	
THD 1%, both channels driven (DIN)	70W per channel (6Ω)
Input sensitivity and impedance	
AUX	250mV,10KΩ
MIC (for areas GC, GT only)	0.7mV, 600Ω

■ Cassette Deck Section

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase
Tape speed	4.8 cm/s
Frequency response (+3, -6 dB at DECK OUT)	
NORMAL (TYPE I)	35 Hz – 14 kHz
HIGH (TYPE II)	35 Hz – 14 kHz
S/N	
Dolby NR off	50dB(A weighted)
Dolby NR on	60dB(CCIR)
Wow and flutter	0.18 % (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

■ FM Tuner Section

Frequency range	87.5 – 108.0 MHz (50 kHz steps)
Sensitivity	
S/N 26dB	1.5 µV
Antenna terminal(s)	75 Ω (unbalanced)

■ AM Tuner Section

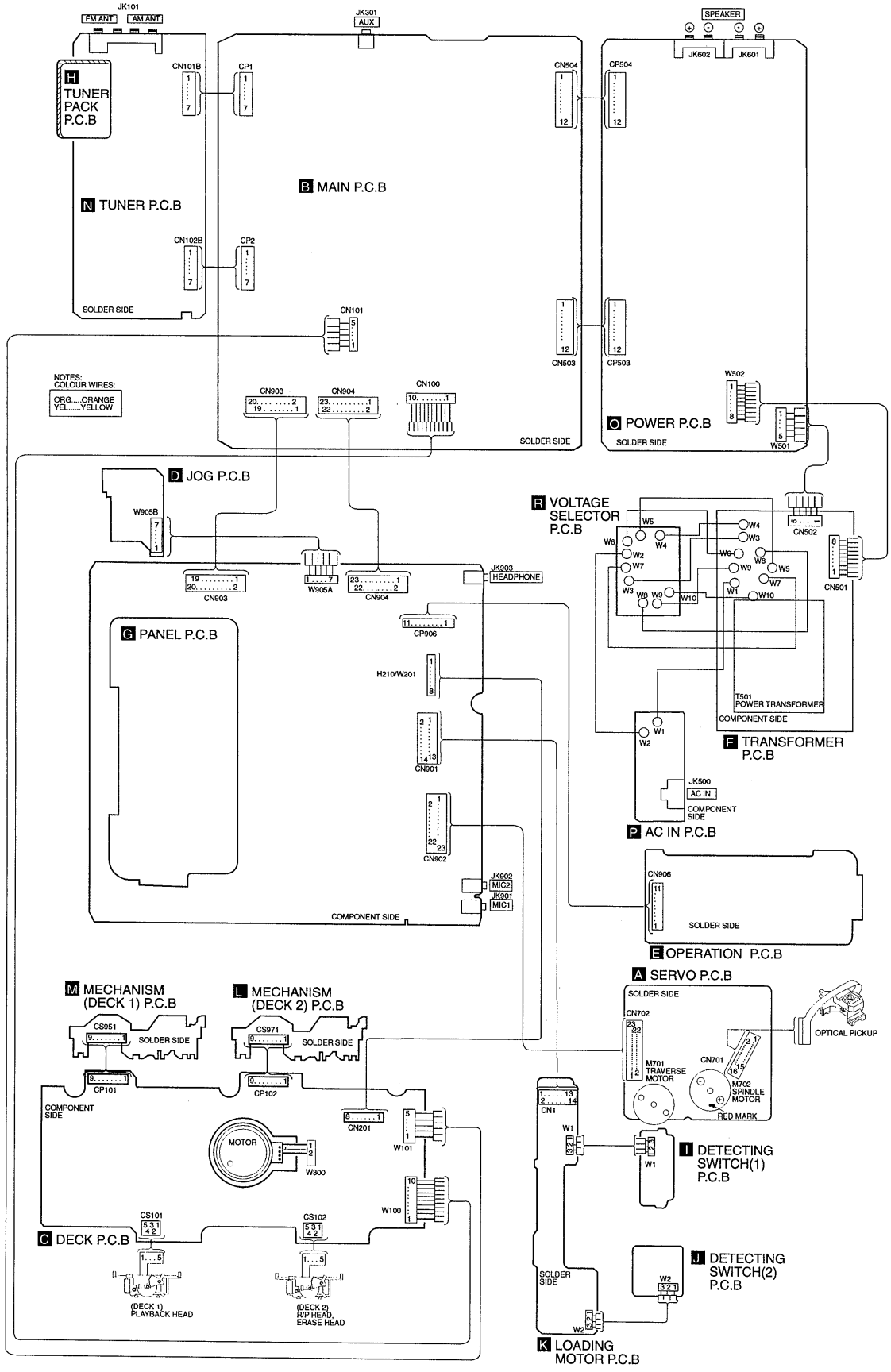
Frequency range	
AM(MW)	
	522 – 1629 kHz (9kHz/Step)
(For areas GC, GT only)	520 – 1630 kHz (10kHz/Step)
SW	
(For area GC only)	
	3.20 – 7.35 MHz (0.005 MHz/Step)
	9.40 – 21.75 MHz (0.005 MHz/Step)
Sensitivity	
AM(MW)	
S/N 20 dB	500 µV/m
SW (For area GC only)	
S/N 20 dB (at 5.3 MHz)	35.5 µV
S/N 20 dB (at 15.7 MHz)	31.6 µV

Notes :

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

Panasonic®

■ Wiring Connection Diagram



■ Terminal Guide of IC's, Transistors and Diodes

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 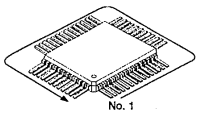 </td>
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 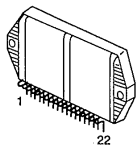 </td>
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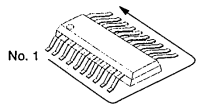
BU2040F-E2 (16P) LA1833M-TLM (24P)
BU2090F-E2 (16P) LC72131MDTRM (20P)
M5228FPE1 (14P) BU9255FS-E2 (16P)
M51167BFP-TB (36P)
  </td>
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 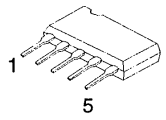 </td>
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 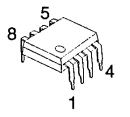 </td>
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 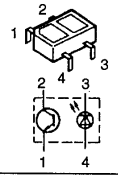 </td>
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 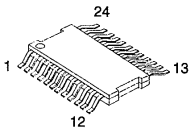 </td>
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 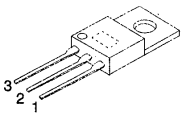 </td>
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 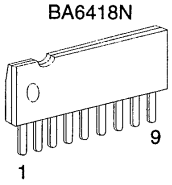 </td>
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 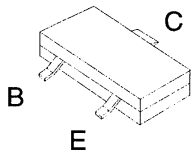 </td>
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 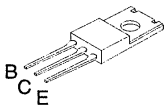 </td>
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 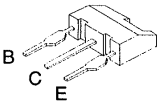 </td>
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 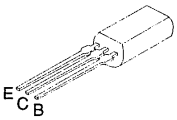 </td>
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 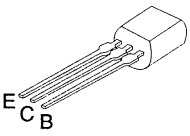 </td>
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 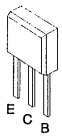 </td>
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 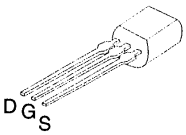 </td>
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 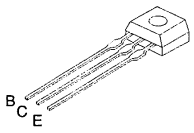 </td>
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 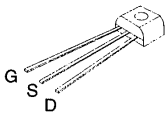 </td>
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 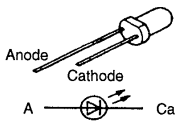 </td>
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 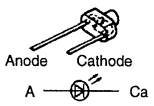 </td>
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 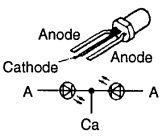 </td>
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 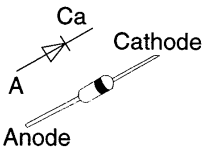 </td>
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 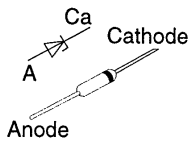 </td>
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 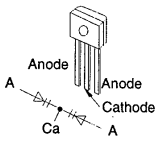 </td>
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 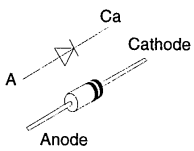 </td>
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 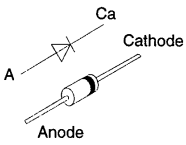 </td>
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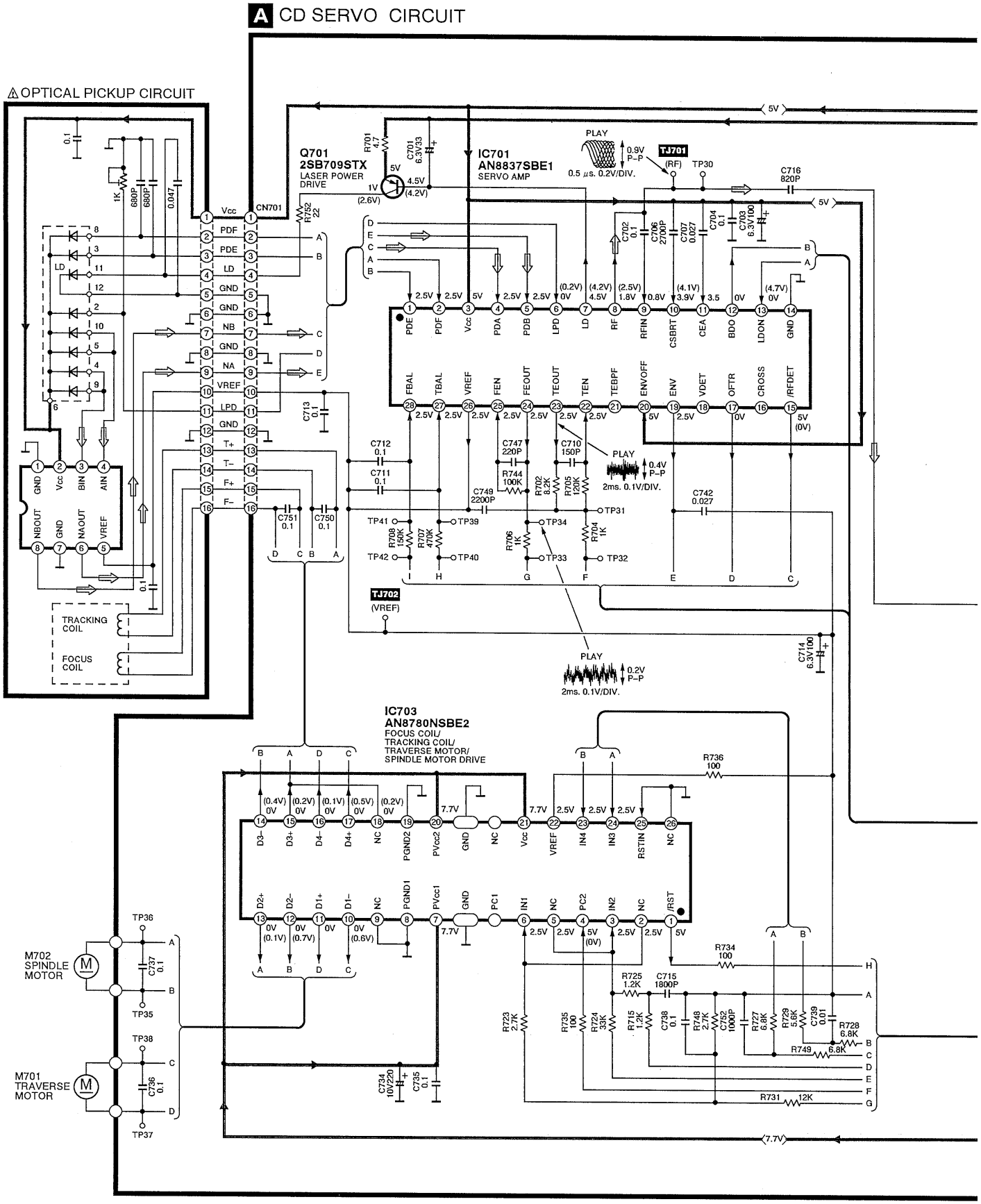
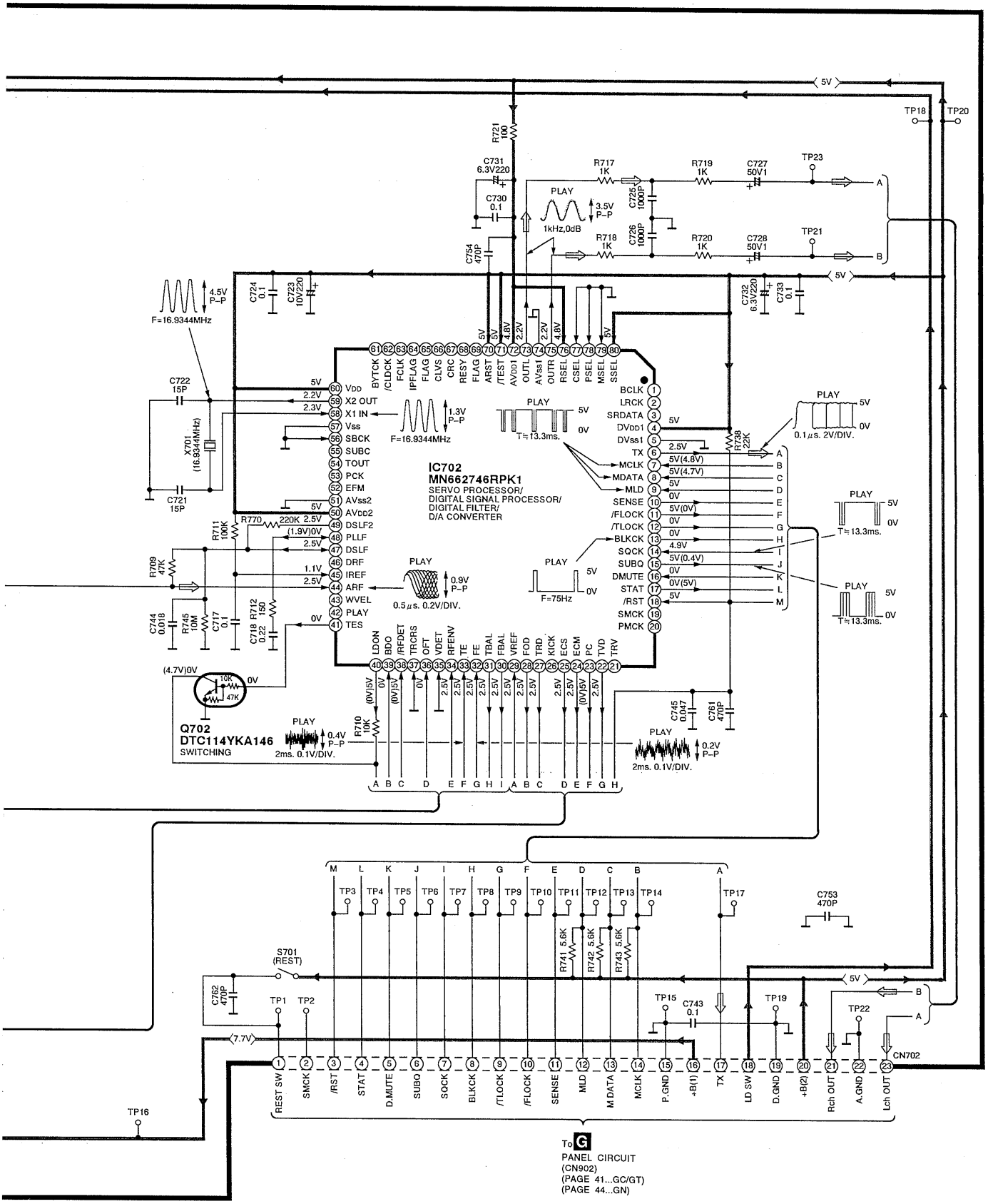
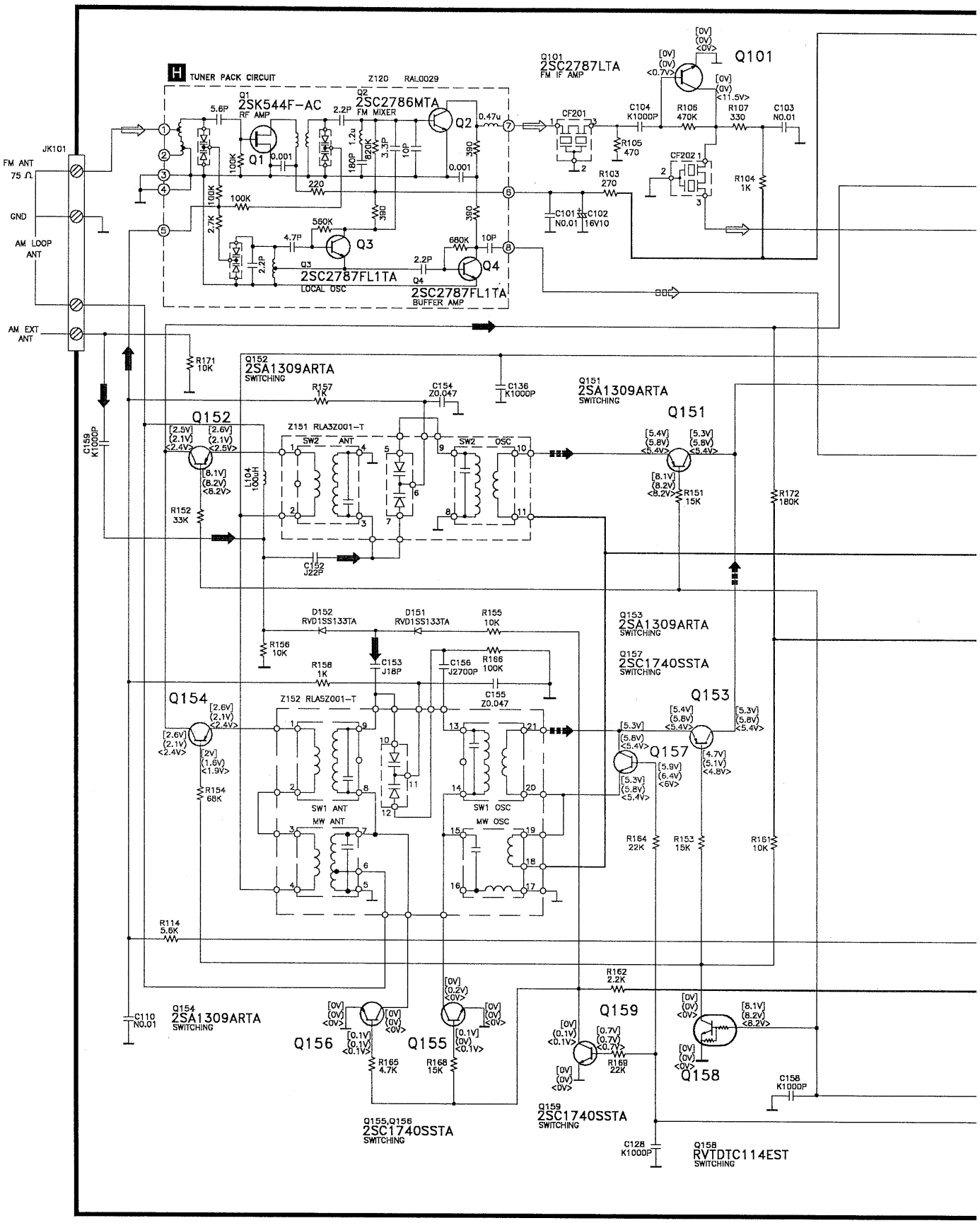
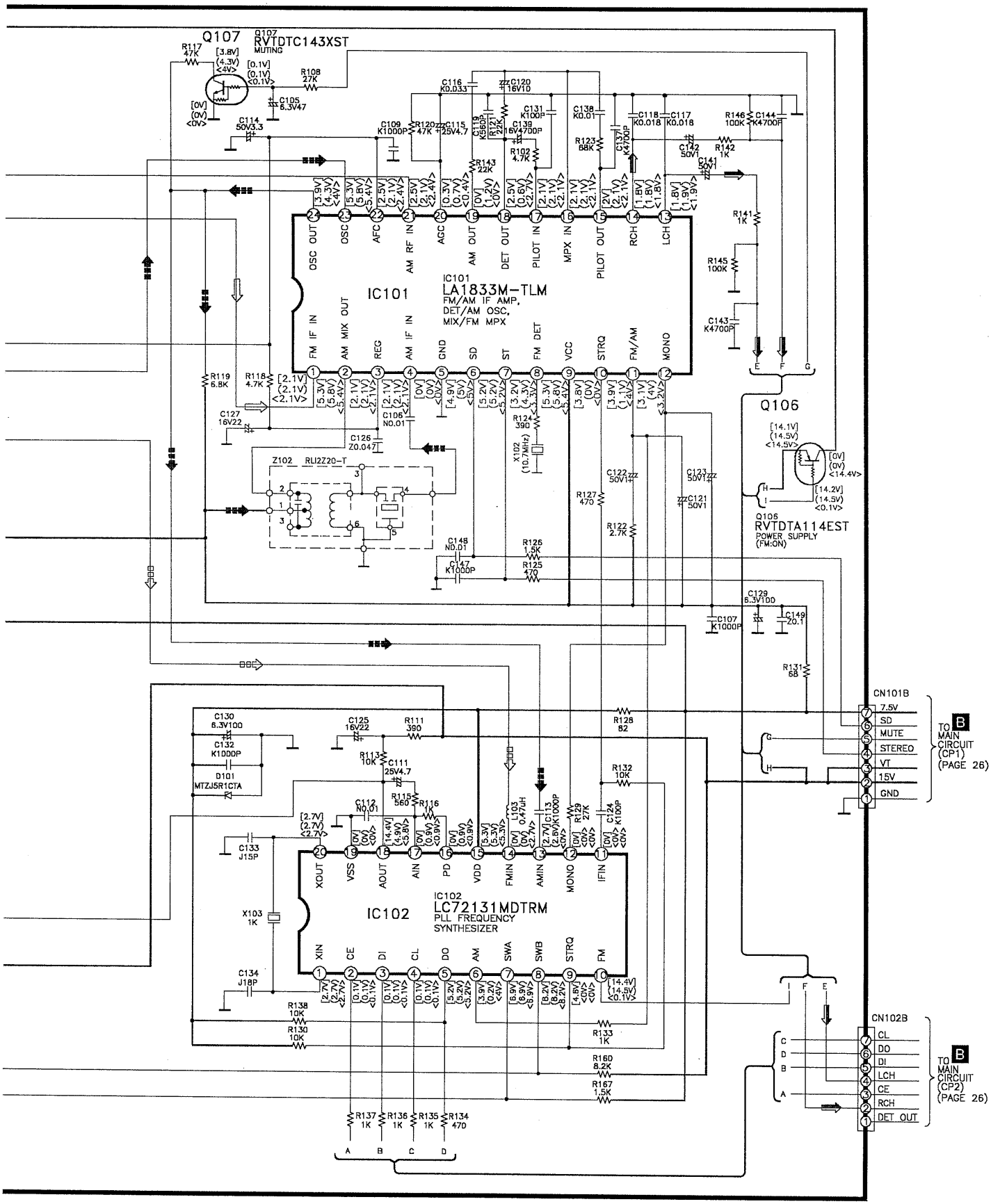
■ Schematic Diagram



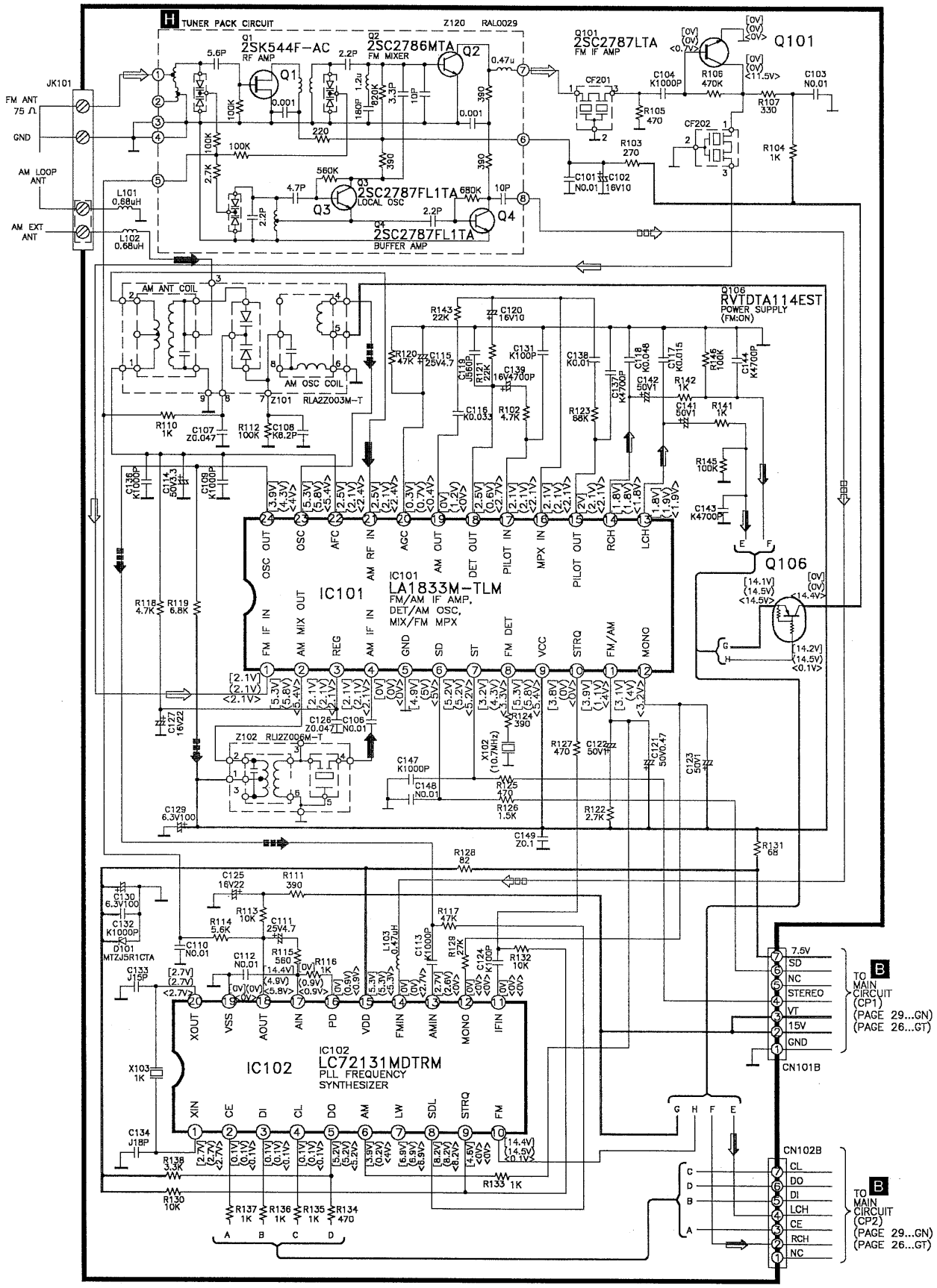

IC702
MN662746RPK1
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
Q702
DTC114YKA146
SWITCHING
S701
(REST)
X701
(16.9344MHz)
F=16.9344MHz
1kHz,0dB
F=75Hz
REST SW
SMCK
/RST
STAT
D.MUTE
SUBQ
SCOCK
BLKCK
/TLOCK
/FLOCK
SENSE
MLD
M.DATA
MCLK
P.GND
+B(1)
TX
LD SW
D.GND
+B(2)
Rch OUT
A.GND
Lch OUT
CN702
To G
PANEL CIRCUIT
(CN902)
(PAGE 41...GC/GT)
(PAGE 44...GN)

N TUNER CIRCUIT
FOR GC ONLY

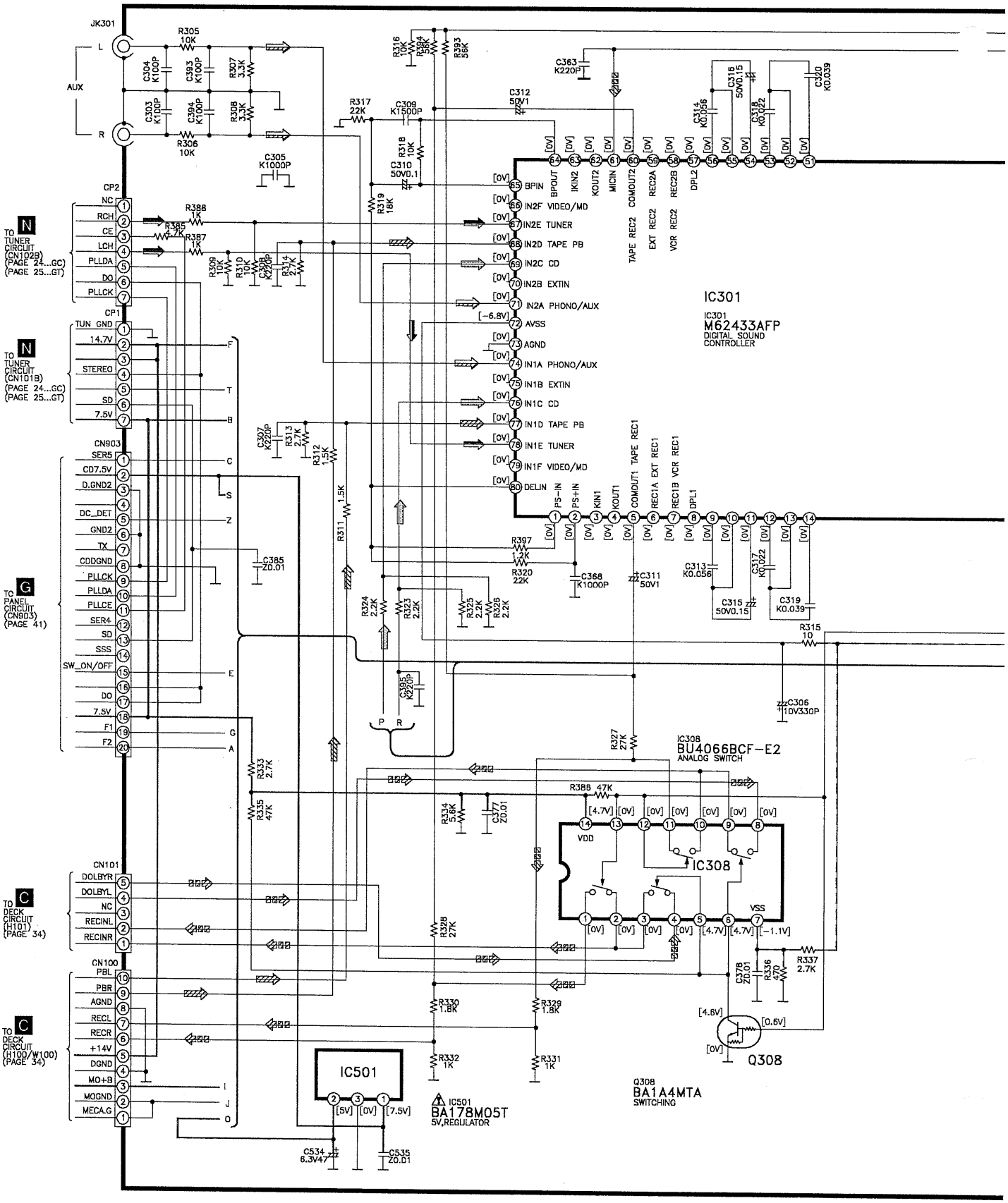


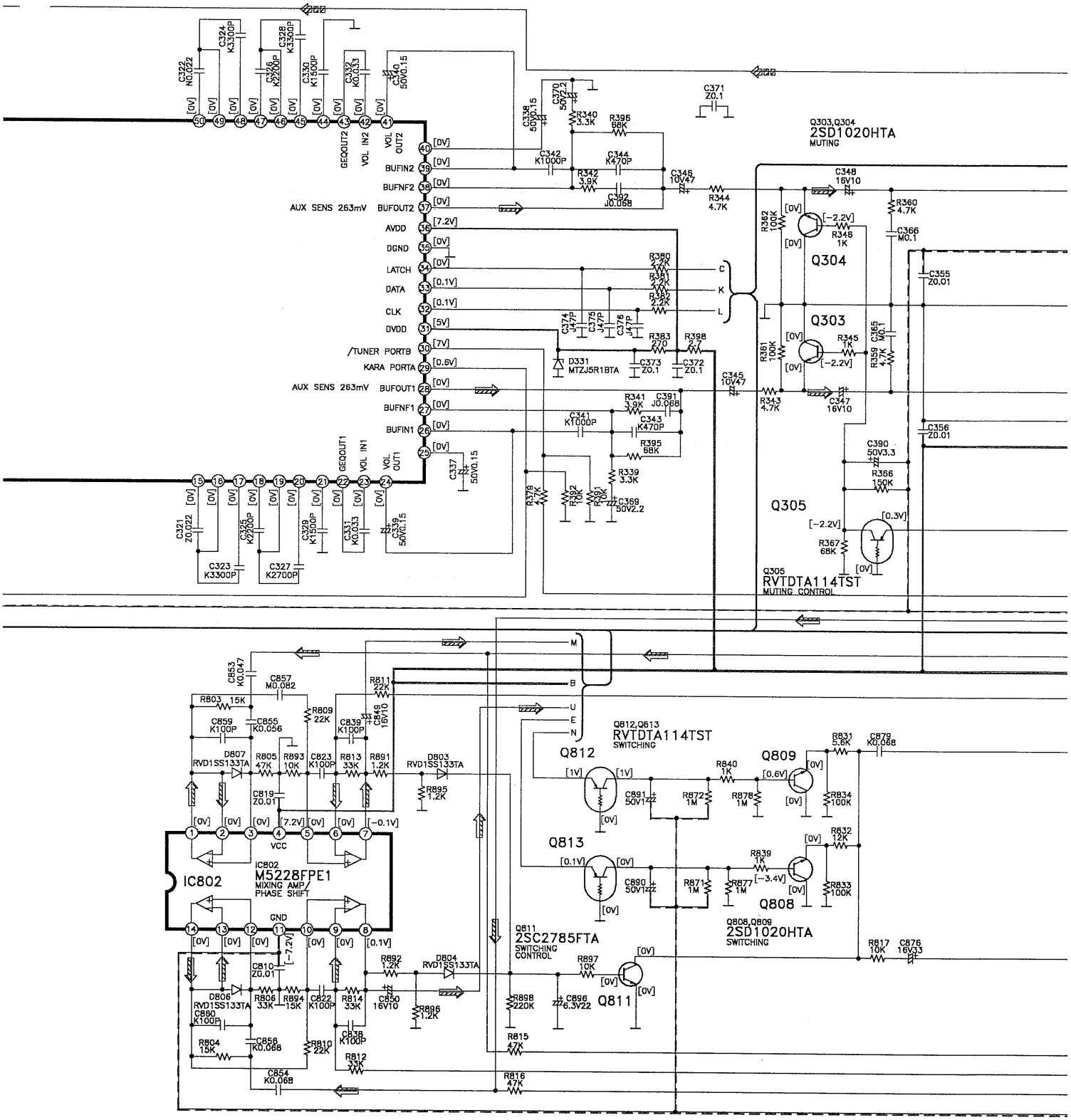

Q107
Q107
RVTDTC143XST
MUTING
IC101
IC101
LA1833M-TLM
FM/AM IF AMP,
DET/AM OSC,
MIX/FM MPX
IC102
IC102
LC72131MDTRM
PLL FREQUENCY
SYNTHESIZER
Q106
Q106
RVTDTA114EST
POWER SUPPLY
(FM:ON)
Z102 RLI2Z20-T
CN101B
7.5V
SD
MUTE
STEREO
VT
15V
GND
TO B MAIN CIRCUIT (CP1) (PAGE 26)
CN102B
CL
DO
DI
LCH
CE
RCH
DET OUT
TO B MAIN CIRCUIT (CP2) (PAGE 26)

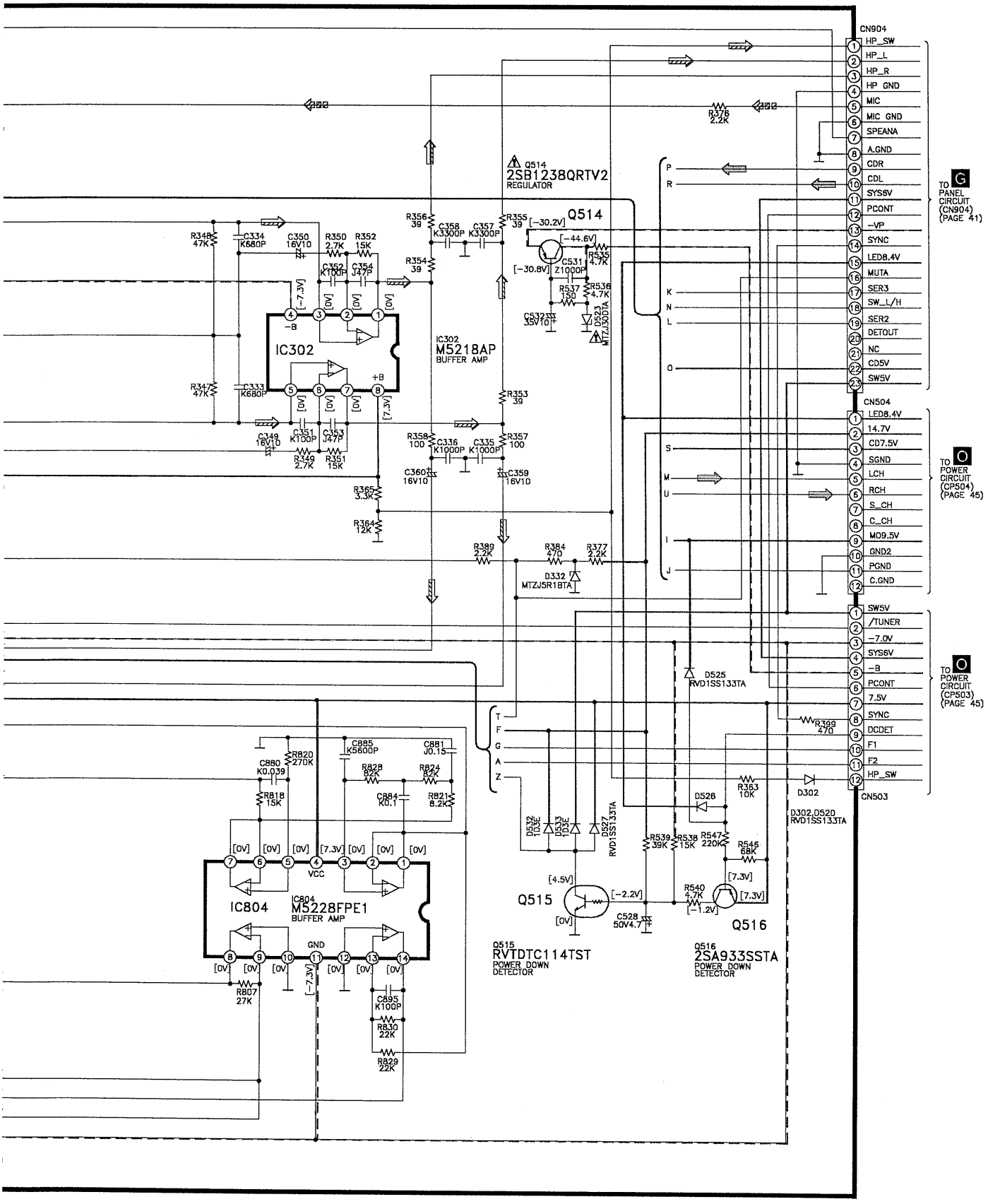
N TUNER CIRCUIT
FOR GN/GT ONLY



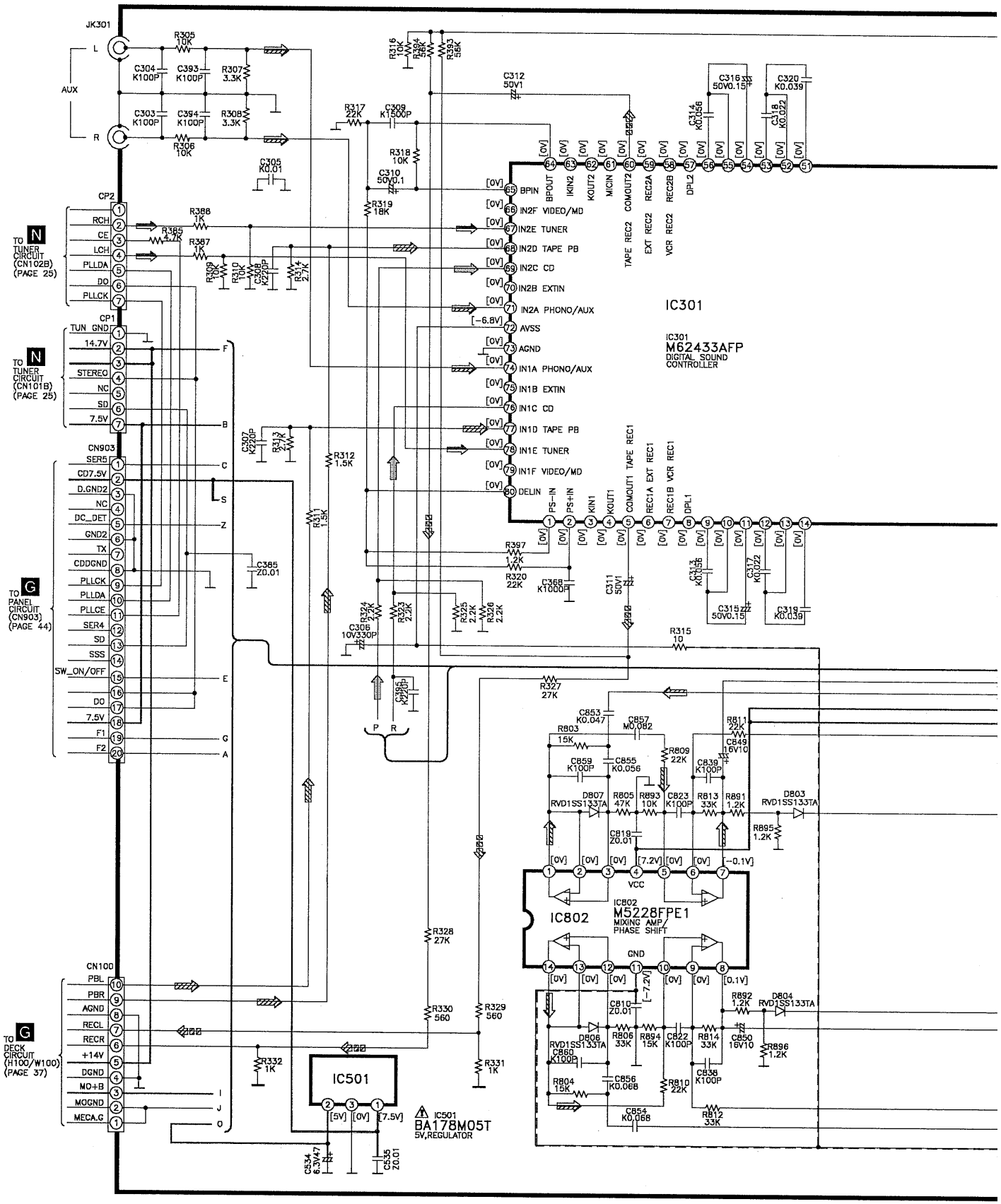
B MAIN CIRCUIT
FOR GC/GT ONLY

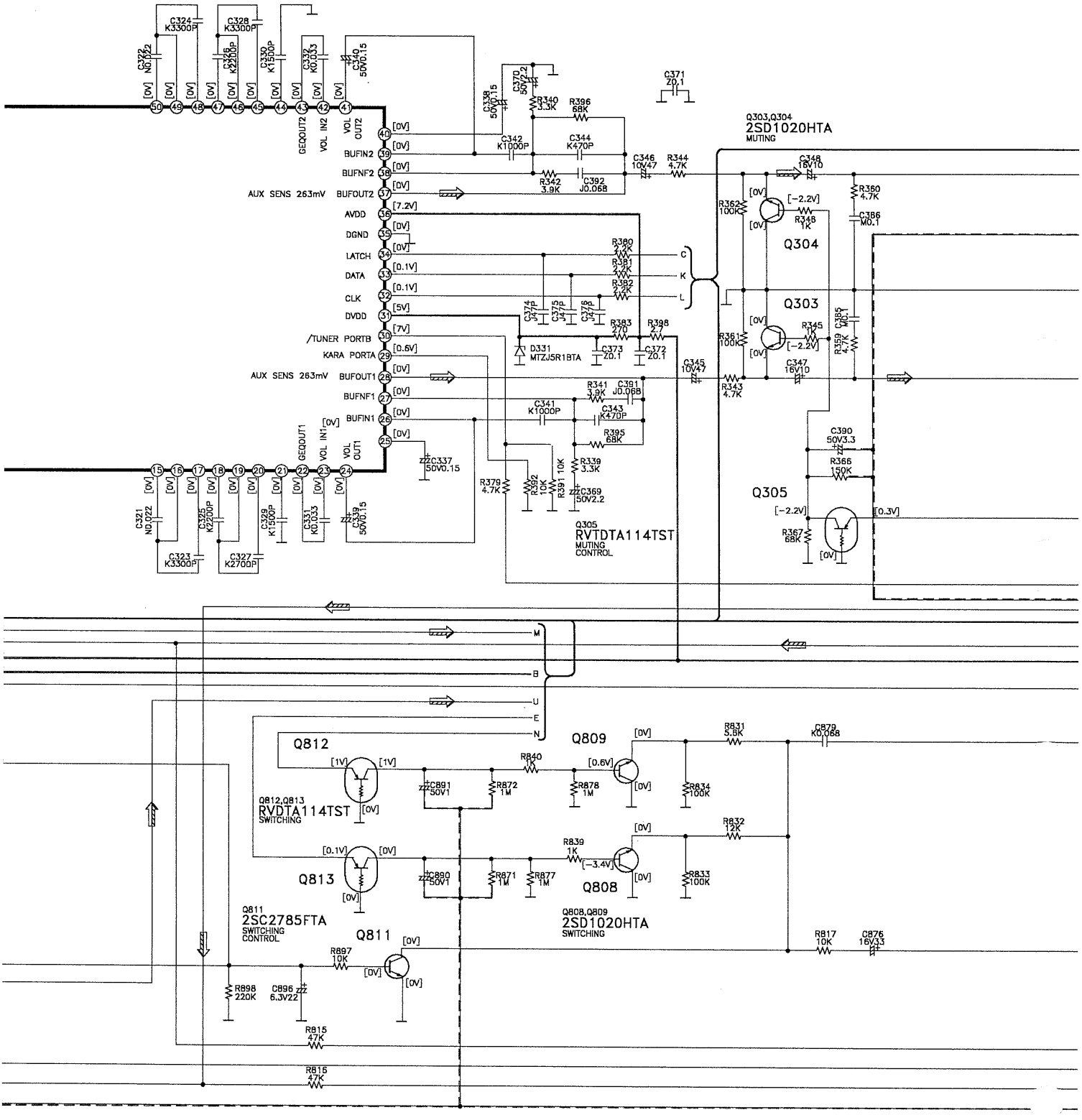


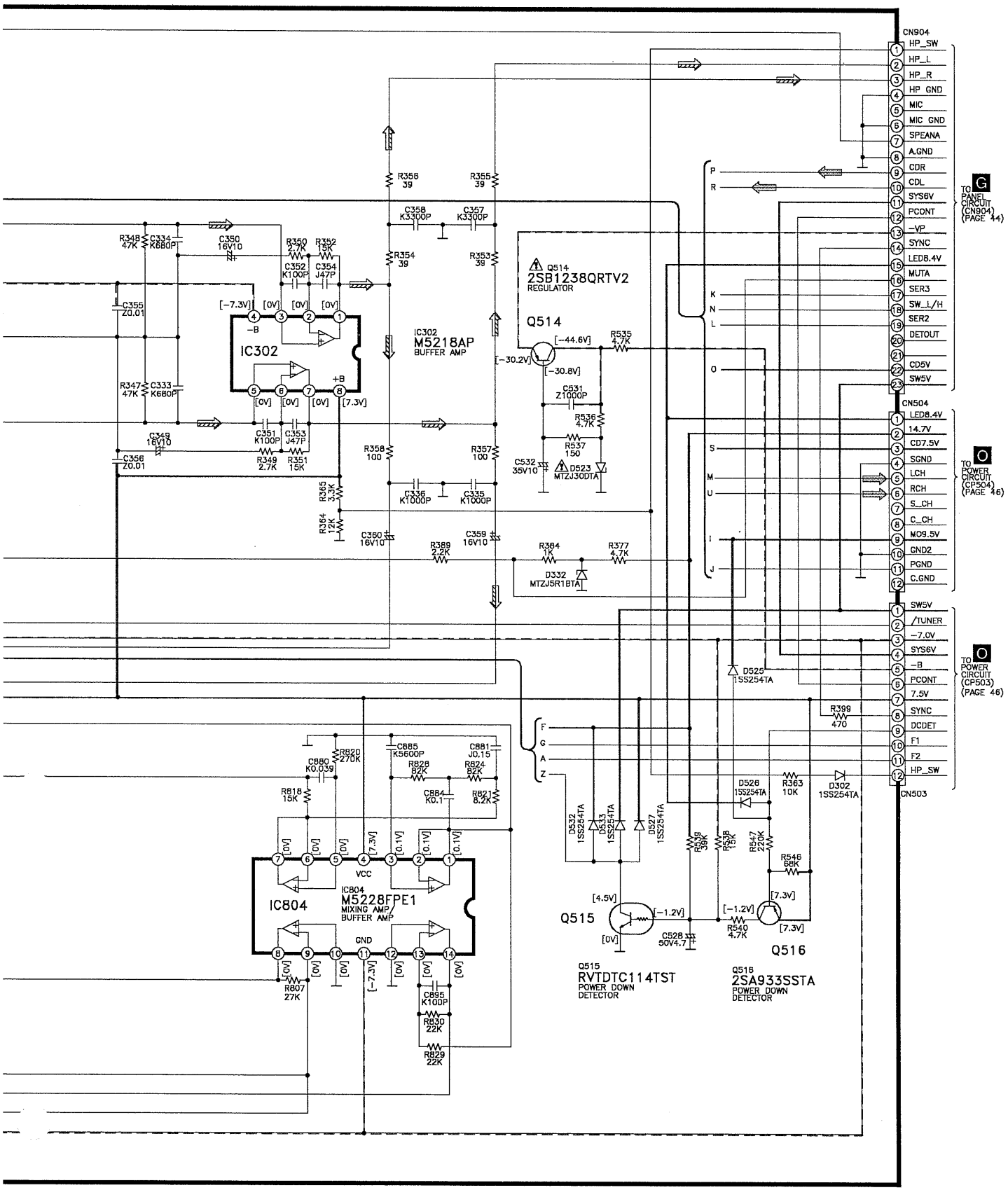

Q303,Q304
2SD1020HTA
MUTING
Q304
Q303
Q305
RVTDTA114TST
MUTING CONTROL
Q812,Q813
RVTDTA114TST
SWITCHING
Q812
Q813
Q809
Q808
Q808,Q809
2SD1020HTA
SWITCHING
Q811
2SC2785FTA
SWITCHING CONTROL
IC802
M5228FPE1
MIXING AMP/
PHASE SHIFT
D331
MTZJ5R1BTA
AUX SENS 263mV
/TUNER PORTB
KARA PORTA
AVDD
DGND
LATCH
DATA
CLK
DVDD
BUFIN2
BUFNF2
BUFOUT2
BUFNF1
BUFIN1
BUFOUT1
GEQOUT2
VOL IN2
VOL OUT2
GEQOUT1
VOL IN1
VOL OUT1
VCC
GND


CN904
HP_SW
HP_L
HP_R
HP GND
MIC
MIC GND
SPEANA
A.GND
CDR
CDL
SYS6V
PCONT
-VP
SYNC
LED8.4V
MUTA
SER3
SW_L/H
SER2
DETOUT
NC
CD5V
SW5V
TO G PANEL CIRCUIT (CN904) (PAGE 41)
CN504
LED8.4V
14.7V
CD7.5V
SGND
LCH
RCH
S_CH
C_CH
M09.5V
GND2
PGND
C.GND
TO O POWER CIRCUIT (CP504) (PAGE 45)
CN503
SW5V
/TUNER
-7.0V
SYS6V
-B
PCONT
7.5V
SYNC
DCDET
F1
F2
HP_SW
TO O POWER CIRCUIT (CP503) (PAGE 45)
Q514
2SB1238QRTV2
REGULATOR
IC302
M5218AP
BUFFER AMP
IC804
M5228FPE1
BUFFER AMP
Q515
RVTDTC114TST
POWER DOWN DETECTOR
Q516
2SA933SSTA
POWER DOWN DETECTOR
D525
RVD1SS133TA
D302,D520
RVD1SS133TA
D332
MTZJ5R1BTA
D523
MTZJ30DTA

B MAIN CIRCUIT
FOR GN ONLY

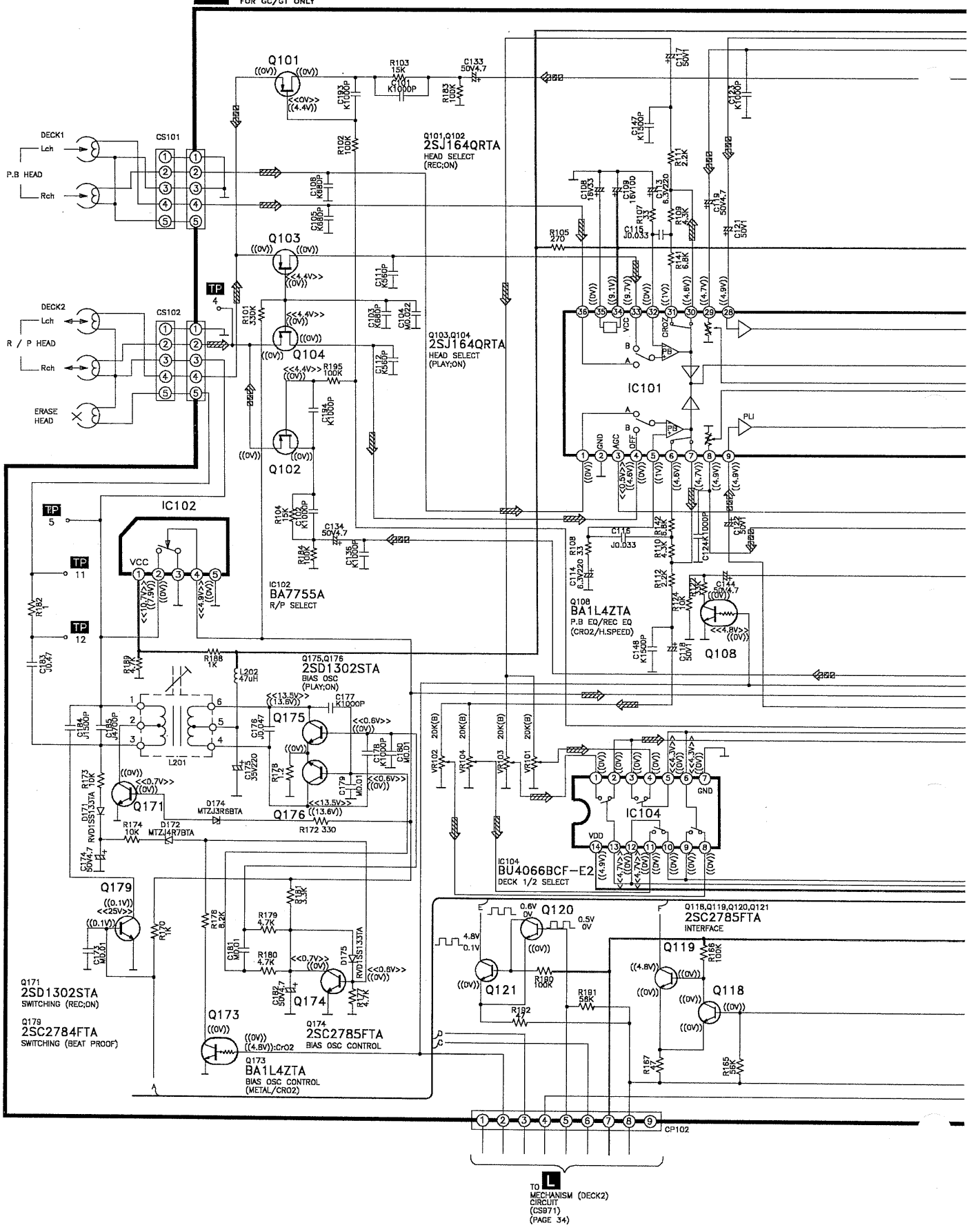


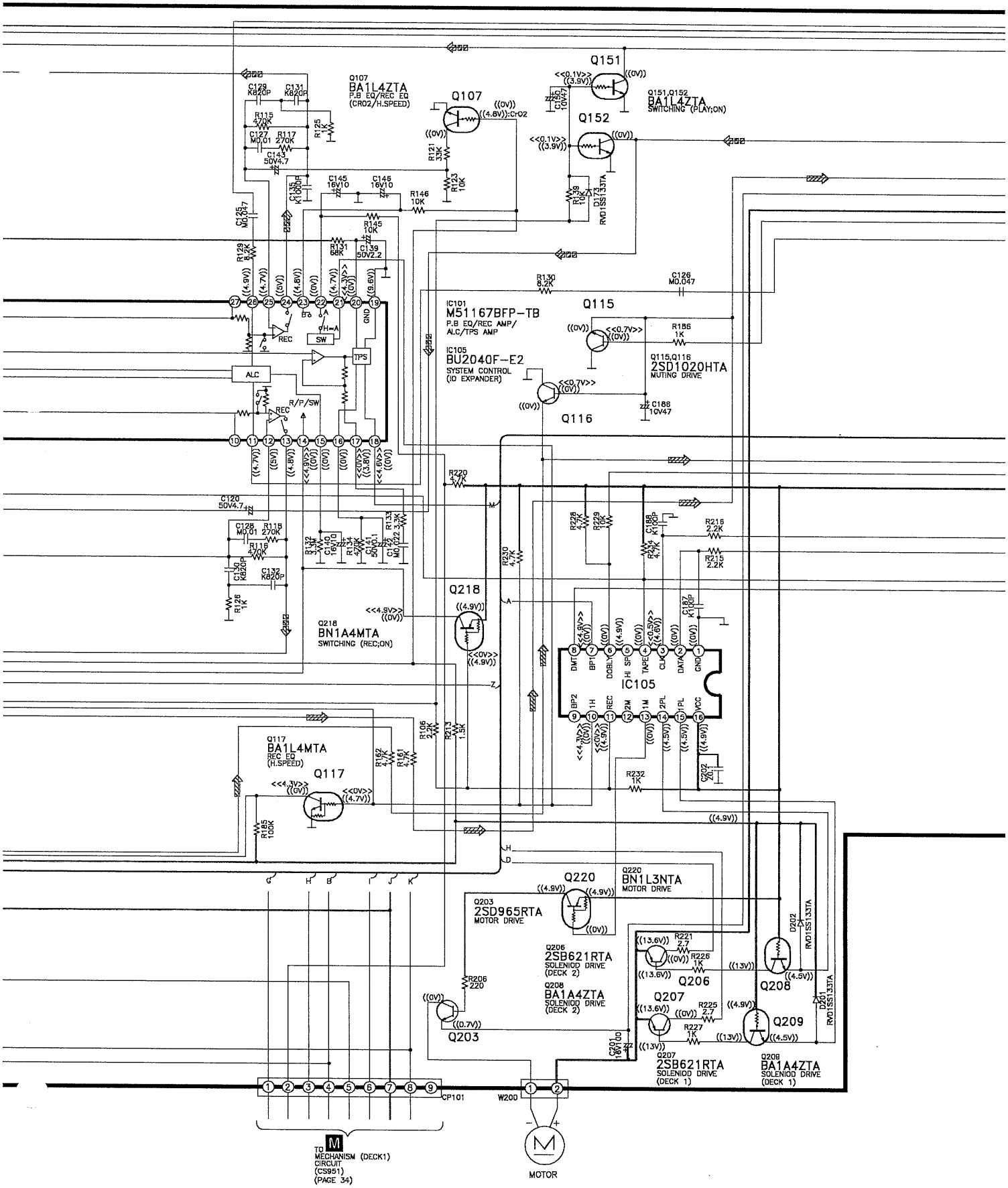

Q303,Q304
2SD1020HTA
MUTING
Q304
Q303
Q305
RVTDTA114TST
MUTING
CONTROL
Q812
Q812,Q813
RVDTA114TST
SWITCHING
Q813
Q809
Q808
Q808,Q809
2SD1020HTA
SWITCHING
Q811
2SC2785FTA
SWITCHING
CONTROL
AUX SENS 263mV
AUX SENS 263mV
/TUNER PORTB
KARA PORTA
LATCH
DATA
CLK
DVDD
AVDD
DGND
BUFIN2
BUFNF2
BUFOUT2
BUFOUT1
BUFNF1
BUFIN1
VOL OUT2
VOL IN2
GEQOUT2
VOL OUT1
VOL IN1
GEQOUT1
D331
MTZJ5R1BTA

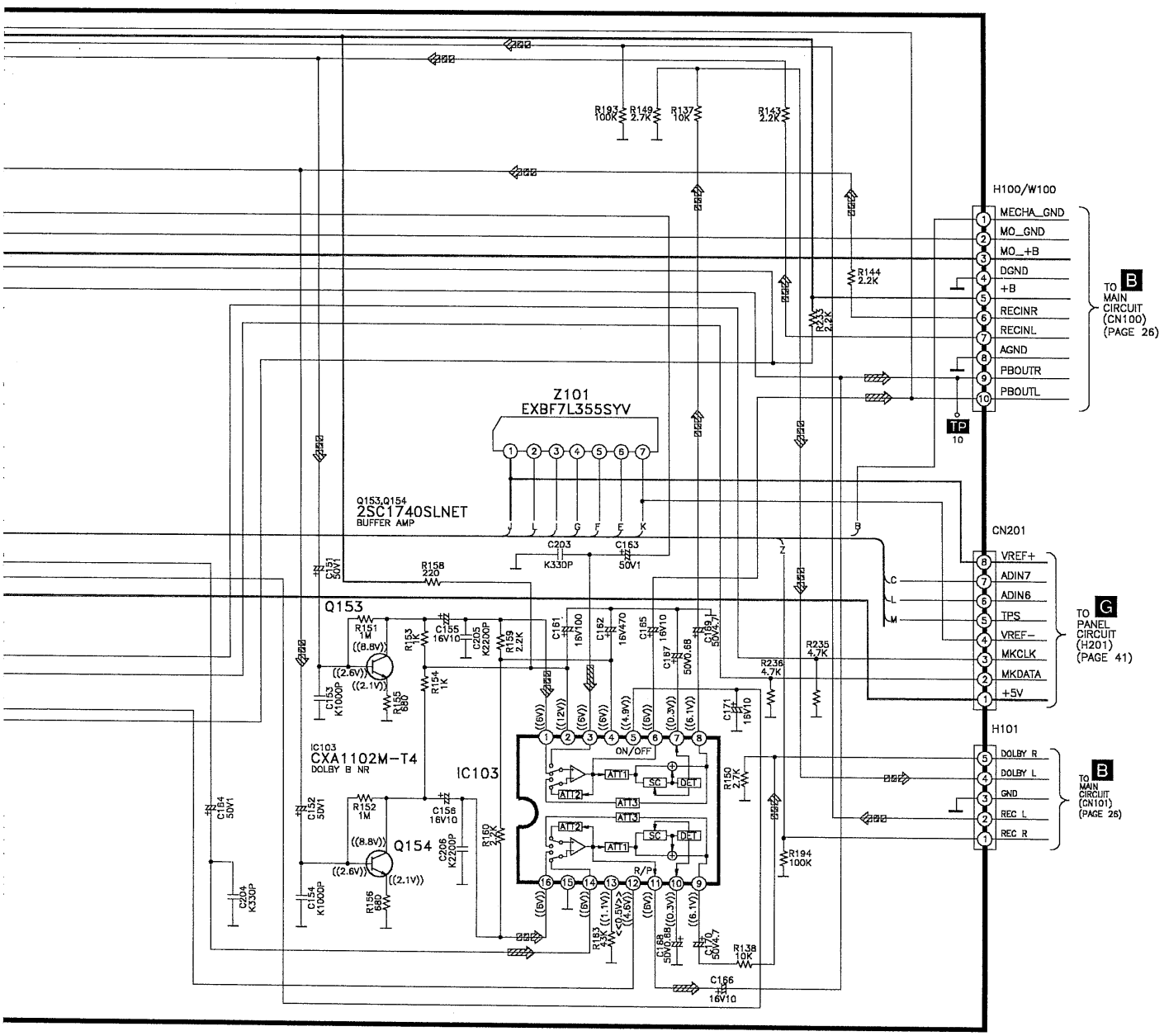

CN904
HP_SW
HP_L
HP_R
HP GND
MIC
MIC GND
SPEANA
A.GND
CDR
CDL
SYS6V
PCONT
-VP
SYNC
LED8.4V
MUTA
SER3
SW_L/H
SER2
DETOUT
CD5V
SW5V
TO PANEL CIRCUIT (CN904) (PAGE 44)
CN504
LED8.4V
14.7V
CD7.5V
SGND
LCH
RCH
S_CH
C_CH
MO9.5V
GND2
PGND
C.GND
TO POWER CIRCUIT (CP504) (PAGE 46)
SW5V
/TUNER
-7.0V
SYS6V
-B
PCONT
7.5V
SYNC
DCDET
F1
F2
HP_SW
CN503
TO POWER CIRCUIT (CP503) (PAGE 46)
IC302
M5218AP
BUFFER AMP
Q514
2SB1238QRTV2
REGULATOR
IC804
M5228FPE1
MIXING AMP/ BUFFER AMP
Q515
RVTDTC114TST
POWER DOWN DETECTOR
Q516
2SA933SSTA
POWER DOWN DETECTOR
D525 1SS254TA
D526 1SS254TA
D302 1SS254TA
D523 MTZJ30DTA
D332 MTZJ5R1BTA

C DECK CIRCUIT

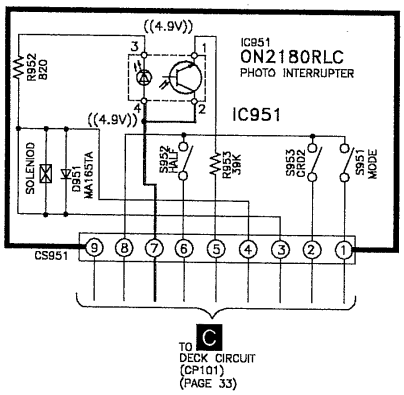
FOR GC/GT ONLY



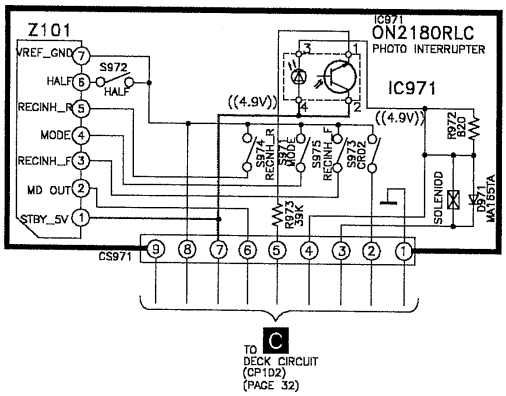

Q107
BA1L4ZTA
P.B EQ/REC EQ
(CRO2/H.SPEED)
Q151
Q151,Q152
BA1L4ZTA
SWITCHING (PLAY;ON)
Q152
IC101
M51167BFP-TB
P.B EQ/REC AMP/
ALC/TPS AMP
IC105
BU2040F-E2
SYSTEM CONTROL
(ID EXPANDER)
Q115
Q115,Q116
2SD1020HTA
MUTING DRIVE
Q116
Q218
BN1A4MTA
SWITCHING (REC;ON)
IC105
Q117
BA1L4MTA
REC EQ
(H.SPEED)
Q220
BN1L3NTA
MOTOR DRIVE
Q203
2SD965RTA
MOTOR DRIVE
Q206
2SB621RTA
SOLENIOD DRIVE
(DECK 2)
Q208
BA1A4ZTA
SOLENIOD DRIVE
(DECK 2)
Q207
2SB621RTA
SOLENIOD DRIVE
(DECK 1)
Q208
BA1A4ZTA
SOLENIOD DRIVE
(DECK 1)
Q209
CP101
W200
TO
MECHANISM (DECK1)
CIRCUIT
(CS951)
(PAGE 34)
MOTOR



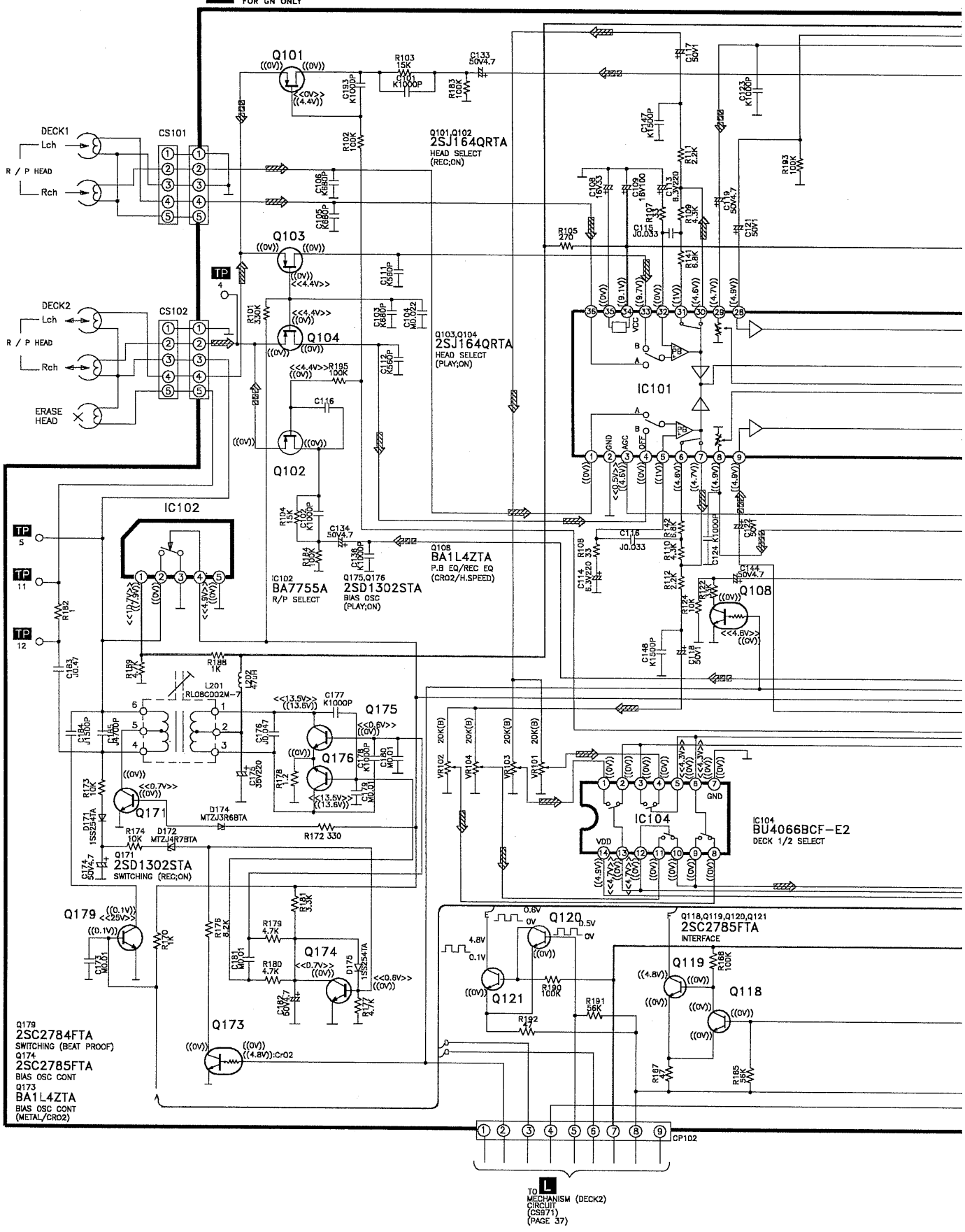
M MECHANISM (DECK 1) CIRCUIT

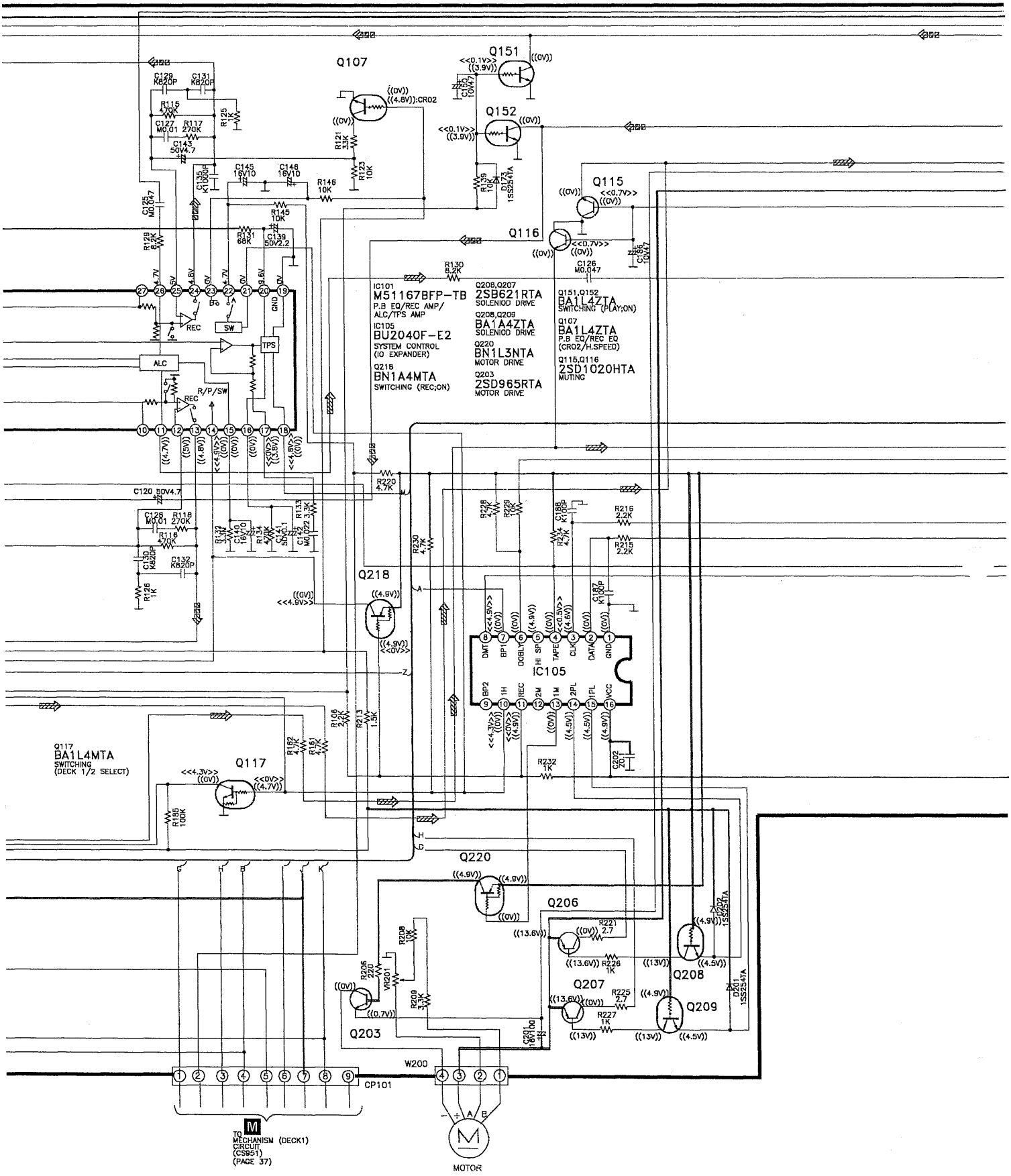


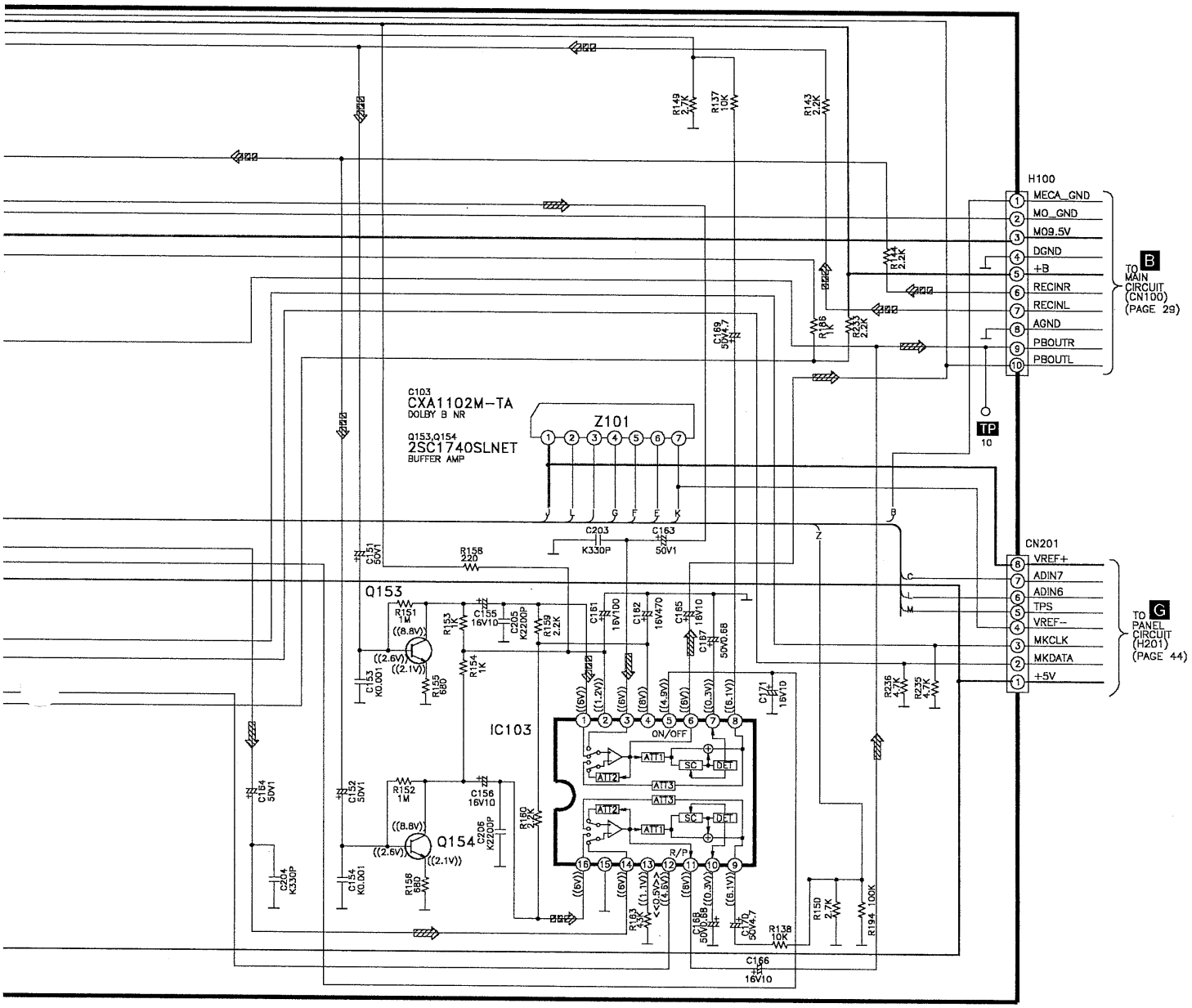
L MECHANISM (DECK 2) CIRCUIT



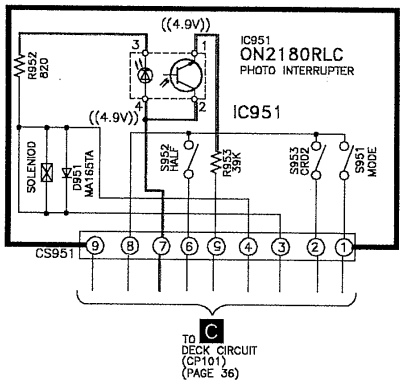
C DECK CIRCUIT
FOR GN ONLY



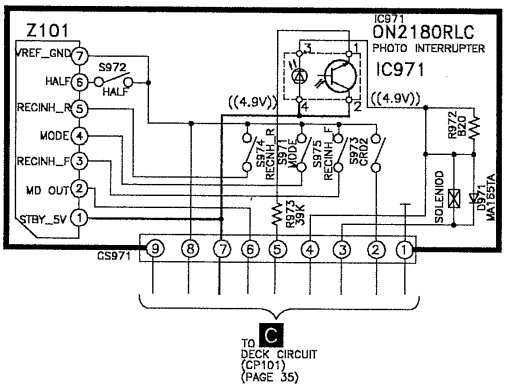

IC101
M51167BFP-TB
P.B EQ/REC AMP/
ALC/TPS AMP
IC105
BU2040F-E2
SYSTEM CONTROL
(IO EXPANDER)
Q218
BN1A4MTA
SWITCHING (REC;ON)
Q208,Q207
2SB621RTA
SOLENIOD DRIVE
Q208,Q209
BA1A4ZTA
SOLENIOD DRIVE
Q220
BN1L3NTA
MOTOR DRIVE
Q203
2SD965RTA
MOTOR DRIVE
Q151,Q152
BA1L4ZTA
SWITCHING (PLAY;ON)
Q107
BA1L4ZTA
P.B EQ/REC EQ
(CRO2/H.SPEED)
Q115,Q116
2SD1020HTA
MUTING
Q117
BA1L4MTA
SWITCHING
(DECK 1/2 SELECT)
REC
SW
TPS
ALC
R/P/SW
W200
CP101
TO MECHANISM (DECK1)
CIRCUIT
(CS951)
(PAGE 37)
MOTOR



M MECHANISM (DECK 1) CIRCUIT

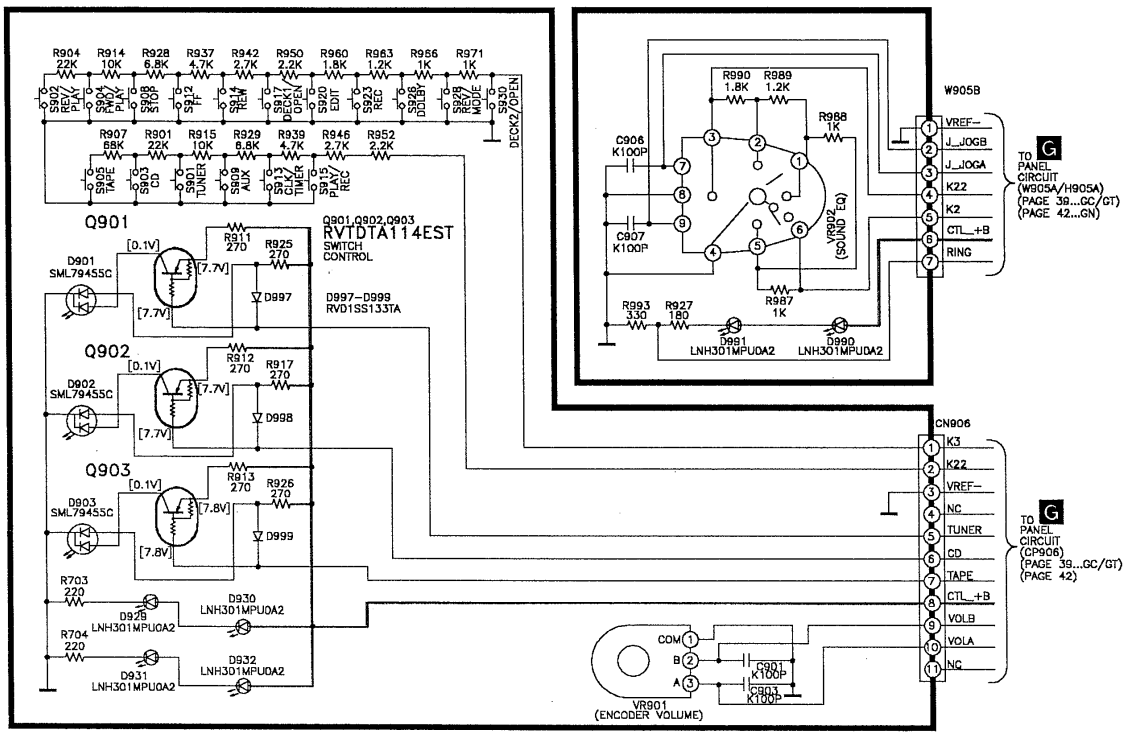


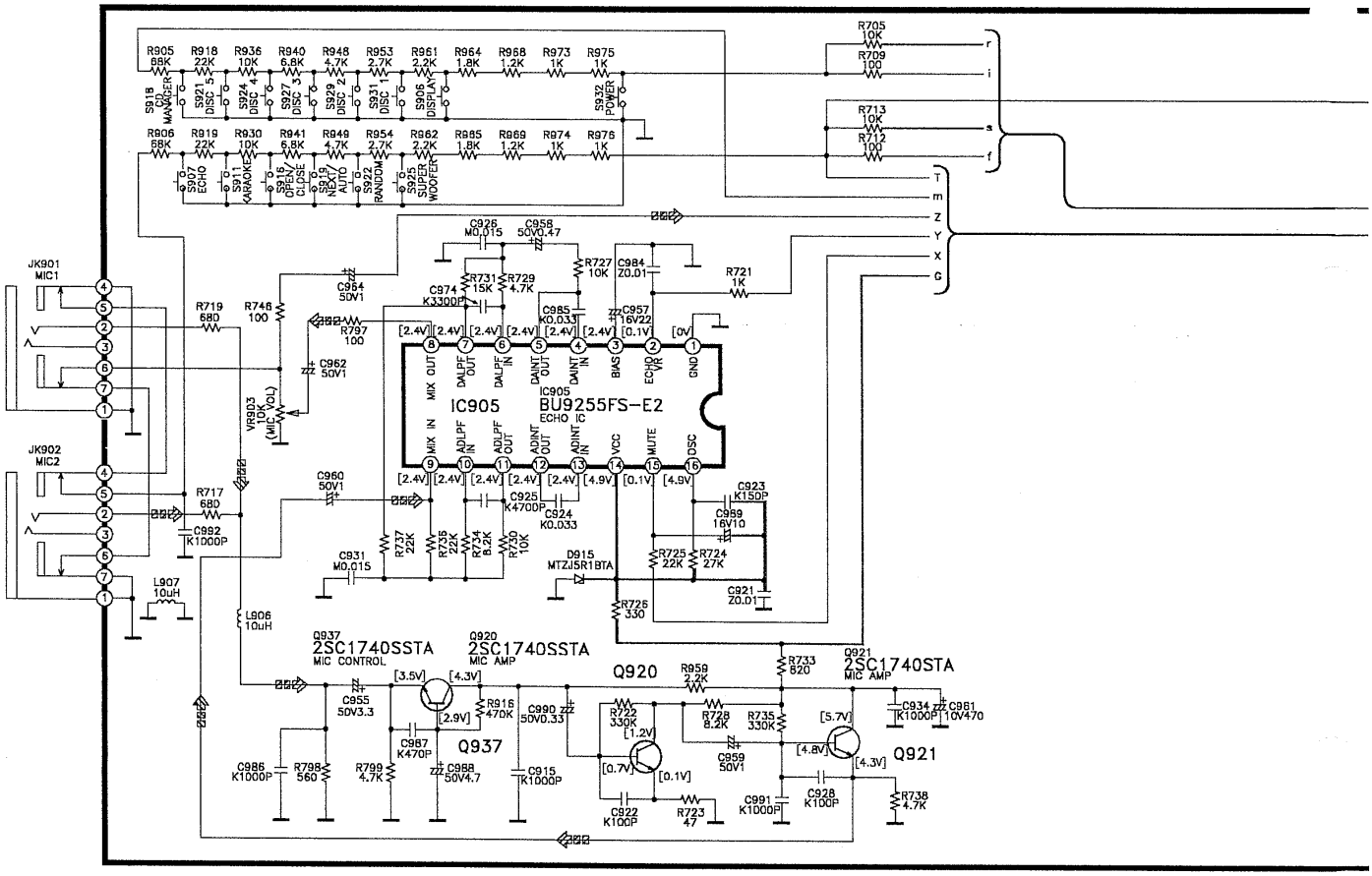
L MECHANISM (DECK 2) CIRCUIT

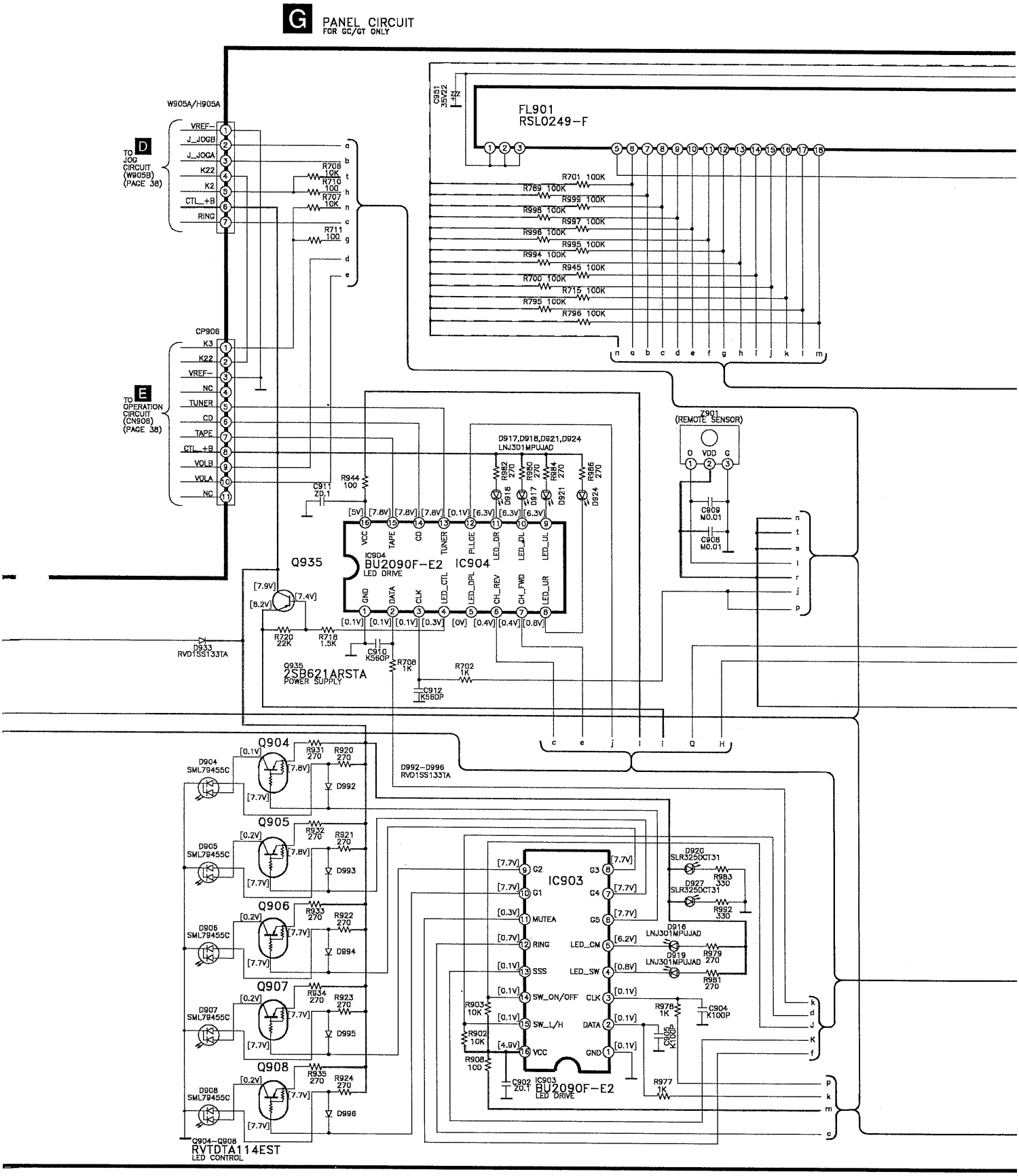


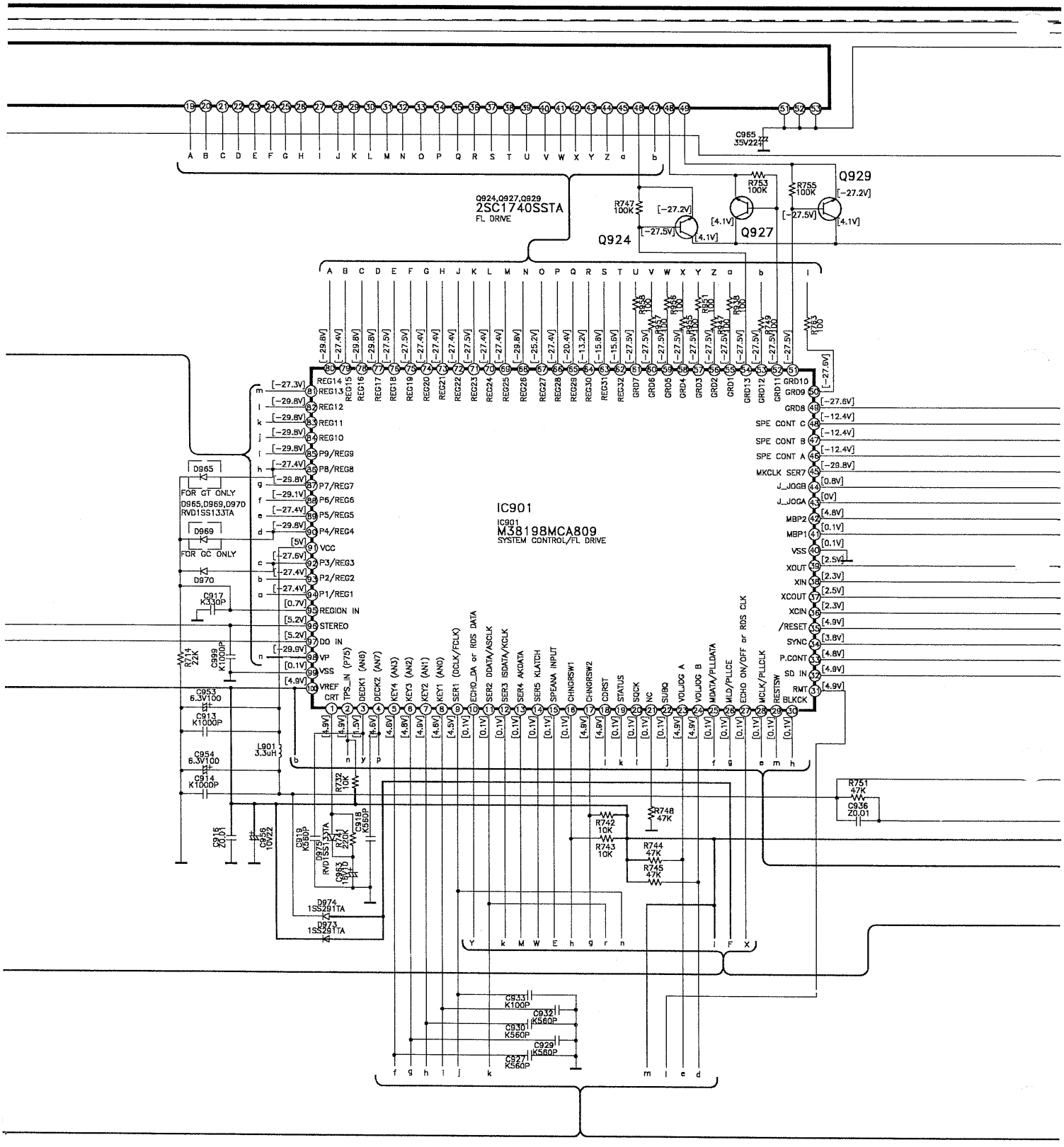
E OPERATION CIRCUIT

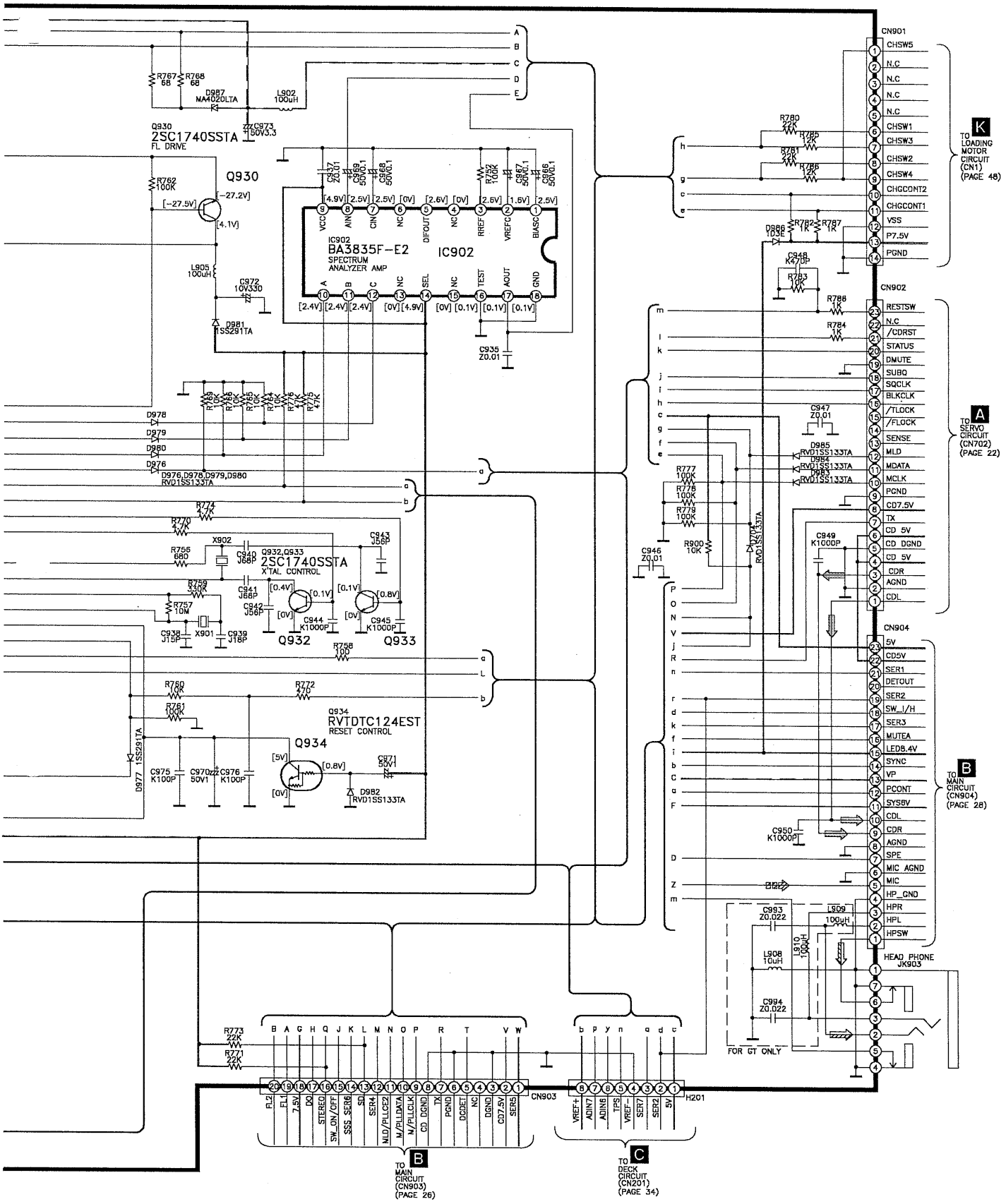
D JOG CIRCUIT

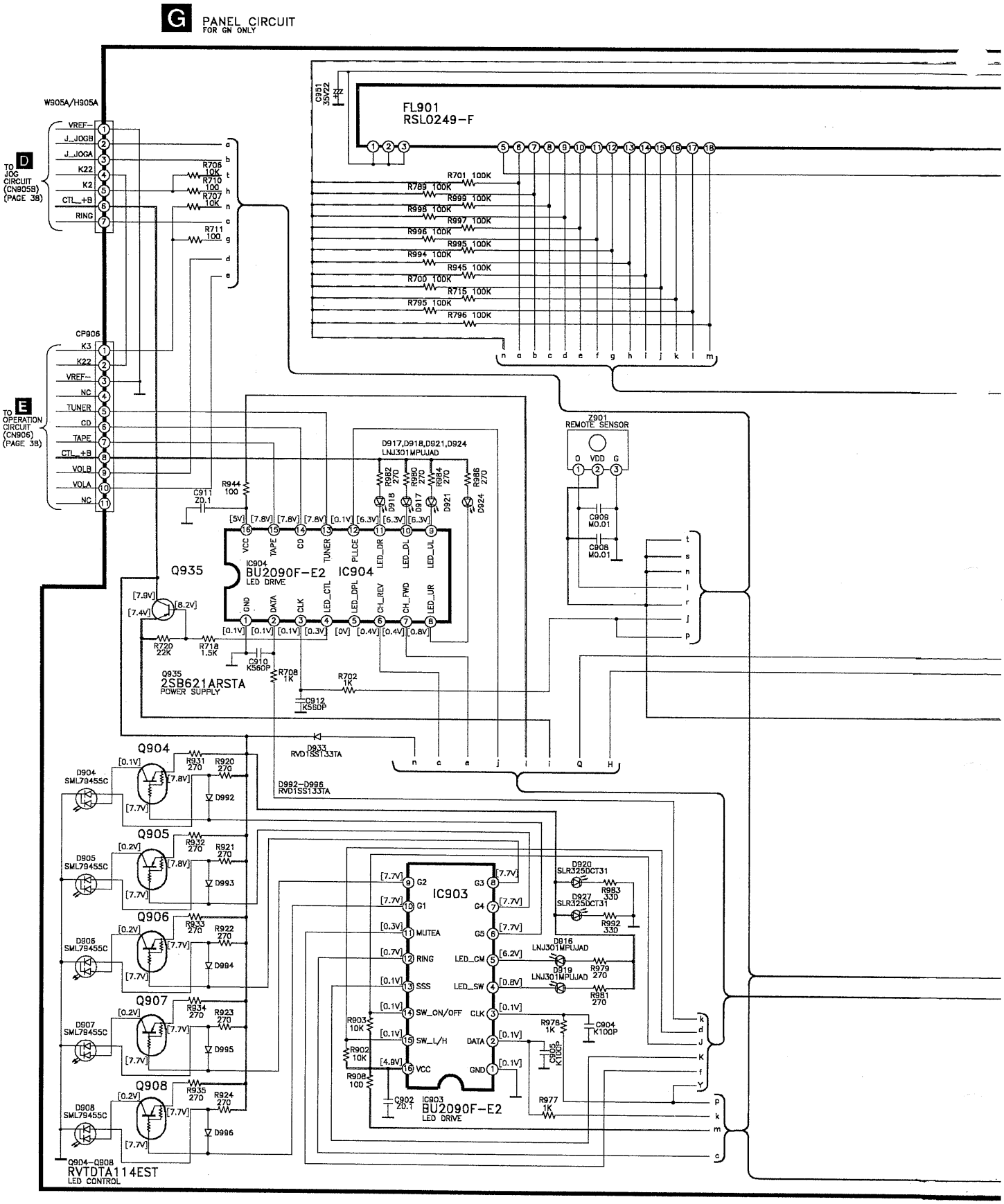


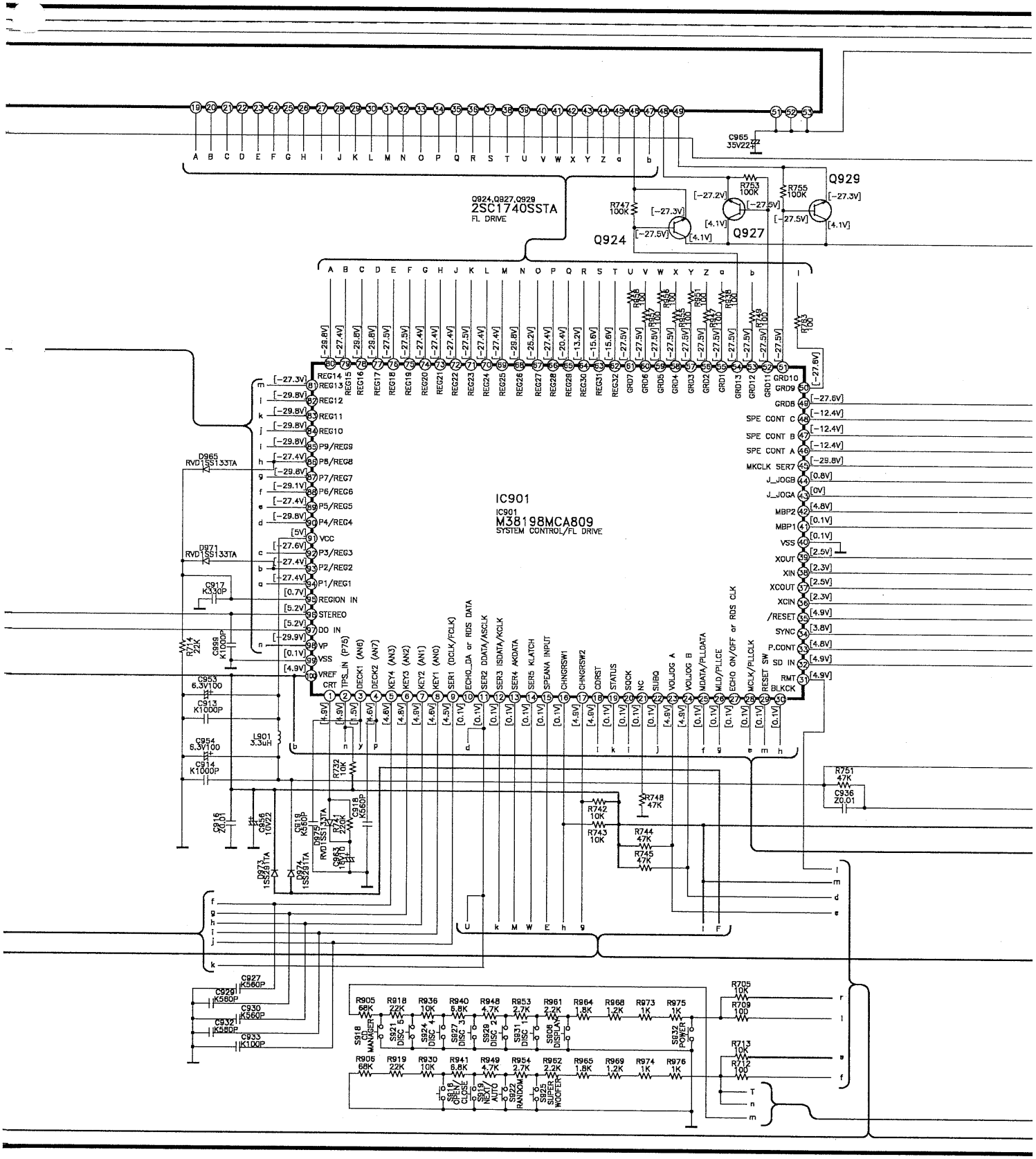


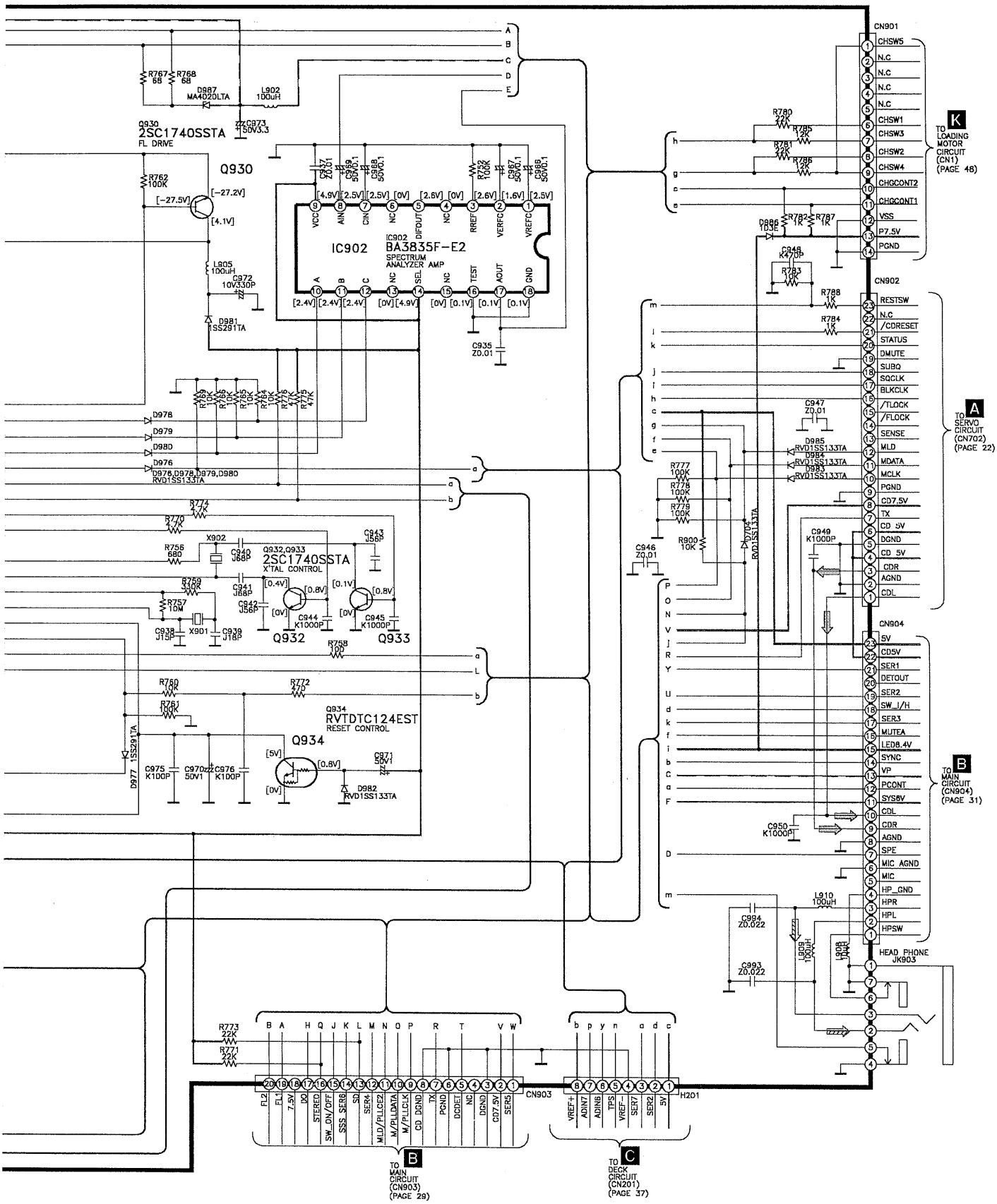

G PANEL CIRCUIT
FOR GC/GT ONLY
W905A/H905A
VREF-
J_JOGB
J_JOGA
K22
K2
CTL_+B
RING
D
TO JOG CIRCUIT (W905B) (PAGE 38)
CP906
K3
K22
VREF-
NC
TUNER
CD
TAPE
CTL_+B
VOLB
VOLA
NC
E
TO OPERATION CIRCUIT (CN906) (PAGE 38)
FL901
RSL0249-F
C951 35V22
R701 100K
R789 100K
R999 100K
R998 100K
R997 100K
R996 100K
R995 100K
R994 100K
R945 100K
R700 100K
R715 100K
R795 100K
R796 100K
R708 10K
R710 100
R707 10K
R711 100
R944 100
C911 Z0.1
D917,D918,D921,D924
LNJ301MPUJAD
R982 270
R980 270
R984 270
R986 270
Z901
(REMOTE SENSOR)
C909 M0.01
C908 M0.01
IC904
BU2090F-E2
LED DRIVE
VCC
TAPE
CD
TUNER
PLLCE
LED_DR
LED_DL
LED_UL
GND
DATA
CLK
LED_CTL
LED_DPL
CH_REV
CH_FWD
LED_UR
Q935
2SB621ARSTA
POWER SUPPLY
R720 22K
R718 1.5K
C910 K560P
R708 1K
R702 1K
C912 K560P
D933 RVD1SS133TA
Q904
Q905
Q906
Q907
Q908
D904 SML79455C
D905 SML79455C
D906 SML79455C
D907 SML79455C
D908 SML79455C
R931 270
R920 270
R932 270
R921 270
R933 270
R922 270
R934 270
R923 270
R935 270
R924 270
D992
D993
D994
D995
D996
D992-D996 RVD1SS133TA
Q904-Q908
RVTDTA114EST
LED CONTROL
IC903
BU2090F-E2
LED DRIVE
G2
G1
MUTEA
RING
SSS
SW_ON/OFF
SW_L/H
VCC
G3
G4
G5
LED_CM
LED_SW
CLK
DATA
GND
D920 SLR325DCT31
D927 SLR325DCT31
R983 330
R992 330
D916 LNJ301MPUJAD
D919 LNJ301MPUJAD
R979 270
R981 270
R903 10K
R902 10K
R908 100
R978 1K
C904 K100P
C905 K100P
C902 Z0.1
R977 1K


Q924,Q927,Q929
2SC1740SSTA
FL DRIVE
Q924
Q927
Q929
IC901
M38198MCA809
SYSTEM CONTROL/FL DRIVE
REGION IN
STEREO
DO IN
VCC
VSS
VREF
CRT
SYNC
XIN
XOUT
XCIN
XCOUT
RESET
SD IN
RMT
BLKCK
P.CONT
SPE CONT A
SPE CONT B
SPE CONT C
MKCLK SER7
J_JOGA
J_JOGB
MBP1
MBP2
FOR GT ONLY
D965,D969,D970
RVD1SS133TA
FOR GC ONLY
D970
D974
1SS291TA
D973
1SS291TA
L901
3.3uH

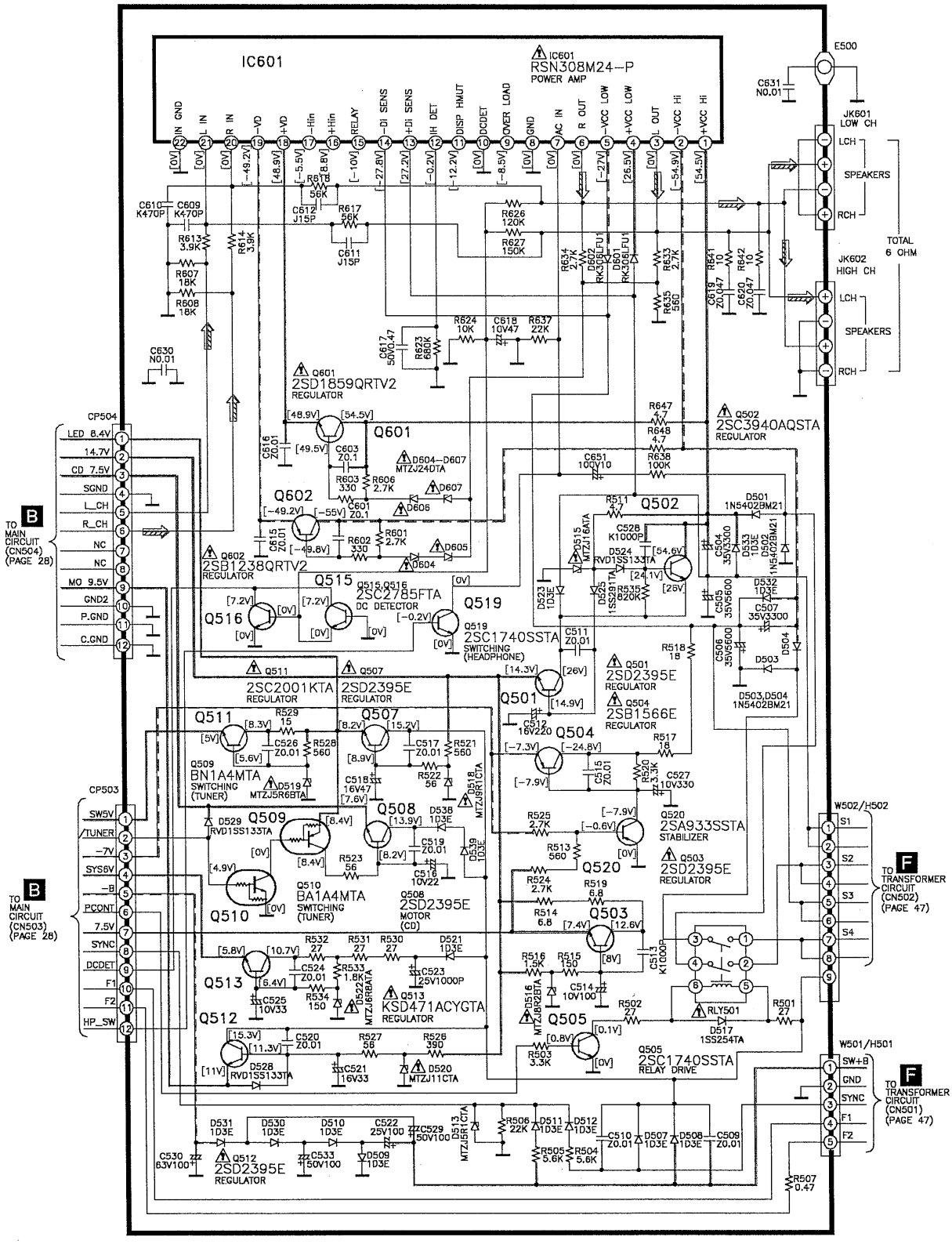

Q930
2SC1740SSTA
FL DRIVE
IC902
BA3835F-E2
SPECTRUM
ANALYZER AMP
Q932,Q933
2SC1740SSTA
X'TAL CONTROL
Q934
RVTDTC124EST
RESET CONTROL
CN901
CN902
CN904
CN903
HZ01
HEAD PHONE
JK903
TO LOADING MOTOR CIRCUIT (CN1) (PAGE 48)
TO SERVO CIRCUIT (CN702) (PAGE 22)
TO MAIN CIRCUIT (CN904) (PAGE 28)
TO MAIN CIRCUIT (CN903) (PAGE 26)
TO DECK CIRCUIT (CN201) (PAGE 34)
FOR GT ONLY


G PANEL CIRCUIT
FOR GN ONLY
FL901
RSL0249-F
W905A/H905A
CP906
TO JOG CIRCUIT (CN905B) (PAGE 38)
TO OPERATION CIRCUIT (CN906) (PAGE 38)
Z901
REMOTE SENSOR
IC904
BU2090F-E2
LED DRIVE
IC903
BU2090F-E2
LED DRIVE
Q935
2SB621ARSTA
POWER SUPPLY
Q904-Q908
RVTDTA114EST
LED CONTROL
D917,D918,D921,D924
LNJ301MPUJAD
D920
SLR325DCT31
D927
SLR325DCT31
D916
LNJ301MPUJAD
D919
LNJ301MPUJAD
D933
RVD1SS133TA
D992-D996
RVD1SS133TA

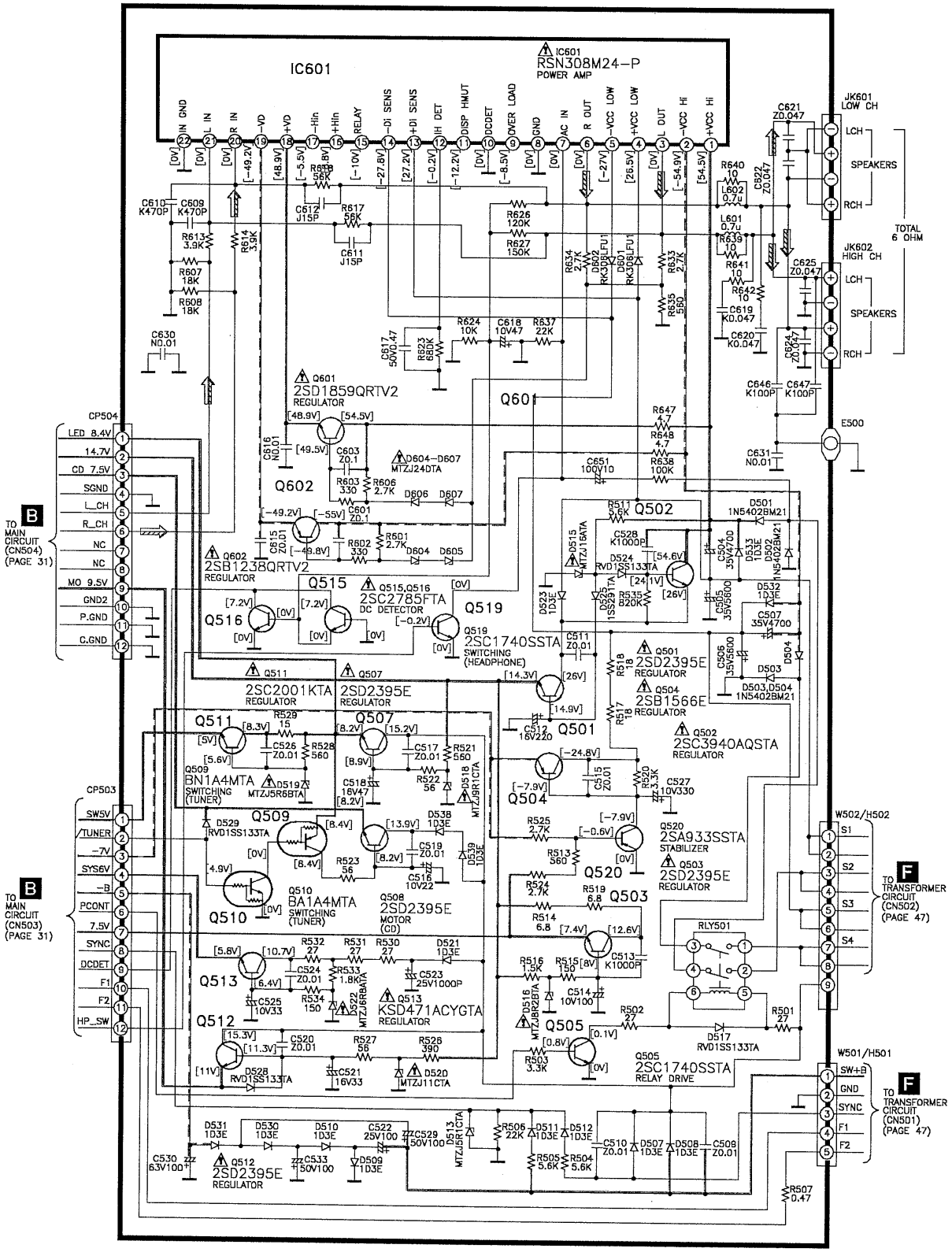

Q924,Q927,Q929
2SC1740SSTA
FL DRIVE
Q924
Q927
Q929
IC901
IC901
M38198MCA809
SYSTEM CONTROL/FL DRIVE

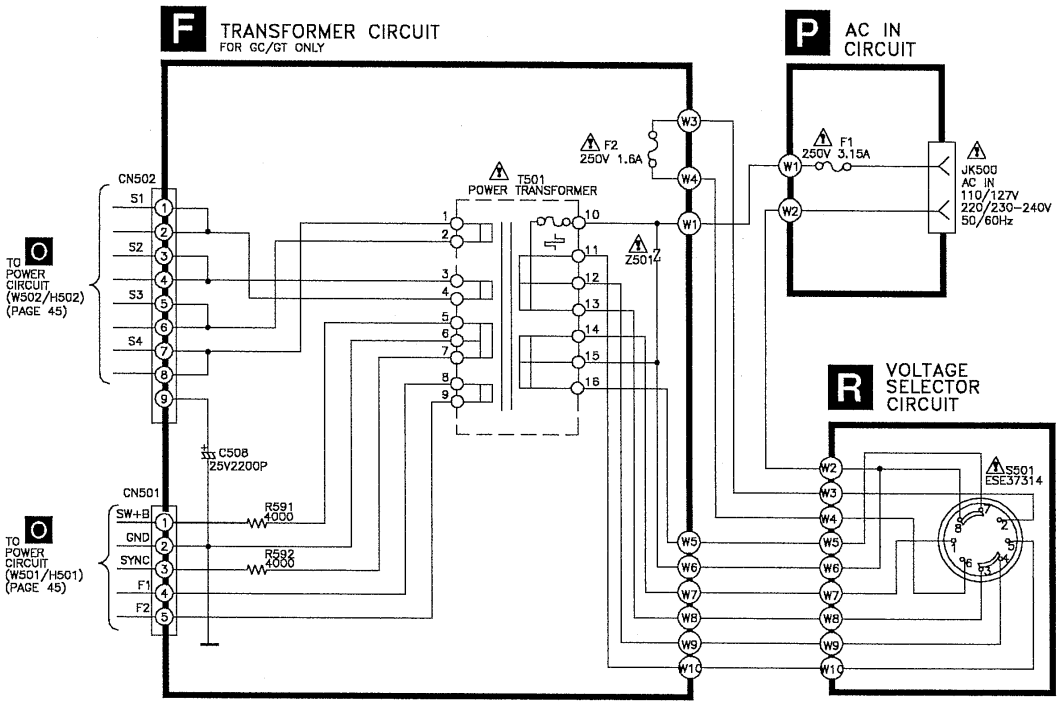

Q930
2SC1740SSTA
FL DRIVE
IC902
BA3835F-E2
SPECTRUM ANALYZER AMP
Q932,Q933
2SC1740SSTA
XTAL CONTROL
Q932
Q933
Q934
RVTDTC124EST
RESET CONTROL
CN901
CHSW5
N.C
CHSW1
CHSW3
CHSW2
CHSW4
CHGCONT2
CHGCONT1
VSS
P7.5V
PGND
TO LOADING MOTOR CIRCUIT (CN1) (PAGE 48)
CN902
RESTSW
/CDRESET
STATUS
DMUTE
SUBQ
SQCLK
BLKCLK
/TLOCK
/FLOCK
SENSE
MLD
MDATA
MCLK
PGND
CD7.5V
TX
CD 5V
DGND
CD 5V
CDR
AGND
CDL
TO SERVO CIRCUIT (CN702) (PAGE 22)
CN904
5V
CD5V
SER1
DETOUT
SER2
SW_I/H
SER3
MUTEA
LED8.4V
SYNC
VP
PCONT
SYS8V
CDL
CDR
AGND
SPE
MIC AGND
MIC
HP_GND
HPR
HPL
HPSW
TO MAIN CIRCUIT (CN904) (PAGE 31)
HEAD PHONE JK903
CN903
FL2
FL1
7.5V
DD
STEREO
SW_ON/OFF
SSS_SER6
SD
SER4
MLD/PLLCE2
M/PLLDATA
M/PLLCLK
CD_DGND
TX
PGND
DCDET
NC
DGND
CD7.5V
SER5
TO MAIN CIRCUIT (CN903) (PAGE 29)
H201
VREF+
ADIN7
ADIN6
TPS
VREF-
SER7
SER2
5V
TO DECK CIRCUIT (CN201) (PAGE 37)

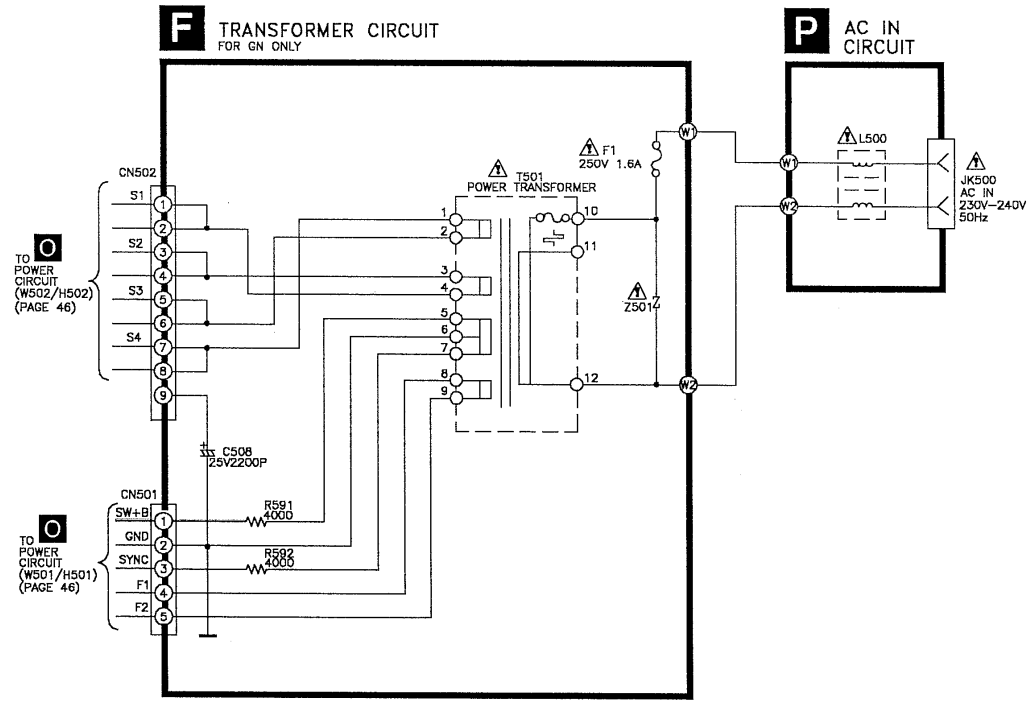
O POWER CIRCUIT
FOR GC/GT ONLY



POWER CIRCUIT
FOR GN ONLY




F TRANSFORMER CIRCUIT
FOR GC/GT ONLY
P AC IN CIRCUIT
R VOLTAGE SELECTOR CIRCUIT
CN502
S1
S2
S3
S4
CN501
SW+B
GND
SYNC
F1
F2
TO POWER CIRCUIT (W502/H502) (PAGE 45)
TO POWER CIRCUIT (W501/H501) (PAGE 45)
T501 POWER TRANSFORMER
F2 250V 1.6A
F1 250V 3.15A
JK500 AC IN 110/127V 220/230-240V 50/60Hz
Z501
C508 25V2200P
R591 4000
R592 4000
S501 ESE37314

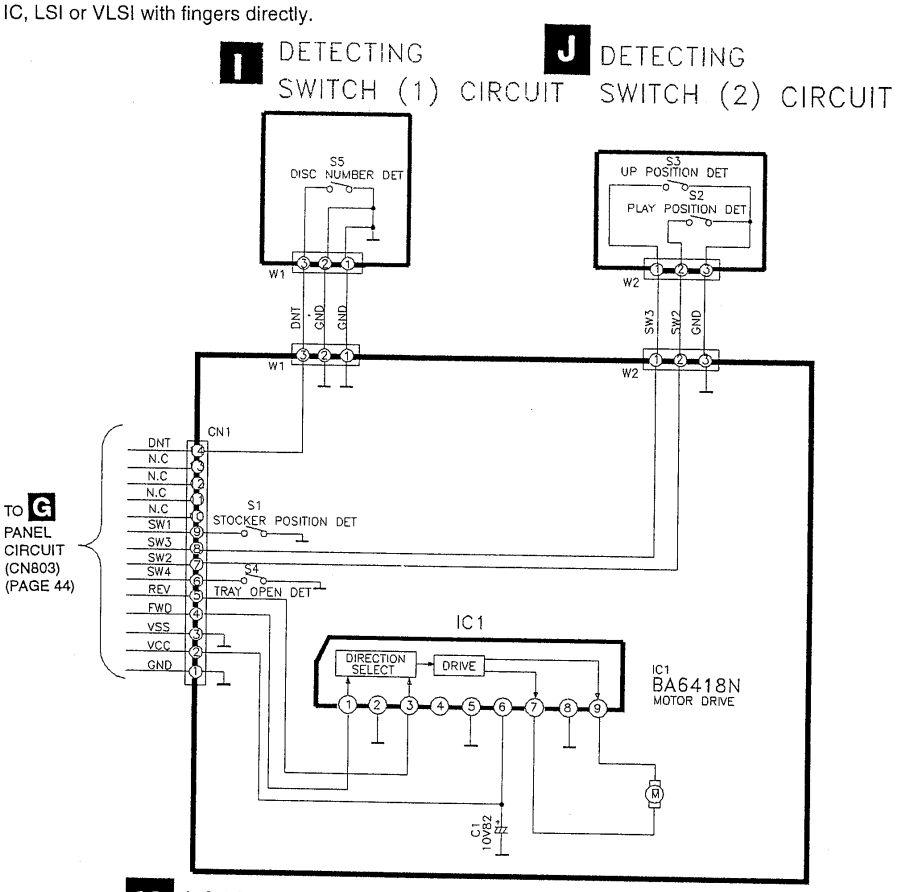

F TRANSFORMER CIRCUIT
FOR GN ONLY
P AC IN CIRCUIT
CN502
S1
S2
S3
S4
CN501
SW+B
GND
SYNC
F1
F2
TO POWER CIRCUIT (W502/H502) (PAGE 46)
TO POWER CIRCUIT (W501/H501) (PAGE 46)
T501 POWER TRANSFORMER
F1 250V 1.6A
L500
JK500 AC IN 230V-240V 50Hz
Z501
C508 25V2200P
R591 4000
R592 4000

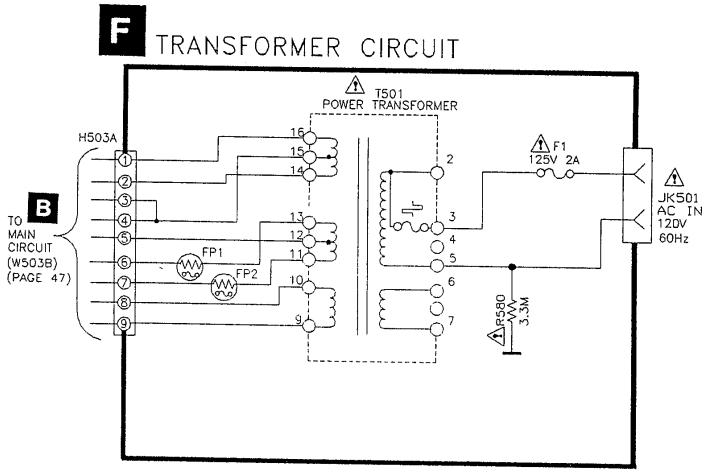
•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark : Playback << >>.....Rec { } : Tuner (( )) : CD < > ..... FM

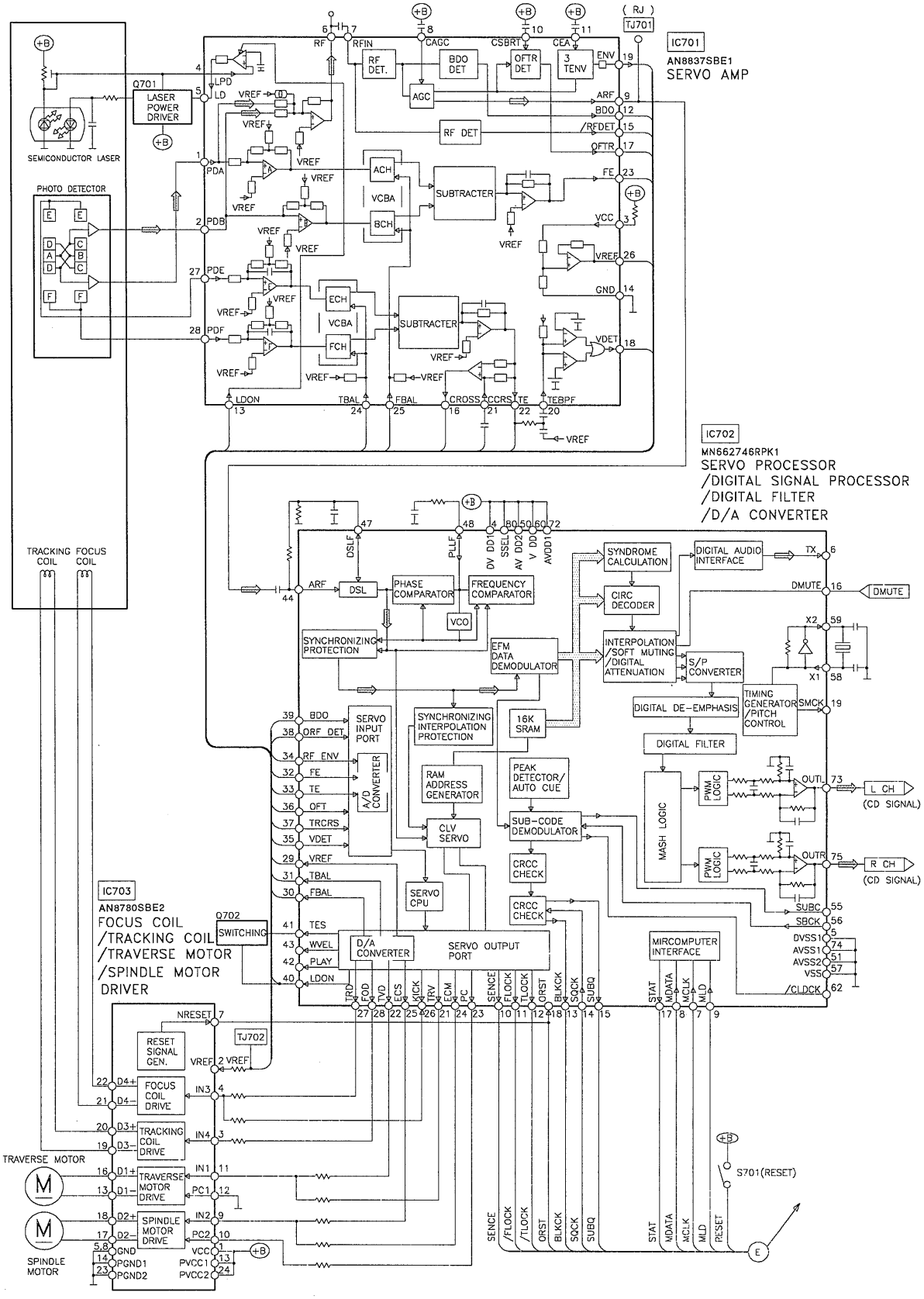
•Importance safety notice:
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure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

Caution !
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
•Cover the parts boxes made of plastics with aluminium foil.
•Put a conductive mat on the work table.
•Ground the soldering iron.
•Do not touch the pins of IC, LSI or VLSI with fingers directly.

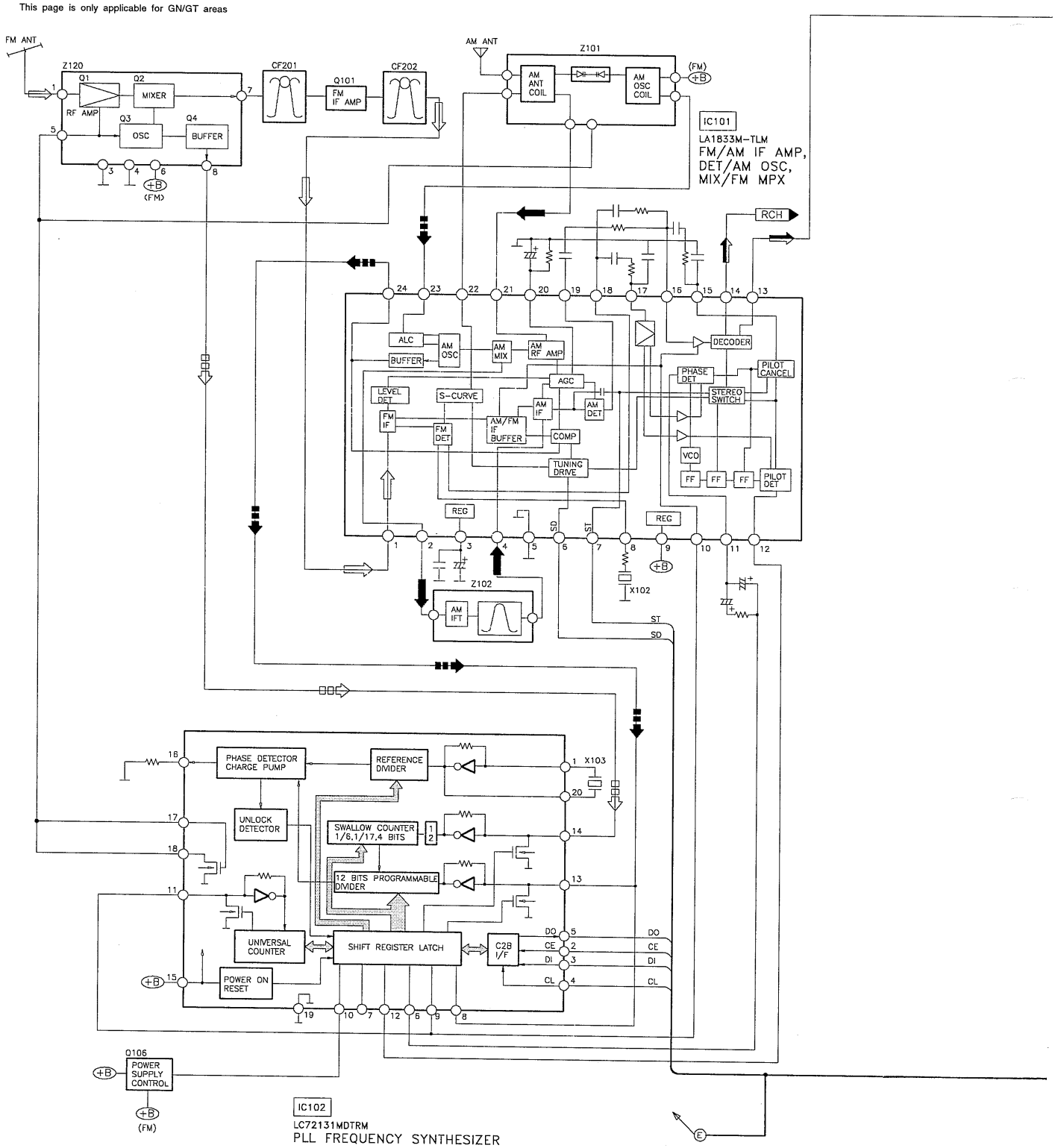




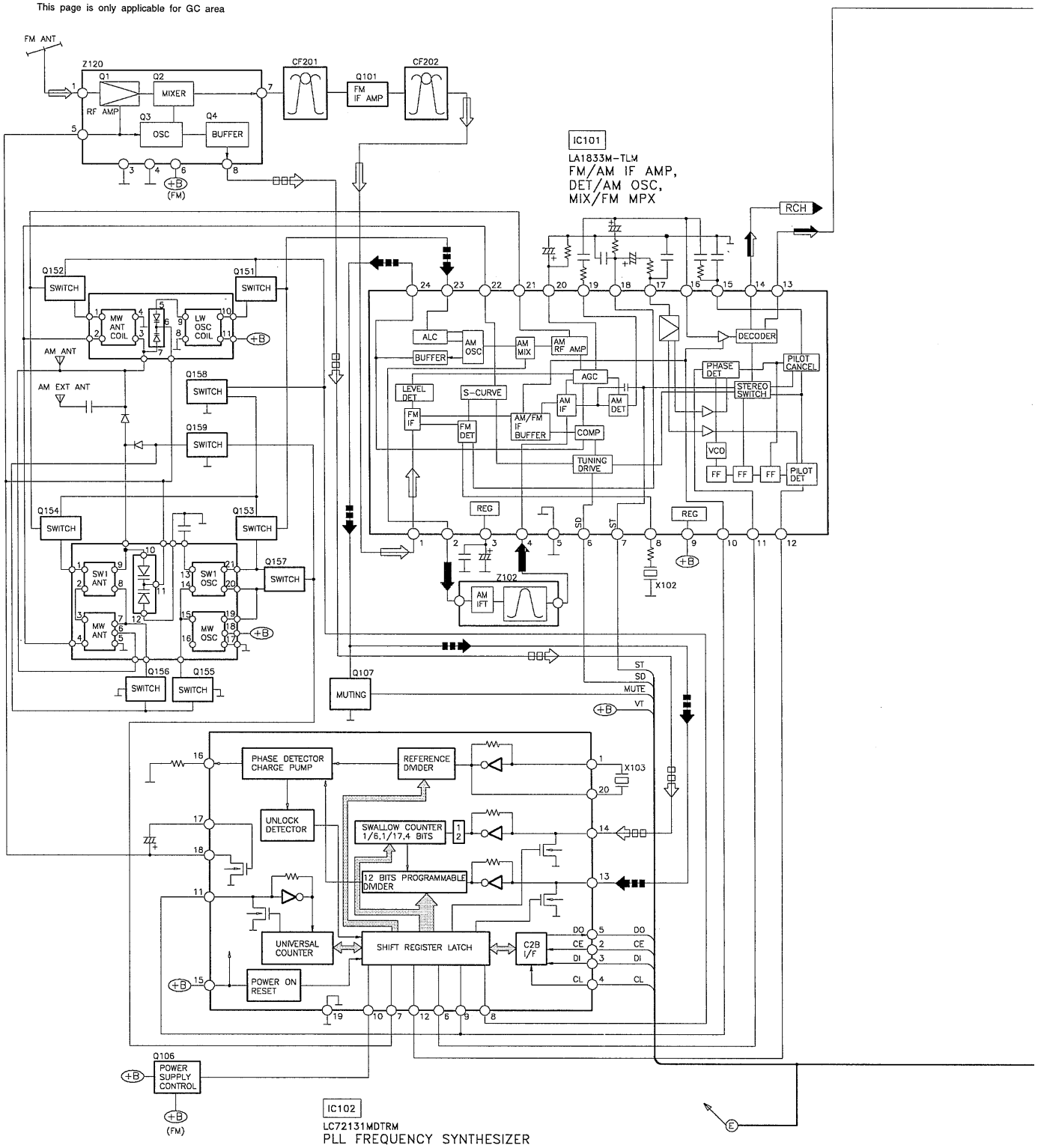
■ Block Diagram

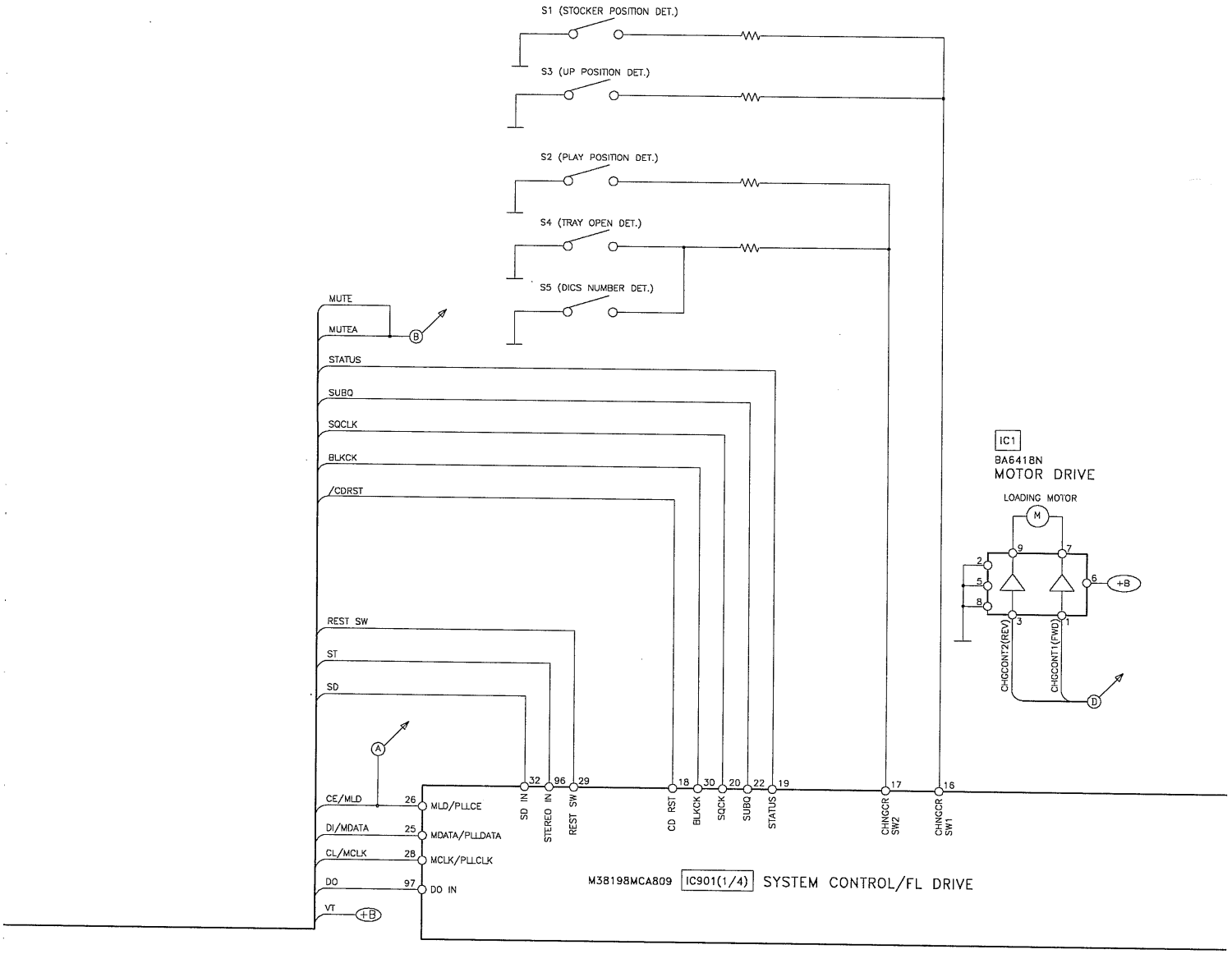


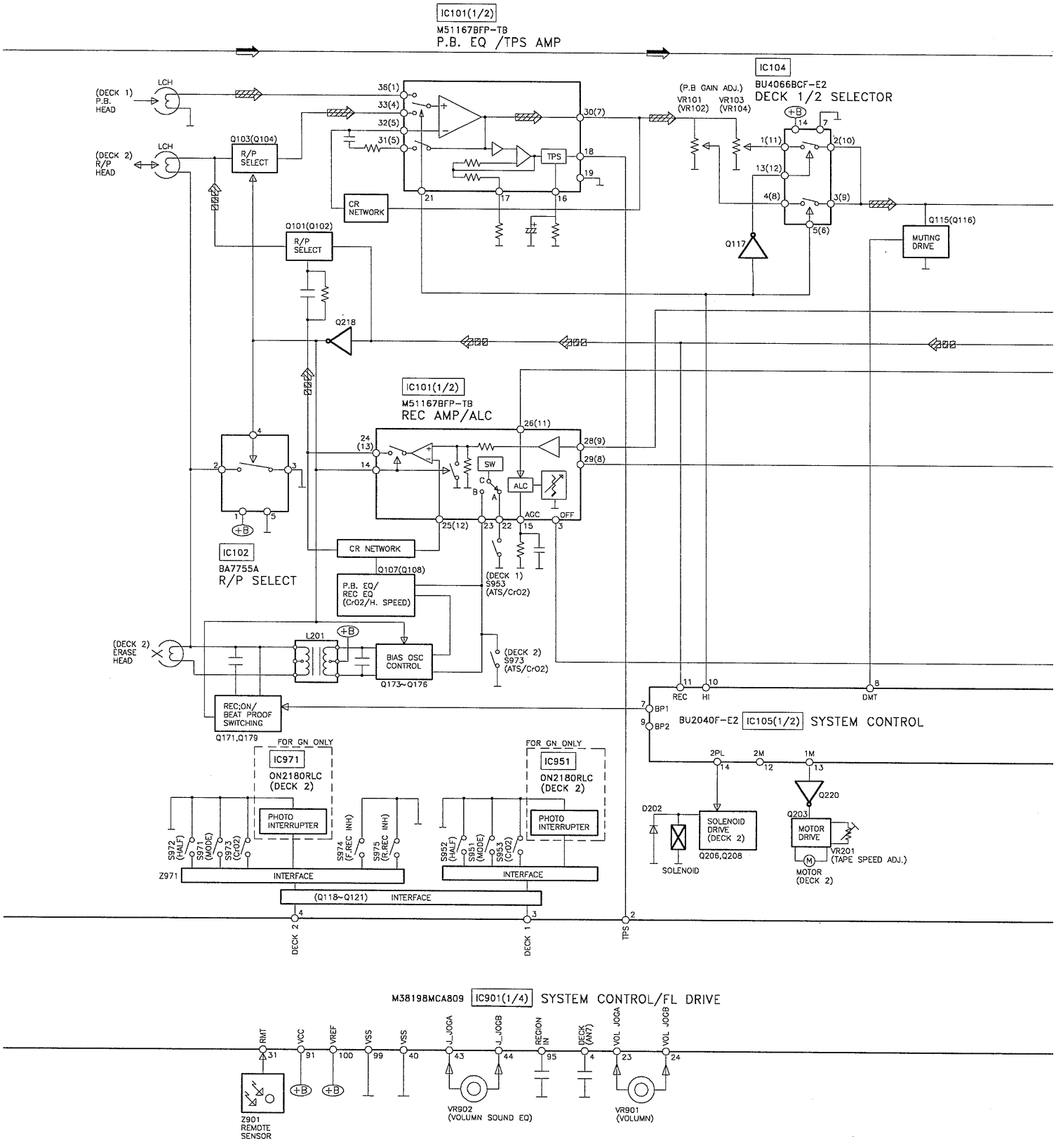
This page is only applicable for GN/GT areas

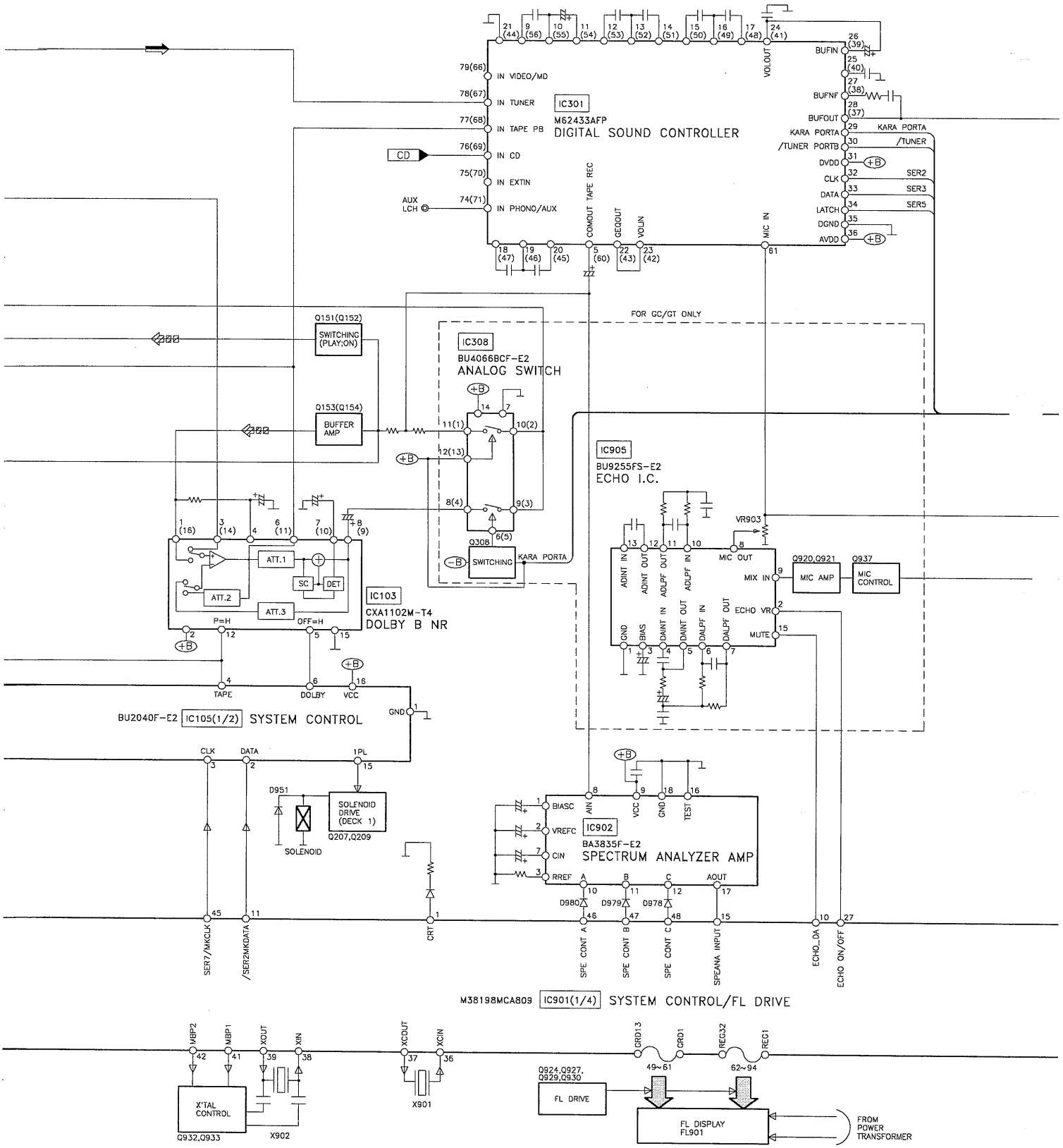


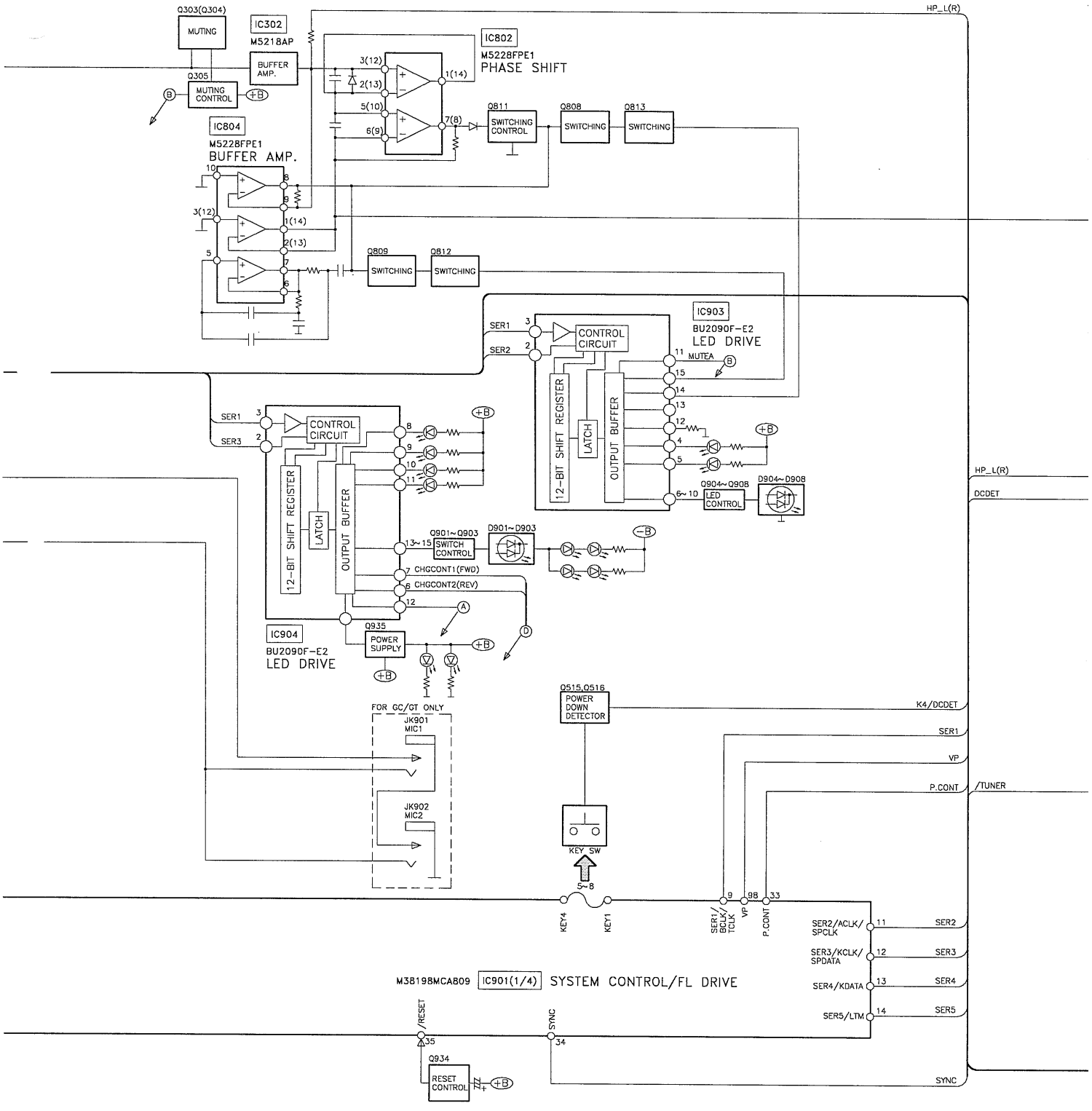
This page is only applicable for GC area

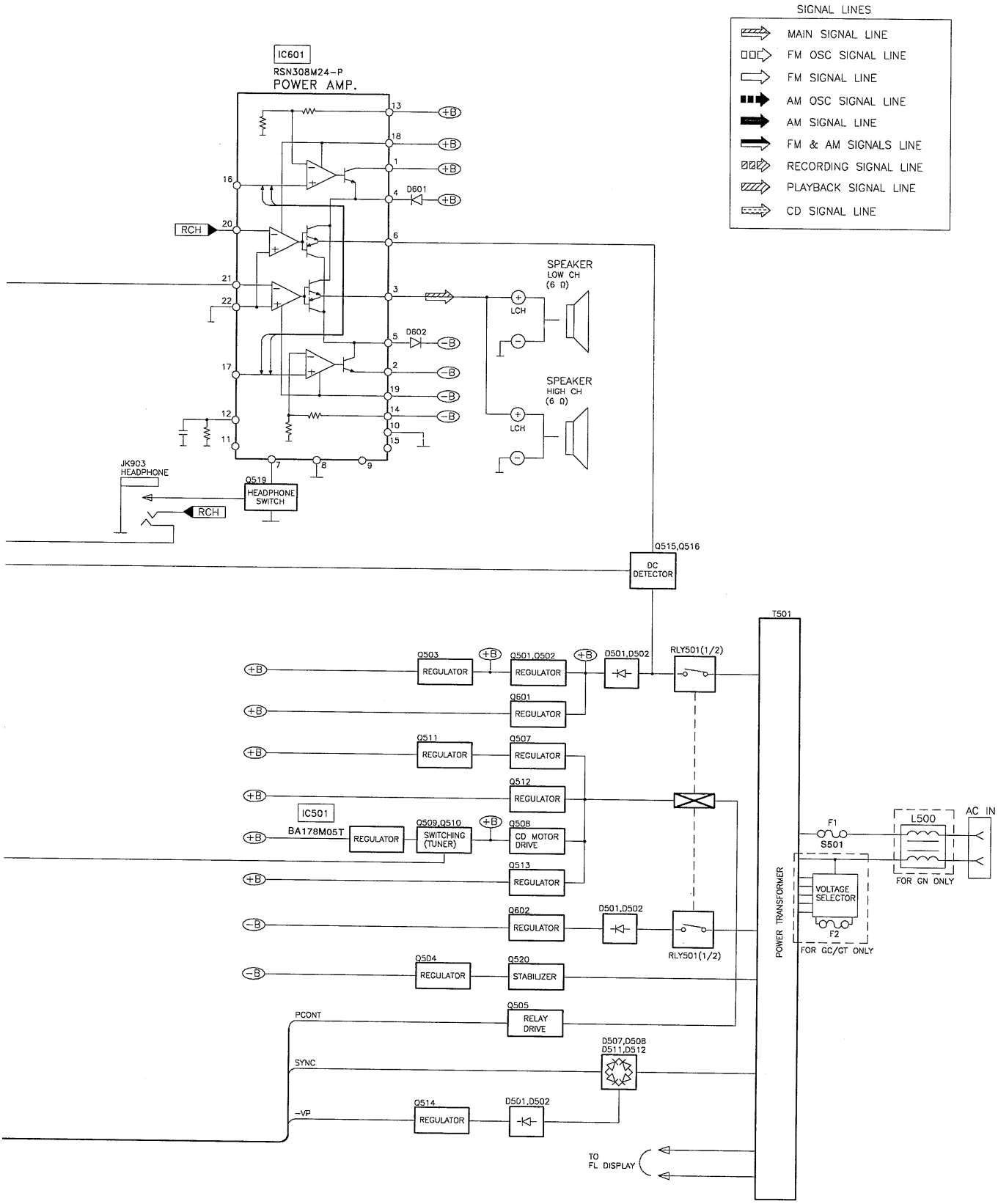



S1 (STOCKER POSITION DET.)
S3 (UP POSITION DET.)
S2 (PLAY POSITION DET.)
S4 (TRAY OPEN DET.)
S5 (DICS NUMBER DET.)
MUTE
MUTEA
B
STATUS
SUBQ
SQCLK
BLKCK
/CDRST
REST SW
ST
SD
A
CE/MLD
DI/MDATA
CL/MCLK
DO
VT
+B
26
25
28
97
MLD/PLLCE
MDATA/PLLDATA
MCLK/PLLCLK
DO IN
32
96
29
18
30
20
22
19
17
16
SD IN
STEREO IN
REST SW
CD RST
BLKCK
SQCK
SUBQ
STATUS
CHNGCR SW2
CHNGCR SW1
M38198MCA809
IC901(1/4)
SYSTEM CONTROL/FL DRIVE
IC1
BA6418N
MOTOR DRIVE
LOADING MOTOR
M
9
7
2
5
8
6
3
1
+B
CHGCONT2(REV)
CHGCONT1(FWD)
D

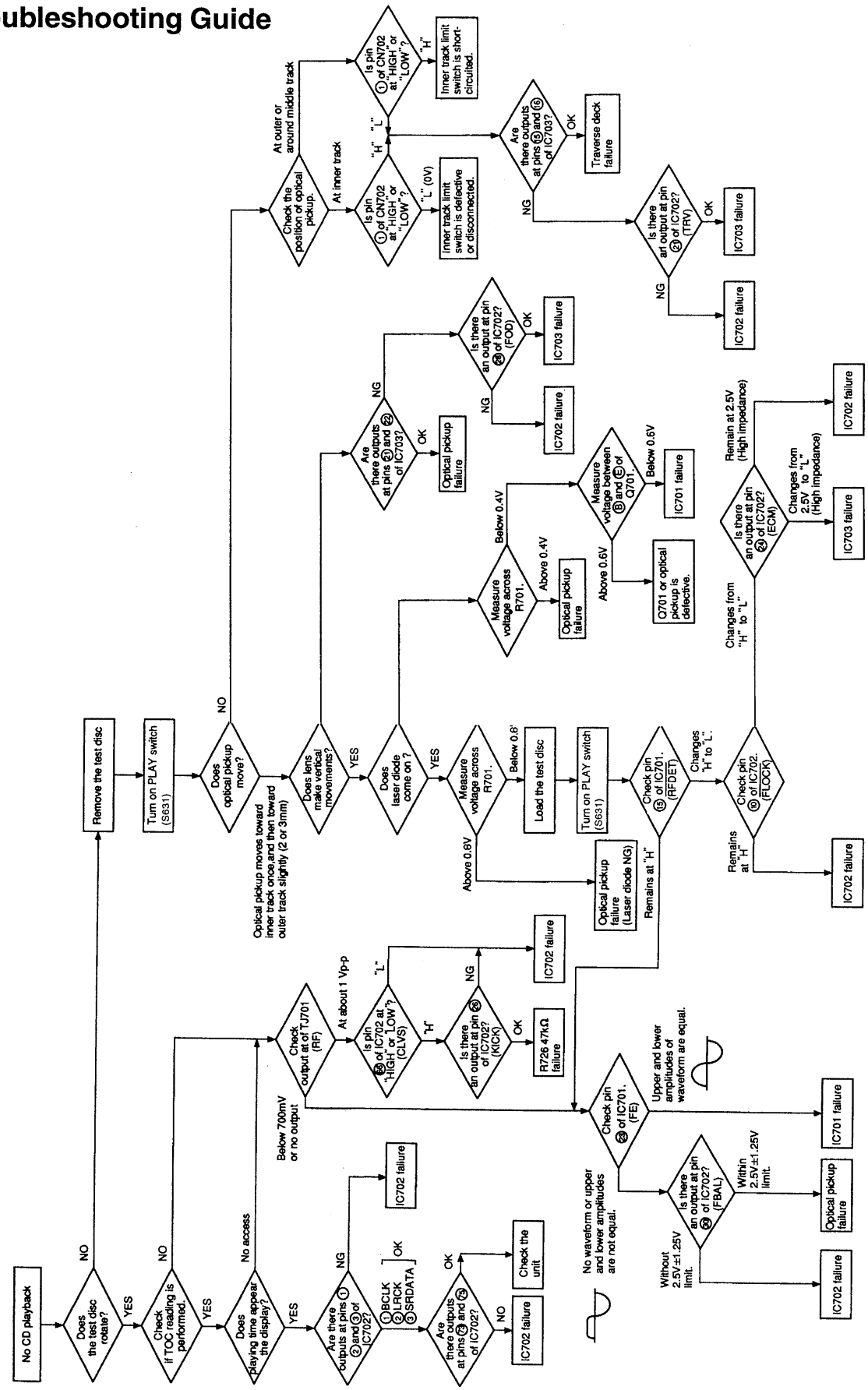

IC101(1/2)
M51167BFP-TB
P.B. EQ /TPS AMP
IC104
BU4066BCF-E2
DECK 1/2 SELECTOR
(DECK 1) P.B. HEAD
(DECK 2) R/P HEAD
LCH
Q103(Q104) R/P SELECT
Q101(Q102) R/P SELECT
CR NETWORK
TPS
(P.B GAIN ADJ.)
VR101 (VR102)
VR103 (VR104)
Q115(Q116) MUTING DRIVE
Q117
Q218
IC101(1/2)
M51167BFP-TB
REC AMP/ALC
SW
ALC
AGC
OFF
IC102
BA7755A
R/P SELECT
CR NETWORK
Q107(Q108)
P.B. EQ/ REC EQ (CrO2/H. SPEED)
(DECK 1) S953 (ATS/CrO2)
(DECK 2) ERASE HEAD
L201
BIAS OSC CONTROL
Q173~Q176
(DECK 2) S973 (ATS/CrO2)
REC;ON/ BEAT PROOF SWITCHING
Q171,Q179
REC
HI
DMT
BP1
BP2
BU2040F-E2
IC105(1/2)
SYSTEM CONTROL
2PL
2M
1M
FOR GN ONLY
IC971
ON2180RLC (DECK 2)
IC951
ON2180RLC (DECK 2)
PHOTO INTERRUPTER
S972 (HALF)
S971 (MODE)
S973 (CrO2)
S974 (F.REC INH)
S975 (R.REC INH)
S952 (HALF)
S951 (MODE)
S953 (CrO2)
Z971
INTERFACE
(Q118~Q121) INTERFACE
D202
SOLENOID DRIVE (DECK 2)
Q206,Q208
SOLENOID
Q220
Q203
MOTOR DRIVE
VR201 (TAPE SPEED ADJ.)
MOTOR (DECK 2)
DECK 2
DECK 1
TPS
M38198MCA809
IC901(1/4)
SYSTEM CONTROL/FL DRIVE
RMT
VCC
VREF
VSS
VSS
J_JOGA
J_JOGB
REGION IN
DECK (ANT)
VOL JOGA
VOL JOGB
Z901 REMOTE SENSOR
VR902 (VOLUMN SOUND EQ)
VR901 (VOLUMN)


IC301
M62433AFP
DIGITAL SOUND CONTROLLER
IN VIDEO/MD
IN TUNER
IN TAPE PB
IN CD
IN EXTIN
IN PHONO/AUX
CD
AUX LCH
COMOUT TAPE REC
GEQOUT
VOLIN
VOLOUT
MIC IN
BUFIN
BUFNF
BUFOUT
KARA PORTA
/TUNER PORTB
DVDD
CLK
DATA
LATCH
DGND
AVDD
/TUNER
SER2
SER3
SER5
FOR GC/GT ONLY
Q151(Q152)
SWITCHING (PLAY;ON)
Q153(Q154)
BUFFER AMP
IC308
BU4066BCF-E2
ANALOG SWITCH
Q308
SWITCHING
KARA PORTA
IC905
BU9255FS-E2
ECHO I.C.
VR903
ADINT IN
ADINT OUT
ADLPF OUT
ADLPF IN
MIC OUT
MIX IN
ECHO VR
MUTE
GND
BIAS
DAINT IN
DAINT OUT
DALPF IN
DALPF OUT
Q920,Q921
MIC AMP
Q937
MIC CONTROL
ATT.1
ATT.2
ATT.3
SC
DET
P=H
OFF=H
IC103
CXA1102M-T4
DOLBY B NR
TAPE
DOLBY
VCC
BU2040F-E2
IC105(1/2)
SYSTEM CONTROL
CLK
DATA
1PL
D951
SOLENOID
SOLENOID DRIVE (DECK 1)
Q207,Q209
IC902
BA3835F-E2
SPECTRUM ANALYZER AMP
BIASC
VREFC
CIN
RREF
AIN
VCC
GND
TEST
AOUT
D980
D979
D978
CRT
SER7/MKCLK
/SER2MKDATA
SPE CONT A
SPE CONT B
SPE CONT C
SPEANA INPUT
ECHO_DA
ECHO ON/OFF
M38198MCA809
IC901(1/4)
SYSTEM CONTROL/FL DRIVE
MBP2
MBP1
XOUT
XIN
XCOUT
XCIN
X'TAL CONTROL
Q932,Q933
X902
X901
GRD13
GRD1
REG32
REG1
49~61
62~94
Q924,Q927,
Q929,Q930
FL DRIVE
FL DISPLAY
FL901
FROM POWER TRANSFORMER

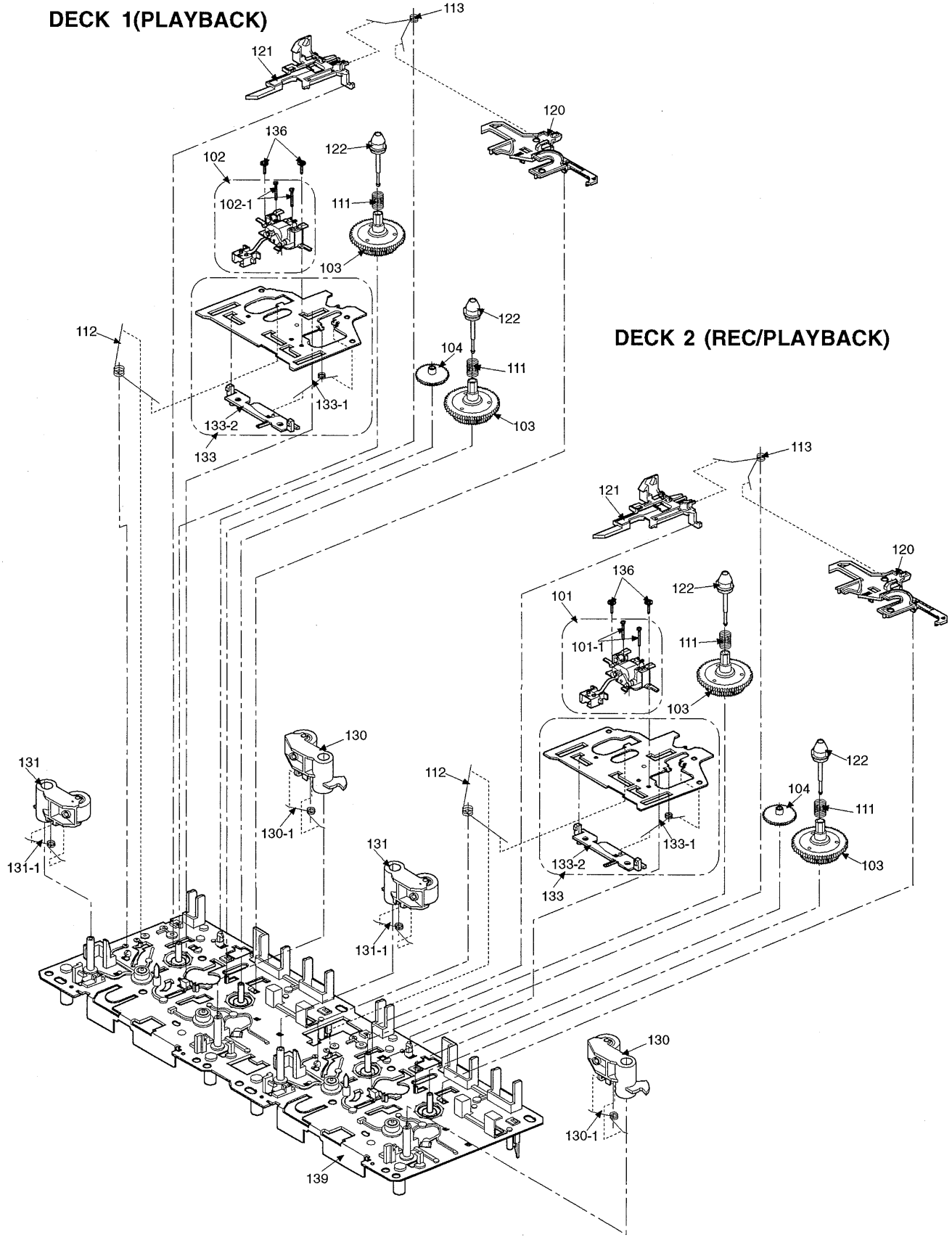

Q303(Q304)
MUTING
IC302
M5218AP
BUFFER AMP.
Q305
MUTING CONTROL
+B
IC804
M5228FPE1
BUFFER AMP.
IC802
M5228FPE1
PHASE SHIFT
Q811
SWITCHING CONTROL
Q808
SWITCHING
Q813
SWITCHING
Q809
SWITCHING
Q812
SWITCHING
HP_L(R)
IC903
BU2090F-E2
LED DRIVE
SER1
SER2
CONTROL CIRCUIT
MUTEA
12-BIT SHIFT REGISTER
LATCH
OUTPUT BUFFER
Q904~Q908
LED CONTROL
D904~D908
SER3
Q901~Q903
SWITCH CONTROL
D901~D903
CHGCONT1(FWD)
CHGCONT2(REV)
IC904
BU2090F-E2
LED DRIVE
Q935
POWER SUPPLY
FOR GC/GT ONLY
JK901
MIC1
JK902
MIC2
Q515,Q516
POWER DOWN DETECTOR
KEY SW
K4/DCDET
SER1
VP
P.CONT
/TUNER
DCDET
KEY4
KEY1
SER1/ BCLK/ TCLK
VP
P.CONT
SER2/ACLK/ SPCLK
SER3/KCLK/ SPDATA
SER4/KDATA
SER5/LTM
SER2
SER3
SER4
SER5
M38198MCA809
IC901(1/4)
SYSTEM CONTROL/FL DRIVE
/RESET
SYNC
Q934
RESET CONTROL
SYNC


SIGNAL LINES
MAIN SIGNAL LINE
FM OSC SIGNAL LINE
FM SIGNAL LINE
AM OSC SIGNAL LINE
AM SIGNAL LINE
FM & AM SIGNALS LINE
RECORDING SIGNAL LINE
PLAYBACK SIGNAL LINE
CD SIGNAL LINE
IC601
RSN308M24-P
POWER AMP.
RCH
D601
D602
SPEAKER
LOW CH
(6 Ω)
LCH
SPEAKER
HIGH CH
(6 Ω)
JK903
HEADPHONE
Q519
HEADPHONE SWITCH
Q515,Q516
DC DETECTOR
T501
Q503
REGULATOR
Q501,Q502
D501,D502
RLY501(1/2)
Q601
Q511
Q507
Q512
IC501
BA178M05T
Q509,Q510
SWITCHING (TUNER)
Q508
CD MOTOR DRIVE
Q513
Q602
Q504
Q520
STABILIZER
Q505
RELAY DRIVE
PCONT
SYNC
-VP
D507,D508
D511,D512
Q514
TO FL DISPLAY
POWER TRANSFORMER
F1
S501
L500
AC IN
VOLTAGE SELECTOR
F2
FOR GC/GT ONLY
FOR GN ONLY

■ Troubleshooting Guide

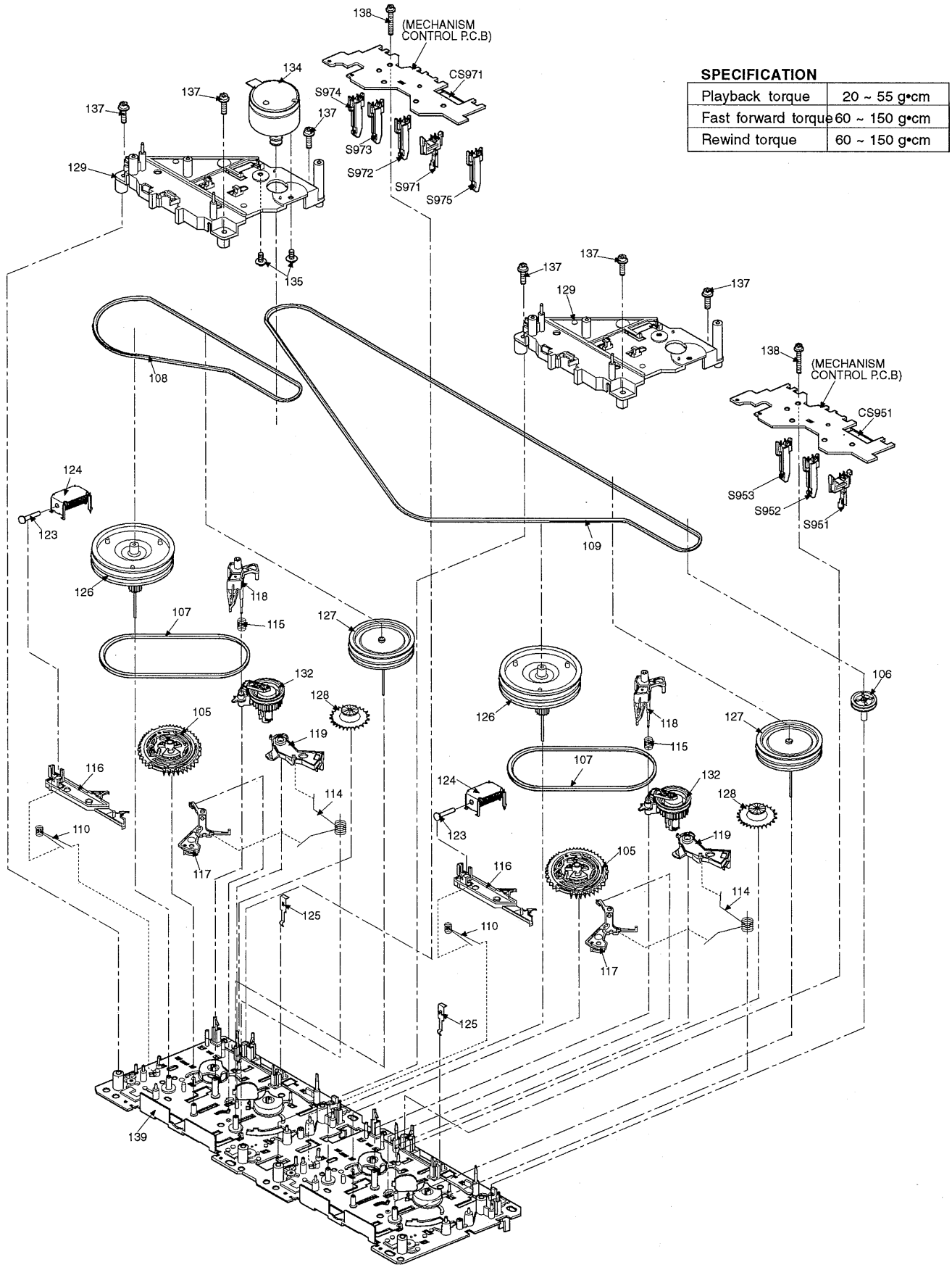


■ Mechanism Parts Location (RAA3404)...GC (RAA3406)...GC,GT

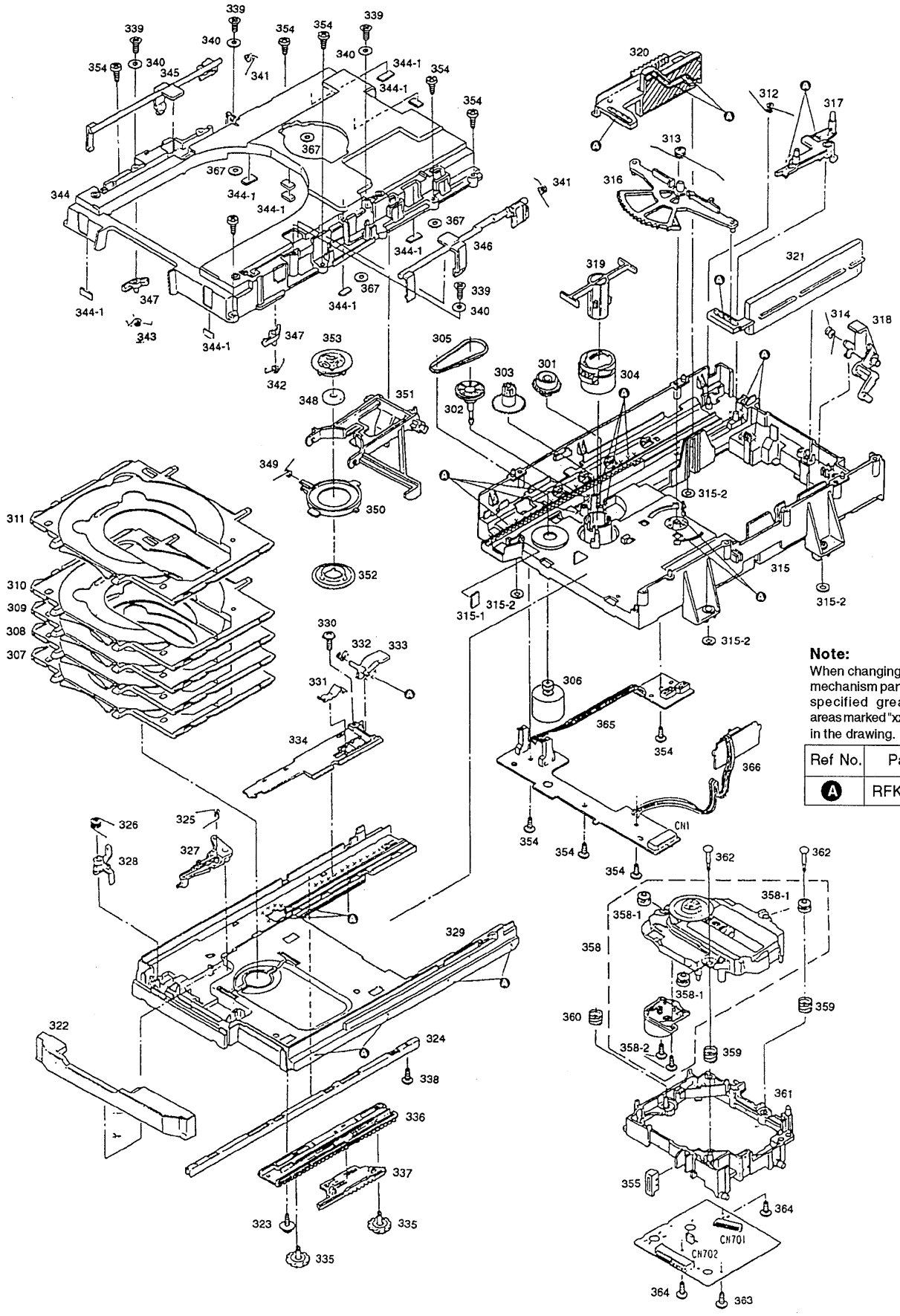


SPECIFICATION

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



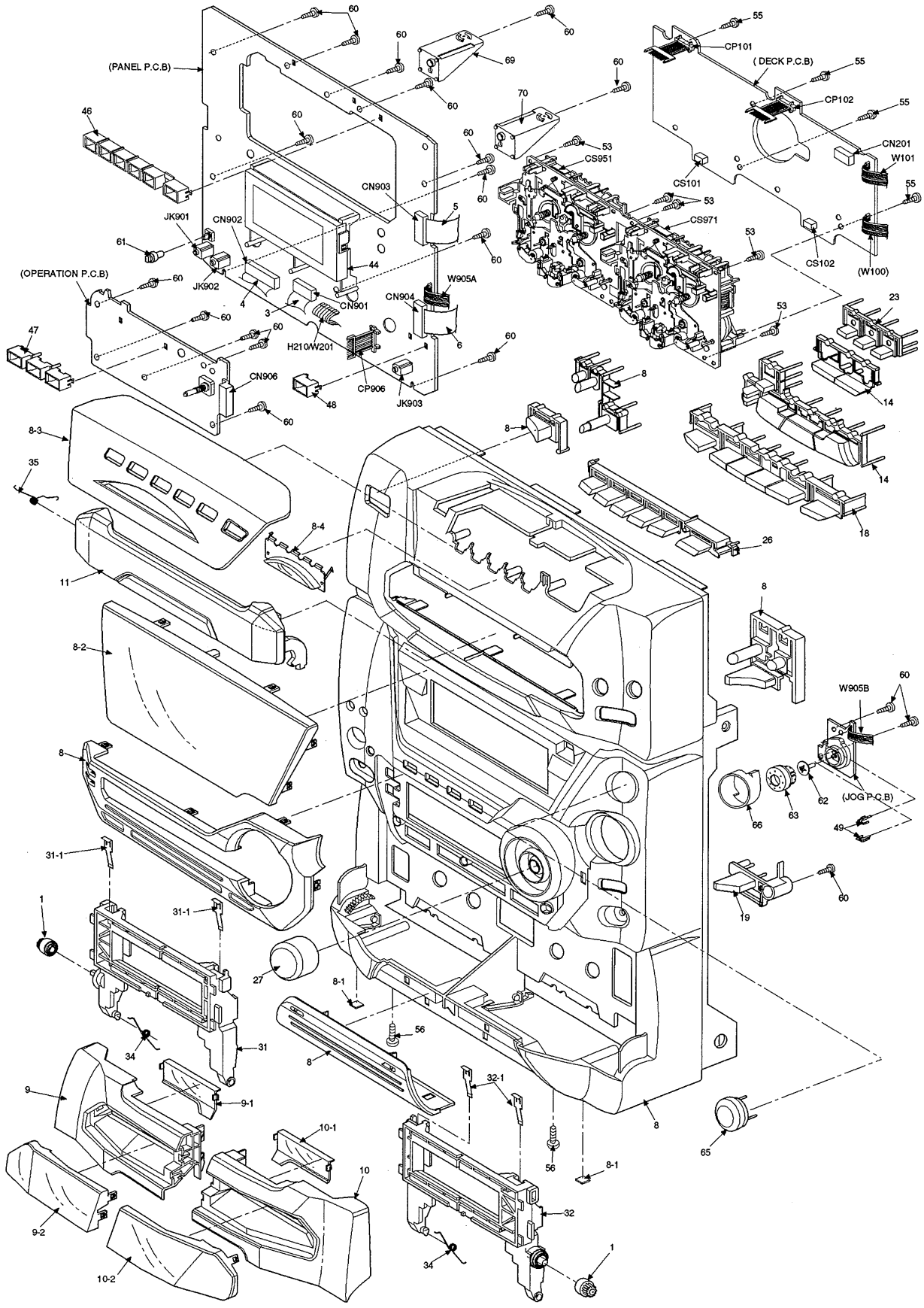
■CD Loading Unit Parts Location

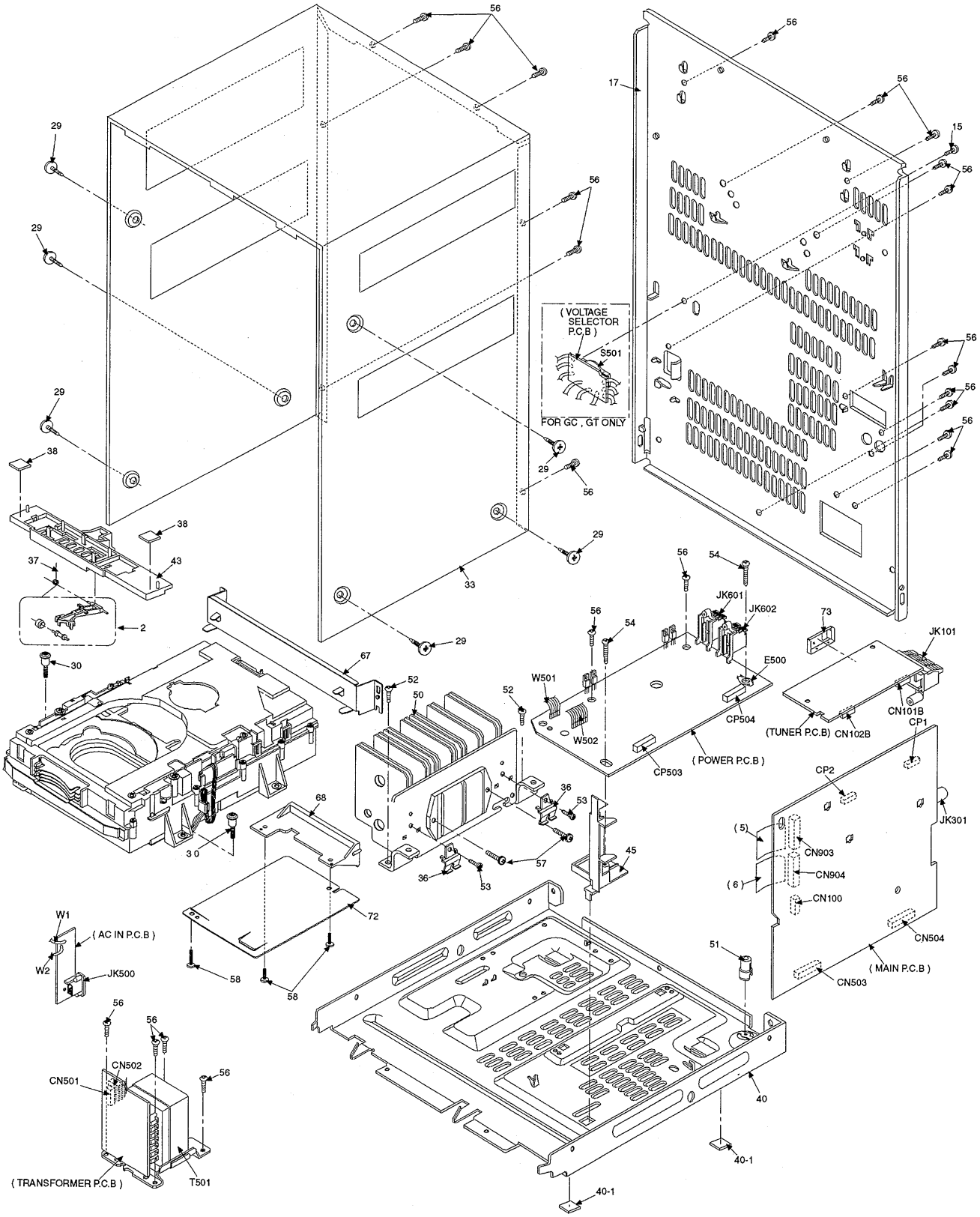


Note:
When changing the loading mechanism parts, apply the specified grease to the areas marked "xxx" as shown in the drawing.

Ref No.	Part No.
Ⓐ	RFKXPG671

■Cabinet Parts Location




(VOLTAGE SELECTOR P.C.B)
S501
FOR GC , GT ONLY
(POWER P.C.B)
JK601
JK602
E500
CP504
CP503
W501
W502
JK101
CN101B
(TUNER P.C.B)
CN102B
CP1
CP2
JK301
CN903
CN904
CN100
CN504
CN503
(MAIN P.C.B)
(AC IN P.C.B)
W1
W2
JK500
CN501
CN502
(TRANSFORMER P.C.B)
T501
56
54
73
67
52
50
68
72
58
36
53
57
45
51
40
40-1
33
30
38
37
43
2
29
17
15