EVI-D30/D31

SERVICE MANUAL

REVISED 2

EVI-D30 (NTSC)
EVI-D31 (PAL)

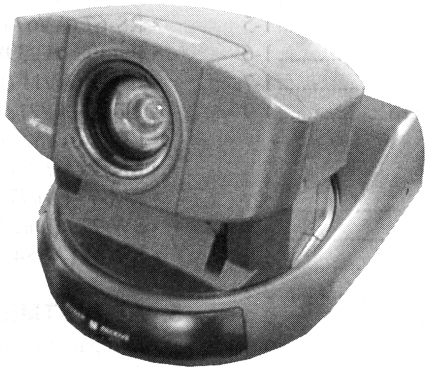

Photo:EVI-D30

3. BLOCK DIAGRAMS/SCHEMATIC DIAGRAMS

NOTE:
Contents excepting "3. BLOCK DIAGRAMS / SCHEMATIC DIAGRAMS" are mentioned in the sevice manual (9-923-017-13).

COLOR VIDEO CAMERA

SONY®

9-923-017-43

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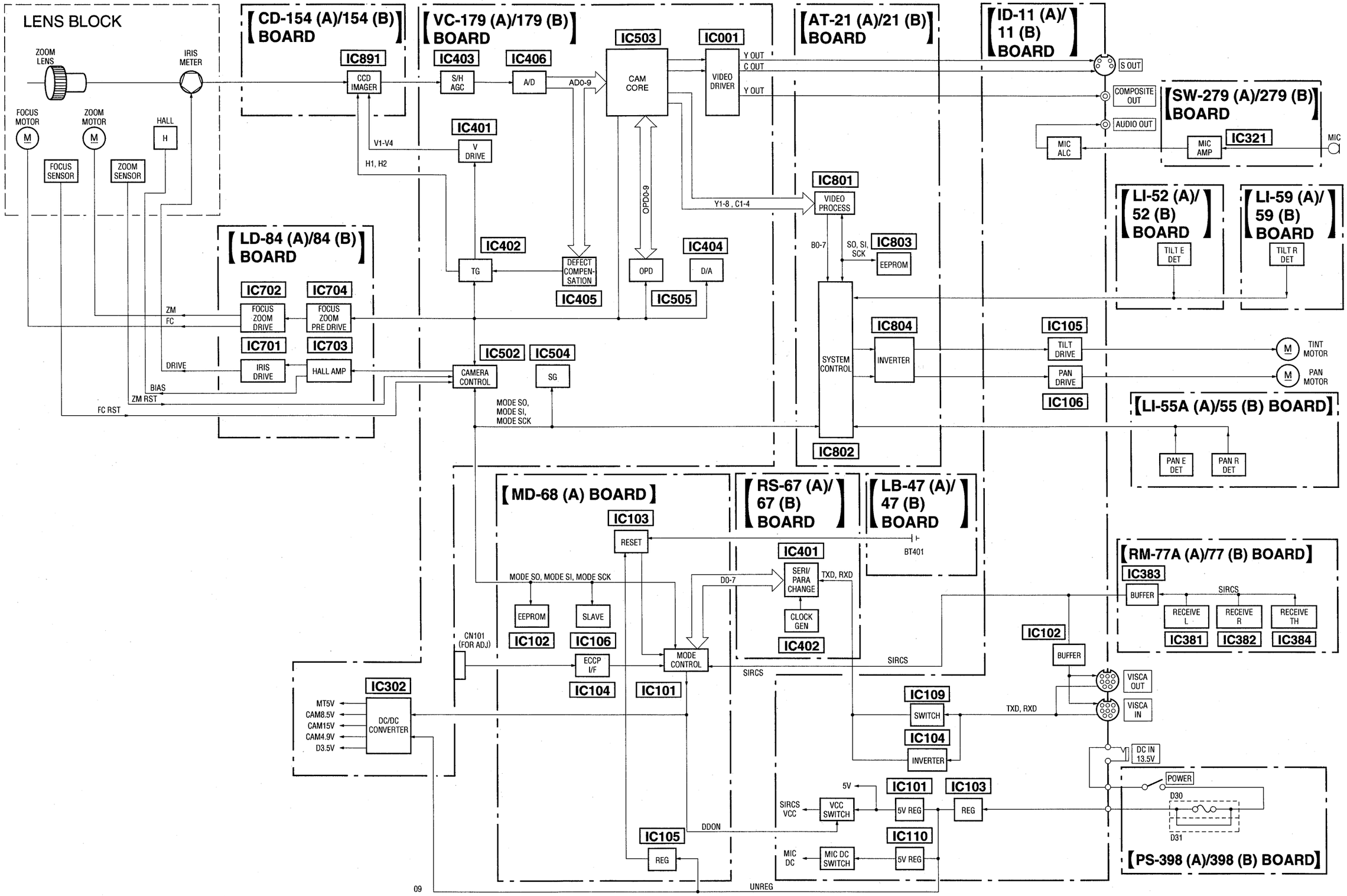
6. VISCA COMMAND LIST

7. REPAIR PARTS LIST

SECTION 3
BLOCK DIAGRAMS/SCHEMATIC DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM



MEMO

MEMO

3-2. SCHEMATIC DIAGRAM

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS.

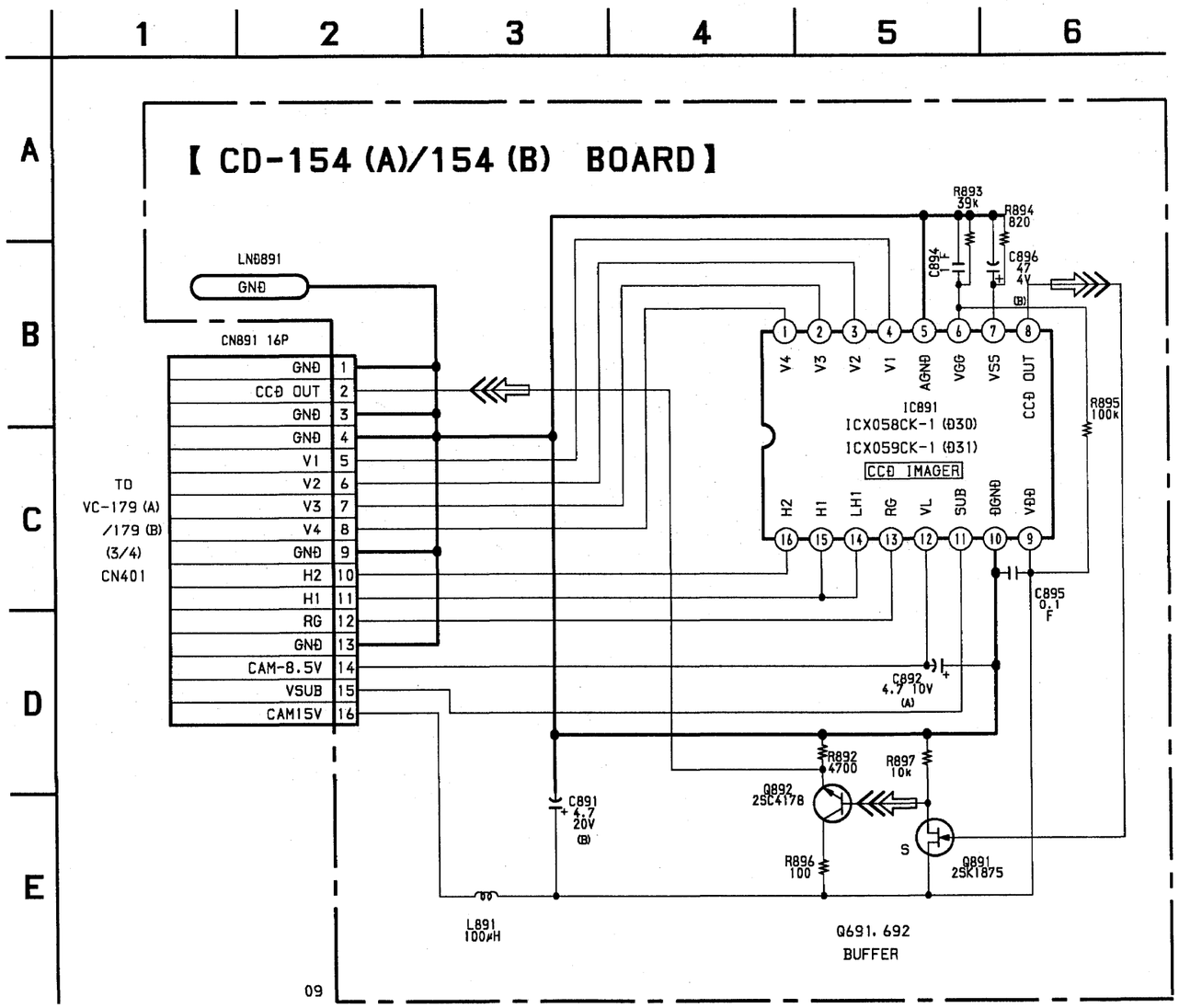
● For schematic diagrams.

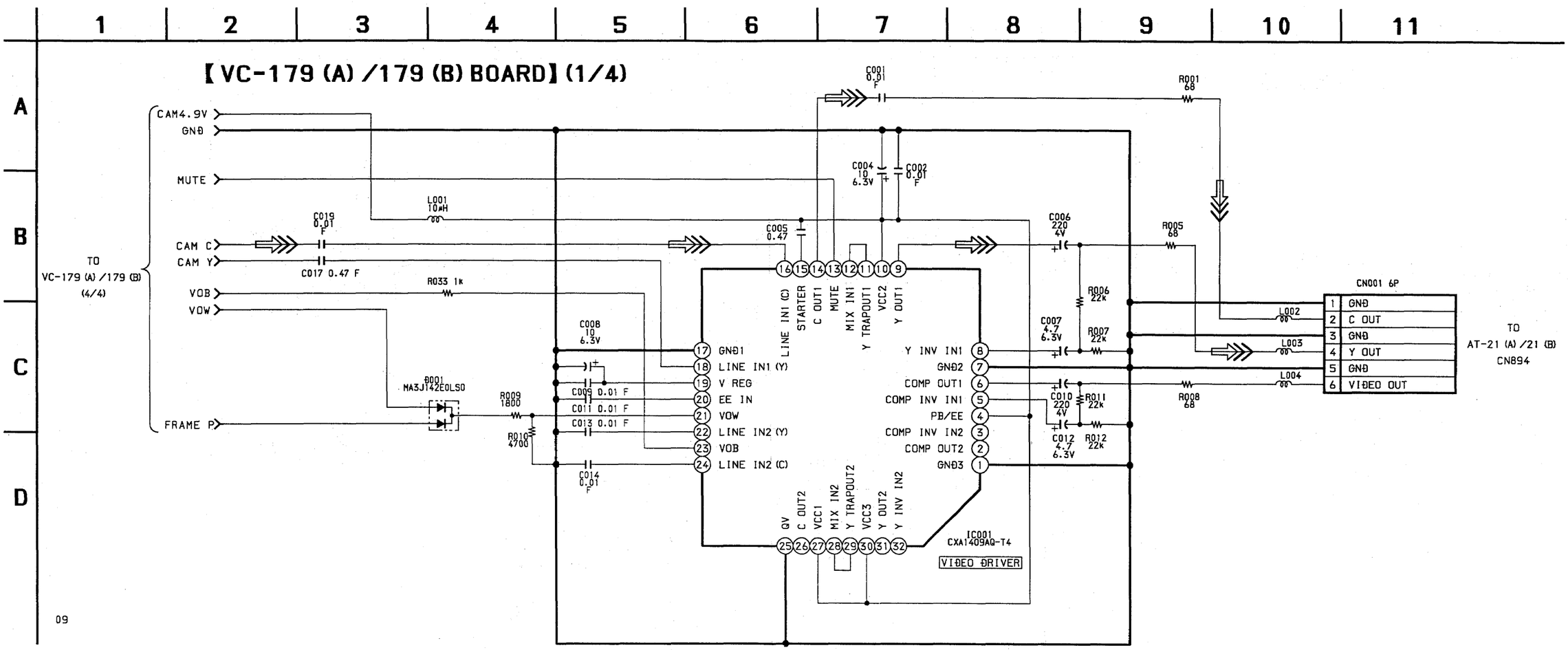
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor,
  because it is damaged by the heat.
- All resistors are in ohms, 1/4W unless otherwise noted.
- Chip resistor are 1/8W or 1/10W unless otherwise noted.
  k : 1000 Ω, MΩ : 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF : μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B,
  unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- △ : internal component.

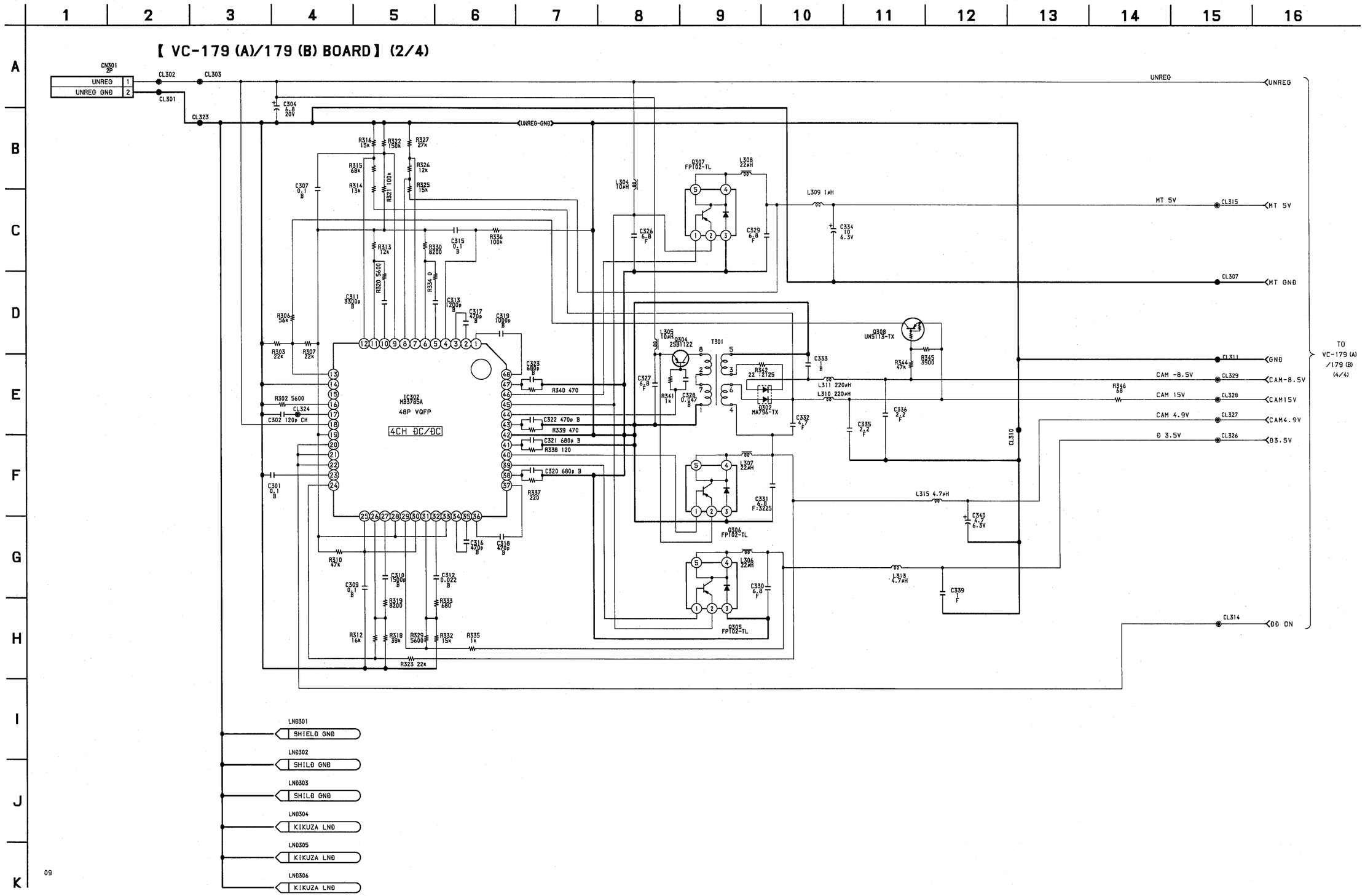
When indicating parts by referrence number, please include the board name.

CD-154 (A)/154 (B) (CCD IMAGER) SCHEMATIC DIAGRAM

– Ref. No. CD-154 (A)/154 (B) BOARD : 1,000 series –



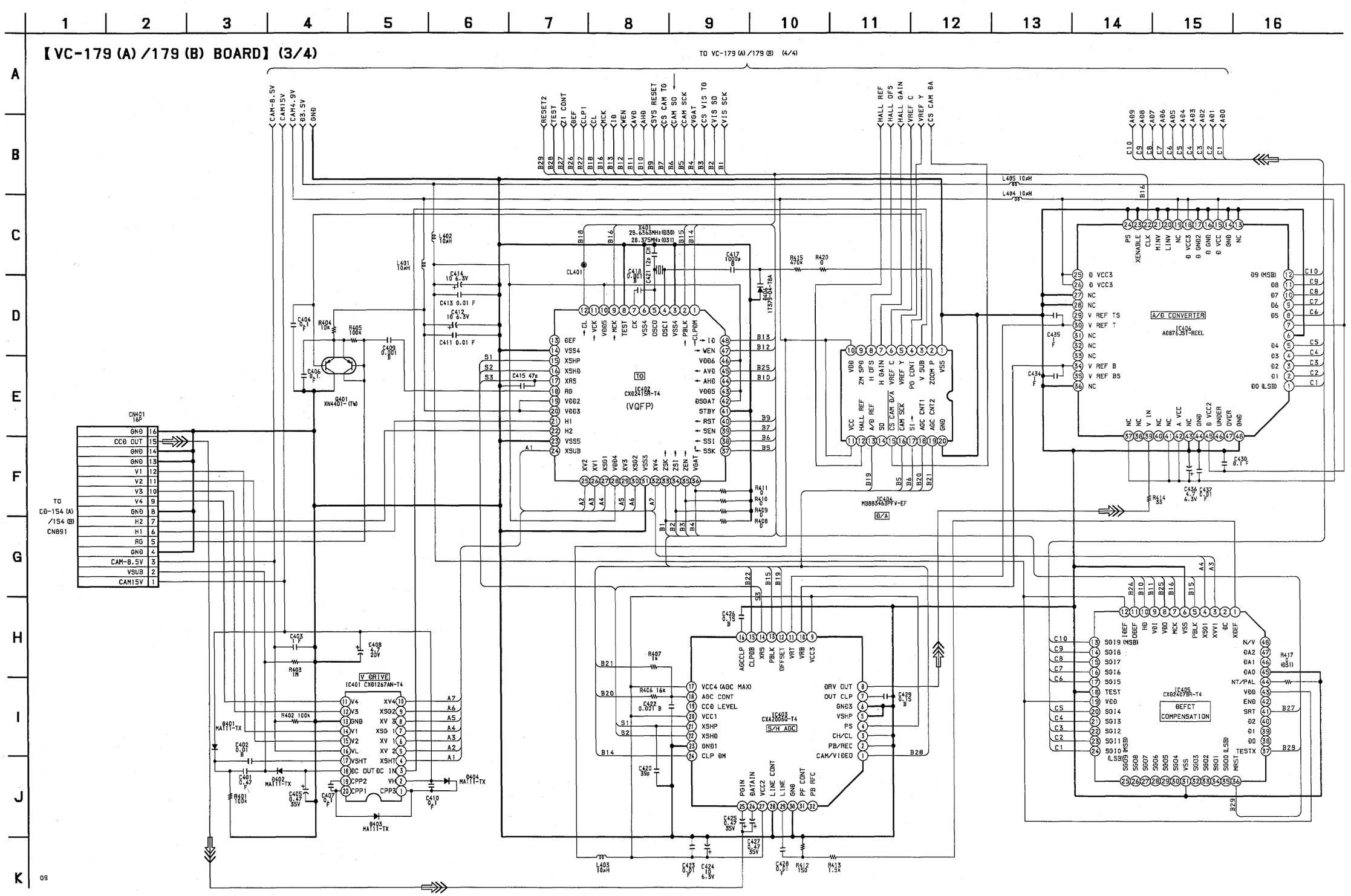

【VC-179 (A) /179 (B) BOARD】(1/4)
1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
09
CAM4.9V
GNÐ
MUTE
CAM C
CAM Y
VOB
VOW
FRAME P
TO
VC-179 (A) /179 (B)
(4/4)
C001 0.01 F
R001 68
C004 10 6.3V
C002 0.01 F
L001 10µH
C019 0.01 F
C017 0.47 F
C005 0.47
C006 220 4V
R005 68
R033 1k
C008 10 6.3V
D001 MA3J142E0LS0
R009 1800
R010 4700
C009 0.01 F
C011 0.01 F
C013 0.01 F
C014 0.01 F
R006 22k
R007 22k
C007 4.7 6.3V
C010 220 4V
R011 22k
C012 4.7 6.3V
R012 22k
R008 68
L002
L003
L004
CN001 6P
1 GNÐ
2 C OUT
3 GNÐ
4 Y OUT
5 GNÐ
6 VIÐEO OUT
TO
AT-21 (A) /21 (B)
CN894
16 LINE IN1 (C)
15 STARTER
14 C OUT1
13 MUTE
12 MIX IN1
11 Y TRAPOUT1
10 VCC2
9 Y OUT1
17 GNÐ1
18 LINE IN1 (Y)
19 V REG
20 EE IN
21 VOW
22 LINE IN2 (Y)
23 VOB
24 LINE IN2 (C)
8 Y INV IN1
7 GNÐ2
6 COMP OUT1
5 COMP INV IN1
4 PB/EE
3 COMP INV IN2
2 COMP OUT2
1 GNÐ3
IC001
CXA1409AQ-T4
VIÐEO ÐRIVER
25 QV
26 C OUT2
27 VCC1
28 MIX IN2
29 Y TRAPOUT2
30 VCC3
31 Y OUT2
32 Y INV IN2


【 VC-179 (A)/179 (B) BOARD 】 (2/4)
CN301 2P
UNREG
UNREG GND
CL302
CL303
CL301
CL323
C304 6.8 20V
UNREG-GND
R316 15k
R322 150k
R327 27k
R315 68k
R326 12k
R314 13k
R321 100k
R325 15k
C307 0.1 B
R313 12k
R330 8200
C315 0.1 B
R336 100k
C326 6.8 F
R320 5600
R334 0
C311 3300p B
C313 1200p B
C317 470p B
C319 1000p B
R304 56k
R303 22k
R307 22k
IC302 MB3785A 48P VQFP
4CH DC/DC
C323 680p B
R340 470
R302 5600
CL324
C302 120p CH
C322 470p B
R339 470
C321 680p B
R338 120
C320 680p B
R337 220
C301 0.1 B
R310 47k
C309 0.1 B
C310 1500p B
C312 0.022 B
R319 8200
R333 680
R312 16k
R318 39k
R329 5600
R332 15k
R335 1k
R323 22k
C316 470p B
C318 470p B
Q307 FPT02-TL
L308 22μH
L304 10μH
L309 1μH
C334 10 6.3V
C329 6.8 F
L305 10μH
Q304 2SB1122
T301
C327 6.8 F
R341 1k
C328 0.047 B
R342 22 1/2125
D302 MA796-TX
C333 B
L311 220μH
L310 220μH
Q308 UNS113-TX
R345 3900
R344 47k
C335 2.2 F
C336 2.2 F
C332 4.7 F
CL310
L307 22μH
C331 6.8 F 1/3225
Q306 FPT02-TL
L315 4.7μH
C340 4.7 6.3V
L306 22μH
C330 6.8 F
Q305 FPT02-TL
L313 4.7μH
C339 1 F
R346 68
UNREG
MT 5V
MT GND
GND
CAM -8.5V
CAM 15V
CAM 4.9V
Ø 3.5V
CL315
CL307
CL311
CL329
CL328
CL327
CL326
CL314
ØØ ON
TO VC-179 (A) /179 (B) (4/4)
LNØ301 SHIELØ GNØ
LNØ302 SHILØ GNØ
LNØ303 SHILØ GNØ
LNØ304 KIKUZA LNØ
LNØ305 KIKUZA LNØ
LNØ306 KIKUZA LNØ
09

VC-179 (A)/179 (B) (CAMERA(3)) SCHEMATIC DIAGRAM

– Ref. No. VC-179 (A)/179 (B) BOARD : 1,000 series –

【VC-179 (A) /179 (B) BOARD】 (3/4)



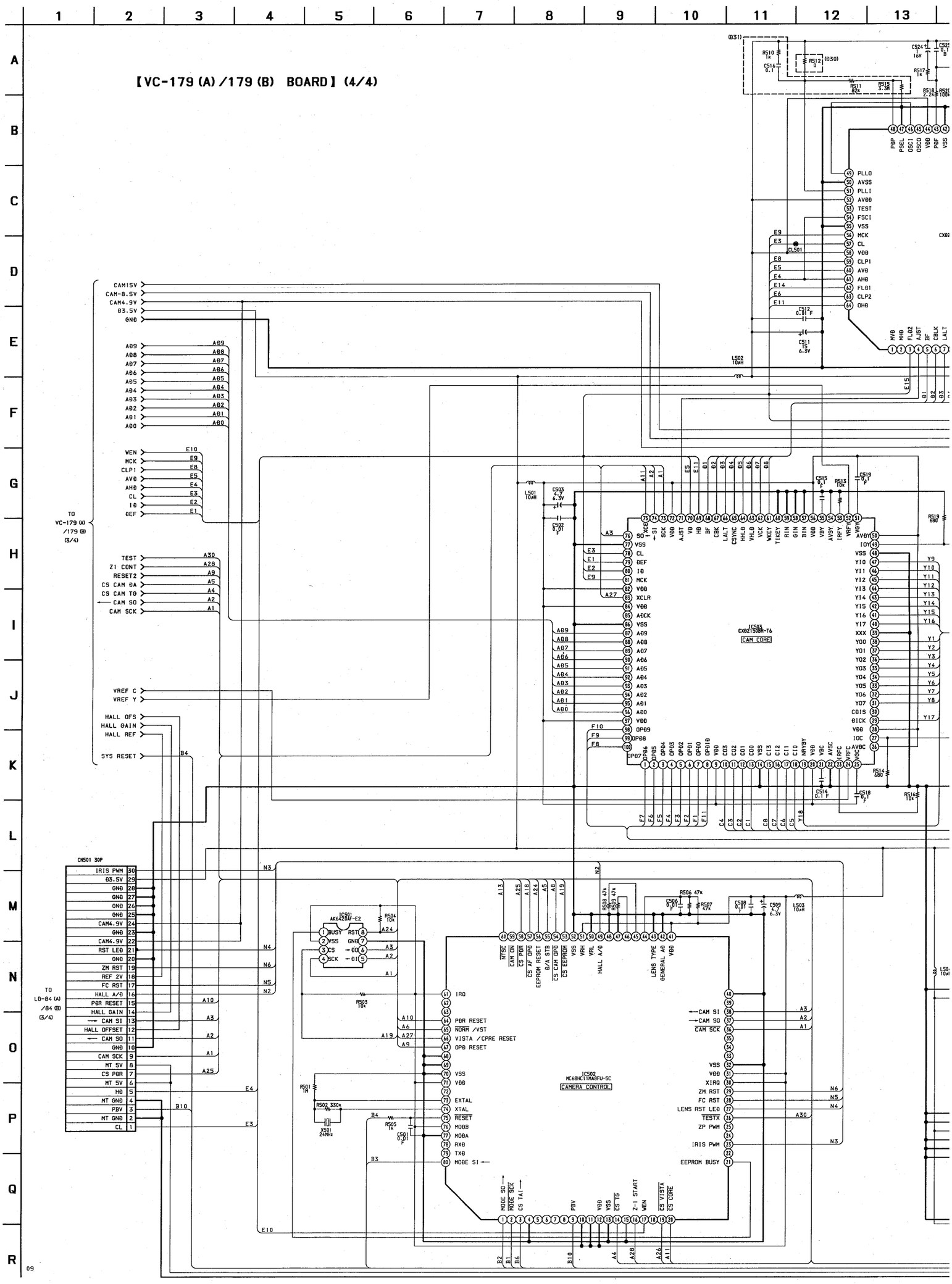
VC-179 (A)/179 (B) (CAMERA(4))

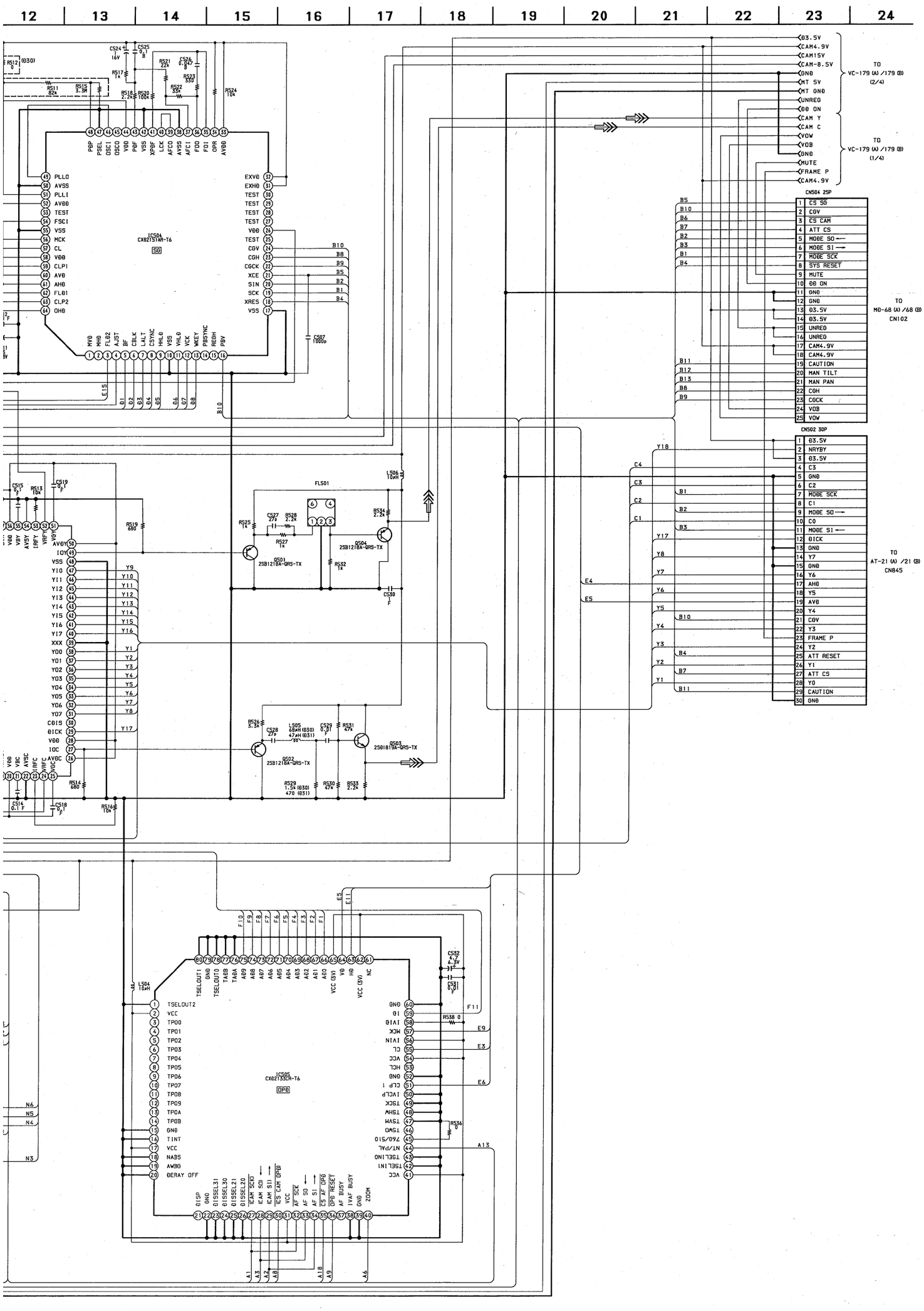
The following have been devided into 3 sections as noted on the grid shown below.

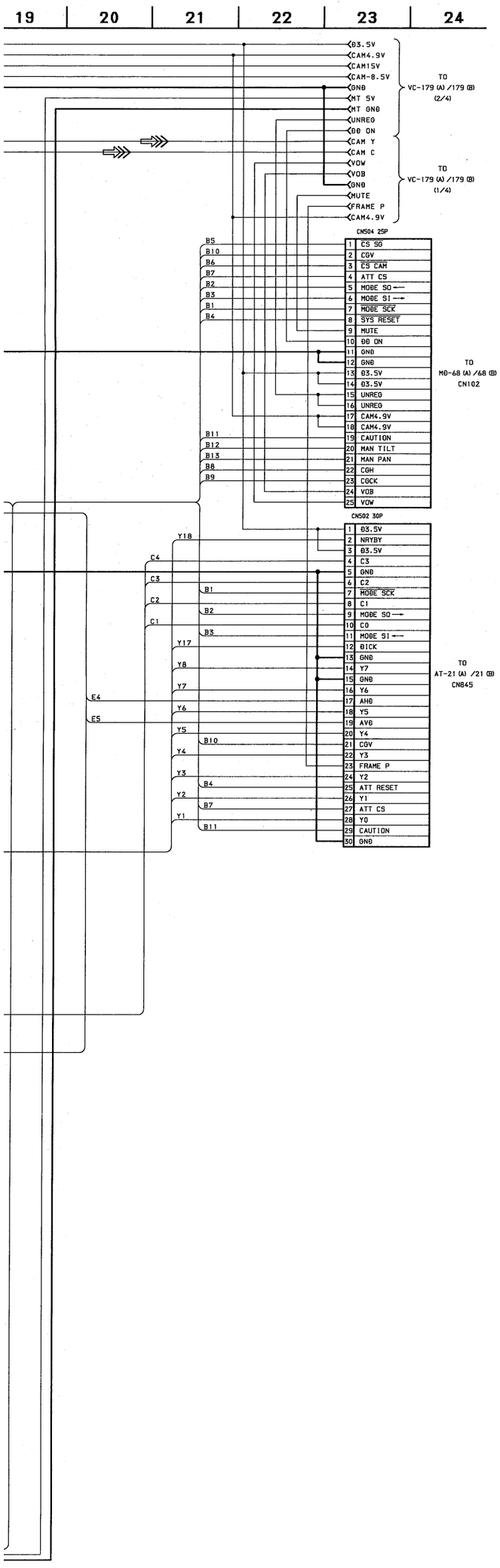
A1	A2	A3

VC-179 (A)/179 (B) (CAMERA(4)) SCHEMATIC DIAGRAM

– Ref. No. VC-179 (A)/179 (B) BOARD : 1,000 series –




12
13
14
15
16
17
18
19
20
21
22
23
24
TO VC-179 (A) /179 (B) (2/4)
TO VC-179 (A) /179 (B) (1/4)
TO M8-68 (A) /68 (B) CN102
TO AT-21 (A) /21 (B) CN845
CN504 25P
CN502 30P
CXD2515AN-T6
CXD2525R-T6
FL501
2SB1218A-QRS-TX
2SD1819A-QRS-TX


19
20
21
22
23
24
Ø3.5V
CAM4.9V
CAM15V
CAM-8.5V
GNØ
MT 5V
MT GNØ
UNREG
ØØ ØN
CAM Y
CAM C
VOW
VOB
GNØ
MUTE
FRAME P
CAM4.9V
TO
VC-179 (A) /179 (B)
(2/4)
TO
VC-179 (A) /179 (B)
(1/4)
CN504 25P
1 CS SO
2 CGV
3 CS CAM
4 ATT CS
5 MOBE SO
6 MOBE SI
7 MOBE SCK
8 SYS RESET
9 MUTE
10 ØØ ØN
11 GNØ
12 GNØ
13 Ø3.5V
14 Ø3.5V
15 UNREG
16 UNREG
17 CAM4.9V
18 CAM4.9V
19 CAUTION
20 MAN TILT
21 MAN PAN
22 CGH
23 CGCK
24 VOB
25 VOW
B5
B10
B6
B7
B2
B3
B1
B4
B11
B12
B13
B8
B9
TO
MØ-68 (A) /68 (B)
CN102
CN502 30P
1 Ø3.5V
2 NRYBY
3 Ø3.5V
4 C3
5 GNØ
6 C2
7 MOBE SCK
8 C1
9 MOBE SO
10 CO
11 MOBE SI
12 ØICK
13 GNØ
14 Y7
15 GNØ
16 Y6
17 AHØ
18 YS
19 AVØ
20 Y4
21 CGV
22 Y3
23 FRAME P
24 Y2
25 ATT RESET
26 Y1
27 ATT CS
28 YO
29 CAUTION
30 GNØ
Y18
C4
C3
C2
C1
Y17
Y8
Y7
Y6
Y5
Y4
Y3
Y2
Y1
B1
B2
B3
B10
B4
B7
B11
E4
E5
TO
AT-21 (A) /21 (B)
CN845

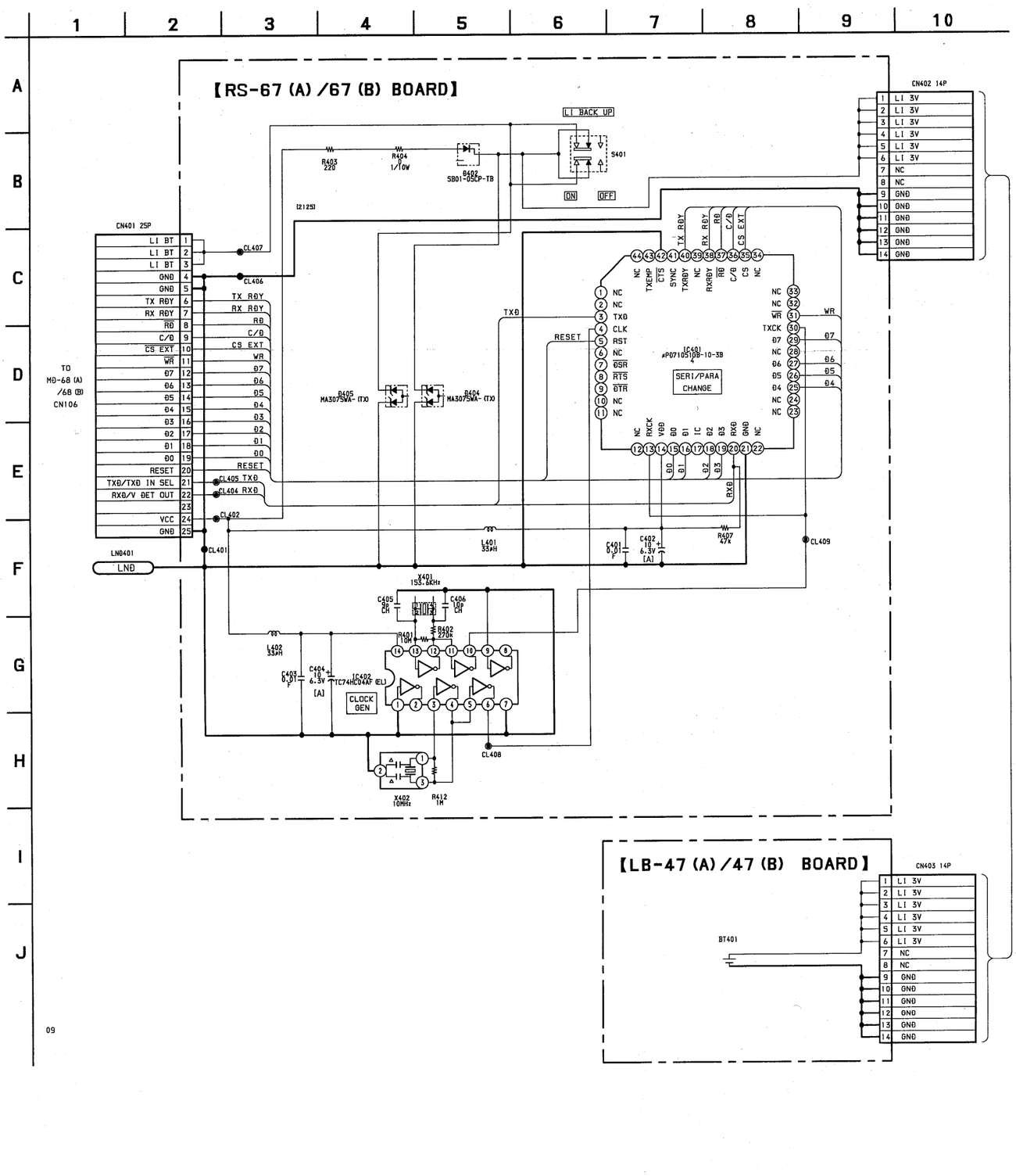
RS-67 (A)/67 (B) (BACK UP) LB-47 (A)/47(B) (BATTERY) MD-68(A)/68 (B) (MODE CONTROL)

The following have been devided into 3 sections as noted on the grid shown below.

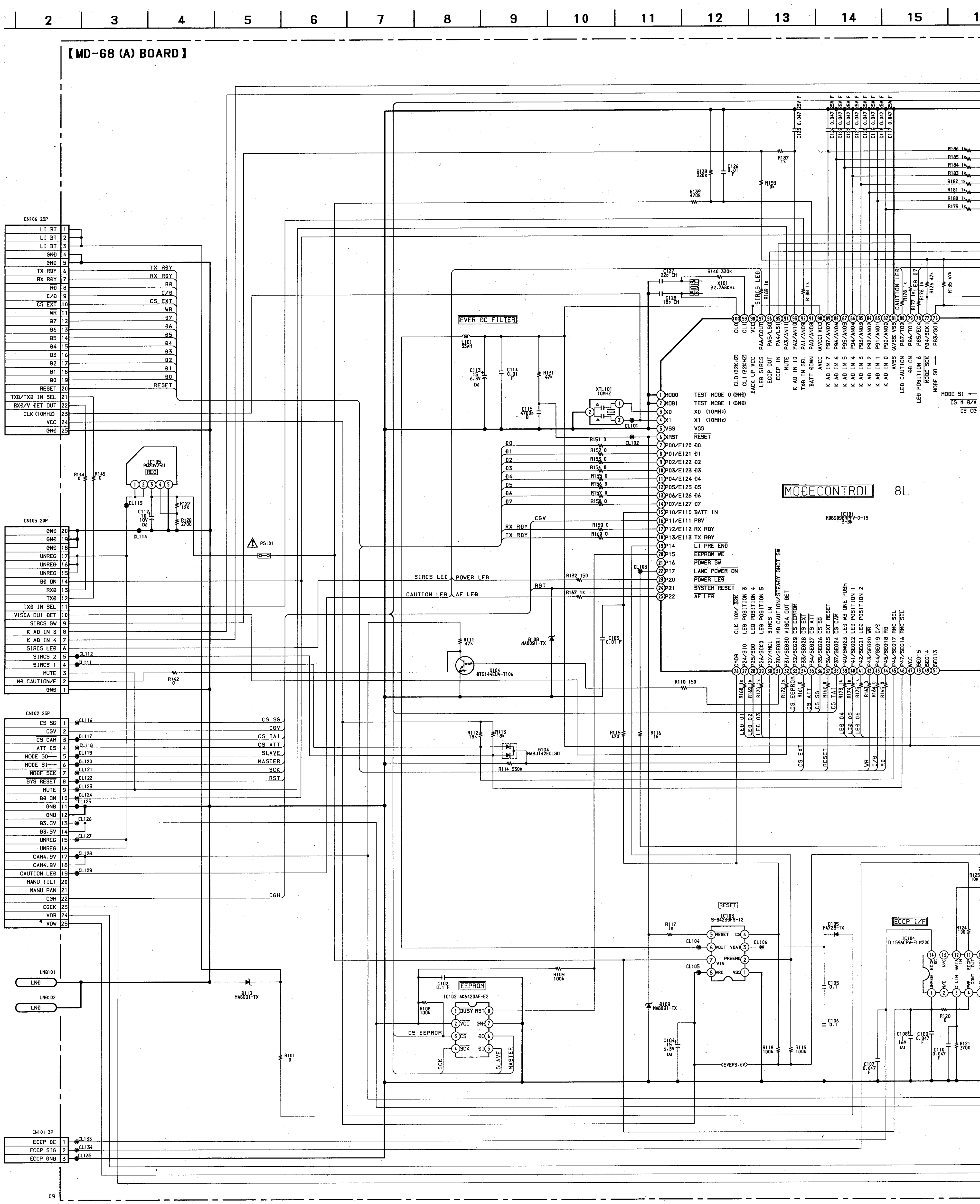
A1	A2	A3

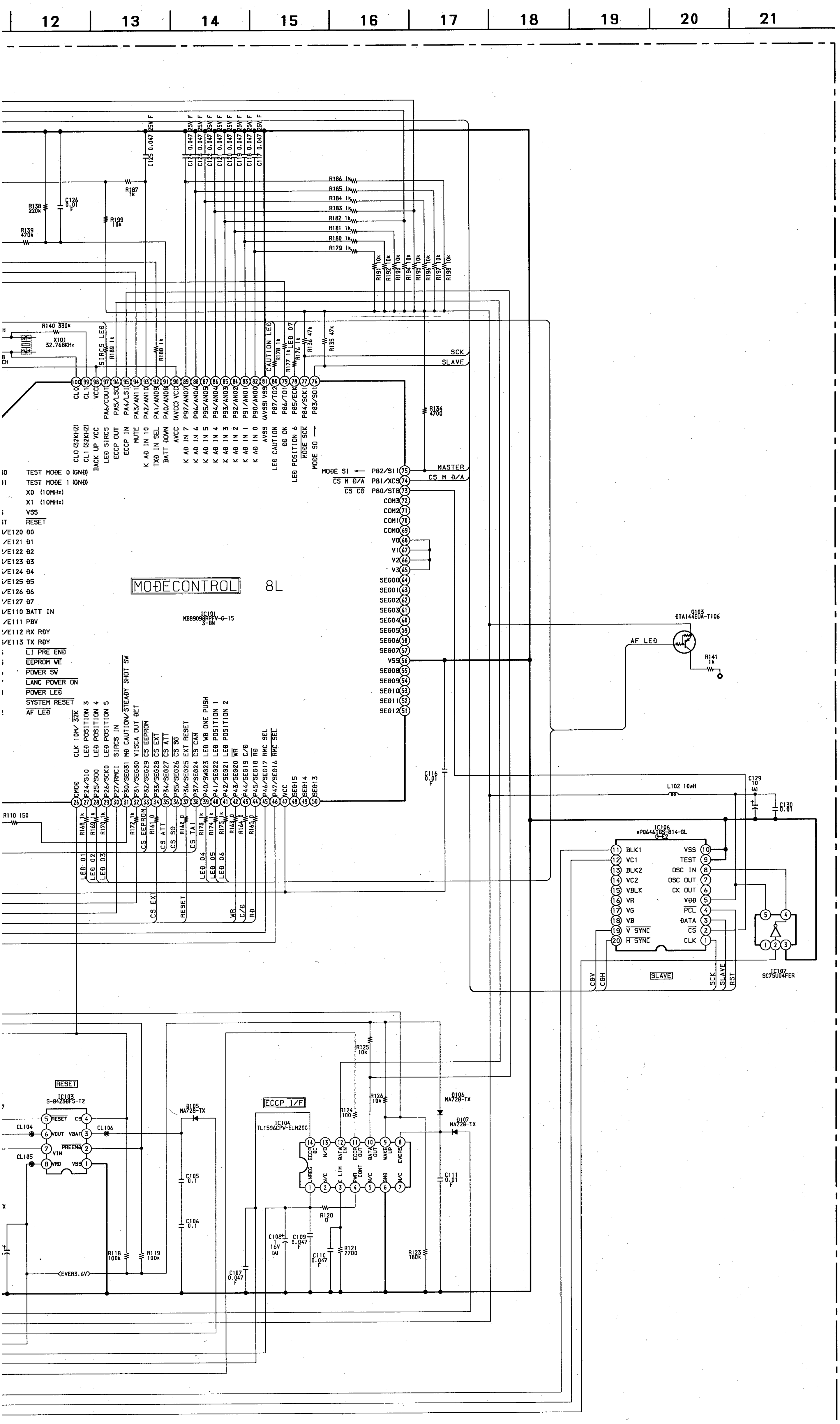
RS-67 (A)/67 (B) (BACK UP) LB-47 (A)/47 (B) (BATTERY) MD-68 (A)/68 (B) (MODE CONTROL) SCHEMATIC DIAGRAM

– Ref. No. RS-67 (A)/67 (B) BOARD : 2,000 series, LB-47 (A)/47 (B) BOARD : 2,000 series, MD-68 (A)/68 (B) BOARD : 2,000 series –



A2


【MD-68 (A) BOARD】
MODECONTROL
8L
IC101 MB89098PFV-G-15
EVER DC FILTER
EEPROM
IC102 AK6420AF-E2
RESET
IC103 S-8423BFS-T2
ECCP I/F
IC104 TL1596CPW-ELM200
IC105 PQ20VZ5U
REG
CN106 25P
CN105 20P
CN102 25P
CN101 3P
LND101
LND102
XTL101 10MHZ
X101 32.768KHz



MODECONTROL
8L
IC101
MB89098RPFV-G-15
IC106
IC107
SC7SU04FER
SLAVE
ECCP I/F
IC104
TL1596CPW-ELM200
RESET
IC103
AF LED
MASTER
SCK

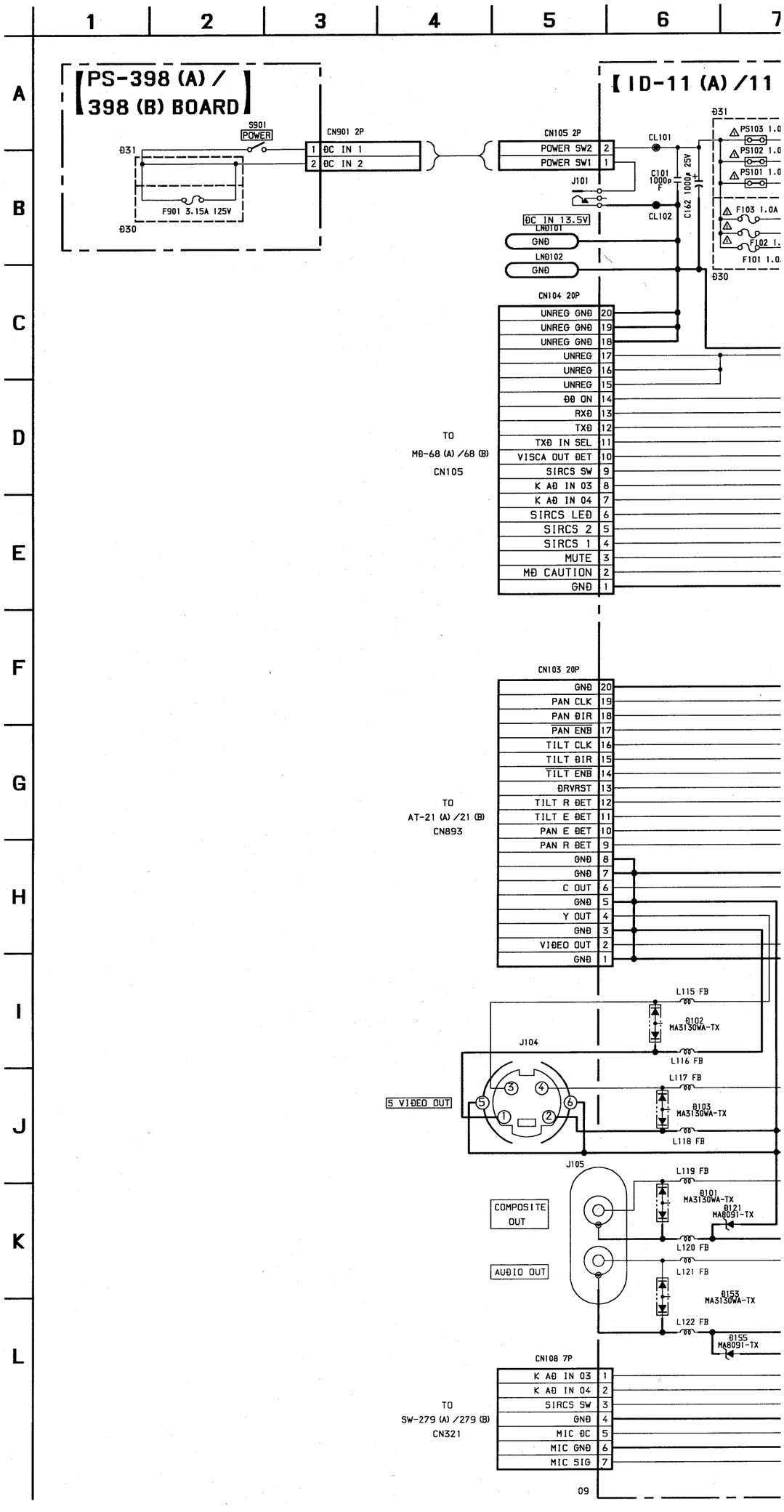
PS-398 (A)/398 (B) (POWER SWITCH) ID-11 (A)/11(B) (MOTOR DRIVE, INPUT/OUTPUT)

The following have been devided into 3 sections as noted on the grid shown below.

A1	A2	A3

PS398 (A)/398 (B) (POWER SWITCH) ID-11 (A)/11 (B) (MOTOR DRIVE, INPUT/OUTPUT) SCHEMATIC DIAGRAM

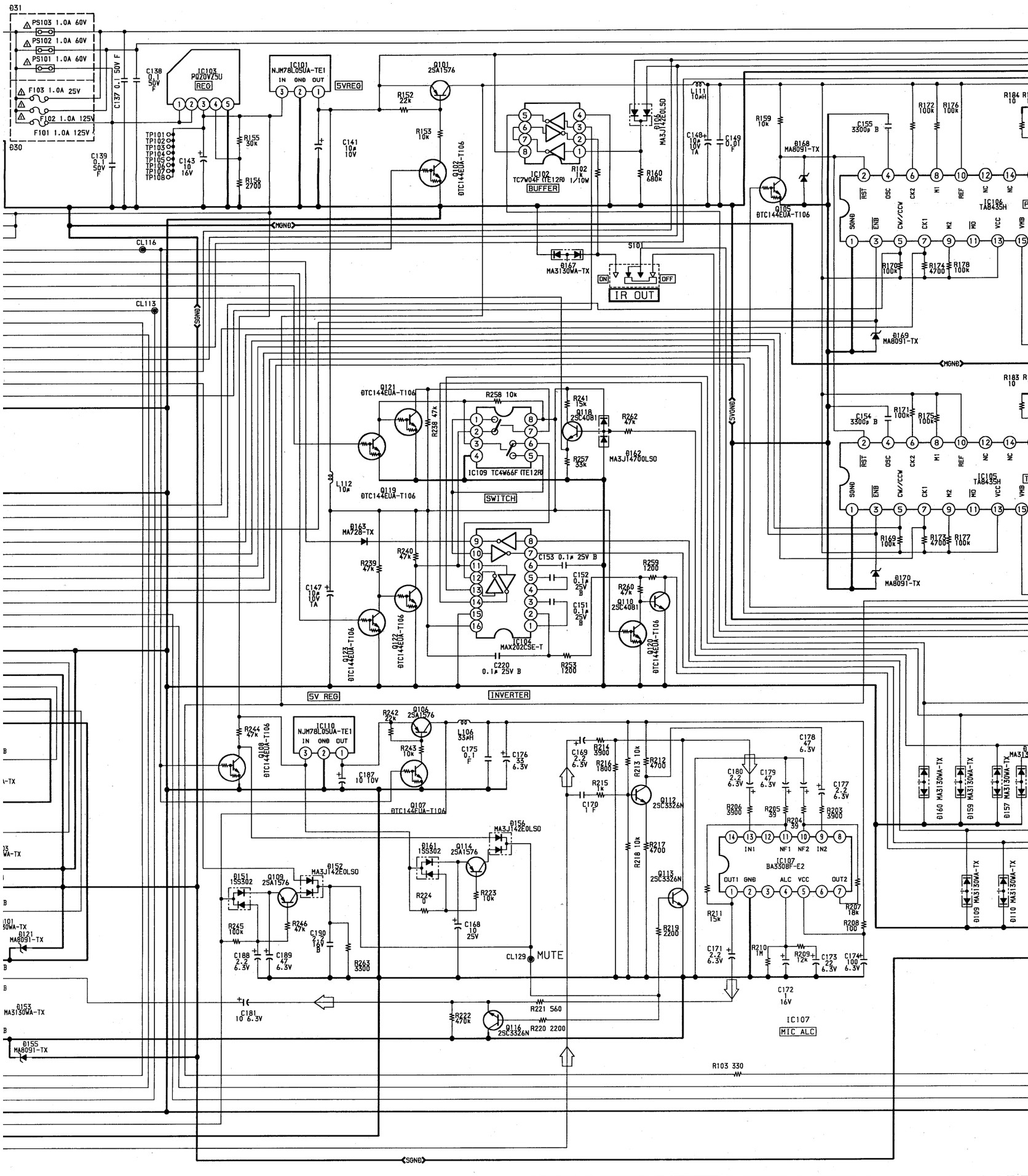
– Ref. No. PS-398 (A)/398 (B) BOARD : 2,000 series, ID-11 (A)/11 (B) BOARD : 2,000 series –

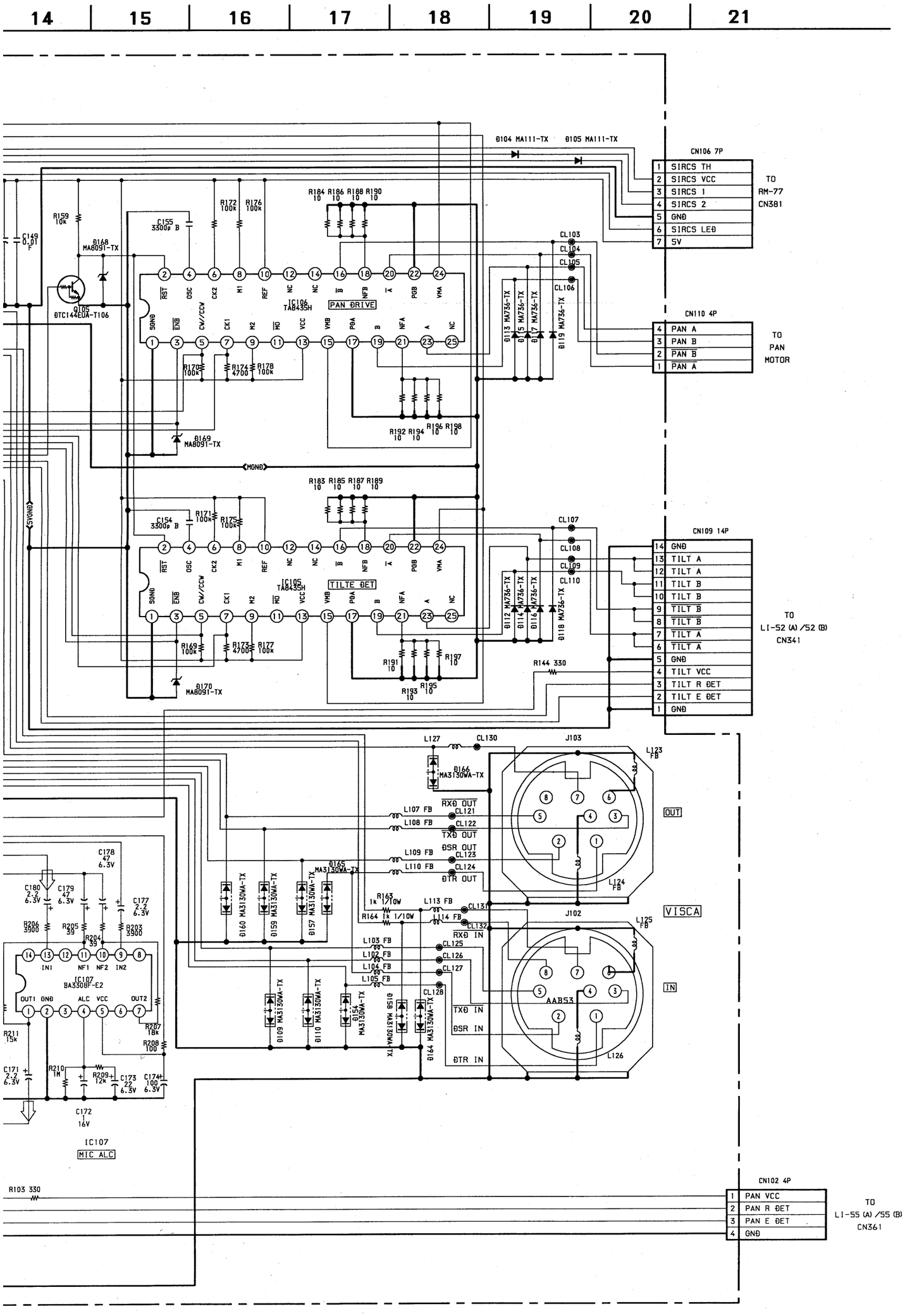


GRAM

7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

(A) /11 (B) BOARD】




14
15
16
17
18
19
20
21
D104 MA111-TX
D105 MA111-TX
CN106 7P
1 SIRCS TH
2 SIRCS VCC
3 SIRCS 1
4 SIRCS 2
5 GND
6 SIRCS LED
7 5V
TO RM-77 CN381
CN110 4P
4 PAN A
3 PAN B
2 PAN B
1 PAN A
TO PAN MOTOR
IC106 TA8435H
PAN DRIVE
IC105 TA8435H
TILTE DET
CN109 14P
14 GND
13 TILT A
12 TILT A
11 TILT B
10 TILT B
9 TILT B
8 TILT B
7 TILT A
6 TILT A
5 GND
4 TILT VCC
3 TILT R DET
2 TILT E DET
1 GND
TO LI-52 (A) /52 (B) CN341
MGND
5VGND
Q105 DTC144EUA-T106
D169 MA8091-TX
D170 MA8091-TX
D166 MA3130WA-TX
D165 MA3130WA-TX
D160 MA3130WA-TX
D159 MA3130WA-TX
D157 MA3130WA-TX
D109 MA3130WA-TX
D110 MA3130WA-TX
D154 MA3130WA-TX
D158 MA3130WA-TX
D164 MA3130WA-TX
D113 MA736-TX
D115 MA736-TX
D117 MA736-TX
D119 MA736-TX
D112 MA736-TX
D114 MA736-TX
D116 MA736-TX
D118 MA736-TX
J103
J102
OUT
VISCA
IN
AAB53
IC107 BA3308F-E2
MIC ALC
CN102 4P
1 PAN VCC
2 PAN R DET
3 PAN E DET
4 GND
TO LI-55 (A) /55 (B) CN361

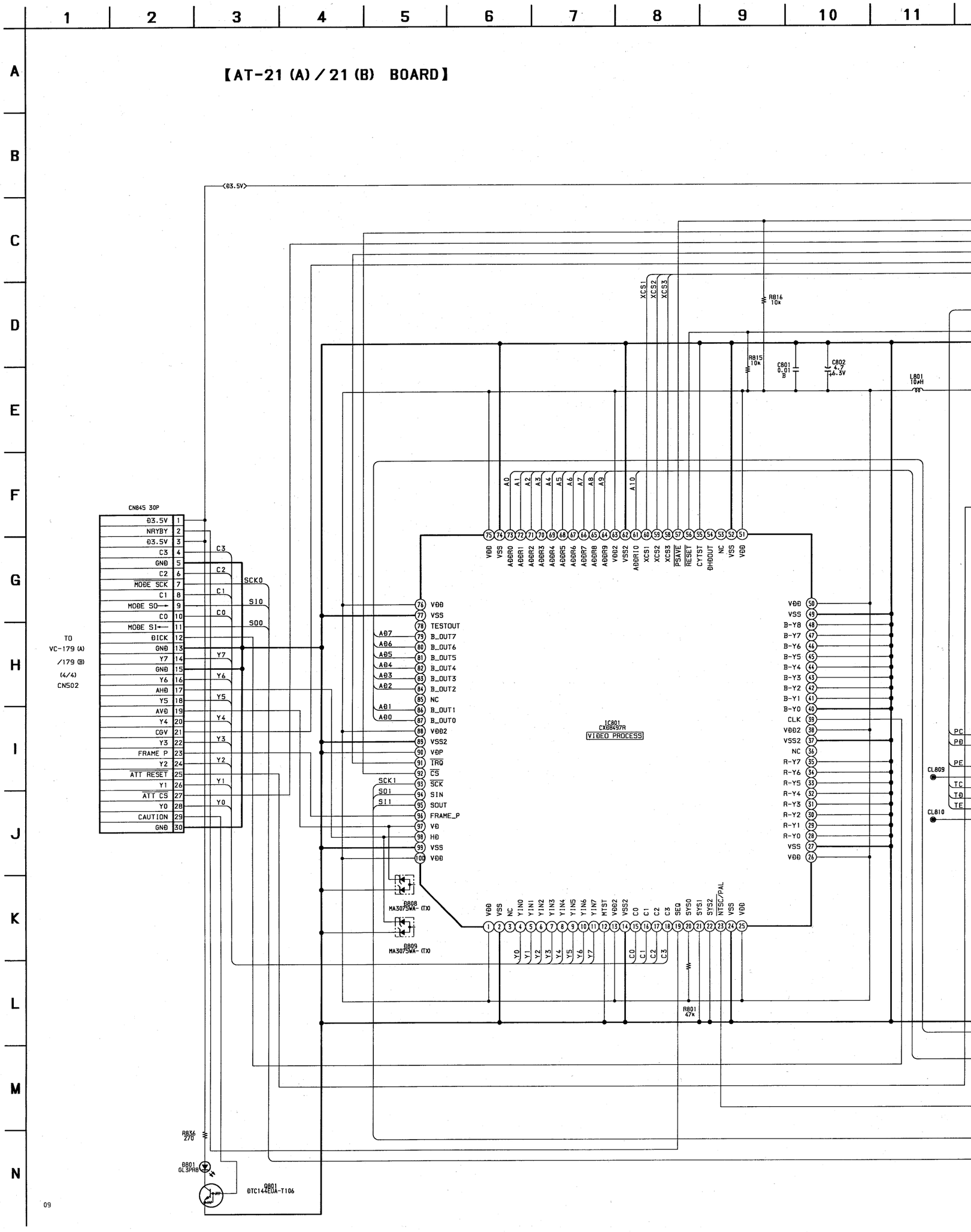
AT-21 (A)/21 (B) (VIDEO PROCESS, MAIN CONTROL)

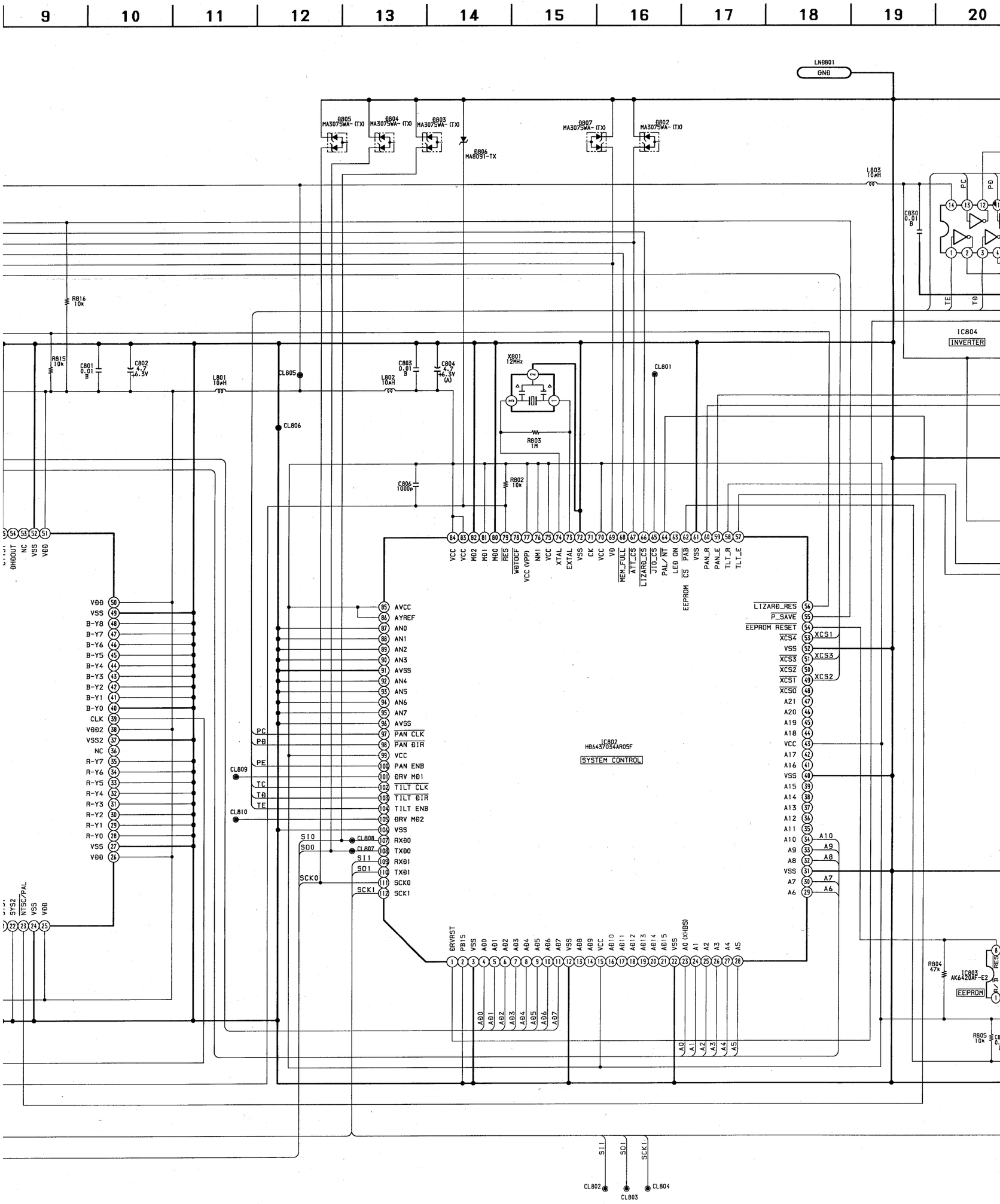
The following have been devided into 3 sections as noted on the grid shown below.

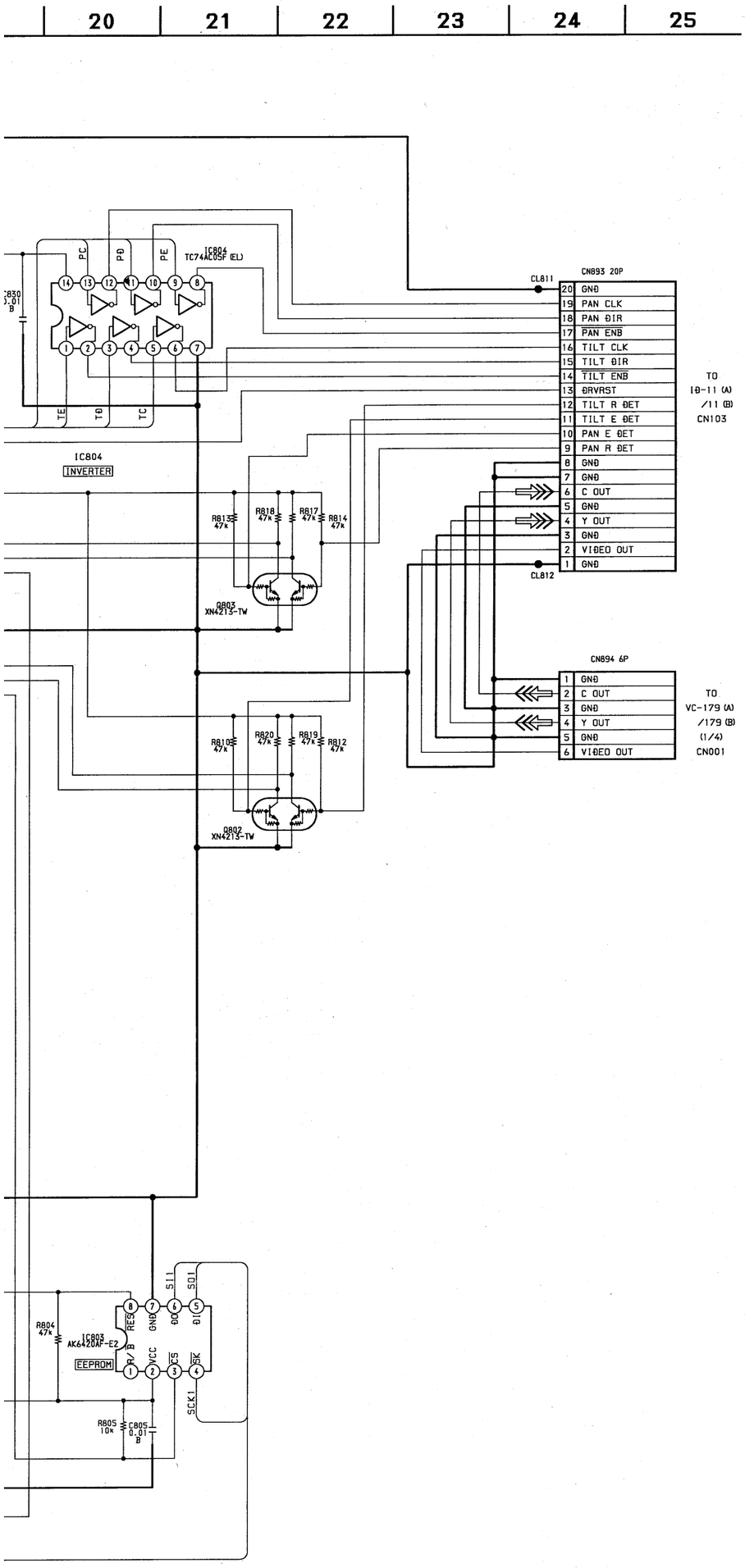
A1	A2	A3

AT-21 (A)/21 (B) (VIDEO PROCESS, MAIN CONTROL) SCHEMATIC DIAGRAM

– Ref. No. AT-21 (A)/21 (B) BOARD : 1,000 series –

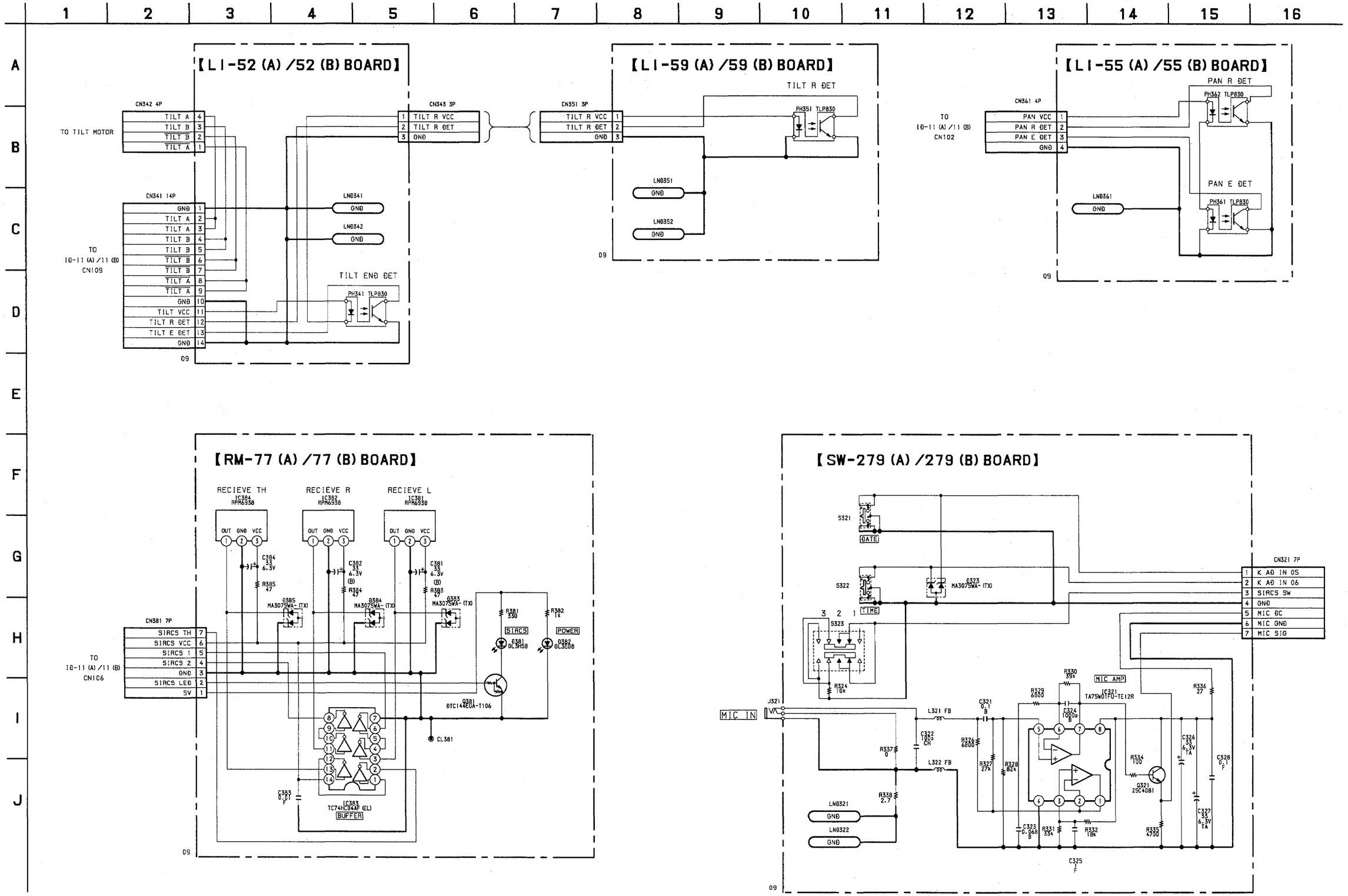



9
10
11
12
13
14
15
16
17
18
19
20
LNB801
GND
R805 MA3075WA- (TX)
R804 MA3075WA- (TX)
R803 MA3075WA- (TX)
R806 MA8091-TX
R807 MA3075WA- (TX)
R802 MA3075WA- (TX)
L803 10uH
C830 0.01 B
PC
PD
TE
TD
IC804
INVERTER
R816 10k
R815 10k
C801 0.01 B
C802 4.7 16.3V
L801 10uH
CL805
L802 10uH
C803 0.01 B
C804 4.7 16.3V (A)
X801 12MHz
CL801
CL806
R803 1M
C806 1000p
R802 10k
VCC VCC MD2 MD1 MD0 RES WDTOFF VCC (VPP) NM1 VCC XTAL EXTAL VSS CK VCC VD MEM_FULL ATT_CS LIZARD_CS JIG_CS PAL/NT LED ON EEPROM CS PAB VSS PAN_R PAN_E TLI_R TLI_E
BHBOUT NC VSS VDD
VDD VSS B-Y8 B-Y7 B-Y6 B-Y5 B-Y4 B-Y3 B-Y2 B-Y1 B-Y0 CLK VDD2 VSS2 NC R-Y7 R-Y6 R-Y5 R-Y4 R-Y3 R-Y2 R-Y1 R-Y0 VSS VDD
SYS2 NTSC/PAL VSS VDD
AVCC AYREF AN0 AN1 AN2 AN3 AVSS AN4 AN5 AN6 AN7 AVSS PAN CLK PAN DIR VCC PAN ENB DRV MD1 TILT CLK TILT DIR TILT ENB DRV MD2 VSS RXD0 TXD0 RXD1 TXD1 SCK0 SCK1
IC802
HB6437054AR05F
SYSTEM CONTROL
LIZARD_RES P_SAVE EEPROM RESET XCS4 XCS3 XCS2 XCS1 XCS0 A21 A20 A19 A18 VCC A17 A16 VSS A15 A14 A13 A12 A11 A10 A9 A8 VSS A7 A6
XCS1 XCS3 XCS2 A10 A9 A8 A7 A6
PC PD PE TC TD TE
CL809 CL810 CL808 CL807
S10 SO0 S11 SO1 SCK0 SCK1
BRVRST PB15 VSS AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 VSS AD8 AD9 VCC AD10 AD11 AD12 AD13 AD14 AD15 VSS A0 (XHBS) A1 A2 A3 A4 A5
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7
A0 A1 A2 A3 A4 A5
R804 47k
IC805 AK6420AF-E2
EEPROM
RES
R805 10k
S11 SO1 SCK1
CL802 CL803 CL804


20
21
22
23
24
25
IC804
TC74AC05F (EL)
PC
PD
PE
TE
TD
TC
IC804
INVERTER
R813 47k
R818 47k
R817 47k
R814 47k
Q803
XN4213-TW
R810 47k
R820 47k
R819 47k
R812 47k
Q802
XN4213-TW
CL811
CN893 20P
20 GND
19 PAN CLK
18 PAN DIR
17 PAN ENB
16 TILT CLK
15 TILT DIR
14 TILT ENB
13 DRVRST
12 TILT R DET
11 TILT E DET
10 PAN E DET
9 PAN R DET
8 GND
7 GND
6 C OUT
5 GND
4 Y OUT
3 GND
2 VIDEO OUT
1 GND
CL812
TO
10-11 (A)
/11 (B)
CN103
CN894 6P
1 GND
2 C OUT
3 GND
4 Y OUT
5 GND
6 VIDEO OUT
TO
VC-179 (A)
/179 (B)
(1/4)
CN001
R804 47k
IC803
AK6420AF-E2
EEPROM
RES
GNB
DO
DI
CS
SK
VCC
SCK1
R805 10k
C805 0.01

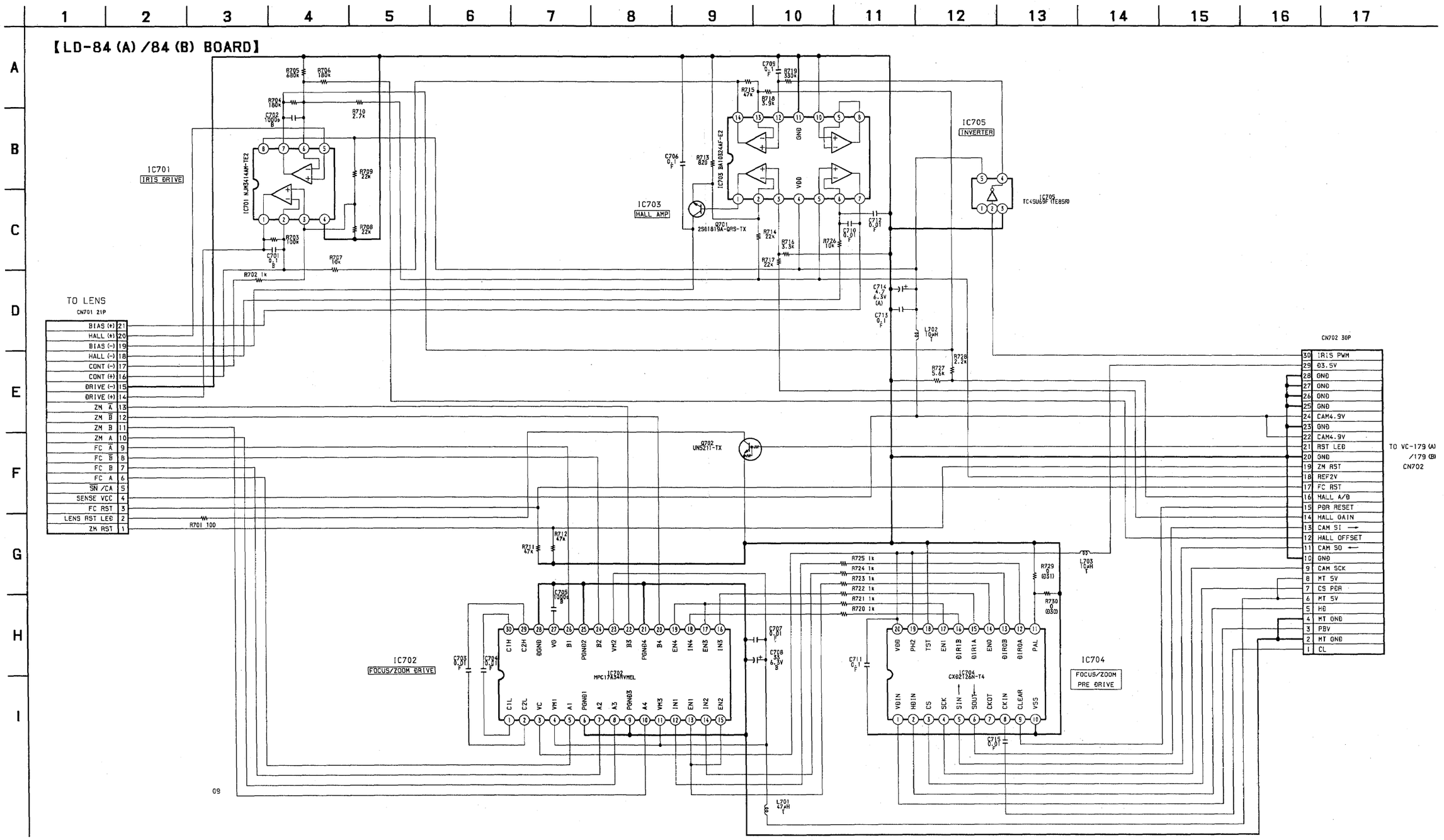
LI-52 (A)/52 (B) (TILT END SENSOR) LI-59 (A)/59 (B) (TILT R SENSOR) LI-55 (A)/55 (B) (PAN R SENSOR) RM-77 (A)/77 (B) (SIRCS RECEIVE) SW-279 (A)/279 (B) (MIC AMP) SCHEMATIC DIAGRAM

– Ref. No. LI-52 (A)/52 (B) BOARD : 2,000 series, LI-59 (A)/59 (B) BOARD : 2,000 series, LI-55 (A)/55 (B) BOARD : 2,000 series, RM-77 (A)/77 (B) BOARD : 2,000 series, SW-279 (A)/279 (B) BOARD : 2,000 series–



LD-84 (A)/84 (B) (LENS DRIVE) SCHEMATIC DIAGRAM

– Ref. No. LD-84 (A)/84 (B) BOARD : 2,000 series –



EVI-D30 (J, UC)
EVI-D31 (CE) J, E
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