SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

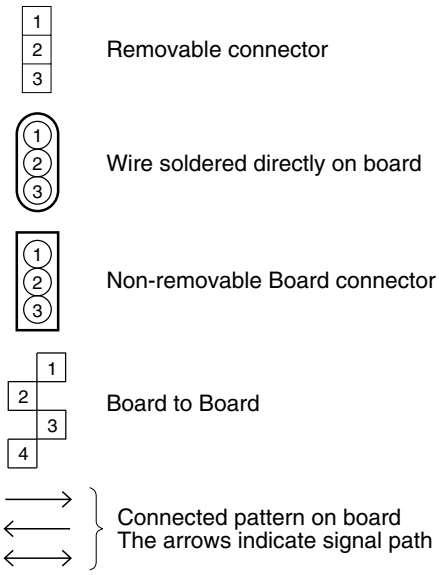
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

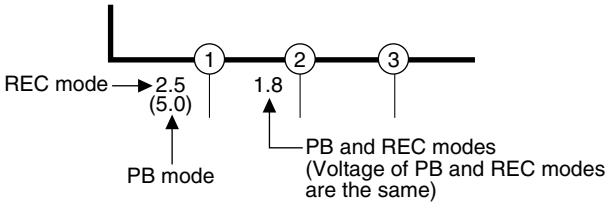
$\overline{\text{AUX}}$ or AUX(L) : Active at low

3. Interpreting Connector indications



4. Voltage measurement

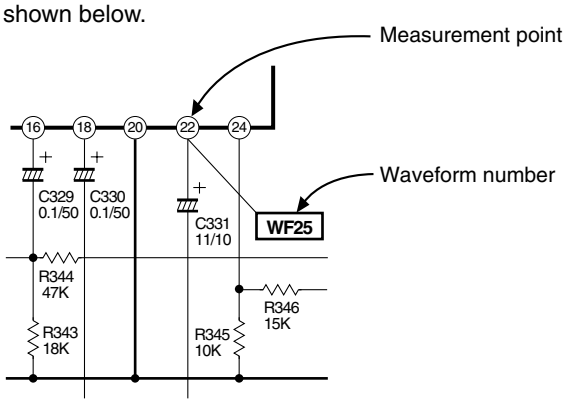
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



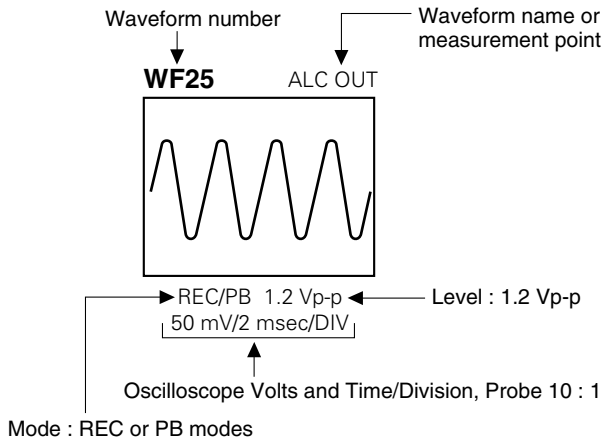
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



5) Waveform indications



6. Signal path Symbols

The arrows indicate the signal path as follows.

Playback signal path

Playback and recording signal path

Recording signal path
(including E-E signal path)

Capstan servo path

Drum servo path

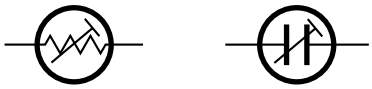
(Example)

R-Y Playback R-Y signal path

Y Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

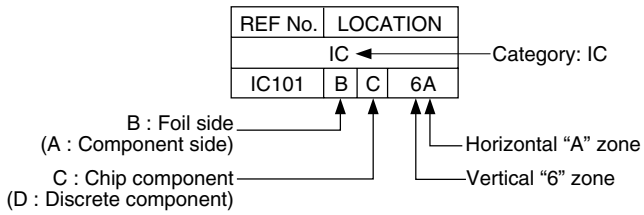
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

Parts location are indicated by guide scale on the circuit board.

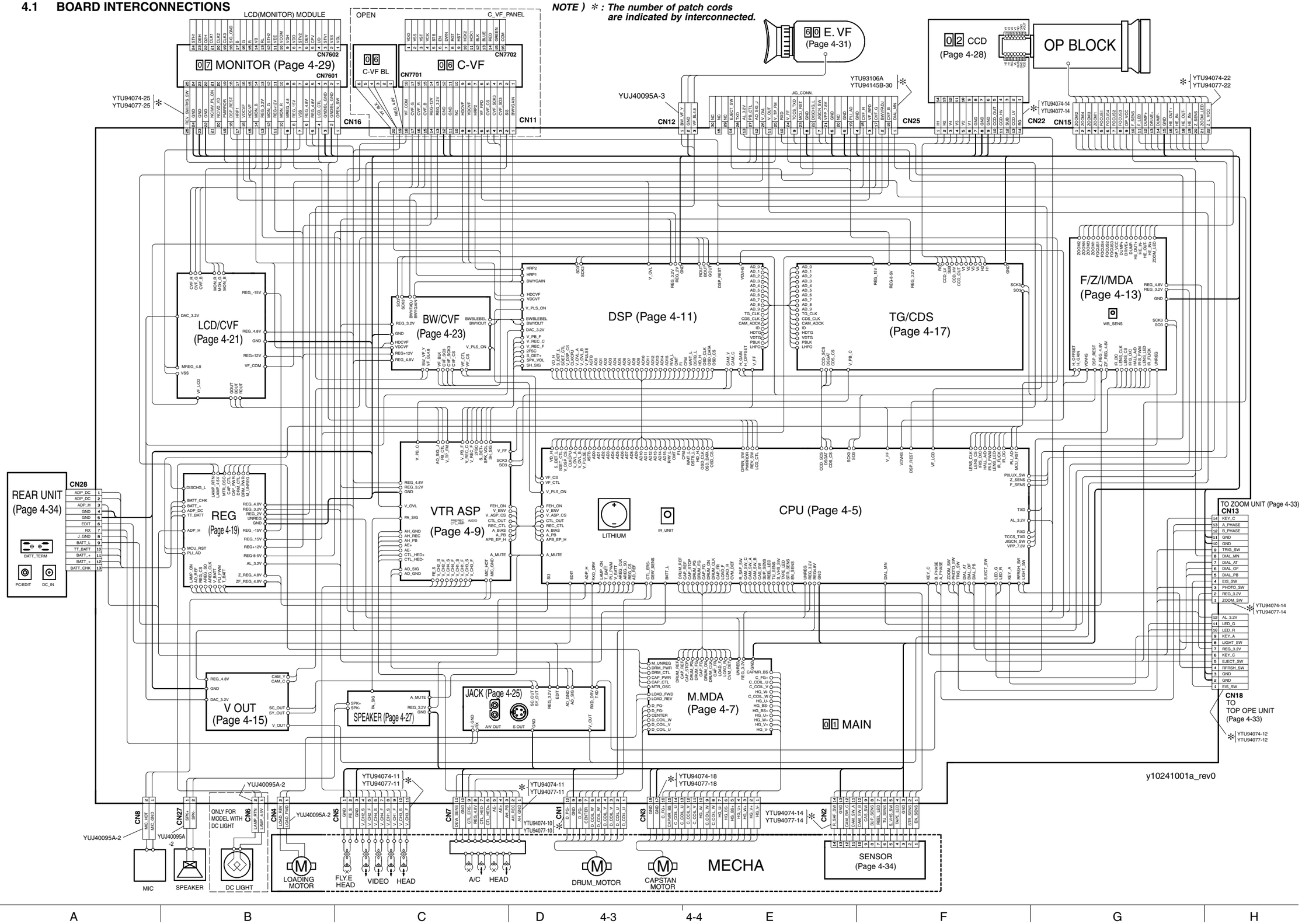


Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS

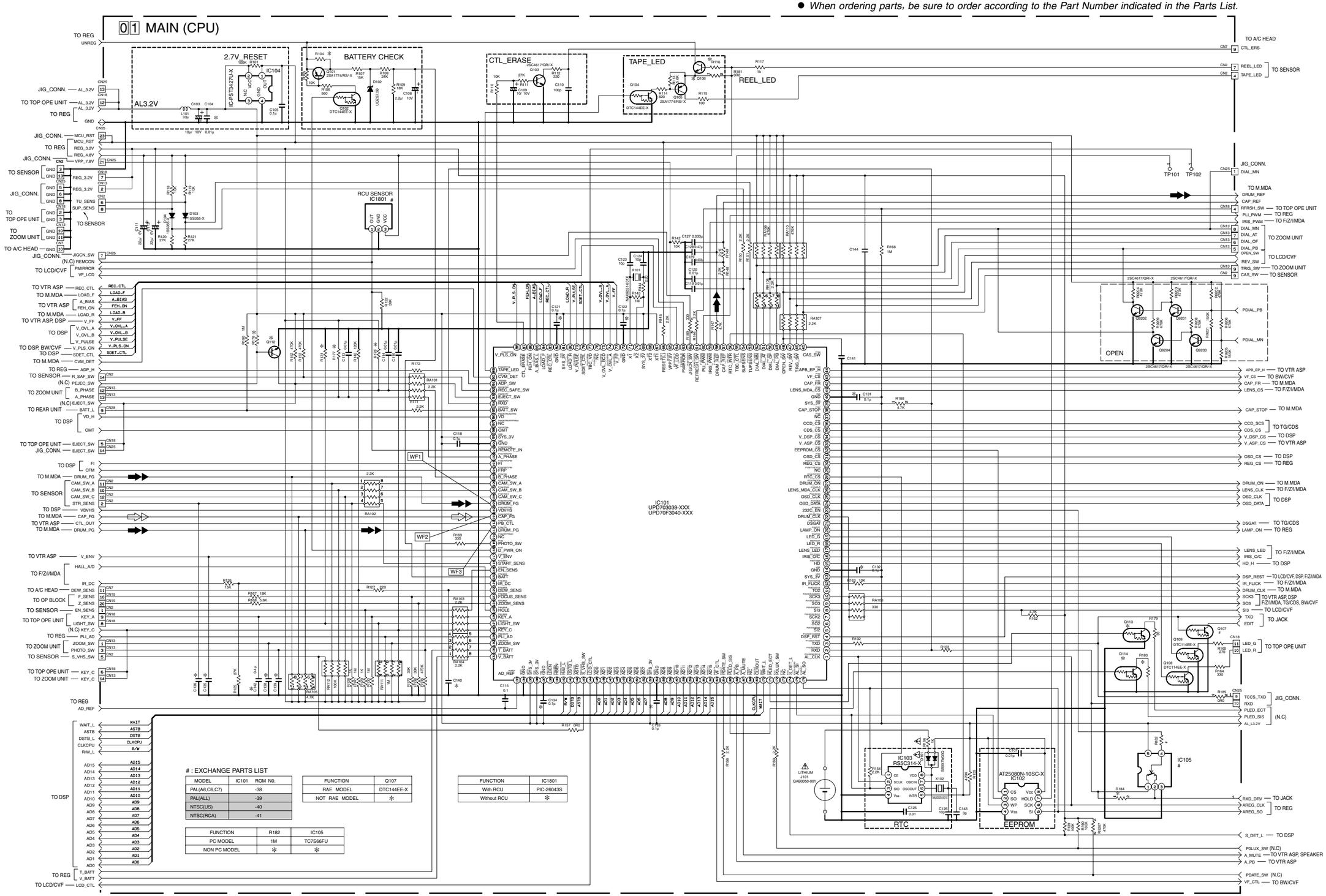
NOTE) ✻ : The number of patch cords are indicated by interconnected.



A B C D 4-3 4-4 E F G H

4.2 CPU SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



: EXCHANGE PARTS LIST

MODEL	IC101 ROM NO.
PAL(A6,C6,C7)	-38
PAL(ALL)	-39
NTSC(US)	-40
NTSC(RCA)	-41

FUNCTION	Q107
RAE MODEL	DTC144EE-X
NOT RAE MODEL	✻

FUNCTION	IC1801
With RCU	PIC-2604S
Without RCU	✻

FUNCTION	R182	IC105
PC MODEL	1M	TC7S66FU
NON PC MODEL	✻	✻

NOTES : 1. The parts with marked (✻) is not used.
2. For CPU waveforms, please refer to page 4-45.

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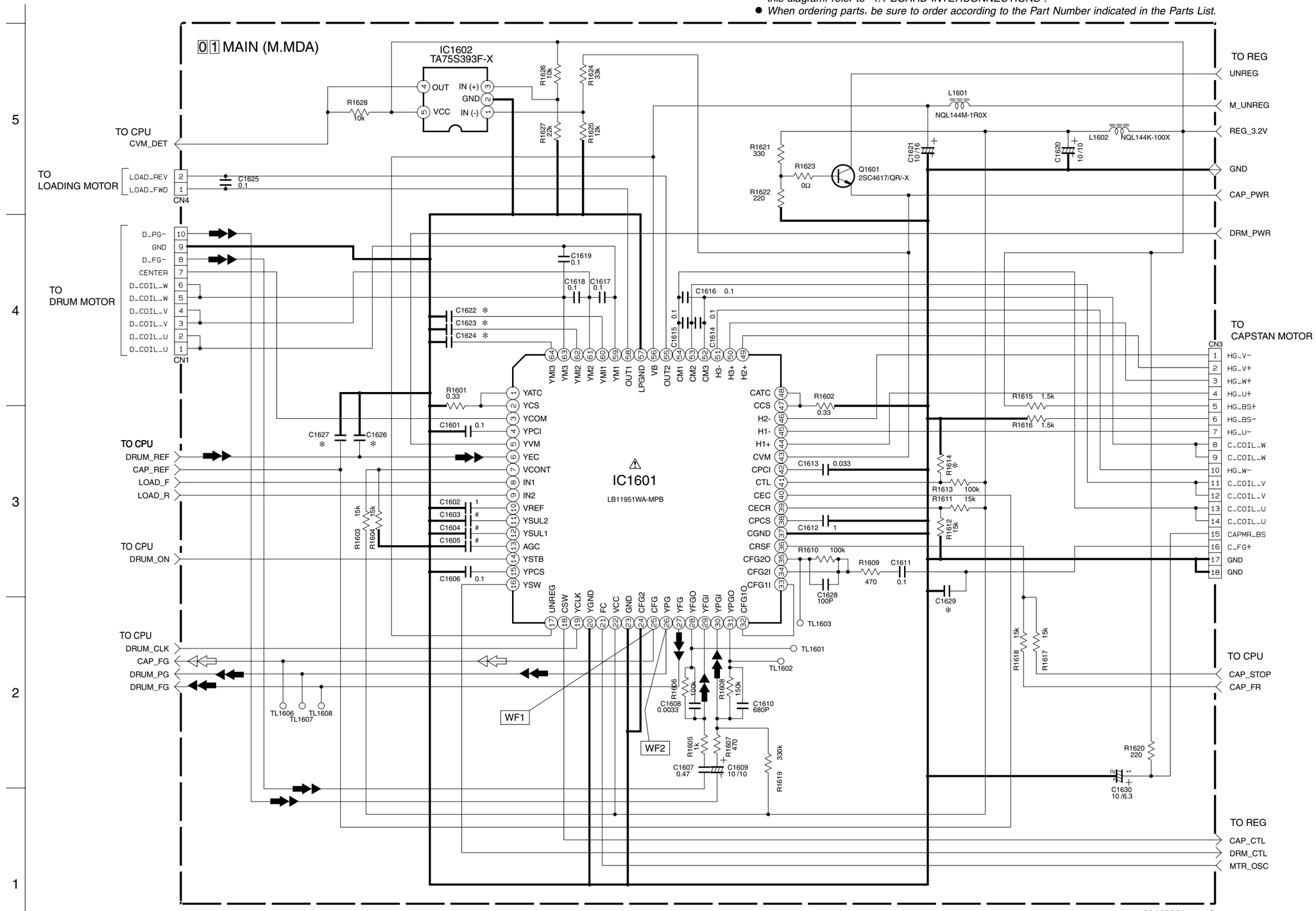
4.3 M.MDA SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



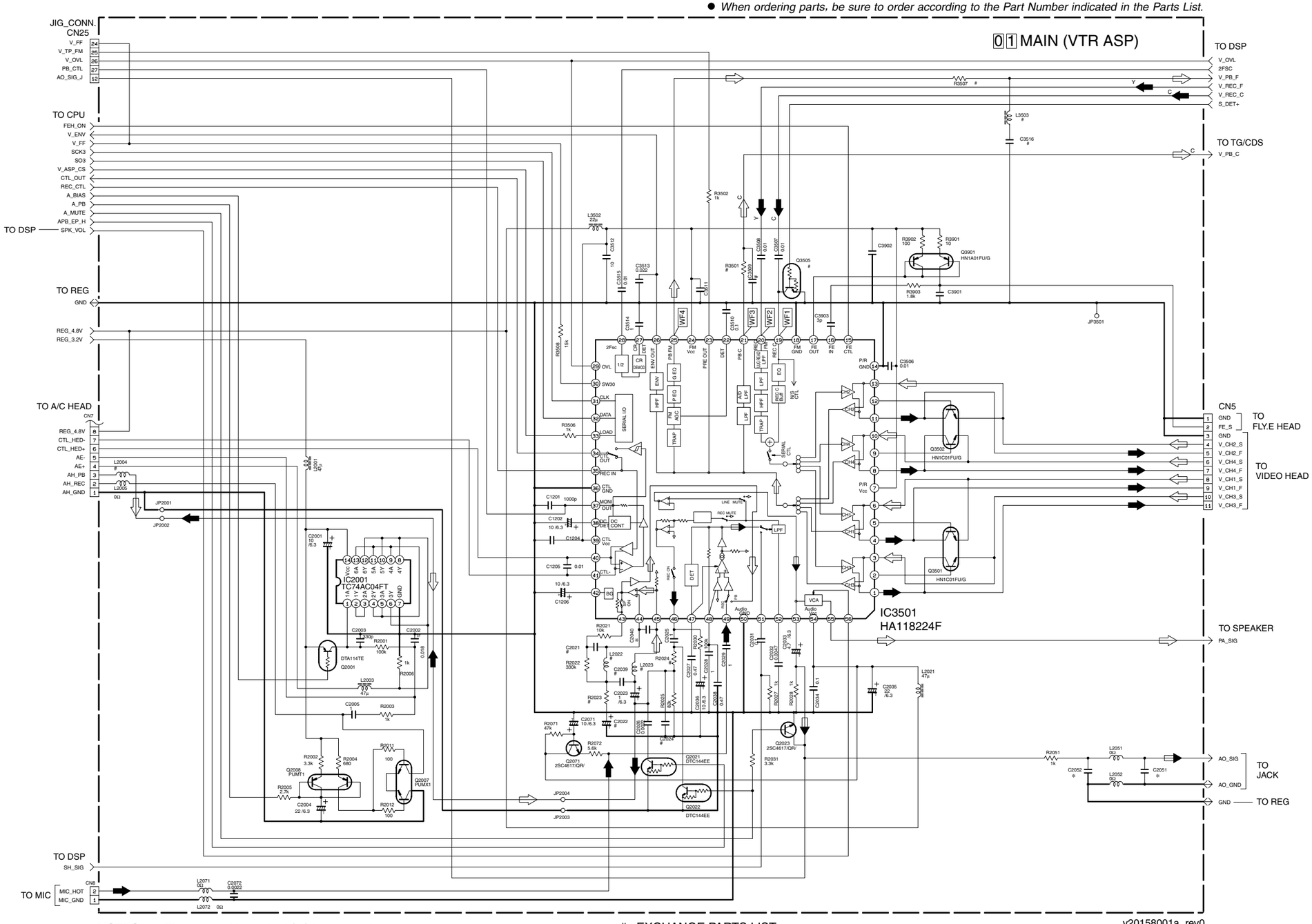
NOTES : 1. The parts with marked (*) is not used.
2. For M.MDA waveforms, please refer to page 4-45.

: EXCHANGE PARTS LIST

	NTSC	PAL
C1603	0.0047	0.01
C1604	0.0047	0.01
C1605	0.033	0.01

4.4 VTR ASP SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTES : 1. The parts with marked (✻) is not used.
2. For VTR ASP waveforms, please refer to page 4-45.

: EXCHANGE PARTS LIST

[VIDEO]

	VHS MODEL	SVHS MODEL
Q3505	✻	DTC144 EE

	NTSC	PAL
R3507	0	100
L3503	✻	5.6
C3516	✻	10p
R3501	0	220
C3509	✻	220p

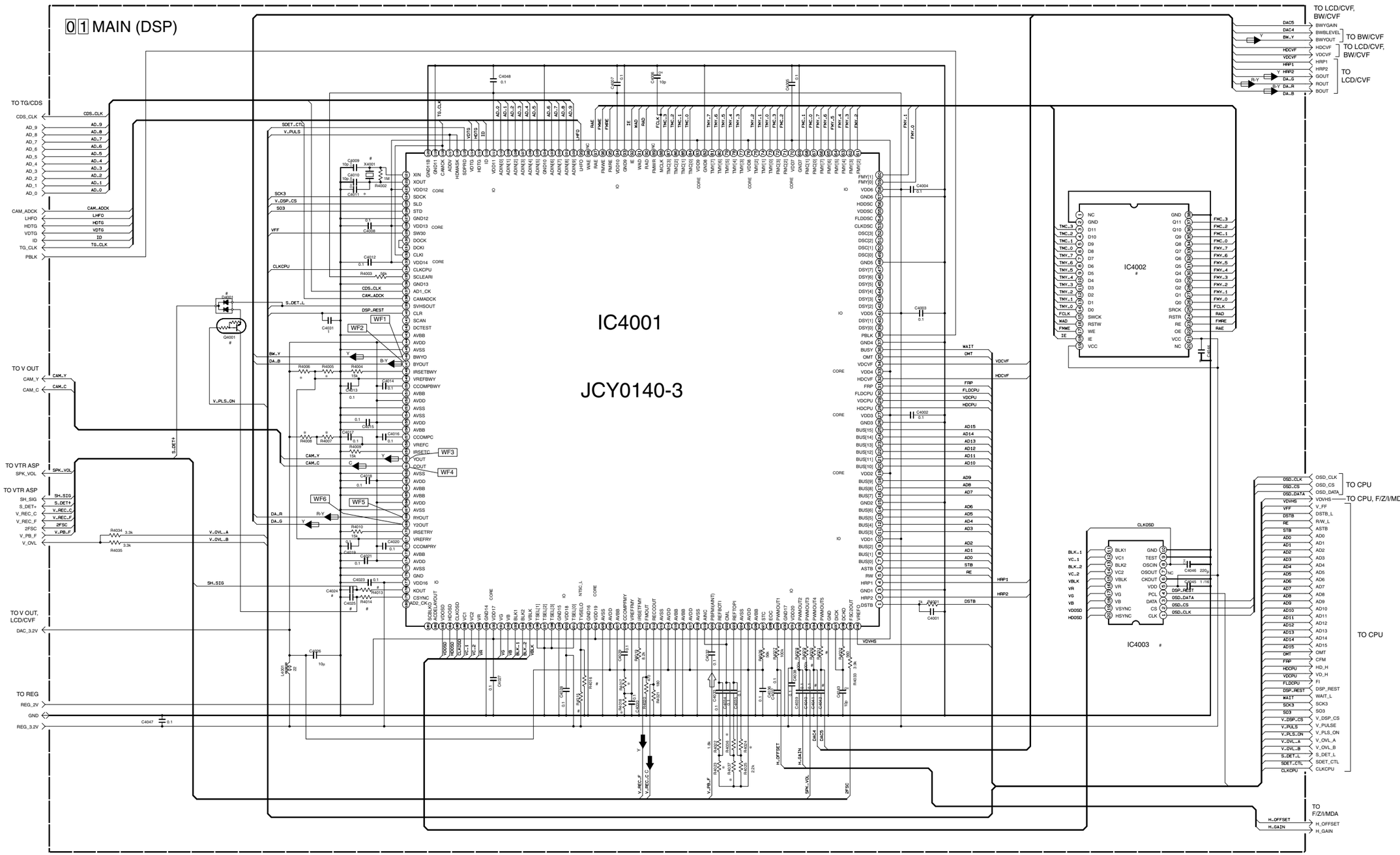
[AUDIO]

	NTSC	PAL
R2023	150	82
R2024	13k	18k
C2021	0.0068	0.01
C2022	10 μ /6.3	15 μ /6.3
C2024	0.0012	0.001

	NTSC	PAL
L2004	0 Ω	NQR0403-003X
L2022	0 Ω	NQR0403-003X
L2023	0 Ω	NQR0406-003X
C2039	✻	33 p

4.5 DSP SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTES : 1. The parts with marked (✻) is not used.
2. For DSP waveforms, please refer to page 4-45.

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: EXCHANGE PARTS LIST

	X4001	R4015	R4016
NTSC	QAX0709-001	✻	0
PAL	QAX0708-001	0	✻

	IC4002	C4044
MEMORY MODEL	Z4C2973-32-X	1 µ
NON MEMORY MODEL	✻	✻

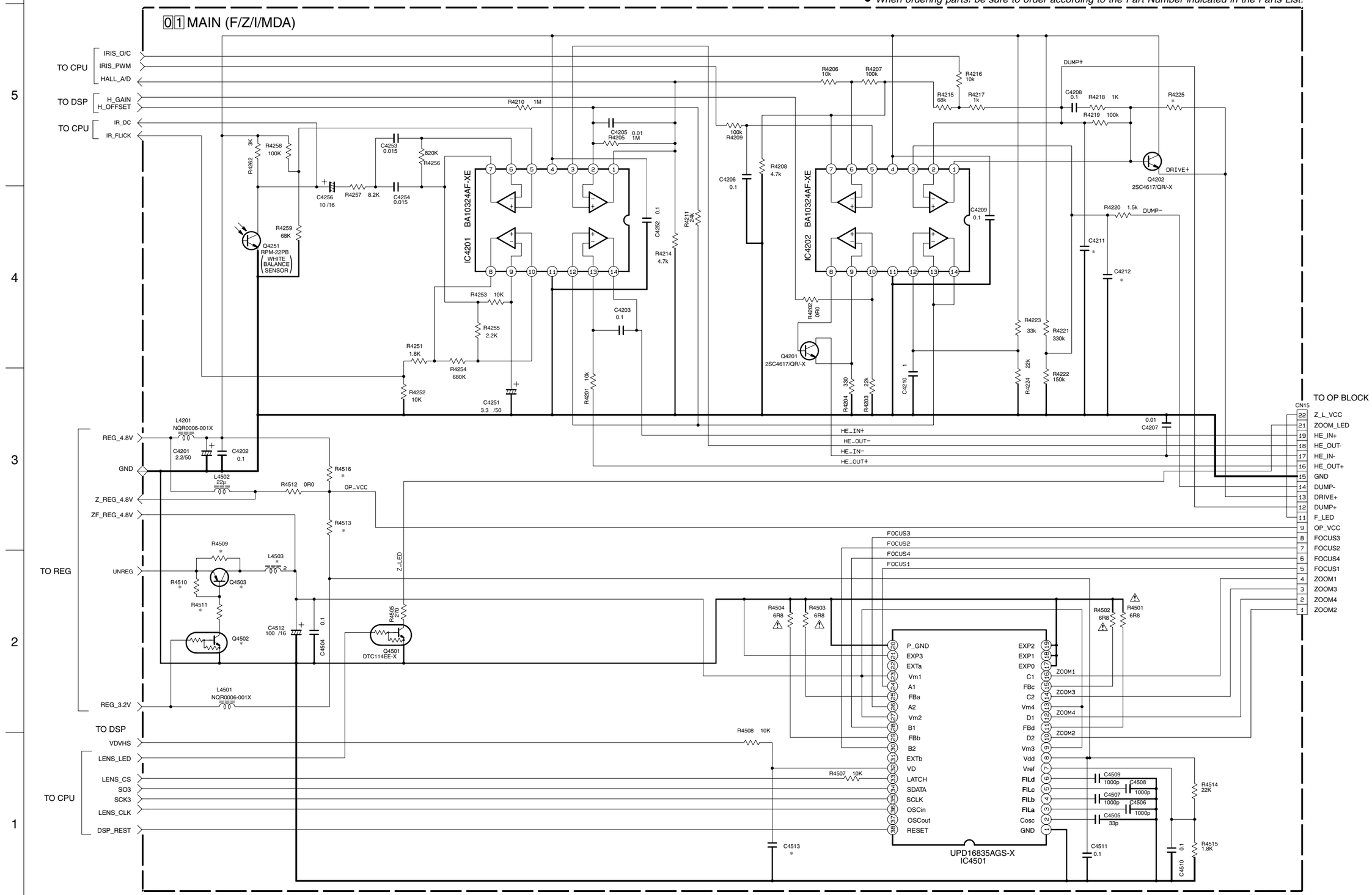
	R4013	C4024
PB SNAP SHOT	1k	0.1µ
NON PB SNAP SHOT	✻	✻

	R4014	C4025	Q4001	D4001
VHS MODEL	✻	✻	✻	✻
SVHS MODEL	10k	0.1	DTC144EE-X	DAN222-X

	R4030	C4041	R4031	C4042	IC4003
JVC C-VF MODEL	✻	✻	1k	1 µ	µ PD6467GR-512-X
JVC OTHER MODEL	✻	✻	✻	✻	↑
PANASONIC MODEL	1k	1 µ	1k	1 µ	µ PD6467GR-508-X

4.6 F/Z/I/MDA SCHEMATIC DIAGRAM

NOTES : ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



NOTE : The parts with marked (*) is not used.

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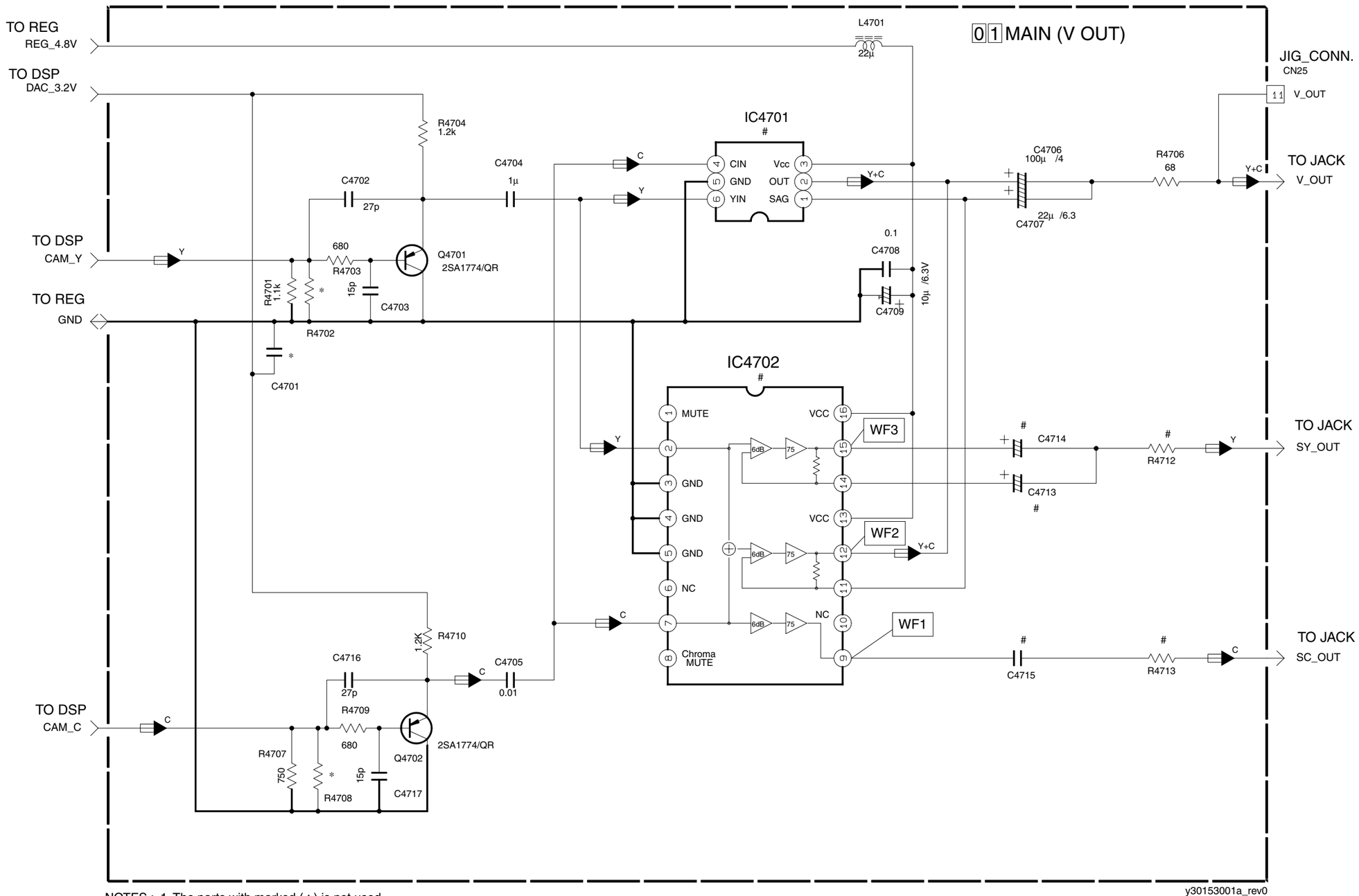
4.7 V OUT SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



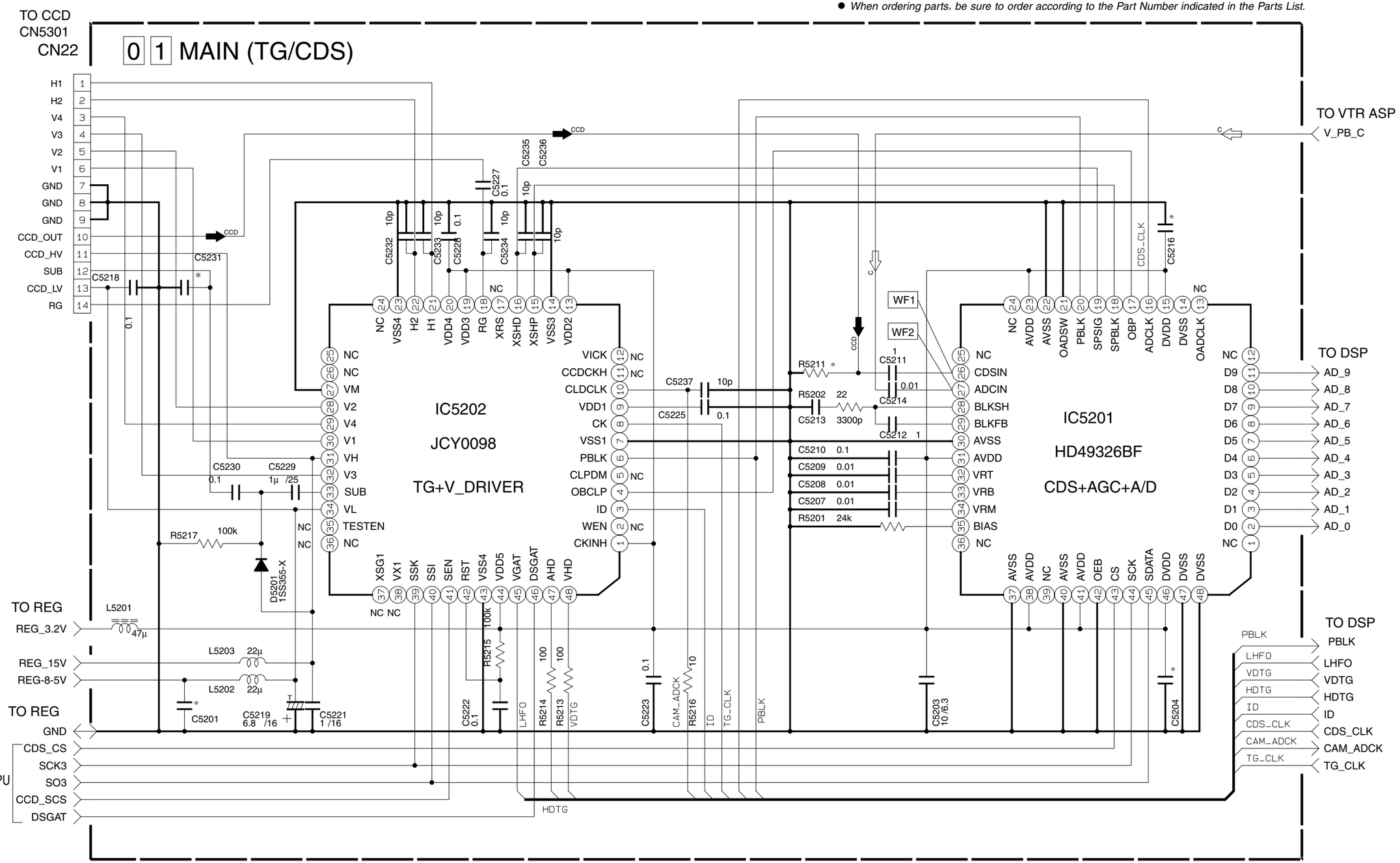
NOTES : 1. The parts with marked (*) is not used.
2. For V OUT waveforms, please refer to page 4-45.

: EXCHANGE PARTS LIST

	IC4701	IC4702	R4712	R4713	C4713	C4714	C4715
VHS MODEL	MM1512XN	*	*	*	*	*	*
SVHS MODEL	*	BA7665FS	68	68	22/6.3	100/4	0.01

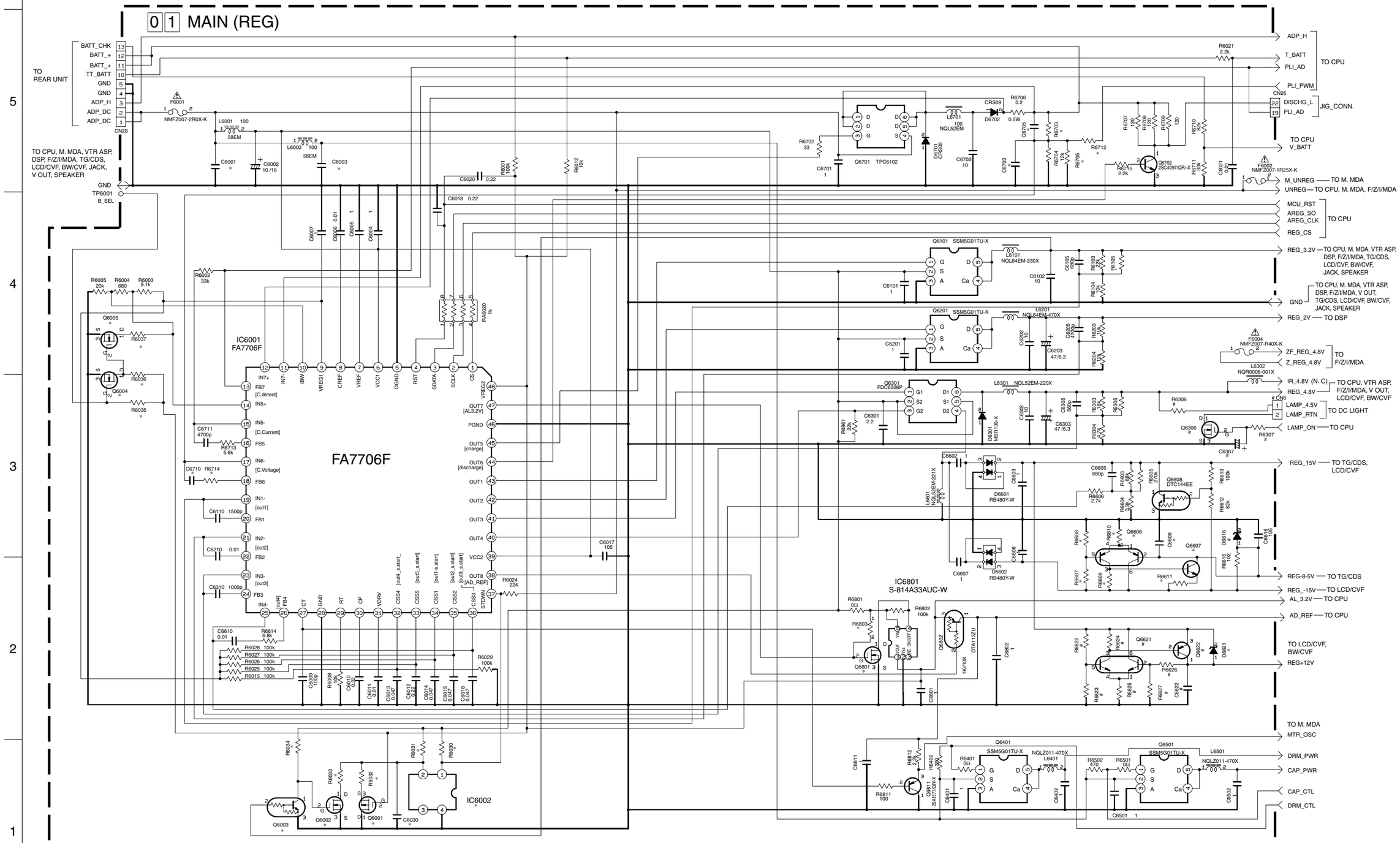
4.8 TG/CDS SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



4.9 REG SCHEMATIC DIAGRAM

NOTES :
- *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
- *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTE : The parts with marked (*) is not used.

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: EXCHANGE PARTS LIST

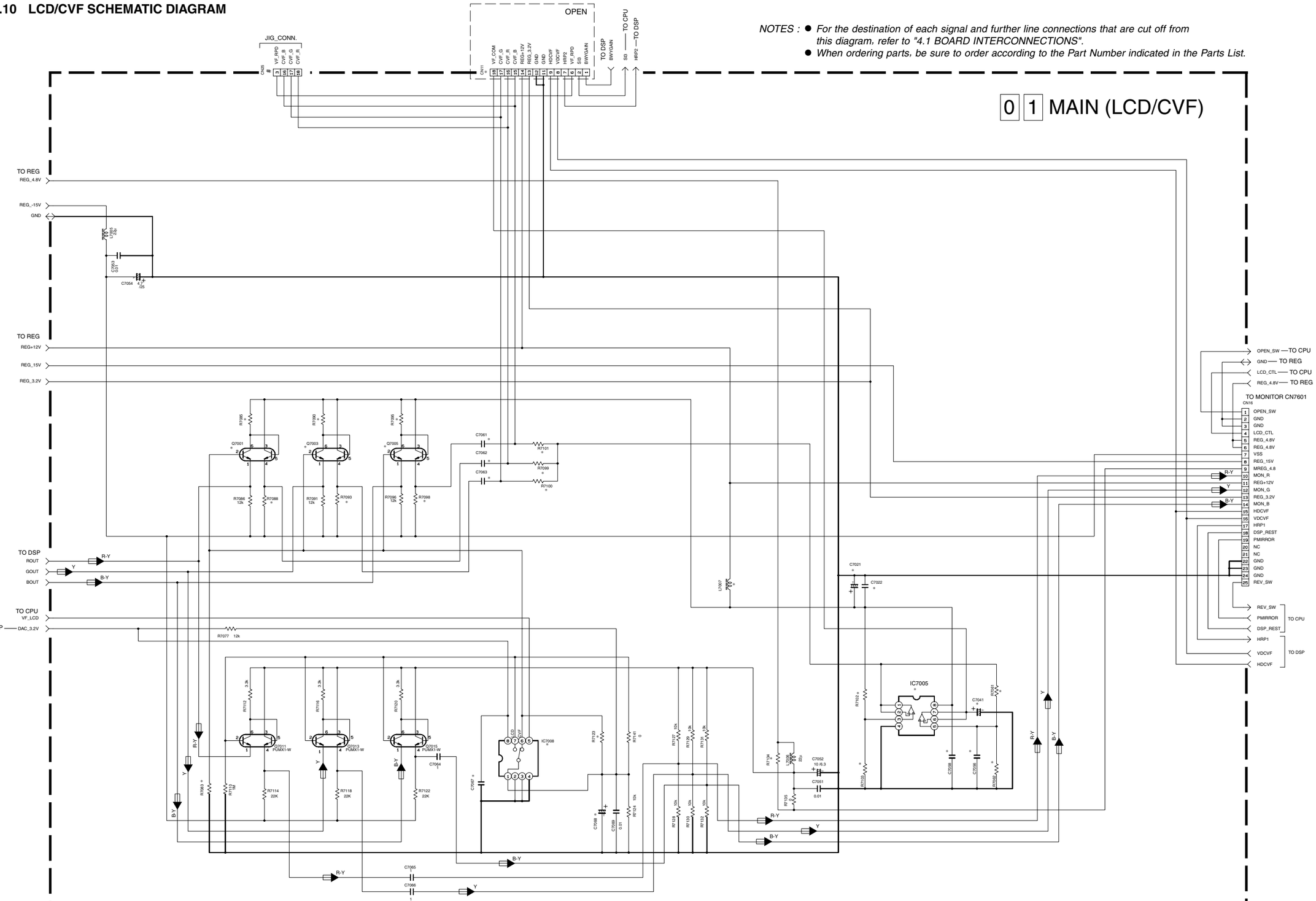
	D6616
NTSC	UDZS8.2B-X
PAL	UDZS7.5B-X

		R6306	R6307	Q6306	C6307	CN6
Light	YES	0.47	100k	SSM3K02F	10µ/16	QGA1201C2-02X
Light	NO	*	*	*	*	*

	R6622	R6623	R6624	R6625	R6626	R6627	Q6621	Q6622	C6622
JVC WB VF ONLY MODEL	*	*	*	*	*	*	*	*	*
JVC WB VF and 2.5LCD MODEL	*	*	*	*	*	*	*	*	*
JVC OTHER MODEL	100k	47k	27k	8.2k	27k	18k	HN1C01FU	2SA1577	1µ

4.10 LCD/CVF SCHEMATIC DIAGRAM

NOTES :
- *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
- *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTE : The parts with marked (✻) is not used.

: EXCHANGE PARTS LIST

	JVC MODEL	PANA MODEL
CN25	QGB0506L1-30X	✻

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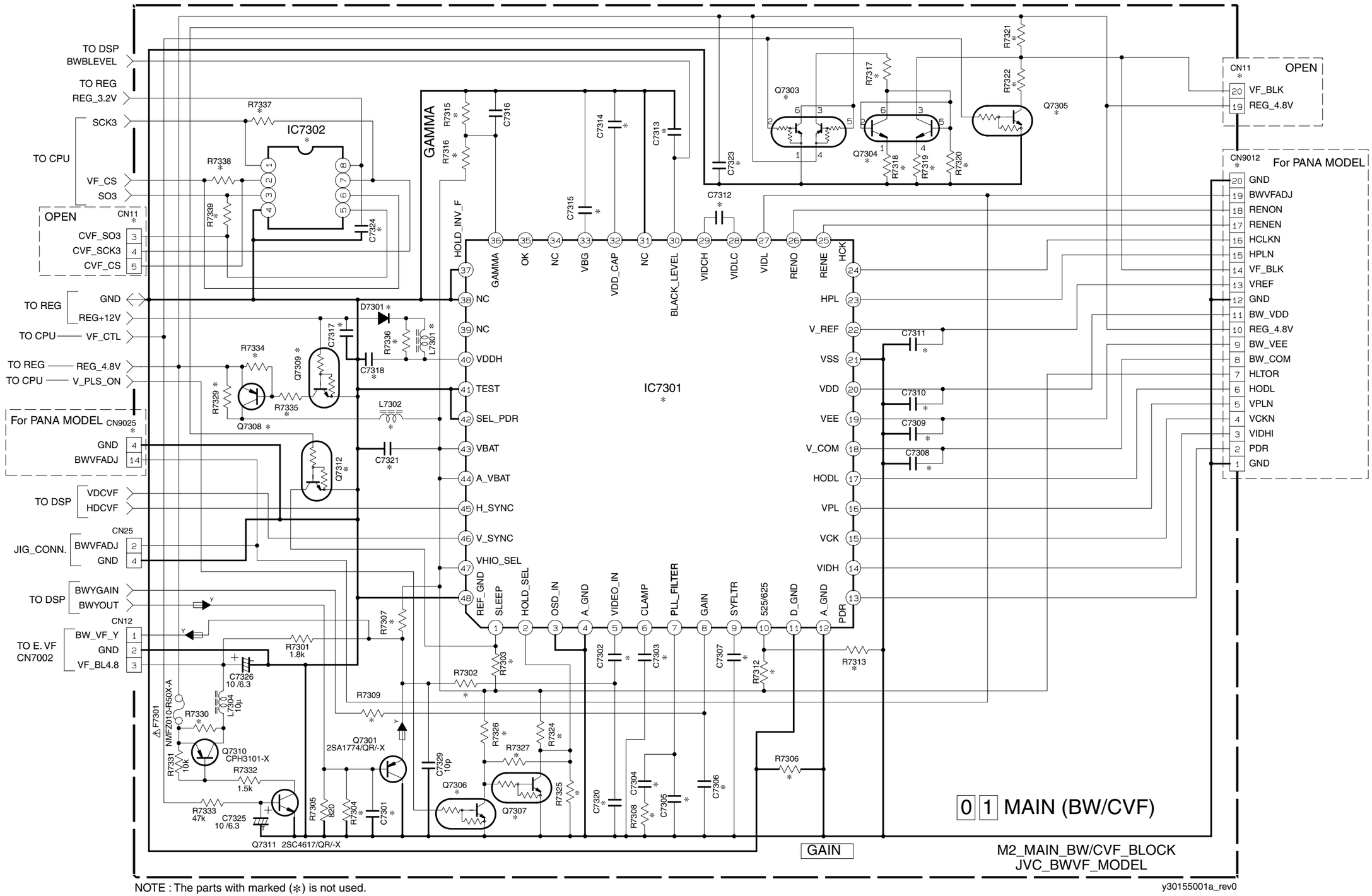
4.11 BW/CVF SCHEMATIC DIAGRAM

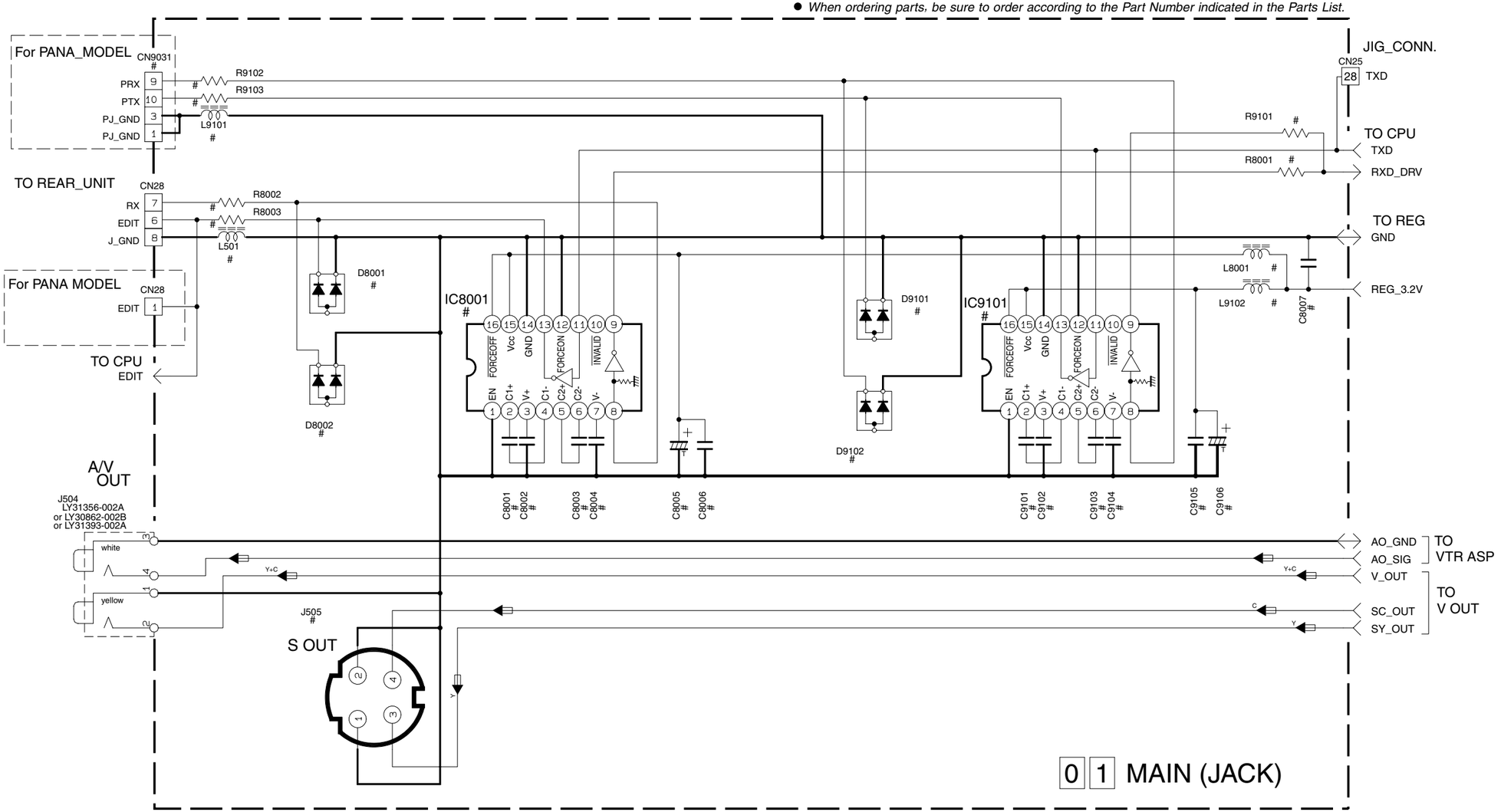
NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTE : The parts with marked (⁎) is not used.

4.12 JACK SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



NOTE : The parts with marked (✻) is not used.

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Exchange Parts List

	JVC PC model	JVC NON PC model PANA model
IC8001	MAX3221CAE-X	✻
R8001	330	✻
R8002	0	✻
R8003	0	✻
C8001	0.1	✻
C8002	0.1	✻
C8003	0.1	✻
C8004	0.1	✻
C8005	10/6.3	✻
C8006	0.1	✻
C8007	✻	✻
D8001	EMZ6.8N-X	✻
D8002	EMZ6.8N-X	✻
L8001	22 µ	✻

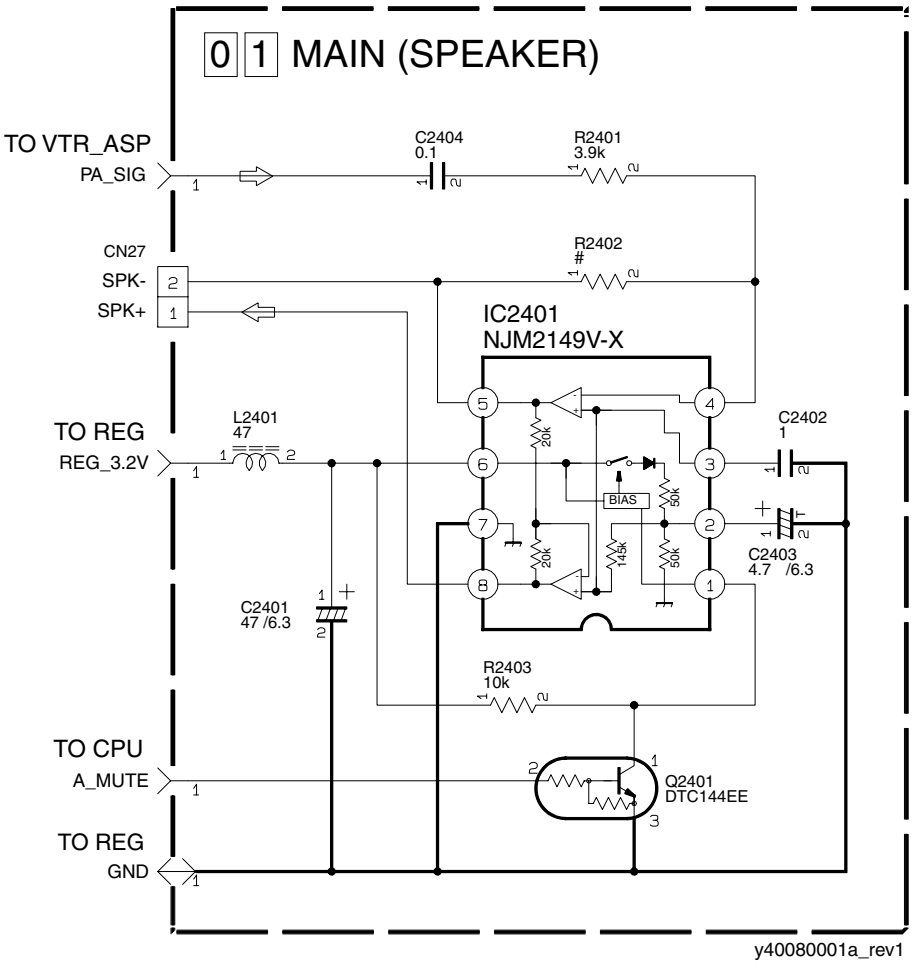
	PANA PC model	JVC model PANA NON PC model
IC9101	MAX3221CAE-X	✻
R9101	330	✻
R9102	0	✻
R9103	0	✻
C9101	0.1	✻
C9102	0.1	✻
C9103	0.1	✻
C9104	0.1	✻
C9105	10/6.3	✻
C9106	0.1	✻
D9101	EMZ6.8N-X	✻
D9102	EMZ6.8N-X	✻
L9102	22 µ	✻

	S model	NON S model
J505	QND0068-001 or QND0078-001 or QND0087-001	✻

	JVC model with EDIT/DIGITAL terminal	JVC model without EDIT/DIGITAL terminal	PANA model
L501	0Ω	✻	
L9101	✻	✻	0
CN9031	✻	✻	

4.13 SPEAKER SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



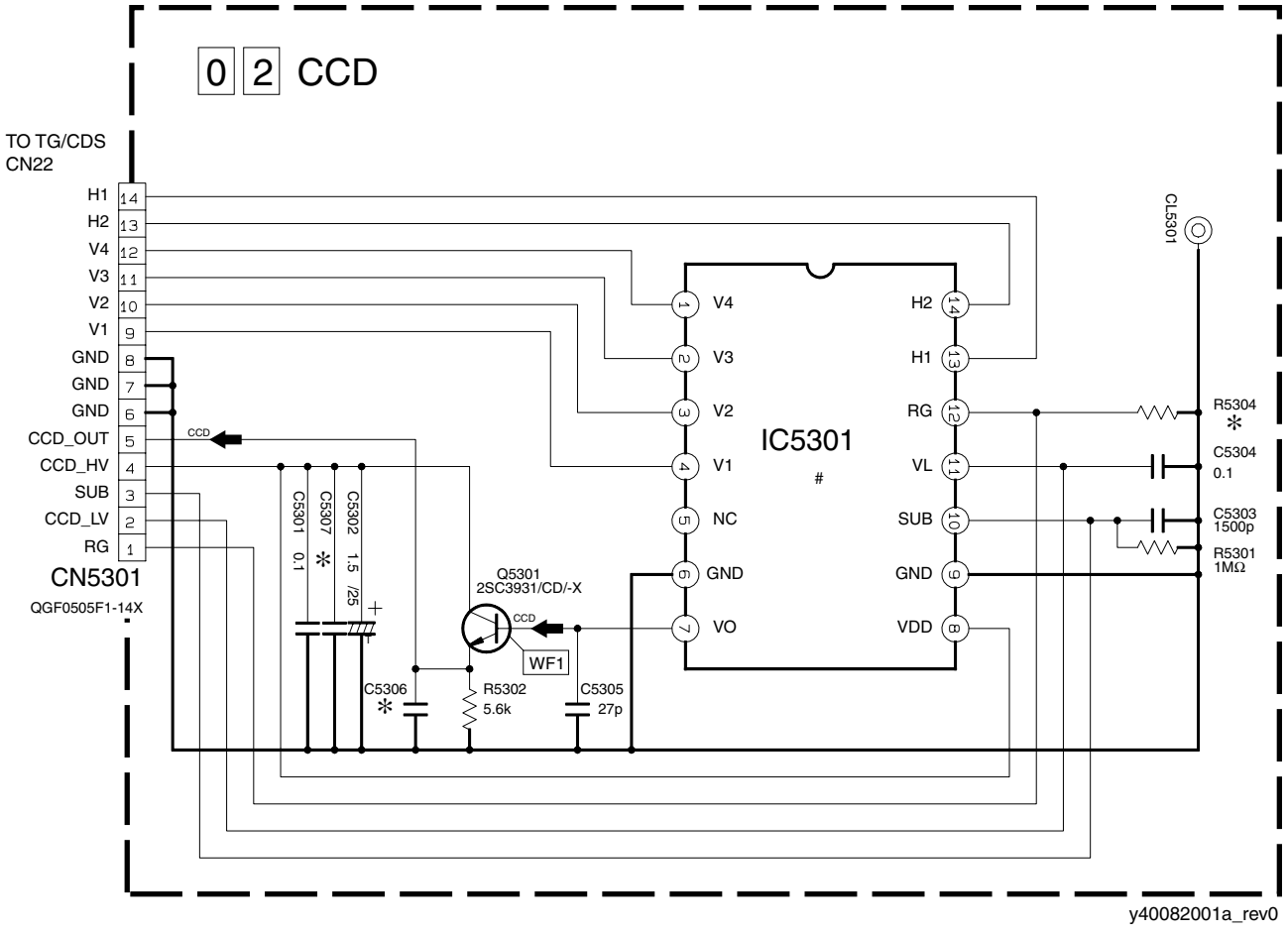
: EXCHANGE PARTS LIST

	JVC	PANA /RCA
R2402	3.3k	2.2k

4.14 CCD SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

● *IC5301 is incorporated in the CCD base assembly. When IC5301 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.*



NOTES : 1. The parts with marked (✻) is not used.
2. For CCD waveform, please refer to page 4-45.

MODEL	IC5301	CCD_HV	CCD_LV
NTSC_L	MN39117FT	15V	-8V
PAL_L	ICX297AKA-L	15V	-7.5V

4.15 MONITOR SCHEMATIC DIAGRAM

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

0 7 MONITOR

: EXCHANGE PARTS LIST

	R7618	R7619
NTSC	✻	NRSA63J-0R0X
PAL	NRSA63J-0R0X	✻

	IC7603	R7642	C7627	R7602	L7603	L7604	R7637	R7640	R7641	R7645	R7607
Type_2.5	SN74AHC1G04K-X	✻	NCB31EK-103X	NRVA63D-752X	✻	NQL38DK-220X	NRSA63J-223X	NRSA02J-182X	NRSA02J-331X	NRSA63J-682X	NRSA63J-822X
Type_3.0	✻	NRSA63J-0R0X	✻	NRVA63D-432X	NQL38DK-220X	✻	NRSA63J-682X	NRSA02J-122X	NRSA02J-821X	NRSA63J-123X	NRSA63J-153X
Type_3.5	✻	NRSA63J-0R0X	✻	NRVA63D-432X	NQL38DK-220X	✻	NRSA63J-682X	NRSA02J-122X	NRSA02J-821X	NRSA63J-123X	NRSA63J-153X

	C7623	R7643	R7644	C7630	R7647	R7648	Q7607	R7649	R7650	R7646	R7622
Type_2.5	NCB31EK-682X	✻	✻	✻	✻	NRSA63J-103X	DTC144EE-X	✻	NRSA63J-103X	NRSA63J-392X	✻
Type_3.0	✻	NRSA63J-123X	NRSA63J-123X	NCB31EK-103X	NRSA63J-0R0X	✻	✻	NRSA63J-333X	✻	NRSA63J-222X	✻
Type_3.5	✻	NRSA63J-123X	NRSA63J-123X	NCB31EK-103X	✻	NRSA63J-103X	DTC144EE-X	NRSA63J-333X	✻	NRSA63J-222X	NRSA63J-0R0X

NOTE : The parts with marked (✻) is not used.

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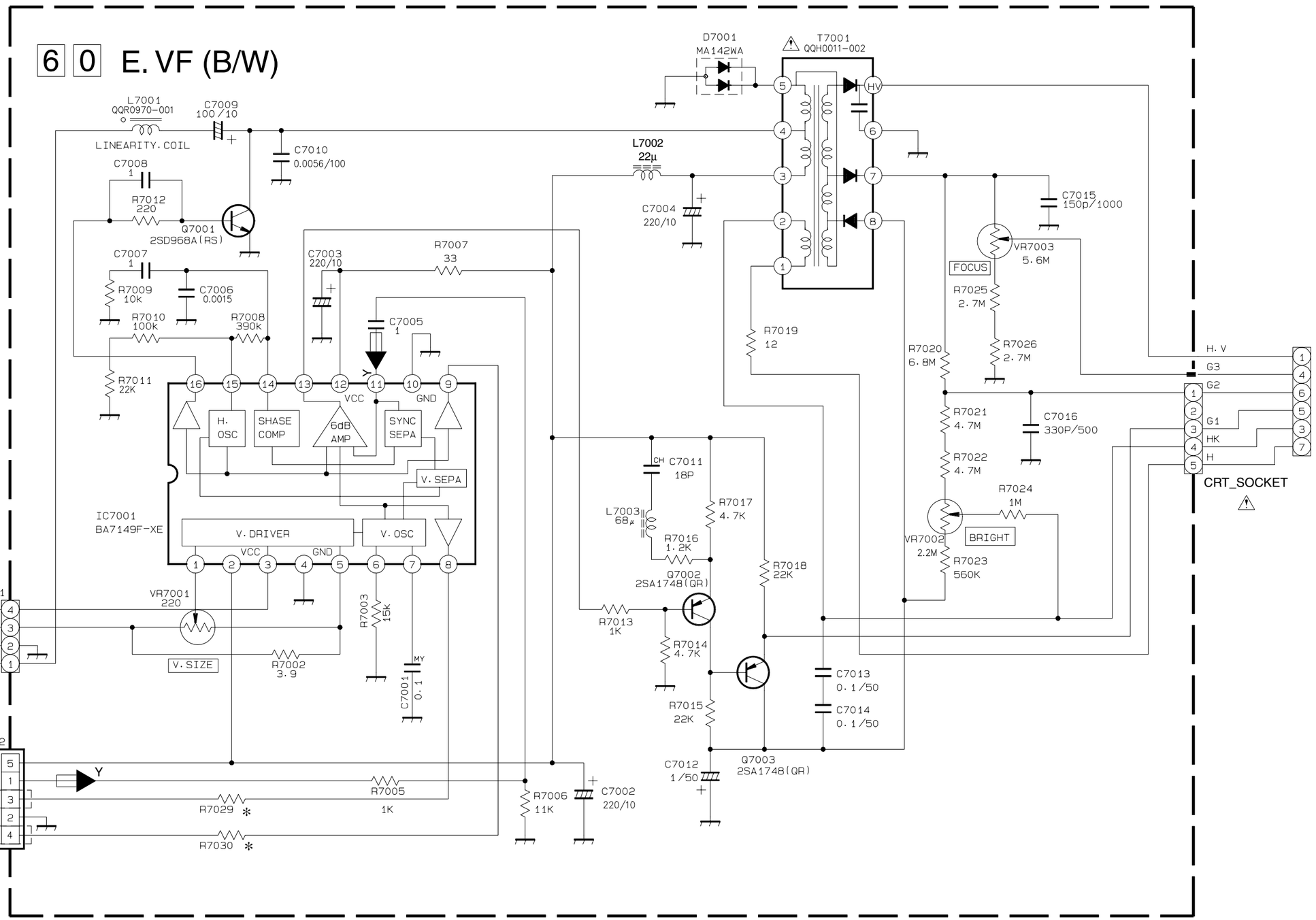
NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

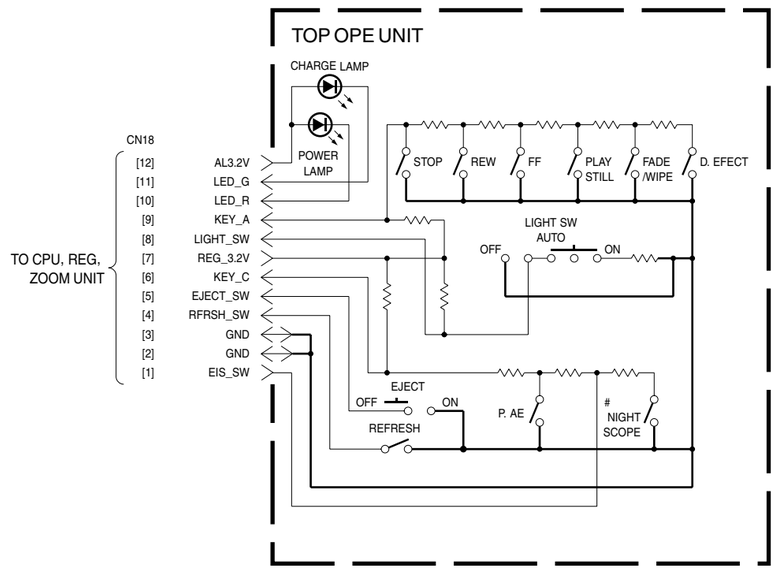


NOTE : The parts with marked (✻) is not used.

4.17 TOP OPE UNIT, ZOOM UNIT, REAR UNIT AND SENSOR SCHEMATIC DIAGRAMS

NOTES : ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.*

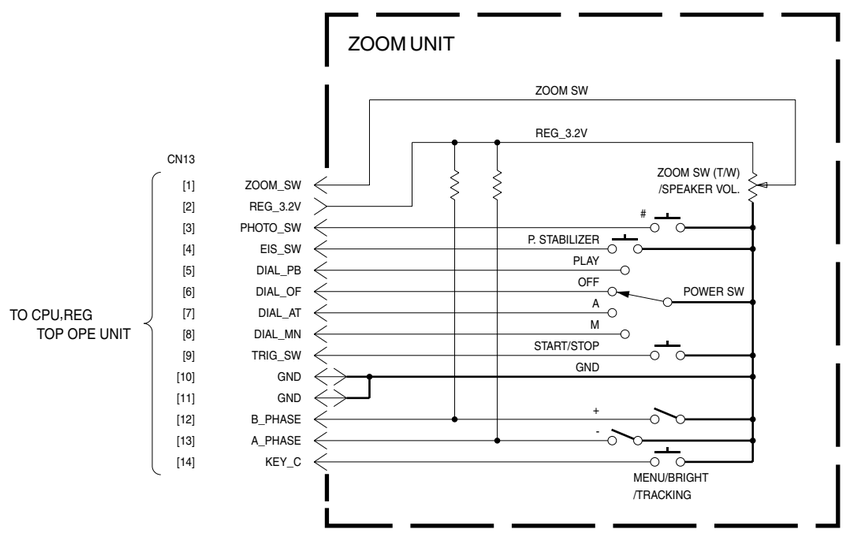
–TOP OPE UNIT–



NOTE : COMPARISON CHART OF MODELS & MARKS (#).

FUNCTION \ MODELS	GR-FXM38 GR-SXM67	GR-SXM48 GR-SXM87
NIGHT SCOPE	NOT USED	USED

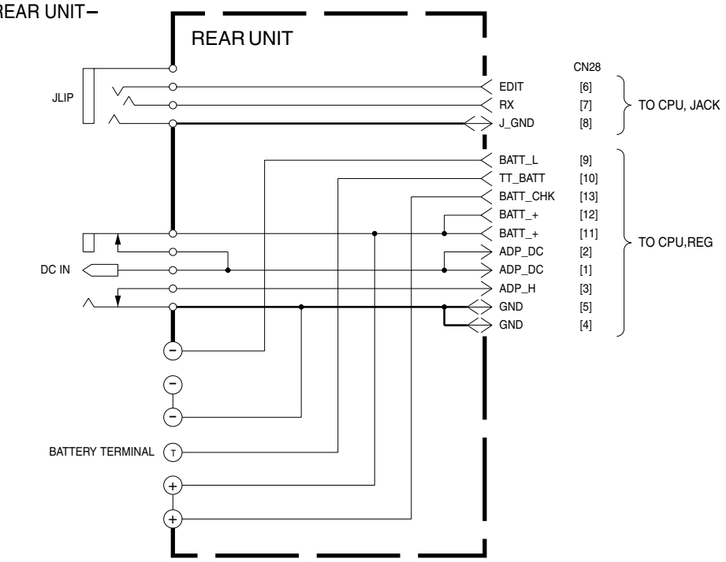
–ZOOM UNIT–



NOTE : COMPARISON CHART OF MODELS & MARKS (#).

MODELS	FUNCTION
GR-FMX38 GR-SXM67	5 SEC REC
GR-SMX48 GR-SXM87	SNAP SHOT

–REAR UNIT–



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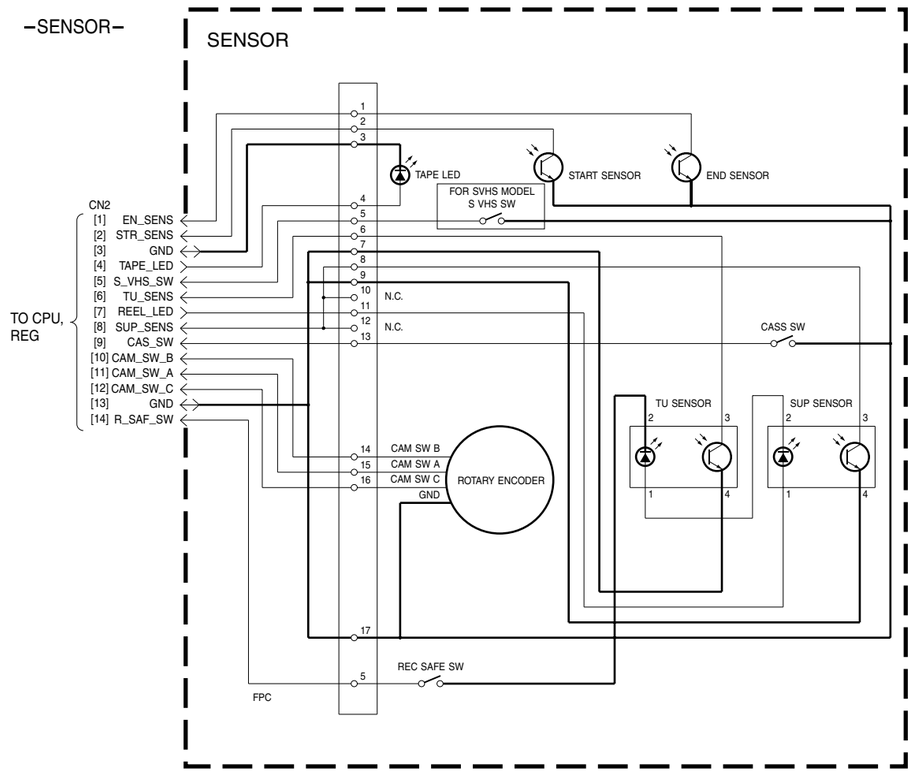
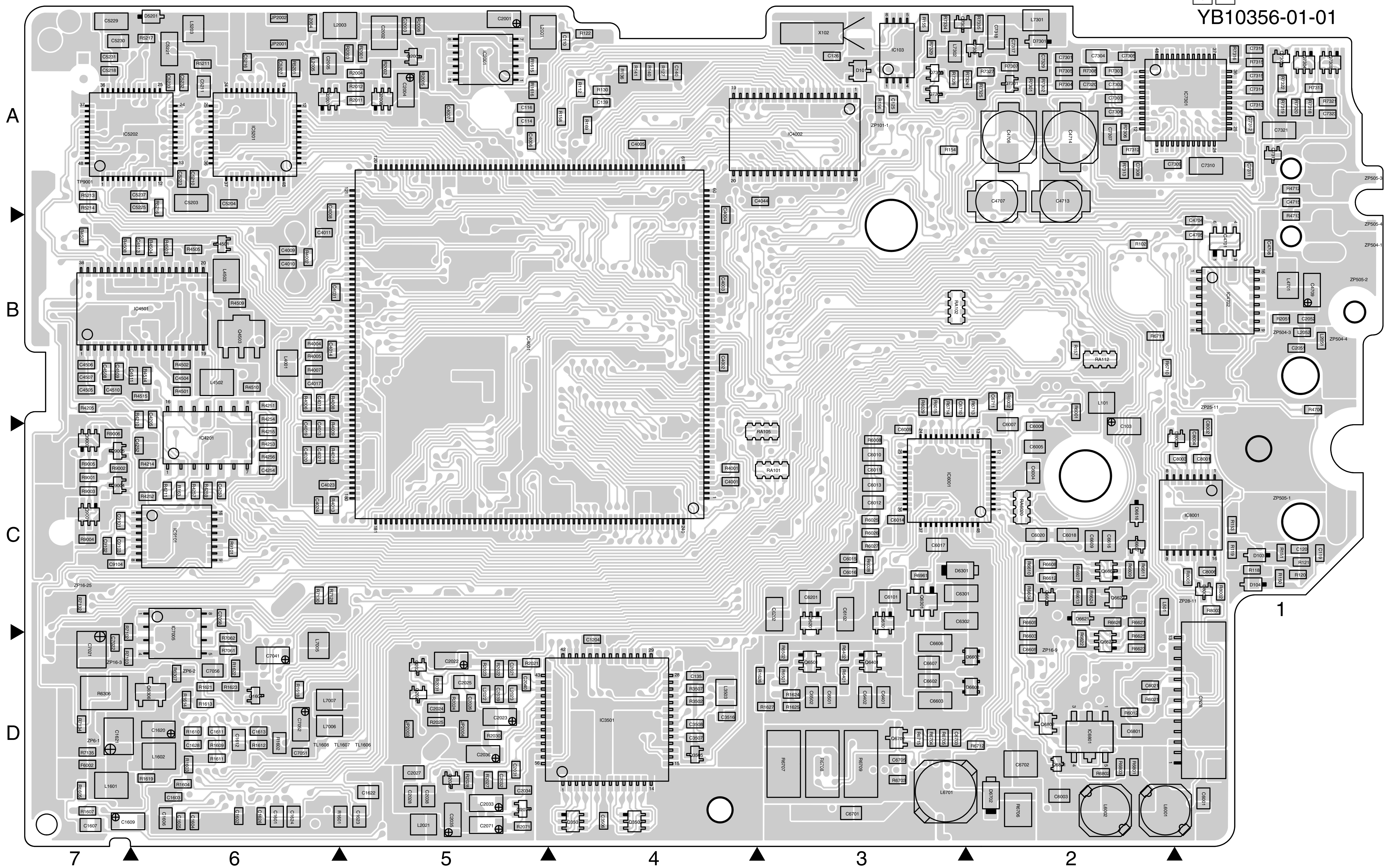


4.18 MAIN CIRCUIT BOARD

FOIL SIDE(B)

0 1 MAIN PWB
YB10356-01-01



COMPONENT PARTS LOCATION GUIDE <MAIN/YB10356-01-01> (1/2)

REF.NO.	LOCATION
CAPACITOR	
C103	B C 2C
C104	A C 2B
C105	A C 2C
C107	A C 3A
C108	A C 1B
C109	A C 4A
C110	B C 4A
C111	A C 6A
C112	A C 4C
C113	A C 4A
C114	B C 5A
C115	A C 5C
C116	B C 5A
C118	A C 3B
C119	B C 1C
C120	B C 1C
C121	A C 4A
C122	A C 3A
C123	A C 3B
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C129	A C 3B
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C132	A C 3C
C133	A C 5B
C134	A C 5C
C135	B C 4D
C136	A C 1C
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C139	B C 4A
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C141	A C 3B
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C9101	B C 7C
C9102	B C 7C
C9103	B C 7C
C9104	B C 7C
C9105	A C 6C
C9106	A C 6C
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CN1	A C 5D
CN2	A C 2D
CN3	A C 5A
CN4	A C 6D
CN5	A C 4D
CN6	A C 6D
CN7	A C 6A
CN8	A C 5D
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CN12	A C 2A
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CN22	A C 7A
CN25	A C 2D
CN27	A C 5C
CN28	B C 1D
CN9012	A C 2A
CN9013	A C 4A
CN9018	A C 5B
CN9025	A C 3D
CN9031	A C 6C
DIODE	
D101	B C 3A
D102	A C 1B
D103	B C 1C
D104	B C 1C
D4001	A C 5B
D5201	B C 6A
D6301	B C 3C
D6601	B C 2D
D6602	B C 2D
D6616	B C 2C
D6621	B C 2C
D6701	A C 3D
D6702	B C 2D
D7301	B C 2A
D8001	B C 1C
D8002	B C 1C
D9101	A C 6C
D9102	A C 6C
FUSE	
F6001	A C 2D
F6002	B C 7D
F6004	A C 6C
F7301	A C 3A
IC	
IC101	A C 4B
IC102	A C 3A
IC103	B C 3A
IC104	A C 2B
IC105	A C 1C
IC1601	A C 6D
IC1602	A C 4D
IC1801	A D 7A
IC2001	B C 5A
IC2401	A C 5B
IC3501	B C 4D
IC4001	B C 5B
IC4002	B C 3A
IC4003	A C 5C
IC4201	B C 6C
IC4202	A C 6B
IC4501	B C 6B
IC4701	B C 1B
IC4702	B C 1B
IC5201	B C 6A
IC5202	B C 6A
IC5301	A D 1D
IC6001	B C 3C
IC6002	A C 2C
IC6801	B C 2D
IC7005	B C 6D
IC7008	A C 6C
IC7301	B C 1A
IC7302	A C 1A
IC8001	B C 1C
IC9101	B C 6C
COIL	
L101	B C 2B
L501	B C 2C
L1601	B C 7D
L1602	B C 6D
L2001	B C 5A
L2003	B C 5A
L2004	B C 6A
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L4201	A C 6C
L4501	A C 7B
L4502	B C 6B
L4503	B C 6B
L4701	B C 1B
L5201	A C 6A
L5202	A C 7A
L5203	B C 6A
L6001	B C 2D
L6002	B C 2D
L6101	A C 3C
L6201	A C 3C
L6301	A C 3C
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L7302	B C 3A
L7304	A C 2A
L8001	A C 2C
L9101	A C 6C
L9102	A C 6C
TRANSISTOR	
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Q102	A C 1B
Q103	A C 4A
Q104	A C 1C
Q105	A C 1D
Q106	A C 2D
Q107	A C 2D
Q108	A C 4A
Q109	A C 4A
Q112	A C 3B
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Q114	A C 5B
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Q2001	B C 5A
Q2007	B C 6A
Q2008	B C 5A
Q2021	B C 5D
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Q2071	B C 5D
Q2401	A C 5B
Q3501	B C 4D
Q3502	B C 4D
Q3505	B C 4D
Q3901	A C 4D
Q4001	A C 5B
Q4201	A C 6B
Q4202	A C 6A
Q4251	A D 7A
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Q6608	B C 2C
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Q6622	B C 2C
Q6701	A C 3D
Q6702	B C 3D
Q6801	B C 2D
Q6802	B C 2D
Q6811	A C 2D
Q7003	A C 5D
Q7005	A C 5D
Q7011	A C 5C

COMPONENT PARTS LOCATION GUIDE <MAIN/YB10356-01-01> (2/2)

REF.NO.	LOCATION		
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Q7015	A	C	5C
Q7301	B	C	2A
Q7303	B	C	1A
Q7304	B	C	1A
Q7305	B	C	1A
Q7306	B	C	3A
Q7307	B	C	3A
Q7308	B	C	2A
Q7309	B	C	2A
Q7310	A	C	3A
Q7311	A	C	3A
Q7312	B	C	1A
Q9001	B	C	7C
Q9002	B	C	7C
Q9004	B	C	7C
Q9005	B	C	7C
Q9201	A	C	3A
Q9202	A	C	3A
Q9203	A	C	3A
Q9204	A	C	3A
RESISTOR			
R101	A	C	2B
R102	B	C	2B
R103	A	C	3C
R104	A	C	1B
R105	A	C	1B
R106	A	C	1B
R107	A	C	1B
R108	A	C	1B
R109	A	C	1B
R110	A	C	4A
R111	A	C	4A
R112	B	C	4A
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R114	A	C	1D
R115	A	C	1D
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R158	B	C	4A
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R185	A	C	2D
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R2023	B	C	5D
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R4007	B	C	6B
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R4209	A	C	6B
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R4211	B	C	6C
R4214	B	C	6C
R4215	A	C	6B
R4216	A	C	6B
R4217	A	C	6B
R4218	A	C	6B
R4219	A	C	6B
R4220	A	C	6A
R4221	A	C	6B
R4222	A	C	7B
R4223	A	C	7B
R4224	A	C	7B
R4225	A	C	6A
R4251	B	C	6B
R4252	B	C	6C
R4253	B	C	6C
R4254	B	C	6B
R4255	B	C	6C
R4256	B	C	6C
R4257	B	C	6C
R4258	A	C	6C
R4259	B	C	6C
R4262	A	C	6C
R4501	B	C	6B
R4502	B	C	6B
R4503	B	C	6B
R4504	B	C	6B
R4505	B	C	6B
R4507	B	C	7B
R4508	B	C	6B
R4509	B	C	6B
R4510	B	C	6B
R4511	A	C	6B
R4512	A	C	6C
R4513	A	C	7B
R4514	B	C	6B
R4515	B	C	6B
R4516	A	C	6C
R4701	A	C	5B
R4702	A	C	6B
R4703	A	C	5B
R4704	A	C	5B
R4706	B	C	1B
R4707	A	C	6C
R4708	A	C	6C
R4709	A	C	6C
R4710	A	C	5C
R4712	B	C	1A
R4713	B	C	1B
R5201	B	C	6A
R5202	A	C	6A
R5211	B	C	6A
R5213	B	C	7A
R5214	B	C	7A
R5215	A	C	6A
R5216	B	C	6A
R5217	B	C	6A
R5301	A	C	?D
R5302	A	C	1D
R5304	A	C	?D
R6001	B	C	2B
R6002	B	C	2B
R6003	A	C	2C
R6004	A	C	2C
R6005	A	C	2C
R6008	B	C	3C
R6012	B	C	2D
R6015	B	C	3B
R6021	B	C	2D
R6024	A	C	2D
R6025	B	C	3C
R6026	B	C	3C
R6027	B	C	3C
R6028	B	C	3C
R6029	B	C	3B
R6030	A	C	2C
R6031	A	C	2C
R6032	A	C	2D
R6033	A	C	2C
R6034	A	C	2C
R6035	A	C	2C
R6036	A	C	2C
R6037	A	C	2C
R6103	A	C	3C
R6104	A	C	3C
R6105	A	C	3C
R6203	A	C	3C
R6204	A	C	3C
R6303	A	C	3C
R6304	A	C	3C
R6305	A	C	3C
R6306	B	C	7D
R6307	B	C	6D
R6401	B	C	3D
R6402	B	C	3D
R6501	B	C	3D
R6502	B	C	3D
R6603	B	C	2D
R6604	B	C	2C
R6605	B	C	2C
R6606	A	C	3C
R6607	B	C	2C
R6608	B	C	2C
R6609	B	C	2C
R6610	B	C	2C
R6611	B	C	2C
R6612	B	C	2C
R6613	B	C	2C
R6614	A	C	3C
R6616	A	C	2C
R6622	B	C	2D
R6623	B	C	2D
R6624	B	C	2C
R6625	B	C	2D
R6626	B	C	2C
R6627	B	C	2C
R6702	A	C	3D
R6703	B	C	3D
R6704	B	C	3D
R6705	B	C	3D
R6706	B	C	2D
R6707	B	C	3D
R6708	B	C	3D
R6709	B	C	3D
R6710	B	C	2B
R6711	B	C	2B
R6712	B	C	2D
R6713	B	C	2B
R6714	B	C	3B
R6715	B	C	3D
R6801	B	C	2D
R6802	B	C	2D
R6803	B	C	2D
R6811	A	C	2D
R6812	A	C	2D
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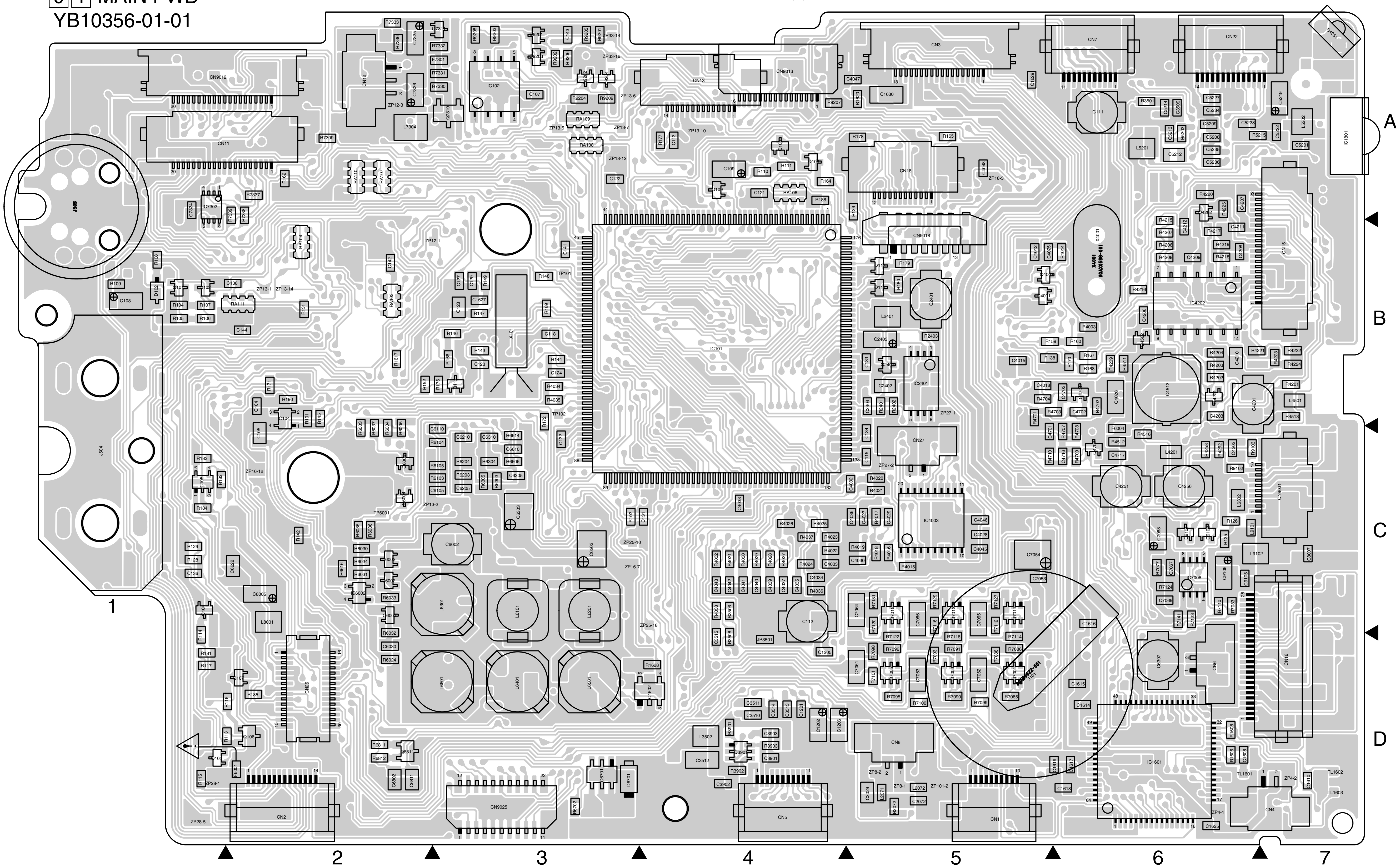
R7061	B	C	6D
R7062	B	C	6D
R7077	A	C	6C
R7083	A	C	6C
R7085	A	C	5D
R7086	A	C	5D
R7088	A	C	5D
R7090	A	C	5D
R7091	A	C	5D
R7093	A	C	5D
R7095	A	C	5D
R7096	A	C	5D
R7098	A	C	5D
R7099	A	C	5D
R7100	A	C	5D
R7101	A	C	5D
R7102	B	C	6C
R7103	B	C	6D
R7110	A	C	6C
R7112	A	C	5C
R7114	A	C	5D
R7116	A	C	5C
R7118	A	C	5D
R7120	A	C	5C
R7122	A	C	5D
R7123	A	C	6C
R7124	A	C	6C
R7127	A	C	5C
R7128	B	C	6C
R7129	A	C	5C
R7130	B	C	6C
R7131	A	C	5C
R7132	B	C	7C
R7134	B	C	7D
R7135	B	C	7D
R7141	A	C	6C
R7301	B	C	2A
R7302	B	C	2A
R7303	B	C	2A
R7304	B	C	2A
R7305	B	C	2A
R7306	B	C	2A
R7307	B	C	2A
R7308	B	C	2A
R7309	A	C	2A
R7312	B	C	2A
R7313	B	C	2A
R7315	B	C	1A
R7316	B	C	1A
R7317	B	C	1A
R7318	B	C	1A
R7319	B	C	1A
R7320	B	C	1A
R7321	B	C	1A
R7322	B	C	1A
R7324	B	C	2A
R7325	B	C	2A
R7326	B	C	3A
R7327	B	C	2A
R7329	B	C	3A
R7330	A	C	3A
R7331	A	C	3A
R7332	A	C	3A
R7333	A	C	2A
R7334	B	C	3A
R7335	B	C	2A
R7336	A	C	2A
R7337	A	C	2A
R7338	A	C	2A
R7339	A	C	2A
R8001	B	C	1C
R8002	B	C	1C
R8003	B	C	1C
R9001	B	C	7C
R9002	B	C	7C
R9003	B	C	7C
R9004	B	C	7C
R9005	B	C	7C
R9006	B	C	7C
R9101	B	C	6C
R9102	A	C	6C
R9103	A	C	6C
R9201	A	C	3A
R9202	A	C	3A
R9203	A	C	3A
R9204	A	C	3A
R9205	A	C	3A
R9206	A	C	3A
R9207	A	C	4A
R9208	A	C	3A
R9209	A	C	3A
RA101	B	C	3C
RA102	B	C	3B
RA103	A	C	2B
RA104	A	C	2B
RA105	B	C	3C
RA106	A	C	4A
RA107	A	C	2A
RA108	A	C	3A
RA109	A	C	3A
RA110	A	C	2A
RA111	A	C	2B
RA112	B	C	2B
RA6020	B	C	2C
TEST POINT			
TP101	A	C	3B
TP102	A	C	3B
TP6001	A	C	2C
TP9001	B	C	7A
OTHER			
J101	A	D	5D
J504	A	D	1B
J505	A	D	1A
JP2001	B	C	6A
JP2002	B	C	6A
JP2003	B	C	5D
JP2004	B	C	5D
JP3501	A	C	4D
TL1601	A	C	6D
TL1602	A	C	7D
TL1603	A	C	7D
TL1606	B	C	5D
TL1607	B	C	5D
TL1608	B	C	6D
TM2	A	C	?A
TM5	A	C	7A
TM6	A	C	7A
X101	A	C	3B
X102	B	C	3A
X4001	A	D	6B
ZP4-1	A	C	6D
ZP4-2	A	C	7D
ZP6-1	B	C	7D
ZP6-2	B	C	6D
ZP8-1	A	C	5D
ZP8-2	A	C	5D
ZP12-1	A	C	2B
ZP12-3	A	C	2A
ZP13-1	A	C	2B
ZP13-2	A	C	2C
ZP13-5	A	C	3A
ZP13-6	A	C	3A
ZP13-7	A	C	3A
ZP16-3	B	C	7D
ZP16-7	A	C	3C
ZP16-9	B	C	2D
ZP18-3	A	C	5A
ZP27-1	A	C	5B
ZP27-2	A	C	5C
ZP28-1	A	C	1D
ZP28-5	A	C	1D
ZP101-1	B	C	3A
ZP101-2	A	C	5D
ZP13-10	A	C	4A
ZP13-14	A	C	2B
ZP16-12	A	C	2C
ZP16-25	B	C	7C
ZP18-12	A	C	3A
ZP25-10	A	C	3C
ZP25-11	B	C	1B
ZP25-18	A	C	4C
ZP28-11	B	C	1C
ZP33-14	A	C	3A
ZP33-16	A	C	3A
ZP504-1	B	C	1B
ZP504-3	B	C	1B
ZP504-4	B	C	1B
ZP505-1	B	C	1C
ZP505-2	B	C	1B
ZP505-3	B	C	1A
ZP505-4	B	C	1B

0 1 MAIN PWB
YB10356-01-01

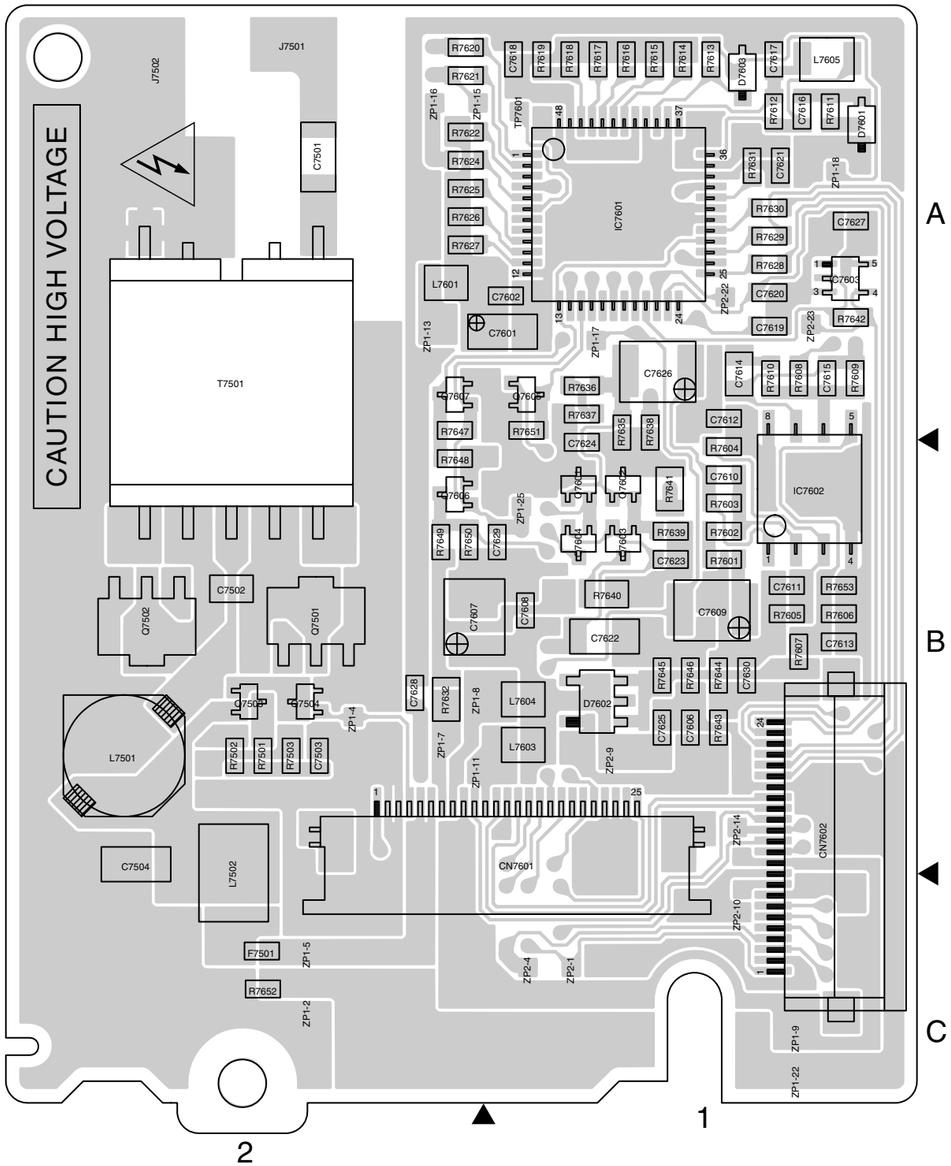
COMPONENT SIDE(A)



4.19 MONITOR CIRCUIT BOARD

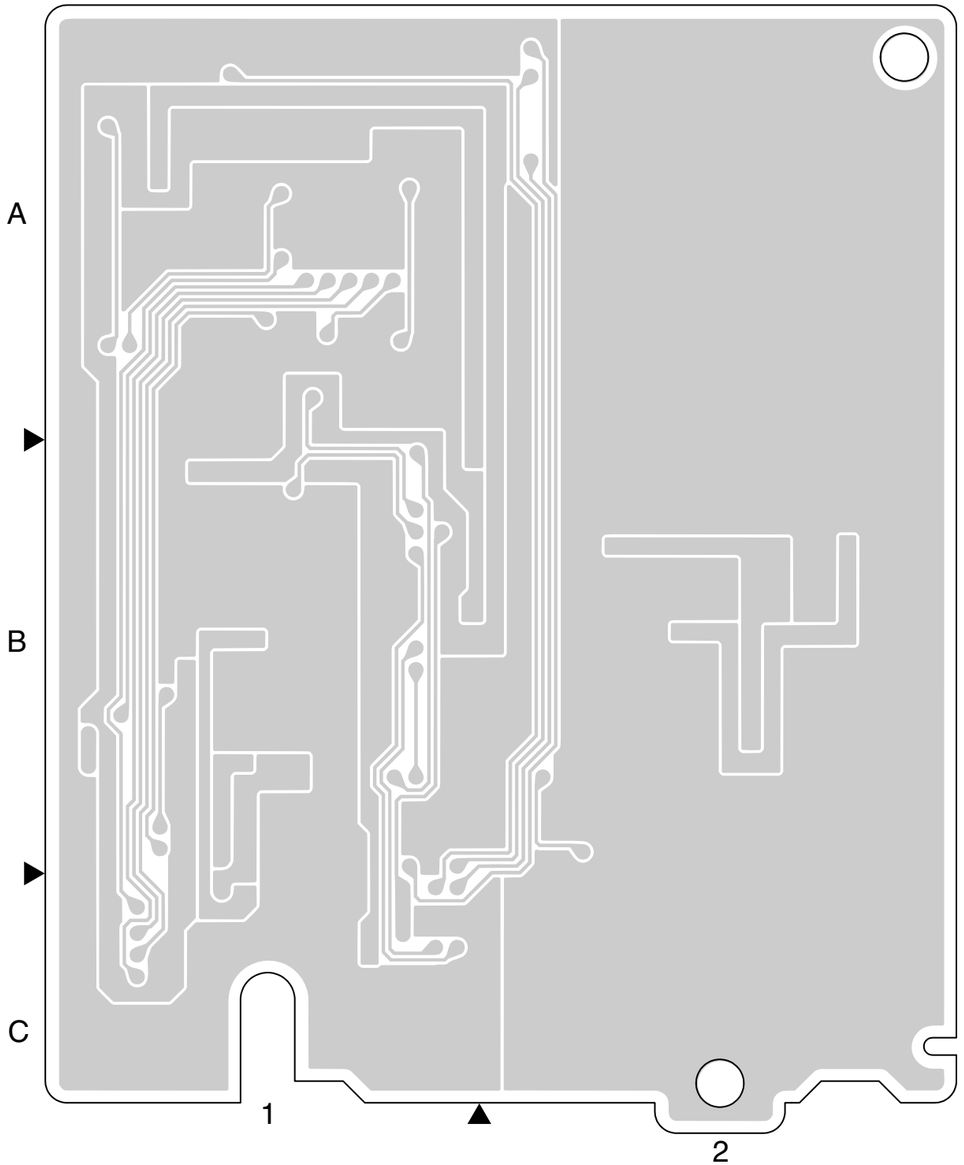
07 MONITOR PWB
YB20913

FOIL SIDE(B)



07 MONITOR PWB
YB20913

COMPONENT SIDE(A)



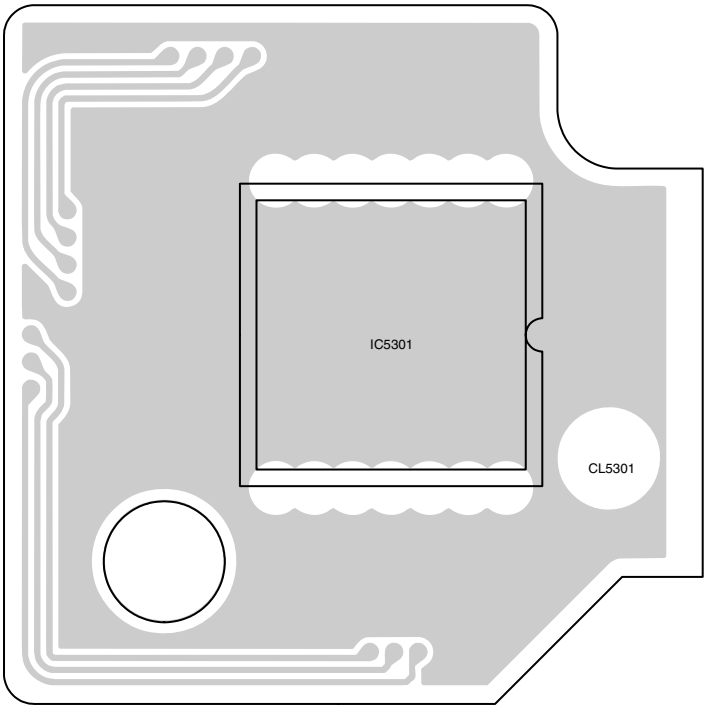
COMPONENT PARTS LOCATION GUIDE <MONITOR/YB20913>

REF.NO.	LOCATION		
CAPACITOR			
C7501	B	C	2A
C7502	B	C	2B
C7503	B	C	2B
C7504	B	C	2B
C7601	B	C	1A
C7602	B	C	1A
C7606	B	C	1B
C7607	B	C	2B
C7608	B	C	1B
C7609	B	C	1B
C7610	B	C	1B
C7611	B	C	1B
C7612	B	C	1A
C7613	B	C	1A
C7614	B	C	1A
C7615	B	C	1A
C7616	B	C	1A
C7617	B	C	1A
C7618	B	C	1A
C7619	B	C	1A
C7620	B	C	1A
C7621	B	C	1A
C7622	B	C	1B
C7623	B	C	1B
C7624	B	C	1B
C7625	B	C	1B
C7626	B	C	1A
C7627	B	C	1A
C7628	B	C	2B
C7629	B	C	1B
C7630	B	C	1B
CONNECTOR			
CN7601	B	C	2B
CN7602	B	C	1C
DIODE			
D7601	B	C	1A
D7602	B	C	1B
D7603	B	C	1A
FUSE			
F7501	B	C	2C
IC			
IC7601	B	C	1A
IC7602	B	C	1B
IC7603	B	C	1A
COIL			
L7501	B	C	2B
L7502	B	C	2C
L7601	B	C	2A
L7603	B	C	1B
L7604	B	C	1B
L7605	B	C	1A
TRANSISTOR			
Q7501	B	C	2B
Q7502	B	C	2B
Q7503	B	C	2B
Q7504	B	C	2B
Q7601	B	C	1B
Q7602	B	C	1B
Q7603	B	C	1B
Q7604	B	C	1B
Q7605	B	C	1A
Q7606	B	C	2B
Q7607	B	C	2A
RESISTOR			
R7501	B	C	2B
R7502	B	C	2B
R7503	B	C	2B
R7601	B	C	1B
R7602	B	C	1B
R7603	B	C	1B
R7604	B	C	1B
R7605	B	C	1B
R7606	B	C	1B
R7607	B	C	1B
R7608	B	C	1A
R7609	B	C	1A
R7610	B	C	1A
R7611	B	C	1A
R7612	B	C	1A
R7613	B	C	1A
R7614	B	C	1A
R7615	B	C	1A
R7616	B	C	1A
R7617	B	C	1A
R7618	B	C	1A
R7619	B	C	1A
R7620	B	C	1A
R7621	B	C	2A
R7622	B	C	2A
R7624	B	C	2A
R7625	B	C	2A
R7626	B	C	2A
R7627	B	C	2A
R7628	B	C	2A
R7629	B	C	1A
R7630	B	C	1A
R7631	B	C	1A
R7632	B	C	2B
R7635	B	C	1A
R7636	B	C	1A
R7637	B	C	1A
R7638	B	C	1A
R7639	B	C	2A
R7640	B	C	1B
R7641	B	C	1B
R7642	B	C	1A
R7643	B	C	1B
R7644	B	C	1B
R7645	B	C	1B
R7646	B	C	1B
R7647	B	C	1A
R7648	B	C	2B
R7649	B	C	2B
R7650	B	C	2B
R7651	B	C	1A
R7652	B	C	2C
R7653	B	C	1B
TEST POINT			
TP7601	B	C	1A
OTHER			
J7501	B	C	2A
J7502	B	C	2A
T7501	B	C	2A
ZP1-2	B	C	2C
ZP1-4	B	C	2B
ZP1-5	B	C	2C
ZP1-7	B	C	2B
ZP1-8	B	C	2B
ZP1-9	B	C	1C
ZP2-1	B	C	1C
ZP2-4	B	C	1C
ZP2-9	B	C	1B
ZP1-11	B	C	2B
ZP1-15	B	C	2B
ZP1-16	B	C	2A
ZP1-17	B	C	1A
ZP1-18	B	C	1A
ZP1-22	B	C	1C
ZP1-25	B	C	1B
ZP2-10	B	C	1C
ZP2-14	B	C	1B
ZP2-22	B	C	1A
ZP2-23	B	C	1A

4.20 CCD CIRCUIT BOARD

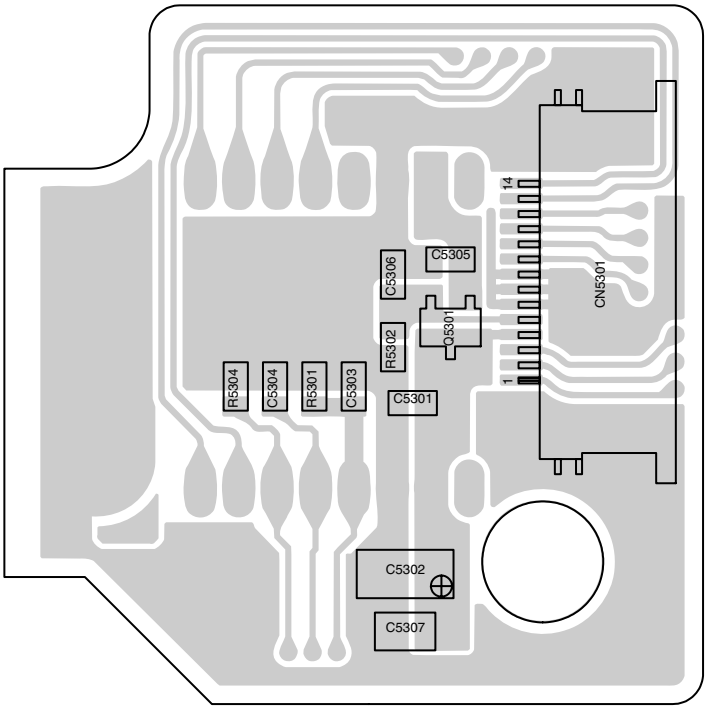
FOIL SIDE(B)

02 CCD PWB
YB10356-01-01



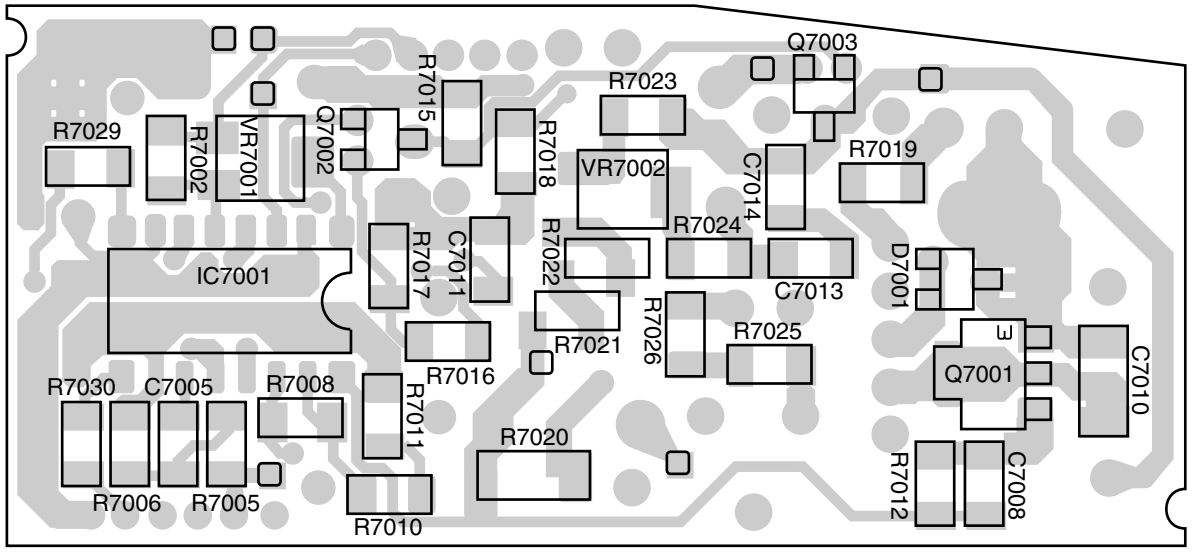
COMPONENT SIDE(A)

02 CCD PWB
YB10356-01-01



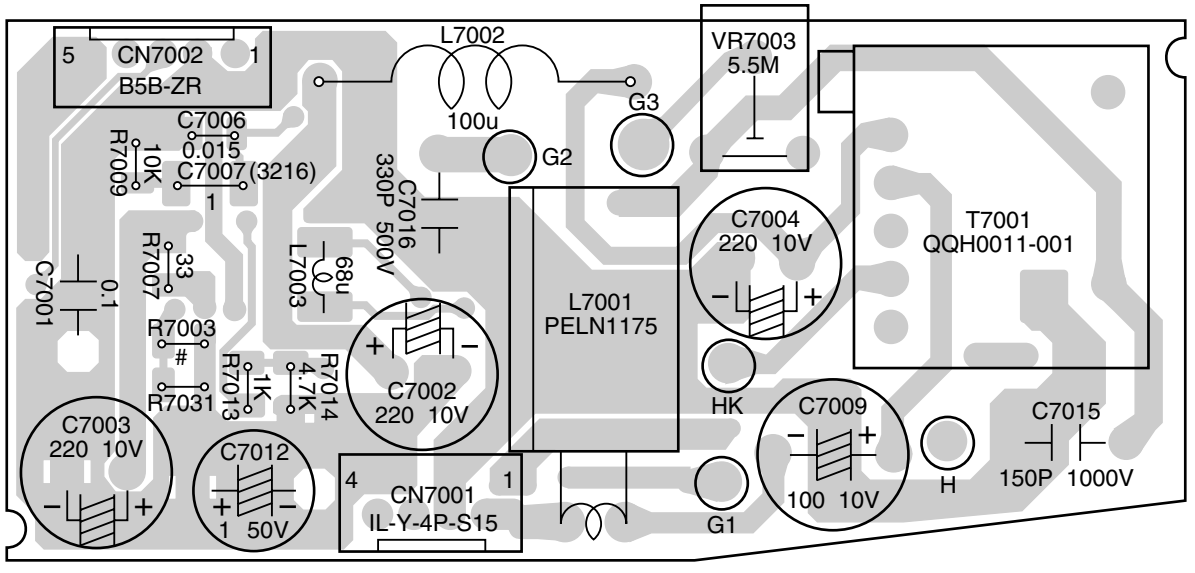
FOIL SIDE(B)

60 E. VF PWB



COMPONENT SIDE (A)

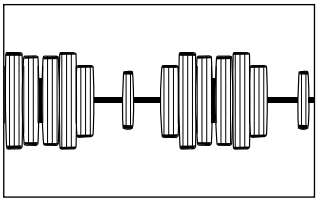
60 E. VF PWB



4.22 WAVEFORMS

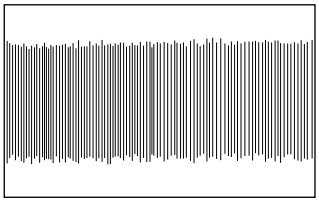
— VTR ASP —

WF1 IC3501-19



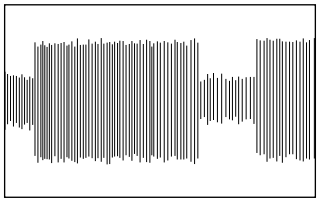
REC 0.1 Vp-p
2 mV/10 µsec/DIV

WF2 IC3501-20



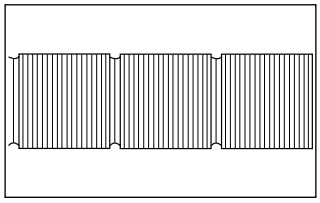
REC 0.57 Vp-p
10 mV/10 µsec/DIV

WF3 IC3501-21



PB 24 mVp-p
1 mV/5 msec/DIV

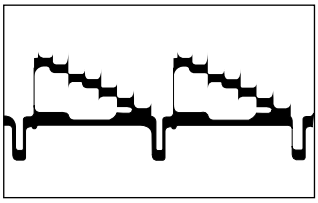
WF4 IC3501-25



PB 0.24 Vp-p
20 mV/5 msec/DIV

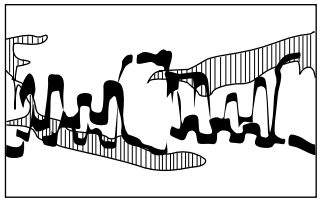
— DSP —

WF1 IC4001-146



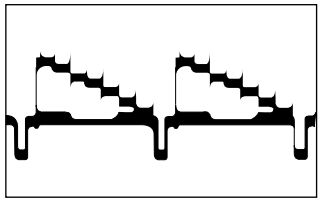
REC/PB 0.28 Vp-p
10 mV/20 µsec/DIV

WF2 IC4001-147



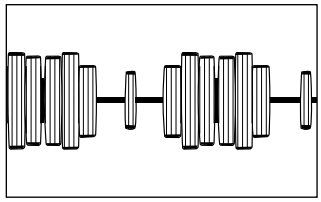
REC 0.52 Vp-p
20 mV/10 µsec/DIV
PB 0.3 Vp-p
10 mV/10 µsec/DIV

WF3 IC4001-160



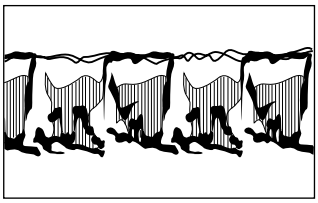
REC/PB 0.28 Vp-p
10 mV/20 µsec/DIV

WF4 IC4001-161



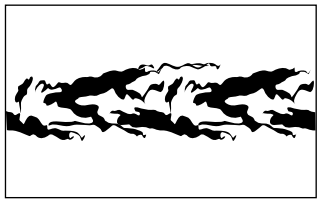
REC 0.15 Vp-p
PB 0.33 Vp-p
5 mV/10 µsec/DIV

WF5 IC4001-168



REC 0.76 Vp-p
20 mV/10 µsec/DIV
PB 0.17 Vp-p
5 mV/10 µsec/DIV

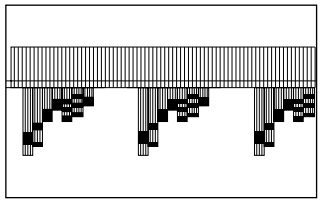
WF6 IC4001-169



REC 0.48 Vp-p
PB 0.13 Vp-p
10 mV/10 µsec/DIV

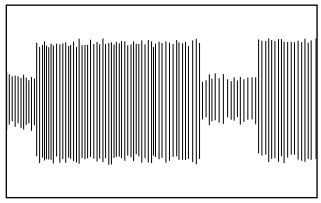
— TG/CDS —

WF1 IC5201-26



REC 0.26 Vp-p
5 mV/10 µsec/DIV

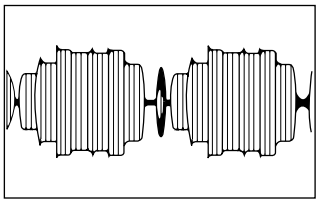
WF2 IC5201-27



PB 24 mVp-p
1 mV/5 msec/DIV

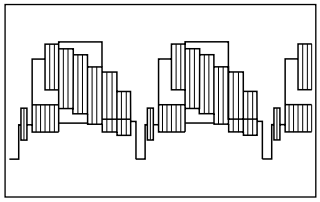
— V OUT —

WF1 IC4702-9



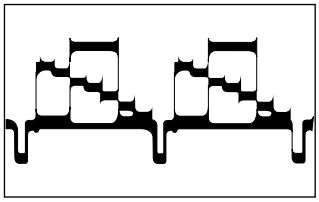
REC/PB 0.34 Vp-p
10 mV/10 µsec/DIV

WF2 IC4702-12



REC 0.66 Vp-p
PB 0.64 Vp-p
10 mV/10 µsec/DIV

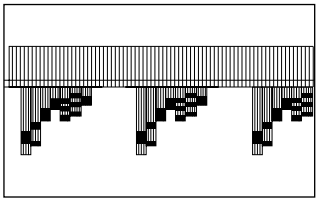
WF3 IC4702-15



REC 0.57 Vp-p
PB 0.55 Vp-p
10 mV/10 µsec/DIV

— CCD —

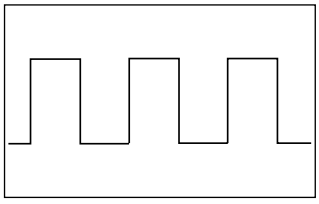
WF1 Q5301-B



EE 0.52 Vp-p
10 mV/10 µsec/DIV

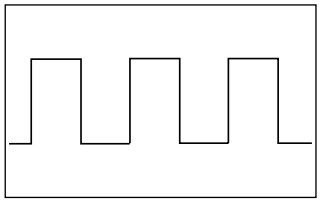
— CPU —

WF1 IC101-109



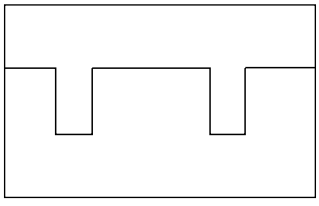
REC/PB 0.96 Vp-p
20 mV/0.5 msec/DIV

WF2 IC101-111



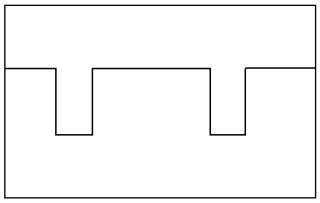
REC/PB 0.96 Vp-p
20 mV/0.1 msec/DIV

WF3 IC101-113



REC/PB 0.9 Vp-p
50 mV/5 msec/DIV

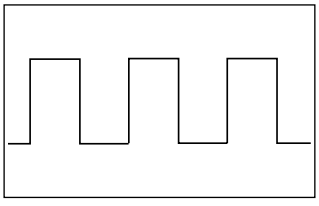
WF2 IC1601-26



REC/PB 0.9 Vp-p
50 mV/5 msec/DIV

— M.MDA —

WF1 IC1601-25



REC/PB 0.96 Vp-p
20 mV/0.1 msec/DIV

4.23 VOLTAGE CHARTS

<CPU>

MODE PIN NO.	REC	PLAY
IC101		
1	3.2	3.2
2	3.2	3.2
3	0	0
4	3.3	3.2
5	0	0
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0.7	0
10	3.2	3.2
11	0	0
12	0	1.3
13	3.2	3.2
14	0	0
15	0	0
16	1.5	0
17	0	0
18	3.2	3.2
19	0	0
20	0	0
21	3.2	0
22	1.6	0
23	3.2	3.2
24	2.9	2.7
25	3.1	3.1
26	1.6	1.5
27	0	0
28	0	0
29	3.2	3.2
30	3.2	3.2
31	3.2	2.5
32	3.2	3.2
33	3.2	3.2
34	3.2	3.2
35	3.2	3.2
36	0	0
37	0	0
38	0	3.2
39	3.2	3.2
40	0	0
41	0	0
42	3.2	0
43	0	0
44	0	0
45	0	0
46	3.0	3.0
47	0	0
48	0	0
49	3.0	0
50	3.0	3.0
51	0	3.0
52	3.1	3.1
53	-	-
54	-	-
55	3.2	3.3
56	0	0
57	1.3	1.3
58	1.7	1.7
59	2.1	0
60	0	0
61	2.9	2.9
62	2.9	2.8
63	0	0
64	0	0
65	0	0
66	3.3	3.3
67	3.2	3.2
68	0	0
69	3.2	3.2
70	1.5	1.5
71	-	-
72	0	0
73	1.6	1.6
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	3.2	3.2
82	0	0
83	1.9	0
84	0	0
85	3.2	0
86	3.2	0
87	0	0
88	0	0
89	0	0
90	3.2	3.2
91	3.3	3.3
92	3.0	3.0
93	3.1	3.0
94	3.2	3.2
95	3.0	3.0
96	0	0
97	0	0
98	0	0
99	3.2	3.2
100	0	0
101	3.0	3.0
102	0	0
103	1.6	1.6
104	1.0	0.6
105	3.2	3.2
106	0	0
107	3.1	3.2
108	3.1	3.1
109	1.7	1.6
110	0	0
111	1.6	1.7
112	1.8	1.8
113	2.9	2.9
114	0	0
115	2.9	3.0
116	3.2	3.2
117	0	2.8
118	3.2	3.2
119	3.2	3.2
120	3.2	0
121	2.9	2.9
122	0	0
123	0	0
124	0	0
125	2.2	0.5
126	3.2	3.2
127	0	0
128	3.2	3.2
129	0	0
130	1.7	1.7
131	0	3.3
132	0	-
133	3.3	3.3
134	0	0
135	3.2	3.2
136	3.2	3.2
137	0	0
138	0	0
139	0	0
140	3.2	3.2
141	3.2	3.2
142	3.2	3.2
143	3.2	3.2
144	3.2	3.2
145	0.8	0.8
146	0.8	0.8
147	0.8	0.8
148	0.7	0.7
149	0.7	0.7
150	0.8	0.7
151	0.7	0.6
152	0.8	0.6
153	3.2	3.2
154	0	0
155	0.7	0.8
156	0.8	0.6
157	0.8	0.7
158	0.8	0
159	0.6	0.6
160	0.7	0.5
161	0.5	0.7
162	0.6	0.5
163	0	0
164	3.2	3.2
165	0	0
166	3.2	3.2
167	0	0
168	0	0
169	1.6	1.6
170	3.2	3.2
171	0	0
172	0	0
173	0	0
174	0	3.2
175	3.2	3.2
176	3.2	3.2
IC102		
1	3.2	3.2
2	3.2	3.2
3	3.2	3.2
4	0	0
5	3.2	3.2
6	3.2	3.2
7	3.2	3.2
8	3.2	3.2
IC103		
1	0	0
2	3.2	3.2
3	3.2	3.2
4	0	0
5	0	0
6	0.6	0.6
7	0.7	0.8
8	3.1	3.1
IC104		
1	3.2	3.2
2	3.2	3.2
3	0	0
4	0	0
IC105		
1	3.2	3.2
2	3.2	3.2
3	0	0
4	2.7	2.6
5	3.2	3.2
IC1801		
1	2.7	2.7
2	0	0
3	4.8	4.8
Q101		
E	11.1	11.1
C	11.1	11.1
B	10.3	10.3
Q102		
E	0	0
C	0	0
B	3.2	3.2
Q103		
E	0	0
C	0	4.8
B	0.7	0
Q104		
E	0	0
C	4.5	4.5
B	0	0
Q105		
E	4.8	4.8
C	0	-0.5
B	4.8	4.7
Q107	-	-
Q108		
E	0	0
C	0	0
B	3.2	3.2
Q109		
E	0	0
C	2.1	2.1
B	0	0

<M.MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0	0
3	1.7	1.7
4	2.6	2.6
5	2.4	3.3
6	1.7	1.7
7	1.6	1.6
8	0	0
9	0	0
10	1.2	-
11	0	0.4
12	0.4	0.4
13	1.8	1.8
14	0	0
15	1.4	1.4
16	8.4	8.5
17	11.1	11.1
18	10.3	10.3
19	1.6	1.6
20	0	0
21	1.4	0
22	3.2	3.2
23	0	0
24	0	0
25	1.6	1.6
26	2.9	3.0
27	1.6	1.7
28	1.2	1.2
29	1.2	-
30	1.2	-
31	0	0
32	1.2	1.2
33	1.2	0
34	1.2	-
35	0	0
36	0	3.0
37	0	0
38	1.4	1.5
39	1.6	1.6
40	1.3	1.3
41	3.1	3.1
42	0	2.5
43	1.5	1.6
44	1.6	1.6
45	1.6	1.6
46	1.6	1.6
47	-	-
48	-	-
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	0.8	0.8
55	0	0
56	11.1	11.1
57	0	0
58	0	0
59	0	1.7
60	0	1.4
61	1.6	1.6

MODE PIN NO.	REC	PLAY
62	1.4	1.4
63	1.7	1.6
64	1.5	1.4
IC1602		
1	0.4	0.4
2	0	0
3	2.2	2.2
4	3.2	3.2
5	3.2	3.2
Q1601		
E	1.7	1.7
C	11.1	11.1
B	5.8	5.8

<VTR ASP>

MODE PIN NO.	REC	PLAY
IC2001		
1	1.5	3.2
2	1.6	0
3	1.6	0
4	1.5	3.2
5	1.6	3.2
6	1.5	0
7	0	0
8	1.5	0
9	1.6	3.2
10	1.5	0
11	1.6	3.2
12	1.5	0
13	1.6	3.2
14	3.1	3.2
IC3501		
1	2.2	2.2
2	2.2	2.5
3	2.2	2.2
4	2.2	2.1
5	2.2	2.5
6	2.2	2.2
7	4.7	4.7
8	2.2	2.1
9	2.2	2.5
10	2.2	2.1
11	2.1	2.1
12	2.2	2.5
13	2.2	2.1
14	0	0
15	3.2	0
16	2.8	1.4
17	4.0	5.2
18	0	0
19	2.8	0
20	2.8	0
21	1.1	2.1
22	0	2.1
23	2.1	2.1
24	4.7	4.7
25	2.8	2.4
26	0	2.9
27	2.5	2.5
28	2.9	2.9

MODE PIN NO.	REC	PLAY
29	0	0
30	1.5	1.5
31	3.2	3.2
32	0.7	0
33	3.2	3.2
34	1.8	1.8
35	1.9	0
36	0	0
37	2.6	2.3
38	3.0	3.0
39	4.7	4.7
40	2.4	2.1
41	2.2	2.1
42	2.9	2.9
43	2.8	2.5
44	2.7	2.4
45	2.4	2.5
46	2.5	2.5
47	0	0
48	2.5	2.5
49	2.5	2.5
50	0	0
51	2.4	2.4
52	2.5	2.4
53	2.5	2.5
54	4.8	4.8
55	2.4	2.5
56	0	1.4
Q2001		
E	3.1	3.2
C	1.5	3.2
B	3.2	0
Q2007		
1(E)	-10.4	0
2(B)	-16.2	0.7
3(C)	0	0
4(E)	-10.4	0
5(B)	-16.2	0.7
6(C)	0	0
Q2008		
1(E)	3.1	1.8
2(B)	3.2	1.2
3(C)	3.2	1.2
4(E)	3.1	1.8
5(B)	3.2	1.2
6(C)	-16.4	0.8
Q2021		
E	0	0
C	0.6	0
B	0	0
Q2022		
E	0	0
C	0	0
B	0	0
Q2023		
E	0	0
C	0	0
B	0	0
Q2071		
E	4.5	4.5
C	4.7	4.8
B	4.7	4.8

MODE PIN NO.	REC	PLAY
Q3501		
1(E)	2.2	2.2
2(B)	2.4	2.2
3(C)	2.2	2.2
4(E)	2.2	2.2
5(B)	2.4	2.5
6(C)	2.2	2.2
Q3502		
1(E)	2.2	2.1
2(B)	0	2.2
3(C)	2.2	2.1
4(E)	2.2	2.1
5(B)	2.3	2.2
6(C)	2.2	2.1
Q3505		
E	0	0
C	2.8	0
B	0	2.7
Q3901		
1(E)	4.6	4.7
2(B)	0	4.9
3(C)	3.9	4.9
4(E)	0	0
5(B)	3.9	4.9
6(C)	0	0

<SPEAKER>

MODE PIN NO.	REC	PLAY
IC2401		
1	2.9	2.9
2	1.2	1.2
3	1.2	1.2
4	0	1.3
5	1.3	1.3
6	3.2	3.2
7	0	0
8	1.3	1.3
Q2401		
E	0	0
C	2.9	2.9
B	0	0

<DSP>

MODE PIN NO.	REC	PLAY
IC4001		
1	3.2	3.2
2	0	1.2
3	0	0
4	1.6	1.6
5	3.2	3.2
6	3.2	3.2
7	1.4	1.4
8	1.4	1.4
9	1.4	1.4
10	3.2	3.2
11	1.4	1.5
12	1.4	1.6
13	1.4	1.5

MODE PIN NO.	REC	PLAY
14	1.4	1.6
15	0	0
16	1.4	1.5
17	1.4	1.5
18	1.5	1.5
19	1.8	1.8
20	1.4	1.5
21	1.4	1.5
22	1.4	1.5
23	1.4	1.5
24	1.4	1.5
25	1.4	1.6
26	0	0
27	1.8	1.8
28	0	0
29	0	0
30	1.6	1.6
31	0	0.6
32	3.0	3.0
33	1.8	1.8
34	3.1	3.1
35	0	0
36	3.1	3.1
37	0	0
38	2.5	0
39	1.2	1.6
40	1.2	1.6
41	3.2	3.2
42	1.2	1.6
43	1.2	1.6
44	1.9	1.6
45	1.5	1.6
46	1.6	1.6
47	0.6	1.6
48	0	0
49	1.1	1.4
50	1.2	1.4
51	1.2	1.5
52	1.6	1.5
53	1.5	1.5
54	1.6	1.6
55	0	0
56	0	0
57	0	0
58	3.2	3.2
59	1.5	1.5
60	1.5	1.5
61	1.4	1.7
62	1.3	1.5
63	1.5	1.7
64	1.7	1.5
65	1.7	1.8
66	0.9	0.9
67	1.4	1.7
68	1.4	1.7
69	0	0
70	1.8	1.8
71	1.4	1.7
72	1.6	1.6
73	1.2	1.4
74	1.2	1.3
75	1.2	1.5

MODE PIN NO.	REC	PLAY
76	1.8	1.8
77	1.2	1.2
78	1.3	1.5
79	1.5	1.5
80	1.5	1.5
81	0.7	0.6
82	0	0
83	1.8	1.8
84	1.1	1.5
85	1.1	1.5
86	1.2	1.6
87	1.6	1.5
88	1.5	1.4
89	0	0
90	0	0
91	0	0
92	3.0	3.0
93	0	0
94	3.2	3.2
95	2.7	2.7
96	2.8	2.7
97	2.8	2.7
98	3.2	3.2
99	0	0
100	0	1.5
101	0.6	1.7
102	1.6	1.6
103	1.0	1.5
104	0	0
105	1.9	1.5
106	1.1	1.5
107	1.1	1.5
108	1.2	1.5
109	1.2	1.5
110	1.2	1.5
111	3.2	3.2
112	1.4	1.6
113	2.9	0
114	3.1	0
115	0	0
116	0	0
117	0	0
118	1.5	1.5
119	0	0
120	0	0
121	1.5	1.6
122	1.5	1.5
123	1.8	1.8
124	3.2	3.2
125	3.2	3.2
126	0.7	0
127	0	0
128	1.8	1.8
129	1.6	1.6
130	1.5	1.5
131	1.5	1.5
132	1.5	1.5
133	1.8	1.8
134	1.5	1.5
135	3.0	3.0
136	0	0
137	1.6	1.5

MODE PIN NO.	REC	PLAY
138	1.6	1.5
139	0	3.2
140	3.2	3.2
141	-	-
142	3.1	3.1
143	0	0
144	3.1	3.1
145	0	0
146	0.4	0.4
147	0.8	0.8
148	0.7	0.7
149	0.7	0.7
150	2.4	2.4
151	0	0
152	3.1	3.1
153	0	0
154	0	0
155	3.1	3.1
156	0	0
157	2.4	2.4
158	0.7	0.7
159	0.7	0.7
160	0.6	0.5
161	0.6	0.6
162	0	0
163	3.1	3.1
164	0	0
165	0	0
166	3.1	3.1
167	0	0
168	0.8	0.9
169	0.8	0.8
170	0.7	0.7
171	0.7	0.7
172	2.4	2.4
173	0	0
174	3.1	3.1
175	0	0
176	0	0
177	3.2	3.2
178	1.5	1.5
179	0	0
180	1.5	1.5
181	3.2	3.2
182	0	0
183	3.1	3.1
184	3.0	3.0
185	1.3	1.2
186	0	0
187	0	0
188	0	0
189	0	0
190	1.8	1.8
191	0	0
192	20	0
193	0	0
194	0	0
195	0	0
196	0	0
197	0	0
198	0	0
199	0	0

MODE PIN NO.	REC	PLAY
200	3.2	3.2
201	0	0
202	0	0
203	0	0
204	1.8	1.8
205	0	0
206	3.1	3.1
207	0	0
208	2.4	2.4
209	0.7	0.7
210	0.7	0.7
211	0.6	0
212	0	0
213	0	0
214	3.1	3.1
215	0	0
216	0	0
217	3.1	3.1
218	0	0
219	1.6	1.6
220	1.5	1.5
221	1.2	1.2
222	1.6	1.6
223	1.7	1.7
224	0	0
225	3.1	3.1
226	0	0
227	2.5	2.9
228	3.1	1.4
229	2.0	2.0
230	0	0
231	3.2	3.2
232	1.6	1.6
233	0	1.4
234	2.3	2.3
235	1.6	1.6
236	0	0
237	1.4	1.5
238	1.5	1.5
239	1.5	1.5
240	0	0
IC4002		
1	0	0
2	0	0
3	1.5	1.5
4	1.1	1.6
5	1.1	1.5
6	1.1	1.5
7	0.6	0.6
8	1.3	1.3
9	1.3	1.4
10	1.1	1.5
11	1.0	1.1
12	1.1	1.5
13	1.3	1.3
14	1.2	1.3
15	1.5	1.4
16	0	0
17	2.7	2.7
18	3.0	3.0
19	3.2	3.2
20	0	0

MODE PIN NO.	REC	PLAY
21	3.2	3.2
22	2.8	2.7
23	2.7	2.7
24	0	0
25	1.5	1.4
26	1.4	1.5
27	1.5	1.5
28	1.4	1.6
29	1.3	1.3
30	1.4	1.5
31	1.5	1.5
32	1.7	1.6
33	0.8	0.9
34	1.3	1.8
35	1.4	1.9
36	1.4	1.8
37	1.6	1.8
38	0	0
IC4003		
1	3.1	3.1
2	2.5	2.5
3	2.9	2.7
4	3.2	3.2
5	3.2	3.2
6	0	0
7	1.3	1.3
8	1.3	1.3
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	3.1	3.1
20	3.0	2.9
Q4001		
E	0	0
C	0	0
B	0	0

<F/Z/I/MDA>

MODE PIN NO.	REC	PLAY
IC4201		
1	2.2	0.5
2	1.9	1.9
3	1.9	1.9
4	4.8	4.8
5	1.9	1.9
6	1.9	1.9
7	1.9	1.9
8	1.6	1.6
9	1.9	1.9
10	1.9	1.9
11	0	0
12	1.9	1.9
13	1.9	1.9
14	2.5	2.5

MODE PIN NO.	REC	PLAY
IC4202		
1	1.8	3.6
2	1.5	0.4
3	1.4	0.4
4	4.8	4.8
5	2.1	0
6	2.1	0.5
7	1.2	0
8	0	0.9
9	0	0
10	0	0
11	0	0
12	1.9	1.9
13	1.9	1.9
14	1.9	1.9
IC4501		
1	0	0
2	0.8	0.8
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	3.2	3.2
9	4.8	4.8
10	0.6	2.2
11	0	0
12	0.6	2.2
13	4.8	4.8
14	0.6	0.8
15	0	0
16	0.6	3.6
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	4.8	4.8
24	1.0	0.8
25	0	0
26	1.0	0.8
27	4.8	4.8
28	1.0	0.7
29	0	0
30	1.0	0.7
31	0	0
32	0	0
33	0	0
34	0.7	0
35	3.2	3.2
36	1.6	1.6
37	1.5	1.5
38	3.2	3.2
Q4201		
E	0	0
C	1.3	1.3
B	0.9	0.9
Q4202		
E	1.3	2.9
C	4.8	4.8
B	2.0	3.6

MODE PIN NO.	REC	PLAY
Q4251		
E	0	0
C	4.5	4.5
B	-	-
Q4501		
E	0	0
C	4.2	4.2
B	0	0

<V OUT>

MODE PIN NO.	REC	PLAY
IC4701	-	-
IC4702		
1	0	0
2	2.3	2.4
3	0	0
4	0	0
5	0	0
6	0	0
7	1.9	1.9
8	0	0
9	2.3	2.3
10	0	0
11	2.2	2.1
12	2.4	2.4
13	4.7	4.8
14	1.9	1.9
15	2.0	2.0
16	4.7	4.8
Q4701		
E	1.1	1.1
C	0	0
B	0.5	0.5
Q4702		
E	1.2	1.2
C	0	0
B	0.5	0.5

<TG/CDS>

MODE PIN NO.	REC	PLAY
IC5201		
1	0	0
2	1.2	1.5
3	1.2	1.5
4	1.1	1.5
5	1.0	1.5
6	1.0	1.5
7	2.0	1.5
8	1.0	1.5
9	1.3	1.5
10	0.6	1.6
11	0	1.5
12	0	0
13	0	0
14	0	0
15	3.0	3.1
16	1.6	1.5
17	3.0	0

MODE PIN NO.	REC	PLAY
18	2.8	0
19	2.7	0
20	2.5	0
21	0	0
22	0	0
23	3.0	3.1
24	0	0
25	0	0
26	2.0	0
27	1.5	1.5
28	2.0	0
29	2.0	0
30	0	0
31	3.0	3.1
32	2.0	2.0
33	1.0	1.0
34	1.5	1.5
35	1.2	1.2
36	0	0
37	0	0
38	3.1	3.2
39	0	1.0
40	0	0
41	3.0	3.1
42	0	0
43	3.2	3.2
44	3.1	3.1
45	0.7	0
46	3.0	3.1
47	0	0
48	0	0
IC5202		
1	3.0	3.1
2	3.0	3.1
3	1.5	1.6
4	3.0	0
5	3.0	0
6	2.5	0
7	0	0
8	1.5	1.5
9	3.0	3.1
10	1.5	1.6
11	1.2	1.2
12	1.4	1.6
13	3.0	3.1
14	0	0
15	2.6	0
16	2.6	0
17	2.6	0
18	2.6	0
19	3.0	3.1
20	3.0	3.1
21	1.7	0
22	1.5	0
23	0	0
24	0	2.8
25	0	0
26	0	0
27	0	0
28	0	0
29	-7.8	0
30	0	14.9

MODE PIN NO.	REC	PLAY
31	14.9	14.9
32	-7.8	14.9
33	-8.3	14.9
34	-8.3	-8.4
35	0	0
36	0	0
37	0	0
38	0	0
39	3.2	3.2
40	0.7	0
41	0	0
42	3.0	3.1
43	0	0
44	3.0	3.1
45	0	0
46	3.2	0
47	2.9	0
48	3.1	0

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	3.2	3.2
2	3.2	3.2
3	3.2	3.2
4	-	-
5	0	0
6	11.1	11.1
7	1.0	1.0
8	1.2	1.3
9	2.2	2.2
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	2.2	2.2
17	0	0
18	2.2	2.2
19	1.0	1.0
20	0.7	0.7
21	1.0	1.0
22	0.5	0.5
23	1.0	1.0
24	0.8	0.8
25	1.0	1.0
26	0.6	0.6
27	0.8	0.8
28	0	0
29	1.0	1.0
30	0	0
31	2.4	2.4
32	1.1	1.1
33	0	0
34	2.2	2.2
35	2.2	2.2
36	2.2	2.2
37	8.0	8.0
38	0	0

MODE PIN NO.	REC	PLAY
39	11.1	11.1
40	8.1	8.1
41	6.2	6.2
42	9.1	9.1
43	7.8	7.8
44	0	0
45	11.1	11.1
46	0	0
47	0	0
48	3.3	3.3
IC6801		
1	3.3	3.3
2	0	0
3	0	0
4	11.0	11.0
5	11.1	11.0
Q6101		
1	7.8	7.8
2	11.1	11.1
3	0	0
4	3.2	3.2
5	3.2	3.2
Q6201		
1	9.1	9.1
2	11.1	11.1
3	0	0
4	1.8	1.8
5	1.8	1.8
Q6301		
1	6.1	6.1
2	11.1	11.1
3	8.1	8.1
4	0	0
5	11.1	11.1
6	4.8	4.8
Q6306		
D	0	0
S	0	0
G	0.7	0.5
Q6401		
1	10.0	10.0
2	11.1	11.1
3	0	0
4	3.4	3.4
5	3.4	3.4
Q6501		
1	10.3	10.3
2	11.1	11.1
3	0	0
4	1.7	1.7
5	1.7	1.7
Q6608		
E	0	0
C	14.9	14.9
B	-0.9	-0.9
Q6701		
1	0	0
2	0	0
3	11.1	11.1
4	11.1	11.1
5	0	0
6	0	0

MODE PIN NO.	REC	PLAY
Q6702		
E	0	0
C	0	0
B	0	0
Q6802		
E	3.3	3.3
C	3.3	3.3
B	0	0
Q6811		
E	1.4	1.4
C	0	0
B	0.8	0.8

<LCD/CVF>

MODE PIN NO.	REC	PLAY
Q7011	-	-
Q7013		
1(E)	0.8	0.8
2(B)	1.3	1.3
3(C)	4.8	4.8
4(E)	2.3	2.3
5(B)	2.9	2.9
6(C)	-	-
Q7015		
1(E)	0.8	0.8
2(B)	1.3	1.4
3(C)	4.8	4.8
4(E)	2.3	2.3
5(B)	2.9	2.9
6(C)	2.9	2.9

<BW/CVF>

MODE PIN NO.	REC	PLAY
Q7301		
E	0	0
C	0	0
B	0.4	0.4
Q7310		
E	4.8	4.8
C	0	0
B	4.8	4.8
Q7311		
E	0	0
C	4.8	4.8
B	0	0

<CCD>

MODE PIN NO.	EE
IC5301	
1	-7.8
2	0
3	-0.3
4	-0.3
5	0
6	0
7	0
8	0
9	0
10	6.9
11	-8.3
12	8.6
13	1.6
14	1.2
Q5301	
E	0
C	14.9
B	11.2

<MONITOR>

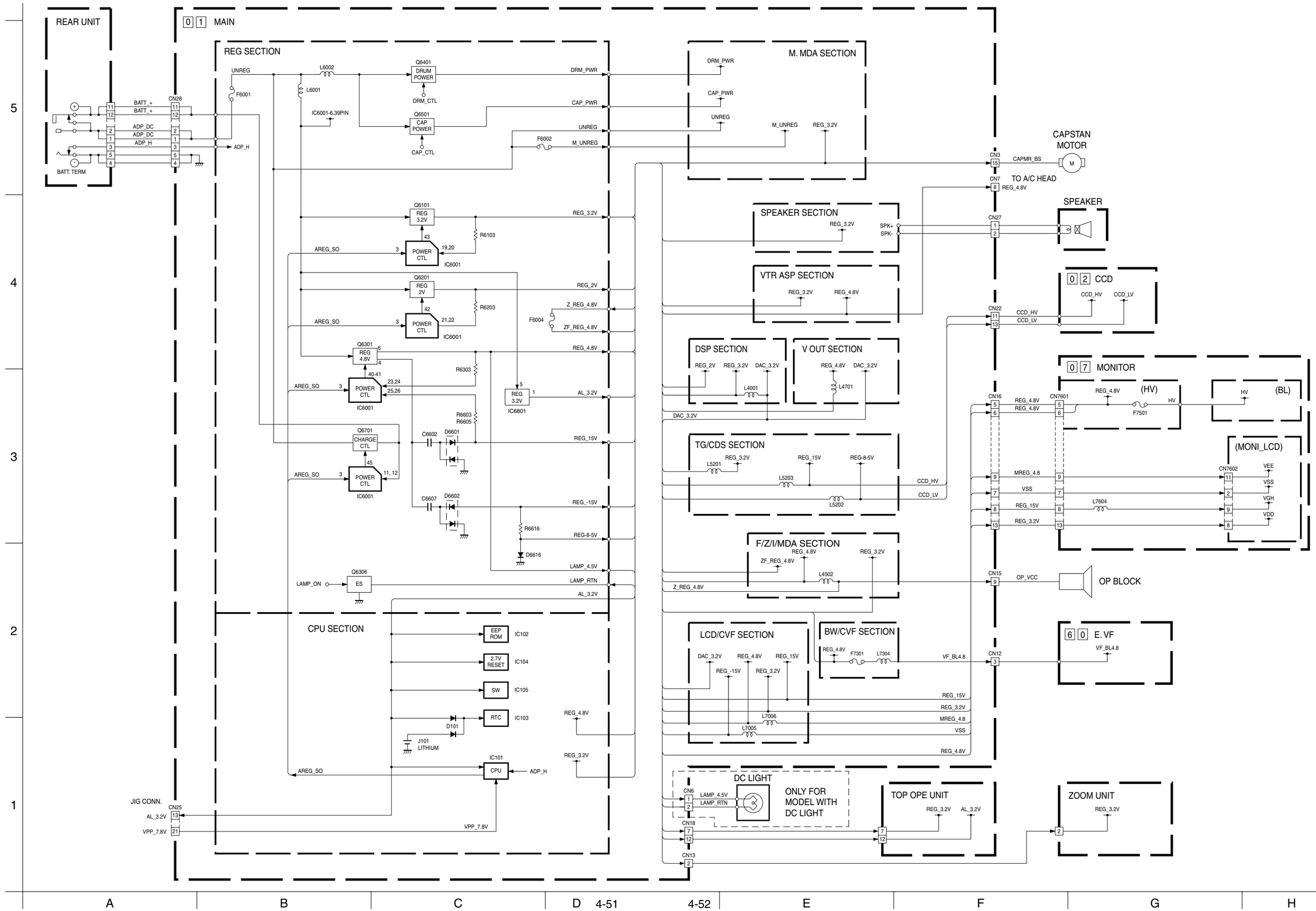
MODE PIN NO.	EE
IC7601	
1	0.8
2	3.0
3	3.2
4	0
5	3.1
6	3.0
7	3.1
8	0
9	0
10	0
11	0
12	0
13	2.5
14	1.6
15	0
16	0
17	0
18	0
19	0
20	0
21	0.4
22	1.6
23	0
24	0
25	1.4
26	0
27	1.4
28	2.5
29	1.4
30	0
31	0
32	3.2
33	1.6
34	0
35	3.2
36	1.5
37	1.5
38	0
39	3.2
40	0
41	3.2
42	0
43	3.2
44	0
45	3.2
46	0
47	3.2
48	0
IC7602	
1	6.0
2	6.0
3	6.0
4	0
5	1.6
6	1.6
7	9.8
8	12.1
IC7603	-

MODE PIN NO.	EE
Q7501	
E	0
C	4.4
B	0.4
Q7502	
E	0
C	4.4
B	0.4
Q7503	
E	4.5
C	4.5
B	0
Q7504	
E	0
C	0
B	3.2
Q7601	
E	-8.7
C	0
B	0
Q7602	
E	-8.0
C	-14.7
B	-8.3
Q7603	
E	-8.4
C	-1.8
B	-8.0
Q7604	
E	-8.4
C	0
B	-8.7
Q7606	
E	3.2
C	-13.0
B	2.5
Q7607	
E	0
C	0
B	2.5

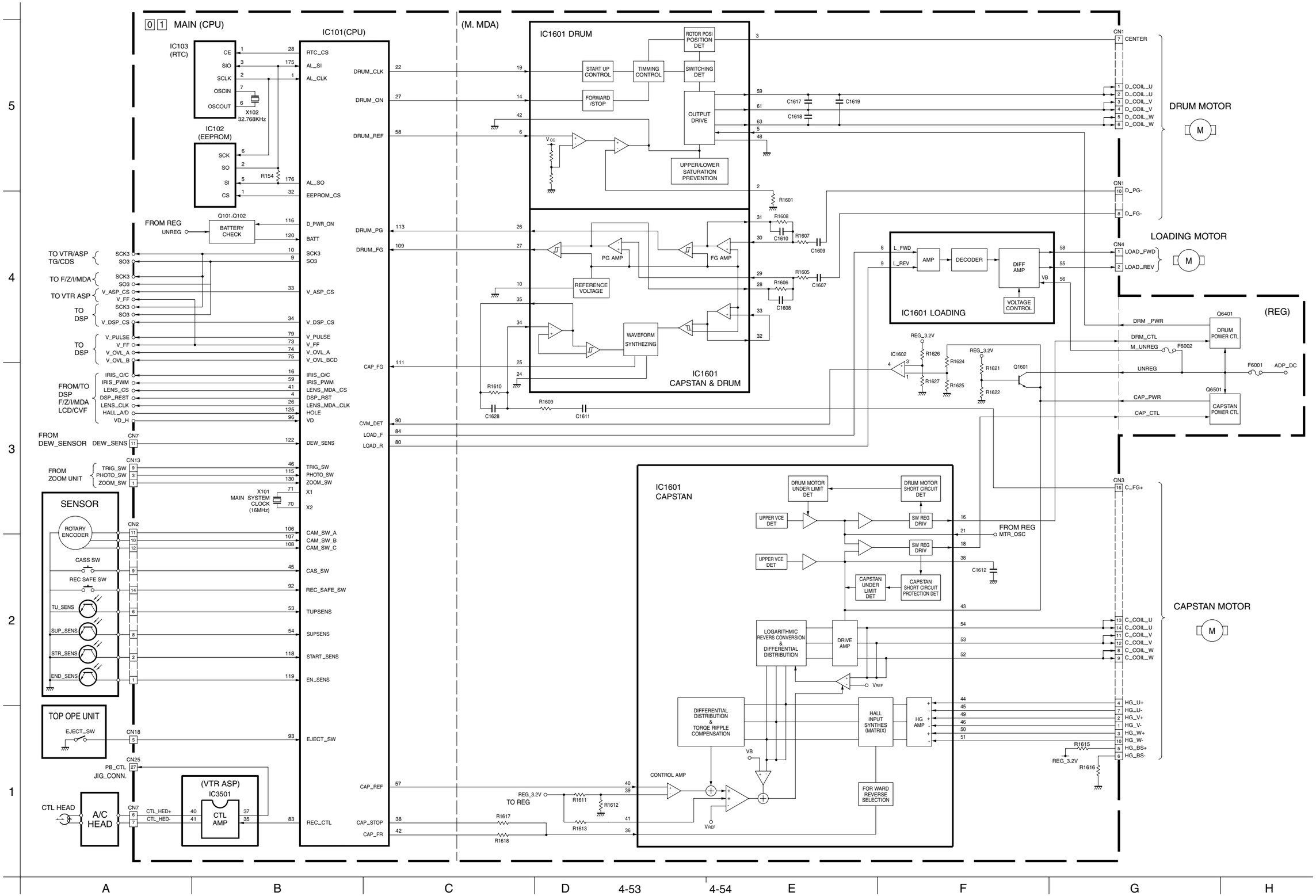
<E.VF>

MODE PIN NO.	EE
IC7001	
1	2.1
2	4.9
3	2.0
4	0
5	2.1
6	1.3
7	2.0
8	6.0
9	4.2
10	0
11	1.9
12	4.5
13	2.8
14	1.7
15	1.8
16	1.6
Q7001	
E	0
C	4.4
B	0.5
Q7002	
E	2.8
C	-24.8
B	2.3
Q7003	
E	-24.0
C	-34.3
B	-24.6

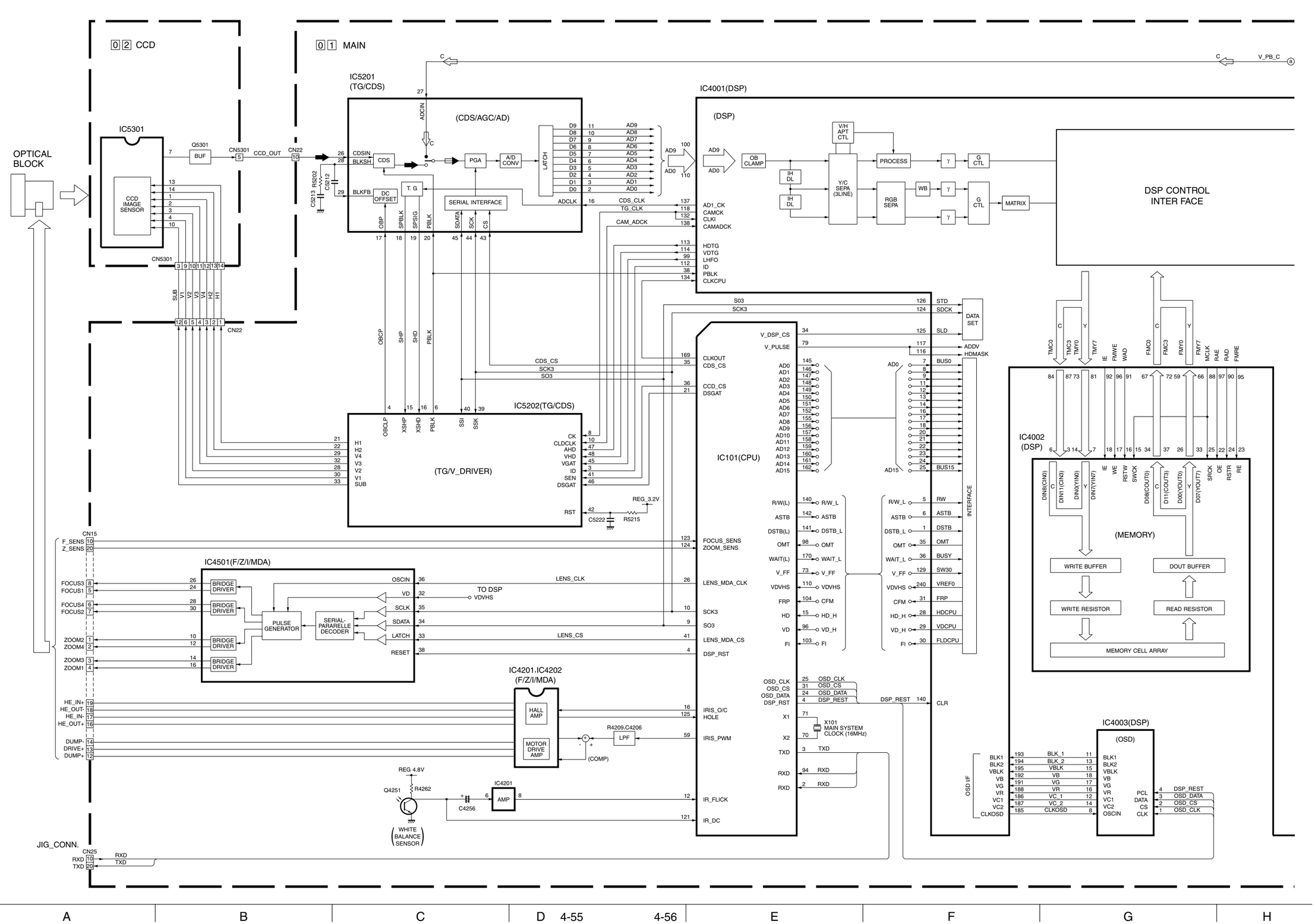
4.24 POWER SYSTEM BLOCK DIAGRAM

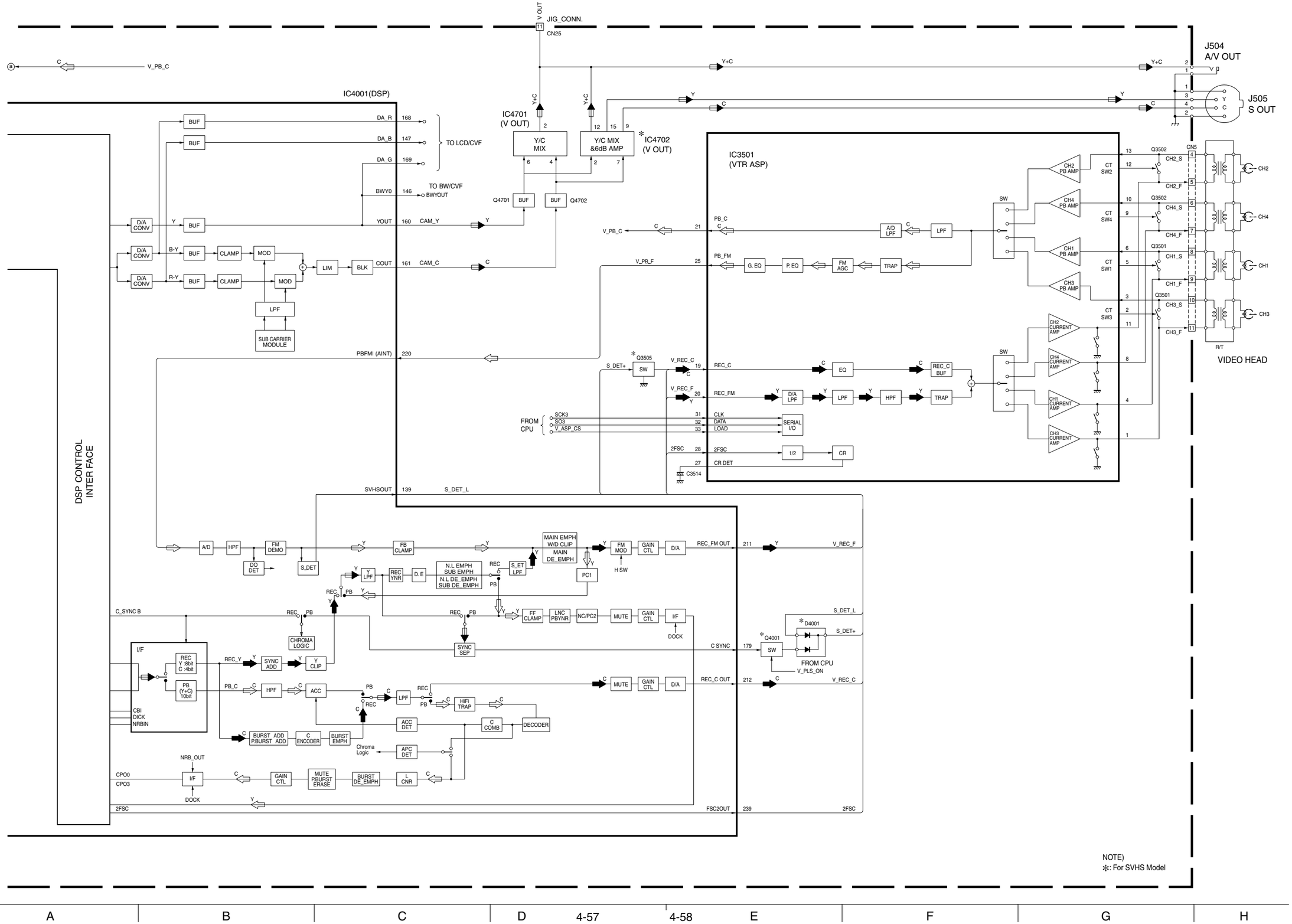


4.25 CPU/MDA SYSTEM BLOCK DIAGRAM



4.26 CAMERA AND Y/C SYSTEM BLOCK DIAGRAM




V OUT
11
JIG_CONN.
CN25
J504
A/V OUT
J505
S OUT
V_PB_C
IC4001(DSP)
IC4701
(V OUT)
IC4702
(V OUT)
Y/C MIX
Y/C MIX &6dB AMP
TO LCD/CVF
DA_R
DA_B
DA_G
TO BW/CVF
BWYOUT
BWY0
YOUT
CAM_Y
CAM_C
COUT
BUF
D/A CONV
CLAMP
MOD
LIM
BLK
LPF
SUB CARRIER MODULE
IC3501
(VTR ASP)
PB_C
PB_FM
V_PB_F
A/D LPF
G. EQ
P. EQ
FM AGC
TRAP
SW
CH2 PB AMP
CH4 PB AMP
CH1 PB AMP
CH3 PB AMP
CT SW2
CT SW4
CT SW1
CT SW3
Q3502
Q3501
CH2_S
CH2_F
CH4_S
CH4_F
CH1_S
CH1_F
CH3_S
CH3_F
CN5
R/T
VIDEO HEAD
CH2 CURRENT AMP
CH4 CURRENT AMP
CH1 CURRENT AMP
CH3 CURRENT AMP
PBFMI (AINT)
S_DET+
Q3505
V_REC_C
V_REC_F
REC_C
REC_FM
EQ
REC_C BUF
D/A LPF
LPF
HPF
TRAP
FROM CPU
SCK3
SO3
V_ASP_CS
CLK
DATA
LOAD
SERIAL I/O
2FSC
1/2
CR
CR DET
C3514
SVHSOUT
S_DET_L
A/D
HPF
FM DEMO
DO DET
S_DET
FB CLAMP
MAIN EMPH W/D CLIP
MAIN DE_EMPH
FM MOD
GAIN CTL
D/A
REC_FM OUT
H SW
PC1
Y LPF
REC YNR
D. E
N.L EMPH SUB EMPH
N.L DE_EMPH SUB DE_EMPH
S_ET LPF
C_SYNC B
CHROMA LOGIC
FF CLAMP
LNC PBYNR
NC/PC2
MUTE
I/F
DOCK
SYNC SEP
C SYNC
D4001
Q4001
FROM CPU
V_PLS_ON
REC_C OUT
SYNC ADD
Y CLIP
REC Y :8bit C :4bit
PB (Y+C) 10bit
CBI
DICK
NRBIN
HPF
ACC
LPF
HiFi TRAP
ACC DET
C COMB
DECODER
BURST ADD P.BURST ADD
C ENCODER
BURST EMPH
Chroma Logic
APC DET
NRB_OUT
CPO0
CPO3
GAIN CTL
MUTE P.BURST ERASE
BURST DE_EMPH
L CNR
FSC2OUT
239
2FSC
DSP CONTROL
INTER FACE
NOTE)
*: For SVHS Model

4.27 MONITOR SYSTEM BLOCK DIAGRAM