DSP UNIT

DSP1D

SERVICE MANUAL

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YAMAHA
HAMAMATSU, JAPAN

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IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: This presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is belived to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

LITHIUM BATTERY HANDLING

This product uses a lithium battery for memory back-up.

WARNING: Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board by soldering, solder using the connection terminals provided on the battery cells.
- Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disassemble the batteries.
- Never heat batteries or throw them into fire.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

The following information complies with Dutch Official Gazette 1995. 45; ESSENTIALS OF ORDER ON THE COLLECTION OF BATTERIES.

- Please refer to the diassembly procedure for the removal of Back-up Battery.
- Leest u voor het verwijderen van de backup batterij deze beschrijving.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

SPECIFICATIONS

Sampling frequency	<External sync> 39.69 kHz – 50.88 kHz
	<Internal sync> 44.1 kHz, 48 kHz
Power supply	USA and Canada: 120 V, 60 Hz
	Others: 230 V, 50 Hz
Power consumption	170 W
Dimensions (W x H x D)	480 mm x 408.7 mm x 460.8 mm
Weight	33 kg
Operating temperature	10 – 35˚C
Fan circuit	always fixed
Accessories	power cable 2.5 m x 1

Digital I/Os

I/O connectors	Level	Type
DIGITAL I/O INPUT 1 –10	RS-422	D-sub, half-pitch, 68-pin connector (female) x 10
DIGITAL I/O OUTPUT 1 – 6	RS-422	D-sub, half-pitch, 68-pin connector (female) x 6
DIGITAL I/O CASCADE IN, OUT	RS-422	D-sub, half-pitch, 68-pin connector (female) x 2
DIGITAL I/O CONSOLE I/O 1, 2	RS-422	D-sub, half-pitch, 68-pin connector (female) x 2
CONTROL I/O CONSOLE 1 IN, OUT	–0.225V — –1.825V/50 Ω	BNC connector x 2
CONTROL I/O CONSOLE 2 IN, OUT	–0.225V — –1.825V/50 Ω	BNC connector x 2
REMOTE RS-422	RS-422	D-sub, 9-pin connector (female)
GPI	C-MOS IN, Open collector OUT 1 pin: 150mA, 8pin total: 500mA	D-sub, 25-pin connector (female)
TIME CODE IN	SMPTE format, Nominal –10 dB/10 kΩ	XLR-3-31 type connector
MIDI IN, OUT, THRU	MIDI format	5-pin DIN connector x 3
PC CONTROL RS-232-C	RS-232-C	D-sub, 9-pin connector (male)
PC CONTROL USB	0V — 3.3V	B type USB connector
WORD CLOCK IN	TTL/75 Ω (ON/OFF)	BNC connector
WORD CLOCK OUT	TTL/75 Ω	BNC connector

Slots (for IDB1D board)

Unit	Input channel
DPS1D	INPUT 1-48 & ST IN 1-4 *
DPS1D-EX	INPUT 1-96 & ST IN 1-8 (DSP1D + IDB1D for expansion)

* The DSP1D has an empty slot available for the IDB1D board.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

IMPORTANT. The wires in this main lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

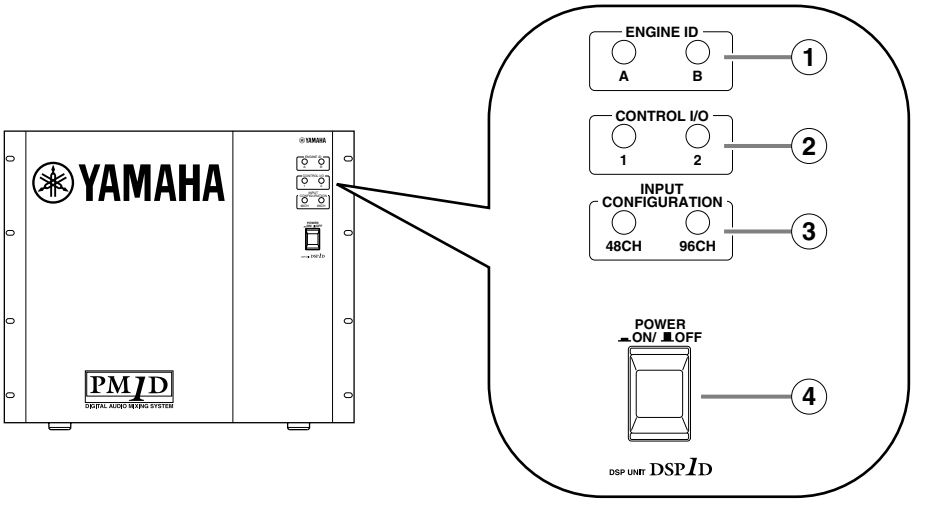
The BLUE wire must be connected to the terminal that is marked with the letter N (or coloured BLACK).

The BROWN wire must be connected to the terminal that is marked with the letter L (or coloured RED).

Be certain that neither core is connected to the earth terminal of the three pin plug.

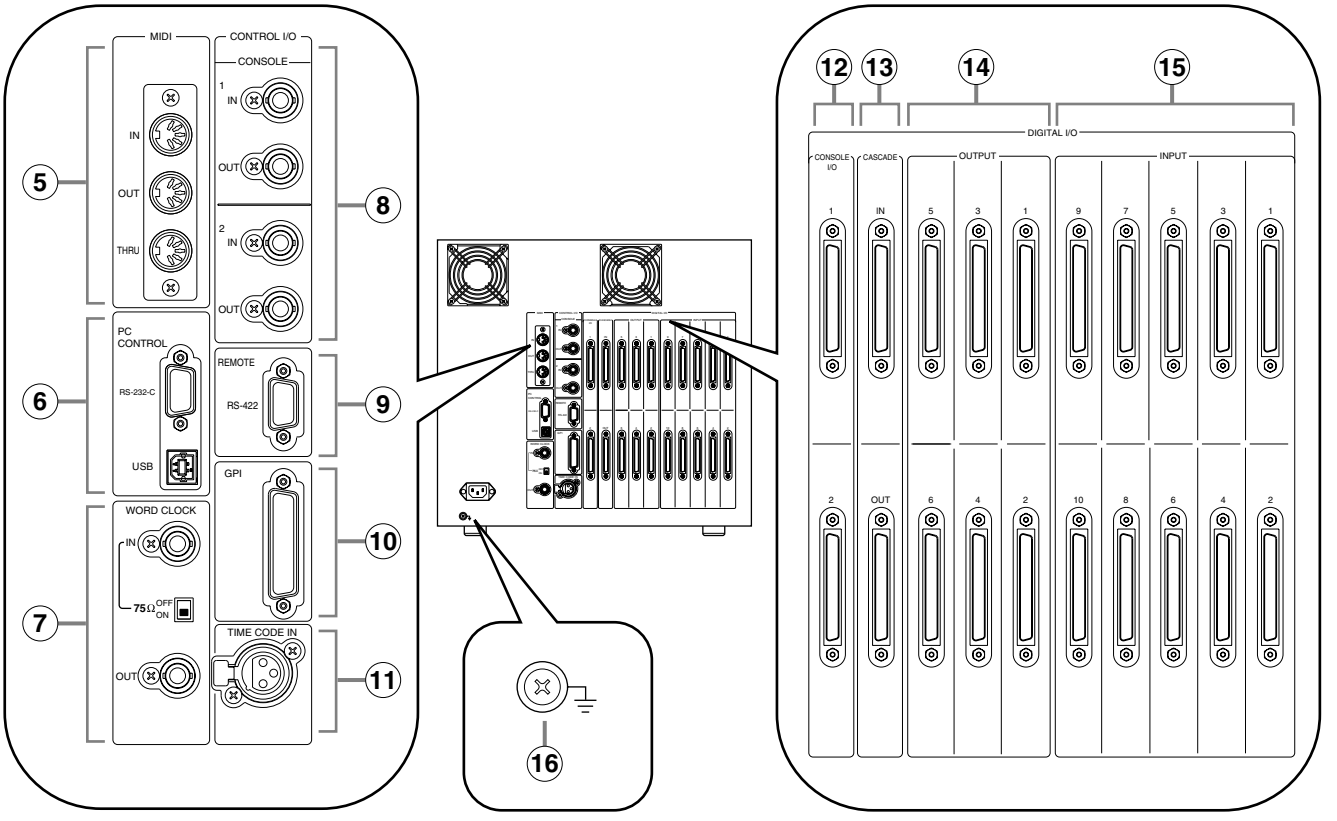
PANEL LAYOUT

Front Panel



1. ENGINE ID A/B indicators
2. CONTROL I/O 1/2 indicators
3. INPUT CONFIGURATION 48CH/96CH indicators
4. POWER ON/OFF switch

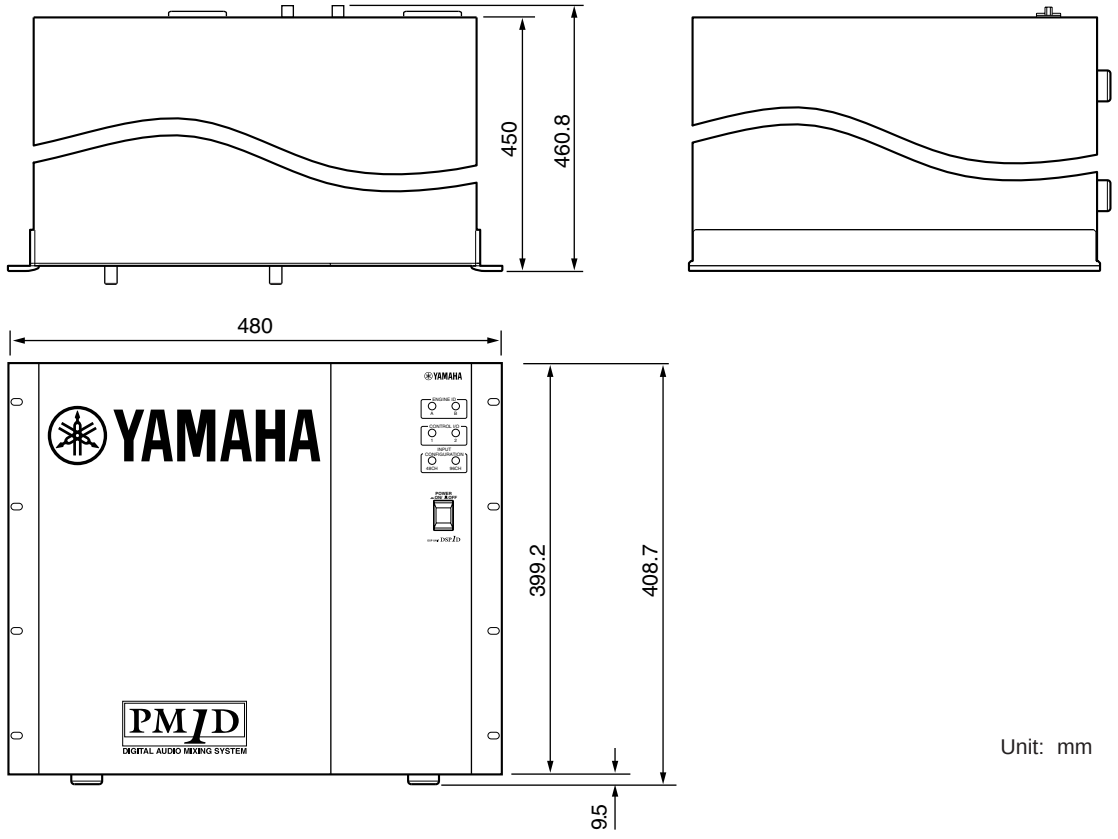
Rear Panel



5. MIDI IN/OUT/THRU connectors
6. PC CONTROL RS-232-C/USB ports
7. WORD CLOCK IN jack, 75 Ω ON/OFF switch, and WORD CLOCK OUT jack

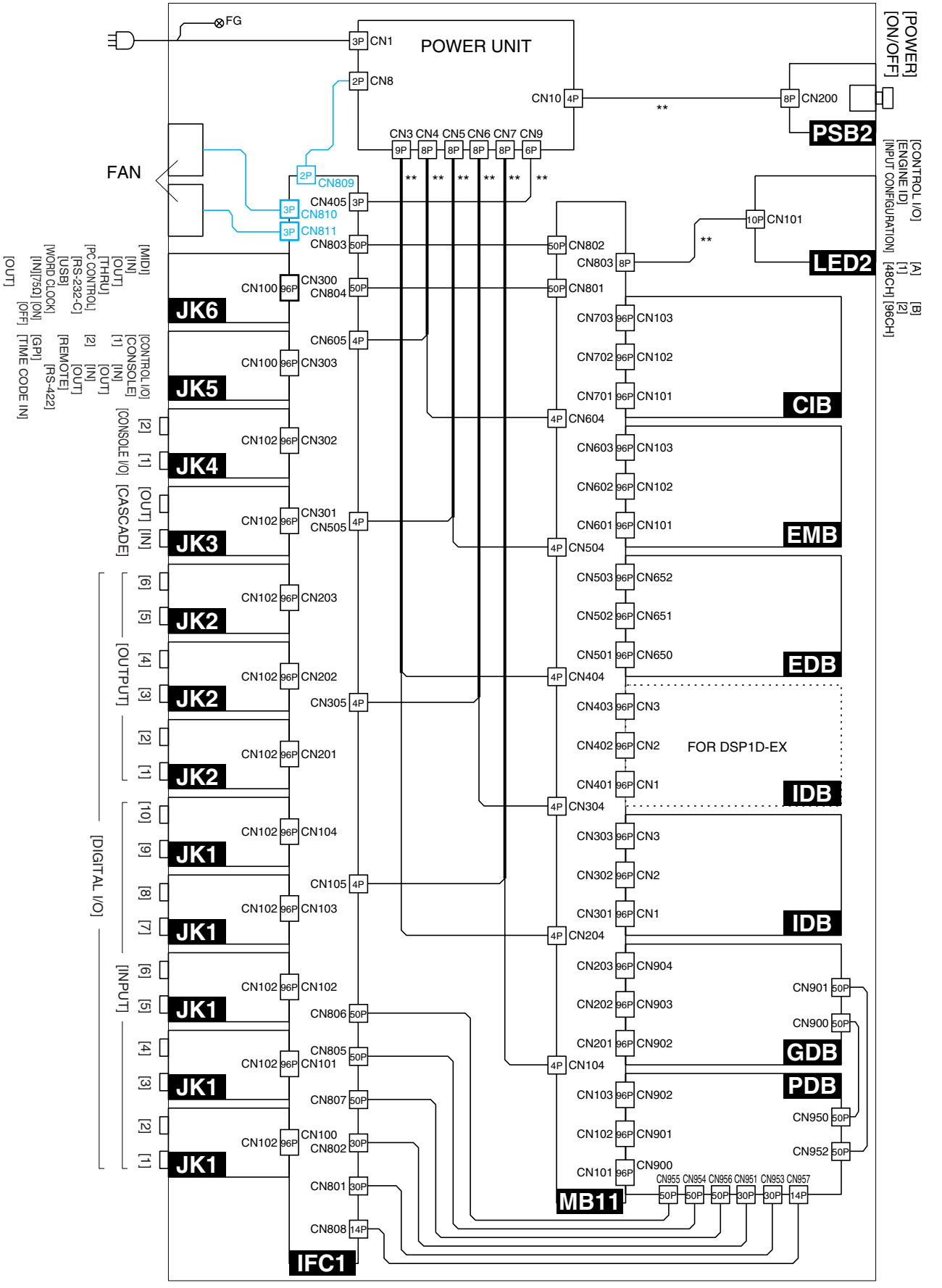
⑧ CONSOLE 1, 2 IN/OUT jacks
⑨ REMOTE RS-422 connector
⑩ GPI connector
⑪ TIME CODE IN connector
⑫ CONSOLE I/O 1, 2 slots
⑬ CASCADE IN, OUT slots
⑭ OUTPUT 1–6 slot
⑮ INPUT 1–10 slot
⑯ Ground connector

DIMENSIONS



Unit: mm

CONNECTOR CIRCUIT DIAGRAM



KEC-92539-2

Circuit Board	CN No.	Pin No.
POWER UNIT	CN3	1
		2
		3
		4
		6
		7
		8
		9

Circuit Board	CN No.	Pin No.
MB11	CN204	1
		2
	CN404	1
		2
	CN204	4
		5
	CN404	4
		5

POWER UNIT	CN4	1
		2
		3
		4
		5
		6
		7
		8

MB11	CN604	1
		2
IFC1	CN605	1
		2
MB11	CN604	3
		4
IFC1	CN605	3
		4

POWER UNIT	CN5	1
		2
		3
		4
		5
		6
		7
		8

MB11	CN504	1
		2
IFC1	CN505	1
		2
MB11	CN504	3
		4
IFC1	CN505	3
		4

POWER UNIT	CN6	1
		2
		3
		4
		5
		6
		7
		8

MB11	CN304	1
		2
IFC1	CN305	1
		2
MB11	CN304	3
		4
IFC1	CN305	3
		4

POWER UNIT	CN7	1
		2
		3
		4
		5
		6
		7
		8

MB11	CN104	1
		2
IFC1	CN105	1
		2
MB11	CN104	3
		4
IFC1	CN105	3
		4

POWER UNIT	CN9	1
		5
		6

IFC1	CN405	1
		2
		3

POWER UNIT	CN10	1
		4

PSB2	CN200	1
		3

LED2	CN101	1
		2
		3
		4
		5
		6
		7
		8

MB11	CN803	1
		2
		3
		4
		5
		6
		7
		8

DISASSEMBLY PROCEDURE

1. GDB, IDB, EDB, EMB and CIB Circuit Boards

1-1 Remove the ten (10) screws marked [905]. The front cover can then be removed. (Fig. 1)

1-2 Remove the two (2) screws marked [850]. The reinforcement angle-A can then be removed. (Fig. 2)

1-3 Remove the GDB, IDB, EDB, EMB and CIB circuit boards by sliding forward. (Fig. 2)

2. PDB Circuit Board

2-1 Remove the front cover. (See procedure 1-1.)

2-2 Remove the reinforcement angle. (See procedure 1-2.)

2-3 Remove the six (6) screws marked [960A] and the two (2) screws marked [962A]. The left frame can then be removed. (Fig. 3)

2-4 Remove the twelve (12) screws marked [920]. The side panel-L can then be removed. (Fig. 3)

2-5 Remove the PDB circuit board by sliding forward. (Fig. 2)

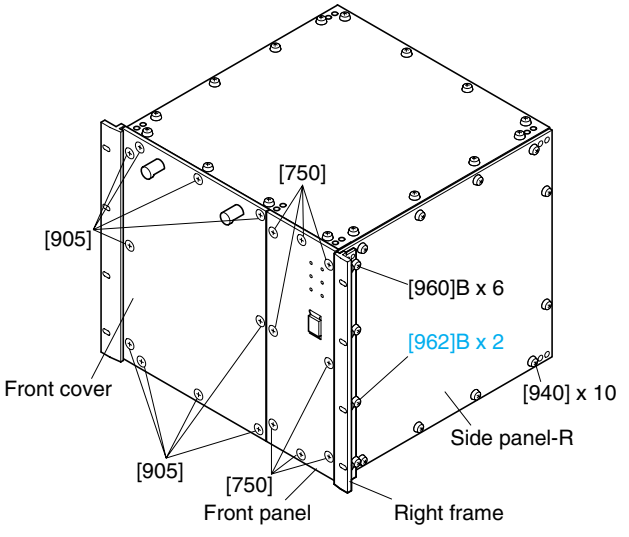
3. LED2 and PSB2 Circuit Boards

3-1 Remove the six (6) screws marked [960B] and the two (2) screws marked [962B]. The right frame can then be removed. (Fig. 1)

3-2 Remove the eight (8) screws marked [750]. The front panel can then be removed. (Fig. 1)

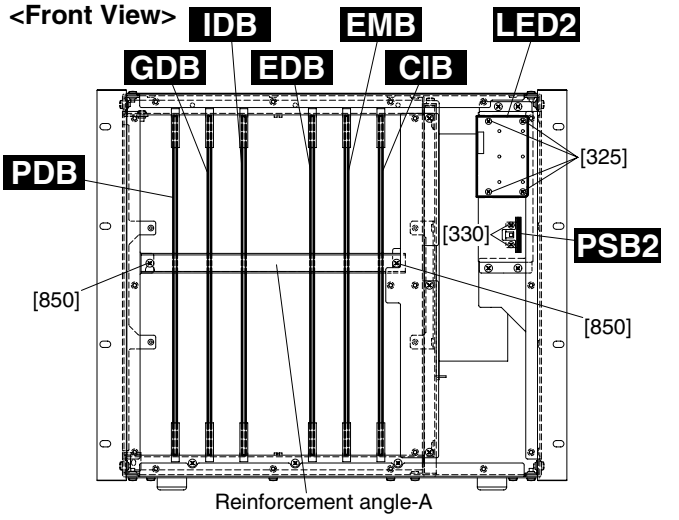
3-3 Remove the four (4) screws marked [325]. The LED2 circuit board can then be removed. (Fig. 2)

3-4 Remove the two (2) screws marked [330]. The PSB2 circuit board can then be removed. (Fig. 2)



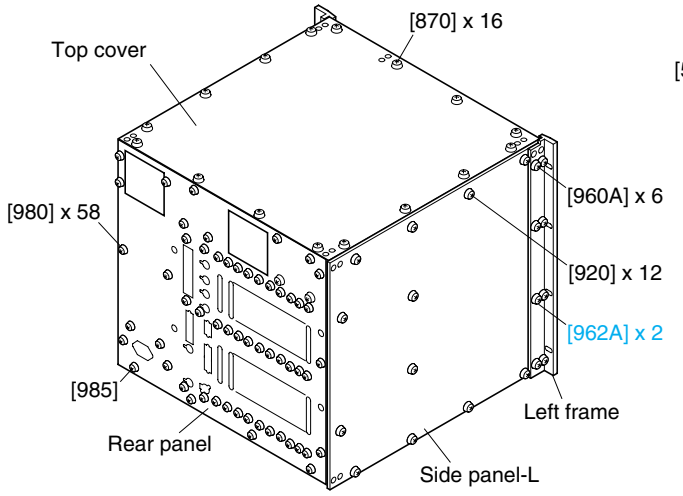
[750]: Oval Head Screw 3.0x6 MFZN2BL (VS153600)
[905]: Oval Head Screw 3.0x6 MFZN2BL (VS153600)
[940]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[960B]: Oval Head Screw 3.0x6 MFZN2BL (VS153600)
[962B]: Oval Head Screw B4.0x10 MFZN2BL (V6221000)

Fig. 1



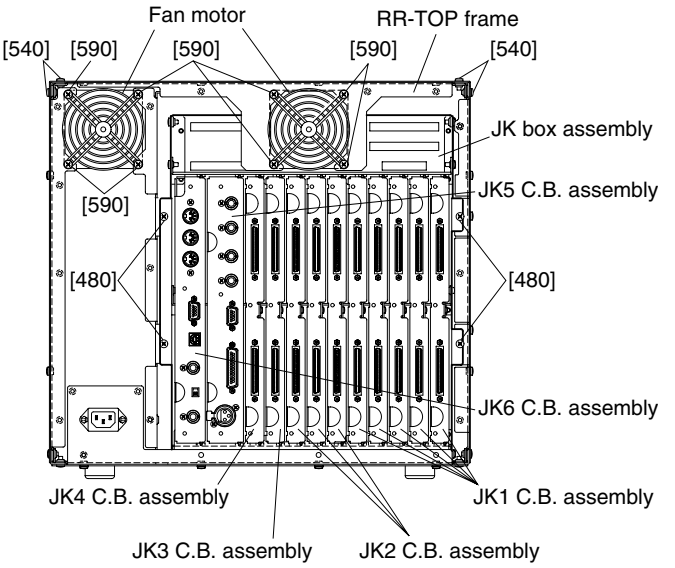
[325]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)
[330]: Bind Head Screw 3.0x8 MFZN2BL (VB659000)
[850]: Bind Head Screw A4.0x8 MFZN2BL (VP156800)

Fig. 2



[870]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[920]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[960A]: Oval Head Screw 3.0x6 MFZN2BL (VS153600)
[962A]: Oval Head Screw B4.0x10 MFZN2BL (V6221000)
[980]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[985]: Bind Head Screw A4.0x8 MFZN2BL (VP156800)

<Rear View>



[480]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[540]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[590]: Bind Head Screw 4.0x35 MFZN2BL (VG605800)

4. Fan Motor

4-1 Remove the six-teen (16) screws marked [870]. The top cover can then be removed. (Fig. 3)

4-2 Remove the four (4) screws each marked [590]. The fan motor A or B can then be removed. (Fig. 4)

5. Power Supply Unit

5-1 Remove the top cover. (See procedure 4-1.)

5-2 Remove the right frame. (See procedure 3-1.)

5-3 Remove the ten (10) screws marked [940]. The side panel-R can then be removed. (Fig. 1)

5-4 Remove the fifty-eight (58) screws marked [980] and the screw marked [985]. The rear panel can then be removed. (Fig. 3)

5-5 Remove the eight (8) screws marked [540]. The RR-TOP frame can then be removed. (Fig. 4)

5-6 Remove the fan motor B. (See procedure 4.)

5-7 Remove the three (3) screws marked [560]. The power supply unit can then be removed by lifting up. (Fig. 5)

6. JK1-JK6 Circuit Board Assemblies

6-1 Remove the rear panel. (See procedure 5-4.)

6-2 Remove the JK1-JK6 circuit board assemblies by sliding forward. (Fig. 4)

7. IFC Circuit Board

7-1 Remove the top cover. (See procedure 4-1.)

7-2 Remove the left frame and the side panel-L. (See procedure 2-2, 2-3.)

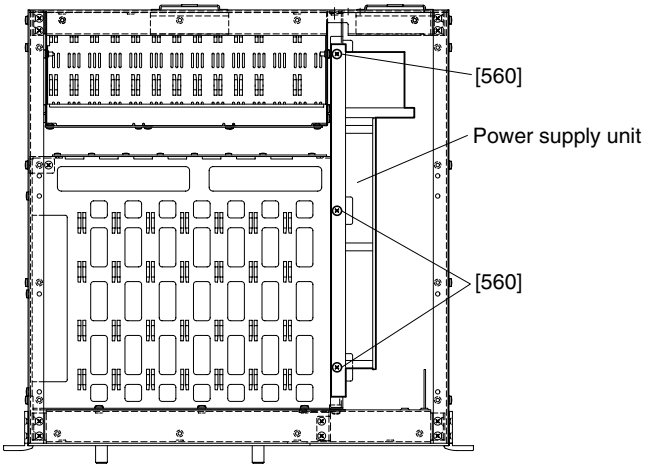
7-3 Remove the rear panel. (See procedure 5-4.)

7-4 Remove the RR-TOP frame. (See procedure 5-5.)

7-5 Remove the four (4) screws marked [480]. The JK box assembly can then be removed. (Fig. 4)

7-6 Remove the six-teen (16) screws marked [110]. The IFC1 circuit board can then be removed. (Fig. 6)

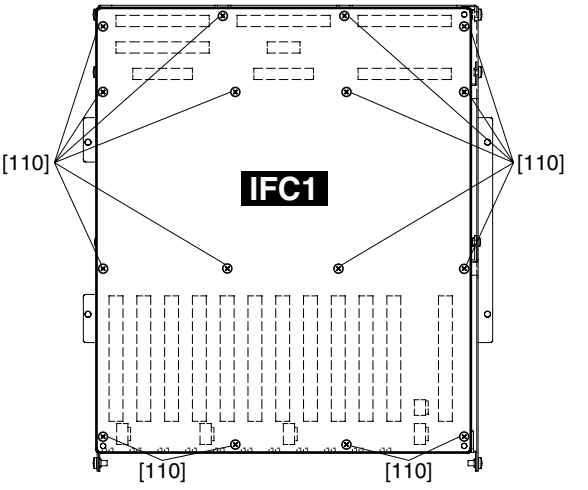
<Top View>



[560]: Bind Head Tapping Screw-B A4.0x12 MFZN2BL (VD831800)

Fig. 5

• JK Box Assembly



[110]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)

Fig. 6

8. MB11 Circuit Board

8-1 Remove the top cover. (See procedure 4-1.)

8-2 Remove the left frame and the side panel-L. (See procedure 2-2, 2-3.)

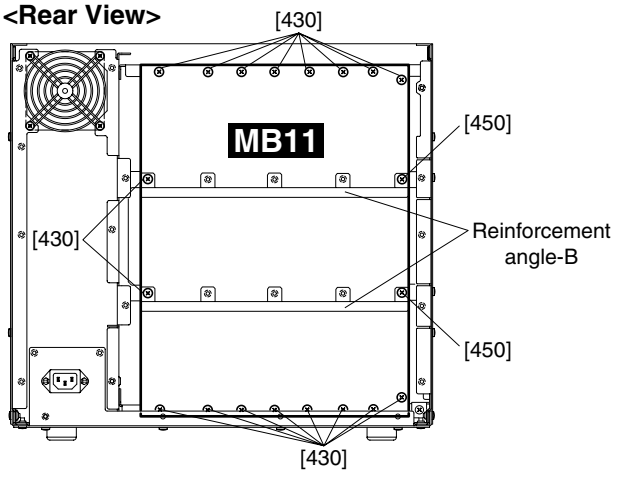
8-3 Remove the rear panel. (See procedure 5-4.)

8-4 Remove the RR-TOP frame. (See procedure 5-5.)

8-5 Remove the JK box assembly. (See procedure 7-5.)

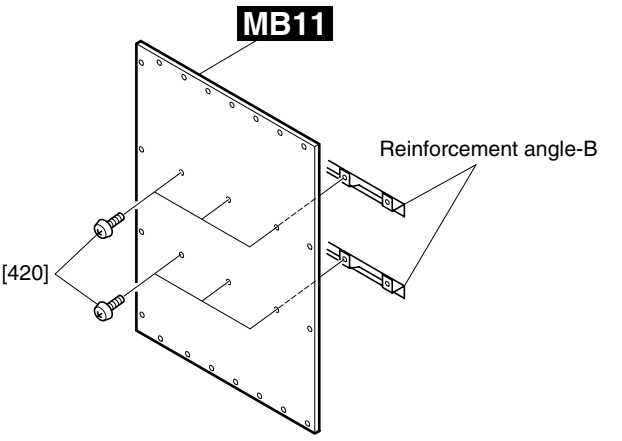
8-6 Remove the eight-teen (18) screws marked [430] and the two (2) screws marked [450]. The MB11 circuit board can then be removed with the reinforcement angle-B. (Fig. 7)

8-7 Remove the six (6) screws marked [420]. The reinforcement angle-B can then be removed from the MB11 circuit board. (Fig. 8)



[430]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)
[450]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)

Fig. 7



[420]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)

Fig. 8

9. Replacement of the Lithium Battery

9-1 Remove the EMB circuit board. (See procedure 1.)

9-2 The lithium battery can be replacement on the EMB circuit board. (Fig. 9)

* The lithium battery is not a part of the EMB circuit board. When you replace the EMB circuit board, remove the lithium battery and install it in the new circuit board.

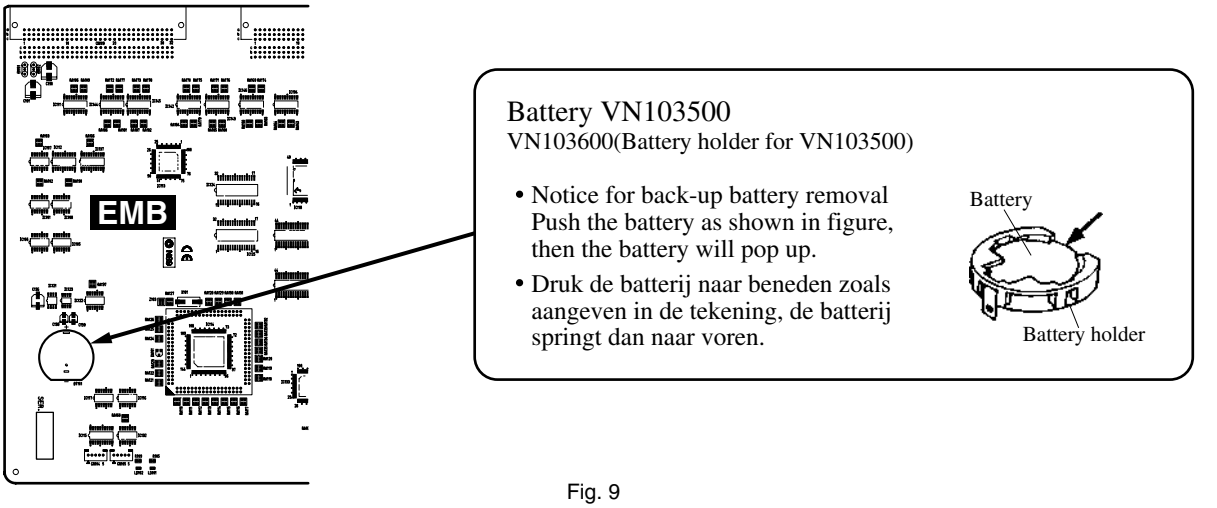


Fig. 9

■ LSI PIN DESCRIPTION

HD6477042AF28 (XY715A00) **CPU** ····· 10
HD6477043AF33 (XY716A00) **CPU** ····· 11
YSS910-S (XV988A00) **DSP6** (Digital Signal Processor) ····· 12
YSS904-F (XV989A00) **DSP5** (Digital Signal Processor) ····· 13
SGH609080F-47F (XU235A00) **ATSC** ····· 14
YM3436DK (XG948E0) **DIR2** (Digital Format Interface Receiver) ····· 15
AM7992BPC (XW277A00) **SIA** (Serial Interface Adapter) ····· 15
ICS2008A (XV619A00) **T.C. Reader/Generator** ····· 16
PDIUSBD12PW (XW583A00) **USB Interface** ····· 16

● **HD6477042AF28** (XY715A00) **CPU**

CIB: IC129,139 EDB: IC100 EMB: IC127
GDB: IC100 IDB: IC100 PDB: IC101

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PE14	O	Port E	57	D11	I/O	Data bus
2	PE15	O	Port E	58	D10	I/O	
3	VSS	I	Ground	59	D9	I/O	
4	A0	O	Address bus	60	D8	I/O	
5	A1	O		61	VSS	I	Ground
6	A2	O		62	D7	I/O	Data bus
7	A3	O		63	D6	I/O	
8	A4	O		64	D5	I/O	
9	A5	O		65	VCC	I	Power supply
10	A6	O		66	D4	I/O	Data bus
11	A7	O		67	D3	I/O	
12	A8	O		68	D2	I/O	
13	A9	O		69	D1	I/O	
14	A10	O		70	D0	I/O	
15	A11	O		71	VSS	I	Ground
16	A12	O		72	XTAL	I	Crystal oscillator
17	A13	O		73	MD3	I	Mode control
18	A14	O		74	EXTAL	I	Crystal oscillator
19	A15	O		75	MD2	I	Mode control
20	A16	O		76	NMI	I	Non-maskable interrupt request
21	VCC	I	Power supply	77	VCC	I	Power supply
22	A17	O	Address bus	78	MD1	I	Mode control
23	VSS	I	Ground	79	MD0	I	Mode control
24	/RAS	O	Row address strobe	80	PLLVCC	I	PLL Power supply
25	/CASL	O	Column address strobe (low)	81	PLLCAP	I	PLL capacitor
26	/CASH	O	Column address strobe (high)	82	PLLVSS	I	PLL Ground
27	VSS	O	Ground	83	PA15 / CK	O	Port A / Clock
28	RDWR / PB5	O	DRAM read/write / Port B	84	/RES	I	Reset
29	A18	O	Address bus	85	PE0	I	Port E
30	A19	O		86	PE1	I	
31	A20	O		87	PE2	I	
32	PB9 /A21	O	Port B / Address bus	88	PE3	I	
33	VSS	I	Ground	89	PE4	I	
34	/RD	O	Read	90	VSS	I	Ground
35	/WDTOVF	O	Watch dog timer overflow	91	AN0 / PF0	I	Analog input / Port F
36	/WRH	O	High write	92	AN1 / PF1	I	
37	VCC	I	Power supply	93	AN2 / PF2	I	
38	/WRL	O	Low write	94	AN3 / PF3	I	
39	VSS	I	Ground	95	AN4 / PF4	I	
40	/CS1	O	Chip select	96	AN5 / PF5	I	
41	/CS0	O	Chip select	97	AVSS	I	Analog ground
42	PA9 / TCLKD	O	Port A / Timer clock	98	AN6 / PF6	I	Analog input / Port F
43	/IRQ2 / TCLKC	I	Interrupt request / Timer clock	99	AN7 / PF7	I	Analog input / Port F
44	/CS3	O	Chip select	100	AVCC	I	Power supply
45	/CS2	O	Chip select	101	VSS	I	Ground
46	/IRQ1	I	Interrupt request	102	PE5	O	Port E
47	TXD	O	Data transmission	103	VCC	I	Power supply
48	RXD	I	Data reception	104	PE6	O	Port E
49	/IRQ0	I	Interrupt request	105	PE7	O	
50	PA1 / TXD0	O	Port A / Data transmission	106	PE8	O	
51	PA0 / RXD0	I	Port A / Data reception	107	PE9	O	
52	D15	I/O	Data bus	108	PE10	O	
53	D14	I/O		109	VSS	I	Ground
54	D13	I/O		110	PE11	O	Port E
55	VSS	I	Ground	111	PE12	O	
56	D12	I/O	Data bus	112	PE13	O	

● **HD6477043AF33** (XY716A00) **CPU**

EMB: IC114

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	/WRHH	O	HH write	73	D15	I/O	Data bus
2	/DACK0/PE14	O	DAM transfer strobe/Port E	74	D14	I/O	
3	/WRHL	O	HL write	75	D13	I/O	
4	CASHH/PA21	I/O	HH Column address strobe/Port A	76	D12	I/O	
5	DACK1/PE15	O	DMA transfer strobe/Port E	77	VCC	I	Power supply
6	VSS	I	Ground	78	D11	I/O	Data bus
7	A0	O	Address bus	79	VSS	I	Ground
8	A1	O		80	D10	I/O	Data bus
9	A2	O		81	D9	I/O	
10	A3	O		82	D8	I/O	
11	A4	O		83	D7	I/O	
12	VCC	I	Power supply	84	D6	I/O	
13	A5	O	Address bus	85	VCC	I	Power supply
14	VSS	I	Ground	86	D5	I/O	Data bus
15	A6	O	Address bus	87	VSS	I	Ground
16	A7	O		88	D4	I/O	Data bus
17	A8	O		89	D3	I/O	
18	A9	O		90	D2	I/O	
19	A10	O		91	D1	I/O	
20	A11	O		92	D0	I/O	
21	A12	O		93	VSS	I	Ground
22	A13	O		94	XTAL	I	Crystal oscillator
23	A14	O		95	MD3	I	Mode select
24	A15	O		96	EXTAL	I	Crystal oscillator
25	A16	O		97	MD2	I	Mode select
26	VCC	I	Power supply	98	NMI	-	Non-maskable interrupt
27	A17	O	Address bus	99	VCC	I	Power supply
28	VSS	I	Ground	100	PA16	I/O	Port A
29	/CASHL/PA20	I/O	HL Column address strobe/Port A	101	PA17	I/O	Port A
30	PA19	I/O	Port A	102	MD1	I	Mode select
31	/RAS/PB2	O	Row address strobe/Port B	103	MD0	I	Mode select
32	/CASL/PB3	O	Column address strobe (low) /Port B	104	PLLVCC	I	PLL Power supply
33	PA18	I/O	Port A	105	PLLCAP	I	PLL capacitor
34	/CASH/PB4	O	Column address strobe (high) /Port B	106	PLLVSS	I	PLL Ground
35	VSS	I	Ground	107	CK/PA15	I/O	Clock/Port A
36	RDWR/PB5	O	DRAM read/write /Port B	108	/RES	I	Reset
37	A18	O	Address bus	109	/DREQ0/TIOC0A/PE0	I/O	DMA transfer request/MTU input capture/output compare (ch 0)/Port E
38	A19	O		110	PE1	I/O	Port E
39	A20	O		111	/DREQ1/PE2	I/O	DMA transfer request/Port E
40	VCC	I	Power supply	112	VCC	I	Power supply
41	A21	O	Address bus	113	PE3	I/O	Port E
42	VSS	I	Ground	114	PE4	I/O	
43	/RD	O	Read	115	PE5	I/O	
44	/WDTOVF	O	Watch dog timer overflow	116	PE6	I/O	
45	D31	I/O	Data bus	117	VSS	I	Ground
46	D30	I/O	Data bus	118	AN0 /PF0	I	Analog input/Port F
47	/WRH	O	High write	119	AN1/ PF1	I	
48	/WRL	O	Low write	120	AN2 /PF2	I	
49	/CS1	O	Chip select	121	AN3 /PF3	I	
50	/CS0	O	Chip select	122	AN4 /PF4	I	
51	/IRQ3/PA9	I/O	Interrupt request/Port A	123	AN5/PF5	I	
52	/IRQ2/PA8	I/O	Interrupt request/Port A	124	AVSS	I	Analog ground
53	/CS3	O	Chip select	125	AN6/PF6	I	Analog input/ Port F
54	/CS2	O	Chip select	126	AN7/PF7	I	Analog input /Port F
55	VSS	I	Ground	127	AVREF	I	Analog reference voltage
56	D29	I/O	Data bus	128	AVCC	I	Analog power supply
57	D28	I/O		129	VSS	I	Ground
58	D27	I/O		130	RxDO	I	SCI
59	D26	I/O		131	TxDO	O	
60	D25	I/O		132	/IRQ0/SCK0	I	Receive data Transmit data Interrupt request/Serial clock
61	VSS	I	Ground	133	RxD1	I	Receive data
62	D24	I/O	Data bus	134	TxD1	I/O	SCI
63	VCC	I	Power supply	135	VCC	I	Power supply
64	D23	I/O	Data bus	136	/IRQ1/SCK1	I	Interrupt request/Serial clock
65	D22	I/O		137	PE7	I/O	Port E
66	D21	I/O		138	PE8	I/O	
67	D20	I/O		139	PE9	I/O	
68	D19	I/O		140	PE10	I/O	
69	D18	I/O		141	VSS	I	Ground
70	D17	I/O		142	TIOC3D/PE11	I/O	MTU input capture/output compare (ch 3)/Port E
71	VSS	I	Ground	143	PE12	I/O	Port E
72	D16	I/O	Data bus	144	PE13	I/O	Port E

EDB: IC300,304,350,354,400,404,450,454,500,503,550,553
GDB: IC300,305,350,351,400,403,450,451,500,503,550,551,600
IDB: IC250,255,300,301,350,351,400,401,450,453,500,501,550,551,600,601
PDB: IC500,505,550,551,600,603,650,700,701

● **YSS910-S** (XV988A00) **DSP6** (Digital Signal Processor)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vdd		Power supply (3.3 V)	89	Vss		Ground
2	Vss		Ground	90	DB13	I/O	Parallel data bus
3	XI	I	System master clock input (60 MHz or 30 MHz)	91	DB14	I/O	
4	XO	O	System master clock output (High or 30 MHz)	92	DB15	I/O	
5	Vdd		Power supply (5 V)	93	DB16	I/O	
6	/SYNCI	I	Sync. signal input	94	DB17	I/O	
7	/SYNCO	O	Sync. signal output	95	DB18	I/O	
8	Vdd		Power supply (5 V)	96	DB19	I/O	
9	CKI	I	System clock input (30 MHz)	97	DB20	I/O	
10	CKO	O	System clock output (30 MHz)	98	DB21	I/O	
11	CKSEL	I	System master clock select (0: 60 MHz, 1: 30 MHz)	99	DB22	I/O	
12	Vss		Ground	100	Vss		Ground
13	MCKS	I	Serial I/O master clock input (128 x Fs)	101	Vdd		Power supply (3.3 V)
14	/SSYNC	I	Serial I/O Sync. signal output	102	DB23	I/O	Parallel data bus
15	/IC	I	Initial clear	103	DB24	I/O	
16	/TEST	I	Test mode setting (0: Test, 1: Normal)	104	DB25	I/O	
17	BTYP	I	Data bus type select (0: 8 bit, 1: 16 bit)	105	DB26	I/O	
18	/IRQ	O	IRQ output	106	DB27	I/O	
19	TRIG	I/O	Trigger signal input/output	107	DB28	I/O	
20	Vdd		Power supply (5 V)	108	DB29	I/O	
21	Vss		Ground	109	DB30	I/O	
22	/CS	I	chip select signal input	110	DB31	I/O	
23	/WR	I	Write signal input	111	TIMO/DBOB	I/O	Timing signal output/ Parallel data bus output/ input
24	/RD	I	Read signal input	112	Vss		Ground
25	CA7	I/O	Address bus of internal register	113	Vdd		Power supply (5 V)
26	CA6	I/O		114	DA00	I/O	Memory data bus
27	CA5	I/O		115	DA01	I/O	
28	CA4	I/O		116	DA02	I/O	
29	CA3	I/O		117	DA03	I/O	
30	CA2	I/O		118	DA04	I/O	
31	CA1	I/O		119	DA05	I/O	
32	Vss		Ground	120	DA06	I/O	
33	Vdd		Power supply (3.3 V)	121	DA07	I/O	
34	CD15	I/O	Data bus of internal register	122	Vss		Ground
35	CD14	I/O		123	DA08	I/O	Memory data bus
36	CD13	I/O		124	DA09	I/O	
37	CD12	I/O		125	DA10	I/O	
38	CD11	I/O		126	DA11	I/O	
39	CD10	I/O		127	DA12	I/O	
40	CD09	I/O		128	DA13	I/O	
41	CD08	I/O		129	DA14	I/O	
42	CD07	I/O		130	DA15	I/O	
43	CD06	I/O		131	Vss		Ground
44	Vss		Ground	132	Vdd		Power supply (3.3 V)
45	Vdd		Power supply (3.3 V)	133	(n.c)		Not used
46	Vdd		Power supply (5 V)	134	Vdd		Power supply (5 V)
47	CD05	I/O	Data bus of internal register	135	DA16	I/O	Memory data bus
48	CD04	I/O		136	DA17	I/O	
49	CD03	I/O		137	DA18	I/O	
50	CD02	I/O		138	DA19	I/O	
51	CD01	I/O		139	DA20	I/O	
52	CD00	I/O		140	DA21	I/O	
53	/WAIT	O	WAIT output	141	DA22	I/O	
54	Vss		Ground	142	DA23	I/O	
55	SI0	I	Serial data input	143	Vss		Ground
56	SI1	I		144	DA24	I/O	Memory data bus
57	SI2	I		145	DA25	I/O	
58	SI3	I		146	DA26	I/O	
59	SI4	I		147	DA27	I/O	
60	SI5	I		148	DA28	I/O	
61	SI6	I		149	DA29	I/O	
62	SI7	I		150	DA30	I/O	
63	Vss		Ground	151	DA31	I/O	
64	Vdd		Power supply (5 V)	152	Vdd		Power supply (5 V)
65	SO0	O	Serial data output	153	Vss		Ground
66	SO1	O		154	A00	O	Memory address (SRAM, PSRAM, DRAM)
67	SO2	O		155	A01	O	
68	SO3	O		156	A02	O	
69	SO4	O		157	A03	O	
70	SO5	O		158	A04	O	
71	SO6	O		159	A05	O	
72	SO7	O		160	A06	O	
73	Vss		Ground	161	A07	O	
74	DB00	I/O	Parallel data bus	162	A08	O	
75	DB01	I/O		163	A09	O	
76	DB02	I/O		164	Vss		Ground
77	DB03	I/O		165	Vdd		Power supply (3.3 V)
78	DB04	I/O		166	A10	O	Memory address (SRAM, PSRAM, DRAM)
79	DB05	I/O		167	A11	O	
80	DB06	I/O		168	A12	O	Memory address (SRAM, PSRAM)
81	DB07	I/O		169	A13	O	
82	DB08	I/O		170	A14	O	
83	DB09	I/O		171	A15/RAS	O	Memory address (SRAM, PSRAM), /RAS (DRAM)
84	DB10	I/O		172	A16/CAS	O	Memory address (SRAM, PSRAM), /CAS (DRAM)
85	DB11	I/O		173	A17/CE	O	Memory address (SRAM), /CE (PSRAM)
86	DB12	I/O		174	/WE	O	Memory write enable signal
87	Vdd		Power supply (5 V)	175	/OE	O	Memory output enable signal
88	Vdd		Power supply (3.3 V)	176	Vdd		Power supply (5 V)

GDB: IC250,251,650,651,750,751,800
IDB: IC650,651,700,701,750,751,800,801
PDB: IC250,251,300,301,350,351,400,401,450,750,751

● **YSS904-F** (XV989A00) **DSP5** (Digital Signal Processor)

PIN NO.	NAME	I/O	FUNCTION
1	NC		Not used
2	NC		
3	NC		
4	NC		
5	Vdd		Ground
6	Vss	I	Power supply
7	XI	O	System master clock input (60 MHz or 30 MHz)
8	XO	O	System master clock output (High or 30 MHz)
9	Vdd		Ground
10	/SYNCI	I	Sync. signal input
11	/SYNCO	O	Sync. signal output
12	Vdd		Ground
13	CKI	I	System clock input (30 MHz)
14	CKO	O	System clock output (30 MHz)
15	CKSEL	I	System master clock select
16	Vss		Power supply
17	MCKD	I	Serial clock input (256 fs)
18	/SSYNC	I	Serial. signal input
19	/IC	I	Initial clear
20	/TEST	I	Test mode setting (0: TEST, 1: Normal)
21	NC		Not used
22	NC		
23	NC		
24	Vdd		Ground
25	Vss		Power supply
26	/CS	I	Chip select
27	/WR	I	Write enable input
28	/RD	I	Read enable input
29	CA7	I	CPU address bus
30	CA6	I	
31	CA5	I	
32	CA4	I	
33	CA3	I	
34	CA2	I	
35	CA1	I	
36	Vss		Power supply
37	Vdd		Ground
38	CD15	I/O	CPU data bus
39	CD14	I/O	
40	CD13	I/O	
41	CD12	I/O	
42	CD11	I/O	
43	CD10	I/O	
44	CD09	I/O	
45	CD08	I/O	
46	CD07	I/O	
47	CD06	I/O	
48	Vss		Power supply
49	NC		Not used
50	NC		
51	NC		
52	NC		
53	NC		
54	NC		
55	NC		
56	NC		
57	Vdd		Ground
58	Vdd		
59	CD05	I/O	CPU data bus
60	CD04	I/O	
61	CD03	I/O	
62	CD02	I/O	
63	CD01	I/O	
64	CD00	I/O	
65	/WAIT	O	Wait output
66	Vss		Power supply
67	SIO00	I/O	Serial data bus
68	SIO01	I/O	
69	SIO02	I/O	
70	SIO03	I/O	
71	SIO04	I/O	
72	SIO05	I/O	
73	SIO06	I/O	
74	SIO07	I/O	
75	Vss		Power supply
76	Vdd		Ground
77	SIO08	I/O	Serial data bus
78	SIO09	I/O	
79	SIO10	I/O	
80	SIO11	I/O	
81	SIO12	I/O	
82	SIO13	I/O	
83	SIO14	I/O	
84	SIO15	I/O	
85	Vss		Power supply
86	Vdd		Ground
87	SIO16	I/O	Serial data bus
88	SIO17	I/O	
89	SIO18	I/O	
90	SIO19	I/O	
91	SIO20	I/O	
92	SIO21	I/O	
93	SIO22	I/O	
94	SIO23	I/O	
95	Vss		Power supply
96	Vdd		Ground
97	SIO24	I/O	Serial data bus
98	SIO25	I/O	
99	SIO26	I/O	
100	SIO27	I/O	
101	NC		Not used
102	NC		
103	NC		
104	NC		
105	NC		Not used
106	NC		
107	NC		
108	NC		
109	SIO28	I/O	Serial data bus
110	SIO29	I/O	
111	SIO30	I/O	
112	SIO31	I/O	
113	Vss		Power supply
114	Vdd		Ground
115	SIO32	I/O	Serial data bus
116	SIO33	I/O	
117	SIO34	I/O	
118	SIO35	I/O	
119	SIO36	I/O	
120	SIO37	I/O	
121	SIO38	I/O	
122	SIO39	I/O	
123	Vss		Power supply
124	Vdd		Ground
125	SIO40	I/O	Serial data bus
126	SIO41	I/O	
127	SIO42	I/O	
128	SIO43	I/O	
129	SIO44	I/O	
130	SIO45	I/O	
131	SIO46	I/O	
132	SIO47	I/O	
133	Vss		Power supply
134	SIO48	I/O	Serial data bus
135	SIO49	I/O	
136	SIO50	I/O	
137	SIO51	I/O	
138	SIO52	I/O	
139	SIO53	I/O	
140	SIO54	I/O	
141	SIO55	I/O	
142	Vss		Power supply
143	Vdd		Ground
144	Vdd		
145	SIO56	I/O	Serial data bus
146	SIO57	I/O	
147	SIO58	I/O	
148	SIO59	I/O	
149	SIO60	I/O	
150	SIO61	I/O	
151	SIO62	I/O	
152	SIO63	I/O	
153	NC		Not used
154	NC		
155	NC		
156	NC		
157	NC		
158	NC		
159	NC		
160	NC		
161	Vss		Power supply
162	/POE	I	Parallel data bus controll signal
163	Vss		Power supply
164	PIO00	I/O	Parallel data bus
165	PIO01	I/O	
166	PIO02	I/O	
167	PIO03	I/O	
168	PIO04	I/O	
169	PIO05	I/O	
170	PIO06	I/O	
171	PIO07	I/O	
172	Vss		Power supply
173	Vdd		Ground
174	Vdd		
175	PIO08	I/O	Parallel data bus
176	PIO09	I/O	
177	PIO10	I/O	
178	PIO11	I/O	
179	PIO12	I/O	
180	PIO13	I/O	
181	PIO14	I/O	
182	PIO15	I/O	
183	Vss		Power supply
184	NC		Not used
185	PIO16	I/O	Parallel data bus
186	PIO17	I/O	
187	PIO18	I/O	
188	PIO19	I/O	
189	PIO20	I/O	
190	PIO21	I/O	
191	PIO22	I/O	
192	PIO23	I/O	
193	Vss		Power supply
194	Vdd		Ground
195	Vdd		
196	PIO24	I/O	Parallel data bus
197	PIO25	I/O	
198	PIO26	I/O	
199	PIO27	I/O	
200	PIO28	I/O	
201	PIO29	I/O	
202	PIO30	I/O	
203	PIO31	I/O	
204	Vss		Power supply
205	NC		Not used
206	NC		
207	NC		
208	NC		

● SGH609080F-47F (XU235A00) ATSC

JK1: IC109,110,119,120 JK2: IC100,101,113,114
JK3: IC111-114 JK4: IC109,110,118,119

PIN NO.	NAME	I/O	FUNCTION
1	syncati	I	Synch. word input terminal for ati, siat3-0 input
2	mccti	I	64 fs clock input terminal for ati, siat3-0 input
3	mcbti	I	128 fs clock input terminal for ati, siat3-0 input
4	VCC		Power supply (+5 V)
5	GND		Ground
6	mcati	I	256 fs clock input terminal for ati, siat3-0 input
7	GND		Ground
8	siat0	I	Serial data input terminal
9	siat1	I	
10	siat2	I	
11	siat3	I	
12	ati	I	Optical input terminal
13	GND		Ground
14	ato	O	Optical output terminal
15	soat3	O	Serial data output terminal
16	soat2	O	
17	soat1	O	
18	soat0	O	
19	VCC		Power supply (+5 V)
20	GND		Ground
21	mcato	I	256 fs clock input terminal for ato, soat3-0 output
22	GND		Ground
23	mcbto	I	128 fs clock input terminal for ato, soat3-0 output
24	mccto	I	64 fs clock input terminal for ato, soat3-0 output
25	syncato	I	Synch. word input terminal for ato, soat3-0 output
26	clksel	I	Clock select terminal for ato, soat 3-0 output 0: mcato,mcbto,mccto,syncato 1: mcai,mcbi,mcci,synci
27	ato-sel0	I	Format select terminal for ato, soat3-0 output
28	ato-sel1	I	Format select terminal for ato, soat3-0 output

0: mcato,mcbto,mccto,syncato
1: mcai,mcbi,mcci,synci

ato sel1	ato sel0	output format	
1	1	ato	
1	0	soat0	(8ch/line)
0	1	soat2, 0	(4ch/line)
0	0	soat3-0	(2ch/line)

29	bitsel2		Bit shift select terminal for the ato output
30	bitsel1		
31	bitsel0		
32	VCC		Power supply (+5 V)
33	GND		Ground
34	ext-sync2		Synch. detect output terminal 2
35	ui0		U-bit input terminal for optical output
36	ui1		
37	ui2		
38	ui3		
39	si-sel0		input format select terminal for si3-0
40	si-sel1		input format select terminal for si3-0i

si sel1	si sel0	input format	
1	1	not enable to set	
1	0	si0	(8ch/line)
0	1	si2, 0	(4ch/line)
0	0	si3-0	(2ch/line)

PIN NO.	NAME	I/O	FUNCTION
41	synci	I	Synch. word input terminal for si3-0 input
42	mcci	I	64 fs clock input terminal for si3-0 input
43	mcbi	I	128 fs clock input terminal for si3-0 input
44	VCC		Power supply (+5 V)
45	GND		Ground
46	mcai	I	256 fs clock input terminal for si3-0 input
47	GND		Ground
48	si0	I	Serial data input terminal
49	si1	I	
50	si2	I	
51	si3	I	
52	GND		Ground
53	so3	O	Serial data output terminal
54	so2	O	
55	so1	O	
56	so0	O	
57	VCC		Power supply (+5 V)
58	GND		Ground
59	mcao	I	256 fs clock input terminal for so3-0 output
60	GND		Ground
61	mcbo	I	128 fs clock input terminal for so3-0 output
62	mcco	I	64 fs clock input terminal for so3-0 output
63	synco	I	Synch. word input terminal for so3-0 output
64	so-sel1	I	Format select terminal for soat3-0 output
65	so-sel0	I	Format select terminal for soat3-0 output

so sel1	so sel0	input format	
1	1	not enable to set	
1	0	so0	(8ch/line)
0	1	so2, 0	(4ch/line)
0	0	so3-0	(2ch/line)

66	uo3	O	U-bit output terminal for optical output
67	uo2	O	
68	uo1	O	
69	uo0	O	
70	ext-sync1	O	Synch. detect output terminal 1
71	VCC		Power supply (+5 V)
72	GND		Ground
73	clk	I	Clock input terminal for word clock extract
74	GND		Ground
75	/res	I	System reset input terminal
76	GND		Ground
77	wc-at	O	Word clock output terminal
78	mute	I	Data mute input terminal
79	ati-sel1	I	Input format select terminal for ati, siat3-0.
80	ati-sel0	I	input format select terminal for ati, siat3-0.

ati sel1	ati sel0	input format	
1	1	ati	
1	0	ati0	(8ch/line)
0	1	ati2, 0	(4ch/line)
0	0	ati3-0	(2ch/line)

IFC1: IC604-606 JK1: IC112,121
JK2: IC112,121 JK3: IC110,126
JK4: IC112,120 JK6 IC202

● **YM3436DK** (XG948E0) **DIR2** (Digital Format Interface Receiver)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DAUX	I	Auxiliary input for audio data	23	RSTN	I	System reset input
2	HDLT	O	Asynchronous buffer operation flag	24	Vdda		VCO section power (+5 V)
3	DOUT	O	Audio data output	25	CTLN	I	VCO control input N
4	VFL	O	Parity flag output	26	PCO	O	PLL phase comparison output
5	OPT	O	Fs x 1 Synchronous output signal for DAC	27	(NC)		
6	SYNC	O	Fs x 1 Synchronous output signal for DSP	28	CTLP	I	VCO control input P
7	MCC	O	Fs x 64 Bit clock output	29	Vssa		VCO section power (GND)
8	WC	O	Fs x 1 Word clock output	30	TSTN	I	Test terminal. Open for normal use
9	MCB	O	Fs x 128 Bit clock output	31	KM2	I	Clock mode switching input 2
10	MCA	O	Fs x 256 Bit clock output	32	KM0	I	Clock mode switching input 0
11	SKSY	I	Clock synchronization control input	33	FS1	O	Channel status sampling frequency display output 1
12	XI	I	Crystal oscillator connection or external clock input	34	FS0	O	Channel status sampling frequency display output 0
13	XO	O	Crystal oscillator connection	35	CSM	I	Channel status output method selection
14	P256	O	VCO oscillating clock connection	36	EXTW	I	External synchronous auxiliary input word clock
15	LOCK	O	PLL lock flag	37	DDIN	I	EIAJ (AES/EBU) data input
16	Vss		Logic section power (GND)	38	LR	O	PLL word clock output
17	TC	O	PLL time constant switching output	39	Vdd		Logic section power (+5 V)
18	DIM1	I	Data input mode selection	40	ERR	O	Data error flag output
19	DIM0	I	Data input mode selection	41	EMP	O	Channel status emphasis control code output
20	DOM1	I	Data output mode selection	42	CD0	O	3-wire type microcomputer interface data output
21	DOM0	I	Data output mode selection	43	CCK	I	3-wire type microcomputer interface clock input
22	KM1	I	Clock mode switching input 1	44	CLD	I	3-wire type microcomputer interface load input

● **AM7992BPC** (XW277A00) **SIA** (Serial Interface Adapter)

CIB: IC112-115

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	CLSN	O	Collision (Output, TTL Active HIGH)	13	Collision+	I	Collision
2	RX	O	Receive Data	14	Collision-	I	Collision
3	RENA	O	Receive Enable (Output, TTL Acvtive HIGH)	15	Receive+	I	Receiver
4	RCLK	O	Receive Clock	16	Receive-	I	Receiver
5	TSEL	I/O	Transmit Mode Select (Output, Open Collector; Input, Sense Amplifier)	17	/TEST	I	Test Control
				18	Vcc1	-	High Current and Logic Supply
6	GND1	-	High Current Ground	19	Vcc2	-	Voltage-Controlled Oscillator Supply
7	GND2	-	Logic Ground	20	PF	I	Receive Path Vco Phase-Locked Loop Filter
8	X1	I	Biased Crystal Oscillator	21	RF	O	Frequency Setting Voltage-Controlled
9	X2	I	Biased Crystal Oscillator				Oscillator (Vco) Loop Filter (Output)
10	TX	I	Transmit	22	GND3	-	Voltage-Controlled Oscillator Ground
11	TCLK	O	Transmit Clock	23	Transmit+	O	Transmit
12	TENA	I	Transmit Enable	24	Transmit-	O	Transmit

● ICS2008A (XV619A00) T.C. Reader/Generator

CIB: IC136

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	INTR	O	Interrupt request	23	CTS	I	Clear to send
2	RESET	I	Master reset	24	TXD	O	UART transmit data
3	FRAME	I	Color frame A / B input	25	RTS	O	Ready to send
4	CLICK	I	LTC SYNC input	26	LRCLK	O	SMPTE LTC receive clock
5	LTCIN-	I	SMPTE LTC input -	27	VITCGATE	O	VITE cord is for video overlay
6	LTCIN+	I	SMPTE LTC input +	28	VITCOUT	O	SMPTE VITE output
7	LTCOUT	O	SMPTE LTC output	29	A0	I	Address bus
8	LFC	I	External RC circuit	30	A1	I	Address bus
9	XTAL2	O	14.318 MHz crystal oscillator	31	/SMPTECS	I	SMPTE port chip select
10	XTAL1	I	14.318 MHz crystal oscillator	32	/UARTSC	I	UART chip select
11	AVDD	-	Analog power supply	33	/IOR	I	Read enable
12	AVSS	-	Analog ground	34	VSS	-	Digital ground
13	COUT	O	C(Chroma) output	35	VDD	-	Digital power supply
14	YOUT	O	Y(Luma) output	36	/IOW	I	Write enable
15	C2	I	C(Chroma) input	37	D0	I/O	Data bus
16	Y2	I	Y(Luma) input	38	D1	I/O	
17	C1	I	C(Chroma) input	39	D2	I/O	
18	Y1	I	Y(Luma) input	40	D3	I/O	
19	STHRESH	I	SYNC threshold bypass input	41	D4	I/O	
20	CTHRESH	I	Clamp threshold bypass input	42	D5	I/O	
21	DTHRESH	I	Data threshold bypass input	43	D6	I/O	
22	RXD	I	UART receive data	44	D7	I/O	

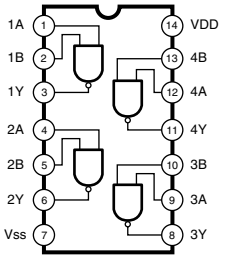
● PDIUSBD12PW (XW583A00) USB Interface

JK6: IC105

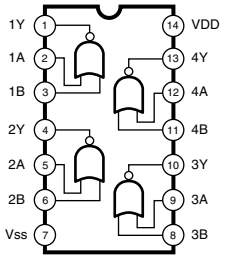
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DATA0	I/O	Bit 0 of bi-directional data.	15	RD_N	I	Read Strobe (Active Low)
2	DATA1	I/O	Bit 1 of bi-directional data.	16	WR_N	I	Write Strobe (Active Low)
3	DATA2	I/O	Bit 2 of bi-directional data.	17	DMREQ	O	DMA Request.
4	DATA3	I/O	Bit 3 of bi-directional data.	18	DMACK_N	I	DMA Acknowledge (Active Low).
5	GND	-	Ground	19	EOT_N	I	End of DMA Transfer (Active Low).
6	DATA4	I/O	Bit 4 of bi-directional data.	20	RESET_N	I	Reset (Active Low and asynchronous).
7	DATA5	I/O	Bit 5 of bi-directional data.				Built-in Power-On-Reset circuit
8	DATA6	I/O	Bit 6 of bi-directional data.	21	GL_N	O	GoodLink LED indicator (Active Low)
9	DATA7	I/O	Bit 7 of bi-directional data.	22	XTAL1	I	Crystal Connection 1 (6 MHz)
10	ALE	I	Address Latch Enable.	23	XTAL2	O	Crystal Connection 2 (6 MHz)
11	CS_N	I	Chip Select (Active Low).	24	Vcc	-	Voltage supply (4.0-5.5 V)
12	SUSPEND	I/O	Device is in Suspend state.	25	D-	-	USB D-data line
13	CLKOUT	O	Programmable Output Clock (slew-rate controlled)	26	D+	-	USB D+data line
14	INT_N	O	interrupt (Active Low)	27	Vout3.3	-	3.3 V regulated output.
				28	A0	I	Address bit. A0=1 selects command instruction; A0=0 selects the data phase.

IC BLOCK DIAGRAM

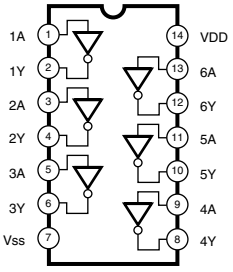
● **HD74LV00AFPEL** (IS000000)
Quad 2 Input NAND
EMB: IC101,105



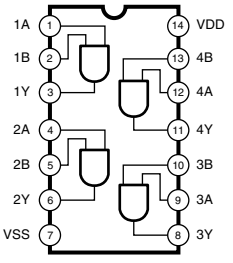
● **HD74LV02AFPEL** (IS00020)
Quad 2 Input NOR
CIB: IC104 JK1: IC100
JK3: IC108 JK4: IC100



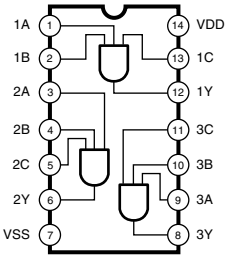
● **HD74LV04AFPEL** (IS000400)
HD74LV05AFPEL (IS000500)
SN74LS06NSR (XP985A00)
TC74VHCT04AF (XT777A00)
Hex Inverter
CIB: IC103,117,128,151 EDB: IC109,IC110
EMB: IC107,108,151 GDB: IC109,IC110
IDB: IC111,116 IFC1: IC601
JK1: IC102,141 JK2: IC109,141
JK3: IC100,141 JK4: IC102,121,141
JK5: IC108 JK6: IC100,IC108
PDB: IC109,IC115



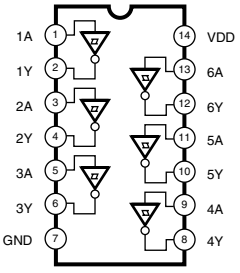
● **HD74LV08AFPEL** (IS000800)
Quad 2 Input AND
CIB: IC131,141 EDB: IC106,107
EMB: IC116,117,129 GDB: IC106,107
IDB: IC114,115 IFC1: IC602
JK1: IC140 JK2: IC140 JK3: IC140
JK4: IC140 JK6: IC207 PDB: IC102,103



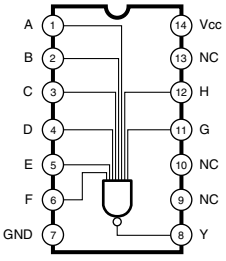
● **HD74LV11AFPEL** (IS001100)
Triple 3 Input AND
CIB: IC1102
EMB: IC132



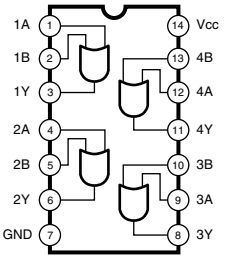
● **HD74LV14AFPEL** (IS001400)
Hex Inverter
JK6: IC107



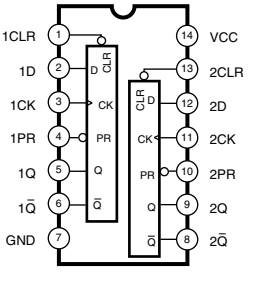
● **HD74HC30FPTL** (XQ970A00)
8 Input NAND
EMB: IC106



● **HD74LV32AFPEL** (IS003200)
Quad 2 Input OR
CIB: IC134 EDB: IC105 EMB: IC122
GDB: IC108 GDB: IC108
IDB: IC112,113 JK1: IC126
JK2: IC126 JK3: IC130
JK4: IC125 PDB: IC100,108

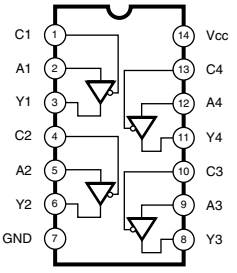


● **HD74LV74AFPEL** (IS007400)
Dual D-Type Flip-Flop
CIB: IC111

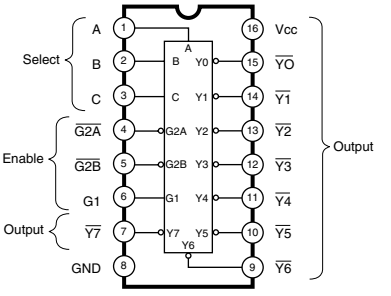


INPUTS				OUTPUTS	
PR	CLR	CLK	D	Q	Q
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H
H	H	f	H	H	L
H	H	f	L	L	H
H	H	L	X	Q₀	Q₀

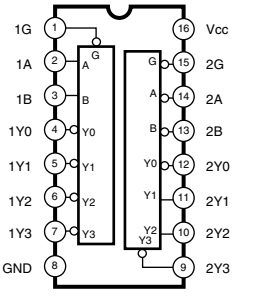
- **SN74HC125N** (IR012550)
  HD74LV125AFPEL (IS012500)
  Quad 3-State Bus Buffer
  CIB: IC148,150 EMB: IC149
  JK: IC107



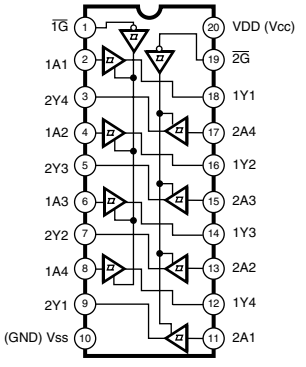
- **SN74LV138ANSR** (IS013810)
  3 to 8 Demultiplexer
  CIB: IC152



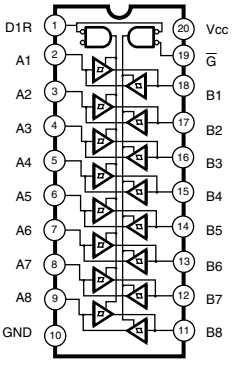
- **SN74LV139ANSR** (IS013910)
  Dual 2 to 4 Demultiplexer
  JK1: IC125 JK2: IC125
  JK3: IC131 JK4: IC124



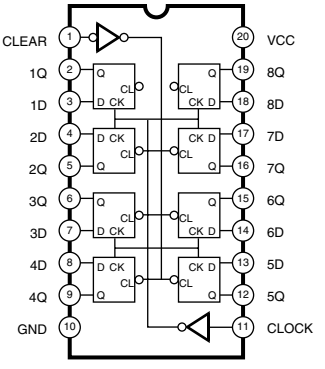
- **HD74LV244AFPEL** (IS024400)
  Octal 3-State Bus Buffer
  IDB: IC855



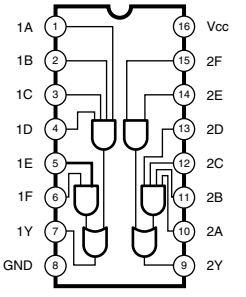
- **TC74VHC245F** (XT487A00)
  TC74VHCT245AF (XV242A00)
  TC74HC245AP (IR024500)
  Octal 3-State Bus Transceiver
  CIB: IC105-110,120,121,130,135,137,140,145,146
  EDB: IC101,250-253,255-260,306,307,600-606
  EMB: IC120-104,109,112,115,128,134,137-147
  GDB: IC102,220-229,303,304,850-871
  IDB: IC220-232,253,254,850-854,856-863,900-913,IC102
  IFC1: IC504-507,509,608-610,701-717
  JK1: IC122-124,128-133
  JK2: IC122-124,128-134
  JK3: IC115,116,127-129,132,134-138
  JK5: IC103,104,105
  JK4: IC122,123,127-134
  JK6: IC103,104,103,204
  PDB: IC105,103,110-112,200-202,204-206,503,504,
  800-822,850-872,900-904



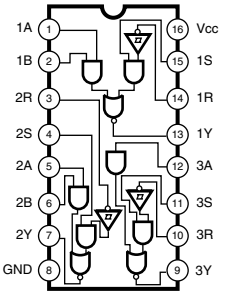
- **HD74LV273AFPEL** (IS027300)
  SN74HC273N (IR027350)
  Octal D-Type Flir Flop
  CIB: IC124 EMB: IC136 JK1: IC127
  JK2: IC127 JK3: IC117-119,133
  JK4: IC126 JK5: IC102



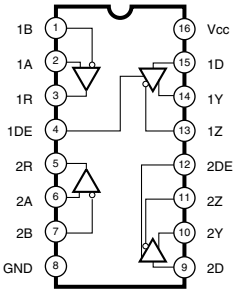
- **SN75121NSR** (XU816A00)
  Dual Line Driver
  JK6: IC200



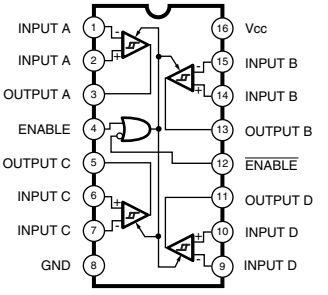
- **SN75124NSR** (XV930A00)
  Triple Line Receiver
  JK6: IC201



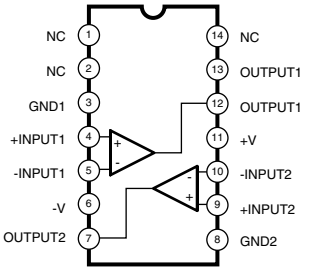
- **SN75C1168N** (XU463A00)
  Line Driver / Receiver
  JK5: IC101



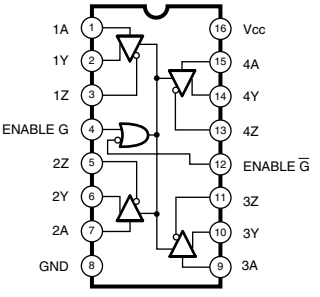
- **DS26C32ATMX** (XU815A00)
  Quad Differential Line Receiver
  JK1: IC103-107,113-117
  JK2: IC104,116
  JK3: IC101,102,104-106,125
  JK4: IC103-105,113-115



- **µPC319C** (IG086700)
  Voltage Comparator
  JK5: IC100



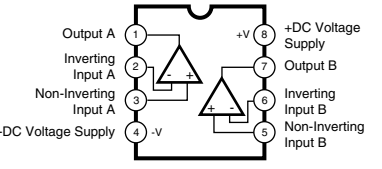
- **AM26LS31CNSR** (XU996A00)
  Quad Line Driver
  JK1: IC108,118
  JK2: IC103,105-108,115,117-120
  JK3: IC107,120-124
  JK4: IC106-108,116,117



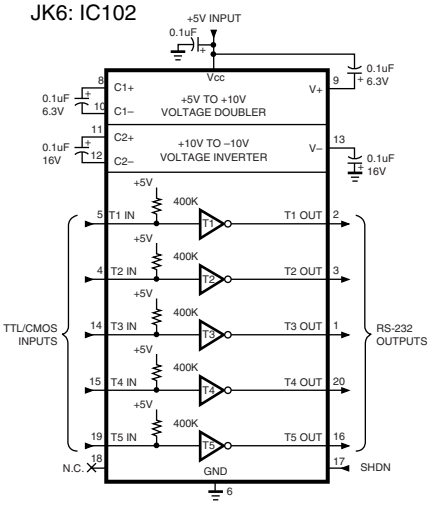
INPUT	ENABLES		OUTPUTS	
A	G	$\overline{G}$	Y	Z
H	H	X	H	L
L	H	X	L	H
H	X	L	H	L
L	X	L	L	H
X	L	H	Z	Z

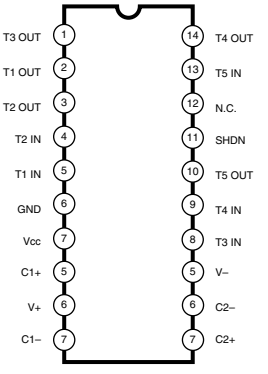
H= high level X= irrelevant
L= low level Z= high impedance (off)

- **NJM2082M (T1)** (XN797A00)
  NJM4560D (IG040000)
  Dual Operational Amplifier
  EMB: IC121
  JK5: IC106

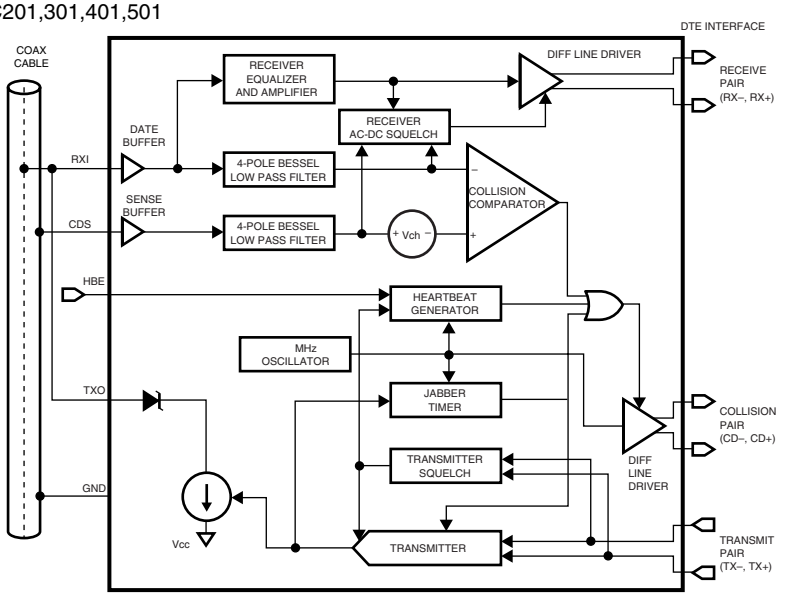


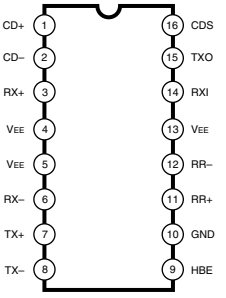
- **MAX202CSE** (XP113A00)
  RS-232C Transceiver
  JK6: IC102





- **DP8392CN** (XW278A00)
  CTI
  JK5: IC201,301,401,501





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EDB Circuit Board (XW348B0) 26
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IDB Circuit Board (XW347B0) 28
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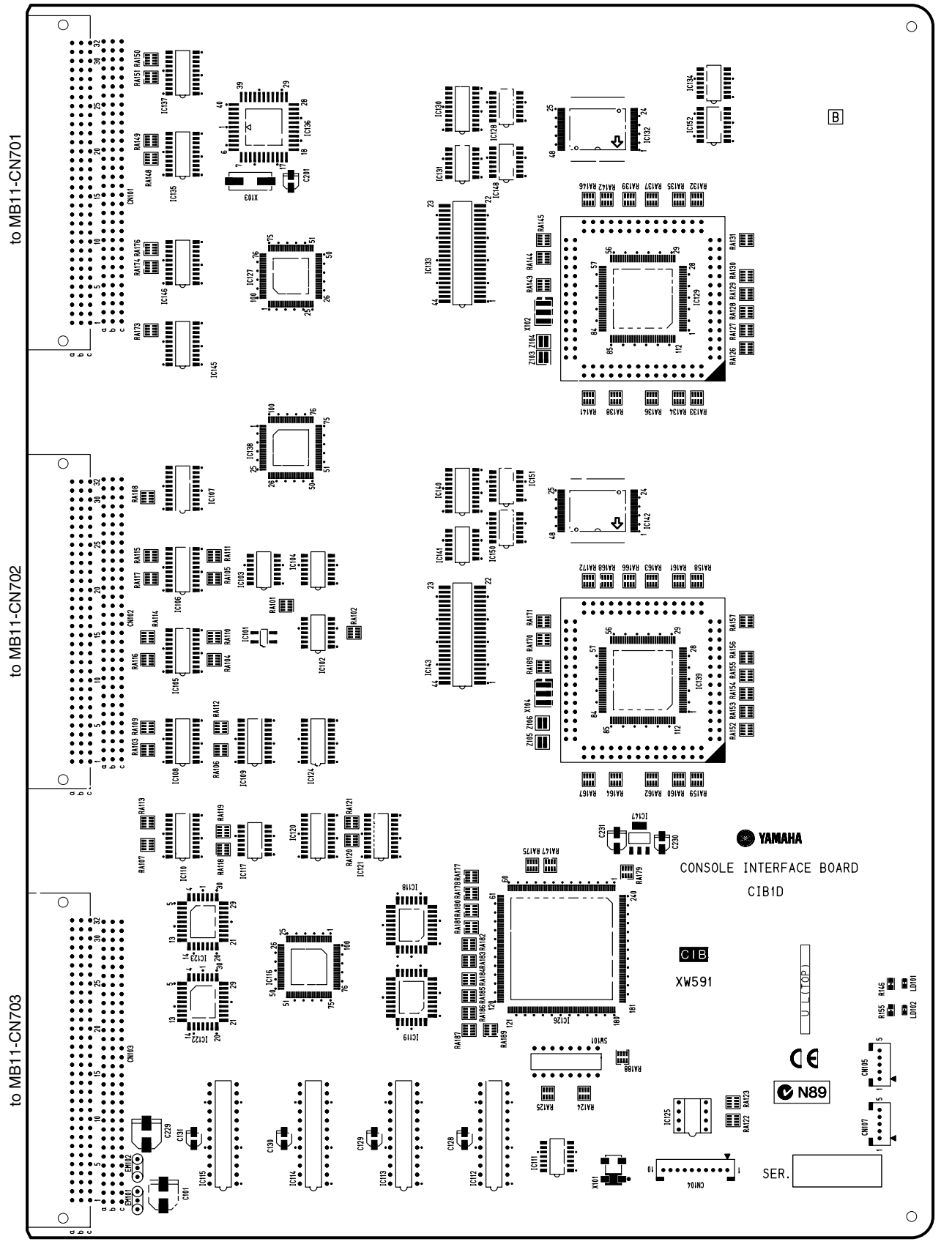
Note: See parts list for details of circuit board component parts.

CIRCUIT BOARDS

● CIB Circuit Board



Component side

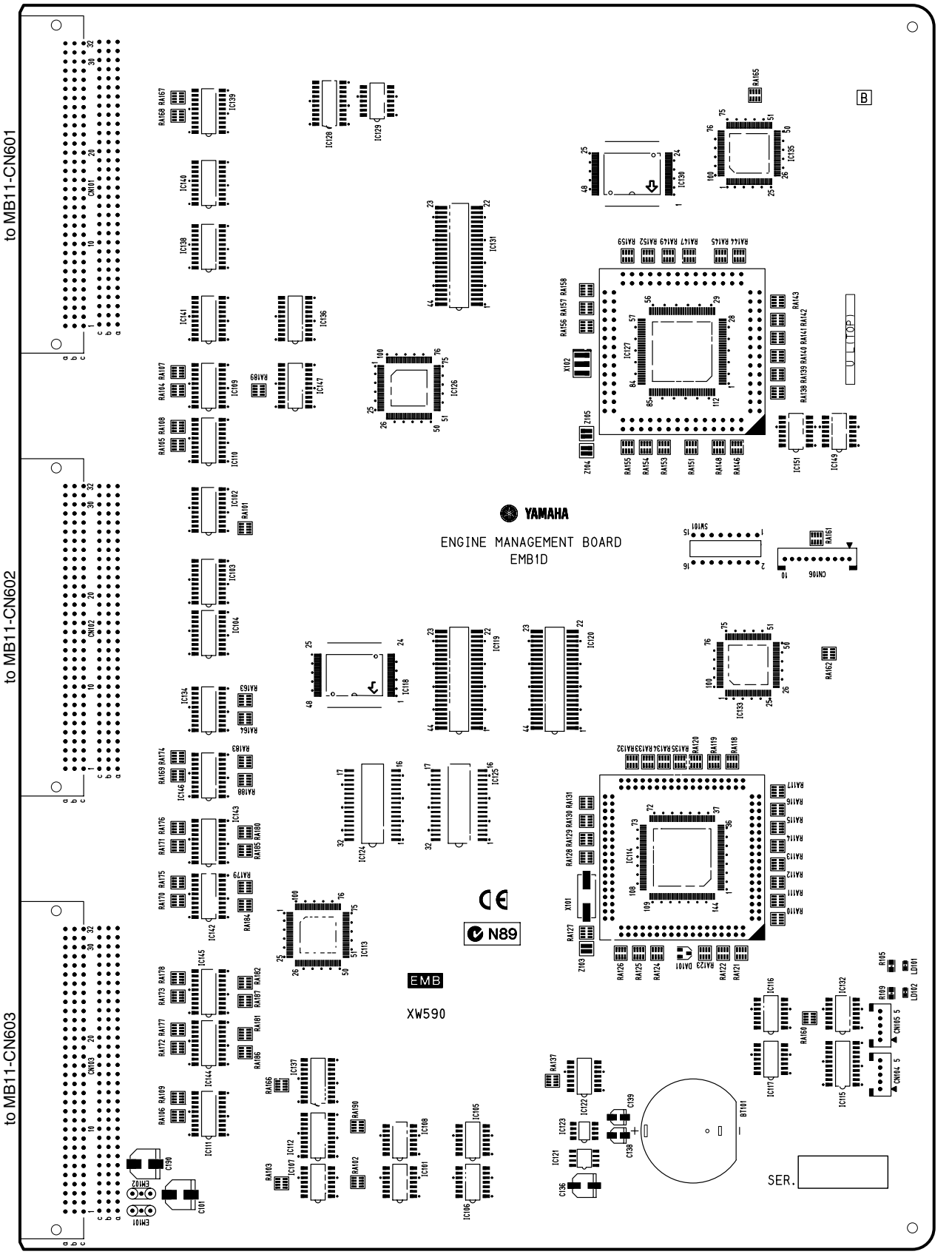
3NA-V440750 A

● CIB Circuit Board

Pattern side

3NA-V440750△2

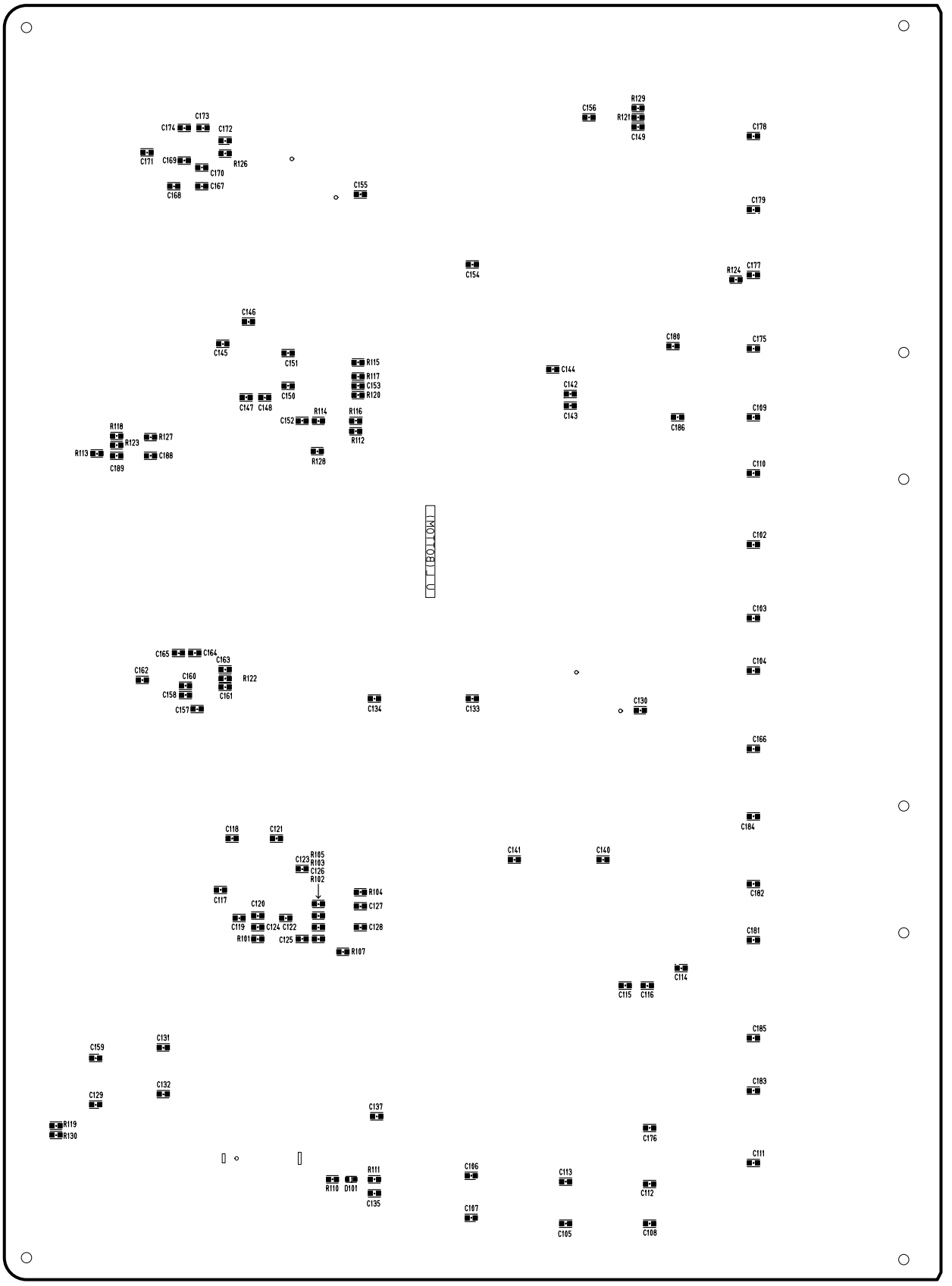
● EMB Circuit Board



Component side

3NA-V440740 3

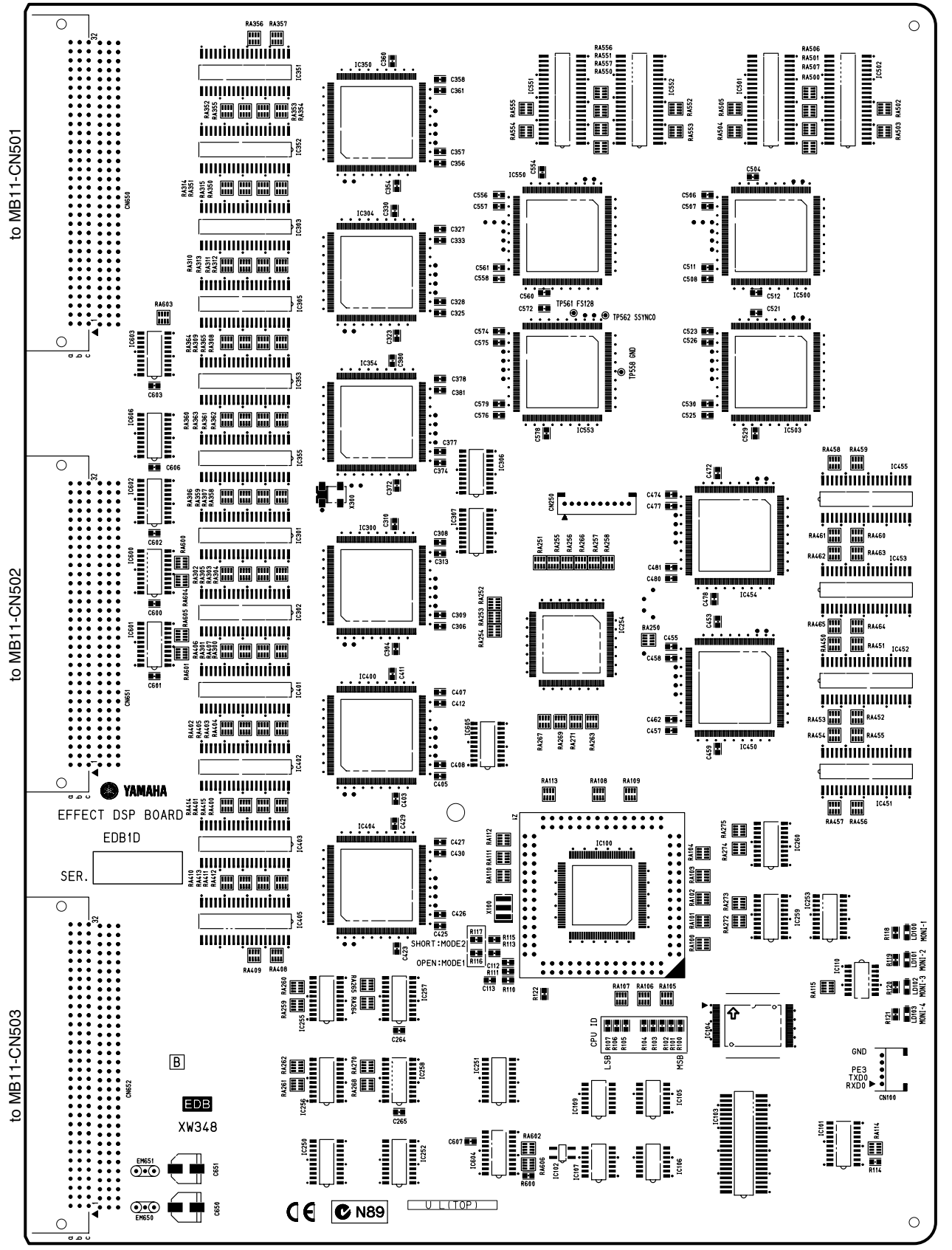
● EMB Circuit Board



Pattern side

3NA-V440740 ⚠3

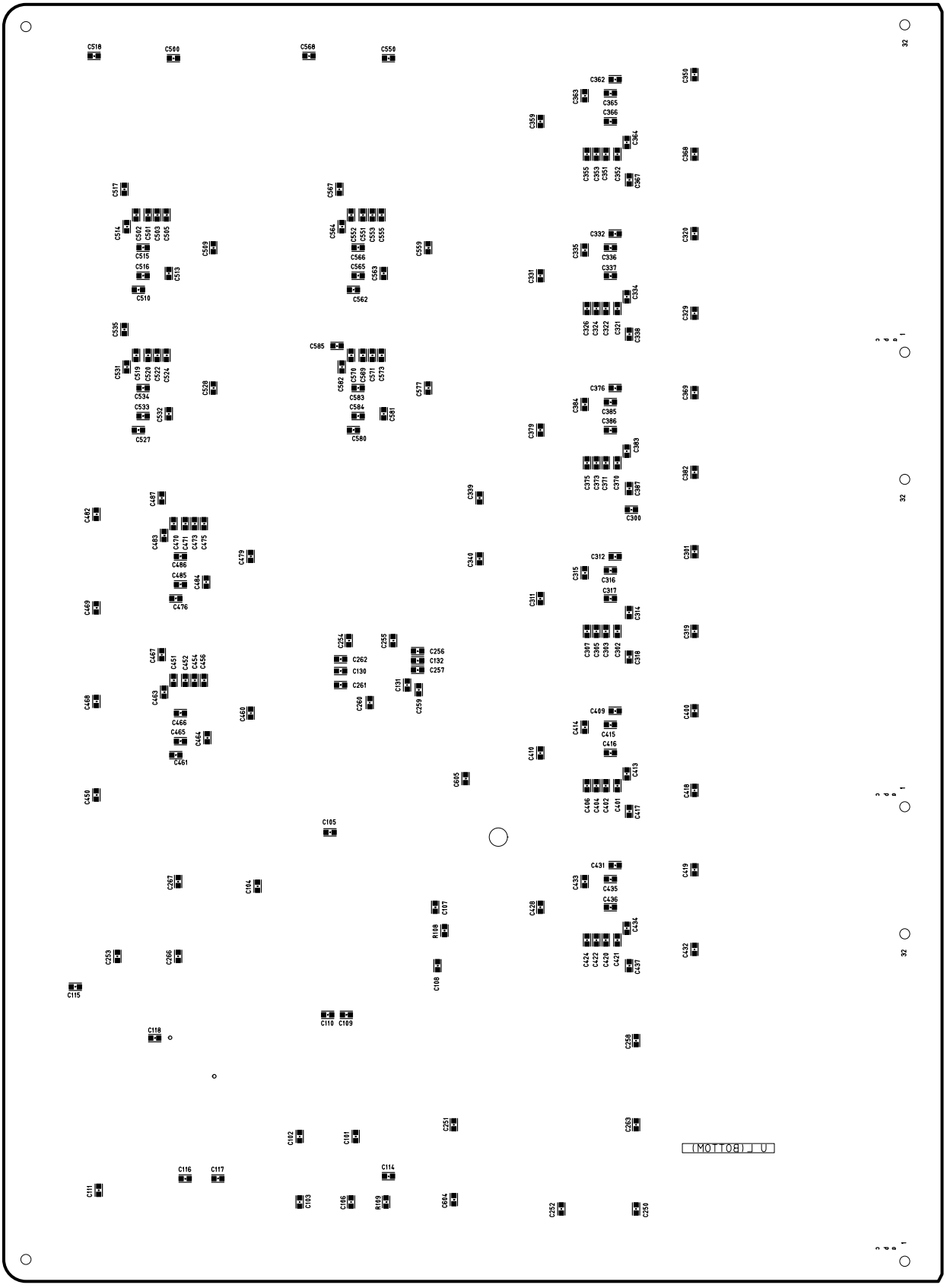
● EDB Circuit Board



Component side

3NA-V411270 ⚠2

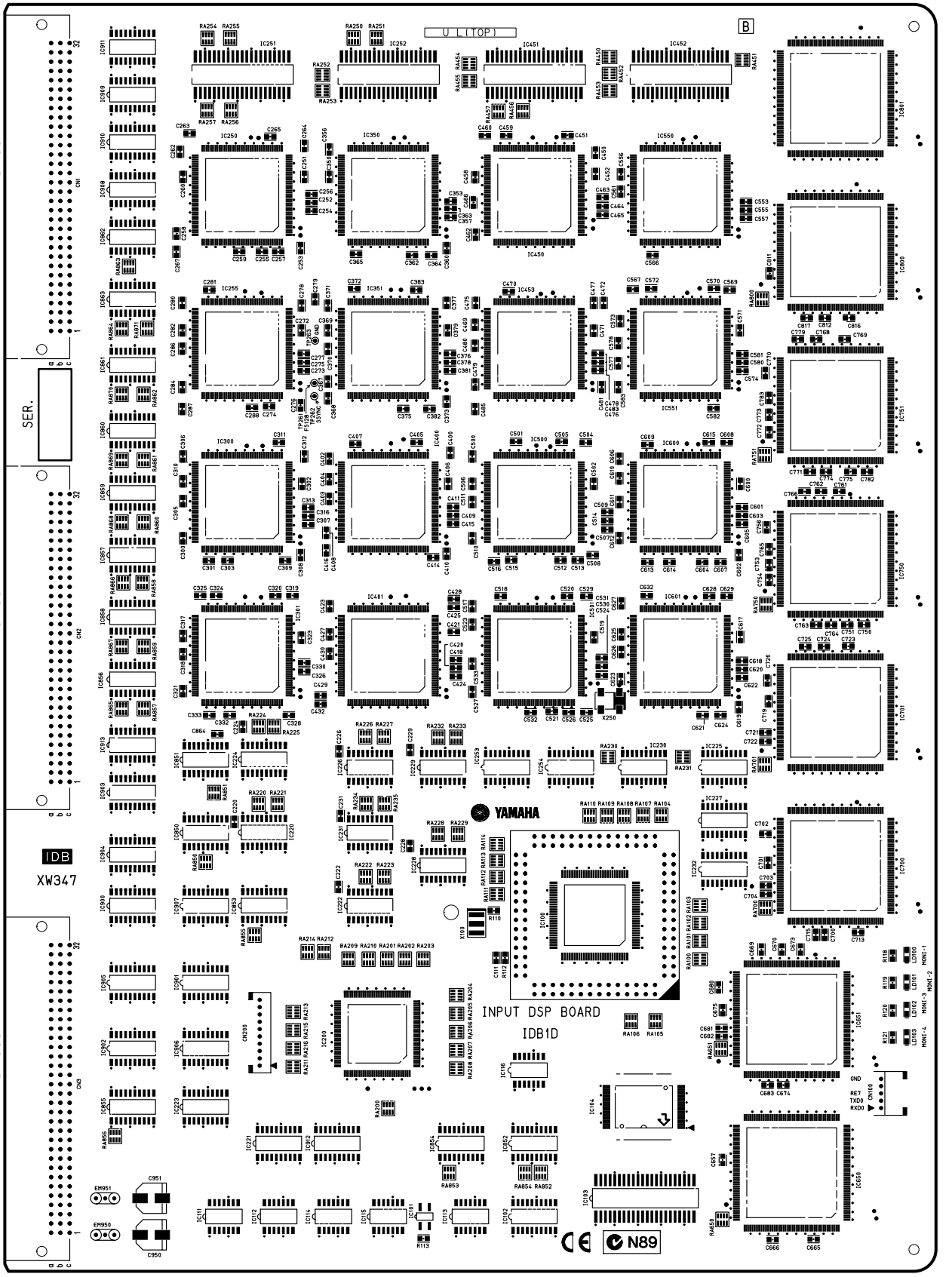
● EDB Circuit Board



Pattern side

3NA-V411270⚠2

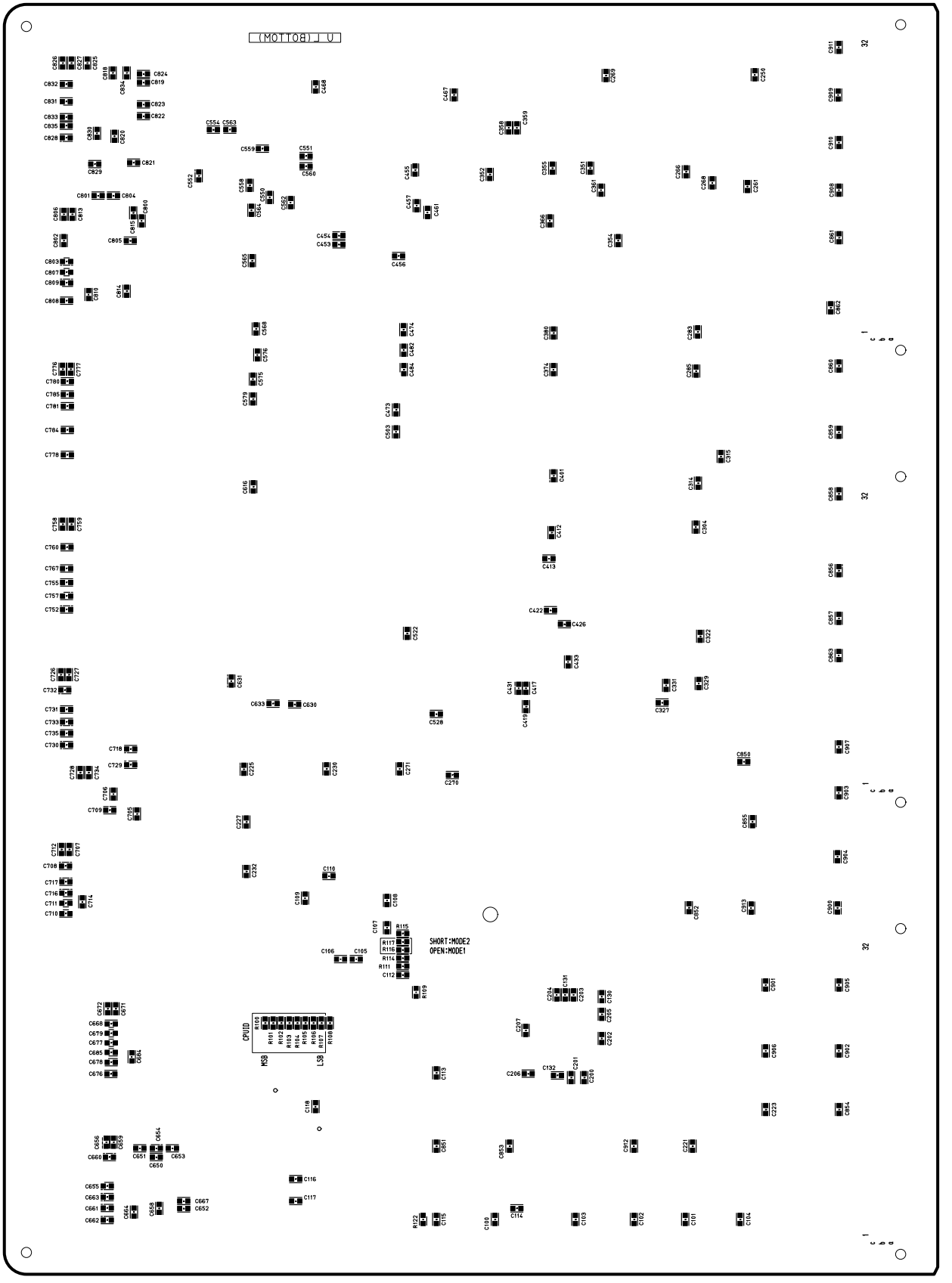
● IDB Circuit Board



Component side

3NA-V411260⚠

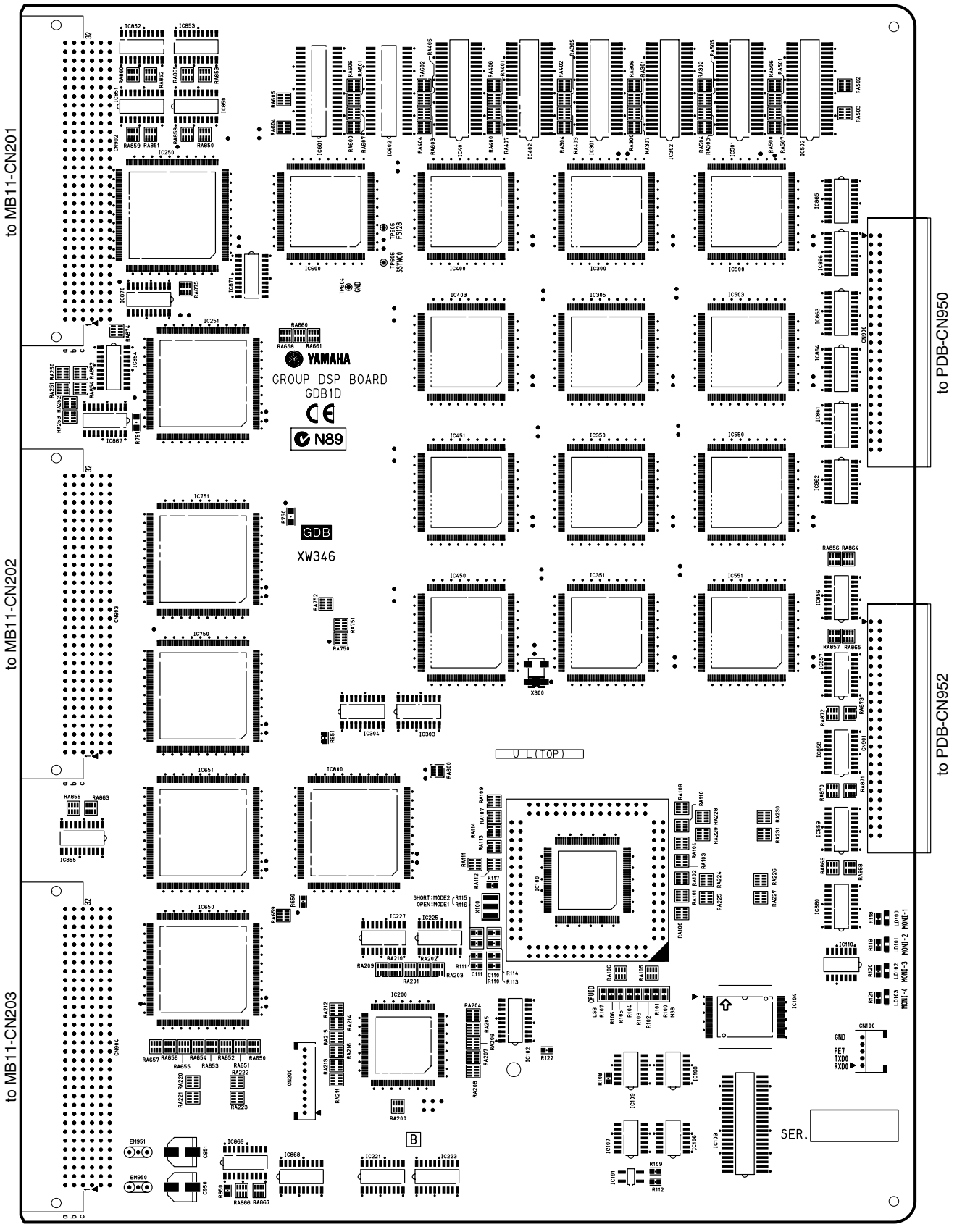
● IDB Circuit Board



Pattern side

3NA-V411260⚠

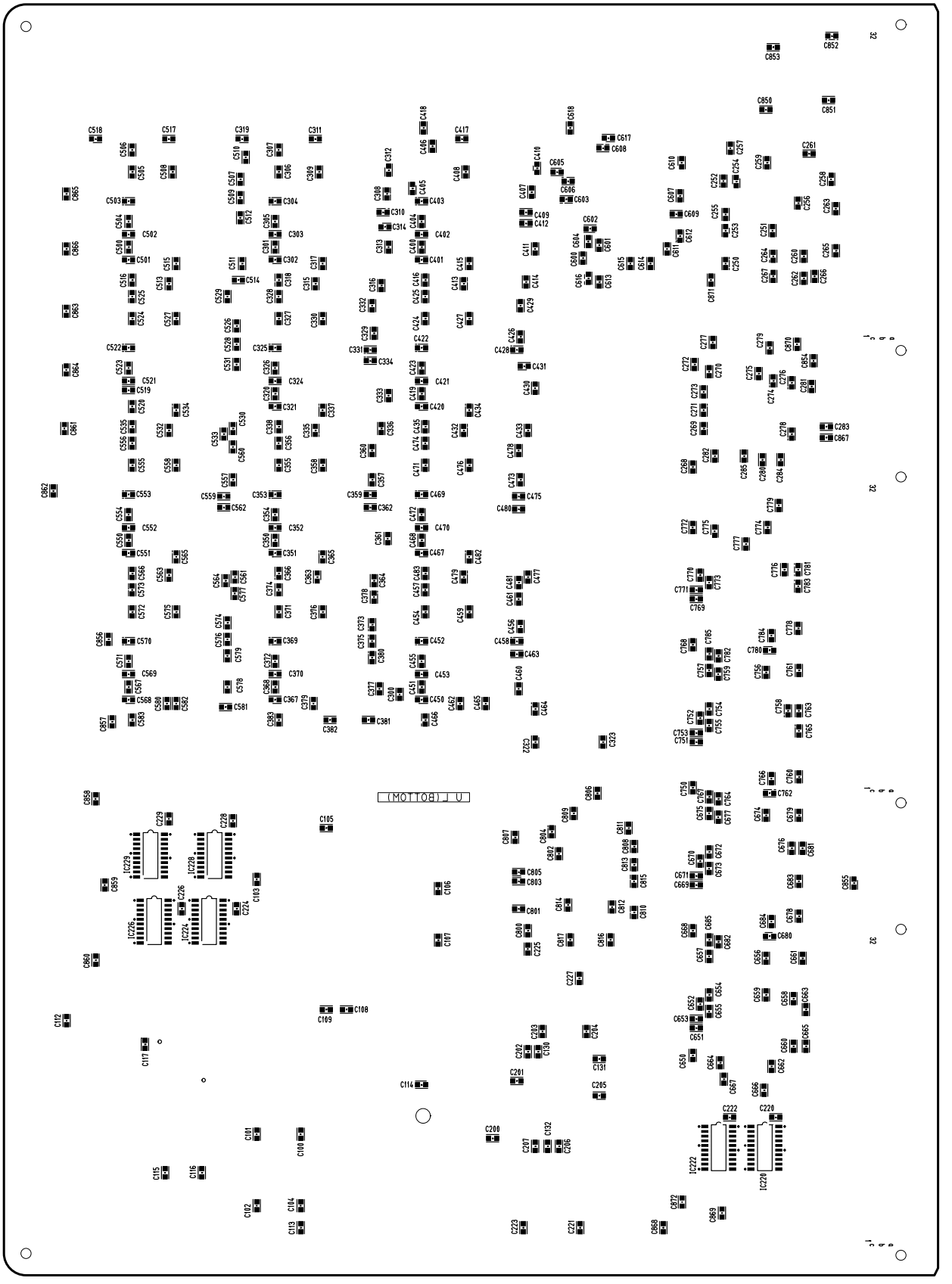
● GDB Circuit Board



Component side

3NA-V411250 ⚠2

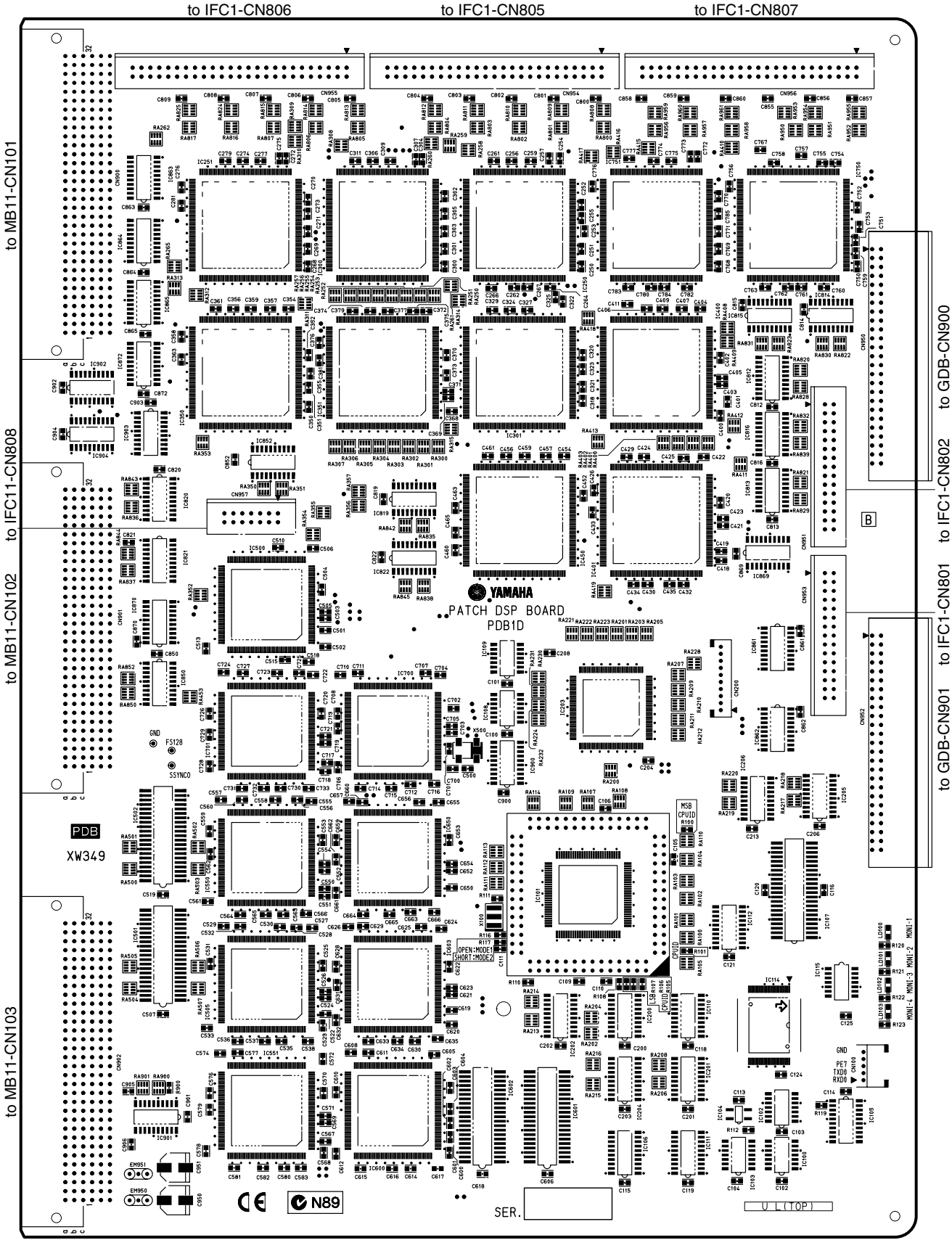
● GDB Circuit Board



Pattern side

3NA-V411250⚠2

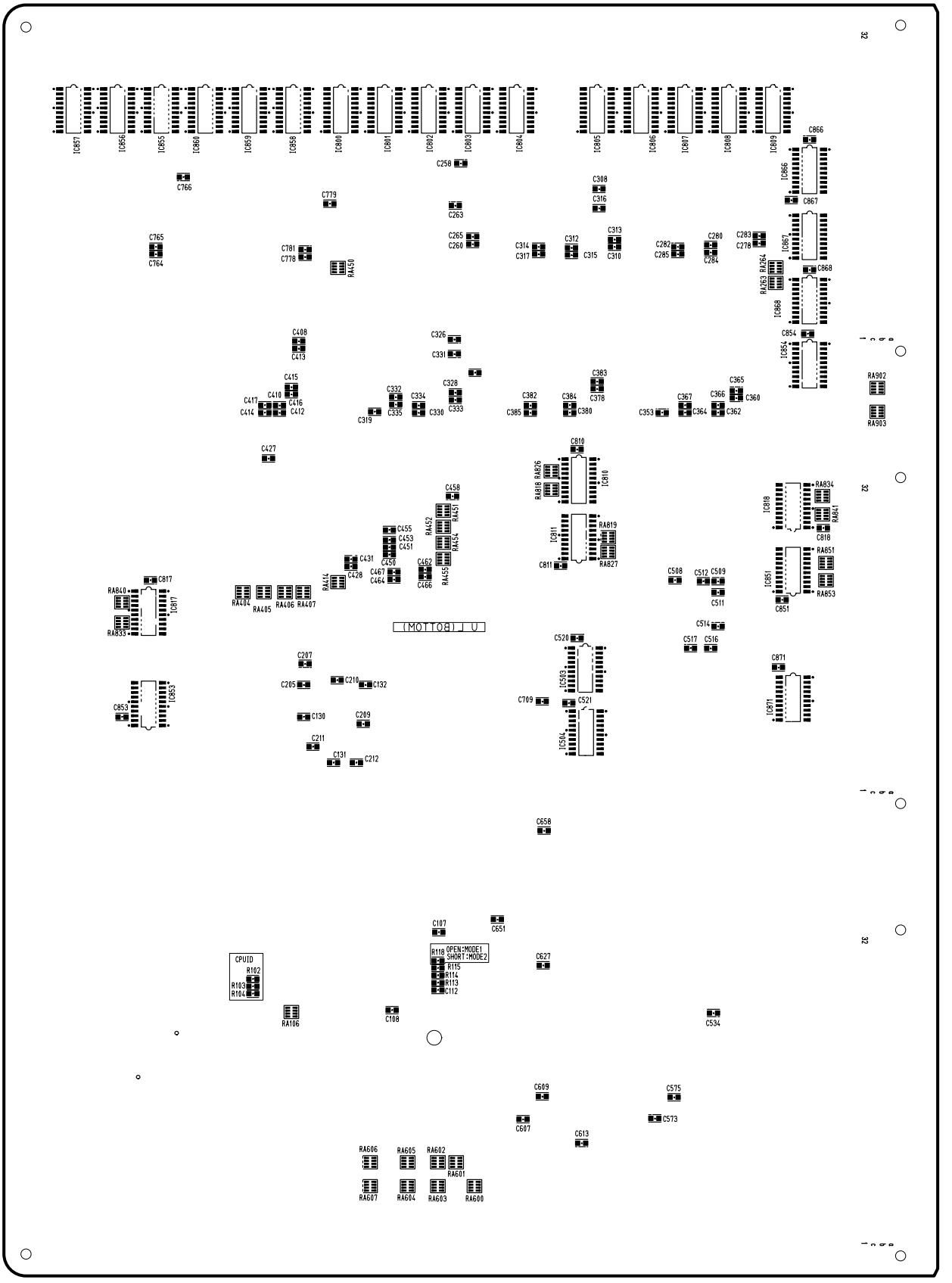
● PDB Circuit Board



Component side

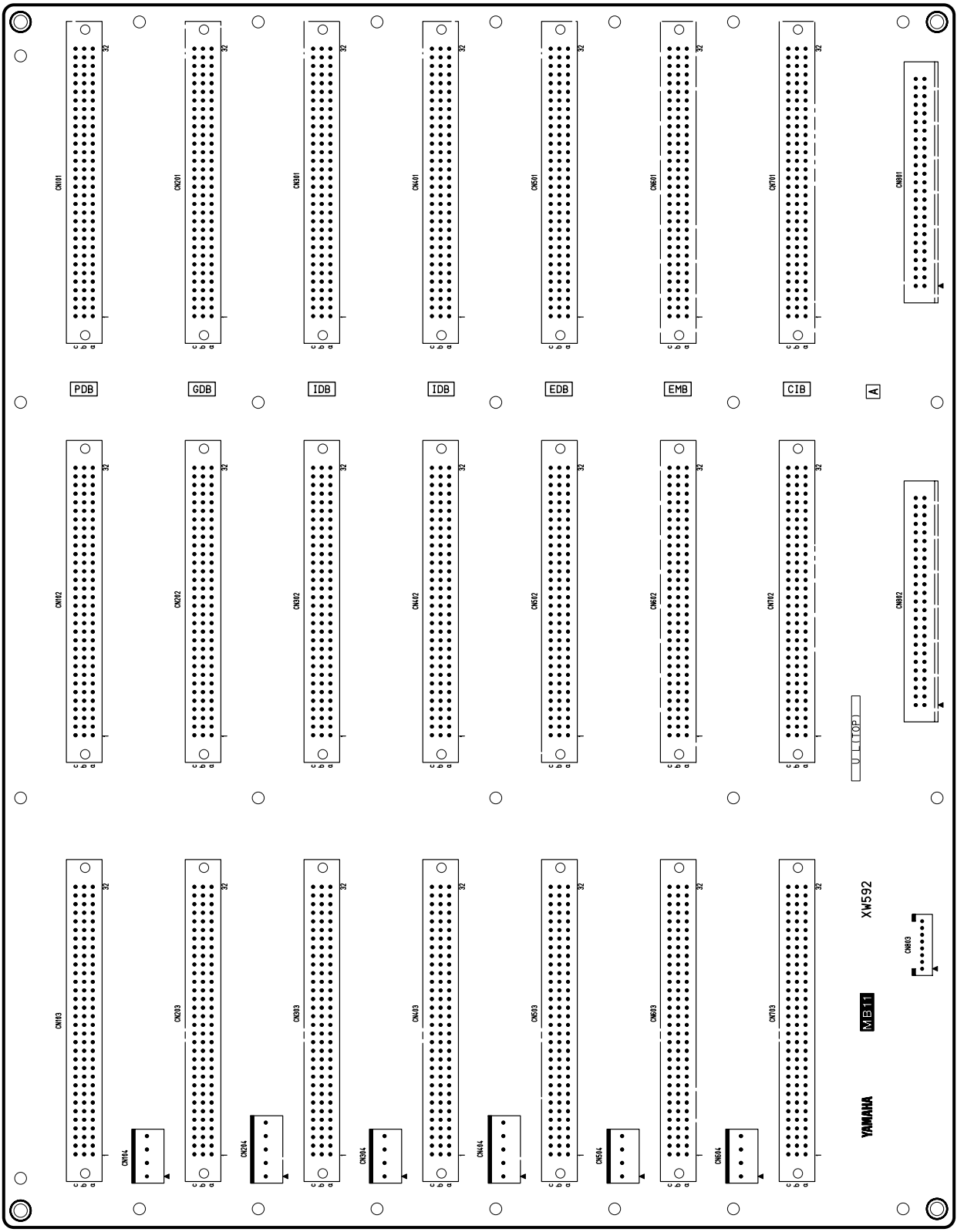
3NA-V411280 ⚠2

● PDB Circuit Board



Pattern side

● MB11 Circuit Board

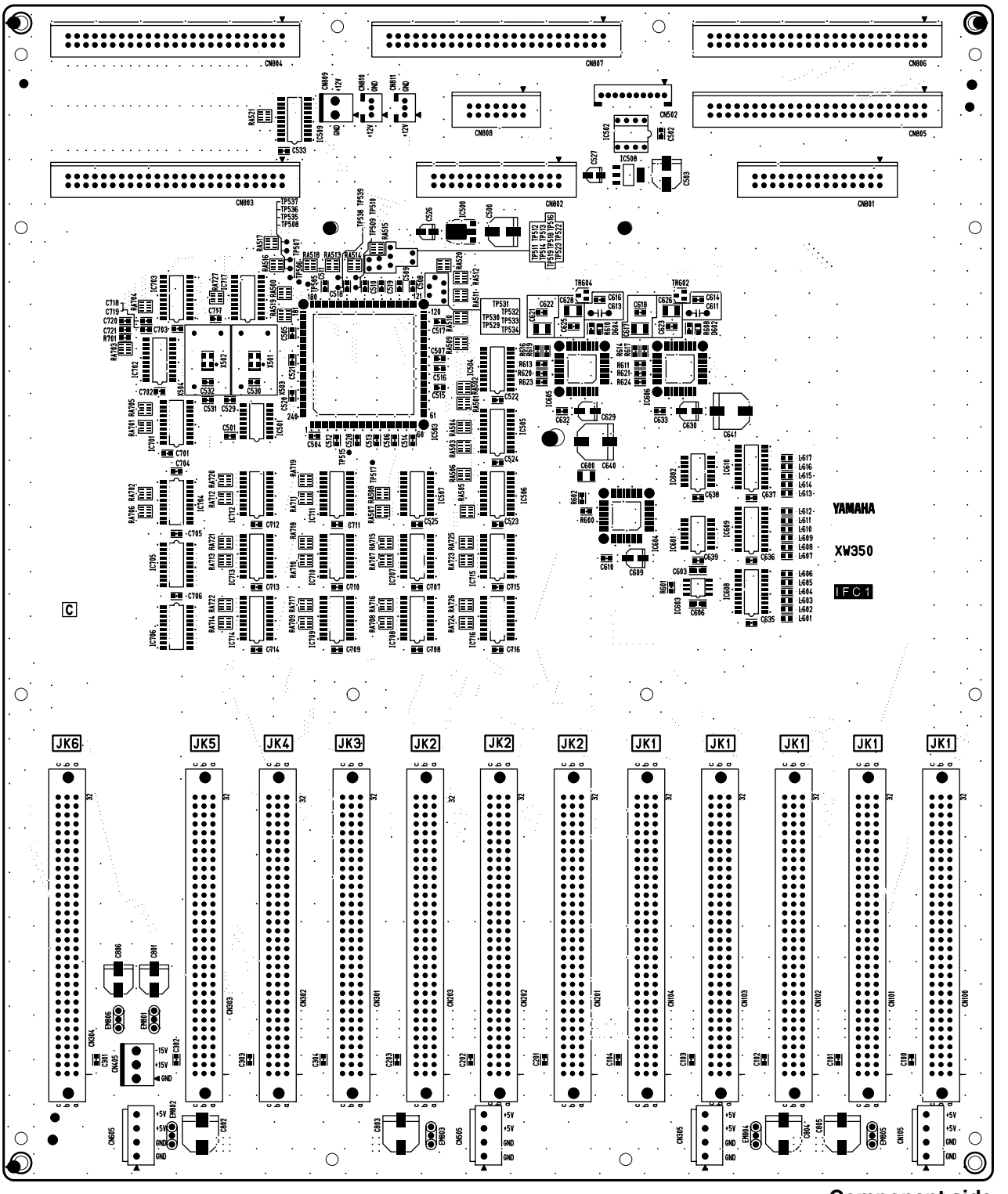


Component side

CN101: to PDB-CN900
CN102: to PDB-CN901
CN103: to PDB-CN902
CN104: to Power Unit-CN7
CN201: to GDB-CN902
CN202: to GDB-CN903
CN203: to GDB-CN904
CN204: to Power Unit-CN3
CN301: to IDB-CN1
CN302: to IDB-CN2
CN303: to IDB-CN3
CN304: to Power Unit-CN6
CN401: to IDB-CN1 (DSP1D-EX)
CN402: to IDB-CN2 (DSP1D-EX)
CN403: to IDB-CN3 (DSP1D-EX)
CN404: to Power Unit-CN3
CN501: to EDB-CN650
CN502: to EDB-CN651
CN503: to EDB-CN652
CN504: to Power Unit-CN5
CN601: to EMB-CN101
CN602: to EMB-CN102
CN603: to EMB-CN103
CN604: to Power Unit-CN4
CN701: to CIB-CN101
CN702: to CIB-CN102
CN703: to CIB-CN103
CN801: to IFC1-CN804
CN802: to IFC1-CN803
CN803: to LED2-CN101

3NA-V440790⚠

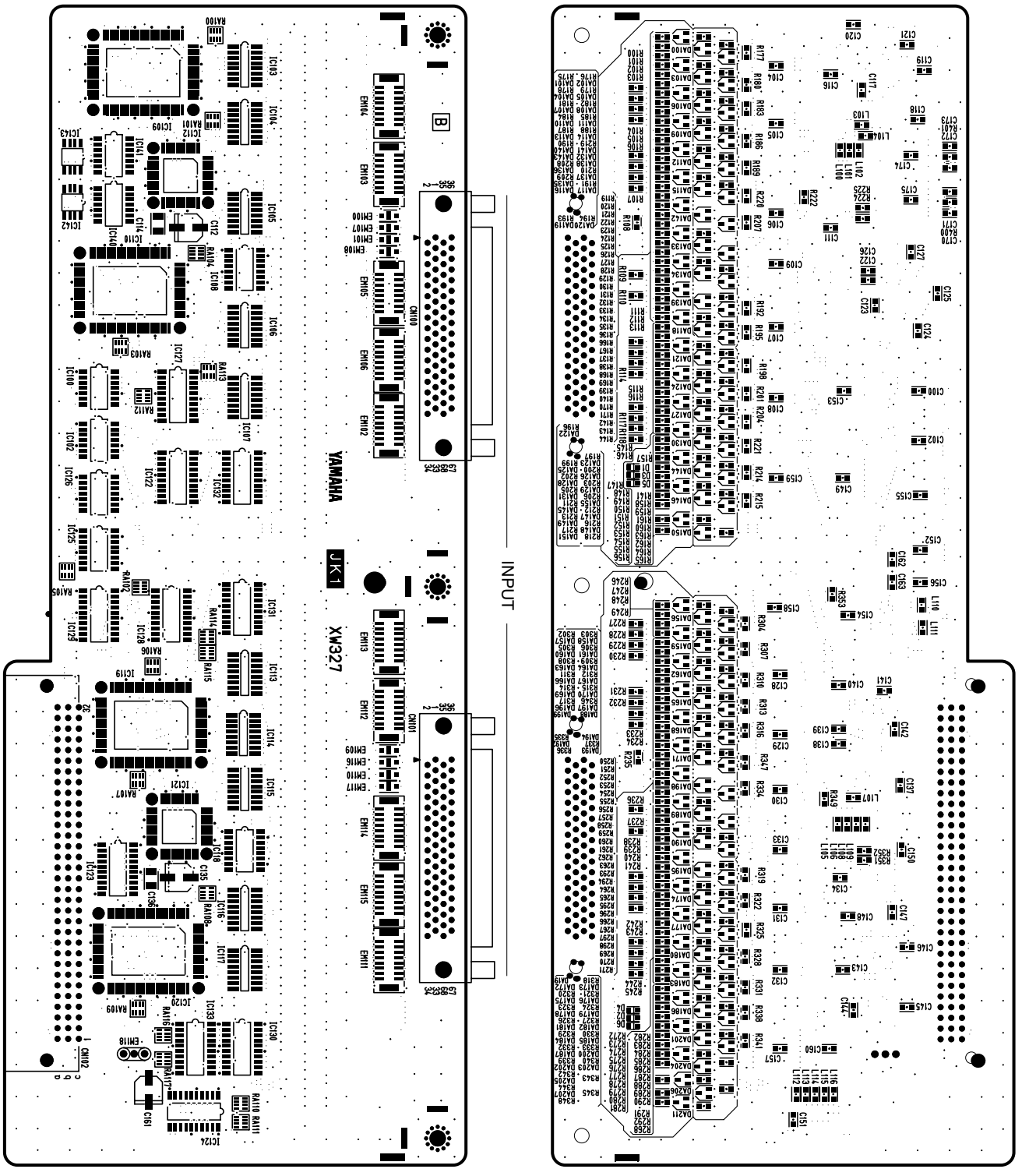
● IFC1 Circuit Board



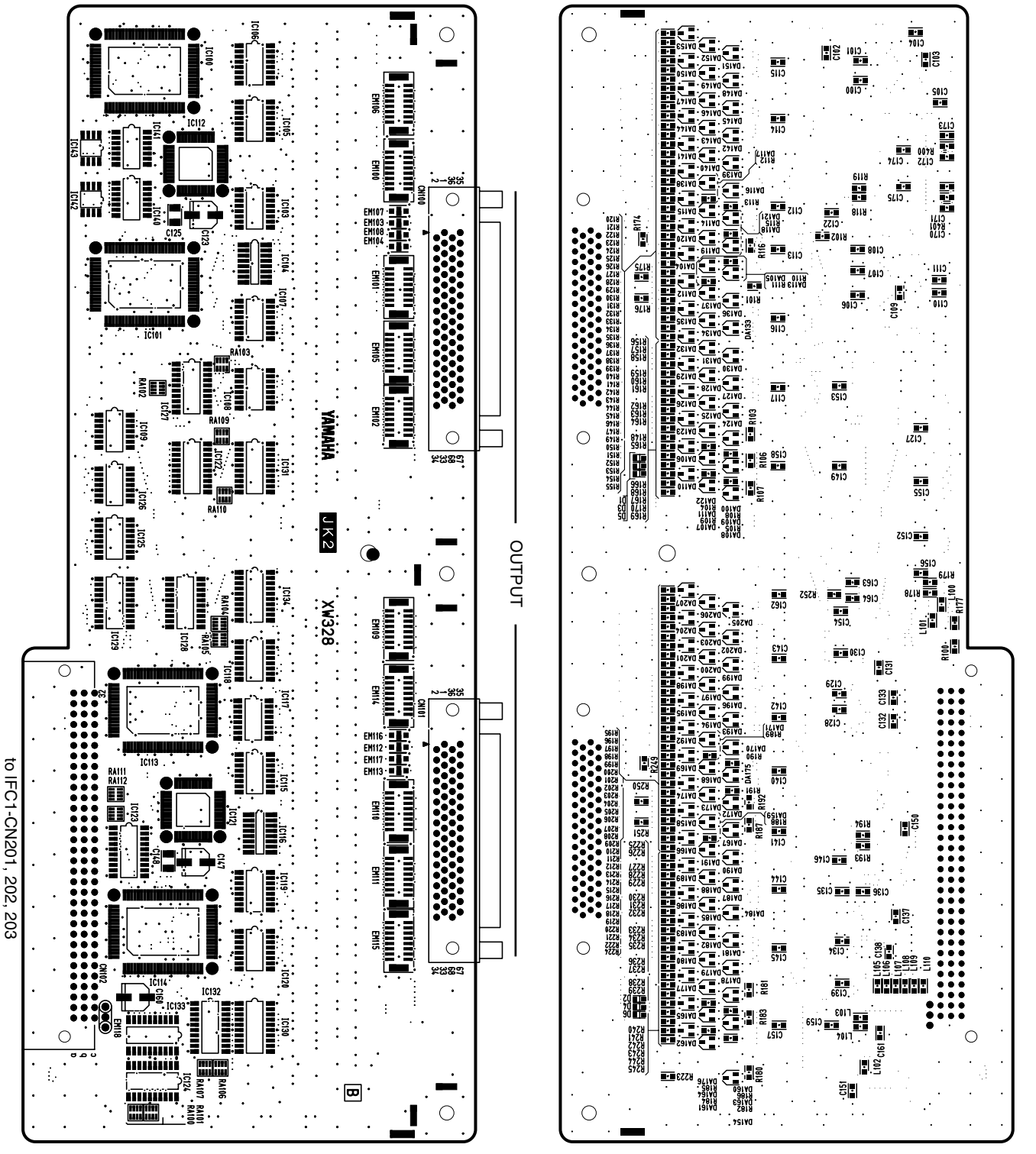
Component side

CN100: to JK1-CN102
CN101: to JK1-CN102
CN102 to JK1-CN102
CN103: to JK1-CN102
CN104: to JK1-CN102
CN105: to Power Unit-CN7
CN201: to JK2-CN102
CN202: to JK2-CN102
CN203: to JK2-CN102
CN301: to JK3-CN102
CN302: to JK4-CN102
CN303: to JK5-CN100
CN304: to JK6-CN100
CN305: to Power Unit-CN6
CN405: to Power Unit-CN9
CN505: to Power Unit-CN5
CN605: to Power Unit-CN4
CN801: to PDB-CN953
CN802: to PDB-CN951
CN803: to MB11-CN802
CN804: to MB11-CN801
CN805: to PDB-CN954
CN806: to PDB-CN955
CN807: to PDB-CN956
CN808: to PDB-CN957
CN809: to Power Unit-CN8
CN810: to Fan
CN811: to Fan

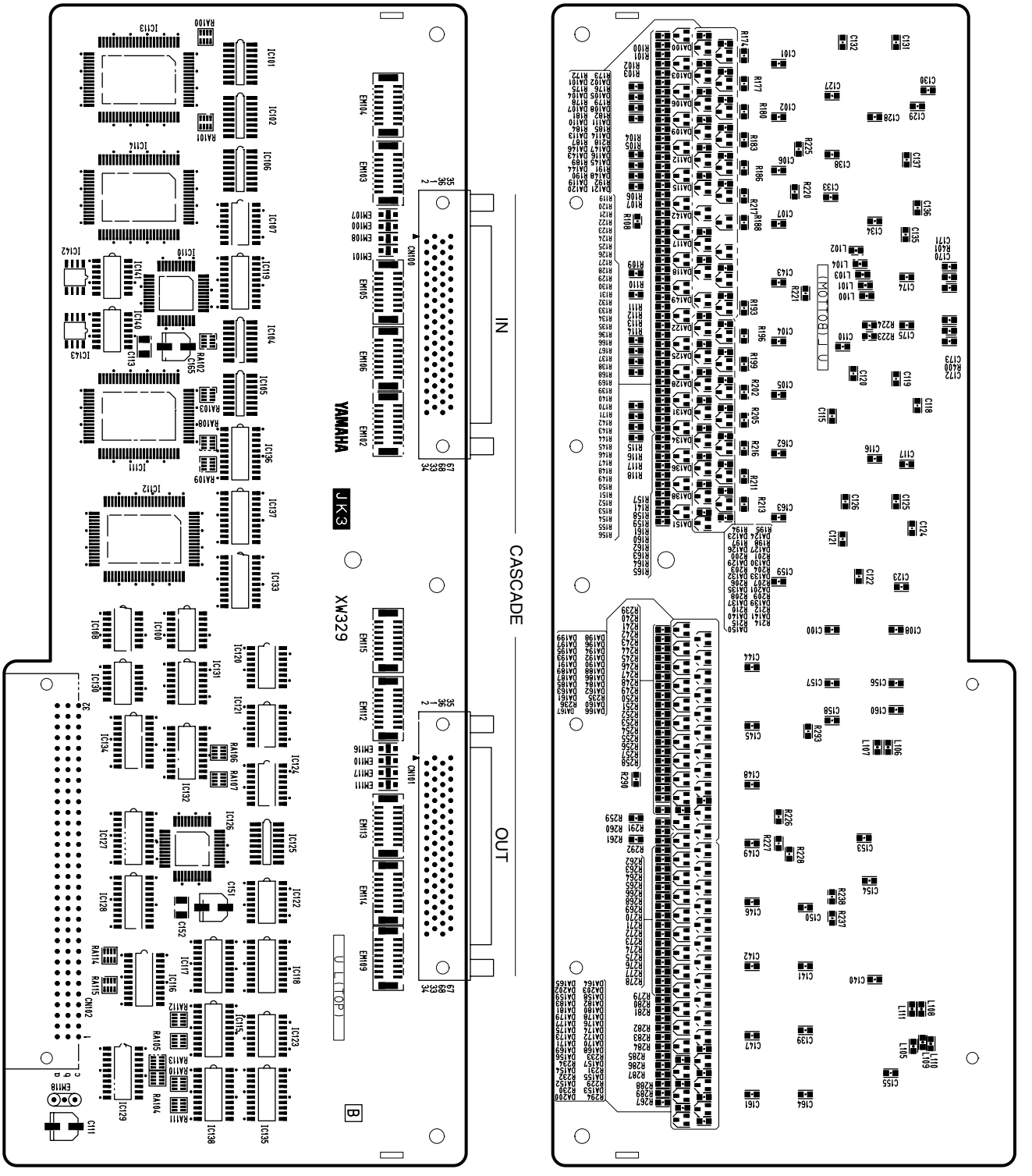
● JK1 Circuit Board



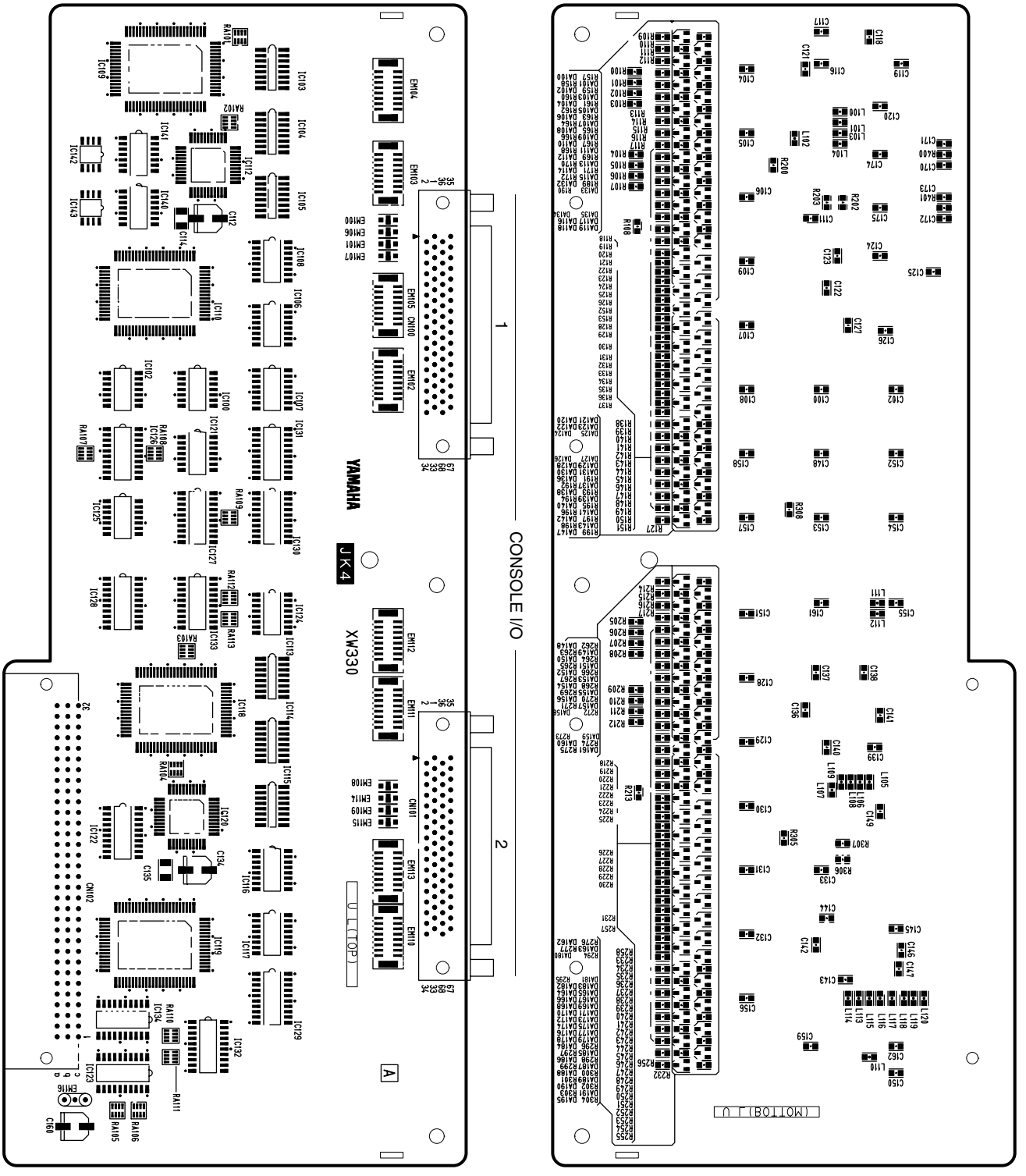
● JK2 Circuit Board



● JK3 Circuit Board



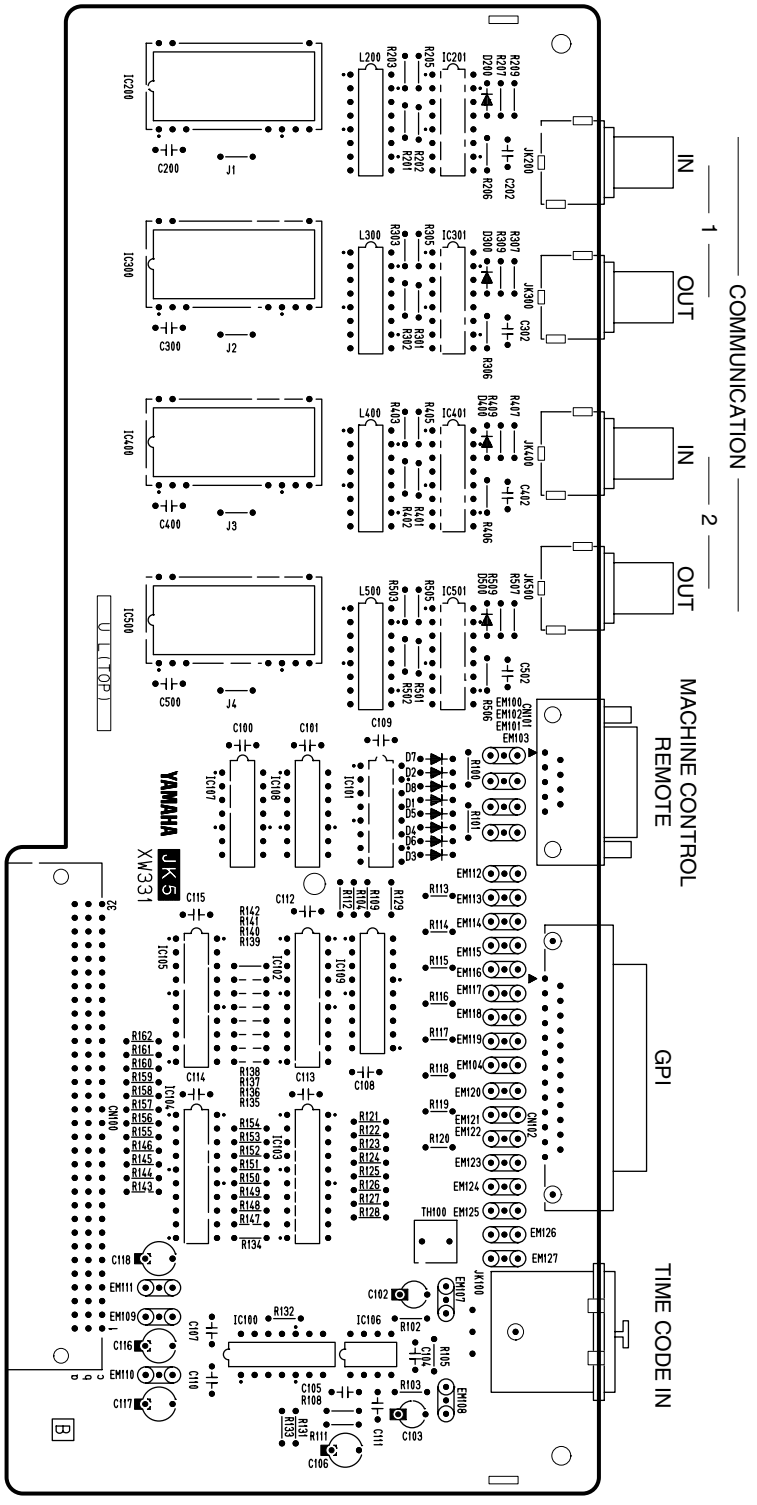
● JK4 Circuit Board



Component side

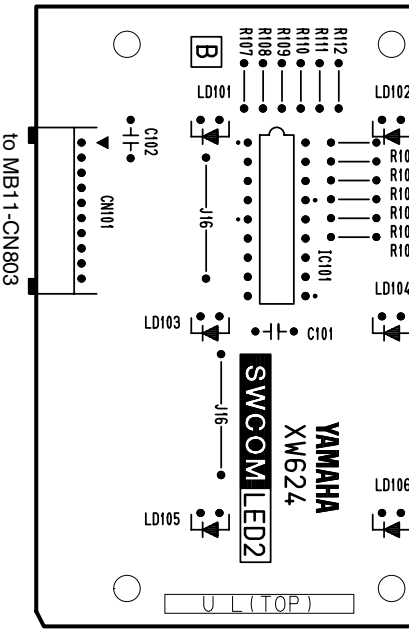
Pattern side

● JK5 Circuit Board



Component side

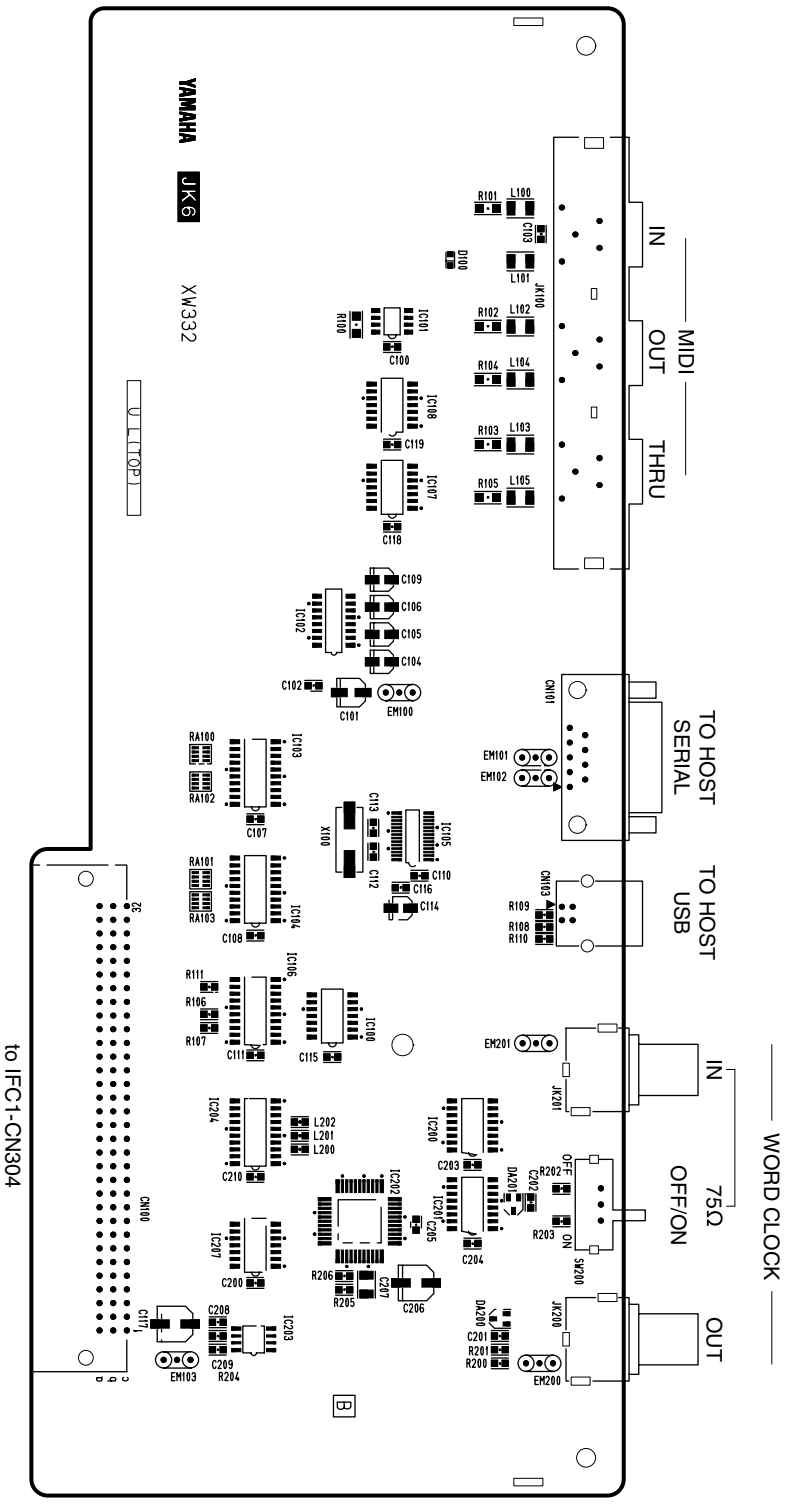
● LED2 Circuit Board



Component side

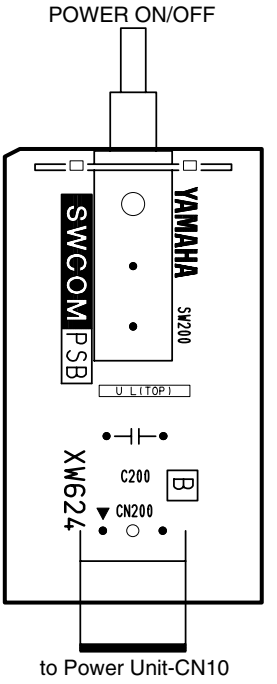
JK5: 3NA-V410530 ⚠3
LED2: 3NA-V505000 ⚠1

● JK6 Circuit Board



Component side

● PSB2 Circuit Board



Component side

JK6: 3NA-V410540⚠2
PSB2: 3NA-V505000⚠1

■ INSPECTION

1. Range of Application

These specifications apply to the DSP1D and DSP1D-EX.

2. Preparations

2-1. Conditions

◇ For details on the connection method, refer to the Test Program Specifications KES-92651.

◇ The function generator used for inspection must be the Sony Tektronix AFG310 or equivalent. When using the AFG310, the settings are as follows.

FUNC :PULS
MODE :CONT
MODUL :OFF
AMPL :1.800
OFFSET :0.900

◇ Unless otherwise specified, the conditions are as follows.

· The function generator BNC output is connected to WORD CLOCK IN (BNC).

· Set WORD CLOCK IN to 75 Ω.

2-2. Loading the Firmware

The firmware used must be the "DSP1D Firmware" (managed with the already drawn CD-R assembly drawing (3JL-XY714A0)) of the PM1D System Software with a version later than the version shown on the cover. For details on the firmware writing method, refer to theTest Program Specifications KES-92652.

2-3. Test Program

For details on the starting method etc., refer to the Test Program Specifications KES-92651.

2-4. Jigs

The altered jigs and cable circuit diagram are shown from Page 47 of the Test Program Specifications KES-92651.

3. Inspection

3-1. Inspection with Test Program

· Inspect based on the Test Program Specifications KES-92651.

3-2. Jitter Measurement

· Connect the jitter meter to the WORD CLOCK OUT terminal.

· Set the function generator to 48 kHz and 44.1 kHz, connect to WORD CLOCK IN, and measure the jitter with the jitter meter.

	Range of tolerance
48 kHz	6 ns max.
44.1 kHz	5 ns max.

3-3. Fan Operation Check

· Check that the fan rotates while the power is on.

3-4. Sound

· For the connections and settings, refer to the Test Program Specifications.

(1) Fs = 50.976 kHz (48 kHz + 6.2 %)

· Set the function generator to 50.976 kHz.

· Test listen for 30 seconds and verify that there is no noise.

(2) Fs = 39.69 kHz (44.1 kHz -10 %)

· Set the function generator to 39.69 kHz.

· Test listen for 30 seconds and verify that there is no noise.

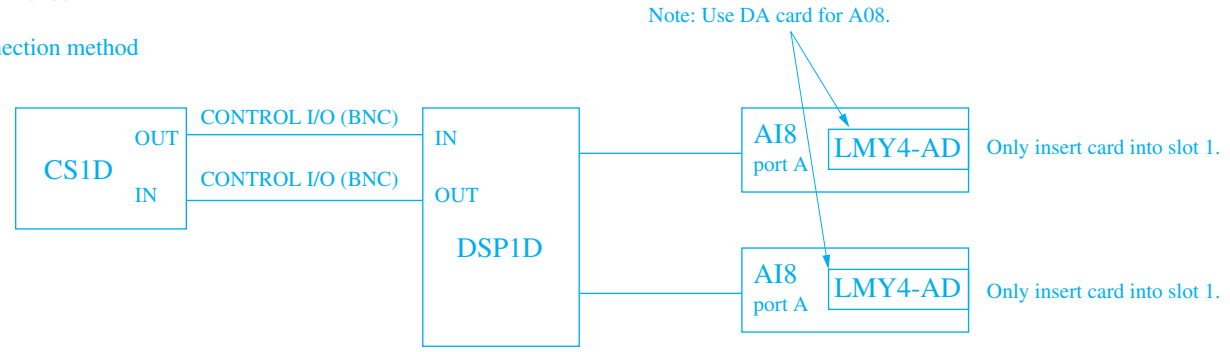
4. Factory Settings

· Rear panel.

WORD CLOCK IN 75 Ω: ON

3-4. System check

3-4-1. Connection method



With the connections as shown above, check that the unit and card are properly displayed in the system connection screen.

Inspection method

As with AI8 input 1,2,3,4 . . . sequentially connect A08 as well in upper/lower pairs for output 1,2,3,4.. . and the LCD display each time for 90 seconds.
Also, with the exception of the pop-up screen that appears after the connection is made, make sure there are no other changes to the screen.
It is also acceptable to connect all units simultaneously and check for 90 seconds.

TEST PROGRAM

A. Preparations for Inspection

This equipment requires firmware. When there are changes to the manufacturing processes and program for this equipment, it is necessary to write the new firmware to FlashRom from a PC. The software used and firmware used and their version numbers and concrete details of the writing method are shown below.

•PM1DLOAD installation

First, it is necessary to install in the PC the dedicated software for writing the firmware. For the installation method, refer to the CS1D Test Program Specifications.

Software used:	PM1DLOAD within PM1D system software
Version used:	Files composed using a PM1D SYSTEM SOFTWARE with a version later than the version shown on the cover. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0.)

•Writing the firmware

The sheets that require firmware downloading are CIB (the 2CPU portion of E_TUC/E_HIF), EMB (the 2CPU portion of EMU/UIF), PDB, GDB, IDB (the 2CPU portion of DSP1D-EX), and EDB.
Below is the firmware used. Detailed procedures are on the following pages.

Firmware used:	DSP1D firmware in PM1D system software
Version used:	Files composed using a PM1D SYSTEM SOFTWARE with a version later than the version shown on the cover. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0.)

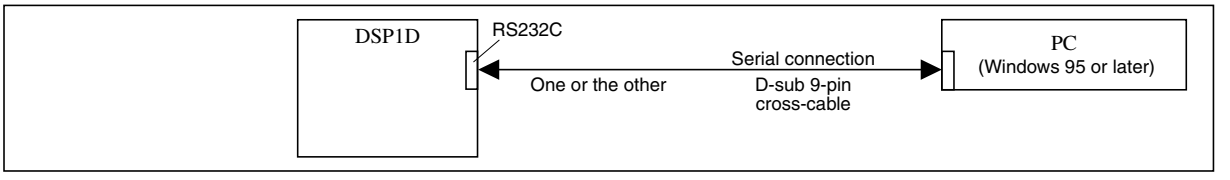
* If PM1DLOAD has been installed according to the instructions in the CS1D Test Program Specifications, the version for the firmware above is taken care of and there is no need to worry about it.

	Firmware name	Sheet name	Connection number for writing firmware independently
1	EMU	EMB	CN104
2	E_TCU	CIB	CN105
3	E_HIF		CN107
4	UIF	EMB	CN105
5	PDB	PDB	CN100
6	GDB	GDB	CN100
7	IDB1	IDB (1st sheet)	CN100
8	IDB2	IDB (2nd sheet)	CN100
9	EDB	EDB	CN100

"Firmware" and "subject sheet and subject connector" correspondence table

•Method for writing firmware using the DSP1D RS232C port

* It is possible to write the CPU firmware from the PC via the RS232C port. This is the method normally used.



1. Install and set PM1DLOAD with the method given in the CS1D Test Program Specifications.
2. At the very least, connect as shown in the figure above (when DSP1D). If it is not possible to avoid making signal connections other than these, turn off the power supply for all components other than those relevant to the write object and turn off the control power supply for the volume of other components such as speakers and amplifiers.
3. Use the methods shown in the CS1D Test Program Specifications to write the DSP1D firmware. You can check the status of the LEDs on each sheet. Refer to the following chart.
   After writing, confirm that the firmware for all CPUs has become the target version.

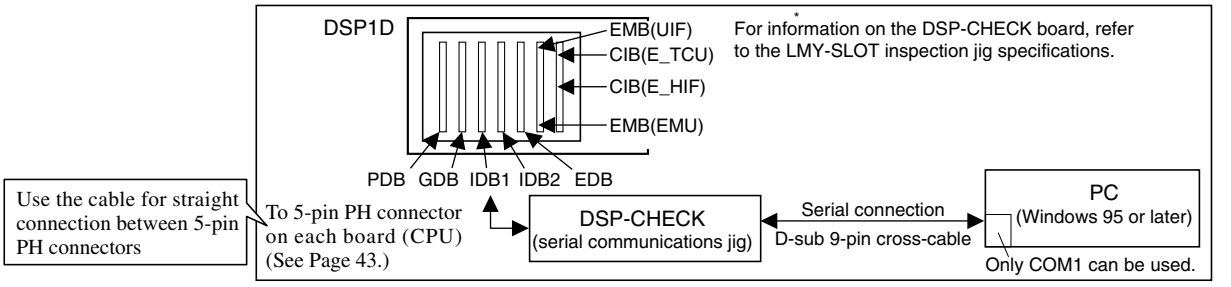
For PDB, GDB, IDB1, IDB2, and EDB	
MONI-4 flashing	Program not yet written
MONI-4 lit up	Program writing complete Program writing enabled
LED other than MONI-4 flashing or lit up	Program writing complete Program writing inhibited
All LEDs out	Board defect possible

For CIB, EMB	
LED flashing	Program not yet written
LED lit up	Program writing complete Ready for program writing
LED off	Program writing complete Not ready for program writing

Corresponding LEDs { CIB (E_TCU: LD101, E_HIF: LD102)
EMB (EMU: LD101, UIF: LD102)

•Method for writing firmware directly to each sheet

* When there is some kind of problem and the firmware can not be written with the method on the previous page, use the method below.



1. Install and set PM1DLOAD with the method given in the CS1D Test Program Specifications.
2. Remove the DSP1D front panel.
3. Remove all the CPU boards except the one on which you want to write PDB. (When writing to PDB, leave only that board.)
4. Connect the D-sub 9-pin serial cables (cross) and DSP-CHECK board between the 5-pin connector for the target board and the PC. At this time, do not connect other signal lines.

• For PDB, GDB, IDB1, IDB2, and EDB

5. Short Pin 1 of the target CPU directly to ground.
6. With the connections still as in 4., switch on the power for the DSP1D. If the LED darkens momentarily, you can remove the short.
7. Check that the LED on the board is lit or flashing, indicating that the system is ready for writing. (See the previous page.)
8. After starting PM1DLOAD, select CardDirect with MODE SELECT, then press OK.
   Use the setup menu to set the serial port. (The connection port is ignored and remains as is.)
9. Select DSP1D from the pull-down menu.
10. Select the desired firmware, then press the Write button. (See Page 43.)
11. After writing ends, end PM1DLOAD.
12. Switch off DSP1D. Remove the PH connector, then switch the power for DSP1D on again and check that it starts up normally.

• For EMB, CIB

5. Switch on the power for the DSP1D.
6. Check that the LED on the board is lit or flashing, indicating that the system is ready for writing. (See the previous page.)
7. After starting PM1DLOAD, select CardDirect with MODE SELECT, then press OK.
   Use the setup menu to set the serial port. (The connection port is ignored and remains as is.)
8. Select DSP1D from the pull-down menu.
9. Select the desired firmware, then press the Write button. (See Page 43.)
10. After writing ends, end PM1DLOAD.
11. Switch off DSP1D. Remove the PH connector, then switch the power for DSP1D on again and check that it starts up normally.

•PM1D inspection PC software preparation

Inspection with this device uses special PC software for inspection.
The software used, version and installation method is shown below.

Firmware used:	PM1D inspection PC software in PM1D system software
Version used:	Files composed using a PM1D SYSTEM SOFTWARE with a version later than the version shown on the cover. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0.)
Method of preparation:	Follow the instructions in the CS1D test program specifications (Drawing No: KES-92654) titled "Procedure for extracting software groups for production and customer service applications". Once the files have been extracted, refer to the Readme.txt in the FactoryDiag directory.

* The operating systems supported are Windows 95/98.
* USB inspection is only supported in Windows 98. (Windows 98 Second Edition is not supported yet.)

Refer to version.txt in the same directory as the firmware on Page 43 and input the version character string exactly as given there. (For details on the input positions, refer to the "PM1D Inspection PC Software Summary" given later in this document.)

•Installing the USB driver for inspection

This equipment has a USB terminal. Therefore, it is necessary to install the USB driver for inspection in the inspection PC. The files used are included in the above PM1D inspection PC software, so install with the following procedure.

1. For the PM1D inspection PC software, start 16. DSP1D-JK6, LED2 Test.
2. When the pop-up box for connecting the USB cable is displayed, connect the USB cable.
3. After a short while, the system asks you to specify the driver. Specify the directory containing the PM1D inspection PC software.
4. The installation proceeds as indicated by the OS.
5. After installation is complete, press the OK button on the pop-up box that came up in 2.
6. If inspection is OK, the installation has completed normally.

* The only operating system supported is Windows98. The USB driver can not be used with Windows 98 Second Edition.
* The USB port is only activated in the state in 2. Beware. If you insert the USB cable in any other state, it is not correctly recognized by the PCS1De and the wrong driver is installed.
* Once the driver has been installed, the above procedure is not necessary for USB tests.
* This driver is only for inspection. It does not add the DSP1D USB function.
* The CS1D inspection USB driver must be installed separately.
  (There are two types of USB drivers for detection for DSP1D and CS1D.)

B. Inspection Method

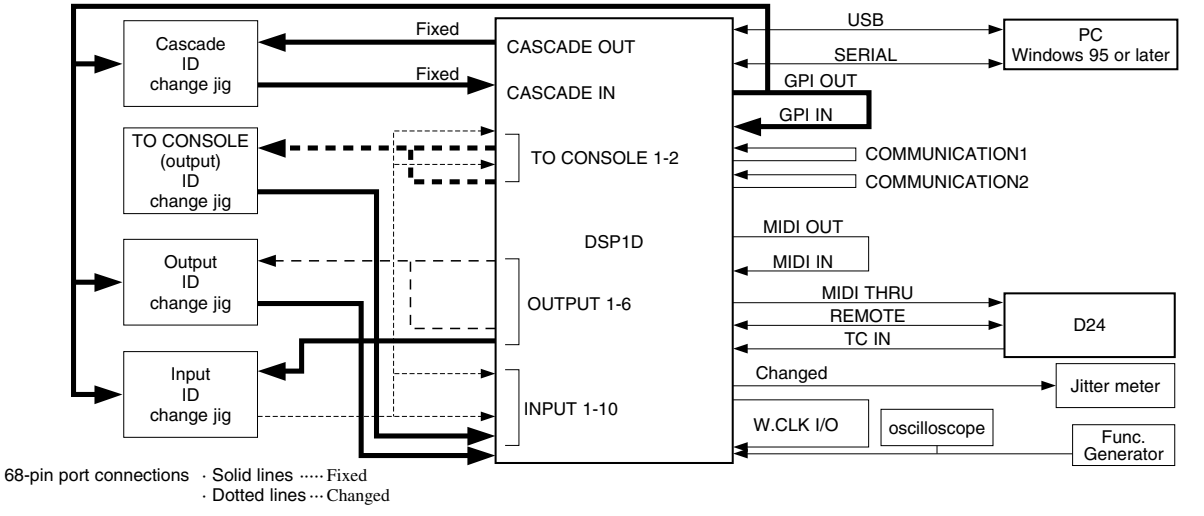
The inspection items are given below. Except for 17., these items are inspected using the PM1D inspection PC software. For details on each item, see from Page 49 on.

No.	Items	
1	CIB Test	1-1. TCU 1-2. HIF 1-3. CIF
2	EMB Test	2-1. EMU 2-2. UIF
3	IFC Test	
4	PDB Test	4-1. CPU 4-2. DSP6 4-3. DSP5
5	GDB Test	5-1. CPU 5-2. DSP6 5-3. DSP5
6	IDB1 Test	6-1. CPU 6-2. DSP6 6-3. DSP5
7	IDB2 Test	7-1. CPU 7-2. DSP6 7-3. DSP5
8	EDB Test	8-1. CPU 8-2. DSP6

No.	Items	
9	Connection test	9-1. PDB 9-2. GDB 9-3. IDB1 9-4. IDB2 9-5. EDB
10	JK1 (INPUT x) Test	10-1. INPUT 1 : 10-10. INPUT 10
11	JK4 (TO CONSOLE x) INPUT Test	11-1. TO CONSOLE 1 11-2. TO CONSOLE 2
12	JK2 (OUTPUT x) Test	12-1. OUTPUT 1 : 12-6. OUTPUT 6
13	JK4(TO CONSOLE x) OUTPUT Test	13-1. TO CONSOLE 1 13-2. TO CONSOLE 2
14	JK3 (CASCADE) Test	
15	JK5 Test	
16	JK6 , LED2 Test	
17	All-group sound inspection (Inspects using DSP1D sound inspection data. See Page 49.)	

C. Inspection Using PM1D Inspection PC Software

Except for the all-group sound test, the inspections use the PM1D inspection PC software to control the DSP1D and the inspection is carried out autonomously. The inspection configuration diagram is as follows.



For details on inspecting with this software, see from Page 49 on.
Locations with instructions for changes have instructions for that inspection item in the PC software, so change the connections according to the instructions.
(* Even if the system is the DSP1D not the DSP1D-EX, inspect with IDB2 inserted for the bus check.)

D24 setting method

For time code output, insert an MO disc (song data or the like) that can idle as long as possible. Also, switch On MMC Receive on the Utility menu and set TC Select to Serial IN on the Setup menu.

W. CLK connection method

In the 16 JK6 inspection, it is necessary to change the BNC cable. The connection method is as follows.

JK6-W.CLK inspection sub-item	Connection method
IN 48 kHz + 6 % IN 44.1kHz - 10 %	W.CLK In ····· Connect the function generator and output the clocks. W.CLK Out ····· No need to connect
Jitter 48 kHz Jitter 44.1 kHz	W.CLK In ····· Connect the function generator and output the clocks. W.CLK Out ····· Connect the jitter meter and measure.
DIR2	The same a jitter 44.1 khz connection.
IN/OUT	Loopback connection between W.CLK Out and W.CLK In

68-pin port connection method table

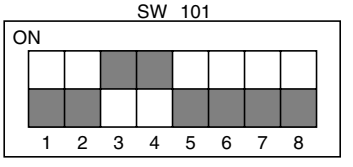
* Since the input and output functions are inspected separately for TO CONSOLE, there are two connection methods.

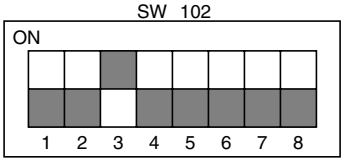
Inspection item	Necessary jig	ID change jig connection method	
		From left side (CN103)	From right side (CN102)
10. INPUT 1-10	Input ID change jig	To INPUT 1-10	To OUTPUT x
11. TO CONSOLE (INPUT) 1-2		To Console 1-2	
12. OUTPUT 1-6	Output ID change jig	To INPUT x	To OUTPUT 1-6
13. TO CONSOLE (OUTPUT) 1-2	Altered ID change jig just for TO CONSOLE (OUTPUT)	Connected TO CONSOLE 1-2 and INPUT; no polarity.	
14. CASCADE IN/OUT	Cascade ID change jig	To CASCADE IN	To CASCADE OUT

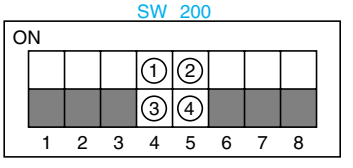
ID change jig DIP switch settings

* There are three special 68-pin port ID change jigs (for INPUT, OUTPUT, and CASCADE) but these are the same jig with just the DIP switch settings changed. In other words, you can work with just one ID change inspection jig by changing the DIP switch settings appropriately. For information on the ID change jig, refer to the LMY-SLOT inspection jig specifications.

Input ID change jig
[INPUT 1-10]
[TO CONSOLE (INPUT)]



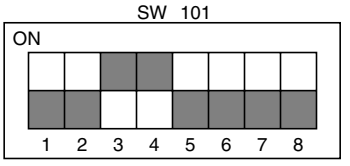


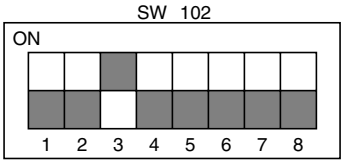


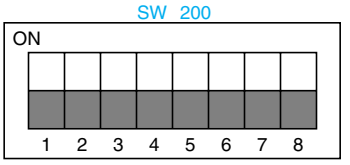
① MSB/LSB Line = Has been fixed at the low level.
② MSB/LSB Line = Has been set as by pull amp as is.
③ 2CH/4CH Line = Has been fixed at the low level.
④ 2CH/4CH Line = Has been set as by pull amp as is.

In each inspection item, if there are instructions to drop to the low level, set the relevant switches to ON.

Output ID change jig
[OUTPUT 1-6]



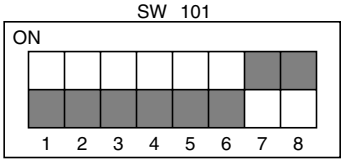


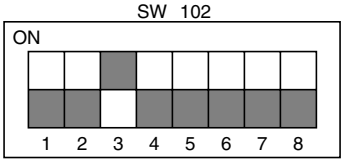


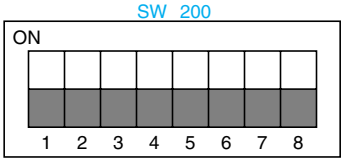
TO CONSOLE (OUTPUT)
ID change jig
[TO CONSOLE (OUTPUT)]

The ID is not inspected at TO CONSOLE (OUTPUT), so the DIP switch settings do not matter. Connect the altered ID change jig just for TO CONSOLE (OUTPUT). (Refer to drawing control number 8B87E (AI8) LMY-SLT detection jig specification (ID conversion jig circuit drawing) for the method of revision.

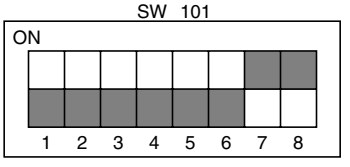
Cascade ID change jig
[for CASCADE IN check]

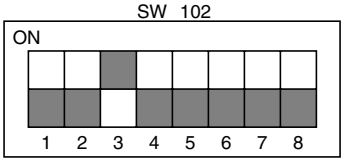


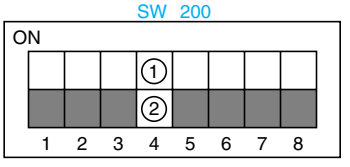




Cascade ID change jig
[for CASCADE OUT check]







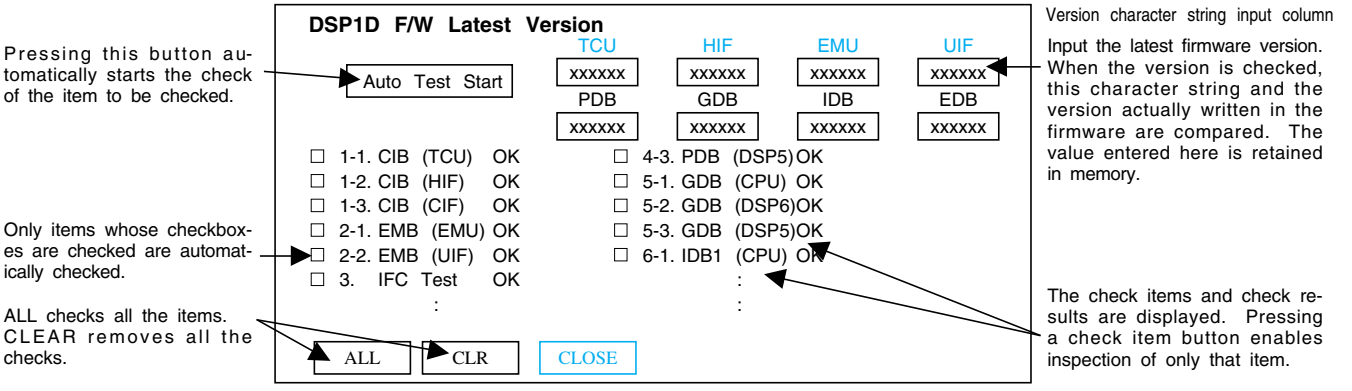
① MSB/LSB Line = Has been fixed at the low level.
② MSB/LSB Line = Has been set as by pull amp as is.

In each inspection item, if there are instructions to drop to the low level, set the relevant switches to ON.

PM1D inspection PC software summary

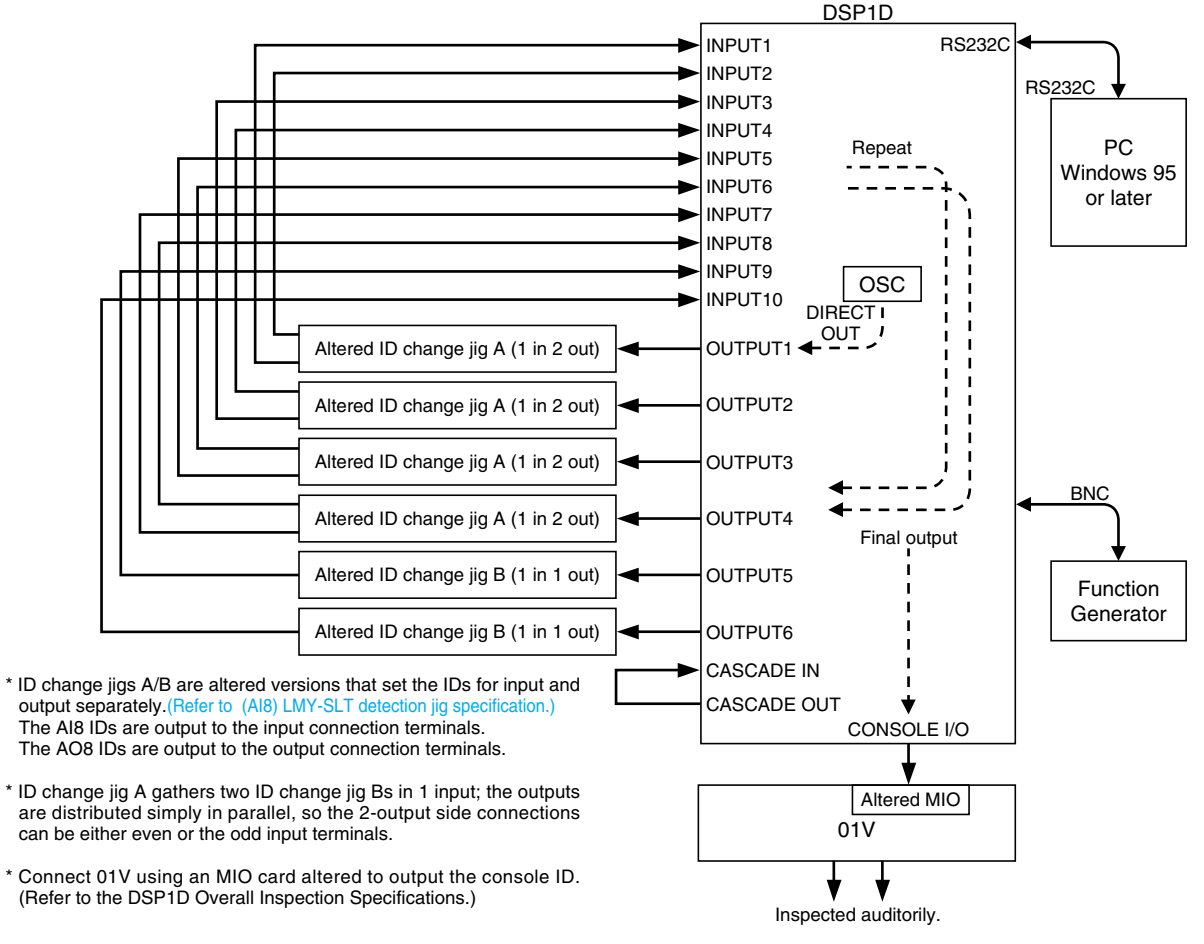
Except for Item 17., the PM1D is inspected using PC inspection software. This inspection software is common for AI8/AO8/DSP1D/CS1D.
For details on the basic operation methods, menu screen specifications, etc., refer to the CS1D Test Program Specifications.

The DSP test menus are shown below.
Before the inspection, the latest version of each piece of DSP1D software must be input. (This is necessary for the version check.)
For the version character string to be input, refer to version.txt in the same directory as the DSP1D firmware.
The following pages give details on each check item and how the PC software handles it.



D. All-Group Sound Inspection

After all the inspections were carried out with the PM1D inspection PC software, the sound inspection is carried out.
After making the connections as in the diagram below, inspect with the procedure given from the next page on. Note that the altered ID change jigs A/B are separate from the dedicated TO CONSOLE (OUTPUT) altered ID change jig. (If multiple ID change jigs can be not be made available, substitute with the method given later in this document.)



* ID change jigs A/B are altered versions that set the IDs for input and output separately.(Refer to (AI8) LMY-SLT detection jig specification.)
The AI8 IDs are output to the input connection terminals.
The AO8 IDs are output to the output connection terminals.

* ID change jig A gathers two ID change jig Bs in 1 input; the outputs are distributed simply in parallel, so the 2-output side connections can be either even or the odd input terminals.

* Connect 01V using an MIO card altered to output the console ID. (Refer to the DSP1D Overall Inspection Specifications.)

•Method using six altered ID change jigs (This is the method normally used.)

1. Refer to the following preparation methods and prepare the software version to be used.
2. Follow the connection drawing on page 47 and supply the clock from the function generator. Refer to the DSP1D overall inspection specifications for the frequency settings.
3. Execute PM1D.EXE in the prepared folder. (The basic usage of PM1D.EXE is the same as the CS1D screen software.Accordingly, refer to the software version of the CS1D operation manual.)

Data used:	DSP1D sound inspection software within PM1D system software
Version used:	Files composed using a PM1D SYSTEM SOFTWARE with a version later than the version shown on the cover. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0.)
Method of preparation:	Follow the instructions in the CS1D test program specifications (Drawing No: KES-92654) titled "Procedure for extracting software groups for production and customer service applications". Once the files have been extracted, refer to the Readme.txt in the SoundDiag directory.

4. Set ENGINE A to W.CLOCK IN with SYS/W.CLOCK - WORD CLOCK.
5. Set OSC OUT to 1AO8:1-1 with MON/CUE - OSCILLATOR, set ON. OSC to IN, then adjust the level.
6. Recall SCENE 00.1: SOUND THRU1 with SCENE - MEMORY.
7. Set the switch for the altered MIO connected to 01V to ST.
8. Check the audio through 01V.
9. Set the switch for the altered MIO connected to 01V to ST.
10. Check the audio through 01V.

•Method using only one altered ID change jig

1. As shown on page 47, connect all components other than the ID conversion jig and supply the clock from the function generator. Refer to the DSP1D overall inspection specifications for the frequency settings.
2. Connect an altered ID change jig to INPUT 1 and 2 and OUTPUT 1.
3. In the same manner as the previous page, prepare the software for inspecting DSP1D sound for the version to be used and from it, execute PM1D.EXE. (The basic usage of PM1D.EXE is the same as the CS1D screen software. Accordingly, refer to the software version of the CS1D operation manual.)
4. Set ENGINE A to W.CLOCK IN with SYS/W.CLOCK - WORD CLOCK.
5. Set OSC OUT to 1AO8:1-1 with MON/CUE - OSCILLATOR, set ON. OSC to IN, then adjust the level.
6. Recall SCENE 00.1: SOUND THRU1 with SCENE - MEMORY.

*1 {
7. Set the switch for the altered MIO to ST and check the audio through 01V.
8. Set the switch for the altered MIO to MON and check the audio through 01V.

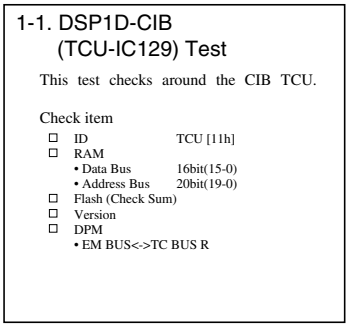
9. Recall SCENE 00.2: SOUND THRU2 with SCENE - MEMORY. Check that the audio goes off.
10. Change the input side connections only to INPUT 3 and 4.
11. Repeat *1.
12. Recall SCENE 00.3: SOUND THRU3 with SCENE - MEMORY. Check that the audio goes off.
13. Change the input side connections only to INPUT 5 and 6.
14. Repeat *1.
15. Recall SCENE 00.4: SOUND THRU4 with SCENE - MEMORY. Check that the audio goes off.
16. Change the input side connections only to INPUT 7 and 8.
17. Repeat *1.
18. Recall SCENE 00.5: SOUND THRU5 with SCENE - MEMORY. Check that the audio goes off.
19. Change the input side connections only to INPUT 9 and 10.
20. Repeat *1.
21. Set OSC OUT to 2AO8:1-1.
22. Change the output side connection only to OUTPUT 2. (The INPUT remains 9 and 10 and the scene 00.5.)
23. Repeat *1.
24. Set OSC OUT to 3AO8:1-1.
25. Change the output side connection only to OUTPUT 3.
26. Repeat *1.
27. Set OSC OUT to 4AO8:1-1.
28. Change the output side connection only to OUTPUT 4.
29. Repeat *1.
30. Set OSC OUT to 5AO8:1-1.
31. Change the output side connection only to OUTPUT 5.

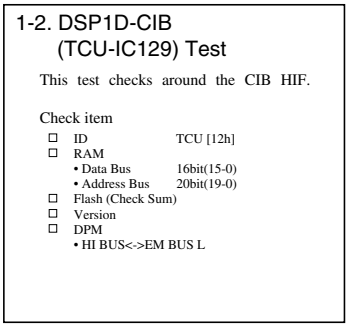
32. Repeat *1.
33. Set OSC OUT to 6AO8:1-1.
34. Change the output side connection only to OUTPUT 3.
35. Repeat *1.

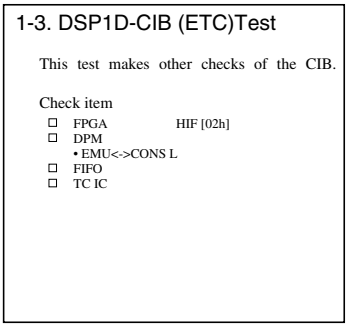
1. DSP1D-CIB Test

This test checks the DSP1D-CIB. It checks the following items. Those items for which there are figures display the results in binary. Detailed screen output specifications are given on the following pages.
The details for 1-2. are omitted because they are the same as for 1-1.

* For the DPM (dual port RAM) item, EM BUS <-> TC BUS R etc. is written. This indicates which of the DPM buses is inspected. For example, for EM BUS <-> TC BUS R, this indicates the check of the TC BUS side seen from the DPM (right side for the DPS BUS <-> CM BUS notation).

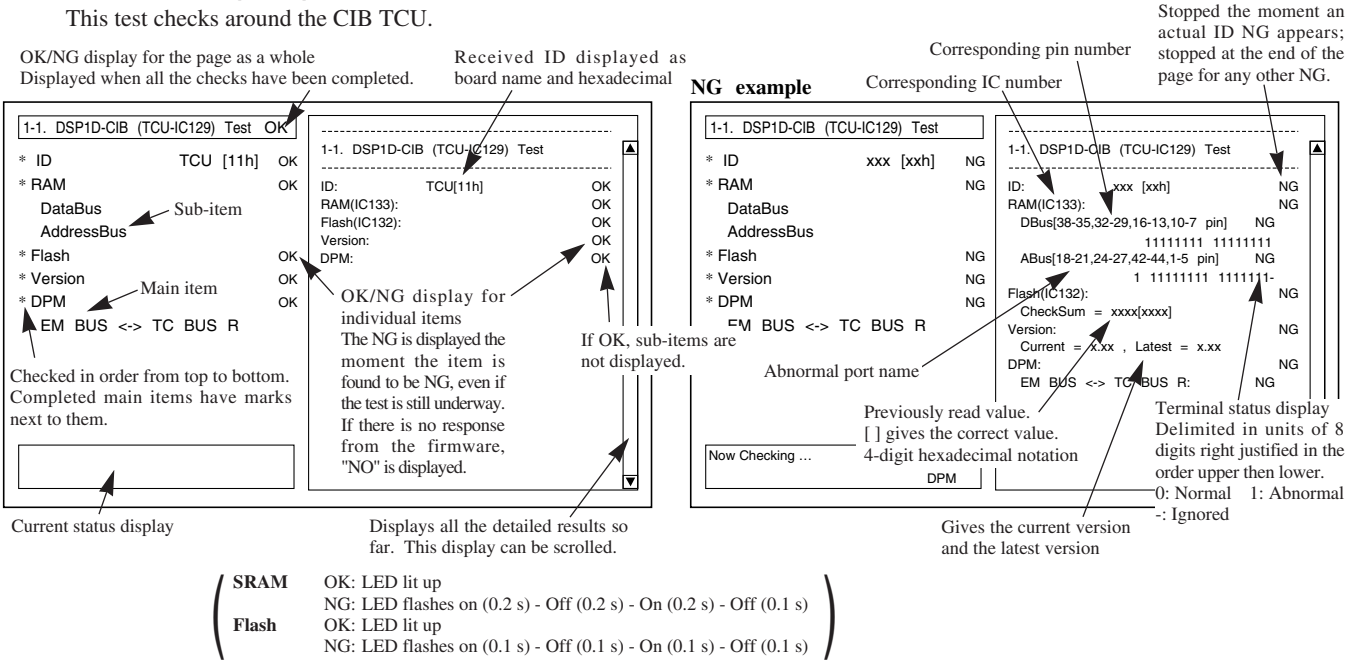






1-1. DSP1D-CIB (TCU) Test

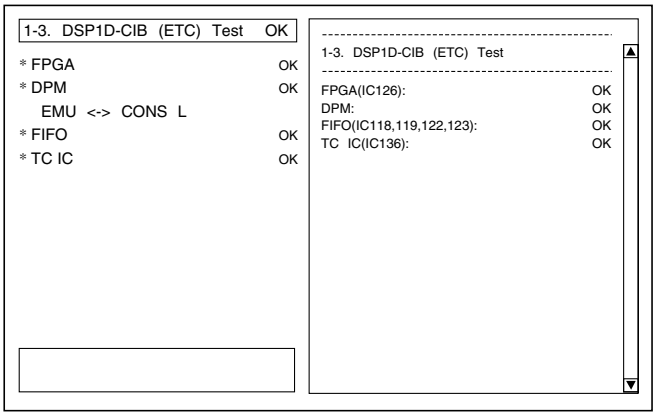
This test checks around the CIB TCU.



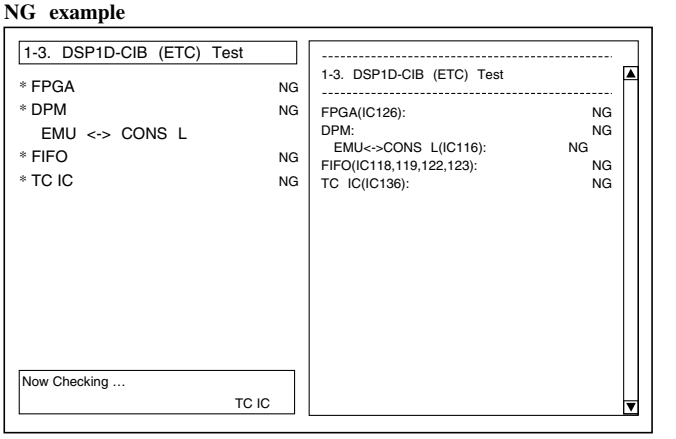
SRAM OK: LED lit up
NG: LED flashes on (0.2 s) - Off (0.2 s) - On (0.2 s) - Off (0.1 s)
Flash OK: LED lit up
NG: LED flashes on (0.1 s) - Off (0.1 s) - On (0.1 s) - Off (0.1 s)

1-3. DSP1D-CIB (ETC) Test

This test checks around the CIB ETC.



NG example



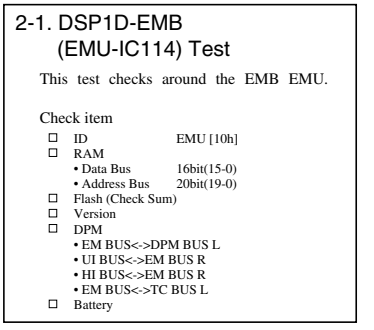
SRAM OK: LED lit up
NG: LED flashes on (0.2 s) - Off (0.2 s) - On (0.2 s) - Off (0.1 s)

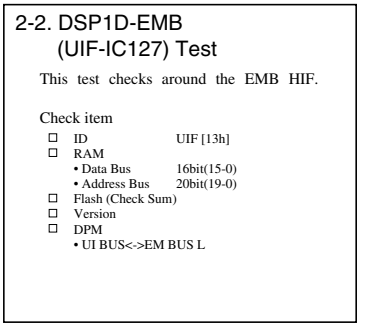
Flash OK: LED lit up
NG: LED flashes on (0.1 s) - Off (0.1 s) - On (0.1 s) - Off (0.1 s)

2. DSP1D-EMB Test

This test checks the EMB. It checks the following items. Those items for which there are figures display the results in binary. Detailed screen output specifications are given on the following pages.

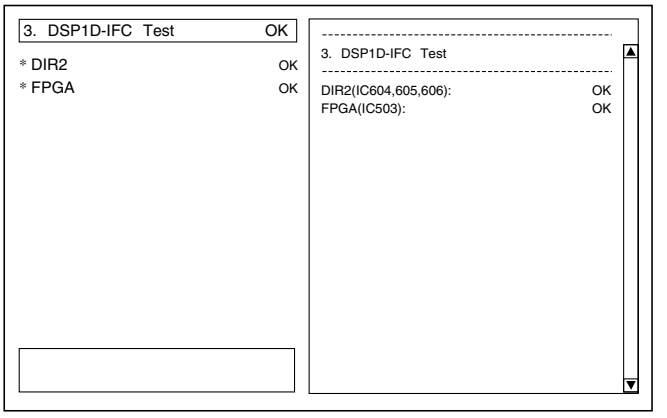
The battery check item is only for 2-1. Here the voltage is checked and if it is within the correct range, OK is displayed. If it is NG, how far it deviates from the correct value is displayed.



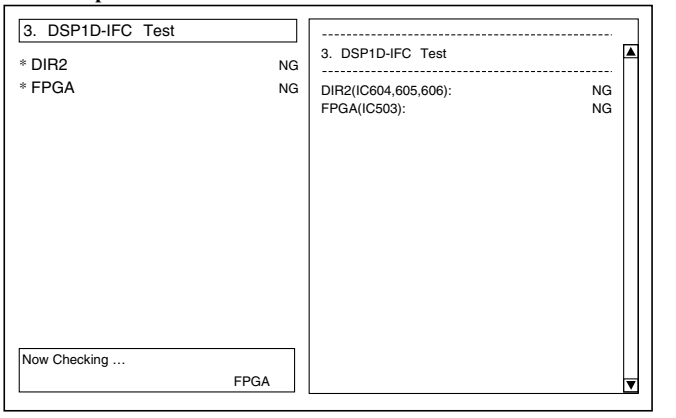


3. DSP1D-IFC (TCU) Test

This test checks the IFC board.



NG example



4. DSP1D-PDB Test

This test checks the DSP1D-PDB. It checks the following items. Those items for which there are figures display the results in binary. Detailed screen output specifications are given on the following pages.

DSP6 total count ···· 9
DSP5 total count ···· 11

4-1. DSP1D-PDB (CPU-IC101) Test

This test checks around the PDB CPU.

Check item

- ☐ ID PDB [14h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 16bit(16-1)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • Data Bus 16bit(15-0)
  - • Address Bus 15bit(15-1)

4-2. DSP1D-PDB (DSP6) Test

This test checks around PDB DSP6.

Check item

- ☐ Chip Select
- ☐ DSP6 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus 7bit(7-1)
- ☐ DSP6 <-> DRAM
  - • Data Bus 32bit(31-0)
  - • Address Bus 10bit(9-0)
- ☐ DSP6 -> DSP6
  - • Serial I/O

4-3. DSP1D-PDB (DSP5) Test

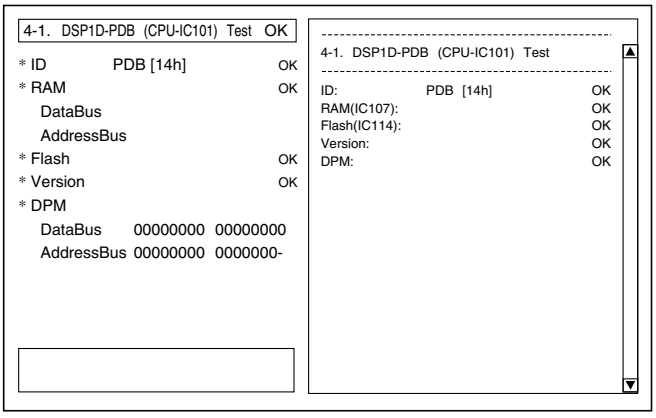
This test checks around PDB DSP5.

Check item

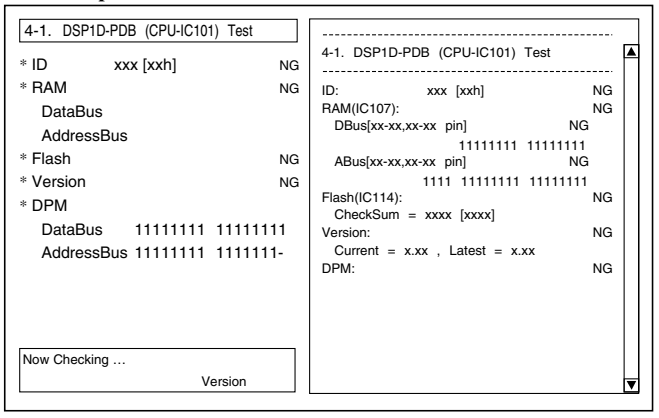
- ☐ Chip Select
- ☐ DSP5 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus
- ☐ DSP6 -> DSP5
  - • Serial I/O
- ☐ DSP5 -> DSP6
  - • Serial I/O
- ☐ DPM
  - • Serial I/O
  - • ParallelI/O 32bit(31-0)

4-1. DSP1D-PDB (CPU-IC101) Test

This test checks around the PDB CPU.



NG example



SRAM OK: LED lit up
NG: LED flashes on (0.2 s) - Off (0.2 s) - On (0.2 s) - Off (0.1 s)

Flash OK: LED lit up
NG: LED flashes on (0.1 s) - Off (0.1 s) - On (0.1 s) - Off (0.1 s)

4-2. DSP1D-PDB (DSP6) Test

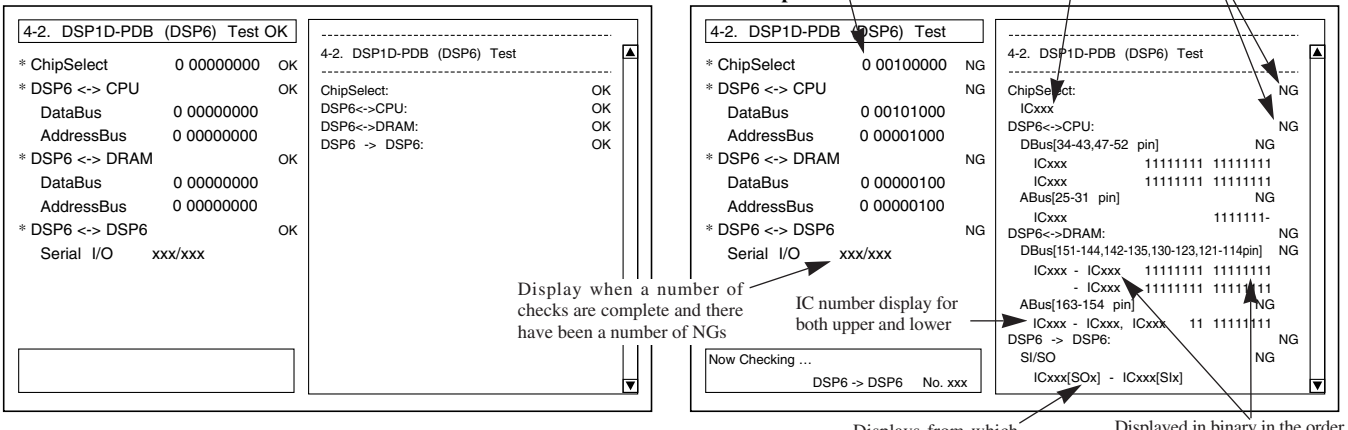
This test checks around PDB DSP6.

The DSP check results are displayed for each DSP. The DSPs are displayed in order from the right of the ChipSelect signals on the circuit diagram.
(Blank: Not yet checked; 0: Normal; 1: Abnormal; N: No response)

Stopped the moment an actual Chip Select or TxB NG appears; stopped at the end of the page for any other NG.

Gives the abnormal DSP IC number.

NG example



Display when a number of checks are complete and there have been a number of NGs

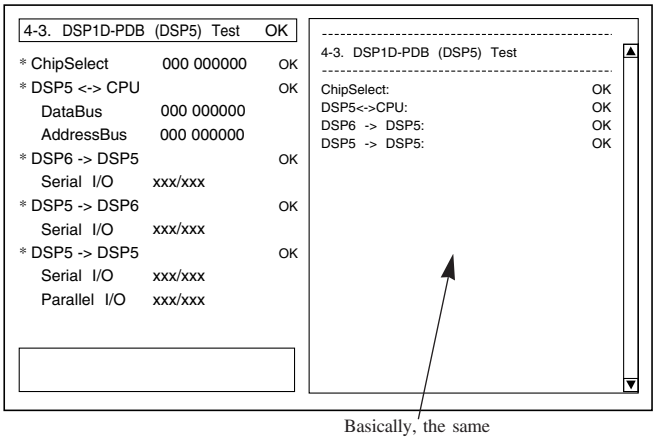
IC number display for both upper and lower

Displays from which SO to which SI is NG.

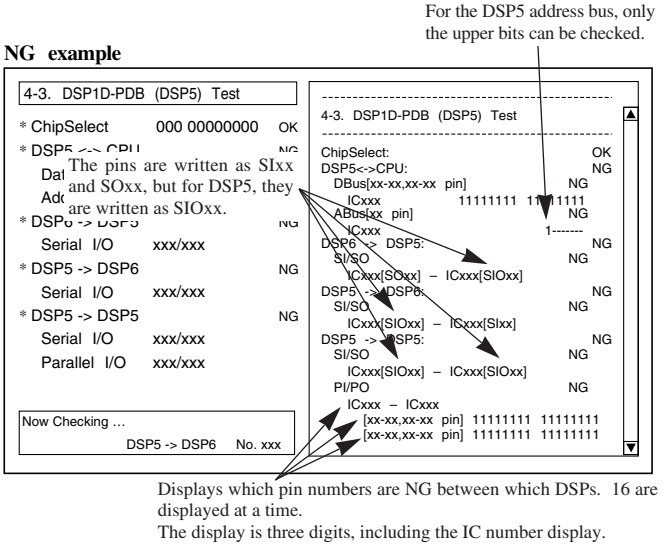
Displayed in binary in the order Upper: 16 bits, Lower: 16 bits
The corresponding DRAM IC number is also displayed.

4-3. DSP1D-PDB (DSP5) Test

This test checks around PDB DSP6.



NG example



5. DSP1D-GDB Test

This test checks the GDB. It checks the following items. The specifications are basically the same as for 4-1. through 4-3.

DSP6 total count ···· 13

DSP5 total count ···· 7

5-1. DSP1D-GDB (CPU-IC100) Test

This test checks around the GDB CPU.

Check item

- ☐ ID GDB [15h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 16bit(16-1)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • Data Bus 16bit(15-0)
  - • Address Bus 15bit(15-1)

5-2. DSP1D-GDB (DSP6) Test

This test checks around GDB DSP6.

Check item

- ☐ Chip Select
- ☐ DSP6 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus 7bit(7-1)
- ☐ DSP6 <-> DRAM
  - • Data Bus 32bit(31-0)
  - • Address Bus 10bit(9-0)
- ☐ DSP6 -> DSP6
  - • Serial I/O

5-3. DSP1D-GDB (DSP5) Test

This test checks around GDB DSP5.

Check item

- ☐ Chip Select
- ☐ DSP5 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus
- ☐ DSP6 -> DSP5
  - • Serial I/O
- ☐ DSP5 -> DSP6
  - • Serial I/O
- ☐ DSP5 -> DSP5
  - • Serial I/O
  - • Parallel I/O 32bit(31-0)

6. DSP1D-IDB1 Test

This test checks the IDB1. It checks the following items. The specifications are basically the same as for 4-1. through 4-3.

DSP6 total count ···· 16

DSP5 total count ···· 8

6-1. DSP1D-IDB1 (CPU-IC100) Test

This test checks around the IDB1 CPU.

Check item

- ☐ ID IDB1 [16h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 16bit(16-1)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • Data Bus 16bit(15-0)
  - • Address Bus 15bit(15-1)

6-2. DSP1D-IDB1 (DSP6) Test

This test checks around IDB1 DSP6.

Check item

- ☐ Chip Select
- ☐ DSP6 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus 7bit(7-1)
- ☐ DSP6 <-> DRAM
  - • Data Bus 32bit(31-0)
  - • Address Bus 10bit(9-0)
- ☐ DSP6 -> DSP6
  - • Serial I/O

6-3. DSP1D-IDB1 (DSP5) Test

This test checks around IDB1 DSP5.

Check item

- ☐ Chip Select
- ☐ DSP5 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus
- ☐ DSP6 -> DSP5
  - • Serial I/O
- ☐ DSP5 -> DSP5
  - • Serial I/O

7. DSP1D-IDB2 Test

This test checks the IDB2. It checks the following items. The specifications are basically the same as for 4-1. through 4-3.

DSP6 total count ···· 16

DSP5 total count ···· 8

7-1. DSP1D-IDB2 (CPU-IC100) Test

This test checks around the IDB2 CPU.

Check item

- ☐ ID IDB2 [16h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 16bit(16-1)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • Data Bus 16bit(15-0)
  - • Address Bus 15bit(15-1)

7-2. DSP1D-IDB2 (DSP6) Test

This test checks around IDB2 DSP6.

Check item

- ☐ Chip Select
- ☐ DSP6 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus 7bit(7-1)
- ☐ DSP6 <-> DRAM
  - • Data Bus 32bit(31-0)
  - • Address Bus 10bit(9-0)
- ☐ DSP6 -> DSP6
  - • Serial I/O

7-3. DSP1D-IDB2 (DSP5) Test

This test checks around IDB2 DSP5.

Check item

- ☐ Chip Select
- ☐ DSP5 <-> CPU
  - • Data Bus 16bit(15-0)
  - • Address Bus
- ☐ DSP6 -> DSP5
  - • Serial I/O
- ☐ DSP5 -> DSP5
  - • Serial I/O

8. DSP1D-EDB Test

This test checks the EDB. It checks the following items. The specifications are basically the same as for 4-1. through 4-2.

DSP6 total count ···· 12

2-1. DSP1D-EMB (EMU-IC114) Test

This test checks around the EMB EMU.

Check item

- ☐ ID EMU [10h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 20bit(19-0)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • EM BUS<->DPM BUS L
  - • UI BUS<->EM BUS R
  - • HI BUS<->EM BUS R
  - • EM BUS<->TC BUS L
- ☐ Battery

2-2. DSP1D-EMB (UIF-IC127) Test

This test checks around the EMB HIF.

Check item

- ☐ ID UIF [13h]
- ☐ RAM
  - • Data Bus 16bit(15-0)
  - • Address Bus 20bit(19-0)
- ☐ Flash (Check Sum)
- ☐ Version
- ☐ DPM
  - • UI BUS<->EM BUS L

9. DSP1D Connection Test

This test checks the connections among the PDB, GDB, IDB1, IDB2, and EDB. It checks the following items. Detailed screen output specifications are given on the following pages.

* There are duplicate checks, but for checking just specific boards, these checks are not omitted.

9-1. DSP1D-Connection (PDB) Test

Checks the connections between the PDB and the other boards.

Check item

- ☐ PDB -> IDB1
- ☐ PDB -> IDB2
- ☐ PDB -> GDB
- ☐ PDB -> EDB
- ☐ IDB1 -> PDB
- ☐ IDB2 -> PDB
- ☐ GDB -> PDB
- ☐ EDB -> PDB

9-2. DSP1D-Connection (GDB) Test

Checks the connections between the GDB and the other boards.

Check item

- ☐ GDB -> PDB
- ☐ IDB1 -> GDB
- ☐ IDB2 -> GDB
- ☐ PDB -> GDB
- ☐ EDB -> GDB

9-3. DSP1D-Connection (IDB1) Test

Checks the connections between the IDB1 and the other boards.

Check item

- ☐ IDB1 -> GDB
- ☐ IDB1 -> PDB
- ☐ IDB1 -> IDB2
- ☐ PDB->IDB1

9-4. DSP1D-Connection (IDB2) Test

Checks the connections between the IDB2 and the other boards.

Check item

- ☐ IDB2 -> GDB
- ☐ IDB2 -> PDB
- ☐ IDB1 -> IDB2
- ☐ PDB->IDB2

9-5. DSP1D-Connection (EDB) Test

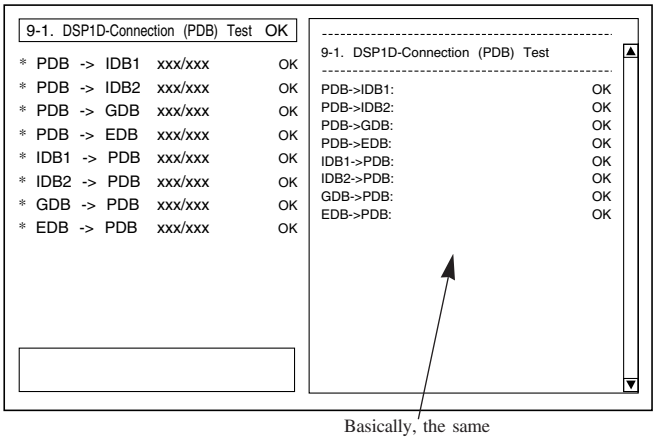
Checks the connections between the EDB and the other boards.

Check item

- ☐ EDB -> GDB
- ☐ EDB -> PDB
- ☐ PDB -> EDB

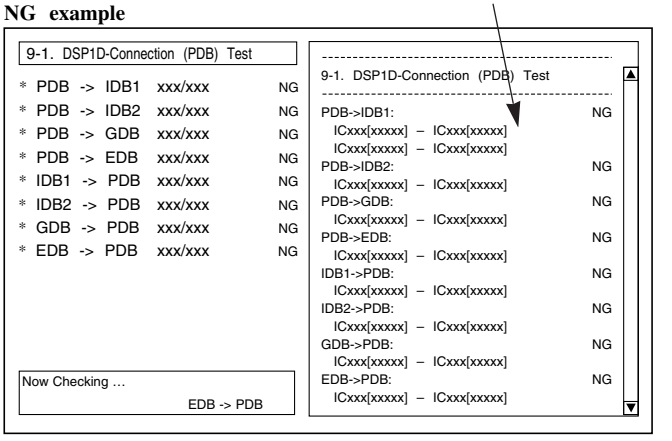
9-1. DSP1D-Connection (PDB) Test

Checks the connections between the PDB and the other boards.



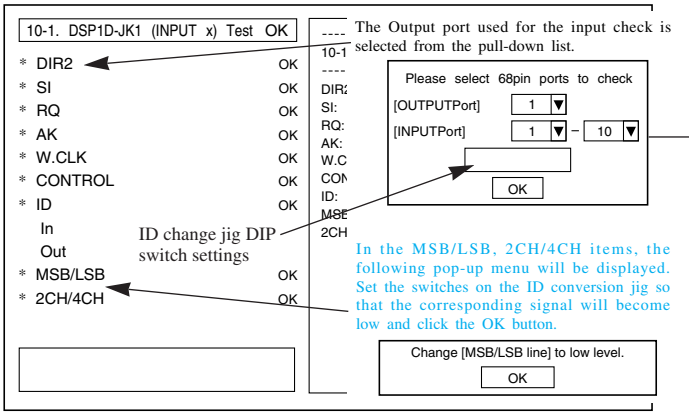
NG example

Displays which pin numbers are NG between which ICs



10. DSP1D-JK1 (INPUT x) TEST

This test checks the JK1 board with loopback connections. These items are repeated for just the specified range of Inputs 1-10. The

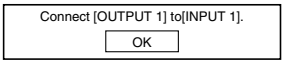


NG sample

Please refer to page 49, 51, 52 for NG charts.

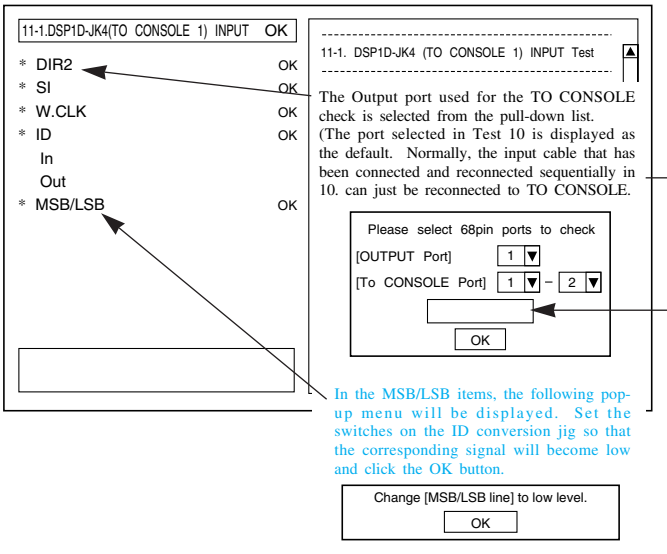
Fixed to the port selected for the output side; the input connections are changed in order.

When changing to the next port, a pop-up box like the one below is displayed.



11. DSP1D-JK4 (TO CONSOLE x) Input Test

This test checks the JK4 port input direction communications. These items are repeated for the specified range of TO CONSOLE 1-2.

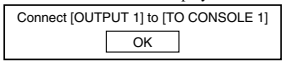


NG sample

Please refer to page 49, 51, 52 for NG charts.

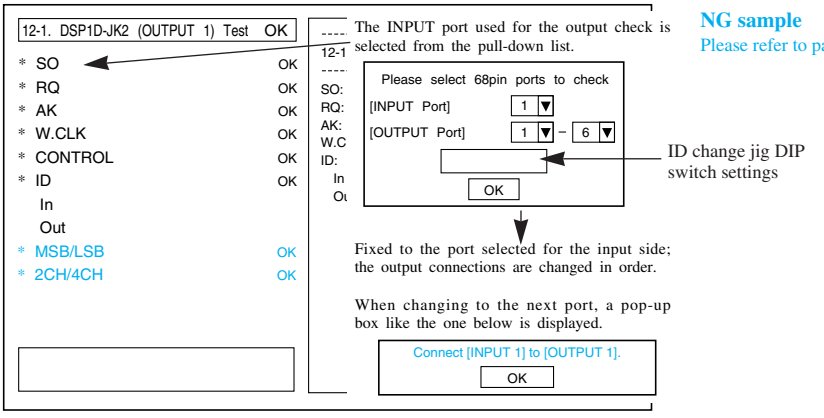
Fixed to the port selected for the output side; the TO CONSOLE connections are changed in order.

When changing to the next port, a pop-up box like the one below is displayed.



12. DSP1D-JK2 (OUTPUT x) Test

This test checks the JK2 port with loopback connections. These items are repeated only for INPUT1-10. The output ID change jig is used for Item 12.

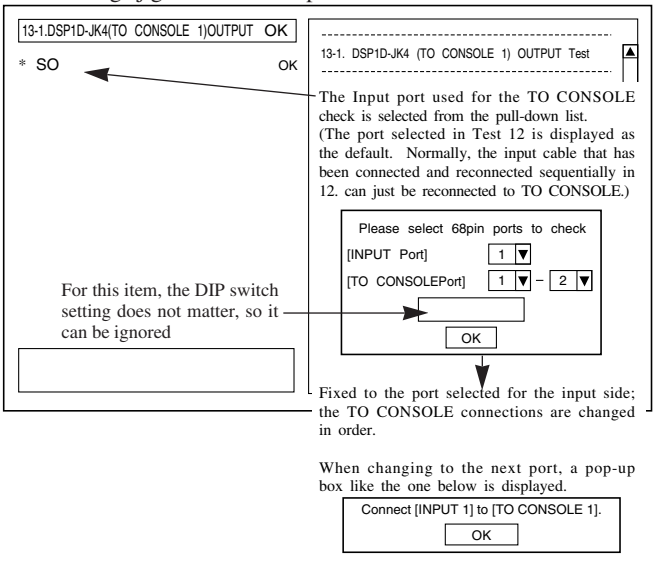


NG sample

Please refer to page 49, 51, 52 for NG charts.

13. DSP1D-JK4 (TO CONSOLE x) Output Test

This test checks the JK4 port output direction communications. For this item, use either the altered TO CONSOLE (OUTPUT) ID change jig or the altered special cable.

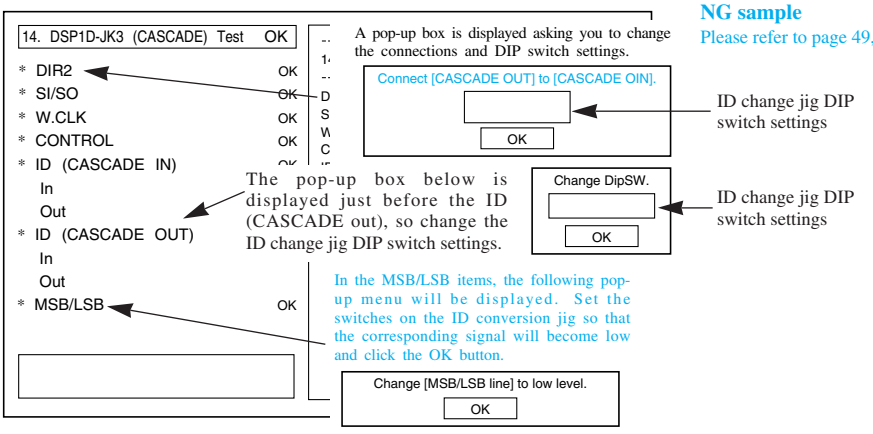


NG sample

Please refer to page 49, 51, 52 for NG charts.

14. DSP1D-JK3 (CASCADE) Test

This test checks the JK3 port with loopback connections. For this test, use either the Cascade ID change jig.

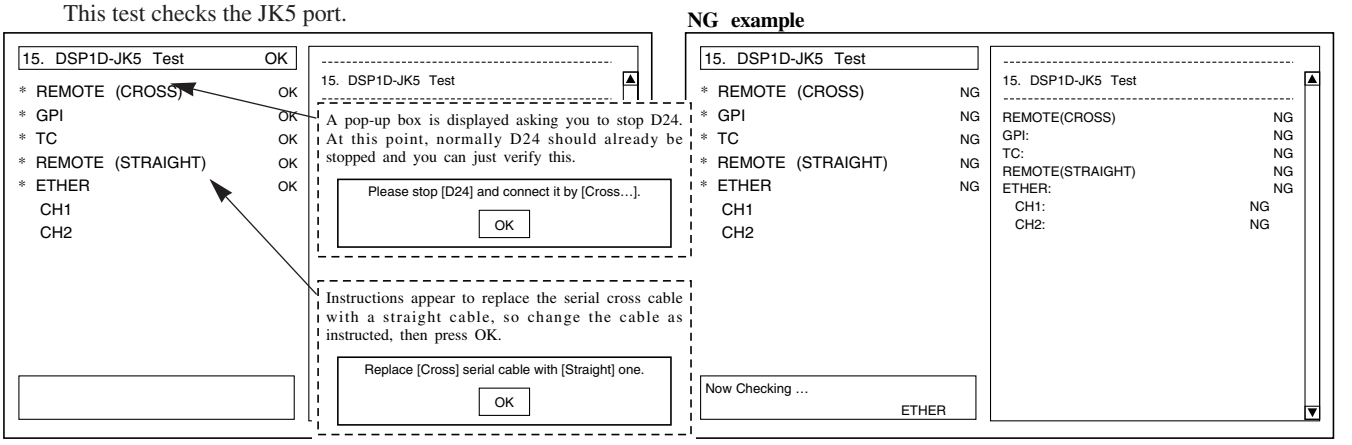


NG sample

Please refer to page 49, 51, 52 for NG charts.

15. DSP1D-JK5 Test

This test checks the JK5 port.

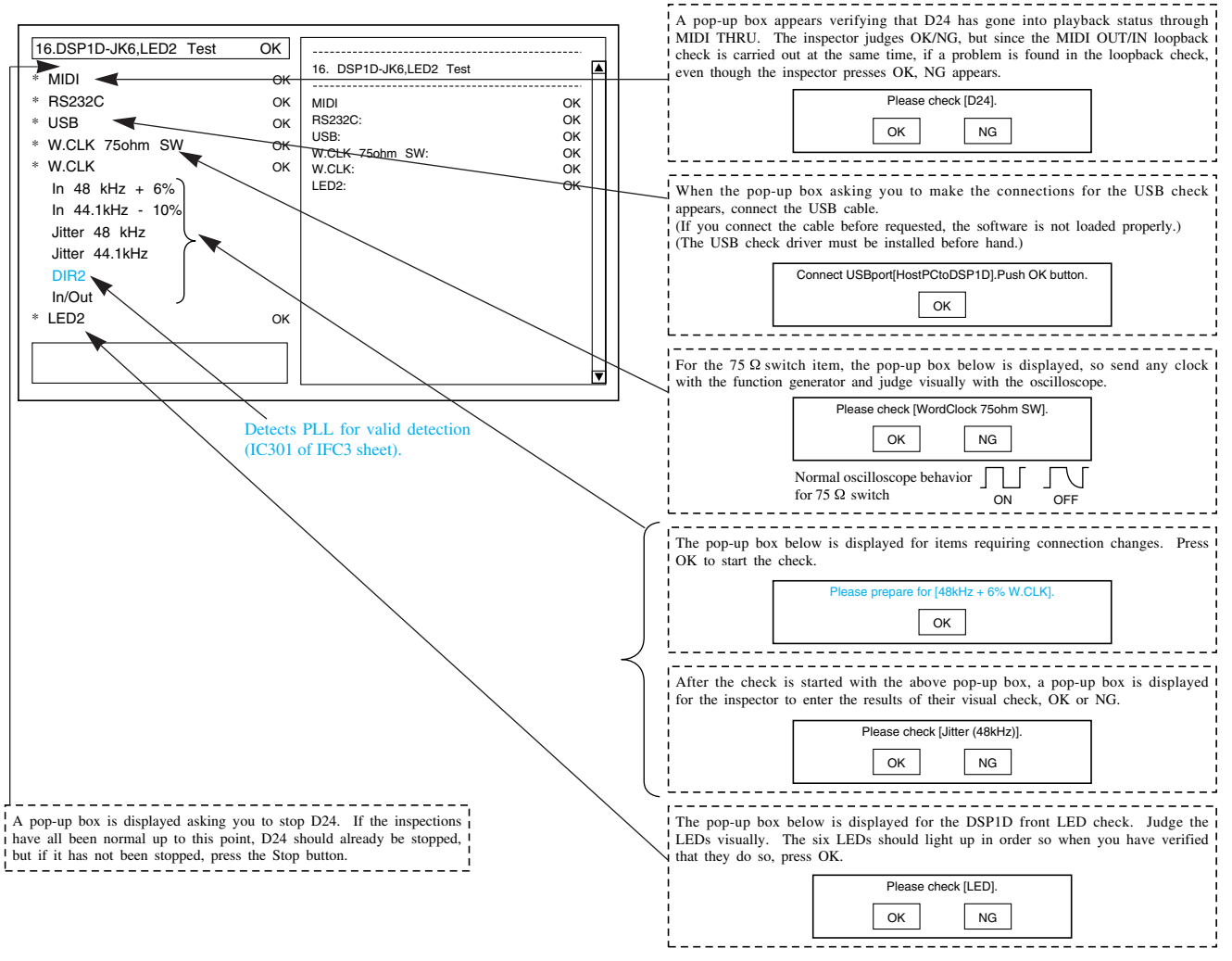


• Normal behavior for each inspection item

REMOTE (CROSS) ..... D24 playback (TC send)
TC ..... TC check from D24
REMOTE (STRAIGHT) ..... D24 stop

16. DSP1D-JK6 Test

This test checks the JK6 port and LED2. For details on how to change the connections, see Page 45.



■ ERROR MESSAGES

• If both ENGINE ID A and B indicators are flash-ing:

→ There is a malfunction in the internal board (PDB, GDB, IDB1/2, EDB, EMB, or CIB). Or the necessary board does not exist.

• If either ENGINE ID A or B indicator is flashing:

→ During the Mirror mode operation, the ENGINE ID indicator for the unused DSP1D/DSP1D-EX flashes, indicating that the unit is in standby mode.

→ If Indicator A is flashing, unit A is in standby mode. If Indicator B is flashing, unit B is in standby mode.

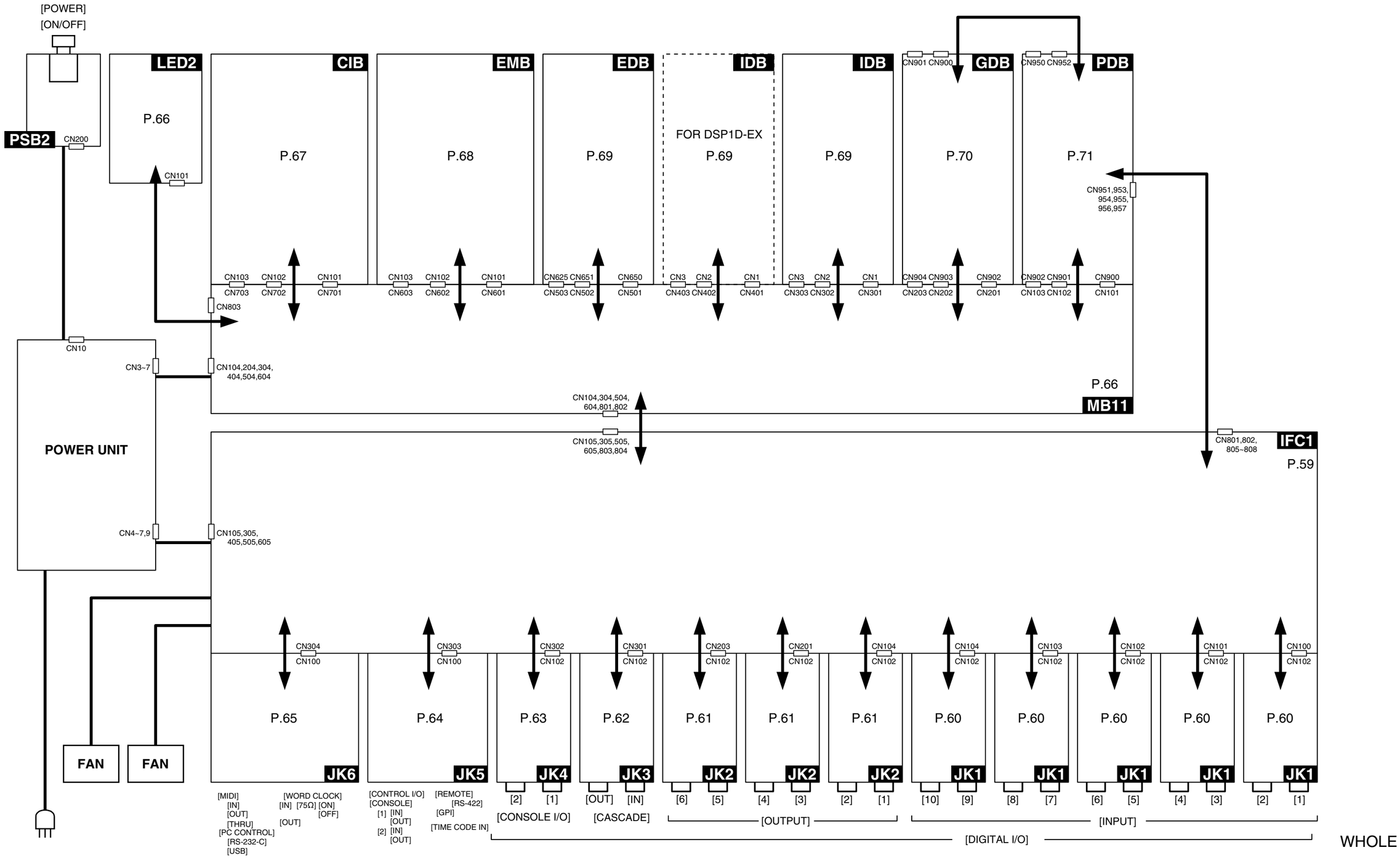
• If the CONTROL I/O 1 indicator is flashing:

→ Communication between the CS1D control surface and the DSP1D is not established.The CONSOLE 1, 2 IN OUT jacks or the PC CON-TROL port is not connected correctly.

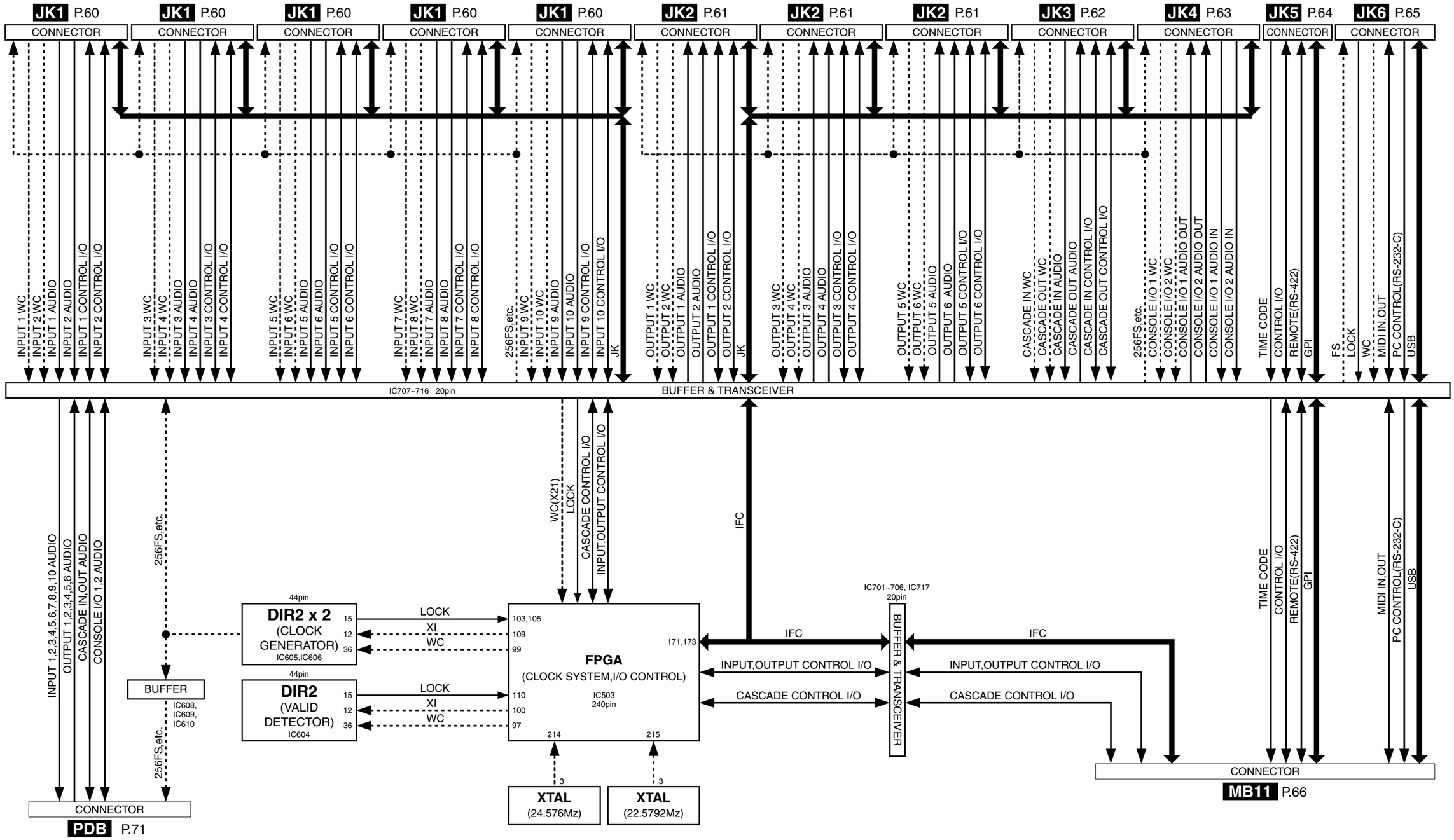
• If the INPUT CONFIGURATION 48CH is flashing:

→ The signal is not locking to the word clock.

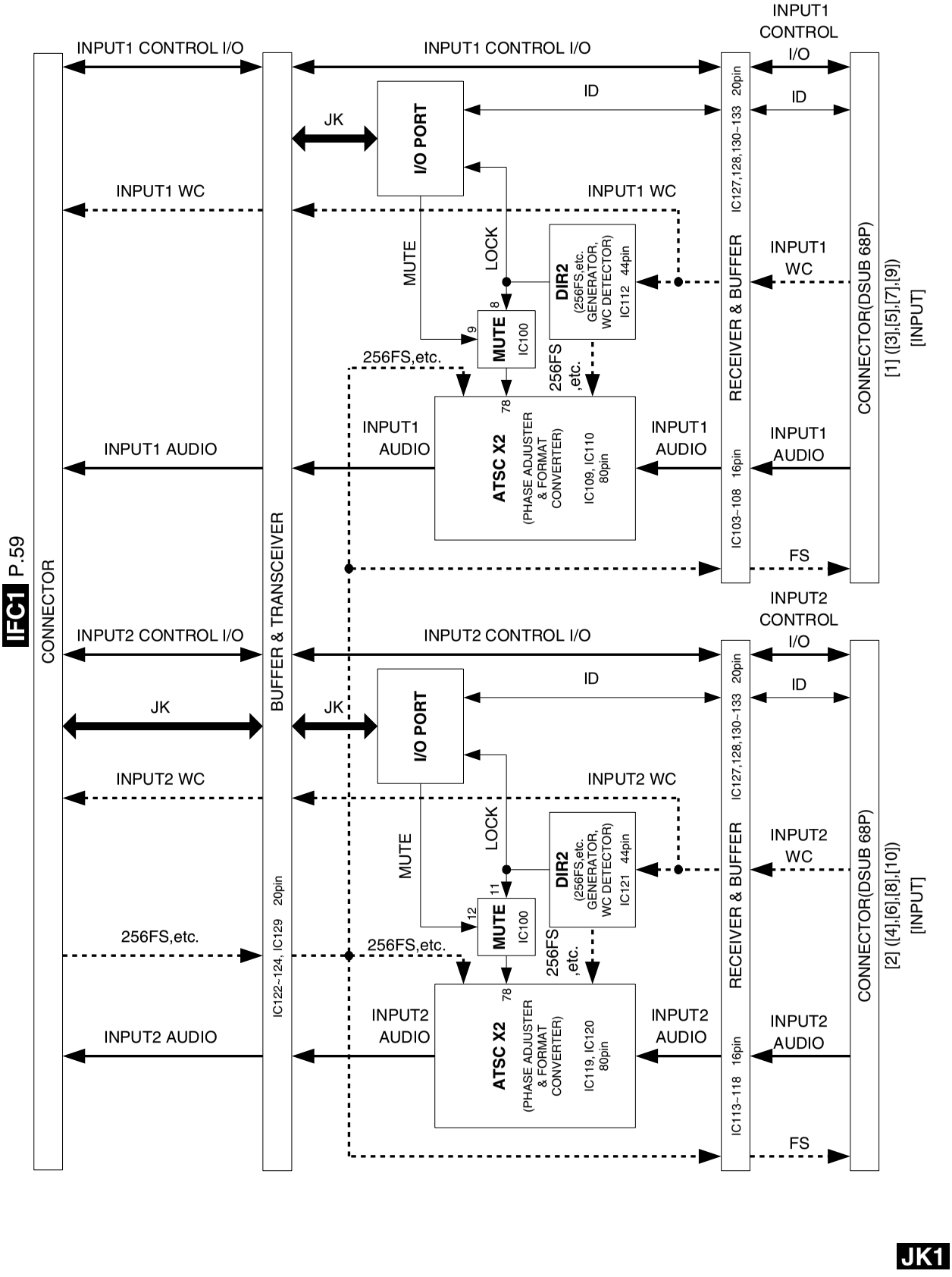
BLOCK DIAGRAM

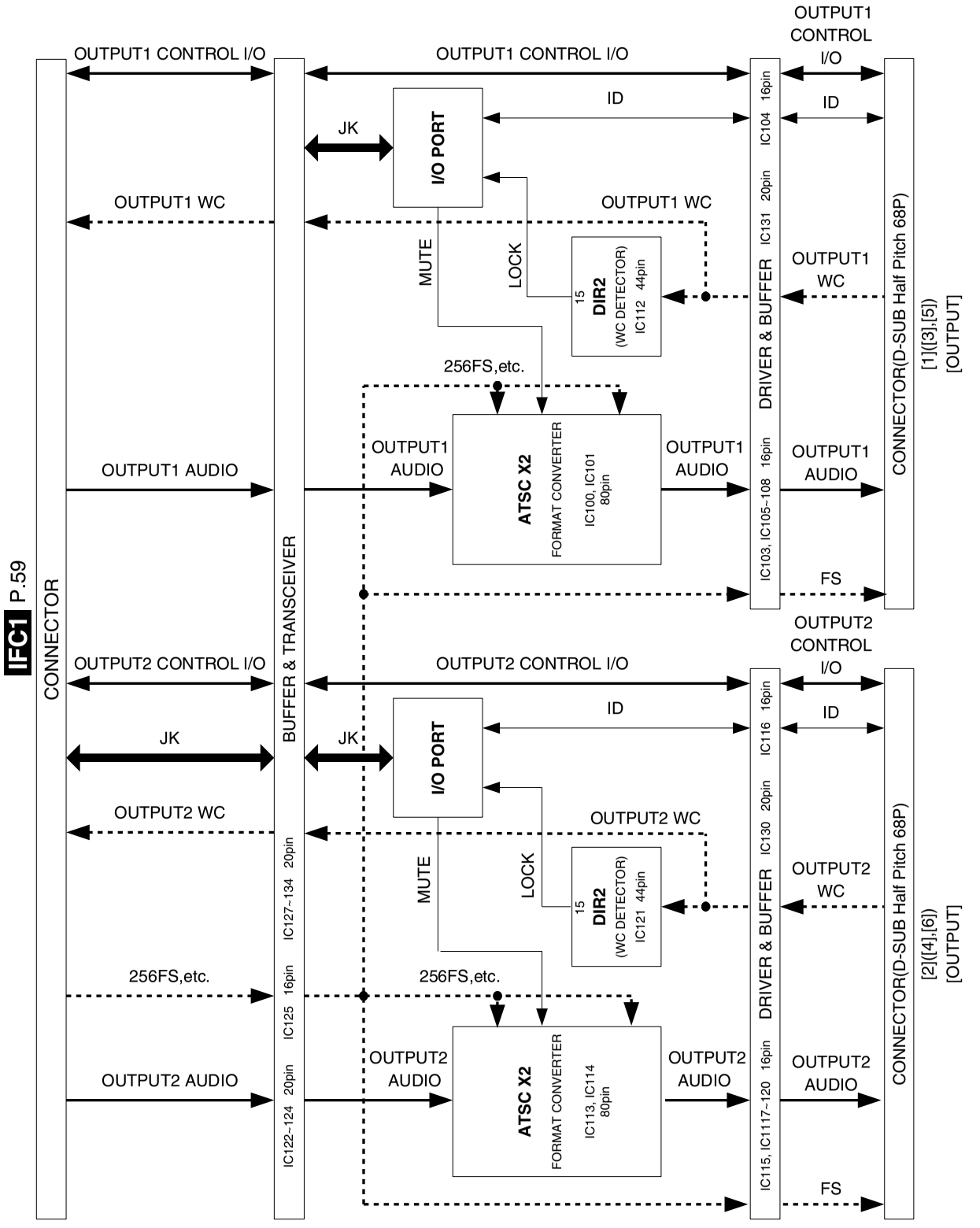


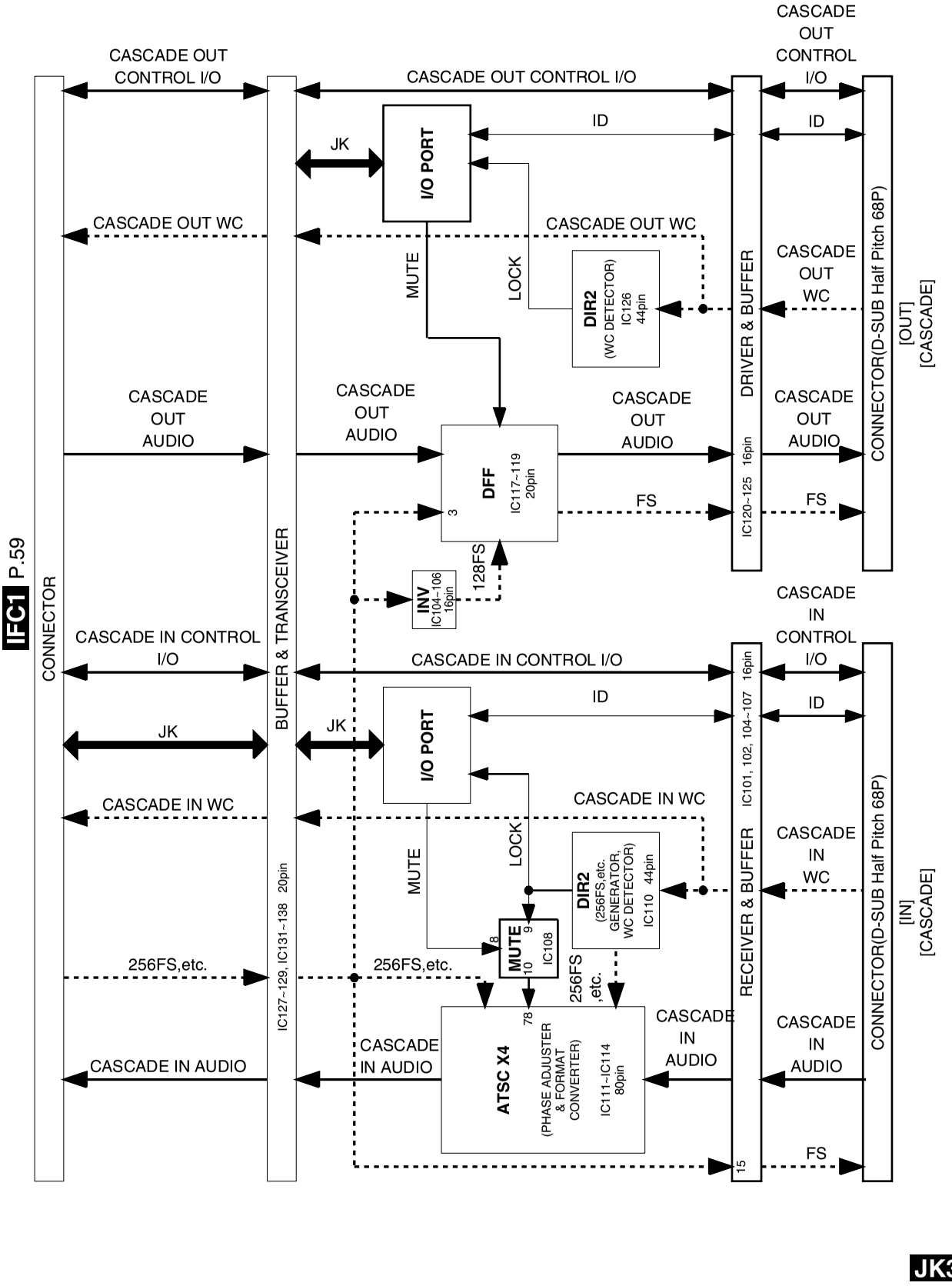
KEC-92538-2

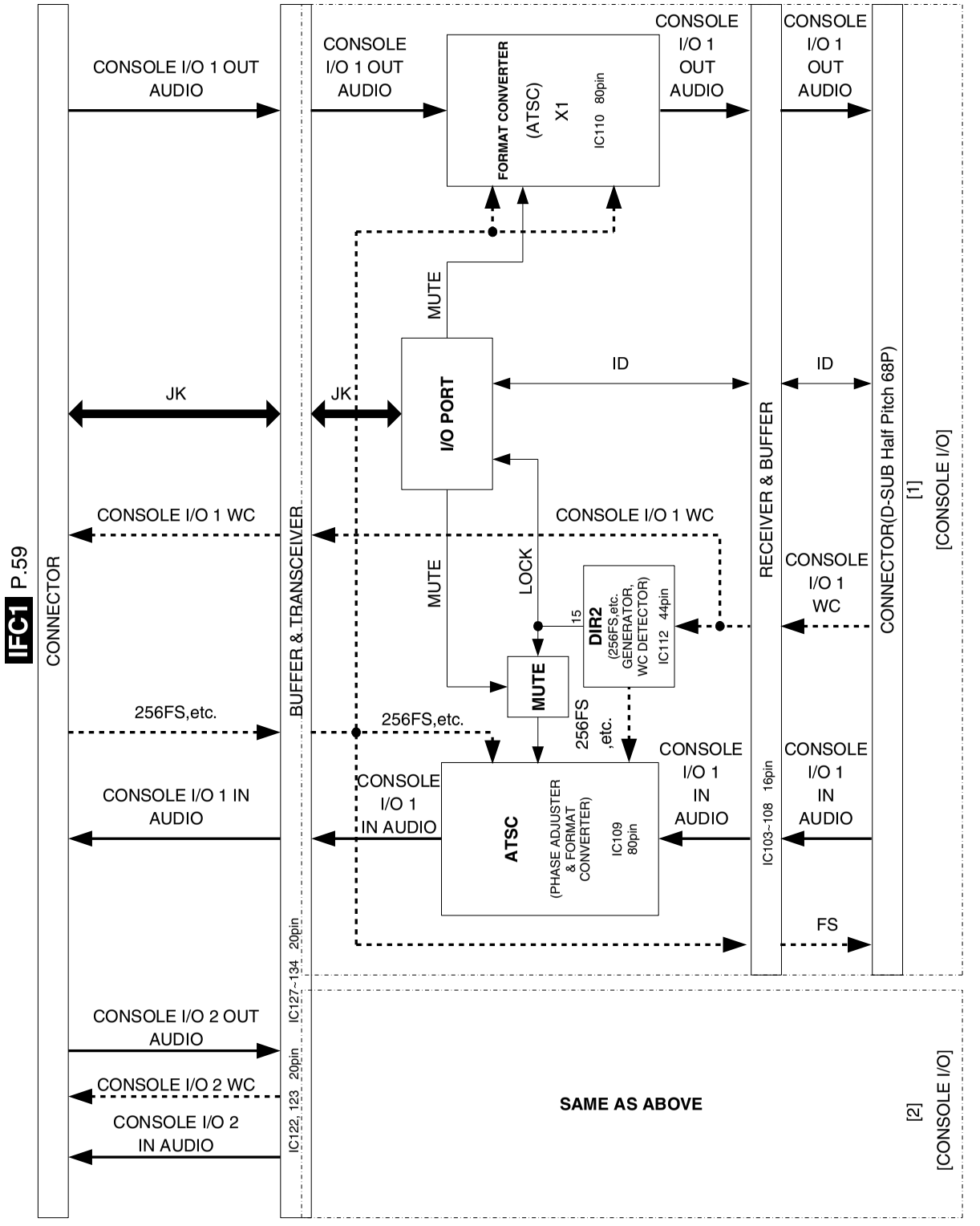

JK1 P.60
JK1 P.60
JK1 P.60
JK1 P.60
JK1 P.60
JK2 P.61
JK2 P.61
JK2 P.61
JK3 P.62
JK4 P.63
JK5 P.64
JK6 P.65
CONNECTOR
INPUT 1 WC
INPUT 2 WC
INPUT 1 AUDIO
INPUT 2 AUDIO
INPUT 1 CONTROL I/O
INPUT 2 CONTROL I/O
INPUT 3 WC
INPUT 4 WC
INPUT 3 AUDIO
INPUT 4 AUDIO
INPUT 3 CONTROL I/O
INPUT 4 CONTROL I/O
INPUT 5 WC
INPUT 6 WC
INPUT 5 AUDIO
INPUT 6 AUDIO
INPUT 5 CONTROL I/O
INPUT 6 CONTROL I/O
INPUT 7 WC
INPUT 8 WC
INPUT 7 AUDIO
INPUT 8 AUDIO
INPUT 7 CONTROL I/O
INPUT 8 CONTROL I/O
256FS,etc.
INPUT 9 WC
INPUT 10 WC
INPUT 9 AUDIO
INPUT 10 AUDIO
INPUT 9 CONTROL I/O
INPUT 10 CONTROL I/O
JK
OUTPUT 1 WC
OUTPUT 2 WC
OUTPUT 1 AUDIO
OUTPUT 2 AUDIO
OUTPUT 1 CONTROL I/O
OUTPUT 2 CONTROL I/O
JK
OUTPUT 3 WC
OUTPUT 4 WC
OUTPUT 3 AUDIO
OUTPUT 4 AUDIO
OUTPUT 3 CONTROL I/O
OUTPUT 4 CONTROL I/O
OUTPUT 5 WC
OUTPUT 6 WC
OUTPUT 5 AUDIO
OUTPUT 6 AUDIO
OUTPUT 5 CONTROL I/O
OUTPUT 6 CONTROL I/O
CASCADE IN WC
CASCADE OUT WC
CASCADE IN AUDIO
CASCADE OUT AUDIO
CASCADE IN CONTROL I/O
CASCADE OUT CONTROL I/O
256FS,etc.
CONSOLE I/O 1 WC
CONSOLE I/O 2 WC
CONSOLE I/O 1 AUDIO OUT
CONSOLE I/O 2 AUDIO OUT
CONSOLE I/O 1 AUDIO IN
CONSOLE I/O 2 AUDIO IN
TIME CODE
CONTROL I/O
REMOTE(RS-422)
GPI
FS
LOCK
WC
MIDI IN,OUT
PC CONTROL(RS-232-C)
USB
IC707~716 20pin
BUFFER & TRANSCEIVER
INPUT 1,2,3,4,5,6,7,8,9,10 AUDIO
OUTPUT 1,2,3,4,5,6 AUDIO
CASCADE IN,OUT AUDIO
CONSOLE I/O 1,2 AUDIO
256FS,etc.
WC(X21)
LOCK
CASCADE CONTROL I/O
INPUT,OUTPUT CONTROL I/O
IFC
44pin
DIR2 x 2
(CLOCK GENERATOR)
IC605,IC606
LOCK
XI
WC
15
12
36
44pin
DIR2
(VALID DETECTOR)
IC604
BUFFER
IC608, IC609, IC610
256FS,etc.
103,105
109
99
110
100
97
FPGA
(CLOCK SYSTEM,I/O CONTROL)
IC503
240pin
171,173
214
215
3
XTAL
(24.576Mz)
XTAL
(22.5792Mz)
IC701~706, IC717
20pin
BUFFER & TRANSCEIVER
IFC
INPUT,OUTPUT CONTROL I/O
CASCADE CONTROL I/O
CONNECTOR
PDB P.71
MB11 P.66
IFC1

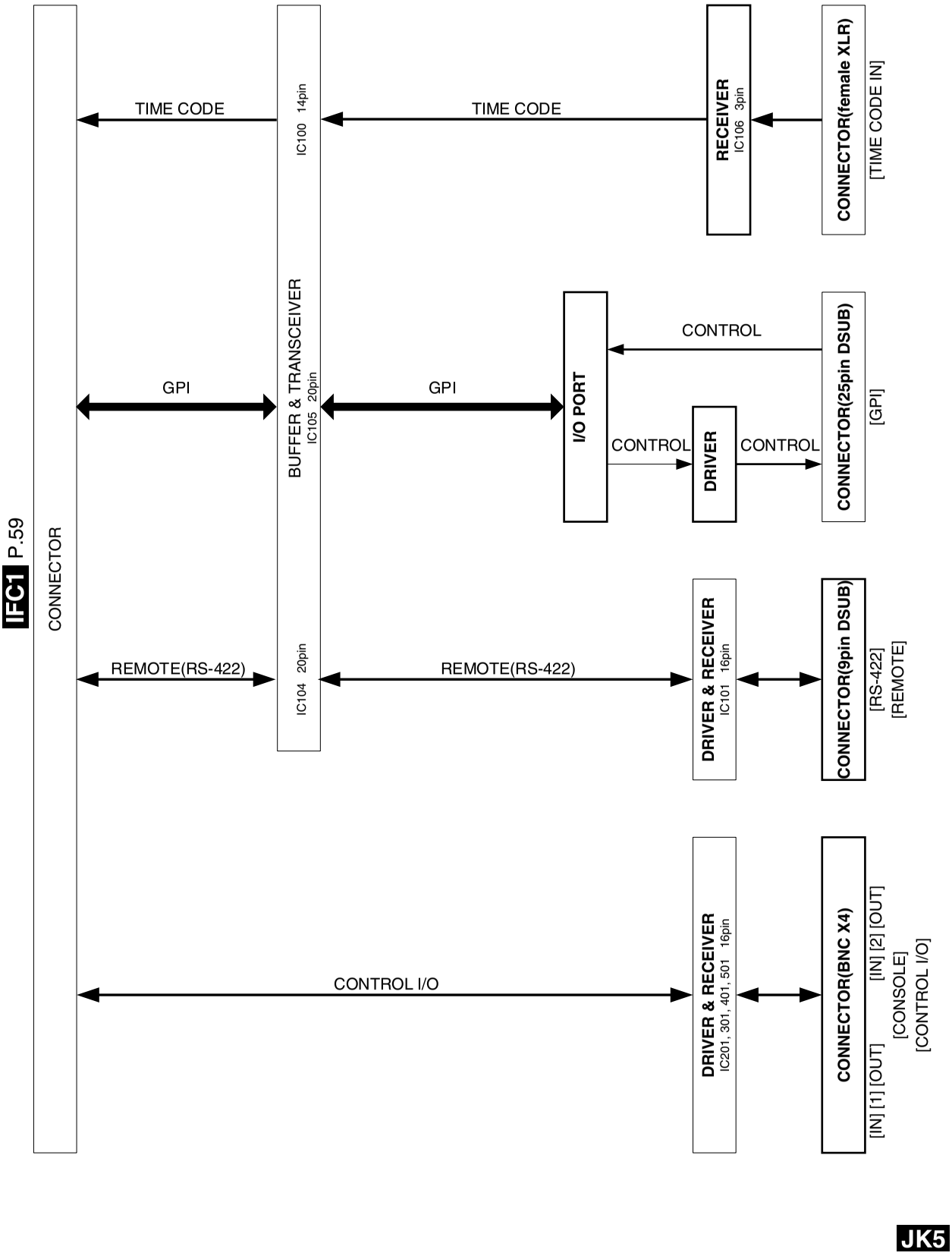
KEC-92538-3

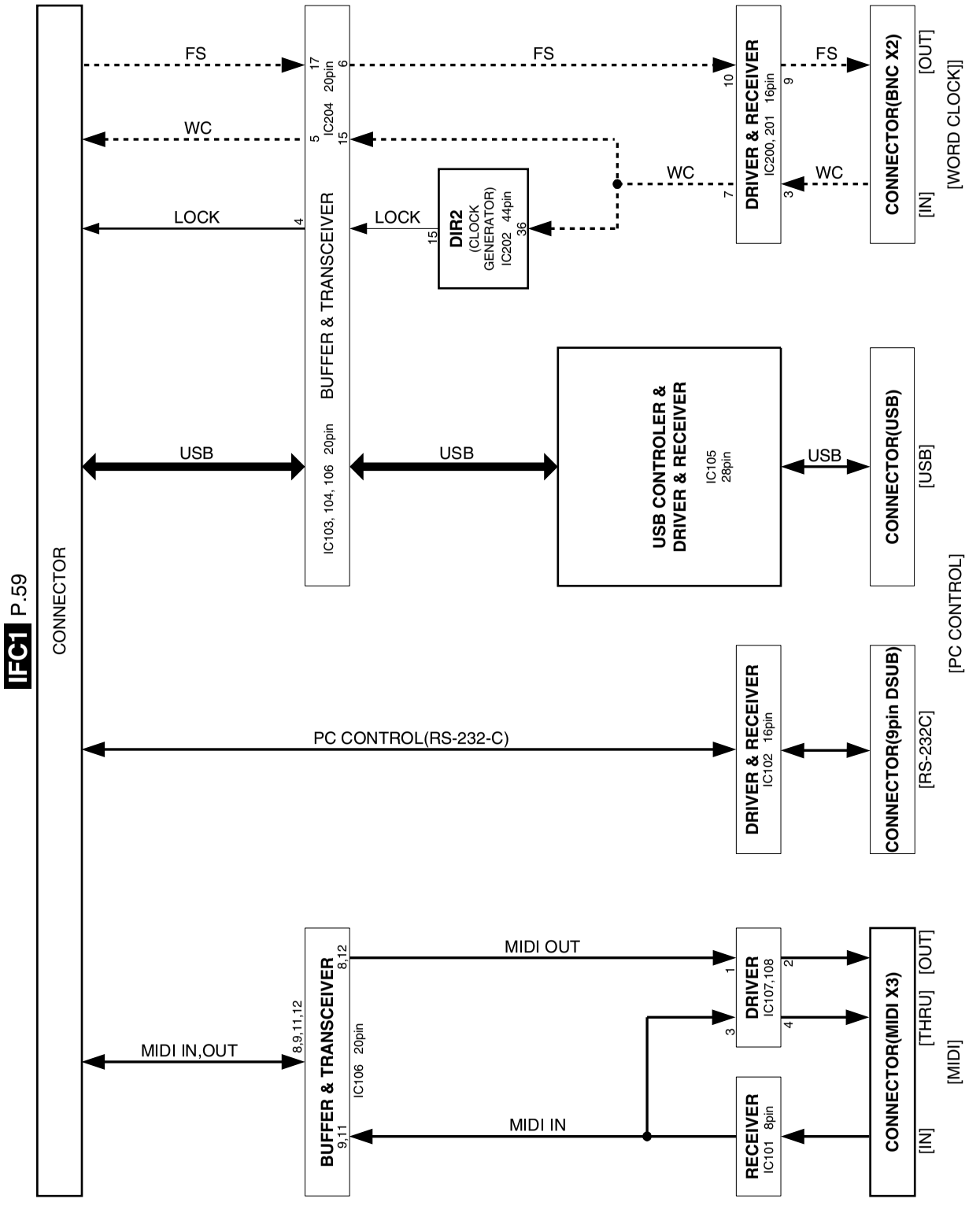

IFC1 P.59
CONNECTOR
BUFFER & TRANSCEIVER
IC122~124, IC129 20pin
INPUT1 CONTROL I/O
INPUT1 WC
INPUT1 AUDIO
INPUT2 CONTROL I/O
INPUT2 WC
INPUT2 AUDIO
256FS,etc.
JK
I/O PORT
ID
MUTE
LOCK
DIR2 (256FS,etc. GENERATOR, WC DETECTOR) IC112 44pin
DIR2 (256FS,etc. GENERATOR, WC DETECTOR) IC121 44pin
MUTE IC100
ATSC X2 (PHASE ADJUSTER & FORMAT CONVERTER) IC109, IC110 80pin
ATSC X2 (PHASE ADJUSTER & FORMAT CONVERTER) IC119, IC120 80pin
INPUT1 AUDIO
INPUT2 AUDIO
FS
RECEIVER & BUFFER
IC127,128,130~133 20pin
IC103~108 16pin
IC113~118 16pin
CONNECTOR(DSUB 68P)
[1] ([3],[5],[7],[9])
[INPUT]
[2] ([4],[6],[8],[10])
[INPUT]
JK1

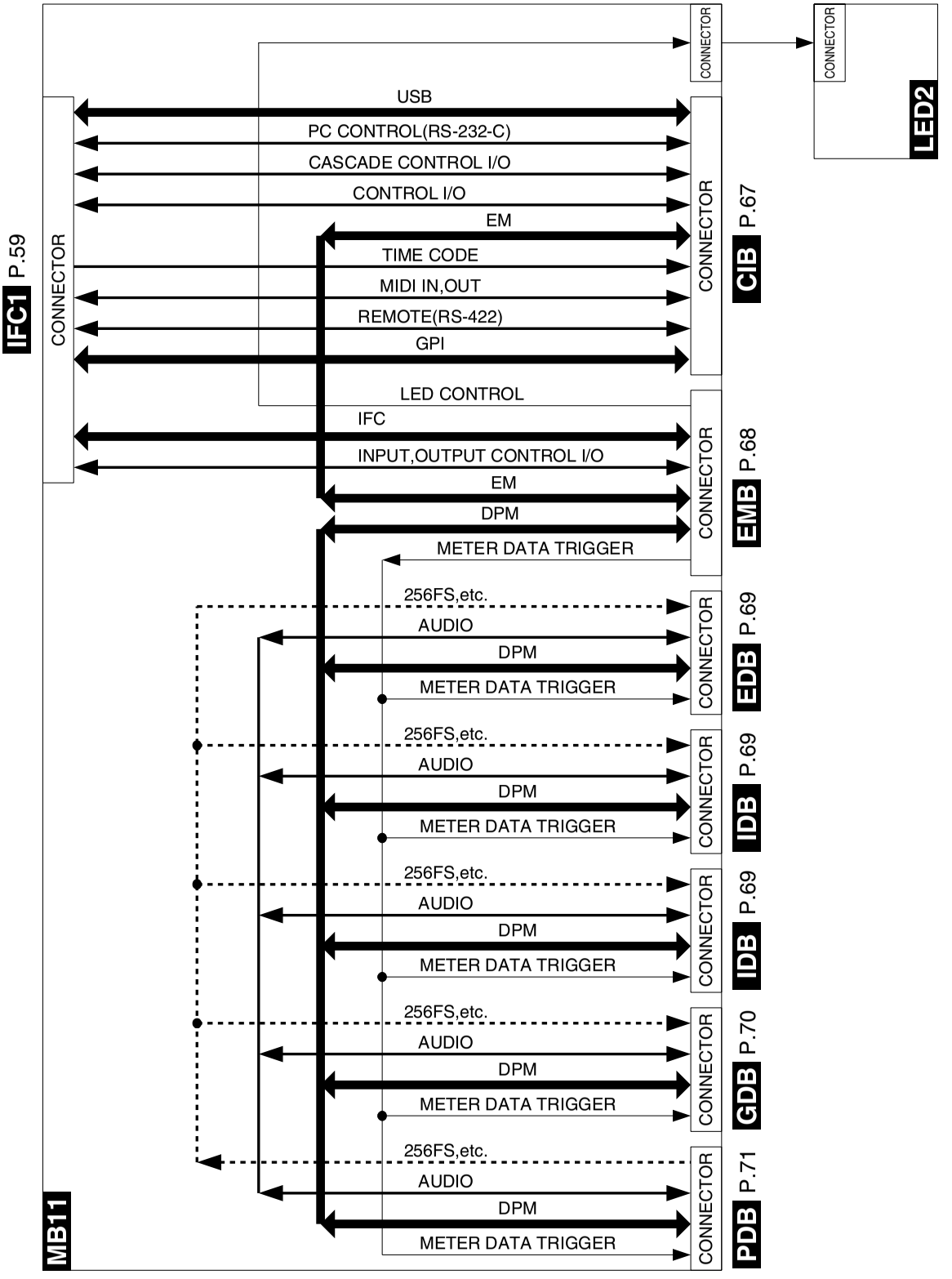

IFC1 P.59
CONNECTOR
BUFFER & TRANSCEIVER
IC122~124 20pin
IC125 16pin
IC127~134 20pin
OUTPUT1 CONTROL I/O
OUTPUT1 WC
OUTPUT1 AUDIO
OUTPUT2 CONTROL I/O
JK
OUTPUT2 WC
256FS,etc.
OUTPUT2 AUDIO
I/O PORT
ID
MUTE
LOCK
15 DIR2 (WC DETECTOR) IC112 44pin
15 DIR2 (WC DETECTOR) IC121 44pin
ATSC X2 FORMAT CONVERTER IC100, IC101 80pin
ATSC X2 FORMAT CONVERTER IC113, IC114 80pin
DRIVER & BUFFER
IC103, IC105~108 16pin
IC115, IC1117~120 16pin
IC131 20pin
IC130 20pin
IC104 16pin
IC116 16pin
FS
CONNECTOR(D-SUB Half Pitch 68P)
[1]([3],[5])
[2]([4],[6])
[OUTPUT]
JK2


IFC1 P.59
CONNECTOR
CASCADE OUT CONTROL I/O
CASCADE OUT WC
CASCADE OUT AUDIO
CASCADE IN CONTROL I/O
JK
CASCADE IN WC
256FS,etc.
CASCADE IN AUDIO
BUFFER & TRANSCEIVER
IC127~129, IC131~138 20pin
CASCADE OUT CONTROL I/O
JK
I/O PORT
ID
CASCADE OUT WC
MUTE
LOCK
DIR2
(WC DETECTOR)
IC126
44pin
CASCADE OUT AUDIO
DFF
IC117~119
20pin
3
128FS
INV
IC104~106
16pin
FS
CASCADE IN CONTROL I/O
JK
I/O PORT
ID
CASCADE IN WC
MUTE
LOCK
DIR2
(256FS,etc. GENERATOR, WC DETECTOR)
IC110 44pin
MUTE
8
9
10
IC108
256FS,etc.
256FS ,etc.
78
ATSC X4
(PHASE ADJUSTER & FORMAT CONVERTER)
IC111~IC114
80pin
CASCADE IN AUDIO
DRIVER & BUFFER
IC120~125 16pin
RECEIVER & BUFFER
IC101, 102, 104~107 16pin
15
CASCADE OUT CONTROL I/O
ID
CASCADE OUT WC
CASCADE OUT AUDIO
FS
CASCADE IN CONTROL I/O
ID
CASCADE IN WC
CASCADE IN AUDIO
FS
CONNECTOR(D-SUB Half Pitch 68P)
[OUT]
[CASCADE]
CONNECTOR(D-SUB Half Pitch 68P)
[IN]
[CASCADE]
JK3

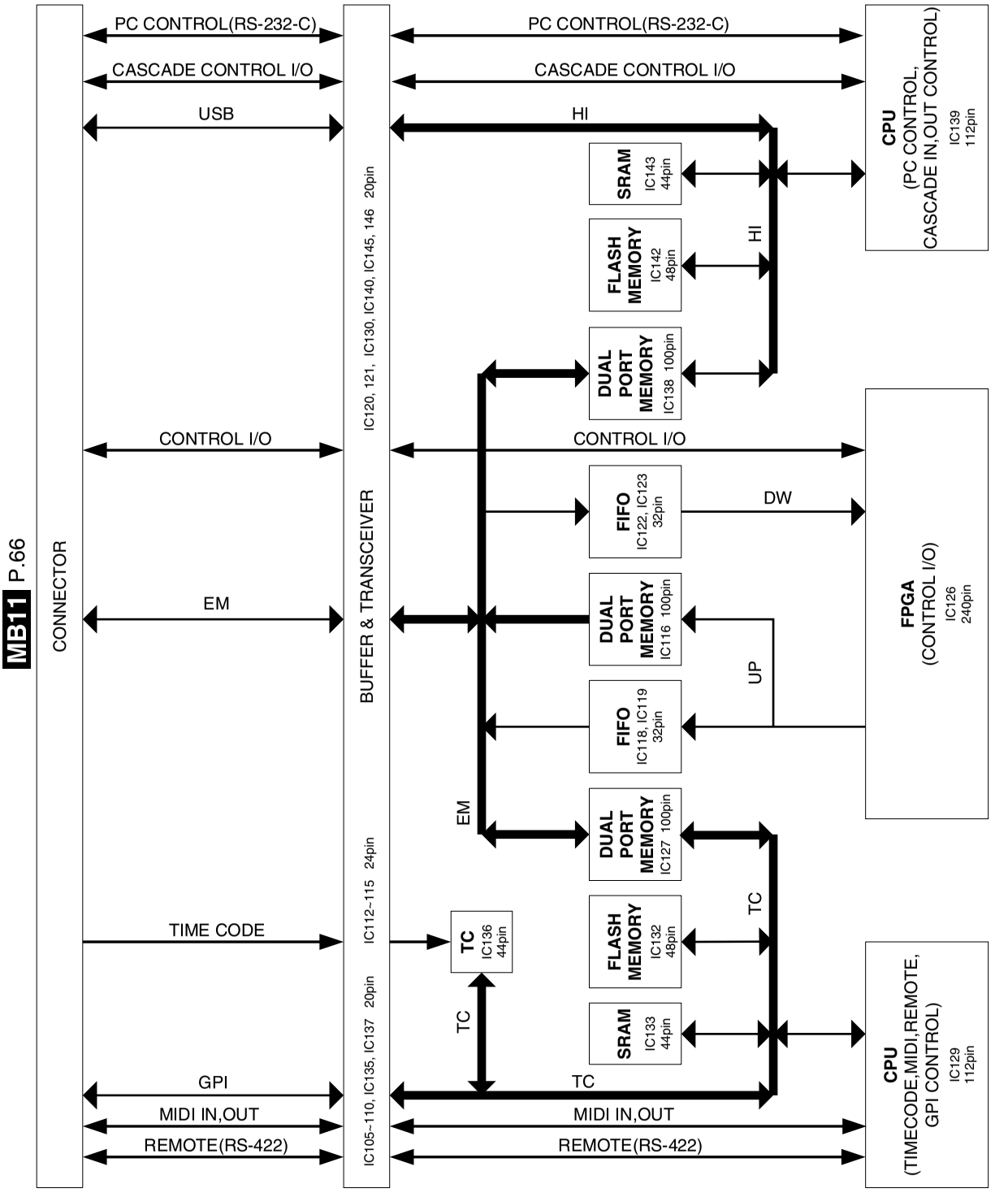

IFC1 P.59
CONNECTOR
CONSOLE I/O 1 OUT AUDIO
JK
CONSOLE I/O 1 WC
256FS,etc.
CONSOLE I/O 1 IN AUDIO
CONSOLE I/O 2 OUT AUDIO
CONSOLE I/O 2 WC
CONSOLE I/O 2 IN AUDIO
BUFFER & TRANSCEIVER
IC127~134 20pin
IC122, 123 20pin
CONSOLE I/O 1 OUT AUDIO
JK
CONSOLE I/O 1 WC
256FS,etc.
CONSOLE I/O 1 IN AUDIO
FORMAT CONVERTER (ATSC) X1 IC110 80pin
MUTE
I/O PORT
ID
MUTE
LOCK
15
DIR2 (256FS,etc. GENERATOR, WC DETECTOR) IC112 44pin
MUTE
256FS ,etc.
ATSC (PHASE ADJUSTER & FORMAT CONVERTER) IC109 80pin
CONSOLE I/O 1 IN AUDIO
CONSOLE I/O 1 OUT AUDIO
RECEIVER & BUFFER
IC103~108 16pin
ID
CONSOLE I/O 1 WC
CONSOLE I/O 1 IN AUDIO
FS
CONSOLE I/O 1 OUT AUDIO
CONNECTOR(D-SUB Half Pitch 68P)
[1]
[CONSOLE I/O]
SAME AS ABOVE
[2]
[CONSOLE I/O]
JK4


IFC1 P.59
CONNECTOR
TIME CODE
TIME CODE
BUFFER & TRANSCEIVER
IC105 20pin
IC100 14pin
IC104 20pin
RECEIVER
IC106 3pin
CONNECTOR(female XLR)
[TIME CODE IN]
GPI
GPI
I/O PORT
CONTROL
CONTROL
DRIVER
CONTROL
CONNECTOR(25pin DSUB)
[GPI]
REMOTE(RS-422)
REMOTE(RS-422)
DRIVER & RECEIVER
IC101 16pin
CONNECTOR(9pin DSUB)
[RS-422]
[REMOTE]
CONTROL I/O
DRIVER & RECEIVER
IC201, 301, 401, 501 16pin
CONNECTOR(BNC X4)
[IN] [1] [OUT]
[IN] [2] [OUT]
[CONSOLE]
[CONTROL I/O]
JK5

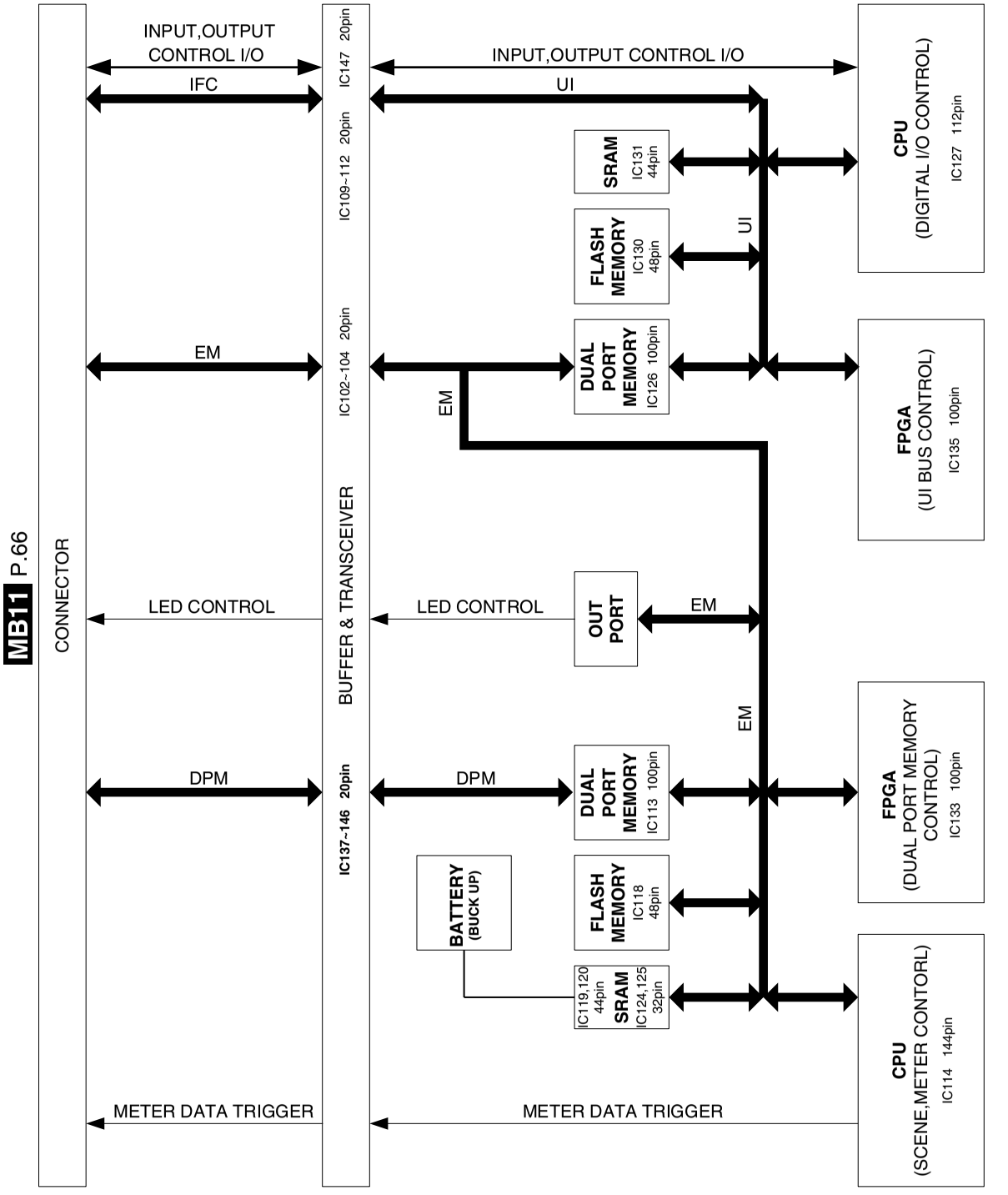

IFC1 P.59
CONNECTOR
FS
WC
LOCK
USB
PC CONTROL(RS-232-C)
MIDI IN,OUT
BUFFER & TRANSCEIVER
IC103, 104, 106 20pin
17
20pin
6
IC204
5
15
4
DIR2
(CLOCK GENERATOR)
IC202 44pin
36
15
LOCK
USB CONTROLER & DRIVER & RECEIVER
IC105
28pin
DRIVER & RECEIVER
IC200, 201 16pin
10
9
7
3
CONNECTOR(BNC X2)
[IN]
[OUT]
[WORD CLOCK]
CONNECTOR(USB)
[USB]
DRIVER & RECEIVER
IC102 16pin
CONNECTOR(9pin DSUB)
[RS-232C]
[PC CONTROL]
BUFFER & TRANSCEIVER
9,11
IC106 20pin
8,12
8,9,11,12
MIDI OUT
MIDI IN
DRIVER
IC107,108
1
2
3
4
RECEIVER
IC101 8pin
CONNECTOR(MIDI X3)
[IN]
[THRU]
[OUT]
[MIDI]
JK6


MB11
CONNECTOR
IFC1 P.59
CONNECTOR
LED2
CONNECTOR
USB
PC CONTROL(RS-232-C)
CASCADE CONTROL I/O
CONTROL I/O
EM
TIME CODE
MIDI IN,OUT
REMOTE(RS-422)
GPI
CONNECTOR
CIB P.67
LED CONTROL
IFC
INPUT,OUTPUT CONTROL I/O
EM
DPM
METER DATA TRIGGER
CONNECTOR
EMB P.68
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
CONNECTOR
EDB P.69
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
CONNECTOR
IDB P.69
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
CONNECTOR
IDB P.69
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
CONNECTOR
GDB P.70
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
CONNECTOR
PDB P.71

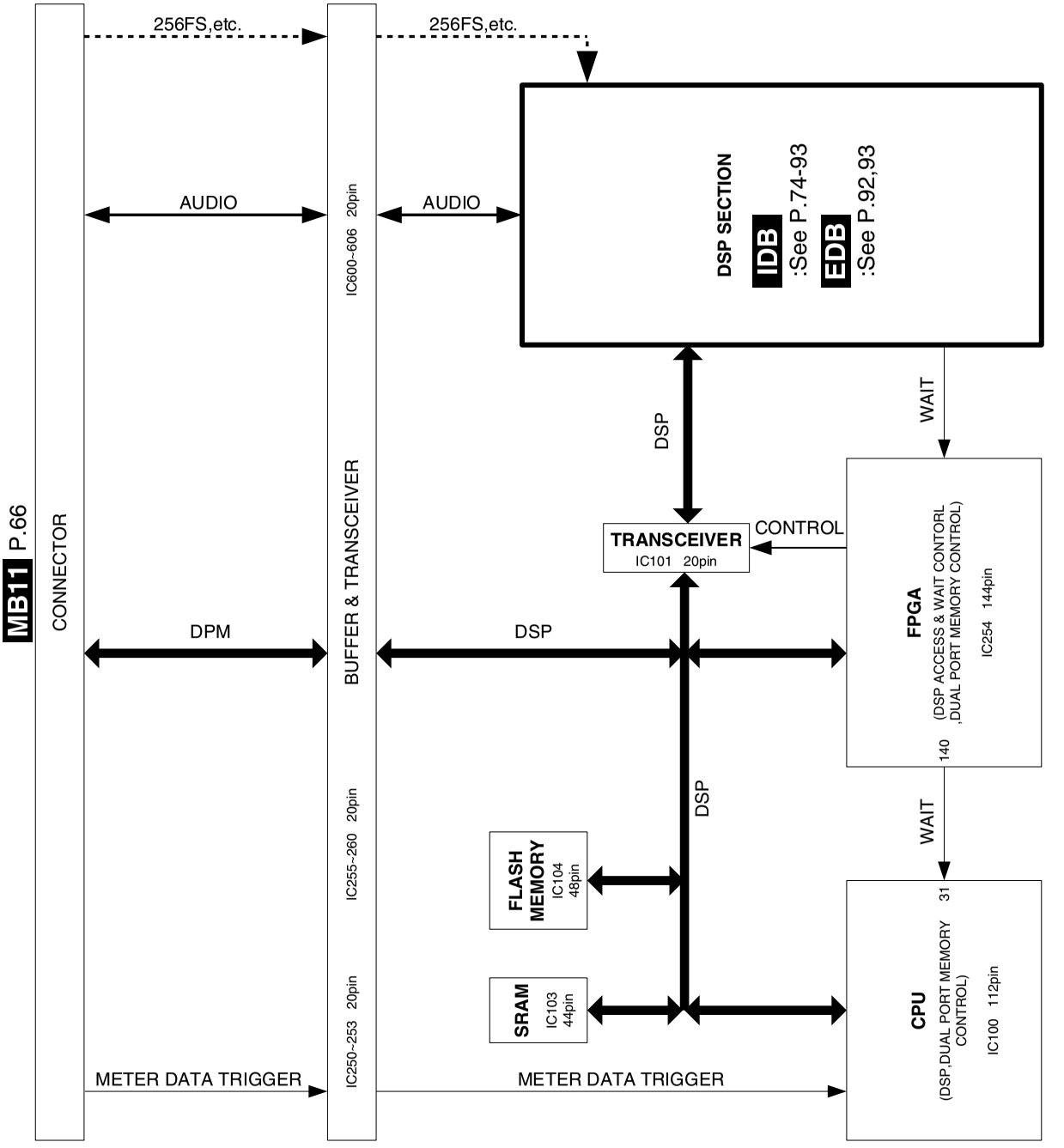
MB11 LED2


MB11 P.66
CONNECTOR
PC CONTROL(RS-232-C)
CASCADE CONTROL I/O
USB
CONTROL I/O
EM
TIME CODE
GPI
MIDI IN,OUT
REMOTE(RS-422)
IC105~110, IC135, IC137 20pin
IC112~115 24pin
IC120, 121, IC130, IC140, IC145, 146 20pin
BUFFER & TRANSCEIVER
TC
IC136
44pin
PC CONTROL(RS-232-C)
CASCADE CONTROL I/O
HI
SRAM
IC143
44pin
FLASH MEMORY
IC142
48pin
DUAL PORT MEMORY
IC138 100pin
CPU
(PC CONTROL, CASCADE IN,OUT CONTROL)
IC139
112pin
CONTROL I/O
FIFO
IC122, IC123
32pin
DW
DUAL PORT MEMORY
IC116 100pin
UP
FIFO
IC118, IC119
32pin
FPGA
(CONTROL I/O)
IC126
240pin
EM
DUAL PORT MEMORY
IC127 100pin
TC
FLASH MEMORY
IC132
48pin
SRAM
IC133
44pin
TC
TC
MIDI IN,OUT
REMOTE(RS-422)
CPU
(TIMECODE,MIDI,REMOTE, GPI CONTROL)
IC129
112pin

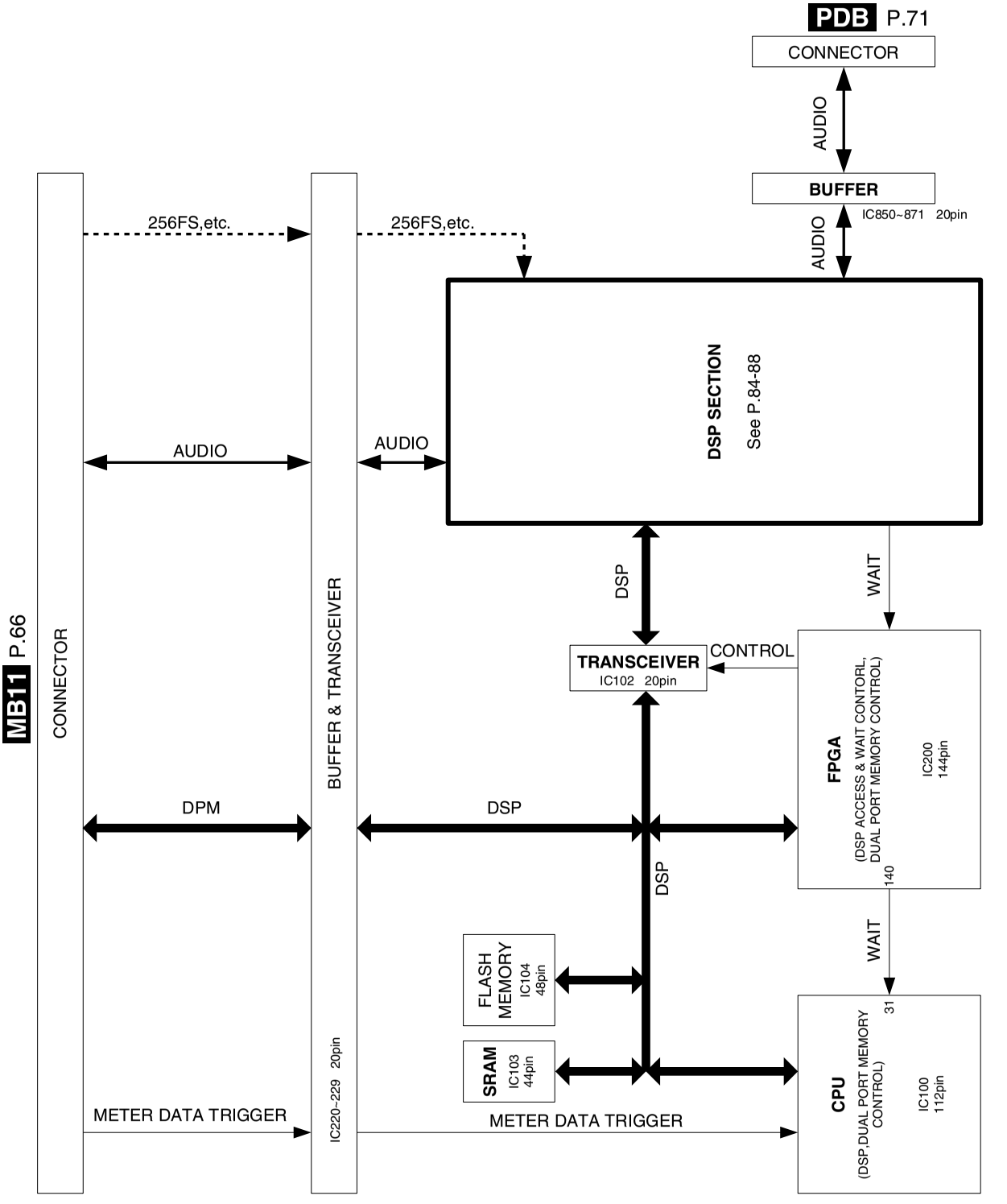
CIB


MB11 P.66
CONNECTOR
INPUT,OUTPUT CONTROL I/O
IFC
EM
LED CONTROL
DPM
METER DATA TRIGGER
BUFFER & TRANSCEIVER
IC147 20pin
IC109~112 20pin
IC102~104 20pin
IC137~146 20pin
INPUT,OUTPUT CONTROL I/O
UI
EM
LED CONTROL
DPM
METER DATA TRIGGER
SRAM IC131 44pin
FLASH MEMORY IC130 48pin
DUAL PORT MEMORY IC126 100pin
OUT PORT
DUAL PORT MEMORY IC113 100pin
FLASH MEMORY IC118 48pin
IC119,120 44pin SRAM IC124,125 32pin
BATTERY (BUCK UP)
CPU (DIGITAL I/O CONTROL) IC127 112pin
FPGA (UI BUS CONTROL) IC135 100pin
FPGA (DUAL PORT MEMORY CONTROL) IC133 100pin
CPU (SCENE,METER CONTORL) IC114 144pin

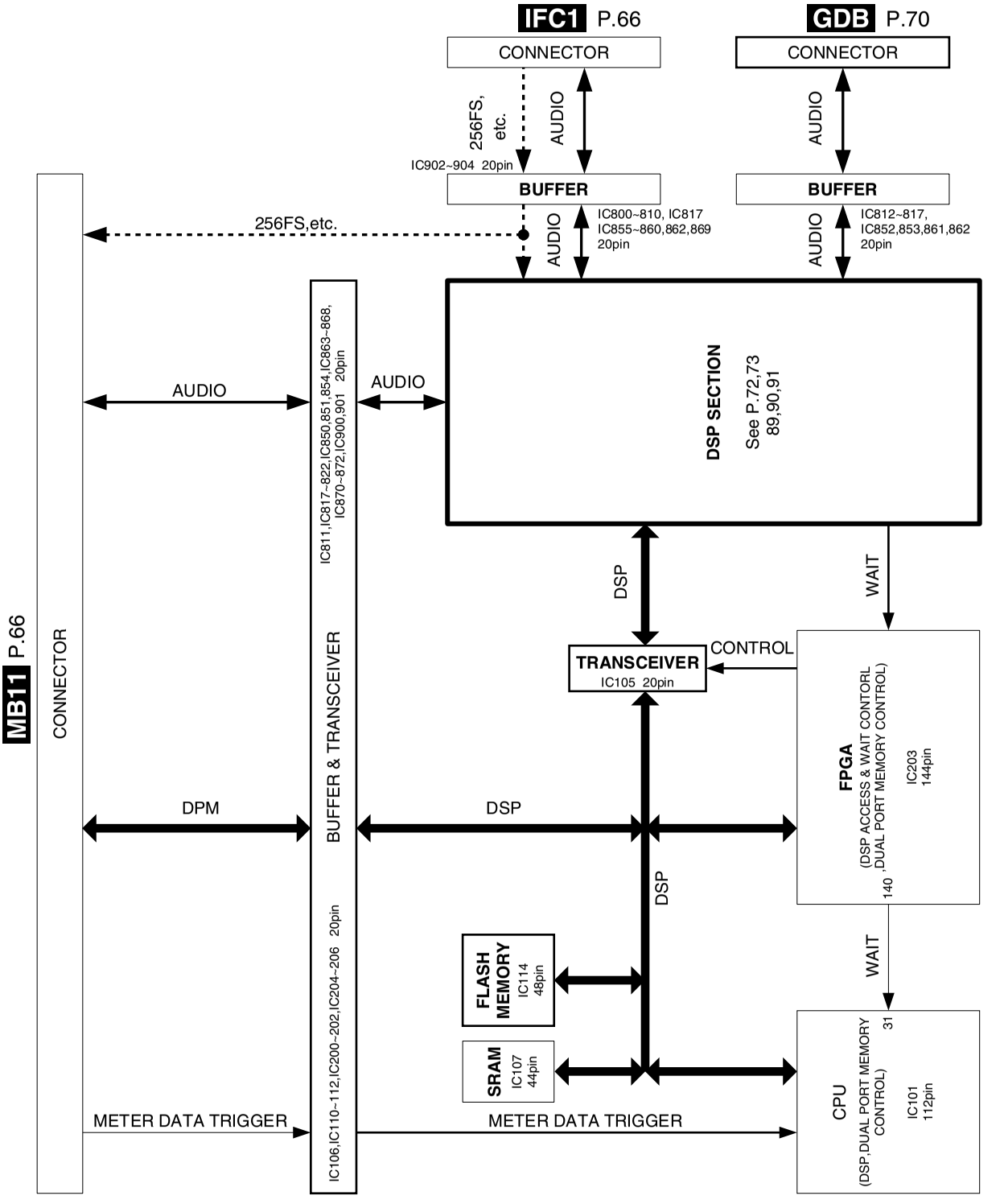
EMB


MB11 P.66
CONNECTOR
256FS,etc.
AUDIO
DPM
METER DATA TRIGGER
BUFFER & TRANSCEIVER
IC600~606 20pin
IC255~260 20pin
IC250~253 20pin
256FS,etc.
AUDIO
DSP SECTION
IDB :See P.74-93
EDB :See P.92,93
DSP
TRANSCEIVER
IC101 20pin
CONTROL
DSP
FLASH MEMORY
IC104
48pin
SRAM
IC103
44pin
DSP
METER DATA TRIGGER
WAIT
FPGA
(DSP ACCESS & WAIT CONTORL
,DUAL PORT MEMORY CONTROL)
IC254 144pin
140
WAIT
CPU
(DSP,DUAL PORT MEMORY CONTROL)
IC100 112pin
31

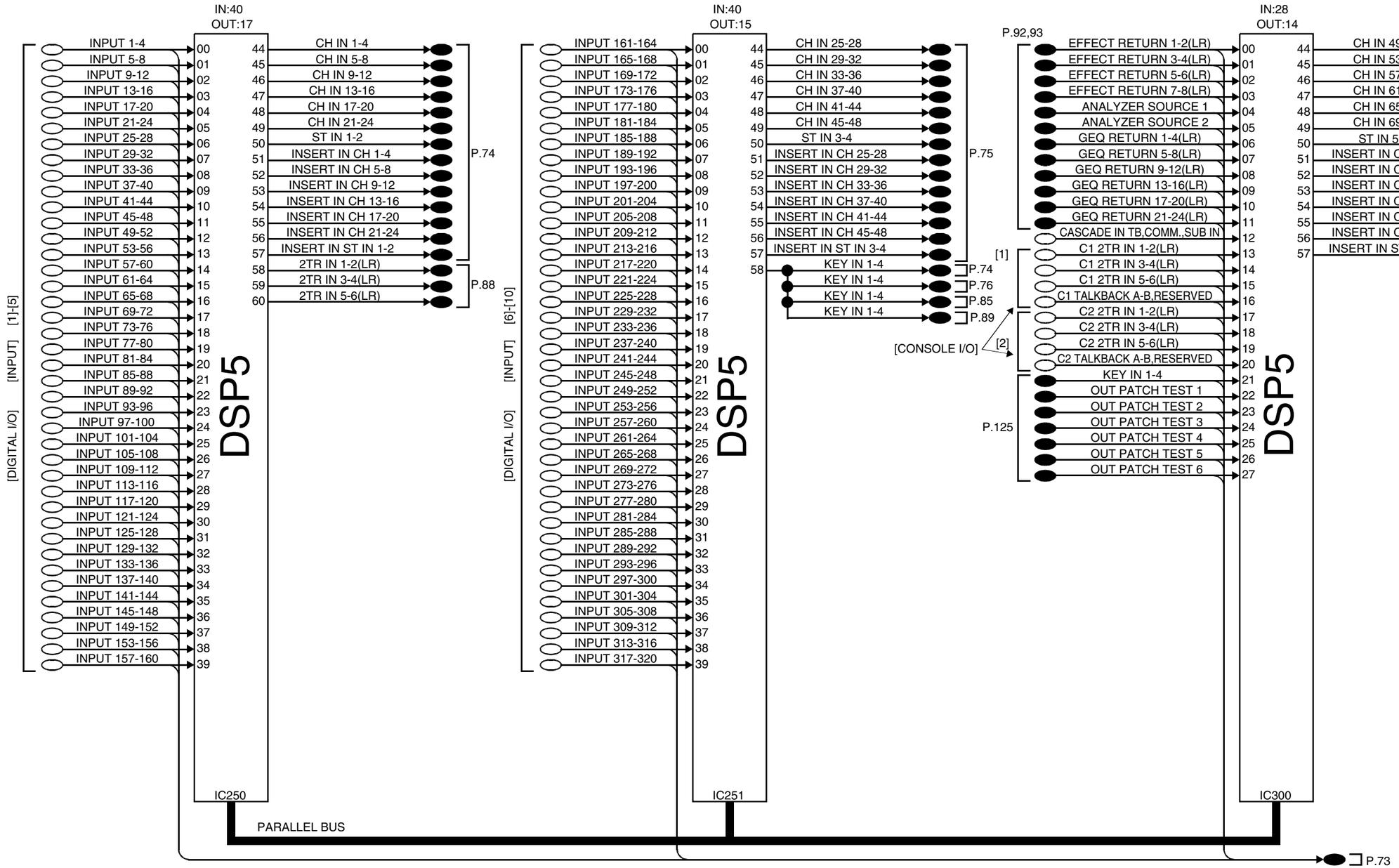
IDB EDB


PDB P.71
CONNECTOR
AUDIO
BUFFER
IC850~871 20pin
AUDIO
256FS,etc.
256FS,etc.
DSP SECTION
See P.84-88
AUDIO
AUDIO
MB11 P.66
CONNECTOR
BUFFER & TRANSCEIVER
IC220~229 20pin
DSP
WAIT
TRANSCEIVER
IC102 20pin
CONTROL
FPGA
(DSP ACCESS & WAIT CONTORL, DUAL PORT MEMORY CONTROL)
140
IC200
144pin
DPM
DSP
DSP
FLASH MEMORY
IC104
48pin
SRAM
IC103
44pin
WAIT
CPU
(DSP,DUAL PORT MEMORY CONTROL)
31
IC100
112pin
METER DATA TRIGGER
METER DATA TRIGGER

GDB

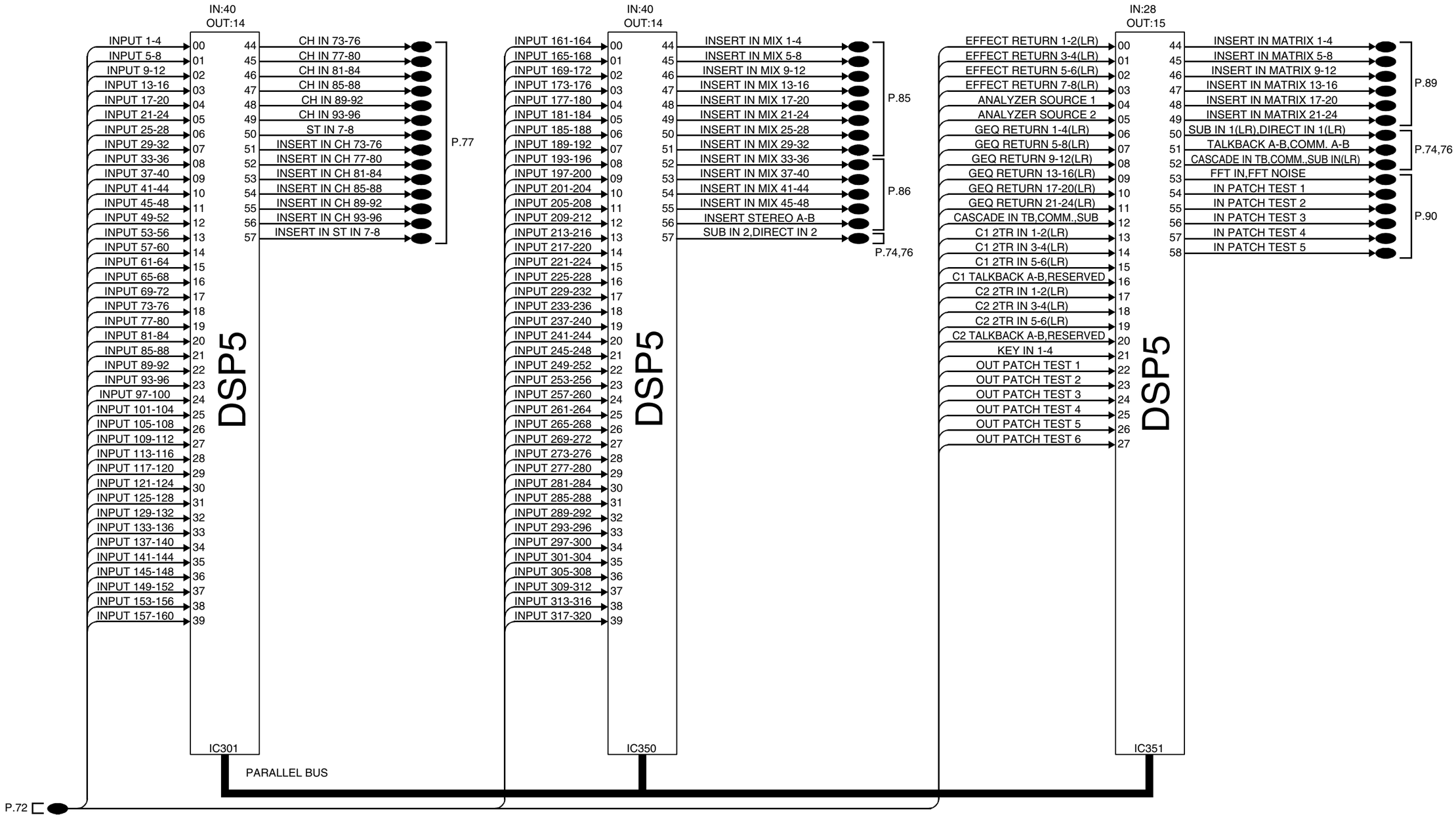

IFC1 P.66
GDB P.70
CONNECTOR
CONNECTOR
256FS, etc.
AUDIO
AUDIO
IC902~904 20pin
BUFFER
BUFFER
256FS,etc.
AUDIO
IC800~810, IC817
IC855~860,862,869
20pin
AUDIO
IC812~817,
IC852,853,861,862
20pin
AUDIO
DSP SECTION
See P.72,73
89,90,91
AUDIO
IC811,IC817~822,IC850,851,854,IC863~868,
IC870~872,IC900,901 20pin
DSP
WAIT
MB11 P.66
CONNECTOR
TRANSCEIVER
IC105 20pin
CONTROL
FPGA
(DSP ACCESS & WAIT CONTORL
,DUAL PORT MEMORY CONTROL)
140
IC203
144pin
DPM
BUFFER & TRANSCEIVER
DSP
DSP
FLASH MEMORY
IC114
48pin
WAIT
SRAM
IC107
44pin
CPU
(DSP,DUAL PORT MEMORY
CONTROL)
31
IC101
112pin
METER DATA TRIGGER
IC106,IC110~112,IC200~202,IC204~206 20pin
METER DATA TRIGGER

PDB



FUNCTION: INPUT PATCH, PEAK METER

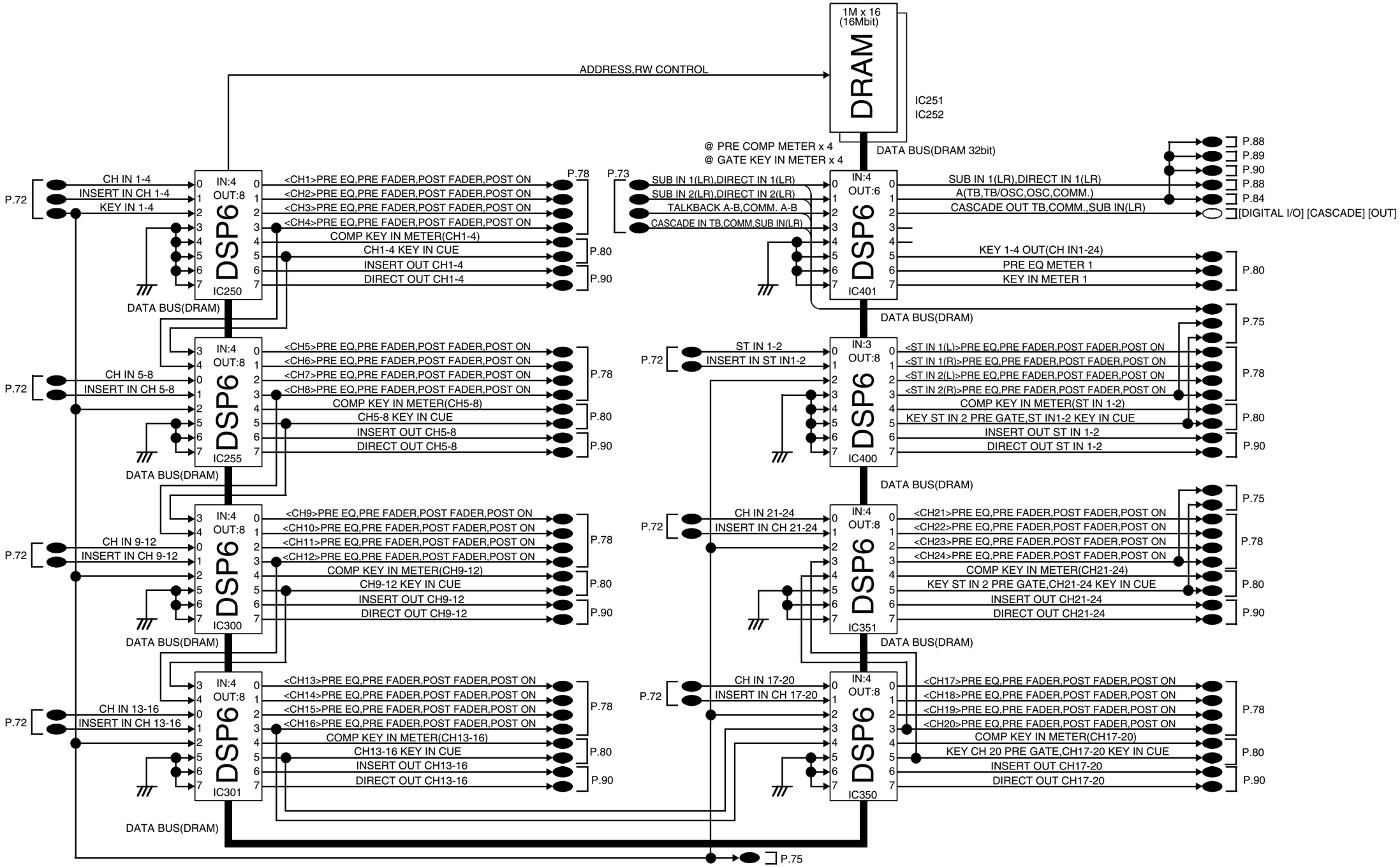
PDB



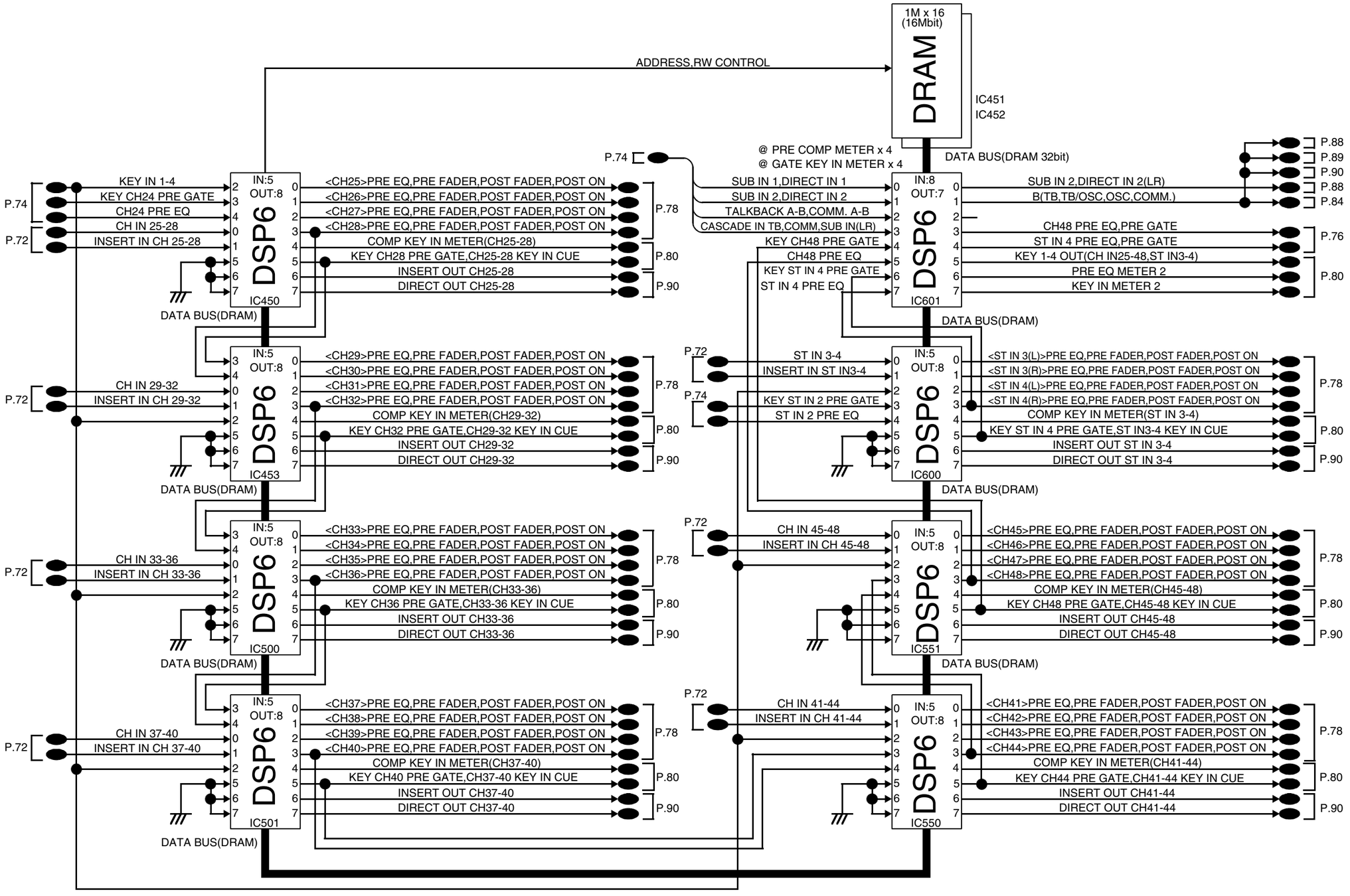
FUNCTION: INPUT PATCH, PEAK METER

PDB

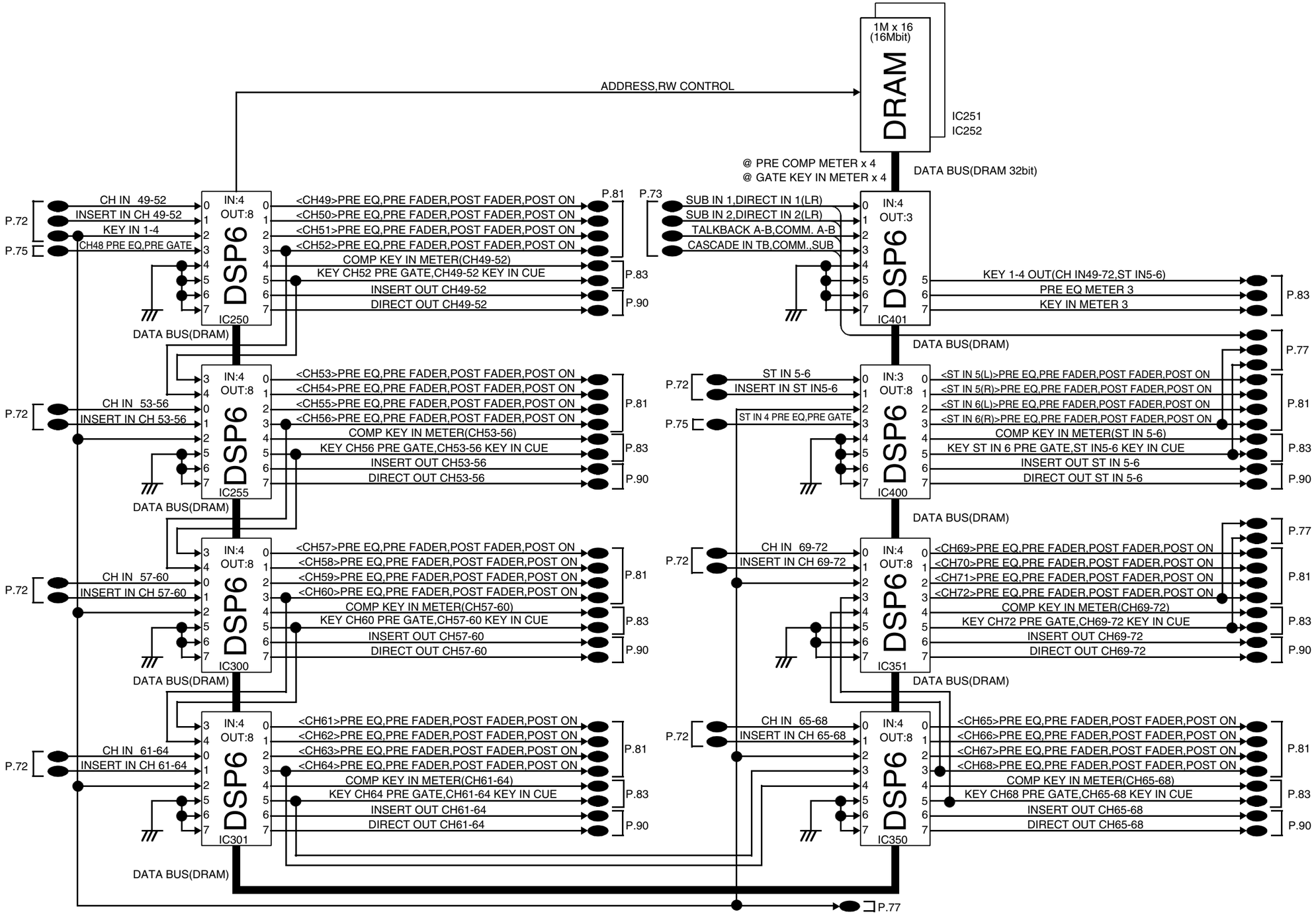
KEC-92538-17



FUNCTION: INPUT EQ/GATE/COMP/DELAY/FADER ON



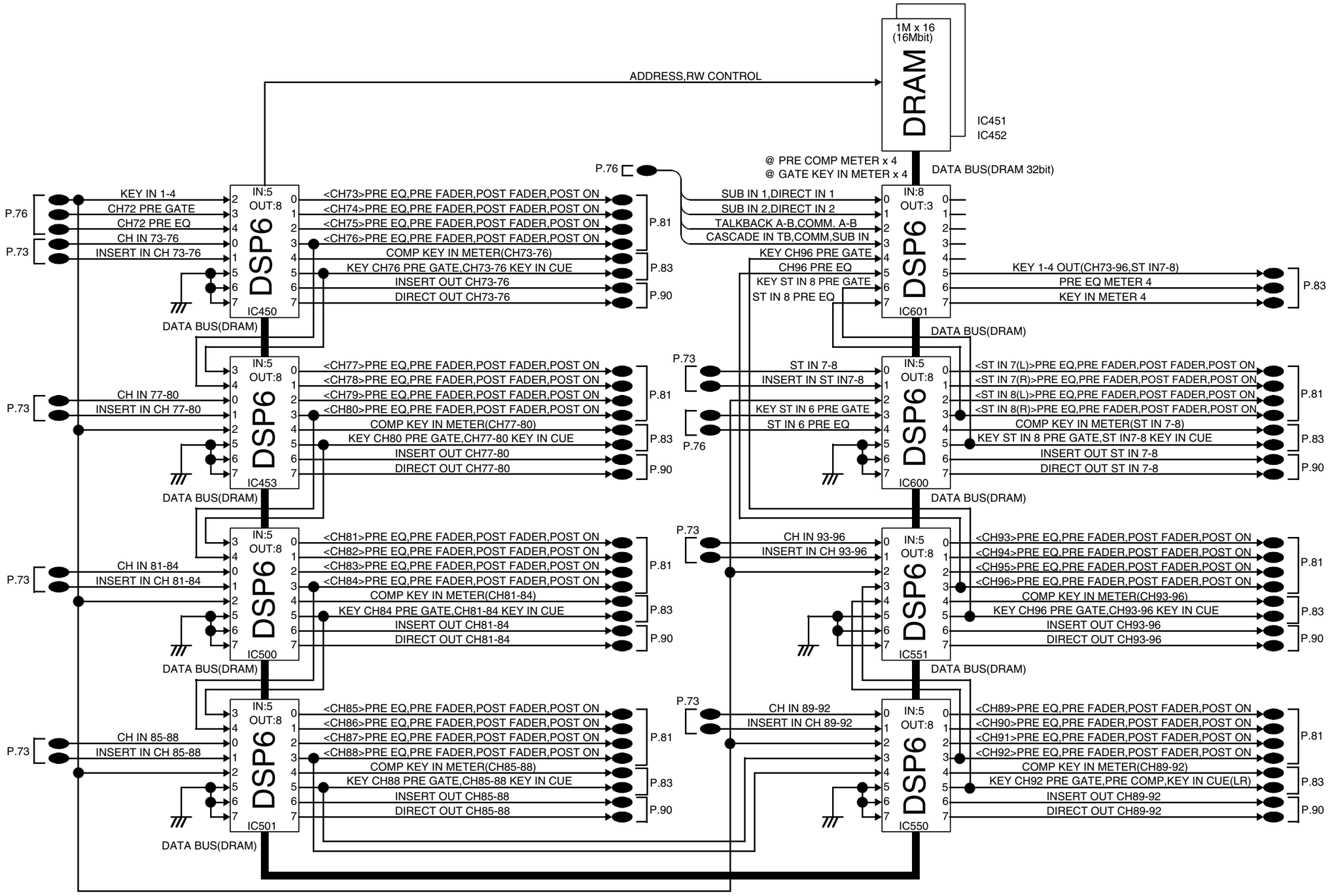
FUNCTION: INPUT EQ/GATE/COMP/DELAY/FADER ON



FUNCTION: INPUT EQ/GATE/COMP/DELAY/FADER ON

(FOR DSP1D-EX)

IDB (49–96)

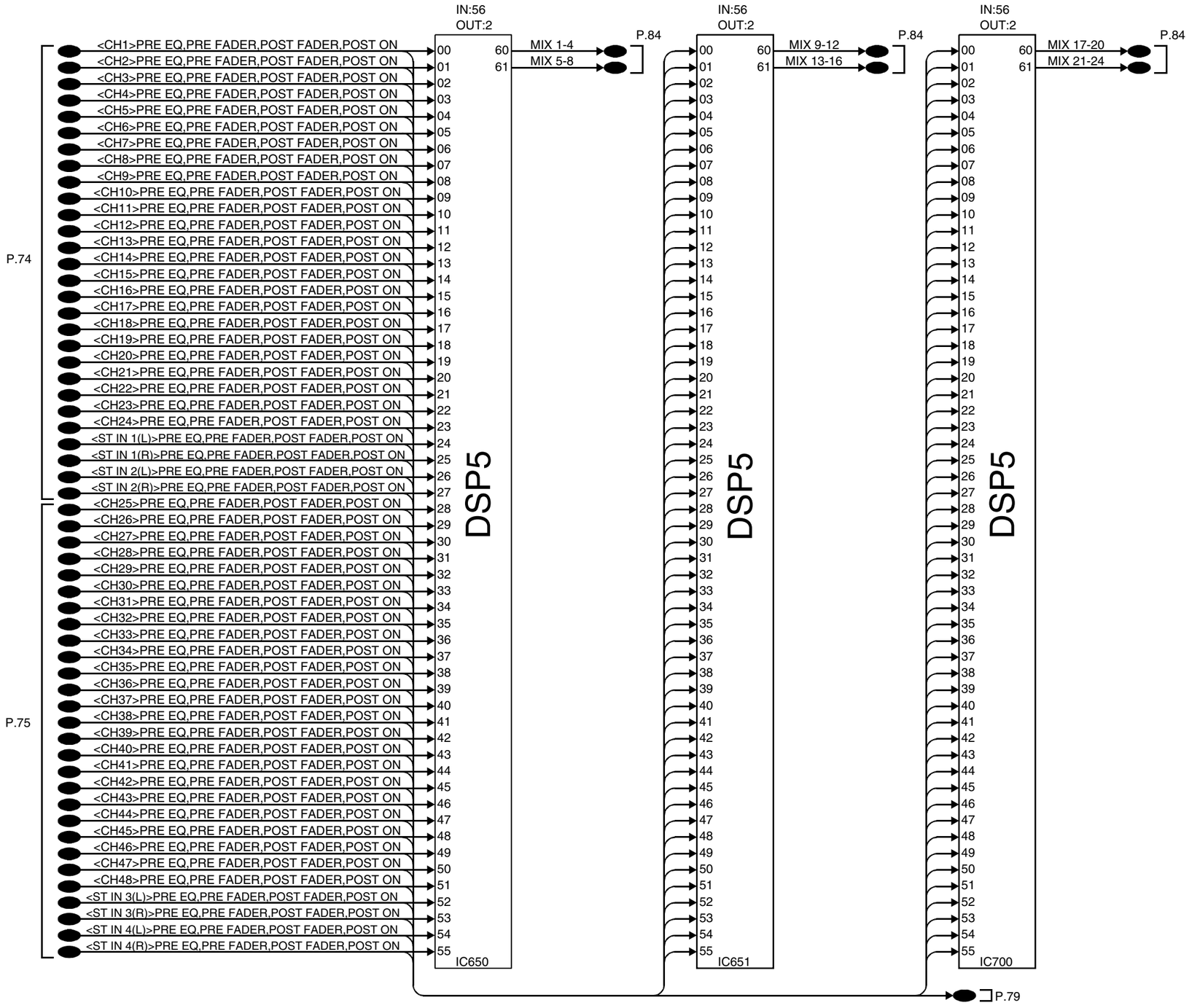


FUNCTION: INPUT EQ/GATE/COMP/DELAY/FADER ON

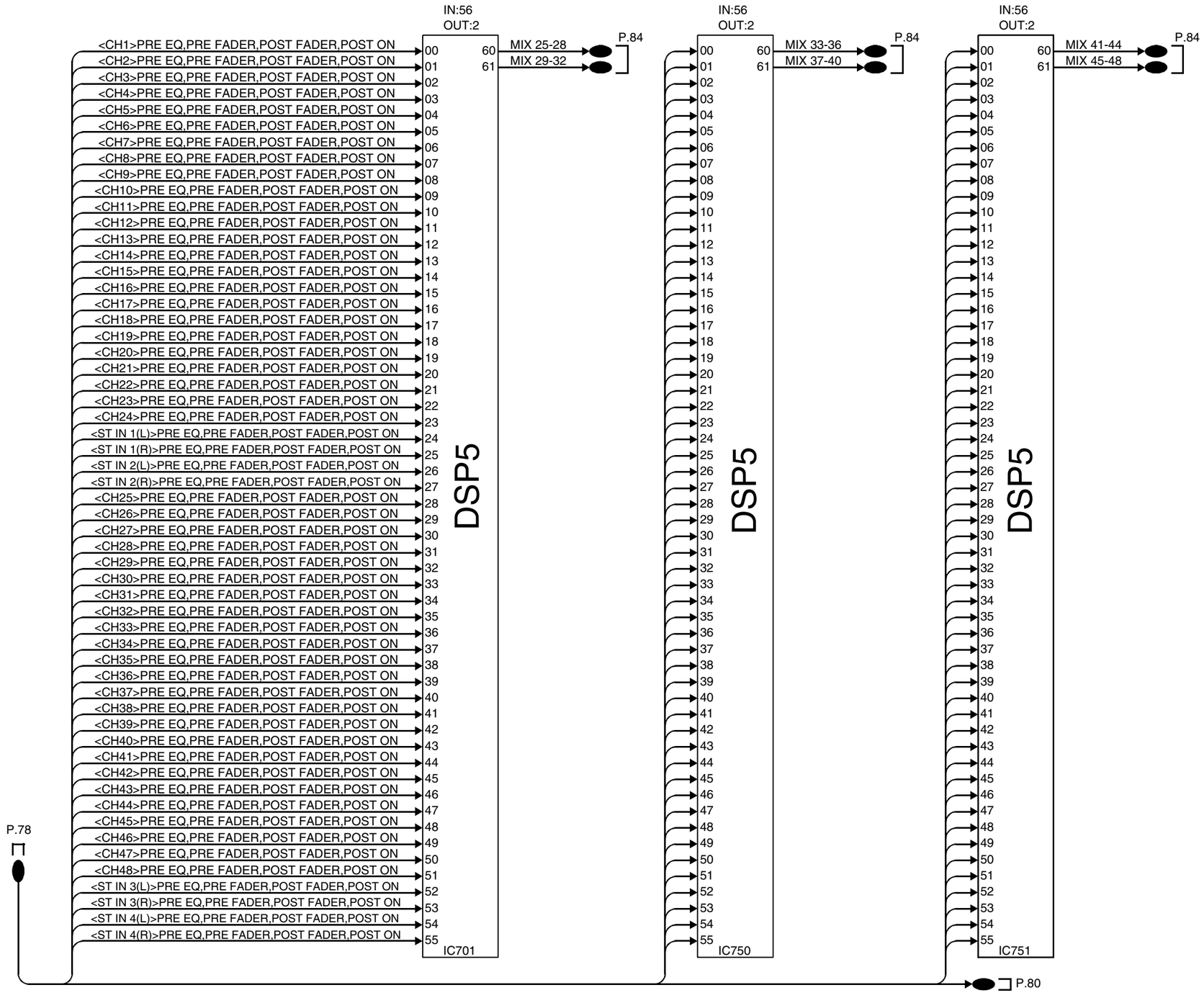
(FOR DSP1D-EX)

IDB (49–96)

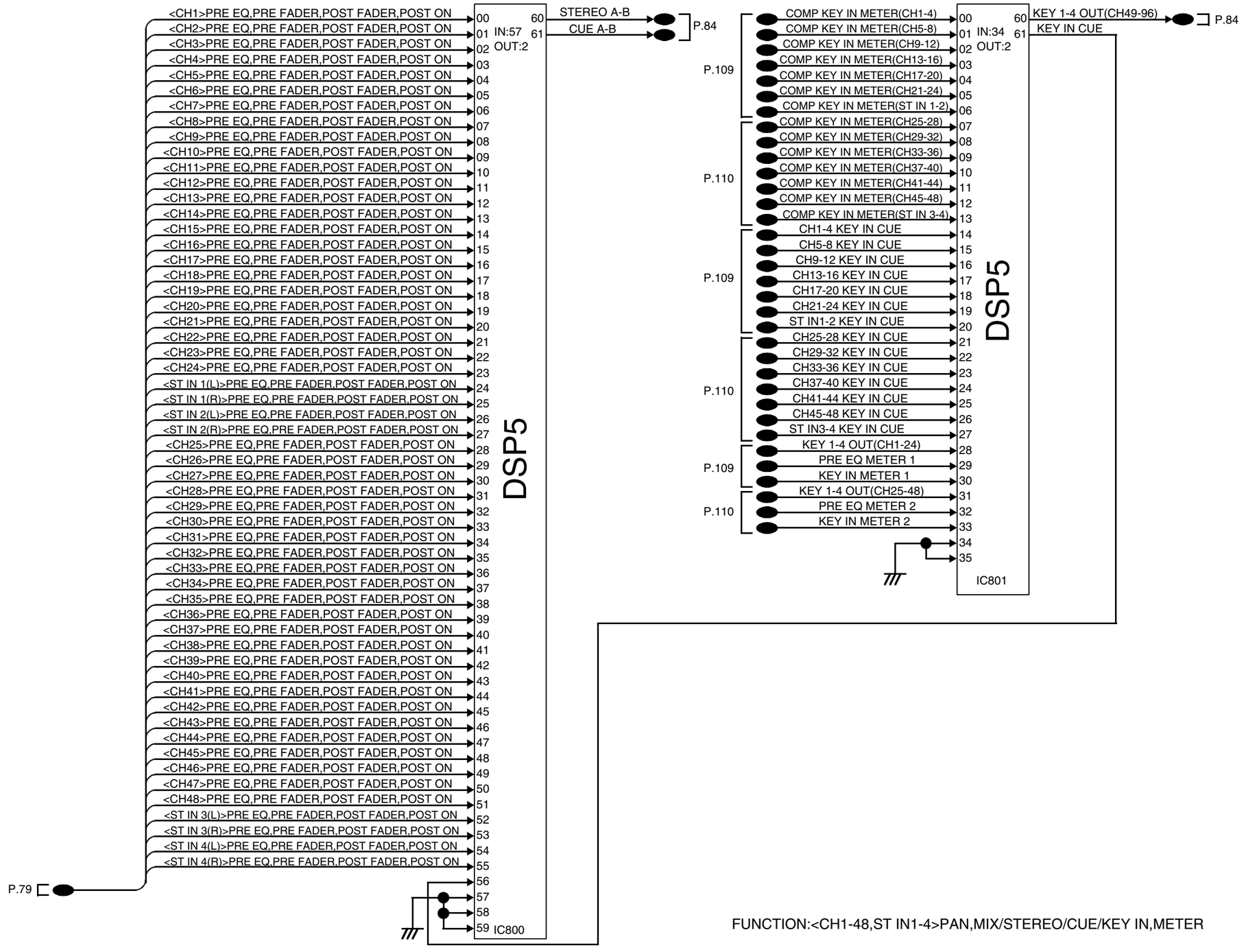
KEC-92538-21



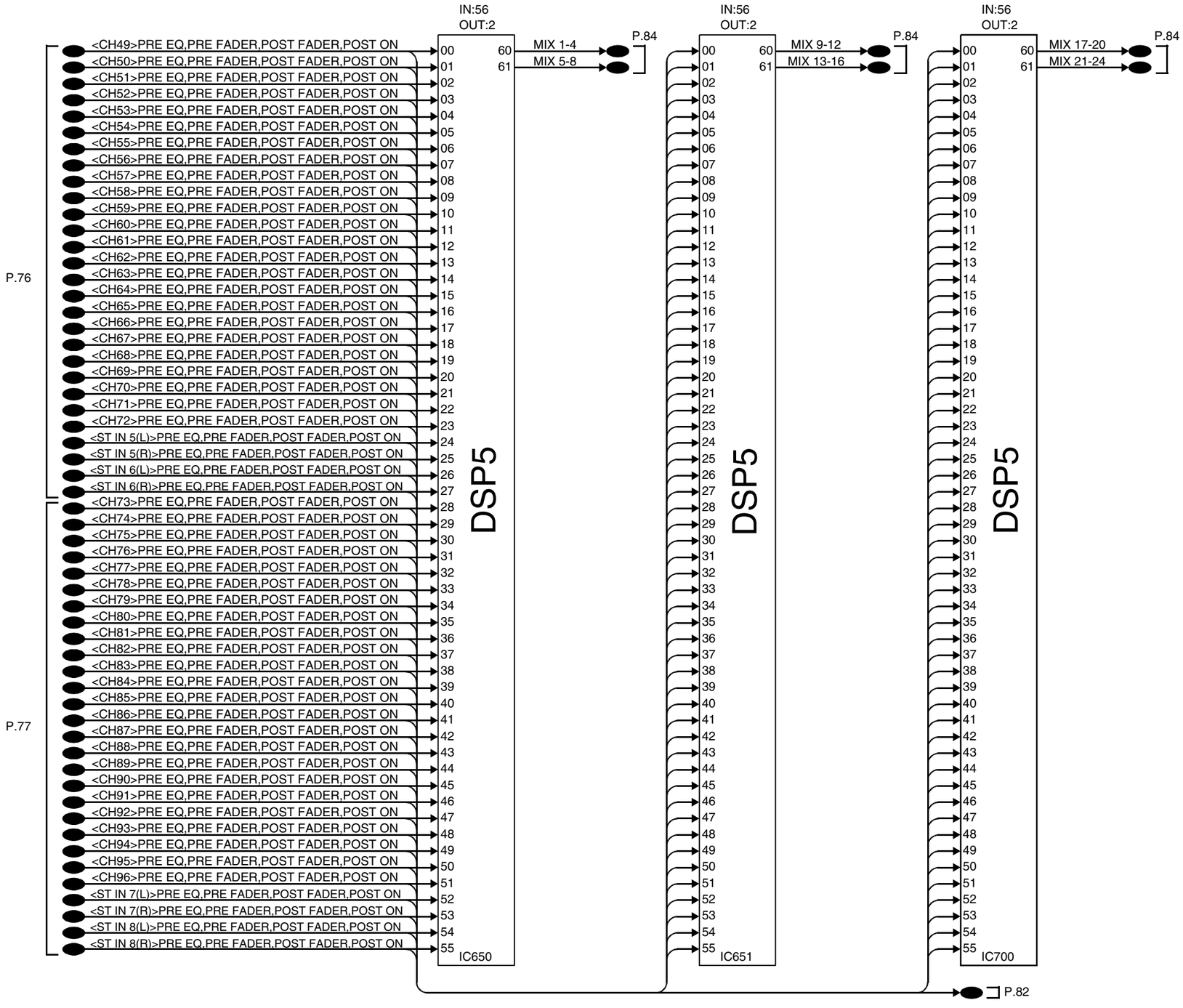
FUNCTION: <CH1-48,ST IN1-4>PAN,MIX/STEREO/CUE/KEY IN,METER



FUNCTION: <CH1-48,ST IN1-4>PAN,MIX/STEREO/CUE/KEY IN,METER



FUNCTION:<CH1-48,ST IN1-4>PAN,MIX/STEREO/CUE/KEY IN,METER

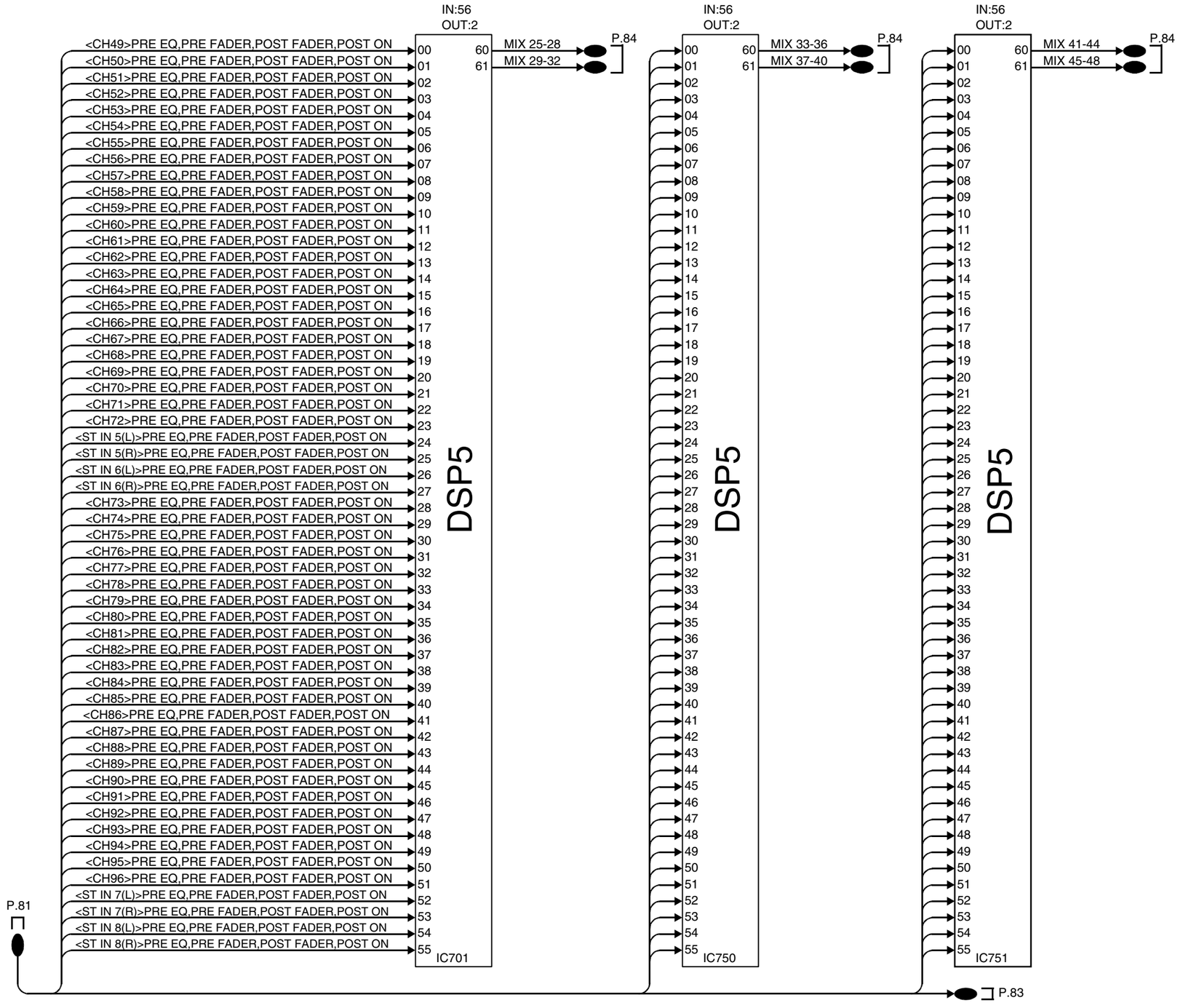


FUNCTION: <CH49-96,ST IN5-8>PAN,MIX/STEREO/CUE/KEY IN,METER

(FOR DSP1D-EX)

IDB (49–96)

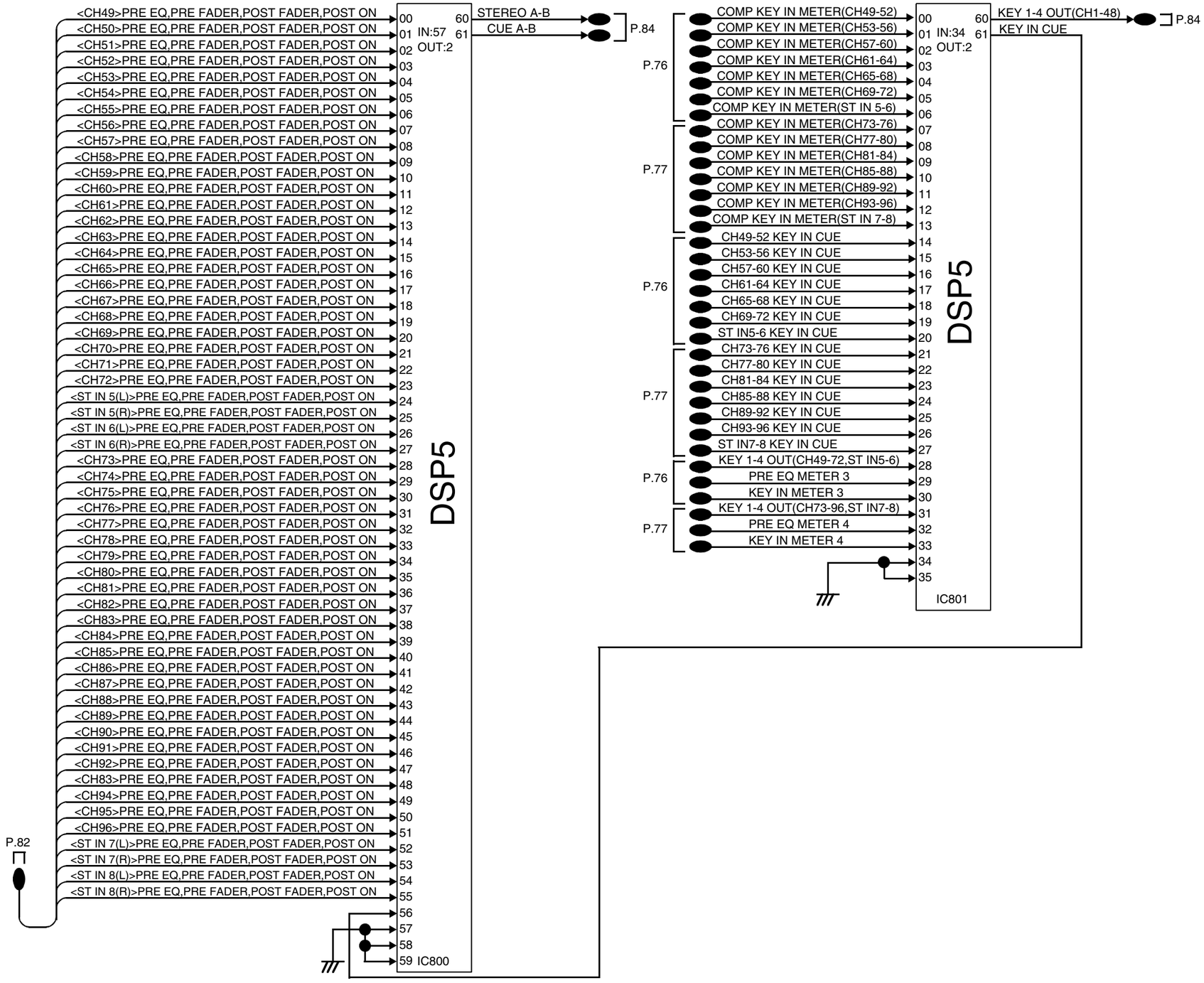
KEC-92538-25



FUNCTION: <CH49-96,ST IN5-8>PAN,MIX/STEREO/CUE/KEY IN,METER

(FOR DSP1D-EX)

IDB (49–96)

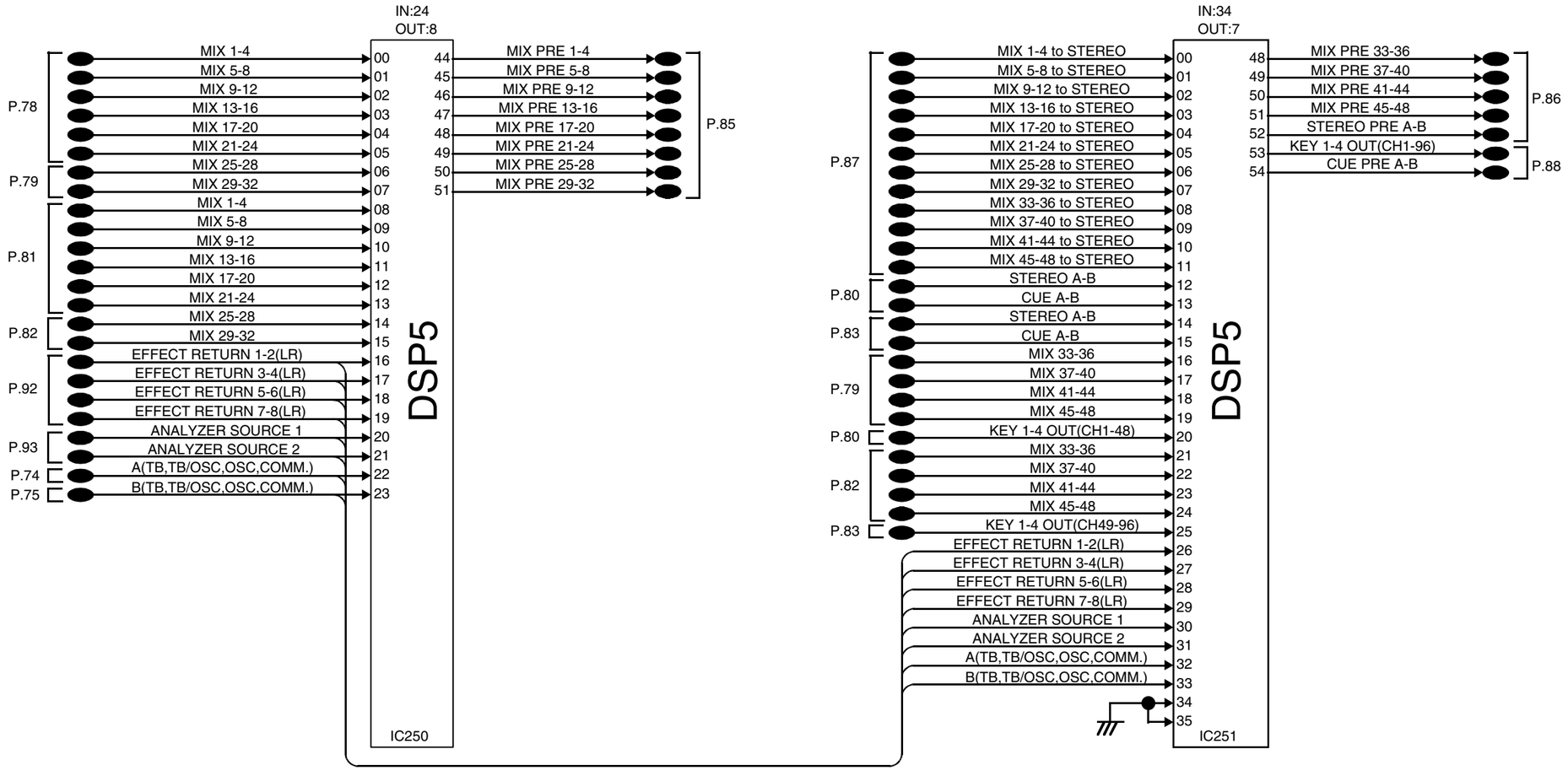


FUNCTION: <CH49-96,ST IN5-8>PAN,MIX/STEREO/CUE/KEY IN,METER

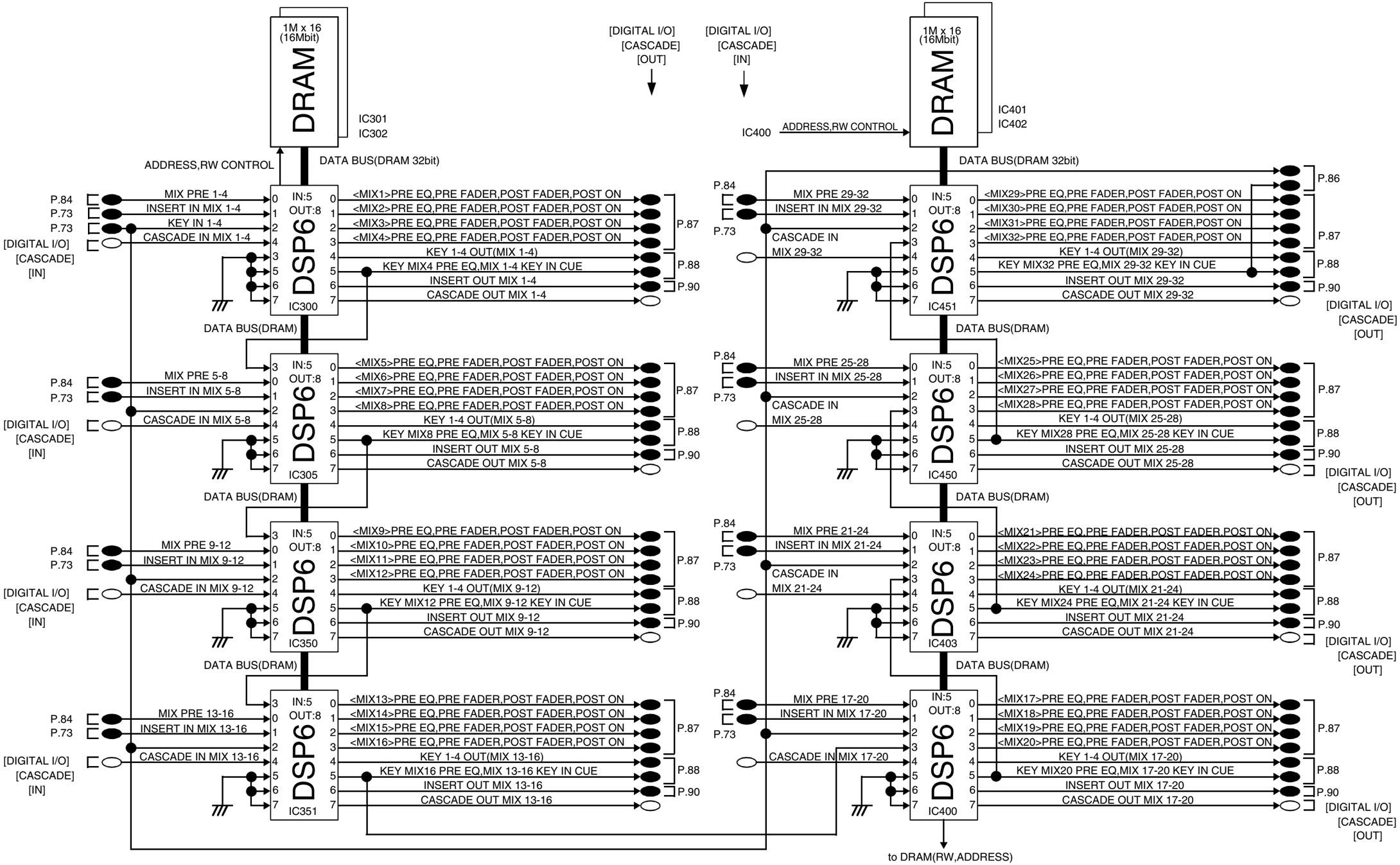
(FOR DSP1D-EX)

IDB (49–96)

KEC-92538-27



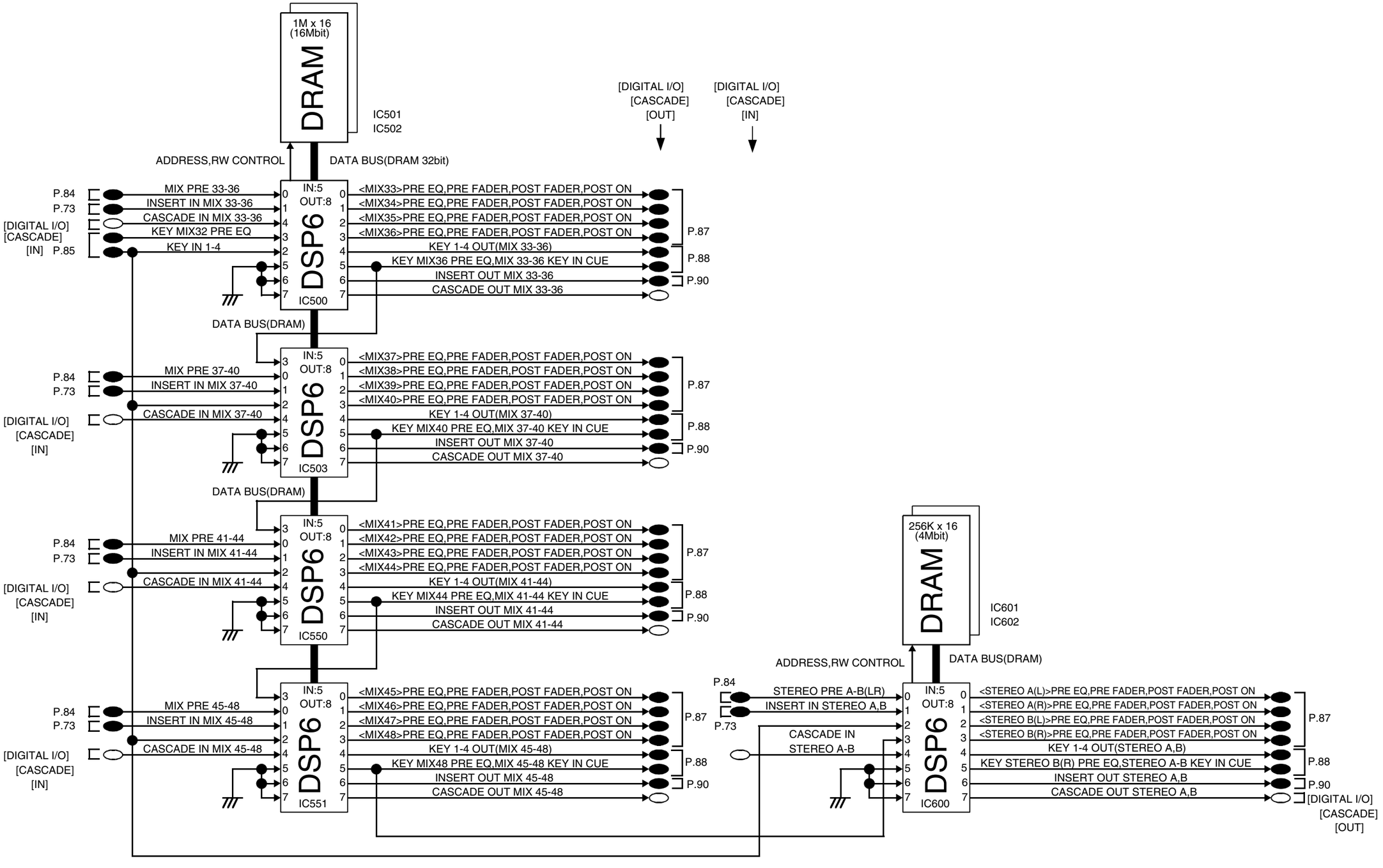
FUNCTION: MIX/STEREO/CUE/KEY IN



FUNCTION: MIX EQ/COMP/DELAY/FADER ON

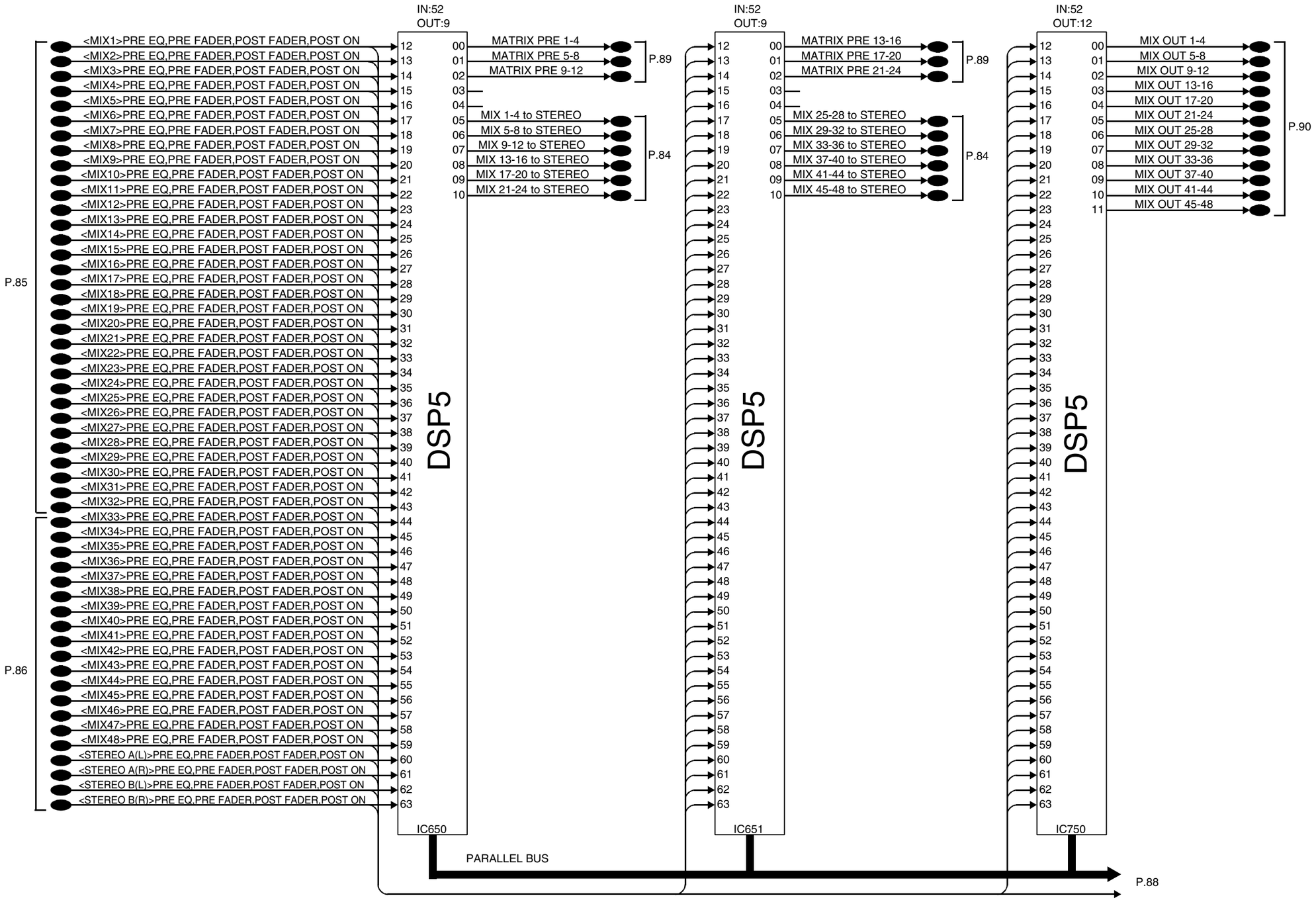
GDB

KEC-92538-29

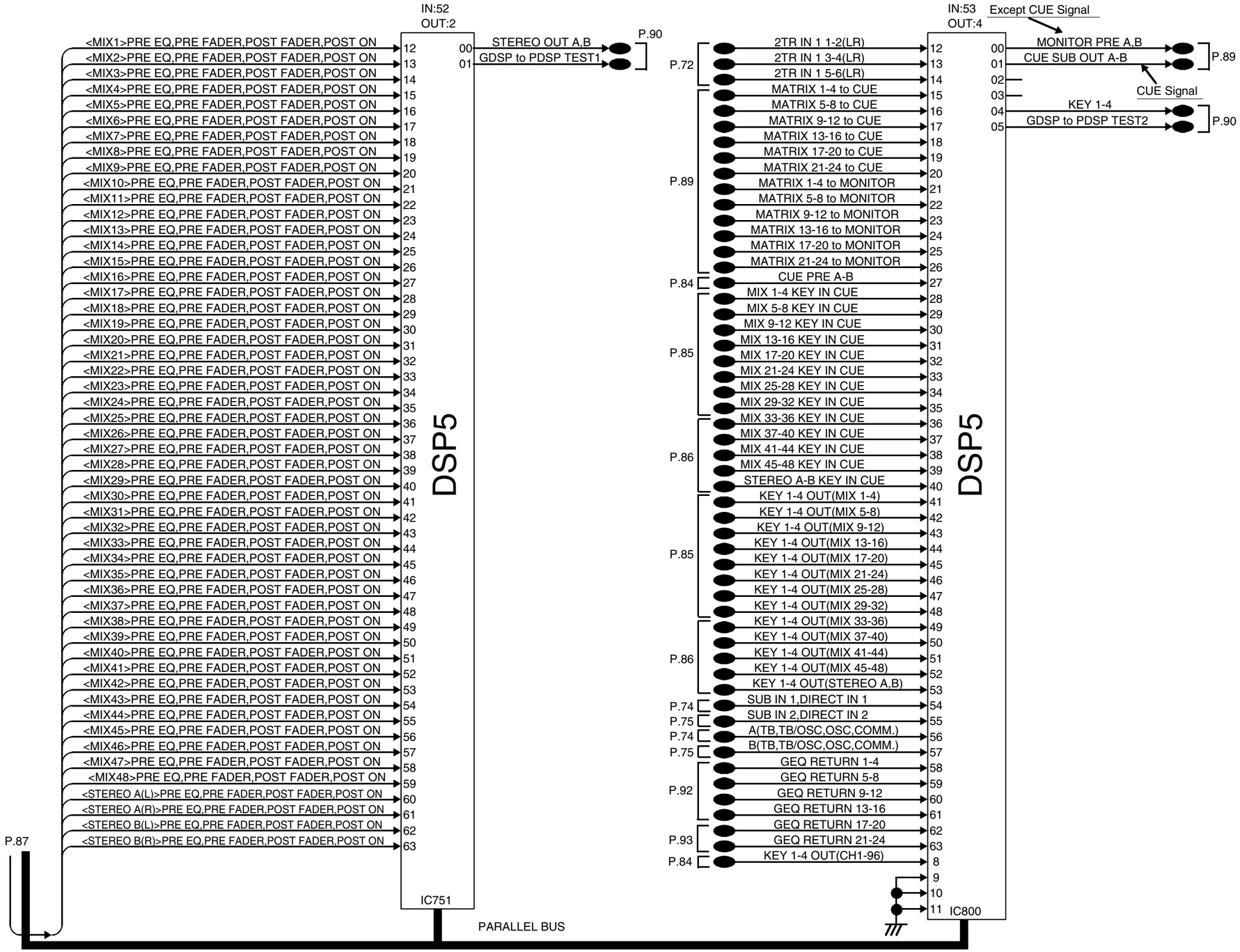


FUNCTION: MIX EQ/COMP/DELAY/FADER ON

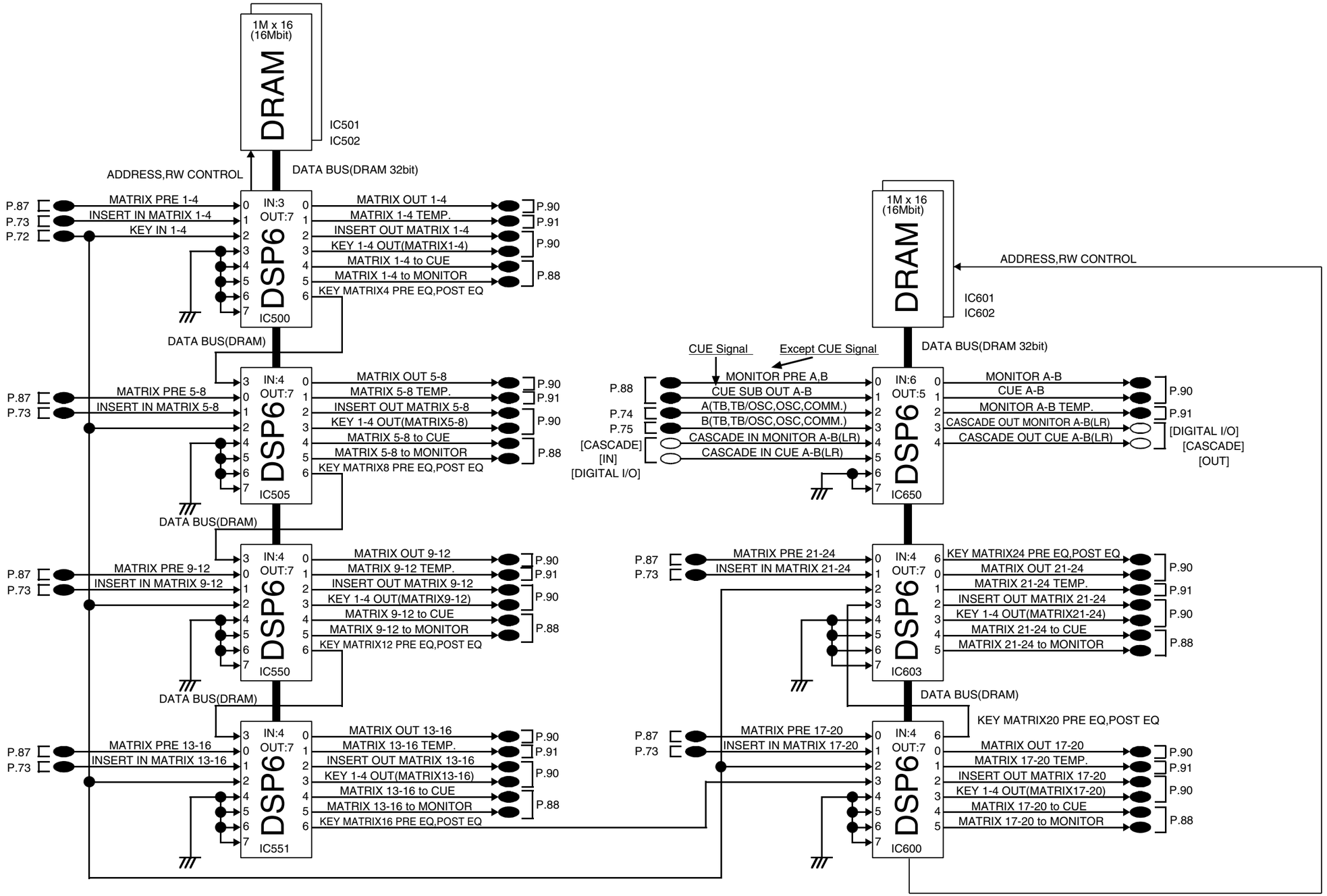
GDB



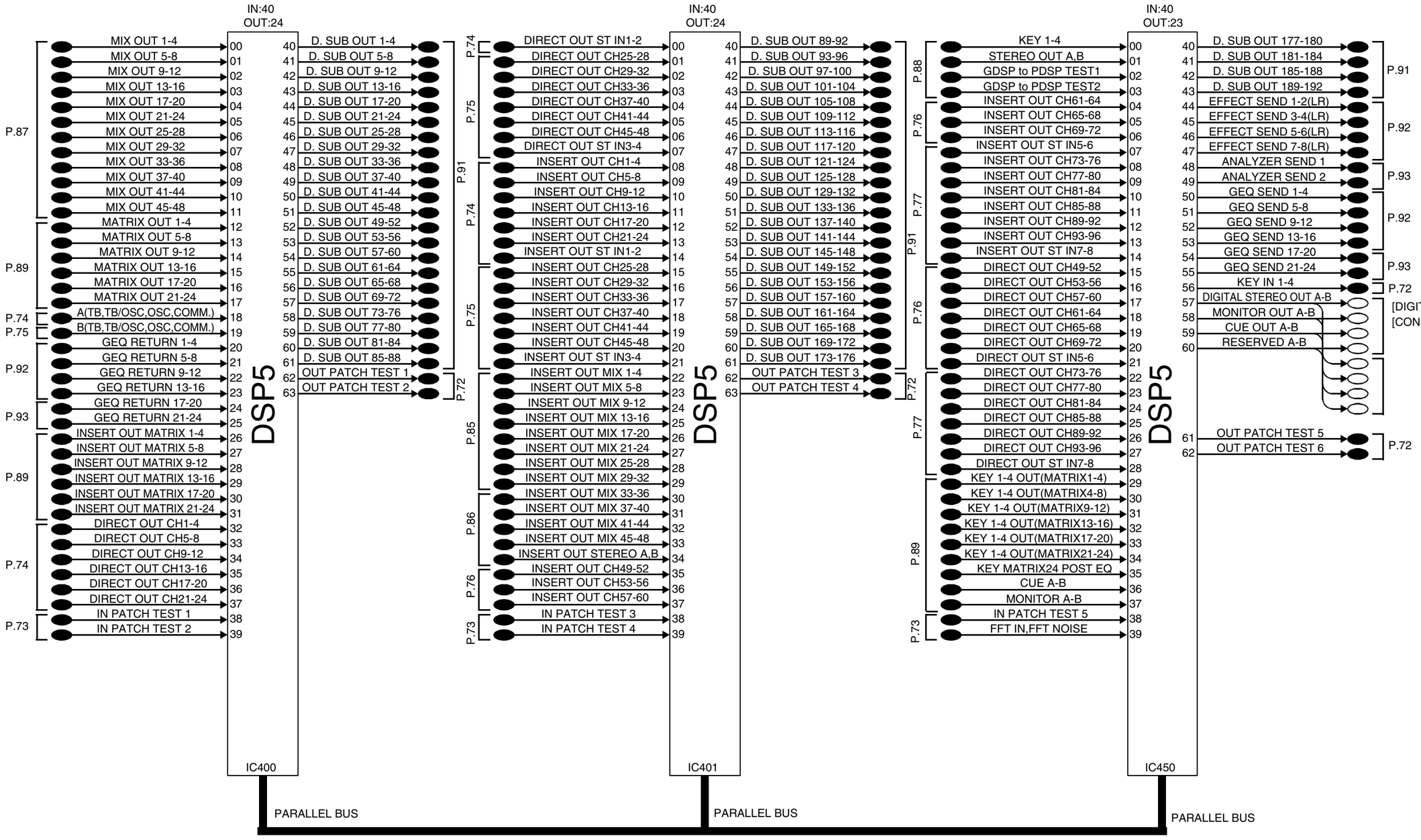
FUNCTION: MATRIX,CUE/MONITOR ADD.,KEY IN



FUNCTION: MATRIX,CUE/MONITOR ADD.,KEY IN

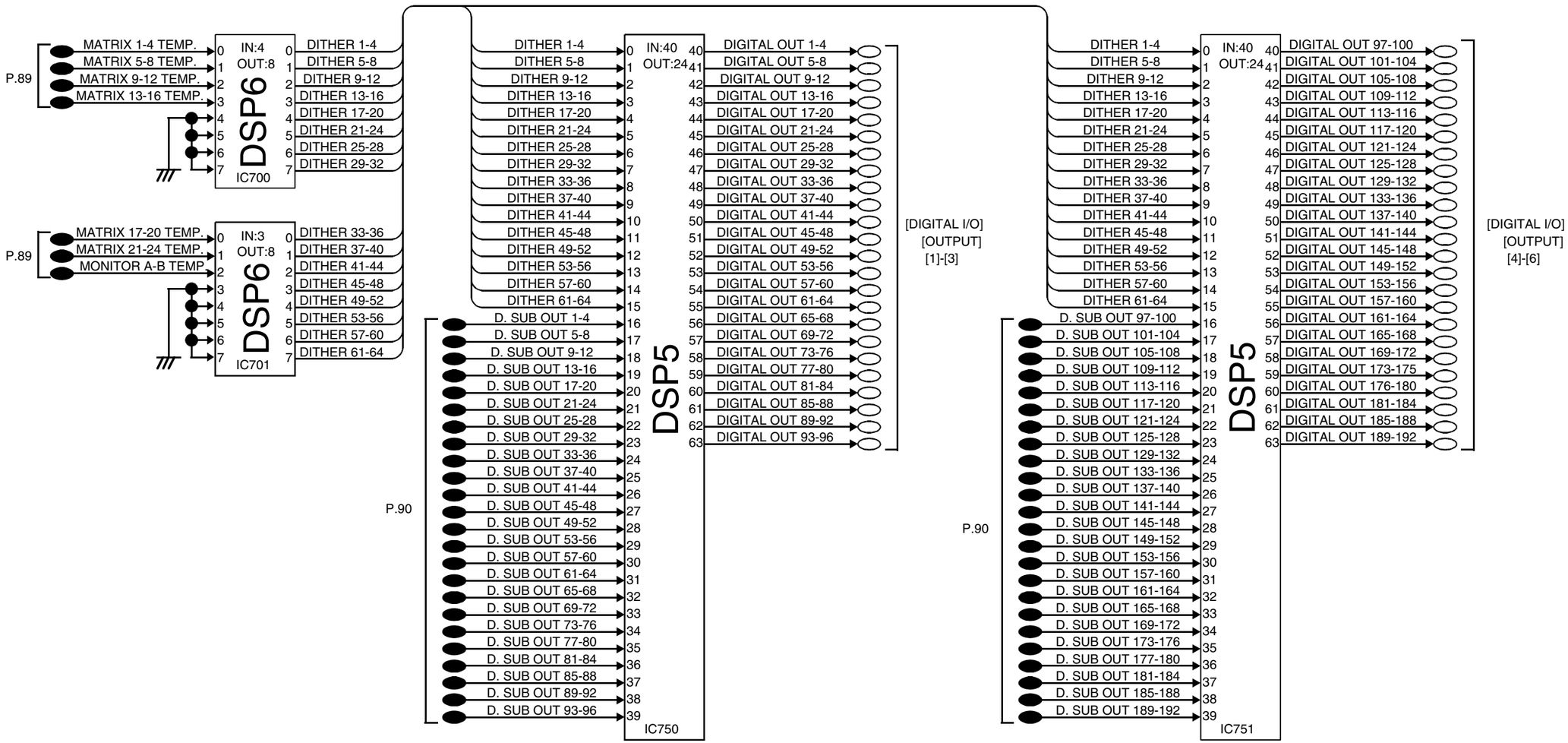


FUNCTION: MATRIX EQ/COMP/DELAY/FADER ON,MONITOR DELAY

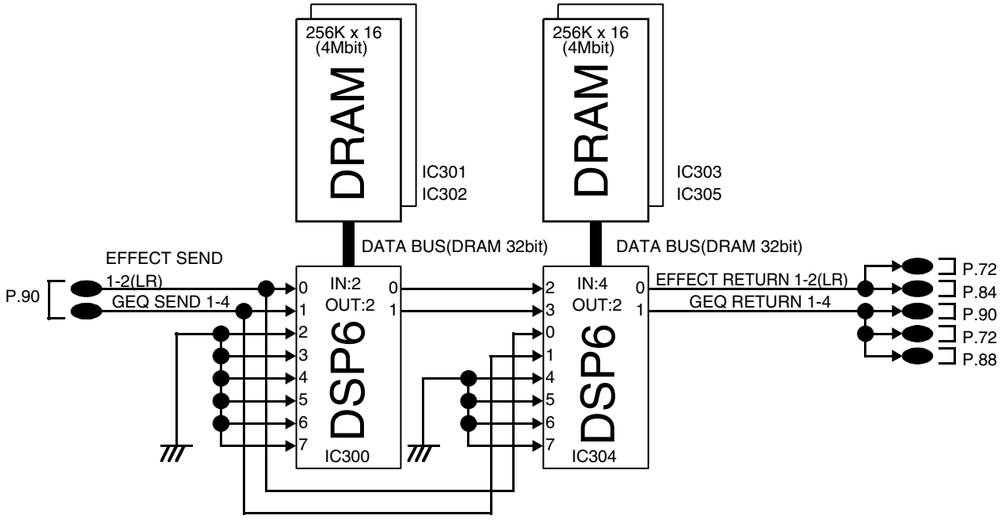


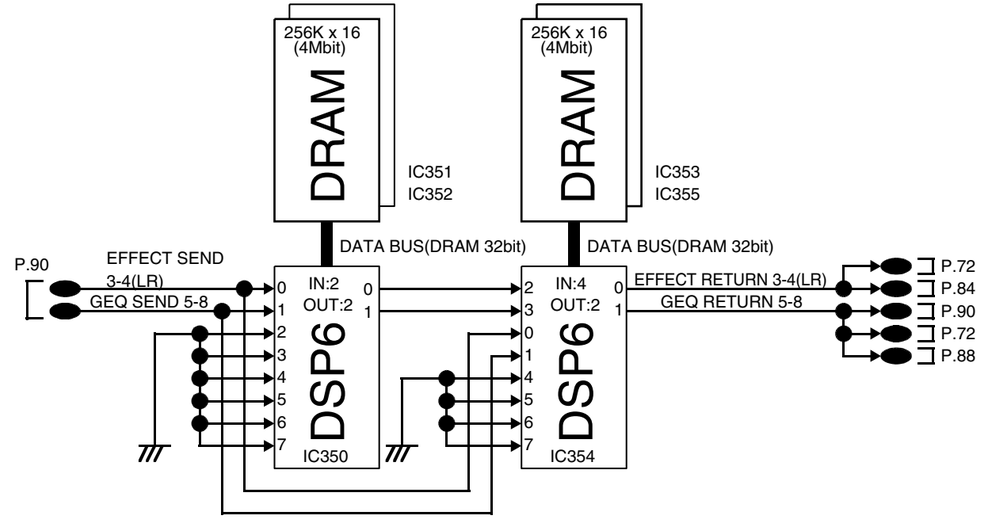
FUNCTION: OUTPUT PATCH, PEAK METER

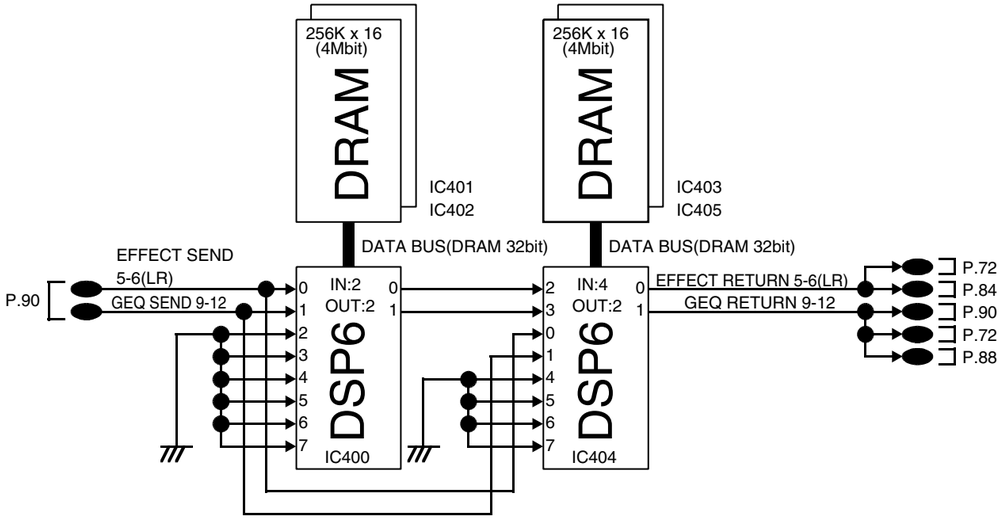
PDB

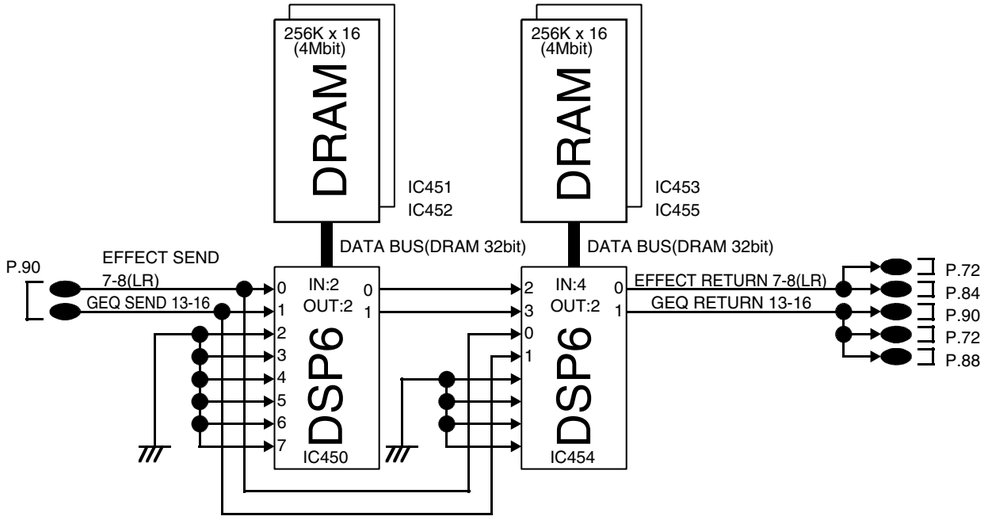


FUNCTION: DITHER

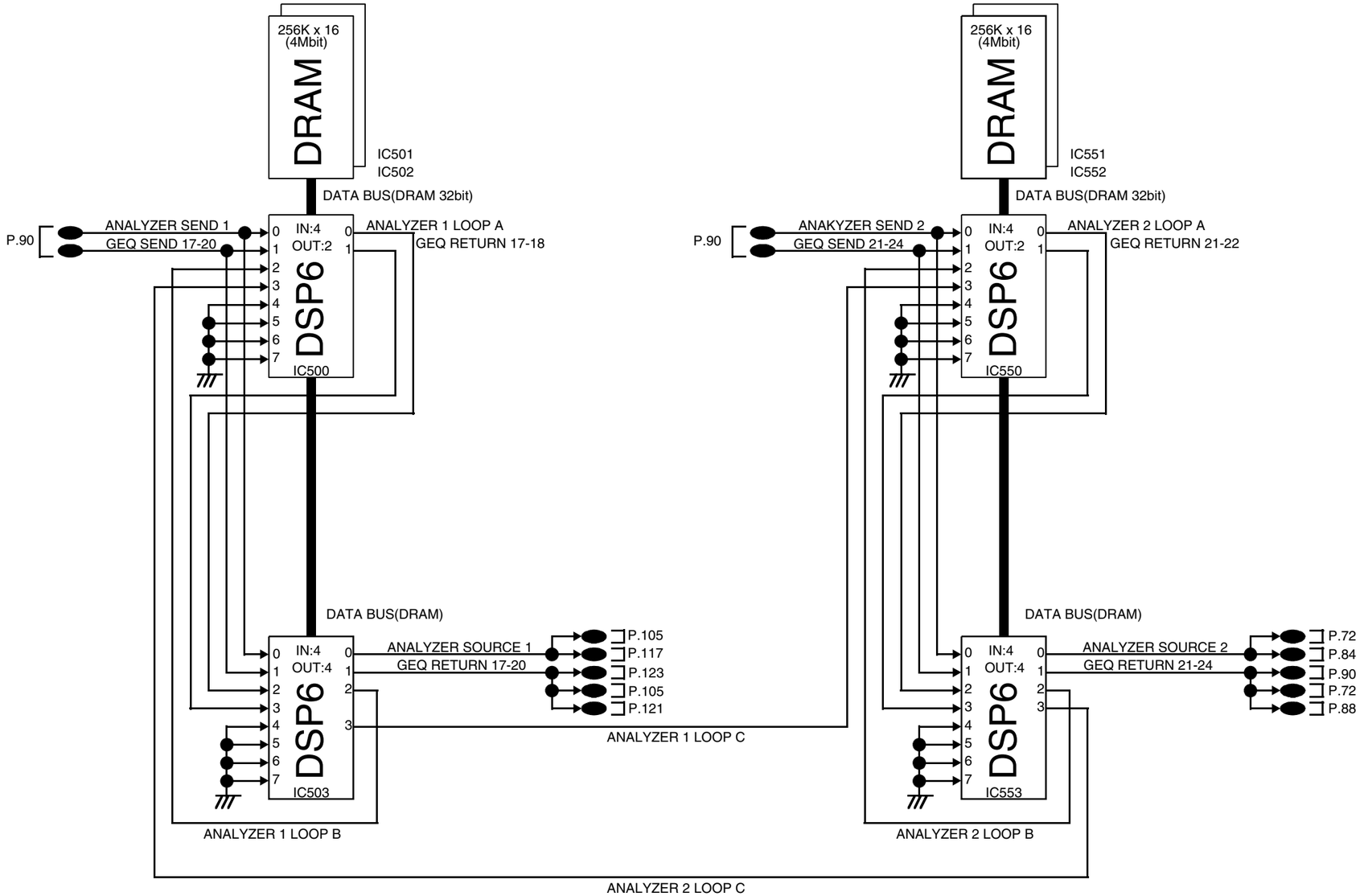








FUNCTION: EFFECT,GEQ


256K x 16
(4Mbit)
DRAM
IC501
IC502
DATA BUS(DRAM 32bit)
P.90
ANALYZER SEND 1
GEQ SEND 17-20
IN:4
OUT:2
DSP6
IC500
ANALYZER 1 LOOP A
GEQ RETURN 17-18
DATA BUS(DRAM)
IN:4
OUT:4
DSP6
IC503
ANALYZER SOURCE 1
GEQ RETURN 17-20
P.105
P.117
P.123
P.105
P.121
ANALYZER 1 LOOP C
ANALYZER 1 LOOP B
256K x 16
(4Mbit)
DRAM
IC551
IC552
DATA BUS(DRAM 32bit)
P.90
ANAKYZER SEND 2
GEQ SEND 21-24
IN:4
OUT:2
DSP6
IC550
ANALYZER 2 LOOP A
GEQ RETURN 21-22
DATA BUS(DRAM)
IN:4
OUT:4
DSP6
IC553
ANALYZER SOURCE 2
GEQ RETURN 21-24
P.72
P.84
P.90
P.72
P.88
ANALYZER 2 LOOP B
ANALYZER 2 LOOP C

DSP UNIT

DSP1D

PARTS LIST

CONTENTS

OVERALL ASSEMBLY 2
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ELECTRICAL PARTS ..... 7~24

Notes : DESTINATION ABBREVIATIONS

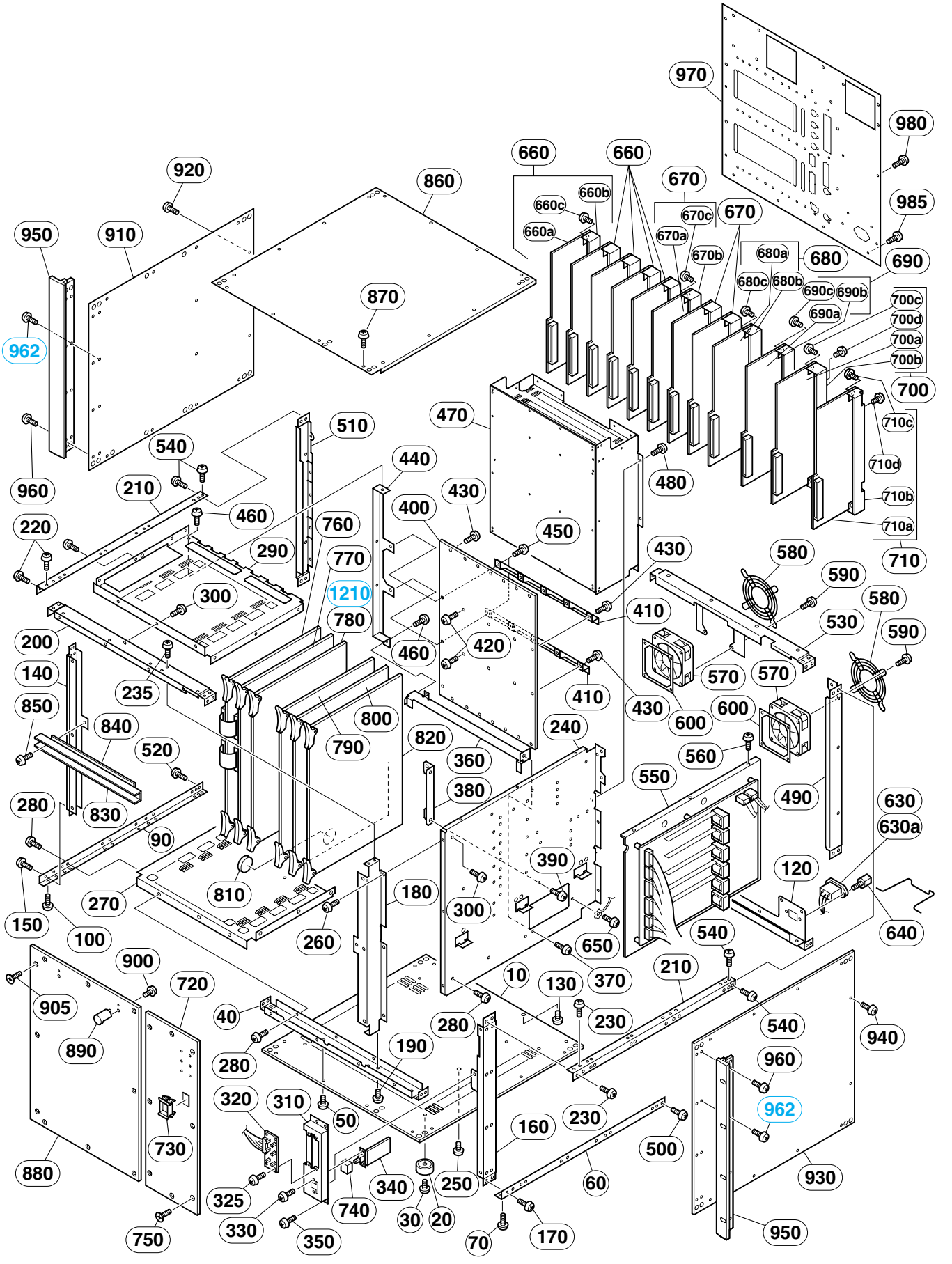
A:	Australian model	M:	South African model
B:	British model	O:	Chinese model
C:	Canadian model	Q:	South-east Asia model
D:	German model	T:	Taiwan model
E:	European model	U:	U.S.A. model
F:	French model	V:	General export model (110 V)
H:	North European model	W:	General export model (220 V)
I :	Indonesian model	N,X:	General export model
J :	Japanese model	Y:	Export model

WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

- The numbers in " QTY " show quantities for each unit.
- The parts with " **- -** " in " **PART NO.** " are not available as spare parts.
- The mark " } " in the remarks column indicates that these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

OVERALL ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			OVERALL ASSEMBLY			DSP1D		
		- -	Overall Assembly			DSP1D (V478200)		
		- -	Overall Assembly			DSP1D-EX (V535700)		
*	10	V4783000	Botton Plate					12
	20	CB806590	Foot	BL			4	03
	30	VR138400	Bind Head Tapping Screw-B	4.0X12 MFZN2BL			4	01
	40	- -	Frame	FR-LOW		(V510520)		
	50	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	60	- -	Frame	FRONT-REAR		(V510560)		
	70	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			6	01
	90	- -	Frame	FRONT-REAR		(V510560)		
	100	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			6	01
	120	- -	Frame	RR-LOW		(V510570)		
	130	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	140	- -	Frame	FR-L		(V510540)		
	150	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	160	- -	Frame	FR-R		(V510550)		
	170	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	180	- -	Frame	CENTER		(V478280)		
	190	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	200	- -	Frame	FR-TOP		(V510530)		
	210	- -	Frame	FRONT-REAR		(V510560)	2	
	220	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	230	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	235	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	240	- -	Middle Panel			(V478390)		
	250	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			3	01
	260	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			3	01
	270	- -	Guide Plate	FRONT-LOWER		(V478450)		
	280	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			9	01
	290	- -	Guide Plate	FRONT-UPPER		(V478460)		
	300	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			9	01
	310	- -	Bracket	LED-SWITCH		(V478500)		
*	320	V44395S0	Circuit Board	DSP LED2 (SWCOM)				
	325	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			4	01
	330	VB659000	Bind Head Screw	3.0X8 MFZN2BL			2	01
*	340	V50480S0	Circuit Board	DSP PSB2 (SWCOM)				
	350	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	360	- -	Frame	FR-SUB		(V510610)		
	370	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	380	- -	Bracket			(V478340)		
	390	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
*	400	V44079S0	Circuit Board	DSP MB11				
	410	- -	Reinforcement Angle			(V478350)	2	
	420	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			6	01
	430	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			16	01
	435	VN413300	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			2	01
	440	- -	Frame	SIDE		(V510620)		
	450	VN413300	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			2	01
	460	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	470	- -	JK Box Assembly			(V479950)		
	480	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
	490	- -	Frame	RR-R		(V510600)		
	500	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	510	- -	Frame	RR-L		(V510590)		
	520	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			2	01
	530	- -	Frame	RR-TOP		(V510580)		
	540	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			8	01
⚠ *	550	V4704900	Power Supply Unit	DSP-DC J,UL,CSA				98
	560	VD831800	Bind Head Tapping Screw-B	A4.0X12 MFZN2BL			3	01
	570	V5789100	Motor			Fan	2	09
	580	VK949100	Fan Guard				2	06
	590	VG605800	Bind Head Screw	4.0X35 MFZN2BL			8	01
	600	V5107200	Fan Guide				2	06
	630	- -	Inlet Assembly	AC INLET&VH3P		(V509940)		
⚠ *	630a	V5065200	AC Inlet	M1908-C 3P				03
	640	- -	Support			(V560030)	1	
	650	VP156800	Bind Head Screw	A4.0X8 MFZN2BL				01
	652	CB835590	Holder	TMS-20				01
	654	CB069250	Cord Holder	BK-1				01

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*	660	V51065S0	Circuit Board Assembly	JK1			5	
	660a	- -	Circuit Board	DSP JK1		(V410490)		
	660b	- -	F Frame	JK1-4		(V478740)		
	660c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			3	01
*	670	V51066S0	Circuit Board Assembly	JK2			3	
	670a	- -	Circuit Board	DSP JK2		(V410500)		
	670b	- -	F Frame	JK1-4		(V478740)		
	670c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			3	01
*	680	V51067S0	Circuit Board Assembly	JK3				
	680a	- -	Circuit Board	DSP JK3		(V410510)		
	680b	- -	F Frame	DSP1D		(V478740)		
	680c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			3	01
*	690	V51068S0	Circuit Board Assembly	JK4				
	690a	- -	Circuit Board	DSP JK4		(V410520)		
	690b	- -	F Frame	JK1-4		(V478740)		
	690c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			3	01
*	700	V51069S0	Circuit Board Assembly	JK5				
	700a	- -	Circuit Board	DSP JK5		(V410530)		
	700b	- -	F Frame	JK5		(V478750)		
	700c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			2	01
	700d	VB659000	Bind Head Screw	3.0X8 MFZN2BL			6	01
*	710	V51070S0	Circuit Board Assembly	JK6				
	710a	- -	Circuit Board	DSP JK6		(V410540)		
	710b	- -	F Frame	JK6		(V478760)		
	710c	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			2	01
	710d	VB659000	Bind Head Screw	3.0X8 MFZN2BL			4	01
*	720	V4782500	Front Panel					13
	730	VL813000	Escutcheon, Power Switch					03
	740	VL812900	Power Switch Knob			POWER ON/OFF		03
	750	VS153600	Oval Head Screw	4.0X8 MFZN2BL			8	01
*	760	V41128S0	Circuit Board	DSP PDB				
*	770	V41125S0	Circuit Board	DSP GDB				
*	780	V41126S0	Circuit Board	DSP IDB				
*	790	V41127S0	Circuit Board	DSP EDB				
*	800	V44074S0	Circuit Board	DSP EMB				
	810	VN103500	Lithium Battery	CR2032				03
*	820	V44075S0	Circuit Board	DSP CIB				
	830	- -	Reinforcement Angle			(V478540)		
	840	- -	Cushion			(V478550)		
	850	VP156800	Bind Head Screw	A4.0X8 MFZN2BL			2	01
*	860	V4783100	Top Cover					15
	870	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			16	01
*	880	V4782600	Front Cover					17
	890	VV441000	Knob	BL			2	01
	900	VQ074600	Bind Head Tapping Screw-B	3.0X12 MFZN2BL			2	01
	905	VS153600	Oval Head Screw	4.0X8 MFZN2BL			10	01
*	910	V5106300	Side Panel	LEFT				11
	920	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			12	01
*	930	V5106400	Side Panel	RIGHT				11
	940	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			10	01
	950	- -	Frame			(V478210)	2	
	960	VU758500	Oval Head Screw	4.0X10 MFZN2BL			16	01
	962	V6221000	Oval Head Screw	B4.0X10 MFZN2BL			4	01
*	970	V4784900	Panel	REAR				13
	980	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			58	01
	985	VP156800	Bind Head Screw	A4.0X8 MFZN2BL				01
	990	CB040540	Cord Binder	S-72B L=50			3	01
	995	VJ770600	Cord Binder	S-126			3	01
	1000	CB069250	Cord Holder	BK-1			4	01
	1010	- -	Connector Assembly	VH4P&VH3P		(V478020)		
	1020	- -	Connector Assembly			(V573730)		
	1030	VN941800	Cord Binder	K-106G			2	01
	1090	- -	Flat Cable Assembly	50P		(V478110)		
	1100	- -	Flat Cable Assembly	50P		(V478120)		
	1110	- -	Flat Cable Assembly	50P L270		(V478130)		
	1120	- -	Flat Cable Assembly	50P L370		(V478140)		
	1130	- -	Flat Cable Assembly	50P L570		(V478150)		
	1140	- -	Flat Cable Assembly	50P L70		(V478160)		
	1150	- -	Flat Cable Assembly	14P		(V478180)		
	1160	- -	Flat Cable Assembly	30P L570		(V492490)		

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	1170	- -	Flat Cable Assembly	30P		(V492490)		
	1190	- -	Connector Assembly	DSP-W604 2P 500		(V511240)		
*	1210	V41126S0	Circuit Board	DSP IDB		DSP1D-EX		
			ACCESSORIES					
⚠		**V5800000**	AC Cord	J 7A 125V 3P		J		09
⚠		**V5068000**	AC Cord	CSA		U,C,V		09
⚠		**V5067700**	AC Cord	VDE		H,W		08
⚠		**VP204400**	AC Cord	BS 3P		B		10
		VQ240200	Adaptor			J		06
		V5600500	Cable Lock			J,U,C,V		07
		V5600800	Cable Lock			H,W,B		07

*: New Parts

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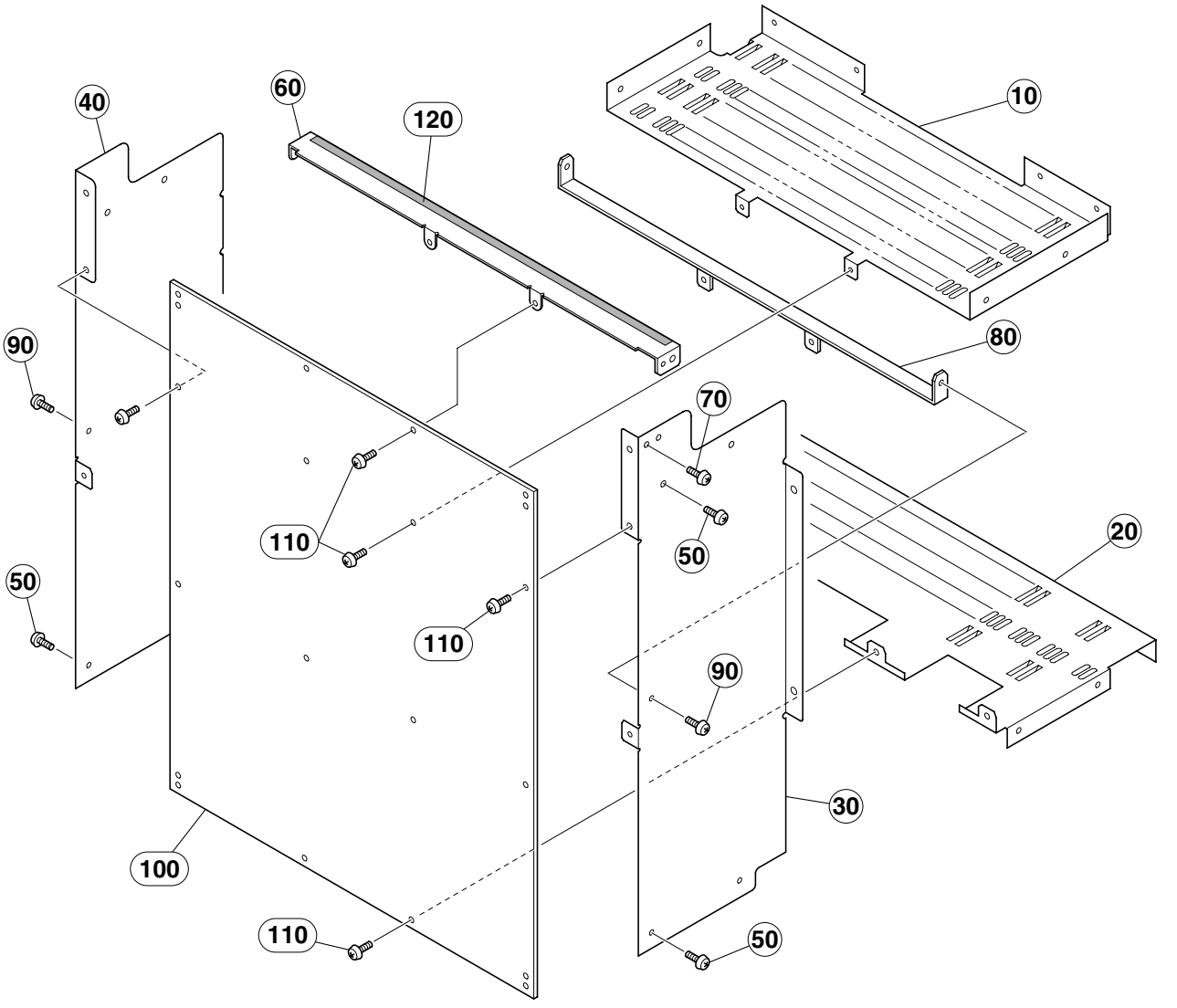
■ JK BOX ASSEMBLY



REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		JK BOX ASSEMBLY			DSP1D		
	- -	JK Box Assembly			(V479950)		
10	- -	Guide Plate	R-TOP		(V478470)		
20	- -	Guide Plate	R-LOWER		(V478480)		
30	- -	Side Panel	REAR-RH		(V478410)		
40	- -	Side Panel	REAR-LH		(V478420)		
50	**VC688800**	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			8	01
60	- -	Frame	MATHER-REAR		(V478440)		
70	**VC688800**	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			4	01
80	- -	Reinforcement Angle	MATHER-REAR		(V478430)		
90	**EP600230**	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			2	01
* 100	**V41129S0**	Circuit Board	DSP IFC1				
110	**EP600230**	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			16	01
120	- -	Edgeing	CE-012		(VT17560)		

*: New Parts

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ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			DSP1D		
*		V44075S0	Circuit Board	DSP CIB		(XW591C0)		
*		V41127S0	Circuit Board	DSP EDB		(XW348B0)		
*		V44074S0	Circuit Board	DSP EMB		(XW590C0)		
*		V41125S0	Circuit Board	DSP GDB		(XW346B0)		
*		V41126S0	Circuit Board	DSP IDB		(XW347B0)		
*		V41129S0	Circuit Board	DSP IFC1		(XW350C0)		
		- -	Circuit Board	DSP JK1		(V410490)(XW327B0)		
		- -	Circuit Board	DSP JK2		(V410500)(XW328B0)		
		- -	Circuit Board	DSP JK3		(V410510)(XW329B0)		
		- -	Circuit Board	DSP JK4		(V410520)(XW330A0)		
		- -	Circuit Board	DSP JK5		(V410530)(XW331B0)		
		- -	Circuit Board	DSP JK6		(V410540)(XW332B0)		
*		V44395S0	Circuit Board	DSP LED2 (SWCOM)		(XW624B0)		
*		V50480S0	Circuit Board	DSP PSB2 (SWCOM)		(XW624B0)		
*		V44079S0	Circuit Board	DSP MB11		(XW592A0)		
*		V41128S0	Circuit Board	DSP PDB		(XW349B0)		
*		V44075S0	Circuit Board	DSP CIB		(XW591C0)		
		- -	Ejector	CBE-2P		(V498570)	2	
		- -	Heat Sink	IC-B		(V579340)	4	
	C101	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C128	UF066100	Electrolytic Cap. (chip)	1 50V				01
	-131	UF066100	Electrolytic Cap. (chip)	1 50V				01
	C201	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C202	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C229	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C230	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C231	UF037220	Electrolytic Cap. (chip)	22 16V				01
		US061200	Ceramic Capacitor-CH(chip)	20P 50V J				
		US062680	Ceramic Capacitor-SL(chip)	680P 50V J				01
		UB052100	Monolithic Ceramic Cap.	SL 100P 50V J				01
		UB012220	Monolithic Ceramic Cap.	B 220P 50K				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB013470	Monolithic Ceramic Cap.	B 4700P 50V K				01
		UB215100	Monolithic Ceramic Cap.	B 0.1 25V K				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	CN101	VZ581500	Header, Flat Cable	53320 96P SE				05
	-103	VZ581500	Header, Flat Cable	53320 96P SE				05
	CN104	VB390600	Connector Base Post	PH-10P TE				01
	CN105	VB390100	Connector Base Post	PH- 5P TE				01
	CN107	VB390100	Connector Base Post	PH- 5P TE				01
	EM101	FZ006970	LC Filter	LS MT Y223NB				02
	EM102	FZ006970	LC Filter	LS MT Y223NB				02
	IC101	XP226A00	IC	IC-PST591DMT		SYSTEM RESET		03
*	IC102	IS001100	IC	HD74LV11AFPEL		AND		01
*	IC103	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	IC104	IS000200	IC	HD74LV02AFPEL		NOR		01
	IC105	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-110	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC111	IS007400	IC	HD74LV74AFPEL		D-FF		01
*	IC112	XW277A00	IC	AM7992BPC		SIA		14
*	-115	XW277A00	IC	AM7992BPC		SIA		14
*	IC116	XY114A00	IC	CY7C027-20AC		SRAM 256K		22
*	IC117	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	IC118	XY137A00	IC	CY7C433-25JC		FIFO 64K		10
*	IC119	XY137A00	IC	CY7C433-25JC		FIFO 64K		10
	IC120	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	IC121	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC122	XY137A00	IC	CY7C433-25JC		FIFO 64K		10
*	IC123	XY137A00	IC	CY7C433-25JC		FIFO 64K		10
*	IC124	IS027300	IC	HD74LV273AFPEL		D-FF		02
*	IC125	XW239A00	IC	EPC1		EPROM 1M		09
*	IC126	XY090A00	IC	EPF10K50EQC240-3		FPGA		25
	IC127	XV605A00	IC	CY7C024-15AC		SRAM 64K		19
*	IC128	IS000400	IC	HD74LV04AFPEL		INVERTER		01
	IC129	XY715A00	IC	HD6477042AF28		MASK CPU		10
	IC130	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC131	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC132	XV685A00	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC133	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC134	**IS003200**	IC	HD74LV32AFPEL		OR		01
	IC135	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC136	**XV619A00**	IC	ICS2008A		T.C.READER/GENERATOR		15
	IC137	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC138	**XY114A00**	IC	CY7C027-20AC		SRAM 256K		22
	IC139	**XY715A00**	IC	HD6477042AF28		MASK CPU		10
	IC140	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC141	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC142	**XV685A00**	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
	IC143	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
	IC145	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC146	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC147	**XY094A00**	IC	LT1118CST-2.5		REGULATOR +2.5V		08
*	IC148	**IS012500**	IC	HD74LV125AFPEL		BUFFER		01
*	IC150	**IS012500**	IC	HD74LV125AFPEL		BUFFER		01
*	IC151	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC152	**IS013810**	IC	SN74LV138ANSR		DECODER		01
*	LD101	**V3990300**	LED (chip)	TLSU1008 RE		FOR TEST		01
*	LD102	**V3990300**	LED (chip)	TLSU1008 RE		FOR TEST		01
	RA101	**RE047100**	Resistor Array	10KX4				01
	-103	**RE047100**	Resistor Array	10KX4				01
	RA104	**RE048100**	Resistor Array	100KX4				01
	RA105	**RE048100**	Resistor Array	100KX4				01
	RA106	**RE047100**	Resistor Array	10KX4				01
	-109	**RE047100**	Resistor Array	10KX4				01
	RA110	**RE048100**	Resistor Array	100KX4				01
	RA111	**RE048100**	Resistor Array	100KX4				01
	RA112	**RE047100**	Resistor Array	10KX4				01
	-119	**RE047100**	Resistor Array	10KX4				01
	RA122	**RE046100**	Resistor Array	1KX4				01
	RA123	**RE046100**	Resistor Array	1KX4				01
	RA124	**RE047100**	Resistor Array	10KX4				01
	-139	**RE047100**	Resistor Array	10KX4				01
	RA141	**RE047100**	Resistor Array	10KX4				01
	-146	**RE047100**	Resistor Array	10KX4				01
	RA148	**RE047100**	Resistor Array	10KX4				01
	RA149	**RE047100**	Resistor Array	10KX4				01
	RA150	**RE048100**	Resistor Array	100KX4				01
	RA151	**RE048100**	Resistor Array	100KX4				01
	RA152	**RE047100**	Resistor Array	10KX4				01
	-164	**RE047100**	Resistor Array	10KX4				01
	RA166	**RE047100**	Resistor Array	10KX4				01
	-173	**RE047100**	Resistor Array	10KX4				01
	RA174	**RE048100**	Resistor Array	100KX4				01
	RA176	**RE048100**	Resistor Array	100KX4				01
	RA177	**RE046470**	Resistor Array	4.7KX4				01
	-182	**RE046470**	Resistor Array	4.7KX4				01
	RA184	**RE046470**	Resistor Array	4.7KX4				01
	-187	**RE046470**	Resistor Array	4.7KX4				01
	RA190	**RE046470**	Resistor Array	4.7KX4				01
	-193	**RE046470**	Resistor Array	4.7KX4				01
*	SC125	**VV047100**	IC Socket	DICF-8CS-E				01
	SW101	**VQ949900**	Switch dip.	SSGM18151A		FUNCTION		03
*	X101	**VZ568000**	Quartz Crystal Unit	40MHz DSO751S				06
*	X102	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
	X103	**VZ751900**	Quartz Crystal Unit	14.31818MHz SMD-49				03
*	X104	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
*		**RD254200**	Carbon Resistor (chip)	20.0 0.1 J				01
		RD254390	Carbon Resistor (chip)	39.0 0.1 J				01
		RD255220	Carbon Resistor (chip)	220.0 0.1 J				01
		RD255510	Carbon Resistor (chip)	510.0 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
*		**V41127S0**	Circuit Board	DSP EDB		(XW348B0)		
		- -	Ejector	CBE-2P		(V498570)	2	
	C650	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C651	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	CN100	**VB858400**	Connector Base Post	PH- 5P SE				01
	CN250	**VB390600**	Connector Base Post	PH-10P TE				01
	CN650	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	-652	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	EM650	**FZ006970**	LC Filter	LS MT Y223NB				02
	EM651	**FZ006970**	LC Filter	LS MT Y223NB				02
	IC100	**XY715A00**	IC	HD6477042AF28		MASK CPU		10
	IC101	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC102	**XY837A00**	IC	IC-PST593DMT		SYSTEM RESET		02
	IC103	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC104	**XV685A00**	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
*	IC105	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC106	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC107	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC109	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC110	**IS000500**	IC	HD74LV05AFPEL		INVERTER		01
	IC250	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC251	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC252	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC253	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC254	**XY732B00**	IC	EPM7128AETC144-12		FPGA		
	IC255	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	-260	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC300	**XV988A00**	IC	YSS910-S		DSP6		10
	IC301	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	-303	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC304	**XV988A00**	IC	YSS910-S		DSP6		10
	IC305	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC306	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC307	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC350	**XV988A00**	IC	YSS910-S		DSP6		10
	IC351	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	-353	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC354	**XV988A00**	IC	YSS910-S		DSP6		10
	IC355	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC400	**XV988A00**	IC	YSS910-S		DSP6		10
	IC401	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	-403	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC404	**XV988A00**	IC	YSS910-S		DSP6		10
	IC405	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC450	**XV988A00**	IC	YSS910-S		DSP6		10
	IC451	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	-453	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC454	**XV988A00**	IC	YSS910-S		DSP6		10
	IC455	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC500	**XV988A00**	IC	YSS910-S		DSP6		10
	IC501	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC502	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC503	**XV988A00**	IC	YSS910-S		DSP6		10
	IC550	**XV988A00**	IC	YSS910-S		DSP6		10
	IC551	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC552	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC553	**XV988A00**	IC	YSS910-S		DSP6		10
	IC600	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-604	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC605	**XV242A00**	IC	HD74LV245AF		TRANSCEIVER		03
	IC606	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	LD100	**V4095700**	LED	PG1113F GR		MONI1-4		01
*	-103	**V4095700**	LED	PG1113F GR				01
	RA100	**RE047100**	Resistor Array	10KX4				01
	-115	**RE047100**	Resistor Array	10KX4				01
	RA250	**RE047100**	Resistor Array	10KX4				01
	-258	**RE047100**	Resistor Array	10KX4				01
	RA259	**RE048100**	Resistor Array	100KX4				01
	-262	**RE048100**	Resistor Array	100KX4				01
	RA264	**RE047100**	Resistor Array	10KX4				01
	-266	**RE047100**	Resistor Array	10KX4				01
	RA268	**RE047100**	Resistor Array	10KX4				01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	RA270	RE047100	Resistor Array	10KX4				01
	RA272	RE047100	Resistor Array	10KX4				01
	-275	RE047100	Resistor Array	10KX4				01
	RA300	RE047100	Resistor Array	10KX4				01
	-315	RE047100	Resistor Array	10KX4				01
	RA350	RE047100	Resistor Array	10KX4				01
	-365	RE047100	Resistor Array	10KX4				01
	RA400	RE047100	Resistor Array	10KX4				01
	-415	RE047100	Resistor Array	10KX4				01
	RA450	RE047100	Resistor Array	10KX4				01
	-465	RE047100	Resistor Array	10KX4				01
	RA500	RE047100	Resistor Array	10KX4				01
	-507	RE047100	Resistor Array	10KX4				01
	RA550	RE047100	Resistor Array	10KX4				01
	-557	RE047100	Resistor Array	10KX4				01
	RA600	RE048100	Resistor Array	100KX4				01
	-606	RE048100	Resistor Array	100KX4				01
	TP558	VE340300	Test Pin	IRS-1169				01
	TP561	VE340300	Test Pin	IRS-1169				01
	TP562	VE340300	Test Pin	IRS-1169				01
*	X100	V3990700	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
	X300	VZ156100	Quartz Crystal Unit	60MHz DSO751S				06
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
		RD255200	Carbon Resistor (chip)	200.0 0.1 J				01
		RD255330	Carbon Resistor (chip)	330.0 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
*		V44074S0	Circuit Board	DSP EMB		(XW590C0)		
		- -	Ejector	CBE-2P		(V498570)	2	
	BT101	VN103600	Battery Holder	CR2032				03
	C101	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C136	UF037330	Electrolytic Cap. (chip)	33 16V				01
	C138	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C139	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C190	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
*		UB051200	Monolithic Ceramic Cap.	SL 20P 50V J				01
		UB052100	Monolithic Ceramic Cap.	SL 100P 50V J				01
		UB052180	Monolithic Ceramic Cap.	SL 180P 50V J				01
		UB012270	Monolithic Ceramic Cap.	B 270P 50V K				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB052560	Monolithic Ceramic Cap.	SL 560P 50V J				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	CN101	VZ581500	Header, Flat Cable	53320 96P SE				05
	-103	VZ581500	Header, Flat Cable	53320 96P SE				05
	CN104	VB390100	Connector Base Post	PH- 5P TE				01
	CN105	VB390100	Connector Base Post	PH- 5P TE				01
	CN106	VB390600	Connector Base Post	PH-10P TE				01
	D101	VT332900	Diode	1SS355 TE-17				01
	DA101	VV556300	Diode Array	DAN217 0.3A X2				01
	EM101	FZ006970	LC Filter	LS MT Y223NB				02
	EM102	FZ006970	LC Filter	LS MT Y223NB				02
*	IC101	IS000000	IC	HD74LV00AFPEL		NAND		01
	IC102	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC103	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	IC104	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC105	IS000000	IC	HD74LV00AFPEL		NAND		01
	IC106	XQ970A00	IC	HD74HC30FPTL		NAND		01
*	IC107	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	IC108	IS000400	IC	HD74LV04AFPEL		INVERTER		01
	IC109	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
	-112	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC113	XY114A00	IC	CY7C027-20AC		SRAM 512K		22
	IC114	XY716A00	IC	HD6477043AF33		MASK CPU		12
	IC115	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC116	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC117	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC118	XV685A00	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
	IC119	XV729A00	IC	IDT71016S15Y-TR		SRAM 1M		09
	IC120	XV729A00	IC	IDT71016S15Y-TR		SRAM 1M		09

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC121	XN797A00	IC	NJM2082M(T1)		OP AMP		02
*	IC122	IS003200	IC	HD74LV32AFPEL		OR		01
	IC123	XI686A00	IC	M62021FP		SYSTEM RESET		04
	IC124	XW303A00	IC	HM628512BLFP-5SL		SRAM 4M		15
	IC125	XW303A00	IC	HM628512BLFP-5SL		SRAM 4M		15
	IC126	XV605A00	IC	CY7C024-15AC		SRAM 64K		19
	IC127	XY715A00	IC	HD6477042AF28		MASK CPU		10
	IC128	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC129	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC130	XV685A00	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
	IC131	XV729A00	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC132	IS001100	IC	HD74LV11AFPEL		AND		01
*	IC133	XY727B00	IC	EPM7128AETC100-10		FPGA		
	IC134	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC135	XY728A00	IC	EPM7128AETC100-10		FPGA		11
*	IC136	IS027300	IC	HD74LV273AFPEL		D-FF		02
	IC137	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	IC138	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC139	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC140	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-146	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	IC147	XV242A00	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC149	IS012500	IC	HD74LV125AFPEL		BUFFER		01
*	IC151	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	LD101	V3990300	LED (chip)	TLSU1008 RE		FOR TEST		01
*	LD102	V3990300	LED (chip)	TLSU1008 RE		FOR TEST		01
	RA101	RE047100	Resistor Array	10KX4				01
	-103	RE047100	Resistor Array	10KX4				01
	RA104	RE048100	Resistor Array	100KX4				01
	RA105	RE048100	Resistor Array	100KX4				01
	RA106	RE047100	Resistor Array	10KX4				01
	RA107	RE048100	Resistor Array	100KX4				01
	RA108	RE048100	Resistor Array	100KX4				01
	RA109	RE047100	Resistor Array	10KX4				01
	-135	RE047100	Resistor Array	10KX4				01
	RA137	RE047100	Resistor Array	10KX4				01
	-149	RE047100	Resistor Array	10KX4				01
	RA151	RE047100	Resistor Array	10KX4				01
	-160	RE047100	Resistor Array	10KX4				01
	RA161	RE046100	Resistor Array	1KX4				01
	RA164	RE047100	Resistor Array	10KX4				01
	RA166	RE047100	Resistor Array	10KX4				01
	-169	RE047100	Resistor Array	10KX4				01
	RA170	RE048100	Resistor Array	100KX4				01
	-173	RE048100	Resistor Array	100KX4				01
	RA174	RE047100	Resistor Array	10KX4				01
	RA175	RE048100	Resistor Array	100KX4				01
	-178	RE048100	Resistor Array	100KX4				01
	RA179	RE047100	Resistor Array	10KX4				01
	-190	RE047100	Resistor Array	10KX4				01
	SW101	VQ949900	Switch	SSGM18151A		FUNTION		03
*	X101	V4038900	Quartz Crystal Unit	8.27MHz SMD-49				03
*	X102	V3990700	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
*		RD254200	Carbon Resistor (chip)	20.0 0.1 J				01
		RD255220	Carbon Resistor (chip)	220.0 0.1 J				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD259470	Carbon Resistor (chip)	4.7M 0.1 J				01
*		V41125S0	Circuit Board	DSP GDB		(XW346B0)		
		- -	Ejector	CBE-2P		(V498570)	2	
	C950	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C951	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	CN100	VB858400	Connector Base Post	PH- 5P SE				01
	CN200	VB390600	Connector Base Post	PH-10P TE				01
	CN900	- -	Header, Flat Cable	5342 50P SE		(V419270)		
	CN901	- -	Header, Flat Cable	5342 50P SE		(V419270)		

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	CN902	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	-904	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	EM950	**FZ006970**	LC Filter	LS MT Y223NB				02
	EM951	**FZ006970**	LC Filter	LS MT Y223NB				02
	IC100	**XY715A00**	IC	HD6477042AF28		MASK CPU		10
	IC101	**XY837A00**	IC	IC-PST593DMT		SYSTEM RESET		02
	IC102	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC103	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC104	**XV685A00**	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
*	IC106	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC107	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC108	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC109	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC110	**IS000500**	IC	HD74LV05AFPEL		INVERTER		01
*	IC200	**XY730B00**	IC	EPM7128AETC144-10		FPGA		
	IC220	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	-224	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC225	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC226	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC227	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC228	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC229	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC250	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC251	**XV989A00**	IC	YSS904-F		DSP5		11
	IC300	**XV988A00**	IC	YSS910-S		DSP6		10
	IC301	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC302	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC303	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC304	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC305	**XV988A00**	IC	YSS910-S		DSP6		10
	IC350	**XV988A00**	IC	YSS910-S		DSP6		10
	IC351	**XV988A00**	IC	YSS910-S		DSP6		10
	IC400	**XV988A00**	IC	YSS910-S		DSP6		10
	IC401	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC402	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC403	**XV988A00**	IC	YSS910-S		DSP6		10
	IC450	**XV988A00**	IC	YSS910-S		DSP6		10
	IC451	**XV988A00**	IC	YSS910-S		DSP6		10
	IC500	**XV988A00**	IC	YSS910-S		DSP6		10
	IC501	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC502	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC503	**XV988A00**	IC	YSS910-S		DSP6		10
	IC550	**XV988A00**	IC	YSS910-S		DSP6		10
	IC551	**XV988A00**	IC	YSS910-S		DSP6		10
	IC600	**XV988A00**	IC	YSS910-S		DSP6		10
	IC601	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
	IC602	**XV077A00**	IC	MSM514260C-60JS		DRAM 4M		07
*	IC650	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC651	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC750	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC751	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC800	**XV989A00**	IC	YSS904-F		DSP5		11
	IC850	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-867	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC868	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC869	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-871	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	LD100	**V4095700**	LED	PG1113F GR		MONI1-4		01
*	-103	**V4095700**	LED	PG1113F GR				01
	RA100	**RE047100**	Resistor Array	10KX4				01
	-114	**RE047100**	Resistor Array	10KX4				01
	RA200	**RE047100**	Resistor Array	10KX4				01
	-208	**RE047100**	Resistor Array	10KX4				01
	RA213	**RE047100**	Resistor Array	10KX4				01
	RA220	**RE048100**	Resistor Array	100KX4				01
	-223	**RE048100**	Resistor Array	100KX4				01
	RA224	**RE047100**	Resistor Array	10KX4				01
	-231	**RE047100**	Resistor Array	10KX4				01
	RA250	**RE047100**	Resistor Array	10KX4				01
	-253	**RE047100**	Resistor Array	10KX4				01

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	RA300	**RE047100**	Resistor Array	10KX4				01
	-307	**RE047100**	Resistor Array	10KX4				01
	RA400	**RE047100**	Resistor Array	10KX4				01
	-407	**RE047100**	Resistor Array	10KX4				01
	RA500	**RE047100**	Resistor Array	10KX4				01
	-507	**RE047100**	Resistor Array	10KX4				01
	RA600	**RE047100**	Resistor Array	10KX4				01
	-607	**RE047100**	Resistor Array	10KX4				01
	RA650	**RE047100**	Resistor Array	10KX4				01
	-661	**RE047100**	Resistor Array	10KX4				01
	RA750	**RE047100**	Resistor Array	10KX4				01
	-752	**RE047100**	Resistor Array	10KX4				01
	RA800	**RE047100**	Resistor Array	10KX4				01
	RA850	**RE048100**	Resistor Array	100KX4				01
	-875	**RE048100**	Resistor Array	100KX4				01
	TP604	**VE340300**	Test Pin	IRS-1169				01
	TP605	**VE340300**	Test Pin	IRS-1169				01
	TP606	**VE340300**	Test Pin	IRS-1169				01
*	X100	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
	X300	**VZ156100**	Quartz Crystal Unit	60MHz DSO751S				06
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
		RD255200	Carbon Resistor (chip)	200.0 0.1 J				01
		RD255220	Carbon Resistor (chip)	220.0 0.1 J				01
		RD255330	Carbon Resistor (chip)	330.0 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD157100	Carbon Resistor (chip)	10.0K 1/4 J				01
*		**V41126S0**	Circuit Board	DSP IDB		(XW347B0)		
		- -	Ejector	CBE-2P		(V498570)	2	
	C950	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C951	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	CN1	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	-3	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	CN100	**VB858400**	Connector Base Post	PH- 5P SE				01
	CN200	**VB390600**	Connector Base Post	PH-10P TE				01
	EM950	**FZ006970**	LC Filter	LS MT Y223NB				02
	EM951	**FZ006970**	LC Filter	LS MT Y223NB				02
	IC100	**XY715A00**	IC	HD6477042AF28		MASK CPU		10
	IC101	**XY837A00**	IC	IC-PST593DMT		SYSTEM RESET		02
	IC102	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC103	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC104	**XV685A00**	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
*	IC111	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC112	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC113	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC114	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC115	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC116	**IS000500**	IC	HD74LV05AFPEL		INVERTER		01
*	IC200	**XY731B00**	IC	EPM7128AETC144-12		FPGA		
*	IC220	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
*	-224	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC225	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC226	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC227	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC228	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	-232	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC250	**XV988A00**	IC	YSS910-S		DSP6		10
	IC251	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC252	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC253	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC254	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC255	**XV988A00**	IC	YSS910-S		DSP6		10
	IC300	**XV988A00**	IC	YSS910-S		DSP6		10
	IC301	**XV988A00**	IC	YSS910-S		DSP6		10
	IC350	**XV988A00**	IC	YSS910-S		DSP6		10
	IC351	**XV988A00**	IC	YSS910-S		DSP6		10
	IC400	**XV988A00**	IC	YSS910-S		DSP6		10

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC401	**XV988A00**	IC	YSS910-S		DSP6		10
	IC450	**XV988A00**	IC	YSS910-S		DSP6		10
	IC451	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC452	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC453	**XV988A00**	IC	YSS910-S		DSP6		10
	IC500	**XV988A00**	IC	YSS910-S		DSP6		10
	IC501	**XV988A00**	IC	YSS910-S		DSP6		10
	IC550	**XV988A00**	IC	YSS910-S		DSP6		10
	IC551	**XV988A00**	IC	YSS910-S		DSP6		10
	IC600	**XV988A00**	IC	YSS910-S		DSP6		10
	IC601	**XV988A00**	IC	YSS910-S		DSP6		10
*	IC650	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC651	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC700	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC701	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC750	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC751	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC800	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC801	**XV989A00**	IC	YSS904-F		DSP5		11
	IC850	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-854	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC855	**XT800A00**	IC	TC74VHC244F		BUFFER		03
	IC856	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-863	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC900	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-911	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC912	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC913	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	LD100	**V4095700**	LED	PG1113F GR		MONI1-4		01
*	-103	**V4095700**	LED	PG1113F GR				01
	RA100	**RE047100**	Resistor Array	10KX4				01
	-114	**RE047100**	Resistor Array	10KX4				01
	RA200	**RE047100**	Resistor Array	10KX4				01
	-208	**RE047100**	Resistor Array	10KX4				01
	RA213	**RE047100**	Resistor Array	10KX4				01
	RA220	**RE048100**	Resistor Array	100KX4				01
	-223	**RE048100**	Resistor Array	100KX4				01
	RA224	**RE047100**	Resistor Array	10KX4				01
	-235	**RE047100**	Resistor Array	10KX4				01
	RA250	**RE047100**	Resistor Array	10KX4				01
	-257	**RE047100**	Resistor Array	10KX4				01
	RA450	**RE047100**	Resistor Array	10KX4				01
	-457	**RE047100**	Resistor Array	10KX4				01
	RA650	**RE047100**	Resistor Array	10KX4				01
	RA651	**RE047100**	Resistor Array	10KX4				01
	RA700	**RE047100**	Resistor Array	10KX4				01
	RA701	**RE047100**	Resistor Array	10KX4				01
	RA750	**RE047100**	Resistor Array	10KX4				01
	RA751	**RE047100**	Resistor Array	10KX4				01
	RA800	**RE047100**	Resistor Array	10KX4				01
	RA850	**RE048100**	Resistor Array	100KX4				01
	-855	**RE048100**	Resistor Array	100KX4				01
	RA856	**RE047100**	Resistor Array	10KX4				01
	RA857	**RE048100**	Resistor Array	100KX4				01
	-871	**RE048100**	Resistor Array	100KX4				01
*	X100	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
	X250	**VZ156100**	Quartz Crystal Unit	60MHz DSO751S				06
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J				01
		RD255200	Carbon Resistor (chip)	200.0 0.1 J				01
		RD255330	Carbon Resistor (chip)	330.0 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
*		**V41129S0**	Circuit Board	DSP IFC1		(XW350C0)		
	C500	**UF128220**	Electrolytic Cap. (chip)	220 10V UUR1A2				01
	C503	**UF128220**	Electrolytic Cap. (chip)	220 10V UUR1A2				01
	C526	**UF017220**	Electrolytic Cap. (chip)	22 6.3V				01
	C527	**UF017220**	Electrolytic Cap. (chip)	22 6.3V				01
	C609	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
C629	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
C630	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
C640	**UF119100**	Electrolytic Cap. (chip)	1000 6.3V UUR0J1				02
C641	**UF119100**	Electrolytic Cap. (chip)	1000 6.3V UUR0J1				02
C801	**UF148100**	Electrolytic Cap. (chip)	100 25V UUR1E1				01
C802	**UF119100**	Electrolytic Cap. (chip)	1000 6.3V UUR0J1				02
-805	**UF119100**	Electrolytic Cap. (chip)	1000 6.3V UUR0J1				02
C806	**UF148100**	Electrolytic Cap. (chip)	100 25V UUR1E1				01
	UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
	UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
	UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
	VR327300	Mylar Capacitor (chip)	0.082 16V J				01
CN100	**VZ581300**	Receptacle	52480 96P TE		SLOT JK1		05
-104	**VZ581300**	Receptacle	52480 96P TE				05
CN105	**LB932040**	Base Post Connector	VH- 4P TE				01
CN201	**VZ581300**	Receptacle	52480 96P TE		SLOT JK2		05
-203	**VZ581300**	Receptacle	52480 96P TE				05
CN301	**VZ581300**	Receptacle	52480 96P TE		SLOT JK3-6		05
-304	**VZ581300**	Receptacle	52480 96P TE				05
CN305	**LB932040**	Base Post Connector	VH- 4P TE				01
CN405	**LB932030**	Base Post Connector	VH- 3P TE				01
CN502	**VB390600**	Connector Base Post	PH-10P TE				01
CN505	**LB932040**	Base Post Connector	VH- 4P TE				01
CN605	**LB932040**	Base Post Connector	VH- 4P TE				01
CN801	**- -**	Header, Flat Cable	5332 30P TE		(V414610)		
CN802	**- -**	Header, Flat Cable	5332 30P TE		(V414610)		
CN803	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
-807	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
CN808	**- -**	Header, Flat Cable	5332 14P TE		(V419280)		
CN809	**LB932020**	Base Post Connector	VH- 2P TE				01
CN810	**VB389900**	Connector Base Post	PH- 3P TE				01
CN811	**VB389900**	Connector Base Post	PH- 3P TE				01
EM801	**FZ006970**	LC Filter	LS MT Y223NB				02
-806	**FZ006970**	LC Filter	LS MT Y223NB				02
IC500	**XS304A00**	IC	LT1117CST-3.3		REGULATOR +3.3V		07
* IC502	**XW239A00**	IC	EPC1		EPROM 1M		09
* IC503	**XY090A00**	IC	EPF10K50EQC240-3		FPGA		25
IC504	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
IC505	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
* IC506	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
* IC507	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
* IC508	**XY094A00**	IC	LT1118CST-2.5		REGULATOR +2.5V		08
IC509	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
* IC601	**XT777A00**	IC	TC74VHCT04AF		INVERTER		01
* IC602	**IS000800**	IC	HD74LV08AFPEL		AND		01
* IC603	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
IC604	**XG948E00**	IC	YM3436DK		DIR2		11
-606	**XG948E00**	IC	YM3436DK		DIR2		11
IC608	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-609	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
IC610	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
IC701	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-703	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
IC704	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
-706	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
IC707	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-717	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
L601	**VS740100**	Chip Inductance	BLM21B751S 2125				03
-617	**VS740100**	Chip Inductance	BLM21B751S 2125				03
R600	**VI196100**	Metal Film Resistor (chip)	3.3K 1/10 D				01
R602	**VI194600**	Metal Film Resistor (chip)	750.0 1/10 D				01
R611	**VI196100**	Metal Film Resistor (chip)	3.3K 1/10 D				01
R613	**VI196100**	Metal Film Resistor (chip)	3.3K 1/10 D				01
	HF757100	Carbon Resistor	10K				01
	RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
	RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
	VV375100	Carbon Resistor (chip)	750.0 0.1 D				01
	VV315200	Carbon Resistor (chip)	1.5K 0.1 D				01
RA500	**RE046100**	Resistor Array	1KX4				01
RA501	**RE047100**	Resistor Array	10KX4				01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	-506	**RE047100**	Resistor Array	10KX4				01
	RA509	**RE047100**	Resistor Array	10KX4				01
	-511	**RE047100**	Resistor Array	10KX4				01
	RA513	**RE047100**	Resistor Array	10KX4				01
	-515	**RE047100**	Resistor Array	10KX4				01
	RA517	**RE047100**	Resistor Array	10KX4				01
	RA518	**RE047100**	Resistor Array	10KX4				01
	RA520	**RE046100**	Resistor Array	1KX4				01
	RA521	**RE047100**	Resistor Array	10KX4				01
	RA701	**RE047100**	Resistor Array	10KX4				01
	-727	**RE047100**	Resistor Array	10KX4				01
*	SC502	**VV047100**	IC Socket	DICF-8CS-E				01
	X503	**VQ248800**	Quartz Crystal Unit	3119A-AQA8024.576				10
	X504	**VT641400**	Quartz Crystal Unit	3119A-AQA8022.5792				08
		- -	Circuit Board	DSP JK1		(V410490)(XW327B0)		
	C112	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
	C135	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
	C161	**UF038100**	Electrolytic Cap. (chip)	100 16V				01
*		**FG452270**	Ceramic Capacitor	270P 50V K				
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
		UB012270	Monolithic Ceramic Cap.	B 270P 50V K				01
		VR327300	Mylar Capacitor (chip)	0.082 16V J				01
*	CN100	**V4158600**	Connector	230R(SCSI) 68P SE		INPUT 1,3,5,7,9		06
*	CN101	**V4158600**	Connector	230R(SCSI) 68P SE		INPUT 2,4,6,8,10		06
	CN102	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	D1	**VT332900**	Diode	1SS355 TE-17				01
	-6	**VT332900**	Diode	1SS355 TE-17				01
	DA100	**VV556300**	Diode Array	DAN217 0.3A X2				01
	-151	**VV556300**	Diode Array	DAN217 0.3A X2				01
	DA155	**VV556300**	Diode Array	DAN217 0.3A X2				01
	-207	**VV556300**	Diode Array	DAN217 0.3A X2				01
	DA211	**VV556300**	Diode Array	DAN217 0.3A X2				01
	EM100	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM101	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM102	**VL534100**	LC Filter	NFA81R00C101				05
	-106	**VL534100**	LC Filter	NFA81R00C101				05
	EM107	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	-110	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM111	**VL534100**	LC Filter	NFA81R00C101				05
	-115	**VL534100**	LC Filter	NFA81R00C101				05
	EM116	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM117	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM118	**FZ006970**	LC Filter	LS MT Y223NB				02
*	IC100	**IS000200**	IC	HD74LV02AFPEL		NOR		01
*	IC102	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC103	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	-107	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	IC108	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC109	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC110	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC112	**XG948E00**	IC	YM3436DK		DIR2		11
	IC113	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	-117	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	IC118	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC119	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC120	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC121	**XG948E00**	IC	YM3436DK		DIR2		11
	IC122	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-124	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC125	**IS013910**	IC	SN74LV139ANSR		COUNTER		01
*	IC126	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC127	**IS027300**	IC	HD74LV273AFPEL		D-FF		02
	IC128	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-133	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC140	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC141	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC142	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
*	IC143	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	L100	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-116	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	RA100	**RE047100**	Resistor Array	10KX4				01
	-109	**RE047100**	Resistor Array	10KX4				01
	RA110	**RE048100**	Resistor Array	100KX4				01
	RA111	**RE048100**	Resistor Array	100KX4				01
	RA112	**RE047100**	Resistor Array	10KX4				01
	RA113	**RE047100**	Resistor Array	10KX4				01
	RA114	**RE048100**	Resistor Array	100KX4				01
	RA115	**RE047100**	Resistor Array	10KX4				01
	RA116	**RE048100**	Resistor Array	100KX4				01
	RA117	**RE048100**	Resistor Array	100KX4				01
		RD254100	Carbon Resistor (chip)	10.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J				01
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J				01
		RD257470	Carbon Resistor (chip)	47.0K 0.1 J				01
		- -	Circuit Board	DSP JK2		(V410500)(XW328B0)		
	C123	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
	C147	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
	C160	**UF038100**	Electrolytic Cap. (chip)	100 16V				01
*		**FG452270**	Ceramic Capacitor	270P 50V K				
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
		UB012270	Monolithic Ceramic Cap.	B 270P 50V K				01
		VR327300	Mylar Capacitor (chip)	0.082 16V J				01
*	CN100	**V4158600**	Connector	230R(SCSI) 68P SE		OUTPUT 1,3,5		06
*	CN101	**V4158600**	Connector	230R(SCSI) 68P SE		OUTPUT 2,4,6		06
	CN102	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	D1	**VT332900**	Diode	1SS355 TE-17				01
	-6	**VT332900**	Diode	1SS355 TE-17				01
	DA100	**VV556300**	Diode Array	DAN217 0.3A X2				01
	DA104	**VV556300**	Diode Array	DAN217 0.3A X2				01
	-154	**VV556300**	Diode Array	DAN217 0.3A X2				01
	DA158	**VV556300**	Diode Array	DAN217 0.3A X2				01
	-207	**VV556300**	Diode Array	DAN217 0.3A X2				01
	EM100	**VL534100**	LC Filter	NFA81R00C101				05
	-102	**VL534100**	LC Filter	NFA81R00C101				05
	EM103	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM104	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM105	**VL534100**	LC Filter	NFA81R00C101				05
	EM106	**VL534100**	LC Filter	NFA81R00C101				05
	EM107	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM108	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM109	**VL534100**	LC Filter	NFA81R00C101				05
	-111	**VL534100**	LC Filter	NFA81R00C101				05
	EM112	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM113	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM114	**VL534100**	LC Filter	NFA81R00C101				05
	EM115	**VL534100**	LC Filter	NFA81R00C101				05
	EM116	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM117	**VQ761400**	EMI Filter (chip)	NFM40R01C101T1				01
	EM118	**FZ006970**	LC Filter	LS MT Y223NB				02
	IC100	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC101	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC103	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC104	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	IC105	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	-108	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
*	IC109	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC112	**XG948E00**	IC	YM3436DK		DIR2		11
	IC113	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC114	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC115	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC116	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC117	XU996A00	IC	AM26LS31CNSR		LINE DRIVER		05
	-120	XU996A00	IC	AM26LS31CNSR		LINE DRIVER		05
	IC121	XG948E00	IC	YM3436DK		DIR2		11
	IC122	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-124	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC125	IS013910	IC	SN74LV139ANSR		COUNTER		01
*	IC126	IS003200	IC	HD74LV32AFPEL		OR		01
*	IC127	IS027300	IC	HD74LV273AFPEL		D-FF		02
	IC128	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-134	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC140	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC141	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	IC142	XW422A00	IC	M51953AFP		SYSTEM RESET		01
*	IC143	XW422A00	IC	M51953AFP		SYSTEM RESET		01
	L100	VS740100	Chip Inductance	BLM21B751S 2125				03
	-110	VS740100	Chip Inductance	BLM21B751S 2125				03
	RA100	RE048100	Resistor Array	100KX4				01
	RA101	RE048100	Resistor Array	100KX4				01
	RA102	RE047100	Resistor Array	10KX4				01
	RA103	RE047100	Resistor Array	10KX4				01
	RA104	RE048100	Resistor Array	100KX4				01
	RA105	RE047100	Resistor Array	10KX4				01
	RA106	RE048100	Resistor Array	100KX4				01
	RA107	RE048100	Resistor Array	100KX4				01
	RA109	RE047100	Resistor Array	10KX4				01
	-112	RE047100	Resistor Array	10KX4				01
		RD254100	Carbon Resistor (chip)	10.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J				01
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J				01
		RD257470	Carbon Resistor (chip)	47.0K 0.1 J				01
		- -	Circuit Board	DSP JK3		(V410510)(XW329B0)		
	C111	UF037470	Electrolytic Cap. (chip)	47 16V				01
	C151	UF037470	Electrolytic Cap. (chip)	47 16V				01
	C165	UF038100	Electrolytic Cap. (chip)	100 16V				01
*		FG452270	Ceramic Capacitor	270P 50V K				
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
		VR327300	Mylar Capacitor (chip)	0.082 16V J				01
*	CN100	V4158600	Connector	230R(SCSI) 68P SE		CASCADE IN		06
*	CN101	V4158600	Connector	230R(SCSI) 68P SE		CASCADE OUT		06
	CN102	VZ581500	Header, Flat Cable	53320 96P SE				05
	DA100	VV556300	Diode Array	DAN217 0.3A X2				01
	-203	VV556300	Diode Array	DAN217 0.3A X2				01
	EM100	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM101	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM102	VL534100	LC Filter	NFA81R00C101				05
	-106	VL534100	LC Filter	NFA81R00C101				05
	EM107	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM108	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM109	VL534100	LC Filter	NFA81R00C101				05
	EM110	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM111	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM112	VL534100	LC Filter	NFA81R00C101				05
	-115	VL534100	LC Filter	NFA81R00C101				05
	EM116	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM117	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM118	FZ006970	LC Filter	LS MT Y223NB				02
*	IC100	IS000400	IC	HD74LV04AFPEL		INVERTER		01
	IC101	XU815A00	IC	DS26C32ATMX		LINE RECEIVER		06
	IC102	XU815A00	IC	DS26C32ATMX		LINE RECEIVER		06
	IC104	XU815A00	IC	DS26C32ATMX		LINE RECEIVER		06
	-106	XU815A00	IC	DS26C32ATMX		LINE RECEIVER		06
	IC107	XU996A00	IC	AM26LS31CNSR		LINE DRIVER		05
*	IC108	IS000200	IC	HD74LV02AFPEL		NOR		01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC110	XG948E00	IC	YM3436DK		DIR2		11
	IC111	XU235A00	IC	SGH609080F-47F		ATSC		10
	-114	XU235A00	IC	SGH609080F-47F		ATSC		10
	IC115	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	IC116	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC117	IS027300	IC	HD74LV273AFPEL		D-FF		02
*	-119	IS027300	IC	HD74LV273AFPEL		D-FF		02
	IC120	XU996A00	IC	AM26LS31CNSR		LINE DRIVER		05
	-124	XU996A00	IC	AM26LS31CNSR		LINE DRIVER		05
	IC125	XU815A00	IC	DS26C32ATMX		LINE RECEIVER		06
	IC126	XG948E00	IC	YM3436DK		DIR2		11
	IC127	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-129	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC130	IS003200	IC	HD74LV32AFPEL		OR		01
*	IC131	IS013910	IC	SN74LV139ANSR		COUNTER		01
	IC132	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC133	IS027300	IC	HD74LV273AFPEL		D-FF		02
	IC134	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
	-138	XT487A00	IC	TC74VHC245F		TRANSCEIVER		03
*	IC140	IS000800	IC	HD74LV08AFPEL		AND		01
*	IC141	IS000400	IC	HD74LV04AFPEL		INVERTER		01
*	IC142	XW422A00	IC	M51953AFP		SYSTEM RESET		01
*	IC143	XW422A00	IC	M51953AFP		SYSTEM RESET		01
	L100	VS740100	Chip Inductance	BLM21B751S 2125				03
	-111	VS740100	Chip Inductance	BLM21B751S 2125				03
	RA100	RE047100	Resistor Array	10KX4				01
	-103	RE047100	Resistor Array	10KX4				01
	RA104	RE048100	Resistor Array	100KX4				01
	-106	RE048100	Resistor Array	100KX4				01
	RA107	RE047100	Resistor Array	10KX4				01
	-109	RE047100	Resistor Array	10KX4				01
	RA110	RE048100	Resistor Array	100KX4				01
	RA111	RE048100	Resistor Array	100KX4				01
	RA112	RE047100	Resistor Array	10KX4				01
	-115	RE047100	Resistor Array	10KX4				01
		RD254100	Carbon Resistor (chip)	10.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J				01
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J				01
		RD257470	Carbon Resistor (chip)	47.0K 0.1 J				01
		- -	Circuit Board	DSP JK4		(V410520)(XW330A0)		
	C112	UF037470	Electrolytic Cap. (chip)	47 16V				01
	C134	UF037470	Electrolytic Cap. (chip)	47 16V				01
	C160	UF038100	Electrolytic Cap. (chip)	100 16V				01
*		FG452270	Ceramic Capacitor	270P 50V K				
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
		VR327300	Mylar Capacitor (chip)	0.082 16V J				01
*	CN100	V4158600	Connector	230R(SCSI) 68P SE		TO CONSOLE 1		06
*	CN101	V4158600	Connector	230R(SCSI) 68P SE		TO CONSOLE 2		06
	CN102	VZ581500	Header, Flat Cable	53320 96P SE				05
	DA100	VV556300	Diode Array	DAN217 0.3A X2				01
	-195	VV556300	Diode Array	DAN217 0.3A X2				01
	EM100	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM101	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM102	VL534100	LC Filter	NFA81R00C101				05
	-105	VL534100	LC Filter	NFA81R00C101				05
	EM106	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	-109	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM110	VL534100	LC Filter	NFA81R00C101				05
	-113	VL534100	LC Filter	NFA81R00C101				05
	EM114	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM115	VQ761400	EMI Filter (chip)	NFM40R01C101T1				01
	EM116	FZ006970	LC Filter	LS MT Y223NB				02
*	IC100	IS000200	IC	HD74LV02AFPEL		NOR		01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*	IC102	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC103	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	-105	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	IC106	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	-108	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC109	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC110	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC112	**XG948E00**	IC	YM3436DK		DIR2		11
	IC113	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	-115	**XU815A00**	IC	DS26C32ATMX		LINE RECEIVER		06
	IC116	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC117	**XU996A00**	IC	AM26LS31CNSR		LINE DRIVER		05
	IC118	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC119	**XU235A00**	IC	SGH609080F-47F		ATSC		10
	IC120	**XG948E00**	IC	YM3436DK		DIR2		11
*	IC121	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC122	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC123	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC124	**IS013910**	IC	SN74LV139ANSR		COUNTER		01
*	IC125	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC126	**IS027300**	IC	HD74LV273AFPEL		D-FF		02
	IC127	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-134	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC140	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC141	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
*	IC142	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
*	IC143	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
	L100	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-120	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	RA101	**RE047100**	Resistor Array	10KX4				01
	-104	**RE047100**	Resistor Array	10KX4				01
	RA105	**RE048100**	Resistor Array	100KX4				01
	RA106	**RE048100**	Resistor Array	100KX4				01
	RA107	**RE047100**	Resistor Array	10KX4				01
	RA108	**RE047100**	Resistor Array	10KX4				01
	RA109	**RE048100**	Resistor Array	100KX4				01
	-111	**RE048100**	Resistor Array	100KX4				01
	RA112	**RE047100**	Resistor Array	10KX4				01
	RA113	**RE047100**	Resistor Array	10KX4				01
		RD254100	Carbon Resistor (chip)	10.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J				01
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J				01
		RD257470	Carbon Resistor (chip)	47.0K 0.1 J				01
		- -	Circuit Board	DSP JK5		(V410530)(XW331B0)		
		- -	Heat Sink	IC-A		(V579330)	4	
	C102	**UR866100**	Electrolytic Cap.	1.00 50.0V				01
	C103	**UR866100**	Electrolytic Cap.	1.00 50.0V				01
	C106	**UR867470**	Electrolytic Cap.	47.00 50.0V				01
	C116	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
	-118	**UR848100**	Electrolytic Cap.	100.00 25.0V				01
		FG652100	Ceramic Capacitor-SL	100P 50V J				01
		VF611200	Monolithic Ceramic Cap.	0.1 50V Z				02
		FZ004790	Monolithic Ceramic Cap.	0.1 50V Z				02
	CN100	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	CN101	**VY730000**	Socket	17LE 9P SE		MACHINE CONTROL REMOTE		04
	CN102	**VR147400**	D-Sub Connector	JBY 25P SE		GP1		05
	D1	**VB941200**	Diode	1SS133,1SS176				01
	-8	**VB941200**	Diode	1SS133,1SS176				01
	D200	**VB941200**	Diode	1SS133,1SS176				01
	D300	**VB941200**	Diode	1SS133,1SS176				01
	D400	**VB941200**	Diode	1SS133,1SS176				01
	D500	**VB941200**	Diode	1SS133,1SS176				01
	EM100	**FZ006920**	LC Filter	LS MT B271KB				01
	-127	**FZ006920**	LC Filter	LS MT B271KB				01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC100	IG086700	IC	UPC319C		COMPARATOR		05
	IC101	XU463A00	IC	SN75C1168N		LINE TRANSEIVER		05
	IC102	IR027350	IC	SN74HC273N		D-FF		05
	IC103	IR024500	IC	TC74HC245AP		TRANSEIVER		07
	-105	IR024500	IC	TC74HC245AP		TRANSEIVER		07
	IC106	IG040000	IC	NJM4560D		OP AMP		04
	IC107	IR012550	IC	SN74HC125N		BUFFER		03
	IC108	IR000400	IC	TC74HC04AP		INVERTER		03
	IC109	VJ041400	Transistor Array	TD62381P				04
	IC200	XZ001A00	IC	ELP05S09		DC-DC CONVERTER		08
*	IC201	XW278A00	IC	DP8392CN		CTI		13
	IC300	XZ001A00	IC	ELP05S09		DC-DC CONVERTER		08
*	IC301	XW278A00	IC	DP8392CN		CTI		13
	IC400	XZ001A00	IC	ELP05S09		DC-DC CONVERTER		08
*	IC401	XW278A00	IC	DP8392CN		CTI		13
	IC500	XZ001A00	IC	ELP05S09		DC-DC CONVERTER		08
*	IC501	XW278A00	IC	DP8392CN		CTI		13
	J1	- -	Jumper Wire	0.55		(VA07890)		
	-4	- -	Jumper Wire	0.55		(VA07890)		
	JK100	VL958600	XLM Connector	XLM-3-31PCV		TIME CODE IN		08
	JK200	VI552200	BNC Connector	YKS11-0 1P		COMMUNICATION 1 IN		05
	JK300	VI552200	BNC Connector	YKS11-0 1P		COMMUNICATION 1 OUT		05
	JK400	VI552200	BNC Connector	YKS11-0 1P		COMMUNICATION 2 IN		05
	JK500	VI552200	BNC Connector	YKS11-0 1P		COMMUNICATION 2 OUT		05
*	L200	V2571300	Pulse Transformer	TLA075-3E				08
*	L300	V2571300	Pulse Transformer	TLA075-3E				08
*	L400	V2571300	Pulse Transformer	TLA075-3E				08
*	L500	V2571300	Pulse Transformer	TLA075-3E				08
	R112	HV754100	Flame Proof C. Resistor	10.0 1/4 J				01
	-120	HV754100	Flame Proof C. Resistor	10.0 1/4 J				01
	R207	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R209	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R307	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R309	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R407	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R409	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R507	VC323900	Metal Film Resistor	100.0 1/4 F				01
	R509	VC323900	Metal Film Resistor	100.0 1/4 F				01
		HF755510	Carbon Resistor	510.0 1/4 J				01
		HF756100	Carbon Resistor	1.0K 1/4 J				01
		HF756360	Carbon Resistor	3.6K 1/4 J				01
		HF756470	Carbon Resistor	4.7K 1/4 J				01
		HF757100	Carbon Resistor	10.0K 1/4 J				01
		HF757470	Carbon Resistor	47.0K 1/4 J				01
		HF758100	Carbon Resistor	100.0K 1/4 J				01
	TH100	VV216100	Protecter switch	RXE050 0.50A 60V				03
		- -	Circuit Board	DSP JK6		(V410540)(XW332B0)		
		- -	USB Angle			(V563370)		
	C101	UF037220	Electrolytic Cap. (chip)	22 16V				01
	C104	UF037100	Electrolytic Cap. (chip)	10 16V				01
	-106	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C109	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C114	UF037100	Electrolytic Cap. (chip)	10 16V				01
	C117	UF038100	Electrolytic Cap. (chip)	100 16V				01
	C206	UF037470	Electrolytic Cap. (chip)	47 16V				01
		FG612180	Ceramic Capacitor	180P 50V K				
		UB051680	Monolithic Ceramic Cap.	SL 68P 50V J				01
		UB051330	Monolithic Ceramic Cap.	SL 33P 50V J				01
		UB052100	Monolithic Ceramic Cap.	SL 100P 50V J				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB445330	Monolithic Ceramic Cap.	F 0.33 16V Z				01
		VR327300	Mylar Capacitor (chip)	0.082 16V J				01
	CN100	VZ581500	Header, Flat Cable	53320 96P SE				05
	CN101	VU196300	Socket	17LE-23090-27(D4CH		TO HOST SERIAL		04
	CN103	V3671200	Jack	USB 4P TE		TO HOST USB		03
	D100	VT332900	Diode	1SS355 TE-17				01
	DA200	VV556300	Diode Array	DAN217 0.3A X2				01
	DA201	VV556300	Diode Array	DAN217 0.3A X2				01
	EM100	FZ006920	LC Filter	LS MT B271KB				01
	-103	FZ006970	LC Filter	LS MT Y223NB				02

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	EM200	**FZ006920**	LC Filter	LS MT B271KB				01
	EM201	**FZ006920**	LC Filter	LS MT B271KB				01
*	IC100	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC101	**VN406200**	Photo Coupler	HCPL-0600-500				05
	IC102	**XP113A00**	IC	MAX202CSE		RS-232C		06
	IC103	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC104	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC105	**XW583A00**	IC	PDIUSBD12PW		USB I/F		09
	IC106	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC107	**IS001400**	IC	HD74LV14AFPEL		INVERTER		01
	IC108	**XP985A00**	IC	SN74LS06NSR		INVERTER		
	IC200	**XU816A00**	IC	SN75121NSR		LINE DRIVER		05
	IC201	**XV930A00**	IC	SN75124NSR		LINE RECEIVER		05
	IC202	**XG948E00**	IC	YM3436DK		DIR2		11
*	IC203	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
	IC204	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC207	**IS000800**	IC	HD74LV08AFPEL		AND		01
	JK100	**VI466400**	DIN Connector	3DIN YKF51-5046		MIDI IN/OUT/THRU		04
	JK200	**VI552200**	BNC Connector	YKS11-0 1P		WORD CLOCK OUT		05
	JK201	**VI552200**	BNC Connector	YKS11-0 1P		WORD CLOCK IN		05
	L100	**VQ723100**	Chip Inductance	EXC CL3225U 3				01
	-105	**VQ723100**	Chip Inductance	EXC CL3225U 3				01
	L200	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-202	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	RA100	**RE048100**	Resistor Array	100KX4				01
	-103	**RE048100**	Resistor Array	100KX4				01
	SW200	**VQ907900**	Slide Switch	SSSU112-S06N-1		WORD CLOCK 75ohm OFF/ON		01
	X100	**V4093500**	Quartz Crystal Unit	6MHz SMD-49				03
		RD253470	Carbon Resistor (chip)	4.7 0.1 J				01
		RD254180	Carbon Resistor (chip)	18.0 0.1 J				
		RD254470	Carbon Resistor (chip)	47.0 0.1 J				01
		RD254750	Carbon Resistor (chip)	75.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
		RD155220	Carbon Resistor (chip)	220.0 1/4 J				
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
		RD156100	Carbon Resistor (chip)	1.0K 1/4 J				
		RD256150	Carbon Resistor (chip)	1.5K 0.1 J				01
		RD256220	Carbon Resistor (chip)	2.2K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
*		**V44395S0**	Circuit Board	DSP LED2 (SWCOM)		(XW624B0)		
*		**V50480S0**	Circuit Board	DSP PSB2 (SWCOM)		(XW624B0)		
		- -	Jumper Wire	0.55		(VA07890)		
	C200	**V3311600**	Capacitor	0.01 250V J.U.C.S				01
		VF611200	Monolithic Ceramic Cap.	0.1 50V Z				02
	CN101	**VB858900**	Connector Base Post	PH-10P SE				01
	CN200	**LB933030**	Base Post Connector	VH- 3P SE				01
	IC101	**VJ041400**	Transistor Array	TD62381P				04
	LD101	**VR080300**	LED	SLR-342MG3F GR		ENGINE A/B,COMMUNICATION		01
	-106	**VR080300**	LED	SLR-342MG3F GR		1/2,48CH,96CH		01
	SP101	**VB397800**	LED Spacer					01
	-106	**VB397800**	LED Spacer					01
	SW200	**V3127000**	Push Switch	ESB92S23B J.U.C.S		POWER ON/OFF		02
		HF755220	Carbon Resistor	220.0 1/4 J				01
		HF757100	Carbon Resistor	10.0K 1/4 J				01
*		**V44079S0**	Circuit Board	DSP MB11		(XW592A0)		
	CN101	**VZ581300**	Receptacle	52480 96P TE		SLOT PDB		05
	-103	**VZ581300**	Receptacle	52480 96P TE				05
	CN104	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN201	**VZ581300**	Receptacle	52480 96P TE		SLOT GDB		05
	-203	**VZ581300**	Receptacle	52480 96P TE				05
	CN204	**LB932050**	Base Post Connector	VH- 5P TE				01
	CN301	**VZ581300**	Receptacle	52480 96P TE		SLOT IDB		05
	-303	**VZ581300**	Receptacle	52480 96P TE				05
	CN304	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN401	**VZ581300**	Receptacle	52480 96P TE		SLOT IDB		05
	-403	**VZ581300**	Receptacle	52480 96P TE				05
	CN404	**LB932050**	Base Post Connector	VH- 5P TE				01
	CN501	**VZ581300**	Receptacle	52480 96P TE		SLOT EDB		05

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	-503	**VZ581300**	Receptacle	52480 96P TE				05
	CN504	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN601	**VZ581300**	Receptacle	52480 96P TE		SLOT EMB		05
	-603	**VZ581300**	Receptacle	52480 96P TE				05
	CN604	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN701	**VZ581300**	Receptacle	52480 96P TE		SLOT CIB		05
	-703	**VZ581300**	Receptacle	52480 96P TE				05
	CN801	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
	CN802	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
	CN803	**VB390400**	Connector Base Post	PH- 8P TE				01
*		**V41128S0**	Circuit Board	DSP PDB		(XW349B0)		
		- -	Ejector	CBE-2P		(V498570)	2	
	C950	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
	C951	**UF118330**	Electrolytic Cap. (chip)	330 6.3V UUR0J3				01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
	CN100	**VB858400**	Connector Base Post	PH- 5P SE				01
	CN200	**VB390600**	Connector Base Post	PH-10P TE				01
	CN900	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	-902	**VZ581500**	Header, Flat Cable	53320 96P SE				05
	CN950	**- -**	Header, Flat Cable	5342 50P SE		(V419270)		
	CN951	**- -**	Header, Flat Cable	5332 30P TE		(V414610)		
	CN952	**- -**	Header, Flat Cable	5342 50P SE		(V419270)		
	CN953	**- -**	Header, Flat Cable	5332 30P TE		(V414610)		
	CN954	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
	-956	**- -**	Header, Flat Cable	5332 50P TE		(V414590)		
	CN957	**- -**	Header, Flat Cable	5332 14P TE		(V419280)		
	EM950	**FZ006970**	LC Filter	LS MT Y223NB				02
	EM951	**FZ006970**	LC Filter	LS MT Y223NB				02
*	IC100	**IS003200**	IC	HD74LV32AFPEL		OR		01
	IC101	**XY715A00**	IC	HD6477042AF28		MASK CPU		10
*	IC102	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC103	**IS000800**	IC	HD74LV08AFPEL		AND		01
	IC104	**XY837A00**	IC	IC-PST593DMT		SYSTEM RESET		02
	IC105	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC106	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC107	**XV729A00**	IC	IDT71016S15Y-TR		SRAM 1M		09
*	IC108	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC109	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
	IC110	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC111	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC112	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	IC114	**XV685A00**	IC	MBM29F400BC-70PFTN		FLASH ROM 4M		11
*	IC115	**IS000500**	IC	HD74LV05AFPEL		INVERTER		01
	IC200	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	-202	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC203	**XY729B00**	IC	EPM7128AETC144-10		FPGA		
	IC204	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	-206	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
*	IC250	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC251	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC300	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC301	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC350	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC351	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC400	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC401	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC450	**XV989A00**	IC	YSS904-F		DSP5		11
	IC500	**XV988A00**	IC	YSS910-S		DSP6		10
	IC501	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC502	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC503	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC504	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC505	**XV988A00**	IC	YSS910-S		DSP6		10
	IC550	**XV988A00**	IC	YSS910-S		DSP6		10
	IC551	**XV988A00**	IC	YSS910-S		DSP6		10
	IC600	**XV988A00**	IC	YSS910-S		DSP6		10
	IC601	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC602	**XV932A00**	IC	MSM5118160D-60J		DRAM 16M		12
	IC603	**XV988A00**	IC	YSS910-S		DSP6		10

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC650	**XV988A00**	IC	YSS910-S		DSP6		10
	IC700	**XV988A00**	IC	YSS910-S		DSP6		10
	IC701	**XV988A00**	IC	YSS910-S		DSP6		10
*	IC750	**XV989A00**	IC	YSS904-F		DSP5		11
*	IC751	**XV989A00**	IC	YSS904-F		DSP5		11
	IC800	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-822	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC850	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-872	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC900	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
	IC901	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	-904	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
*	LD100	**V4095700**	LED	PG1113F GR		MONI1-4		01
*	-103	**V4095700**	LED	PG1113F GR				01
	RA100	**RE047100**	Resistor Array	10KX4				01
	-114	**RE047100**	Resistor Array	10KX4				01
	RA200	**RE047100**	Resistor Array	10KX4				01
	RA201	**RE047100**	Resistor Array	10KX4				01
	RA202	**RE048100**	Resistor Array	100KX4				01
	RA203	**RE047100**	Resistor Array	10KX4				01
	RA204	**RE048100**	Resistor Array	100KX4				01
	RA205	**RE047100**	Resistor Array	10KX4				01
	RA206	**RE048100**	Resistor Array	100KX4				01
	RA207	**RE047100**	Resistor Array	10KX4				01
	RA208	**RE048100**	Resistor Array	100KX4				01
	RA209	**RE047100**	Resistor Array	10KX4				01
	-220	**RE047100**	Resistor Array	10KX4				01
	RA228	**RE047100**	Resistor Array	10KX4				01
	RA250	**RE047100**	Resistor Array	10KX4				01
	-265	**RE047100**	Resistor Array	10KX4				01
	RA300	**RE047100**	Resistor Array	10KX4				01
	-315	**RE047100**	Resistor Array	10KX4				01
	RA350	**RE047100**	Resistor Array	10KX4				01
	-357	**RE047100**	Resistor Array	10KX4				01
	RA400	**RE047100**	Resistor Array	10KX4				01
	-419	**RE047100**	Resistor Array	10KX4				01
	RA450	**RE047100**	Resistor Array	10KX4				01
	-455	**RE047100**	Resistor Array	10KX4				01
	RA500	**RE047100**	Resistor Array	10KX4				01
	-507	**RE047100**	Resistor Array	10KX4				01
	RA600	**RE047100**	Resistor Array	10KX4				01
	-607	**RE047100**	Resistor Array	10KX4				01
	RA800	**RE048100**	Resistor Array	100KX4				01
	-845	**RE048100**	Resistor Array	100KX4				01
	RA850	**RE048100**	Resistor Array	100KX4				01
	-853	**RE048100**	Resistor Array	100KX4				01
	RA900	**RE048100**	Resistor Array	100KX4				01
	-903	**RE048100**	Resistor Array	100KX4				01
	RA950	**RE048100**	Resistor Array	100KX4				01
	-961	**RE048100**	Resistor Array	100KX4				01
	TP706	**VE340300**	Test Pin	IRS-1169				01
	TP707	**VE340300**	Test Pin	IRS-1169				01
	TP710	**VE340300**	Test Pin	IRS-1169				01
*	X100	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC				01
	X500	**VZ156100**	Quartz Crystal Unit	60MHz DSO751S				06
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
		RD255200	Carbon Resistor (chip)	200.0 0.1 J				01
		RD255330	Carbon Resistor (chip)	330.0 0.1 J				01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
⚠ *		**V4704900**	Power Supply Unit	DSP-DC J,UL,CSA				98
		VR627300	Motor	DC PUDC12B4		Fan	2	12
⚠ *		**V5065200**	AC Inlet	M1908-C 3P				03
		VN103500	Lithium Battery	CR2032				03

*: New Parts

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DSP UNIT

DSP1D

CIRCUIT DIAGRAM

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WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

■CIB CIRCUIT DIAGRAM 002 (DSP1D)

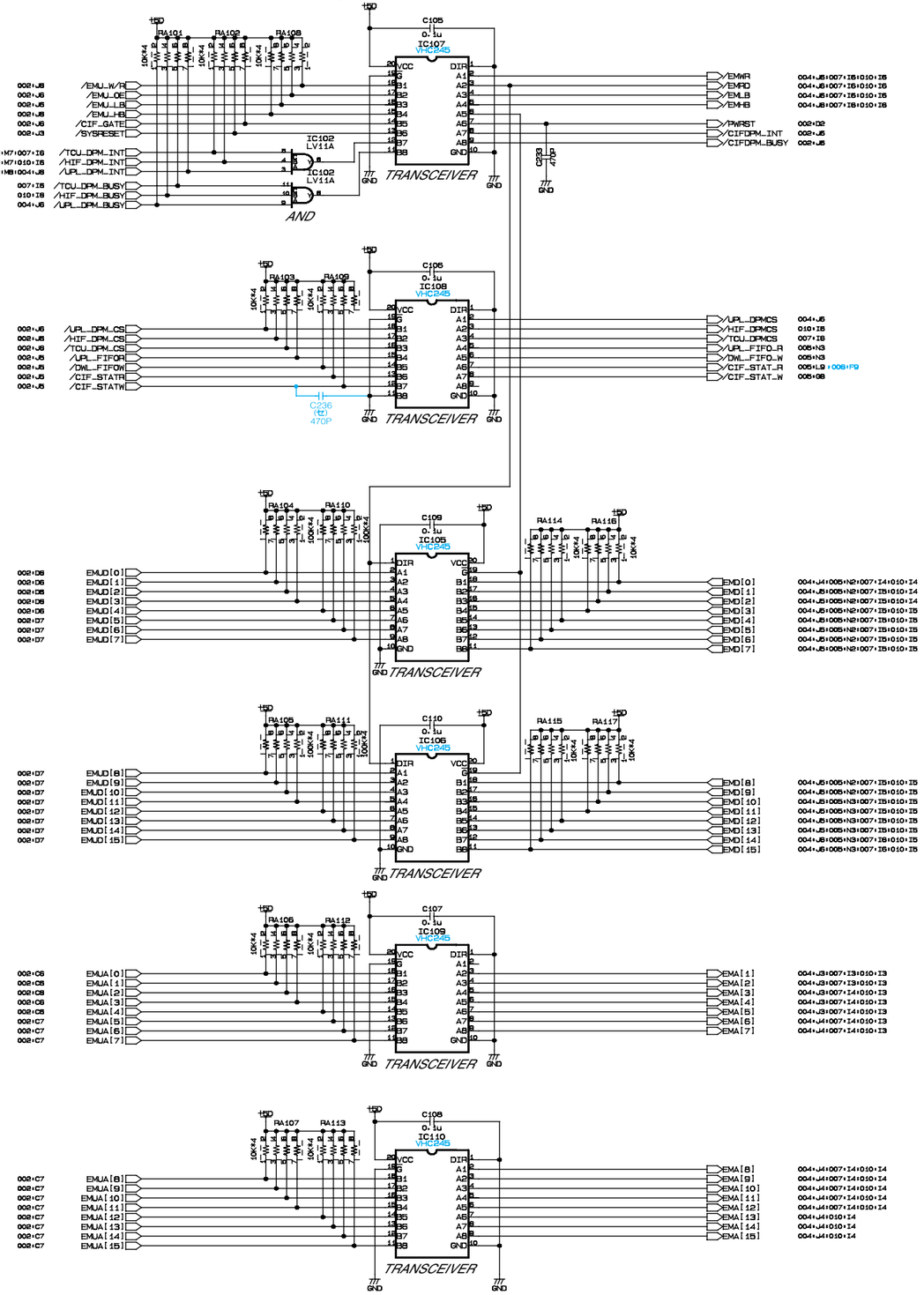
DSP1D

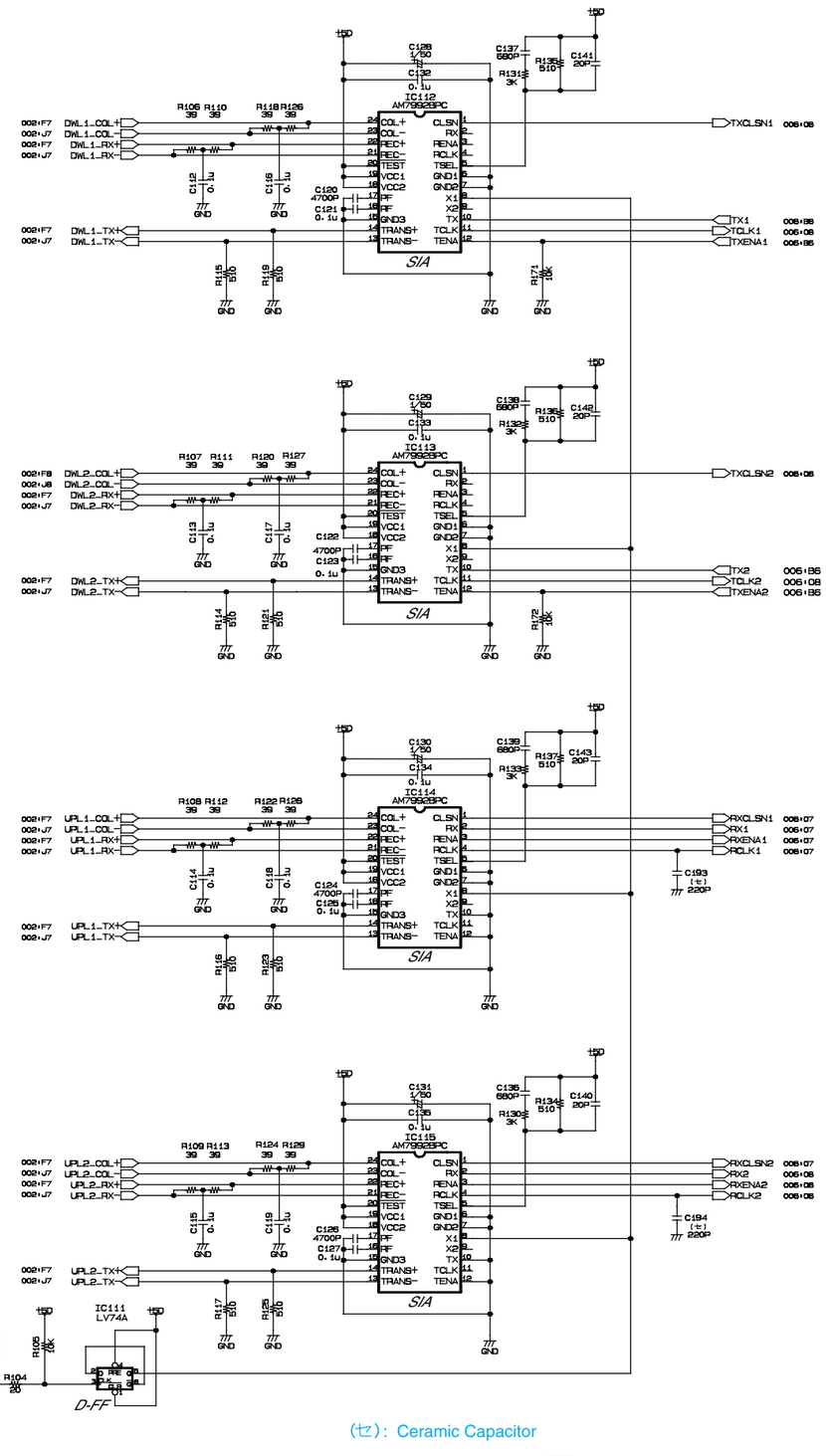
KEC-92490-2

■CIB CIRCUIT DIAGRAM 002 (DSP1D)

■ CIB CIRCUIT DIAGRAM 003 (DSP1D)

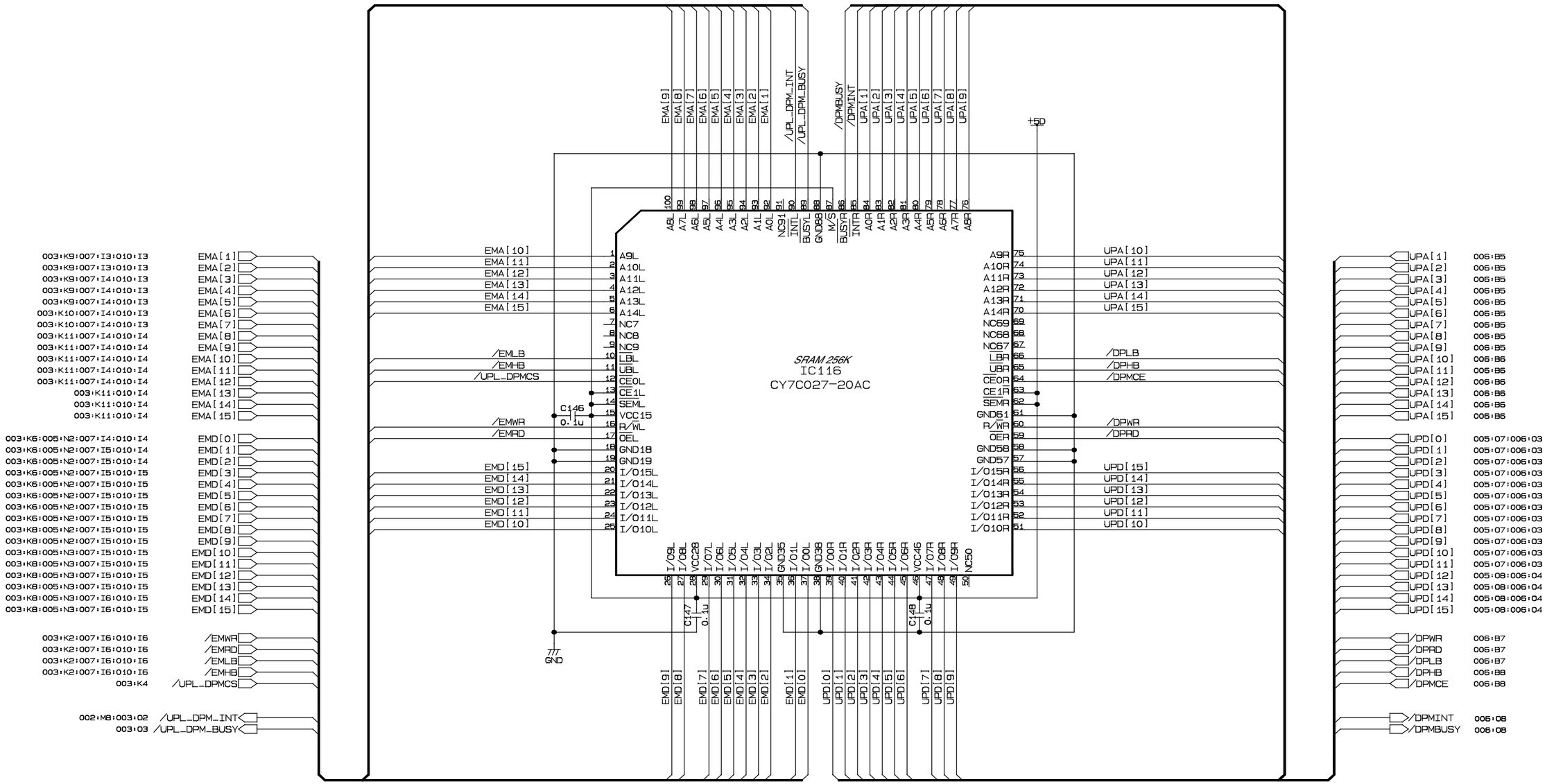
DSP1D





(㎌): Ceramic Capacitor

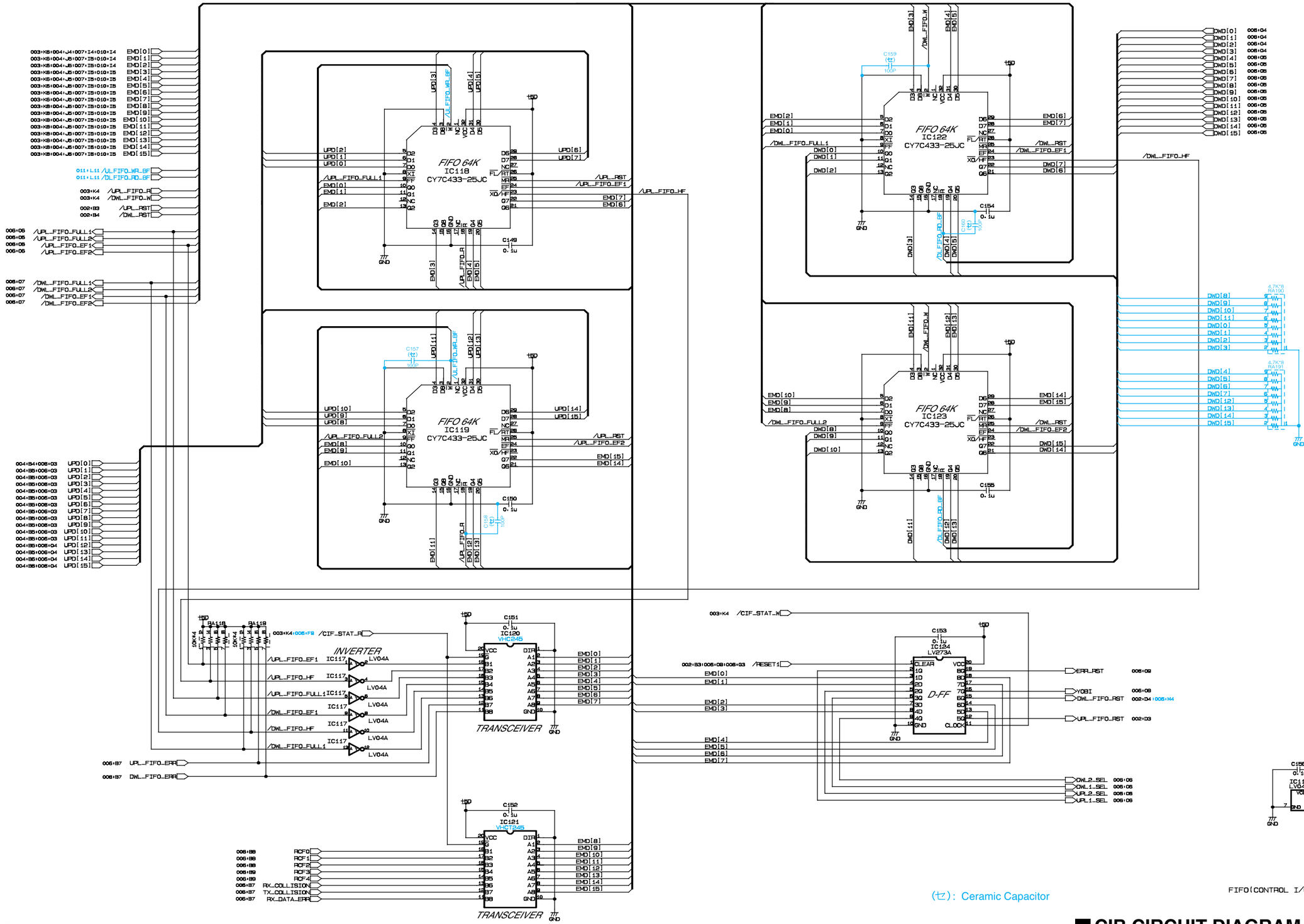
■ CIB CIRCUIT DIAGRAM 004 (DSP1D)



DUAL PORT MEMORY(DSP <-> CPU) SECTION

■ CIB CIRCUIT DIAGRAM 005 (DSP1D)

DSP1D



(セ): Ceramic Capacitor

FIFO(CONTROL I/O) SECTION

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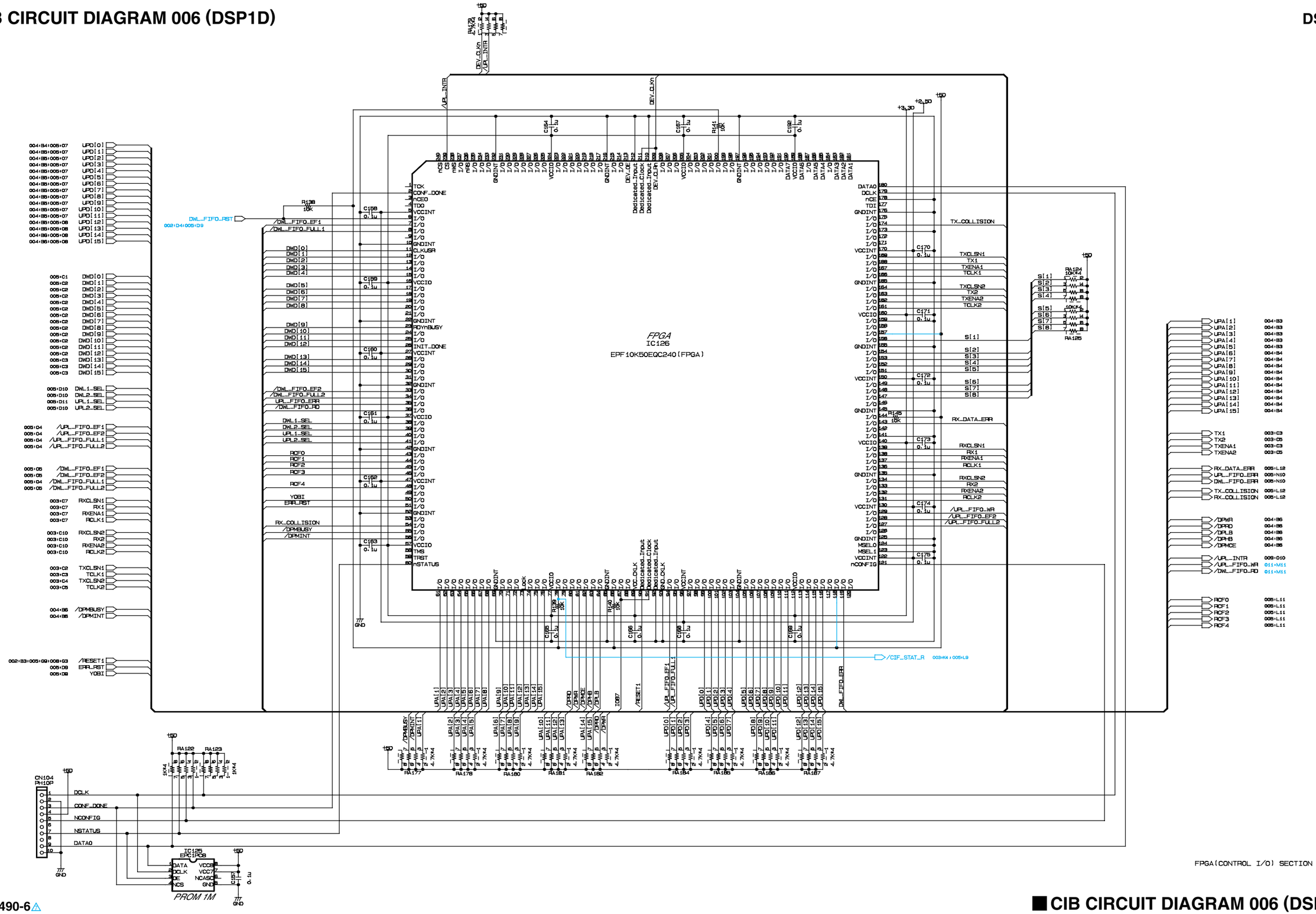
■ CIB CIRCUIT DIAGRAM 005 (DSP1D)

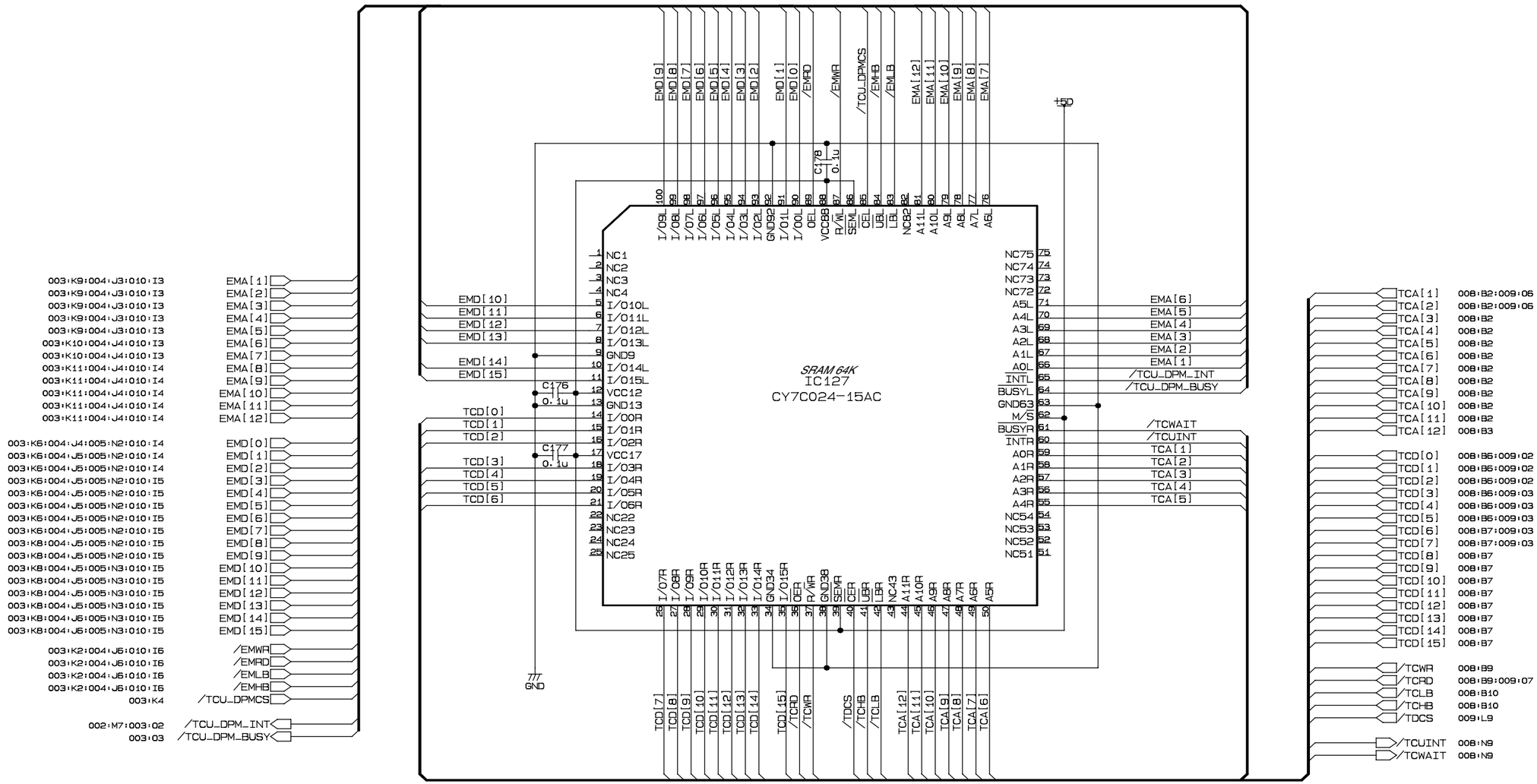
■ CIB CIRCUIT DIAGRAM 006 (DSP1D)



KEC-92490-6△

■ CIB CIRCUIT DIAGRAM 007 (DSP1D)

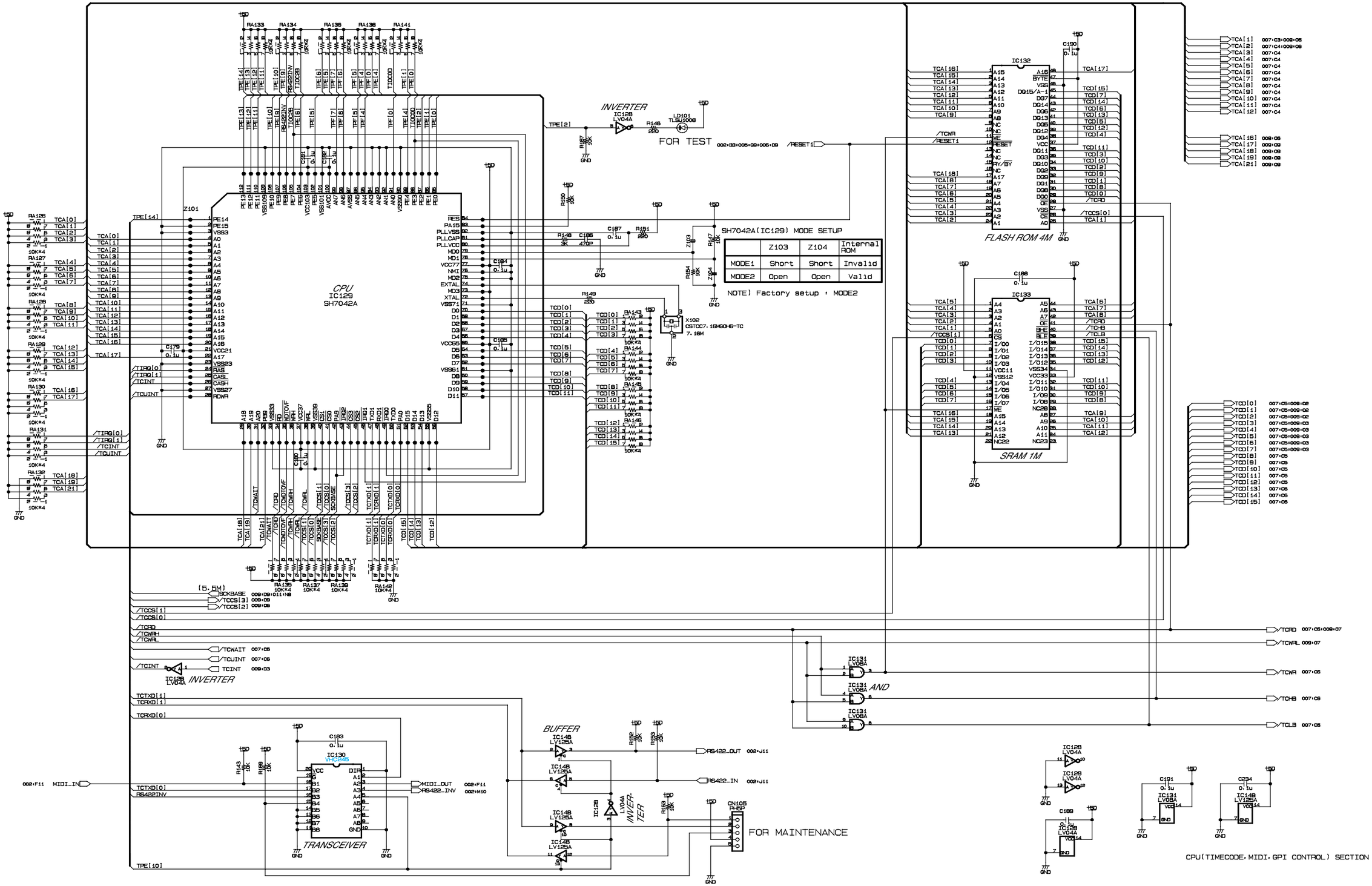
DSP1D



DUAL PORT MEMORY(TC BUS <-> EM BUS) SECTION

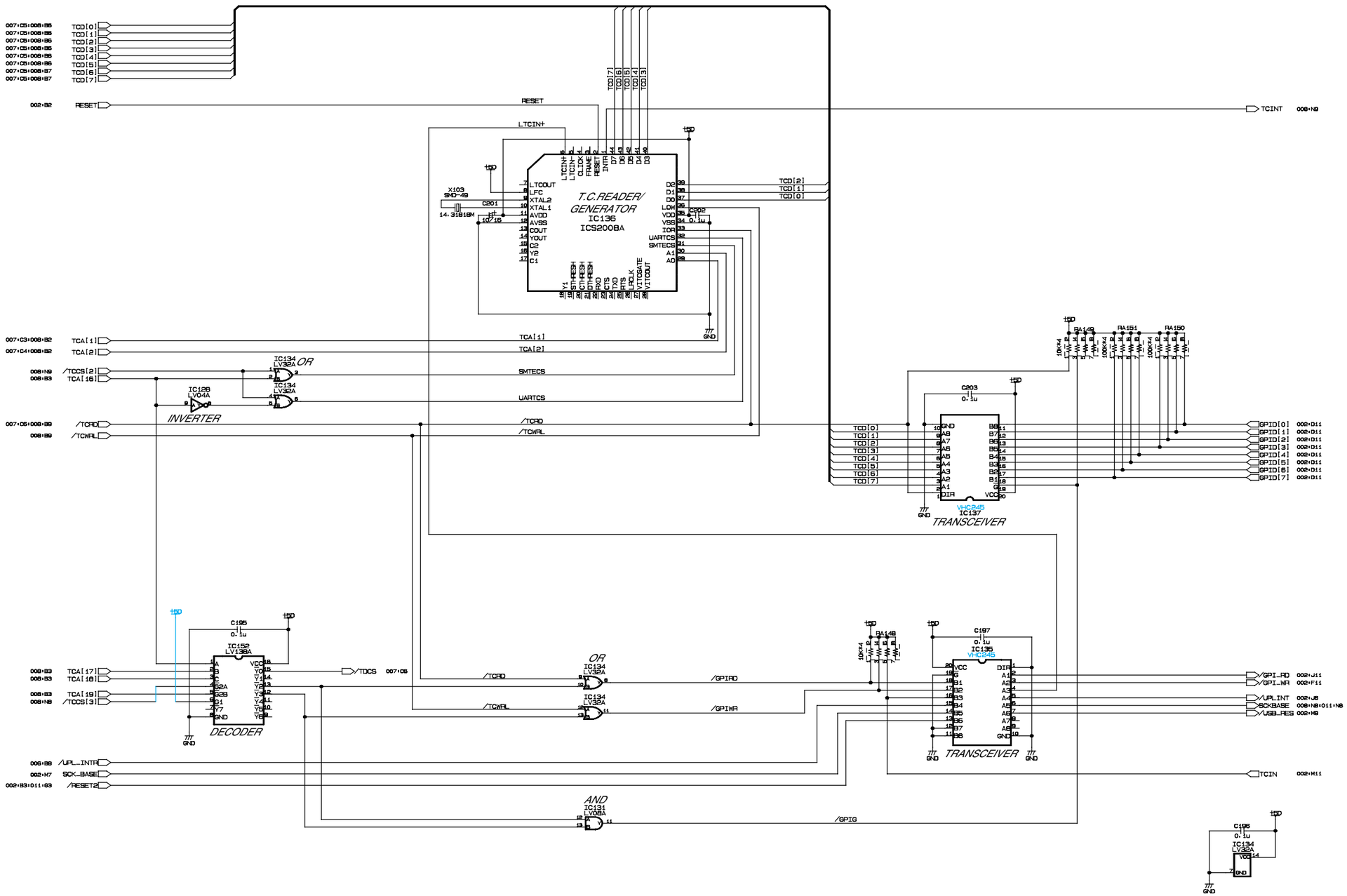
■ CIB CIRCUIT DIAGRAM 007 (DSP1D)

■ CIB CIRCUIT DIAGRAM 008 (DSP1D)



■ CIB CIRCUIT DIAGRAM 008 (DSP1D)

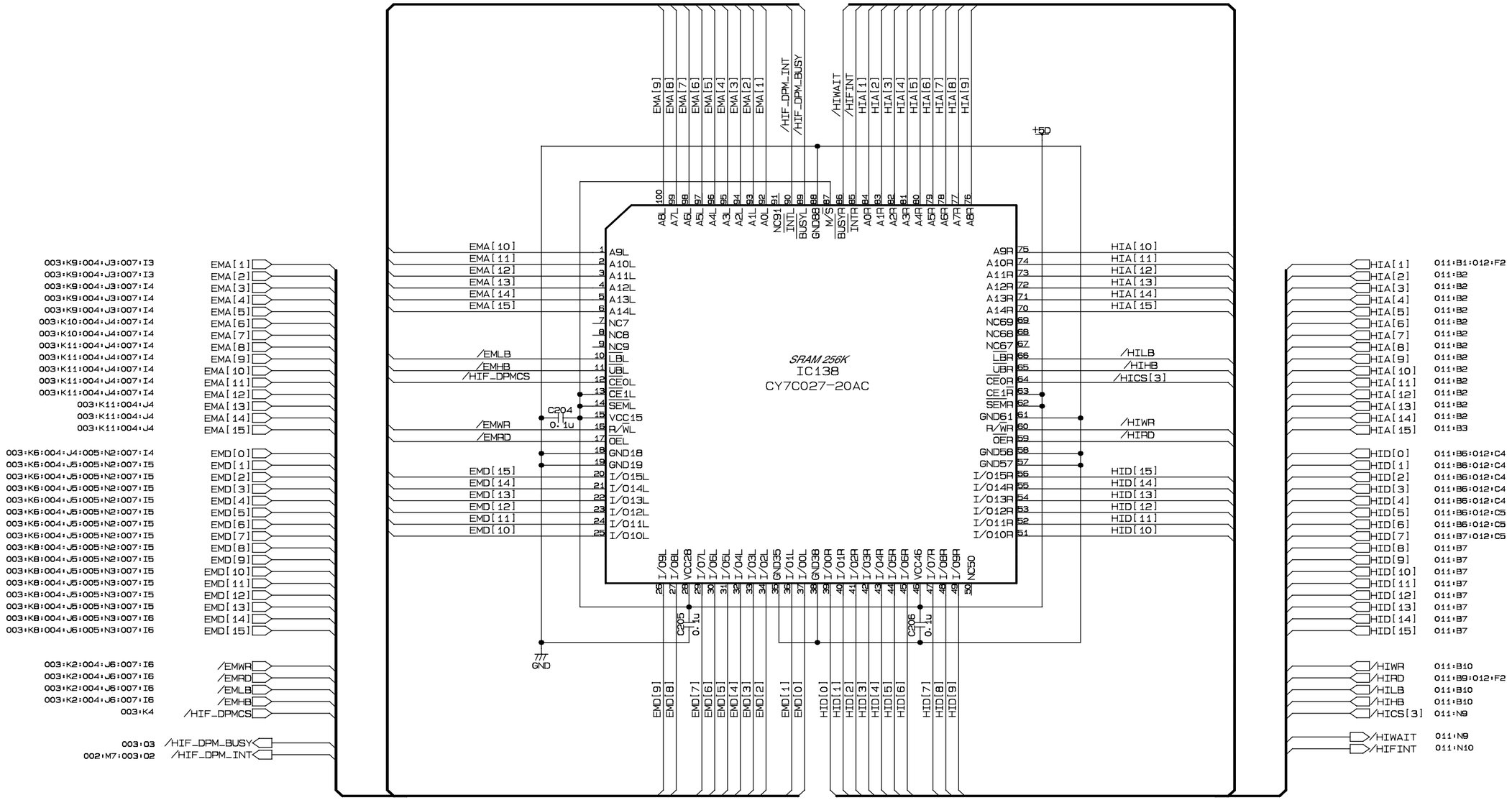
■ CIB CIRCUIT DIAGRAM 009 (DSP1D)



TIMECODE CONTROL SECTION

■ CIB CIRCUIT DIAGRAM 009 (DSP1D)

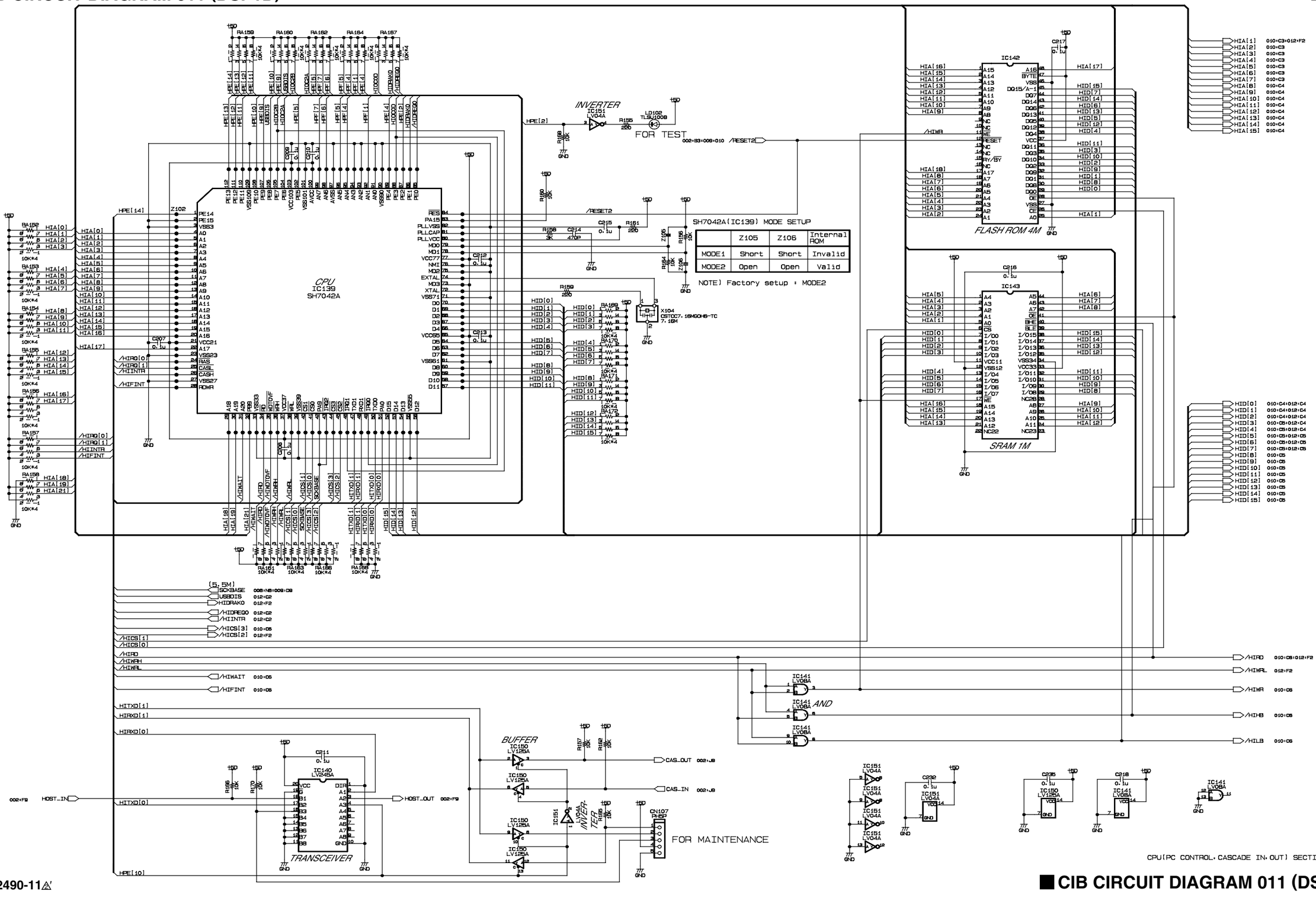
■ CIB CIRCUIT DIAGRAM 010 (DSP1D)



DUAL PORT MEMORY(EM BUS <-> HI BUS) SECTION

■ CIB CIRCUIT DIAGRAM 011 (DSP1D)

DSP1D



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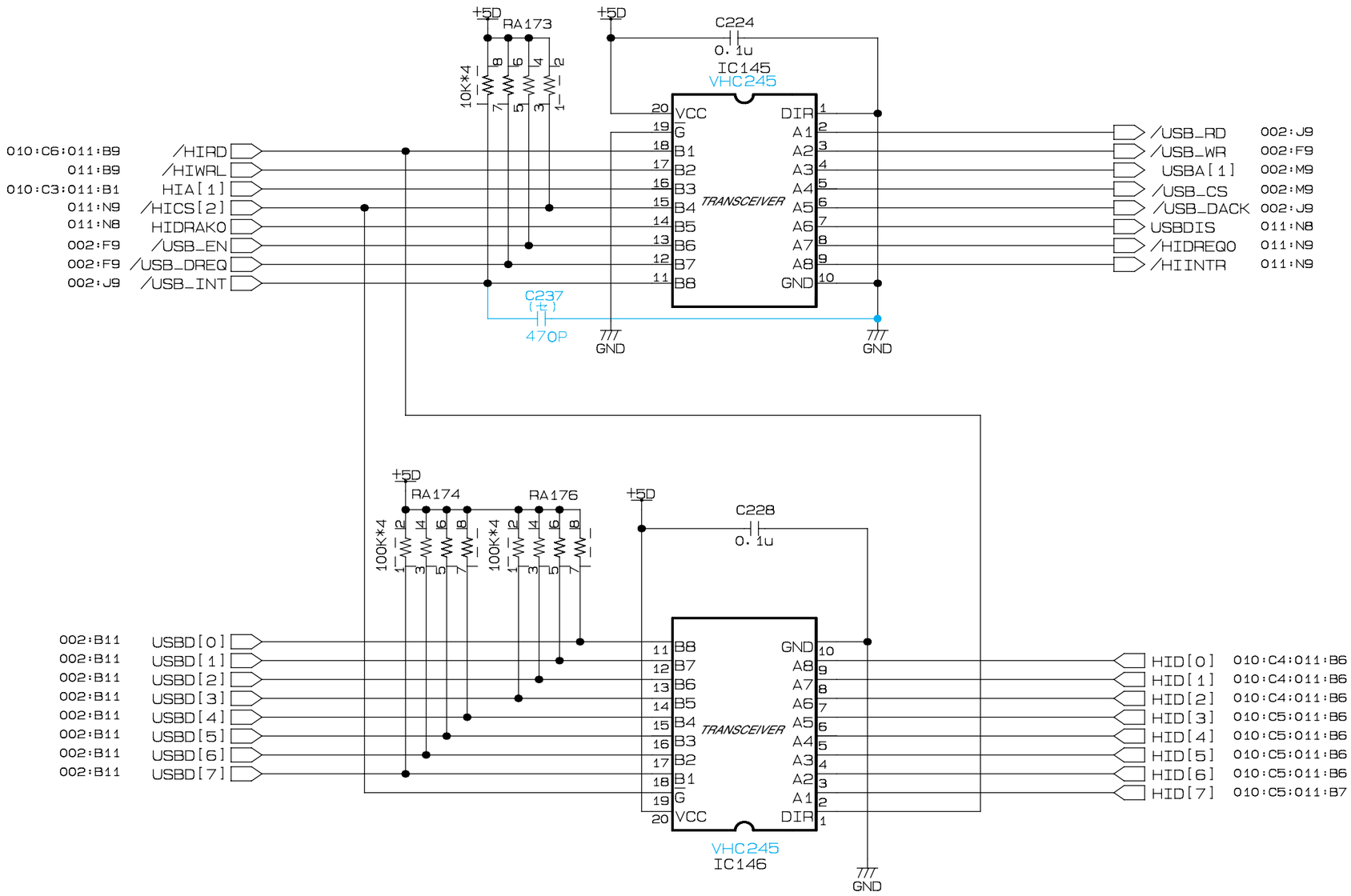
■ CIB CIRCUIT DIAGRAM 011 (DSP1D)

■ CIB CIRCUIT DIAGRAM 012 (DSP1D)



(セ): Ceramic Capacitor

BUFFER & TRANCEIVER(USB BUS <-> HI BUS) SECTION

■ EDB CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

SH7042A(IC100) MODE SETUP

	R116	R117	Internal ROM
MODE1	Open	Open	Invalid
MODE2	Short	Short	Valid

NOTE) Factory setup : MODE2

CPU ID F7H:EDB
MSB LSB

CPU IC100 SH7042A

RESET IC102 PST5930MT

INVERTER IC109 LV04A

AND IC107 LV08A

OR IC105 LV32A

AND IC105 LV08A

AND IC106 LV08A

AND IC107 LV08A

IC110 LV05A

SRAM 1M IC103

FLASH ROM 4M IC104

TRANSCEIVER IC101 VHC245

FOR MAINTENANCE CN100

FOR TEST

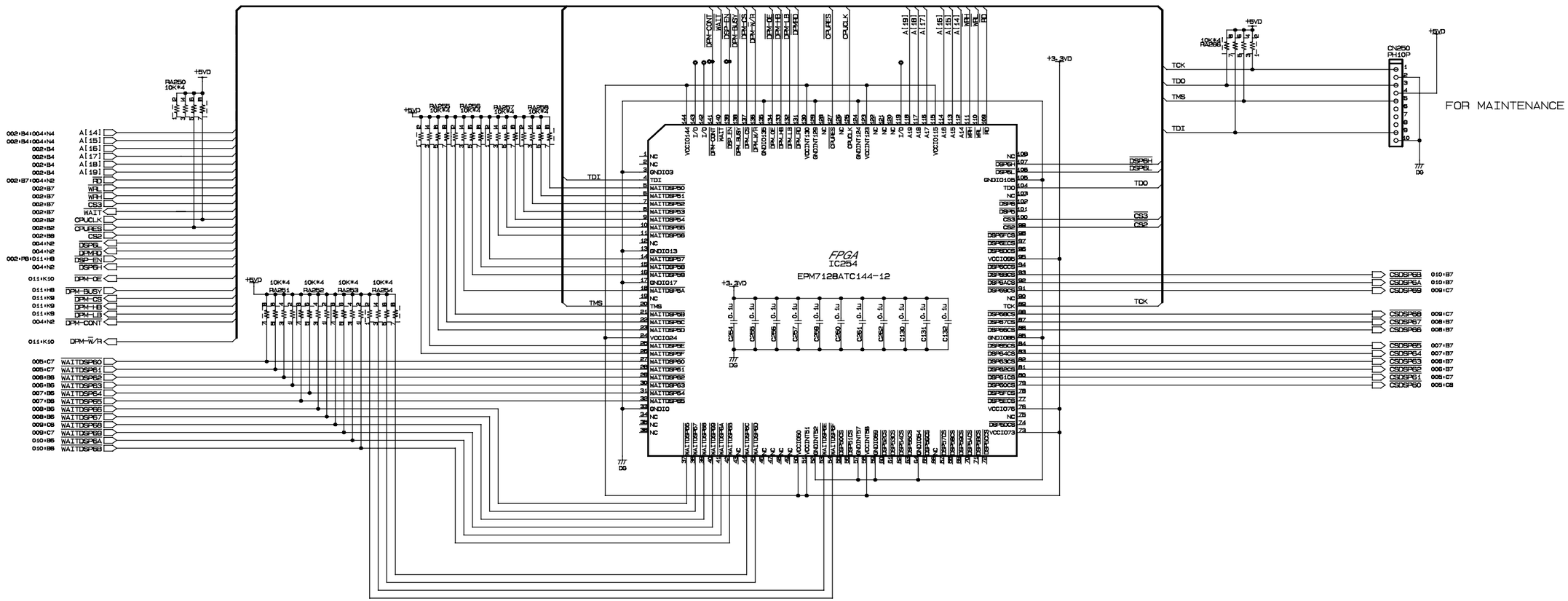
MONI-1
MONI-2
MONI-3
MONI-4

CPU SECTION

KEC-92489-2

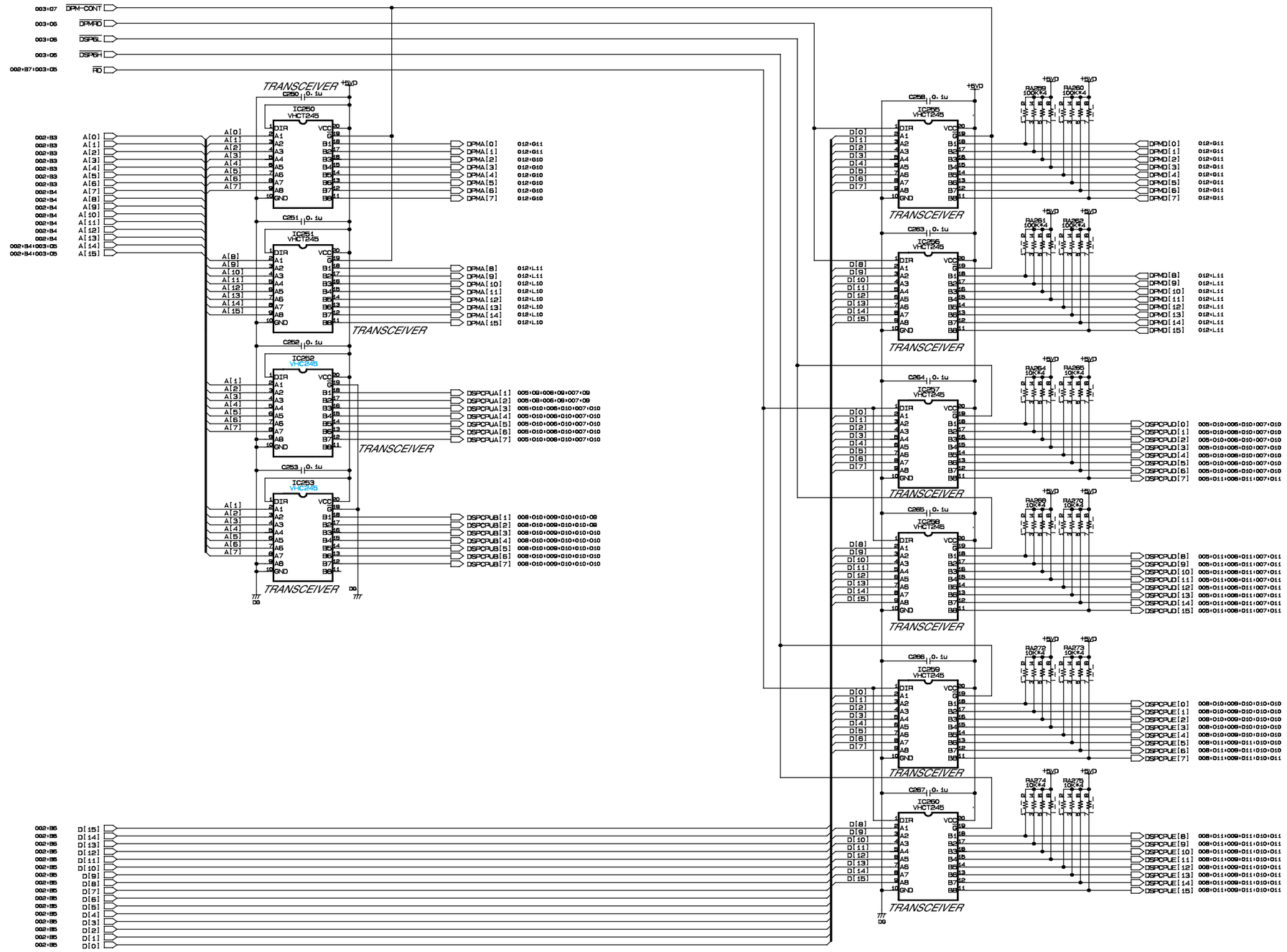
■ EDB CIRCUIT DIAGRAM 002 (DSP1D)

■ EDB CIRCUIT DIAGRAM 003 (DSP1D)



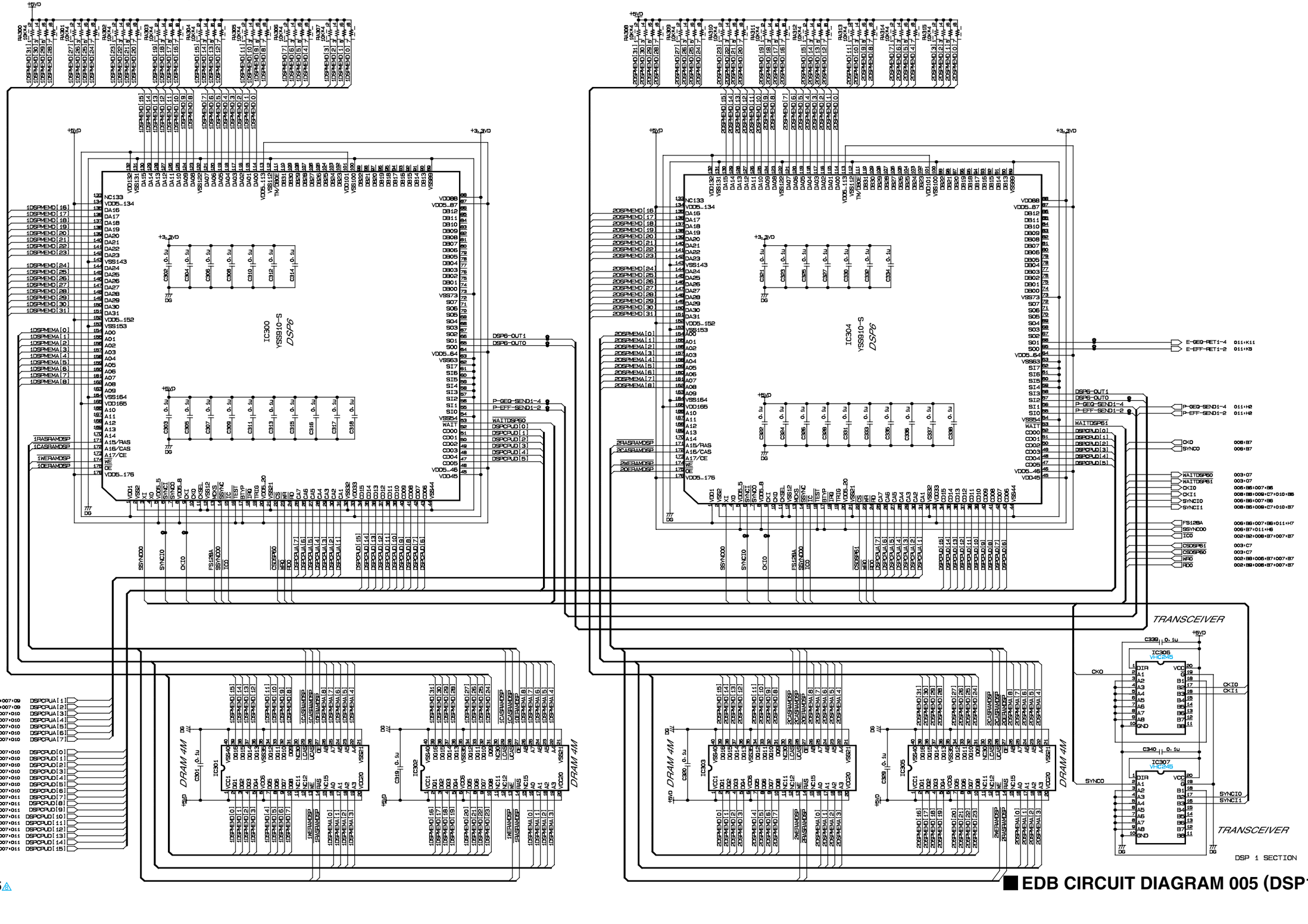
EDB CIRCUIT DIAGRAM 004 (DSP1D)

DSP1D



ADDRESS & DATA BUFFER SECTION

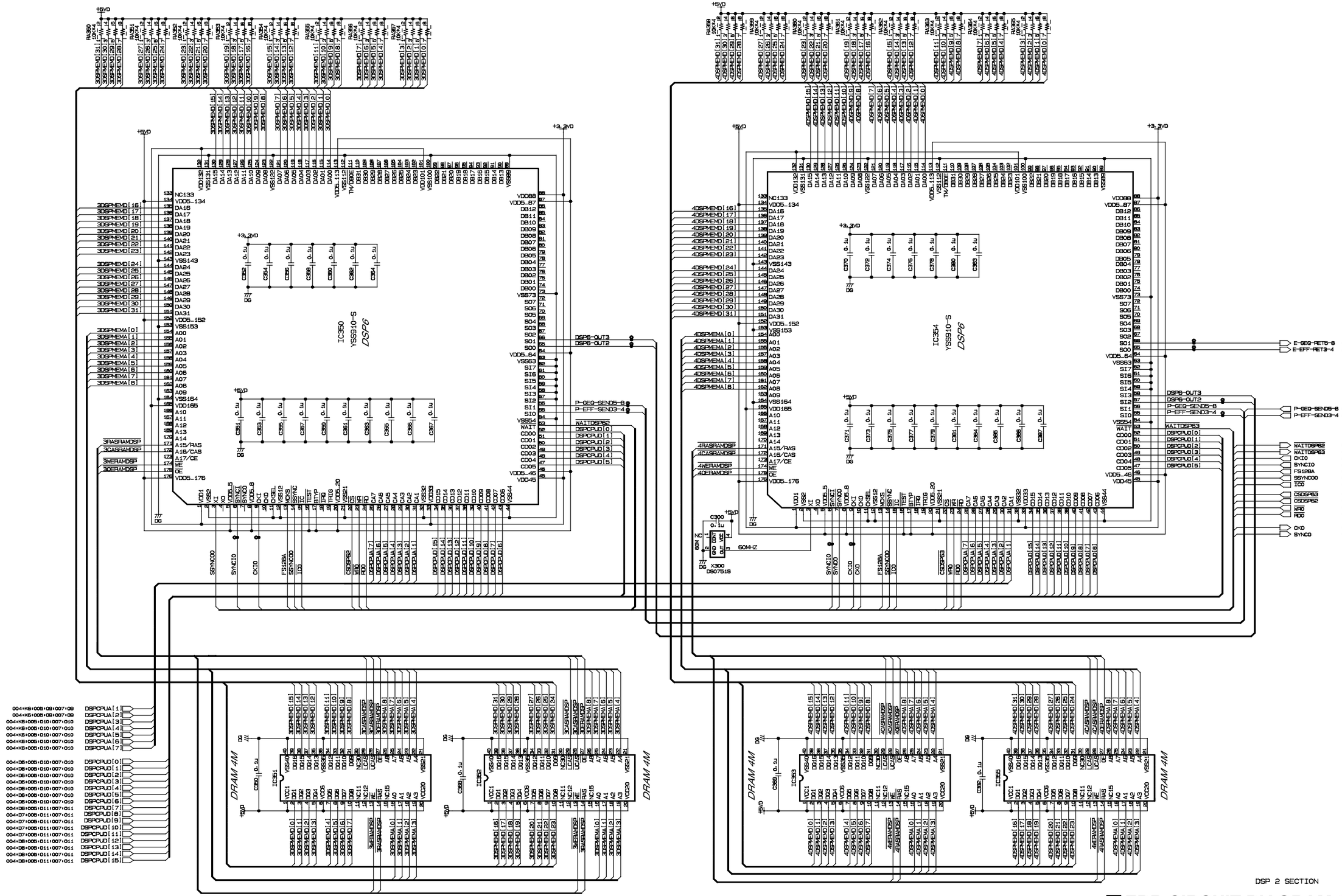
■ EDB CIRCUIT DIAGRAM 005 (DSP1D)



■ EDB CIRCUIT DIAGRAM 005 (DSP1D)

■ EDB CIRCUIT DIAGRAM 006 (DSP1D)

DSP1D

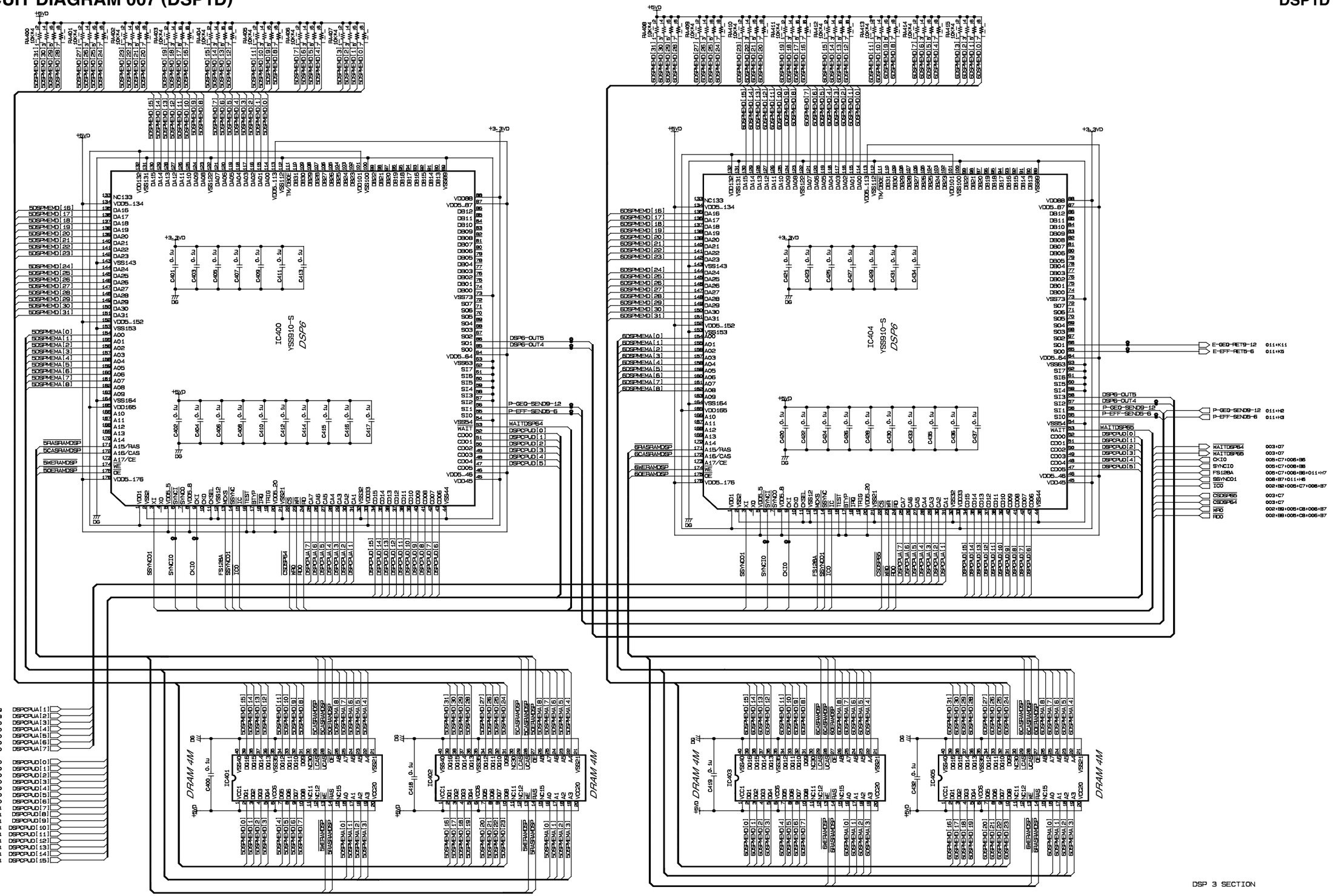


DSP 2 SECTION

■ EDB CIRCUIT DIAGRAM 006 (DSP1D)

■ EDB CIRCUIT DIAGRAM 007 (DSP1D)

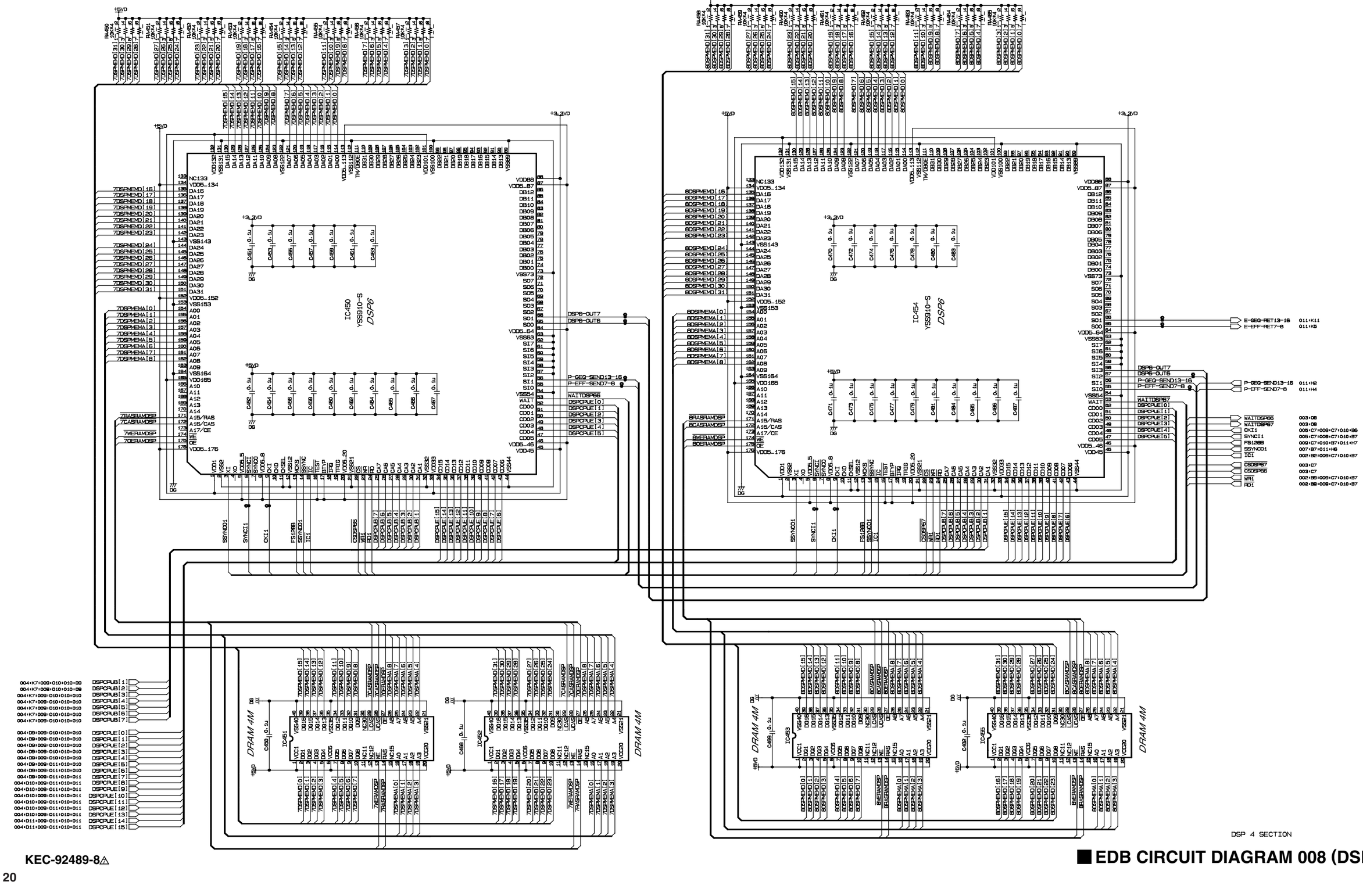
DSP1D



■ EDB CIRCUIT DIAGRAM 007 (DSP1D)

■ EDB CIRCUIT DIAGRAM 008 (DSP1D)

DSP1D



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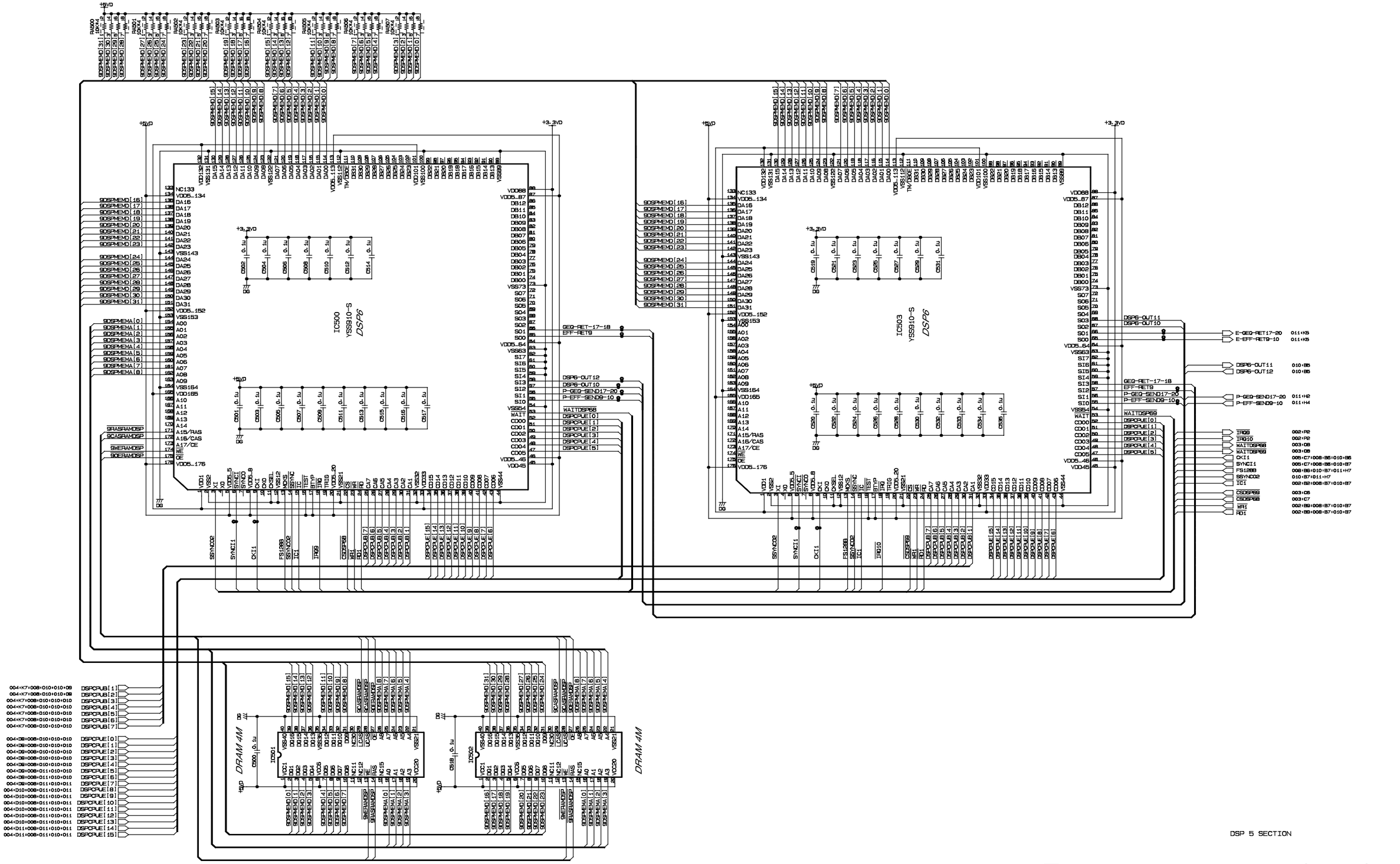
■ EDB CIRCUIT DIAGRAM 008 (DSP1D)

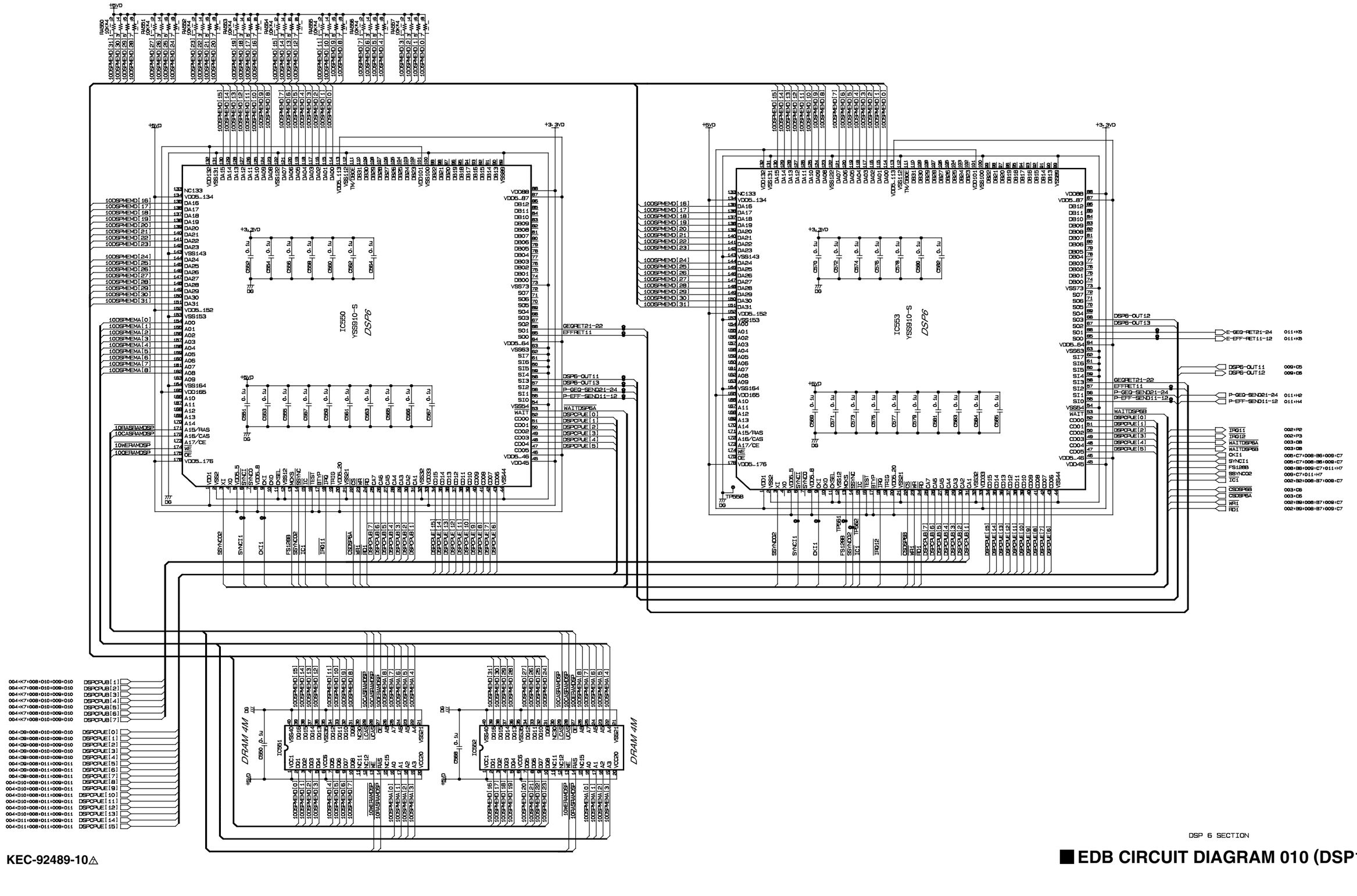
■ EDB CIRCUIT DIAGRAM 009 (DSP1D)

DSP1D



DSP 5 SECTION

■ EDB CIRCUIT DIAGRAM 010 (DSP1D)



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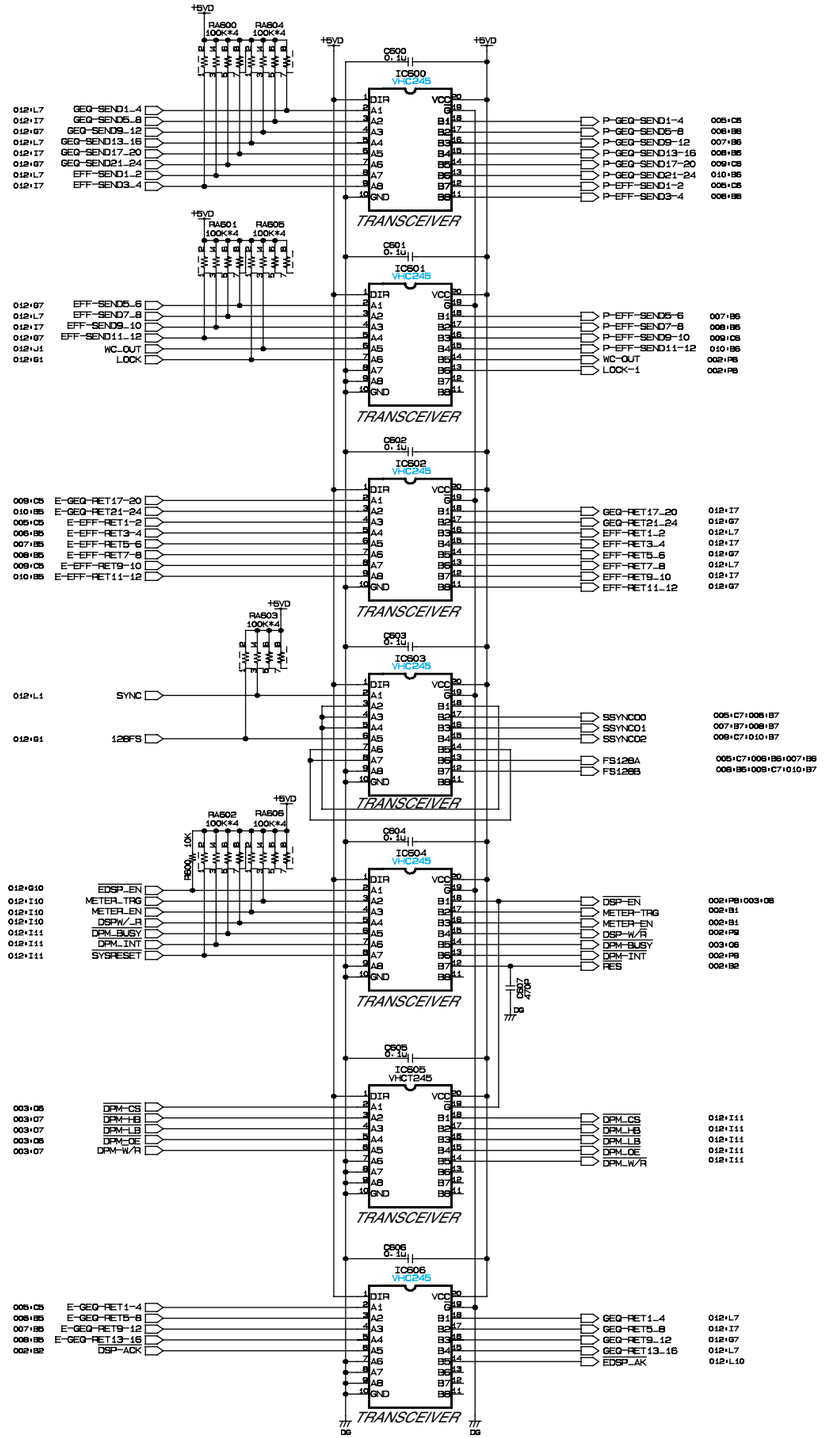
DSP 6 SECTION

■ EDB CIRCUIT DIAGRAM 010 (DSP1D)

■ EDB CIRCUIT DIAGRAM 011 (DSP1D)

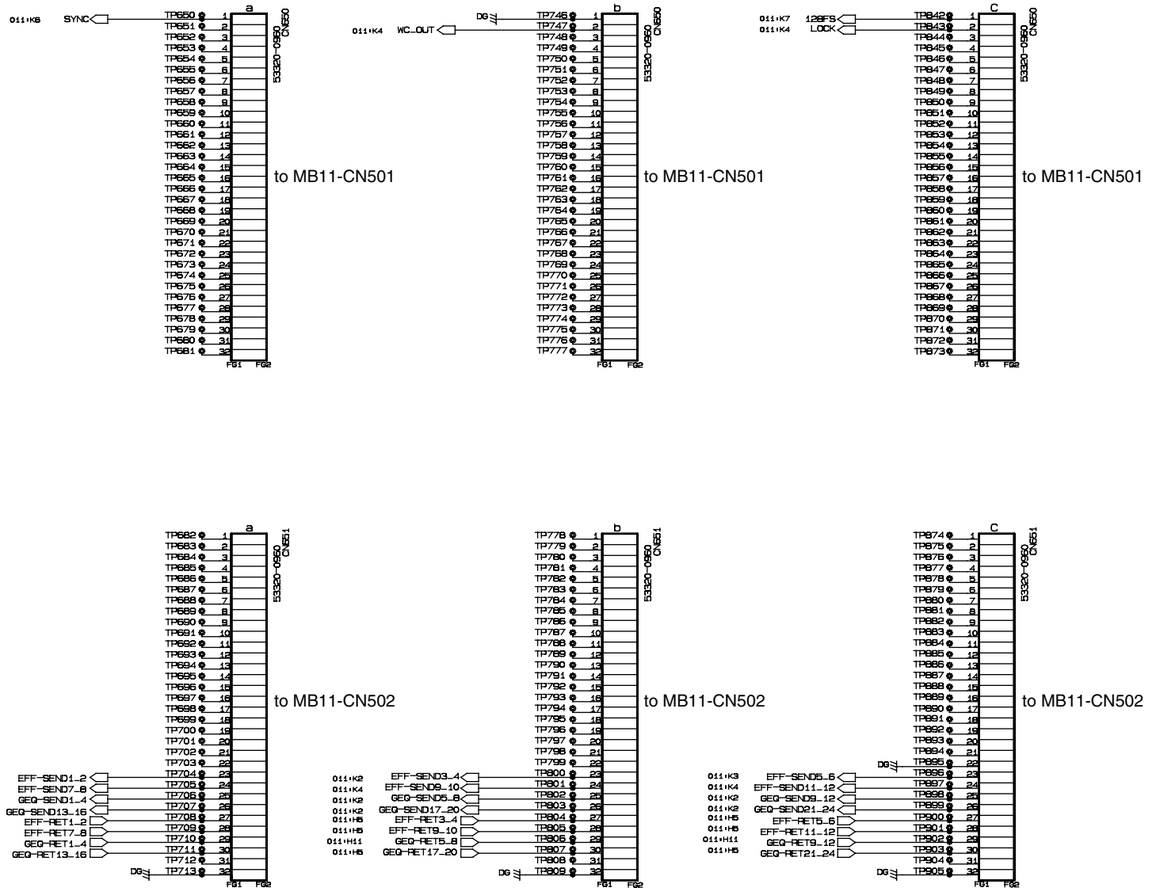
DSP1D



AUDIO DATA BUFFER SECTION

■ EDB CIRCUIT DIAGRAM 012 (DSP1D)

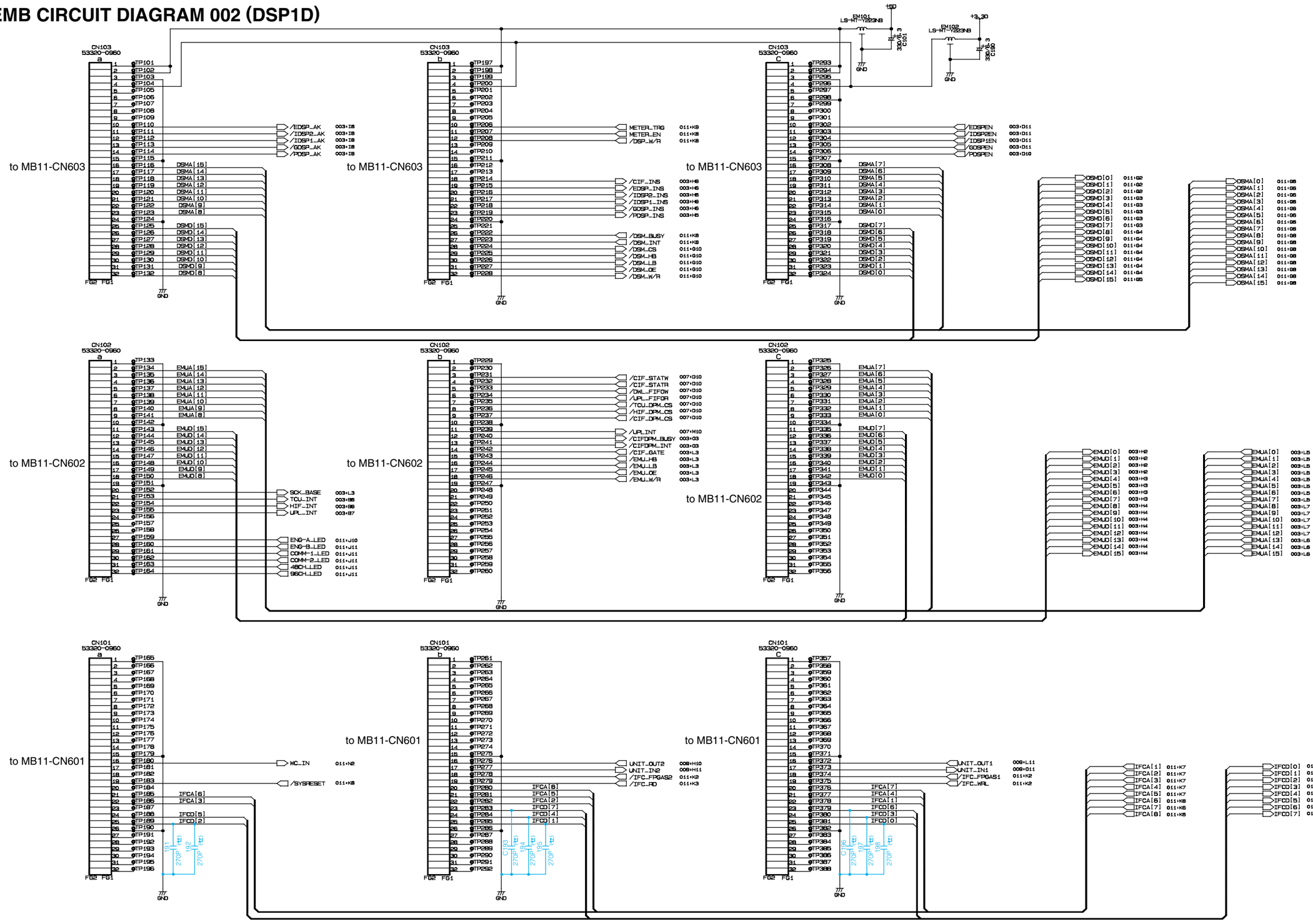
DSP1D



CONNECTOR SECTION

■ EMB CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

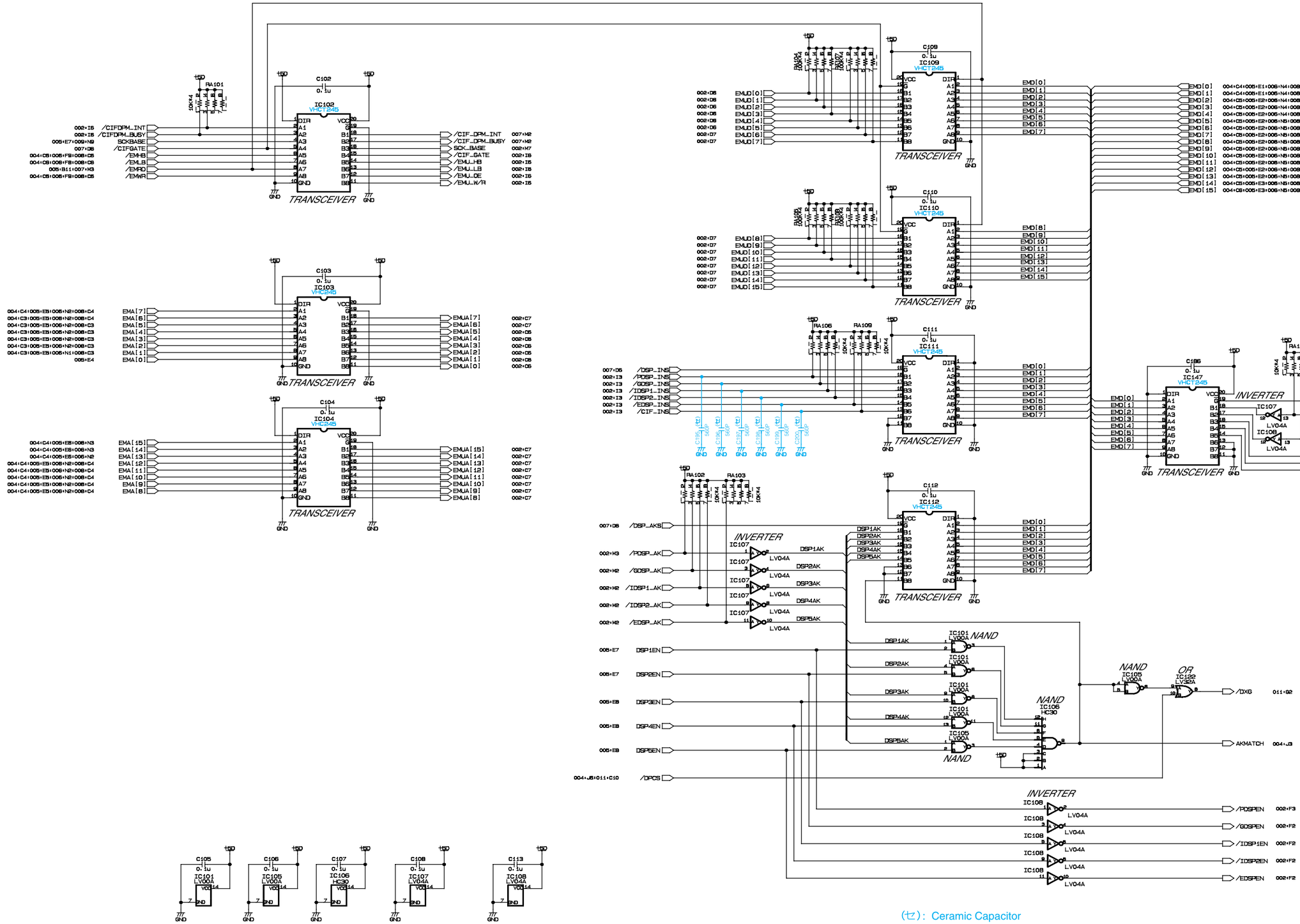


(±) : Ceramic Capacitor

■ EMB CIRCUIT DIAGRAM 002 (DSP1D)

■ EMB CIRCUIT DIAGRAM 003 (DSP1D)

DSP1D

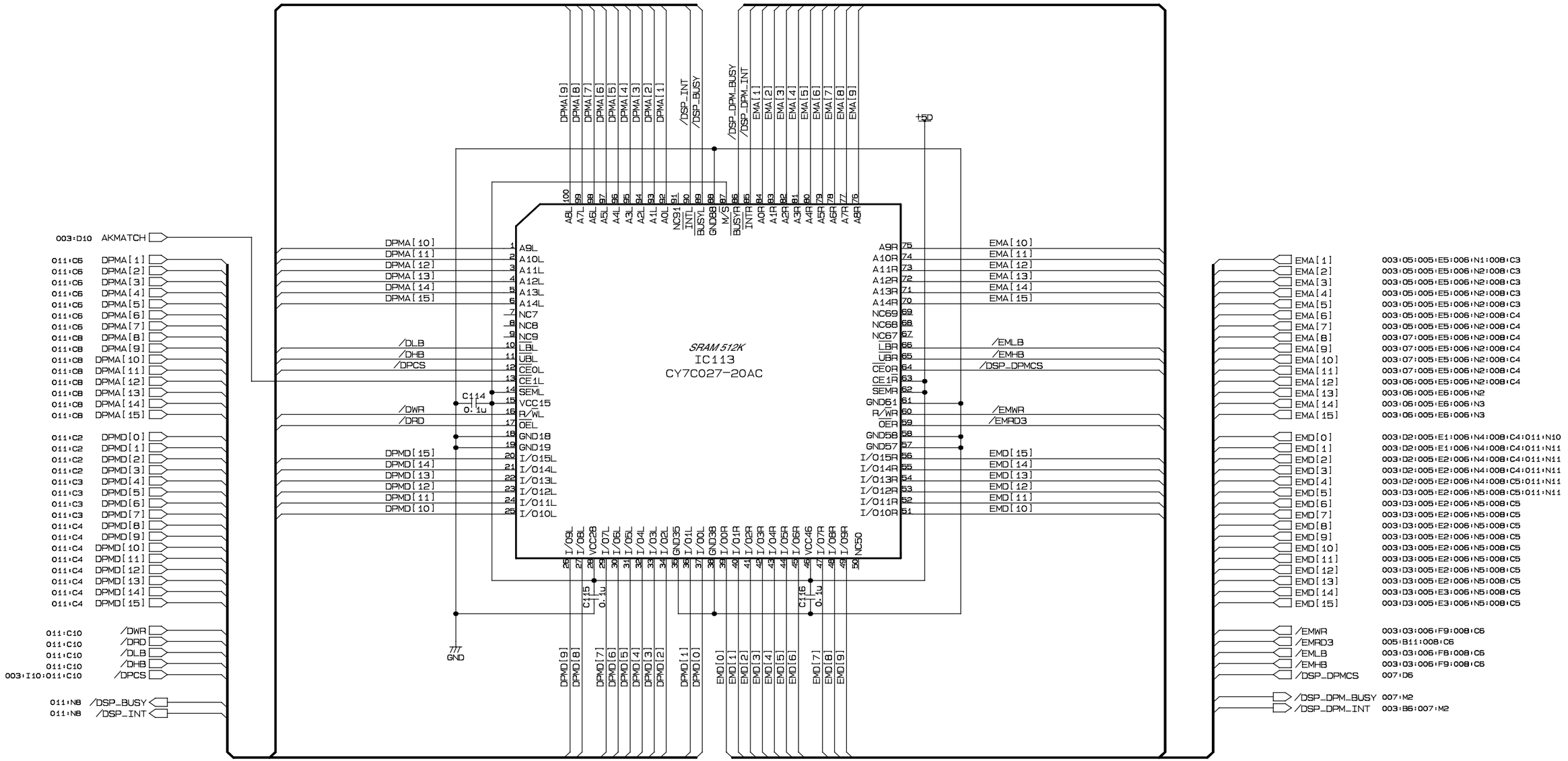


(セ): Ceramic Capacitor

BUFFER & ADDRESS DECODE SECTION

■ EMB CIRCUIT DIAGRAM 003 (DSP1D)

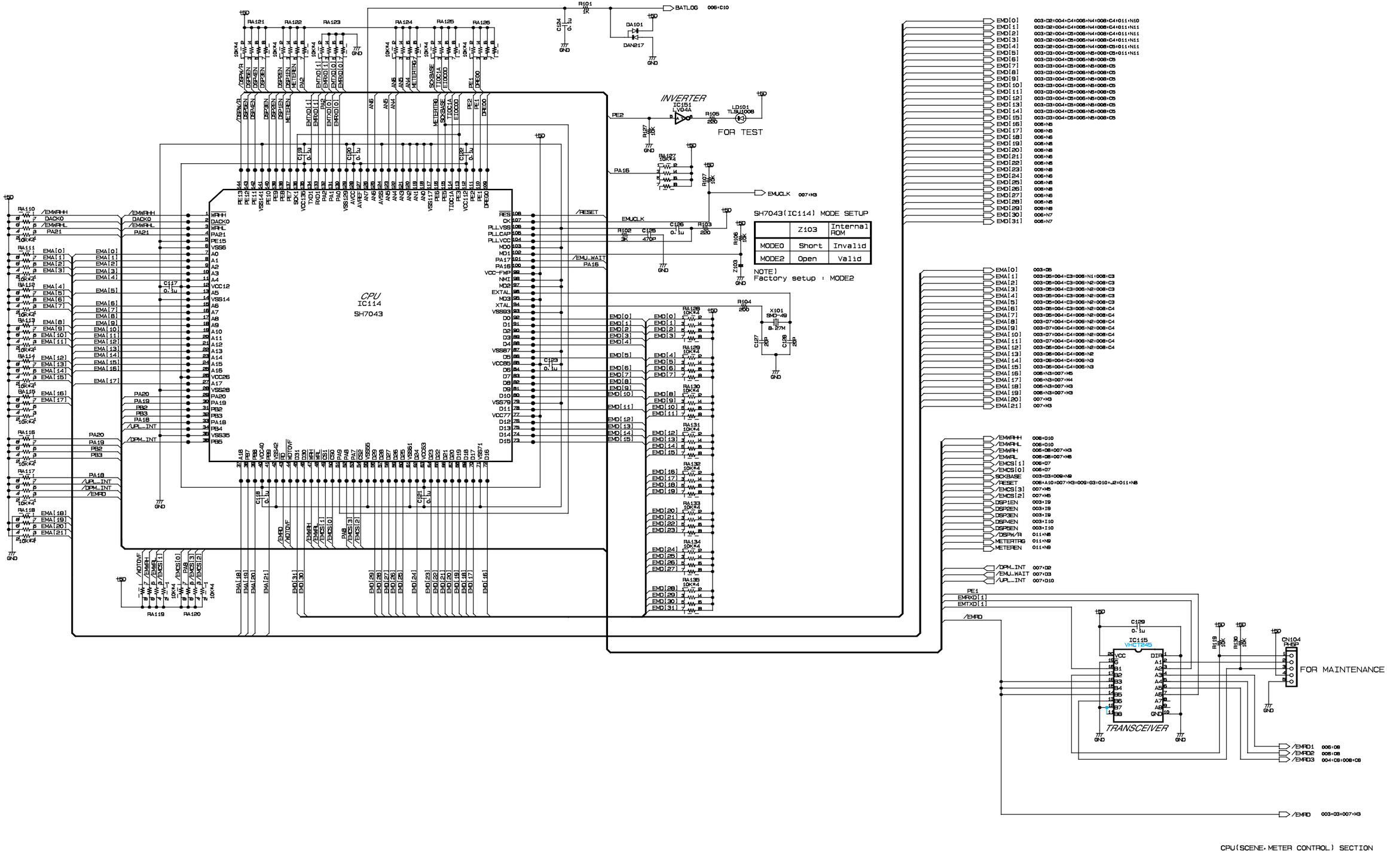
■ EMB CIRCUIT DIAGRAM 004 (DSP1D)



DUAL PORT MEMORY(DPM BUS <-> EM BUS) SECTION

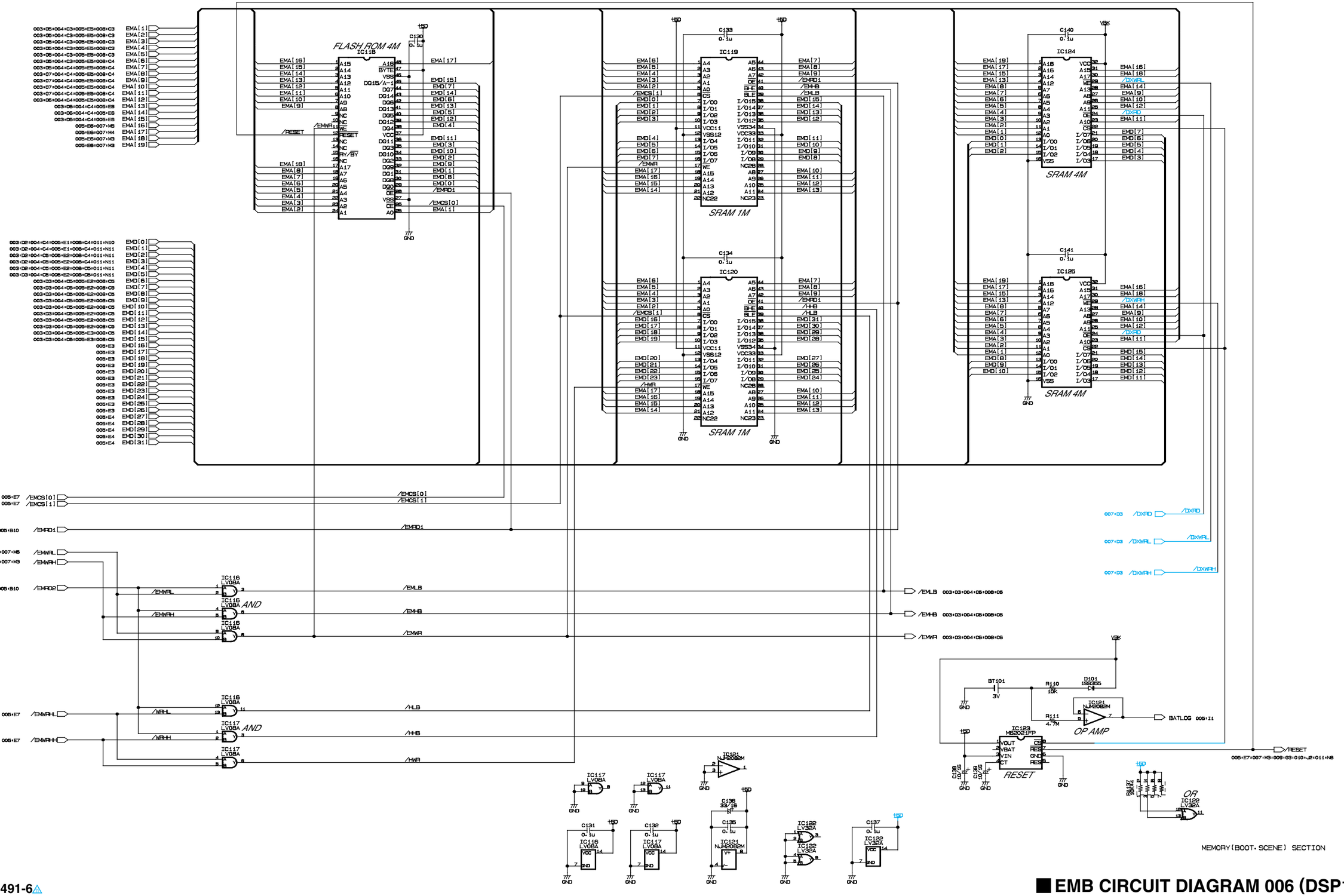
■ EMB CIRCUIT DIAGRAM 005 (DSP1D)

DSP1D



■ EMB CIRCUIT DIAGRAM 005 (DSP1D)

■ EMB CIRCUIT DIAGRAM 006 (DSP1D)



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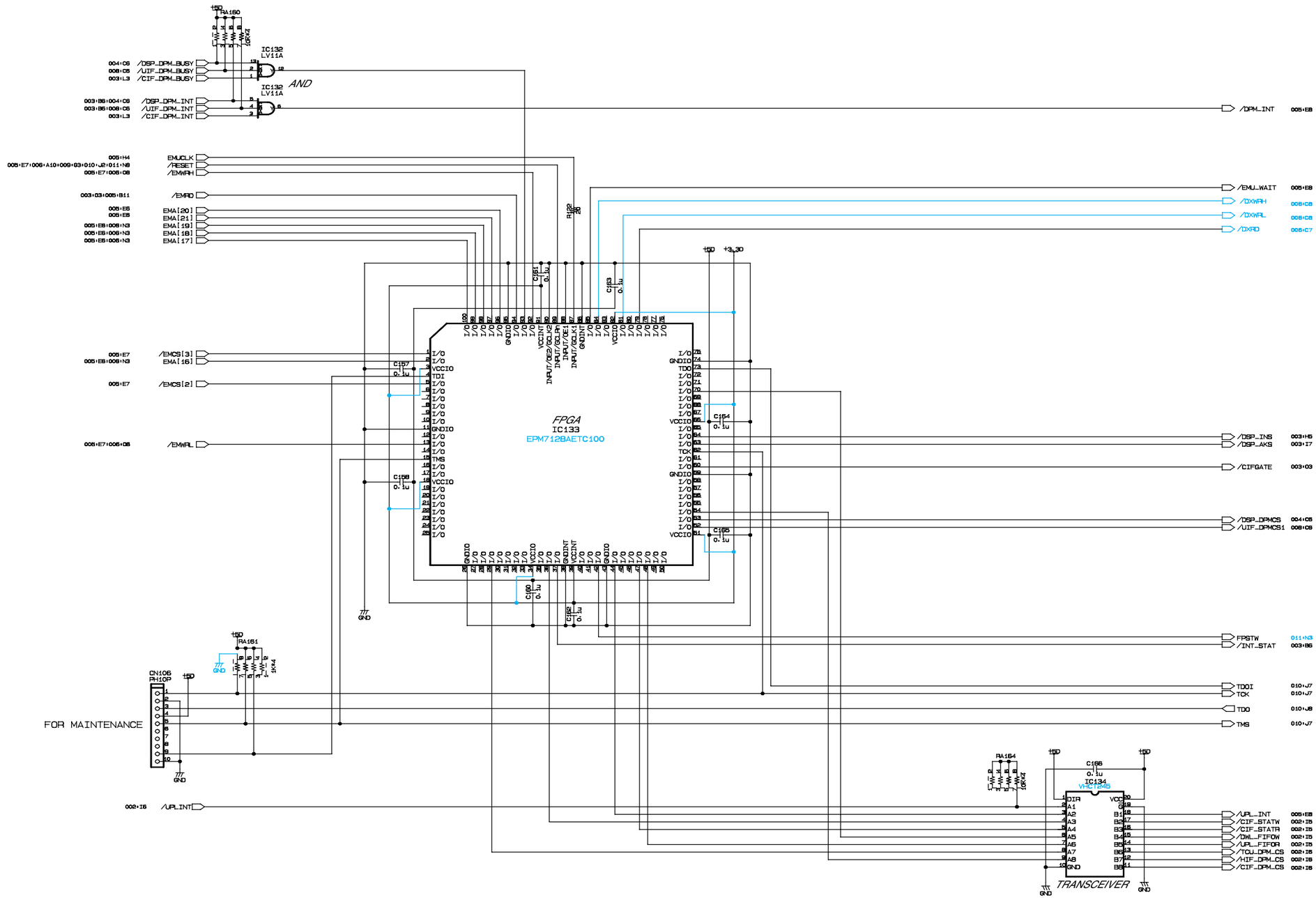
■ EMB CIRCUIT DIAGRAM 006 (DSP1D)

EMB CIRCUIT DIAGRAM 007 (DSP1D)

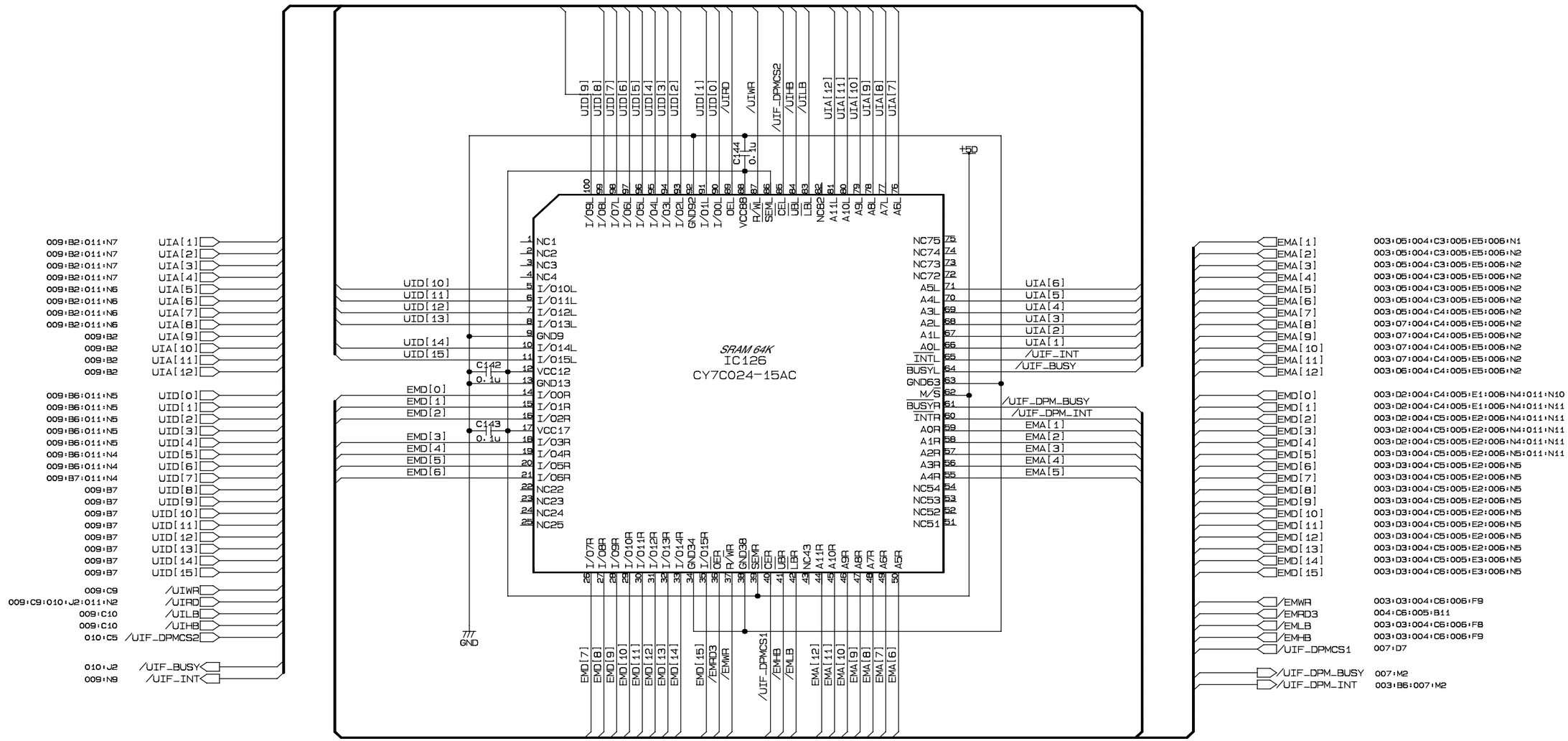
DSP1D



FPGA(DUAL PORT MEMORY CONTROL) SECTION

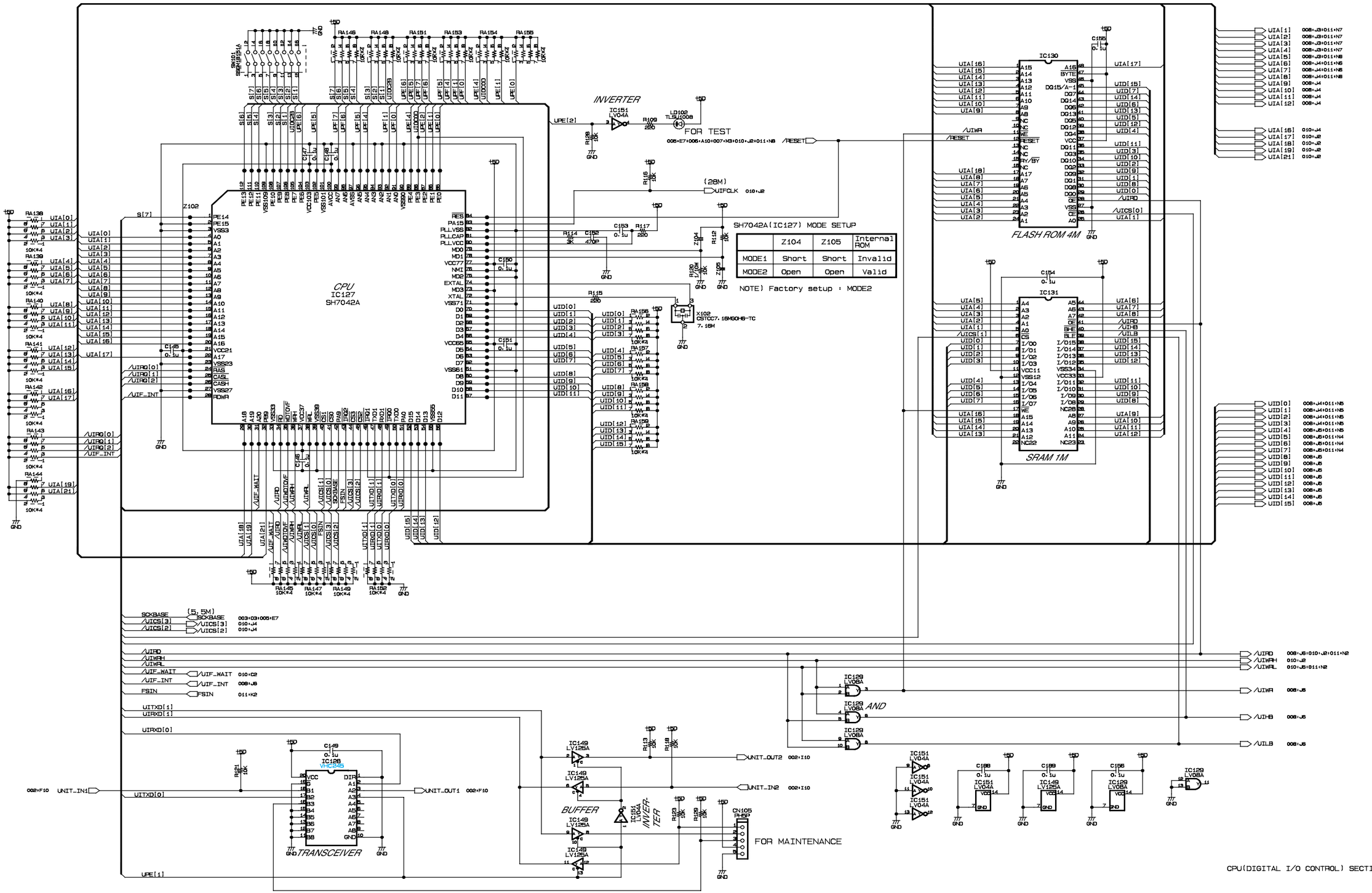
EMB CIRCUIT DIAGRAM 007 (DSP1D)

■ EMB CIRCUIT DIAGRAM 008 (DSP1D)



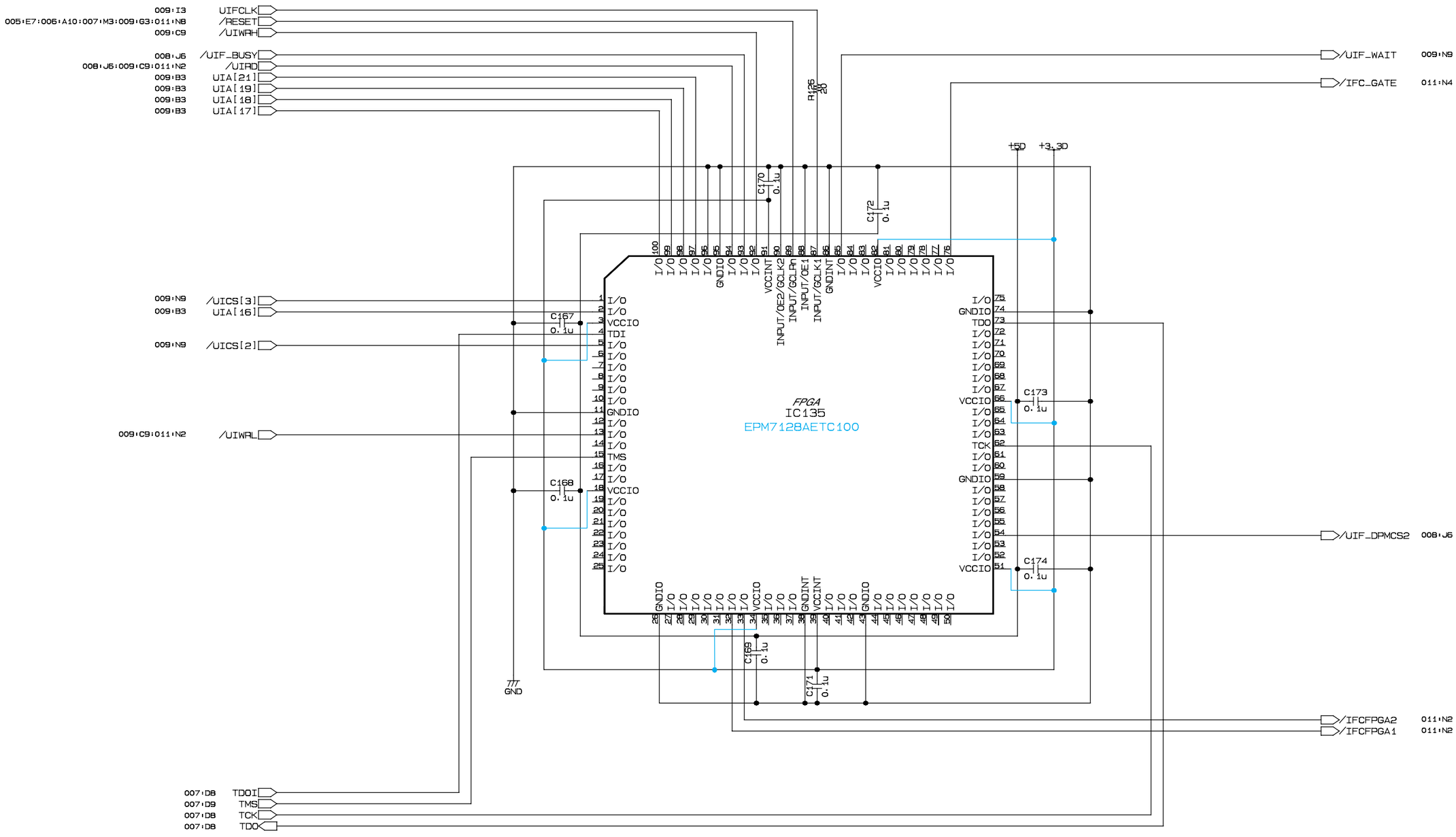
■ EMB CIRCUIT DIAGRAM 009 (DSP1D)

DSP1D



■ EMB CIRCUIT DIAGRAM 009 (DSP1D)

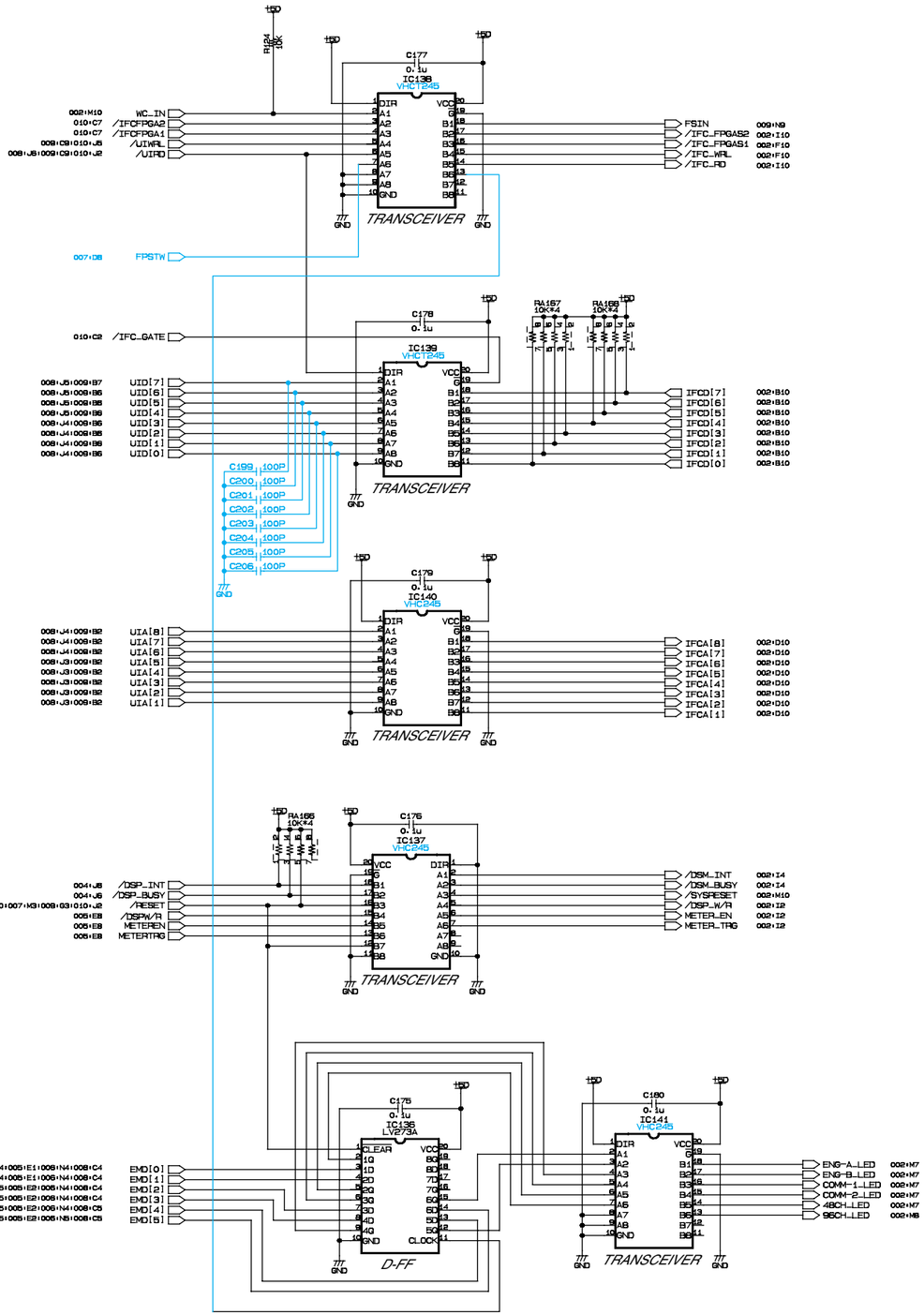
■ EMB CIRCUIT DIAGRAM 010 (DSP1D)



FPGA(UI BUS CONTROL) SECTION

■ EMB CIRCUIT DIAGRAM 011 (DSP1D)

DSP1D



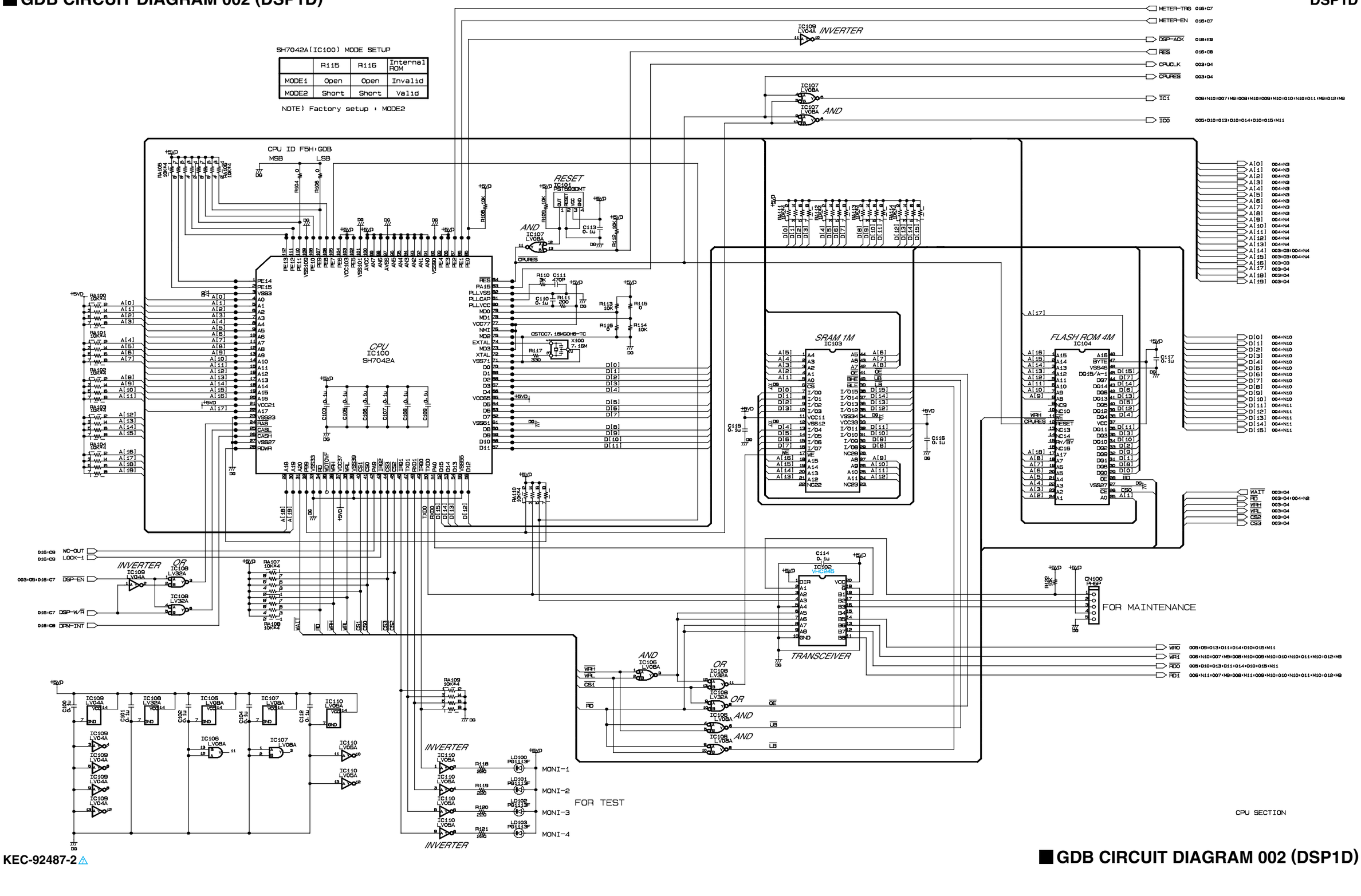
■ EMB CIRCUIT DIAGRAM 011 (DSP1D)

■ GDB CIRCUIT DIAGRAM 002 (DSP1D)

SH7042A(IC100) MODE SETUP

	R115	R116	Internal ROM
MODE1	Open	Open	Invalid
MODE2	Short	Short	Valid

NOTE) Factory setup : MODE2

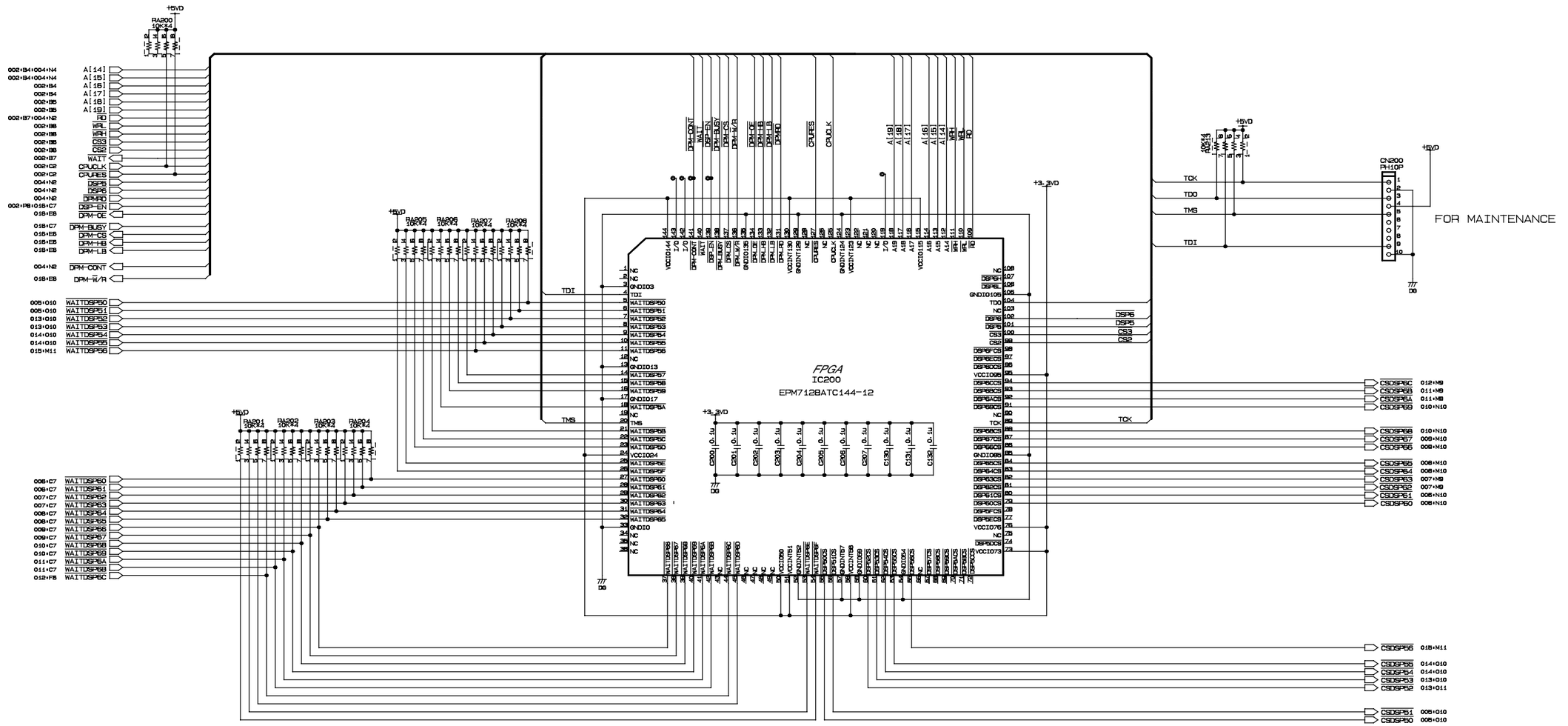


CPU SECTION

■ GDB CIRCUIT DIAGRAM 002 (DSP1D)

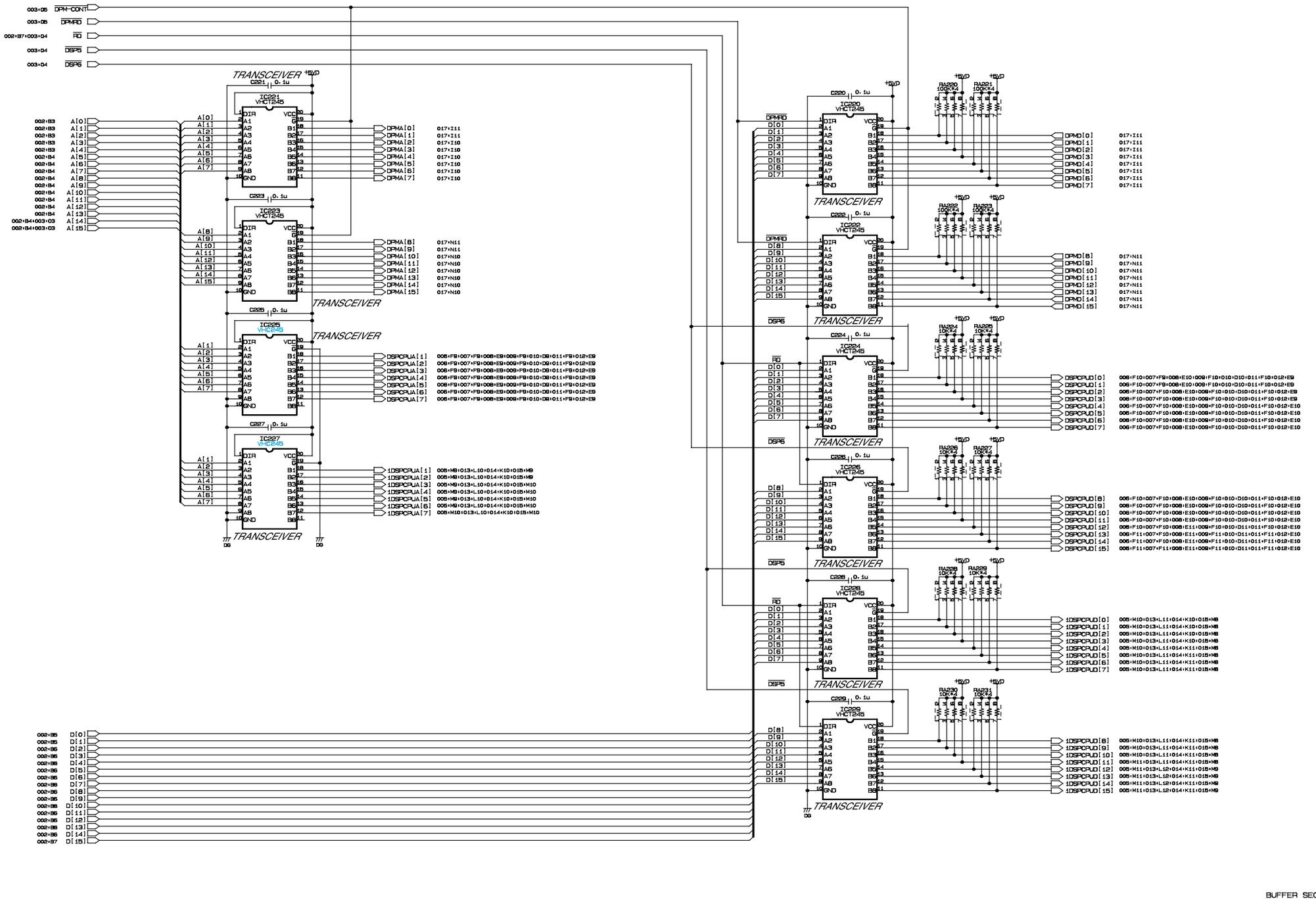
■ GDB CIRCUIT DIAGRAM 003 (DSP1D)

DSP1D



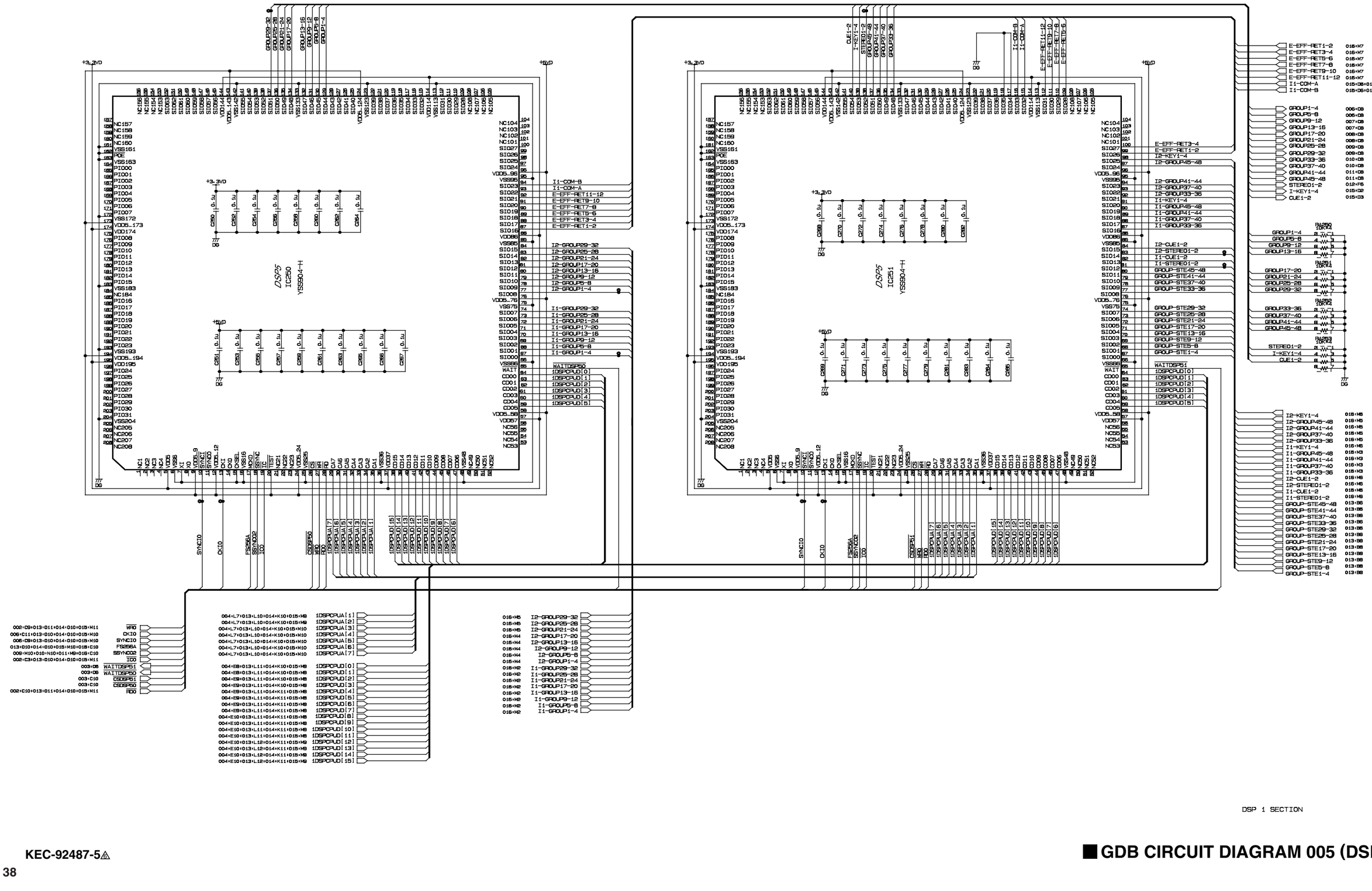
■ GDB CIRCUIT DIAGRAM 003 (DSP1D)

■ GDB CIRCUIT DIAGRAM 004 (DSP1D)



■ GDB CIRCUIT DIAGRAM 005 (DSP1D)

DSP1D

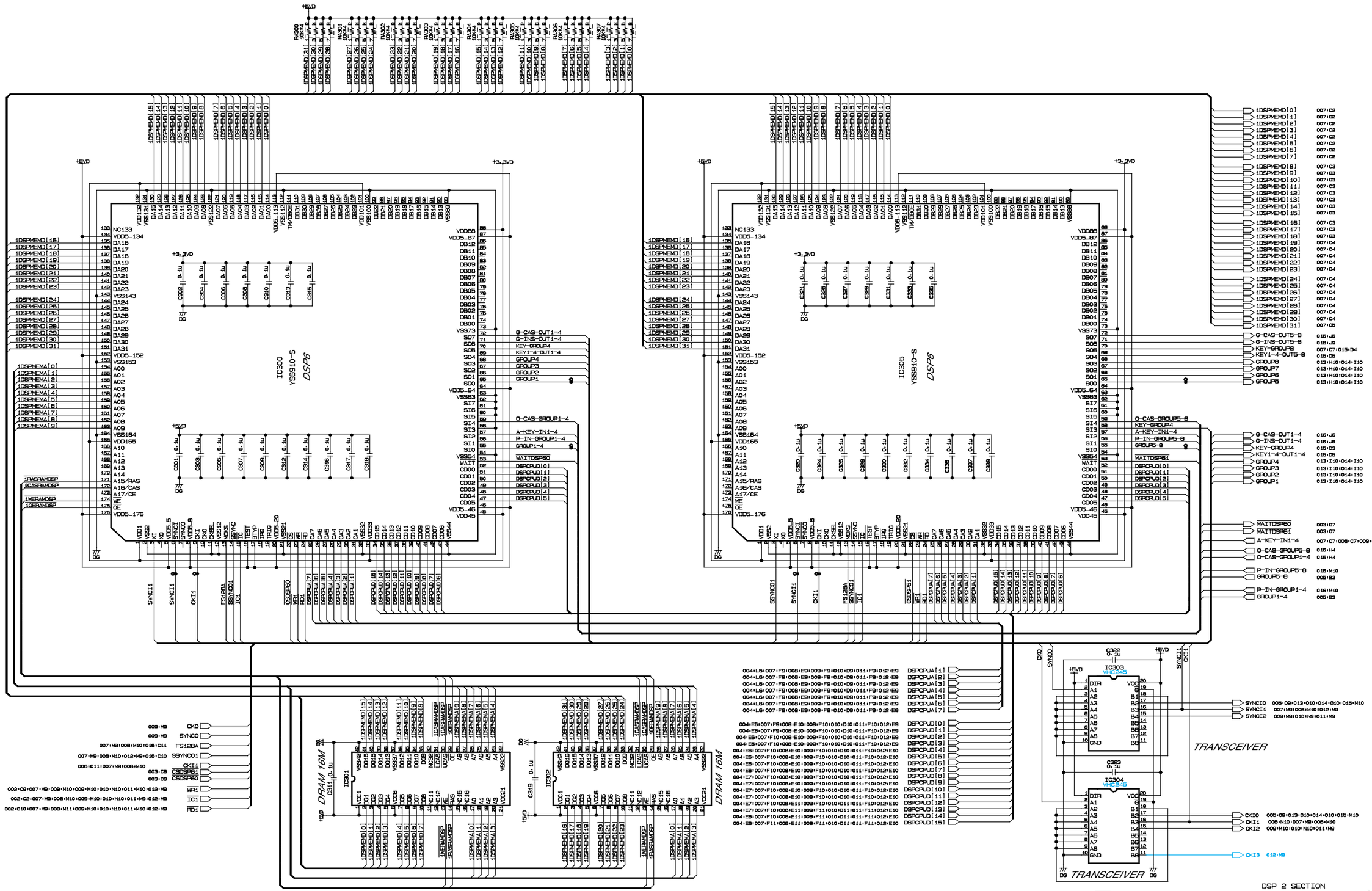


DSP 1 SECTION

■ GDB CIRCUIT DIAGRAM 005 (DSP1D)

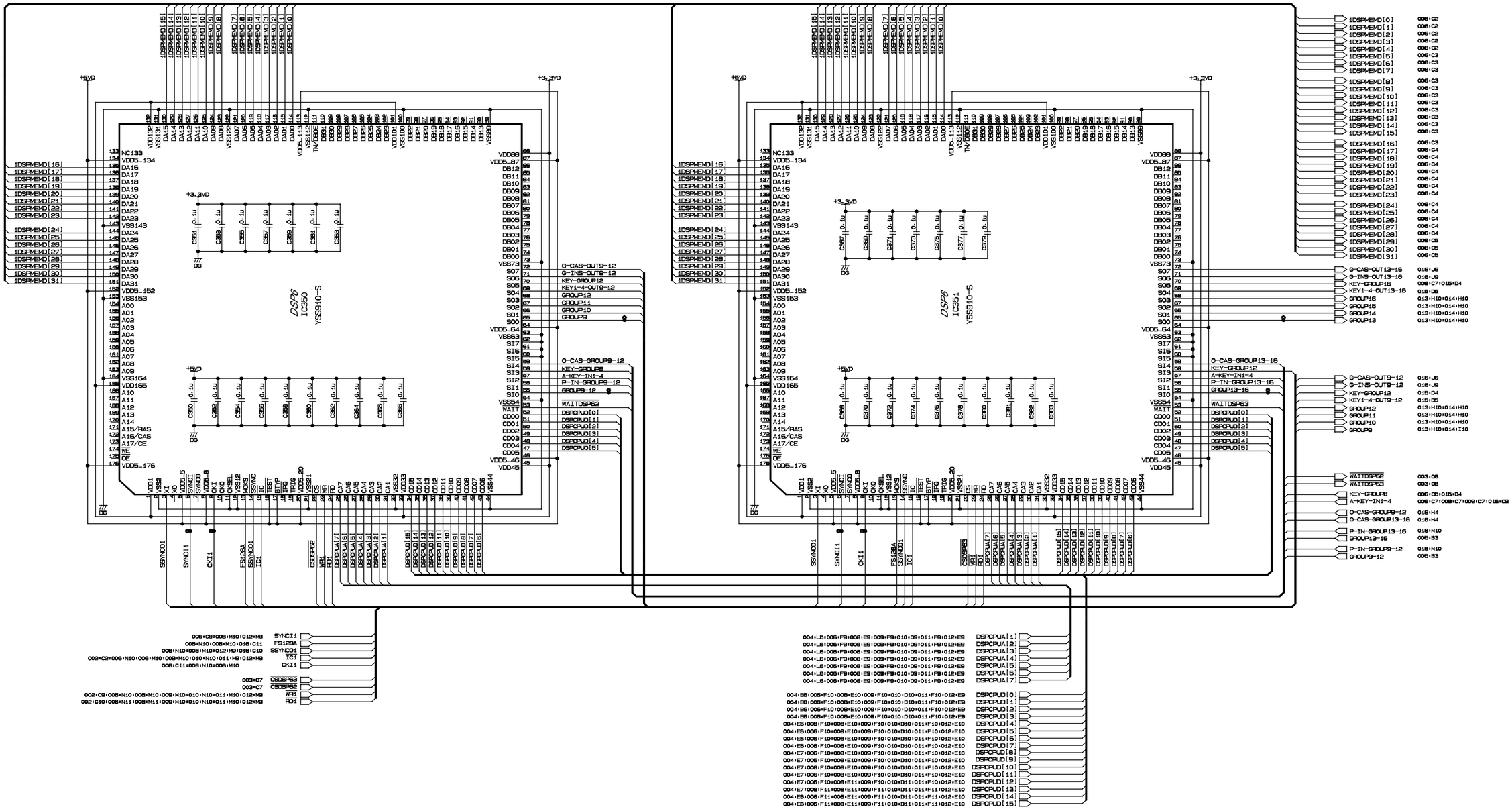
■ GDB CIRCUIT DIAGRAM 006 (DSP1D)

DSP1D



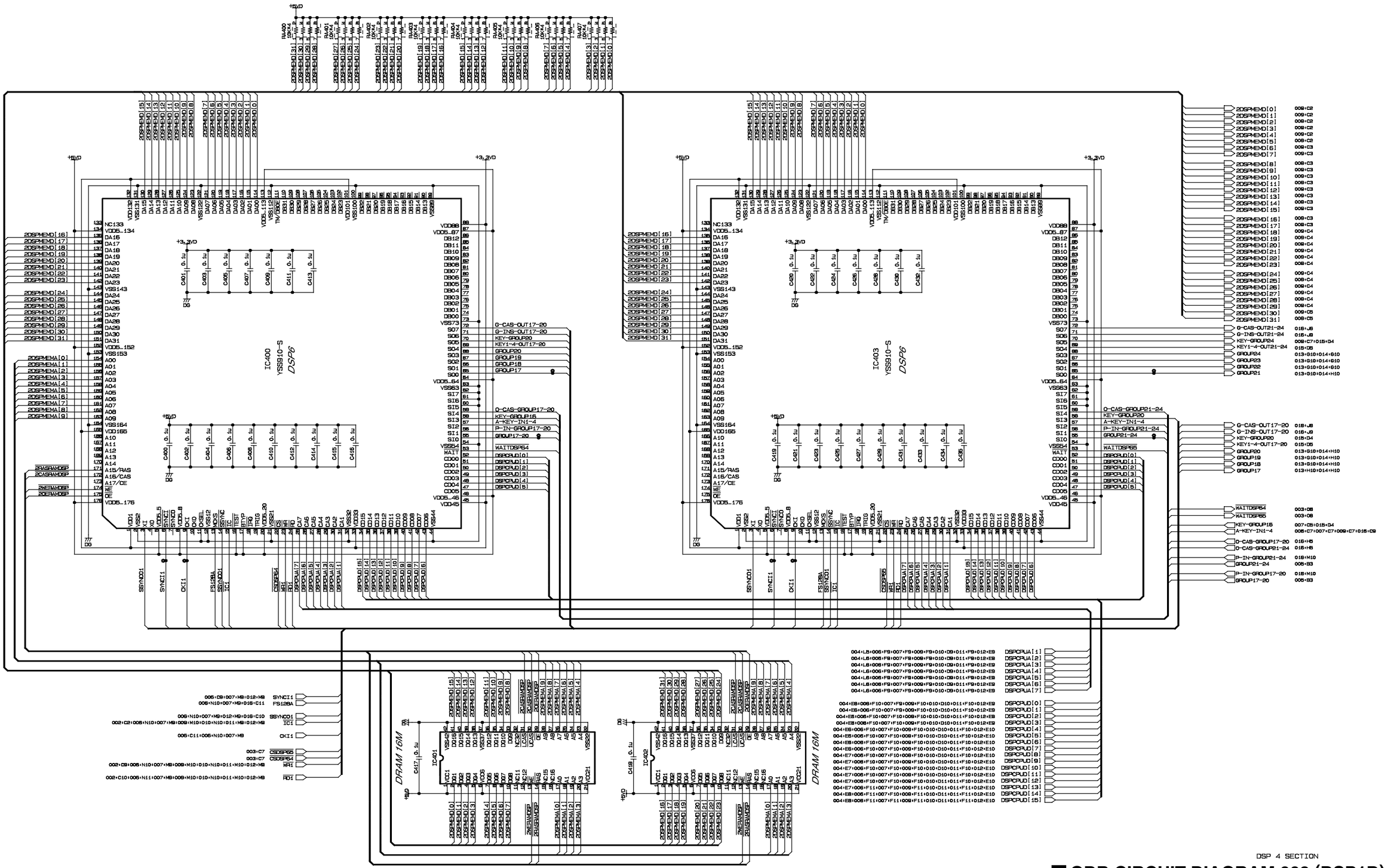
■ GDB CIRCUIT DIAGRAM 007 (DSP1D)

DSP1D



■ GDB CIRCUIT DIAGRAM 007 (DSP1D)

■ GDB CIRCUIT DIAGRAM 008 (DSP1D)



DSP 4 SECTION

■ GDB CIRCUIT DIAGRAM 008 (DSP1D)

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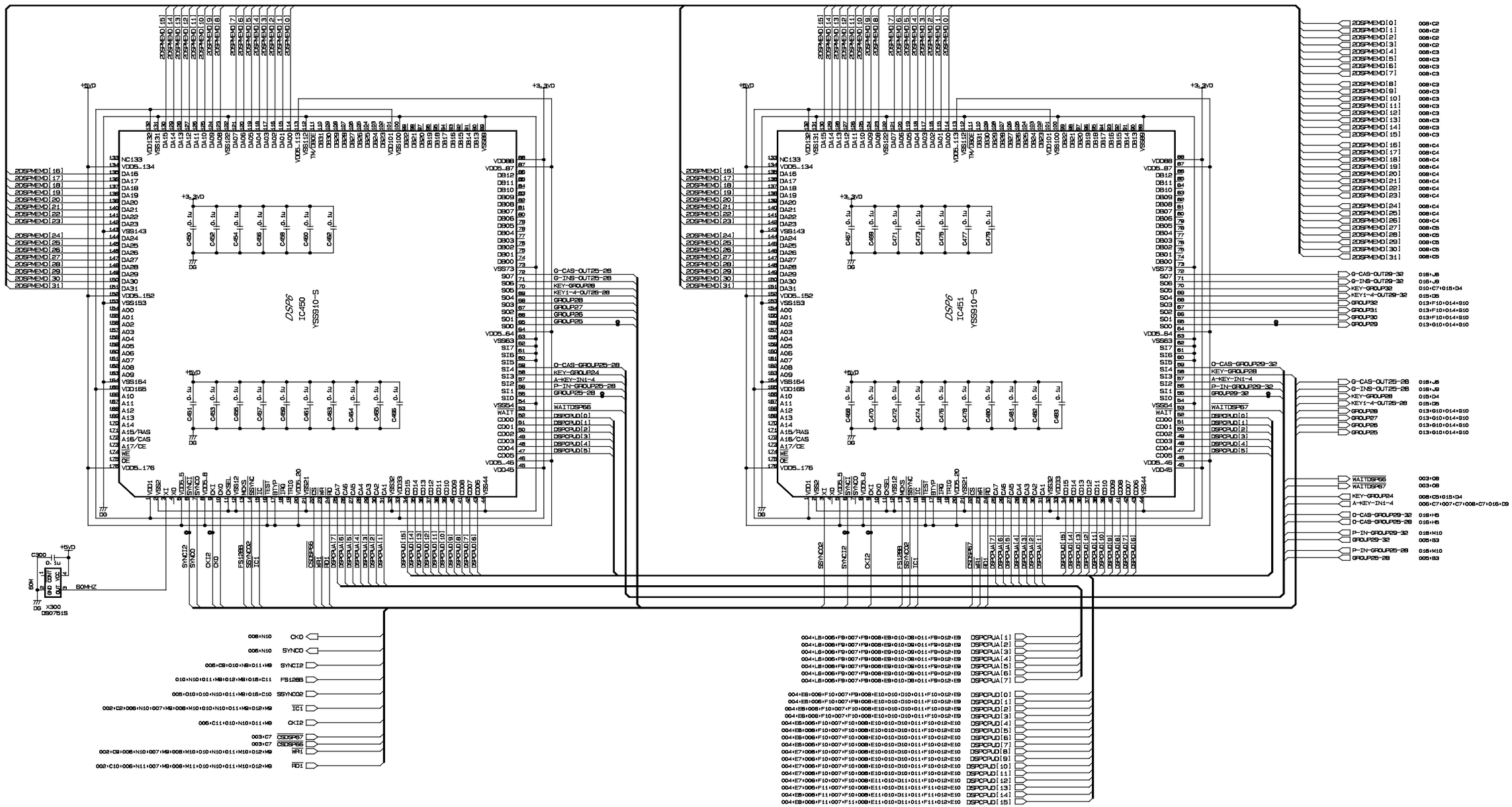
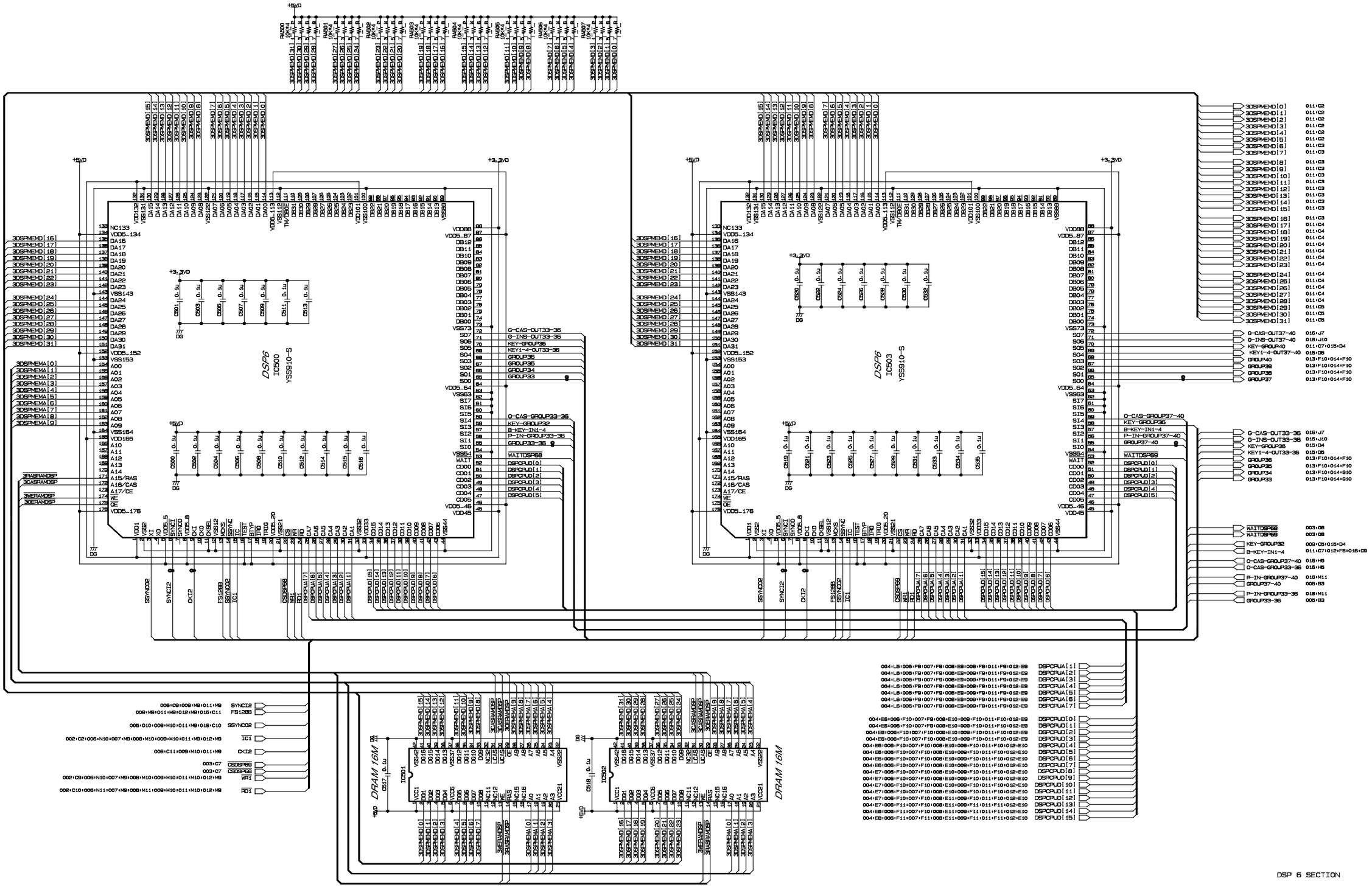
■ GDB CIRCUIT DIAGRAM 009 (DSP1D)



DSP 5 SECTION

■ GDB CIRCUIT DIAGRAM 009 (DSP1D)

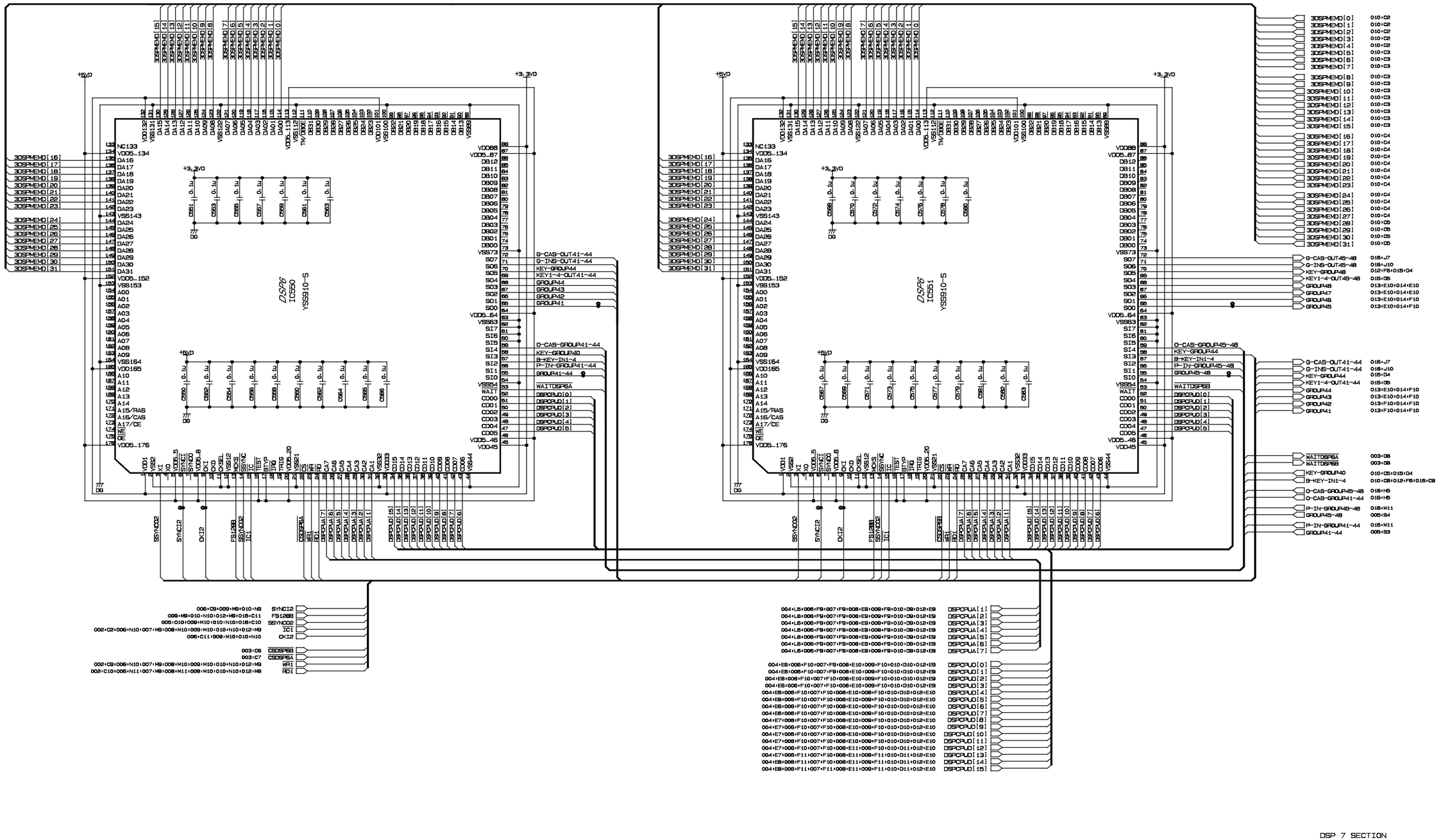
■ GDB CIRCUIT DIAGRAM 010 (DSP1D)



DSP 6 SECTION

■ GDB CIRCUIT DIAGRAM 011 (DSP1D)

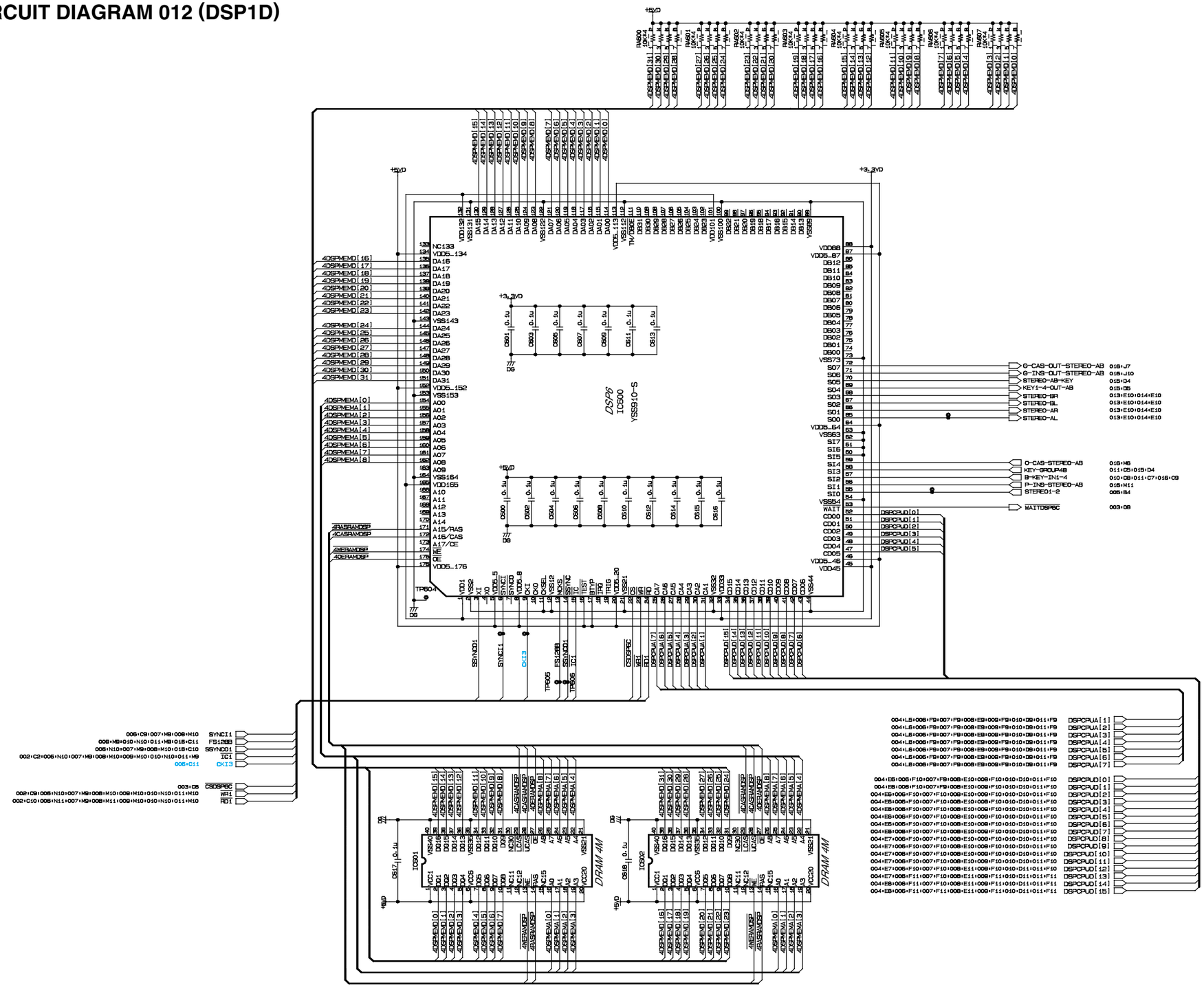
DSP1D



DSP 7 SECTION

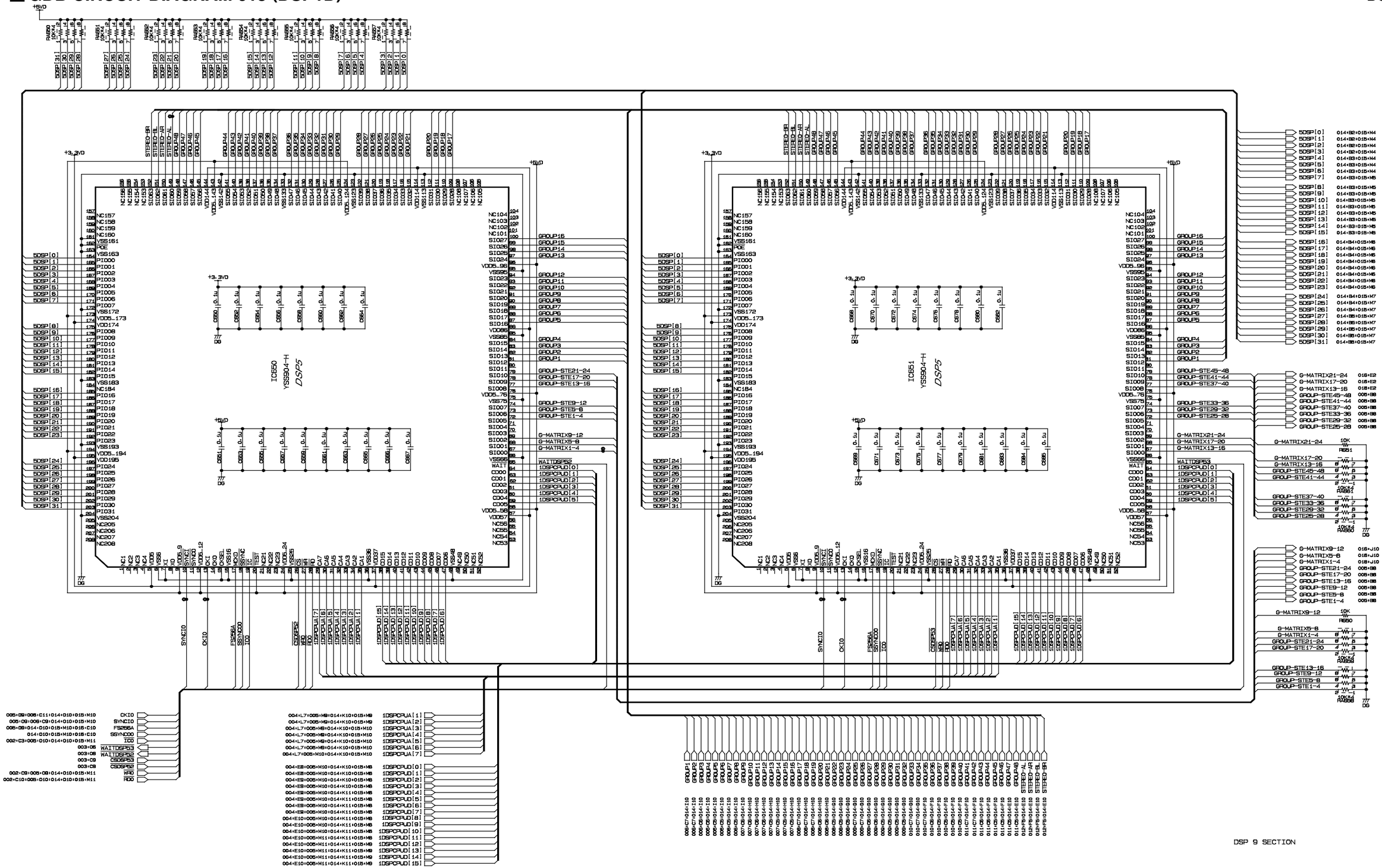
■ GDB CIRCUIT DIAGRAM 011 (DSP1D)

■ GDB CIRCUIT DIAGRAM 012 (DSP1D)



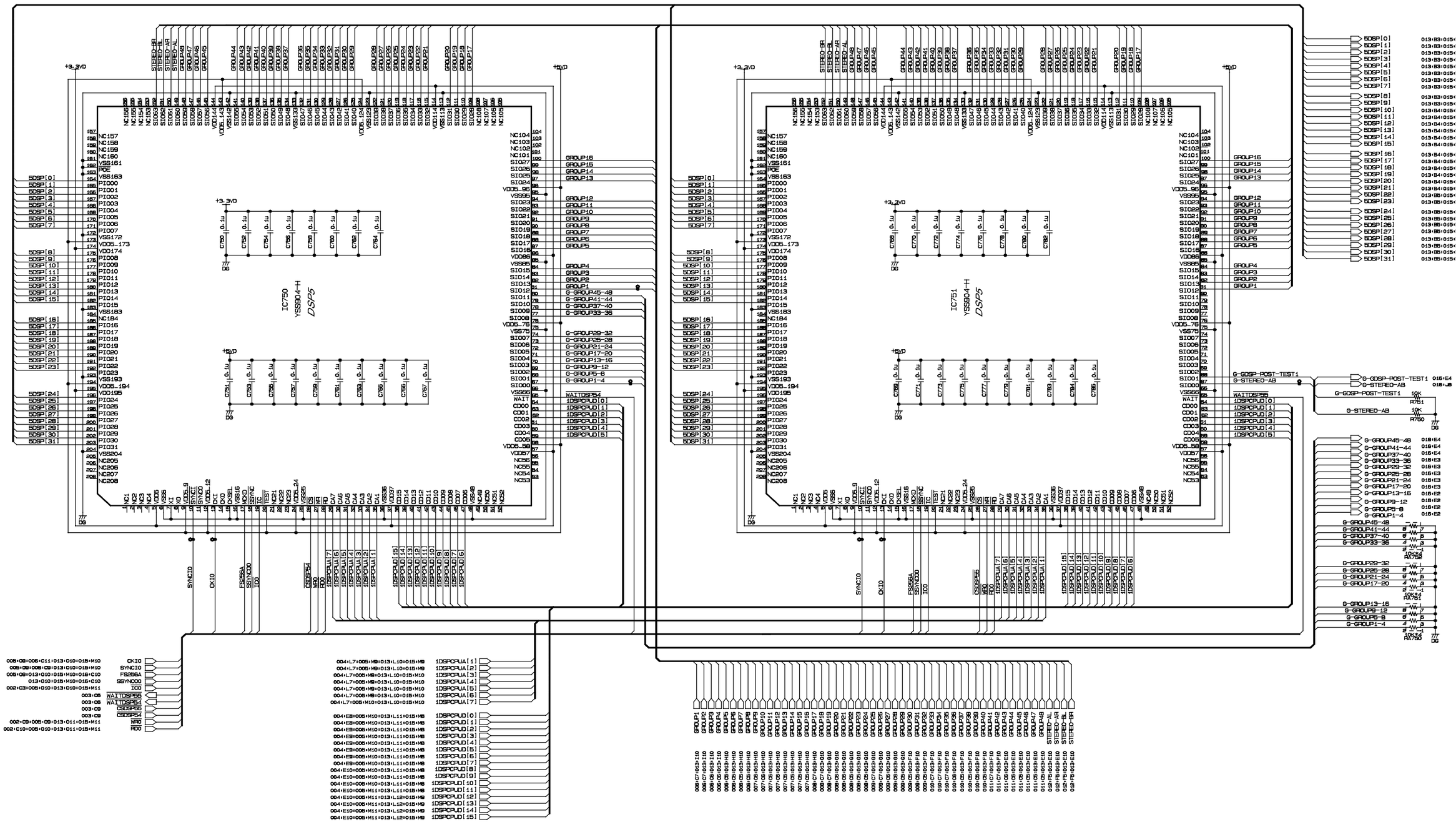
■ GDB CIRCUIT DIAGRAM 013 (DSP1D)

DSP1D



■ GDB CIRCUIT DIAGRAM 013 (DSP1D)

■ GDB CIRCUIT DIAGRAM 014 (DSP1D)


IC750
YSS904-H
DSP5
IC751
YSS904-H
DSP5
+3.3VD
+5VD
5DSP[0]
5DSP[1]
5DSP[2]
5DSP[3]
5DSP[4]
5DSP[5]
5DSP[6]
5DSP[7]
5DSP[8]
5DSP[9]
5DSP[10]
5DSP[11]
5DSP[12]
5DSP[13]
5DSP[14]
5DSP[15]
5DSP[16]
5DSP[17]
5DSP[18]
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5DSP[20]
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5DSP[26]
5DSP[27]
5DSP[28]
5DSP[29]
5DSP[30]
5DSP[31]
GROUP16
GROUP15
GROUP14
GROUP13
GROUP12
GROUP11
GROUP10
GROUP9
GROUP8
GROUP7
GROUP6
GROUP5
GROUP4
GROUP3
GROUP2
GROUP1
G-GROUP45-48
G-GROUP41-44
G-GROUP37-40
G-GROUP33-36
G-GROUP29-32
G-GROUP25-28
G-GROUP21-24
G-GROUP17-20
G-GROUP13-16
G-GROUP9-12
G-GROUP5-8
G-GROUP1-4
G-GDSP-POST-TEST1
G-STEREO-AB
1DSPCPUD[0]
1DSPCPUD[1]
1DSPCPUD[2]
1DSPCPUD[3]
1DSPCPUD[4]
1DSPCPUD[5]
1DSPCPUD[10]
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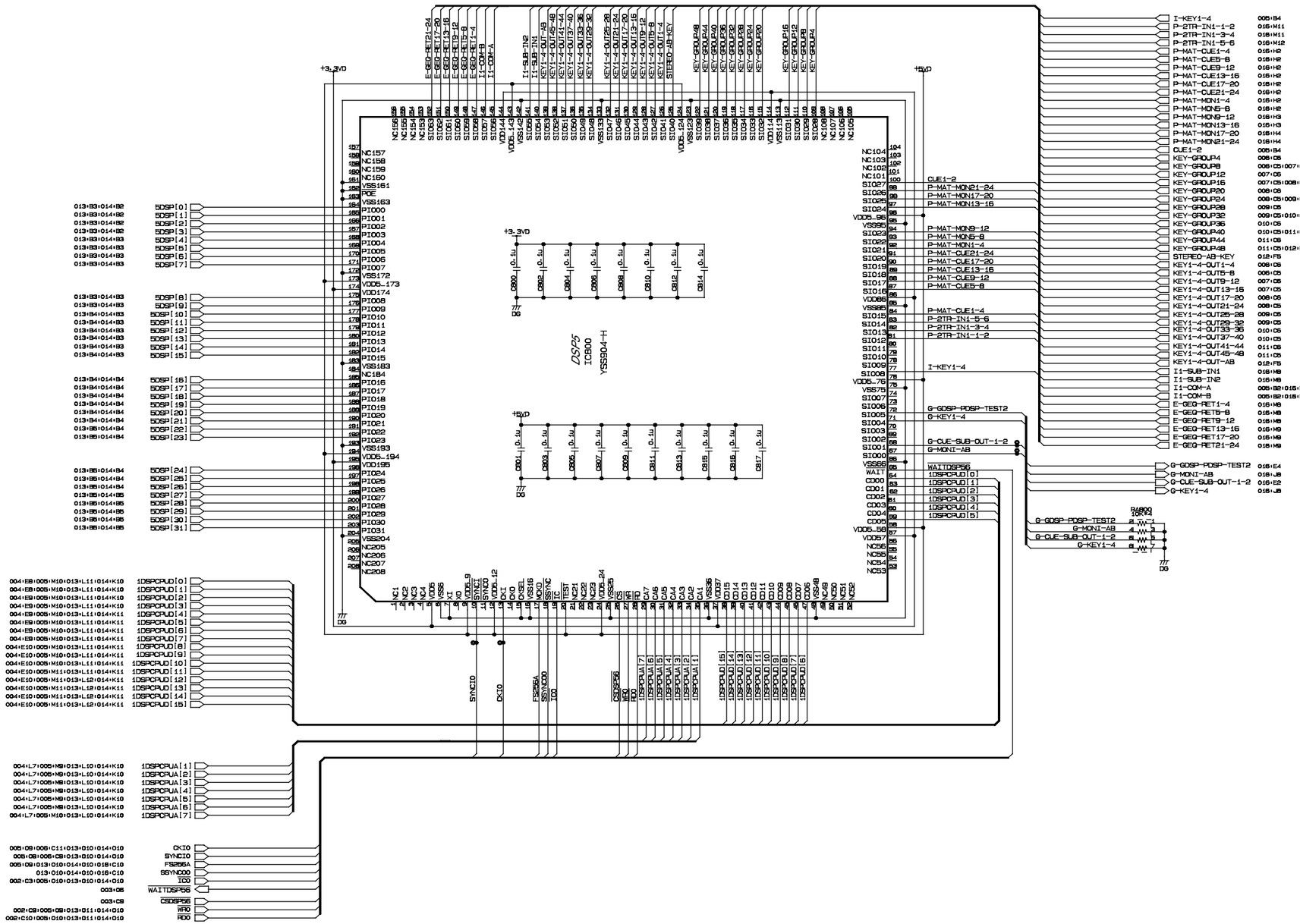
1DSPCPUA[2]
1DSPCPUA[3]
1DSPCPUA[4]
1DSPCPUA[5]
1DSPCPUA[6]
1DSPCPUA[7]
WAITDSP55
WAITDSP54
CSDSP55
CSDSP54
WR0
RD0
SYNCI0
CKI0
FS256A
SSYNCO0
IO0
STEREO-BR
STEREO-AR
STEREO-AL
STEREO-BL
GDSP-POST-TEST1
R781
R750
RA761
RA762
RA763
RA764
RA765
RA766
RA767
RA768
RA769
RA770
RA771
RA772
RA773
RA774
RA775
RA776
RA777
RA778
RA779
RA780
RA781
RA782
RA783
RA784
RA785
RA786
RA787
RA788
RA789
RA790
RA791
RA792
RA793
RA794
RA795
RA796
RA797
RA798
RA799
RA800

■ GDB CIRCUIT DIAGRAM 015 (DSP1D)

DSP1D

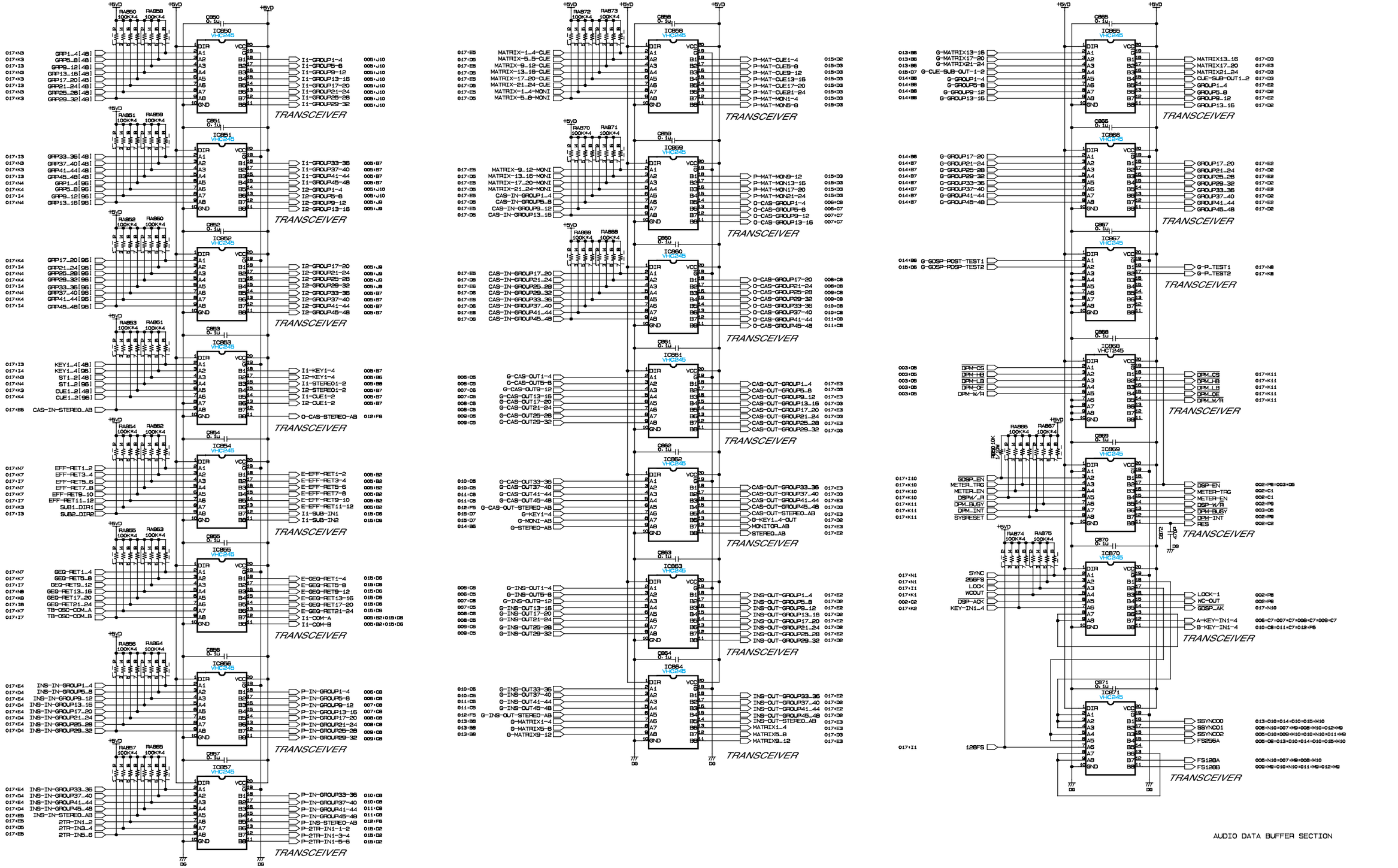


DSP 11 SECTION

■ GDB CIRCUIT DIAGRAM 015 (DSP1D)

■ GDB CIRCUIT DIAGRAM 016 (DSP1D)

DSP1D



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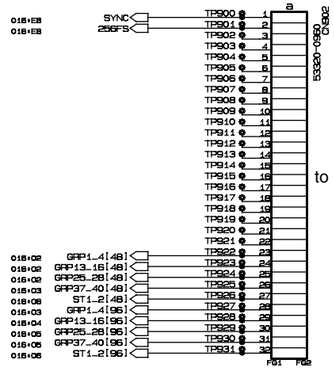
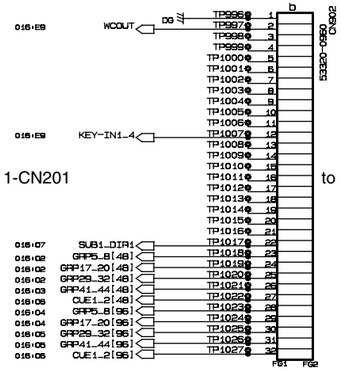
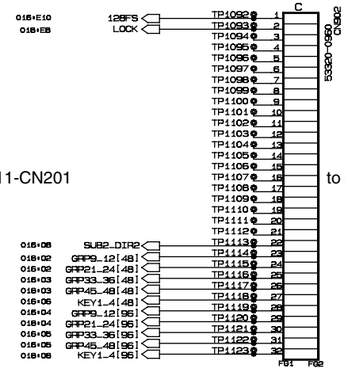
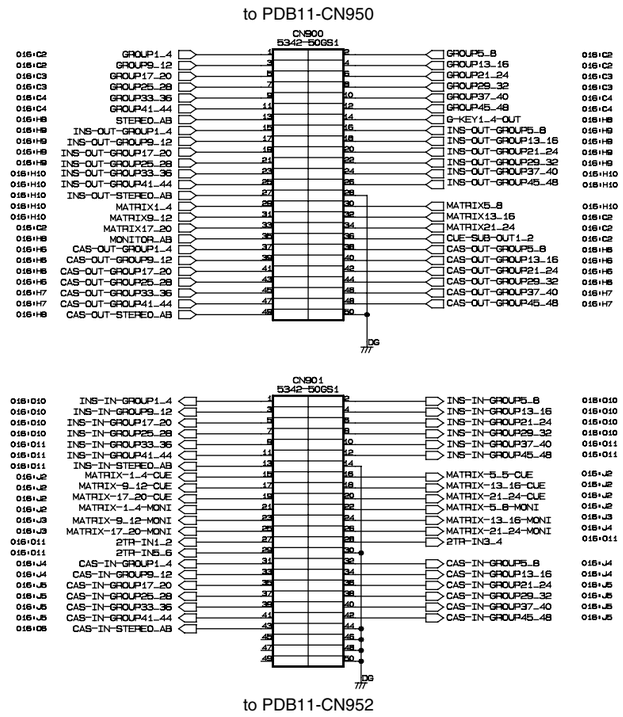
■ GDB CIRCUIT DIAGRAM 016 (DSP1D)

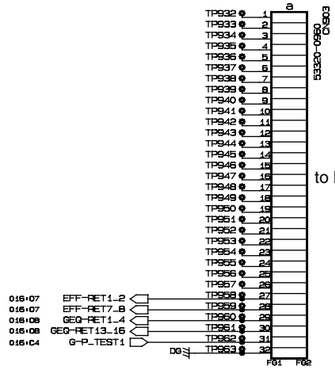
■ GDB CIRCUIT DIAGRAM 017 (DSP1D)

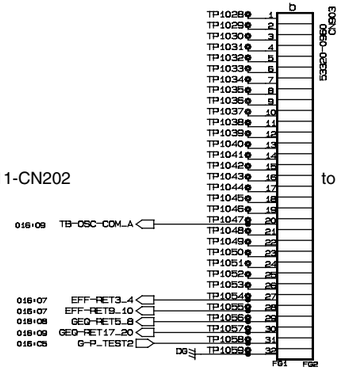


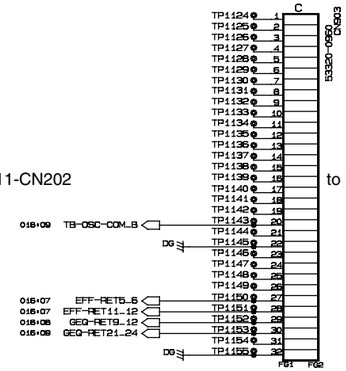


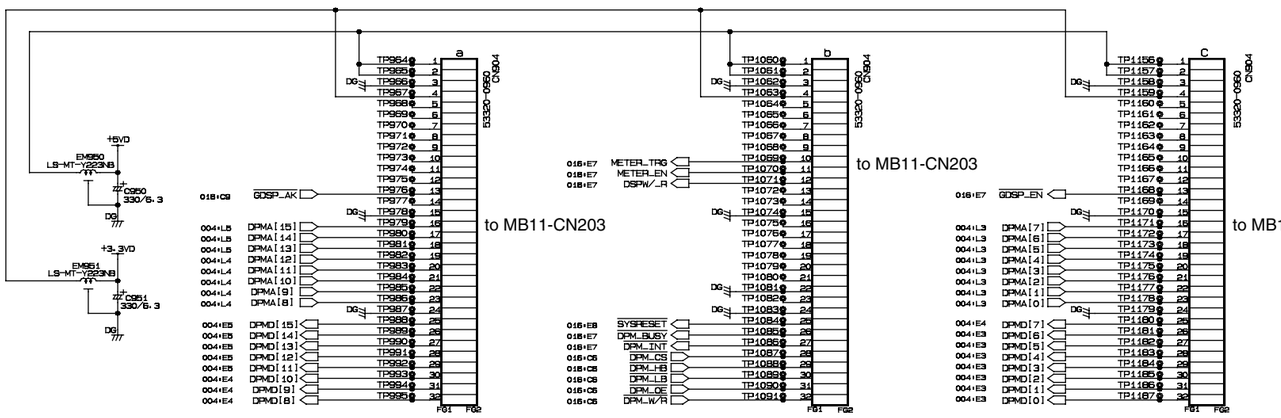












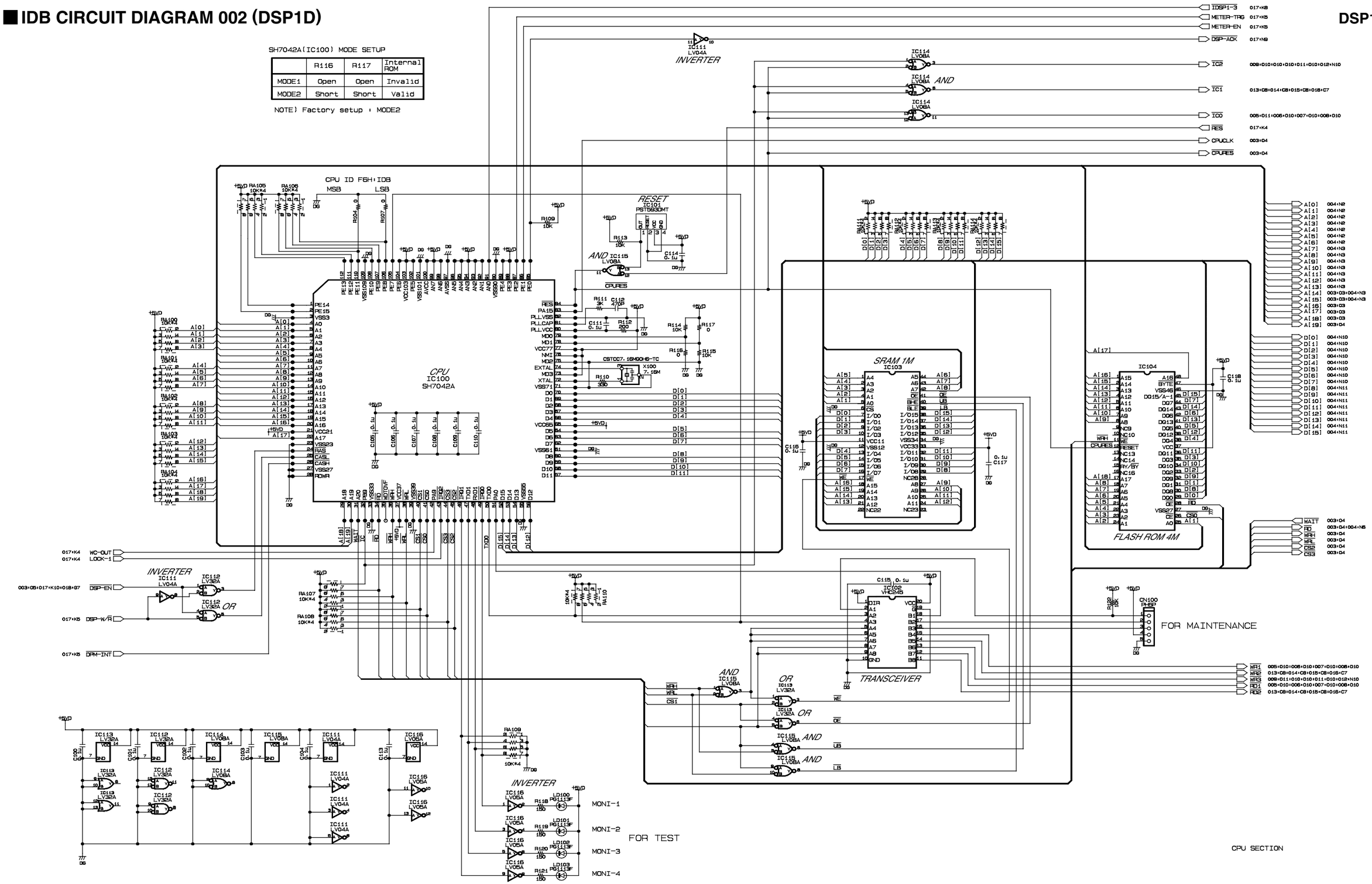
CONNECTOR SECTION

■ IDB CIRCUIT DIAGRAM 002 (DSP1D)

SH7042A(IC100) MODE SETUP

	R116	R117	Internal ROM
MODE1	Open	Open	Invalid
MODE2	Short	Short	Valid

NOTE) Factory setup : MODE2



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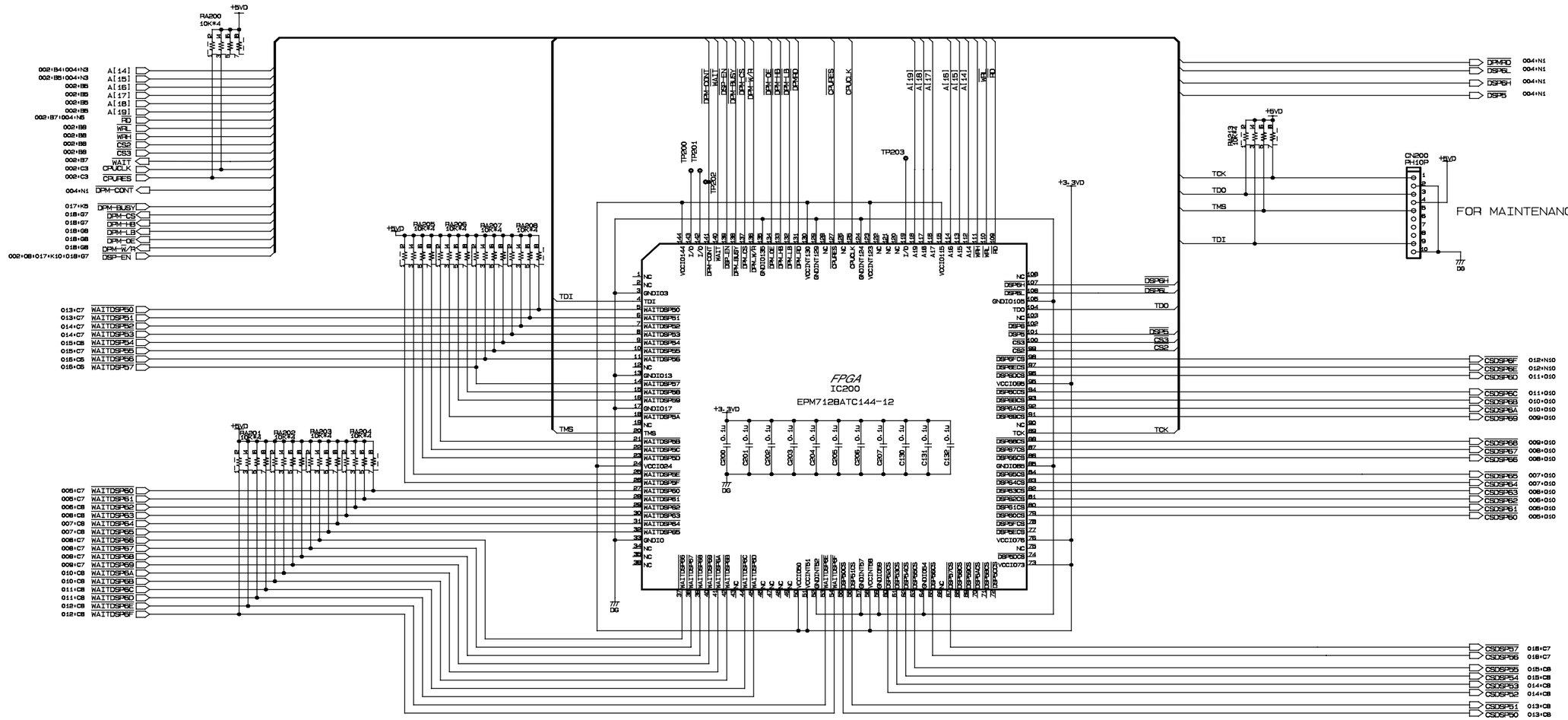
■ IDB CIRCUIT DIAGRAM 002 (DSP1D)

■ IDB CIRCUIT DIAGRAM 003 (DSP1D)

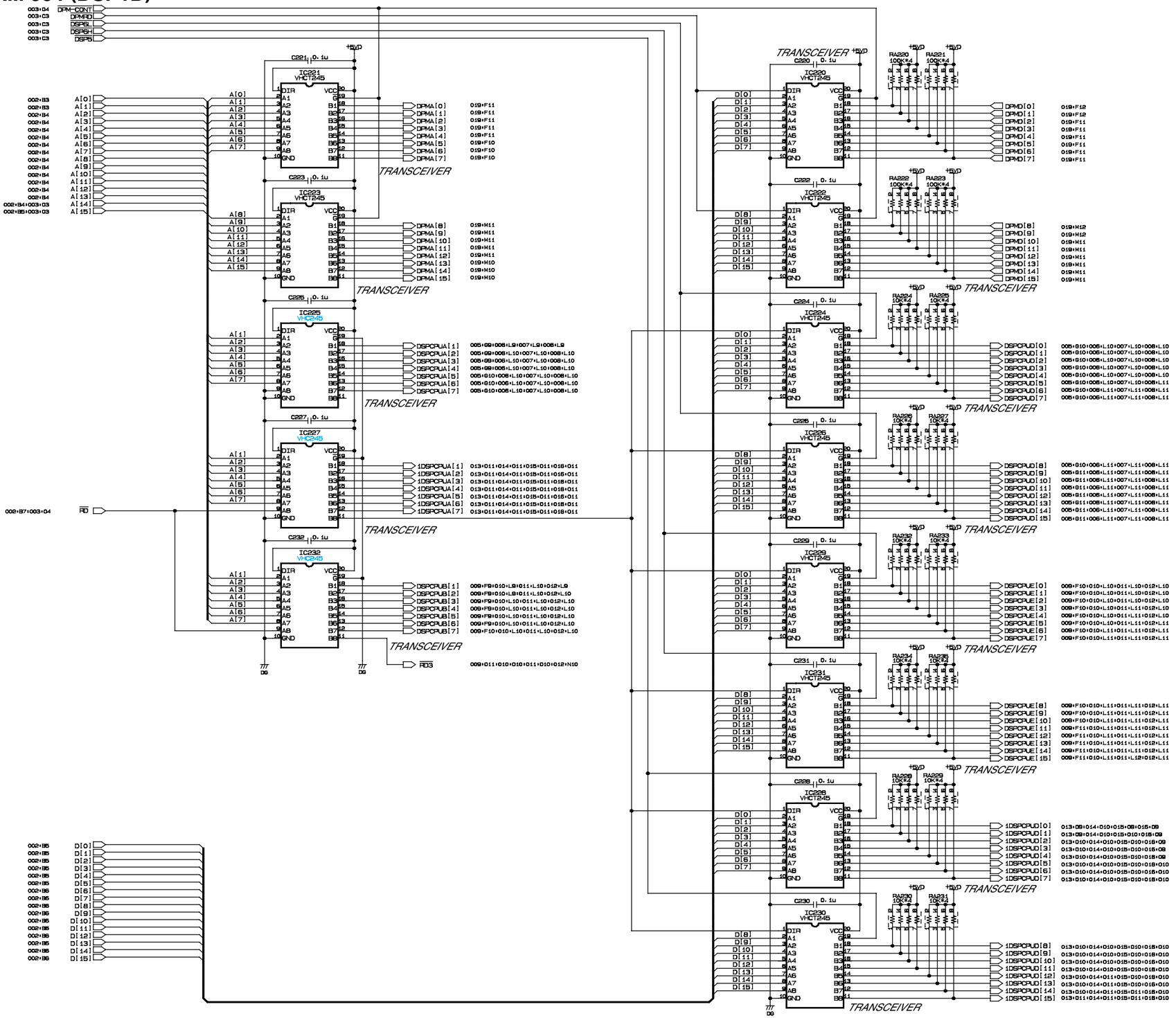
DSP1D



ADDRESS DECODE & WAIT CONTROL SECTION

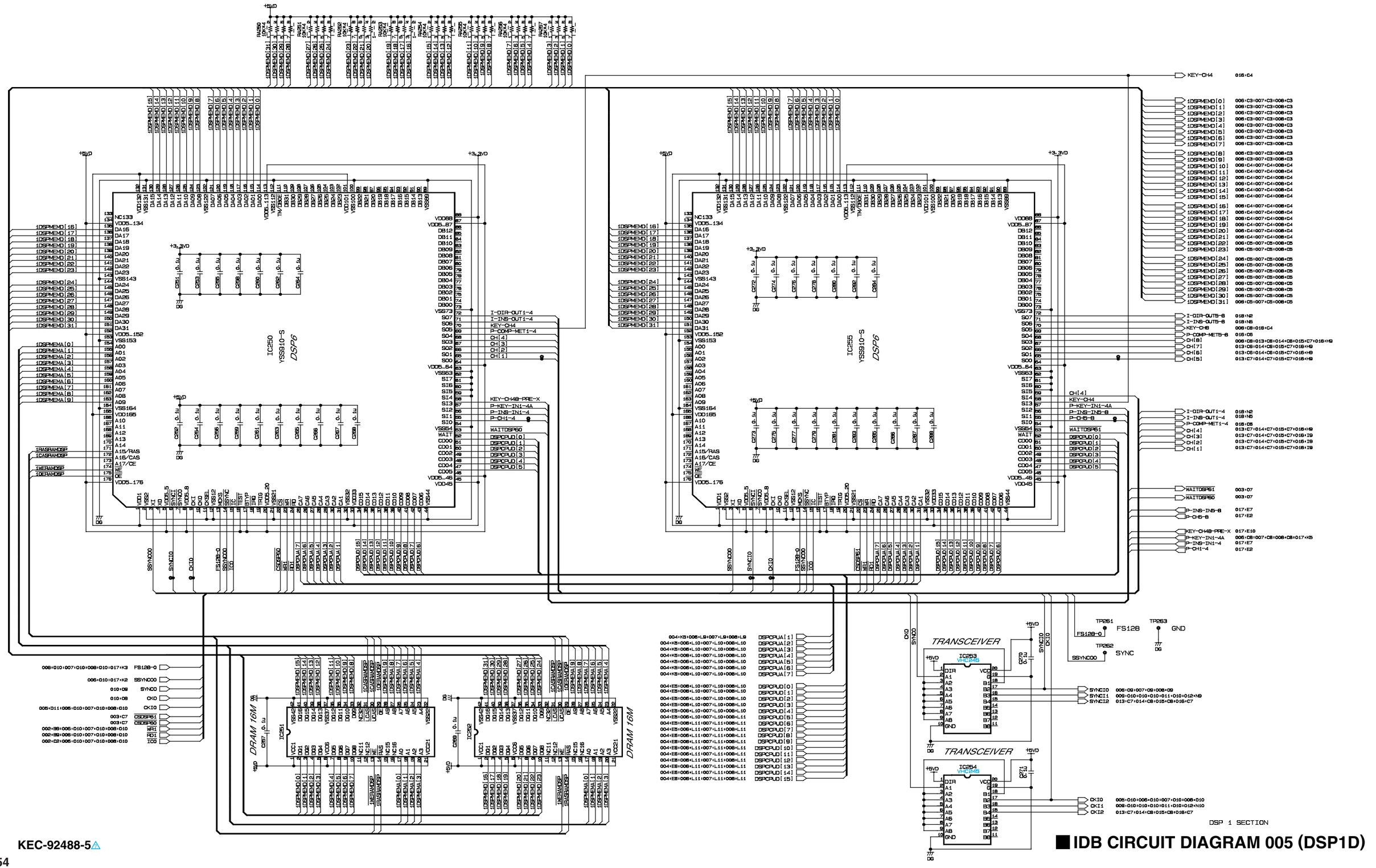
■ IDB CIRCUIT DIAGRAM 003 (DSP1D)

■ IDB CIRCUIT DIAGRAM 004 (DSP1D)



■ IDB CIRCUIT DIAGRAM 005 (DSP1D)

DSP1D



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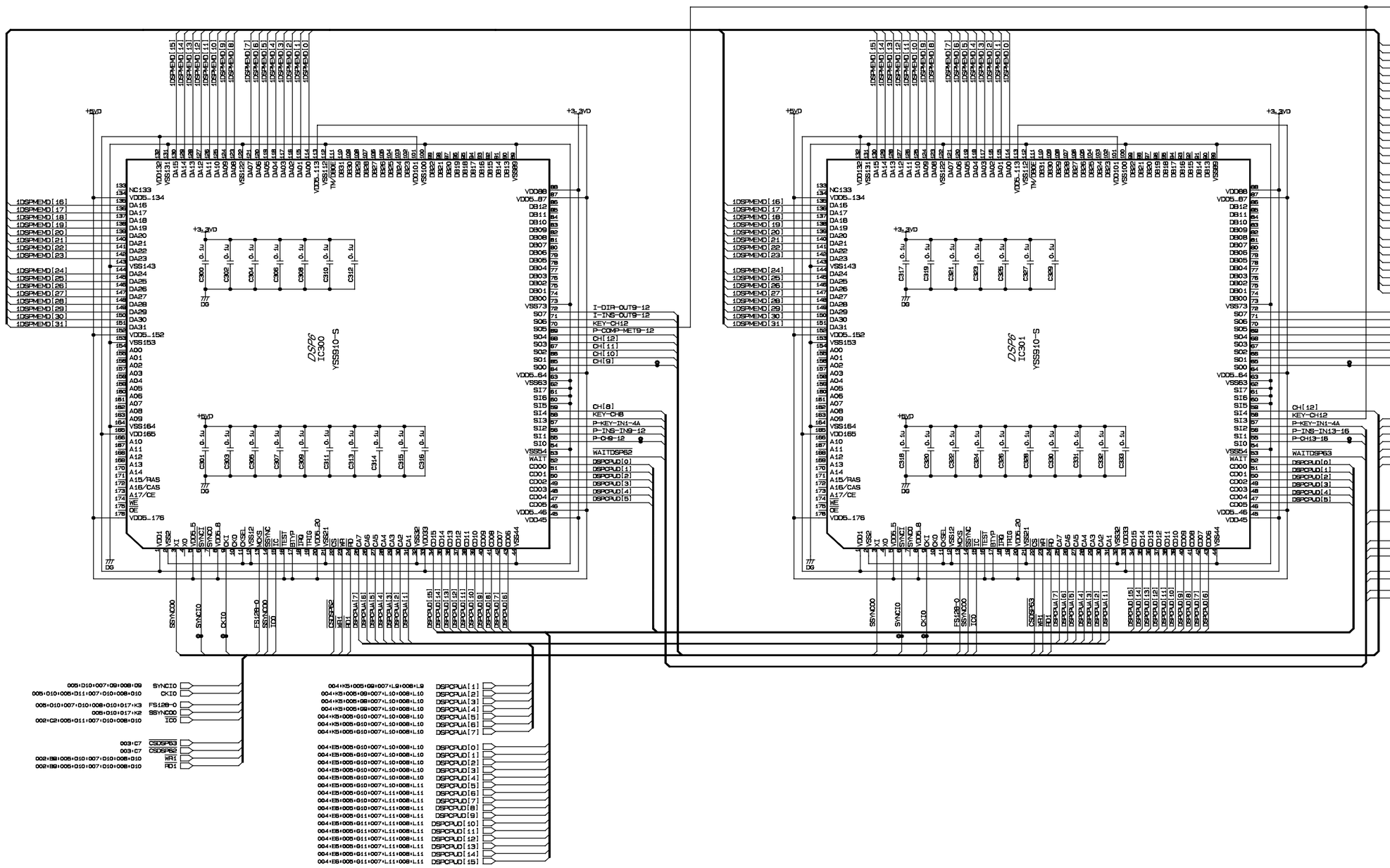
DSP 1 SECTION

■ IDB CIRCUIT DIAGRAM 005 (DSP1D)

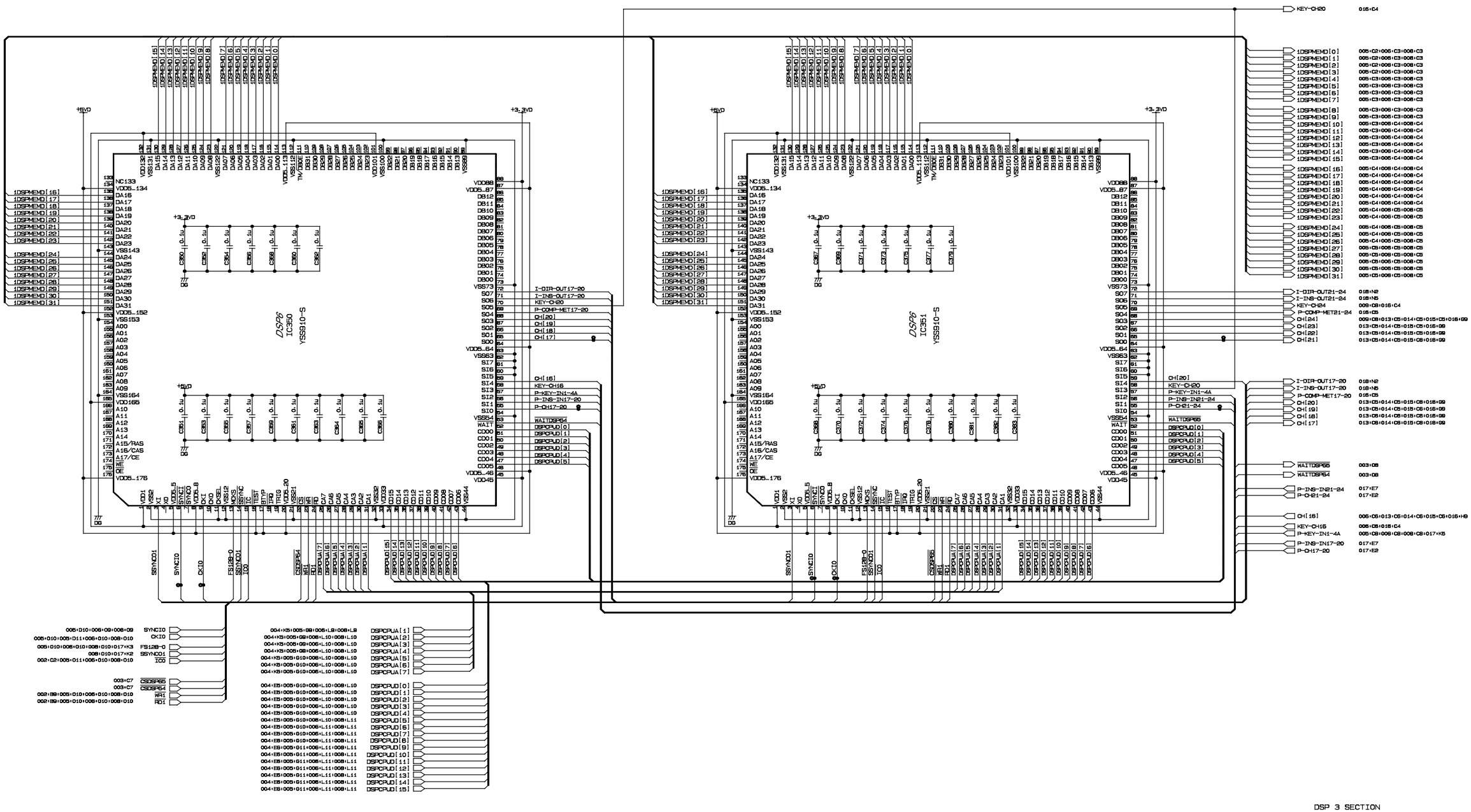
■ IDB CIRCUIT DIAGRAM 006 (DSP1D)



DSP 2 SECTION

■ IDB CIRCUIT DIAGRAM 007 (DSP1D)

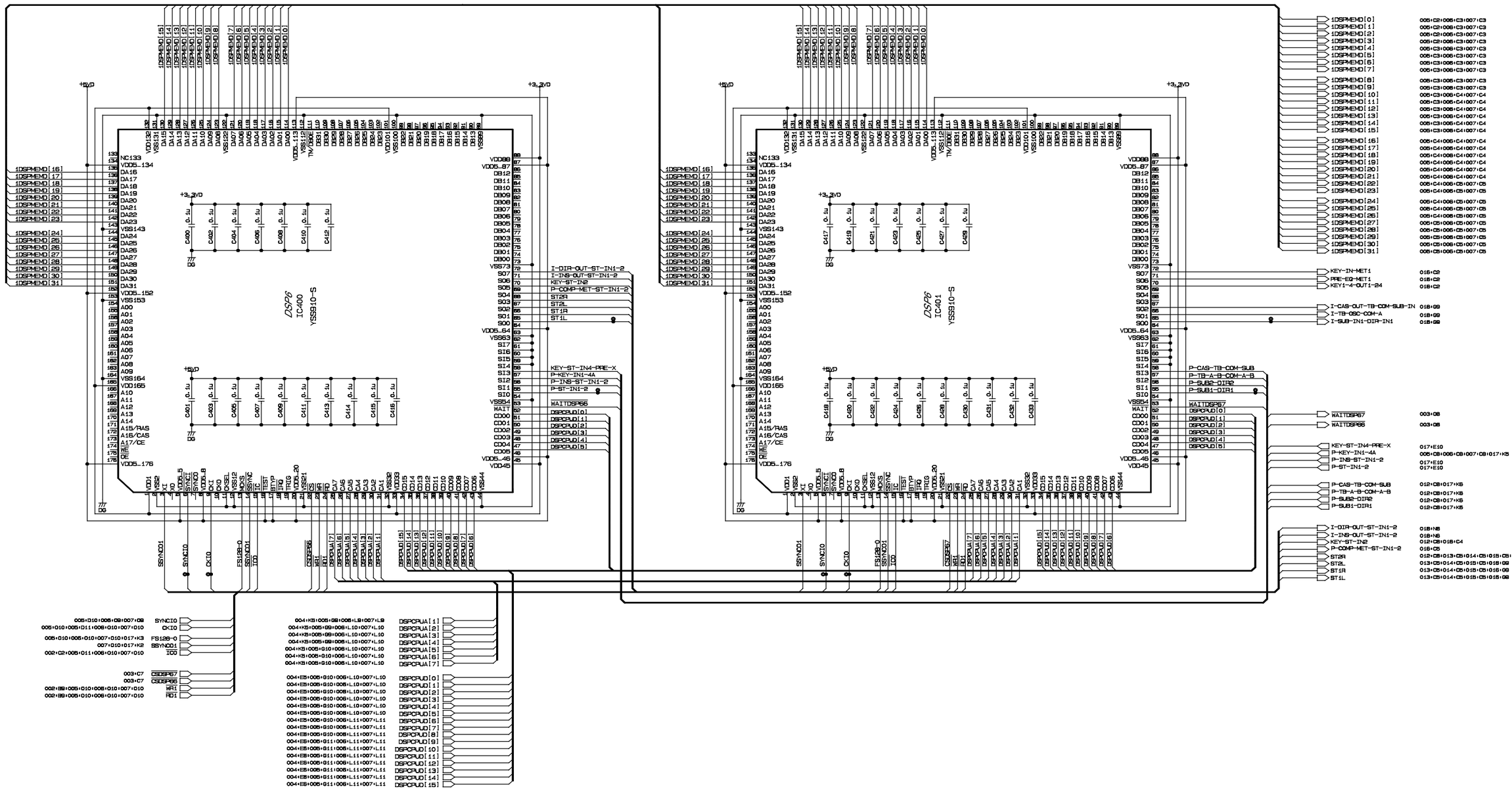
DSP1D



DSP 3 SECTION

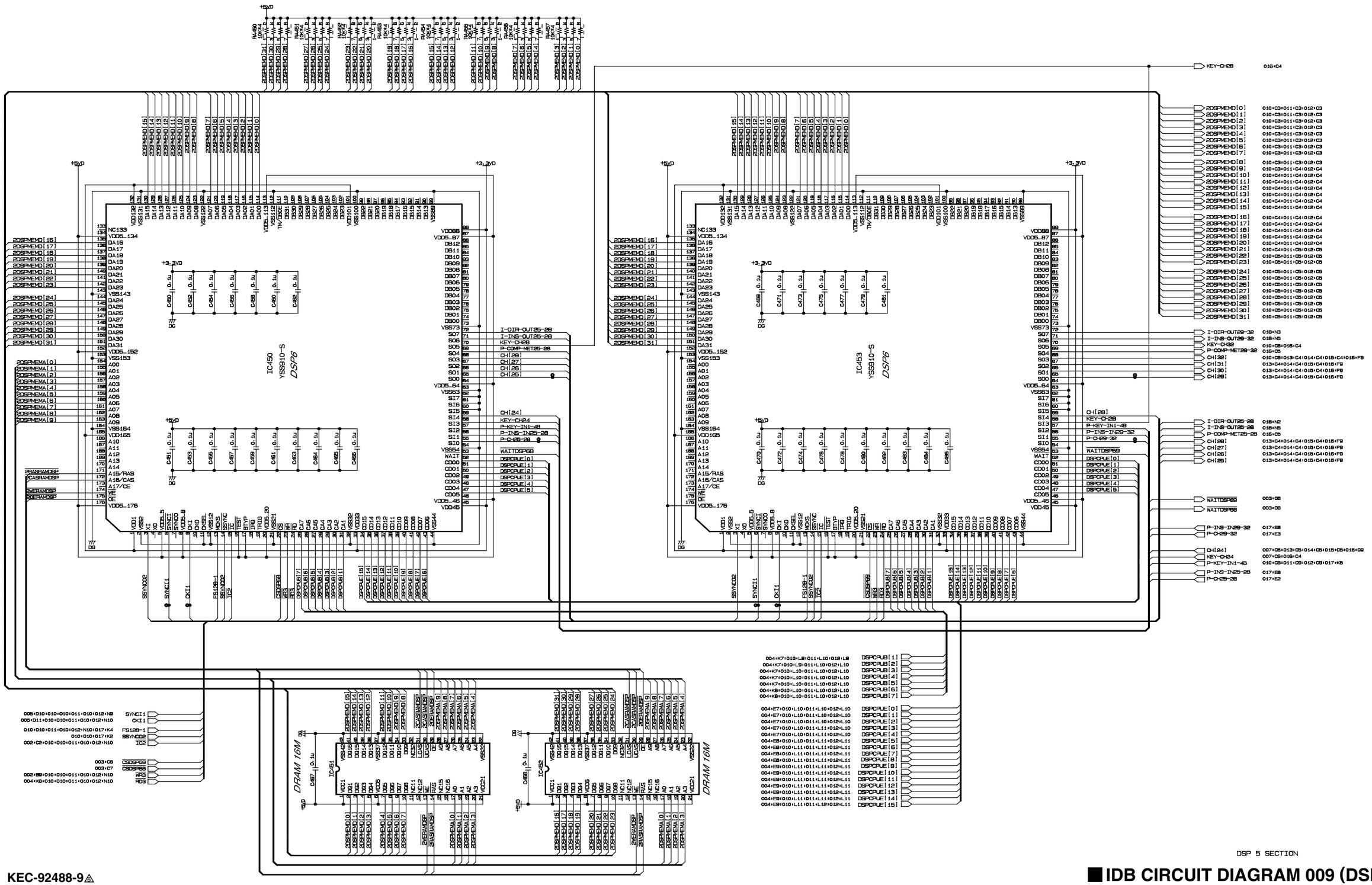
■ IDB CIRCUIT DIAGRAM 007 (DSP1D)

■ IDB CIRCUIT DIAGRAM 008 (DSP1D)



■ IDB CIRCUIT DIAGRAM 009 (DSP1D)

DSP1D



DSP 5 SECTION

■ IDB CIRCUIT DIAGRAM 009 (DSP1D)

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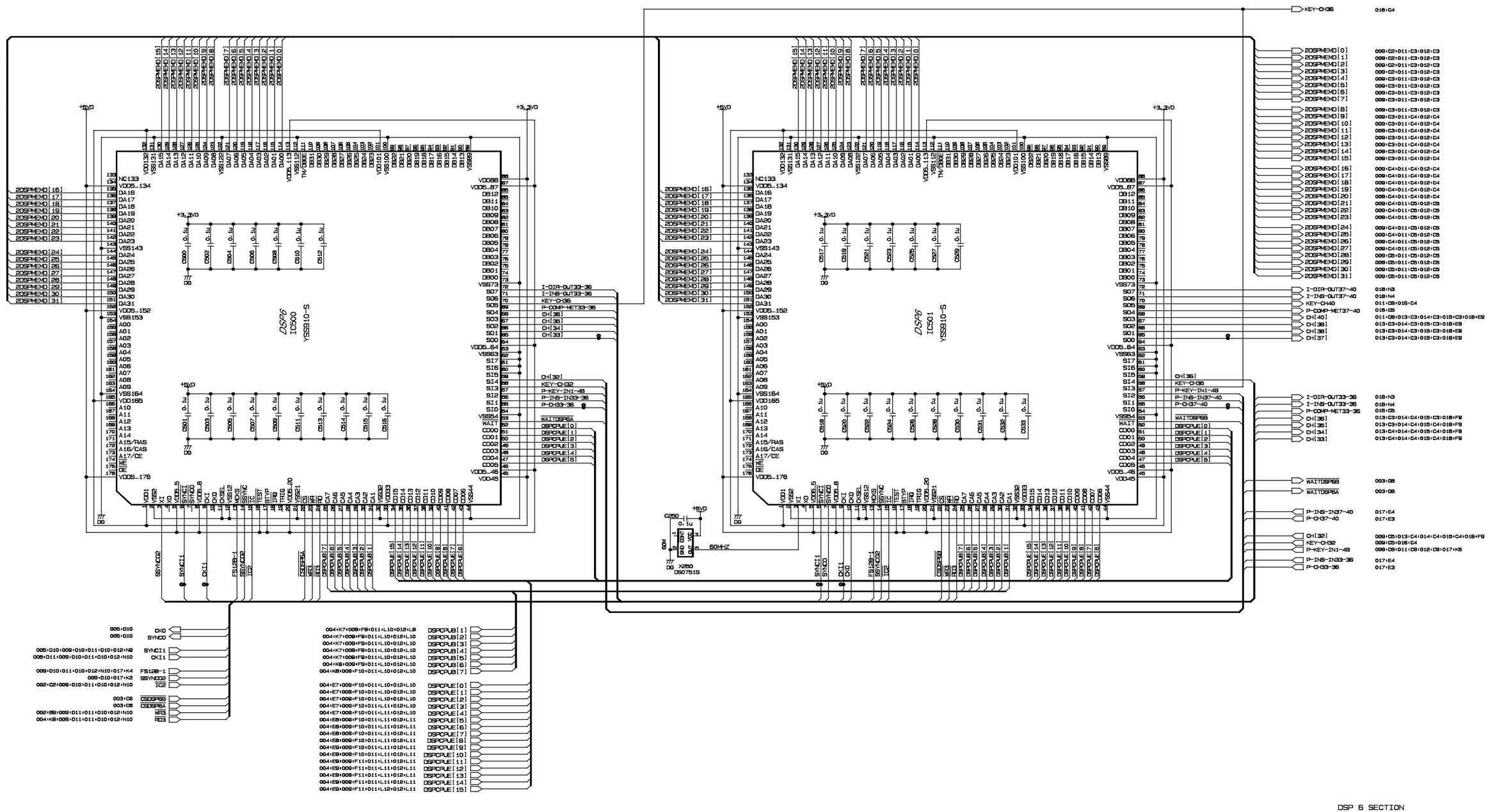
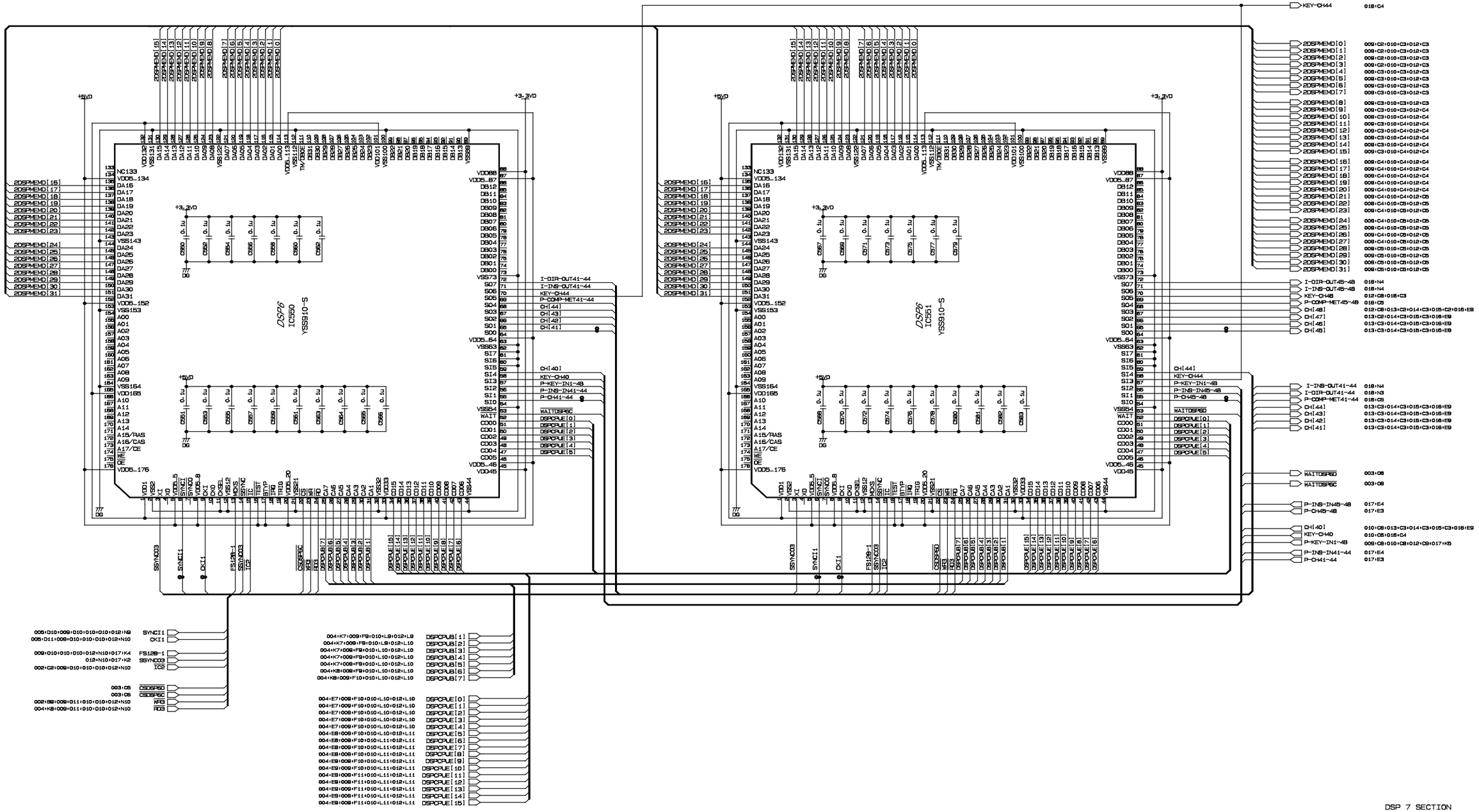
■ IDB CIRCUIT DIAGRAM 010 (DSP1D)



■ IDB CIRCUIT DIAGRAM 011 (DSP1D)

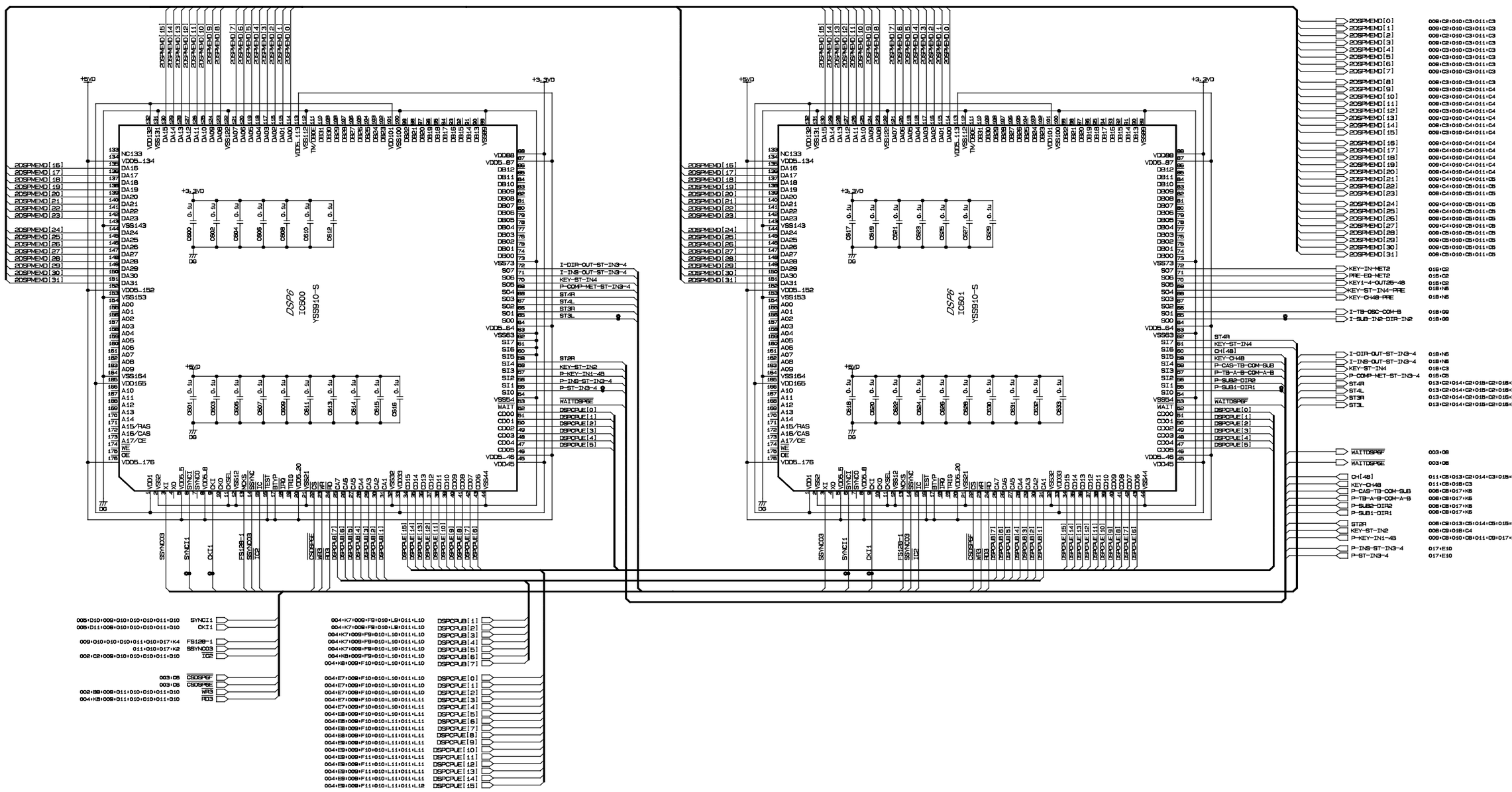
DSP1D



DSP 7 SECTION

■ IDB CIRCUIT DIAGRAM 011 (DSP1D)

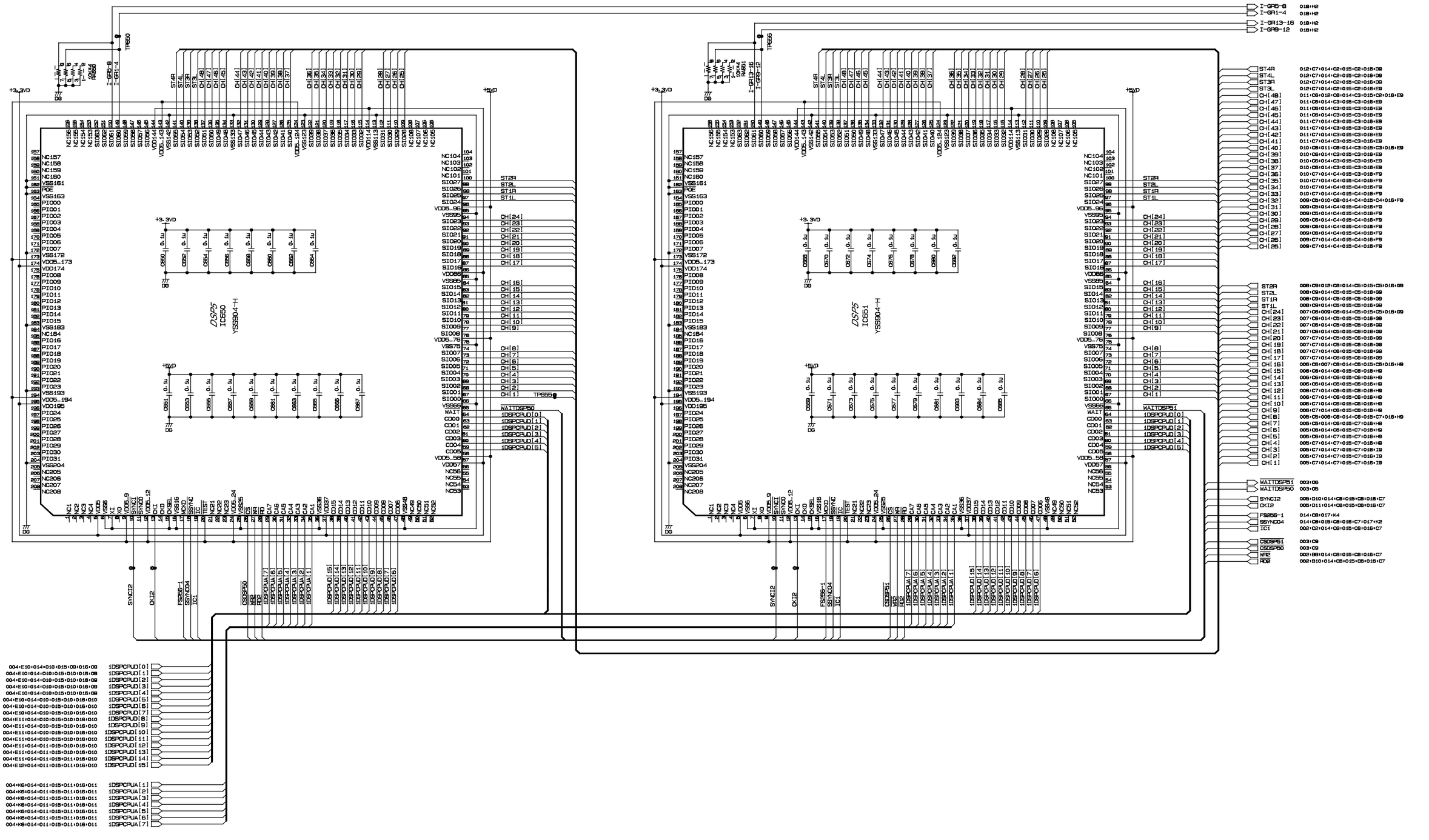
■ IDB CIRCUIT DIAGRAM 012 (DSP1D)



DSP 8 SECTION

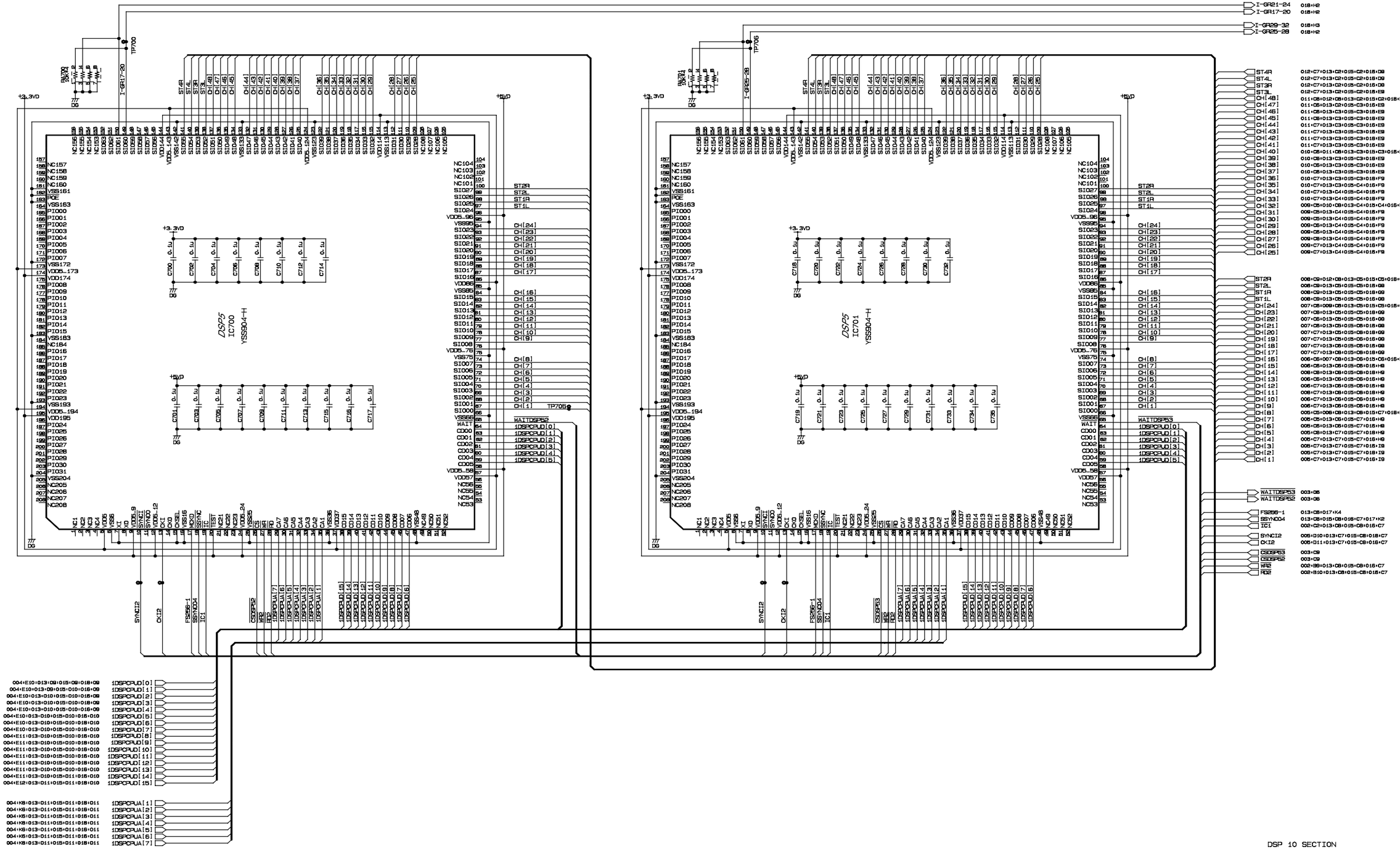
■ IDB CIRCUIT DIAGRAM 012 (DSP1D)

■ IDB CIRCUIT DIAGRAM 013 (DSP1D)



■ IDB CIRCUIT DIAGRAM 013 (DSP1D)

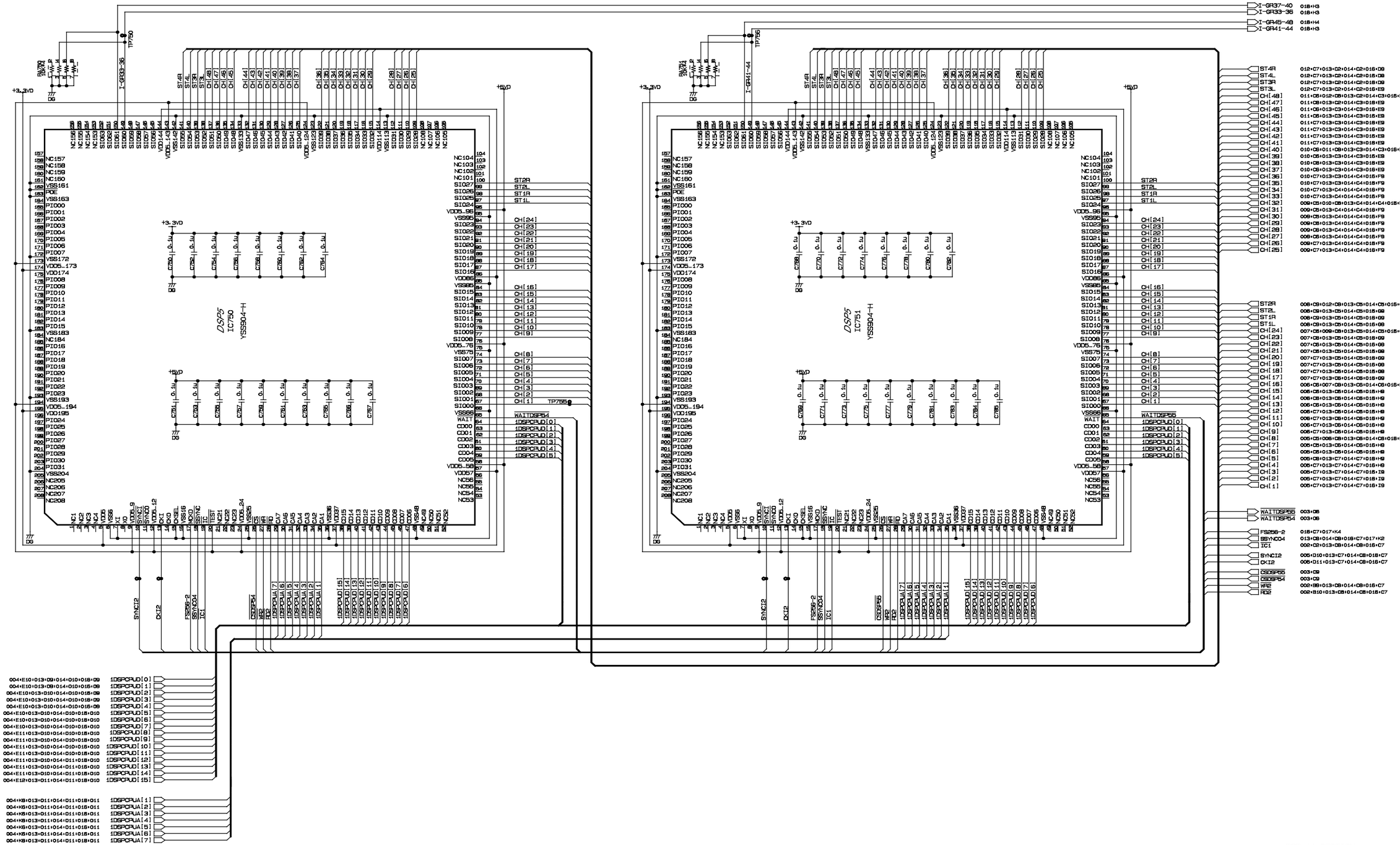
■ IDB CIRCUIT DIAGRAM 014 (DSP1D)



DSP 10 SECTION

■ IDB CIRCUIT DIAGRAM 015 (DSP1D)

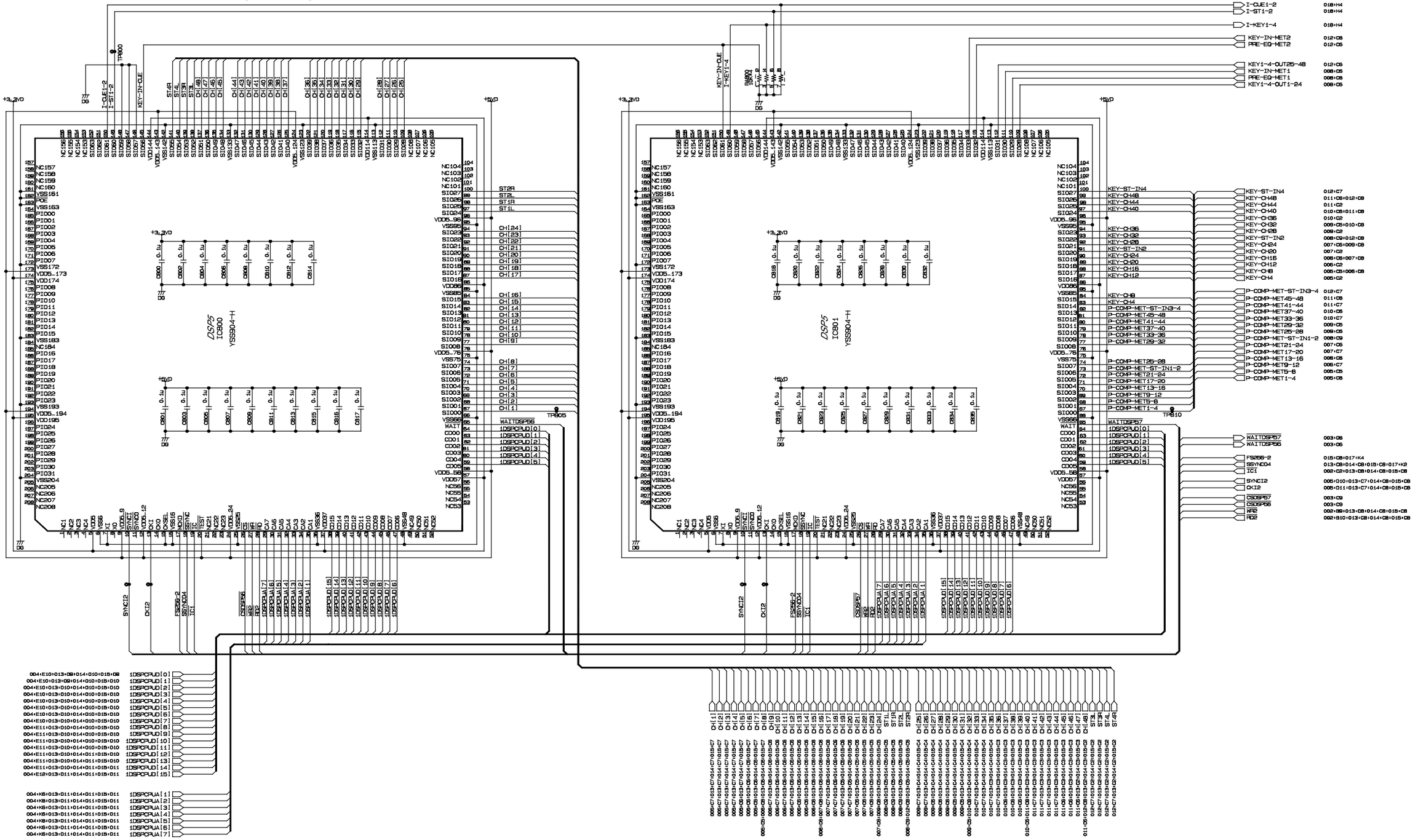
DSP1D



■ IDB CIRCUIT DIAGRAM 015 (DSP1D)

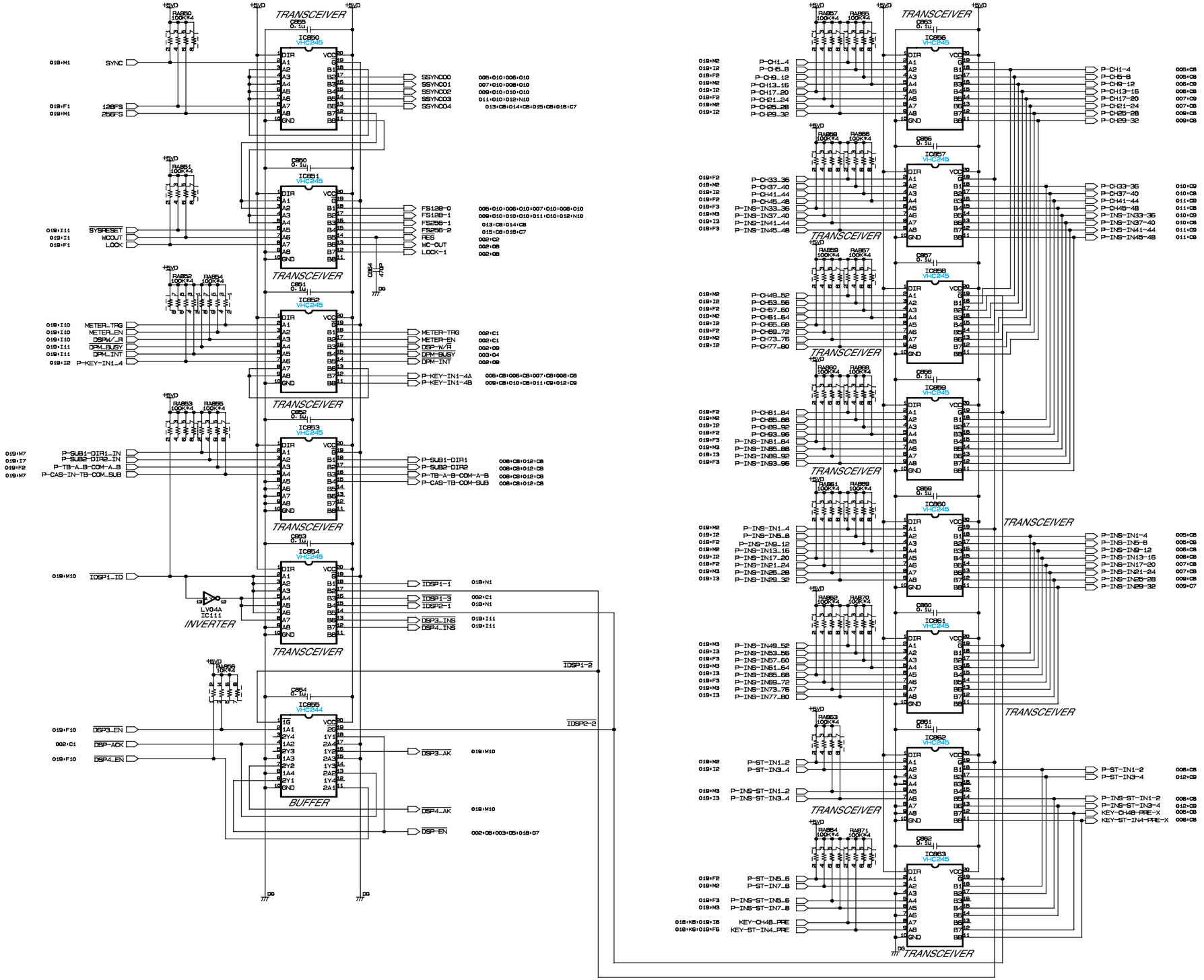
■ IDB CIRCUIT DIAGRAM 016 (DSP1D)

DSP1D



■ IDB CIRCUIT DIAGRAM 017 (DSP1D)

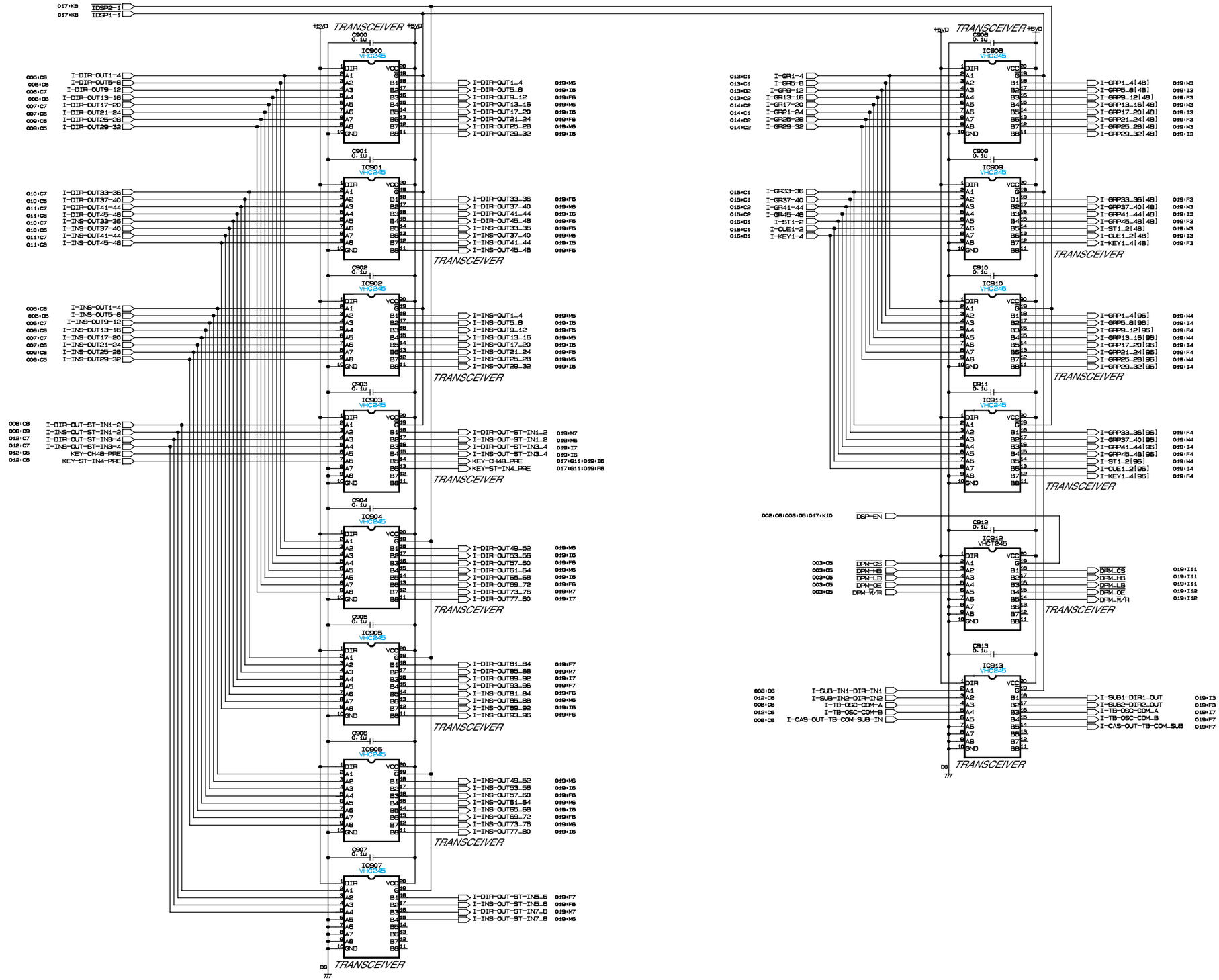
DSP1D



AUDIO DATA BUFFER 1 SECTION

■ IDB CIRCUIT DIAGRAM 017 (DSP1D)

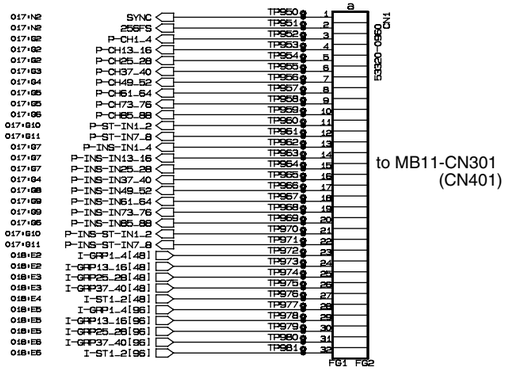
■ IDB CIRCUIT DIAGRAM 018 (DSP1D)



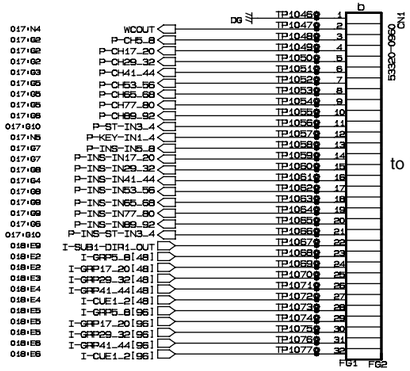
AUDIO DATA BUFFER 2 SECTION

■ IDB CIRCUIT DIAGRAM 019 (DSP1D)

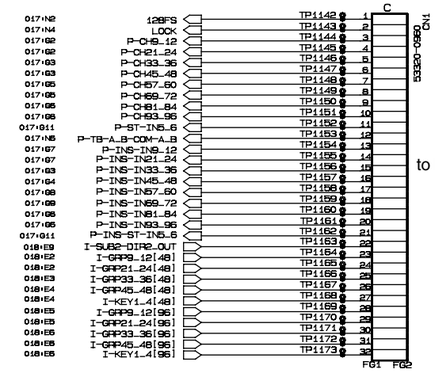
DSP1D



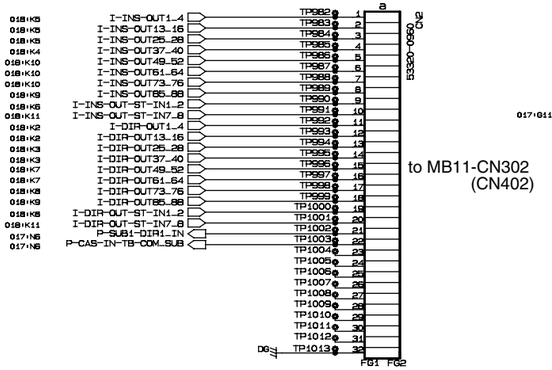
to MB11-CN301 (CN401)



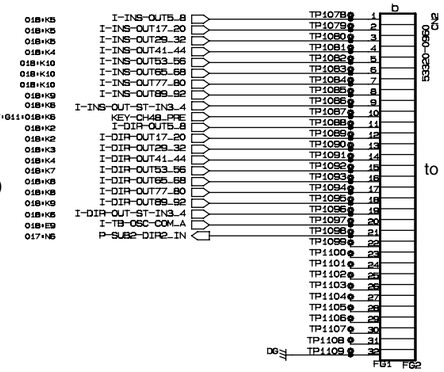
to MB11-CN301 (CN401)



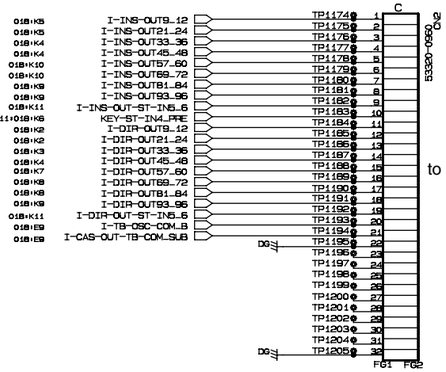
to MB11-CN301 (CN401)



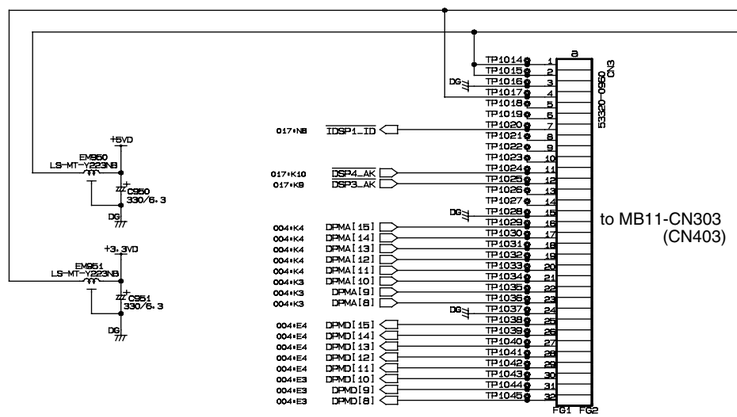
to MB11-CN302 (CN402)



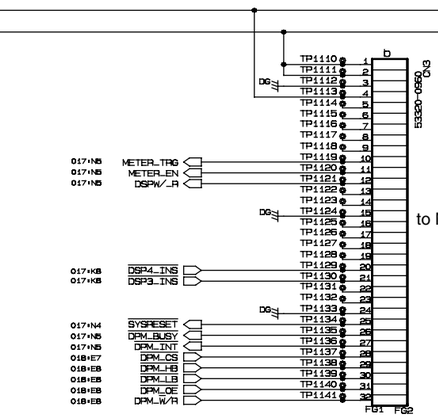
to MB11-CN302 (CN402)



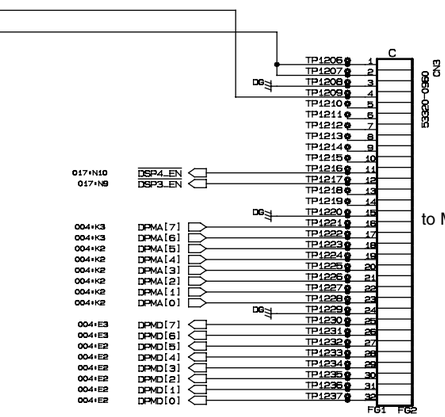
to MB11-CN302 (CN402)



to MB11-CN303 (CN403)



to MB11-CN303 (CN403)



to MB11-CN303 (CN403)

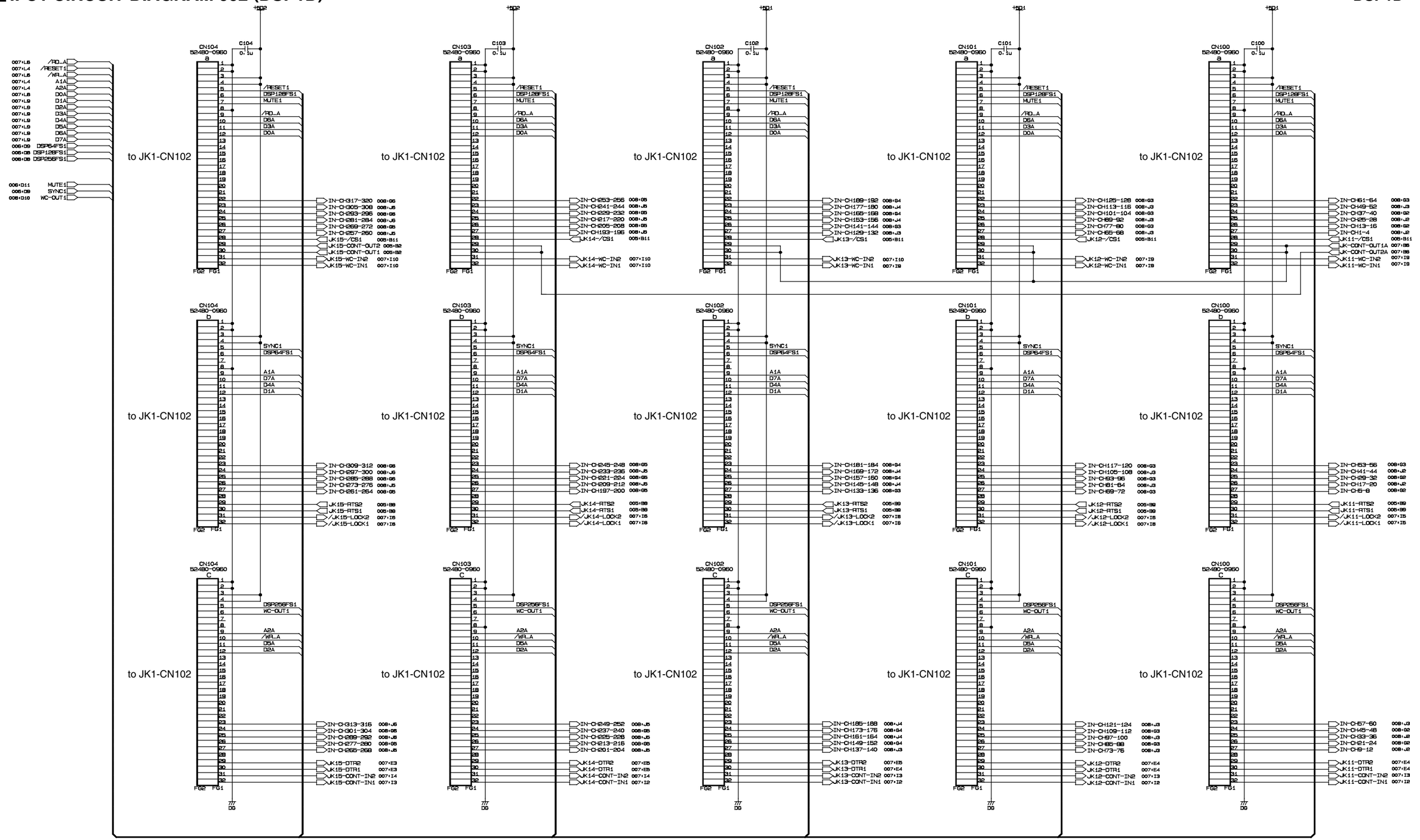
( ): DSP1D-EX

CONNECTOR SECTION

■ IDB CIRCUIT DIAGRAM 019 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 002 (DSP1D)

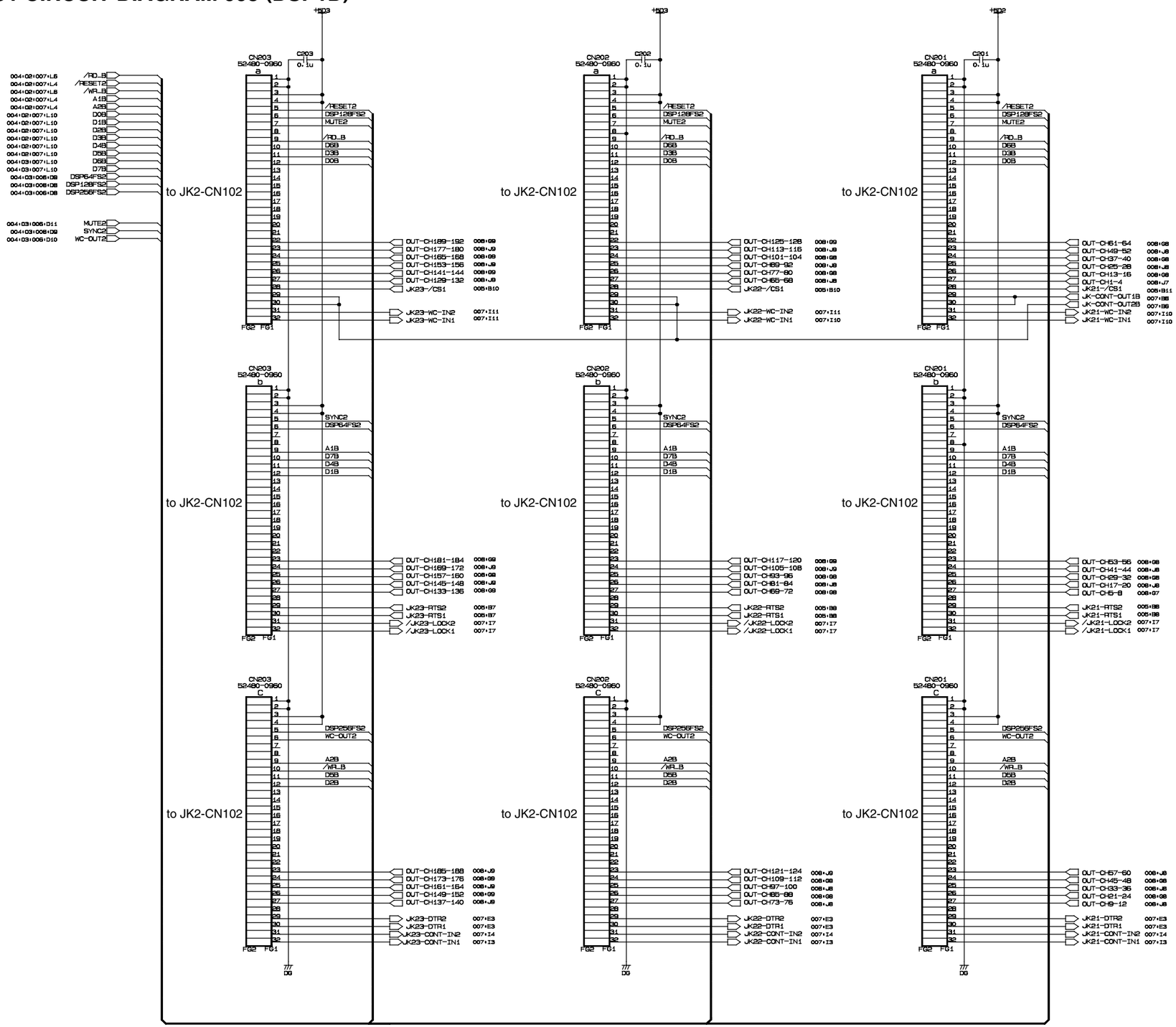
DSP1D



CONNECTOR 1 SECTION

■ IFC1 CIRCUIT DIAGRAM 003 (DSP1D)

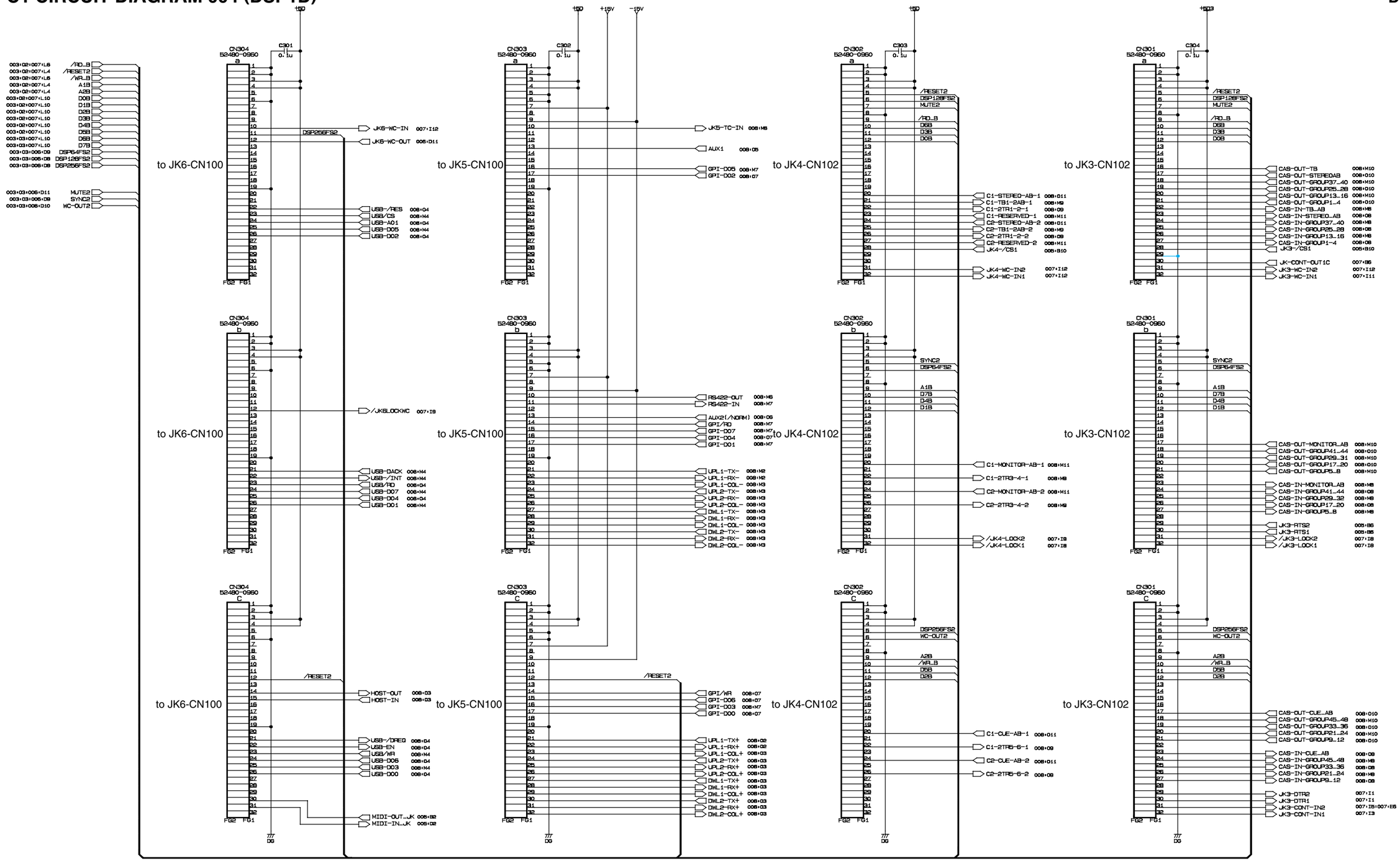
DSP1D



CONNECTOR 2 SECTION

■ IFC1 CIRCUIT DIAGRAM 003 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 004 (DSP1D)



CONNECTOR 3 SECTION

■IFC1 CIRCUIT DIAGRAM 004 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 005 (DSP1D)

DSP1D

PROM 1M

FPGA
IC503
EPF10K50EGC240

REGULATOR +3.3V
REGULATOR +2.5V

TRANSCEIVER

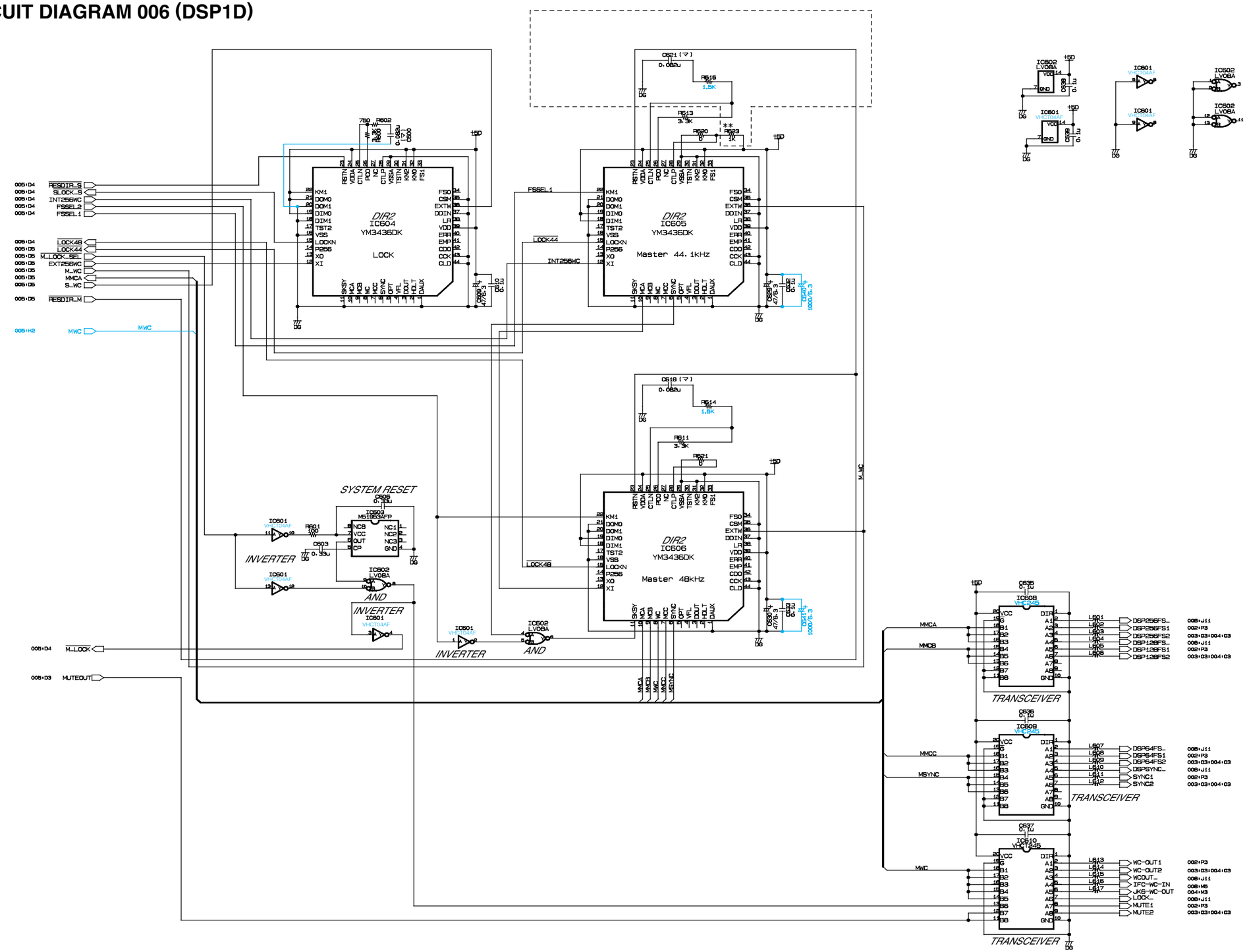
**: Not Installed

CLOCK SYSTEM & EMB I/F SECTION

■IFC1 CIRCUIT DIAGRAM 005 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 006 (DSP1D)

DSP1D



**: Not Installed
(マ): Mylar Capacitor

PLL SECTION

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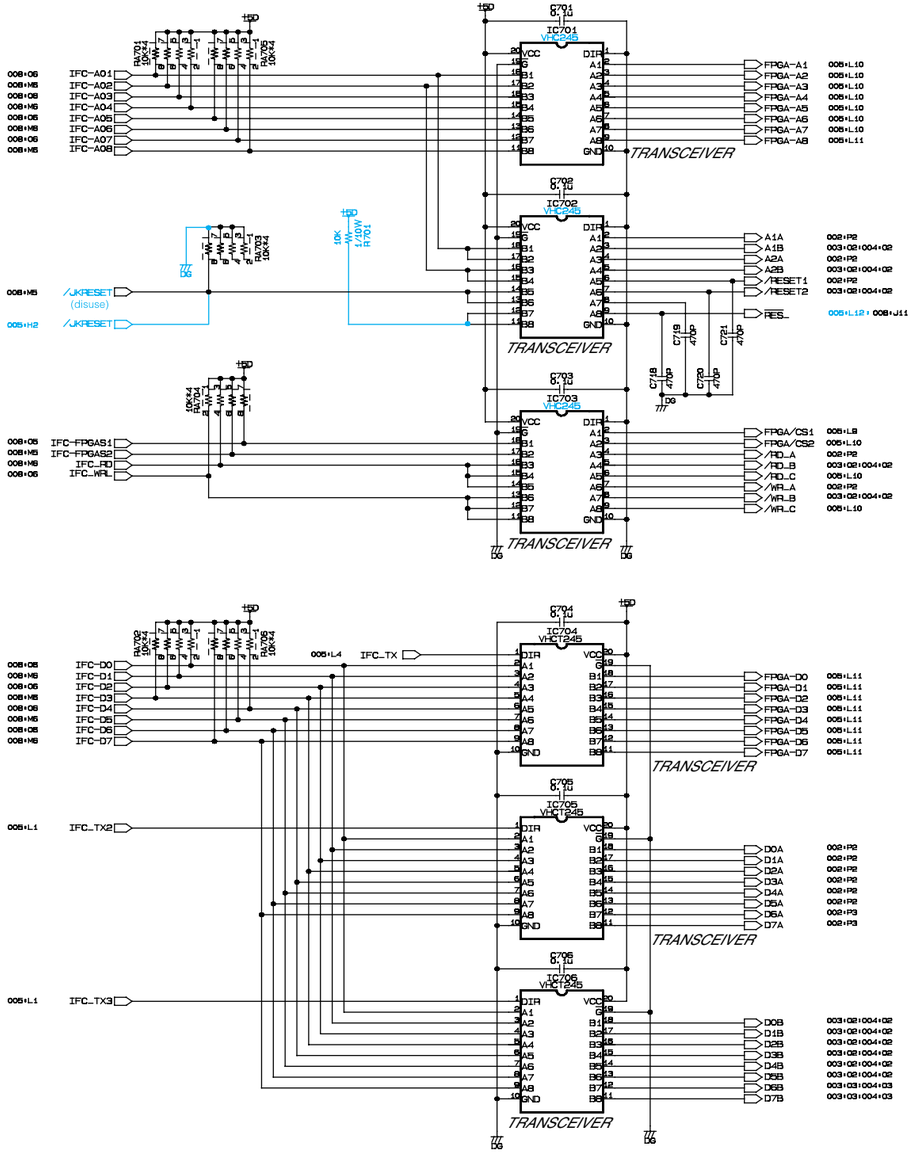
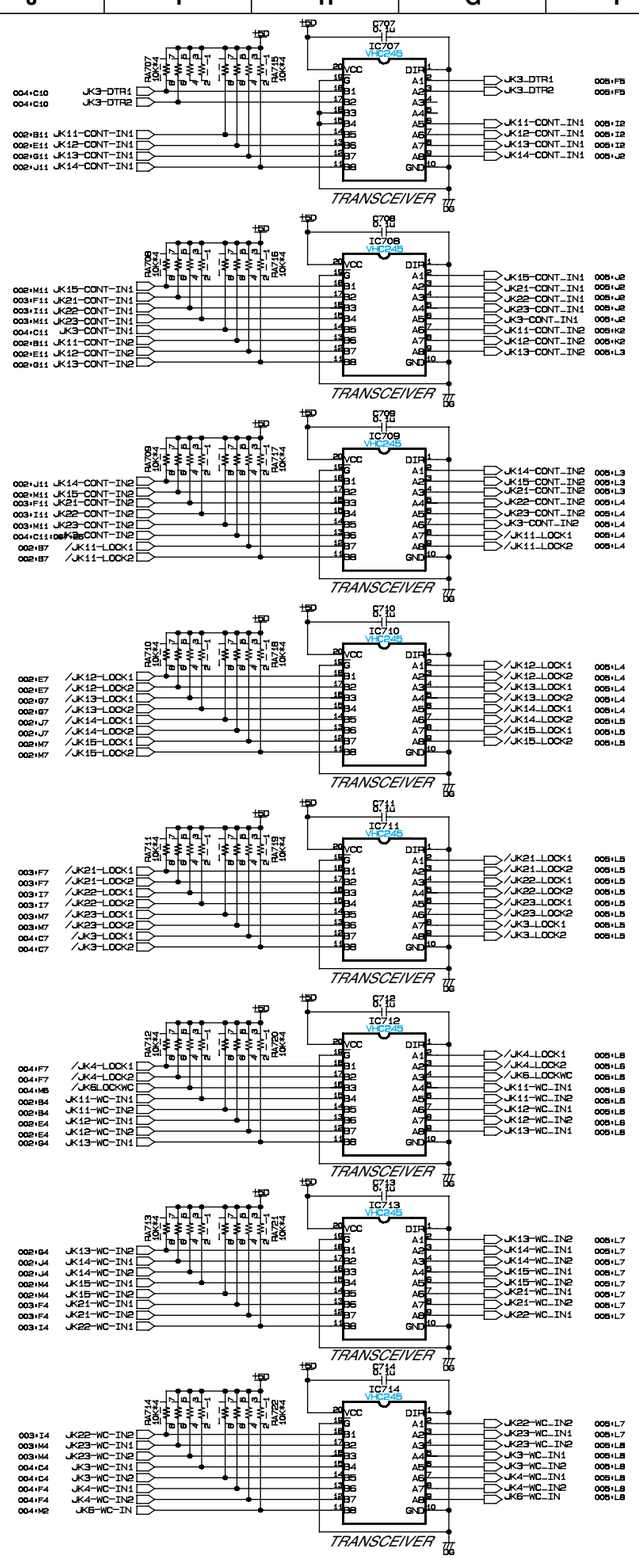
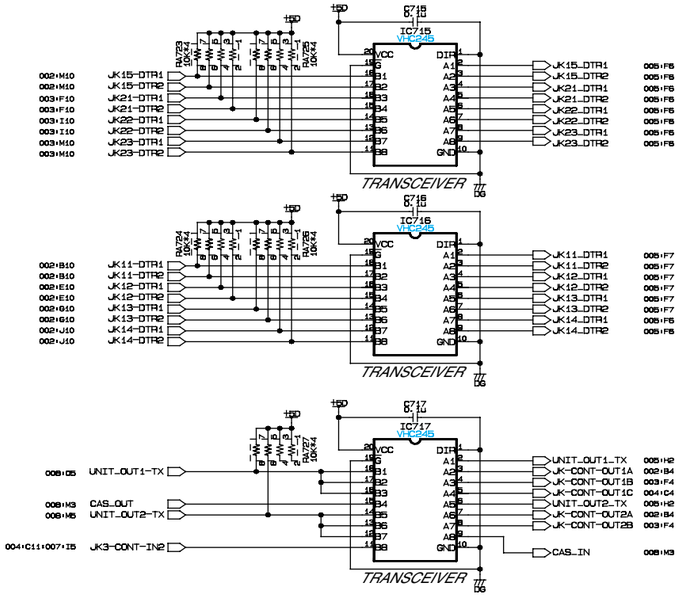
■IFC1 CIRCUIT DIAGRAM 006 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 007 (DSP1D)

DSP1D



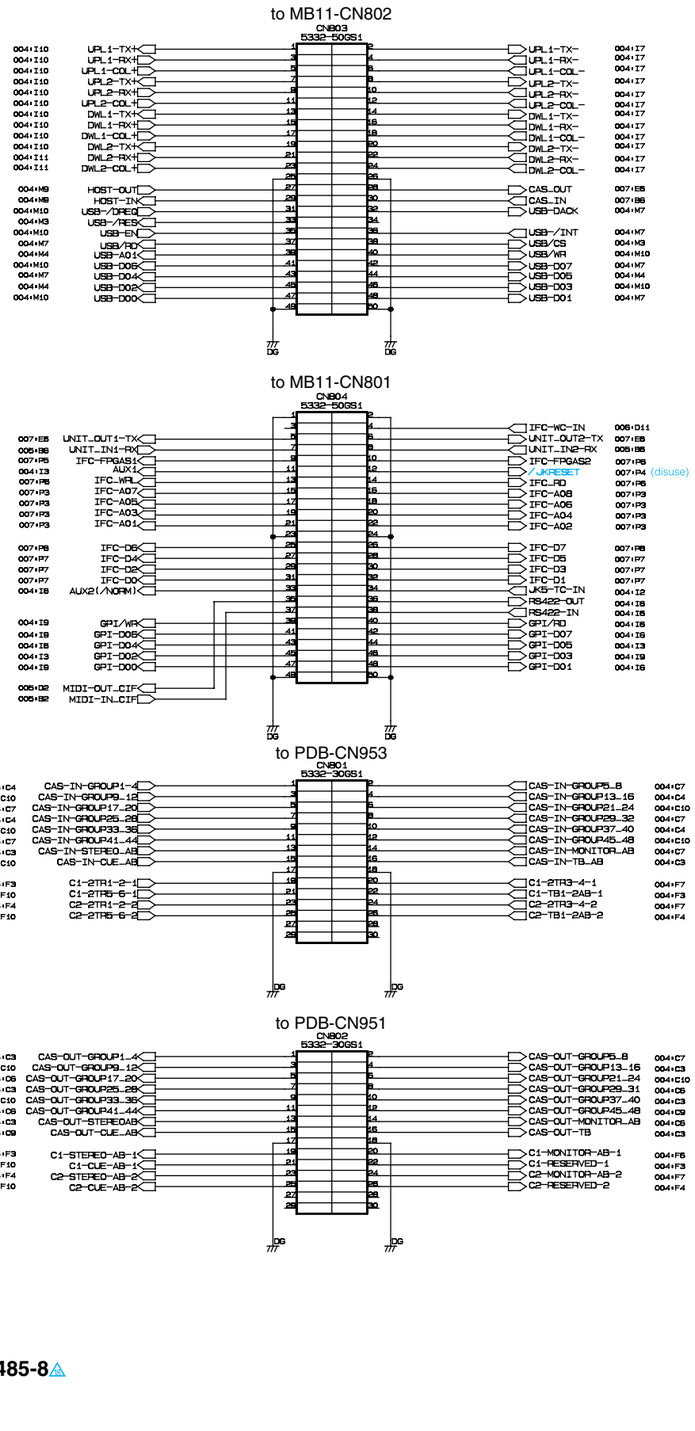




BUFFER SECTION

■IFC1 CIRCUIT DIAGRAM 007 (DSP1D)

■IFC1 CIRCUIT DIAGRAM 008 (DSP1D)



■IFC1 CIRCUIT DIAGRAM 008 (DSP1D)

■ JK1 CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

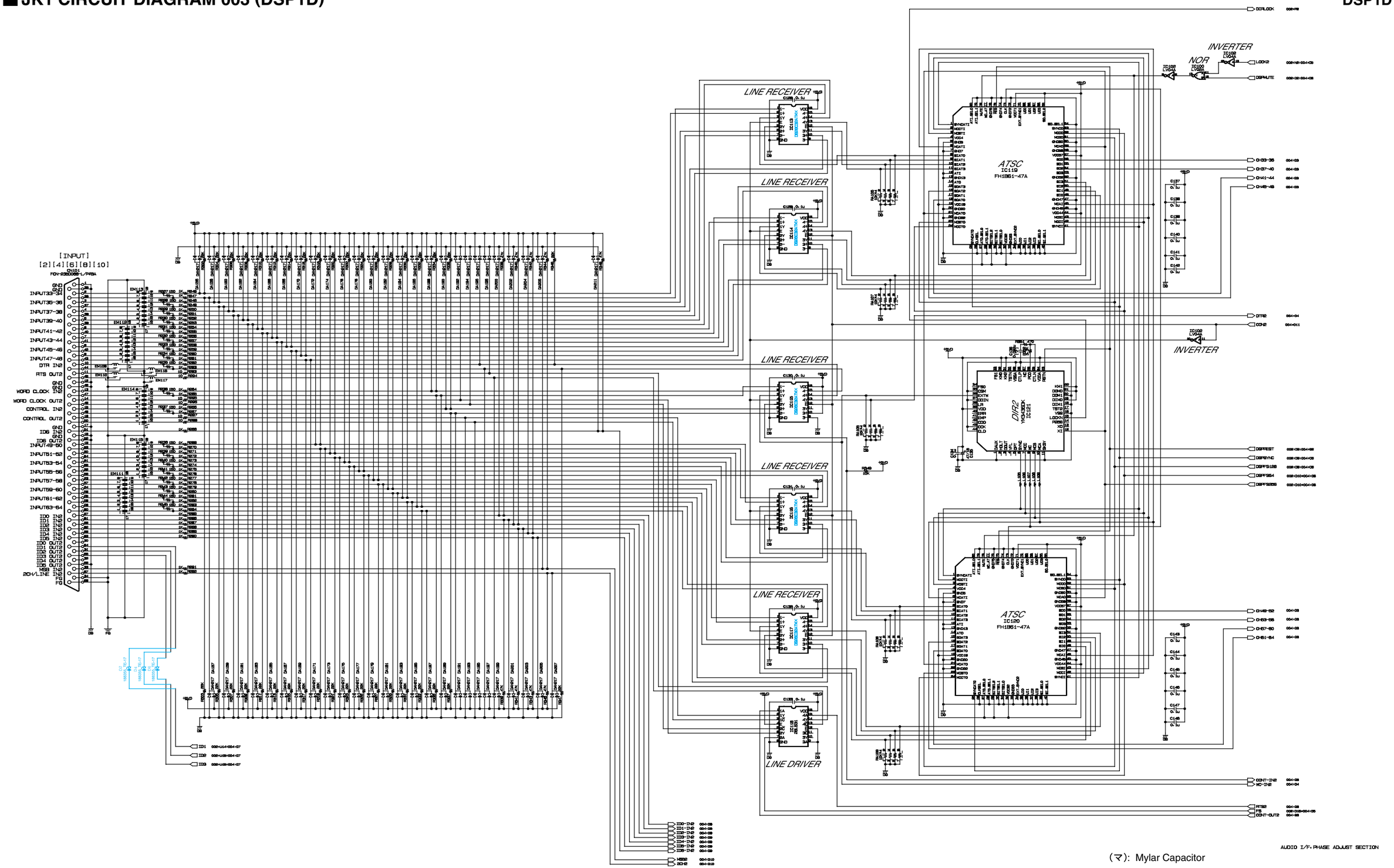
SYSTEM RESET
INVERTER
AND
LINE RECEIVER
LINE DRIVER
NOR
ATSC IC108 FH1B61-47A
ATSC IC110 FH1B61-47A
DIR2 YM34382CK IC112
[INPUT] [1][3][5][7][9]

(マ): Mylar Capacitor

AUDIO I/F, PHASE ADJUST SECTION

■ JK1 CIRCUIT DIAGRAM 002 (DSP1D)

■ JK1 CIRCUIT DIAGRAM 003 (DSP1D)



(マ): Mylar Capacitor

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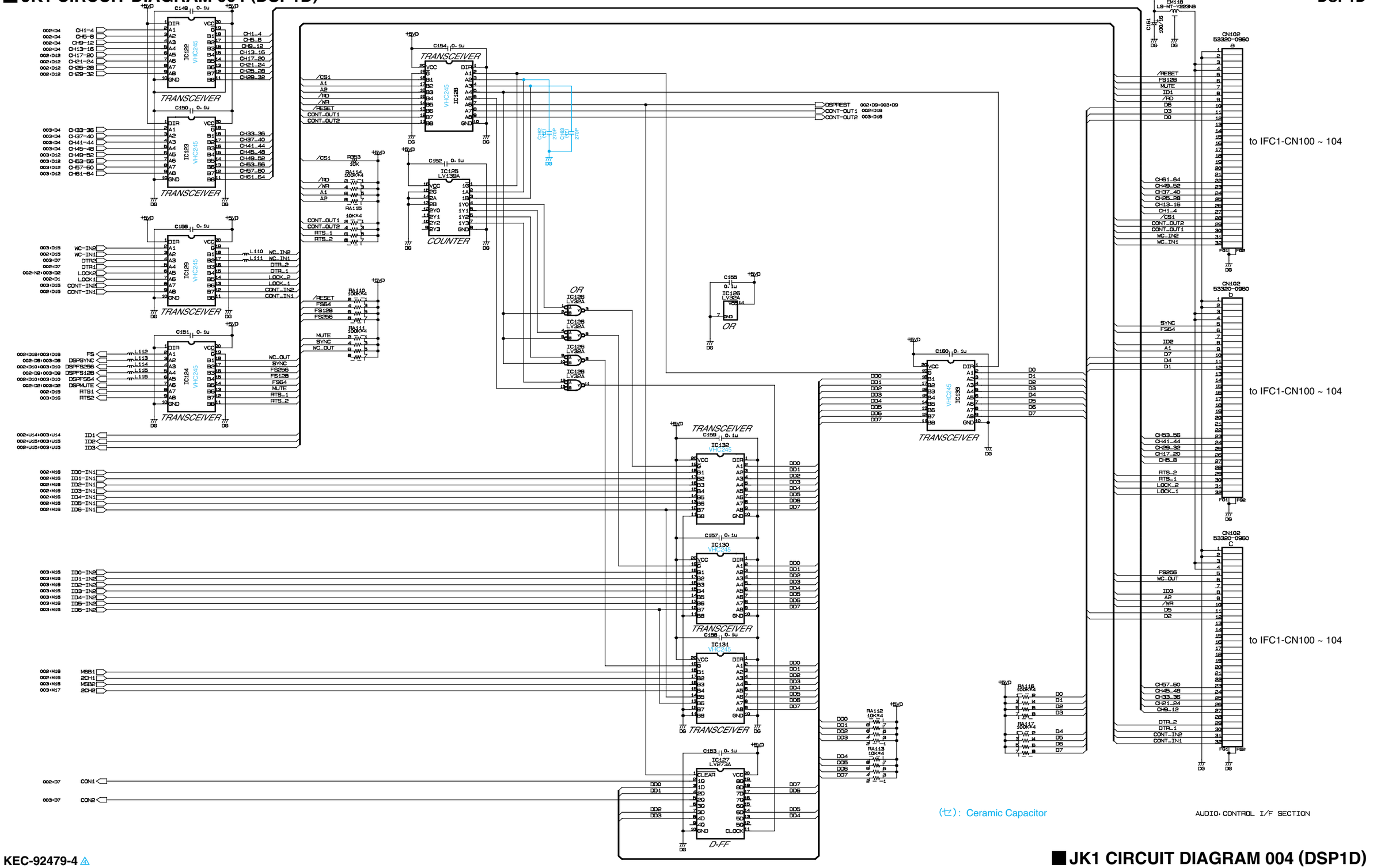
■ JK1 CIRCUIT DIAGRAM 003 (DSP1D)

■ JK1 CIRCUIT DIAGRAM 004 (DSP1D)



■ JK1 CIRCUIT DIAGRAM 004 (DSP1D)

■ JK2 CIRCUIT DIAGRAM 002 (DSP1D)

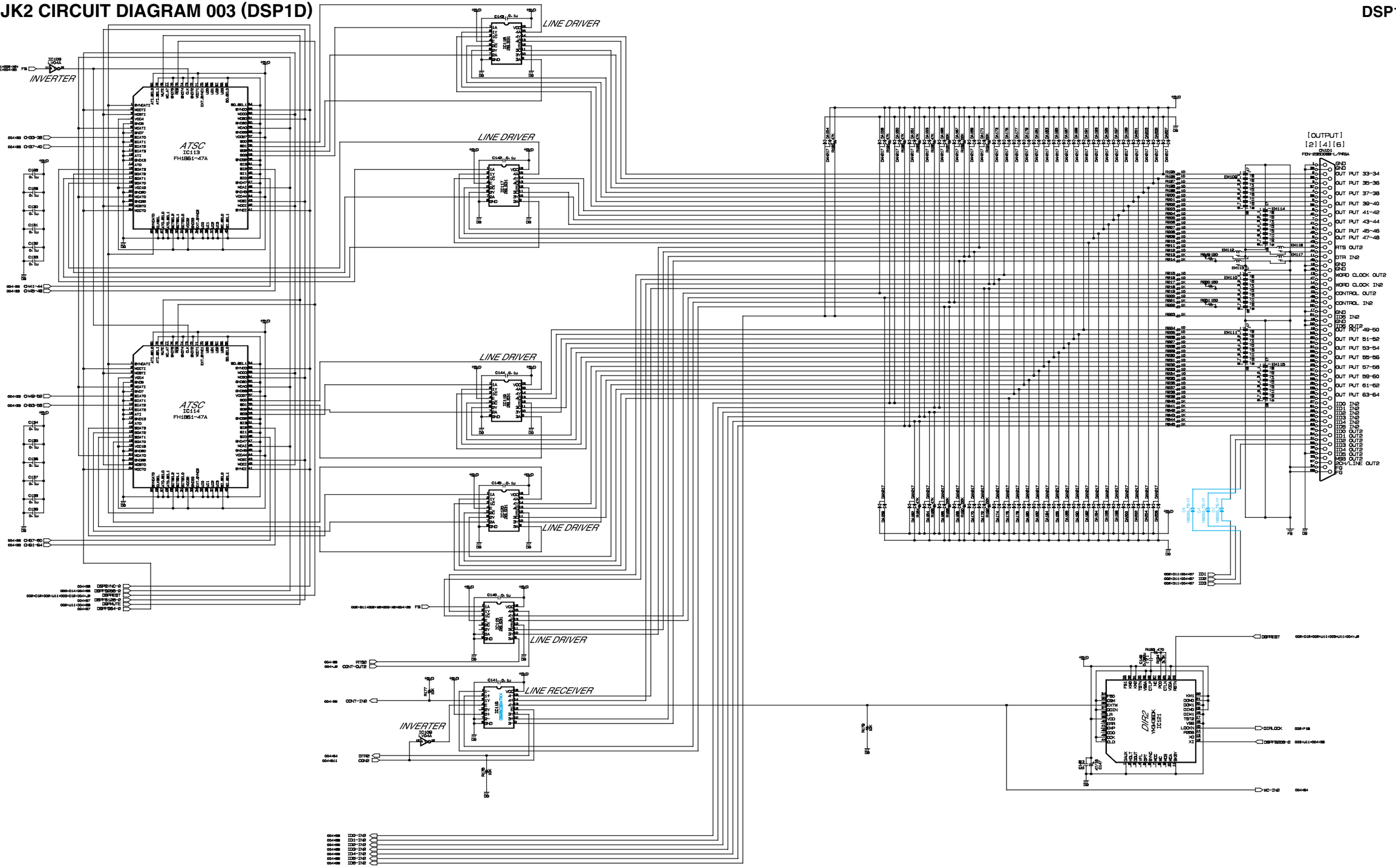
DSP1D

LINE DRIVER
LINE DRIVER
LINE DRIVER
LINE DRIVER
LINE DRIVER
LINE RECEIVER
INVERTER
INVERTER
ATSC IC100 FH1B51-47A
ATSC IC101 FH1B51-47A
[OUTPUT] [1][3][5] CN100 FCN-2001A08F-L/MBA
OUT PUT 1-2
OUT PUT 1-4
OUT PUT 5-6
OUT PUT 7-8
OUT PUT 9-10
OUT PUT 11-12
OUT PUT 13-14
OUT PUT 15-16
OUT PUT 17-18
OUT PUT 19-20
OUT PUT 21-22
OUT PUT 23-24
OUT PUT 25-26
OUT PUT 27-28
OUT PUT 29-30
OUT PUT 31-32
RESET
INVERTER
AND
DIR2 YM34302K IC112
RESET
INVERTER
AND
AUDIO I/F, PHASE ADJUST SECTION

(マ): Mylar Capacitor

■ JK2 CIRCUIT DIAGRAM 003 (DSP1D)

DSP1D

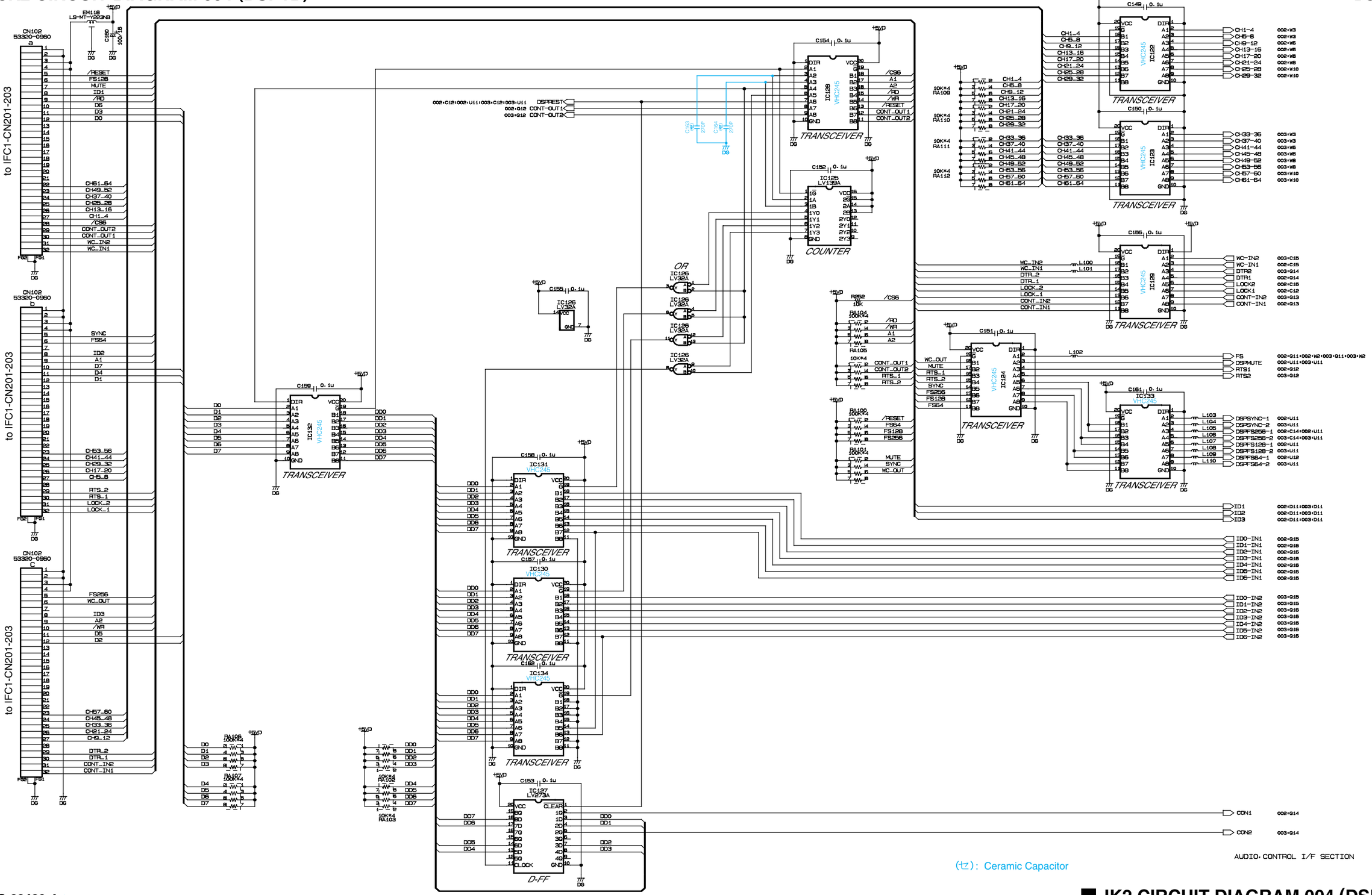


(マ): Mylar Capacitor

AUDIO I/F-PHASE ADJUST SECTION

■ JK2 CIRCUIT DIAGRAM 003 (DSP1D)

■ JK2 CIRCUIT DIAGRAM 004 (DSP1D)



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■ JK3 CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

SYSTEM RESET
INVERTER
AND
RESET
INVERTER
AND
LINE RECEIVER
LINE RECEIVER
INVERTER
INVERTER
INVERTER
INVERTER
LINE DRIVER
ATSC IC111 FH1B61-47A
ATSC IC112 FH1B61-47A
DIR2 YK54DB2K IC110
INVERTER
INVERTER
NOR
INVERTER
[CASCADE] [IN] CN100 FCN-6360C050-L/PRBA
GROUP IN 1-4
GROUP IN 5-8
GROUP IN 9-12
GROUP IN 13-16
GROUP IN 17-20
GROUP IN 21-24
GROUP IN 25-28
GROUP IN 29-32
DTR IN
RTS OUT
WORD CLOCK IN
WORD CLOCK OUT
CONTROL IN A
CONTROL OUT A
GROUP IN 33-36
GROUP IN 37-40
GROUP IN 41-44
GROUP IN 45-48
STEREO-AB IN
MONITOR AB IN
CUE A+B IN
TB.COMM IN
2CH/LINE

(セ): Ceramic Capacitor
(マ): Mylar Capacitor

AUDIO I/F, PHASE ADJUST SECTION

■ JK3 CIRCUIT DIAGRAM 002 (DSP1D)

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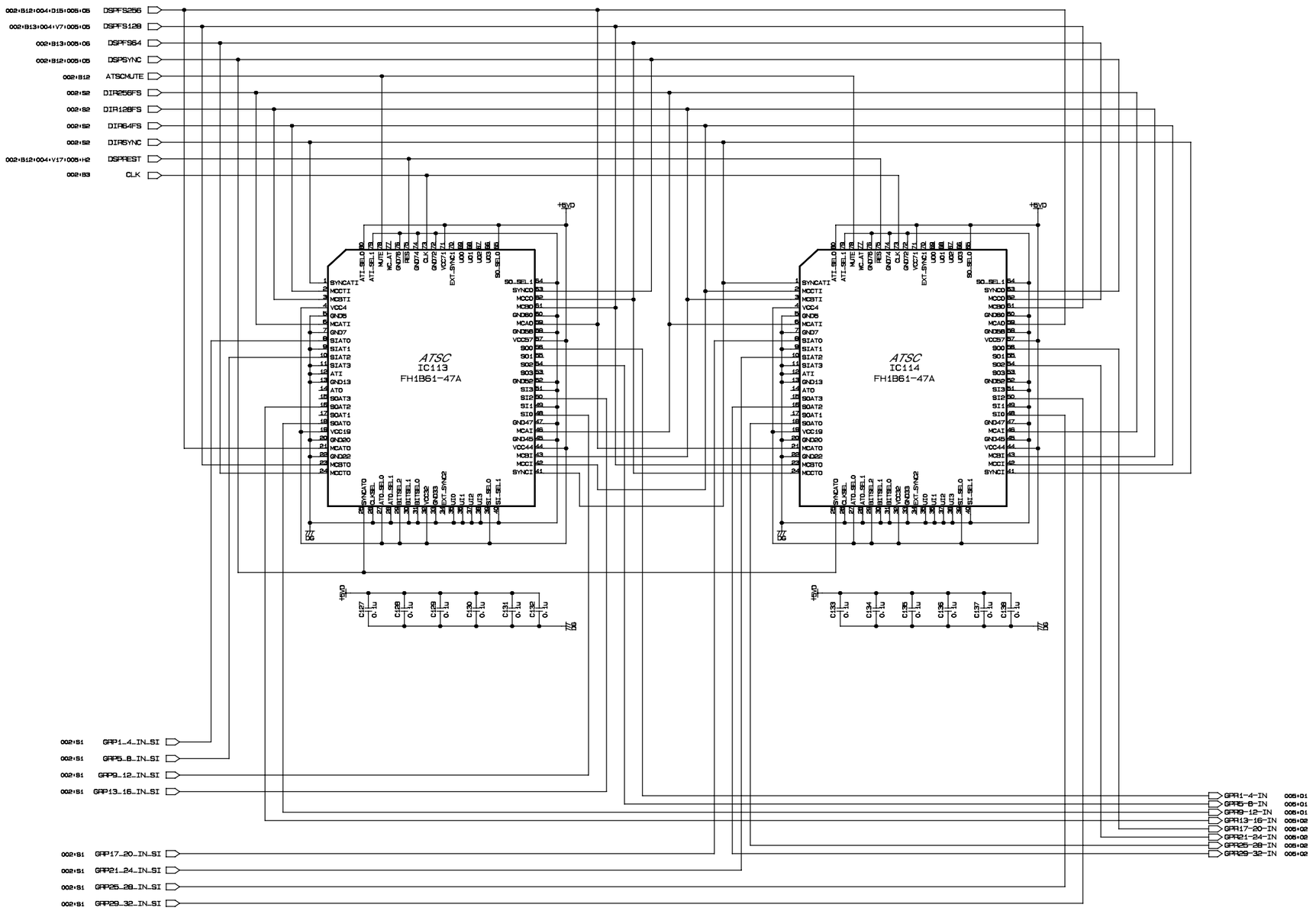
■ JK3 CIRCUIT DIAGRAM 003 (DSP1D)



AUDIO I/F・PHASE ADJUST SECTION

■ JK3 CIRCUIT DIAGRAM 003 (DSP1D)

■ JK3 CIRCUIT DIAGRAM 004 (DSP1D)

DSP1D

LINE DRIVER

LINE DRIVER

TRANSCEIVER

D-FF

INVERTER

LINE DRIVER

TRANSCEIVER

D-FF

LINE DRIVER

LINE DRIVER

INVERTER

LINE RECEIVER

[CASCADE]
[OUT]

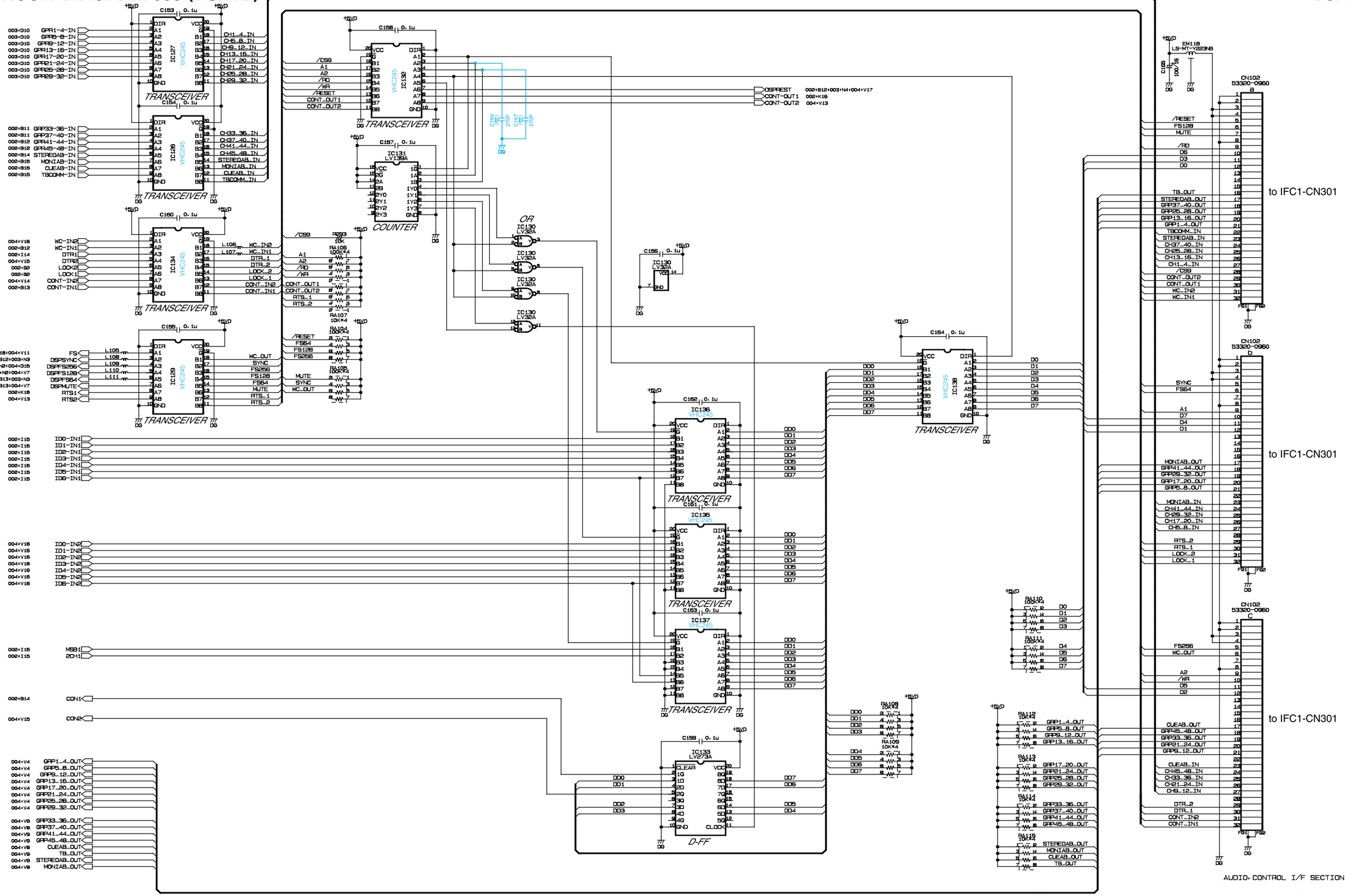
GROUP OUT 1-4
GROUP OUT 5-8
GROUP OUT 9-12
GROUP OUT 13-16
GROUP OUT 17-20
GROUP OUT 21-24
GROUP OUT 25-28
GROUP OUT 29-32
RTS OUT 2
DTR IN 2
WORD CLOCK OUT
WORD CLOCK IN
CONTROL OUT B
CONTROL IN B
GROUP OUT 33-36
GROUP OUT 37-40
GROUP OUT 41-44
GROUP OUT 45-48
STEREO AB OUT
MONITOR AB OUT
CUE A-B OUT
TB COMM OUT
LINE OUT

AUDIO I/F SECTION

(マ): Mylar Capacitor

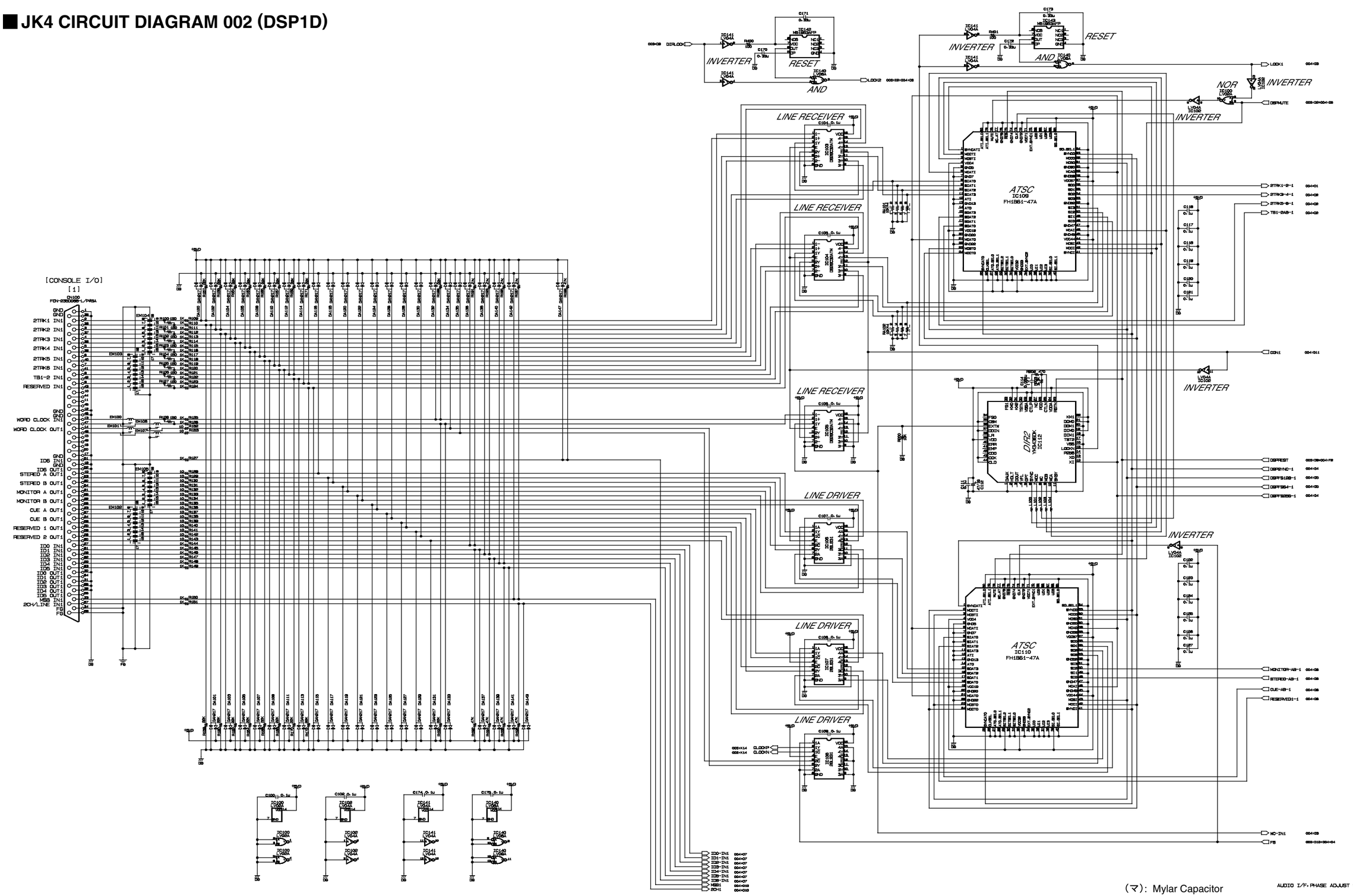
■ JK3 CIRCUIT DIAGRAM 004 (DSP1D)

■JK3 CIRCUIT DIAGRAM 005 (DSP1D)



■ JK4 CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D



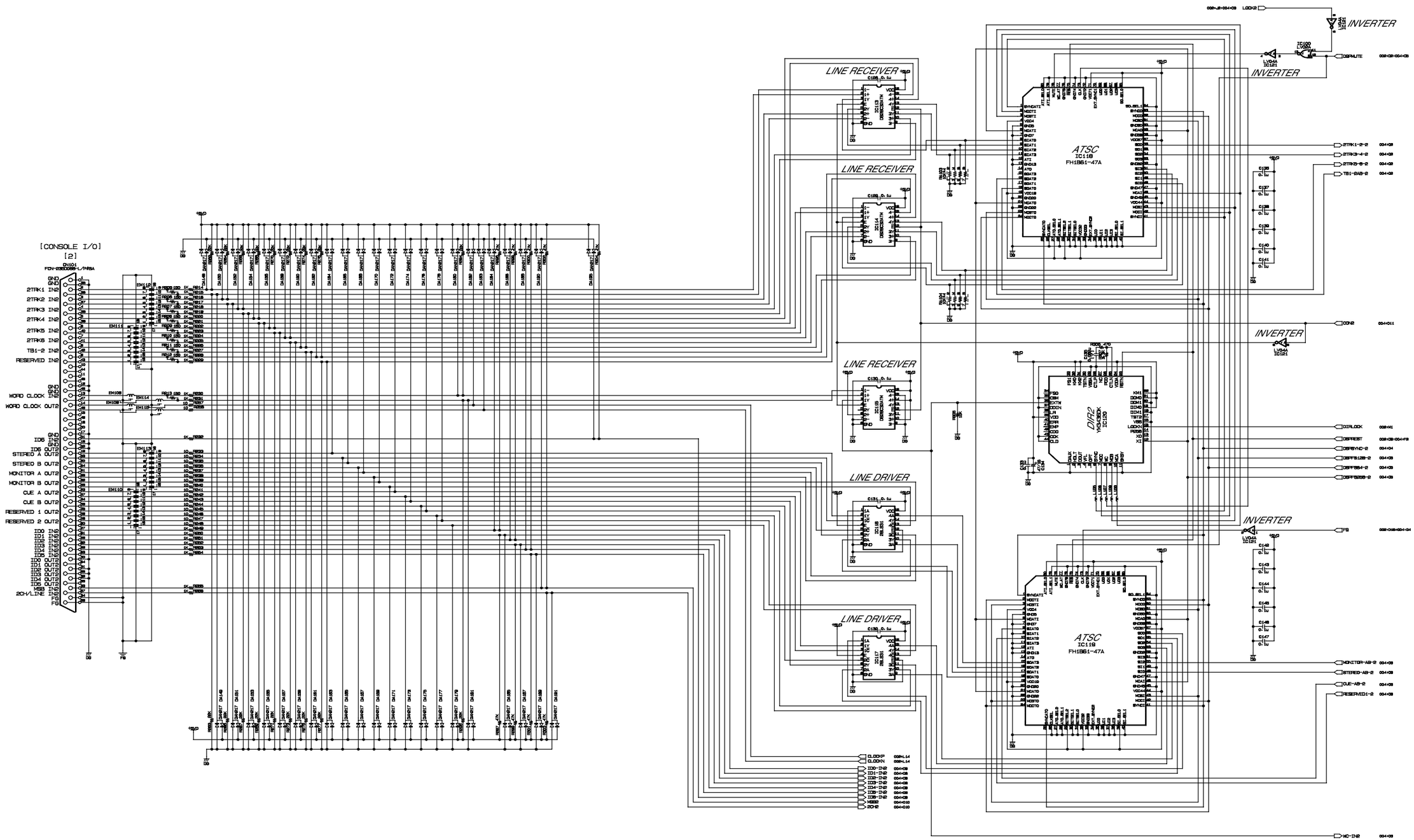
(マ): Mylar Capacitor

AUDIO I/F, PHASE ADJUST SECTION

■ JK4 CIRCUIT DIAGRAM 002 (DSP1D)

■ JK4 CIRCUIT DIAGRAM 003 (DSP1D)

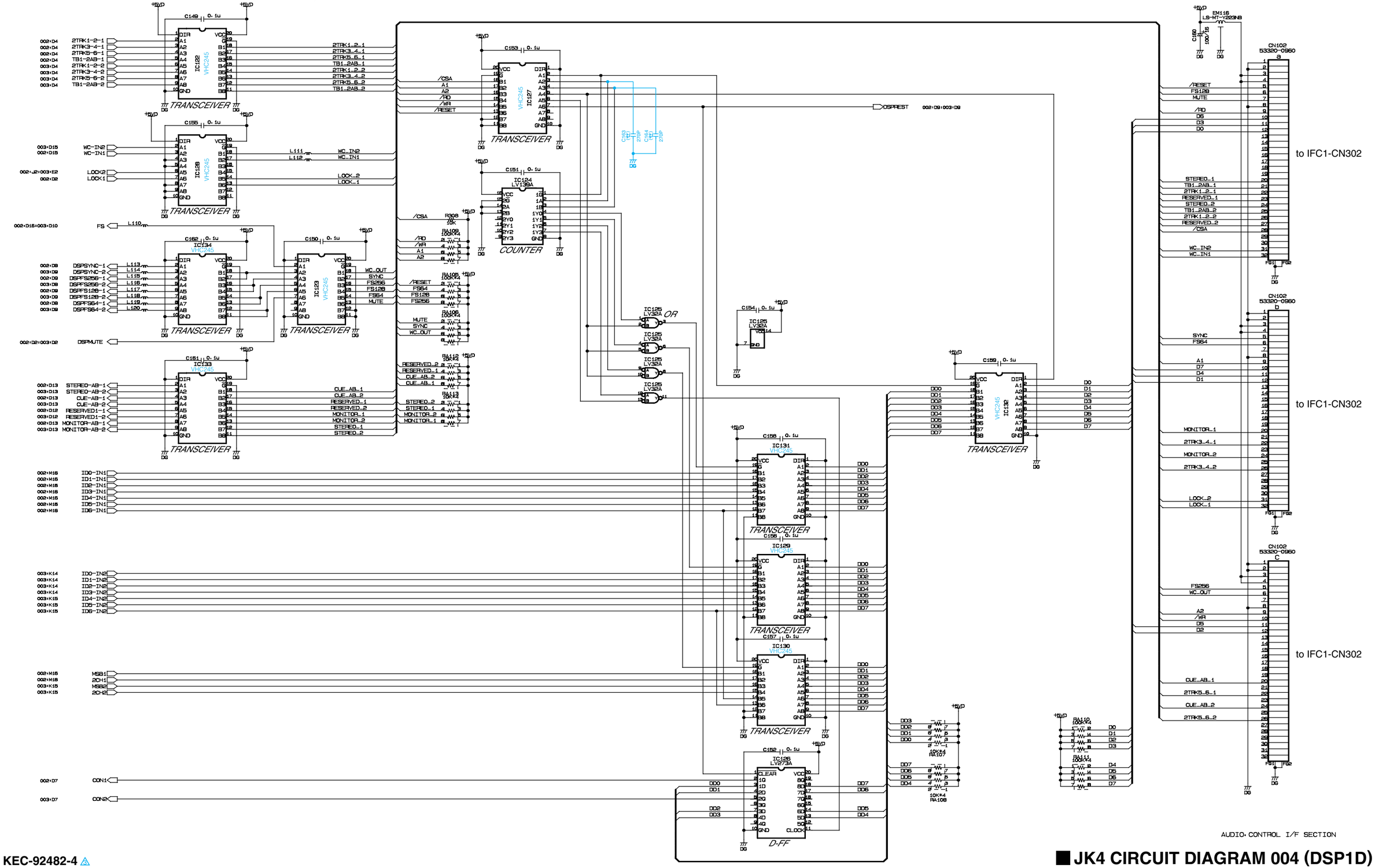
DSP1D



(マ): Mylar Capacitor

AUDIO I/F, PHASE ADJUST SECTION

■ JK4 CIRCUIT DIAGRAM 004 (DSP1D)



■ JK4 CIRCUIT DIAGRAM 004 (DSP1D)

■ JK5 CIRCUIT DIAGRAM 1/2 (DSP1D)

[REMOTE]

[RS-422]

[GPI]

[TIME CODE IN]

DSP1D

LINE TRANSCEIVER

INVERTER

BUFFER

D-FF

TRANSISTOR ARRAY

COMPARATOR

OP AMP

to IFC1-CN303

to IFC1-CN303

to IFC1-CN303

RS-422A, GPI, TIME CODE I/F SECTION

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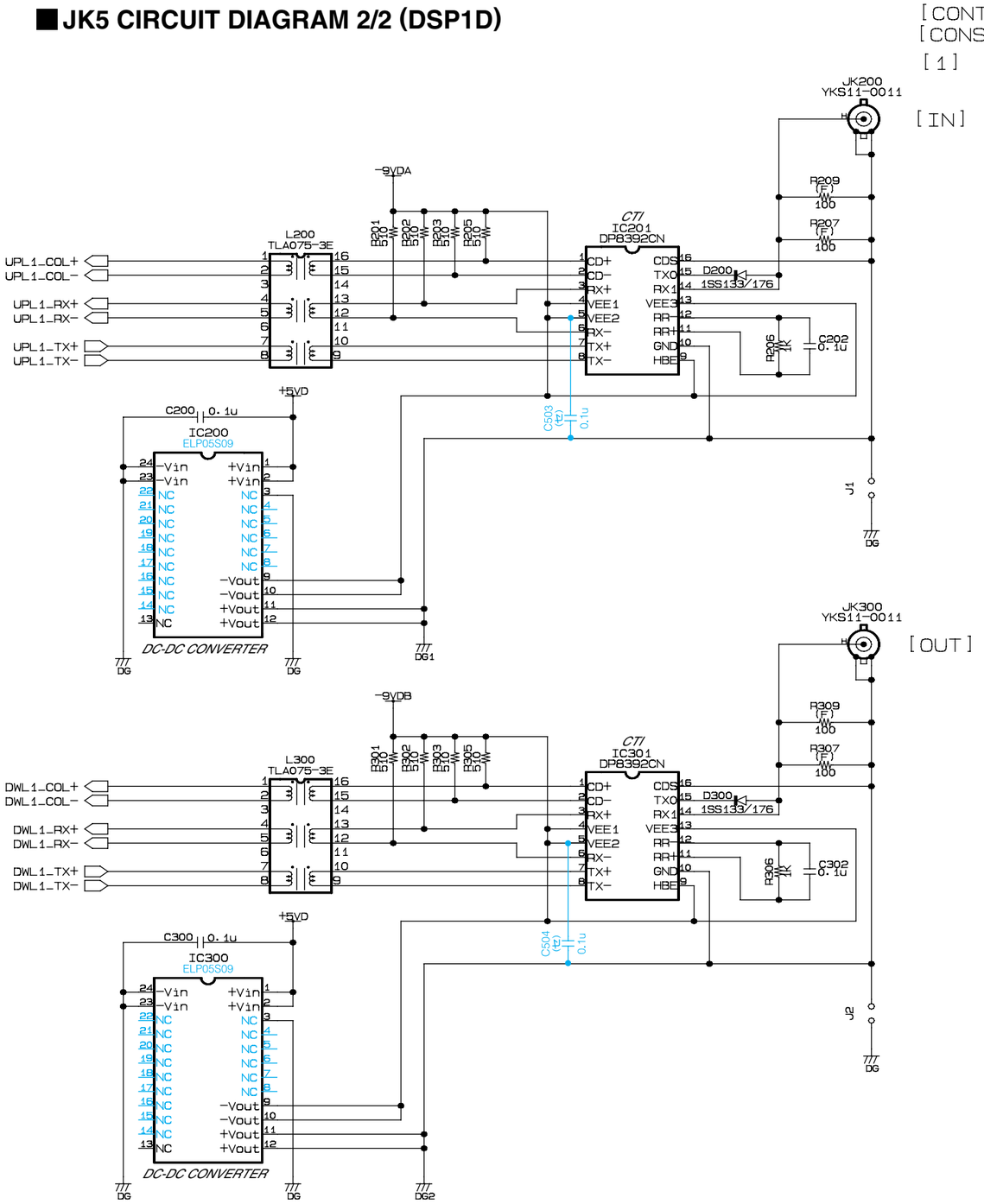
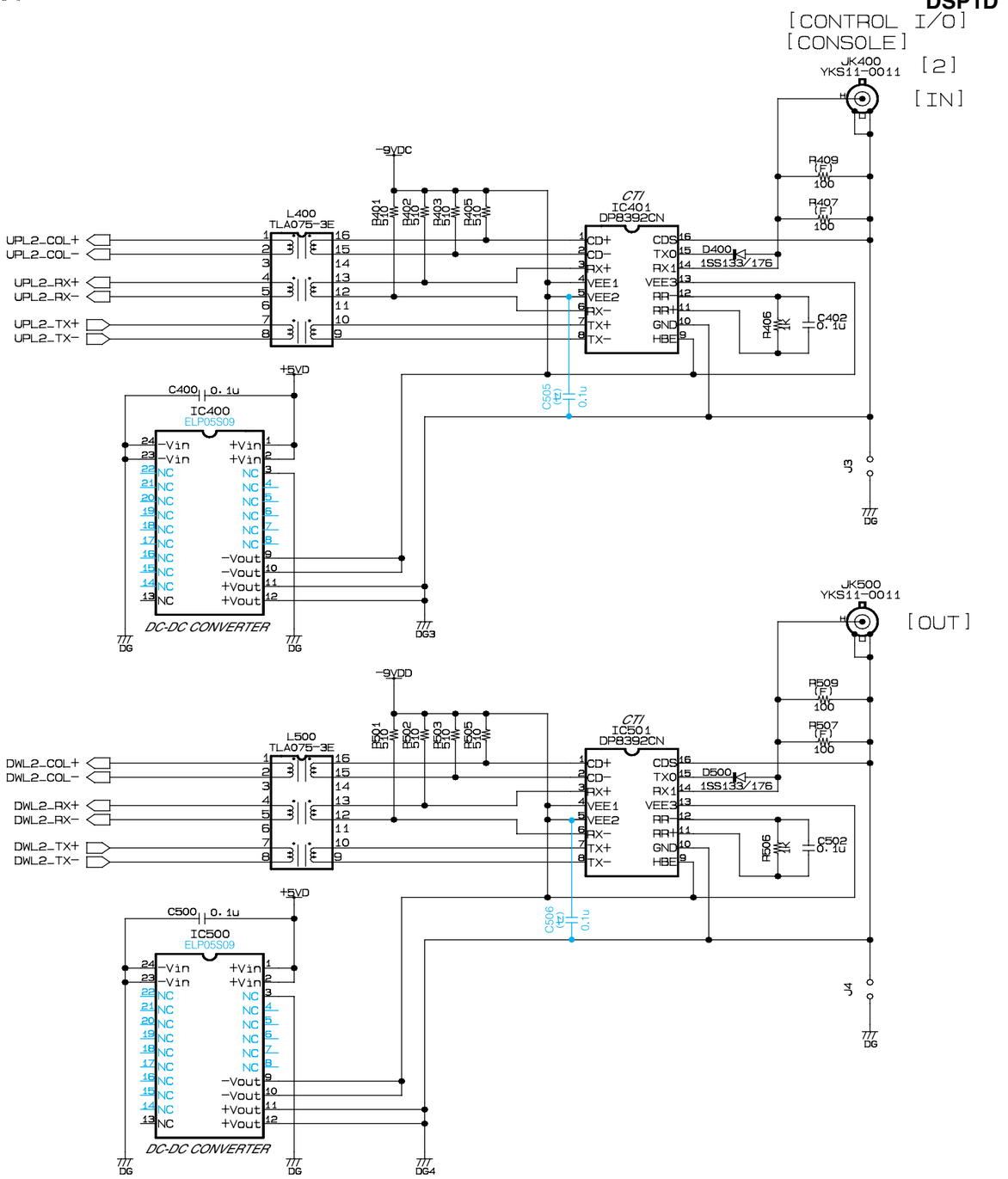
■ JK5 CIRCUIT DIAGRAM 1/2 (DSP1D)

■JK5 CIRCUIT DIAGRAM 2/2 (DSP1D)

DSP1D





(F): Metal Film Resistor

Ethernet I/F SECTION

■JK5 CIRCUIT DIAGRAM 003 (DSP1D)

■ JK6 CIRCUIT DIAGRAM 1/2 (DSP1D)

DSP1D

[MIDI]

[IN]

[OUT]

[THRU]

JK100
YKF51-50045
Front View

[PC CONTROL]

[RS-232-C]

CN101
17LE-23050-27(D4CH)

[USB]

CN103
YKF40-0002

PHOTO COUPLER

IC101
HCPL-0600-500

INVERTER

IC107
LV14A

IC108
LS06

IC100
LV04A

RS-232C

IC102
MAX232CSE

USB I/F

IC105
PDIUSBD12PW

TRANSCEIVER

IC103
VHC245

IC104
VHC245

IC106
VHC245

EM100
LS-MT-B271KB

EM101
LS-MT-B271KB

EM102
LS-MT-B271KB

EM103
LS-MT-Y223NB

MIDI_OUT1
MIDI_IN1
HOST_IN
HOST_OUT
DSPRES
WC_OUT
LOCKWC
WC_IN
MIDI_OUT
MIDI_IN1

CN100
53320-0960
a

CN100
53320-0960
b

CN100
53320-0960
c

to IFC1-CN304

to IFC1-CN304

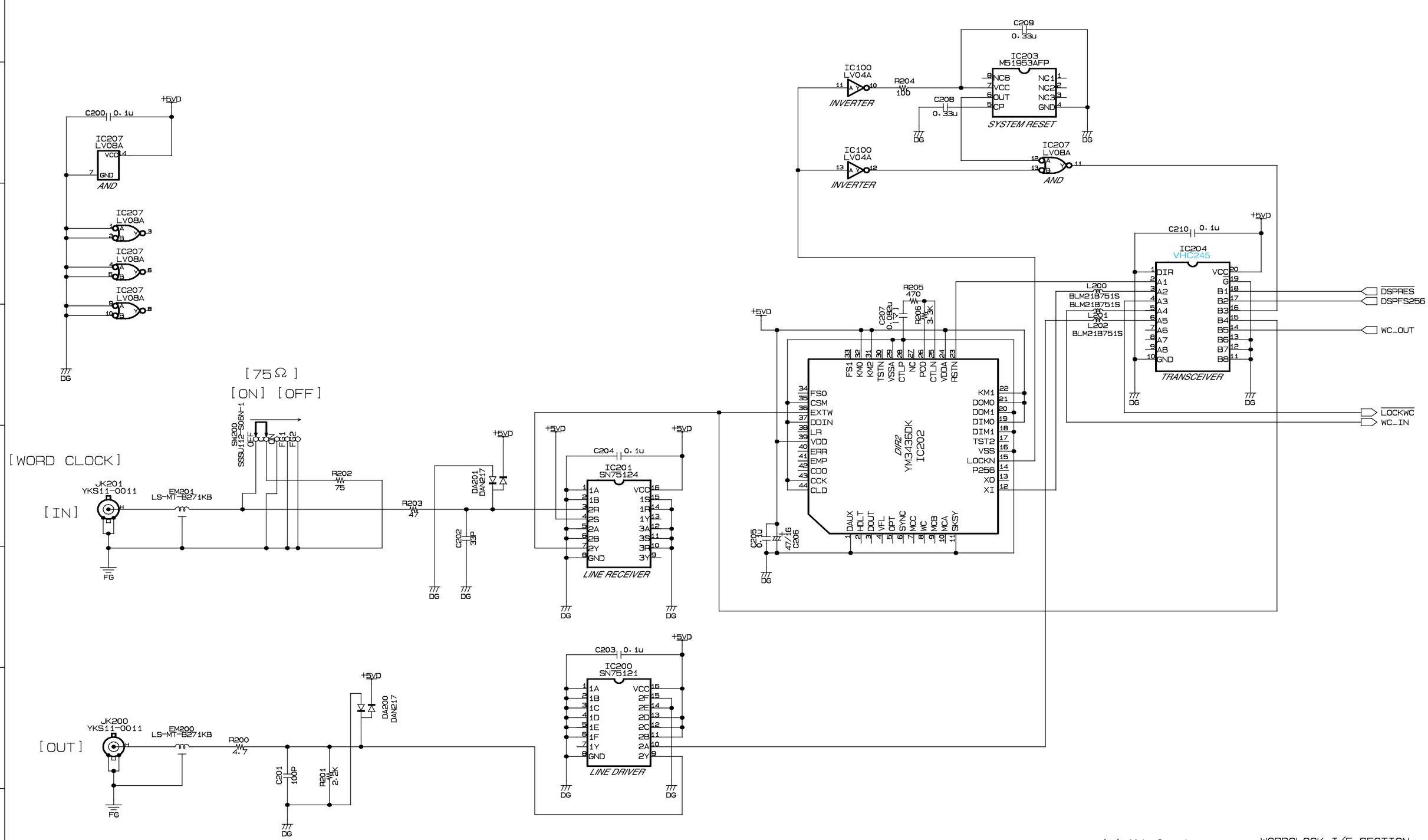
to IFC1-CN304

MIDI・RS-232C・USB I/F SECTION

■ JK6 CIRCUIT DIAGRAM 1/2 (DSP1D)

KEC-92484-2

■JK6 CIRCUIT DIAGRAM 2/2 (DSP1D)

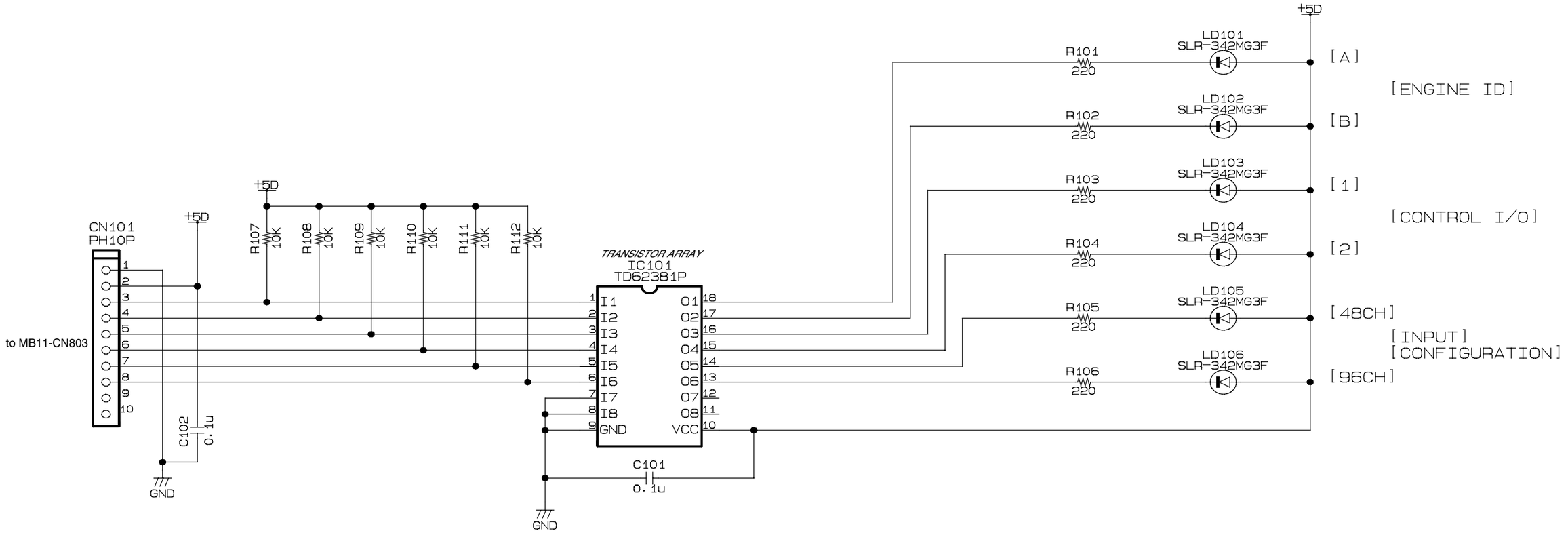


(マ): Mylar Capacitor

WORDCLOCK I/F SECTION

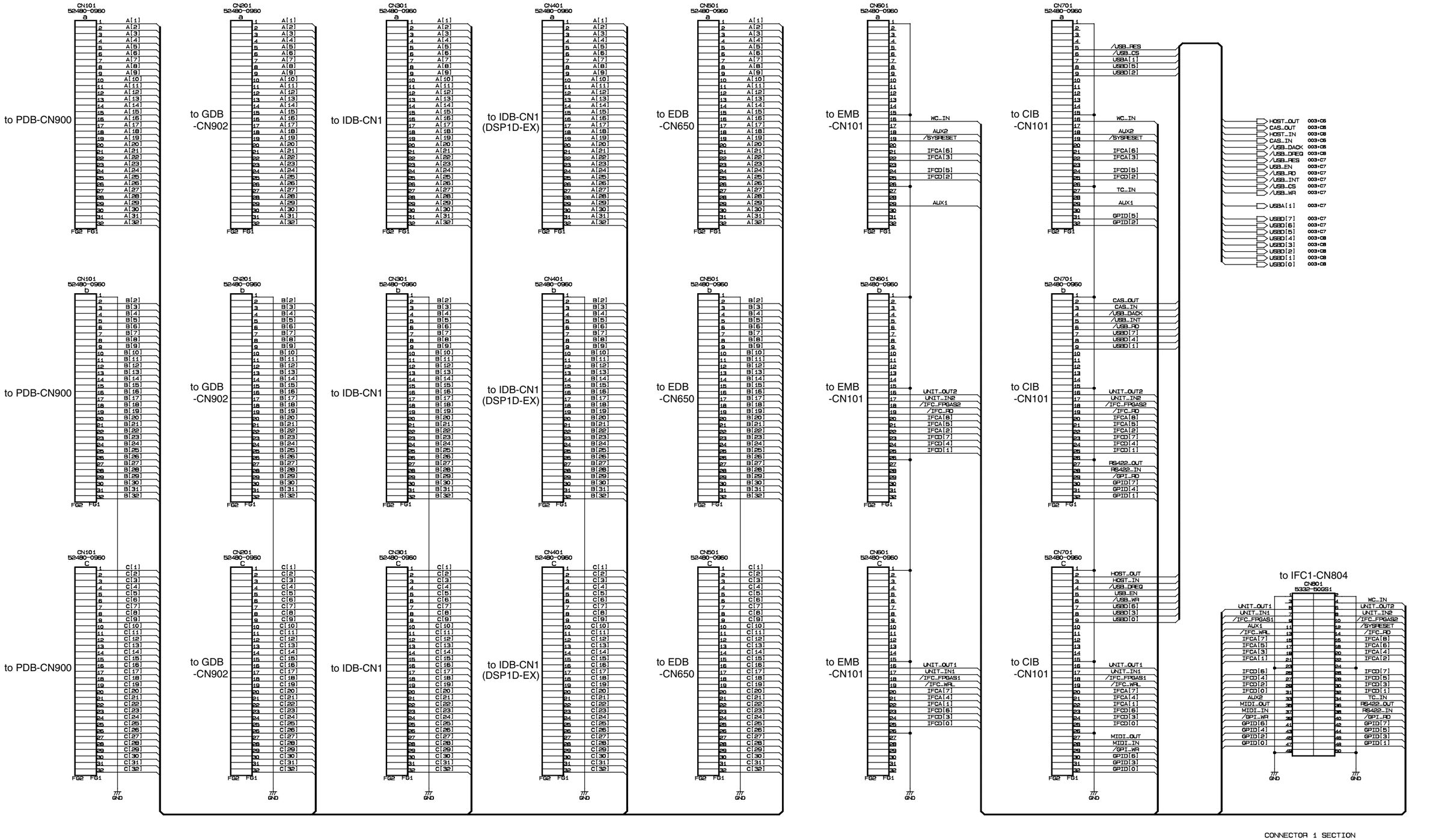
■JK6 CIRCUIT DIAGRAM 2/2 (DSP1D)

■ LED2 CIRCUIT DIAGRAM (DSP1D)



■ MB11 CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

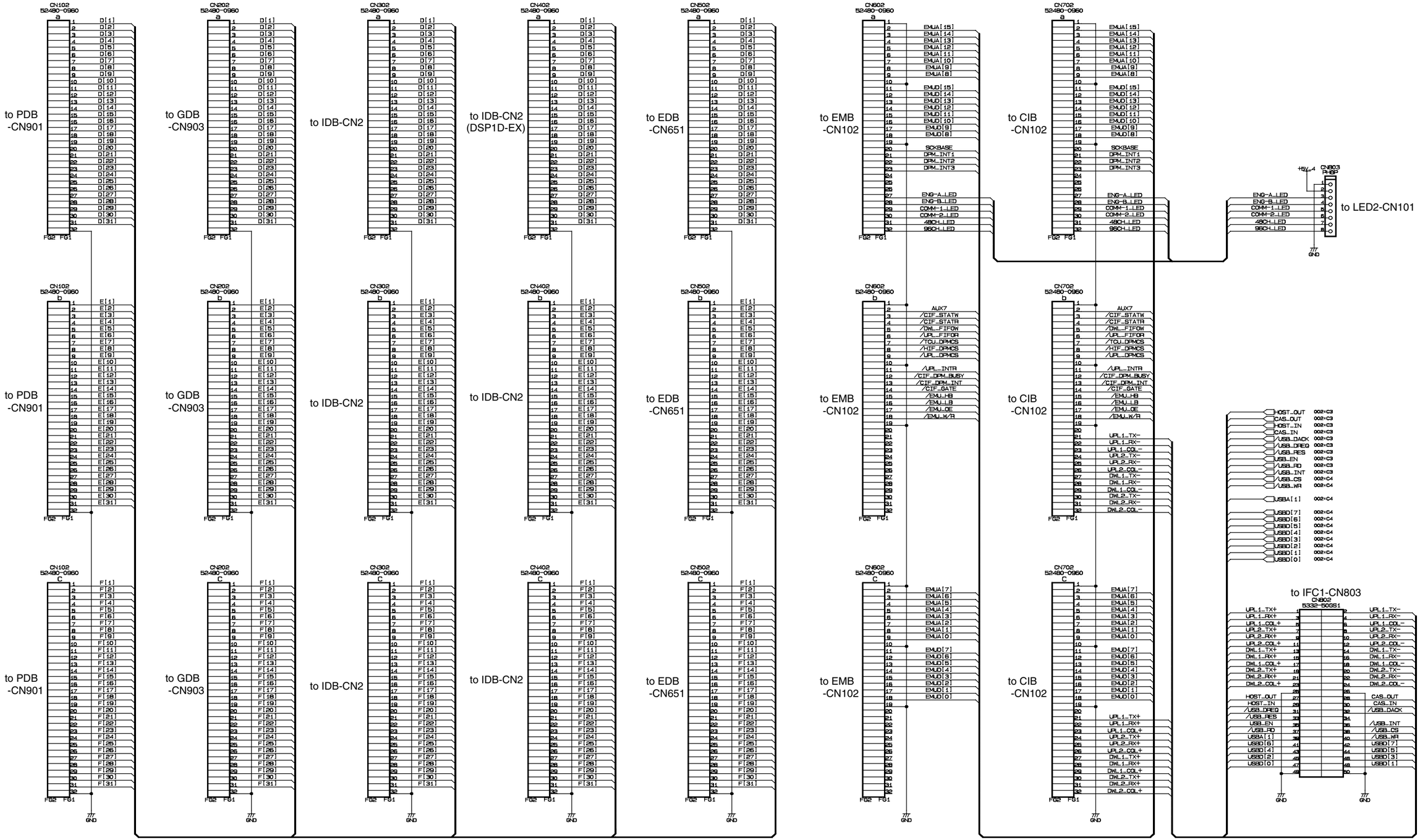


CONNECTOR 1 SECTION

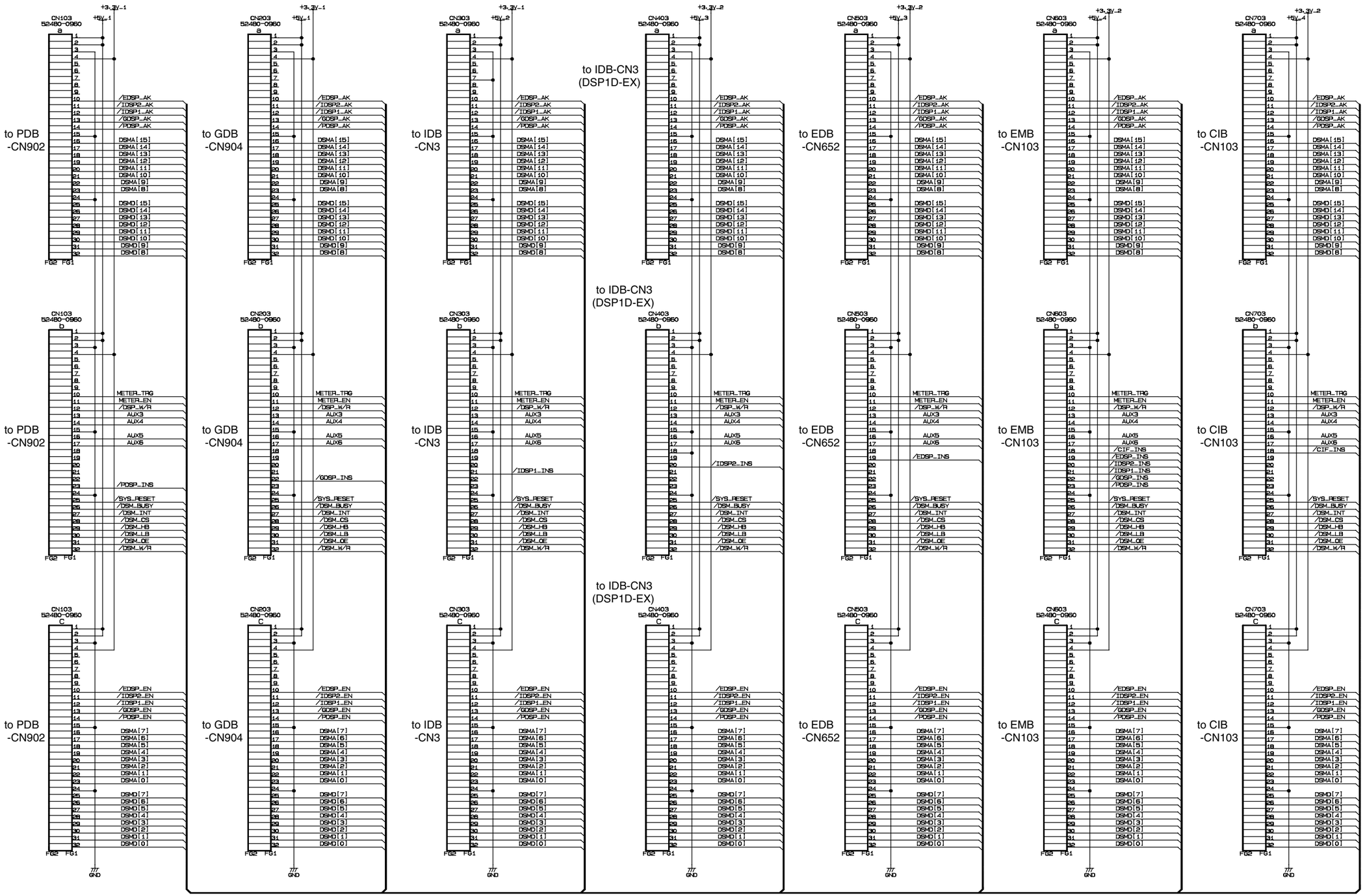
■ MB11 CIRCUIT DIAGRAM 002 (DSP1D)

■ MB11 CIRCUIT DIAGRAM 003 (DSP1D)

DSP1D



■ MB11 CIRCUIT DIAGRAM 004 (DSP1D)



■ MB11 CIRCUIT DIAGRAM 004 (DSP1D)

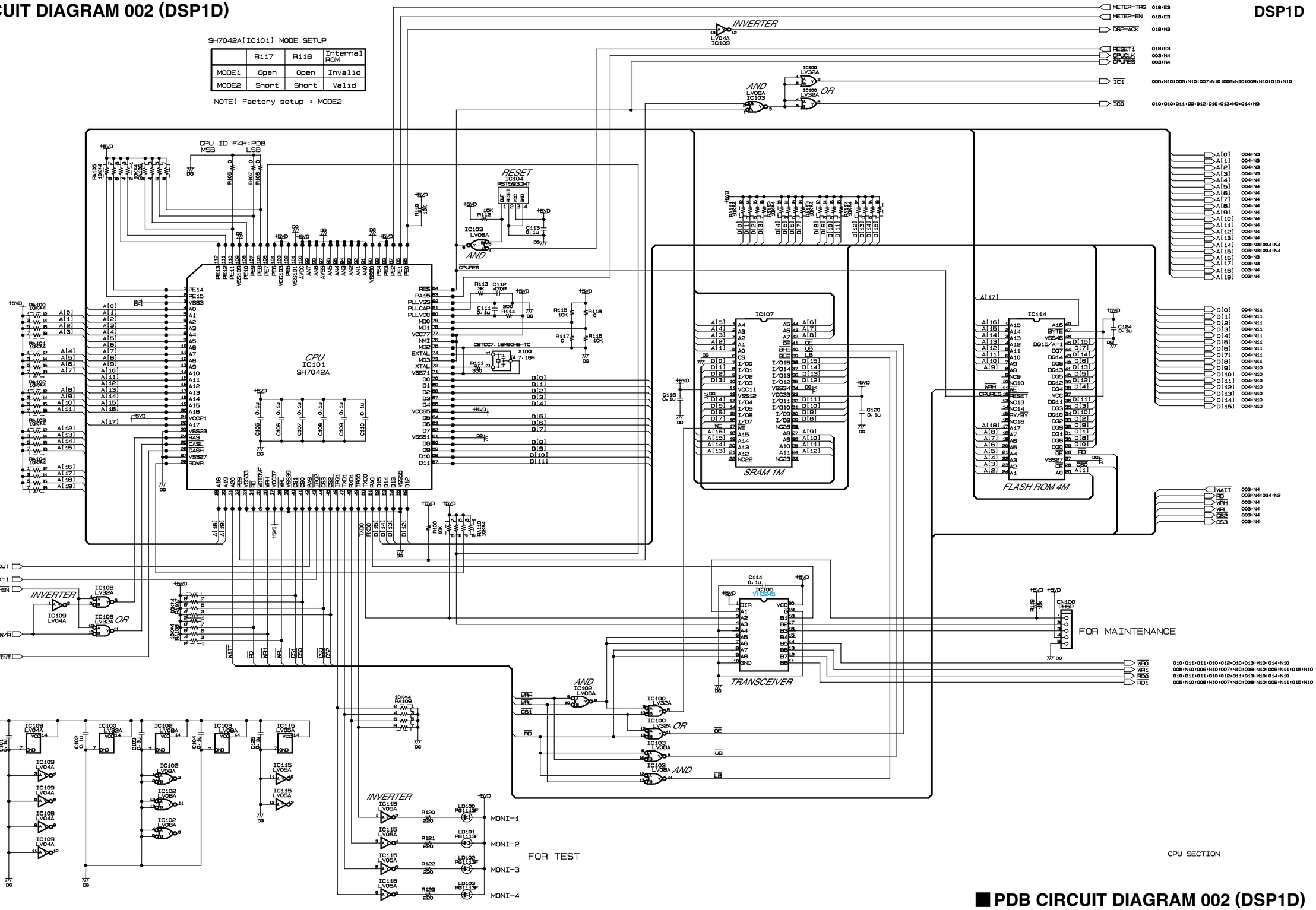
■ PDB CIRCUIT DIAGRAM 002 (DSP1D)

DSP1D

SH7042A(IC101) MODE SETUP

	R117	R118	Internal ROM
MODE1	Open	Open	Invalid
MODE2	Short	Short	Valid

NOTE) Factory setup : MODE2

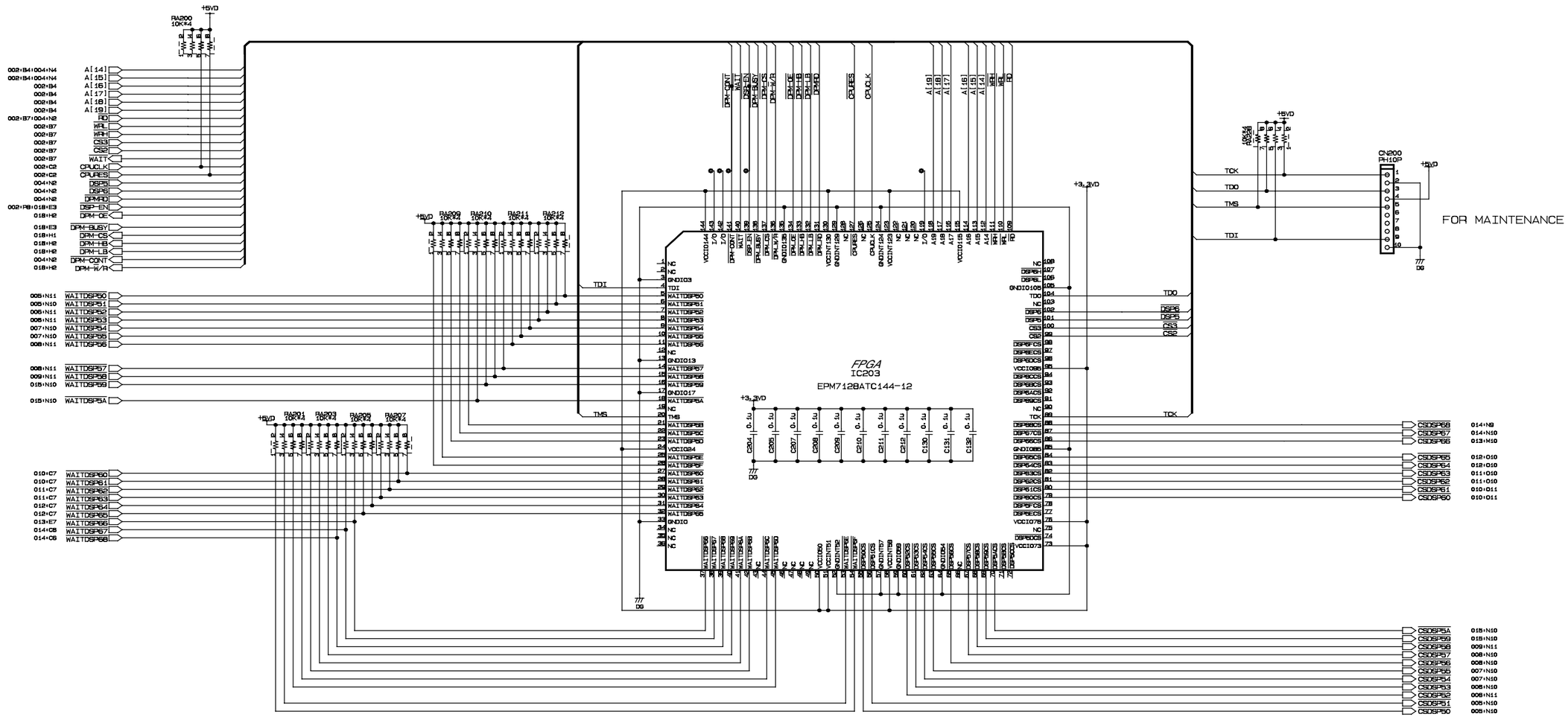


CPU SECTION

KEC-92486-2

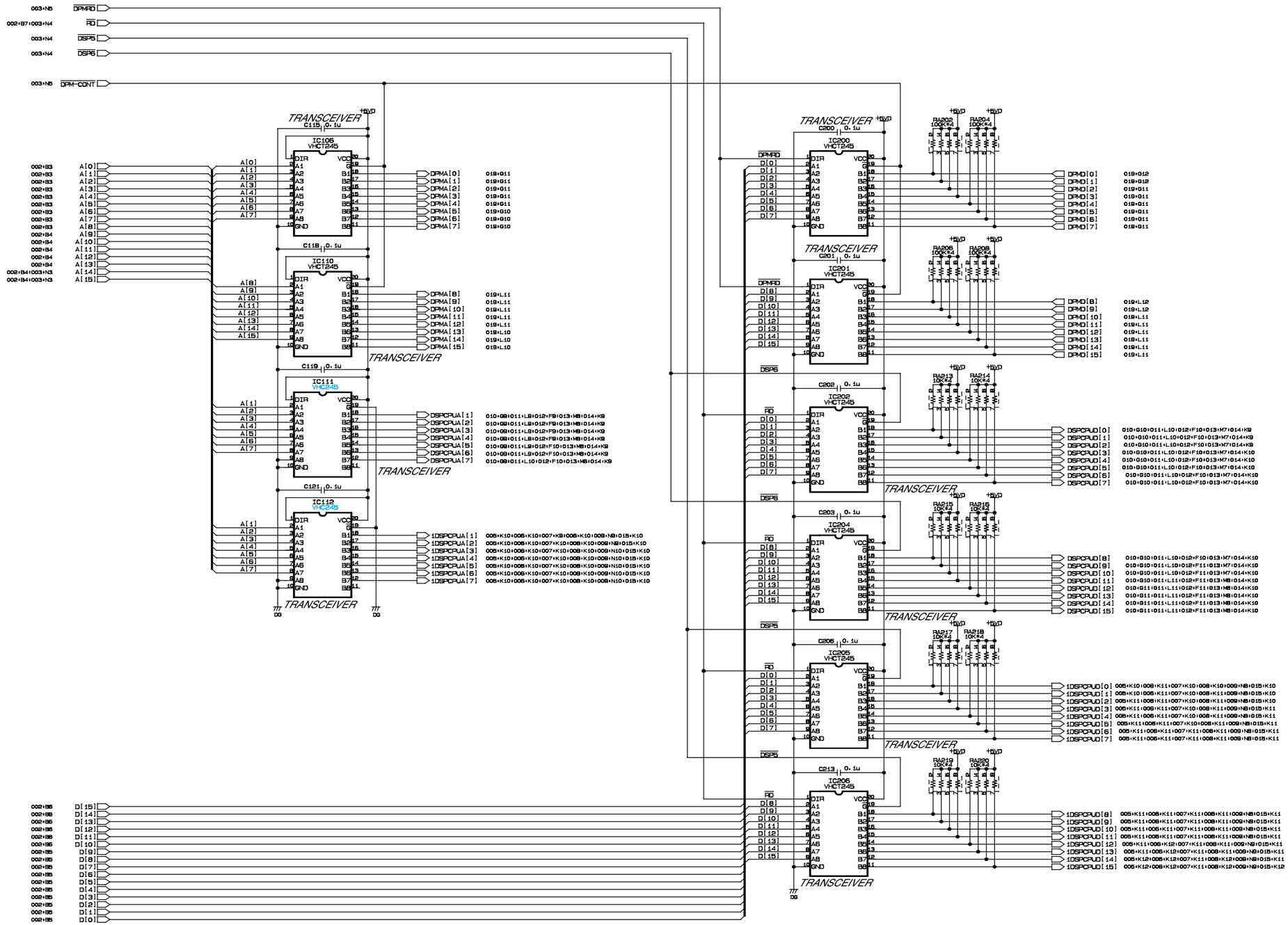
■ PDB CIRCUIT DIAGRAM 002 (DSP1D)

■ PDB CIRCUIT DIAGRAM 003 (DSP1D)



■ PDB CIRCUIT DIAGRAM 003 (DSP1D)

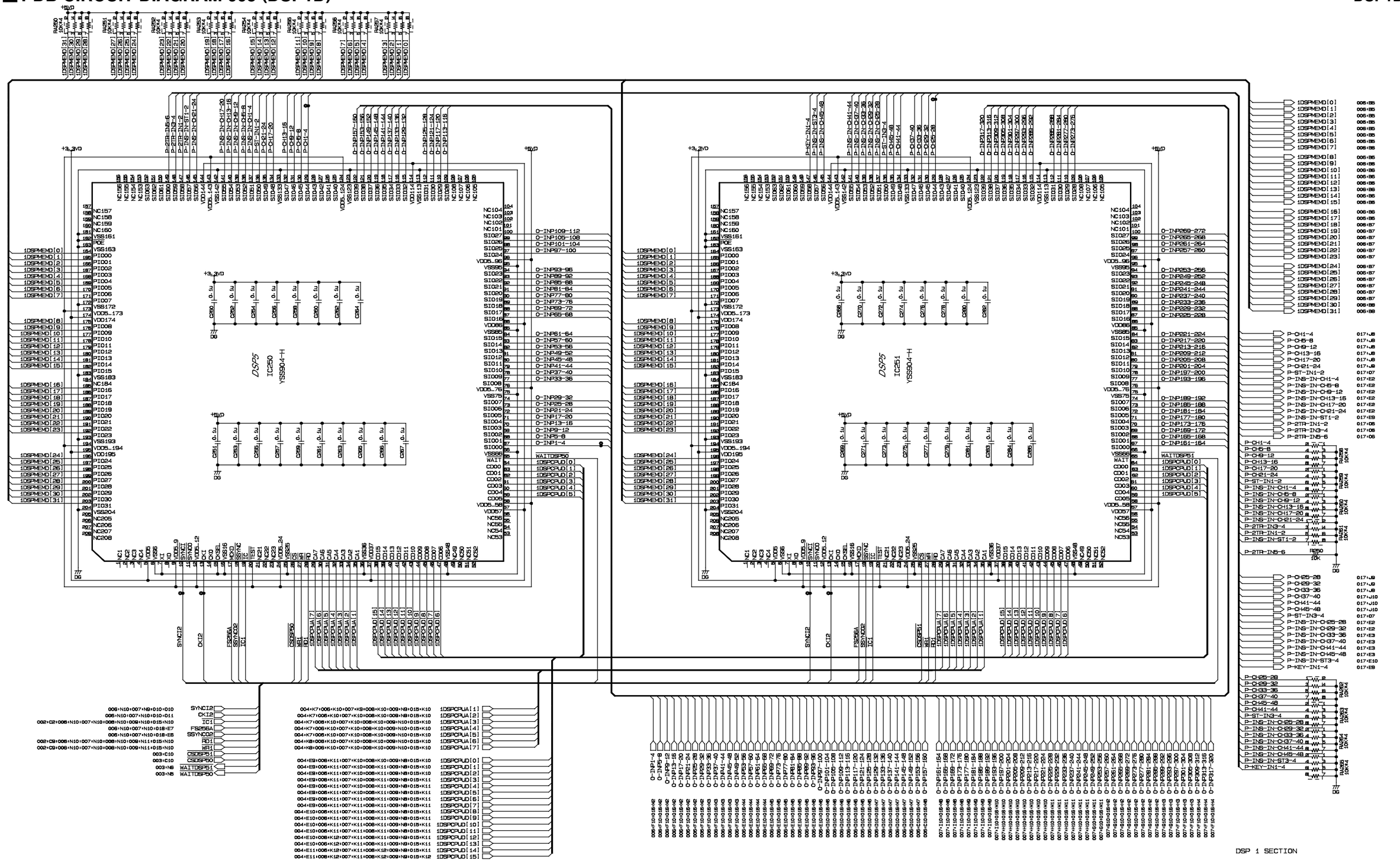
■ PDB CIRCUIT DIAGRAM 004 (DSP1D)



ADDRESS DATA BUFFER SECTION

■ PDB CIRCUIT DIAGRAM 005 (DSP1D)

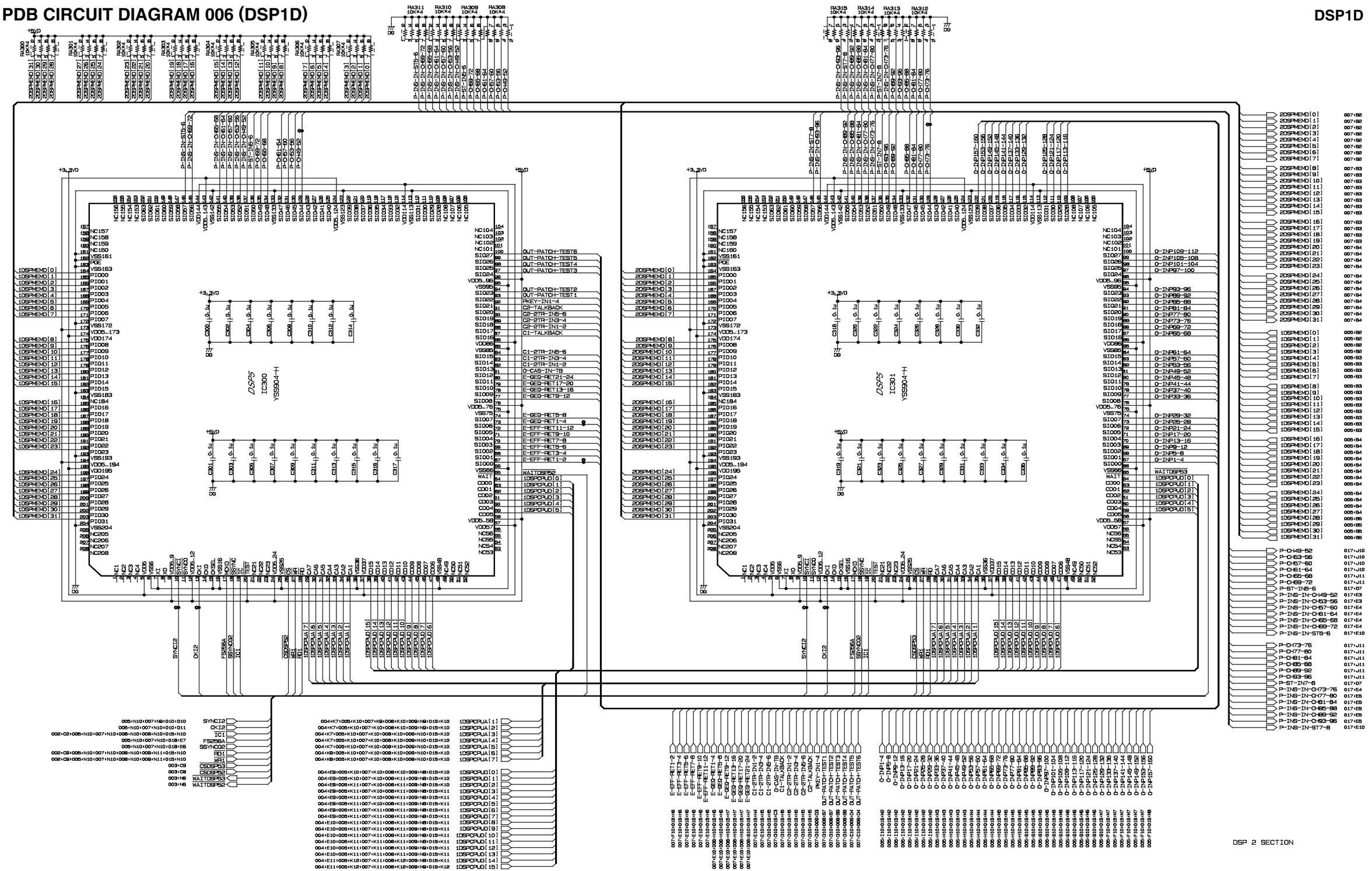
DSP1D



■ PDB CIRCUIT DIAGRAM 005 (DSP1D)

■ PDB CIRCUIT DIAGRAM 006 (DSP1D)

DSP1D



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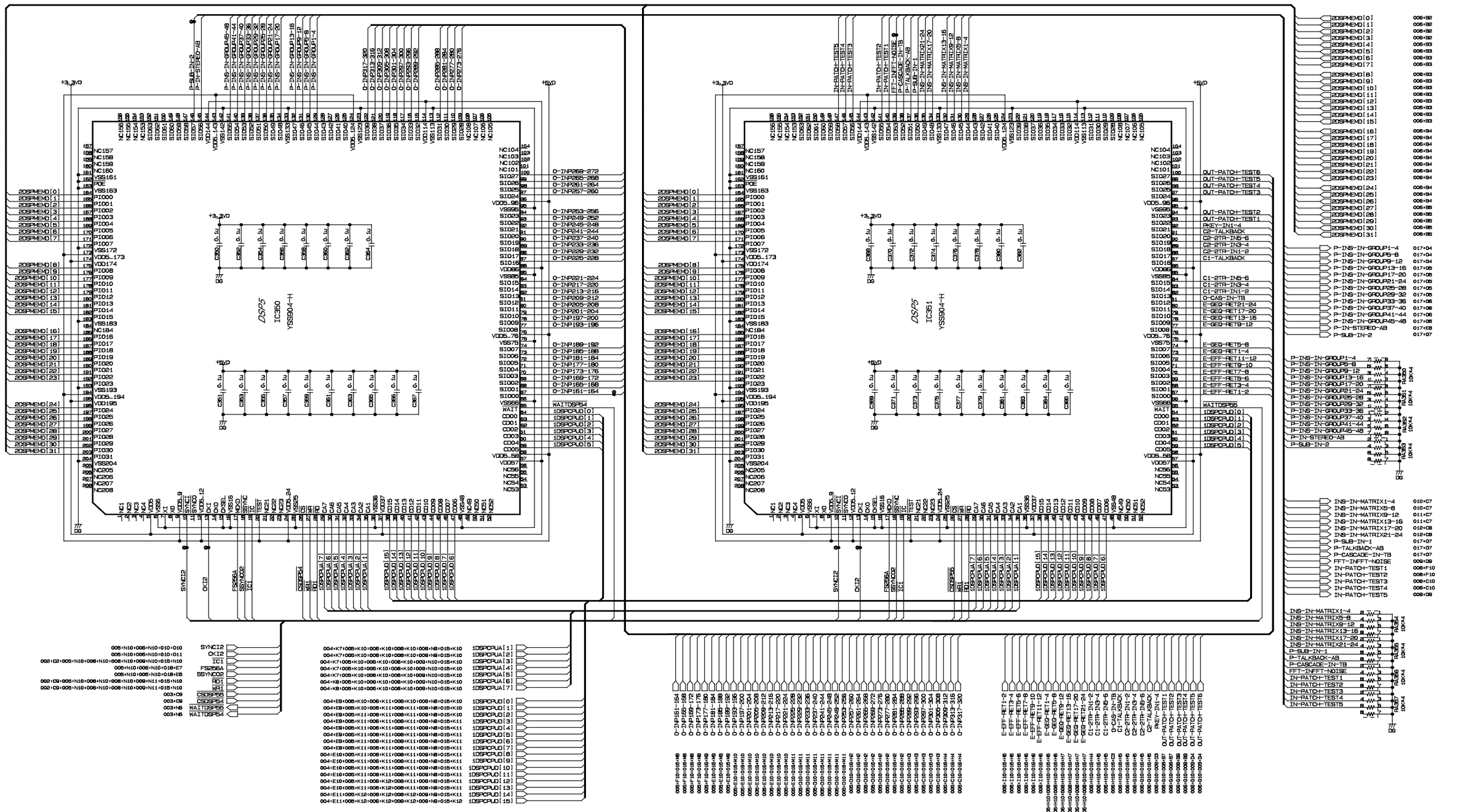
■ PDB CIRCUIT DIAGRAM 006 (DSP1D)

■ PDB CIRCUIT DIAGRAM 007 (DSP1D)

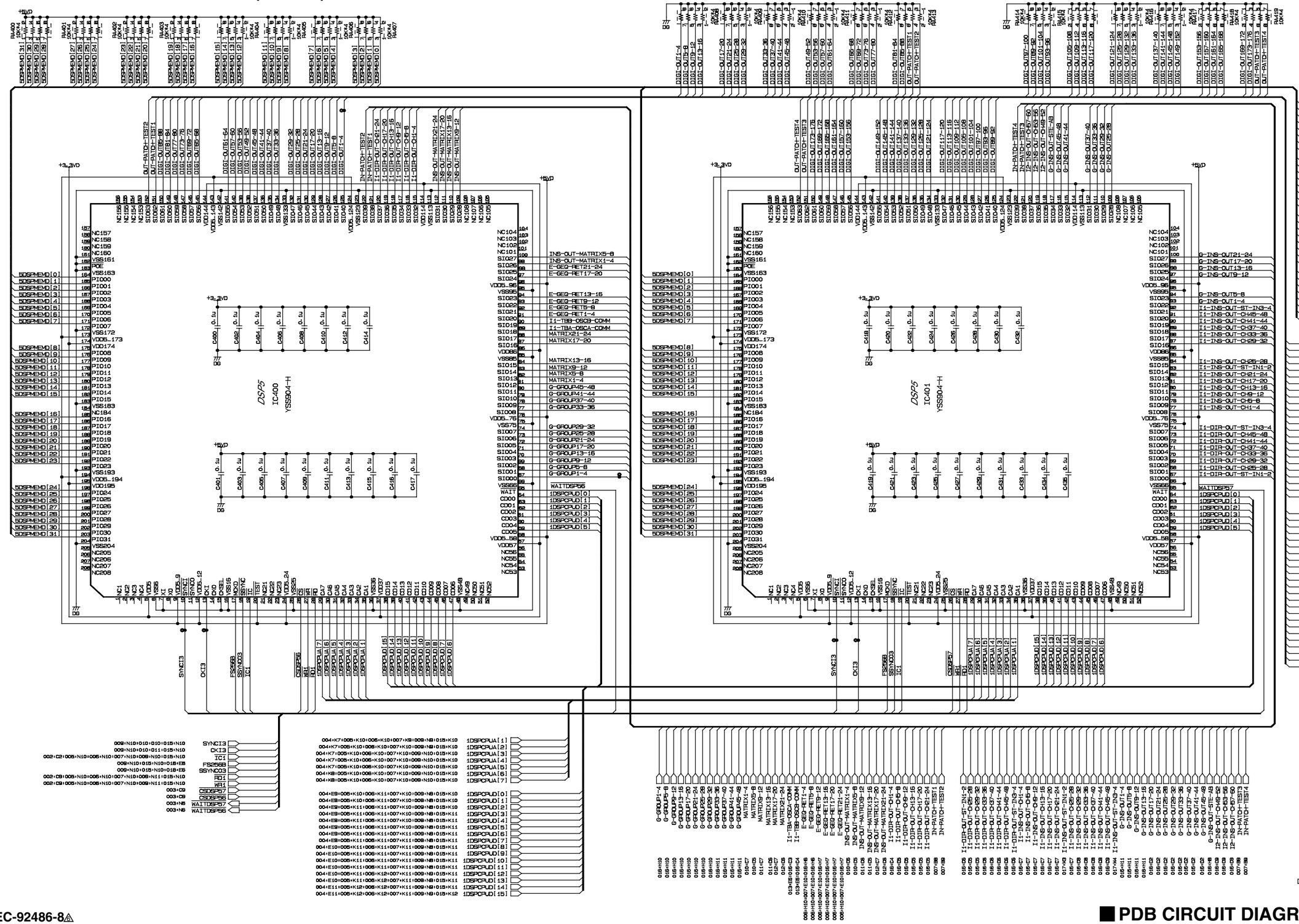
DSP1D



■ PDB CIRCUIT DIAGRAM 007 (DSP1D)

■ PDB CIRCUIT DIAGRAM 008 (DSP1D)

DSP1D



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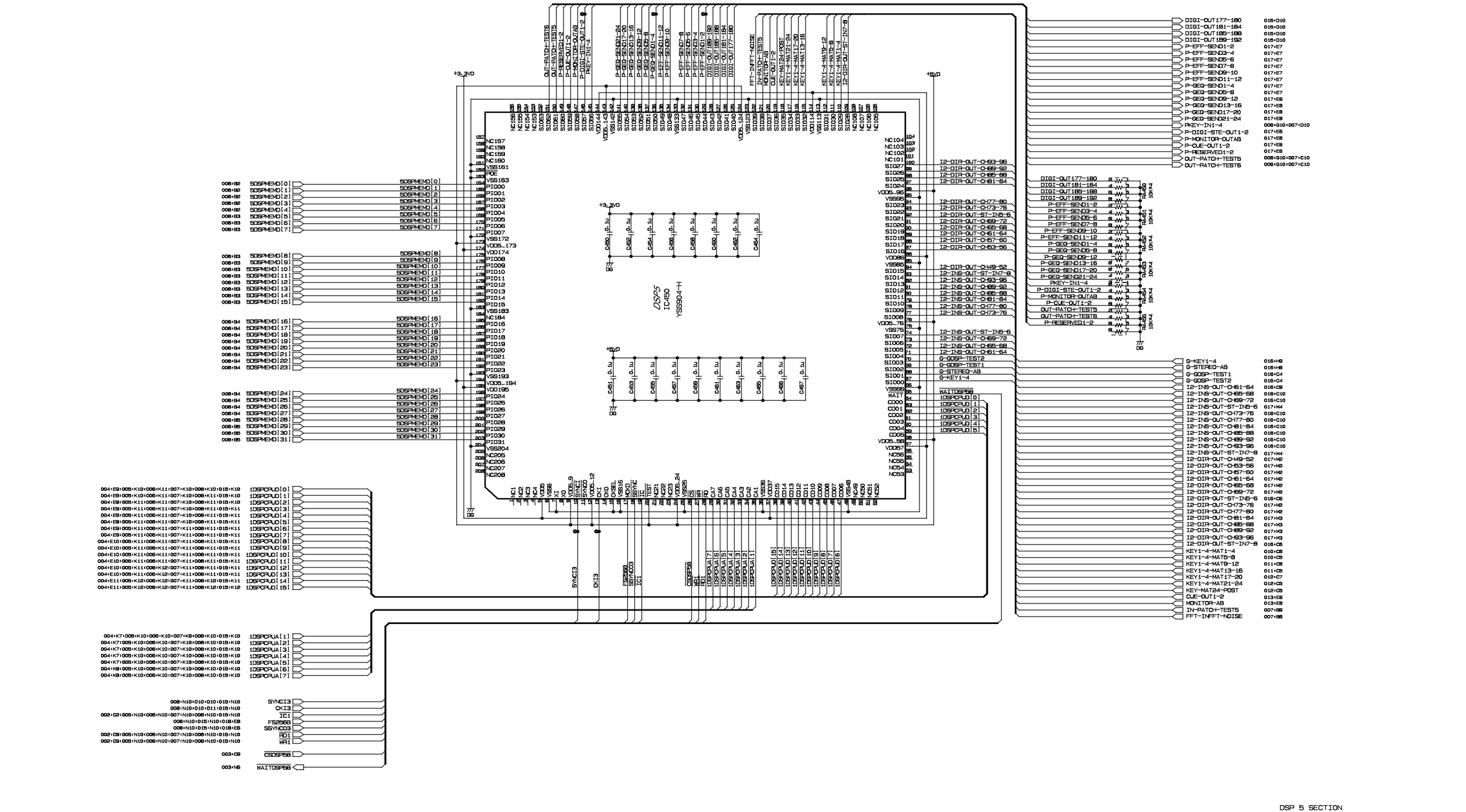
■ PDB CIRCUIT DIAGRAM 008 (DSP1D)

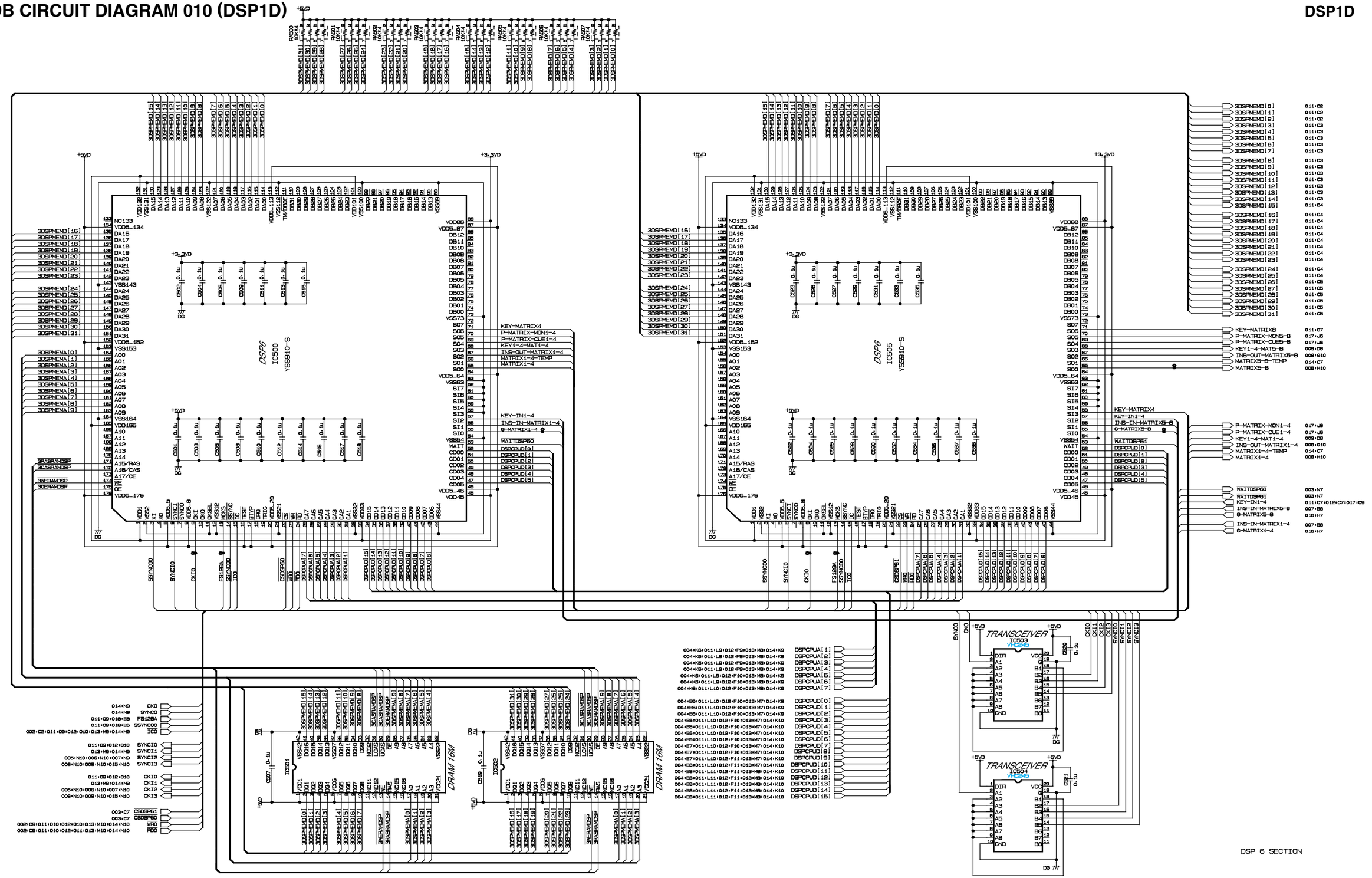
■ PDB CIRCUIT DIAGRAM 009 (DSP1D)



DSP 5 SECTION

■ PDB CIRCUIT DIAGRAM 009 (DSP1D)

■ PDB CIRCUIT DIAGRAM 010 (DSP1D)



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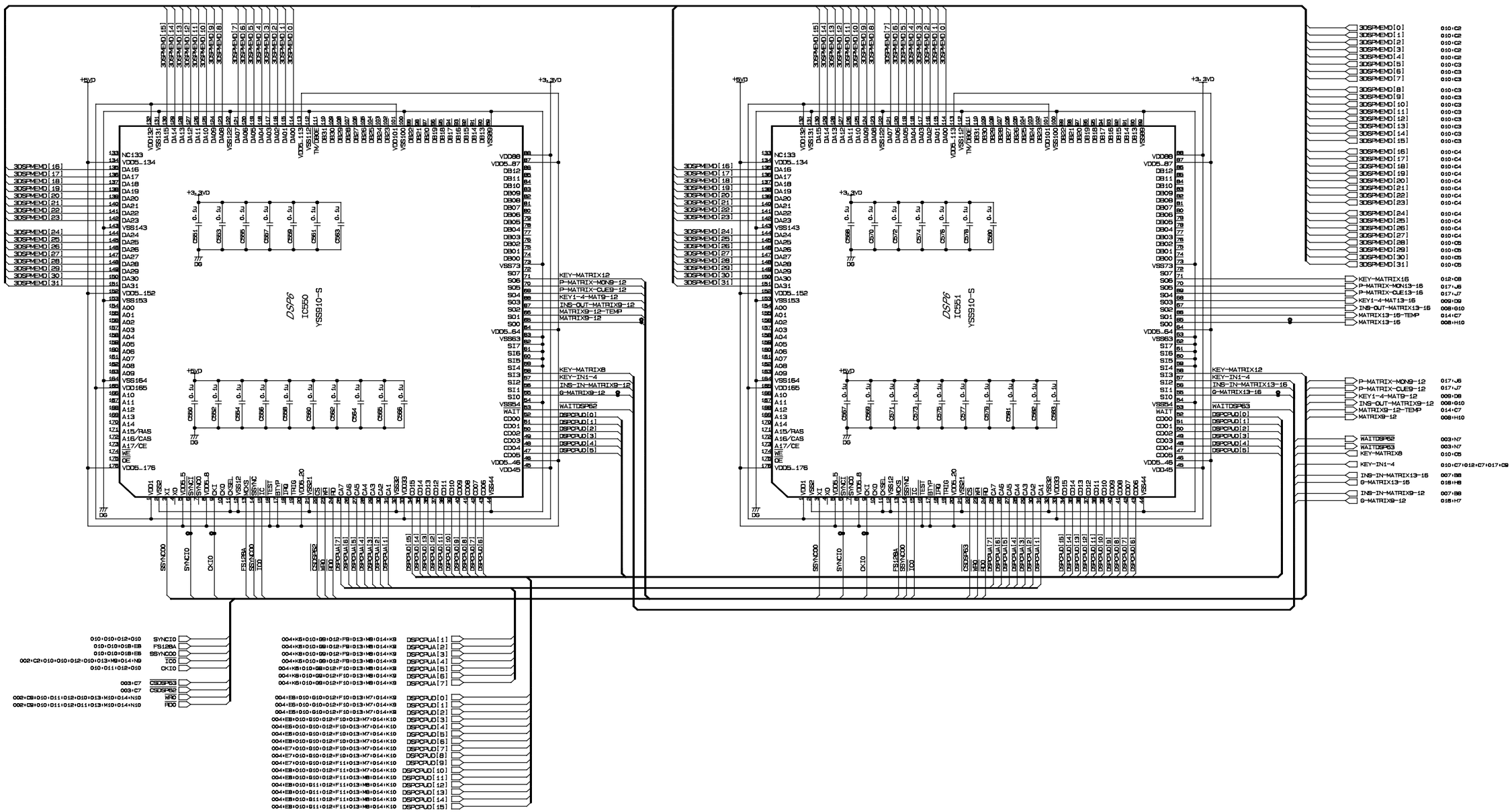
■ PDB CIRCUIT DIAGRAM 010 (DSP1D)

■ PDB CIRCUIT DIAGRAM 011 (DSP1D)

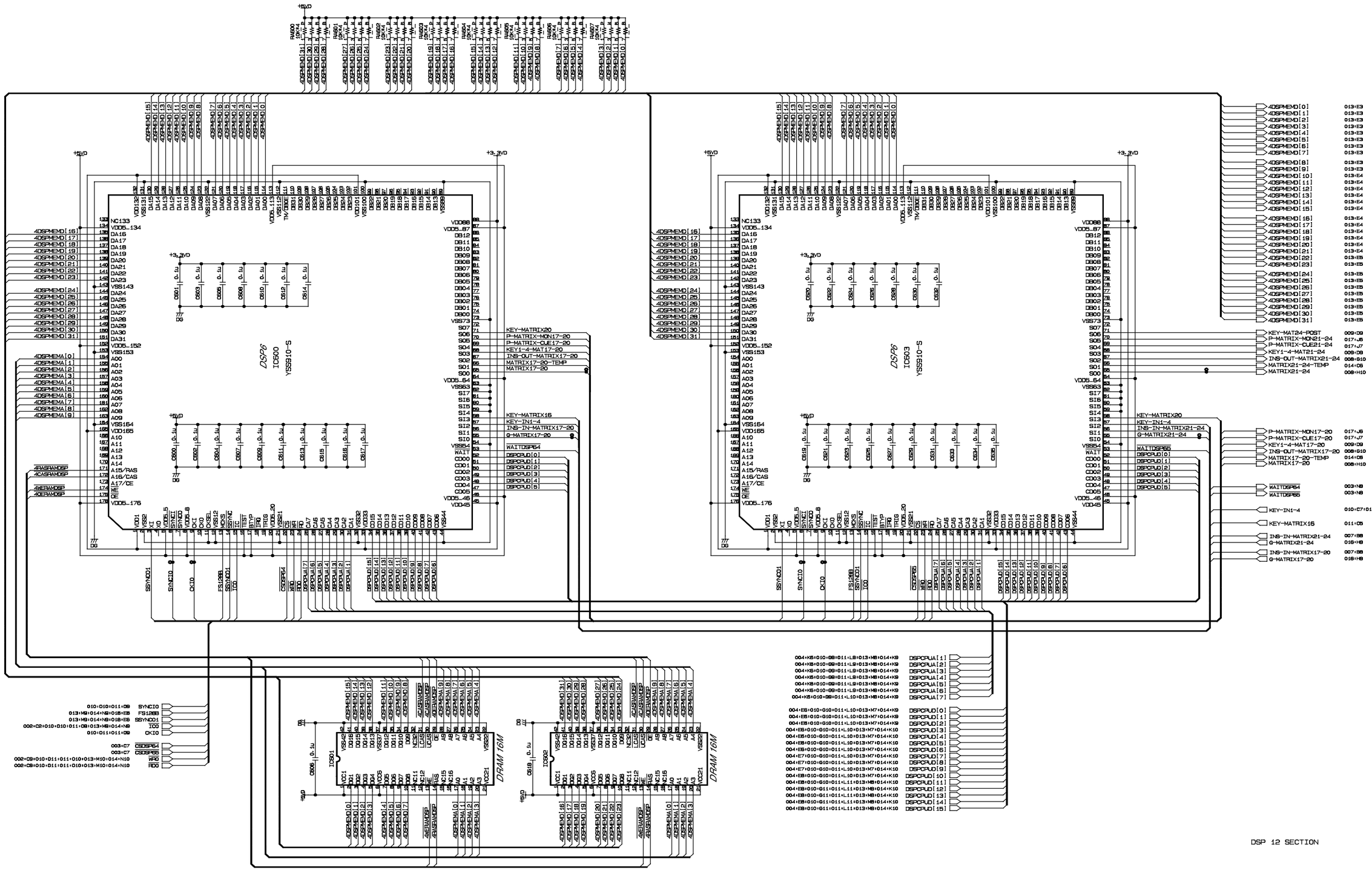
DSP1D



■ PDB CIRCUIT DIAGRAM 011 (DSP1D)

■ PDB CIRCUIT DIAGRAM 012 (DSP1D)

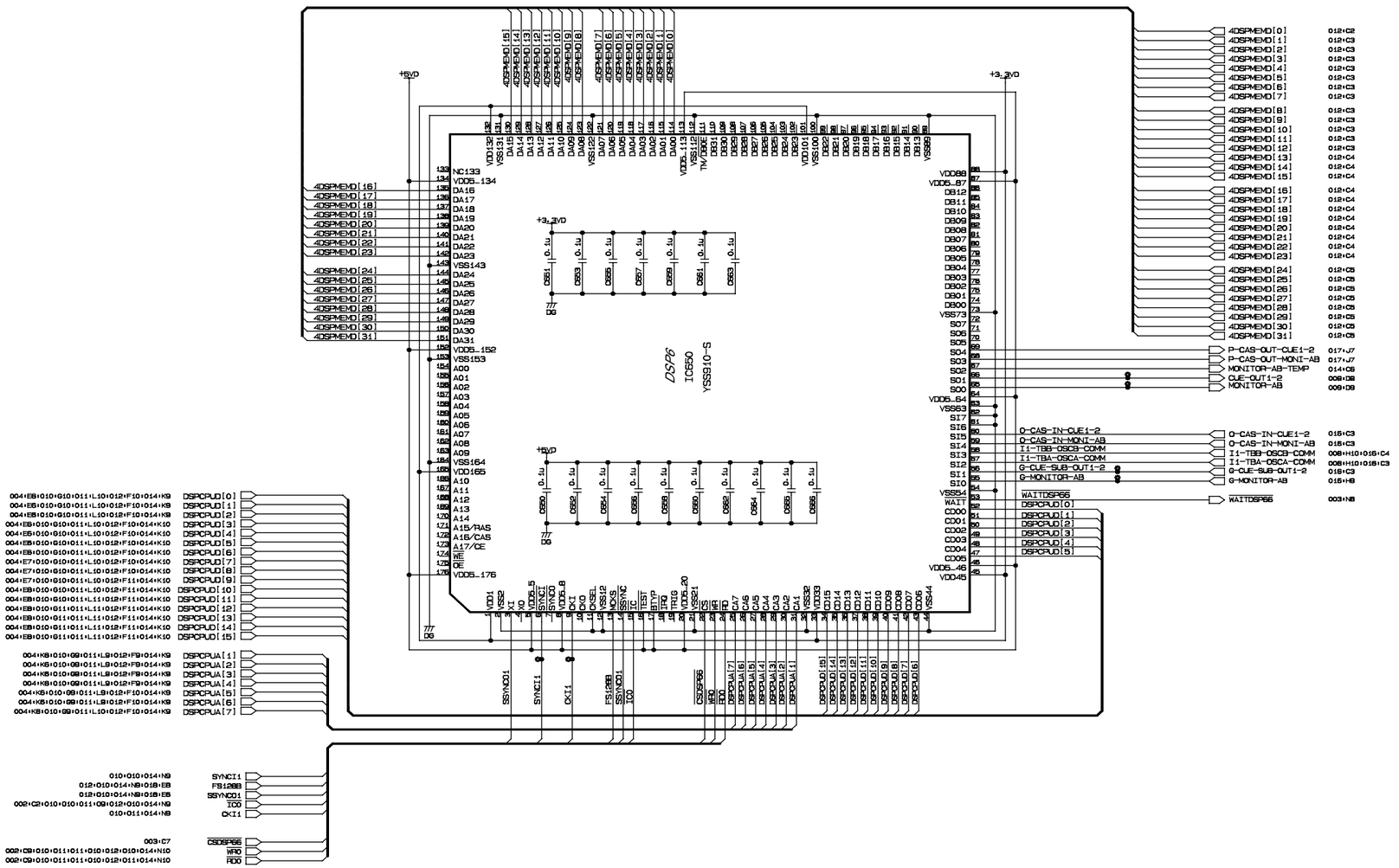
DSP1D



■ PDB CIRCUIT DIAGRAM 012 (DSP1D)

■ PDB CIRCUIT DIAGRAM 013 (DSP1D)

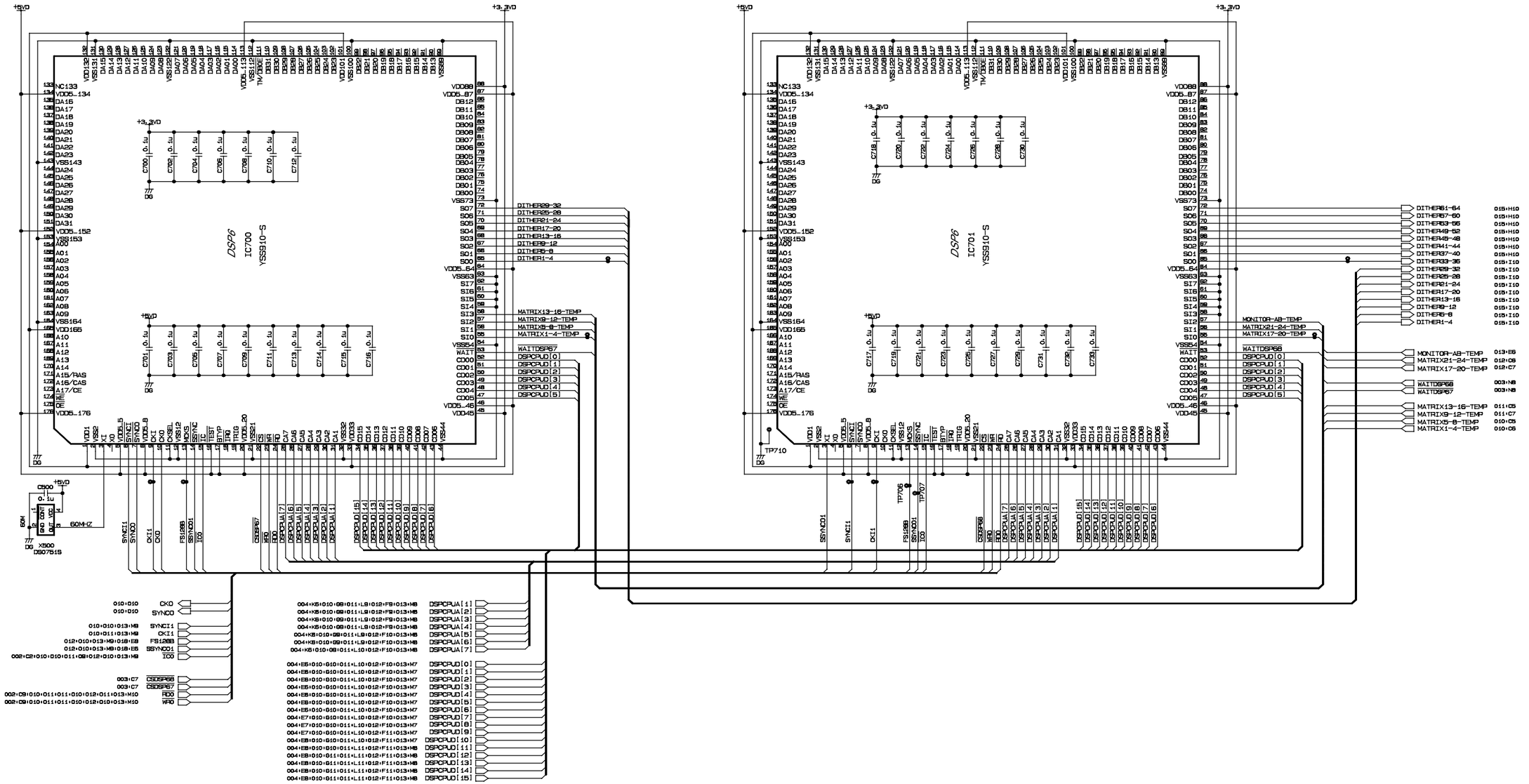
DSP1D



DSP 9 SECTION

■ PDB CIRCUIT DIAGRAM 013 (DSP1D)

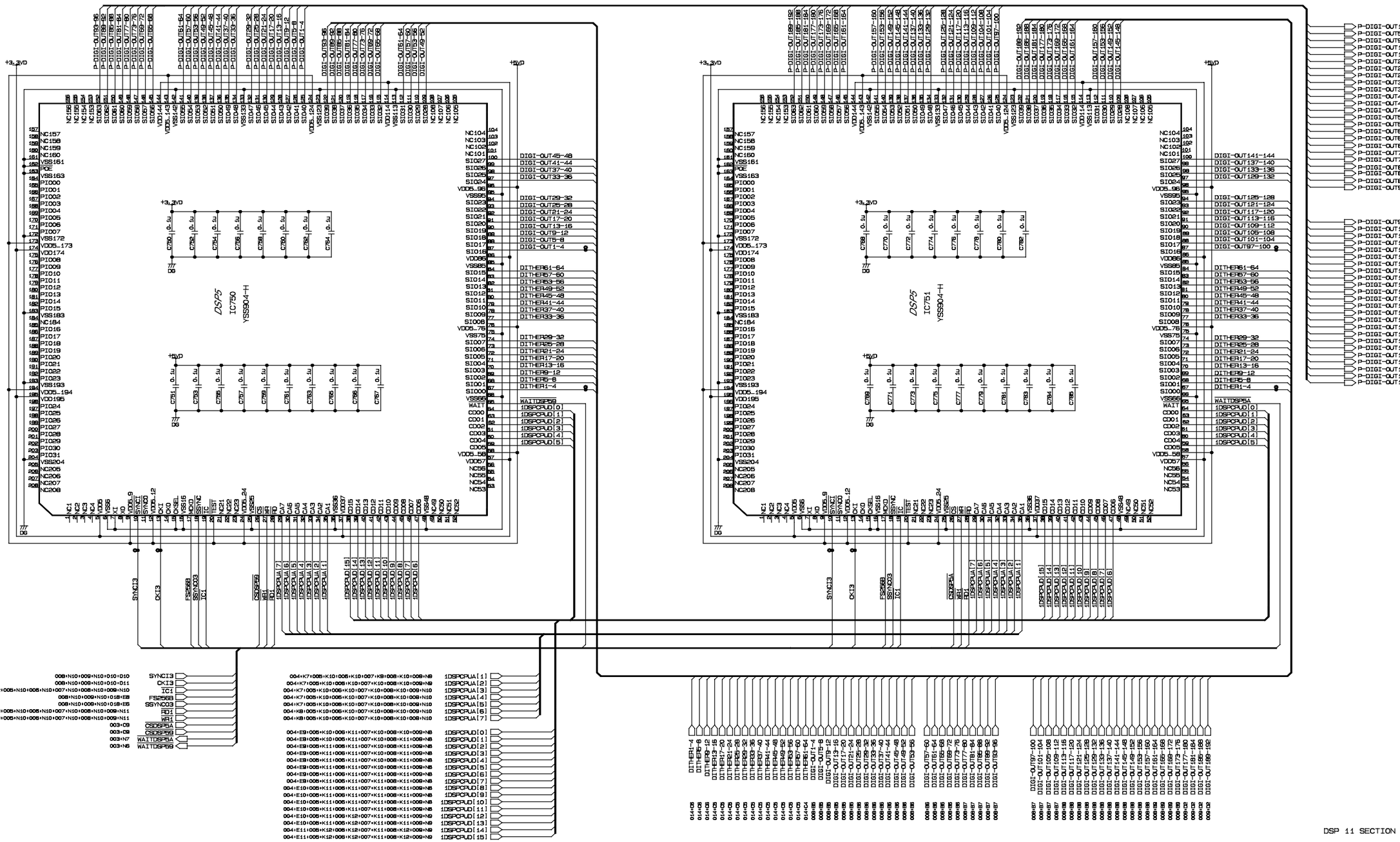
■ PDB CIRCUIT DIAGRAM 014 (DSP1D)



DSP 10 SECTION

■ PDB CIRCUIT DIAGRAM 015 (DSP1D)

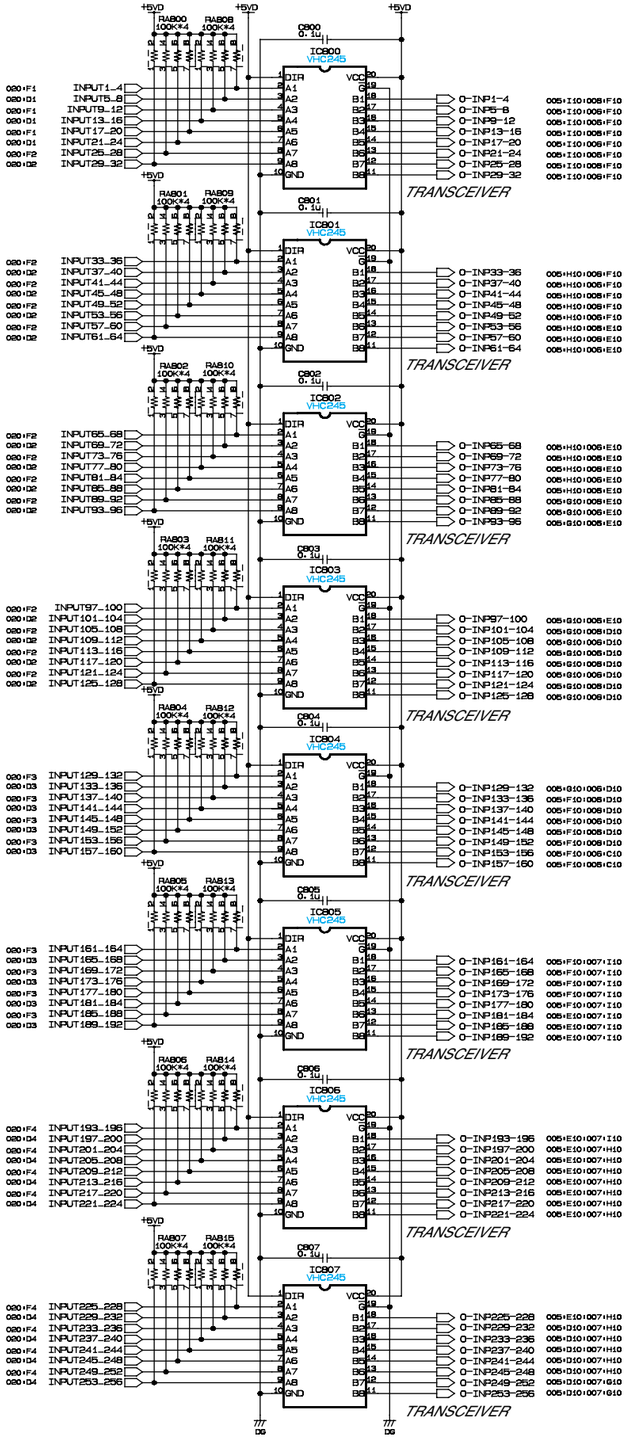
DSP1D

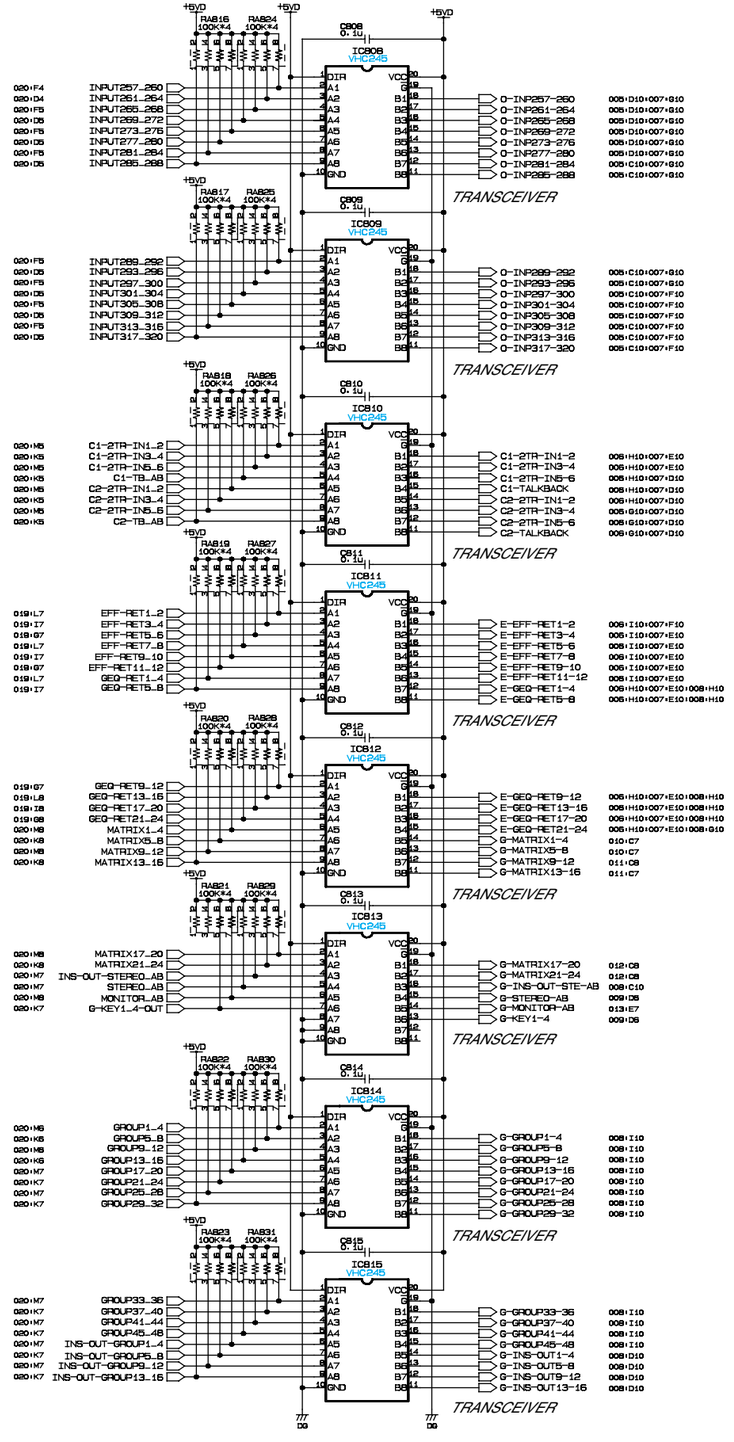


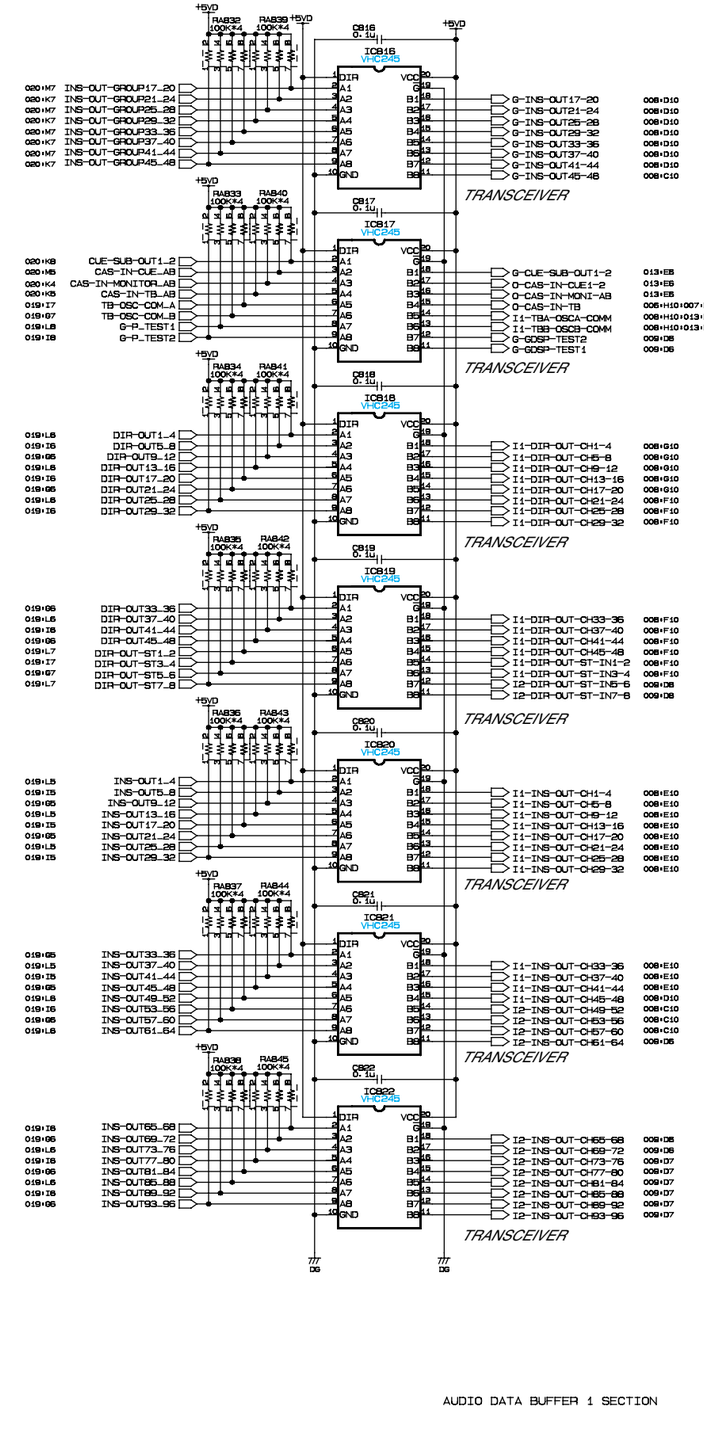
■ PDB CIRCUIT DIAGRAM 015 (DSP1D)

■ PDB CIRCUIT DIAGRAM 016 (DSP1D)

DSP1D

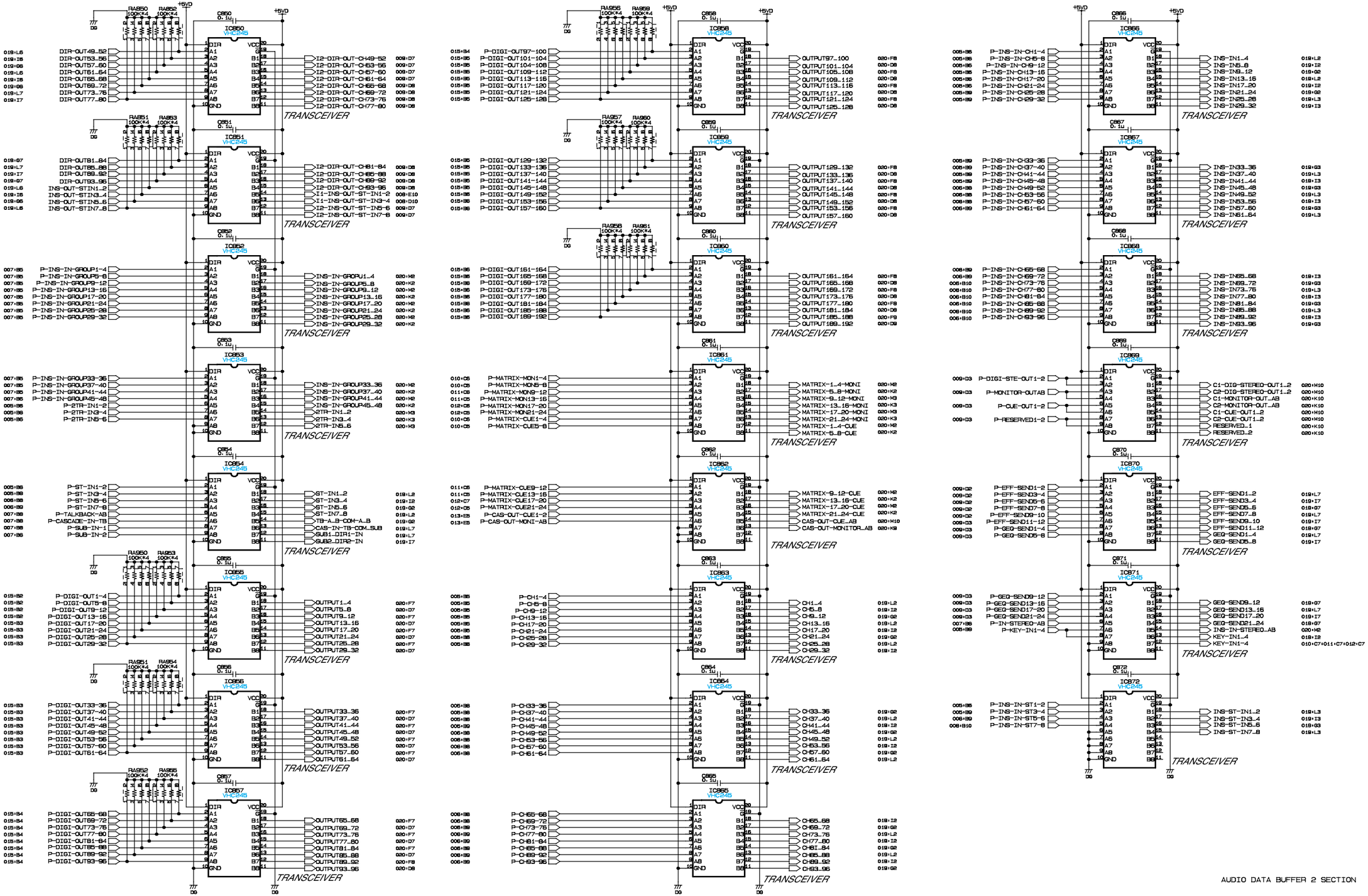






AUDIO DATA BUFFER 1 SECTION

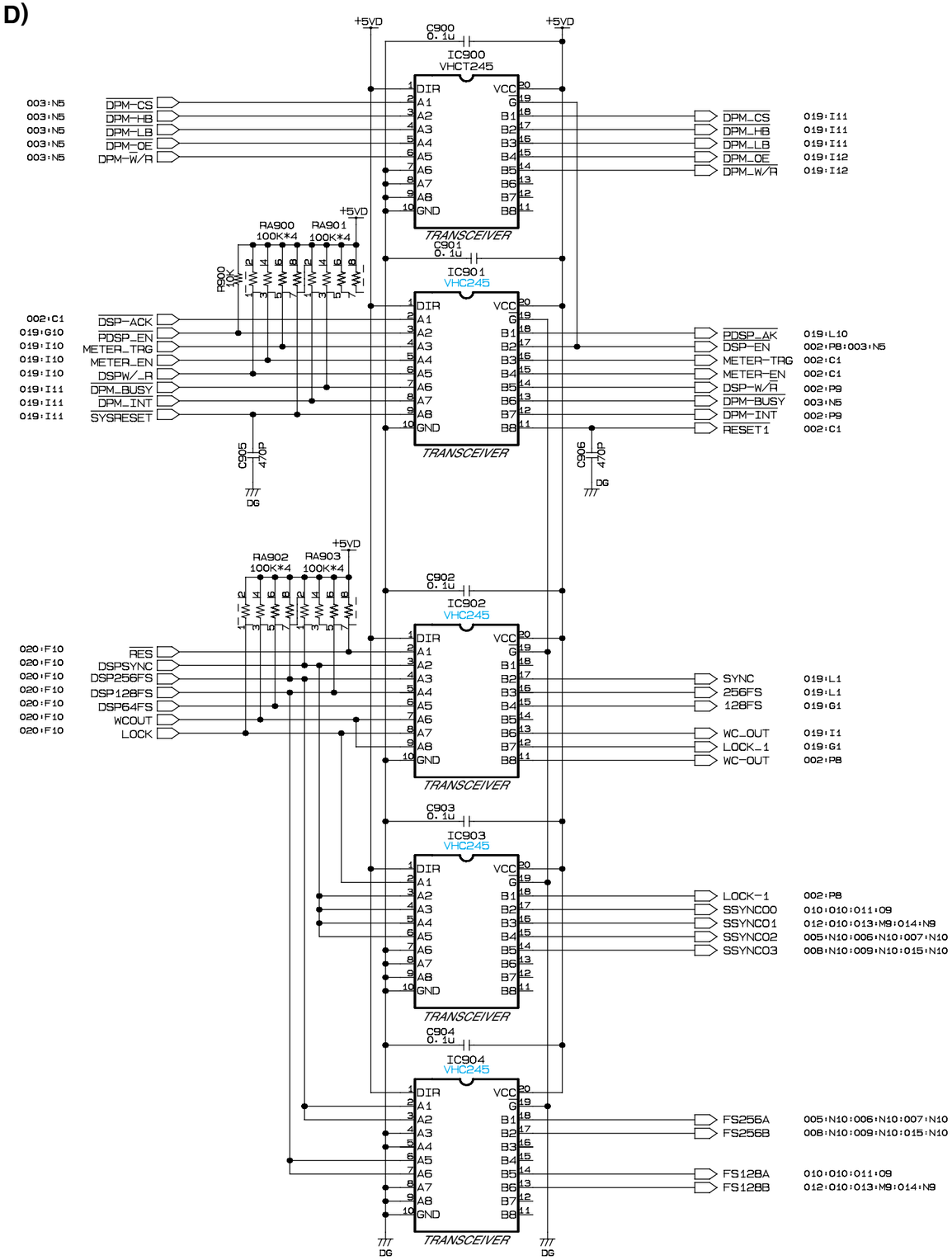
■ PDB CIRCUIT DIAGRAM 017 (DSP1D)



■ PDB CIRCUIT DIAGRAM 017 (DSP1D)

■ PDB CIRCUIT DIAGRAM 018 (DSP1D)

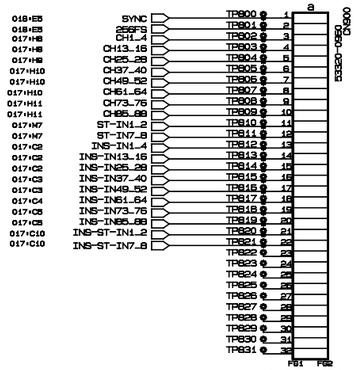
DSP1D



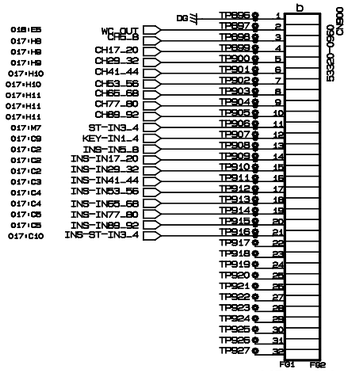
CONTROL & CLOCK BUFFER SECTION

■ PDB CIRCUIT DIAGRAM 018 (DSP1D)

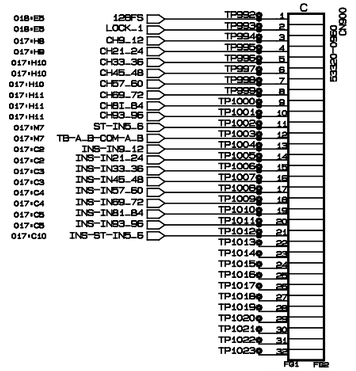
■ PDB CIRCUIT DIAGRAM 019 (DSP1D)



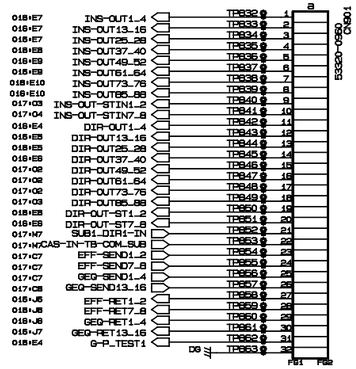
to MB11-CN101



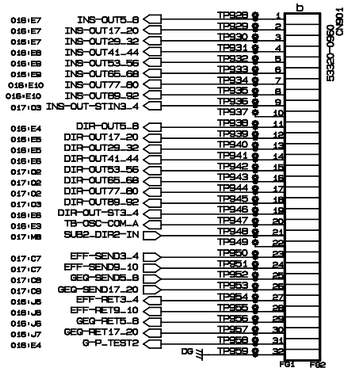
to MB11-CN101



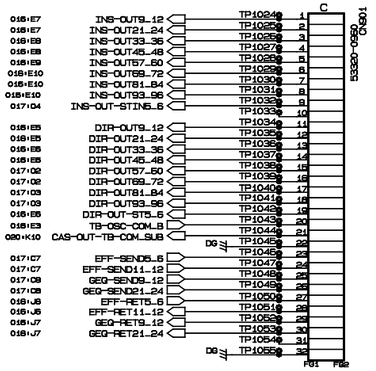
to MB11-CN101



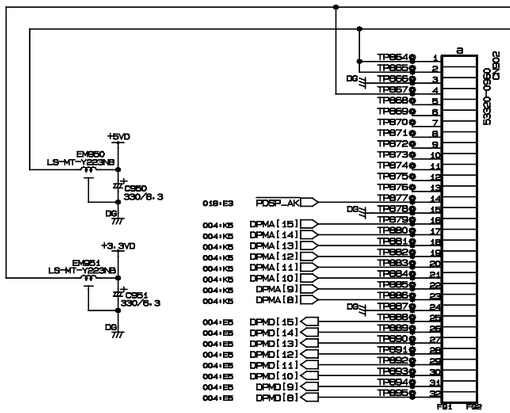
to MB11-CN102



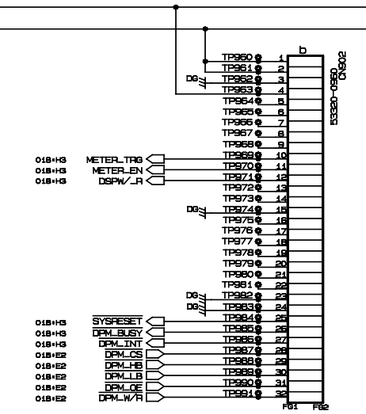
to MB11-CN102



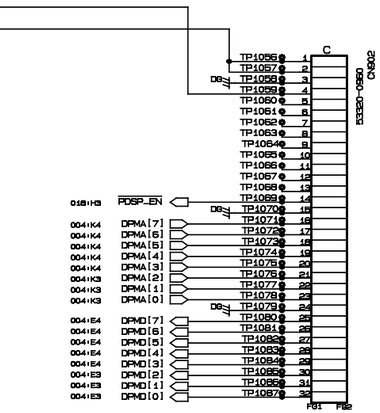
to MB11-CN102



to MB11-CN103



to MB11-CN103



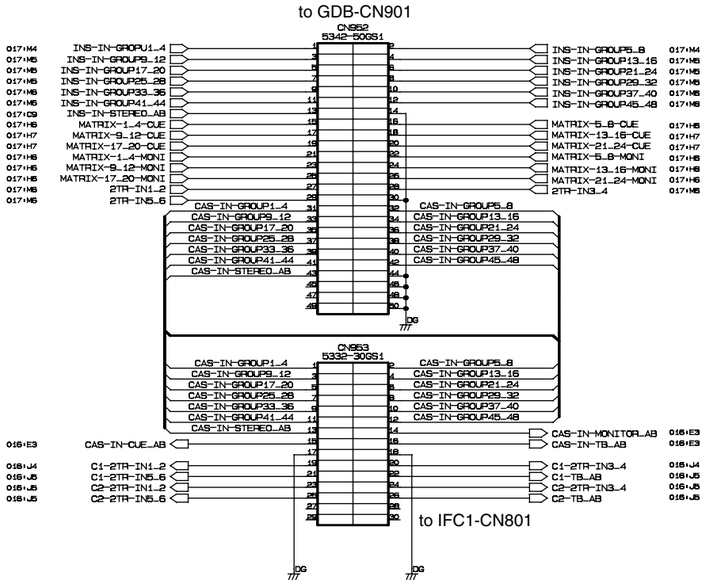
to MB11-CN103

CONNECTOR 1 SECTION

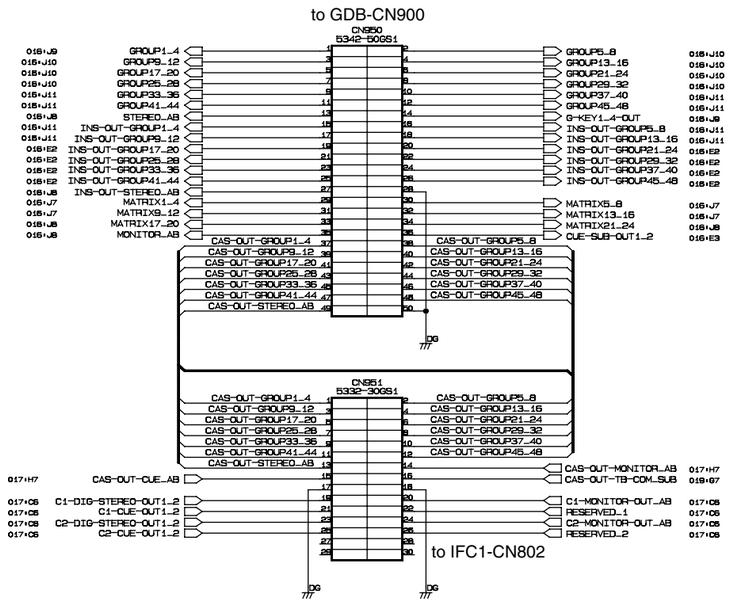
■ PDB CIRCUIT DIAGRAM 019 (DSP1D)

■ PDB CIRCUIT DIAGRAM 020 (DSP1D)

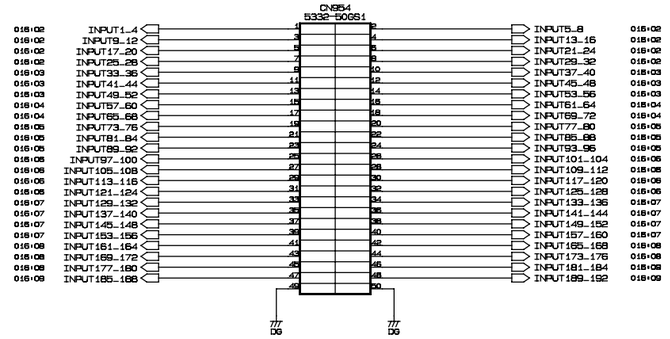
to GDB-CN901



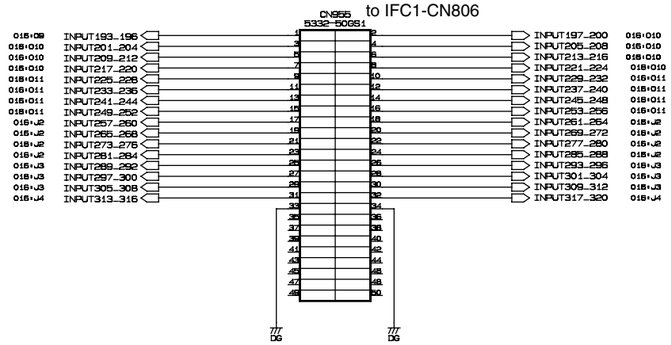
to GDB-CN900



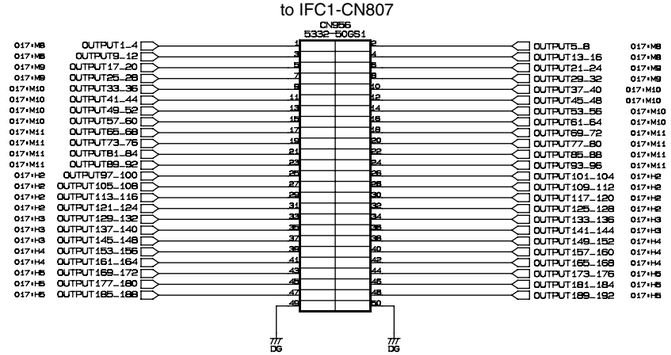
to IFC1-CN805



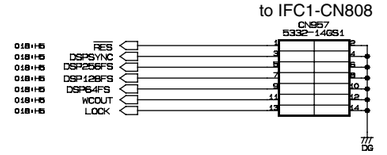
to IFC1-CN806



to IFC1-CN807



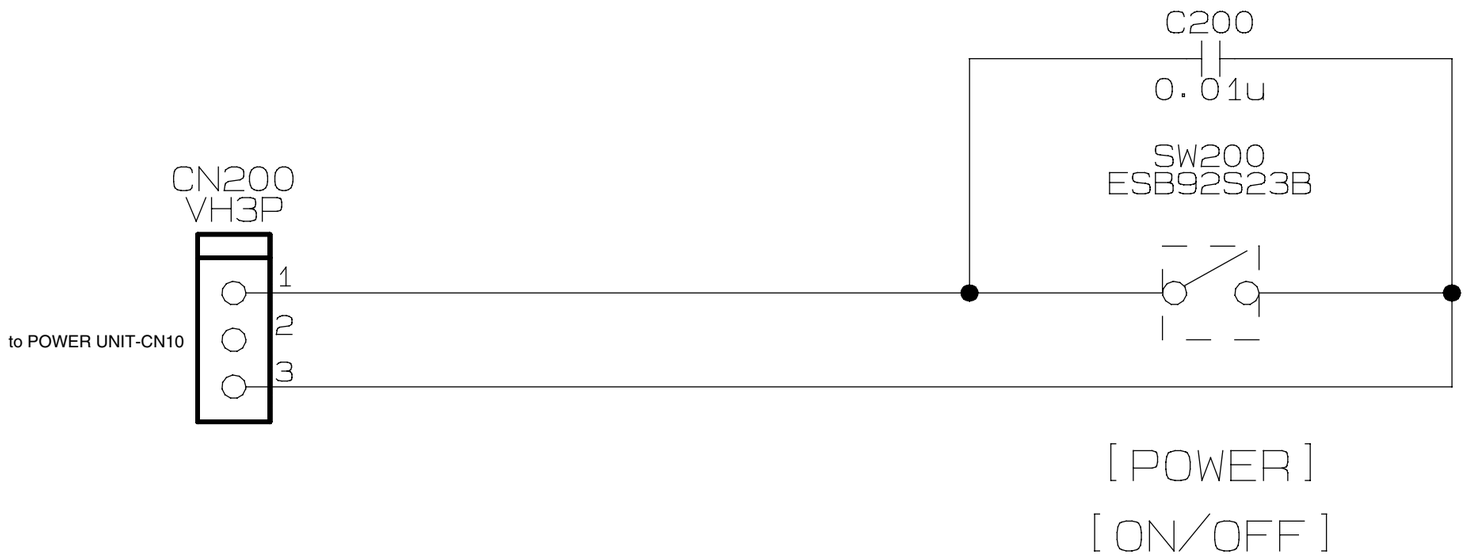
to IFC1-CN808



CONNECTOR 2 SECTION

■ PDB CIRCUIT DIAGRAM 020 (DSP1D)

■ PSB CIRCUIT DIAGRAM (DSP1D)



DSP-DC CONNECTOR DIAGRAM (DSP1D)

DSP1D