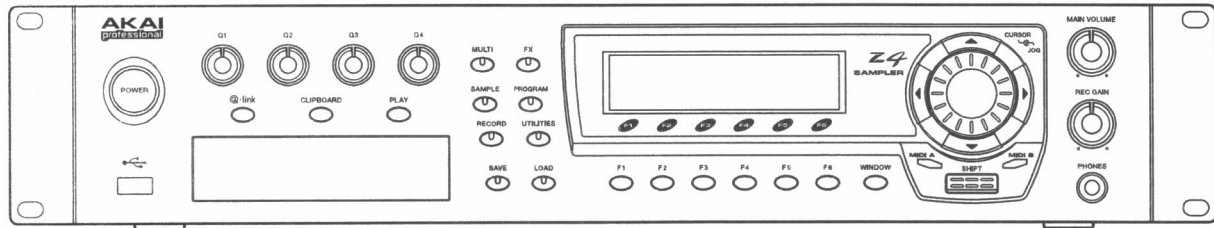
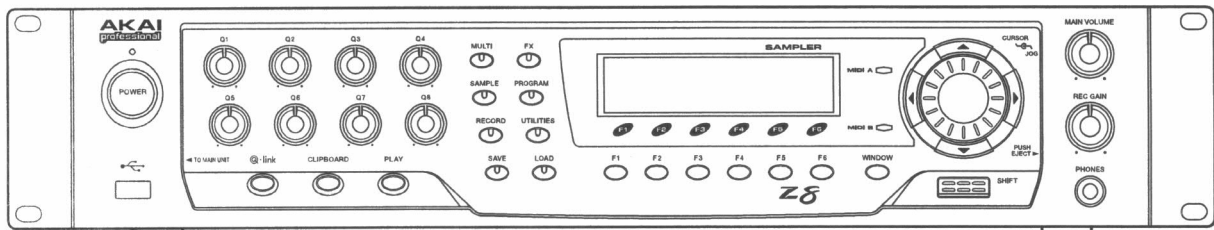


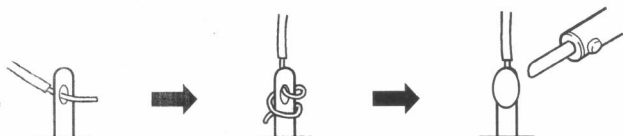
Z4 / Z8



SAMPLER

1. Parts identified by the \triangle symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with the specified replacements.
Examples : Noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially :
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially :
 - 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers (insulating barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing micro switches

When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit. The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 μ F capacitor, under the unit's normal working conditions.

The leakage-current should be less than 0.5 mA rms AC. The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

SYMBOLS FOR PRIMARY DESTINATION

Unit destinations are indicated with letters as shown below.

Symbols	Principal Destinations
A	U.S.A
B	England
E	Europe
J	Japan
V	Germany
X1	Japan
X4	Universal Area

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.



Please leave them at an appropriate depot.

PRECAUTIONS FOR LITHIUM BATTERY

The lithium battery may explode when incorrectly replaced. [OBSERVE THE FOLLOWING WHEN REPLACING]

- Replace with the same make and type or equivalent recommended by manufacturer.
- Place battery in correct polarity.
- Do not short the terminals.
- Do not charge battery.
- Do not dispose of battery in fire.

I. SPECIFICATIONS

Specifications

Model Name	Sampler Z8/Z4
Sampling data format	24/16-bit linear encoding
Sampling rates	44.1 kHz (20 Hz–20 kHz audio bandwidth) 48 kHz (20 Hz–22 kHz audio bandwidth) 96 kHz (20 Hz–40 kHz audio bandwidth)
Sampling time (standard memory)	180/120 seconds (16/24 bit) - mono Fs = 44.1 kHz 166/110 seconds (16/24 bit) - mono Fs = 48 kHz 83/55 seconds (16/24 bit) - mono Fs = 96 kHz 90/60 seconds (16/24 bit) - stereo Fs = 44.1 kHz 83/55 seconds (16/24 bit) - stereo Fs = 48 kHz 41/27 seconds (16/24 bit) - stereo Fs = 96 kHz
Internal memory	16 MB, expandable to 512 MB using 168-pin DIMMs (PC133/PC100, CL2, 256 MB max.)
Polyphony	64 voices
Filter	Digital dynamic multistage filter (2-pole x 3 with reso-nance)
Envelope generators	3 x Digital Envelope generators (2 multistage)
LFO	2 x Multi-Wave Low Frequency Oscillators
Display	Backlit 248 x 60 dot graphic LCD
Connectors	
REC	IN 2 x 1/4" stereo phone (balanced)
STEREO OUT	2 x 1/4" stereo phone (balanced) 6 dBm
ASSIGNABLE	OUTS 8 x 1/4" stereo phone (balanced) 6 dBm (optional)
HEADPHONES	1 x 1/4" stereo phone 60 mW (32 ohms load) max.
MIDI	4 x 5-pin DIN (IN, OUT/THRU x 2)
SCSI Interface	1 x 50-pin high pitch SCSI
S/PDIF digital IN/OUT	2 x phono input/output (optional on Z4)
Word clock input	BNC (75 ohms w/terminator ON/OFF, optional on Z4)
USB	Host x 1, Slave x 1 (V1.1)
Power requirements	100–240 V AC 50/60 Hz 60 W,
without options	24 W - Z8/19 W - Z4
Dimensions (W x H x D)	Z8 - 483 x 91 x 415 mm (EIA 2U size) Z4 - 483 x 91 x 402 mm (EIA 2U size)
Weight	Z8 - 6.4 kg, Z4 - 6.1 kg
Supplied accessories	AC power cable x 1 Sound Library Disc x 1 Cable set for IDE drive x 1 Contact Cover x1 User Guide
Optional accessories	
EB4JS	Multi Effects Board (Z4 only)
IB-4D	S/PDIF Digital Interface Board (Z4 only)
IB-4ADT	2-IN/8-OUT adat™ Interface Board ¹
IB-4ADT and IB-48P	cannot be installed at the same time.
IB-48P	8 Individual Outputs Board ¹

1. IB-4ADT and IB-48P cannot be installed at the same time.

Specifications are subject to change without prior notice.

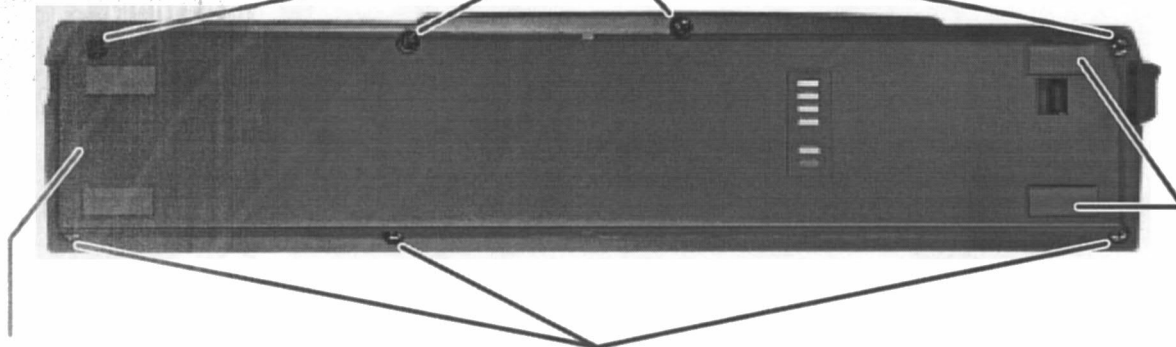
II. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

1. Removal of the OPERATION BLOCK



ZS-331182
BT BID30X085STL BN1



SP-820533X
PANEL REMOCON UNDER

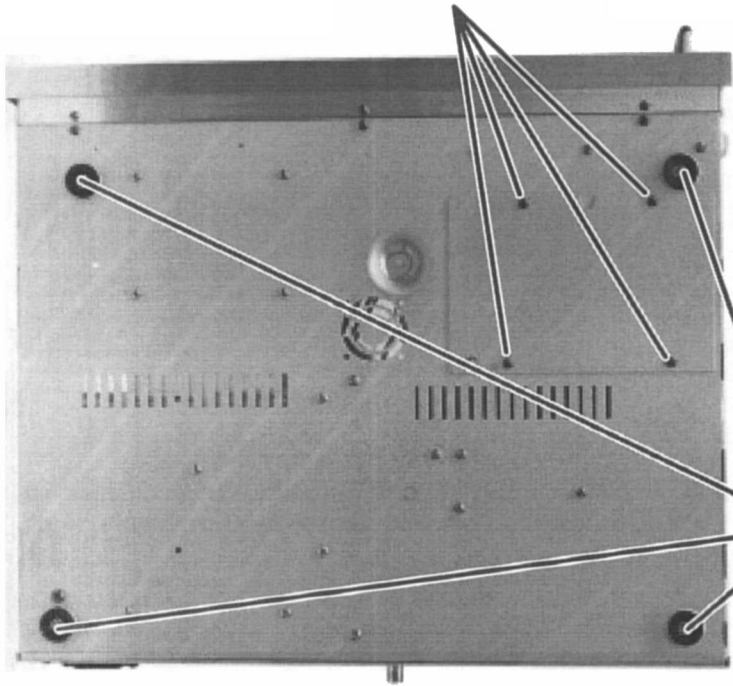


SA-820551X
FOOT REMOCON

ZS-331182
BT BID30X085STL BN1

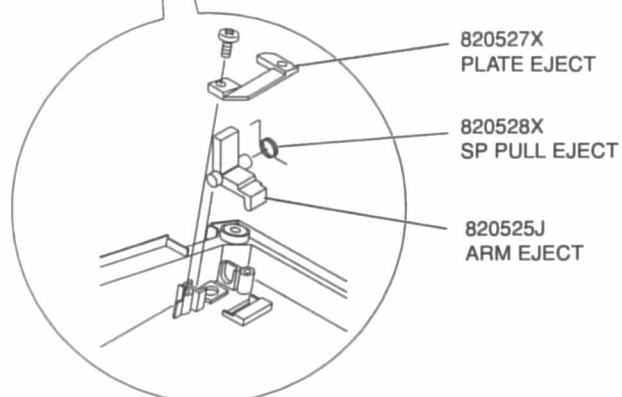
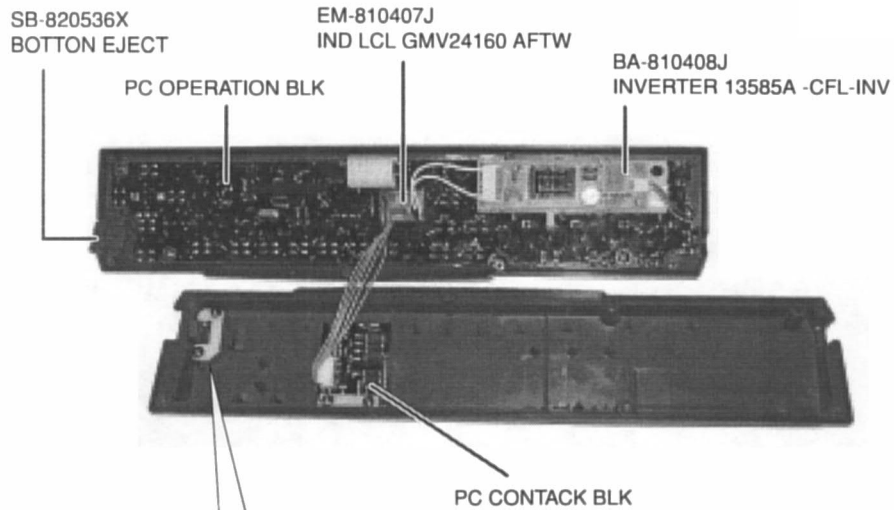
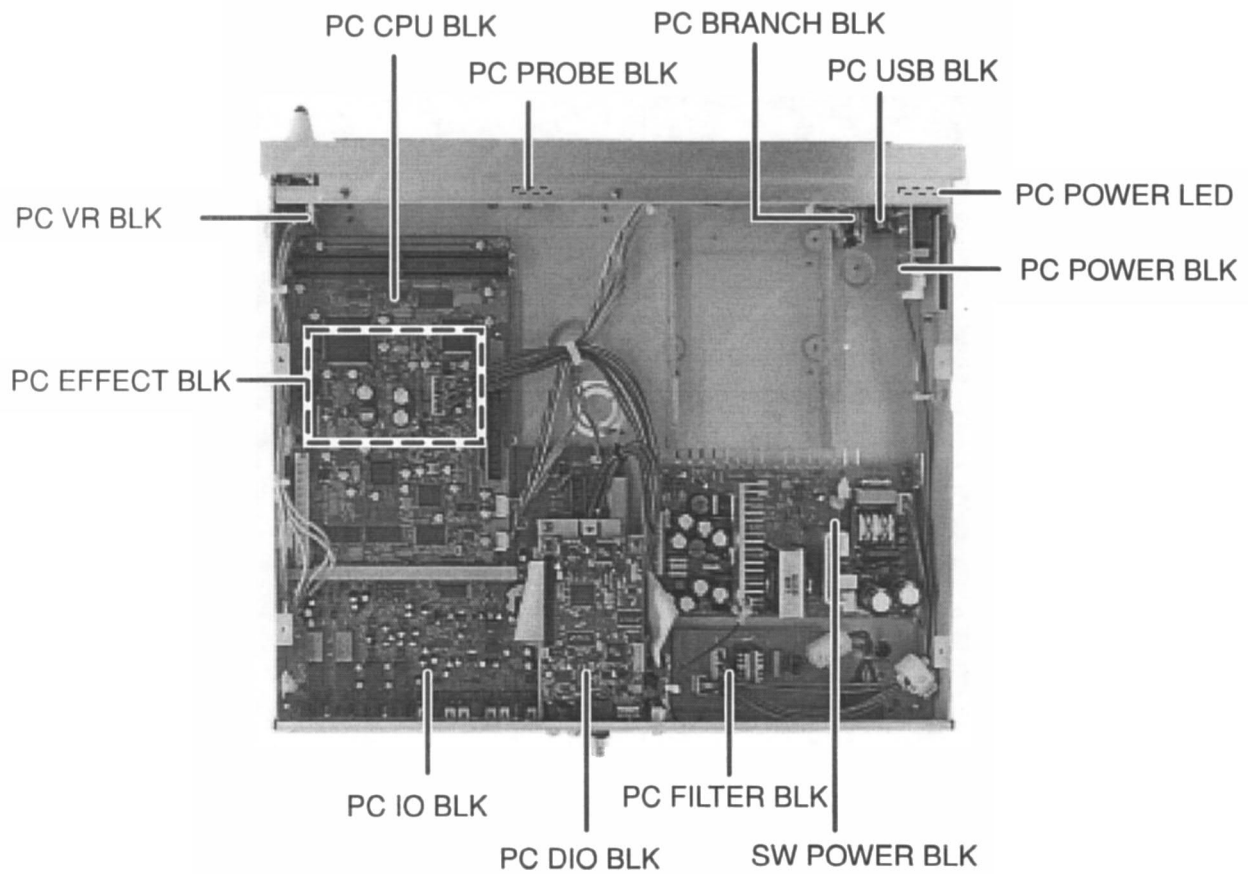
2. Removal of the BOTTOM COVER

ZS-331182
BT BID30X08STL BNI



ZS-344754
ST PAN30X065TLCMT C080

III. PRINCIPAL PARTS LOCATION



IV. OS UP DATE PROCEDURE

OS Update procedure from USB

The OS update can be made from PC via the USB port.

You must have the "OS loader software for Z4/8", besides the OS bin file.

OS loader software contains OS Loader.exe file, USB driver.inf file, USB Driver.sys file.

1. Install USB driver to your PC
Place the USB Driver.inf and USB Driver.sys files to the same folder, e.g. Driver. Turn the PC and sampler on.
Then connect the sampler to the PC via USB cable. This prompts that the PC found the new device and requires the new driver. Refer to the Driver folder you just created.
Then the driver is placed properly and the Z4/Z8 sampler is recognized.
2. OS update
Double click on the OS Loader.exe icon and specify the OS bin file. It will send the OS to the sampler.

Caution

After update, be sure to initialize the sampler by pressing Utility Key, then F6 [INIT] and F5 [DO IT], before turning it off.

OS update procedure from storage media (CD-ROM, Zip, MO)

To update OS from removable media, it requires OS version later than V1.10 software on Z4/8.

You can update the OS from the removable media. Please use a removable media that contains the OS for the Z4/8. You can create the OS disk by using your PC to write the "Z48.bin" file on to a removable media.

1. Turn the Z4/8 on and insert the OS disk.
2. Press the LOAD button, then select Z48 OS file (.bin file).
3. Press F6 [DO IT], then the F5 [DO IT] button.
4. Displayed O/S Upgrade, "please wait . . .", then "Are you sure you want update the O/S to version 1.xx ?"
5. Press F5 [YES], displayed "please wait . . .", then "The O/S has been successfully updated."
6. Press F5 [OK] button, be sure to initialize the Z4/8 by pressing UTILITIES Key, then F6 [INIT] and F5 [DO IT], before turning it off.

V. TEST MODE

PC Flash ROM Z4/8 (AJ-771031J)

The PC Flash ROM is used during repair for the testing jig, OS update, and Boot Block recovery.

The PC Flash ROM Z4/8 include a Test OS.

Insert the PC Flash Z4/8 ROM in J7 on the CPU board. (If Ib-48P or IB-4ADT is installed, please remove these).

Turn on the main unit's power to start up the TEST OS from the PC Flash ROM.

Since version upgrade is the same as installing the PC Flash ROM, the Test OS can also be installed by using the OS loader to install the Test OS in the Z4/8 via the USB.

Note: Once the Test OS is installed, the unit will always start up using the Test OS, until the regular OS is re-installed.

How to use the TEST OS

1. F1:PANEL Panel Test Program

1-1 F1:KEY Key Test Program

Pressed button is displayed on the LCD.

Press the SHIFT button 2 times in succession to return to upper level.

1-2 F2:DISP LCD and LED display test

LED of self lighting button pressed lights.

MIDI A, B light when up and down cursor buttons are pressed.

F1-F4 buttons are for LCD contrast change confirmation.

F1:OFF LCD OFF

F2:LOW LCD LOW

F3:MID LCD MID

F4:HIGH LCD HIGH

F6: ABORT Return to upper level.

1-3 F3:KNOB Data JOG Test Program

Operate according to display instructions.

- 1-4 F4: Qlink Qlink volume test
- 1-5 F5: OS For program writing of Panel OS of operation CPU
If the operation CPU is empty, connect the operation CPU 4 and 5 pins to the GND.
F1: UPDATE
Executes Panel OS update.
If update has been executed by mistake, wait until the screen returns. "Panel OS updated!" appears after writing of data is finished.
F6: ABORT Return to upper level.

1-6 F6: ABORT

2. F2: JLSI JLSI function check and analog check

- 2-1 F1: SINE Full bit data test tone sounds at 44.1khz.
Press when you want to switch F5:Fs
Current Fs is shown on display.
F1: 44.1 Sets Fs to 44.1Khz
F2: 48 Sets Fs to 48Khz
F4: 96 Sets Fs to 96Khz
F6: ABORT Return to upper level.
- 2-2 F2: THU Data from INPUT is output as is.
F1: ANA Selects analog input as INPUT
Output to Master L/R, HEAD PHONE DIGITAL OUT, PARA OUT
F6: ABORT Return to upper level.
F2: DIG Selects digital input as INPUT
Output to Master L/R, HEAD PHONE DIGITAL OUT, PARA OUT
F6: ABORT Return to upper level.
F5: 44.1 (48, 96) Current FS is displayed. Press to switch.
F5: 44.1 Press to set 44.1Khz
F2: 48Khz Press to set 48Khz
F4: 96Khz Press to set 96Khz
F6: ABORT Return to upper level.
F6: ABORT Return to upper level.
- 2-3 F3: RAM Memory inspection
F1: SPD1 D1MM1's SPD read
F1: SPD2 D1MM2's SPD read
F3: BOARD Board RAM inspection
F4: DIMM1 D1MM1 RAM inspection
F5: DIMM2 D1MM2 RAM inspection
F6: ABORT Return to upper level.
- 2-4 F4: REC For development
- 2-5 F5: NEXT Move to next page
F1: ADSR For development
F6: ABORT Return to 2 levels above

3. F3:CPLD CPLD code write

- 3-1 F1: CPU CPU's CPLD code write.
A program can be written to the empty CPLD (IC8) on the CPU board.
F1: VERIFY CPLD verification.
F2: WRITE Program writing to the CPLD

Note:

Writing to the CPLD can only be done from the Flash ROM board.

The CPU will not start up if the CPLD is empty.

Short the P98 pin on the CPU board and then turn the power on.

First execute write operation.

CPLD writing on the CPU will begin.

Once finished, turn the power off, release the short and turn the power on again. The unit will start up normally.

F2: DIO A program can be written to the CPLD on the DIO board.

-
- F1: VERIFY CPLD verification.
 F2: WRITE Program writing to the CPLD
 F6: ABORT Return to upper level.
- 4. F4: RTC Result shown approx. 10 seconds after end of real time clock test**
- 5. F5: FLASH**
- 5-1 F1: DEVICE Mounted Flash Rom ID display
- 5-2 F2: USB Press to read new OS using PC's OS loader.
 Turning on power after reading from PC has been completed will start the unit using the new OS.
- 5-3 F3: BOOT Read Boot Blk into Flash memory.
Note: If there is no PC Flash ROM, failure will result and Boot Block will not be recovered.
 F3: YES Execute data read
 F4: NO Move one level up without executing
- 5-4 F4: V1.xx Load display's normal OS version
 F3: YES Execute OS loading
 Loading is complete when DONE is displayed.
 After loading, turning on the power again will restart using the normal OS.
 F4: NO Cancel OS loading and move to upper level.
 F6: ABORT Same operation as F4
- 5-5 F5:(TEST) Read test program into Flash ROM CARD or CPU board's Flash Memory.
 If Flash ROM CARD is inserted with P9 removed, data will be written onto the Flush ROM CARD.
 F3: YES Execute data write
 F4: No Cancel data write
 F6: ABORT Return to upper level
 F6: NEXT Jump to next group's selection screen
- 6. F1: DIO For DIO related inspection.**
- 6-1 F1: SYNC For development
- 6-2 F2: ADAT For development.
- 6-3 F3: IDE For development
- 6-4 F4: FX
 F1: CON Confirm access to FX board
 F2: BOOT Confirm writing of FX boot program
 F3: RAM RAM test on FX board
 F4: LONG For development
 F6: ABORT Move to 1 level above
- 6-5 F5: MIDI For development
- 6-6 F6: PREV Jump to previous group selection screen.

VI. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List or Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs.
2. Parts not shown in the Parts List will not in principle be supplied.
3. How to read the Parts List.

1. PC MAIN BOARD BLK

Ref. No.	Part No.	Description
D5	ED-431276C	D SCHOT 1S30-J T05
D110	ED-431276C	D SCHOT 1S30-J T05
⋮		
IC5	EI-811073J	ICTRC-6593
<u>IC10</u>	<u>EI-811068J</u>	IC HD74HC157FP

↑ Service parts classification
 ↑ These reference symbols correspond with component symbols in the Schematic Diagrams.

2. FINAL ASSEMBLY BLK

Ref. No.	Part No.	Description
1.	SA-349332	FOOT
2.	ZS-344754C	ST PAN30x06STL CMT
⋮		
44.	SP-417333J	COVER TOP
45.	ZS-418385J	BT BID30X06STL BNI EATRH LOCK
46-A	△ EW-380905J	AC CORD 250S KP300 KS16A H B J [J]
46-B	△ EW-368420J1	AC CORD 200SKP30KS B AC [A]
<u>46-C</u>	△ EW-410608J	AC CORD 250 KP4819D KS31A B E [E,V]

↑ Symbols for primary destination
 [A] U.S.A. [J] Japan
 [B] England [V] Germany
 [E] Europe [x1] Japan
 [X4] Universal Area

↑ Safety critical component

↑ This number corresponds with the individual parts index number in the figure.

WARNING

△ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

△ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

PC BOARD BLK

The PC Board Block may contain several PC Boards. They appear under its block name with their individual part number.

1. P.C. BOARD BLOCK

Ref.No.	Part No.	Description
1	L6052A020A	PC CPU BLK Z8
2	L6052A030A	PC(#!/)O BLK Z8
3	L6052A040A	PC(#!/)JACK BLK Z8
4	L6053A050A	PC OPERATION BLK Z4
5	L6052A060A	PC(#!/)OPERATION BLK Z8

PC(#!/)O BLK Z8 CONSISTIS OF FOLLOWING P.C. BOARDS.

*	L6052A502A	PC IO BLK
*	L6052A502B	PC SCSI BLK
*	L6052A502C	PC USB BLK

PC(#!/)JACK BLK Z8 CONSISTIS OF FOLLOWING P.C. BOARDS.

*	L6052A503A	PC FILTER BLK
*	L6052A503B	PC POWER SW BLK
*	L6052A503C	PC VR BLK

PC(#!/)OPERATION BLK Z8 CONSISTIS OF FOLLOWING P.C. BOARDS.

*	L6052A504A	PC OPERATION BLK
*	L6052A504B	PC CONTACT BLK
*	L6052A504C	PC PROBE BLK
*	L6052A504D	PC BRANCH BLK
*	L6052A504E	PC POWER LED BLK

2. P.C. CPU BLOCK

Ref.No.	Part No.	Description
IC1	EI-820788X	IC GDS1110BD-206MHZ MBGA [UNAVAILABLE]
IC2	EI-821551X	IC MB87L1852PFVS-G-BND JSL
IC3	EI-821594X	IC HM5264165FTT-75
IC4	EI-821594X	IC HM5264165FTT-75
IC5	EI-821424X	IC HY57V281620AT-7 FPTY
IC6	EI-821424X	IC HY57V281620AT-7 FPTY
IC7	EI-821211X	IC MBM29DL322TE90TN
IC8	EI-820962X	IC XC95144XL-7TQ100C
IC9	EI-820961X	IC XC2S100-5TQ144C
IC10	EI-820959X1	IC SL811HST V1.5
IC11	EI-812785J	IC FAS236U PQFP
IC12	EI-820949X	IC HD74ALVCH16245TEL
IC13	EI-820948X	IC HD74ALVCH16244TE
IC14	EI-820948X	IC HD74ALVCH16244TE
IC15	EI-820948X	IC HD74ALVCH16244TE
IC16	EI-820949X	IC HD74ALVCH16245TEL
IC17	EI-820951X	IC HD74LVC244AT FPELT16E
IC18	EI-820951X	IC HD74LVC244AT FPELT16E
IC19	EI-812979J	IC HD74LVC245ATELL FPELT16E
IC20	EI-810574J	IC M51957BFP FP73AT12
IC21	EI-820957X	IC NJM317DL1 FPTE1T16E
IC22	EI-820957X	IC NJM317DL1 FPTE1T16E
IC23	EI-820955X	IC NET2890
J1	EJ-820938X	SOCKET SMD XH4A-8035-A 80P
J2	EJ-820938X	SOCKET SMD XH4A-8035-A 80P
J3	EJ-820937X	SOCKET SMD XH4A-4035-A 40P
J4	EJ-820937X	SOCKET SMD XH4A-4035-A 40P
J5	EJ-820990X	SOCKET DMM-168F-111B1 168P
J6	EJ-820990X	SOCKET DMM-168F-111B1 168P
J7	EJ-419246J	SOCKET 128A-050S2A-S14A 50P
P2	EJ-810581J	PLUG SCP40GS3 40P
P4	EJ-432670J	PLUG C.S6B-PH-SM3-TB 6P T24E
P5	EJ-821159X	PLUG C.S5B-PH-SM3-TB 5P T24E
P6	EJ-820998X	PLUG C.S4B-PH-SM3-TB 4P T24E
TR1	ET-430868J	TR C.DTC114EKA T146T08E
TR2	ET-430868J	TR C.DTC114EKA T146T08E
TR3	ET-430868J	TR C.DTC114EKA T146T08E
UN1	EI-820944X	DC-DC CONVERTER HGS15-3R3
W1	EW-820397X	WIRE AWG24 TCT BLK L=30
X1	EI-820769X	OSC X'TAL C.SMD-49 3.6864MHZ

Ref.No.	Part No.	Description
X2	EI-820994X	OSC X'TAL C.DS0751SV 18.4320MHZ
X3	EI-820993X	OSC X'TAL C.DS0751SV 16.9344MHZ
X4	EI-820991X	OSC X'TAL C.SMD-49 12.0000MHZ
X5	EI-820995X	OSC X'TAL C.DS0751SB 40.0000MHZ
X6	EI-820989X	OSC X'TAL C.DS0751SV 48.0000MHZ

3. P.C. IO BLOCK

Ref.No.	Part No.	Description
IC1	EI-811073J	IC RTC-6593
IC2	EI-820950X	IC HD74LV05AT FPELT16E
IC3	EI-820946X	IC AK4524-VF
IC4	EI-812479J	IC NJM5532M FPT1T32P
IC5	EI-812479J	IC NJM5532M FPT1T32P
IC6	EI-812479J	IC NJM5532M FPT1T32P
IC7	EI-812479J	IC NJM5532M FPT1T32P
IC8	EI-812479J	IC NJM5532M FPT1T32P
IC9	EI-812479J	IC NJM5532M FPT1T32P
IC10	EI-812479J	IC NJM5532M FPT1T32P
IC11	EI-820667X	IC NJM4556AM FPTE1T16E
IC12	EI-812341J	IC BA17805FP-E2 FPE2T16E
IC13	EI-821160X	IC BA033FP E2 FPE2T16E
IC14	EI-821160X	IC BA033FP E2 FPE2T16E
IC15	EI-820951X	IC HD74LVC244AT FPELT16E
IC16	EI-397407J	IC NJM7812FA
IC17	EI-410281J	IC NJM7912FA
J1	EJ-430956J	DIN J YKF51-5058 2X5P
J2	EJ-430956J	DIN J YKF51-5058 2X5P
J3	EJ-820316X	SOCKET CONNECTER YKF45-0002 4P
J4	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT
J5	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT
J6	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT
J7	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT
J8	EJ-820939X	SOCKET XH4A-8031-A 80P
J9	EJ-820939X	SOCKET XH4A-8031-A 80P
J10	EJ-820493X	SOCKET BATTERY BH25TN [BATTELY RITHIUM]
P2	EJ-810271J	PLUG SCP26GS3 26P
P3	EJ-810581J	PLUG SCP40GS3 40P
P4	EJ-810270J	PLUG SCP50GS3 50P
PH1	ET-431258J	DETECTOR C.PC400T T12E
PH2	ET-431258J	DETECTOR C.PC400T T12E
RL1	EQ-414985J	RELAY SIG RY5W-OH-K 2TR 5V
RL2	EQ-414985J	RELAY SIG RY5W-OH-K 2TR 5V
TR1	ET-410280J	TR 2SC3327 A T05
TR2	ET-410280J	TR 2SC3327 A T05
TR3	ET-429898J	TR C.DTA114EKA T146T08E
TR4	ET-430868J	TR C.DTC114EKA T146T08E
TR5	ET-429898J	TR C.DTA114EKA T146T08E
TR6	ET-430868J	TR C.DTC114EKA T146T08E
TR7	ET-430868J	TR C.DTC114EKA T146T08E
TR8	ET-430868J	TR C.DTC114EKA T146T08E
TR9	ET-364097	TR 2SC3383 T,U T05
TR10	ET-364097	TR 2SC3383 T,U T05
TR11	ET-430868J	TR C.DTC114EKA T146T08E
TR12	ET-430868J	TR C.DTC114EKA T146T08E
TR13	ET-429898J	TR C.DTA114EKA T146T08E
W11	EW-820981X	WIRE ASSY L6053(2) RC-RC 34P
100	EZ-811066J	BATTERY LITHIUM CR2025

P.C. SCSI BLOCK

D20	ED-353374	D SILICON DS135E-FA3 100/1.0A
IC20	EI-810828J	IC MCCS142236DWR2 18B FPR2T24E
J20	EJ-812347J	SOCKET FCN-235D050-GJ 50P
FS200	△ EF-811098J	FUSE RUE135 30V 1.35A

P.C. USB BLOCK

J701	EJ-820970X	SOCKET CONNECTER YKF45-0001 4P
W702	EW-820975X	WIRE ASSY L6052(3) PH-JB 4P

4. P.C. FILTER BLOCK

Ref.No.	Part No.	Description
C401	△ EC-430824J	C MMY V CUT MKP3362 683M 275AC
L401	△ EO-427223J	COIL LF HR-24-562

P.C. POWER SW BLOCK

C501	△ EC-427562J	C MMY V CUT MKP3362 103M 275AC
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Ref.No.	Part No.	Description
C502	△ EC-427562J	C MMY V CUT MKP3362 103M 275AC
SW501	△ ES-430685J1	SW PUSH SDDF3A 02-1

P.C. VR BLOCK

J601	EJ-821000X	PHONE J YKB26-5264 S.NUT 6.3
VR601	EV-821007X	VR ROTARY RK09L12B0 L20 C503X2
VR602	EV-821008X	VR ROTARY RK09L12B0 L20 B103X2
W601	EW-820980X	WIRE ASSY L6052(7) PH-JB 9P
W602	EW-820978X	WIRE ASSY L6052(5) PH-JB 6P

5. P.C. OPERATION BLOCK (Z4)

Ref.No.	Part No.	Description
D24	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D25	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D26	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D27	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D28	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D29	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D30	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D31	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D32	ED-820665X	D LED SEL5955A ORANGE
D33	ED-820665X	D LED SEL5955A ORANGE
J1	EJ-810851J	SOCKET SLP19R-2 19P
SW1	ES-349474	SW TACT SKHHAM004A
SW2	ES-349474	SW TACT SKHHAM004A
SW3	ES-349474	SW TACT SKHHAM004A
SW4	ES-349474	SW TACT SKHHAM004A
SW5	ES-349474	SW TACT SKHHAM004A
SW6	ES-349474	SW TACT SKHHAM004A
SW7	ES-349474	SW TACT SKHHAM004A
SW8	ES-349474	SW TACT SKHHAM004A
SW9	ES-349474	SW TACT SKHHAM004A
SW10	ES-349474	SW TACT SKHHAM004A
SW11	ES-349474	SW TACT SKHHAM004A
SW12	ES-349474	SW TACT SKHHAM004A
SW13	ES-349474	SW TACT SKHHAM004A
SW14	ES-349474	SW TACT SKHHAM004A
SW15	ES-349474	SW TACT SKHHAM004A
SW16	ES-349474	SW TACT SKHHAM004A
SW17	ES-349474	SW TACT SKHHAM004A
SW18	ES-349474	SW TACT SKHHAM004A
SW19	ES-349474	SW TACT SKHHAM004A
SW20	ES-349474	SW TACT SKHHAM004A
SW21	ES-349474	SW TACT SKHHAM004A
SW22	ES-349474	SW TACT SKHHAM004A
SW23	ES-349474	SW TACT SKHHAM004A
SW24	ES-811112J	SW ROTARY ENCODER EC16B24204
VR1	EV-821030X	VR ROTARY RK09D1130 L20 B103
VR2	EV-821030X	VR ROTARY RK09D1130 L20 B103
VR3	EV-821030X	VR ROTARY RK09D1130 L20 B103
VR4	EV-821030X	VR ROTARY RK09D1130 L20 B103
W2	EW-821397X	WIRE ASSY L6053(4) EH-JB 2P
W3	EW-820976X	WIRE ASSY L6053(1) PH-JB 5P
IC1	EI-820947X	IC HD64F2132RFA20
IC2	EI-431113J	IC M51953BFP-73A FP73AT12E
IC3	EI-821009X	IC NJM2125F FPTE1T8E
TR1	ET-430868J	TR C.DTC114EKA T146T08E
TR2	ET-430868J	TR C.DTC114EKA T146T08E
TR3	ET-430868J	TR C.DTC114EKA T146T08E
TR4	ET-430868J	TR C.DTC114EKA T146T08E
TR5	ET-428907J	TR C.DTA123JKA T146T08E
TR6	ET-428907J	TR C.DTA123JKA T146T08E
TR7	ET-428907J	TR C.DTA123JKA T146T08E
X1	EI-820996X	OSC X'TAL C.SMD-49 14.7456MHZ

6. P.C. OPERATION BLOCK (Z8)

Ref.No.	Part No.	Description
D1	ED-428998J	D SILICON C.1SS355TE-17 T08E
D2	ED-428998J	D SILICON C.1SS355TE-17 T08E
D3	ED-428998J	D SILICON C.1SS355TE-17 T08E
D4	ED-428998J	D SILICON C.1SS355TE-17 T08E
D5	ED-428998J	D SILICON C.1SS355TE-17 T08E
D6	ED-428998J	D SILICON C.1SS355TE-17 T08E
D7	ED-428998J	D SILICON C.1SS355TE-17 T08E

Ref.No.	Part No.	Description
D8	ED-428998J	D SILICON C.1SS355TE-17 T08E
D9	ED-428998J	D SILICON C.1SS355TE-17 T08E
D10	ED-428998J	D SILICON C.1SS355TE-17 T08E
D11	ED-428998J	D SILICON C.1SS355TE-17 T08E
D12	ED-428998J	D SILICON C.1SS355TE-17 T08E
D13	ED-428998J	D SILICON C.1SS355TE-17 T08E
D14	ED-428998J	D SILICON C.1SS355TE-17 T08E
D15	ED-428998J	D SILICON C.1SS355TE-17 T08E
D16	ED-428998J	D SILICON C.1SS355TE-17 T08E
D17	ED-428998J	D SILICON C.1SS355TE-17 T08E
D18	ED-428998J	D SILICON C.1SS355TE-17 T08E
D19	ED-428998J	D SILICON C.1SS355TE-17 T08E
D20	ED-428998J	D SILICON C.1SS355TE-17 T08E
D21	ED-428998J	D SILICON C.1SS355TE-17 T08E
D22	ED-428998J	D SILICON C.1SS355TE-17 T08E
D23	ED-428998J	D SILICON C.1SS355TE-17 T08E
D24	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D25	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D26	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D27	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D28	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D29	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D30	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D31	ED-820945X	D LED SEL2415GMTP5 GREEN T26
D32	ED-812085J	D LED L-934SED ORANGE
D33	ED-812085J	D LED L-934SED ORANGE
IC1	EI-820947X	IC HD64F2132RFA20
IC2	EI-431113J	IC M51953BFP-73A FP73AT12E
IC3	EI-821009X	IC NJM2125F FPTE1T8E
IC4	EI-820960X	IC SN75179BPS
IC5	EI-812341J	IC BA17805FP-E2 FPE2T16E
IC6	EI-812341J	IC BA17805FP-E2 FPE2T16E
J1	EJ-810851J	SOCKET SLP19R-2 19P
J3	EJ-810323J	SOCKET TCS7927-56
SW1	ES-349474	SW TACT SKHHAM004A
SW2	ES-349474	SW TACT SKHHAM004A
SW3	ES-349474	SW TACT SKHHAM004A
SW4	ES-349474	SW TACT SKHHAM004A
SW5	ES-349474	SW TACT SKHHAM004A
SW6	ES-349474	SW TACT SKHHAM004A
SW7	ES-349474	SW TACT SKHHAM004A
SW8	ES-349474	SW TACT SKHHAM004A
SW9	ES-349474	SW TACT SKHHAM004A
SW10	ES-349474	SW TACT SKHHAM004A
SW11	ES-349474	SW TACT SKHHAM004A
SW12	ES-349474	SW TACT SKHHAM004A
SW13	ES-349474	SW TACT SKHHAM004A
SW14	ES-349474	SW TACT SKHHAM004A
SW15	ES-349474	SW TACT SKHHAM004A
SW16	ES-349474	SW TACT SKHHAM004A
SW17	ES-349474	SW TACT SKHHAM004A
SW18	ES-349474	SW TACT SKHHAM004A
SW19	ES-349474	SW TACT SKHHAM004A
SW20	ES-349474	SW TACT SKHHAM004A
SW21	ES-349474	SW TACT SKHHAM004A
SW22	ES-349474	SW TACT SKHHAM004A
SW23	ES-349474	SW TACT SKHHAM004A
SW24	ES-811112J	SW ROTARY ENCODER EC16B24204
TR1	ET-430868J	TR C.DTC114EKA T146T08E
TR2	ET-430868J	TR C.DTC114EKA T146T08E
TR3	ET-430868J	TR C.DTC114EKA T146T08E
TR4	ET-430868J	TR C.DTC114EKA T146T08E
TR5	ET-428907J	TR C.DTA123JKA T146T08E
TR6	ET-428907J	TR C.DTA123JKA T146T08E
TR7	ET-428907J	TR C.DTA123JKA T146T08E
VR1	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR2	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR3	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR4	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR5	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR6	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR7	EV-821029X	VR ROTARY RK09D1130 L25 B103
VR8	EV-821029X	VR ROTARY RK09D1130 L25 B103
W2	EW-820973X	WIRE ASSY L6052(1) EH-JB 2P
W4	EW-821398X	WIRE ASSY L6052(13) PH-JB 6P
X1	EI-820996X	OSC X'TAL C.SMD-49 14.7456MHZ

P.C. CONT ACT BLK

Ref.No.	Part No.	Description
P50	EJ-432670J	PLUG C.S6B-PH-SM3-TB 6P T24E
TP50	820530X	PLATE PC CONTACT
TP51	820530X	PLATE PC CONTACT
TP52	820530X	PLATE PC CONTACT
TP53	820530X	PLATE PC CONTACT
TP54	820530X	PLATE PC CONTACT
TP55	820530X	PLATE PC CONTACT

P.C. PROBE BLK

Ref.No.	Part No.	Description
P60	EJ-820964X	PLUG PROBE 900795 2P
P61	EJ-820963X	PLUG PROBE 900688 4P
P62	EJ-432670J	PLUG C.S6B-PH-SM3-TB 6P T24E

P.C. BRANCH BLK

Ref.No.	Part No.	Description
D71	ED-382813J	D ZENER H HZS3B1 T26
D72	ED-394990J	D ZENER H HZS12C1 T26
D73	ED-400606J	D ZENER H HZS6A1 T26
D74	ED-400606J	D ZENER H HZS6A1 T26
D75	ED-400606J	D ZENER H HZS6A1 T26
D76	ED-400606J	D ZENER H HZS6A1 T26
IC70	EI-820960X	IC SN75179BPS
J70	EJ-810323J	SOCKET TCS7927-56
W71	EW-820977X	WIRE ASSY L6052(4) PH-JB 5P
W72	EW-820979X	WIRE ASSY L6052(6) PH-JB 6P

P.C. POWER LED BLK

Ref.No.	Part No.	Description
D801	ED-821375X	D LED L-934MBD BLUE
W801	EW-820974X	WIRE ASSY L6052(2) PH-JB 2P

7. P.C. EFFECT BLK

Ref.No.	Part No.	Description
J1	EJ-820937X	SOCKET SMD XH4A-4035-A 40P
J2	EJ-820937X	SOCKET SMD XH4A-4035-A 40P
IC1	EI-812794J	IC XCB56362PV100 TQFP
IC2	EI-820459X	IC GM71VS65163CLT-5
IC3	EI-820459X	IC GM71VS65163CLT-5
IC4	EI-812841J	IC HM62W16255HJP-15
IC5	EI-812841J	IC HM62W16255HJP-15
IC6	EI-812977J	IC HD74LVC08TELL FPELT16E

8. P.C. DIO BLK

Ref.No.	Part No.	Description
100	△ EZ-811066J	BATTERY LITHIUM CR2025
J2	EJ-820150J	SOCKET COAX. BNC-LNRD-BPAA
SW1	ES-428287J	SW SLIDE SSSF112-S06N1 1-02N
W1	EW-821006X	WIRE ASSY L5262(1) RA-RC 40P
IC1	EI-813234J	IC CS8414-CS FPT1T24E
IC2	EI-813233J	IC CS8404A-CS FPT1T24E
IC3	EI-821412X	IC SM5849BF
IC4	EI-821412X	IC SM5849BF
IC5	EI-810887J	IC AV9173-01CS08 FP T12E
IC6	EI-810887J	IC AV9173-01CS08 FP T12E
IC7	EI-821022X	IC XC9572XL-7TQ100C
IC8	EI-811576J	IC DS34C86TM FP T16E
IC9	EI-811205J	IC MC74HCU04AF FPELT16E
IC10	EI-811125J	IC UPC2933T
T1	BT-810651J	TRANS PULSE CIT0705S-35101TFP
X1	EI-821023X	OSC X'TAL C.DS0751SV 6.144MHZ
TR1	ET-391712J	TR 2SA1317 S,T T05

9. P.C. REMOCON BLK (Z8)

Ref.No.	Part No.	Description
1	SP-820532X	PANEL REMOCON UPPER
2	EM-810407J	IND LCD GMV24160AFTW
3	△ EM-810408J	INVERTER 133585A-CFL-INV
4	BA-L6052A504A	PC OPERATION BLK Z8
5	SB-820536X	BUTTON EJECT
6	BA-L6052A504B	PC CONTACT BLK
7	SP-820533X	PANEL REMOCON UNDER
8	ZG-820525X	ARM EJECT
9	ZG-820528X	SP PULL EJECT
10	ZS-331182	BT BID30X08STL BNI

Ref.No.	Part No.	Description
11	ZG-820527X	PLATE EJECT
12	ZG-820529X	HOLDER PC CONTACT
13	ZS-393720J	BT BID30X12STL BZN

IB-4ADT

Ref.No.	Part No.	Description
IC1	EI-821412X	IC SM5849BF
IC2	EI-821412X	IC SM5849BF
IC3	EI-821412X	IC SM5849BF
IC4	EI-821412X	IC SM5849BF
IC5	EI-821412X	IC SM5849BF
IC6	EI-820941X	IC XC2S50-5TQ144C
IC7	EI-820957X	IC NJM317DL1 FPTE1T16E
IC8	EI-810887J	IC AV9173-01CS08 FP T12E
IC9	EI-810887J	IC AV9173-01CS08 FP T12E
IC10	EI-812977J	IC HD74LVC08TELL FPELT16E
IC11	EI-821160X	IC BA033FP E2 FPE2T16E
IC13	EI-812978J	IC HD74LVC541ATELL FPELT16E
IC14	EI-812978J	IC HD74LVC541ATELL FPELT16E
J1	EJ-394459J	SOCKET OPTICAL GP1F32R
J2	EJ-394490J	SOCKET OPTICAL GP1F32T
J3	EJ-820965X	WIRE ASSY L5263(1) RA-RC 50P
P1	EJ-364356	PLUG B8B-PH-K WHT 8P
X1	EI-820992X	OSC X'TAL C.DS0751SV 25.0000MHZ

IB-48P

Ref.No.	Part No.	Description
IC1	EI-397407J	IC NJM7812FA
IC2	EI-410281J	IC NJM7912FA
IC3	EI-812978J	IC HD74LVC541ATELL FPELT16E
IC4	EI-427221J	IC NJM7808FA
IC5	EI-400856J	IC NJM78M05FA
IC6	EI-821048X	IC UPC29M33AT-E2 FPE2T16E
IC7	EI-336995	IC NJM78L05A
IC8	EI-810574J	IC M51957BFP FP73AT12
IC9	EI-821442X	IC PCM1730E FPT16E
IC10	EI-821226X	IC OPA2134UA FPT12E
IC11	EI-810591J	IC NJM5532L
IC12	EI-821226X	IC OPA2134UA FPT12E
IC13	EI-810591J	IC NJM5532L
IC14	EI-821442X	IC PCM1730E FPT16E
IC15	EI-821226X	IC OPA2134UA FPT12E
IC16	EI-810591J	IC NJM5532L
IC17	EI-821226X	IC OPA2134UA FPT12E
IC18	EI-810591J	IC NJM5532L
IC19	EI-821442X	IC PCM1730E FPT16E
IC20	EI-821226X	IC OPA2134UA FPT12E
IC21	EI-810591J	IC NJM5532L
IC22	EI-821226X	IC OPA2134UA FPT12E
IC23	EI-810591J	IC NJM5532L
IC24	EI-821442X	IC PCM1730E FPT16E
IC25	EI-821226X	IC OPA2134UA FPT12E
IC26	EI-810591J	IC NJM5532L
IC27	EI-821226X	IC OPA2134UA FPT12E
IC28	EI-810591J	IC NJM5532L
IC30	EI-812977J	IC HD74LVC08TELL FPELT16E
J1	EJ-413165J	PHONE J 3P YKB21-5009 NI 6.3
J2	EJ-821387X	PHONE J YKB21-5264 6.3
J3	EJ-821387X	PHONE J YKB21-5264 6.3
J4	EJ-413165J	PHONE J 3P YKB21-5009 NI 6.3
J5	EJ-821387X	PHONE J YKB21-5264 6.3
J6	EJ-821387X	PHONE J YKB21-5264 6.3
J7	EJ-413165J	PHONE J 3P YKB21-5009 NI 6.3
J8	EJ-821387X	PHONE J YKB21-5264 6.3
TR1	ET-410280J	TR 2SC3327 A T05
TR2	ET-410280J	TR 2SC3327 A T05
TR3	ET-410280J	TR 2SC3327 A T05
TR4	ET-410280J	TR 2SC3327 A T05
TR5	ET-410280J	TR 2SC3327 A T05
TR6	ET-410280J	TR 2SC3327 A T05
TR7	ET-410280J	TR 2SC3327 A T05
TR8	ET-410280J	TR 2SC3327 A T05
TR9	ET-410280J	TR 2SC3327 A T05
TR10	ET-410280J	TR 2SC3327 A T05
TR11	ET-410280J	TR 2SC3327 A T05
TR12	ET-410280J	TR 2SC3327 A T05

Ref.No.	Part No.	Description
TR13	ET-410280J	TR 2SC3327 A T05
TR14	ET-410280J	TR 2SC3327 A T05
TR15	ET-410280J	TR 2SC3327 A T05
TR16	ET-410280J	TR 2SC3327 A T05
TR17	ET-364023	TR DTC114ES T05
TR18	ET-362847	TR 2SA1317 S,T,U T05
W1	EW-820969X	WIRE ASSY L5261(1) RA-RC 26P

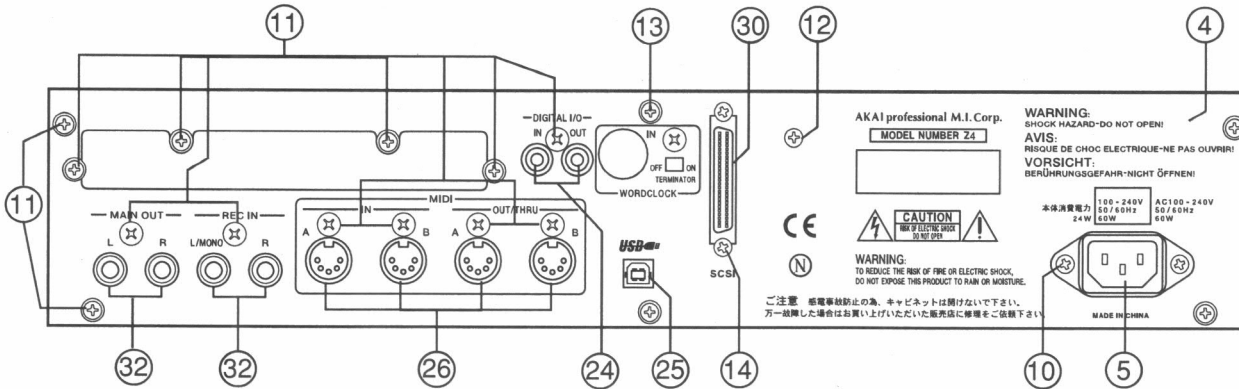
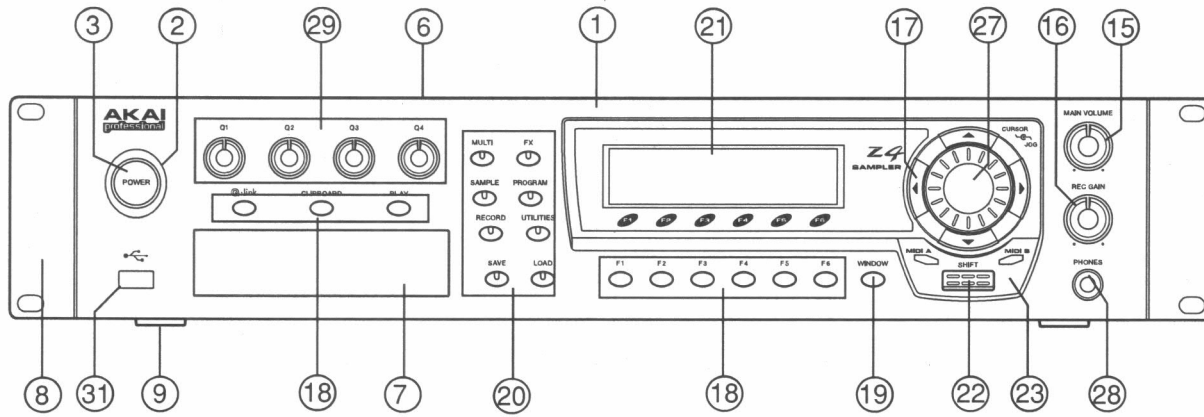
FINAL ASSEMBLY BLK (Z4)

Ref.No.	Part No.	Description
1	SP-821056X	PANEL FRONT Z4
2	SP-820647X1	ESCUTCHEON POWER
3	BUTTON SB-820646X	BUTTON POWER
	SW ES-430685J1	SW PUSH SDDF3A 02-1
4	SP-821072X1	PANEL REAR Z4
5	Δ EJ-358632J2	SOCKET INLET SOT-16 3P [AC INLET]
6	SP-820557X	COVER UPPER
7	SC-821067X	COVER ZIP
8	SH-820559X	HANDLE
9	SA-349332	FOOT
10	ZS-820481X	BT PAN30X08STL BZN C080
11	ZS-331182	BT BID30X08STL BNI
12	ZS-358953	ST BID30X08STL BNI
13	ZS-418385J	BT BID30X06STL BNI EARTH LOCK
14	ZS-812613J	PAN25X06STL NI3
15	KNOB SK-821036X	KNOB VOL B-1 PART
	VOL EV-821008X	VR ROTARY RK09L12B0 L20 B103X2
16	KNOB SK-821037X	KNOB VOL B-2 PART
	VOL EV-821007X	VR ROTARY RK09L12B0 L20 C503X2
17	SB-821059X	BUTTON CURSOR
	SW ES-349474	SW TACT SKHHAM004A
18	SB-821060X	BUTTON PUSH (A-1) [WHITE]
	SW ES-349474	SW TACT SKHHAM004A
19	SB-821061X	BUTTON PUSH (A-2) [ORANGE]
	SW ES-349474	SW TACT SKHHAM004A
20	SB-821415X	BUTTON PUSH (B) PART [WHITE]
	SW ES-349474	SW TACT SKHHAM004A
21	SE-821058X	DISPLAY LCD
22	SB-821063X	BUTTON SHIFTKEY
	SW ES-349474	SW TACT SKHHAM004A
23	SP-821075X	PANEL LCD PART
24	EJ-820754X	PIN J YKC21-3079 P2P SPDI/F I/O
25	EJ-820316X	SOCKET CONNECTER YKF45-0002 4P [USB-B]
	EJ-430956J	DIN J YKF51-5058 2X5P MIDI I/O
27	KNOB SK-820542X	[KNOB JOG]
	SW ES-811112J	SW ROTARY ENCODER EC16B24204
28	EJ-821000X	PHONE J YKB26-5264 S.NUT 6.3 [Head Phone]
29	SK-821035X	KNOB VOL A-1 PART [Q-LINK]
	VOL EV-821029X	VR ROTARY RK09D1130 L25 B103
30	EJ-812347J	SOCKET FCN-235D050-G/J 50P SCSI I/F
31	EJ-820970X	SOCKET CONNECTER YKF45-0001 4P [USB-A]
32	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT [MAIN I/O]
33	Δ EJ-405424J	PLUG ADAPTOR KPR-25
35	ZW-413267	N FRANGE 40STL CMT
36	ZS-322580	ST BID40X08STL BNI
37	BA-810408J	INVERTER 13585A-CFL-INV
38	EM-810407J	IND LCD GMV24160AFTW
40	EW-820986X	WIRE ASSY L6053(3) EH-AMP 4P
41	EW-820987X	WIRE ASSY L6052(12) RA-RA 40P
42	ZS-417137	BID30X04STL CMT
43	ZS-418538J	PAN N06-32UNCX5MM STL CMT
34-A	Δ EW-380905J	AC CORD 250S KP300 KS16A H B J
34-B	Δ EW-368420J1	AC CORD200SKP30KS16 B AC
34-C	Δ EW-403993J	AC CORD200SKP4819DKS31A B E
34-D	Δ EW-419170J	AC CORD200S KP610 KS31A B
44	Δ BA-LJ038A020A	PC POWERBLK SPS-80

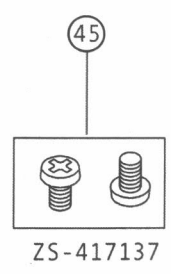
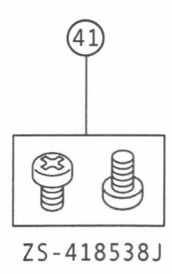
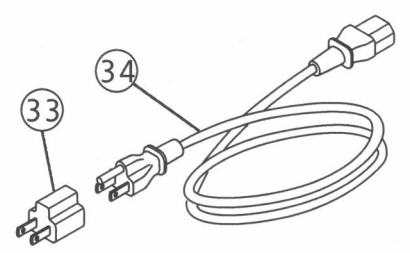
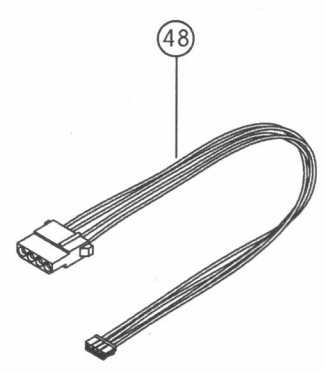
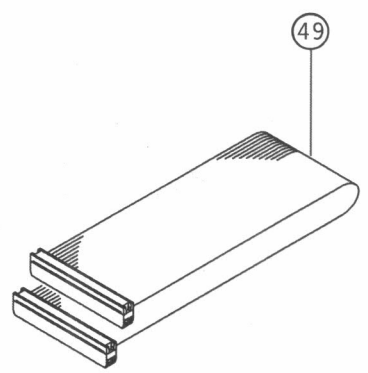
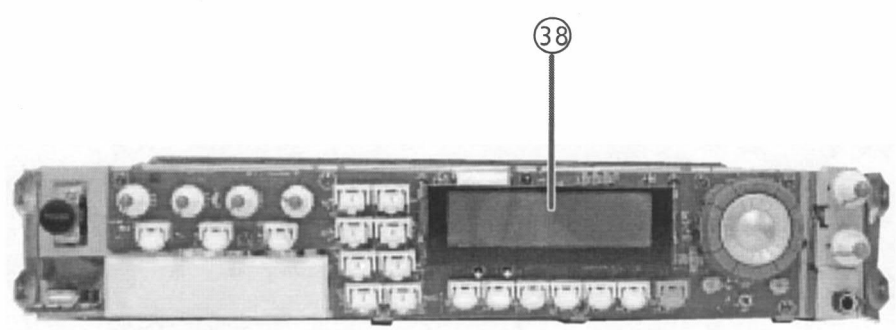
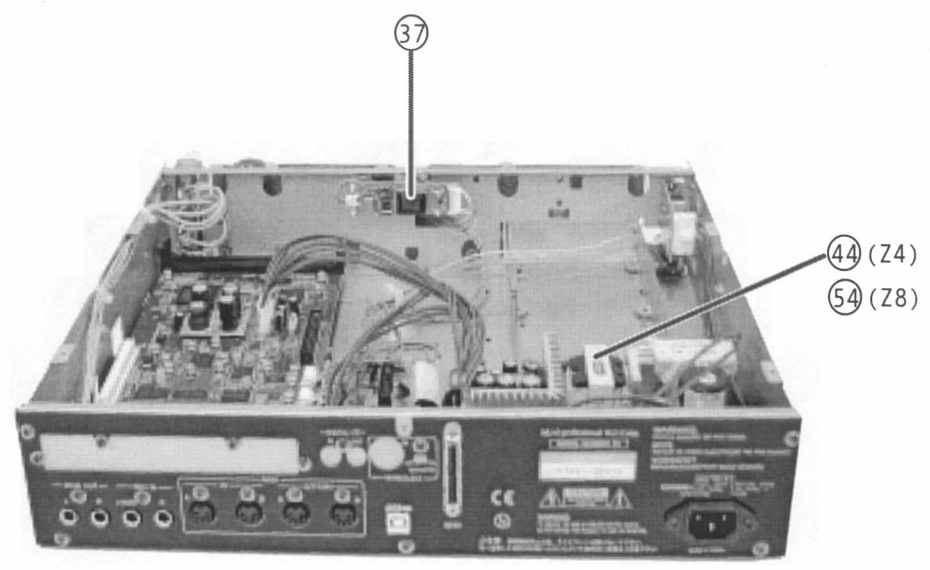
FINAL ASSEMBLY BLK (Z8)

Ref.No.	Part No.	Description
1	SP-820531X	PANEL FRONT Z8
2	SE-820647X1	ESCUTCHEON POWER
3	SE-820554X	LENS POWER
4	KNOB SB-820646X	BUTTON POWER
	SW ES-430685J1	SW PUSH SDDF3A 02-1
5	SP-820555X1	PANEL REAR Z8
6	Δ EJ-358632J2	SOCKET INLET SOT-16 3P [AC INLET]
7	SP-820534X	MASK REMOCON
8	820526X	LEVER EJECT
9	SC-820557X	COVER UPPER
10	SE-820535X	MASK ZIP
11	SH-820559X	HANDLE
12	SA-349332	FOOT
13	ZS-820481X	BT PAN30X08STL BZN C080
14	ZS-331182	BT BID30X08STL BNI
15	ZS-358953	ST BID30X08STL BNI
16	ZS-418385J	BT BID30X06STL BNI EARTH LOCK
17	ZS-812613J	PAN25X06STL NI3
18	KNOB SK-821036X	KNOB VOL B-1 PART [MAIN VOL]
	VOL EV-821008X	VR ROTARY RK09L12B0 L20 B103X2
19	KNOB SK-821037X	KNOB VOL B-2 PART [REC GAIN]
	VOL EV-821007X	VR ROTARY RK09L12B0 L20 C503X2
20	BUTTON SB-820543X	BUTTON CURSOR
	SW ES-349474	SW TACT SKHHAM004A
21	BUTTON SB-820548X	BUTTON PUSH A-1 [WHITE]
	SW ES-349474	SW TACT SKHHAM004A
22	BUTTON SB-821038X	BUTTON PUSH A-2 [ORANGE]
	SW ES-349474	SW TACT SKHHAM004A
23	BUTTON SB-821049X	BUTTON PUSH B-1 PART [with LED LENS]
	SW ES-349474	SW TACT SKHHAM004A
24	SE-820541X	WINDOW LCD
25	BUTTON SB-820547X	BUTTON SHIFT [SHIFT Key]
	SW ES-349474	SW TACT SKHHAM004A
26	SP-820532X	PANEL REMOCON UPPER
27	EJ-820754X	PIN J YKC21-3079 P2P SPDI/F I/O 28
	EJ-820316X	SOCKET CONNECTER YKF45-0002 4P [USB-B]
29	EJ-430956J	DIN J YKF51-5058 2X5P MIDI I/O
30	KNOB SK-820542X	[KNOB JOG]
	SW ES-811112J	SW ROTARY ENCODER EC16B24204
31	EJ-821000X	PHONE J YKB26-5264 S.NUT 6.3 [HEAD PHONE]
32	KNOB SK-821035X	KNOB VOL A-1 PART [Q-LINK]
	VOL EV-821029X	VR ROTARY RK09D1130 L25 B103
33	EJ-820150J	SOCKET COAX. BNC-LNRD-BPAA
34	ES-428287J	SW SLIDE SSSF112-S06N1 1-02N
35	EJ-812347J	SOCKET FCN-235D050-G/J 50P SCSI I/F
36	EJ-810323J	SOCKET TCS7927-56 REMOCON JACK
37	BA-L6052A504C	PC PROBE BLK
38	EJ-820970X	SOCKET CONNECTER YKF45-0001 4P [USB-A]
39	EJ-413050J	PHONE J 3P HLJ1520-3010 S.NUT [MAIN I/O]
40	SC-821034X	COVER PROBE
41	ZS-418538J	PAN N06-32UNCX5MM STL CMT [FOR HD]
42	EW-820988X	CORD MIN-DIN 6P L150 REMOCON CORD
43	Δ EJ-405424J	PLUG ADAPTOR KPR-25 (J)
44-A	Δ EW-368420J1	AC CORD200SKP30KS16 B AC (A)
44-B	Δ EW-380905J	AC CORD 250S KP300 KS16A H B J (J)
44-C	Δ EW-403993J	AC CORD200SKP4819DKS31A B E(E)
44-D	Δ EW-419170J	AC CORD200S KP610 KS31A B (B)
45	ZS-417137	BID30X04STL CMT [for ZIP]
46	ZW-413267	N FRANGE 40STL CMT
47	ZW-609434	N FRANGE 30STL CMT
48	EW-820986X	WIRE ASSY L6053(3) EH-AMP 4P [ATA POWER]
49	EW-820987X	WIRE ASSY L6052(12) RA-RA 40P [ATA 40pin]
50	KNOB SB-821113X	BUTTON PUSH C-1 PART
	SW ES-349474	SW TACT SKHHAM004A
51	ZS-322580	ST BID40X08STL BNI
54	Δ BA-LJ038A020A	PC POWER BLK SPS-80

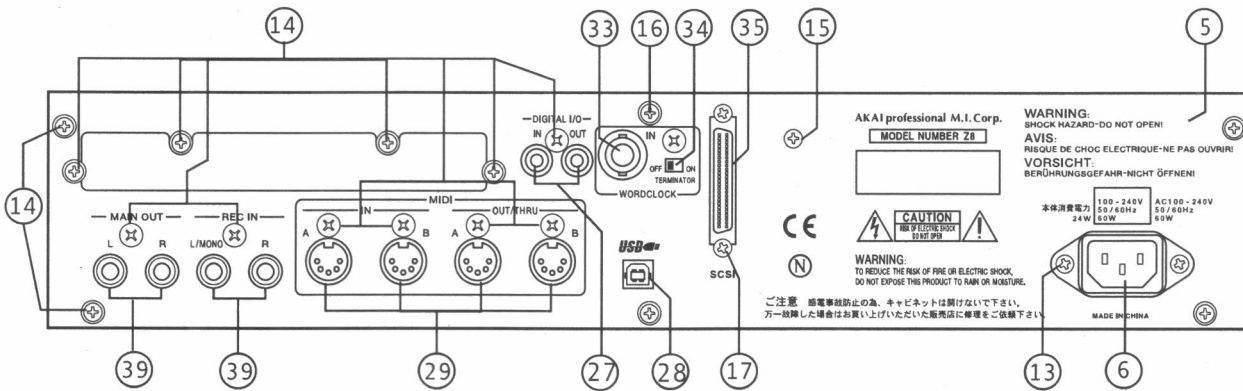
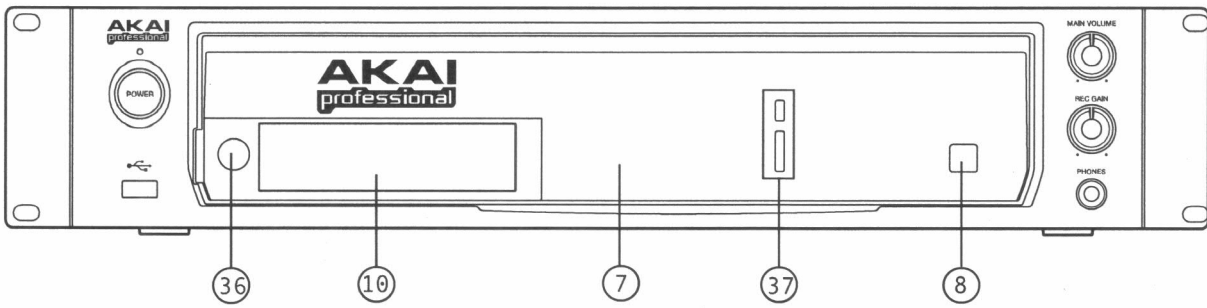
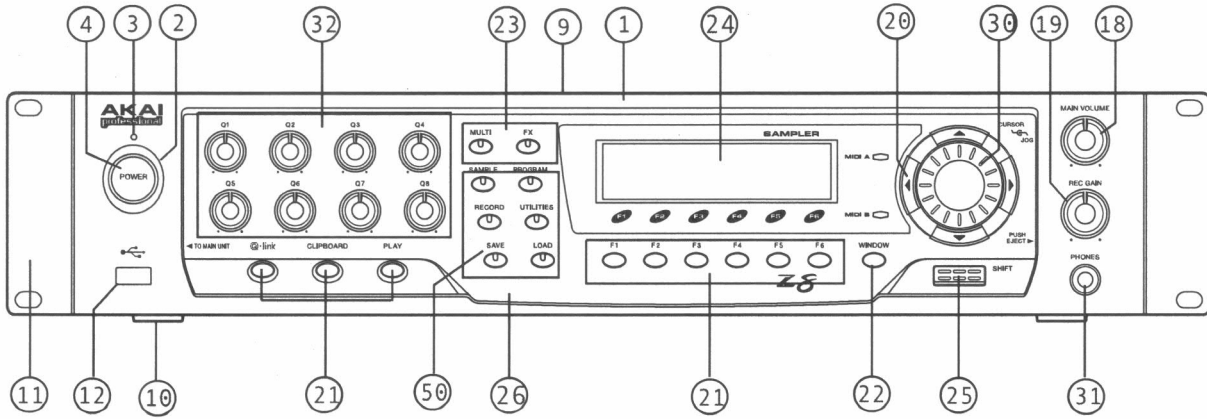
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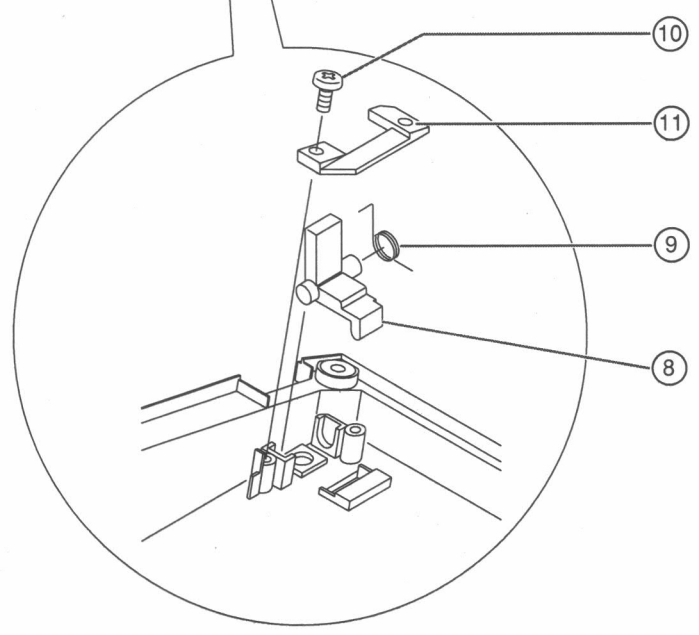
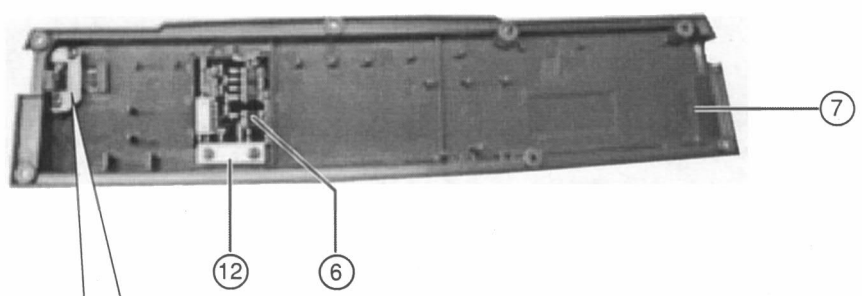
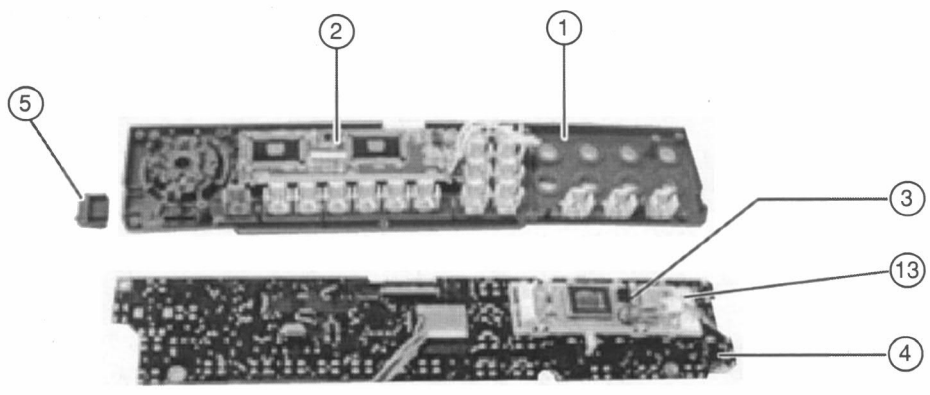
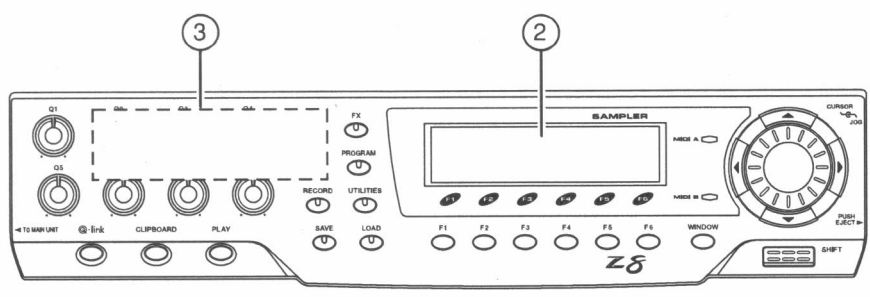
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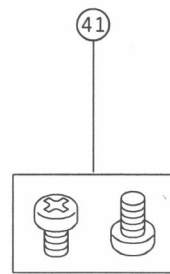
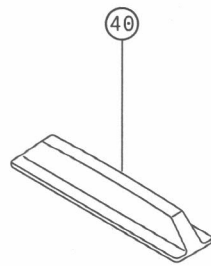
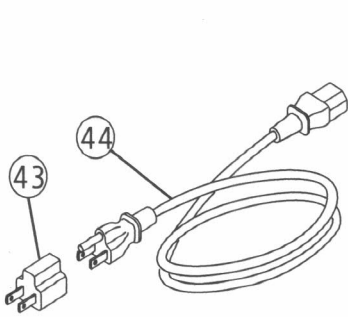
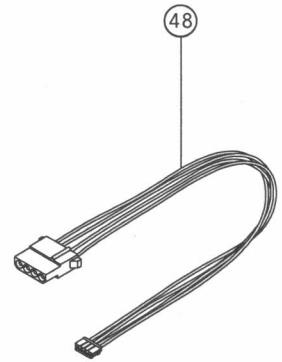
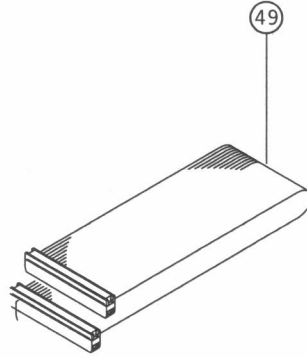
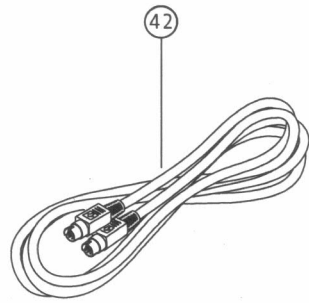
Z8 FINAL ASSEMBLY BLK



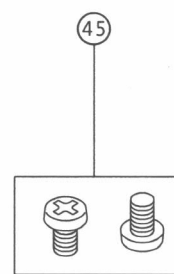
Z8 REMOCON BLK



Z8 FINAL ASSEMBLY BLK



ZS-418538J



ZS-417137

VII. INFORMATION OF ICs

1. IC Explanation.

1-1 IC1 SA1110B (Intel CPU)

206MHz version chip.

CPU clock : 176.9MHz.

SDRAM (CPU work memory) : 88.45MHz (=176.9MHz/2)

1-1-2 Pin Descriptions

Signal name	Dir	Explanation
D[31:0]	i/o	Data-bus
A[25:0]	out	Address-bus
SDCKE1	out	SDRAM clock enable for CPU's work memory
SDCLK1	out	SDRAM clock for CPU's work memory.(88.45MHz)
SDCLK2	out	Not used though this is connected.(44.225MHz)
/SDRAS	out	SDRAM RAS for CPU's work memory
/SDCAS	out	SDRAM CAS for CPU's work memory
/SDCS0	out	SDRAM CS for CPU's work memory
DQM[3:0]	out	SDRAM data out mask enable for CPU's work memory
/OE	out	Output enable (/RD)
/WE	out	Write enable
/Cs[5:0]	out	Chip select
RDY	in	Data ready signal for /CS[5:3]
RD/nWR	out	Read/write direction control
/RESET	in	Hard reset. Active low.
PXTAL	in	Input for 3.686MHz crystal (non-CMOS threshold)
PEXTAL	out	Output for 3.686MHz crystal (non-CMOS level)
GP0	in	Interrupt from Voice-LSI
GP1	in	Interrupt from SCSI controller (FAS236U)
GP2	in	Interrupt from IDE
GP3	in	Interrupt from USB-host controller (SL811HST)
GP4	in	Interrupt from effect board
GP5	in	Interrupt from MIDI (Voice-LSI)
GP6	in	Interrupt from USB-function controller (NET2890)
GP7	in	Interrupt from SMPTE option (MPC only)
GP8	in	Interrupt from FPGA
GP9	in	Interrupt from Voice-LSI
GP11	out	Initialize FPGA. active high.
GP13	out	DIMM SPDA for reading information.
GP14	out	DIMM SPCL for reading information.
GP15	out	LCD DISP off. Active low.(MPC only)
GP16	in	SCSI jack board recognition. Low=connected.
GP17	out	Control /PROGRAM pin of FPGA during configuration
GP18	in	effect board recognition. Low=connected.
GP19	in	FPGA /INIT. used during configuration.
GP20	out	D/A converter CDTI (control data input)
GP21	in	FPGA done. used during configuration.
GP22	out	Used for ROM emulator.
GP23	out	CPLD TDI. used during configuration in factory.
GP24	out	CPLD TMS. used during configuration in factory.
GP25	out	CPLD TCK. used during configuration in factory.
GP26	in	8 Para board recognition. Low=connected.
GP27	in	CPLD TDO. used during configuration in factory.
RxD_1	in	DIO board recognition. Low=connected.
TxD_1	in	SMPTE board recognition. Low=connected.
RxD_2	in	RxD. from panel(remocon) 230.4kbps.
TxD_2	out	TxD. to panel(remocon). 230.4kbps.
RxD_3	in	ADAT board recognition. Low=connected.
TxD_3	in	for future. (Low When ADAT board is exist now)
RxD_C	in	CD analog recognition. Low=connected.(MPC only)

Signal name	Dir	Explanation
TxD_C	in	CD digital recognition. Low=connected.(MPC only)
SCLK_C	in	BM1. Machine recognition. Low=Z4/8. High=MPC.
SFRM_C	in	BM0. Connected GND now. for future.
LDD[7:0]	out	LCD controller display data.
L_BIAS	out	LCD ac bias drive.
L_PCLK	out	LCD pixel clock.
L_LCLK	out	LCD line clock.
L_FCLK	out	LCD frame clock.
TXTAL	in	Not used.(Clock for CPU's real-time clock)
ROM_SEL	in	ROM bus width select. Low=16bits.
SMROM_EN	in	SMROM enable. Low= disable.
/PIOR,/PIOW	out	PCMCIA I/o read/write for ROM Emulator
/IOIS16	in	PCMCIA 16-bit I/O data transfers for ROM Emulator
TCK_BYP		
TESTCLK	in	Test pin
GP10,/PCE1		
/PWAIT		
BATT_FAULT		
VDD_FAULT	out	# Not used though this is connected #
VDD	-	Positive supply for the core. +1.75V
VDDX	-	Positive supply for the pins. +3.3V
VSS	-	Ground supply.
VSSX	-	Ground supply for the I/O pins.

1-3. IC3,4 HM5264165FTT (64Mbit SDRAM (4Mword x16bit))

Wave RAM for Voice LSI

The clock changes by the value of sampling frequency.

44.1kHz: 33.869MHz (= fsx768)

48kHz : 36.864MHz (= fsx768)

96kHz : 36.864MHz (= fsx384)

If there is no DIMM, SDRAM is placed in zero address.

If there is DIMM(s), SDRAM is placed in last address.

1-4. IC5,6 HY57V281620AT-P (128Mbit SDRAM (8Mword x16bit))

CPU work RAM

This clock is set to half of CPU core clock by software.

("88.45MHz" When CPU clock is 176.9MHz.)

1-5. IC7 MBM29DL322TE90TN (32Mbit Flash ROM (2M word x16bits))

CPU Boot ROM

(If ROM-card is inserted in J7, system boot up from ROM card.)

1-6. IC8 XC95144XL-7TQ100C (Complex programmable logic (CPLD).

Address decoder.

Expansion port by using data-latch.

Communication logic for RTC.

Selector.

1-6-2. Pin Descriptions

Signal name	Dir	Explanation
D[7:0]	i/o	Connected with CPU data bus for communication.
A[24:21]	in	Connected with CPU address bus for communication.
/CS[5:0]	in	Chip select for other device.
/RD	in	Data output enable of CPU data bus.
/WR	in	Data strobe of CPU data bus.
/RESET	in	For initializing logic. Active low.
/GWR,/FWR	out	buffered /WR. (= /WR)
/GDB	out	Gate of buffer for logic on CPU board.
/GDB2	out	Gate of buffer for logic except for CPU board.
ROMCARD	in	ROM card. L: not inserted (normal), H: inserted.
/FLASH_CS	out	Chip select for Flash-ROM. /CS0 OR (A24 XOR ROMCARD).
/ROM_CS	out	Chip select for ROM-card. /CS0 OR (/A24 XOR ROMCARD).
/SCSI_CS	out	Chip select for SCSI controller. /CS5 OR A24.
/USBF_CS	out	Chip select for USB host controller. /CS5 OR /A24.
FPCCLK	out	FPGA configuration clock on CPU PCB.
/EB_CS	out	Chip select for DSP on effect PCB.
FP2_CCLK	out	FPGA configuration clock on ADAT PCB.
/ADAT_CS	out	Chip select for FPGA on ADAT PCB.
/SMPTE_CS	out	Chip select for controller on SMPTE PCB.
/DIO_CS	out	Chip select for CPLD on DIO PIB.
/LSI_RESET	out	Reset Voice-LSI. Active low.
/VO_PLLRST	out	Reset PLL of Voice-LSI. Active low.
/IDE_RESET	out	Reset IDE.
/ADAT_INIT	out	Initialize FPGA and IC on ADAT PCB. Active low.
/EB_RESET	out	Reset DSP on effect PCB. Active low.
VO_SIN[1:0]	out	Audio serial data to Voice-LSI's SIN[1:0]
AD_DATA	in	Analog-in audio data from CODEC (A/D at MPC).
DIO_RCVD	in	Digital-in audio data from DIO PCB.
ADAT_RCVD	in	ADAT-in audio data from ADAT PCB.
EB_RTN[3:2]	out	Effect return.
/SCSI_TERM	out	SCSI termination. H:off, L:on.
/ADA_CS	out	Chip select for CODEC (A/D conv. at MPC).
/ADA_PD	out	/PD of CODEC and A/D on MPC.
AD_DFS	out	DFS of a/d converter on MPC.
DA_CCLK	out	Control clock for CODEC (D/A conv. at MPC).
/DA_CS	out	Chip select for dD/A converter at MPC.
/DA_PD	out	/PD of D/a converter's on MPC and DIO.
/AD_CDSEL	out	Select analog-out of CD player at MPC.
MUTE	out	For mute circuit. H: mute on, L: mute off.
LSI_MCLK	in	MCLK of Voice-LSI. Make synchronous reset for Voice LSI.
RTC_D[7:0]	i/o	RTC data bus.
RTC_AS	out	Control for RTC
RTC_DS		
RTC_RW		
/RTC_SEL		
/RTC_XALM		
WCKE[1:0]	out	Clock enable of wave SDRAM and DIMM.
SEL_XTAL0	out	X2 output enable. H: enable, L: disable.
SEL_XTAL1	out	X3 output enable. H: enable, L: disable.
MOTOR_ON	out	Control fan on MPC.

Signal name	Dir	Explanation
/FP2_PROG	out	For configuration to FPGA on ADAT PCB.
PLD2_TMS PLD2_TDI	out	For configuration to CPLD on DIO.
PLD2_TDO	in	For configuration to CPLD on DIO.
TCK,TMS,TDI	in	For configuration.(TCK is also used for CPLD on DIO)
TDO	out	For configuration.
VCCINT	-	Positive supply for internal logic. +3.3V
VccIO	-	Positive supply for output driver. +3.3V
GND	-	Ground supply.

1-7. IC9 XC2S100-5TQ144C (Field Programmable Gate Arrays (FPGA))

IDE controller.

DMA controller between Voice-LSI and IDE/SCSI.

MIDI interface.

1-7-2. Pin Descriptions

Signal name	Dir	Explanation
CD[15:0]	i/o	Connected with CPU bus for communication.
A[5:0]	in	Connected with CPU address bus for communication.
/IDE_CS	in	Chip select for this FPGA.
/CPU_RD	in	Data output enable of CPU bus.
/CPU_WR	in	Data strobe of CPU bus.
RESET	in	Initialize FPGA logic. Active high.
LSI_D[15:0]	i/o	Connected with DMA data bus of Voice-LSI.
IDE_D[15:0]	i/o	Connected with data bus of IDE.
IDE_DA[2:0]	out	Connected with DA[2:0] of IDE I/F
/IDE_CS1,0	out	Connected with CS[1:0] of IDE I/F.
/IDE_IORD	Out	Connected with /DIOR_HD of IDE I/F.
/IDE_DIOW	Out	Connected with /DIOW_STOP of IDE I/F.
IORDY	in	Connected with IORDY of IDE I/F.
/IDE_DMACK	out	Connected with /DMACK of IDE I/F.
IDE_DMARQ	in	Connected with DMARQ of IDE I/F.
CPU_RDY	out	Connected with CPU RDY.
SCSI_DMAREQ	in	Connected with SCSI controller. DMA control.
/SCSI_DMACK	out	Connected with SCSI controller. DMA control.
LSI_DMAREQ	out	Connected with Voice-LSI. DMA control.
/LSI_DMAACK	in	Connected with Voice-LSI. DMA control.
/LSI_DMARD	in	Connected with Voice-LSI. DMA control.
/LSI_DMAWR	in	Connected with Voice-LSI. DMA control.
/INT_DMA	out	Interrupt request output of DMA to CPU. Active low.
LRCK	in	Word clock of system. Connected with Voice-LSI.
SFrame	out	Pin No.133. Frequency= Fs/256. duty cycle= 255:1.
MIDI_IN1,2	in	MIDI 2 input.
MIDI_OUT1-4	out	MIDI 4 output.
/INT_MIDI	out	Interrupt request output of Midi to CPU. Active low.
MCLK	in	Master clock of FPGA logic.
CCLK	in	Configuration clock I/O pin.
/INIT	i/o	For configuration. Active Low.
/PROGRAM	in	Initiates a configuration sequence when asserted Low.
DONE	i/o	Indicates that configuration is complete. open drain.
M0,M1,M2	in	configuration mode pin.
TCK,TMS,TDI	in	# Not used though this is connected #
VCCINT	-	Power supply for internal core logic. +2.5V
VccO	-	Power supply for output driver. +3.3V
GND	-	Ground supply.

1-8. IC10 SL811HST (USB Host/Slave Controllers).

1-8-2. Pin Descriptions

Pin No.	Signal name	Dir	Explanation
3	/WR	in	Write Strobe. Active low.
4	/CS	in	Chip select. Active low.
5	CM	in	Clock mode. H: at 12MHz. L: at 48MHz clock source.
6	USBVDD	-	Power for USB Transceivers.
7	DATA+	i/o	USB Differential Data Signal High Side.
8	DATA-	i/o	USB Differential Data Signal Low Side.
9	USBGND	-	Ground Connection for USB.
16	CLK/X1	in	Clock or External Crystal X1 connection.
17	X2	out	External Crystal X2 connection.
18	/RST	in	SL811HST Device reset. Active low.
19	INTRQ	out	Interrupt Request output. Active high.
21,39	D[7:0]	i/o	Connected with CPU bus for communication.
27-29			
31-33			
40	M/S	in	Master/Slave Mode select. H: Slave. L: Master.
42	A0	in	L:Addr.Pointer.Register. H:Data Buffer or Register.
43	/DACK	in	DMA Acknowledge. Active low.
44	/DRQ	Out	DMA Request. Active low.
45	/RD	in	Read Strobe Input. Active low.
15,41	VDD	-	Device VDD Power.
9,20	GND	-	Device Ground.
30			

1-9. IC11 FAS236U (SCSI Controller)

1-9-2. Pin Descriptions

Pin No.	Signal name	Dir	Explanation
100	DREQ	out	DMA request. H: ready to transfer data.
1	/DACK	in	DMA acknowledge.
2	/DBWR	in	Data-bus write control.
4	IGS	out	Indicates that chip is acting in initiator mode.
5	DIFFSENS	in	H: differential mode.
6	TGS	out	Indicates that chip is acting in target mode.
7	EDIFFS	in	H: Enable "DIFFSENS" function.
8-15 19-26	DB[15:0]	i/o	DMA data-bus.
16,27	DBP[1:0]	i/o	DMA data-bus parity.
29-36	/SDI[7:0]	in	SCSI data bus.
37	/SDIP	in	SCSI data parity.
42-45 48-51	/SDO[7:0]	out	SCSI data bus.
52	/SDOP	out	SCSI data parity.
56	/SELO	out	SCSI bus select.
57	/BSYO	out	SCSI bus busy.
58	/REQO	out	SCSI bus request.
59	/ACKO	out	SCSI bus acknowledge.
62	/MSG	i/o	SCSI bus message phase.
63	/CD	i/o	SCSI bus control and data phase.
64	/IO	i/o	SCSI bus I/O phase.
65	/ATN	i/o	SCSI bus attention.
66	/RSTO	out	SCSI bus reset.
69	/SELI	in	SCSI bus select.
70	/BSYI	in	SCSI bus busy.
71	/REQI	in	SCSI bus request.
72	/ACKI	in	SCSI bus acknowledge.
73	/RSTI	in	SCSI bus reset.
74,75	MODE[1:0]	in	Bus configuration mode select.
76	/INT	out	Interrupt output.
77	RESET	in	Power reset.
79	/WR	in	Write control.
80	/RD	in	Read control.
81	/CS	in	Chip select.
82-85	A[3:0]	in	Address bus.
86	CLK	in	Internal chip timing clock.
87	/DIFFM	in	H: single-endes mode. L: differential mode.
90-93 96-99	PAD[7:0]	i/o	PAD bus. Connected with CPU for communication.
38,88	VDD	-	+5V DC power input.
17,18,40 41,46,47 54,55,60 61,67,68 94,95	Vss	-	GROUND. 0V DC power return.

- 1-10 IC12, 16 ALVCH16245 (16 bit Bus bidirectional transceivers)
- 1-11 IC13-15 ALVCH16244 (16 bit Bus Buffers)
- 1-12 IC17, 18 LVC244 (8 bit Bus Buffers)
- 1-13 IC19 LVC245 (8 bit Bus bidirectional transceivers)
In particular, this is used for changing 5V into 3.3V.
- 1-14 IC20 M51957B (System Reset IC. Delay time is about 0.34 sec)
- 1-15 IC21, 22 NJM317 (Regulator IC)
IC21: regulate +2.5V for FPGA.
IC22: regulate +1.75V for CPU.

1-16. IC23 NET2890 (USB function controllers)

1-16-2. Pin Descriptions (PU:pull-up, PD:pull-down)

Pin No.	Signal name	Dir	Explanation
2	/SOF	out	Start of Frame. Active low.
3,4	DP,DM	i/o	USB data port. differential data.
5-11	D[7:0]	i/o	bi-directional 8-bit data bus. Connected with CPU for communication.
14			
15	/CS	in	Chip select. Active low. (PU)
16	LCLK	out	buffered clock output.
17	/IOR	in	I/O read strobe. Active low. (PU)
18	/IOW	in	I/O write strobe. Active low. (PU)
19	DRQ	out	DMA request.
20	/DACK	in	DMA acknowledge. Active low. (PU)
21	/EOT	in	End of transfer. Active low. (PU)
22	/BUSPWR	in	Indicates that external logic is powered by USB bus. Alternatively general input.
23	/PWRGOOD	in	Indicates that external power supply used for self-powered mode is operational. Alternatively general input.
26	/IRQ	out	Interrupt Request. Active low.
27	/USBOE	i/o	USB port output enable. Active low. (PU)
28	/DEVCFG	out	Device config. Alternatively general output. (PD)
30	TEST	in	Test. Connect this pin to ground. (PD)
32	/LRESET	out	Local reset. Active low. (PU)
33	/SUSP	out	Device suspended. Active low. (PU)
34	/WAKEUP	in	USB remote wakeup. Active low. (PU)
35	/RESET	in	External reset. (PU)
38-42	A[4:0]	in	Address bus.
44	CLKIN	in	48 MHz Oscillator input.
45	CLKOUT	out	48 MHz Oscillator output.
47	TESTOUT	out	Test output. Used for manufacturing test.
31	VDD_LOCAL	-	+3.3V or +5V DC power input for CPU I/F.
1,13,25 37,43	VDD	-	+3.3V DC power input for the core and USB I/F.
12,24,36 46,48	Vss	-	GROUND. 0V DC power return.

VIII. SUPPLEMENTARY INFORMATION

Z4/Z8 Installing Options – For Service Technicians

Caution

You must unplug the power cord for the equipment before installing any options.
Be sure to fix the screws and connectors securely to avoid any malfunctioning.

Top Cover removal

Remove the fixing screws of the Z4/Z8 Top Cover on its sides (2pcs. on each side) and its back center (1pc.) and remove the Top Cover by sliding it back and upwards. If the Handles are used, remove their fixing screws and then Handles.
After the installation, replace the Top over and Handles in the opposite order to which they were removed.

Memory Installation

The memory slots are on the CPU board and their 2 long DIMM sockets are located on the right side just behind the Front Panel. Insert the memory board securely in the correct direction. When only one memory board is installed, it can be installed on either slot.

Drive Installation

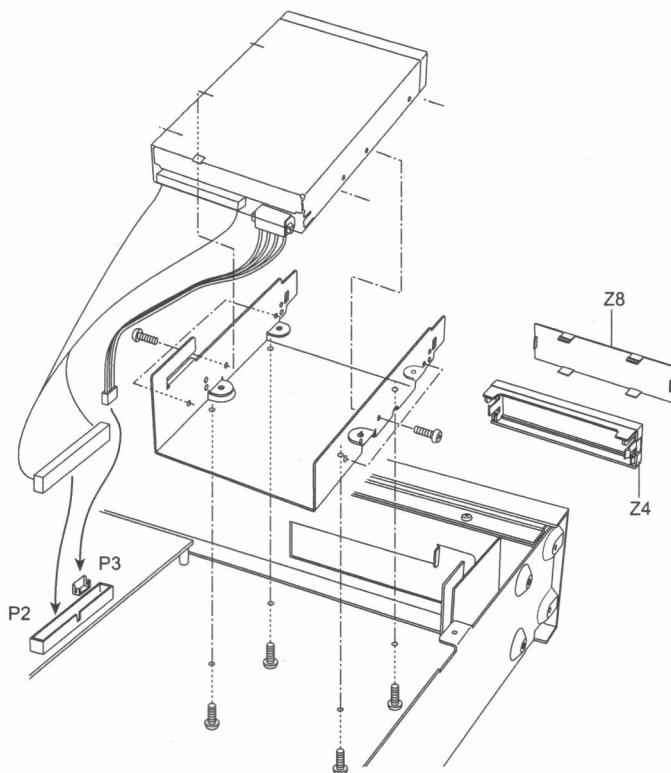
It requires the Connecting Cables and Fixing Screws included in the Z4/Z8 carton box.

1. Remove the fixing screws of the Drive Mounting Bracket (4pcs, bottom) and remove the Drive Mounting Bracket.
2. Remove the Protective Metal Plate on the Drive Mounting Bracket. The Protective Metal Plate is not used (Z8 only).
3. Connect the cables included (2pcs., 40-pin Signal Cable/4-pin Power Cable) to the drive.
4. Mount the drive on the Drive Mounting Bracket and fix it with Fixing Screws included.

Note 1: A different type of screw is required depending on the drive. Be sure to use the correct type of screws.

Note 2: When the removable media drive (e.g. Zip Drive) is installed, remove the plastic Mask Drive from the Front Panel (Z8)/Drive Mounting Bracket (Z4).

5. Set the Drive Mounting Bracket to the Z4/Z8 and fix it (4 screws) securely.
6. Connect the Cables from the drive to the connectors (P2, 40-pin/P3, 4-pin) on the CPU board.

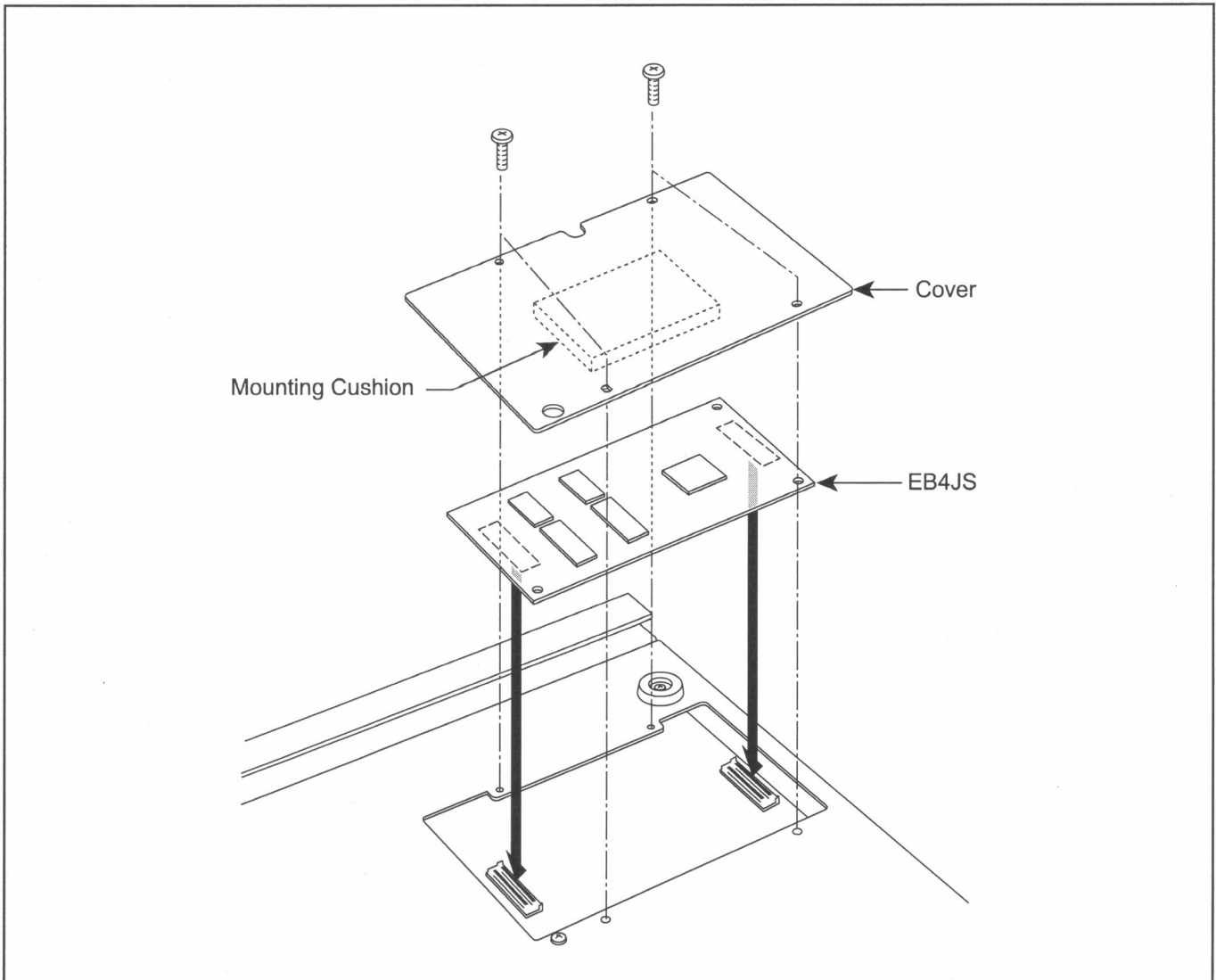


BE4JS

■ Installation

1. Remove the fixing screws (4pcs.) on the bottom of the Z4 and remove the Cover.
2. Adhere the Mounting Cushion inside the Cover. Care must be taken to position the cushion so that it comes to the center of the opening when covered.
3. Referring to the illustration, place the EB4JS board matching the connectors on the Z4 board and press it firmly until the click sound is heard.
4. Replace the Cover and fix it to complete the installation.

* Be sure to fix the screws and connectors securely to avoid malfunctioning.

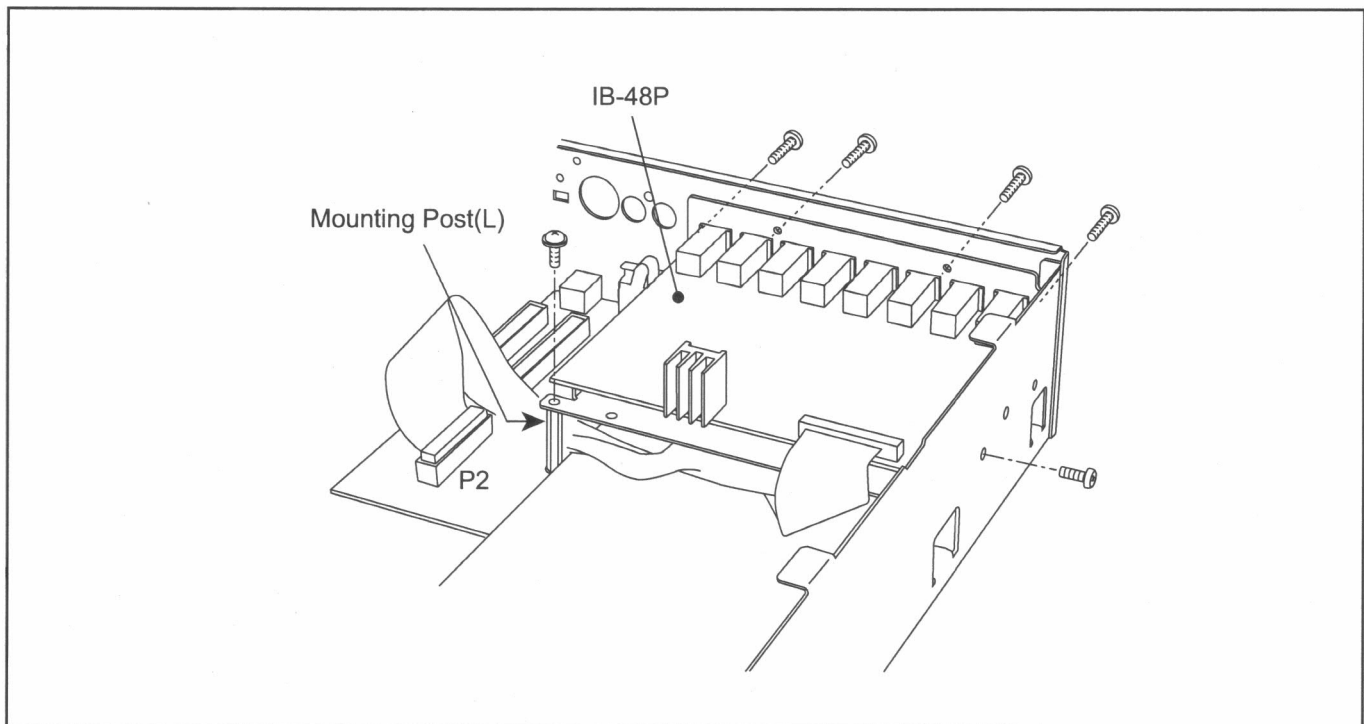


IB-48P

■ Installation

1. Remove the fixing screws of the Z4/Z8 Top Cover on its sides (2pcs. on each side) and its back center (1pc.) and remove the Top Cover. If the Handles are used, remove their fixing screws and then Handles.
2. Remove the fixing screws (4pcs.) for the Mask Plate on the Rear Panel and remove the Mask Plate. Save the screws for later use. The Mask Plate is not used.
3. Referring to the illustration, remove the fixing screw (1pc.) on the I/O board and install the Mounting Post (L) in its place. Save the screw for later use.
4. Connect the cable from the IB-48P board to the connector (P2) on the I/O board.
5. Set the IB-48P on the Rear Panel and Mounting Post (L) and fix it securely with the screws removed in earlier steps and the fixing screw included.
6. Replace and fix the Top Cover (and Handles) to complete the installation.

* Be sure to fix the screws and connectors securely to avoid malfunctioning.

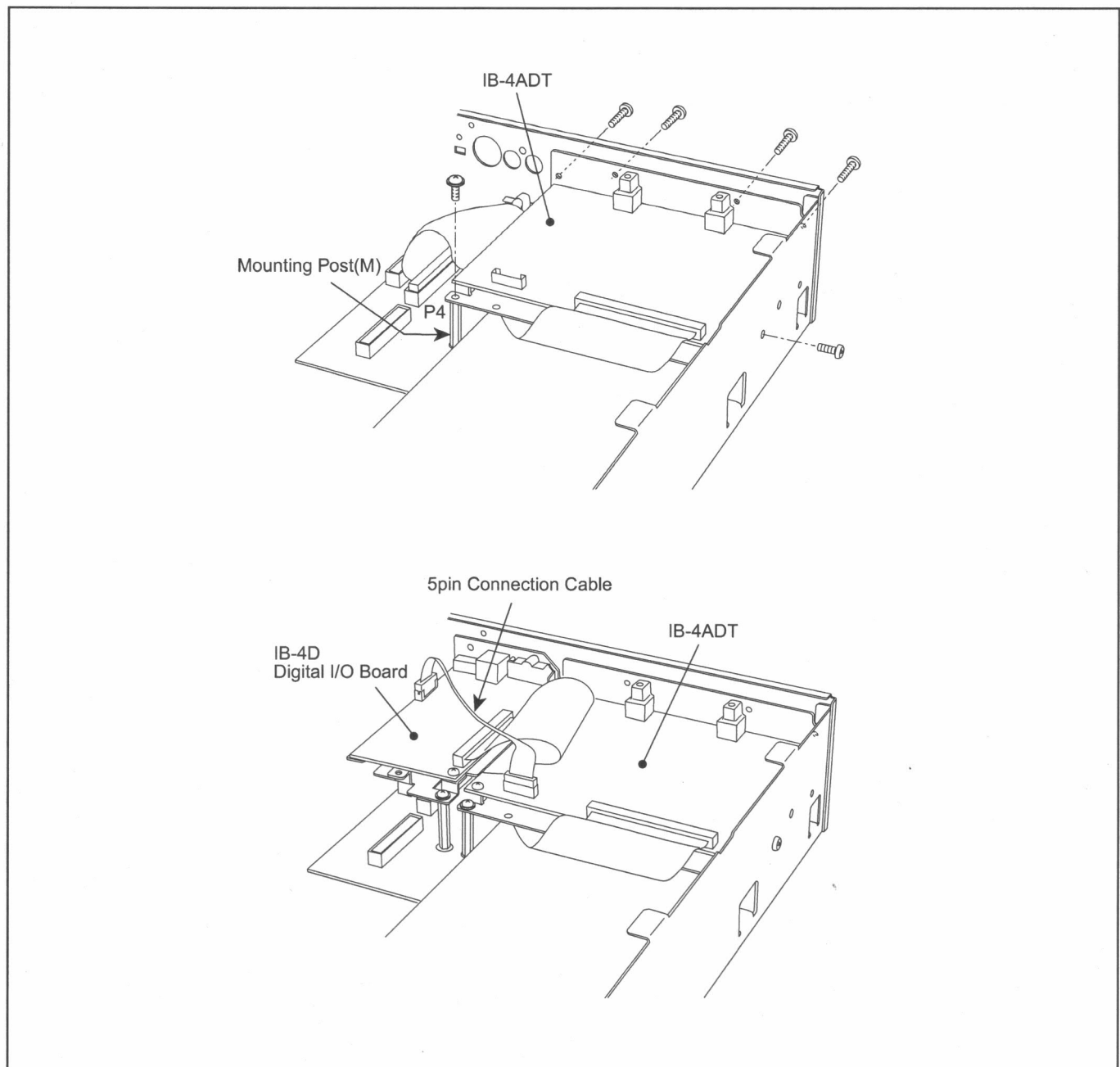


IB-4ADT

■ Installation

1. Remove the fixing screws of the Z4/Z8 Top Cover on its sides (2pcs. on each side) and its back center (1pc.) and remove the Top Cover. If the Handles are used, remove their fixing screws and then Handles.
2. Remove the fixing screws (4pcs.) for the Mask Plate on the Rear Panel and remove the Mask Plate. Save the screws for later use. The Mask Plate is not used.
3. Referring to the illustration, remove the fixing screw (1pc.) on the I/O board and install the Mounting Post (S) in its place. Save the screw for later use.
4. On the Z8 or Z4 with IB-4D SP-DIF Digital Interface Board installed, remove its fixing screws and take the board out. Leave the connection cable connected.
5. Connect the cable from the IB-4ADT board to the connector (P4) on the I/O board.
6. Set the IB-4ADT on the Rear Panel and Mounting Post (S) and fix it securely with the screws removed in earlier steps and the fixing screw included.
7. Replace the IB-4D board back and connect the 5-pin Connecting Cable included between the IB-4D and IB-4ADT boards.
8. Replace and fix the Top Cover (and Handles) to complete the installation.

* Be sure to fix the screws and connectors securely to avoid malfunctioning.

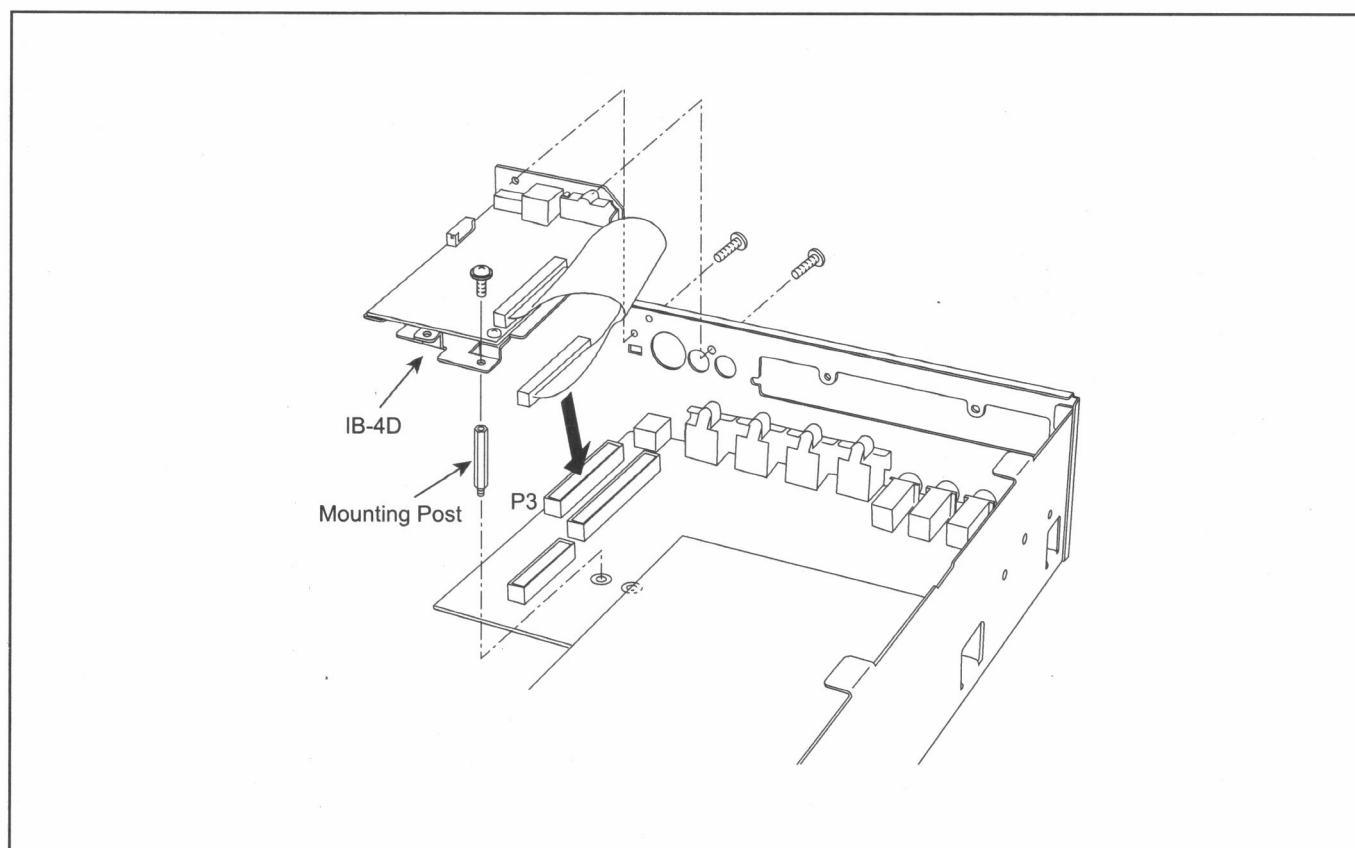


IB-4D

■ Installation

1. Remove the fixing screws of the Z4 Top Cover on its sides (2pcs. on each side) and its back center (1pc.) and remove the Top Cover. If the Handles are used, remove their fixing screws and then Handles.
2. Remove the fixing screws (2pcs.) for the Mask Plate on the Rear Panel and remove the Mask Plate. Save the screws for later use. The Mask Plate is not used.
3. Referring to the illustration, remove the fixing screw (1pc.) on the I/O board and install the Mounting Post in its place. Save the screw for later use.
4. Connect the cable from the IB-4D board to the connector (P3) on the I/O board.
5. Set the IB-4D on the Rear Panel and Mounting Post and fix it securely with the screws removed in earlier steps.
6. Replace and fix the Top Cover (and Handles) to complete the installation.

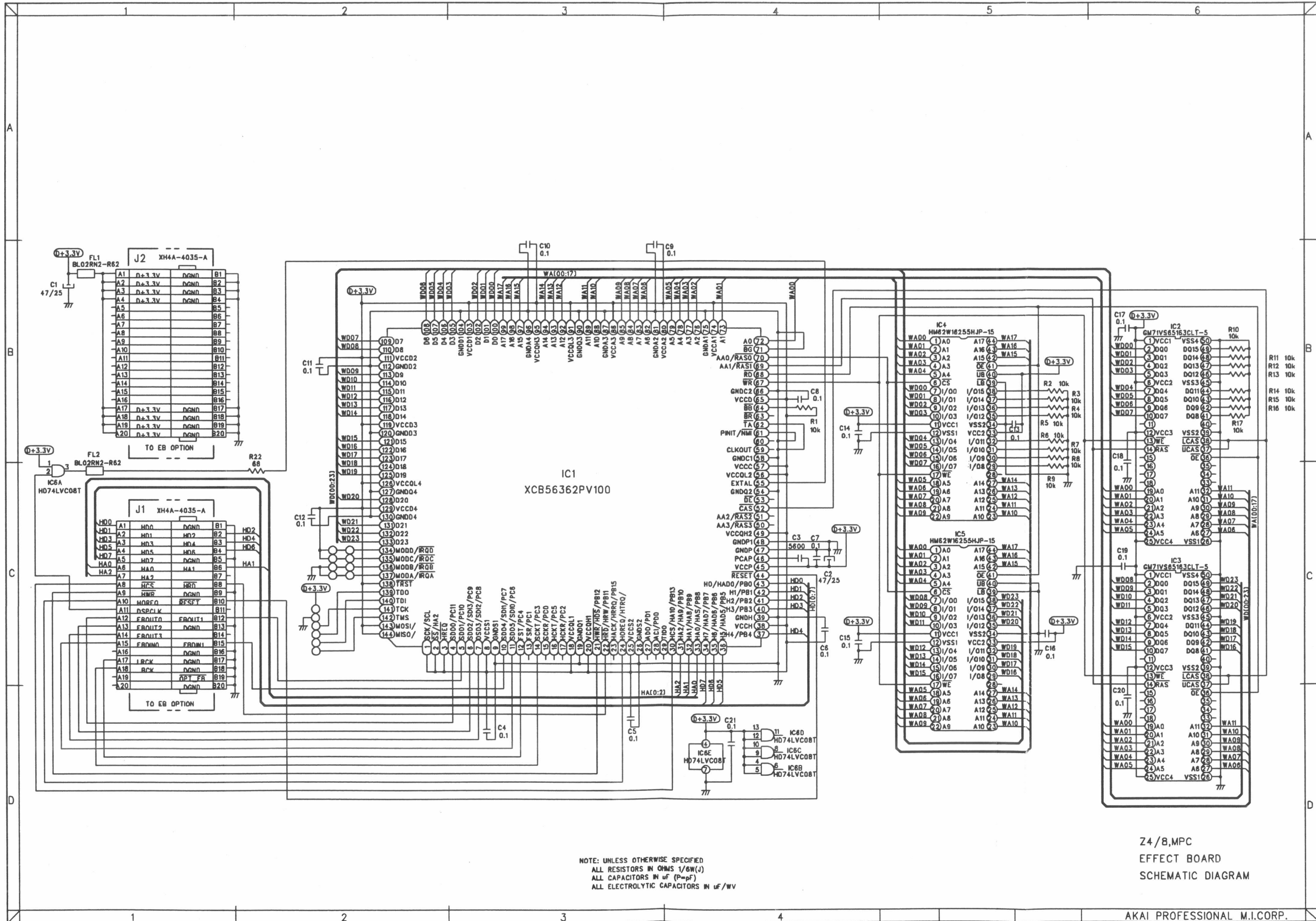
* Be sure to fix the screws and connectors securely to avoid malfunctioning.



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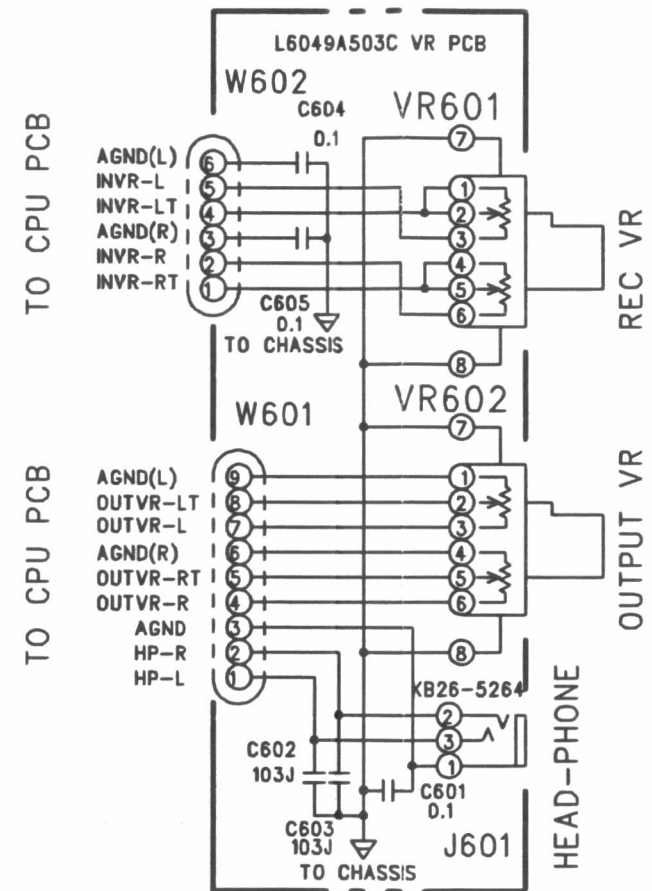
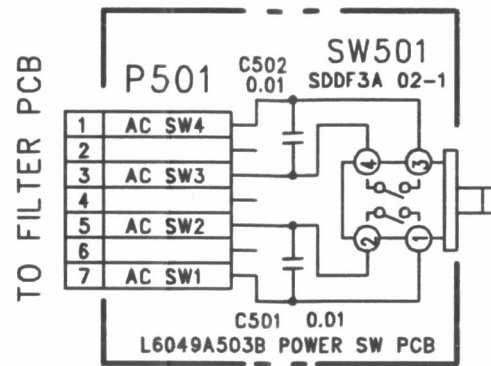
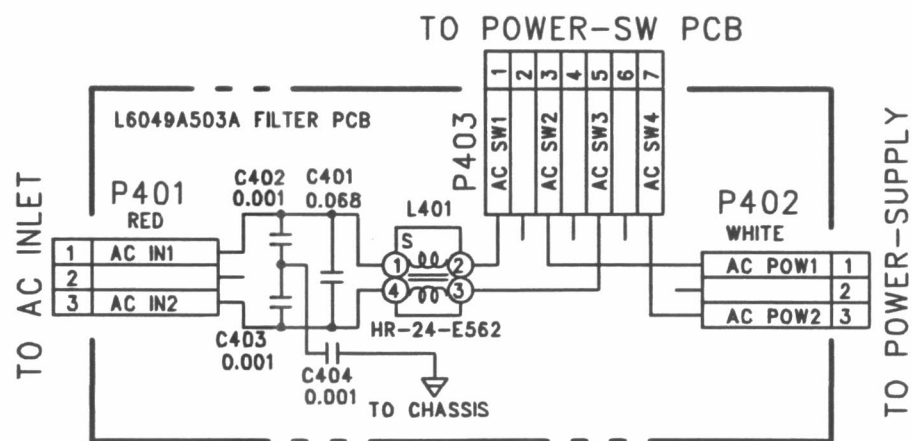
1-3, Hiranuma 1-Chome, Nishi-Ku, Yokohama, Japan

SERVICE SECT. PHONE : +81-45-412-2373 FAX : +81-45-412-2372



NOTE: UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/6W(J)
 ALL CAPACITORS IN uF (P=pF)
 ALL ELECTROLYTIC CAPACITORS IN uF/WV

Z4/8,MPC
 EFFECT BOARD
 SCHEMATIC DIAGRAM



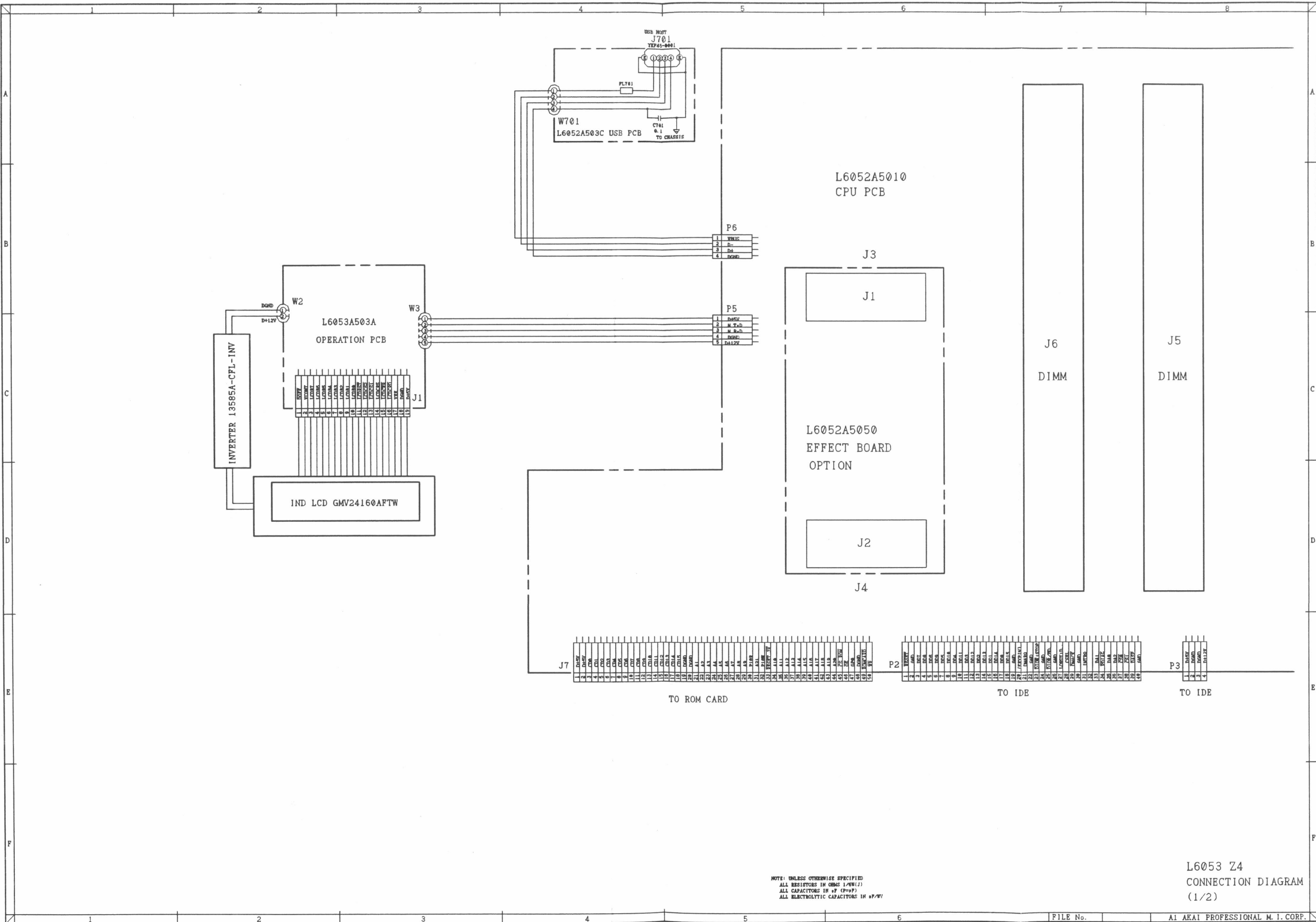
NOTE: UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/6W(J)
 ALL CAPACITORS IN μ F (P=pF)
 ALL ELECTROLYTIC CAPACITORS IN μ F/WV

AVERTISSEMENT: IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ,
 POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE
 REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

WARNING: INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
 REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
 RECOMMENDED PARTS

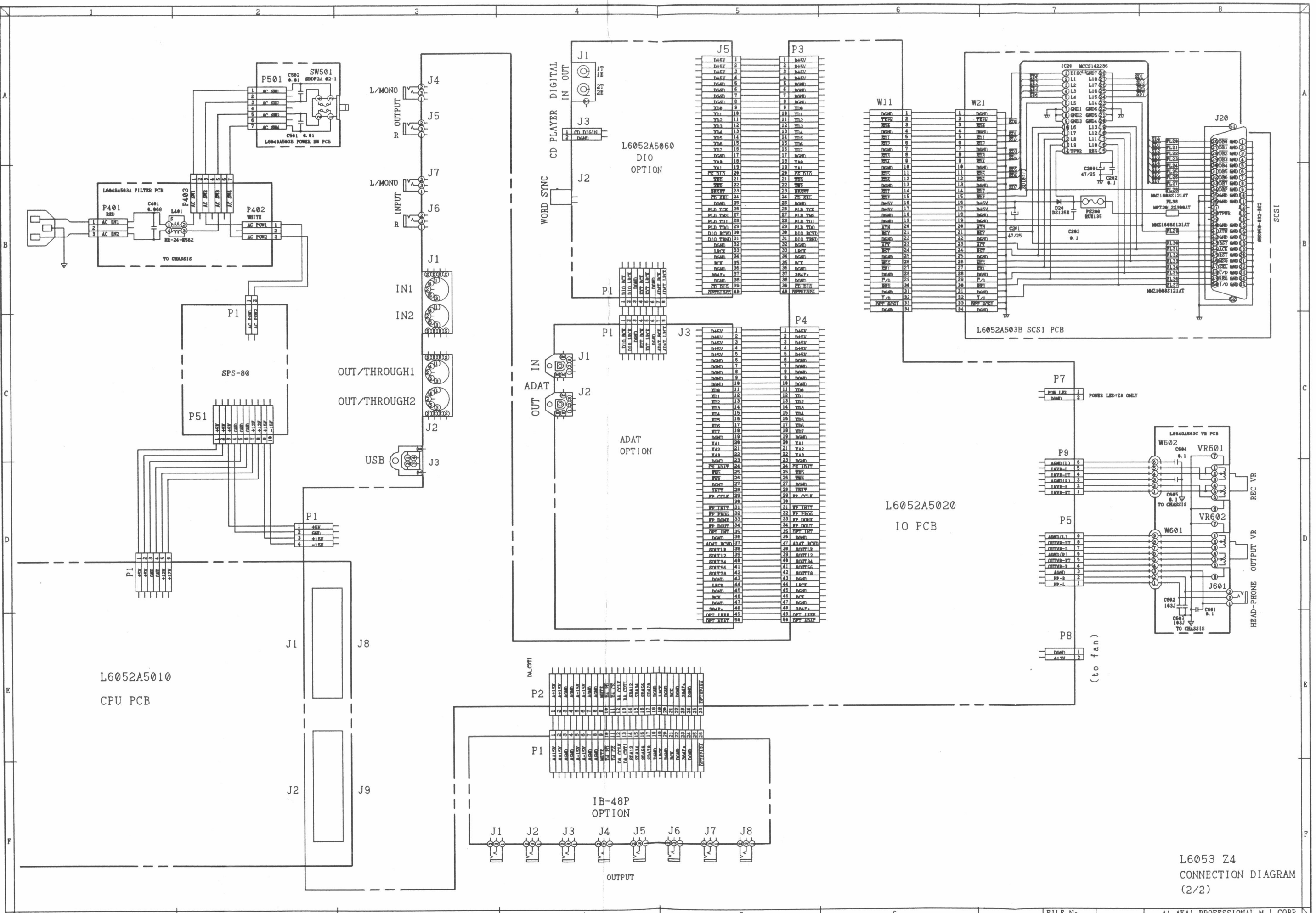
Z8/Z4

PC(#)
 JACK BLK
 SCHEMATIC DIAGRAM
 No. L6052A5030

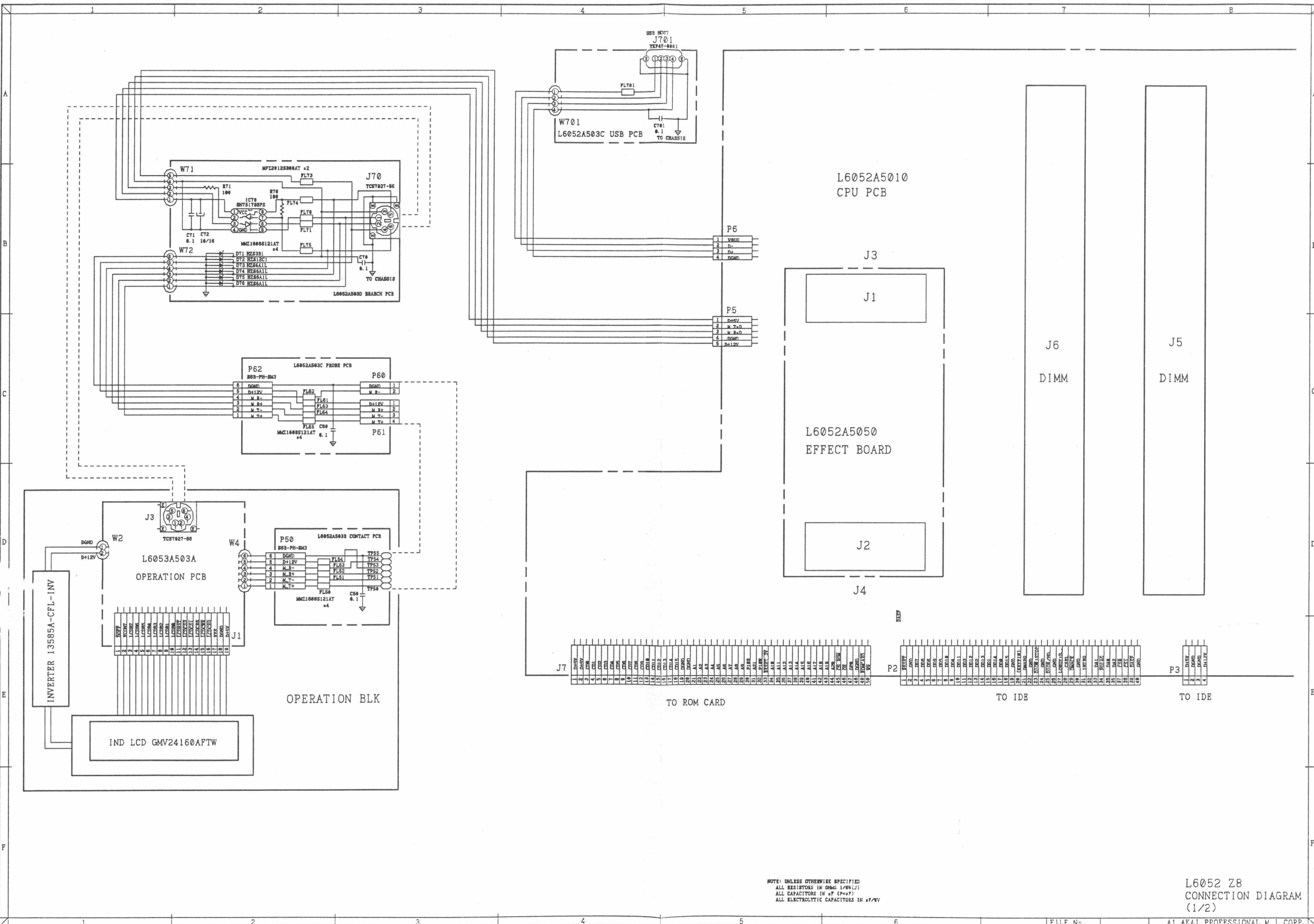


NOTE: UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/4W(1)
 ALL CAPACITORS IN uF (P=PP)
 ALL ELECTROLYTIC CAPACITORS IN uF/WV

L6053 Z4
 CONNECTION DIAGRAM
 (1/2)

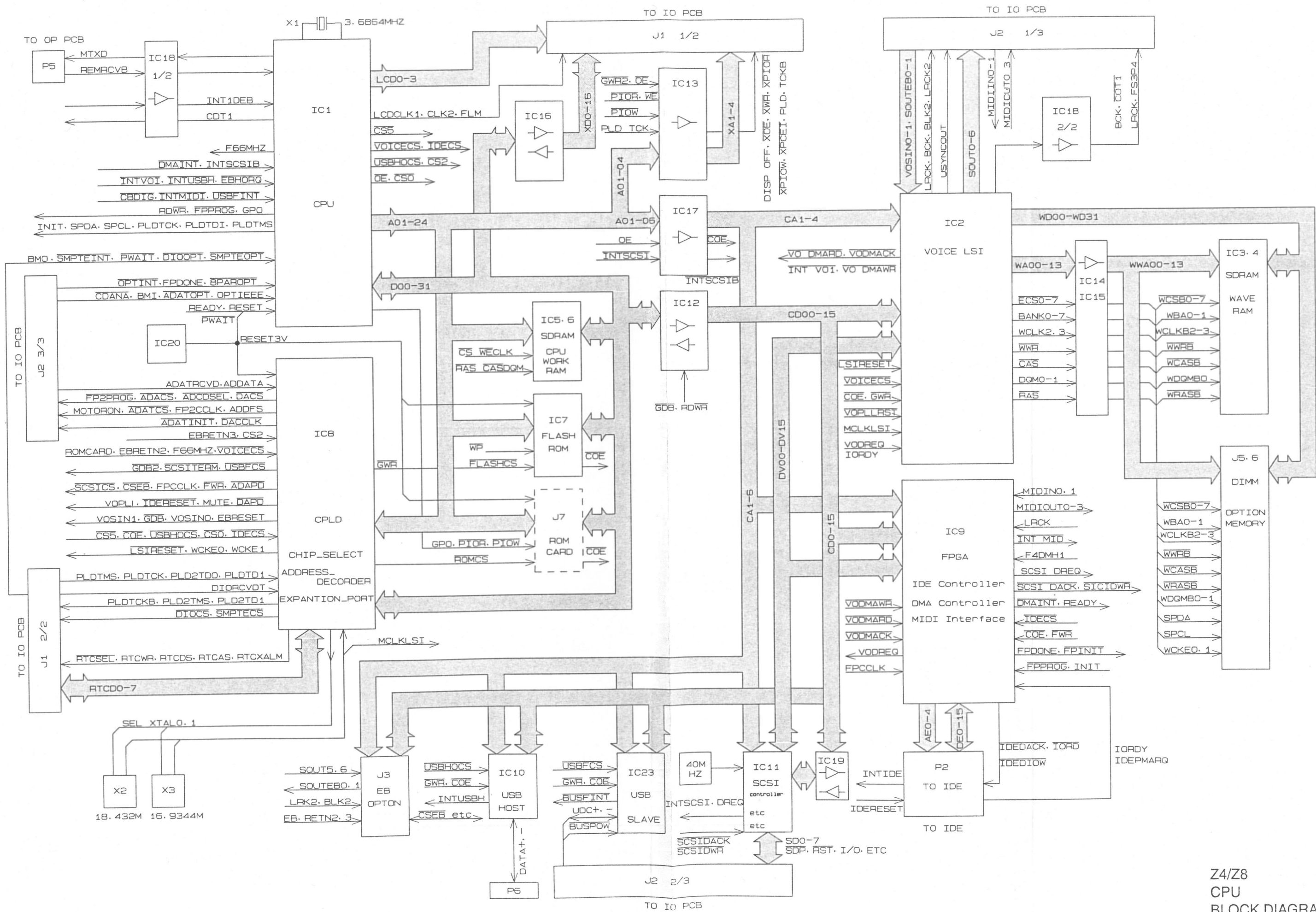


L6053 Z4
CONNECTION DIAGRAM
(2/2)

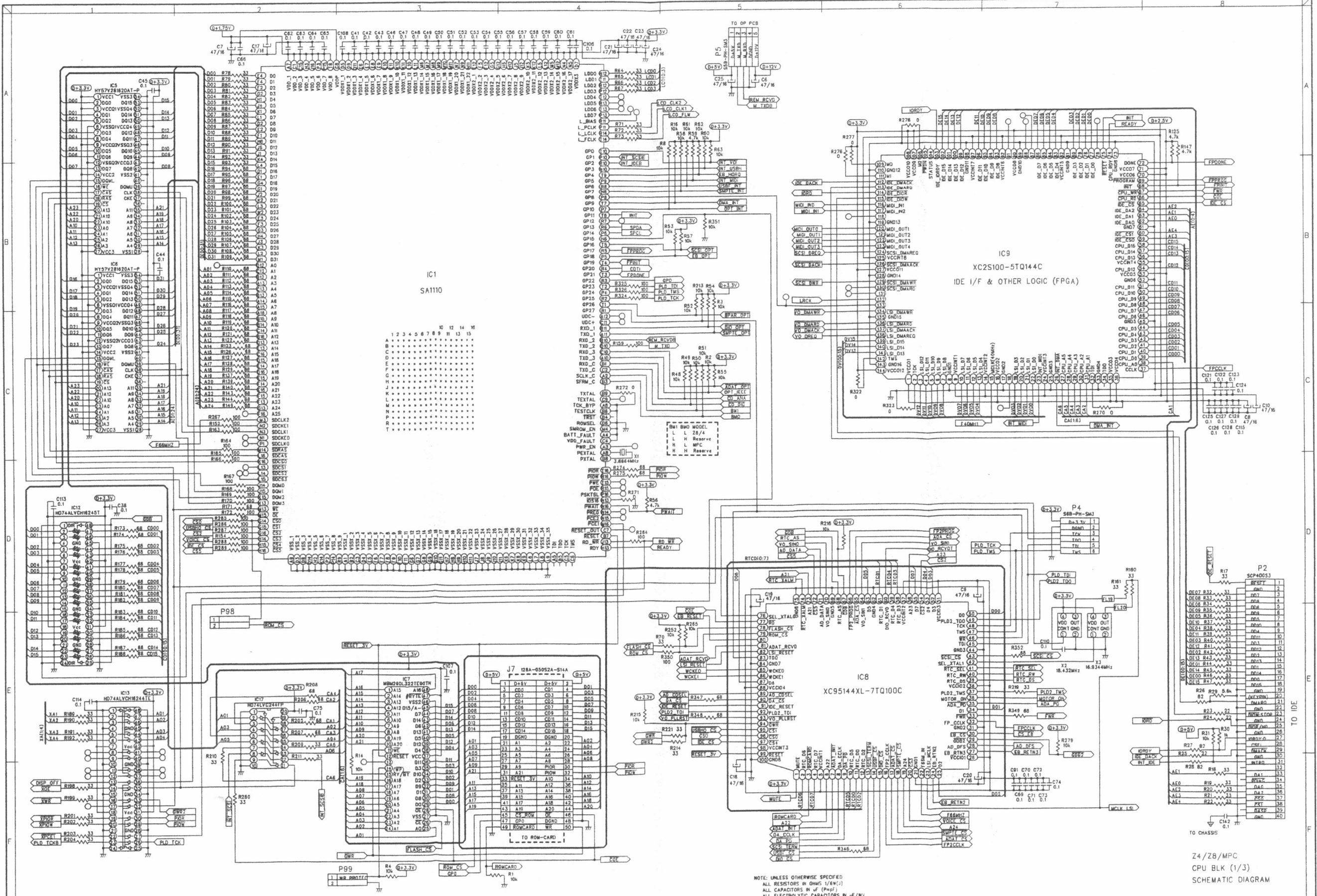


NOTE: UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/6W(J)
 ALL CAPACITORS IN uF (P=PP)
 ALL ELECTROLYTIC CAPACITORS IN uF/5V

L6052 Z8
 CONNECTION DIAGRAM
 (1/2)



Z4/Z8
CPU
BLOCK DIAGRAM

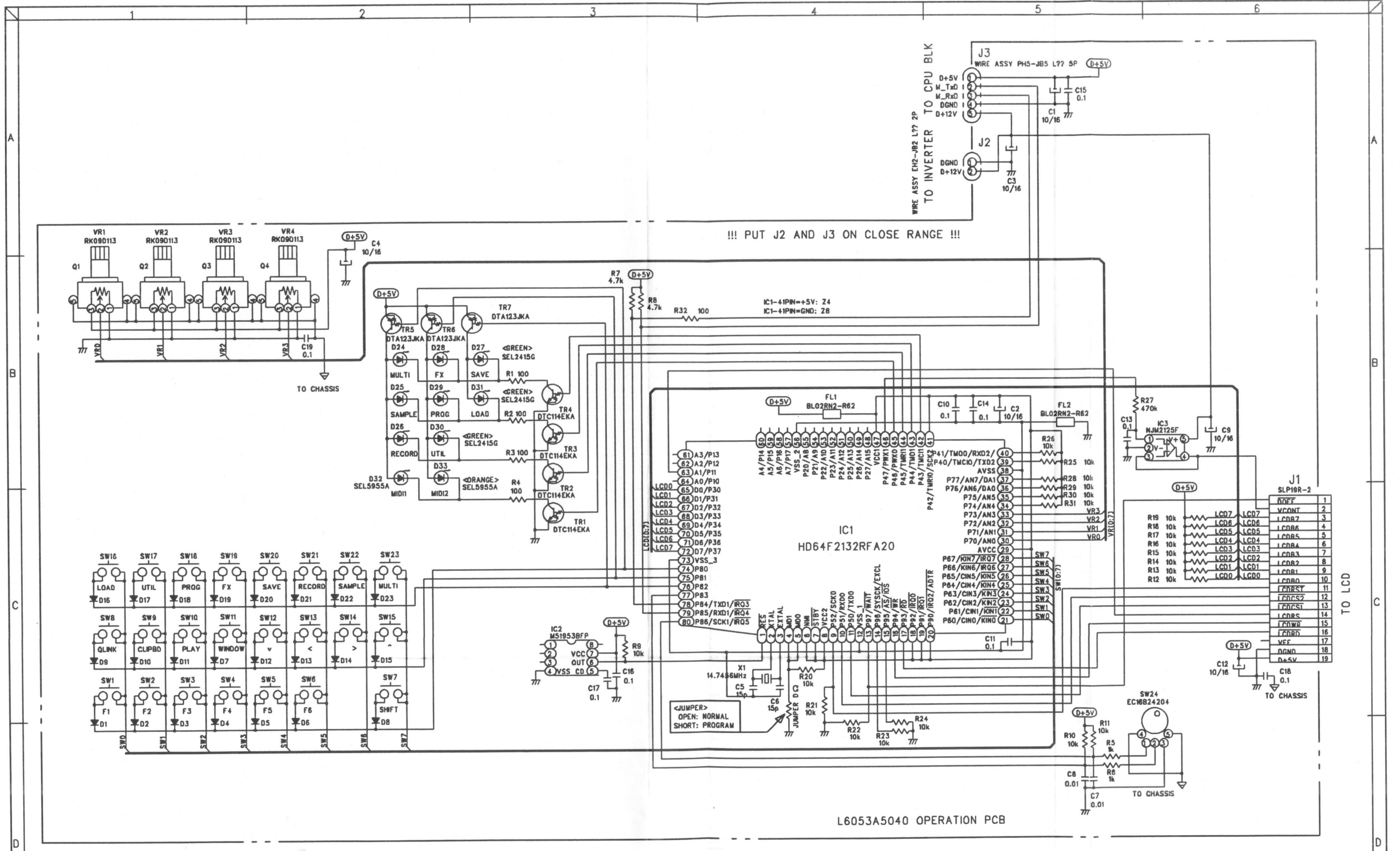


IC1
SA1110

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
R														

NOTE: UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/8W(1)
 ALL CAPACITORS IN uF (Pcap)
 ALL ELECTROLYTIC CAPACITORS IN uF/5V

Z4/Z8/MPC
 CPU BLK (1/3)
 SCHEMATIC DIAGRAM



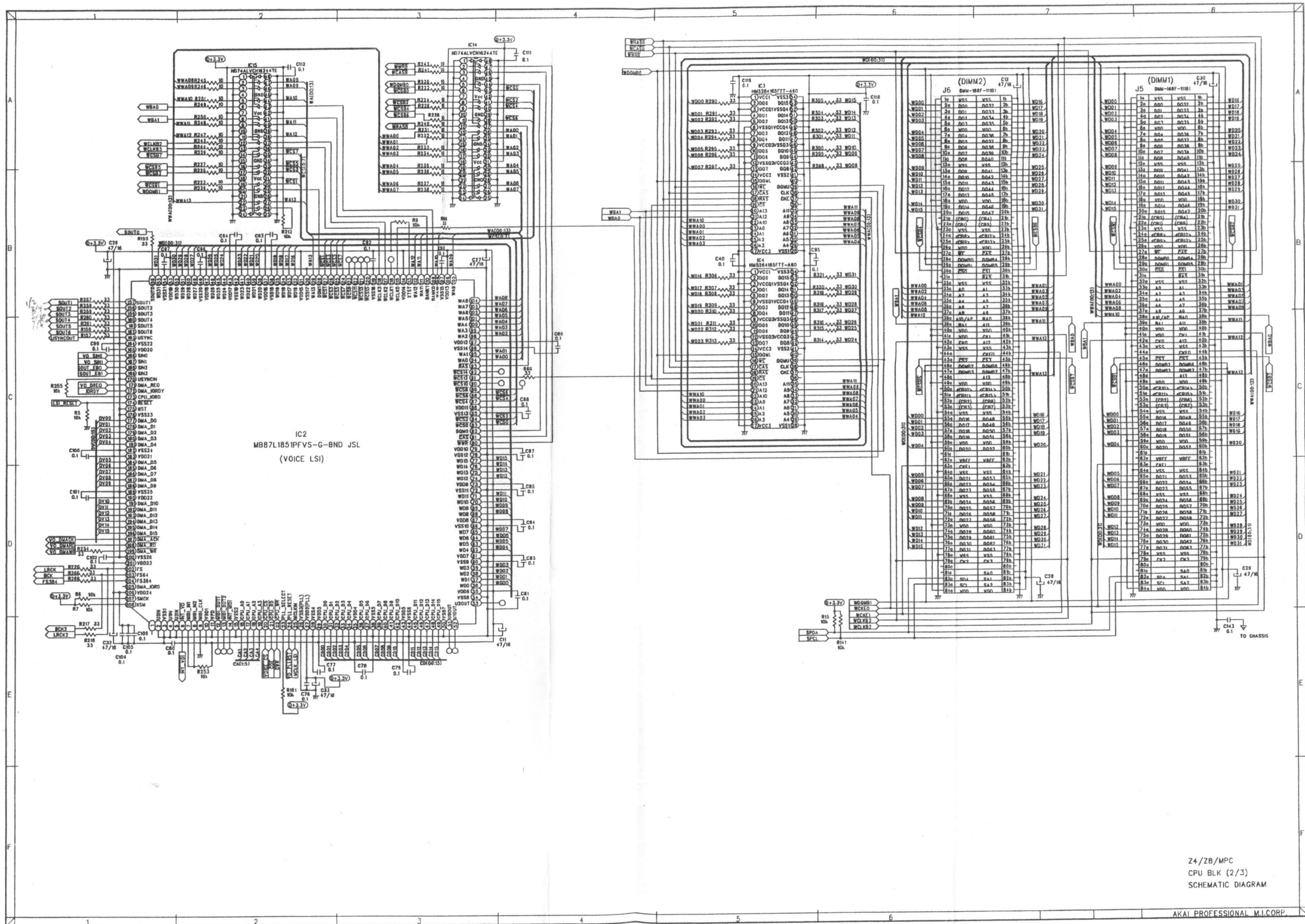
WARNING: **Δ** INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: **Δ** IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

J C A
E V B
S Δ

NOTE: UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN uF (P=pF)
ALL ELECTROLYTIC CAPACITORS IN uF/WV

Z4
OPERATION BLK
SCHEMATIC DIAGRAM



24/28/MPC
CPU BLK (2/3)
SCHEMATIC DIAGRAM

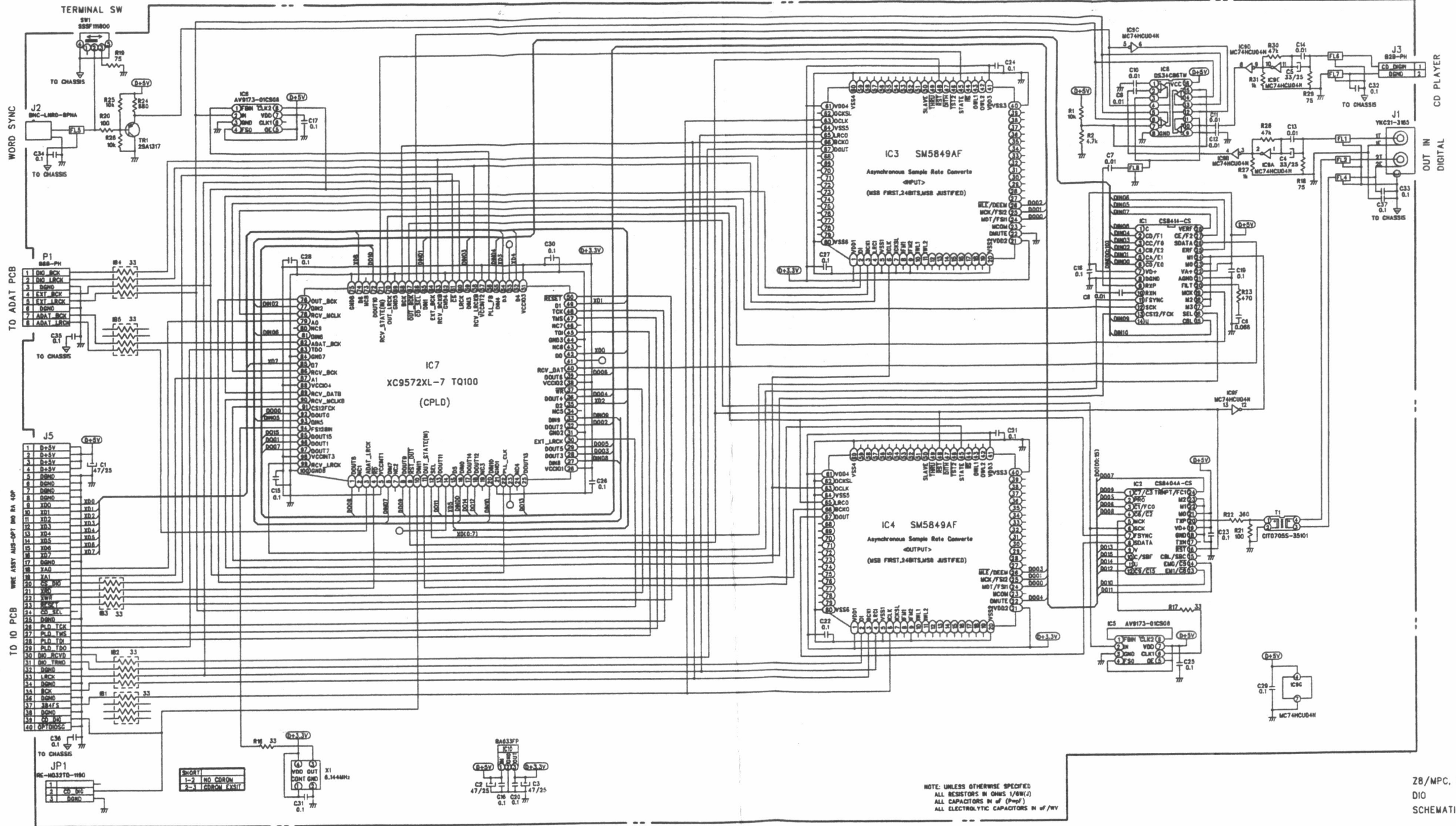
HISTORY of CHANGE

2001/10/19

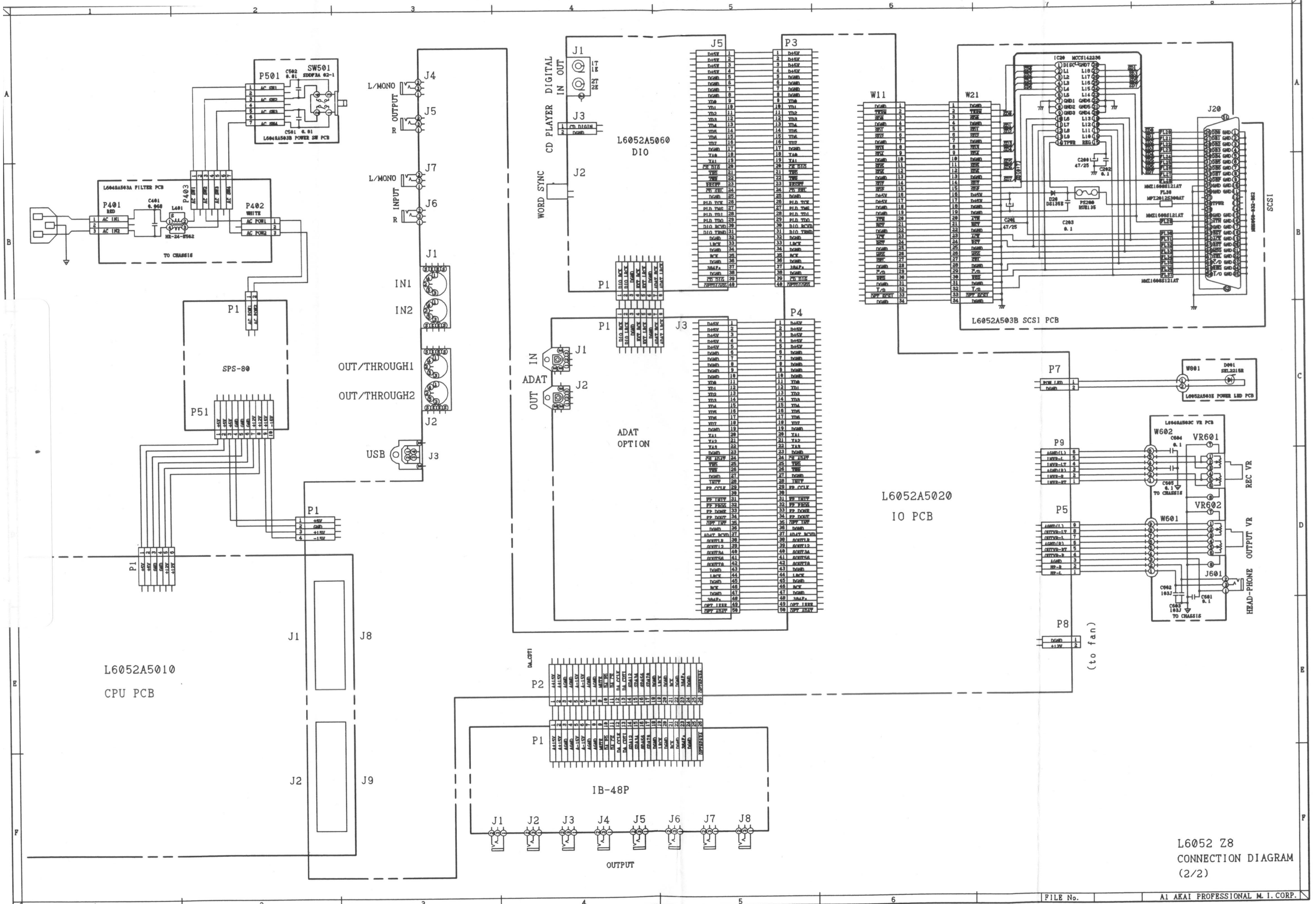
- (1) IC3 22pin -> DGND
(Because spec over)
- (2) IC8 inserted. TR1 emitter -> IC8 -> IC6, etc.
(Because low level was 0.6V (near TTL VIL spec limit))

2001/11/21

- (1) IC1 17,18,23,24pin <- INVERTED RESET-OUT
- (2) FL8 inserted. IC8 3,12pin -> FL8 -> C7



Z8/MPC, Z4 OPTION
DIO
SCHEMATIC DIAGRAM



L6052 Z8
CONNECTION DIAGRAM
(2/2)