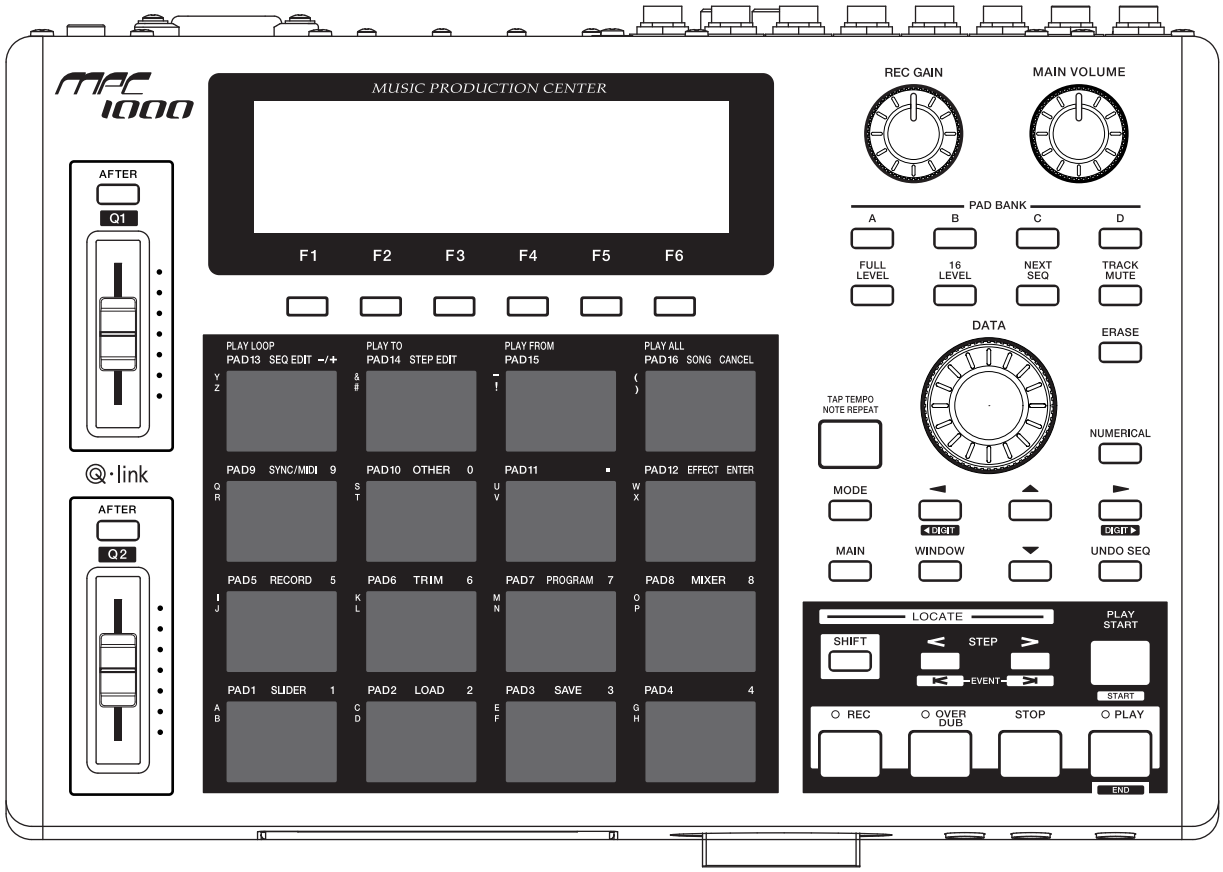
AKAI professional

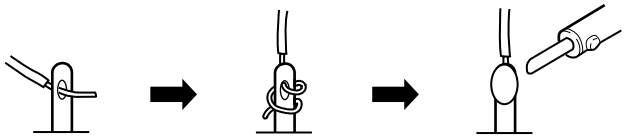
SERVICE MANUAL

MPC1000



Music production Center

1. Parts identified by the 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
5. 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 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 FOLLOEING 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

General	
Display	240 x 64 dot graphic LCD w/back light
Memory card slot	Compact Flash (The size of the compact flash card the MPC1000 can handle is from 32MB to 2GB)
Dimentions (W x H x D)	330 x 75.5 x 228.2(Max 234.6)
Weight	3.45kg
Power reqirement	19W
Sound generator	
Sampling rate	44.1kHz
Memory capacity	16MB standard (11.5MB for sound memory), expandable to 128MB
Recording time	136sec. (16MB, MONO), 24m28sec. (128MB, MONO)
Memory expansion slot	1 x for optional EXM128
Data format	16-bit linear
Polyphony	32
Dynamic filtering	2 x 2-pole filter per voice
Filter type	Low pass, Band pass, High pass
Preset sound memory	5MB
Number of programs	24
Effects	
Effects	2 stereo effects and Master effect
Effect type	Chorus, Flanger, Bit grunger, 4 band EQ, Compressor, Phase shifter, Tremolo, Flying pan, Reverb Master effect: 4 band EQ, Compressor
Sequencer	
Maximum events	100,000 notes
Resolution	96 parts per 1/4-note
Sequences	99
Tracks per sequence	64
MIDI output channels	32 (16 channels x 2 outputs)
Song mode	20 songs, 250 steps per song
Drum pad	16 (velocity and pressure sensitive)
Drum pad banks	4
Sync mode	MIDI clock

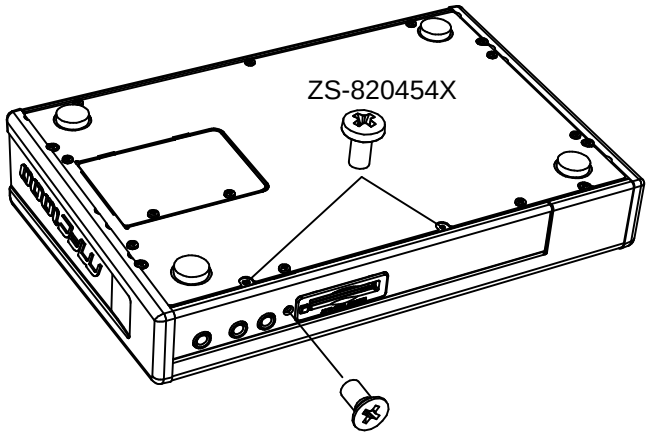
* The specifications are subject to change without the prior notice.

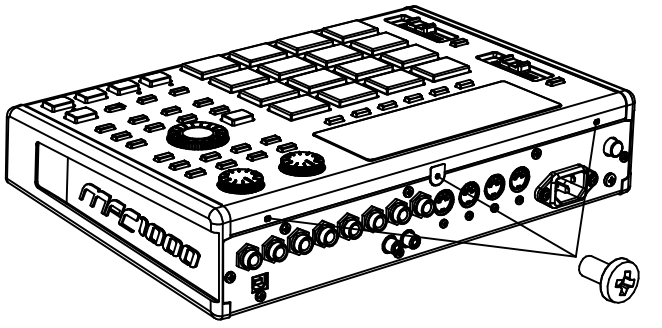
Inputs / Outputs	
Record input (L and R)	1/4-inch stereo phone x 2, balanced -40dBu, input impedance 11k ohms; Max. Input level +10dBu
Digital input	RCA-pin x 1 S/PDIF
Stereo output (L and R)	1/4-inch phone x 2 unbalanced +11dBu, output impedance 1k Ohms, Max. output level +17dBu
4 individual outputs	1/4-inch phone x 4 unbalanced +11dBu, output impedance 1k Ohms, Max. output level +17dBu
Phones output	1/4-inch stereo phone x 1, 200mW / 100 ohms
Digital output	RCA-pin x 1 S/PDIF
MIDI inputs	5-pin DIN x 2
MIDI outputs	5-pin DIN x 2
USB	Slave connector x 1, USB MASS STORAGE CLASS support. (You need Windows 2000/Me/XP or later version, or MacOS 9.x/10.x or later version.)
Footswitches	1/4-inch phone x 2
Standard accessories	
Standard accessories	32MB Compact Flash card, Power cable, Operator's manual
Options	
EXM128	128MB expansion memory card
Data Compatibility (THRU Computer)	
MPC2000XL	SEQ, WAV, PGM (Most parameters of PGM file can be loaded.)
MPC4000	SEQ, WAV , PGM (DRUM program only. Only note assign and tune are loaded.)
MPC3000	No compatibility
Z4/Z8	WAV only
S5000/6000	WAV only
S1000/3000	No compatibility

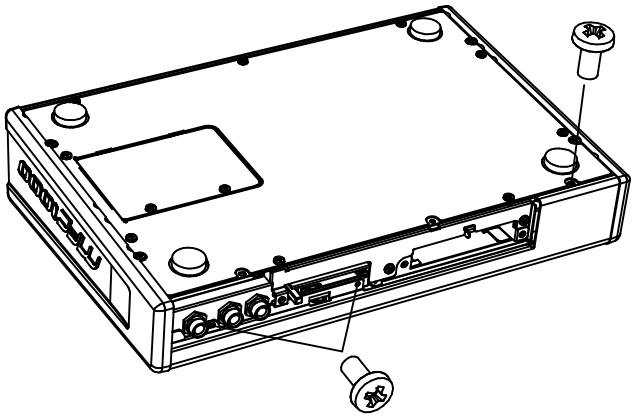
* The specifications are subject to change without the prior notice.

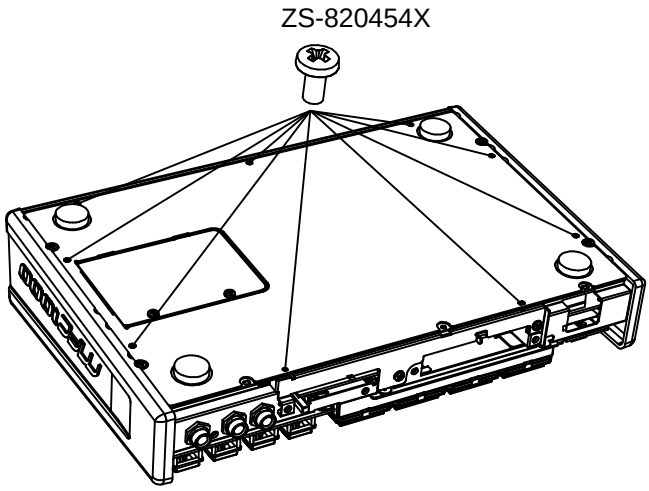
II. DISASSEMBLY

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

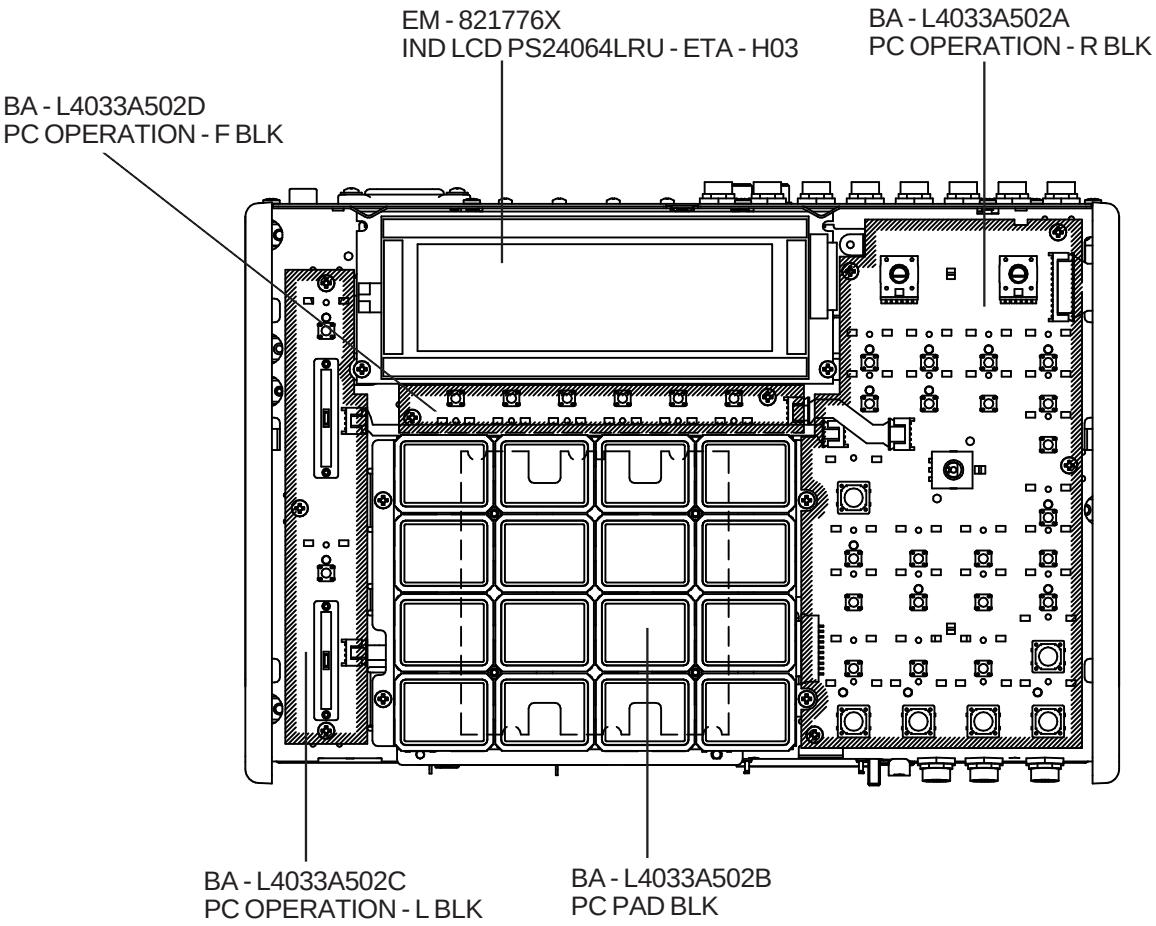


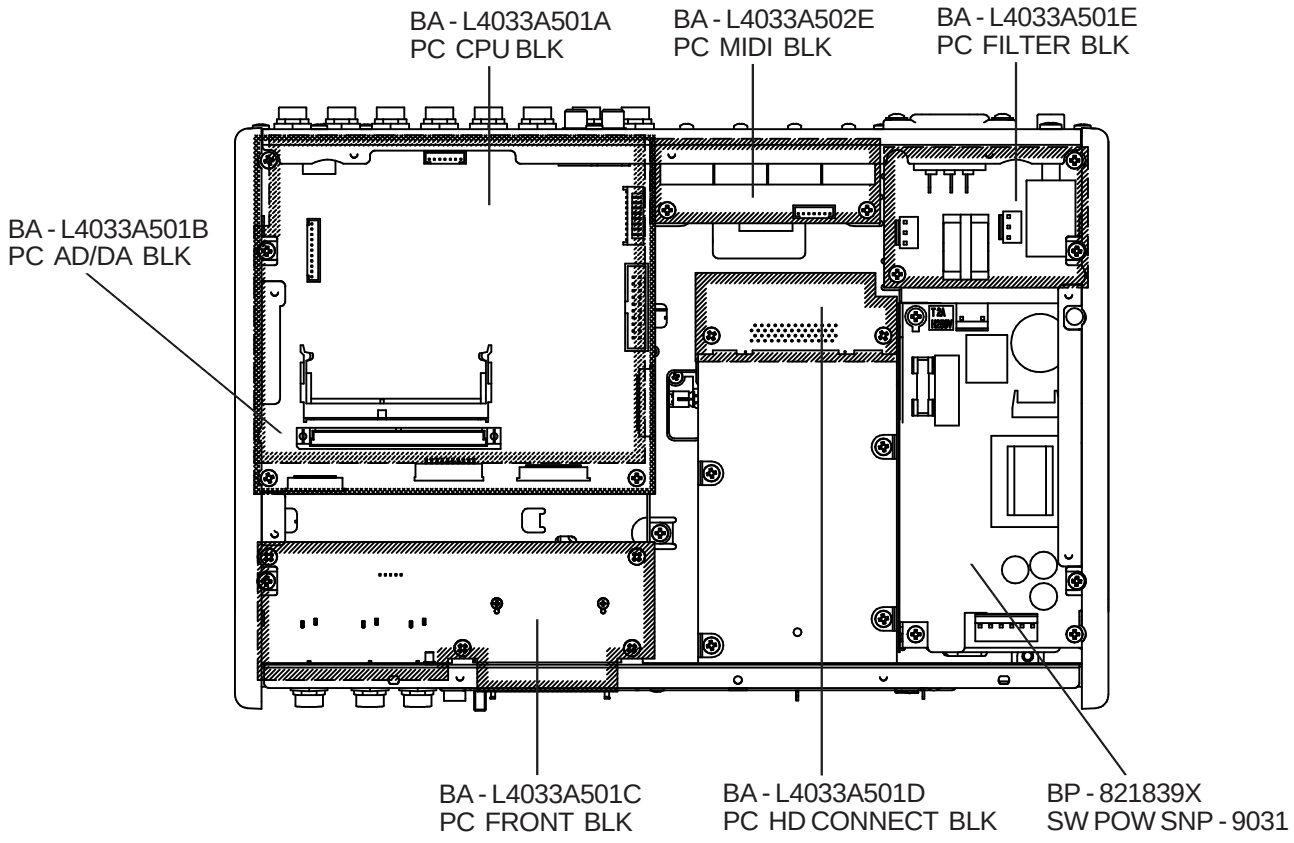






III. PRINCIPAL PARTS LOCATION





IV. SUPPLEMENTARY INFORMATION

[Update procedure]

===How to copy the OS binary file to a CF card using a MPC1000 and a computer====

Below procedure will utilize the MPC1000 as a Compact flash writer.

Required Equipment :

Compact Flash (CF), Computer with USB mass storage class support (Windows XP/ME/2000 or Mac OSX, OS9.x)

1. Copy/Download the OS data to a computer's hard disc drive and extract it 's data.
2. Insert a Compact Flash card into the MPC1000.
3. Turn on the power of the MPC1000.
4. Go to Load mode, then press USB (F4).
5. Connect a USB cable between the computer and the MPC1000. (Display will change from "Status=Not Connected " to "Status=Connected ")
6. The CF in the MPC1000 will be mounted as a drive on the computer.
7. Copy the OS binary file to the CF in the MPC1000.
8. Disconnect the USB cable. (MPC1000 will not accept any user in put while a USB cable is connected)

Note: The OS data can also be copied to a Compact Flash card using any other Compact Flash card reader/writer. In this case it is not necessary to connect the MPC1000 to a computer.

====How to update the MPC1000====

MPC1000 is updated using a Compact Flash card containing OS data.

1. Insert a CF containing OS data into the MPC1000.
2. Turn on the power of the MPC1000 while pressing down the "Window" button.
3. To start the update process, p ress the "REC" button. After the update process is finished the MPC1000 will re- boot automatically.

Note: The MPC1000 can not be updated from a computer via USB directly – updating is only possible using a CF card.

====Hidden model==== (Note: V1.06 is not supported.)

The MPC1000 has the following hidden modes, which can be accessed by certain input sequences or holding down a key while powering on the unit. Currently these modes are not supported in OS Version 1.06.

1. [Owner Name]
   Mode > Other > F3/FOOTSW > F6 > Enter owner name in the startup screen, "Owner Name" will be displayed.
2. [Initialize parameter]
   Hold down the ERASE button while powering on the unit.
3. [Memory Check]
   Hold down the PLAY button while powering on the unit.
4. [Demo mode]
   Hold down the Bank "D" button while powering on the unit.
   In this mode "Internal memory" on the Save page can not be selected . In the startup screen "Demo" will be displayed instead of "MPC1000". Once demo mode has been activated it will remain active even if power is turned off and on again.
   To turn off the Demo mode, hold down the Bank "D" button while powering on the unit.

[Test program]

Test programs on the MPC1000 can be run either using a Test OS or a JIG PC Flash Rom.

[Running the test Programusing a Test OS]

A test program can be installed on the MPC1000 by updating it with a Test OS. The Test OS must be copied to a CF card from which it will be written tothe Flash ROM of the MPC1000. The installation procedure is the same as for a normal OS update. For a description of the test mode functions, refer to the “MPC1000 Test Program list”.

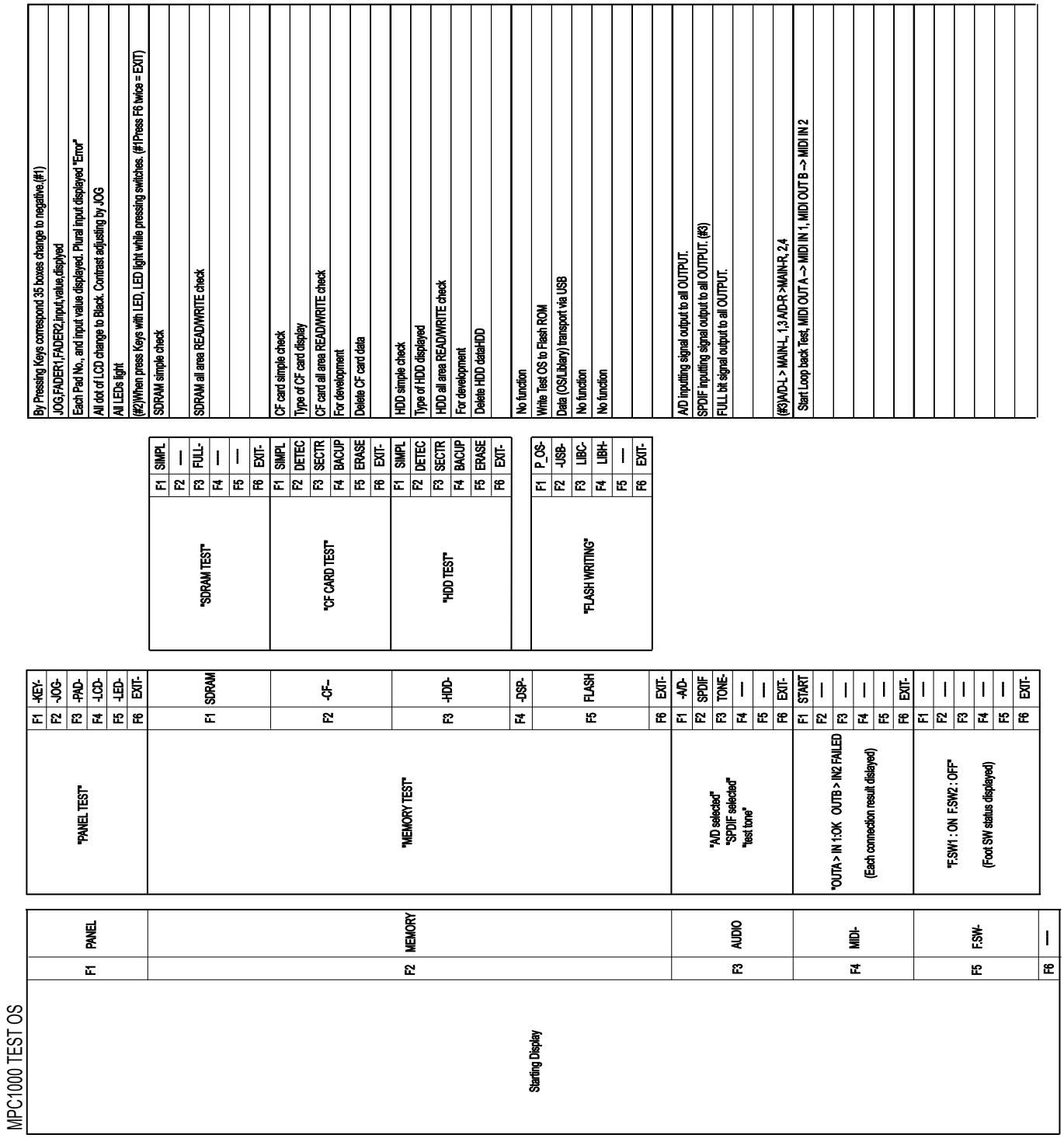
Note: Once the Test OS is installed, the unit will always start up using the Test OS, until the regular OS is re-installed.

[Running the test Program using a JIG PC Flash ROM MPC1K (AJ - 771312J)]

The PC Flash ROM is used during repair for the testing jig and boot block recovery.

To access the test program on the PC Flash ROM MPC1K follow this procedure:

1. Turn off the MPC1000 and open the unit.
2. Insert the PC Flash MPC1K ROM into J110 on the CPU board.
3. Turn on the MPC1000 to start up the Test OS from the PC Flash ROM.



V. 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
IC10	EI-811068J	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]
46-C	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 SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. PC BOARD BLK

Ref. No.	Part No.	Description
1	BA - L4033A020A	PC(#) MAIN BLK MPC1000
2	BA - L4033A030A	PC(#) OPERATION BLK MPC1000

PC(#) MAIN BLK CONSISTS OF FOLLOWING P.C. BOARDS.

1	BA - L4033A501A	PC CPU BLK
2	BA - L4033A501B	PC AD/DA BLK
3	BA - L4033A501C	PC FRONT BLK
4	BA - L4033A501D	PC HD CONNECT BLK
5	BA - L4033A501E	PC FILTER BLK

PC(#) OPERATION BLK CONSISTS OF FOLLOWING P.C. BOARDS.

1	BA - L4033A502A	PC OPERATION-R BLK
2	BA - L4033A502B	PC PAD BLK
3	BA - L4033A502C	PC OPERATION-L BLK
4	BA - L4033A502D	PC OPERATION-F BLK
5	BA - L4033A502E	PC MIDI BLK

2. PC CPU BLK

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 - 812338J	D ZENER C.UDZ4.7BTE-17 T08E
D4	ED - 812338J	D ZENER C.UDZ4.7BTE-17 T08E
D5	ED - 812338J	D ZENER C.UDZ4.7BTE-17 T08E
D6	ED - 812338J	D ZENER C.UDZ4.7BTE-17 T08E
IC1	EI - 821832X	IC HD6417727F160 QFTY
IC2	EI - 821835X	IC MBM29LV651UE90TN
IC3	EI - 821837X	IC GAL20V8B-15QP L4033A
IC4	EI - 821838X	IC GAL20V8B-15QP L4033B
IC5	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC6	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC7	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC8	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC9	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC10	EI - 812979J	IC HD74LVC245ATELL FPELT16E
IC11	EI - 820795X	IC HD74LVC14TELL FPELT12E
IC12	EI - 820062J	IC HD74HCT541FP FPELT24
IC13	EI - 821833X	IC HD74LVCC3245ATELL FPELT16E
IC14	EI - 821827X	IC NJU7002M FPT1T08
IC15	EI - 821836X	IC SI9706DY
IC16	EI - 821831X	IC DS1811R-10
IC17	EI - 821834X	IC HY57V641620HGT-H
IC18	EI - 821834X	IC HY57V641620HGT-H
IC19	EI - 821889X	IC HD74LV1G32ACME FPT08E
IC20	EI - 821901X	IC GAL16V8D-15QP L4033C
J1	EJ - 821236X	SOCKET CONNECTER YKF45-0020 4P
J2	EJ - 820754X	PIN J YKC21-3079 P2P
J3	EJ - 821781X	SOCKET DMM3-RS144A2B-13 144P
J101	EJ - 821888X	SOCKET 32FLZ-SM1-R-TB 32P
J102	EJ - 821842X	SOCKET 20FMZ-ST 20P
J103	EJ - 821779X	SOCKET 42FLZ-SM1-R-TB 42P
J104	EJ - 821779X	SOCKET 42FLZ-SM1-R-TB 42P
J110	EJ - 419246J	SOCKET 128A-050S2A-S14A 50P
P105	EJ - 821841X	PLUG SCP20GS3 20P
PH1	ET - 821874X	DETECTOR HCPL-0701
PH2	ET - 821874X	DETECTOR HCPL-0701
SF1	EF - 810572J	FUSE C.ICP-S2.3 50V 2.3A T08E
TR1	ET - 821788X	TR FET CHIP 2SK3065T100 T12E
TR2	ET - 821788X	TR FET CHIP 2SK3065T100 T12E
TR3	ET - 821788X	TR FET CHIP 2SK3065T100 T12E
TR4	ET - 821788X	TR FET CHIP 2SK3065T100 T12E
TR5	ET - 821788X	TR FET CHIP 2SK3065T100 T12E
TR6	ET - 821789X	TR CHIP DTB113ZKT146 T08E
TR7	ET - 821789X	TR CHIP DTB113ZKT146 T08E
TR8	ET - 821789X	TR CHIP DTB113ZKT146 T08E
TR9	ET - 821789X	TR CHIP DTB113ZKT146 T08E
X1	EI - 821787X	OSC X'TAL C.DS0751SV 13.330MHZ
X2	EI - 820989X	OSC X'TAL C.DS0751SV 48.0000MHZ

3. PC AD/DA BLK

Ref. No.	Part No.	Description
D7	ED - 821790X	D SCHOT. RK44 40/3.0A
D901	ED - 821790X	D SCHOT. RK44 40/3.0A
D902	ED - 812354J	D ZENER C.RB081L-20 TE25T12E
D903	ED - 812338J	D ZENER C.UDZ4.7BTE-17 T08E
IC21	EI - 821826X	IC LM2575S-ADJ
IC201	EI - 812479J	IC NJM5532M FPT1T32P
IC202	EI - 812479J	IC NJM5532M FPT1T32P
IC203	EI - 812479J	IC NJM5532M FPT1T32P
IC204	EI - 812479J	IC NJM5532M FPT1T32P
IC301	EI - 812479J	IC NJM5532M FPT1T32P
IC302	EI - 812479J	IC NJM5532M FPT1T32P
IC401	EI - 812479J	IC NJM5532M FPT1T32P
IC402	EI - 812479J	IC NJM5532M FPT1T32P
IC501	EI - 812479J	IC NJM5532M FPT1T32P
IC502	EI - 812479J	IC NJM5532M FPT1T32P
IC601	EI - 821828X	IC AD1839AS QFTY
IC602	EI - 821830X	IC CS8427-CS FP
IC603	EI - 438820J	IC TC74HCU04AF FPELT16E
IC901	EI - 821826X	IC LM2575S-ADJ
J101	EJ - 821888X	SOCKET 32FLZ-SM1-R-TB 32P
J201	EJ - 821778X	PHONE J YKB22-5326 NUT 6.3
J202	EJ - 821778X	PHONE J YKB22-5326 NUT 6.3
J301	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J302	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J401	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J402	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J501	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J502	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
L1	EO - 821758X	COIL FIX 1 PE-52627
L901	EO - 821758X	COIL FIX 1 PE-52627
L902	EO - 822001X	COIL FIX 1 LHL10NB 220K
L903	EO - 822001X	COIL FIX 1 LHL10NB 220K
R904	⚠ ER - 307565	R FUSE H S10 ERD2FC 1/4W 6R8J
R905	⚠ ER - 307565	R FUSE H S10 ERD2FC 1/4W 6R8J
T601	BT - 810651J	TRANS PULSE CIT0705S-35101TFP
TR10	ET - 428249J	TR C.2SC2412K R,S T146T08E
TR301	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR302	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR401	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR402	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR501	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR502	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR601	ET - 429898J	TR C.DTA114EKA T146T08E
TR602	ET - 430868J	TR C.DTC114EKA T146T08E
TR603	ET - 428249J	TR C.2SC2412K R,S T146T08E
TR604	ET - 428248J	TR C.2SA1037AK R,S T146T08E
TR701	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
TR702	ET - 810831J	TR.CHIP 2SC3326 A,B TE85LT08E
X601	EI - 821786X	OSC X'TAL C.DS0751SV 11.2896MHZ

4. PC FRONT BLK

Ref. No.	Part No.	Description
IC701	EI - 812705J	IC NJM4556AL
J103	EJ - 821779X	SOCKET 42FLZ-SM1-R-TB 42P
J207	EJ - 821782X	SOCKET CFMB50MTW1NL 50P
J208	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J209	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
J210	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3
R707	⚠ ER - 430691J	R OMF H S12 FS 1W 101J
R708	⚠ ER - 430691J	R OMF H S12 FS 1W 101J

5. PC HD CONNECT BLK

Ref. No.	Part No.	Description
J104	EJ - 821779X	SOCKET 42FLZ-SM1-R-TB 42P
P211	EJ - 821777X	PLUG DHB-PA50-R131N 50P

6. PC FILTER BLK

Ref. No.	Part No.	Description
C951	⚠ EC - 430824J	C MMY V CUT MKP3362 683M 275AC
C952	⚠ EC - 427562J	C MMY V CUT MKP3362 103M 275AC
C953	⚠ EC - 427562J	C MMY V CUT MKP3362 103M 275AC
L901	⚠ EO - 427223J	COIL LF HR-24-562
SW901	⚠ ES - 812750J	SW PUSH SDKEC 02-1

7. PC OPERATION-R BLK

Ref. No.	Part No.	Description
D301	ED - 812087J	D LED L-934SRD-G RED
D302	ED - 812087J	D LED L-934SRD-G RED
D303	ED - 812086J	D LED L-934SGD GREEN
D304	ED - 813021J	D LED L-934SYD YELLOW
D305	ED - 812087J	D LED L-934SRD-G RED
D306	ED - 812086J	D LED L-934SGD GREEN
D307	ED - 812086J	D LED L-934SGD GREEN
D308	ED - 812086J	D LED L-934SGD GREEN
D309	ED - 812086J	D LED L-934SGD GREEN
D310	ED - 812086J	D LED L-934SGD GREEN
D311	ED - 812086J	D LED L-934SGD GREEN
D312	ED - 812086J	D LED L-934SGD GREEN
D313	ED - 812086J	D LED L-934SGD GREEN
J102	EJ - 821842X	SOCKET 20FMZ-ST 20P
SW101	ES - 821759X	SW R.ENCORDER SIM-026MT R66 5214
SW301	ES - 415015J	SW TACT SKQEAD
SW302	ES - 415015J	SW TACT SKQEAD
SW303	ES - 415015J	SW TACT SKQEAD
SW304	ES - 415015J	SW TACT SKQEAD
SW305	ES - 349474	SW TACT SKHHAM004A
SW306	ES - 349474	SW TACT SKHHAM004A
SW307	ES - 349474	SW TACT SKHHAM004A
SW308	ES - 415015J	SW TACT SKQEAD
SW309	ES - 349474	SW TACT SKHHAM004A
SW310	ES - 349474	SW TACT SKHHAM004A
SW311	ES - 349474	SW TACT SKHHAM004A
SW312	ES - 349474	SW TACT SKHHAM004A
SW313	ES - 349474	SW TACT SKHHAM004A
SW314	ES - 349474	SW TACT SKHHAM004A
SW315	ES - 349474	SW TACT SKHHAM004A
SW316	ES - 349474	SW TACT SKHHAM004A
SW317	ES - 415015J	SW TACT SKQEAD
SW318	ES - 349474	SW TACT SKHHAM004A
SW319	ES - 349474	SW TACT SKHHAM004A
SW320	ES - 349474	SW TACT SKHHAM004A
SW321	ES - 349474	SW TACT SKHHAM004A
SW322	ES - 349474	SW TACT SKHHAM004A
SW323	ES - 349474	SW TACT SKHHAM004A
SW324	ES - 349474	SW TACT SKHHAM004A
SW325	ES - 349474	SW TACT SKHHAM004A
SW326	ES - 349474	SW TACT SKHHAM004A
SW327	ES - 349474	SW TACT SKHHAM004A
VR301	EV - 821784X	VR ROTARY RK14K1230 L=15 C203X2 [REC GAIN]
VR302	EV - 821783X	VR ROTARY RK14K1230A1E L=15 A103X2 [MAIN VOLUME]

8. PC PAD BLK

Ref. No.	Part No.	Description
IC301	EI - 821829X	IC CD74HCT4051M96
IC302	EI - 821829X	IC CD74HCT4051M96

9. PC OPERATION-L BLK

Ref. No.	Part No.	Description
D0314	ED - 812086J	D LED L-934SGD GREEN
D0315	ED - 812086J	D LED L-934SGD GREEN
SW328	ES - 349474	SW TACT SKHHAM004A
SW329	ES - 349474	SW TACT SKHHAM004A
VR303	EV - 821785X	VRSLIDE RS3011119018 B103
VR304	EV - 821785X	VRSLIDE RS3011119018 B103

10. PC OPERATION-F BLK

Ref. No.	Part No.	Description
SW330	ES - 349474	SW TACT SKHHAM004A
SW331	ES - 349474	SW TACT SKHHAM004A
SW332	ES - 349474	SW TACT SKHHAM004A
SW333	ES - 349474	SW TACT SKHHAM004A
SW334	ES - 349474	SW TACT SKHHAM004A
SW335	ES - 349474	SW TACT SKHHAM004A

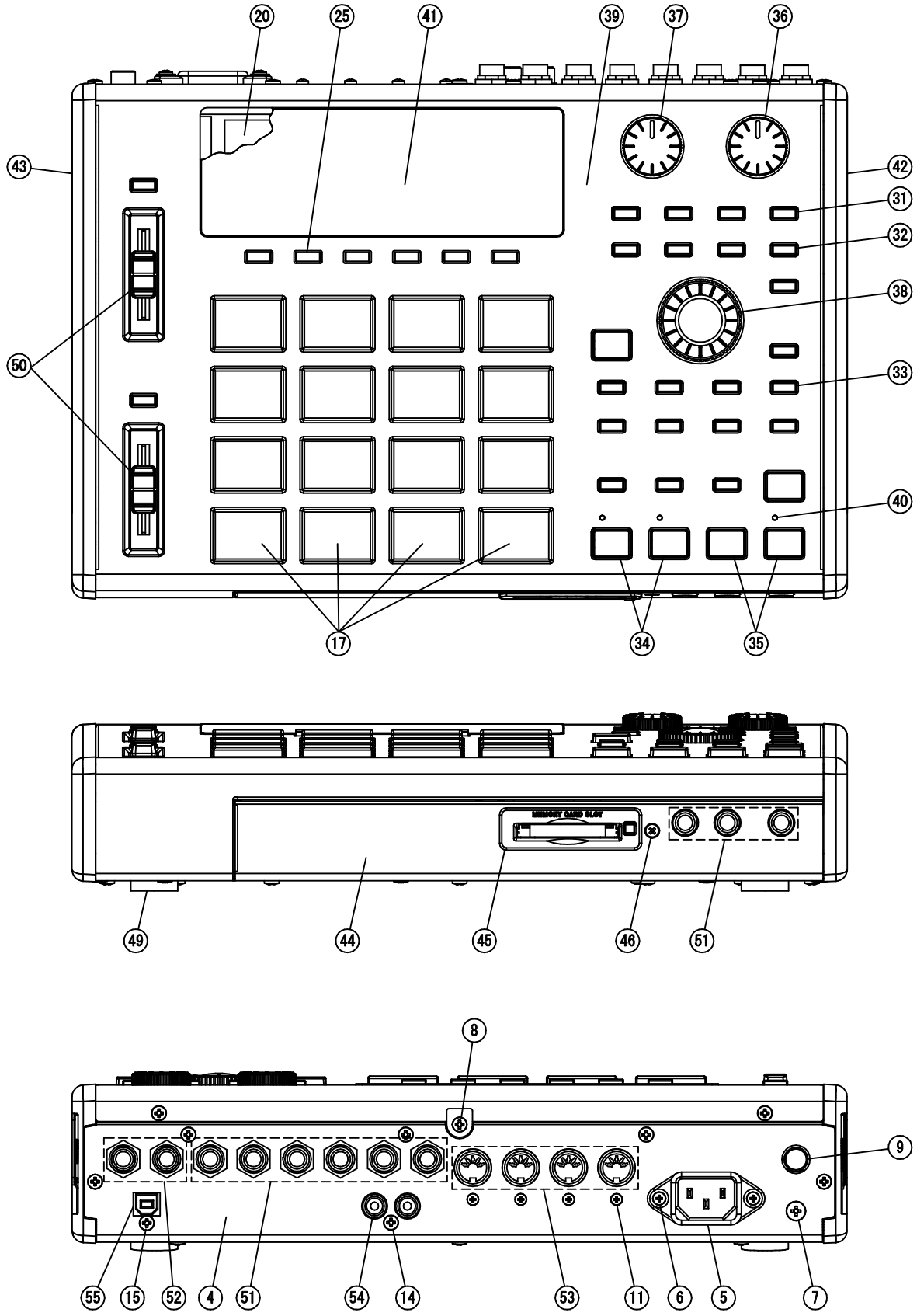
11. PC MIDI BLK

Ref. No.	Part No.	Description
J317	EJ - 427801J	DIN J TCS5084-45-4151 5P
J318	EJ - 427801J	DIN J TCS5084-45-4151 5P
J319	EJ - 427801J	DIN J TCS5084-45-4151 5P
J320	EJ - 427801J	DIN J TCS5084-45-4151 5P

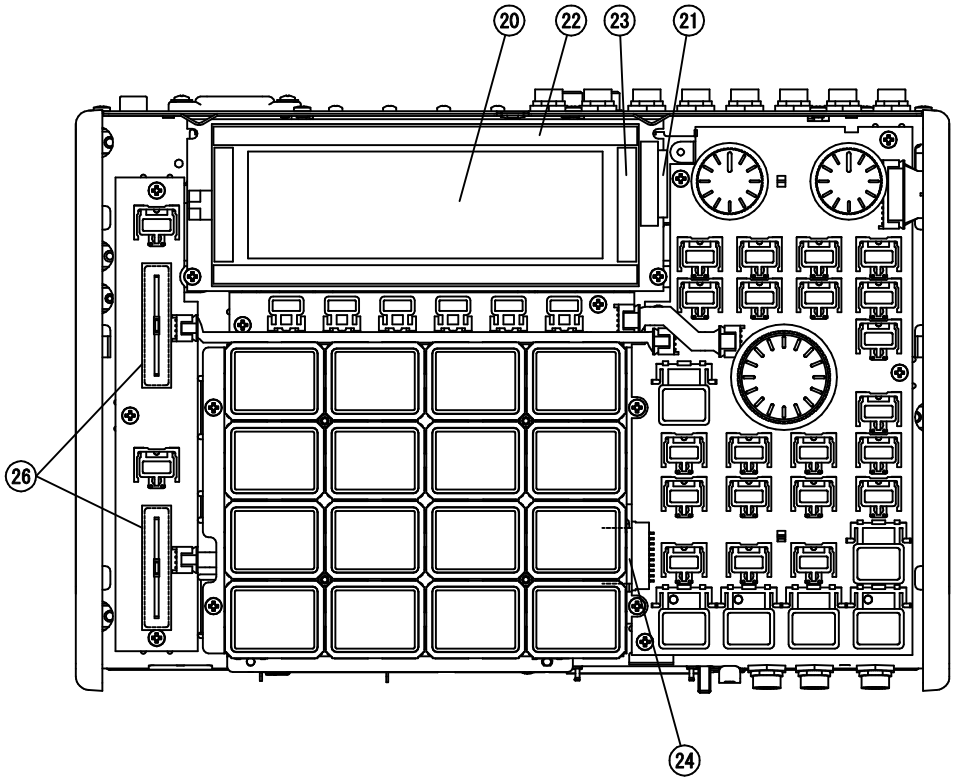
12. FINAL ASSEMBLY BLK

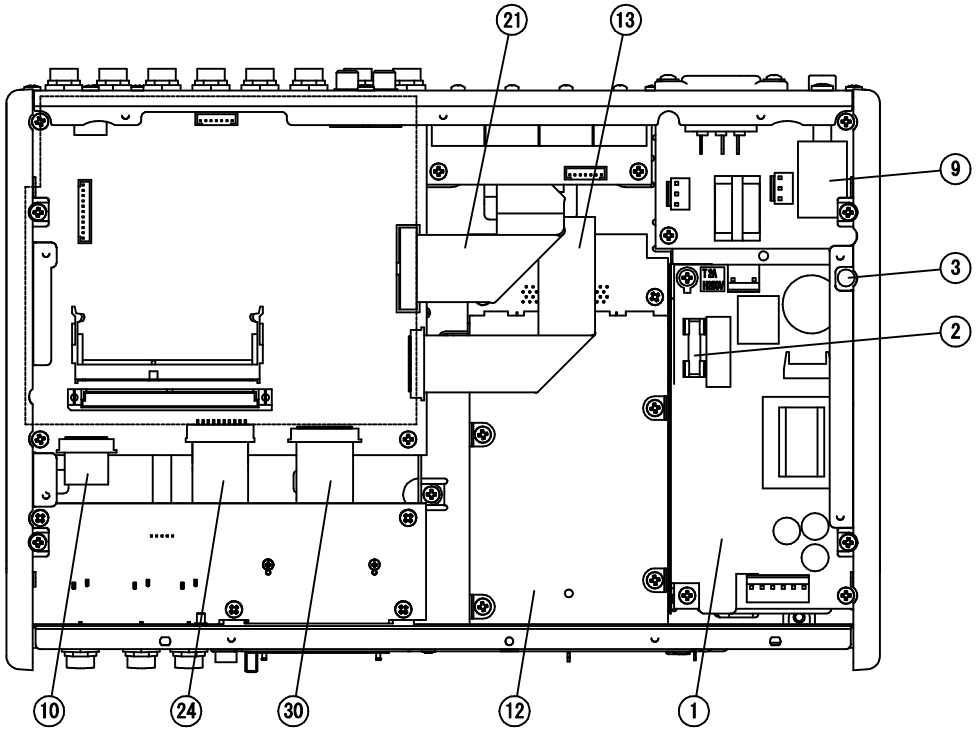
Ref. No.	Part No.	Description	
1	⚠ BP - 821839X	SW POW SNP-9031	
2	⚠ EF - 822002X	FUSE 181 T 250V 2A	
3	ZW - 302909	RV NYL30X035 BL	
4	SP - 821814X	PANEL REAR MPC1000	
5	⚠ EJ - 358632J2	SOCKET INLET SOT-16 3P	
6	ZS - 820481X	BT PAN30X08STL BZN C080	
7	ZS - 411232	BID40X10STL BNI	
8	ZS - 820454X	BT BID30X06STL BNI	
9	SB - 810525J	BUTTON POWER	
9	⚠ ES - 812750J	SW PUSH SDKEC 02-1	
10	EW - 821886X	CORD FFC P0.50 L90 32P	
11	ZS - 812478J	PAN26X06STL BNI	
12	SP - 821794X	HOLDER OPTION HD	
13	EW - 821775X	CORD FFC P0.50 L180 42P	
14	ZS - 331182	BT BID30X08STL BNI	
15	ZS - 355511	BID30X06STL BNI	
16	ZS - 821572X	PAN30X04STL CMT SW	
17	BA - 821854X	SENSOR PAD L4033	
18	EW - 821770X	WIRE ASSY L4033 W301 2P	
19	ZS - 821573X	PAN25X04STL CMT SW	
20	EM - 821776X	IND LCD PS24064LRU-ETA-H03	
21	EW - 821760X	WIRE ASSY L4033 W105 20P	
22	SZ - 821800X	SHIELD LCD (1)	
23	SZ - 821801X	SHIELD LCD (2)	
24	EW - 821887X	CORD FFC P1.00 L210 20P	
25	SB - 821820X	BUTTON PUSH(B)-6	[WHITE]
26	SE - 821858X	MASK SLIDE	
26	EV - 821785X	VRSLIDE RS3011119018 B103	
27	ZW - 618884	N20STL CMT 1	
28	ZS - 608106	PAN20X06STL CMT	
29	EJ - 821861X	SOCKET ACCE EJECTOR CFE250M	
30	EW - 821885X	CORD FFC P0.50 L80 42P	
31	SB - 821806X	BUTTON PUSH S (A)	[CLEAR]
32	SB - 821807X	BUTTON PUSH S (B)	[WHITE]
33	SB - 821808X	BUTTON PUSH S (C)	[PURPLE]
34	SB - 430327J	BUTTON PUSH B(2)	[RED]
35	SB - 821550X	BUTTON PUSH B(5)	[WHITE]
36	SK - 821810X	KNOB VOLUME (A)	[MAIN]
36	EV - 821783X	VR ROTARY RK14K1230A1E L=15 A103X2	
37	SK - 821811X	KNOB VOLUME (B)	[REC]
37	EV - 821784X	VR ROTARY RK14K1230 L=15 C203X2	
38	SK - 821812X	KNOB JOG	
38	ES - 821759X	SW R.ENCORDER SIM-026MT R66 5214	
39	SP - 821803X	PANEL TOP MPC1000	
40	SE - 810353J	LENS LED	
41	SE - 821804X	WINDOW LCD	
42	SP - 821815X	PANEL SIDE (R)	
43	SP - 821816X	PANEL SIDE (L)	
44	SE - 821805X	COVER HD	
45	SP - 821819X	PANEL SLOT	
46	ZS - 820455X	BT CTS30X06STL BNI	
47	SP - 821798X	COVER BOTTOM	
48	SP - 821799X	COVER MEMORY	
49	SA - 812668J	FOOT B	
50	SK - 821813X	KNOB SLIDE	
50	EV - 821785X	VRSLIDE RS3011119018 B103	
51	EJ - 821386X	PHONE J YKB22-5264 NUT 6.3	
52	EJ - 821778X	PHONE J YKB22-5326 NUT 6.3	
53	EJ - 427801J	DIN J TCS5084-45-4151 5P	
54	EJ - 820754X	PIN J YKC21-3079 P2P	
55	EJ - 821236X	SOCKET CONNECTER YKF45-0020 4P	
56	⚠ EW - 380905J	AC CORD 250S KP300 KS16A H B	[J]
56	⚠ EW - 368420J1	AC CORD200SKP30KS16 B AC	[A]
56	⚠ EW - 403993J	AC CORD200SKP4819DKS31A B	[E,V]
56	⚠ EW - 419170J	AC CORD200S KP610 KS31A B	[B]
57	⚠ EJ - 405424J	PLUG ADAPTOR KPR-25	[J]

FINAL ASSEMBLY BLOCK

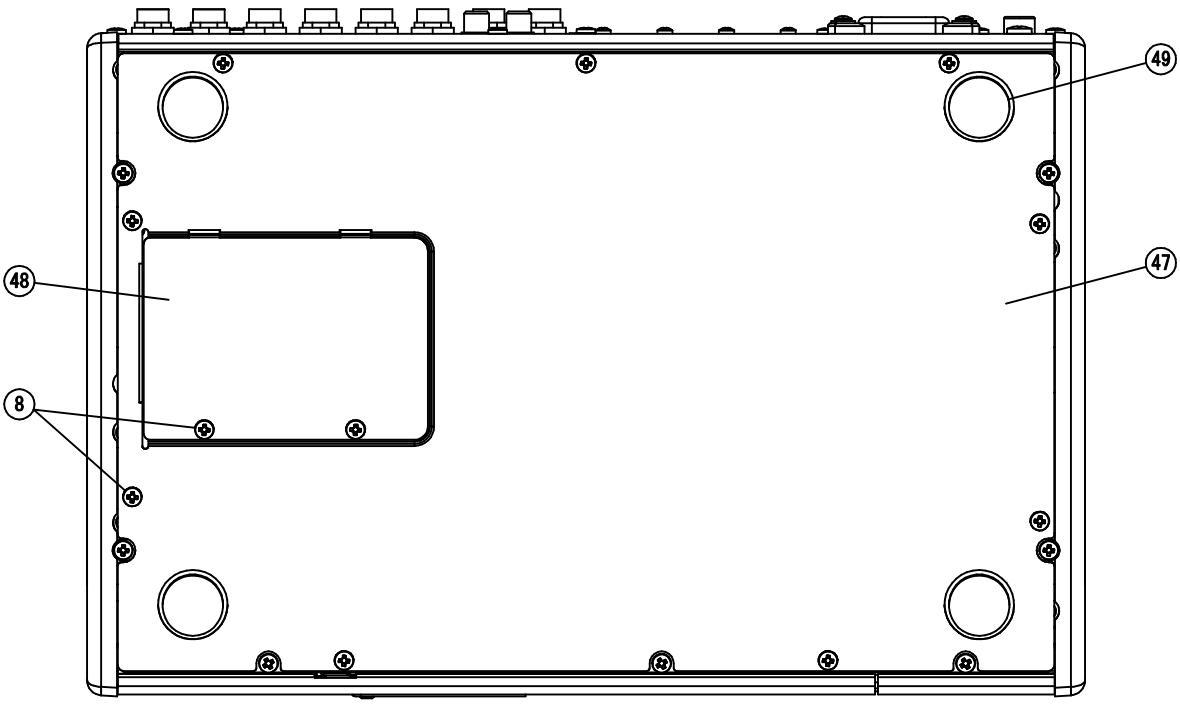


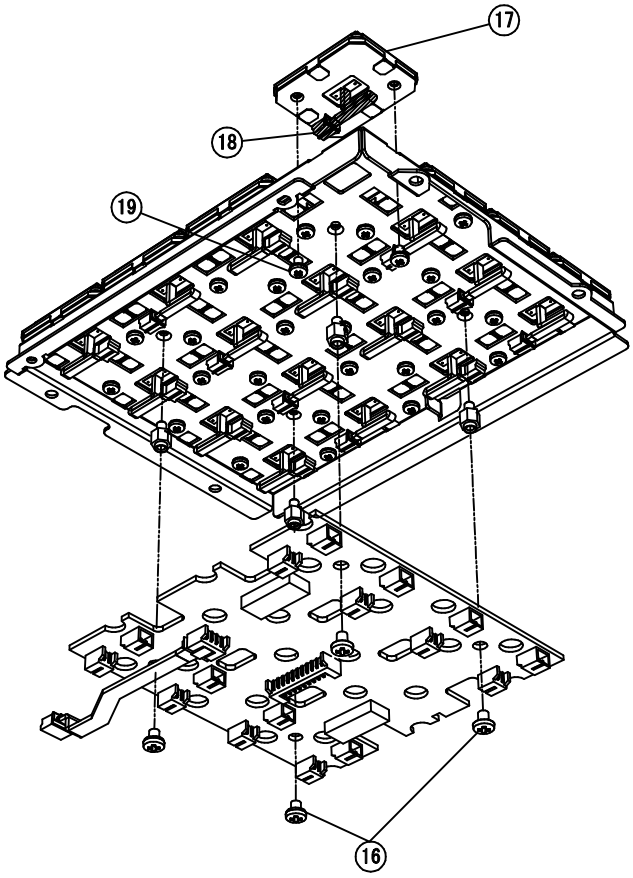
FINAL ASSEMBLY BLOCK

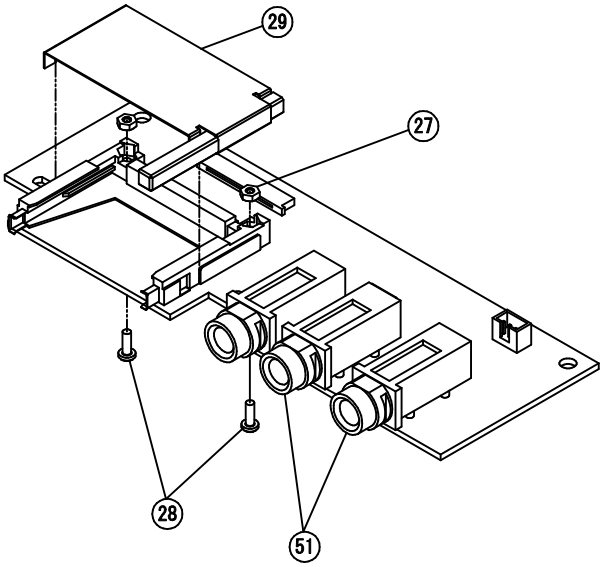


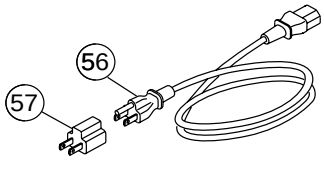


FINAL ASSEMBLY BLOCK





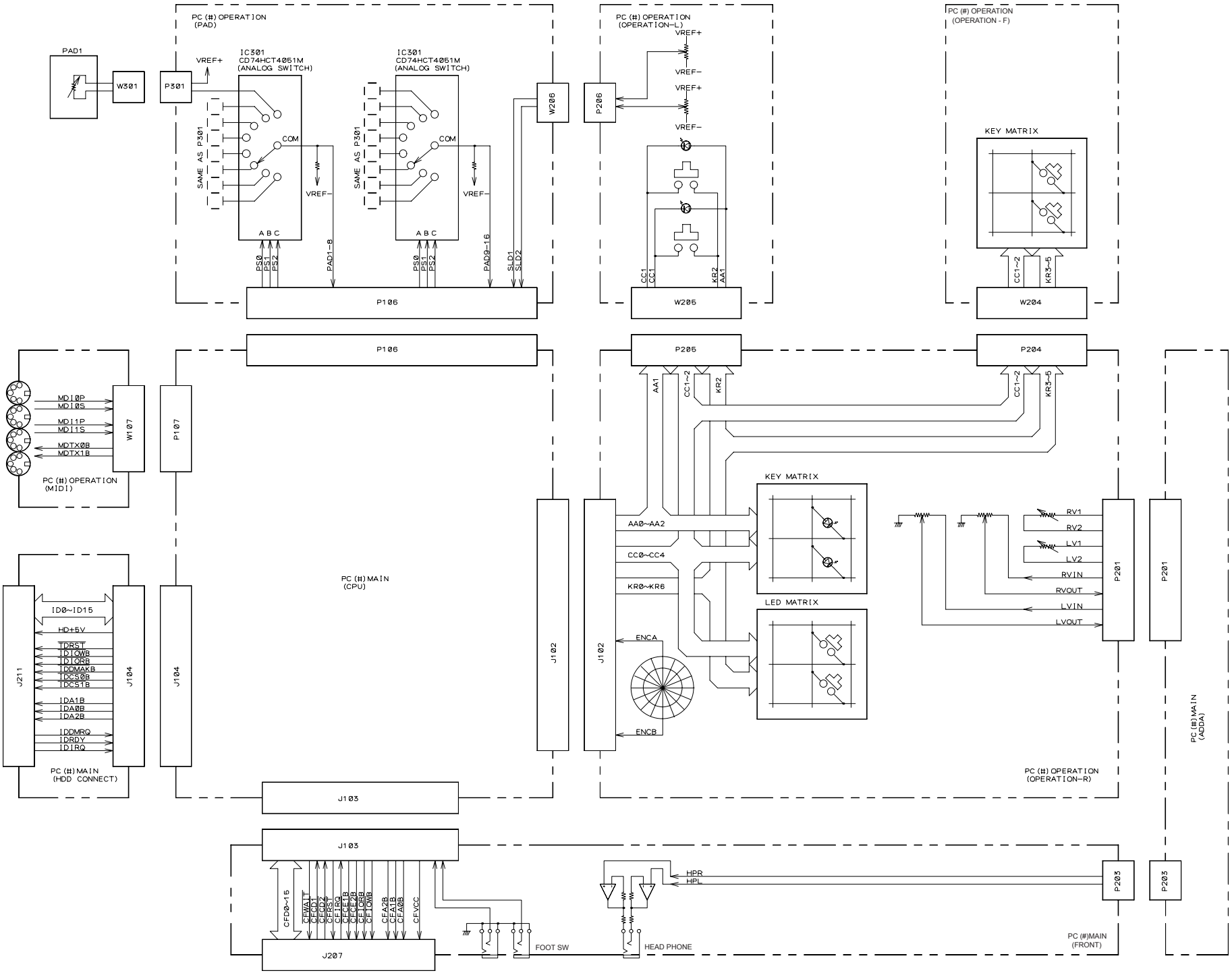


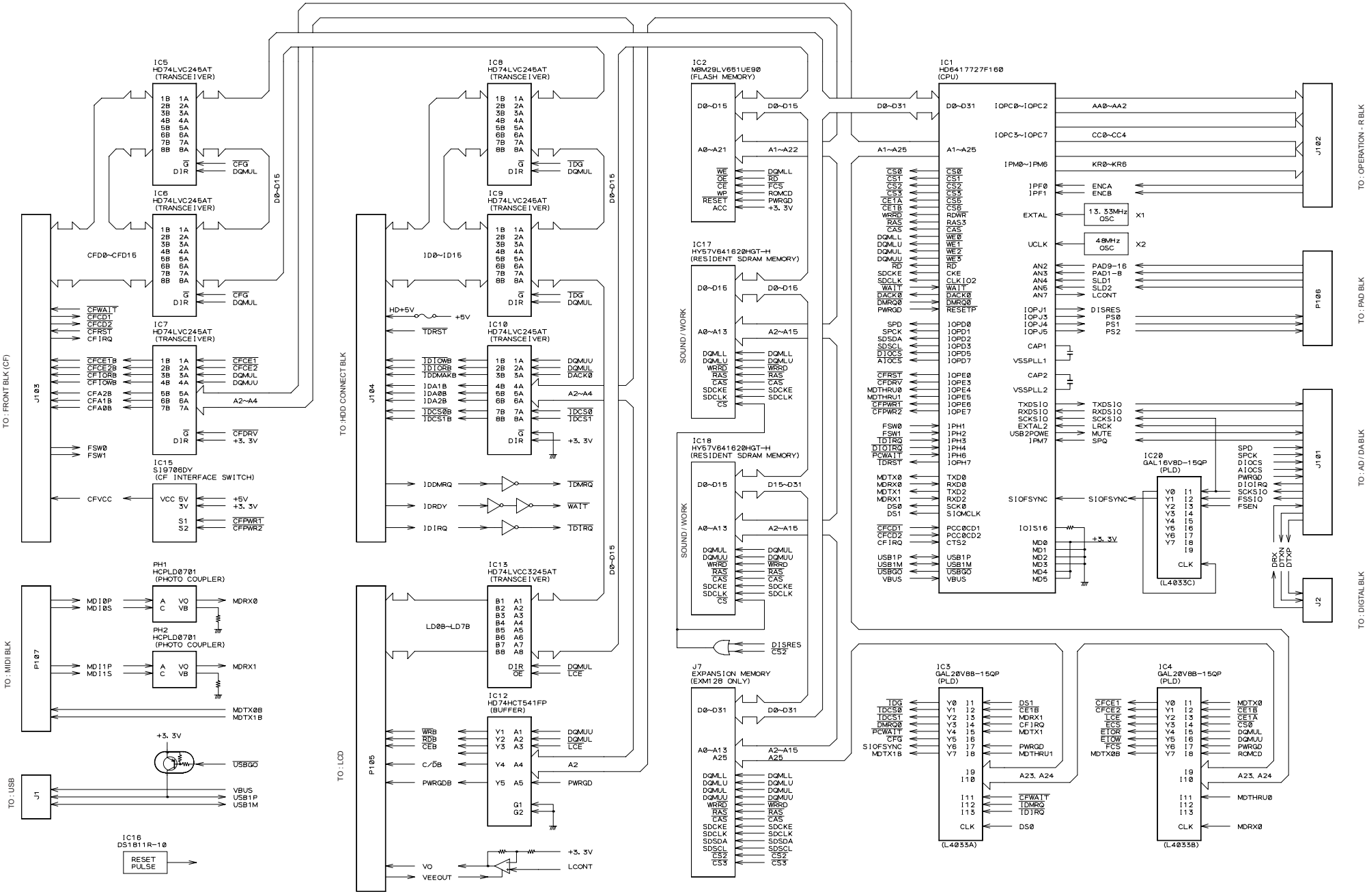


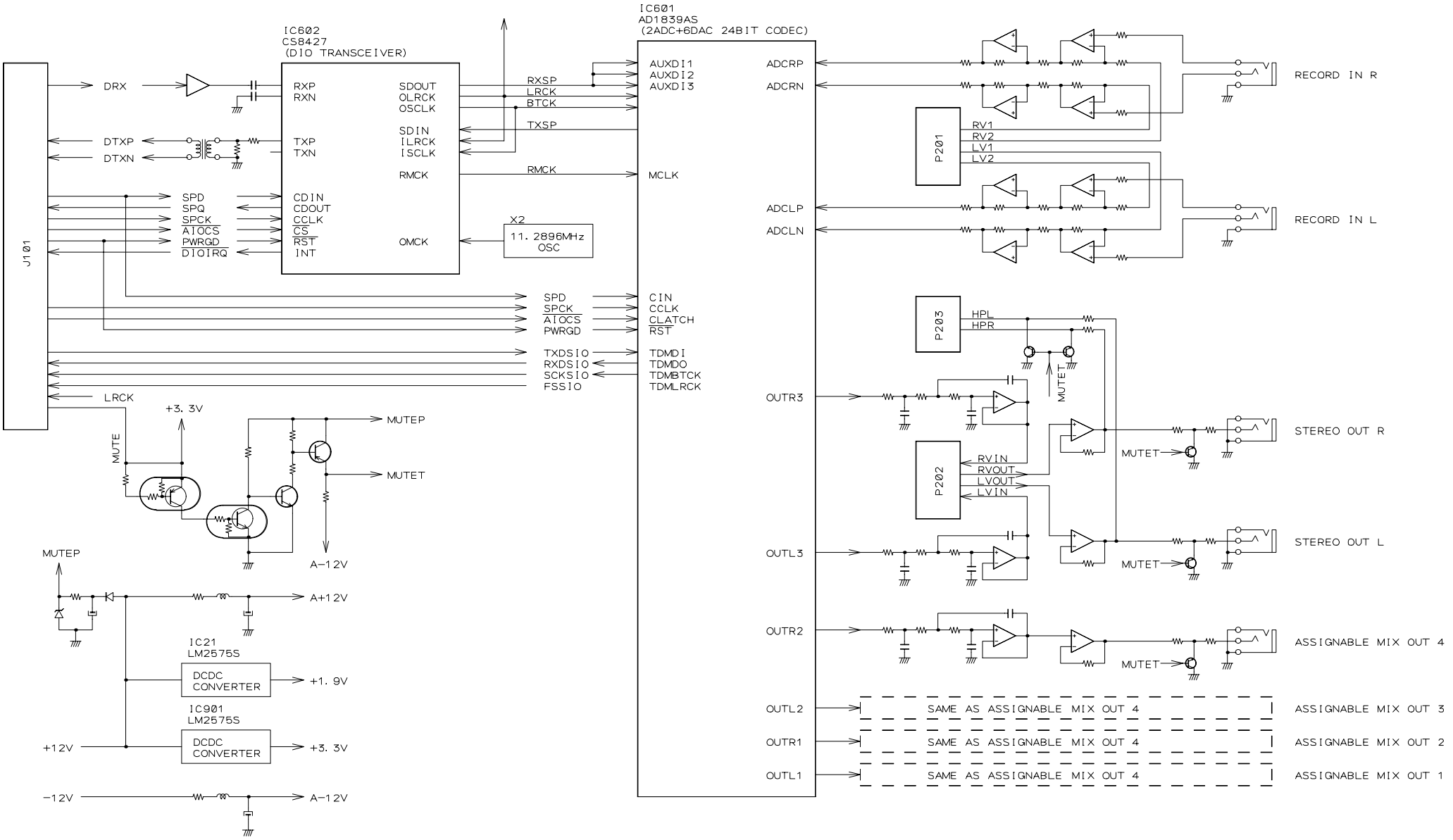
AKAI professional M.I. Corp.

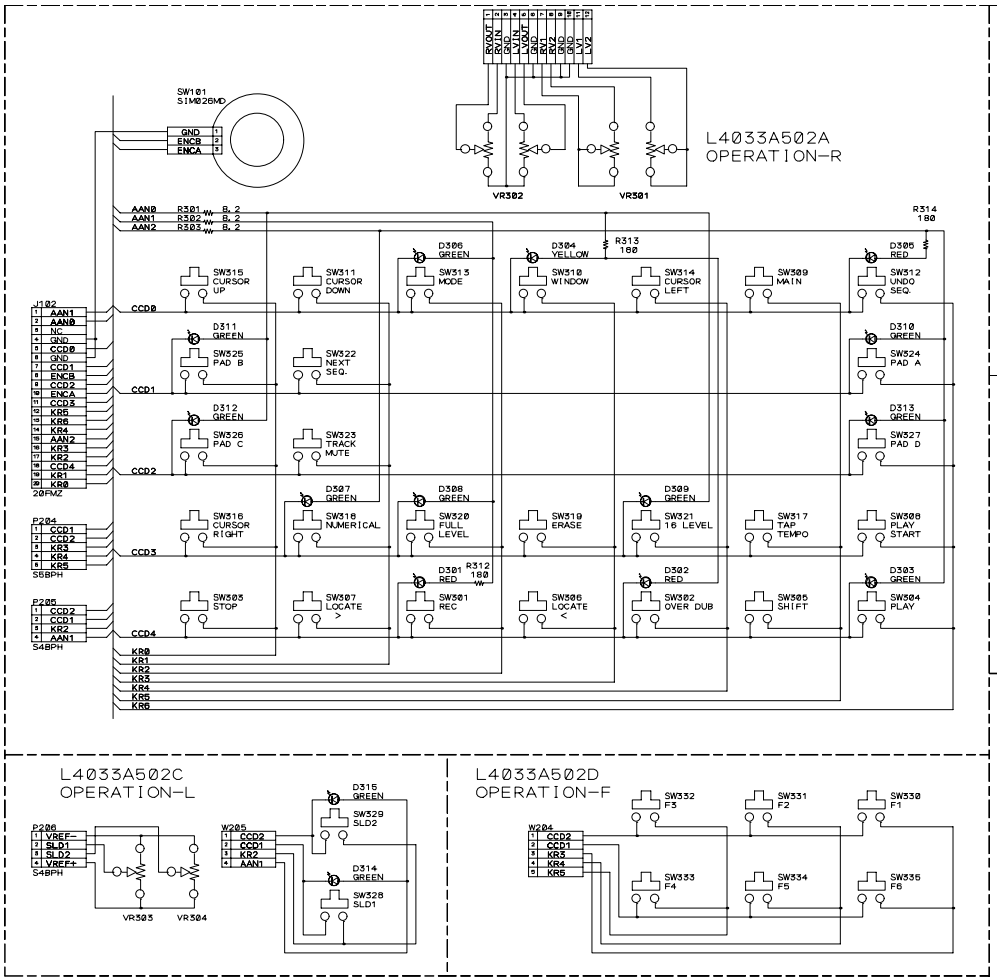
4-7-3, KITA-YAMATA, TSYZUKI-KU, YOKOHAMA, JAPAN

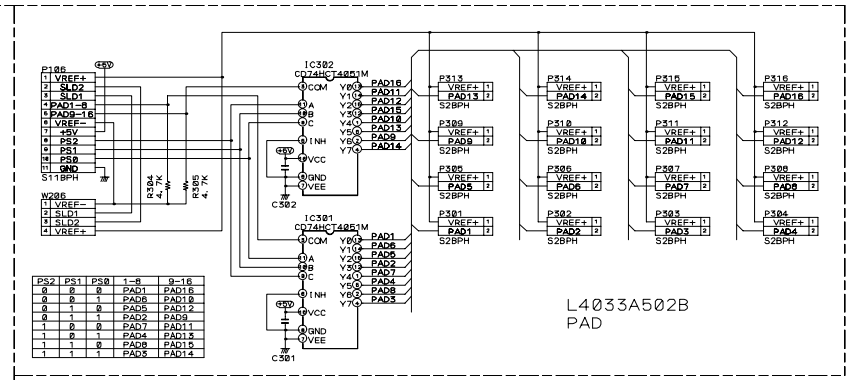
SERVICE SECT. PHONE : +81-45-914-8530 FAX : +81-45-914-8531

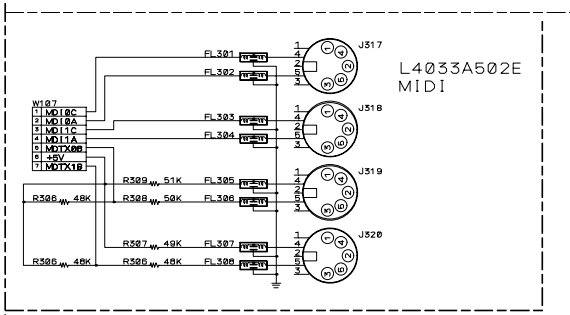

PC (#) OPERATION
(PAD)
PAD1
W301
P301
VREF+
IC301
CD74HCT4051M
(ANALOG SWITCH)
SAME AS P301
COM
VREF−
A B C
PS0
PS1
PS2
PAD1−8
PAD9−16
SLD1
SLD2
W206
P106
PC (#) OPERATION
(OPERATION−L)
P206
CC1
CC2
KR2
AA1
W205
PC (#) OPERATION
(OPERATION - F)
KEY MATRIX
CC1~2
KR3−5
W204
P106
P205
P204
MDI0P
MDI0S
MDI1P
MDI1S
MDTX0B
MDTX1B
W107
P107
PC (#) OPERATION
(MIDI)
AA1
CC1~2
KR2
KEY MATRIX
AA0~AA2
CC0~CC4
KR0~KR6
LED MATRIX
ENCA
ENCB
J102
RV1
RV2
LV1
LV2
RVIN
RVOUT
LVIN
LVOUT
P201
P201
PC (#) MAIN
(ADDA)
PC (#) MAIN
(CPU)
ID0~ID15
HD+5V
IDRST
IDIOWB
IDIORB
IDDMAKB
IDCS0B
IDCS1B
IDA1B
IDA0B
IDA2B
IDDMRQ
IDRDY
IDIRQ
J211
J104
J104
PC (#) MAIN
(HDD CONNECT)
J103
PC (#) OPERATION
(OPERATION−R)
J103
CFD0−15
CFWAIT
CFCD1
CFCD2
CFRST
CFIRQ
CFCE1B
CFCE2B
CFIORB
CFIOWB
CFA2B
CFA1B
CFA0B
CFVCC
J207
FOOT SW
HEAD PHONE
HPR
HPL
P203
P203
PC (#)MAIN
(FRONT)


IC1
HD6417727F160
(CPU)
IC2
M29LV651UE90
(FLASH MEMORY)
IC5
HD74LVC245AT
(TRANSCEIVER)
IC6
HD74LVC245AT
(TRANSCEIVER)
IC7
HD74LVC245AT
(TRANSCEIVER)
IC8
HD74LVC245AT
(TRANSCEIVER)
IC9
HD74LVC245AT
(TRANSCEIVER)
IC10
HD74LVC245AT
(TRANSCEIVER)
IC12
HD74HCT541FP
(BUFFER)
IC13
HD74LVCC3245AT
(TRANSCEIVER)
IC15
SI9708DY
(CF INTERFACE SWITCH)
IC16
DS1811R-10
IC17
HY57V641620HGT-H
(RESIDENT SDRAM MEMORY)
IC18
HY57V641620HGT-H
(RESIDENT SDRAM MEMORY)
IC20
GAL16V8D-15QP
(PLD)
IC3
GAL20V8B-15QP
(PLD)
IC4
GAL20V8B-15QP
(PLD)
J7
EXPANSION MEMORY
(EXM128 ONLY)
PH1
HCPLD0701
(PHOTO COUPLER)
PH2
HCPLD0701
(PHOTO COUPLER)
SOUND / WORK
SOUND / WORK
TO : FRONT BLK (CF)
TO : MIDI BLK
TO : USB
TO HDD CONNECT BLK
TO : LCD
TO : OPERATION - R BLK
TO : PAD BLK
TO : AD / DA BLK
TO : DIGITAL BLK
13.33MHz OSC
48MHz OSC
(L4033C)
(L4033A)
(L4033B)


IC601
AD1839AS
(2ADC+6DAC 24BIT CODEC)
IC602
CS8427
(DIO TRANSCEIVER)
J101
DRX
DTXP
DTXN
SPD
SPQ
SPCK
AIOCS
PWRGD
DIOIRQ
RXP
RXN
TXP
TXN
CDIN
CDOUT
CCLK
CS
RST
INT
SDOUT
OLRCK
OSCLK
SDIN
ILRCK
ISCLK
RMCK
OMCK
X2
11.2896MHz
OSC
RXSP
LRCK
BTCK
TXSP
RMCK
AUXDI1
AUXDI2
AUXDI3
MCLK
SPD
SPCK
AIOCS
PWRGD
CIN
CCLK
CLATCH
RST
TXDSIO
RXDSIO
SCKSIO
FSSIO
TDMDI
TDMDO
TDMBTCK
TDMLRCK
LRCK
+3.3V
MUTE
MUTEP
MUTET
A-12V
A+12V
IC21
LM2575S
DCDC
CONVERTER
+1.9V
IC901
LM2575S
DCDC
CONVERTER
+12V
+3.3V
-12V
A-12V
ADCRP
ADCRN
ADCLP
ADCLN
P201
RV1
RV2
LV1
LV2
RECORD IN R
RECORD IN L
P203
HPL
HPR
MUTET
OUTR3
P202
RVIN
RVOUT
LVOUT
LVIN
STEREO OUT R
STEREO OUT L
OUTL3
OUTR2
ASSIGNABLE MIX OUT 4
OUTL2
OUTR1
OUTL1
SAME AS ASSIGNABLE MIX OUT 4
ASSIGNABLE MIX OUT 3
ASSIGNABLE MIX OUT 2
ASSIGNABLE MIX OUT 1

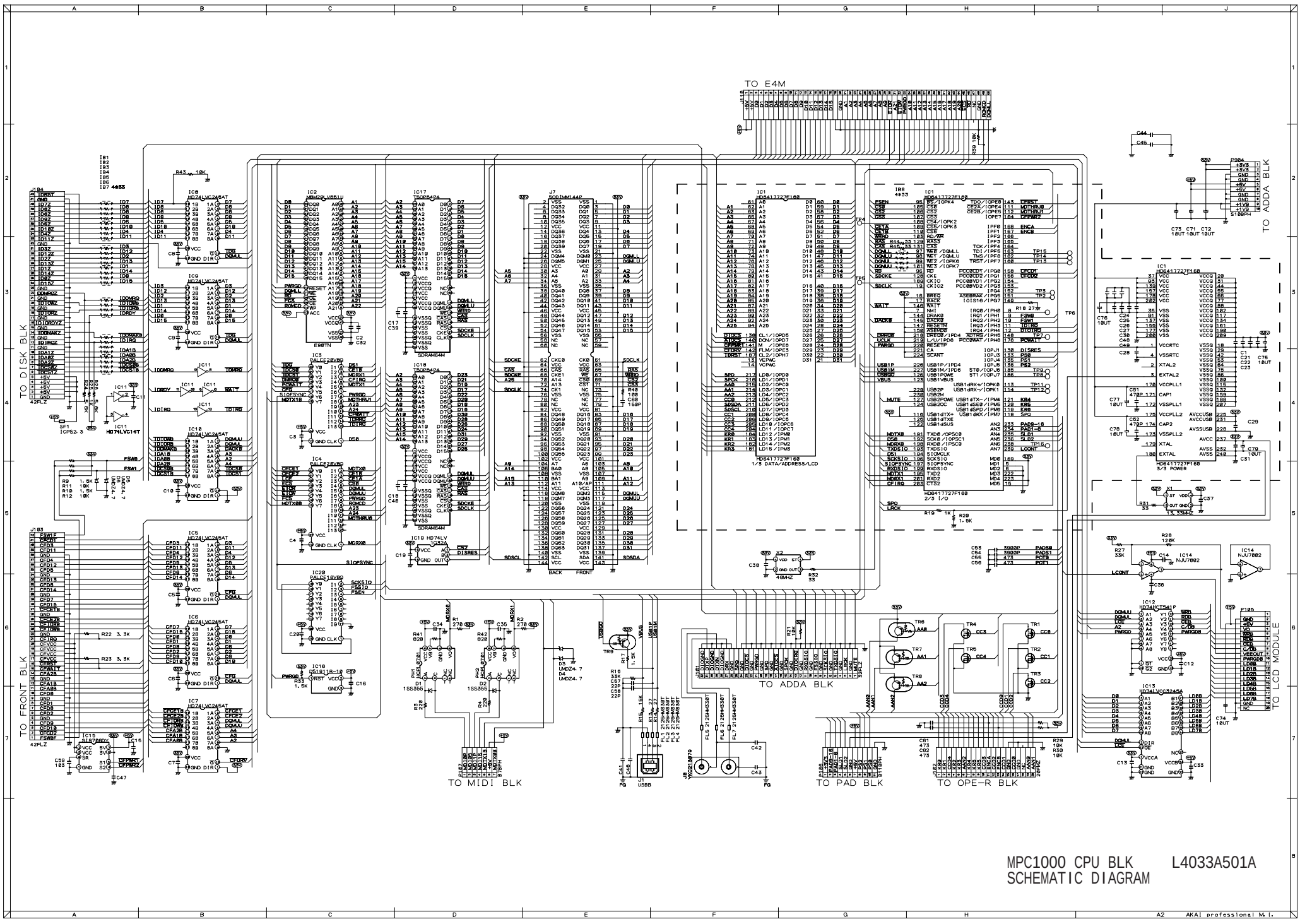


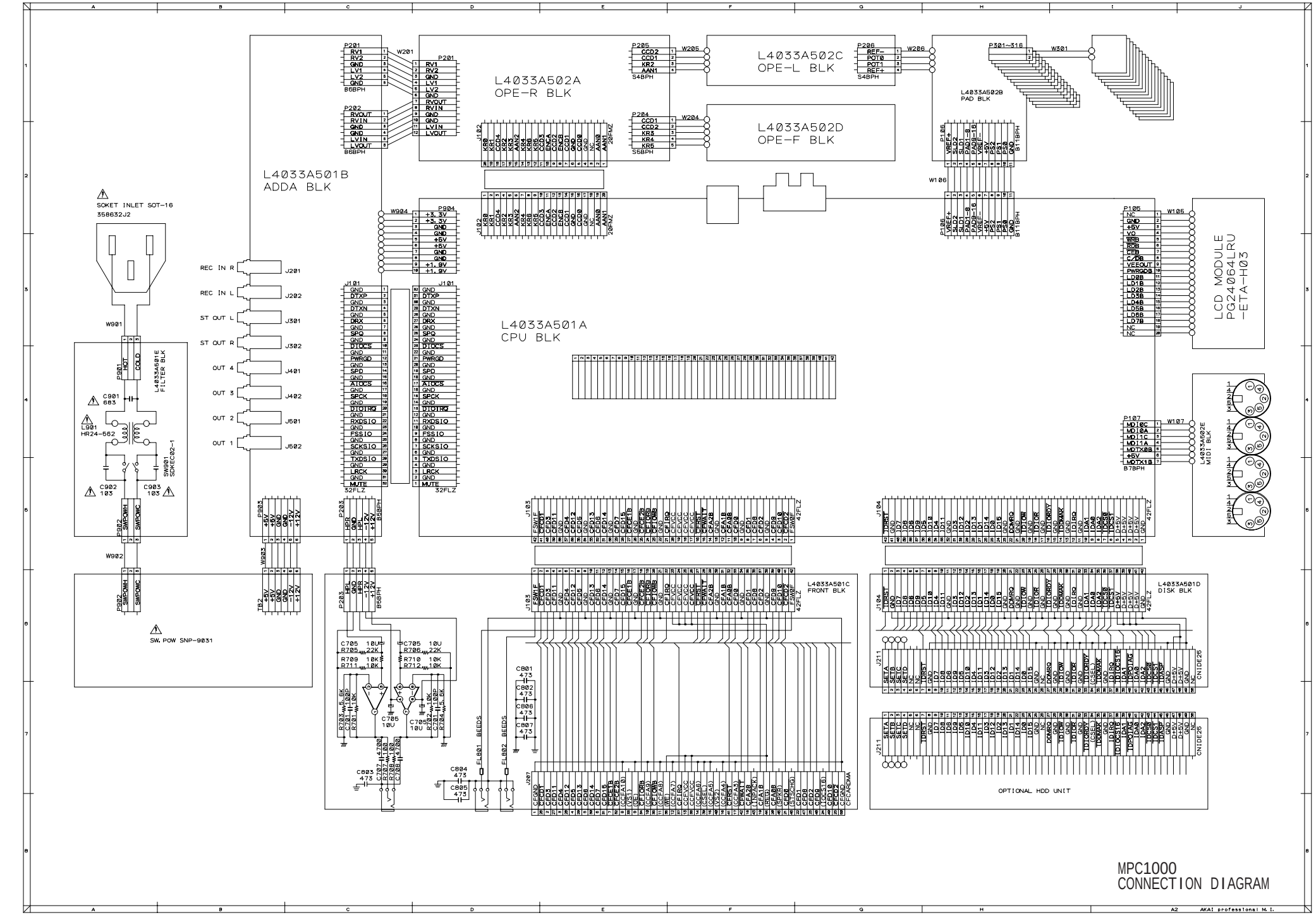


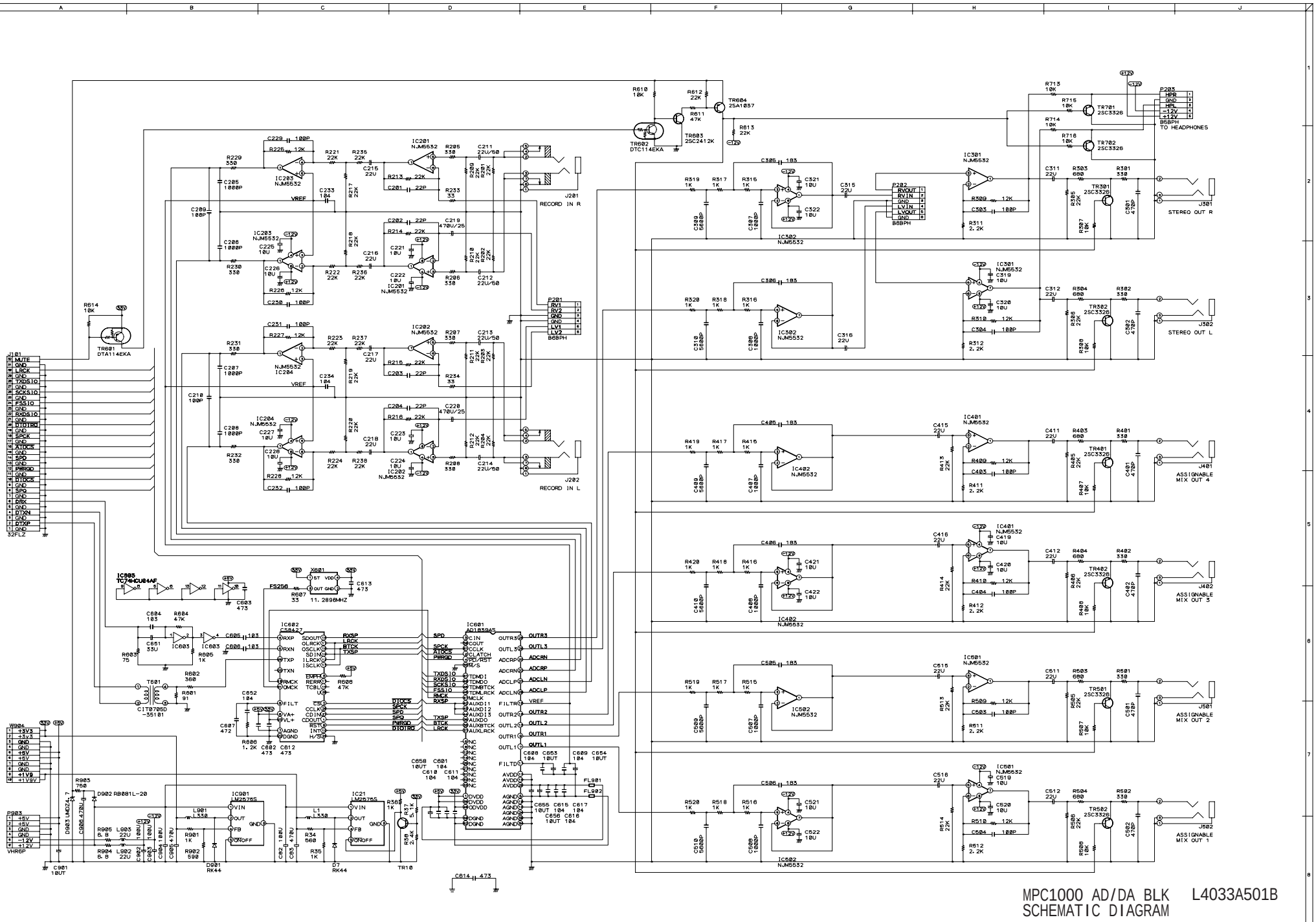


MPC1000 OPERATION-R BLK L4033A502A
PAD BLK L4033A502B
OPERATION-L BLK L4033A502C
OPERATION-F BLK L4033A502D
MIDI BLK L4033A502E

SCHEMATIC DIAGRAM


TO E4M
TO DISK BLK
TO FRONT BLK
TO ADDA BLK
TO LCD MODULE
TO MIDI BLK
TO ADDA BLK
TO PAD BLK
TO OPE-R BLK
MPC1000 CPU BLK L4033A501A
SCHEMATIC DIAGRAM
A2 AKAI professional M.i.


L4033A502A
OPE-R BLK
L4033A502C
OPE-L BLK
L4033A502D
OPE-F BLK
L4033A502B
PAD BLK
L4033A501B
ADDA BLK
L4033A501A
CPU BLK
L4033A501C
FRONT BLK
L4033A501D
DISK BLK
L4033A502E
MIDI BLK
L4033A501E
FILTER BLK
LCD MODULE
PG24064LRU
-ETA-H03
SOKET INLET SOT-16
358632J2
SW. POW SNP-9031
OPTIONAL HDD UNIT
REC IN R
REC IN L
ST OUT L
ST OUT R
OUT 4
OUT 3
OUT 2
OUT 1
MPC1000
CONNECTION DIAGRAM


MPC1000 AD/DA BLK L4033A501B
SCHEMATIC DIAGRAM
AKAI professional M.I.