Music production Center
SAFETY INSTRUCTIONS

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.

INFORMATIONS

SYMBOLS FOR PRIMARY DESTINATION

Unit destinations are indicated with letters as shown below.

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Principal Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>U.S.A</td>
</tr>
<tr>
<td>B</td>
<td>England</td>
</tr>
<tr>
<td>E</td>
<td>Europe</td>
</tr>
<tr>
<td>J</td>
<td>Japan</td>
</tr>
<tr>
<td>V</td>
<td>Germany</td>
</tr>
<tr>
<td>XT</td>
<td>Japan</td>
</tr>
<tr>
<td>X4</td>
<td>Universal Area</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th><strong>General</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display</strong></td>
<td>240 x 64 dot graphic LCD w/back light</td>
</tr>
<tr>
<td><strong>Memory card slot</strong></td>
<td>Compact Flash (The size of the compact flash card the MPC1000 can handle is from 32MB to 2GB)</td>
</tr>
<tr>
<td><strong>Dimensions (W x H x D)</strong></td>
<td>330 x 75.5 x 228.2(Max 234.6)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>3.45kg</td>
</tr>
<tr>
<td><strong>Power requirement</strong></td>
<td>19W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sound generator</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sampling rate</strong></td>
<td>44.1kHz</td>
</tr>
<tr>
<td><strong>Memory capacity</strong></td>
<td>16MB standard (11.5MB for sound memory), expandable to 128MB</td>
</tr>
<tr>
<td><strong>Recording time</strong></td>
<td>136sec. (16MB, MONO), 24m28sec. (128MB, MONO)</td>
</tr>
<tr>
<td><strong>Memory expansion slot</strong></td>
<td>1 x for optional EXM128</td>
</tr>
<tr>
<td><strong>Data format</strong></td>
<td>16-bit linear</td>
</tr>
<tr>
<td><strong>Polyphony</strong></td>
<td>32</td>
</tr>
<tr>
<td><strong>Dynamic filtering</strong></td>
<td>2 x 2-pole filter per voice</td>
</tr>
<tr>
<td><strong>Filter type</strong></td>
<td>Low pass, Band pass, High pass</td>
</tr>
<tr>
<td><strong>Preset sound memory</strong></td>
<td>5MB</td>
</tr>
<tr>
<td><strong>Number of programs</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Effects</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effects</strong></td>
<td>2 stereo effects and Master effect</td>
</tr>
<tr>
<td><strong>Effect type</strong></td>
<td>Chorus, Flanger, Bit grunger, 4 band EQ, Compressor, Phase shifter, Tremolo, Flying pan, Reverb Master effect: 4 band EQ, Compressor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sequencer</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum events</strong></td>
<td>100,000 notes</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>96 parts per 1/4-note</td>
</tr>
<tr>
<td><strong>Sequences</strong></td>
<td>99</td>
</tr>
<tr>
<td><strong>Tracks per sequence</strong></td>
<td>64</td>
</tr>
<tr>
<td><strong>MIDI output channels</strong></td>
<td>32 (16 channels x 2 outputs)</td>
</tr>
<tr>
<td><strong>Song mode</strong></td>
<td>20 songs, 250 steps per song</td>
</tr>
<tr>
<td><strong>Drum pad</strong></td>
<td>16 (velocity and pressure sensitive)</td>
</tr>
<tr>
<td><strong>Drum pad banks</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Sync mode</strong></td>
<td>MIDI clock</td>
</tr>
</tbody>
</table>

* The specifications are subject to change without the prior notice.
### Inputs / Outputs

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Record input (L and R)</strong></td>
<td>1/4-inch stereo phone x 2, balanced -40dBu, input impedance 11k ohms; Max. Input level +10dBu</td>
</tr>
<tr>
<td><strong>Digital input</strong></td>
<td>RCA-pin x 1 S/PDIF</td>
</tr>
<tr>
<td><strong>Stereo output (L and R)</strong></td>
<td>1/4-inch phone x 2 unbalanced +11dBu, output impedance 1k Ohms, Max. output level +17dBu</td>
</tr>
<tr>
<td><strong>4 individual outputs</strong></td>
<td>1/4-inch phone x 4 unbalanced +11dBu, output impedance 1k Ohms, Max. output level +17dBu</td>
</tr>
<tr>
<td><strong>Phones output</strong></td>
<td>1/4-inch stereo phone x 1, 200mW / 100 ohms</td>
</tr>
<tr>
<td><strong>Digital output</strong></td>
<td>RCA-pin x 1 S/PDIF</td>
</tr>
<tr>
<td><strong>MIDI inputs</strong></td>
<td>5-pin DIN x 2</td>
</tr>
<tr>
<td><strong>MIDI outputs</strong></td>
<td>5-pin DIN x 2</td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>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.)</td>
</tr>
<tr>
<td><strong>Footswitches</strong></td>
<td>1/4-inch phone x 2</td>
</tr>
</tbody>
</table>

### Standard accessories

- 32MB Compact Flash card, Power cable, Operator's manual

### Options

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXM128</strong></td>
<td>128MB expansion memory card</td>
</tr>
<tr>
<td><strong>MPC2000XL</strong></td>
<td>SEQ, WAV, PGM (Most parameters of PGM file can be loaded.)</td>
</tr>
<tr>
<td><strong>MPC4000</strong></td>
<td>SEQ, WAV, PGM (DRUM program only. Only note assign and tune are loaded.)</td>
</tr>
<tr>
<td><strong>MPC3000</strong></td>
<td>No compatibility</td>
</tr>
<tr>
<td><strong>Z4/Z8</strong></td>
<td>WAV only</td>
</tr>
<tr>
<td><strong>S5000/6000</strong></td>
<td>WAV only</td>
</tr>
<tr>
<td><strong>S1000/3000</strong></td>
<td>No compatibility</td>
</tr>
</tbody>
</table>

* 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

- BA - L4033A502D
  PC OPERATION - F BLK

- BA - L4033A502C
  PC OPERATION - L BLK

- BA - L4033A502B
  PC PAD BLK

- BA - L4033A502A
  PC OPERATION - R BLK

- EM - 821776X
  IND LCD PS24064LRU - ETA - H03

- BP - 821839X
  SW POW SNP - 9031

- BA - L4033A501E
  PC FILTER BLK

- BA - L4033A501A
  PC CPU BLK

- BA - L4033A501B
  PC AD/DA BLK

- BA - L4033A501C
  PC FRONT BLK

- BA - L4033A501D
  PC HD CONNECT BLK
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 input 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, press the “REC” button. After the update process is finished the MPC1000 will re-boot automatically.

Note: The MPC1000 cannot 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 cannot 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 Program using 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 to the 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.
# 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

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D5</td>
<td>ED-431276C</td>
<td>D SCHOT 1S30-J T05</td>
</tr>
<tr>
<td>D110</td>
<td>ED-431276C</td>
<td>D SCHOT 1S30-J T05</td>
</tr>
<tr>
<td>IC5</td>
<td>EI-811073J</td>
<td>ICTRC-6593</td>
</tr>
<tr>
<td>IC10</td>
<td>EI-811068J</td>
<td>IC HD74HC157FP</td>
</tr>
</tbody>
</table>

### 2. FINAL ASSEMBLY BLK

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

Symbols for primary destination:

- [A] U.S.A.
- [B] England
- [V] Germany
- [E] Europe
- [X] Japan
- [X4] Universal Area

Symbols for primary destination:

- [J] Japan
- [E] Europe
- [V] Germany
- [X] Japan
- [X4] Universal Area

### 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 L’É FABRICANT.**
1. PC BOARD BLK

Ref. No. Part No. Description
1 BA - L4033A020A PC(#) MAIN BLK MPCM1000
2 BA - L4033A030A PC(#) OPERATION BLK MPCM1000

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 FILTER-F BLK
5 BA - L4033A502E PC MIDI BLK

2. PC CPU BLK

Ref. No. Part No. Description
D1 ED - 428996J D SILICON C.15S35STF-17 T08E
D2 ED - 428996J D SILICON C.15S35STF-17 T08E
D3 ED - 812338J D ZENER C.DUZ4A 7BT-17 T08E
D4 ED - 812338J D ZENER C.DUZ4A 7BT-17 T08E
D5 ED - 812338J D ZENER C.DUZ4A 7BT-17 T08E
D6 ED - 812338J D ZENER C.DUZ4A 7BT-17 T08E
IC1 EJ - 81836X IC HD74L172F160 QFTY
IC2 EJ - 81836X IC HD74L172F160 QFTY
IC3 EJ - 81836X IC GAL20V8B-15Q L0433A
IC4 EJ - 81836X IC GAL20V8B-15Q L0433B
IC5 EJ - 81836X IC HD74LV245ATEL FPTET16E
IC6 EJ - 818296J IC HD74LV245ATEL FPTET16E
IC7 EJ - 818296J IC HD74LV245ATEL FPTET16E
IC8 EJ - 818296J IC HD74LV245ATEL FPTET16E
IC9 EJ - 818296J IC HD74LV245ATEL FPTET16E
IC10 EJ - 818976X IC HD74LV141ATEL FPTET16E
IC11 EJ - 818976X IC HD74LV141ATEL FPTET16E
IC12 EJ - 818976X IC HD74HR541TF FPTET16E
IC13 EJ - 81826X IC HD74LVCC32A4ATEL FPTET16E
IC14 EJ - 81826X IC NJU7002M FPT1108
IC15 EJ - 81826X IC SI8118Y
IC16 EJ - 81826X IC DS8111R-10
IC17 EJ - 81826X IC HYS756416200GHT-H
IC18 EJ - 81826X IC HYS756416200GHT-H
IC19 EJ - 81826X IC HD74LV1G032ACME FPTET16E
IC20 EJ - 81901X IC GAL16V8-15Q L0433C
J1 EJ - 81236X SOCKET CONNECTOR YKF4-4002 4P
J2 EJ - 812796X PIN J2093
J3 EJ - 81781X SOCKET DMM3-6RS1442A-13 144P
J101 EJ - 81886X SOCKET 32FLZ-S1-R-TB 32P
J102 EJ - 81886X SOCKET 32FLZ-S1-R-TB 32P
J103 EJ - 81779X SOCKET 4FLZ-S1-R-TB 42P
J104 EJ - 81779X SOCKET 4FLZ-S1-R-TB 42P
J105 EJ - 81779X SOCKET 12A-05032-S34A 50P
P105 EJ - 81841X PLUG SCP20G632 20P
PH1 ET - 81874X DETECTOR HCLP-0701
PH2 ET - 81874X DETECTOR HCLP-0701
SF1 EF - 810572J FUSE C.250G.52 50V 2.3A T08E
TR1 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR2 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR3 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR4 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR5 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR6 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR7 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR8 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR9 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR10 ET - 81786X TR FET CHIP 2SK3065T100 T12E
TR11 ET - 81786X TR FET CHIP 2SK3065T100 T12E
X1 EJ - 81826X OSC XTAL C.D50751SV 13 330MHZ
X2 EJ - 820989X OSC XTAL C.D50751SV 48.00000MHZ

3. PC AD/DA BLK

Ref. No. Part No. Description
D7 ED - 812790X D SCHOT RK44 403.0A
D901 ED - 812790X D SCHOT RK44 403.0A
D902 ED - 812354J D ZENER C.R8801L-20 2TE2T12E
D903 ED - 812354J D ZENER C.DUZ4A 7BT-17 T08E
IC21 EJ - 81826X IC LMD575S-ADJ
IC201 EJ - 812479J IC NJM5532M FPT132P
IC202 EJ - 812479J IC NJM5532M FPT132P

4. PC FRONT BLK

Ref. No. Part No. Description
IC701 EJ - 812705J IC NJM5456AL
J103 EJ - 81779X SOCKET 4FLZ-S1-R-TB 42P
J207 EJ - 81782X SOCKET CFBM50MTW1NL 50P
J208 EJ - 81782X SOCKET 2FLZ-S1-R-TB 32P
J209 EJ - 81868X SOCKET 32FLZ-S1-R-TB 32P
J210 EJ - 81868X SOCKET 32FLZ-S1-R-TB 32P
R707 ER - 430691J R OMF H S12 F5 1W 101J
R708 ER - 430691J R OMF H S12 F5 1W 101J

5. PC HD CONNECT BLK

Ref. No. Part No. Description
J104 EJ - 81779X SOCKET 4FLZ-S1-R-TB 42P
P211 EJ - 81777X PLUG DHB-P550A-R131N 50P

6. PC FILTER BLK

Ref. No. Part No. Description
C951 EC - 430824J C MMY V CUT MKP3362 663M 275AC
C952 EC - 427562J C MMY V CUT MKP3362 100M 275AC
C953 EC - 427562J C MMY V CUT MKP3362 100M 275AC
L901 EJ - 812750J COIL LF HR-24-562
SW901 EJ - 812750J SW PUSH SDK1 02-1