EXM-E3 Memory Module Upgrade for ALESIS Fusion 6/8HD (S60/S80) & AKAI MPC5000

This document is split into four sections:

1. Alesis Fusion 6HD (S60) Disassembly Procedure.
2. Alesis Fusion 8HD (S80) Disassembly Procedure.
3. Alesis Fusion - Installation of EXM-E3 Memory Modules.
4. Akai MPC5000 - Installation of EXM-E3 Memory Module.

Section 1

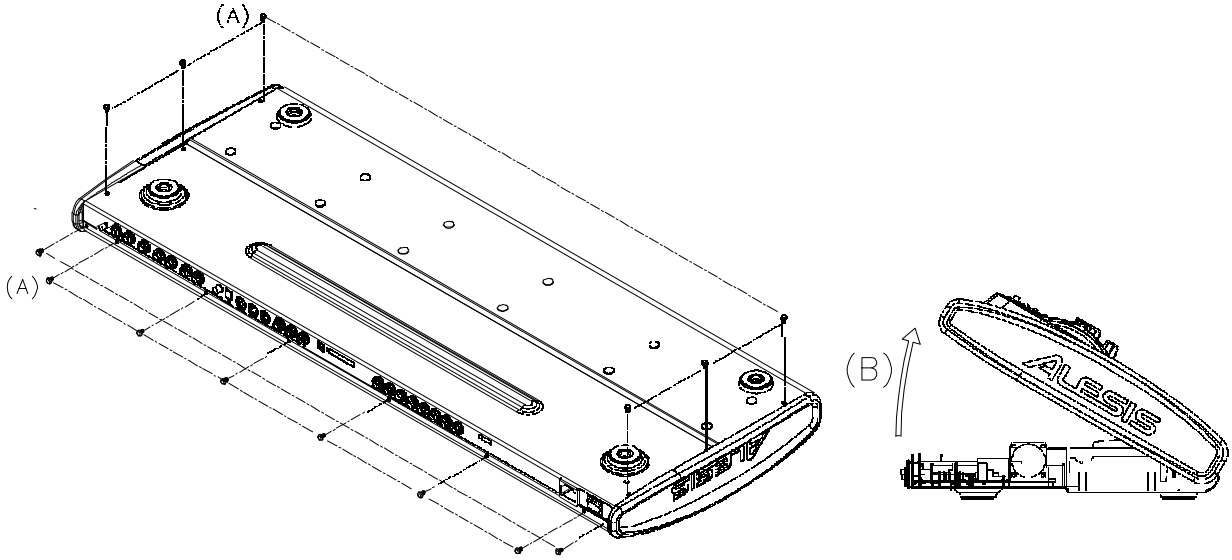
ALESIS
Fusion 6HD (S60)

DISASSEMBLY PROCEDURE

1. REMOVAL OF TOP PANEL AND CHASSIS BOTTOM (Fig.1)

(A) REMOVE 14 SCREWS TO SEPARATE TOP PANEL AND CHASSIS BOTTOM.

(B) SEPARATE TOP PANEL AND CHASSIS WITH THE DIRECTION SHOWN.



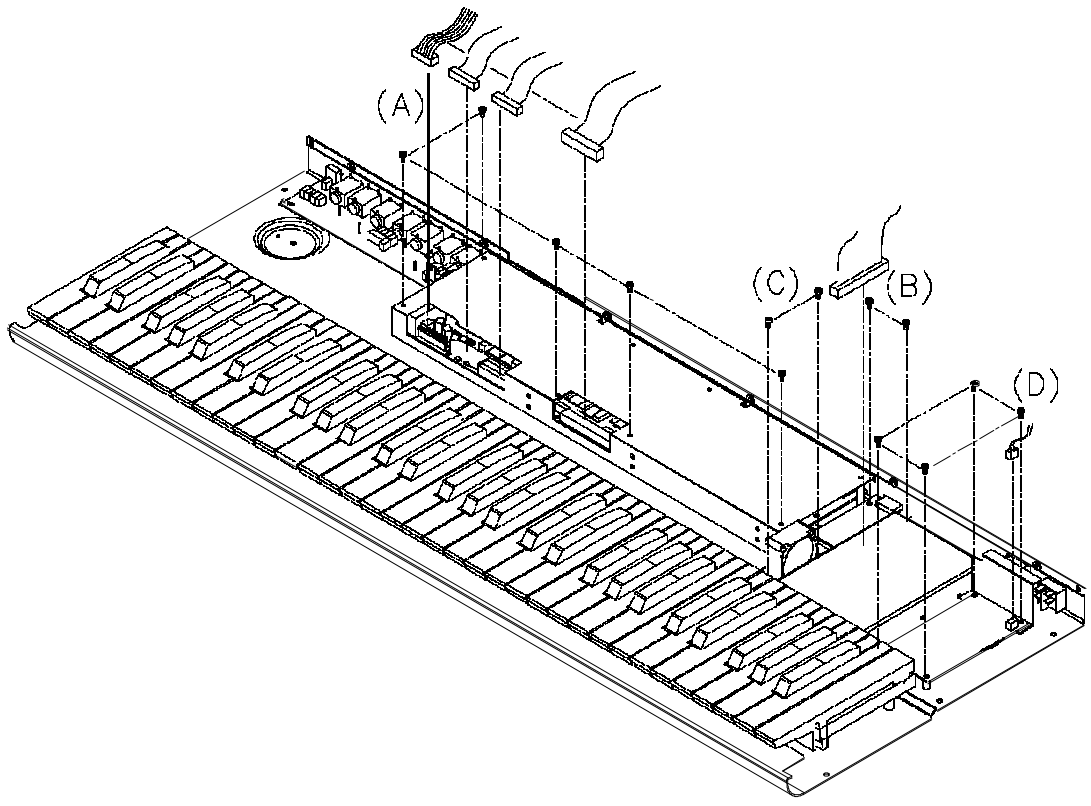
2. REMOVAL OF SATA ASS'Y, POWER SUPPLY PCB ASS'Y AND FAN (Fig.2)

(A) REMOVE 4 CABLES AND 5 SCREWS TO TAKE OFF SHIELD PLATE.

(B) REMOVE THE CABLE AND 2 SCREWS TO TAKE OFF THE SATA PCB.

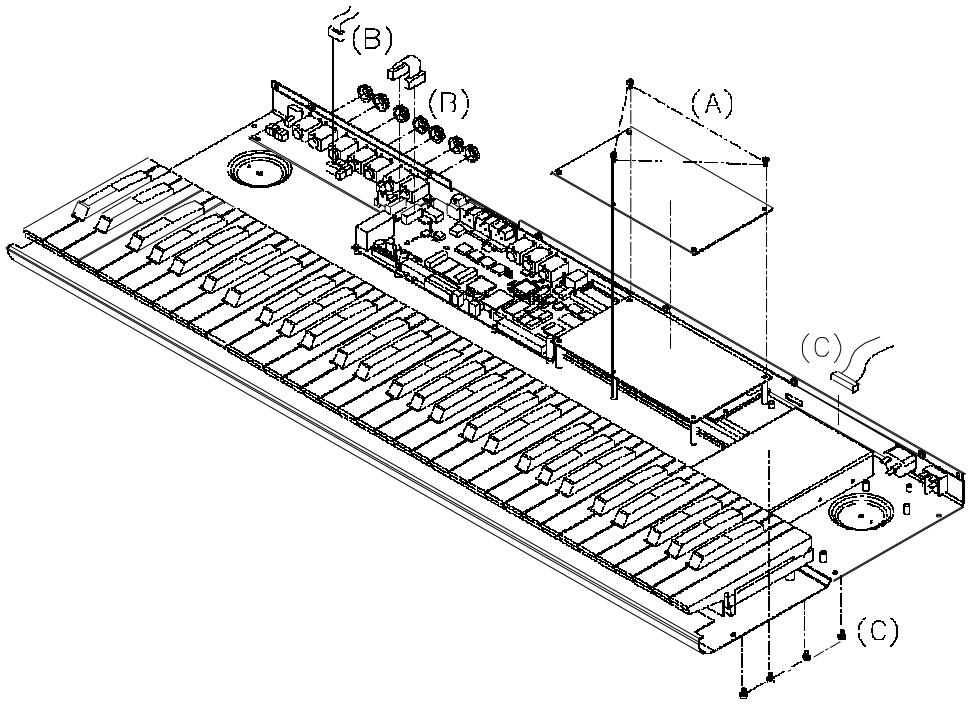
(C) REMOVE 2 SCREWS TO TAKE OUT THE FAN.

(D) REMOVE THE CABLE AND 4 SCREWS TO SEPARATE THE SWITCHING POWER PCB.



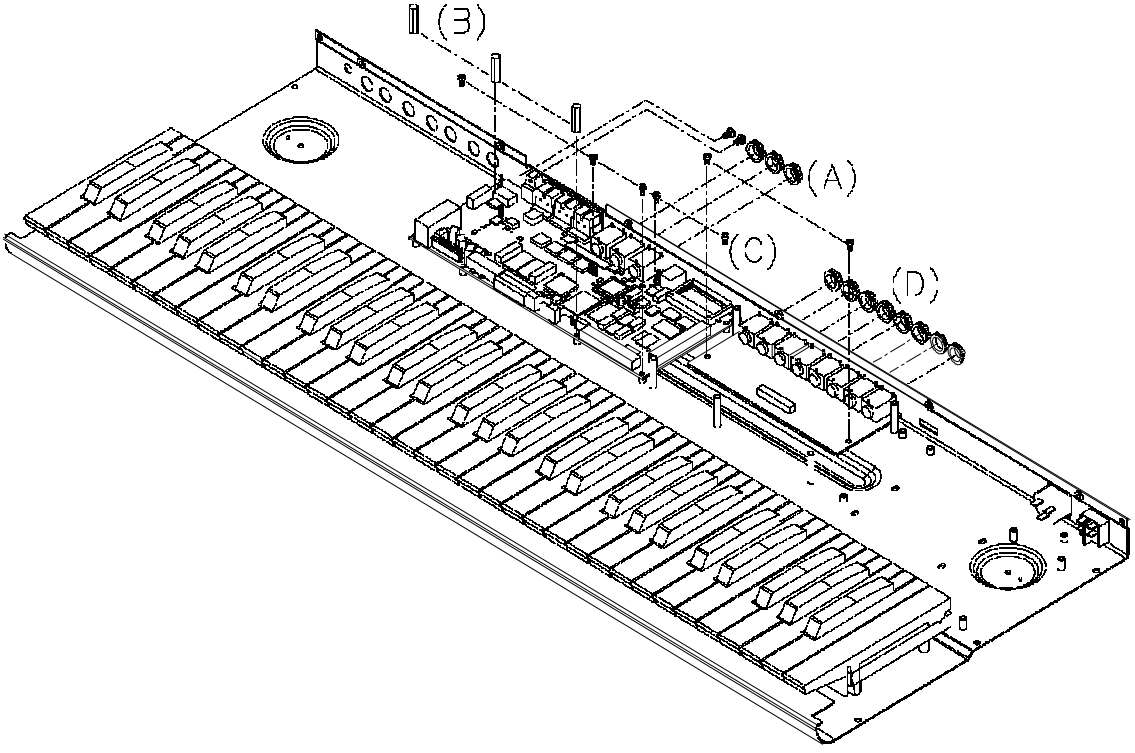
3. REMOVAL OF EXPANSION DIGITAL PCB, ANALOG IO PCB AND HARD DISC. (Fig.3)

(A) REMOVE 3 SCREWS AND INSULATOR SHEET TO TAKE OFF EXPANSION DIGITAL PCB.
(B) REMOVE THE CABLES AND 7 1/4" JACK NUTS FROM REAR PANEL TO TAKE OUT THE ANALOG IO PCB.
(C) REMOVE 4 SCREWS AND CABLES TO TAKE OUT THE HARD DISC.



4. REMOVAL OF MAIN PCB AND EXPANSION ANALOG PCB .(Fig.4)

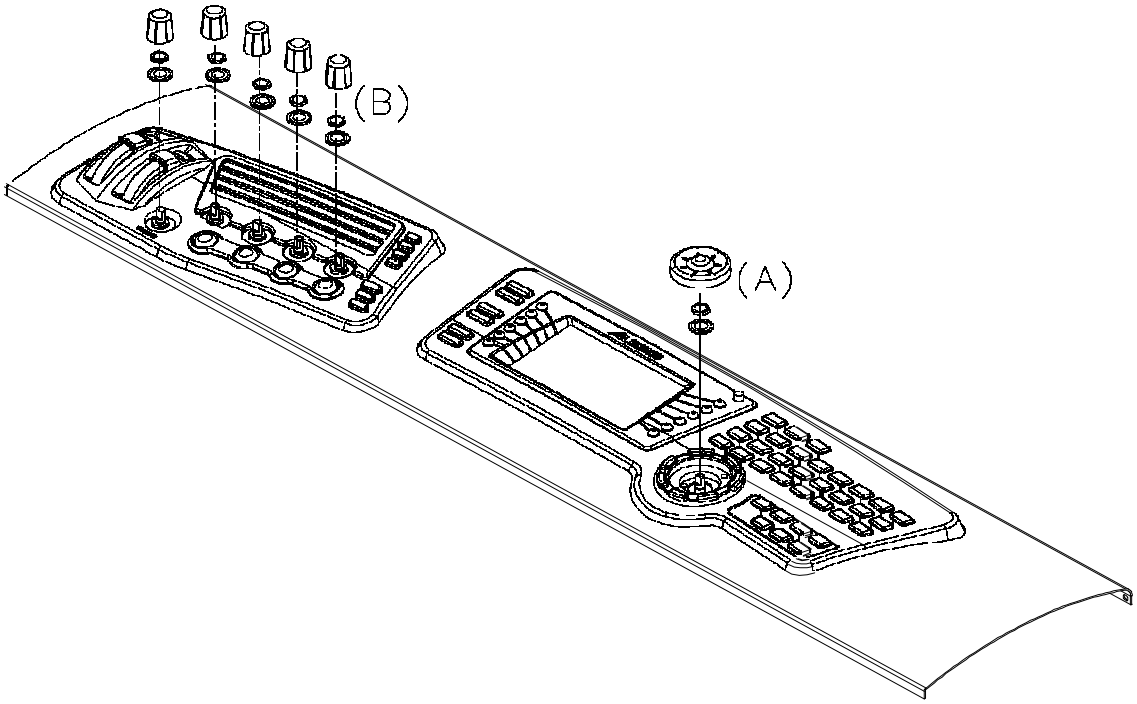
(A) REMOVE 3 1/4" JACK NUTS AND 2 SCREWS FROM REAR PANEL.
(B) REMOVE 3 BRASS STANDOFF FROM MAIN PCB.
(C) REMOVE 5 SCREWS TO TAKE OUT MAIN PCB.
(D) REMOVE 8 1/4" JACK NUTS FROM REAR PANEL TO TAKE OUT EXPANSION ANALOG PCB.



5. REMOVAL OF 5 PCS OF KNOBS , WHEEL ENCODER AND MOUNTING NUTS(Fig.5)

(A) REMOVE WHEEL ENCODER AND MOUNTING NUT FROM PANEL RIGHT

(B) REMOVE 5 KNOBS AND MOUNTING NUTS FROM PANEL LEFT



6. REMOVAL OF LCD MODULE, INVERTER PCB AND DIMMER PCB AND FRONT PANEL RIGHT PCB (Fig.6)

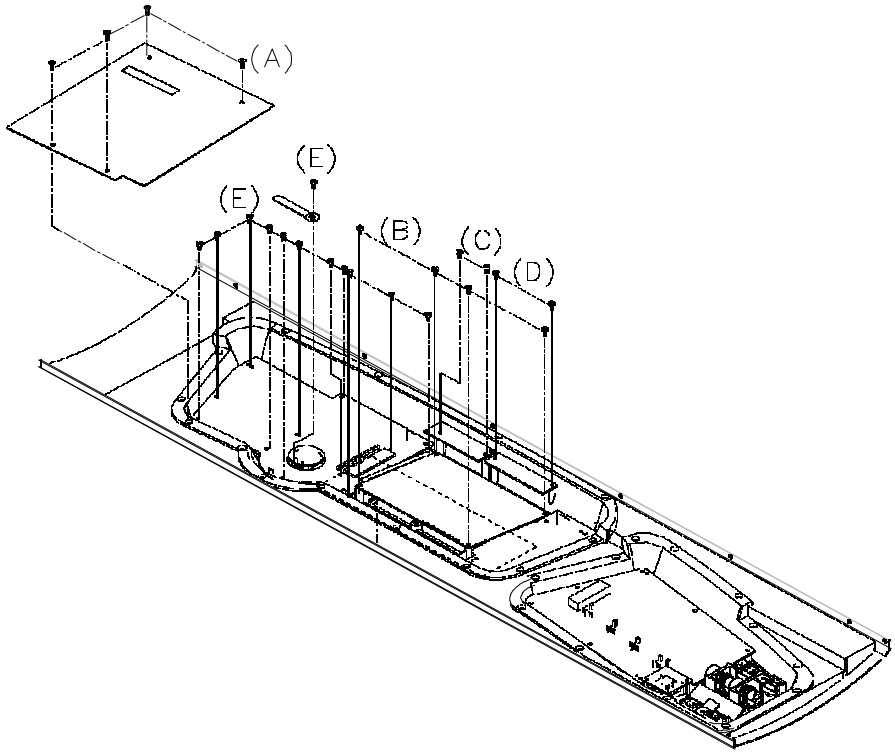
(A) REMOVE 4 SCREWS TO TAKE OFF TINFOIL.

(B) REMOVE 4 SCREWS TO TAKE OFF LCD MODULE.

(C) REMOVE 2 SCREWS TO TAKE OFF DIMMER PCB.

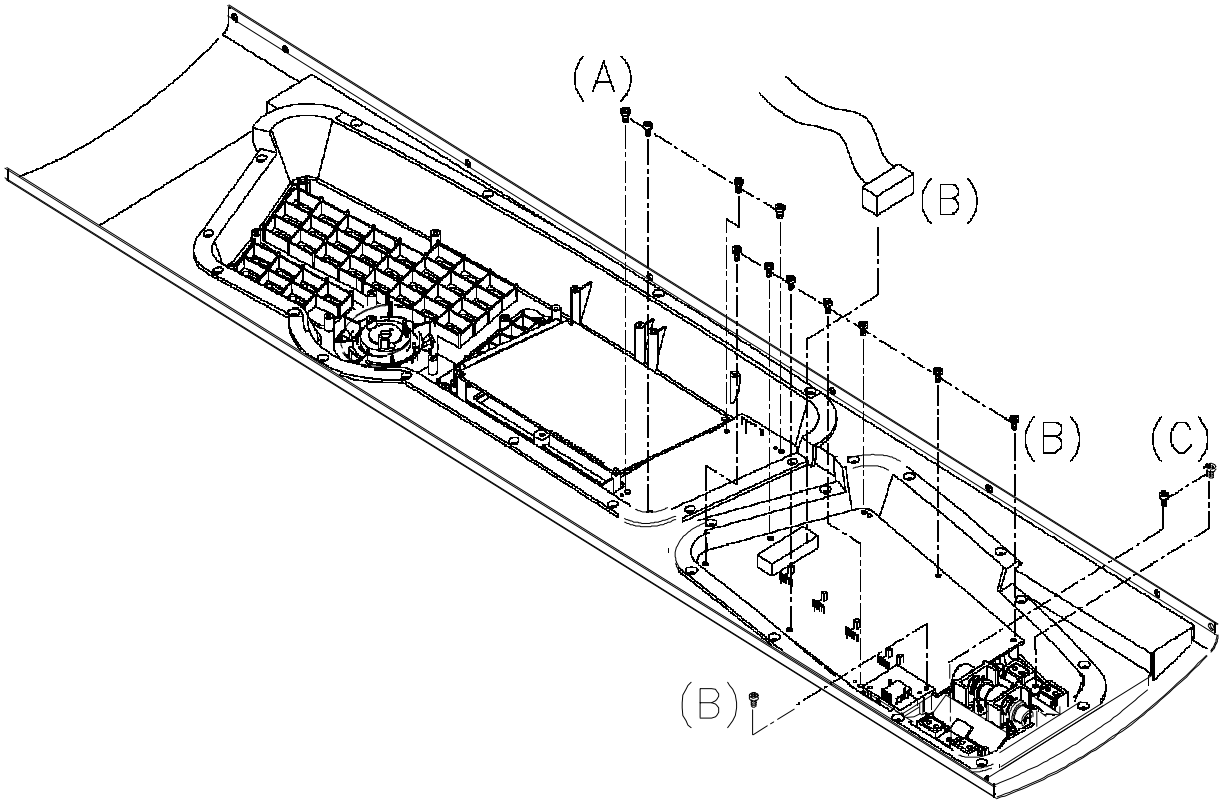
(D) REMOVE 2 SCREWS TO TAKE OFF INVERTER PCB.

(E) REMOVE 12 SCREWS TO TAKE OFF RIGHT PCB.



7. REMOVAL OF FRONT PANEL LEFT PCB, FRONT PANEL CENTER PCB AND LED PCB.(Fig.7)

(A) REMOVE 4 SCREWS TO TAKE OFF FRONT PANEL CENTER PCB.
(B) REMOVE A CABLE AND 8 SCREWS TO TAKE OFF FRONT PANEL LEFT PCB.
(C) REMOVE 2 SCREWS TO TAKE OF LED PCB.



Section 2

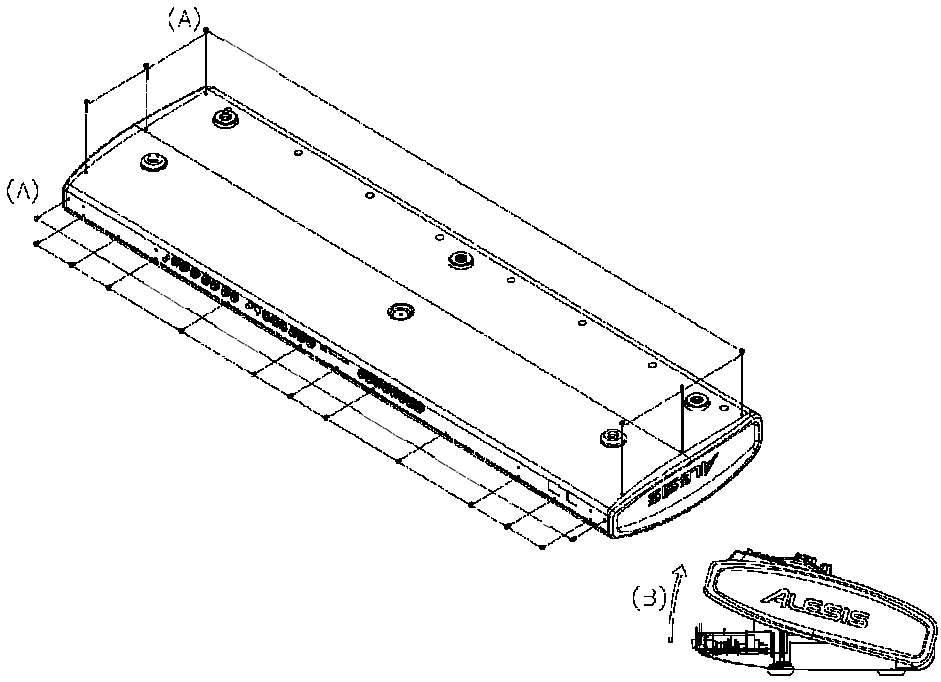
ALESIS
Fusion 8HD (S80)

DISASSEMBLY PROCEDURE

1. REMOVAL OF TOP PANEL AND CHASSIS BOTTOM (Fig.1)

(A) REMOVE 19 SCREWS TO SEPARATE TOP PANEL AND CHASSIS BOTTOM.

(B) SEPARATE TOP PANEL AND CHASSIS WITH THE DIRECTION SHOWN.



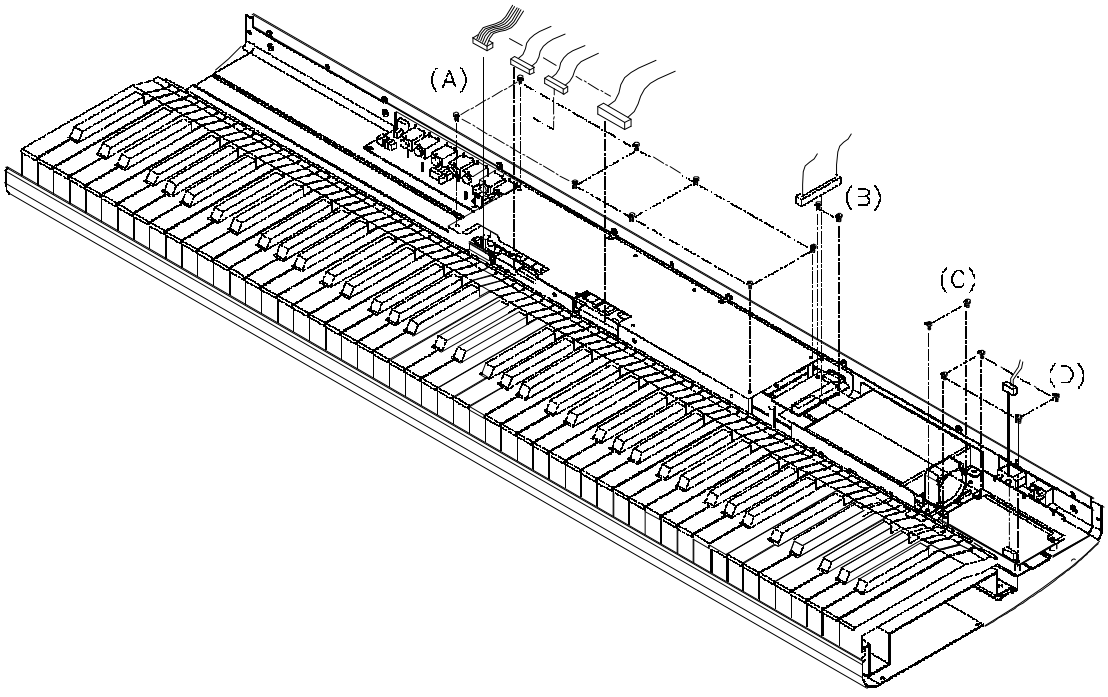
2. REMOVAL OF SHIELD PLATE,SATA PCB, SWITCHING POWER PCB AND FAN (Fig.2)

(A) REMOVE 4 CABLES AND 8 SCREWS TO TAKE OFF SHIELD PLATE.

(B) REMOVE THE CABLE AND 2 SCREWS TO TAKE OFF THE SATA PCB.

(C) REMOVE 2 SCREWS TO TAKE OUT THE FAN.

(D) REMOVE THE CABLE AND 4 SCREWS TO SEPARATE THE SWITCHING POWER PCB.

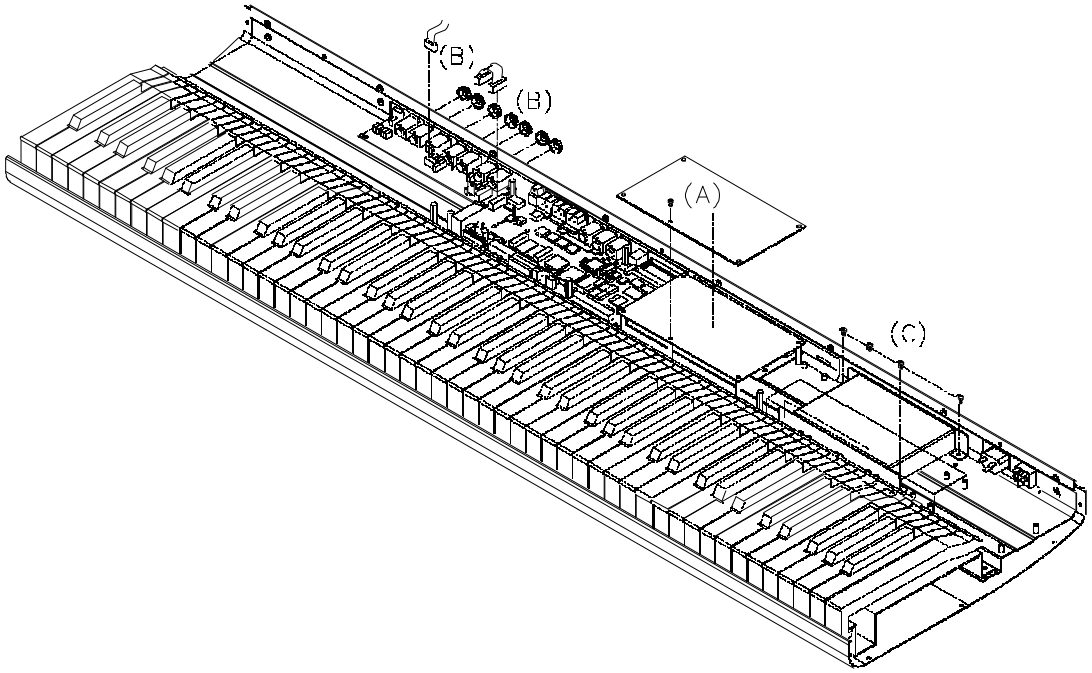


3. REMOVAL OF EXPANSION DIGITAL PCB, ANALOG IO PCB AND HARD DISC (Fig.3)

(A) REMOVE 1 SCREW AND INSULATOR SHEET TO TAKE OFF EXPANSION DIGITAL PCB.

(B) REMOVE THE CABLES AND 7 1/4" JACK NUTS FROM REAR PANEL TO TAKE OUT THE ANALOG IO PCB.

(C) REMOVE 4 SCREWS AND CABLES TO TAKE OUT THE HARD DISC.



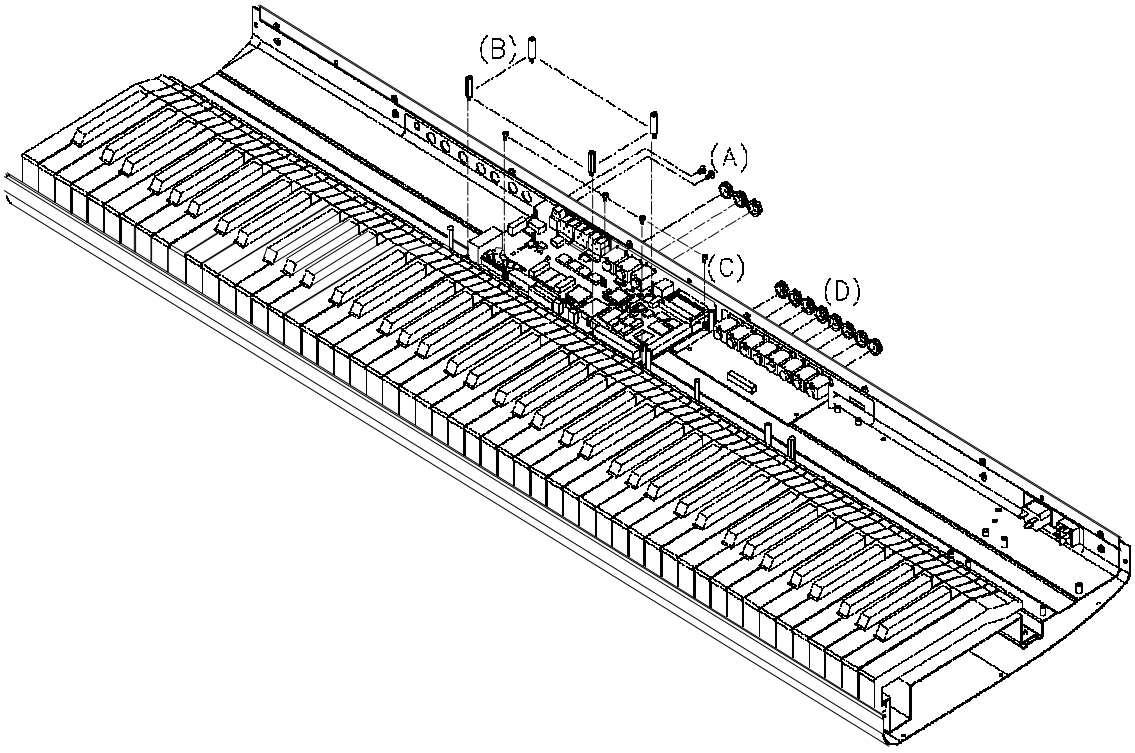
4 REMOVAL OF MAIN PCB AND EXPANSION ANALOG PCB (Fig.4)

(A) REMOVE 3 1/4" JACK NUTS AND 2 SCREW FROM REAR PANEL.

(B) REMOVE 4 BRASS STANDOFF FROM MAIN PCB.

(C) REMOVE 4 SCREWS TO TAKE OUT MAIN PCB.

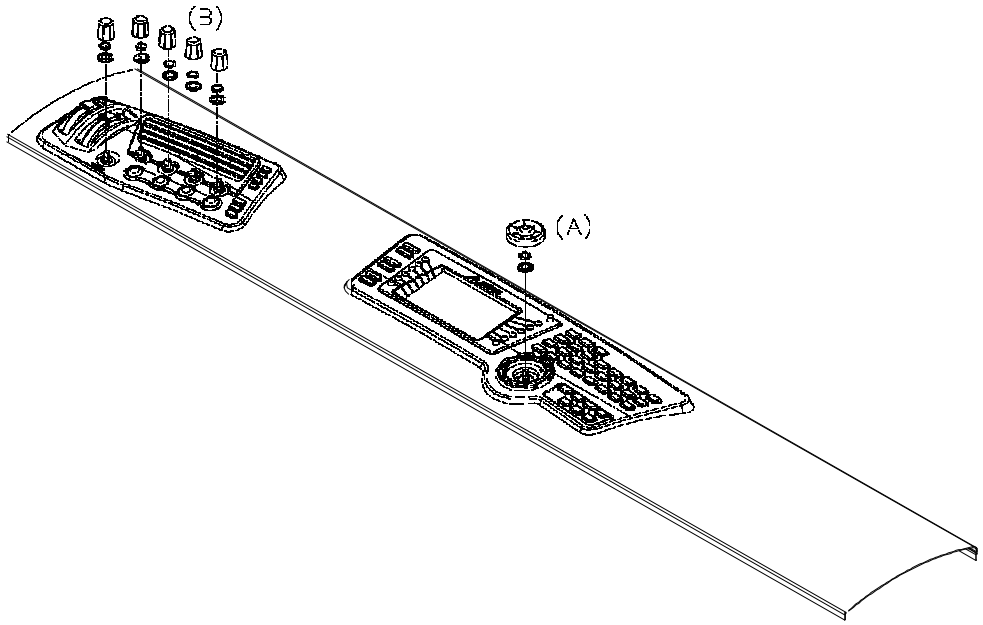
(D) REMOVE 8 1/4" JACK NUTS FROM REAR PANEL TO TAKE OUT EXPANSION ANALOG PCB.



5 REMOVAL OF 5 PCS OF KNOBS , WHEEL ENCODER AND MOUNTING NUTS (Fig.5)

(A) REMOVE WHEEL ENCODER AND MOUNTING NUT FROM PANEL RIGHT.

(B) REMOVE 5 KNOBS AND MOUNTING NUTS FROM PANEL LEFT.



6 REMOVAL OF LCD MODULE, INVERTER PCB AND DIMMER PCB AND FRONT PANEL RIGHT PCB (Fig.6)

(A) REMOVE 4 SCREWS TO TAKE OFF TINFOIL.

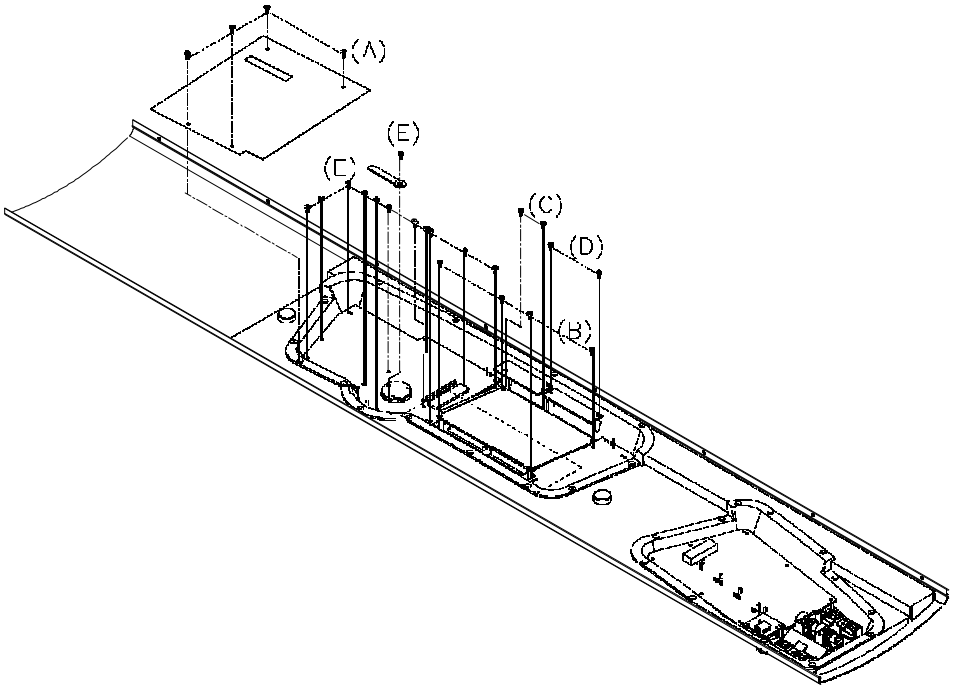
(B) REMOVE 4 SCREWS TO TAKE OFF LCD MODULE.

(C) REMOVE 2 SCREWS TO TAKE OFF DIMMER PCB.

(D) REMOVE 2 SCREWS TO TAKE OFF INVERTER PCB.

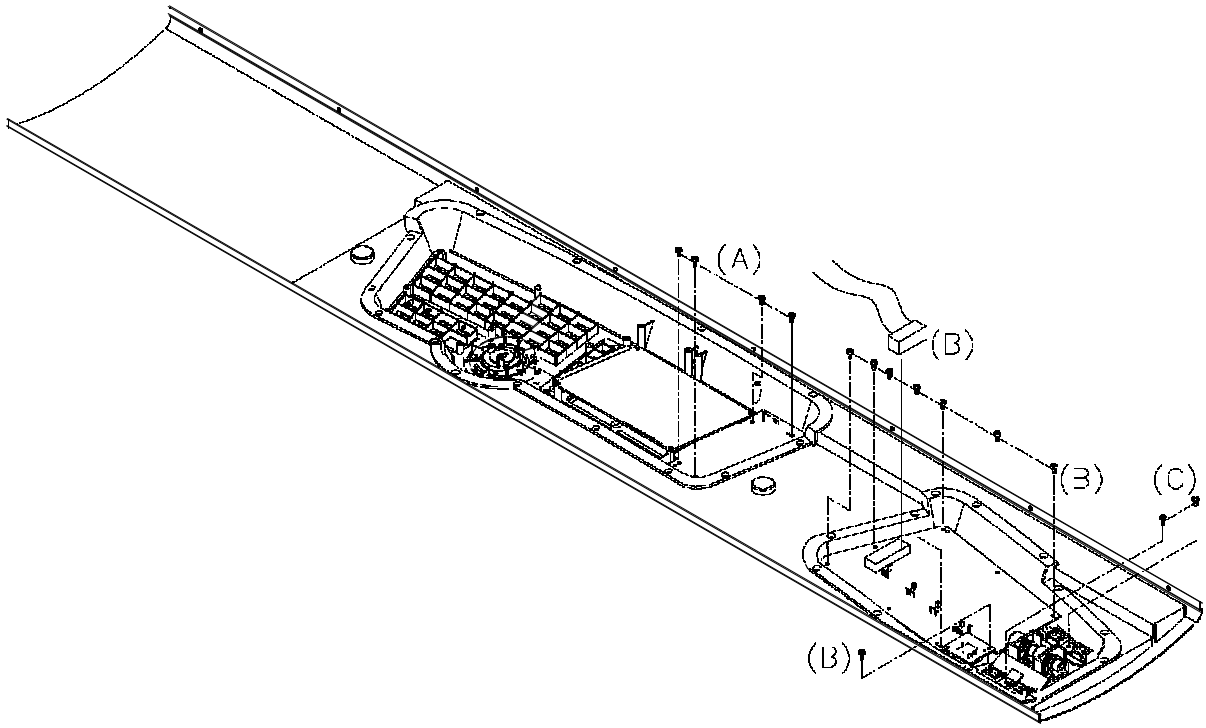
(E) REMOVE 12 SCREWS TO TAKE OFF RIGHT PCB

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7 REMOVAL OF FRONT PANEL LEFT PCB, FRONT PANEL CENTER PCB AND LED PCB.(Fig.7)

(A) REMOVE 4 SCREWS TO TAKE OFF FRONT PANEL CENTER PCB.
(B) REMOVE A CABLE AND 8 SCREWS TO TAKE OFF FRONT PANEL LEFT PCB.
(C) REMOVE 2 SCREWS TO TAKE OF LED PCB.



Section 3

Installing EXM-E3 Modules in ALESIS FUSION 6/8HD

1.1. Open up the unit.

Remove the top panel following the instructions at the start of this document for the appropriate model (**6HD or 8HD**).

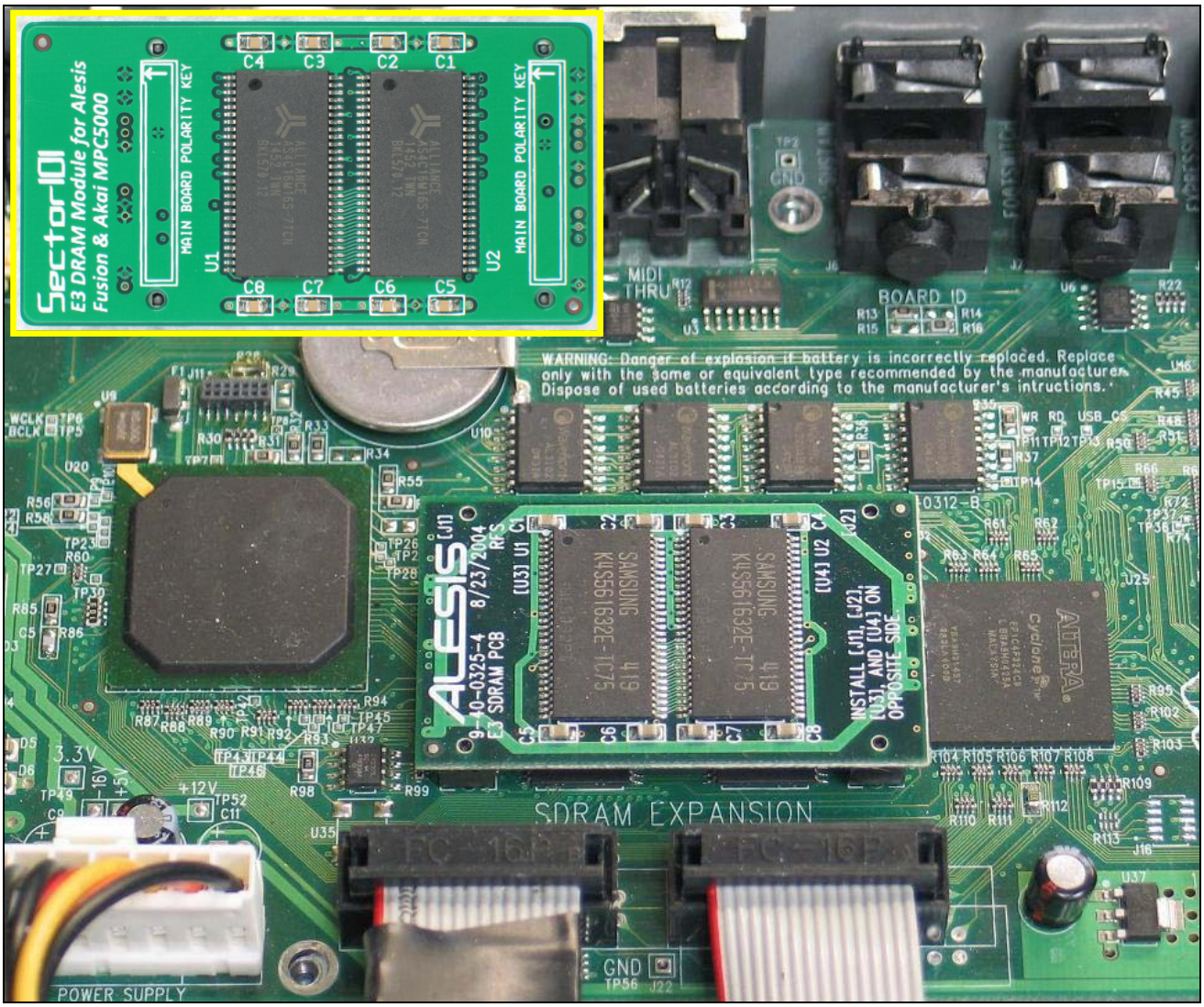
1.2. Install one EMX- E3 Memory Expansion Module on the Main PCB.

No further disassembly is required to install the Main PCB's EXM-E3 module.

Install the module as shown below. The module is keyed to only fit in one direction and should fit easily.

Note the inset photo of the Sector101 EXM-E3 module.
This module must be installed in the correct orientation as shown in the photo.

If you encounter any resistance, double check the module orientation, and the connector alignment, and that the connectors on the Main PCB have no bent pins.



1.3. Remove the Expansion Digital PCB.

Remove the Expansion Digital PCB panel following the instructions at the start of this document for the appropriate model (**6HD or 8HD**).

1.4. Install one E3 Memory Expansion Module on the Expansion Digital PCB.

Install the module as shown below. Again, the module is keyed to only fit in one direction, and should fit easily.

Note the inset photo of the Sector101 EXM-E3 module.
This module must be installed in the correct orientation as shown in the photo.

If you encounter any resistance, double check the module orientation, and the connector alignment, and that the connectors on the Expansion Digital PCB have no bent pins.



1.5. Re-install the Expansion Digital PCB.

Reverse the steps followed earlier to re-assemble the unit.

Take special care with the cables in general and the ATA cables connected to the Expansion Digital PCB in particular, as they fit rather tightly and incorrect placement could lead to damage of the cables, or excessive flexing of the Expansion Digital PCB (potentially leading to cracked solder joints and other problems).

1.6. Re-attach Top Panel and Verify Proper Installation and Operation.

Reverse the steps followed earlier to re-attach the top panel and close the unit.

Turn the unit on in Diagnostic Mode (hold down “1” and “8”) and run through all of the non-destructive Diagnostic Tests (don’t re-calibrate anything and don’t run any of the Media tests).

Particularly verify that the Memory-Processor page displays..

VEngine Total Mem: {192 MB}
VEngine 2 Total Mem: {192 MB}

..and that the Memory-Engine tests pass for “Voice Engine” and “Voice Engine 2”.

Section 4

Installing EXM-E3 Memory Expansion in AKAI MPC5000

1.1. Open the memory expansion trap door:

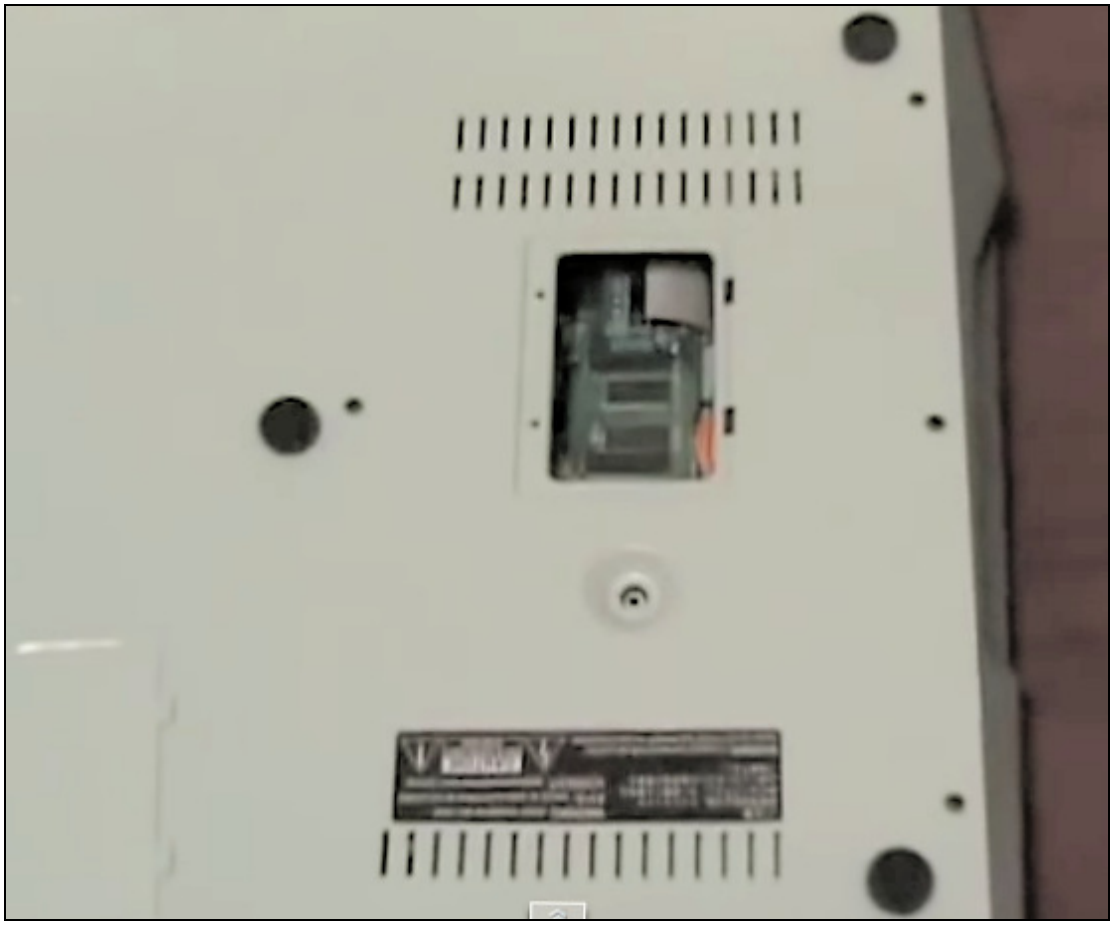
1. Unplug the MPC5000 and flip the unit over.

2. Locate the memory trapdoor cover.

3. Undo the two retaining screws and lift the trapdoor cover away.

The photo below shows the trapdoor cover removed and memory compartment exposed.

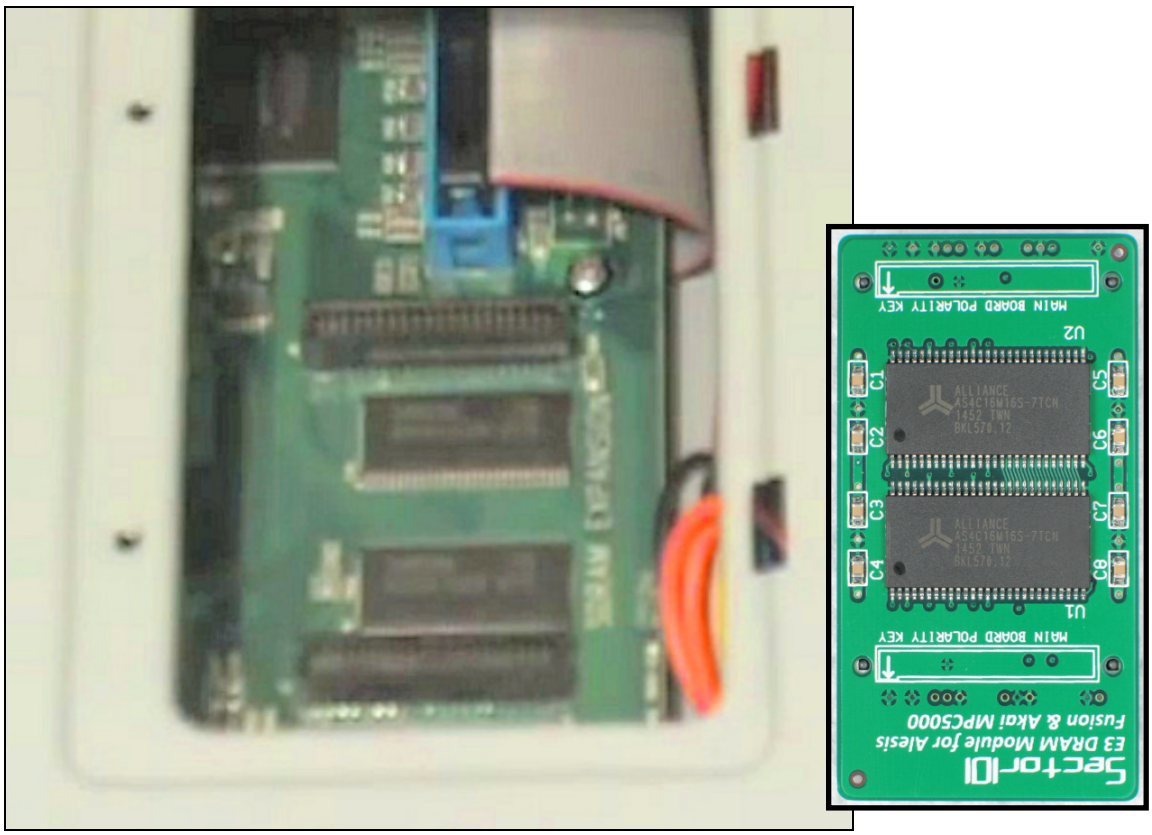
Make sure your MPC5000 is rotated so as to match the orientation of the photo.



1.2 Installing the EXM-E3 into the memory compartment:

The next photograph shows a close-up of the memory compartment.

Note the locations of the components and PCB markings in the photo to ensure you are looking at your MPC5000 the same way around.



The Sector101 EXM-E3 module MUST be fitted in the correct orientation.

With respect to the MPC5000's memory compartment shown in the photo above the module must be fitted in the same orientation as shown in the photo to the right.

Note the Polarity Key indicators on the top of the EXM-E3 board.
These must align with the polarity indents on the Main PCB connectors.

Now position the Sector101 EXM-E3 module carefully on to the Main PCB connectors. When you are sure the connectors are lined up correctly push the module firmly home.

Now replace the trapdoor cover.

1.3 Checking the Memory in the MPC5000:

Switch On the MPC5000

When the boot screen appears make sure the Memory amount shows **192MB** as shown in the screenshot below.

If the memory figure shows 64MB or 0MB switch off the MPC immediately and recheck that the EMX-E3 module has been installed correctly!



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