



Technical Note: 10000052

## How to Upgrade the MDC-360 to the MDC-360C Series Deposition Controller

Since replacing the EPROM will completely erase/corrupt your MDC-360 Series Deposition Controller's memory, using the DCM-250 Version 1.4 or later is the recommended tool for saving and restoring the settings prior to and after the upgrade. Follow the steps below to complete the task.

### **IMPORTANT NOTES**

**Only a qualified technician should carry out this procedure as removing the top cover may expose you to DANGEROUS VOLTAGE LEVELS.**

**The EPROM is a static sensitive device, so care should be taken to prevent damage.**

### **STEP ONE - SAVING CURRENT MDC-360 SETUP**

- Connect the MDC-360's RS-232 port to the computer using a straight 9 pin female to 9 pin female D-sub cable or the RJ11 cable connected to the front panel of the 360.
- Turn the MDC-360 on.
- Select "Save Controller Setup" from the DCM-250's Utilities menu.
- Enter the desired path and file name in the Save dialog and press OK to save the MDC-360 parameter setup. Once selected, the program will read all process, material, and system setup data and write it to the computer disk so it can be restored once the software upgrade is complete.
- Select "Convert 360 Setup file to 360C Format" to convert the file.

### **STEP TWO - EPROM REPLACEMENT AND SET THE HIGH SPEED BOARD**

- Turn the MDC-360 off.
- Remove power cord and the RS-232 cable.
- Remove the top cover of the MDC-360 by removing the screw on the top center of the rear panel.
- Older versions of the MDC-360 main board have 28 pin EPROM sockets (see U12 PROM in Figure 1) instead of the current 32-pin socket. If you have one of these obsolete boards, you will need to return it to the factory prior to completing this upgrade. If you have an MDC-360 that the S/N is before S/N 678 contact the factory, you might need to purchase additional parts (High Speed Board Rev. C and RAM P/N 93K6T1008C2E).
- Otherwise remove the old EPROM from socket U12, the PALS U16 and U17, and the Processor IC U14 (see Figure 1) and replace them with the new IC's. Take care not to bend any pins when you insert the device. Also make sure that the EPROM is oriented as shown in Figure 1 (see U12 PROM). Use the Extractor tool to remove the processor.

Set the High Speed Board P/N 179204 Rev. C to high speed by removing the jumper on J2 and placing it on the first two pins (closest to the letter H). Plug card back into its slot (J11).

### **STEP THREE – REPLACE FRONT PANEL**

- Replace the front panel according to Tech Note, “How to Replace the MDC-360/MDC-370 Front Panel.”
- Replace the top cover.

### **STEP FOUR - RESTORING MDC-360 SETUP**

- Plug in the power cable and connect the MDC-360's RS-232 port to the computer.
- Turn the MDC-360 on. If an alarm sounds, press any key to turn it off.
- Press the Reset and 7 keys at the same time. This will restore all of the MDC-360's parameters to their default values.
- Press the Abort, Reset, and Start keys. This will initialize the current process and material.
- Turn off the MDC-360, wait approximately 10 seconds, then turn it back on.
- Press any key to clear the Sign On screen
- Select the Restore Controller Setup item from the DCM-250's Utilities menu. Select the previously saved setup file and press OK. Once selected, the program will write the contents back to the controller, restoring it to its original state.

The software upgrade is now complete. If you have any questions, please contact INFICON's technical support.

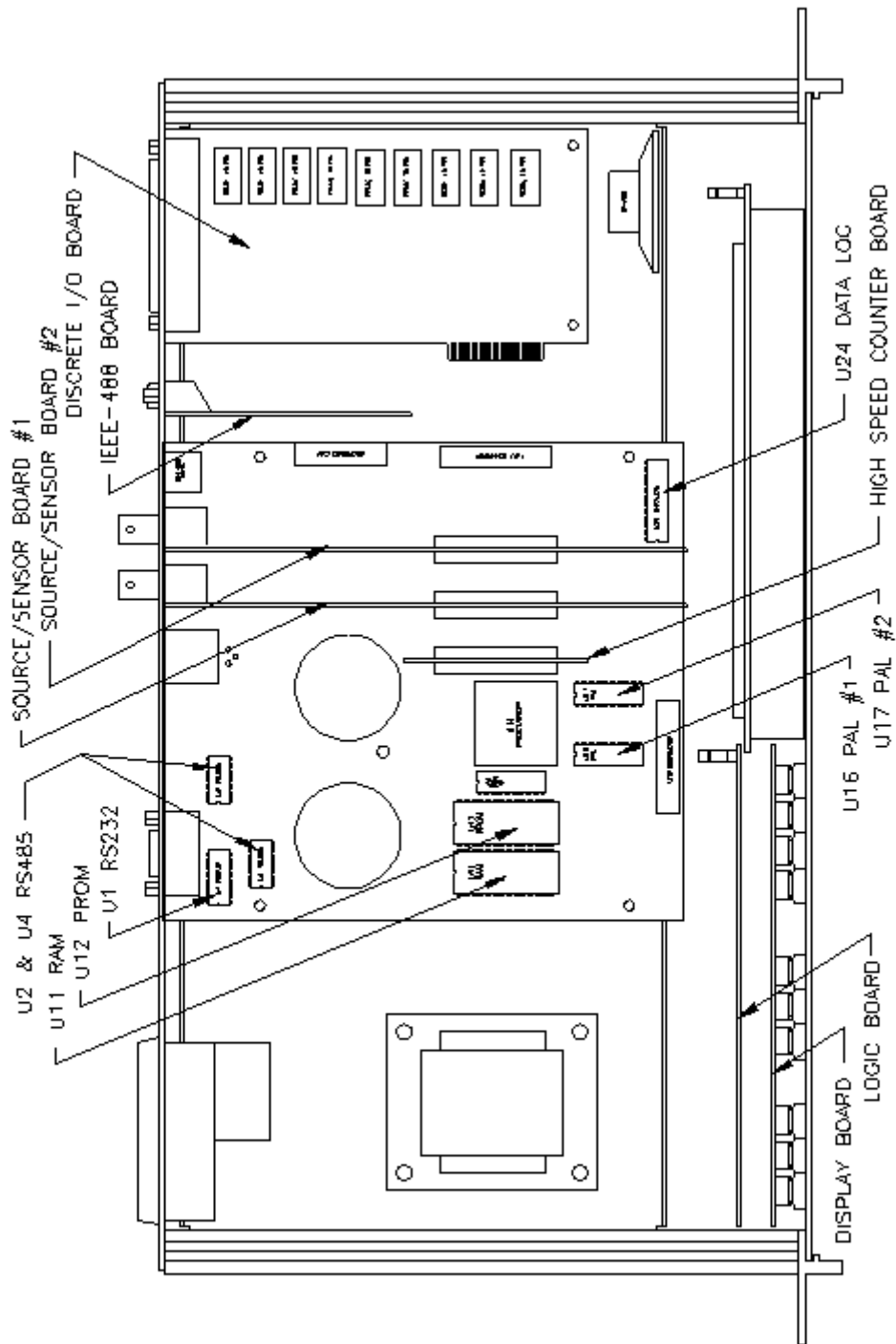


Figure 1 - MDC-360 Top View

Document Title:	How to: Upgrade the MDC-360 to the MDC-360C Series Deposition Controller
Document ID:	10000052
Creation Date:	

Modified Date:	9/23/2005
Related Products:	<a href="#">MDC-360C</a> , <a href="#">MDC-361C</a> , <a href="#">DCM-250</a>
Product Line:	Thin Film / Vacuum
Notes:	This tech note also applies to: MDC-360 (obsolete), MDC-361 (obsolete), MDC-370 (obsolete).  Originally released as THIN FILM TECHNICAL NOTE V-152