

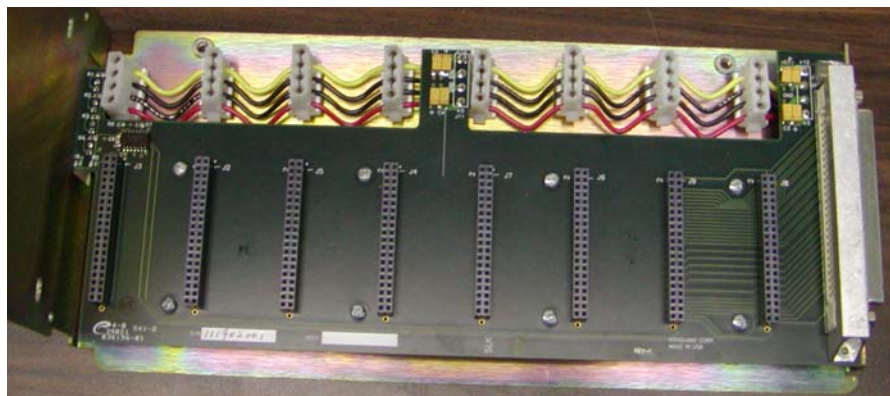
Mark 5 Module Assembly Instructions

by
Doug Gerrard

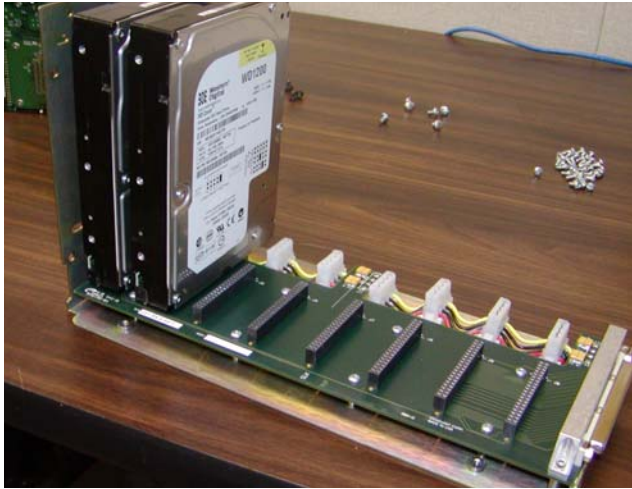
This procedure is an expanded, and more visual, version of Alan Whitney's memo Mark 5A Disk-Module Assembly, Test and Conditioning (8 Jun 04). This photo shows the various parts of the module. There are two pieces that make up the right side/back and the left side/front. The left side already has the circuit board already mounted on it. There are four connector pieces that align and secure the eight hard drives and finally, the front cover that has the handle.



Secure the circuit board to the front assembly (if not already done so) by using ten (10) ¼" 4-40 pan head screws and use **Loctite** solution.



Check each hard drive to ensure that the jumper pin is selected for “Cable Select” (CS) mode.



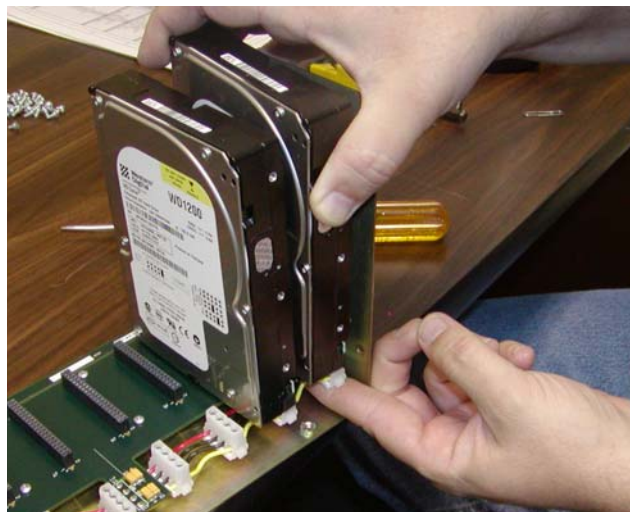
Install the hard drives by inserting each hard drive into its respective 40 pin connector.

Be careful to check the alignment before inserting the hard drive into its connector. It may be easier to start by inserting the second hard drive first.

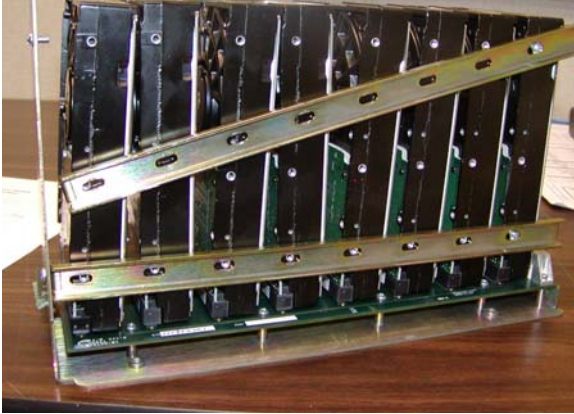


Alignment is critical and it can be easy to misalign the hard drives. The 40 pin connector will allow you be off by one pin in either direction and still be able to install the hard drive. As a guide the edge of the hard drive should align with the line on the circuit board.

You may wish to start the inserting the power connection before fully seating the hard drive.

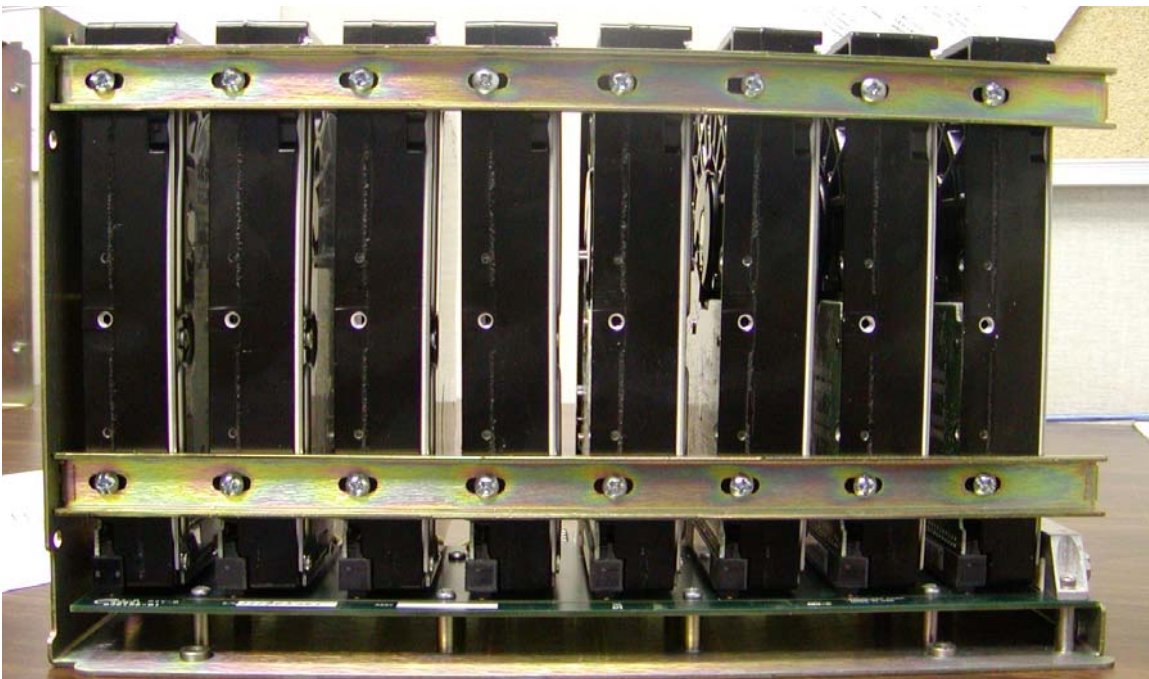
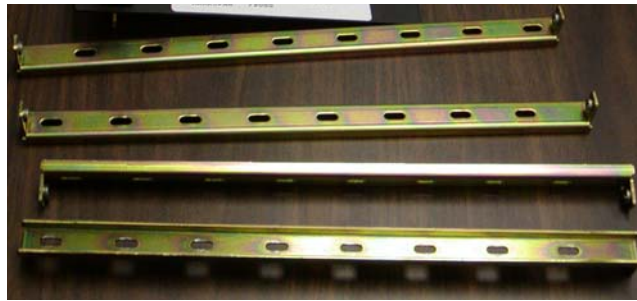


To fully seat the power connection you may need to pry upward with a screwdriver while holding the hard drive from reseating out of the 40 pin connector.



After all the hard drives are inserted and fully seated *loosely* secure the channel brackets on one side with 3/16" 6-32 screws. Do not torque.

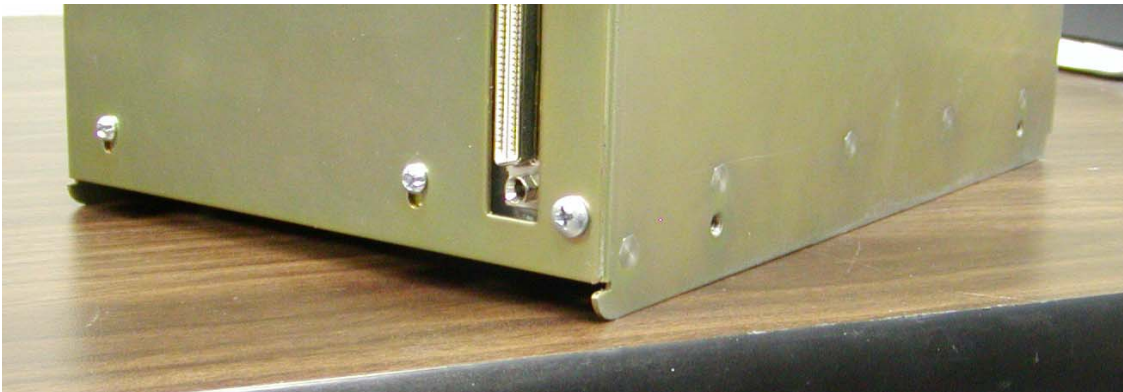
Note that these brackets are not symmetrical. The holes for the screws to the hard drives are spaced differently from each end. Every screw should be installed with **Loctite** solution to prevent loosening during shipping.



After one side is completed, loosely secure the brackets on the other side. Again apply **Loctite** solution but do not torque at this time.

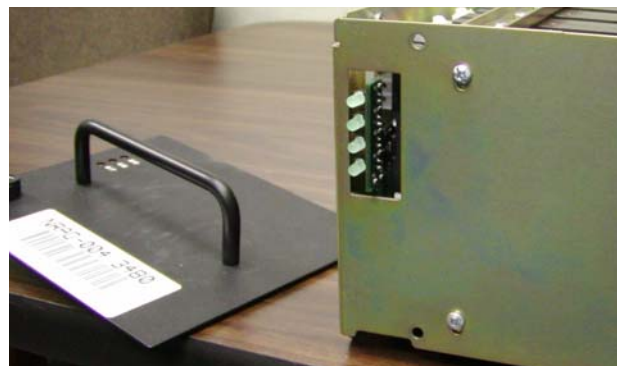


Install the Right/back cover with 1/4" 8 – 32 screws and **Loctite** solution but do not torque at this time. Also install the remaining 6 – 32 screws in for the channels with **Loctite**.



Now you should have all the screws installed, with **Loctite** but not torque down. Set the module on a solid flat surface with the “rails” downward. Carefully adjust the unit to make the frame set firmly down on the rails so no wobble exists.

Now, torque all screws to 8 in-lbs starting with the top screws on the channel and continue with the front and back screws. When all screws showing are torque down turn the unit over and torque the screws on the bottom.



Finally install the front plate with the handle being careful to align the four LED's through the plate.