



The Basic DISK II Pages

the write protection and modifications of the write protection project

The DISK II Drive - a classic storage system

Important Warning ! Never dismount or open drives unless they have been disconnected from the computer (i.e. unplugging the drive from the diskcontroller) and are without power !
Disobeying may lead to a damaged computer or damaged drive !
Only in very few tasks power will be needed and this will be mentioned within the text at the correct place pointing to the needed precautions!

page about write protection in the drive

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In former days using the old 5,25 " floppydisks and later the 3,25" disks the drives detected the write protection by the presence of a so called "Write protection notch". This notch was located at the right upper side of the disk. Because in old days the floppydisks have been very expensive most users also used the revers backside of the disk to and in such a case they had to punch with a so called "disk-notcher" a second notch at the left upper side of the 5.25 floppydisk. In case that the notch was present (or if the notchslder at the 3,25 disks where slided that way to open the diskwriteprotection notch the user could write data to the disk. If the notch was closed by a so called "writeprotection label" (or at the 3,25 disks the slider was pushed towards closing the "writeprotection notch") the disk was "write protected" and the drive refused writing data to the disk.

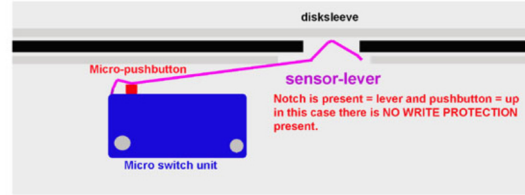
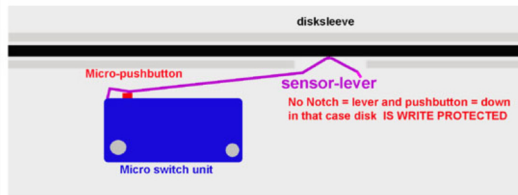
Write protection notch



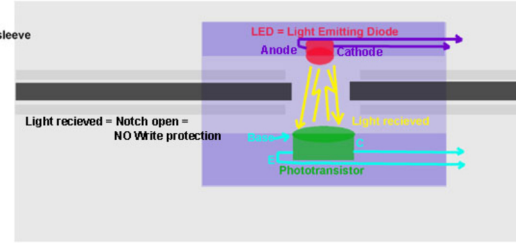
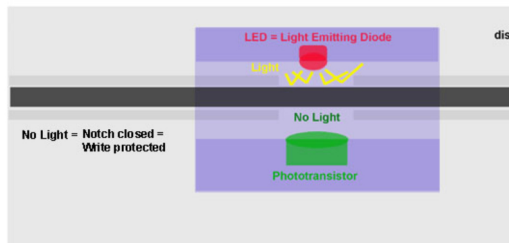
Disk-notcher

To enable the writing again to the disk the user had to remove the disk "write protection label" or slide back the "write protect tab" to the position opening the notch again. In the early days the detection of the status of the write protection notch was performed with a microswitch and later that system was replaced with a light barrier system.

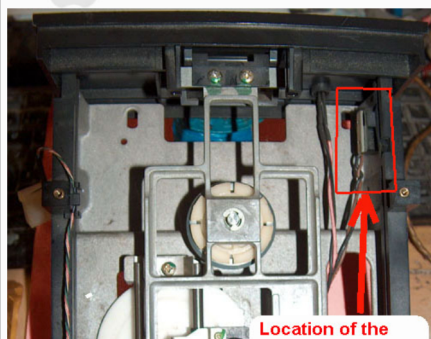
Write protection detection with microswitch



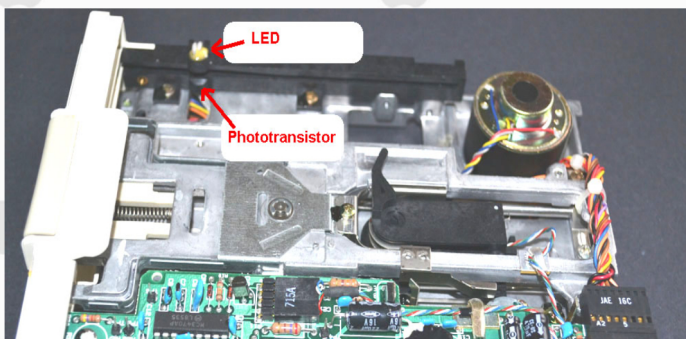
Write protection detection with light barrier

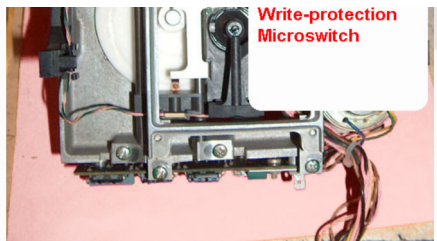


In the classic DISK II drive of Apple the detection was performed by a microswitch that was located here:



Location of the

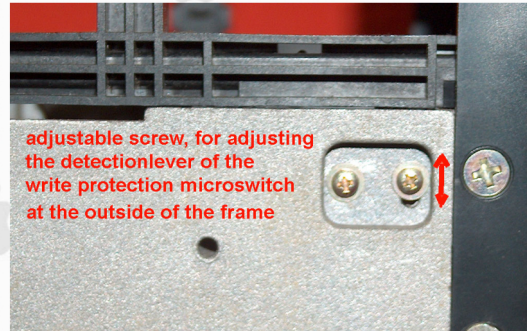
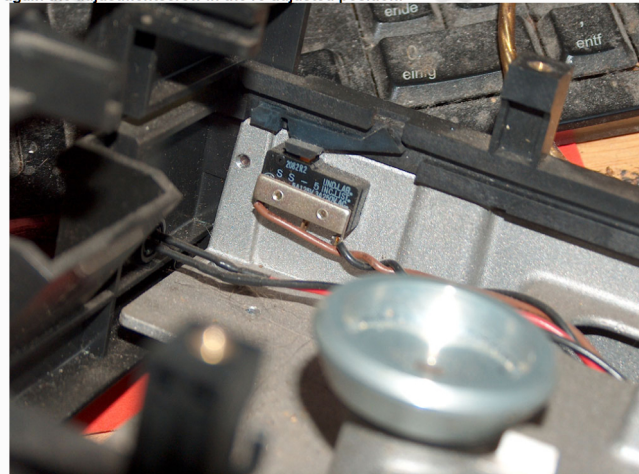




Write-protection Microswitch

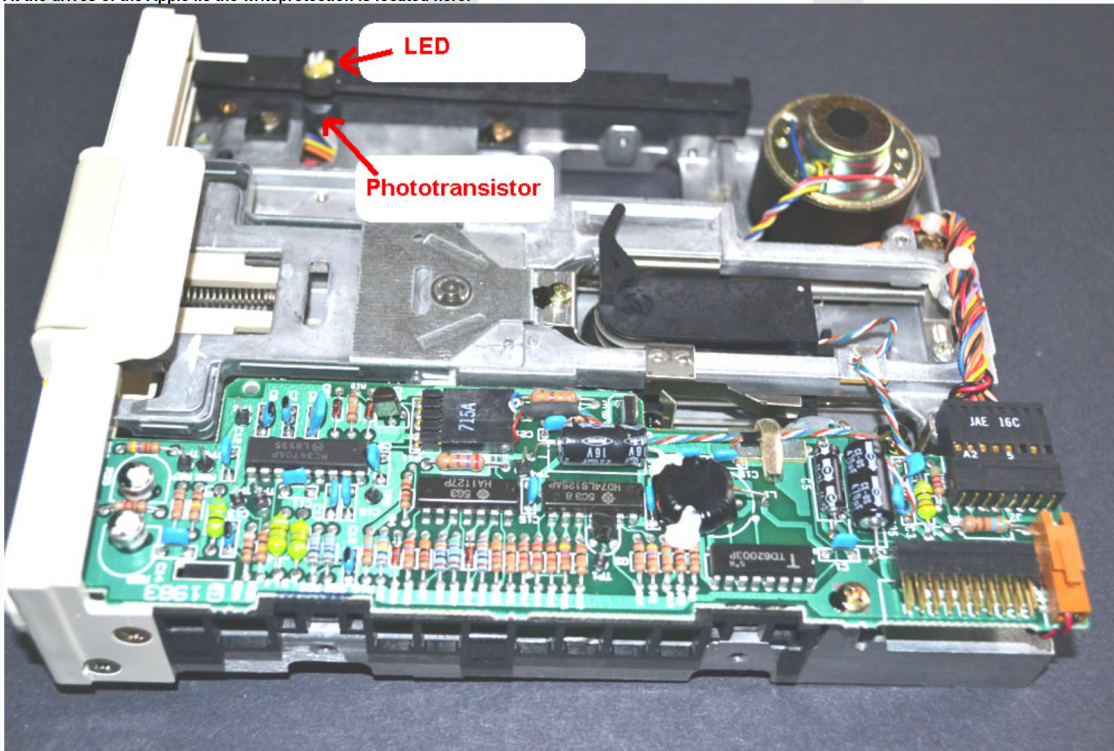


The pictures below show at left a closeup of the microswitch and the detection lever and at the right picture the opposite (outside) of the steelframe is displayed to show the adjustment-screw. In case of malfunction of the write protection often the lever is misaligned and by untightening the adjustmentscrew the switch with the lever can be adjusted again in a position where the switch surely indicates again the presence of a notch or it's absence. Then the user can tighten again the adjustmentscrew in the re-adjusted position.



adjustable screw, for adjusting the detection lever of the write protection microswitch at the outside of the frame

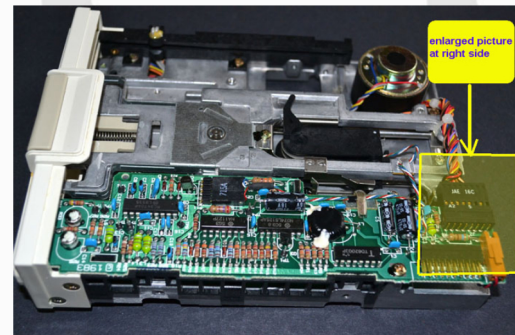
At the drives of the Apple IIC the writeprotection is located here:



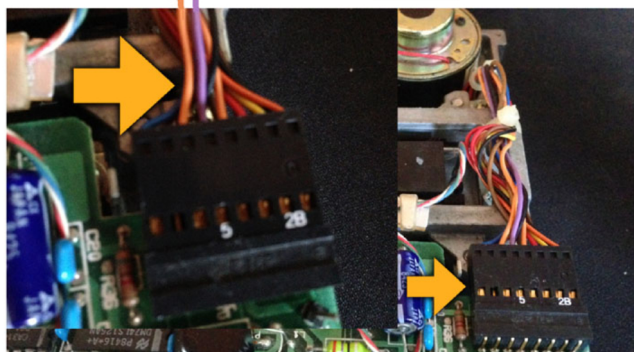
LED

Phototransistor

In case of replacing the writeprotection at the AppleIIC drive with an alternating switch you can see how to perform that task in the pictures below:



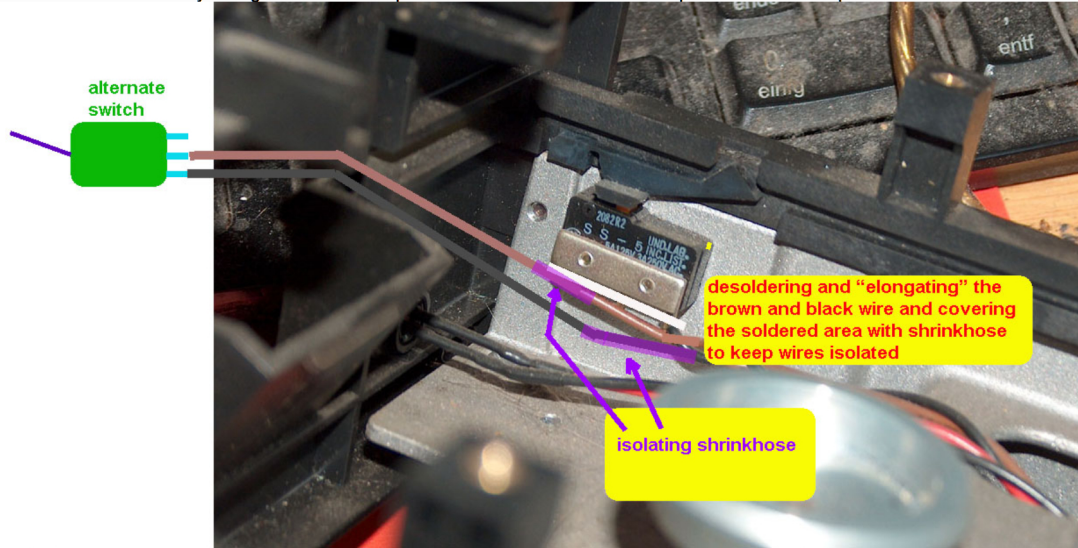
enlarged picture at right side



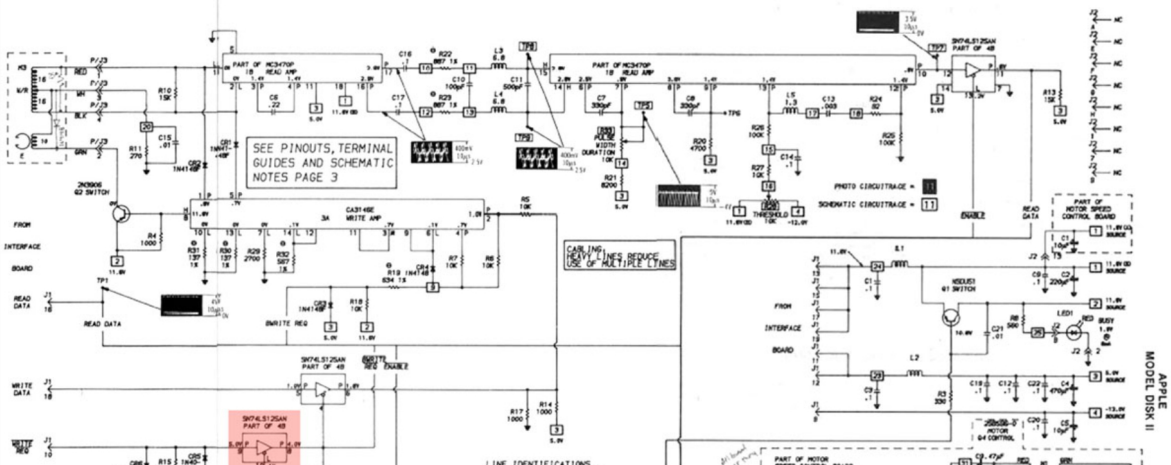
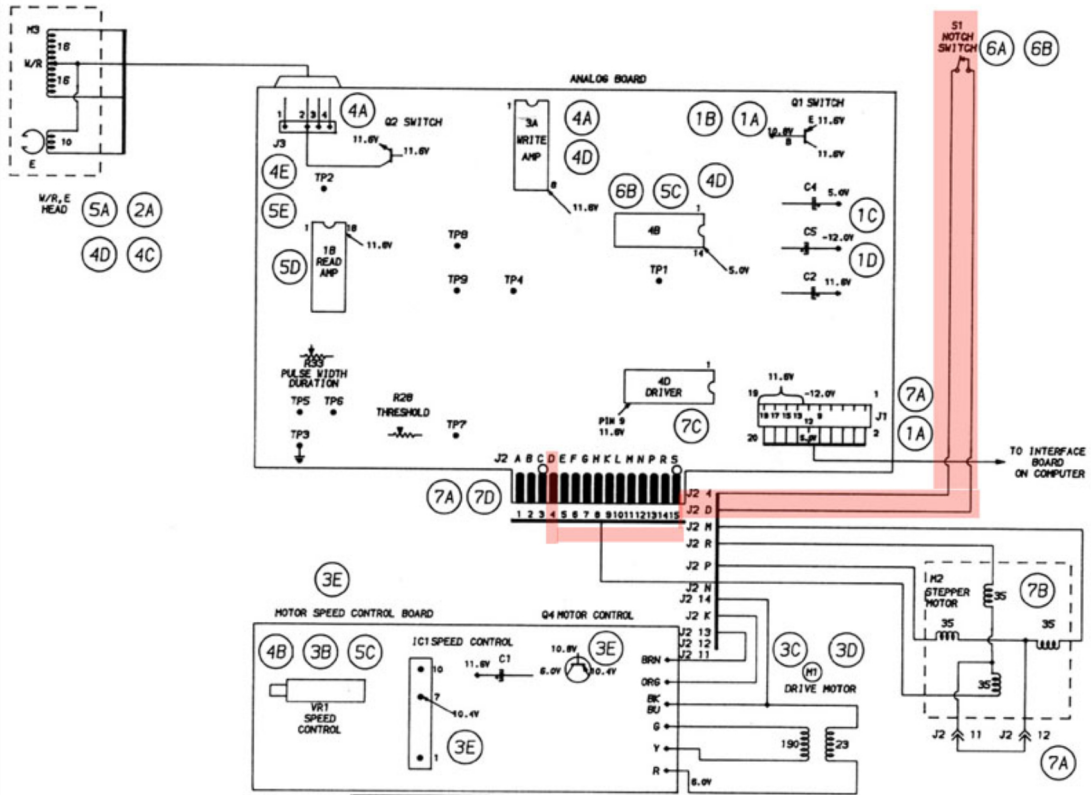
You must pay attention at the pictures at the right side and the numbers marking the cable-block! The picture shows the cable-block "twisted" around and viewing the reverse "backside"!

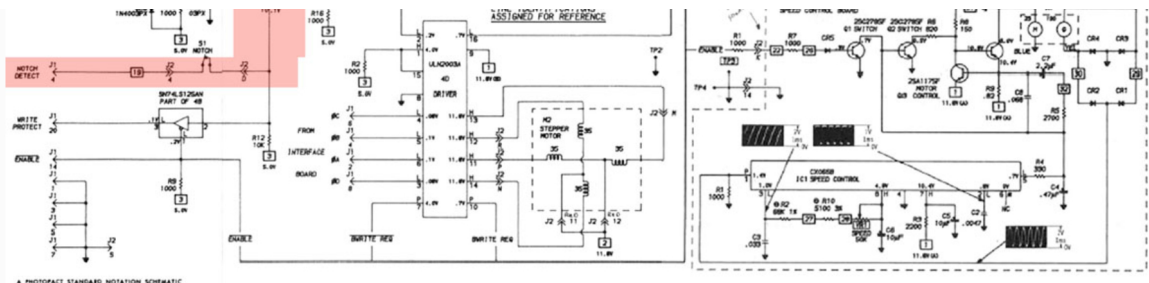


At the DISK II the modification by adding an alternate write protection switch is shown in the next pictures first the "simple version":



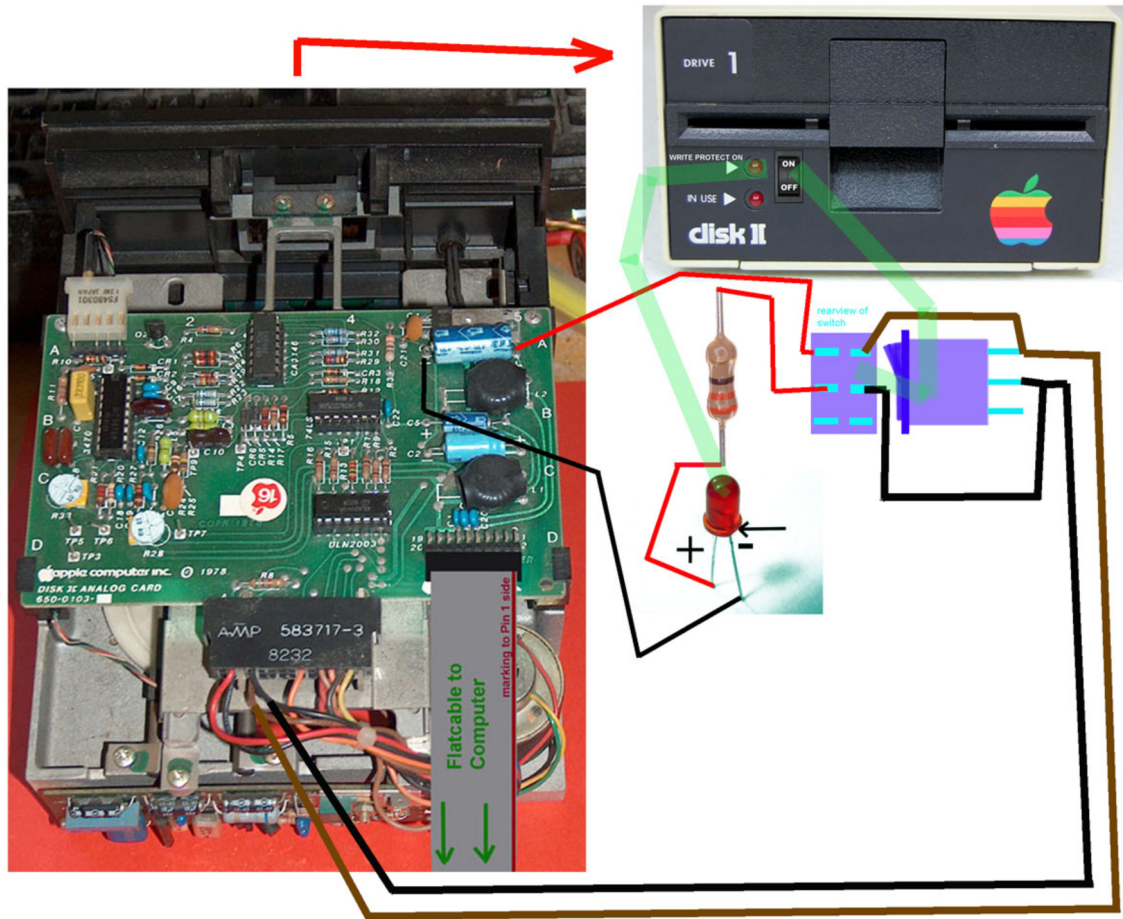
At the circuitplan and at Apple documentation this info's are relevant to the write protection switch (the write protection line is colored):






A PROTOPACK STANDARD NOTATION SCHEMATIC WITH MODIFICATIONS
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the "luxury version" of the write protection modification is this way:



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- turnback to previous page about DISK II (speedadjustment)
- continue to the page about calibrating the track zero
- continue to the page about advanced adjustment of the offset of the electronical Read/Write-Head compensation cycle
- common mistakes at the Disk II drive and the controller
- making a homebrew replacement of the DuoDisk Cable

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