

AccessionIndex: TCD-SCSS-T.20141208.012

Accession Date: 8-Dec-2014

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Object name: Apple Disk II

Vintage: c.1978

Synopsis: Apple Disk II 5.25-inch floppy disk unit. S/N: A2M0003 735894.

Description:

The Apple Disk II was one of the very first disk storage units to be introduced for personal computers. It was a 5.25-inch floppy disk drive designed by Steve Wozniak and manufactured by Apple Computer. It was first introduced in 1978. It is designed specifically for use with the Apple II and use with any other machine without the associated controller risks damage.

The Apple Disk II was completely soft controlled. It used group code recording (GCR) and did not require hard sector formatting. The first Disk II drives (A2M0003) were built using mechanical parts from Shugart (later Apple switched to Alps Electric Co. of Japan to reduce costs).

The drive was connected to the controller via a 20-pin ribbon cable. Most Apple II software expects slot 6 to be used for the primary controller and fails otherwise. Furthermore, the connector is very easy to misalign on the controller, which will short out a chip in the drive; if later connected correctly, a drive damaged this way will delete the contents of any (even write-protected) disk inserted into it as soon as it starts spinning.

Pin	Signal description
1,3,5,7	GND
2	Stepper motor phase 0
4	Stepper motor phase 1
6	Stepper motor phase 2
8	Stepper motor phase 3
9	-12V
10	Write request
11,12	+5V
13,15,17,19	+12V
14	Drive 2 select/Drive enable
16	Read data
18	Write data
20	Write protect

The Apple Disk II was single-sided unit with the read/write head on the bottom. However, it was common for users to manually flip the disk to utilize the opposite side, after cutting a second notch into the cover to allow write-access. Only one side could be accessed at once, but it doubled capacity, and so most software using more than one disk side was shipped on such "flippy" disks.

Initial capacity per disk side was 113.75kiB with Apple DOS 3.2.1 and earlier (256 bytes per sector, 13 sectors per track, 35 tracks per side). In 1980 this was changed to 140kiB using 16 sectors per track and a more efficient GCR code with DOS 3.3 and all later Apple II operating systems (and a ROM upgrade).

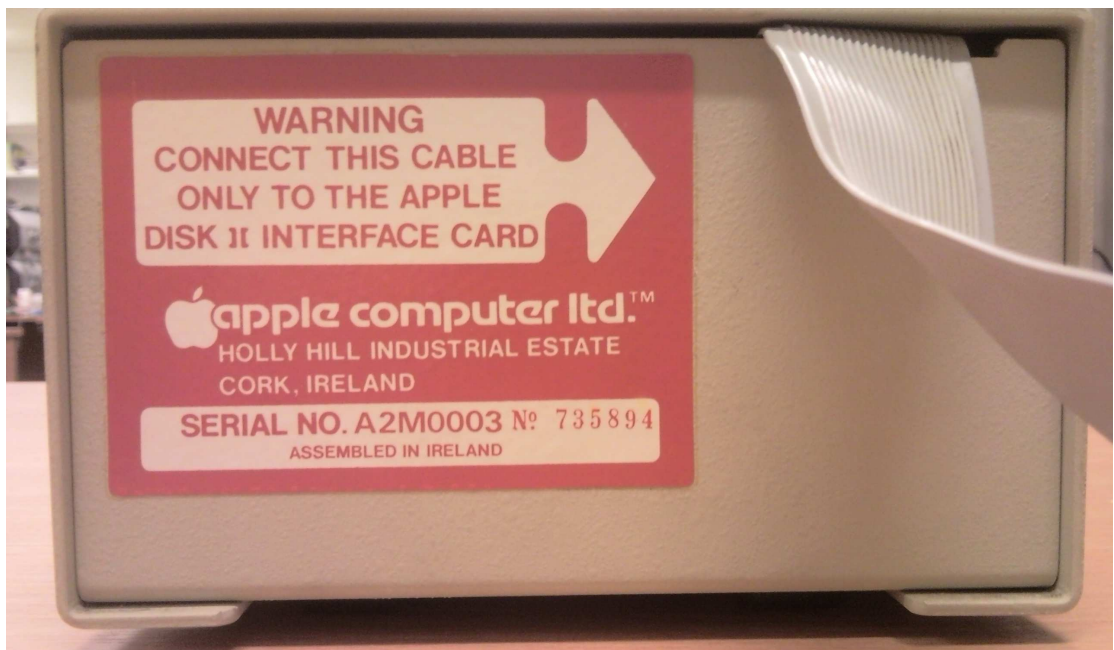
Accession Index	Object with Identification
TCD-SCSS-T.20141208.012	Apple Disk II. FCC ID: BCG9GRDISK2, S/N: A2M0003, No: 735894, manufactured by Apple Computer Ltd, Holly Hill Industrial Estate, Cork, Ireland, assembled in Ireland.



Figure 1: Apple Disk II front three-quarter view



Figure 2: Apple Disk II front view



*Figure 3: Apple Disk II manufacturing label
S/N: A2M0003 No: 735894*



*Figure 4: Apple Disk II FCC label
FCC ID: BCG9GRDISK2*