Subject: Why no single density?
Posted by john on Tue, 11 Nov 1986 04:56:07 GMT
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Article-I.D.: moncol.437
Posted: Mon Nov 10 23:56:07 1986
Date-Received: Sat, 15-Nov-86 05:08:28 EST
Organization: Monmouth College, W. Long Branch, NJ
Lines: 26
Keywords: Intel 8272a, FDC, IBM-PC, Tandy 1000
Xref: watmath comp.sys.ibm.pc:79 comp.sys.tandy:4

Recently I've been looking at ads for programs to read/write alien disks on an IBM compatable. One thing I've noticed, though, is that none of them support the formatting of single density disks (old Osborne I, TRS-80 Model I, etc.).

Forgive a naive question, but why is this the case? Is there some limitation of the disk controller in an IBM-PC which prevents single density operation or is it some limitation of the BIOS?

Looking in the tech manual for my own machine (a Tandy 1000), I noticed that it uses an Intel 8272A as the floppy disk controller. According to the spec sheet, this chip is capable of single density operation. If so, then why can't I find a program to use it that way?

Thanks in advance for any replies. If you know of a program which will deal with single density disk, feel free to pass the name along.

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Name: John Ruschmeyer
US Mail: Monmouth College, W. Long Branch, NJ 07764
Phone: (201) 571-3557
UUCP: ...!vax135!petsd!moncol!john ...!princeton!moncol!john
...!pesnta!moncol!john

This isn't a coronation- this is bad comedy.
-Galvatron

Subject: Re: Why no single density?
Posted by farren on Sat, 15 Nov 1986 12:07:02 GMT
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Article-I.D.: hoptoad.1293
Posted: Sat Nov 15 07:07:02 1986
Date-Received: Sat, 15-Nov-86 23:54:55 EST
References:
Reply-To: farren@hoptoad.UUCP (Mike Farren)
Distribution: net
Organization: Nebula Consultants in San Francisco
Lines: 27
Keywords: Intel 8272a, FDC, IBM-PC, Tandy 1000
Xref: mnetor comp.sys.ibm.pc:87 comp.sys.tandy:5

In article john@moncol.UUCP (John Ruschmeyer) writes:
> Recently I've been looking at ads for programs to read/write alien disks on
> an IBM compatable. One thing I've noticed, though, is that none of them
> support the formatting of single density disks (old Osborne I, TRS-80 Model
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> that it uses an Intel 8272A as the floppy disk controller. According to the
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> why can't I find a program to use it that way?
>
Single density disk controllers write the data to the diskette at 250K bit/
sec. Double density controllers do so at 500K. The IBM controller has only
the 500K clock on board - it would take a hardware change to allow it to
do 250K. Not impossible, just impossible with the standard controller.

--

"... if the church put in half the time on covetousness
Mike Farren that it does on lust, this would be a better world ..."
hoptoad!farren Garrison Keillor, "Lake Wobegon Days"

Subject: Re: Why no single density?
Posted by Anonymous on Mon, 17 Nov 1986 23:34:02 GMT
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Originally posted by: henkp&#64nikhefk.uucp (Henk Peek)

Article-I.D.: nikhefk.61
Posted: Mon Nov 17 18:34:02 1986
Date-Received: Mon, 17-Nov-86 21:45:12 EST
References:
Reply-To: henkp@nikhefk.uucp (Henk Peek)
Distribution: net
Organization: NIKHEF-K, Amsterdam
Lines: 23
Xref: mnetor comp.sys.ibm.pc:121 comp.sys.tandy:6
Apparently-To: rnews@mcvax

In article farren@hoptoad.UUCP (Mike Farren) writes:
> In article john@moncol.UUCP (John Ruschmeyer) writes:
>> Recently I've been looking at ads for programs to read/write alien disks on
>> an IBM compatable. One thing I've noticed, though, is that none of them
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> the 500K clock on board - it would take a hardware change to allow it to
> do 250K. Not impossible, just impossible with the standard controller.

The olivetti M24 (ATT 6300) has a single- double density switchs-
circuit on the motherbord floppy controller. A bit in a floppy contol
register does the switch. I don't have documentation with me.
I think that this machine wil boot from single density floppys.
At boot the bios switch between both modes when it can not read your
boot floppy.

henk peek henkp@nikhefk.uucp   seismo!mcvax!nikhefk!henkp.uucp

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Subject: Re: Why no single density?
Posted by Anonymous on Tue, 18 Nov 1986 14:05:11 GMT
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Originally posted by: smvorkoetter&#64watmum.UUCP (Stefan M. Vorkoetter)

Article-I.D.: watmum.673

Posted: Tue Nov 18 09:05:11 1986
Date-Received: Tue, 18-Nov-86 22:04:46 EST
References:
Reply-To: smvorkoetter@watmum.UUCP (Stefan M. Vorkoetter)
Distribution: net
Organization: U of Waterloo, Ontario
Lines: 11
Keywords: Intel 8272a, FDC, IBM-PC, Tandy 1000
Xref: mnetor comp.sys.ibm.pc:140 comp.sys.tandy:8

In article farren@hoptoad.UUCP (Mike Farren) writes:
> Single density disk controllers write the data to the diskette at 250K bit/
> sec. Double density controllers do so at 500K. The IBM controller has only
> the 500K clock on board - it would take a hardware change to allow it to
> do 250K. Not impossible, just impossible with the standard controller.

There is more of a difference between single and double density than that.
Double density is basically single density with some redundant flux transitions
left out to allow more data to be recorded without increased media bandwidth.
To record 250Kbps at single density requires just as high a clock rate as to
record 500Kbps at double density.