DATA TRANSFER
HIGH DENSITY DRIVES AND 360K DRIVES

----------STANDARD WEASEL WORDING TEXT #204----------
NATURALLY, I TAKE NO, THAT'S N-O BLAME FOR ANY PROBLEMS CAUSED, NOR ANY DAMAGE DONE, PURSUANT TO USE OF THE THEORIES POSED IN THE FOLLOWING TEXT.

For several years, I have asked of the great computer gurus with whom I could attain audience, "What is the deal with 1.2 Megs and 360k drives?". "Why won't the 360k diskettes I write with my 1.2 Meg drive work in the very same 360k drive that I formatted them in? " I've heard use diskcopy, format in the 360k, do it only on Tuesday, ye ain't holding your mouth right,etc. The answers were numerous, ehtereal, surreal, and in all cases, wrong.

Finally, I applied the RTFB theory, and lo and behold, I've an explanation that sounds logical and plausible, along with a practical method of transfer that works! (I wish I were the astute one who posed this solution, but, alas, I'm merely regurgitating the text of Mr. Scott Mueller's "Upgrading and Repairing PC's" from Que Press.)

The root of the problem apparently lies with the coercivity of the media, that is, its magnetic strength, or the level of head magnetism required to make an "impression" on the diskette. Because of the higher density of the data on a High Density diskette, the magnetic strength of the diskette is lower, so in storage, "migration" of closely packed charges will not affect the stored data. A high magnetic strength head is required to write to this diskette. It is in fact, twice as strong as a 360k diskette drive's head.

Consequently it is NOT possible to write with any consistency on a high density diskette with a 360k drive, the head magnetic strength of the 360K drive is not strong enough to leave an "impression".

Additionally, and importantly, the High Density Drive writes a narrower track than the 360k drive. Herein lies the problem of reading, with a 360K drive, a 360k diskette written on by a 1.2 Meg drive. If this diskette is ever written upon by the 360k drive, either in formatting or any other manner, it becomes unreliable for use by a 1.2 Meg drive. If the 360k drive writes to the diskette, it makes a "wide track" recording. When the High Density drive overwrites these tracks with its "narrow track", only the inside portion of the "wide track" is written over, giving all of one track, and parts of another track, all readable by, and thoroughly confusing to, the 360K drive. Then, you guessed it, here comes the dreaded...

(A)bort, (R)etry, (I)gnore?

THAT INFAMOUS, FEARED, GLUTTONOUS DISKETTE EATING NIGHTMARE !
And you thought Freddy was bad...

The solution is relatively simple, and pretty reliable.

(1) Format a 360k diskette in the High Density drive, using the command:
FORMAT A: /4

(2) ONLY WRITE TO THIS DISKETTE WITH THE HIGH DENSITY DRIVE!

(3) Erase with the HD drive also.

(4) IF the diskette is ever written to by a 360K drive, use a bulk erase program to attempt to clean all information from the diskette. It will probably then be usable for these purposes again.

(5) The more writes and erases attempted with a diskette, the lower the reliability of the procedure.

(6) Use the 360K drive only to copy from the diskette. Take no action such as the use of an install program, which may write back to the diskette, leaving the wide footprint "ghost" tracks.

What is "pretty reliable"? Personal observation has shown it to be in the 99% range, with my drives, on the first use. Reliability seems to fall off, to perhaps 90%, then 80%, as the same diskette is written and erased, but can be increased again by the use of a bulk erasure utility such as COPY II PC's bulkeras.exe, from Central Point Software. Naturally, this procedure too has its limitations.

Gee, I hope I haven't confused anyone...

It all seemed so clear to me just a few moments ago...

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--Bibliography--

UPGRADING & REPAIRING PCs, SCOTT MUELLER, QUE CORPORATION, @1988.