THE XF551 DISPELLING THE MYTHS?

I own and use both 1050 and XF551 disk drives and appreciate them both very much, however, the XF551 is clearly superior. In issue 49 I was appalled to read the seemingly authoritative letter regarding the XF551. As the XF551 already has a much maligned reputation it was disturbing to see so much wrong and misleading information contributing further damage to that machine and the 8-bit community in general.

There are two significant components of the XF551; the drive mechanism and the interface circuit board. The drive mechanism is a 360K, 2 sided, 40 track per side, 300 RPM, 5.25" unit, which is apparently of the IBM standard type. It is rated at 300 RPM and has its own on board circuitry, which I believe controls this speed, not the microprocessor on the interface board. So changing the ROM on the interface will not affect the fixed speed of the mechanism.

Of the reputed XF551 incompatibilities I think the speed of the drive is an over-emphasised issue. There seems to be a lot of worry about the 300 RPM in terms of copy protected disks. True there are protection schemes that check the speed that sectors are loaded but this would also affect modified 810's and 1050's. Anyway, 300 RPM is only 4.9% faster than standard, which is almost insignificant. I only have two disks in my entire collection which won't load on the XF551 and I am not convinced it has anything to do with speed. There are other peculiarities of the machine which may be the cause of minor incompatibility (i.e. different operation characteristics and microprocessor and the presence of a configuration block).

Most people think of a drive as performing two basic functions; reading and writing information. In fact it performs a third distinct function; formatting. Contrary to what you may have read, the XF551 does not use the so called "timing hole" for controlling the speed. The hole is more correctly called an "index hole" and for the most part is ignored in the XF551, except during formatting. At that time its use apparently relates to the location of the beginning sector of each track (recall hard sector floppy disks).

During reading and writing, the index hole is ignored. This can be simply verified by XF551 owners by covering the hole with tape on a formatted disk. Revolution speed remains constant despite the hole being covered. The XF551 can read and write on side 2 of a disk if already formatted, but can't format side 2 if it can't see the index hole when the disk is flipped. If careful not to scratch the disk, you can use a hole punch (twice) to provide the extra index hole opening through both sides of the black plastic jacket (but not through the physical disk inside). If you don't know what I mean, check a recent PAGE 6 disk which has two index hole openings, the XF551 can format those on either side with no problem! (I hope PAGE 6 will let XF551 owners know where to get them).

I have no experience with the US doubler so can't really comment regarding it's double density sector skew problems on the XF551. However, it occurs to me that, most probably no commercial software exists that would use that format. Any disk you might receive in that format is therefore unlikely to be copy protected. For use on the XF551 simply ensure that the US doubler formats disks with sector skew off or else copy to an XF551 sector skew formatted disk.

Replacing the 5.25" drive mechanism with a 3.5" mechanism on the XF551 is not as simple a stated. On both mechanisms, most pins have the same assigned function, except for pins 32 and 31. On the 5.25" mechanism they are "Side one select" and its "Ground return pin" respectively, but on the 3.5" mechanism they are "Spare". The 5.25" mechanism is 40 tracks per side but the 3.5" mechanism is 80 tracks per side. The XF551 interface can only handle 80 tracks total, to handle the 3.5" mechanism the interface needs to be modified. There have been at least two different modifications available in the U.S.A for that purpose. Apparently they require changing the ROM and a 34 pin plug as well as the drive mechanism.

Finally, let me just say that the XF551 is an excellent drive for the serious 8-bit enthusiast, as is the 1050. I use Superdos 5.1 (quite Dos 2.5 compatible yet handles single/ enhanced/ double and 2 sided densities in standard or fast baud rate) which allows the XF551 to really fly. There's been a lot of lingering misinformation spread about the XF551 which has hurt all 8-bit users. I hope the XF551 "haters" are happy now that it is no longer manufactured and nor will any other 8-bit drive be. I wish I had the foresight to purchase several while they were still available.

John Stecyk,
Hawthorn, Australia

Many thanks for you comments, John. Most of the image problems of the XF551 stem from Atari's (usual) lack of documentation and explanation of the workings of the drive. The 1050 just came out of the box, was plugged in and, with a quick look at the manual, away you went. With the XF551, all the promises of double sided, double density storage didn't appear to be there, at least for those who did not know enough to find these features. For the beginner an advanced disk drive with inadequate documentation is a nightmare.

The only point which I would take issue with is the question of the drive speed and its effect on copy protection. The speed difference is not 'insignificant' on certain software. The UK company Databyte developed one of the most sophisticated copy protection techniques some years ago for the word processor Super script. Now this was a great program but if your 1050 or 810 was running just slightly out of speed (by 3 or more rpm) then it wouldn't load - a real pain. Databyte subsequently introduced this copy protection on their own games so there are a number of commercial programs that certainly won't run at 300 rpm. Another problem is the myth of having to flip disks. There is absolutely no need to go to the lengths of cutting notches and index holes, if the drive is properly configured it will automatically write to both sides of the disk.

The XF551 is a good drive, perhaps more so for those who understand their systems fully. Beginners might not find it so easy to use all of the features but that is only because its lacks documentation. If you find one, buy it anyway, you won't go far wrong.

TAPE PROBLEMS

I own a 130XE and XC12 tape recorder. When I saved a program in LISTed format so that I could combine it with other programs I tried to load it with ENTER "C:" but it would not load the program. It gave the error 143 but the cables are good and properly connected. Could you HELP?

E. Manning
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This error is usually due to a poor quality tape. Sadly there is nothing that you can do but start again. We did publish a cassette verify routine a while ago which allowed you to test whether a save had been successful before wiping out your program and it might be wise to use a utility such as this.