Twitter Thread by foone

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@Foone

So I got out some CF cards and noticed something odd about this one. Do you see the weirdness?

How the fuck is a CF card "USB Enabled"?

So CF cards are a weird beast that act as either a PCMCIA card or an ATA/IDE card depending on a mode pin.

They're definitely not USB.

And it's not like that weird SanDisk card I have which you can fold in half and plug it in as a USB device.
https://t.co/mYfFMy1qdX

> Flip it over, bend it in half, and now you can plug your SD card right into a USB port pic.twitter.com/jeBefP2xU1
>
> — foone (@Foone) May 2, 2020

It turns out the reason for "USB Enabled" is because it's a Lexar drive from the jumpSHOT era.
This is a normal CF card in most cases, you can use it in normal CF card readers and such

But back in the early 2000s Lexar made the jumpSHOT CF cards and the jumpSHOT CF adapter, which was very small and cheap for a USB CF card adapter...

and it turns out this is because
1. it only works with jumpSHOT CF cards with the "USB enabled" logo on them
2. THERE'S NOTHING INSIDE IT

CF cards inherently need a microcontroller on them to be able to work, and normally your CF card adapter similarly has a microcontroller that converts between ATA and USB...
But that's two microcontrollers. Why not save money and just have one?

so for jumpSHOT, Lexar just built USB support into the microcontroller on the CF card itself, and bundled them with cheap adapters that just physically adapt the USB connector to some pins on the CF card.

the only issue would be if you tried to use a non-jumpSHOT CF card on a jumpSHOT reader.
it wouldn't work at all.

Hopefully Lexar figured out a way to either make that mechanically impossible (I don't think so) or at least safe