

[PSA: Don't buy or trust Western Digital with your data \(technology.\)](#)

by [The Venerable](#)

They put an encryption on their external HDDs. If anything happens to the enclosure of the drive(damaged, usb stops working, won't power on, etc.), it's impossible to get your data back without sending it to them for a hefty fee.

- [79 comments](#)

[\[-\] videocodec](#) 45 points (+49 | -4) 16 hours ago

Format first with gparted and this shouldn't be an issue

- [link](#)

[\[-\] phoenix883](#) 10 points (+10 | -0) 8.2 hours ago (edited 8.1 hours ago)

It may still be unreadable, because the encryption may happen at the firmware level. No matter what you do on the software level, the firmware may still take the data, encrypt it with a random key and then write it out to the physical disk.

SSDs and SMR drives do this all the time and it doesn't matter if you as the user activated encryption or not. The option only changes the behavior if the drive firmware asks for a password to give out the drive encryption key or not.

Technical reasons behind this are wear leveling, storage density and fast erase of the drive.

By encrypting the data before writing it to the physical medium, it is assured the physical data stream always has an equal number of one's and zero's. That helps a lot with wear leveling. It also ensures no arbitrarily repeating patterns are written, so the signal amplification circuits do not get confused when reading back the data later. As the storage density is so high, these circuits have to do all kinds of tricks and math to extract the signal and they may get confused if patterns repeat exactly.

Lastly, quick erase. Customers love to erase their drives quickly and with 2TB and up drives, physically erasing the disk is stupidly expensive, time-wise. Instructing the drive to throw away the disk key and generating a new one achieves the same effect as erasing every single byte on disk and takes only 30 seconds instead of 30 hours. Also, SMR drives cannot reliably be erased otherwise or it would take ages because of the method they employ to increase storage density (the shingling of the data tracks). External cheap USB drives in 4TB+ ranges almost always are shingled magnetic recording now.

So nothing of the OP's complaints are a fault of Western Digital and everything at fault of him or her for not having a backup. Anyone who is too cheap to have an encrypted cloud backup or a backup to NAS is getting exactly what they get and they should stop complaining about anyone but themselves on the internet.

Remember: all storage media fail eventually. It is only a matter when that happens and how you are prepared for it. Don't bet your data on cheap external drives.

- [link](#)
- [parent](#)

[\[-\] Fearmonger](#) 7 points (+8|-1) 16 hours ago

not sure why this got down voted. It is good advice.

- [link](#)
- [parent](#)

[\[-\] phoenix883](#) 7 points (+8|-1) 8.2 hours ago

It is downvoted because the advice is useless (the firmware is doing the encryption), because the encryption is doing something very important from a technical sense and OP is a tool for not having had a backup.

- [link](#)
- [parent](#)

[\[-\] MinorLeakage](#) 5 points (+5|-0) 14 hours ago (edited 14 hours ago)

I think you answered your own question.

- [link](#)
- [parent](#)

[\[-\] Germ22](#) 4 points (+4|-0) 15 hours ago

tell me more about this

- [link](#)
- [parent](#)

[[-](#)] [thisistotallynotme](#) 4 points (+6 | -2) 14 hours ago

gparted will remove the disk encryption while formatting the partition table.

- [link](#)
- [parent](#)

1 reply

[[-](#)] [jammicsmith](#) 29 points (+29 | -0) 16 hours ago

Always have redundancy, have at least 2 hard drives for backups. They're only \$60ish for 2TB! or \$150 for 8TB. Is your data not worth way more than this??

<https://www.amazon.com/Seagate-Expansion-Portable-External-STE2000400/dp/B00TKFEE5S>

<https://www.amazon.com/Elements-Desktop-Hard-Drive-WDBWLG0080HBK-NESN/dp/B07D5V2ZXD>

and then encrypt and mount the drive yourself. attached drive will typically be recognized as mount as `/dev/sdb` (or `/dev/sdc`, `/dev/sdd`, etc)

```
cryptsetup -y --cipher aes-cbc-  
essiv:sha256 --key-size 256  
luksFormat /dev/sdb1
```

once the drive is encrypted, you can decrypt and attach at your leisure.

```
cryptsetup luksOpen  
/dev/sdb1 my_encrypted_disk
```

this will decrypt the partition, you can reference it at
/dev/mapper/my_encrypted_disk

If this is the first time you decrypt it, put a filesystem on it

**mkfs.ext4
/dev/mapper/my_encrypted_d
isk**

and make a directory where you intend to mount it

mkdir /my_encrypted_folder

Once you've got a partition and mount point, mount it. If you've already partitioned the volume, skip previous steps and just mount it.

mount

/dev/mapper/my_encrypted_disk /my_encrypted_folder

- "my_encrypted_disk" and "my_encrypted_folder" can be any string, so you could have "ED1", "ED2" mapped to "/EF1", "/home/user/EF2" if you have multiple encrypted disks.

having multiple encrypted disks is critical. I would NEVER send it back to Western Digital and ask them to decrypt. If a hard drive fails, I drill a hole in it and replace it with a new one. Data is WAY too valuable to be concerned with the \$60ish to replace a 2TB portable hard drive.

Oh, and when you want to remove the drive, unmount and then decrypt:

umount /my_encrypted_folder

cryptsetup luksClose

/dev/mapper/my_encrypted_drive

Then you can unplug your removable drive.

- [link](#)

[–] [MadWorld](#) 1 points (+1 | -0) 14 hours ago

On top of that encryption, one could also create a LVM to manage the partitions. If swap partition was not previous encrypted, one could also optionally apply random encryption. I thought it would be nice to encrypt as much as possible, just in case the device gets stolen.

```
/etc/crypttab
eswap /dev/path/to/swap/partition /dev/urandom
swap,cipher=aes-cbc-essiv:sha256
```

```
/etc/fstab
/dev/mapper/eswap none swap defaults 0 0
```

- [link](#)
- [parent](#)

[–] [ForTheUltimate](#) 0 points (+0 | -0) 14 hours ago

why are externals cheaper than internals?

- [link](#)
- [parent](#)

[\[-\] Epictetus Hierapolis](#) 1 points (+1 |-0) 13 hours ago

They aren't. Prices are pretty similar.

- [link](#)
- [parent](#)

2 replies

[\[-\] HulkInformation](#) 14 points (+14 |-0) 17 hours ago

They've been doing this for years. It's a feature, or at least it is now. Initially the data could be breached easily and the encryption efforts were harpooned as "useless" by all the tech blogs.

So, it's either no encryption at all or encryption good enough that you need to send it to them to decrypt it. They offer non-encryption models.

- [link](#)

[\[-\] weezkitty](#) 7 points (+7 |-0) 16 hours ago

You could always use operating system encryption. That way, you it is your key. Not WDs

- [link](#)
- [parent](#)

[\[-\] HulkInformation](#) 0 points (+0 |-0) 1.4 hours ago

Does that work on external drives? I actually don't know the answer to this. Isn't the largest benefit of external drives that they are swappable.

- [link](#)
- [parent](#)

[\[-\] WORF MOTORBOATS TROI](#) -2 points (+1 |-3) 16 hours ago

Why would an external hard drive need to be encrypted?

- [link](#)
- [parent](#)

[\[-\] Alopix](#) 12 points (+12 |-0) 16 hours ago

external hard drives are generally made to be portable. Portable things get lost. Hard drives contain sensitive information. The purpose of encryption is pretty obvious.

- [link](#)
- [parent](#)

2 replies

[\[-\] HulkInformation](#) 0 points (+0 |-0) 1.4 hours ago

Encrypt everything imo.

- [link](#)
- [parent](#)

[\[-\] EvilWizardManannan](#) 9 points (+13 |-4) 16 hours ago

Morons: We want our personal datas to be safe and encrypted by default!

Also Morons: Fuck WD for encrypting our datas!!!q1

- [link](#)

[\[-\] The Venerable \[S\]](#) 2 points (+4|-2) 16 hours ago (edited 16 hours ago)

How does the encrpytion help if a theif can just plug it into a computer and access the data? The encryption *only* comes into play when the hdd is removed from the enclosure.

- [link](#)
- [parent](#)

[\[-\] EvilWizardManannan](#) 3 points (+4|-1) 15 hours ago

Are you sure about that? Did you read the documentation and setup when you first got the drive? There's probably a WD agent running on your computer with the credentials to decrypt the data in realtime on your PC so you never had to be bothered by the encryption.

What model of WD external drive are you using that has hardware encryption onboard that you couldn't have disabled had you read the manual? Not trying to sound like a dick, but I've used plenty (seriously, dozens) and have never run into this problem.

- [link](#)
- [parent](#)

1 reply

[\[-\] Alopix](#) 8 points (+8 |-0) 16 hours ago

Not all of them, last black friday I bought two 4TB externals, immediately shucked one out of the enclosure and used it internally, using it right now. Do research, read reviews

- [link](#)

[\[-\] bambou1991](#) 1 points (+1 |-0) 14 hours ago

Bought a 1TB 8 years ago. Took it out of the enclosure eventually and worked perfectly since.

- [link](#)
- [parent](#)

[\[-\] prairie](#) 1 points (+1 |-0) 9.9 hours ago

It's the case that does the encryption, not the drive unit inside. This is the correct solution to this problem.

- [link](#)
- [parent](#)

[\[-\] chronos](#) 8 points (+8 |-0) 17 hours ago

Wow didn't know that. Gave up on WD years ago when several drives had click of death within months of each other.

- [link](#)

[\[-\] kcamstar](#) 8 points (+8 |-0) 14 hours ago

Backblaze uses thousands of drives a year for their cloud backup service and they keep stats on the failure rate for each brand.

Read this: <https://www.backblaze.com/blog/2018-hard-drive-failure-rates/>

- [link](#)
- [parent](#)

[–] [kishidan](#) 4 points (+4 | -0) 14 hours ago

Did you purchase all those drives roughly at the same time? If so it's likely all those drives were from the same "batch" and thus with the same manufacturing defect causing them to fail in roughly the same time-frame.

The best practice for reliability is to purchase drives from multiple manufacturers and to stagger your purchases over a couple weeks/months to reduce the chance of buying from the same batch.

- [link](#)
- [parent](#)

[–] [weezkitty](#) 3 points (+3 | -0) 16 hours ago

All but one of the HDs that have ever died on me have been WD. I avoid that brand now

- [link](#)
- [parent](#)

[–] [ScientificRacism](#) 2 points (+2 | -0) 16 hours ago

If you've really had multiple drives die on you, might want to consider that there's something going on with your setups. I've been using computers for well over twenty years and never had a drive die on me. Part of that I'm sure is luck though, but I don't really know anyone who has had multiple drives die.

- [link](#)
- [parent](#)

1 reply

[\[-\] Schreiber](#) 1 points (+1 |-0) 10.2 hours ago

I've used WD for decades and never experience a dead WD harddisk.

- [link](#)
- [parent](#)

[\[-\] EvilWizardManannan](#) 1 points (+1 |-0) 16 hours ago

Anecdotal evidence is cool! I've never had a Seagate drive except the 300MB (yes Megabyte) tank that came in my first 486 that didn't fuck me one way or another.

Not that WD is perfect, they aren't. But even if you're buying enterprise grade drives it's always a fucking gamble.

- [link](#)
- [parent](#)

1 reply

[\[-\] viperguy](#) 8 points (+10 |-2) 17 hours ago

Did NOT KNOW!!!!!! Disgusting if true.

- [link](#)

[[-](#)] [UnknownCitizen](#) 7 points (+7|-0) 17 hours ago (edited 17 hours ago)

Read your manuals.

<https://www.zdnet.com/article/the-self-encrypting-drive-you-may-already-own/>

- [link](#)

[[-](#)] [shekelforce](#) 4 points (+4|-0) 16 hours ago

Make backups of backups so you can just trash the drive if need be. Drives are cheap enough now.

- [link](#)

[[-](#)] [thisistotallynotme](#) 2 points (+2|-0) 14 hours ago (edited 14 hours ago)

If you're going to be dealing with spinning disks, it's good to learn how to make a (2'x1') clean room out of plexiglass and thick gloves. Once you disassemble a hard drive, it's not exactly brain surgery to put it back together again. If you have a bad drive, but you're 90% sure it's just the logic board or read head failing, you can swap the platter(s) with an identical model's equipment, which is easier to source on eBay than you'd think.

Once you get the drive reassembled, slap that fucker in a system (or an enclosure) and pull all the data off it ASAP. There, I just

saved you ten thousand dollars.

- [link](#)

[\[-\] prairie](#) 0 points (+0 |-0) 9.9 hours ago

There, I just saved you ten thousand dollars.

You save even more by simply having a backup (or two) of your drive. Then if one fails, say "ehhh, oh well" and use your backup (first making another backup).

- [link](#)
- [parent](#)

[\[-\] Empire of the mind](#) 2 points (+2 |-0) 15 hours ago

You should be reformatting it immediately out of the box.

- [link](#)

[\[-\] prairie](#) 1 points (+1 |-0) 9.9 hours ago

The enclosure encrypts data on whatever drive is in it. You have to ditch the case.

- [link](#)
- [parent](#)

[\[-\] uvulectomy](#) 2 points (+2 |-0) 15 hours ago

If it's something you don't want to lose, use a 3-2-1 backup.

- 3 copies of the data
- 2 different forms of media

- 1 copy offsite
- [link](#)

[\[-\] suckysucky5dolla](#) 2 points (+2 | -0) 16 hours ago (edited 16 hours ago)

Wait, so the WD hard drives come with an encrypted partition? I'm not sure if I understand what they're doing here.

I *DO* know that their external hard drives are connected to USB controllers in some proprietary fashion, so you can't rip the hard drive out of its enclosure and connect it to your motherboard through SATA. Their regular, barebone hard drives aren't like that, but avoid their external hard drives like the plague. The USB controller fails and you're fucked.

- [link](#)

[\[-\] prairie](#) 0 points (+0 | -0) 9.8 hours ago

The drive is fine and standard, you just have to remove it first and reformat connected directly to the PC or other non-shit USB controller board.

- [link](#)
- [parent](#)

[\[-\] Napierdalator](#) 1 points (+1 | -0) 5.5 hours ago

Never buy oem made external drives in the first place. Just use generic usb hdd cases and put the drives you want inside. It's not more expensive than oem made external drives and you get two standard devices instead of one non-standard brick.

Encryption a hardware vendor has keys to, isn't encryption at all – it's a scam at best, probably a sabotage, because if they are happy to wheedle money from customers for decrypting a device with a masterkey, they'll be happy to do it for piggies. Only if you set it up and are the only one have the keys/passphrase it may be called encryption. Never let your private data touch a not encrypted drive, if you have to use a not encrypted drive, archive your data and then encrypt the archive with PGP.

- [link](#)

[\[-\] glennvtx](#) 0 points (+0 | -0) 3.5 hours ago

This isn't on unless you specifically turn it on. It does not "automatically turn on" when you remove the device from it's housing. In years of performing data recovery, i have yet to see this present as a problem. MANY drives have the feature.

- [link](#)

[\[-\] moviefreak](#) 0 points (+0 | -0) 5.8 hours ago

Lol. If you are like me you like technical challenges. Now go install Win7 on a Lenovo portable. I just had a hilarious ride, and I will not spoil the fun you are going to have! But I'll give you the upload of the USB key I made when you beg for mercy.

- [link](#)

[\[-\] moviefreak](#) 0 points (+0 | -0) 6.3 hours ago (edited 6.3 hours ago)

If you use external HD's use Maxtor. Best harddisks ever. Sucks they stopped producing normal internal harddisks.

Maxtor.

Western Digital always sucked for long term use.

- [link](#)

[\[-\] LlamaMan](#) 0 points (+0|-0) 8.6 hours ago

Just get a sil power a60 or 80. These things are unbreakable and dont come with shitware.

- [link](#)

[\[-\] RvBMan](#) 0 points (+0|-0) 8.7 hours ago

Formatting a purchased drive should be as automatic a habit as rinsing fruit or vegetables before eating them.

- [link](#)

[\[-\] Botanist](#) 0 points (+0|-0) 9.2 hours ago (edited 8.2 hours ago)

I brought 3 Seagate 4TB Gamedrives. One failed, so I contacted them to ask for it to be repaired. The drive only cost £135. But they wanted £100 just to look at it, then they wanted another £750 on top of that to get my data back off it. And they told me that they'd charge me first and that they could not guarantee they could recover my data. And if they couldn't they'd still charge me the full £900 something, the tax too. And if they did re over my data they'd want another £300 to put it on another drive

and send it back to me. WTF? And all that whilst the drive was still under guarantee! WTF?

I've still got working hard drives from the 90's. It's just all the new drives, they're shit in comparison. They really don't make them like they used too.

The only form of secure storage I know now is Samsung's SSD. Those fuckers are X-ray proof. MRI scanner proof, water proof and you name, the rest proof.

If you want to archive data for a few decades at least, them SSD's are the only form of secure drive. They're just so expensive though.

- [link](#)

[\[-\] TerraKell](#) 0 points (+0 | -0) 11.3 hours ago

I have had a recent 3 TB WD external HD that came formatted exFAT and only exFAT. i could not format it from exFAT using gparted at all. I took it back to the store for a refund. I found out that exFAT can be used by both Windows as well as Mac so it likely is that file system if the box says it can be used on both. I did not attempt to take the drive out of its enclosure and attempt to format in a drive bay.

- [link](#)

[\[-\] peterpeter094](#) 0 points (+0 | -0) 14 hours ago

We want our personal datas to be safe and encrypted

- [link](#)

[\[-\] Drakgan](#) 0 points (+0|-0) 14 hours ago

That's why I only keep cooking recipes and gay porn on mine.

- [link](#)

[\[-\] DJB](#) 0 points (+0|-0) 14 hours ago

fuck the fakohshas

- [link](#)

[\[-\] slwsnowman40](#) 0 points (+0|-0) 14 hours ago

This tomfoolery, among others (thinks of Buffalo), are why I just buy enclosures and drives.

- [link](#)

[\[-\] thebassdude](#) 0 points (+0|-0) 15 hours ago

Not one of you know [what this means.JPEG](#)

- [link](#)

[\[-\] IquitzuOcha](#) 0 points (+0|-0) 15 hours ago

WDs are good hardware. What do you want me to do, run Seagate?! Bahahahahaha!

- [link](#)

[\[-\] The Venerable](#) [\[S\]](#) 0 points (+0|-0) 15 hours ago (edited 14 hours ago)

Get a regular hard drive and use a usb hard drive dock.

- [link](#)
- [parent](#)

[\[-\] RollinDaGrassTyson](#) 0 points (+0|-0) 15 hours ago

So if you want an external drive just buy a 2.5" enclosure and standard drive*?

*Rhetorical question.

- [link](#)

[\[-\] DasReich](#) 0 points (+0|-0) 15 hours ago

Anyone who doesn't backup their backup deserves this. 3 backups minimum spread across 2 physical locations. No, RAID is not a backup.

- [link](#)

[\[-\] RndM_EggI](#) 0 points (+0|-0) 15 hours ago

Is this true? I got an external 2TB Hard Drive from Western Digital for Movies and tv shows but tham thats crazy if true.

- [link](#)

[\[-\] Empire of the mind](#) 0 points (+0|-0) 15 hours ago

just reformat it. why anyone would use some proprietary software for an external HD is beyond me. hardware companies always make shit software utilities.

- [link](#)
- [parent](#)

[\[-\] RndM_EggI](#) 1 points (+1 |-0) 15 hours ago (edited 15 hours ago)

I reformatted it when i bought it like 3 years ago. *edit: and i dont even use software from WD because that seems pretty useless to me.

- [link](#)
- [parent](#)

1 reply

[\[-\] Caesarkid1](#) 0 points (+0 |-0) 16 hours ago

This is not the first time I heard this.

- [link](#)

[\[-\] jurisrevenge](#) 0 points (+0 |-0) 17 hours ago

yeah i only use them for my externals for my WIIS

- [link](#)

[\[-\] facepaint](#) -1 points (+0 |-1) 2.2 hours ago

Screw this advice. First and foremost, always have a fucking backup. Once you do this, all these issues go away.

- [link](#)