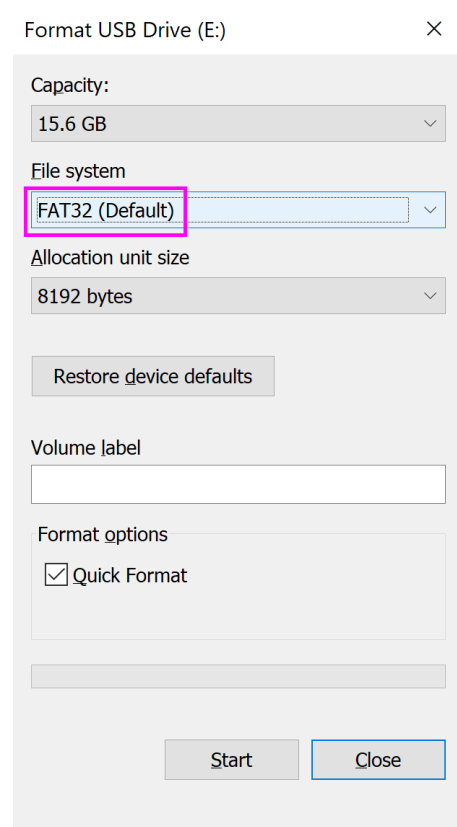


- I'm having a look at the Windows 10 formatter..



Format USB Drive (E:) X

Capacity:
15.6 GB

File system
FAT32 (Default)

Allocation unit size
8192 bytes

Restore device defaults

Volume label

Format options
☒ Quick Format

Start Close

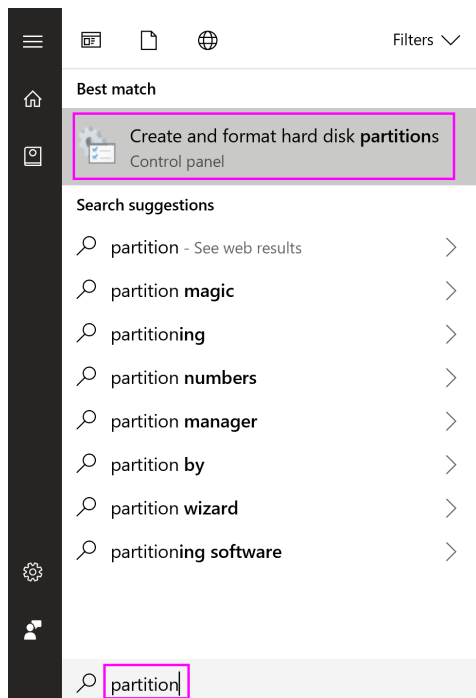
So, it definitely can format the USB stick to be FAT32 (it is the default option), but when I assessed the bytes in the first sector, I noticed that it didn't add the MBR into USB stick.

So this seems to indicate that the Windows 10 formatter does not add an MBR.

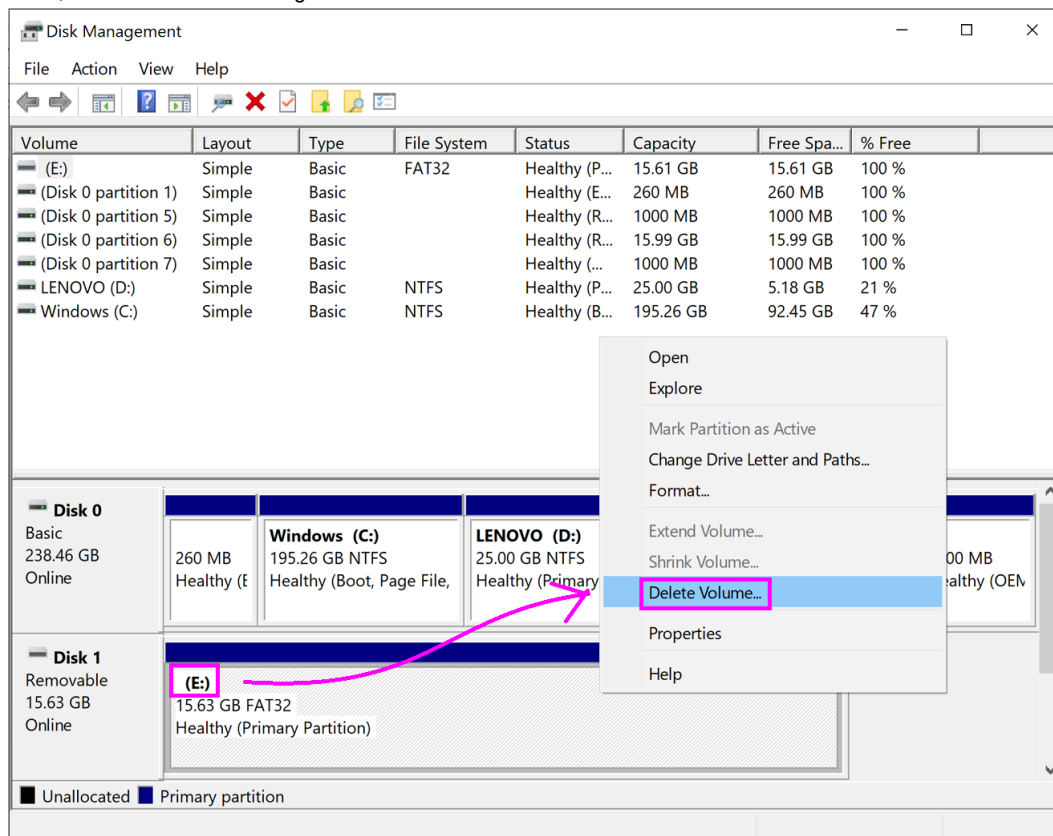
I've tried my USB stick on the c64 mini, and again, it does not work, the dir-listing shows "READONLY" again...

Perhaps if I then I could use the windows 10 partitioning tool to post-humously add a single partition to the drive? Let's see...

I clicked "**start**" button and typed "**partition**".

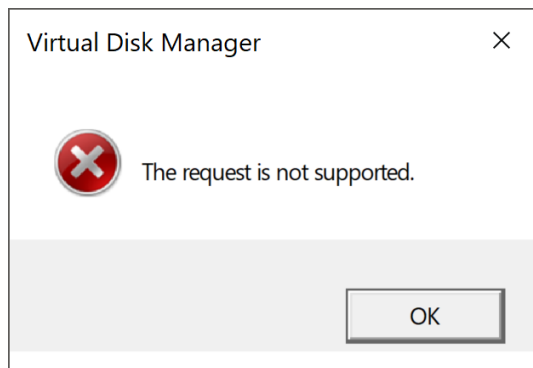


Hmm, let me delete this existing volume...



Perhaps if I create new volumes from within this partition tool, it will create the MBR?

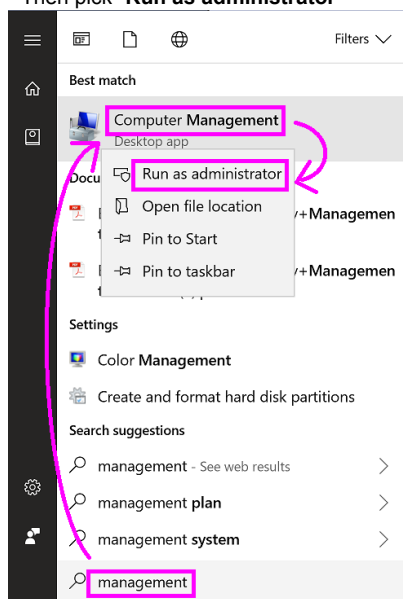
Ooh, I got this nonsense:



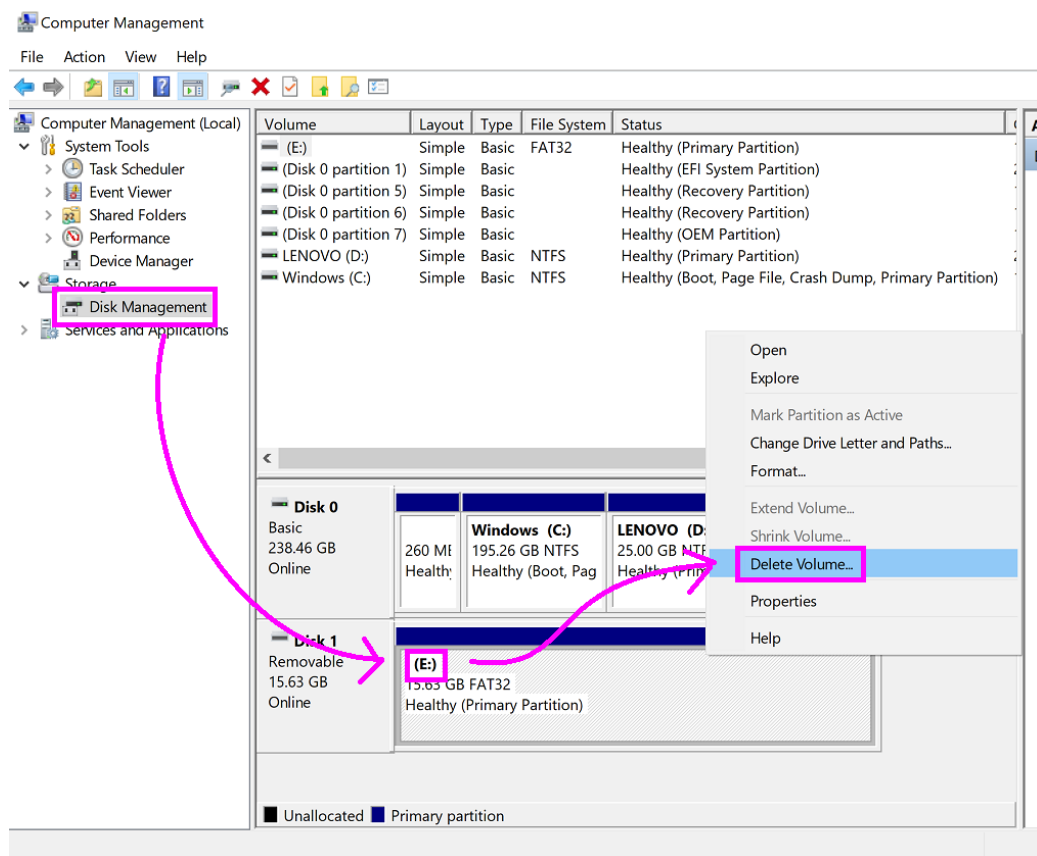
Ah bugger, I think I need to run this tool as administrator :(

Ah ok, I learnt the trick now, I need to:

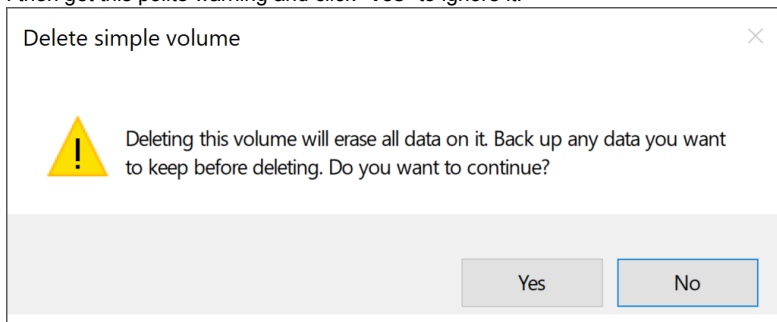
- Click "**start**" and type "**management**".
 - Then **right-click** "**Computer Management**"
 - Then pick "**Run as administrator**"



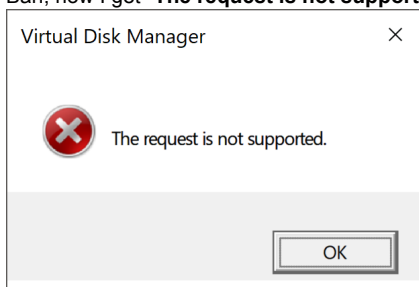
- Ok then, I select "**Disk Management**" in the left-pane.
 - I click on the "**E:**" drive (that's my USB stick)
 - I then right-click it and select "**Delete Volume...**"



- I then get this polite warning and click "Yes" to ignore it.

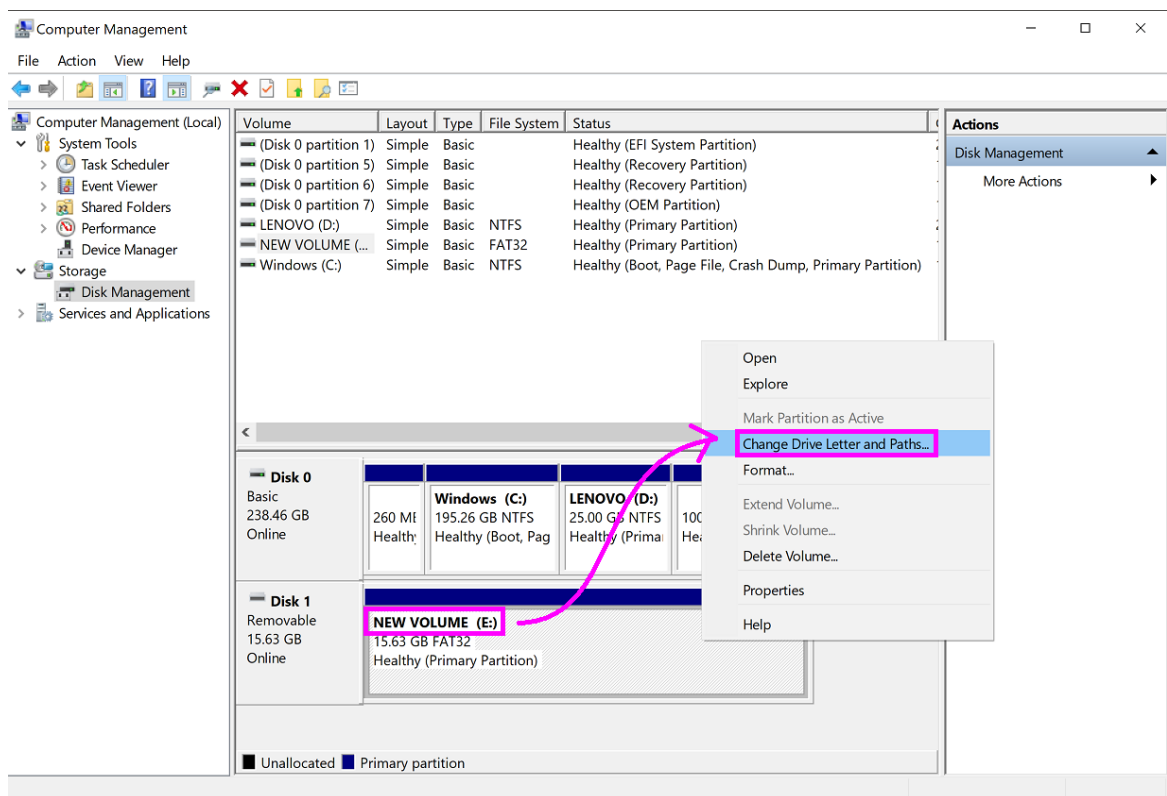


- Bah, now I get "The request is not supported" nonsense... :(

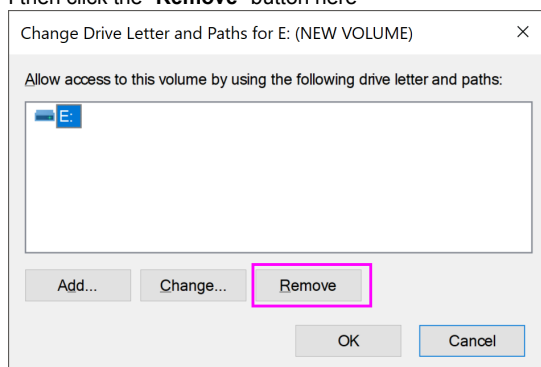


Aah wait a sec, now I think I know my problem, I need to remove the "E:" drive-letter association first before I can delete the existing volume! :(

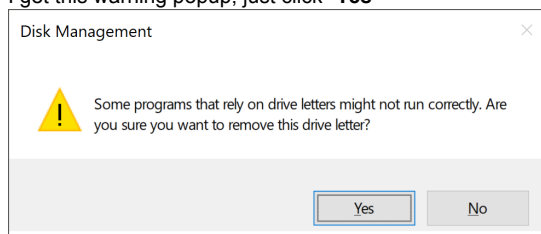
- I right-click the E: drive and select "Change Drive Letter and Paths..."



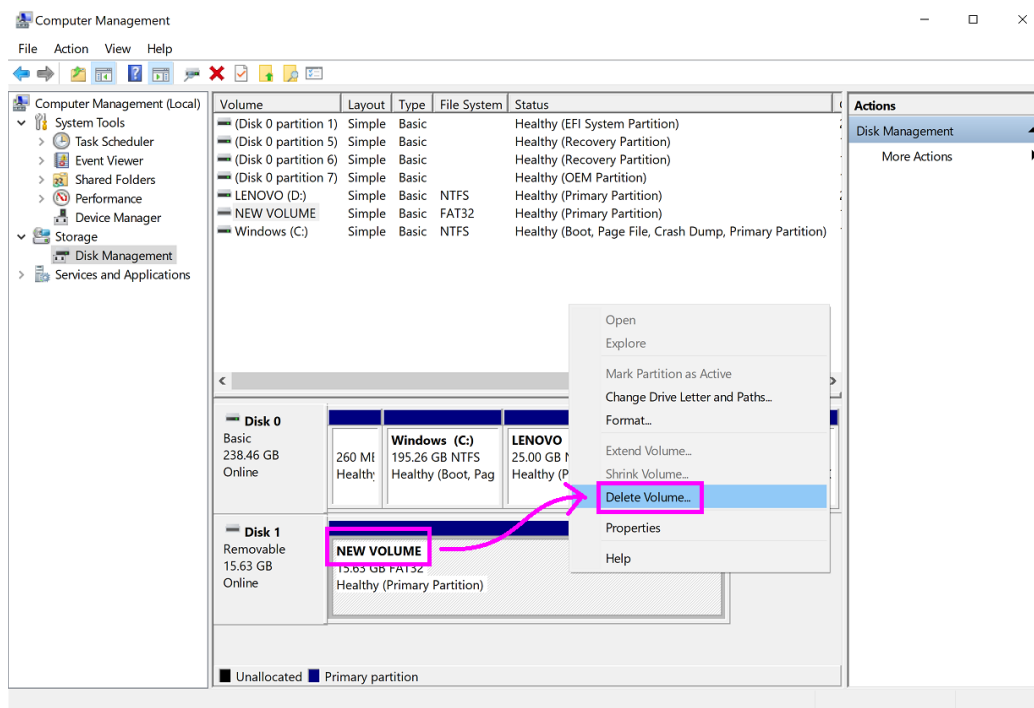
- I then click the **"Remove"** button here



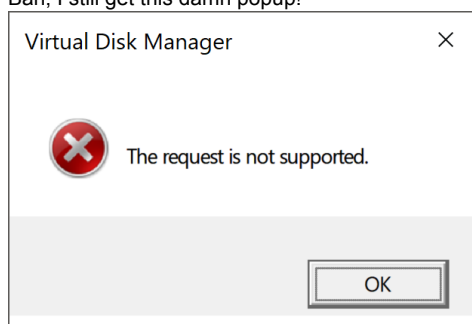
- I get this warning popup, just click **"Yes"**



- I then right-click my old E: drive (which no longer is E:) and select **"Delete Volume..."**



- Bah, I still get this damn popup!



Aah, ok, I'm reading online here that the Windows "Disk Management" tool prevents removable devices from having their volumes deleted!

- <https://www.partitionwizard.com/partitionmagic/can%27t-delete-volume-on-usb-flash-drive.html>

Ah ok then, they suggest to either use the windows command-line tool "diskpart", or their own "MiniTool Partition Wizard", which one of the users previously suggested.

- I run a cmd.exe with administrator privileges
- Run the "diskpart" command
- I do "list disk" and see:

Disk ###	Status	Size	Free	Dyn	Gpt
-----	-----	-----	-----	---	---
Disk 0	Online	238 GB	0 B		*
Disk 1	Online	15 GB	0 B		

- Ok, my usb stick is "Disk 1"...

- I do "select disk 1"

- list partition

Partition ###	Type	Size	Offset
---------------	------	------	--------

```

-----
* Partition 1      Primary              15 GB      0 B

```

- **list volume**

```

Volume ###  Ltr  Label          Fs      Type          Size      Status      Info
-----
Volume 0     C    Windows        NTFS     Partition     195 GB    Healthy     Boot
Volume 1     D    LENOVO         NTFS     Partition     25 GB    Healthy
Volume 2           SYSTEM_DRV     FAT32     Partition     260 MB    Healthy     System
Volume 3           WINRE_DRV      NTFS     Partition     1000 MB    Healthy     Hidden
Volume 4           LENOVO_PART    NTFS     Partition     15 GB    Healthy     Hidden
* Volume 5           NEW VOLUME     FAT32     Removable     15 GB    Healthy

```

- **select volume 5**

- **detail volume**

```

Disk ###  Status      Size      Free      Dyn  Gpt
-----
* Disk 1   Online      15 GB      0 B
Read-only      : No
Hidden         : No
No Default Drive Letter: No
Shadow Copy    : No
Offline        : No
BitLocker Encrypted : No
Installable    : Yes
Volume Capacity : 15 GB
Volume Free Space : 15 GB

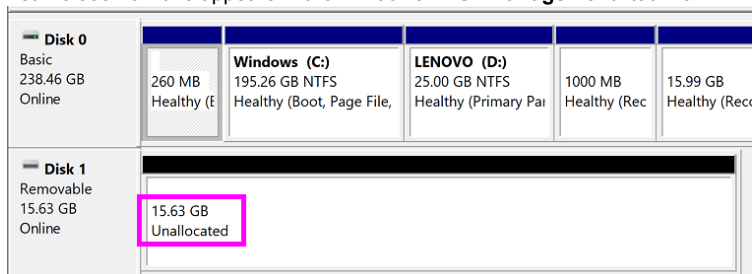
```

Ah whew, this is good confirmation for me that Volume5 is on disk 1 (my USB stick), so I feel comfortable/safe to delete it...

- **clean** (warning, this is a pretty serious thing to remove a volume, so make sure you've selected the right one!!!!)

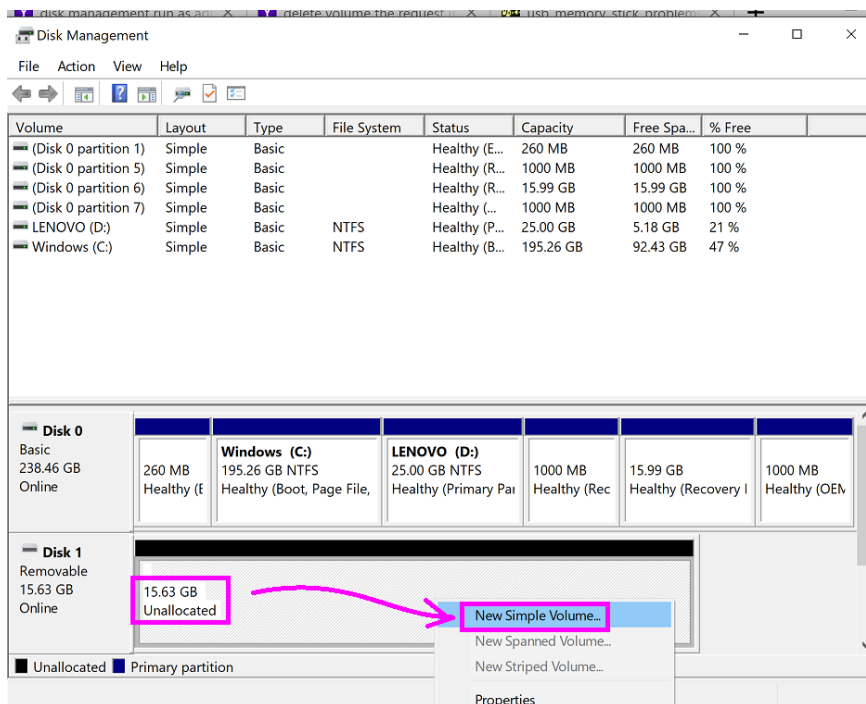
```
DiskPart succeeded in cleaning the disk.
```

- Let me see how this appears in the Windows "Disk Management" tool now...



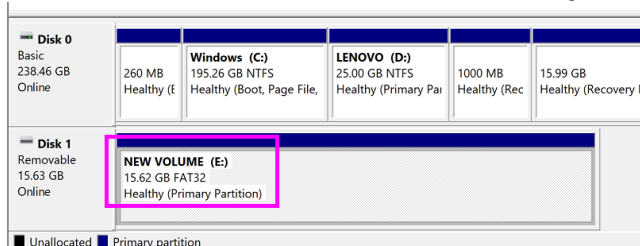
Awesome!! It finally says "Unallocated"!!! That's what I've been waiting for all this time! :)

- I now right-click Disk1 and do "New Simple Volume..."



- A wizard appears, I click "Next"
- I accept the suggested volume-size and click "Next"
- I accept the default drive-letter and click "Next"
- I change from "~~NTFS~~" to "FAT32" and click "Next"

- Ok then, the E: drive has returned... Let's see if this method generated an MBR...



- I checked with dd+hexdump, looks like it has got an MBR now...

```

00000000  33 c0 8e d0 bc 00 7c 8e c0 8e d8 be 00 7c bf 00 |3....|.....|..|
00000010  06 b9 00 02 fc f3 a4 50 68 1c 06 cb fb b9 04 00 |.....Ph.....|
00000020  bd be 07 80 7e 00 00 7c 0b 0f 85 0e 01 83 c5 10 |....~..|.....|
00000030  e2 f1 cd 18 88 56 00 55 c6 46 11 05 c6 46 10 00 |.....V.U.F...F..|
00000040  b4 41 bb aa 55 cd 13 5d 72 0f 81 fb 55 aa 75 09 |.A..U..]r...U.u.|
00000050  f7 c1 01 00 74 03 fe 46 10 66 60 80 7e 10 00 74 |...t..F.f`.~..t|
00000060  26 66 68 00 00 00 00 66 ff 76 08 68 00 00 68 00 |&fh....f.v.h..h.|
00000070  7c 68 01 00 68 10 00 b4 42 8a 56 00 8b f4 cd 13 ||h..h...B.V.....|
00000080  9f 83 c4 10 9e eb 14 b8 01 02 bb 00 7c 8a 56 00 |.....|.V..|
00000090  8a 76 01 8a 4e 02 8a 6e 03 cd 13 66 61 73 1c fe |.v..N..n...fas..|
000000a0  4e 11 75 0c 80 7e 00 80 0f 84 8a 00 b2 80 eb 84 |N.u..~.....|
000000b0  55 32 e4 8a 56 00 cd 13 5d eb 9e 81 3e fe 7d 55 |U2..V...|...>.)U|
000000c0  aa 75 6e ff 76 00 e8 8d 00 75 17 fa b0 d1 e6 64 |.un.v....u....d|
000000d0  ea 83 00 b0 df e6 60 e8 7c 00 b0 ff e6 64 e8 75 |.....`.|....d.u|
000000e0  00 fb b8 00 bb cd 1a 66 23 c0 75 3b 66 81 fb 54 |.....f#.u;f..T|
000000f0  43 50 41 75 32 81 f9 02 01 72 2c 66 68 07 bb 00 |CPAu2....r,fh...|
00000100  00 66 68 00 02 00 00 66 68 08 00 00 00 66 53 66 |.fh....fh....fSf|
00000110  53 66 55 66 68 00 00 00 00 66 68 00 7c 00 00 66 |SfUfh....fh.|..f|
00000120  61 68 00 00 07 cd 1a 5a 32 f6 ea 00 7c 00 00 cd |ah.....Z2...|...|
00000130  18 a0 b7 07 eb 08 a0 b6 07 eb 03 a0 b5 07 32 e4 |.....2...|...|
00000140  05 00 07 8b f0 ac 3c 00 74 09 bb 07 00 b4 0e cd |.....<.t.....|
00000150  10 eb f2 f4 eb fd 2b c9 e4 64 eb 00 24 02 e0 f8 |.....+.d..$...|
00000160  24 02 c3 49 6e 76 61 6c 69 64 20 70 61 72 74 69 |$..Invalid parti|
00000170  74 69 6f 6e 20 74 61 62 6c 65 00 45 72 72 6f 72 |tion table.Error|

```



```

00000180 20 6c 6f 61 64 69 6e 67 20 6f 70 65 72 61 74 69 | loading operati|
00000190 6e 67 20 73 79 73 74 65 6d 00 4d 69 73 73 69 6e |ng system.Missin|
000001a0 67 20 6f 70 65 72 61 74 69 6e 67 20 73 79 73 74 |g operating syst|
000001b0 65 6d 00 00 00 63 7b 9a aa b8 d8 e2 00 00 00 20 |em...c{..... |
000001c0 21 00 0c fe ff ff 00 08 00 00 00 f0 f3 01 00 00 |!.....|
000001d0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 |.....|
000001e0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 |.....|
000001f0 00 00 00 00 00 00 00 00 00 00 00 00 55 aa |.....U.|

```

Ok, I'll drop the .d64 file on my USB disk and see how it goes on the c64 mini...

Hmm, I tried to do a **LOAD "\$",8** but I get:

```
0 "THEC64" 01 2A
```

Hmm, is my .d64 file corrupted? I'll use the one from my attempt before... Aah, oops, it was because I named my prior .d64 file incorrectly, I called it "**THEC64-disk8.d64**", instead of "**THEC64-drive8.d64**".

Ok then, let me rename the file properly and try again! Aah yes, it finally works on the c64 mini! :)