- I'm having a look at the Windows 10 formatte	er,.
Format USB Drive (E:)	<
Capacity:	
15.6 GB ~	
<u>Eile system</u>	
FAT32 (Default)	·
Allocation unit size	
8192 bytes V	•
Restore device defaults	
Volume label	
Format <u>o</u> ptions	
Quick Format	
Start Close	1
	-

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...

T Disk Manageme	ent						-		×
-ile Action Vie	w Help		3 mil						
	Lavout	Type	Eile Svet	tom Status	Capacity	Eree Spa	% Eroo		
	Layout	Pasia		Healthy (D		15.61 CP	100.%		
E:)	1) Simple	Dasic	FAISZ	Healthy (P	15.01 GD	15.01 GD	100 %		
 (Disk 0 partition) (Disk 0 partition) 	5) Simple	Basic		Healthy (E	1000 MP	200 IVID	100 %		
 (Disk 0 partition (Disk 0 partition) 	5) Simple	Dasic		Healthy (R	1000 IVID	1000 IVID	100 %		
(Disk 0 partition (Disk 0 partition	a) Simpleb) Simple	Basic		Healthy (R	15.99 GD	1000 MP	100 %		
	7) Simple	Basic	NITEC	Healthy (21.0/		
	Simple	Dasic		Healthy (P	25.00 GB	5.10 GB	21 70		
					0				
					Open				
					Explore				
					Mark Partitio	n as Active			
					Change Drive	Letter and Pat	hs		
					endinge brive				_
Dick 0					Format				
lasic		Windows (Ci	`		Extend Volum	1e			-
38.46 GB	260 MB	195 26 GB NTE	ς Σ	25.00 GB NTES	Chrink Volum	-		00 MB	
Inline	Healthy (F	Healthy (Boot	Page File	Healthy (Primary	Shrink volum	e		althy (OF	FN
	licentify (c		ruge rne,	(i that)	Delete Volum	ie			
	,				Properties				-
Disk 1 Lemovable	(E:)				Help				
5.63 GB	15.63 GB FA	AT32							
Dnline	Healthy (Pr	imary Partition)							

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..."



Provide the second seco	Volume	Layout Type File System	Status		Actions
🗸 🎁 System Tools	💻 (Disk 0 partition	1) Simple Basic	Healthy (EFI System Par	rtition)	Disk Management
> 🕗 Task Scheduler	💻 (Disk 0 partition	5) Simple Basic	Healthy (Recovery Parti	ition)	Mana Astiana
> 🛃 Event Viewer	(Disk 0 partition	6) Simple Basic	Healthy (Recovery Parti	ition)	More Actions
> 🐹 Shared Folders		() Simple Basic NTES	Healthy (OEM Partition)) (m)	
Periormance	NEW VOLUME (Simple Basic FAT32	Healthy (Primary Partitio	on)	
✓ I Storage	Windows (C:)	Simple Basic NTFS	Healthy (Boot, Page File	e, Crash Dump, Primary Partition	n) '
📅 Disk Management					
> 🚋 Services and Applications					
				Open	
				Explore	
				Mark Partition as Active	
	<		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Change Drive Letter and Path	ns
	T Disk 0			Format	
	Basic	Windows (C:)	LENOVO (D:)	Extend Valume	
	238.46 GB	260 ME 195.26 GB NTFS	25.00 GB NTFS 100	Extend volume	
	Online	Health: Healthy (Boot, Pag	Healthy (Prima: Hea	Shrink Volume	
				Delete Volume	
	= Disk 1			Properties	
	Removable	NEW VOLUME (E:)		Help	
	15.63 GB	15.63 GB FAT32			
	Online	Healthy (Primary Partition)			
then click the "Remov Change Drive Letter and Par	Unallocated	Primary partition			
then click the "Remov Change Drive Letter and Par Allow access to this volume by	Unallocated Unall	Primary partition DLUME) × drive letter and paths:			
then click the "Remov Change Drive Letter and Par Allow access to this volume by	Unallocated Unallocated	Primary partition DLUME) × drive letter and paths:			
then click the "Remov Change Drive Letter and Par Allow access to this volume by	Unallocated Unallocated	Primary partition DLUME) × drive letter and paths:			
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then click the "Remov Change Drive Letter and Par Allow access to this volume by	Unallocated	Primary partition DLUME) × drive letter and paths: Cancel			
then click the "Remov Change Drive Letter and Par Allow access to this volume by E Add Change	Unallocated Unallocated Unallocated Remove OK	Primary partition DLUME) × drive letter and paths: Cancel			
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Computer Management (Local) System Tools Computer Management (Local) Computer Management Computer Management Management Management Services and Applications	Volume (Disk 0 partition 1 (Disk 0 partition 5 (Disk 0 partition 6 (Disk 0 partition 7 LENOVO (D:) NEW VOLUME Windows (C:)	Layout Typ) Simple Bas) Simple Bas) Simple Bas Simple Bas Simple Bas Simple Bas Simple Bas	e File System ic ic ic ic ic ic ic ic ic ic ic ic ic	Status Healthy (EFI : Healthy (Rec Healthy (Rec Healthy (OCN Healthy (Prin Healthy (Prin Healthy (Boo	system Partition) overy Partition) overy Partition) A Partition) hary Partition) hary Partition) t, Page File, Crash Dur	mp, Primary Partit	ion)	Actions Disk Managemer More Action	nt Is	•	
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	Unallocated P	rimary partitior									
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*	Partition 1	Primary	15 GB	0 В

• list volume

Volume ##	# Ltr	Label	Fs	Туре	Size	Status	Info
Volume 0	С	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	Healthv	

- select volume 5
- detail volume

*

Disk ### Status		Siz	ze	Fre	е	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...

Disk 0 Basic 238.46 GB Online	260 MB Healthy (E	Windows (C:) 195.26 GB NTFS Healthy (Boot, Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Par	1000 MB Healthy (Rec	15.99 GB Healthy (Reco
Disk 1 Removable 15.63 GB Online	15.63 GB Unallocated	1			

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..."

File Action View	w Help								
	🗊 🔎 🗹	5							
/olume	Layout	Type	File Syst	em Status	Capacity	Free Spa	% Free		
(Disk 0 partition)	1) Simple	Basic		Healthy (E	260 MB	260 MB	100 %		
(Disk 0 partition)	5) Simple	Basic		Healthy (R	1000 MB	1000 MB	100 %		
(Disk 0 partition)	6) Simple	Basic		Healthy (R	15.99 GB	15.99 GB	100 %		
(Disk 0 partition)	7) Simple	Basic		Healthy (1000 MB	1000 MB	100 %		
LENOVO (D:)	Simple	Basic	NTFS	Healthy (P	25.00 GB	5.18 GB	21 %		
Windows (C:)	Simple	Basic	NTFS	Healthy (B	195.26 GB	92.43 GB	47 %		
Disk 0 Basic 238.46 GB Online	260 MB Healthy (E	Windows (C:) 195.26 GB NTF Healthy (Boot,	S Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Pa	1000 MB Healthy (Rec	15.99 GB Healthy (Re	covery I	1000 M Healthy	B r (OEN
Disk 0 Basic 238.46 GB Online Disk 1 Removable 15.63 GB Online	260 MB Healthy (f	Windows (C:) 195.26 GB NTF Healthy (Boot,	S Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Pa	1000 MB Healthy (Rec imple Volume	15.99 GB Healthy (Re	covery I	1000 M Healthy	B ((OEN
Disk 0 Basic 238.46 GB Online Disk 1 Removable 15.63 GB Online	260 MB Healthy (f 15.63 GB Unallocated	Windows (C:) 195.26 GB NTF Healthy (Boot,	S Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Pa New S New S	1000 MB Healthy (Rec imple Volume panned Volume	15.99 GB Healthy (Re	covery I	1000 M Healthy	B (OEN
Disk 0 Basic 238.46 GB Online Disk 1 Removable 15.63 GB Online Unallocated Indexton	260 MB Healthy (f 15.63 GB Unallocated	Windows (C:) 195.26 GB NTF Healthy (Boot,	S Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Pa New S New S New S	imple Volume panned Volume triped Volume	15.99 GB Healthy (Re	covery	1000 M Healthy	B (OEN

- 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...

Disk 0 Basic 238.46 GB Online	260 MB Healthy (E	Windows (C:) 195.26 GB NTFS Healthy (Boot, Page File,	LENOVO (D:) 25.00 GB NTFS Healthy (Primary Par	1000 MB Healthy (Rec	15.99 GB Healthy (Recovery I
Disk 1 Removable 15.63 GB Online	NEW VOLL 15.62 GB FA Healthy (Pri	I ME (E:) AT32 imary Partition)			
Unallocated	Primary partit	ion			

• 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 06 6f 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....|
08000000
         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 e8 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....fsf|
00000110 53 66 55 66 68 00 00 00 66 68 00 7c 00 00 66 |SfUfh....fl
00000120 61 68 00 00 07 cd la 5a 32 f6 ea 00 7c 00 00 cd |ah....Z2...|...|
         18 a0 b7 07 eb 08 a0 b6 07 eb 03 a0 b5 07 32 e4
00000130
                                                        |.....2.|
00000140 05 00 07 8b f0 ac 3c 00 74 09 bb 07 00 b4 0e cd
                                                        |.....
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|
```

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! :)