

## Quick Guide To Partitioning A Hard Drive

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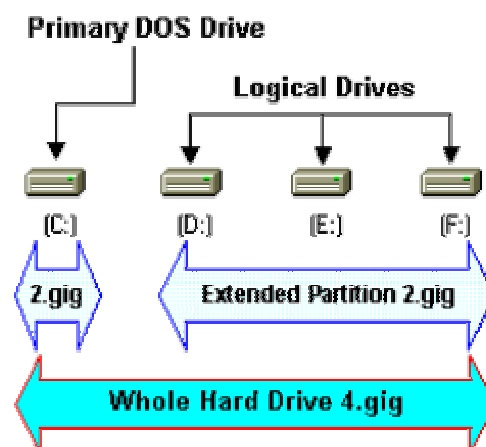
Please note that there are many ways to partition a hard drive and the following only presumes one method which uses DOS partitions for use with FAT32. At present this would be the most common method for the average PC user

Partitioning a hard drive is not that complicated once you understand the basic idea behind it. What we need to understand is the way the partitions are laid out on the drive. In our example we are going to use a 4 gig hard drive and divide it into 4 partitions which the PC will now see as four independent drives 'C', 'D', 'E' & 'F'. Each drive (partition) we want sized as below

- 'C' partition = 2 gig
- 'D' partition = 1 gig
- 'E' partition = 500mb
- 'F' partition = 500mb

If you add up all the above partition sizes you will see it adds up to the full 4 gig of the entire drive (500mb = half a gig)

Now take a look at the diagram below and lets see how these partition's are laid out across the 4 gig drive



**WARNING!! Using Fdisk will destroy all existing data on the entire hard drive so make sure you have backed up any data you may need before using it.**

### Step 1 - Run FDISK

To keep this section short we'll do a example of splitting a 1 gig hard drive into two partitions of 500mb each. FDISK reports the drive as 1032mb with 1034mb of free space, these slight variations between what FDISK tells you on the drive and what the drive itself has actually printed on it is all quite normal. There are explanations for this but they wont be covered here. Run Fdisk from DOS simply by typing 'fdisk' and then hit the return key. You should now be looking at a page that looks like this below

```
Your computer has a disk larger than 512 MB. This version of Windows
includes improved support for large disks, resulting in more efficient
use of disk space on large drives, and allowing disks over 2 GB to be
formatted as a single drive.

IMPORTANT: If you enable large disk support and create any new drives on this
disk, you will not be able to access the new drive(s) using other operating
systems, including some versions of Windows 95 and Windows NT, as well as
earlier versions of Windows and MS-DOS. In addition, disk utilites that
were not designed explicitly for the FAT32 file system will not be able
to work with this disk. If you need to access this disk with other operating
systems or older disk utilities, do not enable large drive support.

Do you wish to enable large disk support (Y/N).....? [N]
```

We are using a 1 gig hard drive and we want large disk support so type 'y' and hit enter. This will now bring you to this page.

```
Microsoft Windows 95
Fixed Disk Setup Program
(C)Copyright Microsoft Corp. 1983 - 1995

FDISK Options

Current fixed disk drive: 1

Choose one of the following:

1. Create DOS partition or Logical DOS Drive
2. Set active partition
3. Delete partition or Logical DOS Drive
4. Display partition information
5. Change current fixed disk drive

Enter choice: [1]

Press Esc to exit FDISK
```

Note here that if you get a choice 5 as above then this means that you have more than one hard drive installed in your computer.

Drive 1 will be the primary master  
Drive 2 will be the primary slave  
Drive 3 will be the secondary master  
Drive 4 will be the secondary slave

**Do make sure you are working on the correct drive before proceeding and also note that a fixed disk is a ENTIRE hard drive and NOT a PARTITION so be careful. If you only have 1 hard drive in your system then you will not get a choice 5.**

### Step 2 - Delete Existing Partitions

You must first delete all partitions that are on the drive already, and they need to be deleted in the following order

1. Delete all Logical DOS drives
2. Delete Extended DOS Partition
3. Delete Primary DOS Drive

For this example we will presume there is only one partition i.e. the whole hard drive is formatted as one. This would mean we only need to delete the Primary DOS Drive. So now type '3' and hit enter. you should now be looking at this

```
                Delete DOS Partition or Logical DOS Drive

Current fixed disk drive: 2

Choose one of the following:

1.  Delete Primary DOS Partition
2.  Delete Extended DOS Partition
3.  Delete Logical DOS Drive(s) in the Extended DOS Partition
4.  Delete Non-DOS Partition

Enter choice: [ 3 ]

Press Esc to return to FDISK Options
```

Enter choice 1 and we get here

```
                Delete Primary DOS Partition

Current fixed disk drive: 2

Partition  Status   Type   Volume Label  Mbytes   System  Usage
D: 1        A       PRI DOS                1032   FAT32   100%

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)

WARNING! Data in the deleted Primary DOS Partition will be lost.
What primary partition do you want to delete..? [1]

Press Esc to return to FDISK Options
```

Look at the top where underneath 'Partition' it says 'D: 1'. This means the first partition on the D drive, which in this screenshot it is my Primary Slave Drive I am deleting, but this will be 'C' if you have only one hard drive installed in your system. Anyhow its partition 1 we are deleting and so we type '1' and hit enter.

And this brings us here

```

                                Delete Primary DOS Partition

Current fixed disk drive: 2

Partition  Status  Type   Volume Label  Mbytes  System  Usage
D: 1      A      PRI DOS                1032   FAT32   100%

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)

WARNING! Data in the deleted Primary DOS Partition will be lost.
What primary partition do you want to delete..? [1]
Enter Volume Label.....? [          ]

Press Esc to return to FDISK Options
```

Look again in the same row we see Volume Label with nothing underneath. If your drive has one then that needs to be typed in next. Our one here has not so next we just hit Enter and we are now here:

```

                                Delete Primary DOS Partition

Current fixed disk drive: 2

Partition  Status  Type   Volume Label  Mbytes  System  Usage
D: 1      A      PRI DOS                1032   FAT32   100%

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)

WARNING! Data in the deleted Primary DOS Partition will be lost.
What primary partition do you want to delete..? [1]
Enter Volume Label.....? [          ]
Are you sure (Y/N).....? [N]

Press Esc to return to FDISK Options
```

Yes we are sure so hit 'y' and Enter and that's our deleting done

```
                Delete Primary DOS Partition

Current fixed disk drive: 2

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)

Primary DOS Partition deleted

Press Esc to continue
```

Press the 'Esc' key and we come back to our main page

### Step 3 - Create Primary DOS Partition

Ok now we are back to the main page.

```
                Microsoft Windows 95
                Fixed Disk Setup Program
                (C)Copyright Microsoft Corp. 1983 - 1995

                FDISK Options

Current fixed disk drive: 1

Choose one of the following:

1. Create DOS partition or Logical DOS Drive
2. Set active partition
3. Delete partition or Logical DOS Drive
4. Display partition information
5. Change current fixed disk drive

Enter choice: [1]

Press Esc to exit FDISK
```

Next we create the Primary DOS Partition by hitting '1' and Enter. We now got three choices

```
                Create DOS Partition or Logical DOS Drive

Current fixed disk drive: 2

Choose one of the following:

1. Create Primary DOS Partition
2. Create Extended DOS Partition
3. Create Logical DOS Drive(s) in the Extended DOS Partition

Enter choice: [1]

Press Esc to return to FDISK Options
```

Hit '1' and Enter for Primary DOS...

```
                Create Primary DOS Partition

Current fixed disk drive: 2

Do you wish to use the maximum available size for a Primary DOS Partition
(Y/N).....? [Y]

Press Esc to return to FDISK Options
```

If we say yes here then all the available space will be taken up by the Primary DOS Drive, so we type 'n' and Enter

We are now here

```
                Create Primary DOS Partition

Current fixed disk drive: 2

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)
Maximum space available for partition is 1034 Mbytes (100% )

Enter partition size in Mbytes or percent of disk space (%) to
create a Primary DOS Partition.....: [ 1034]

Press Esc to return to FDISK Options
```

Now we have to type in the amount of disk space we want to create in the Primary DOS Partition. We have 1034mb available and we want to use half of it (or approximately anyway). In here we will type 500 (i.e. 500mb = half a gig).

```
                Create Primary DOS Partition

Current fixed disk drive: 2

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)
Maximum space available for partition is 1034 Mbytes (100% )

Enter partition size in Mbytes or percent of disk space (%) to
create a Primary DOS Partition.....: [ 500]

Press Esc to return to FDISK Options
```

Now hit Enter

```
                Create Primary DOS Partition

Current fixed disk drive: 2

Partition  Status   Type      Volume Label  Mbytes  System  Usage
D: 1       Status   Type      Volume Label  Mbytes  System  Usage
D: 1       PRI DOS  500      UNKNOWN      48%
```

Primary DOS Partition created, drive letters changed or added

Press Esc to continue

This screen shows us what we have so far. Press 'Esc' takes us back to main screen

```
                Microsoft Windows 95
                Fixed Disk Setup Program
                (C)Copyright Microsoft Corp. 1983 - 1995

                FDISK Options

Current fixed disk drive: 1

Choose one of the following:

1. Create DOS partition or Logical DOS Drive
2. Set active partition
3. Delete partition or Logical DOS Drive
4. Display partition information
5. Change current fixed disk drive

Enter choice: [1]

Press Esc to exit FDISK
```

Next we want to create Extended DOS Partition so hit '1' again

Step 4 - Create Extended DOS Partition

```
                Create DOS Partition or Logical DOS Drive

Current fixed disk drive: 2

Choose one of the following:

1. Create Primary DOS Partition
2. Create Extended DOS Partition
3. Create Logical DOS Drive(s) in the Extended DOS Partition

Enter choice: [1]

Press Esc to return to FDISK Options
```

Hit '2' to create Extended DOS Partition

```
                Create Extended DOS Partition

Current fixed disk drive: 2

Partition  Status  Type    Volume Label  Mbytes  System  Usage
D: 1       Status  Type    Volume Label  Mbytes  System  Usage

Total disk space is 1034 Mbytes (1 Mbyte = 1048576 bytes)
Maximum space available for partition is 534 Mbytes ( 52% )

Enter partition size in Mbytes or percent of disk space (%) to
create an Extended DOS Partition.....: [ 534]

Press Esc to return to FDISK Options
```

534 is already shown as maximum available space for the extended partition and this is what we want to use so hit Enter.

```
                Create Extended DOS Partition

Current fixed disk drive: 2

Partition  Status   Type   Volume Label  Mbytes   System   Usage
D: 1      Status   Type   Volume Label  Mbytes   System   Usage
   2      Status   Type   Volume Label  Mbytes   System   Usage
-----
D: 1      Status   Type   Volume Label  Mbytes   System   Usage
   2      Status   Type   Volume Label  Mbytes   System   Usage

Extended DOS Partition created

Press Esc to continue
```

This page displays some info now press Esc and the next page will tell us we have no Logical Drives Defined

We now have a choice of using all the available space for our Logical DOS Drive (534mb), which is what we want so we just hit Enter.

You could at this point create more than one Logical Drive and this is where we would make up the amount of Partitions that we want, I could for example have 2 Logical Drives by dividing it into 2 sizes of 267mb each by typing 267 and then coming back to this screen again to create the remaining 267mb.

```
                Create Logical DOS Drive(s) in the Extended DOS Partition

No logical drives defined

Total Extended DOS Partition size is   534 Mbytes (1 MByte = 1048576 bytes)
Maximum space available for logical drive is   534 Mbytes (100% )

Enter logical drive size in Mbytes or percent of disk space (%)...[ 534]

Press Esc to return to FDISK Options
```

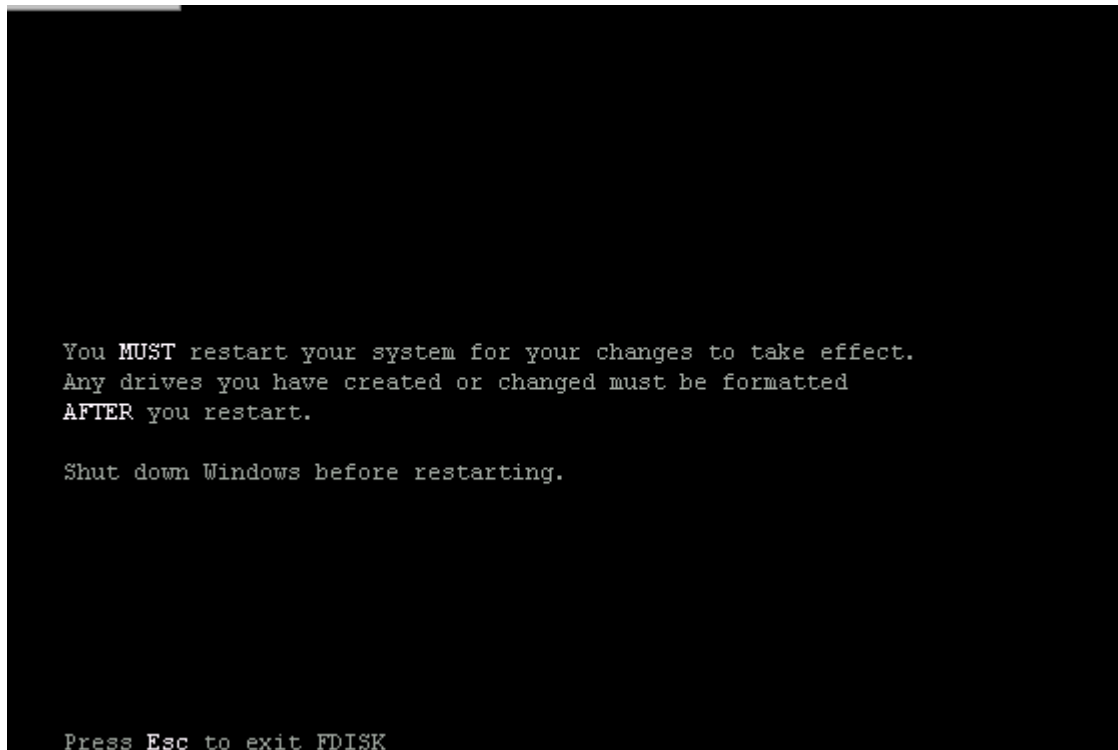
Anyway we want all of it so hit Enter

```
                Create Logical DOS Drive(s) in the Extended DOS Partition

Drv Volume Label  Mbytes  System  Usage
F:                534    UNKNOWN  100%

All available space in the Extended DOS Partition
is assigned to logical drives.
Press Esc to continue
```

Now 'Esc' and we come to here



```
You MUST restart your system for your changes to take effect.  
Any drives you have created or changed must be formatted  
AFTER you restart.  
  
Shut down Windows before restarting.  
  
Press Esc to exit FDISK
```

And we are done. You now need to 'Esc' one more time to exit FDISK and then You MUST restart your computer otherwise DOS will not recognize the new partitions. Once restarted you will now need to format each partition and install the operating system back on if this is to be the drive that contains it.

We now have a hard drive with two partitions of 500mb for the first and 534mb for the second. If this is your only drive in the computer then they will show up as 'C' and 'D'.

That's it finished, now restart your PC with your boot floppy in. Once back to the 'A' prompt proceed to formatting the 'C' drive and then installing your OS.