

FDD: Floppy Disk Drive was another secondary memory component. It was used for long term storage of data files but in recent years, it has been phased out from usage. The reason behind its extinction is its capacity to hold only 1.44 MB data.

It was mounted in the mounting rack inside of the CPU cabinet and is connected with the motherboard on dedicated 34-pin PATA IDE (Integrated Drive Electronics) port.

Physically a Floppy is made up of a thin and flexible Magnetic disk packed inside of a plastic case. Generally this case is what we call the Floppy.

Following are the parts of an FDD that we have to discuss about-

- Floppy disk
- R/W head
- Spindle Motor
- Stepper Motor
- Head Misalignment
- Bezel or Faceplate
- Connectivity

Floppy Disk: A Floppy disk is a thin magnetic disk covered inside of a plastic case. The disk is so thin that it is flexible to an extent. Two different sizes of floppies were available:

1. 3.5 inch (1.44MB)
2. 5.25 inch (2.8MB)

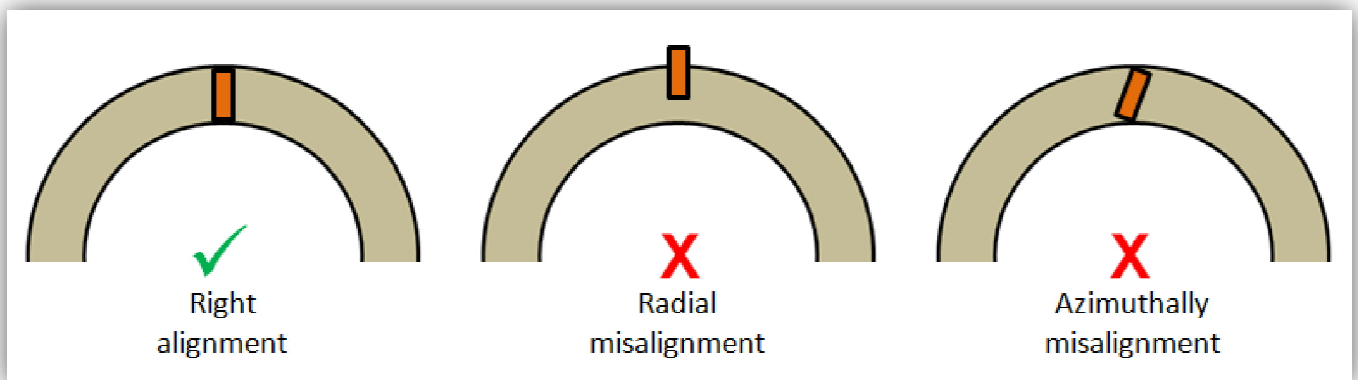
R/W head: An R/W head is an electronic sensor that reads or writes magnetic data to/from the disk surface.

Spindle Motor: It is a motor assembled inside of the FDD to spin the disk on an axis. This is simply to enable the R/W head to access the entire track.

Stepper Motor: This is another motor assembled in the FDD to enable the to and fro movement of R/W head. This is needed to let the R/W head change a track.

Head Misalignment: While continuously working with all the parts and components of an FDD, the R/W head often goes misaligned. Following are the two types of this misalignment:

- 1. Radial Misalignment:** The head goes stuck in between two tracks thereby making a failure in read/write activity.
- 2. Azimuthally Misalignment:** In this misalignment, the head goes angularly drifted in a track. This eventually damages the functionality.



Bezel or Faceplate: It is nothing but the plastic case in which the actual floppy disk lies. There is a metallic shutter that slides to open a window through which the disk is seen.

Connectivity: FDD was to connect with the motherboard using a specific 34-pin PATA IDE cable. No any SATA support was given to FDDs.

Assignments:

- 1.** Differentiate between Radial and Azimuthally misalignment.
- 2.** Briefly discuss about any three FDD parts.