



# SNS COLLEGE OF ENGINEERING

(Autonomous)

DEPARTMENT OF MECHANICAL ENGINEERING



## CONSUMER ELECTRONICS



Guess Today's Topic????







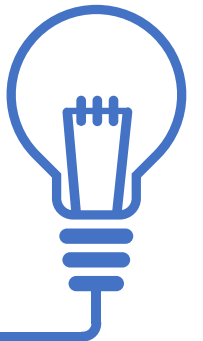
# Home Theater



- **Home Theatre** is a combination of audio and video components designed to recreate the experience of seeing movies in a theatre.
- It gives the better experience than when you watch one on an ordinary television.

Three types are

1. Home-theater-in-a-box system:
2. Sound bar:
3. Component system:





## Types



### 1. Home-theater-in-a-box system:

Usually five surround sound speakers, a subwoofer, and a disc player/amplifier





## 2. Sound bar

A long, thin bar containing several loudspeaker drivers. ...



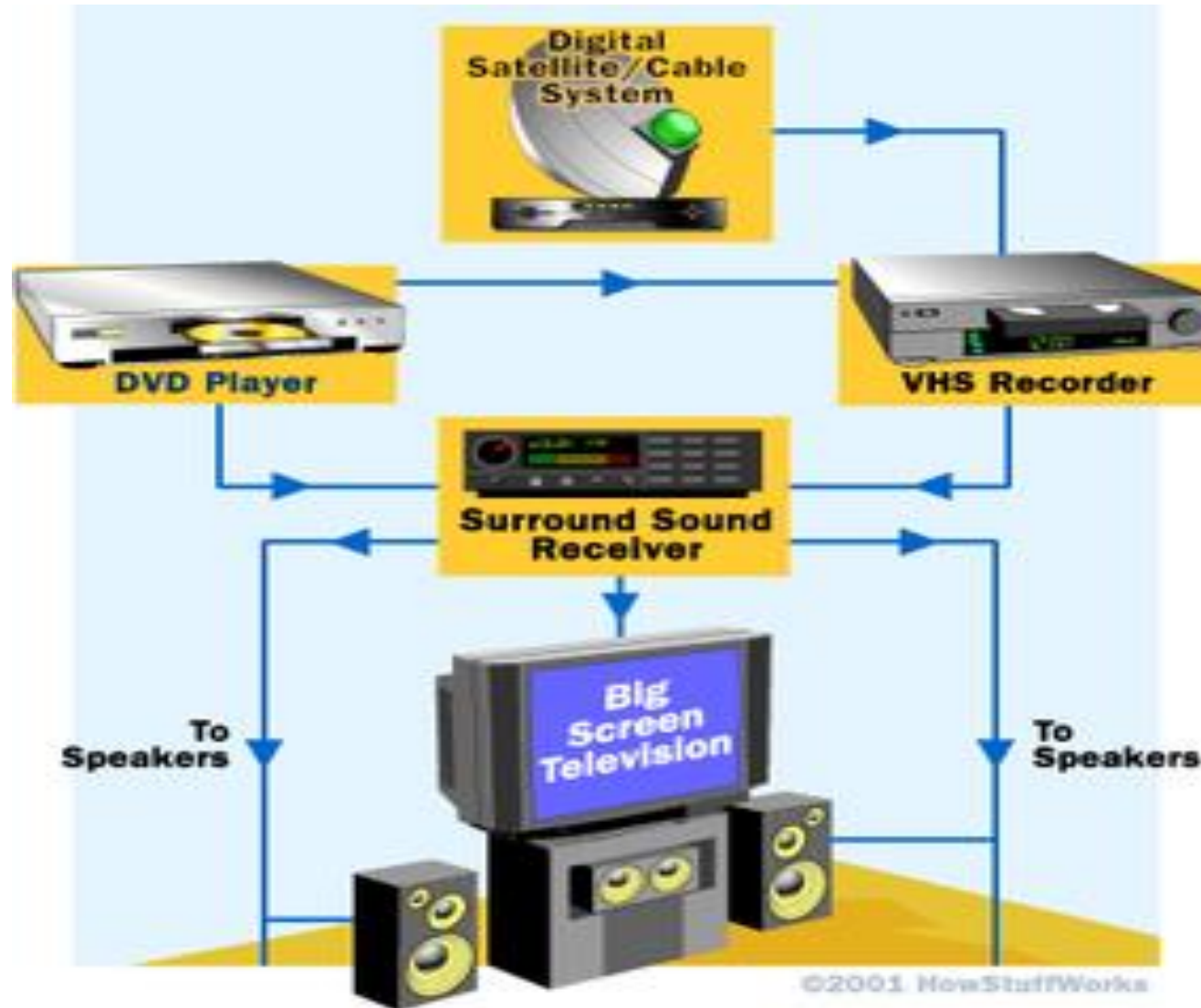


### 3.Component system:

An audio/video receiver, speakers, and any source components (such as a disc player).



# Home Theater







## Working Principal



- **Receiver is the heart of home theatres.** It connects your speakers, video input, and the display device. It is the central hub of your home theater system. Many receivers include their own speakers while others will have inputs that allow for any speakers to be used
- **Power Consumption.** We hooked up a wattmeter (everybody should have one) to a typical 37-inch LCD HDTV and cable box, and found that the combo used a total of **172 watts**. When we added a 5.1-channel home theater with a powered subwoofer, it kicked our consumption up to 244 watts
- The receiver sends the video on to your television and sends the audio to the decoder. The decoder sorts out the different sound channels from the video signal, and then sends the information to amplifiers for each sound-channel output. These amplifiers are connected to the appropriate speaker or speakers.







## Working Principal



- For the working of home theater system it needs 4 components: a watching device (TV), a media device (DVD player, games console), speakers, and an AV receiver are required. These are the basic parts for a home theater to function but it can be as complex as you want.
- The main purpose of a home theatre is to improve your viewing experience compared to standard technology, and ultimately to emulate a cinema experience as much as possible. This means that to get the most from a home theater, you often have to look beyond the essential elements.
- Having a great home theater system means that you don't stop at a DVD player and a big TV. For example, many users go on to add extra soundproofing and light exclusion devices, which further add to the viewing experience. Some even replace their TV with a projector and screen for a truly cinematic experience





## Advantages



- A home theater **provides an entertainment option suitable for watching TV and movies at home with a little extra excitement.**
- For many, going to the local cinema is a distant memory. You can stream relatively new movies and binge-watch TV shows in comfort.





## Compact Discs (CD)

- Compact Disc was invented by James Russel in 1965. In 1982 the first CD recording 'The Visitors' by ABBA was recorded.
- **A CD** stores data or audio which can be played in a regular CD player in your home or car. There are major two types :
  - **CD-R (CD Recordable)**, which are the most popular can be written to only once. The content is permanently stored .
  - **CD-RW (CD Rewritable)**. Rewritable discs can be erased and rewritten to repeatedly.
  - Both can store up to 700 MB of data or 80 min of audio.
- CD-RW uses the laser power to melt the data layer so new data can be added





# DVD Types/Format

- DVD+R (plus R) and DVD-R (dash R) –
  - These two are the record once formats.
- DVD+RW and DVD-RW –
  - These are the rewritable formats and can be rewritten over 1000 times.
- DVD-ROM
  - It is a read only compact disc that can hold a minimum of 4.7 GB enough for a full length digital movie
  - One of the best features of DVD-ROM drives is that they are backward-compatible with CD-ROMs. This means that DVD-ROM players can play old CD-ROMs and video CDs, as well as new DVD-ROMs.
- DVD-RAM
  - Can be recorded and erased repeatedly but are compatible only with devices that support the DVD- RAM format. Discs can be rewritten 100,000 times
  - It will only play back in a DVD-RAM drive.





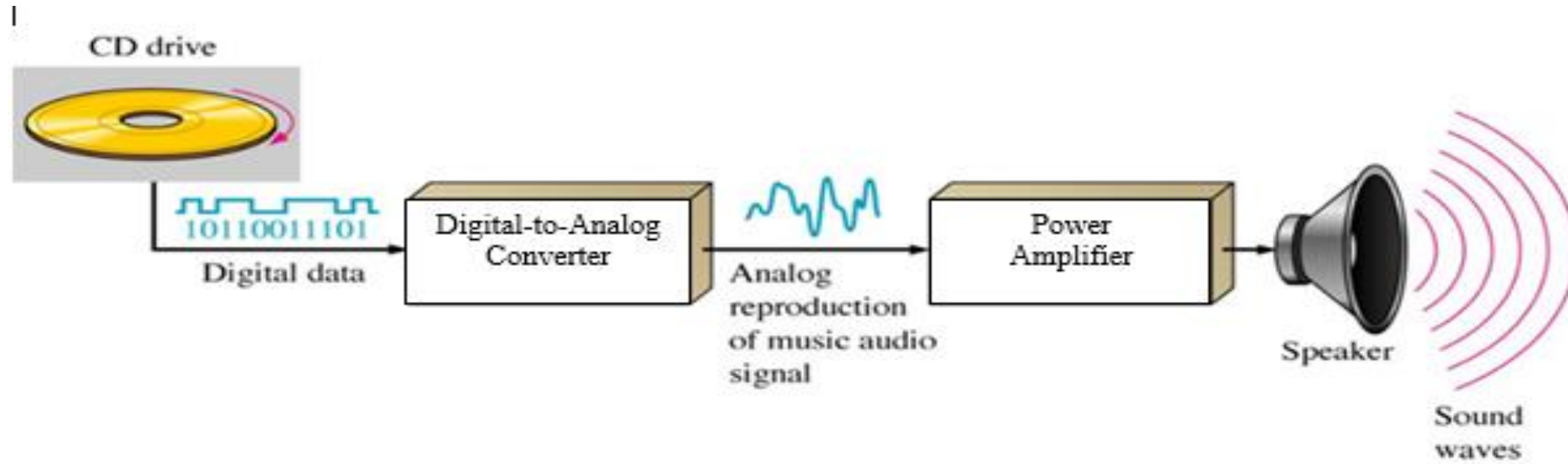
## Video Compact Disc (VCD)

- VCD was introduced in 1993 by JVC, Philips, SONY and Matsushita. It is based on the CD-ROM format and is specifically designed to hold MPEG-1 video data and to include interactive capabilities.
- MPEG is the standards for audio and video compression and transmission.
- Although they have been superseded by other media, VCDs continue to be retailed as a low-cost video format.





# Working Principle







Thank  
you

