HELLO EVERYONE

TEAM NO. 6
PRESENTATION 1

TYPES OF SPEAKERS, HEADPHONES & PROJECTORS

Introduction

01.

SPEAKERS

A speaker is a transducer that converts electrical signals into sound waves.

02.

HEADPHONES

Headphones are a pair of small speakers that you wear over your ears to listen to audio privately.

03.

PROJECTORS

A projector is a device that projects an image onto a surface, such as a screen or wall.

SPEAKERS

History of Speakers

Loudspeakers have a history dating back to late 19th-century telephone experiments. In 1915, practical dynamic speakers were invented, with sound quality improvements in the 1930s and the landmark Altec Lansing 604 loudspeaker in 1943. Edgar Villchur's acoustic suspension design in 1954 enhanced bass response for stereo sound. Today, loudspeakers are crucial in various applications, showcasing a rich history of innovation.

Types of speakers

Short Range

1 – Sound bars/ Floor standing

2 – Mini Speakers

Long Range

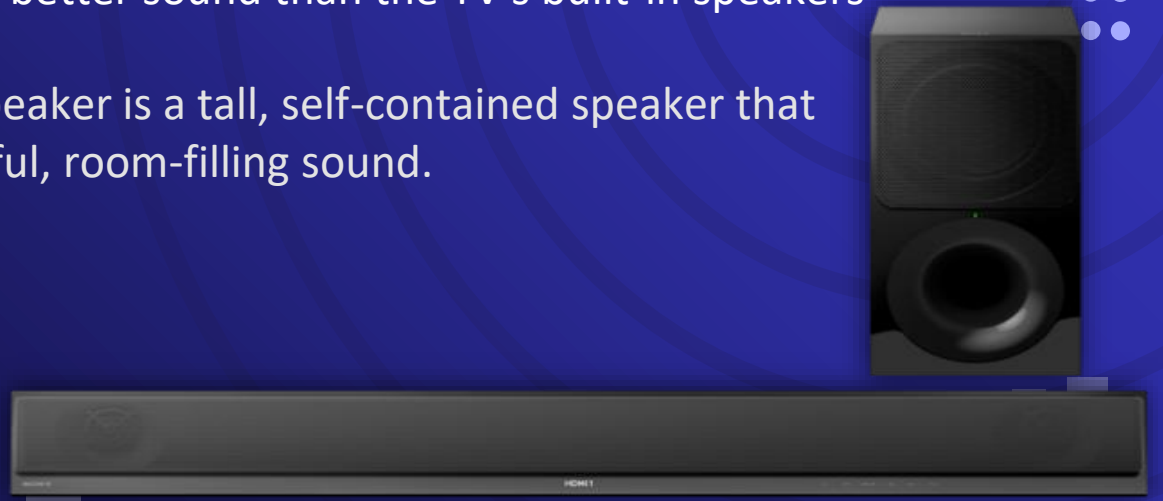
1 – Loud Speakers

2 – Subwoofers

Soundbars & Floor standing

A soundbar is a long, thin speaker that sits below or above your TV and delivers better sound than the TV's built-in speakers

A floor-standing speaker is a tall, self-contained speaker that delivers powerful, room-filling sound.



Mini Speakers

Mini speakers are small, portable speakers that offer good sound quality for their size. They are typically less than 6 inches in diameter and come with features such as Bluetooth connectivity, built-in microphones, and long battery life. Mini speakers are versatile and can be used for a variety of purposes, such as listening to music while traveling, having a picnic in the park, or hosting a small party.

Loud Speakers

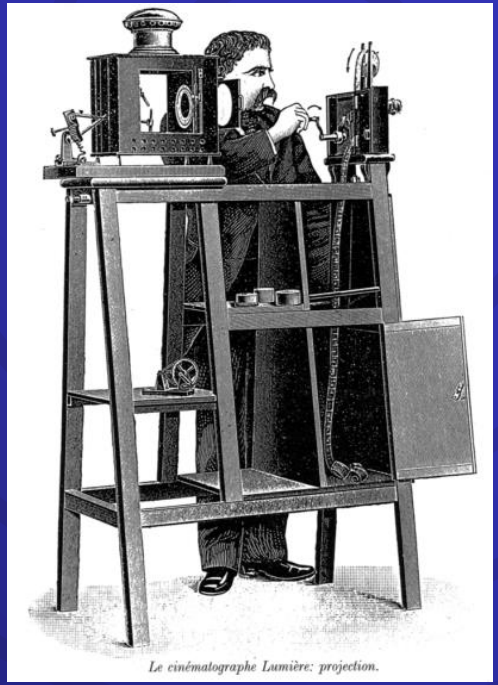
Loudspeakers amplify and reproduce sound, offering advantages like high-quality audio for diverse applications but come with size limitations, potential distortion at high volumes, and power requirements. Examples range from traditional cone drivers to modern electrostatic and planar magnetic speakers, with consumer choices like portable Bluetooth speakers and powerful line array systems for large venues.

Subwoofers

Subwoofers are specialized for reproducing low-frequency sounds under 100 Hz, providing deep bass that enhances audio quality, particularly for music and movies. They can improve sound balance and clarity but are large, require precise placement, and may be costly, potentially causing disturbances in shared spaces. Subwoofers are found as standalone units for home theaters and car audio systems, as well as integrated components in high-end speaker systems, with popular brands like Klipsch, SVS, and Yamaha offering various subwoofer options for diverse audio setups.

History of Projectors

The history of projectors is a journey from ancient projection methods like the camera obscura and magic lanterns to modern digital projectors. It can be divided into three eras: very early projection systems, analog projection with lenses and optics, and digital projection using high-end technology. Notable inventions include the magic lantern in 1659, episcope in 1756, and the first movie projector by the Lumière brothers in the late 19th century.



Le cinématographe Lumière: projection.

Types of Projectors

Technology

1 – LCD Projectors

2 – DLP Projectors

3 – LED Projectors

4 – LCoS Projectors

5 – Laser Projectors

Classified by users

1 – Business Projectors

2 – Home theater Projectors

3 – Portable Projectors

LED PROJECTORS

LED projectors use light-emitting diodes (LEDs) as their light source. LED projectors are known for their long lifespan and low energy consumption.

LCD PROJECTORS

LCD projectors use three LCD panels to create images. Each panel corresponds to a primary color: red, green, and blue. The panels are aligned so that light passes through all three panels to create a full-color image. LCD projectors are known for their accurate color reproduction and wide viewing angle.

DLP PROJECTORS

DLP projectors use a digital micromirror device (DMD) to create images. The DMD is a chip made up of millions of tiny mirrors that can be tilted to reflect light or not. By tilting the mirrors, the projector can create different shades of gray and color. DLP projectors are known for their high brightness and contrast ratio, making them ideal for use in brightly lit rooms.

LCoS Projectors

LCoS projectors combine the technologies of DLP and LCD projectors. They use a liquid crystal layer on a silicon chip to create images. LCoS projectors offer the best of both worlds, with the high brightness and contrast ratio of DLP projectors and the accurate color reproduction and wide viewing angle of LCD projectors

LASER PROJECTORS

Laser projectors use lasers as their light source. Laser projectors are known for their extremely high brightness and contrast ratio.

Classified by users

Projectors can also be classified by their application

Business Projectors

Business projectors are designed to be used in conference rooms and classrooms. They are typically bright and have a high contrast ratio so that images can be seen clearly even in well-lit rooms.

Home Theator Projects

Home theater projectors are designed to be used in home theater settings. They typically have a high resolution and contrast ratio to produce high-quality images.

Portable Projectors

Portable projectors are designed to be lightweight and easy to transport. They are typically used for business presentations or for projecting movies and videos in informal settings.

History of Headphones

Headphones have a rich history dating back to the late 19th century, evolving from basic earpieces to the advanced and versatile audio accessories we use today, driven by a desire for private and high-quality listening experiences. From early electrical models to modern wireless and noise-canceling designs, headphones have consistently adapted to the changing needs and technologies of consumers.

Types of Headphones

1 – Over ear/ On ear headphones

2 – In Ear Headphones

3 – Wireless Headphones

4 – Noise Canceling Headphones

5 – Bone Conduction Headphones

6 – Gaming Headphones

7 – DJ Headphones

Over ear/ On ear headphones

Over-ear headphones, also known as circumoral headphones, are the largest and most comfortable type of headphones. They cover the entire ear and create a good seal, which helps to block out external noise

On-ear headphones, also known as supra-aural headphones, are smaller and more portable than over-ear headphones. They sit on top of the ear, rather than covering it entirely.

In Ear Headphones

In-ear headphones, also known as earbuds, are the smallest and most portable type of headphones. They fit inside the ear canal and create a good seal, which helps to block out external noise. In-ear headphones typically offer good sound quality, but they may not be as comfortable to wear for long periods of time as over-ear or on-ear headphones.

Wireless Headphones

Wireless headphones use Bluetooth or another wireless technology to connect to the source device. This eliminates the need for a cable, which makes them more convenient and portable. Wireless headphones typically offer good sound quality, but they may not be as good as wired headphones in terms of audio performance.

Noise canceling Headphones

Noise-canceling headphones use active noise cancellation technology to reduce external noise. This makes them ideal for use in noisy environments, such as airplanes, trains, and buses. Noise-canceling headphones typically offer good sound quality, but they can be more expensive than other types of headphones.

Bone conduction headphones

Bone conduction headphones transmit sound vibrations through the bones of the skull, rather than through the eardrums. This makes them ideal for people with hearing loss, as well as for people who want to listen to music without blocking out their surroundings. Bone conduction headphones typically offer good sound quality, but they may not be as bass-heavy as other types of headphones.

Gaming Headphones

Gaming headphones are designed specifically for use with video games. They typically have features such as surround sound, noise cancellation, and a built-in microphone. Gaming headphones can help to improve the immersive experience of playing video games.

DJ Headphones

DJ headphones are designed for use by DJs. They typically have features such as high output, swiveling ear cups, and a durable construction. DJ headphones can help DJs to monitor their music and mix tracks more effectively.

TEAM MEMBERS

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6.	SATHUSHA	2021/ASP/40
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8.	SUVEKA	2021/ASP/41
9.	LAKMAL	2020/ASP/96
10.	RAVINDU	2021/asp66

THANK YOU!

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