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B.A. (HONS.) Mass Communication III Year

Sub. - INTRODUCTION TO AUDIO VISUAL MEDIA Paper II

**B.A. (HONS.) Mass Communication  
III Year  
Intro to audio visual media  
Paper- II**

Unit-I	Brief history of television in India, private channel
Unit-II	Camera and its parts Television language & grammar Television production process
Unit III	Lighting :types of lighting
Unit IV	Equipment layout in TV studio chroma key, microphone, vision mixer
Unit V	Principles of editing, types of cut & continuity, video editing device



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## Unit-I

### **Brief history of television in India, private channel**

Television came to India on September 15, 1959 with experimental transmission from Delhi. It was a modest beginning with a makeshift studio, a low power transmitter and only 21 community television sets. All India Radio provided the engineering and programme professionals. A daily one-hour service with a news bulletin was started in 1965. In 1972 television services were extended to a second city—Mumbai. By 1975 television stations came up in Calcutta, Chennai, Srinagar, Amritsar and Lucknow. In 1975-76 the Satellite Instructional Television Experiment brought television programmes for people in 2400 villages in the most inaccessible of the least developed areas through a satellite link to India for one year. Doordarshan is a Public broadcast terrestrial television channel run by Prasar Bharati, a board formed by the Government of India. It is one of the largest broadcasting organizations in the world in terms of the number of studios and transmitters. Doordarshan had its beginning with the experimental telecast started in Delhi in September, 1959 with a small transmitter and a makeshift studio. The regular daily transmission started in 1965 as a part of All India Radio. The television service was extended to a second city Mumbai in 1972. Till 1975, only seven cities were covered by Doordarshan and it remained the only television channel in India. Television services were separated from Radio in 1976. Each office of All India Radio and Doordarshan placed under the management of two separate Director Generals in

New Delhi. Finally, its existence came into being when Doordarshan became a National Broadcaster. It is one of the largest broadcasting organizations in the world in terms of the infrastructure of studios and transmitters. Recently it has also started digital Terrestrial Transmitters. Doordarshan is the only network that it is permitted to broadcast television signals domestically. In a communications breakthrough for Indian Television in July 1995, Doordarshan agreed, for a US \$1.5 million annual fee and 50 percent of advertising revenue when it exceeds US\$1.5 million, to allow CNN to broadcast twenty-four hours a day via an Indian satellite. Indian television channel Doordarshan offers national, regional, and local service of Indian television viewers. DD became national when it started to telecast national programmes in the year 1982. In the same year, colour TVs were introduced in the Indian markets. The

first colour programmes were the live telecast of the Independence Day parade on 15\* August, 1982, followed by the Asian Games being held in Delhi. The eighties was the era of Doordarshan with soaps like Hum Log (1984), Buniyaad (1986-87) and mythological dramas like Ramayana (1987-88) and Mahabharata (1988-89) glued millions to Doordarshan. (Other



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popular programmes included Hindi film songs based programmes like Chitrahaar and Rongoli followed by the crime thrillers like Karamchand (starring Pankaj Kapoor), Byomkesh Bakshi and JankiJasoos. Now more than 90 percent of the Indian population receives 49-Doordarshan (DDI) programmes through a network of nearly 1400 terrestrial transmitters. About 46 Doordarshan studios are presently producing TV programmes. Currently, Doordarshan operates 19 channels - two All India channels, 11 Regional Languages Satellite Channels (RLSC), four State Networks, an International channel, a Sports Channel and two channels (DD-RS & DD-LS) for live broadcast of parliamentary proceedings. DD-1 national programmes, regional programmes and local programmes are carried on time-sharing basis. DD-News channel was launched on 3<sup>rd</sup> November 2003 which replaced the DD-Metro Entertainment channel that provides 24 hour news service.

The following are some major landmarks in the history of Doordarshan—

15.09.1959 Experimental transmission from Delhi

24.10.1961 School television for Delhi students.

15.08.1965 Regular service with daily news bulletin in Hindi.

26.01.1967 Krishi Darshan - programmes for farmers.

02.10.1972 Television in a second city—Mumbai

01.08.1975 SITE launched.

01.01.1976 Commercials introduced.

01.04.1976 Doordarshan delinked from AIR.

15.08.1982 National programmes, colour transmission and networking through satellite.

19.11.1982 Expansion through LPTs launched.

15.07.1984 First mass appeal serial Hum Log.

15.08.1983 Countrywide classroom of UGC launched.

09.08.1984 Second channel at Delhi.

09.08.1985 First regional satellite network in Maharashtra.

23.02.1987 Morning transmissions



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26.01.1989 Afternoon transmissions

01.04.1993 Metro channel with satellite networking

01.10.1993 Regional language satellite channels.

15.08.1994 Restructuring of channels -DDI to DD 13.

14.03.1995 DD India—International channel.

23.11.1997 Prasar Bharati—the autonomous broadcasting corporation of India.

18.03.1999 DD Sports channel inaugurated.

10.07.1999 News on the hour.

15.08.1999 DD News and current affairs channel. (Test transmission).

### **Private channels**

Cable and Satellite Television :

The decade of 1990s brought a big challenge for Doordarshan. The CNN covered Gulf War through satellite and telecast it in national channels of most of the western and Asian countries. It has created potentiality among the viewers to receive and watch foreign broadcast via satellite particularly in developing countries. In 1992, a Hong Kong based group of companies launched STAR TELEVISION (Satellite Television Asian Region). The programmes of STAR Television are beamed by Asian set Satellite. Its channel Star Plus, Prime Sports, BBC and MTV (now replaced by V Channel) beam their signal round the clock. The Hindi channel Zee TV also showed its programmes by hiring a transponder from Star TV.

The advent of Satellite television was a boon for cable operators. It



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motivated them to receive the programmes of Star TV, CNN, ATN,

CNBC, Aaj Taak, NDTV 24 X 7, Headlines Today, BBC, STAR Movies,  
ZEE TV, SONY, SAHARA ONE, ZEE CINEMA, Pakistan TV etc.

Apart from linking satellite channels, cable operators also show their own programmes in their own local channel (mainly films, popular serials and film based programmes). It provided an alternative of the DD to Indian middle class families. The popularity of satellite television was not confined only to metropolitans but it also became popular in small towns and villages of India. This growing popularity of satellite television first compelled DD to improve the quality of the programs on its metro channel with an assumption that the phenomenon of satellite TV shall be confined to metros. But after receiving reports about its popularity in  
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small towns the Ministry of Information and Broadcasting, Govt of India decided to launch some more channels through Satellite INS AT 2B.

Cable television came to the lower middle class localities in the bigger cities of Gujarat and Maharashtra in 1984. Initially it was considered as a cost-effective alternative to watch borrowed cassettes of feature films. As the investments required were small, the local entrepreneurs took it in a big way.

A privileged few watched CNN programmes during the Gulf War of 1991 in five star hotels and with the launch of ASIASAT-1 later that year, the cable operators could access the star channels. Zee TV was launched in the October 1992 by the pioneer Subhash Chandra, the driver of the expansion of cable television. In 2001, ZEE TV became a pay



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channel. With a reach of more than 80 countries and access to more than

225 million viewers globally, cable or satellite TV has created strong demand for the growth of the satellite and cable industry in India. The satellite channels logo became synonymous with entertainment of the Indian kind topping TRP ratings. Satellite TV channels programming delivers a variety of choices for all segments of the audience, including primetime comedy, drama series, television movies, miniseries, theatrical films, specials, children's programs, daytime dramas, game shows, and late night shows. Their menu kept expanding and so did the number of channels, keeping pace with the phenomenal growth of an audience spread across Asia, Africa and Europe.



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## UNIT II

### Camera

#### **Parts of the Camera: Definitions and Diagrams**

**Film advance lever:** moves the film from one frame to the next and also tensions the shutter

**Frame counter:** built into the film advance lever, this tells you how many frames you've shot:

note that this counter moves even when there is no film in the camera, or when your film is not

advancing properly: the fact that the frame counter is moving does not in any way guarantee

that your film is actually advancing

**film compartment:** where the film cassette goes when you load film into the camera

**take-up spool:** exposed film is rolled on to this spool, but must be rewound into the film

cassette before the camera back is opened again; you can turn this spool by hand to gain access

to one of the film insertion slits, and you should insert the film leader into one of these slits as

securely as possible

**rewind button:** should be pressed before rewinding the film: it releases the film from the take up

spool and sprockets (Rewinding film without pressing this button may shred the edges of

the film.)



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rewind knob: pull up to open camera back (also: it will turn counterclockwise as film is

advanced, indicating that the film has been loaded properly and all is well)

rewind lever: turn this lever to rewind the film (after exposure) back into the cassette

shutter speed dial: allows you to set different shutter speeds: the shutter speed is the length of

time, or interval, during which an exposure is made

film speed window/dial: window shows the film speed of the film you are using; lift outer part

of the shutter speed dial to change this speed; once you set the proper film speed – that is, to

match the light-sensitivity characteristics that you know the film you have loaded into your

camera possesses – don't change this setting!

viewer or viewfinder: allows you to see what you are including in your composition: what

you are photographing (With a single lens reflex camera (SLR), you are actually seeing what

the lens sees: mirrors and mirrored prisms bounce the image from the lens up through the

viewfinder.)

shutter button: sets in motion the opening and closing of the shutter: it's very important to

squeeze this button gently so you don't move the camera during the exposure

camera back: must close securely so as to ensure that the camera has no light leaks; the back

has a pressure plate which keeps the film being exposed pressed flat to ensure sharpness



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flash shoe: place to attach an electronic flash to the camera: an electrical contact ensures

that a flash unit placed here will trigger when the shutter button is pressed

lens: gathers light by refracting and transmitting it and forms an image which, in a camera, is

projected onto light-sensitive material (usually film)

focusing ring: allows you to bring objects at different distances into focus by changing the

positioning of lens elements

f-stop selections (aka aperture ring): allows you to set different apertures (openings of the

lens)

[depth-of-field scale (on Pentax K-1000, but not on Nikon FM-10) allows you to determine

the range (near to far) of objects which will appear to be in focus (i.e., acceptably sharp) (The

reason no depth-of-field scale is provided on the lens of the Nikon FM-10 is because the camera

itself has a depth of field preview lever, which lets you actually see in advance, through the

viewfinder, what the near-far range of sharpness will be: see below)]

distance scale: a scale of distances, usually marked in both feet and meters: after focusing the

lens on an object, read its distance from you by looking at the number on the distance scale

across from the distance marker, which is a fixed mark on the lens barrel

distance marker: a on the lens barrel opposite which you read both the f-stop numbers and



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the distance scale

[depth of field preview lever (on Nikon FM10, but not on Pentax K-1000): a lever that shuts

down your f-stop to the setting you've chosen on the lens to allow you to see precisely how

much depth of field your photo will have: when you press the depth of field preview lever, if

you've selected a relatively small aperture (e.g., f11 or f16), the viewfinder will get much

darker, since you are now allowing much less light in. When you don't press the lever, the

camera always shows you the scene through the lens at its widest aperture.]

[light meter (aka exposure meter): measures the amount of light coming into your camera

through the lens and gives you information to you so that you can change camera settings (fstop

and shutter speed) to ensure a good exposure; what you generally see of the light meter is

a display in the camera's viewfinder, often of a "red light/green light" or a "match needle"

type. Four factors will affect the light meter reading (i.e., will "make the needle move" or will

make the lights change from red plus or red minus to green, etc.): the ISO setting you've dialed

into the film speed window; 2. the brightness of the scene at which you're aiming the camera; 3.

the aperture (f-stop) you've selected; 4. the shutter speed you've selected.]

**Television grammar**



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Cut. Sudden change of shot from one viewpoint or location to another. On television cuts occur on average about every 7 or 8 seconds. Cutting may:

change the scene;

compress time;

vary the point of view; or

build up an image or idea.

There is always a reason for a cut, and you should ask yourself what the reason is. Less abrupt transitions are achieved with the fade, dissolve, and wipe

Matched cut. In a 'matched cut' a familiar relationship between the shots may make the change seem smooth:

continuity of direction;

completed action;\*

a similar centre of attention in the frame;

a one-step change of shot size (e.g. long to medium);

a change of angle (conventionally at least 30 degrees).

\*The cut is usually made on an action (for example, a person begins to turn towards a door in one shot; the next shot, taken from the doorway, catches him completing the turn). Because the viewer's eye is absorbed by the action he is unlikely to notice the movement of the cut itself.

Jump cut. Abrupt switch from one scene to another which may be used deliberately to make a dramatic point. Sometimes boldly used to begin or end action. Alternatively, it may be result of poor pictorial continuity, perhaps from deleting a section.

Motivated cut. Cut made just at the point where what has occurred makes the viewer immediately want to see something which is not currently visible (causing us, for instance, to



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accept compression of time). A typical feature is the shot/reverse shot technique (cuts coinciding with changes of speaker). Editing and camera work appear to be determined by the action. It is intimately associated with the 'privileged point of view' (see narrative style: objectivity).

**Cutting rate.** Frequent cuts may be used as deliberate interruptions to shock, surprise or emphasize.

**Cutting rhythm.** A cutting rhythm may be progressively shortened to increase tension. Cutting rhythm may create an exciting, lyrical or staccato effect in the viewer.

**Cross-cut.** A cut from one line of action to another. Also applied as an adjective to sequences which use such cuts.

**Cutaway/cutaway shot (CA).** A bridging, intercut shot between two shots of the same subject. It represents a secondary activity occurring at the same time as the main action. It may be preceded by a definite look or glance out of frame by a participant, or it may show something of which those in the preceding shot are unaware. (See narrative style: parallel development) It may be used to avoid the technical ugliness of a 'jump cut' where there would be uncomfortable jumps in time, place or viewpoint. It is often used to shortcut the passing of time.

**Reaction shot.** Any shot, usually a cutaway, in which a participant reacts to action which has just occurred.

**Insert/insert shot.** A bridging close-up shot inserted into the larger context, offering an essential detail of the scene (or a reshooting of the action with a different shot size or angle.)

**Buffer shot (neutral shot).** A bridging shot (normally taken with a separate camera) to separate two shots which would have reversed the continuity of direction.



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**Fade, dissolve (mix).** Both fades and dissolves are gradual transitions between shots. In a fade the picture gradually appears from (fades in) or disappears to (fades out) a blank screen. A slow fade-in is a quiet introduction to a scene; a slow fade-out is a peaceful ending. Time lapses are often suggested by a slow fade-out and fade-in. A dissolve (or mix) involves fading out one picture while fading up another on top of it. The impression is of an image merging into and then becoming another. A slow mix usually suggests differences in time and place. Defocus or ripple dissolves are sometimes used to indicate flashbacks in time.

**Superimpositions.** Two or more images placed directly over each other (e.g. an eye and a camera lens to create a visual metaphor).

**Wipe.** An optical effect marking a transition between two shots. It appears to supplant an image by wiping it off the screen (as a line or in some complex pattern, such as by appearing to turn a page). The wipe is a technique which draws attention to itself and acts as a clear marker of change.

**Inset.** An inset is a special visual effect whereby a reduced shot is superimposed on the main shot. Often used to reveal a close-up detail of the main shot.

**Split screen.** The division of the screen into parts which can show the viewer several images at the same time (sometimes the same action from slightly different perspectives, sometimes similar actions at different times). This can convey the excitement and frenzy of certain activities, but it can also overload the viewer.

**Stock shot.** Footage already available and used for another purpose than the one for which it was originally filmed.

**Invisible editing:** See narrative style: continuity editing.



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## **The Production Process**

The production process refers to the stages (phases) required to complete a media product, from the idea to the final master copy. The process can apply to any type of media production including film, video, television and audio recording. The stages in each medium vary; for example, there is obviously no storyboard in an audio recording. However the same general concepts work for any medium.

The three main stages of production are:

Pre-production: Planning, scripting & storyboarding, etc.

Production: The actual shooting/recording.

Post-production: Everything between production and creating the final master copy.

Other stages include:

Financing: This happens before pre-production, and involves budget forecasting, finding investors, etc.

Screenplay: This can be considered a separate stage before pre-production.

Distribution: After post-production, delivering the content to the audience (e.g. film prints, CD/DVD, etc).



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## Unit IV

### Lighting : Types of lighting

Lighting can emphasize important details or hide them. It can flatter a subject by bringing out positive attributes, and it can de-emphasize or hide less attractive attributes. Lighting can even impart a sinister and hostile look. It all depends on how you choose to use the concepts. Television is based on the medium of light; in fact, without light there could be no video. Just as sound must be skillfully controlled in audio production, light must be expertly controlled in television. As video — especially HDTV — has begun to emulate the more artistic dimensions of film, there has been a greater emphasis on creative lighting.

before you can successfully control light, you need to understand and control its three basic characteristics: coherence quality• color temperature• intensity•

2.1. Lights: Hard Light Light that is transmitted directly from a small point source results in relatively coherent parallel rays. This gives the light a hard, crisp, sharply defined appearance. The light from a clear, unfrosted light bulb, a focused spotlight, or the noonday sun in a clear sky, all represent hard light sources. Hard light casts a sharp, clearly defined shadow. When hard light is used to illuminate a face, imperfections in the skin stand out. The result is less than flattering. Several types of lighting instruments are used in TV to create hard light, including the beam-spot projector and the ellipsoidal spotlight. Soft Light Soft diffused light has the opposite effect . Soft light sources are used in production to create a broad, even area of light. In the field, videographers often rely on umbrella reflectors to create a soft lighting effect. This is simply a light bounced off the inside of a silver or white, umbrella-like reflector. Because soft light tends to hide lines, wrinkles and blemishes, it's desirable in doing glamour work. A soft light source placed close to the camera minimizes surface detail. The effect is commonly referred to as flat lighting. Although it has certain applications, especially in extreme close-ups of objects where shadows would obscure important details, flat lighting leaves subject matter somewhat "dimensionless." When used over a large area, it can impart an arid and sterile-looking appearance. Lighting: Ultra-Soft Lighting There are a few occasions when ultra-soft lighting is necessary to keep video equipment from exceeding its brightness or contrast range limitations and as a result compressing losing important detail.

### Basics of Lighting: Studio Lighting

Studio lighting can be broken down into two categories, continuous and flash. While continuous lighting has two main advantages there are many disadvantages. The good points of continuous light: It's inexpensive, and makes a good starting point for anyone on a small• budget. You can see what the light is doing and where the shadows and highlights• are. The main disadvantages of continuous light: It generally produces more heat than light, very uncomfortable!• The light that it produces is not balanced to daylight. • What does this mean



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in practical terms? The heat produced by a continuous light can make you and your subject very hot and bothered, but because of the very bright light it will also have the effect of closing down the iris in your model's eyes, which it is generally accepted, doesn't make a good portrait. We have all taken photos in artificial light and ended up with yellow pictures! To your eyes, the light from a tungsten bulb looks white, but it isn't. Colour temperature the colour of the light is measured in degrees Kelvin, daylight is around 5,600K and a tungsten bulb is more like 3,200K and therefore records on daylight balanced film as yellow. This can be overcome in three ways: Firstly, you can use tungsten balanced colour film. Secondly, you can put a filter on your lens, which will enable you to use any daylight film. The big problem with these two solutions is that as the tungsten filament in the bulb burns it leaves a small residue on the inside of the glass envelope. This means that the colour of the light gradually becomes more yellow as the bulb ages. This brings us to flash. With a normal on-camera flashgun there is no way of

knowing what the lighting effect will be, except to say that if you are using it fitted on the camera - it will be pretty awful! The advantages of studio flash are - modelling lamp, consistency, power and control. Studio flash units are fitted with a continuous lamp, which can be seen on this photograph sitting in the centre of the circular flash tube. Because of its position it gives a very accurate indication of the angle and quality that the flash will produce when fired. This makes your lighting easy to set-up, because what-you-see-is-what-you-get'. As this lamp is relatively low powered you don't get the heat or brightness problem we talked about with continuous light. The only thing to remember is that the flash will be a much stronger light, so the shadows will be darker and the highlights will be lighter. To trick your eye/brain built-in compensation device when setting up lighting, first close one eye (a camera only has one) then squint through your lashes. This has the effect of increasing the contrast level you can see and is much more like what the camera will record. Consistency Remember how we said that as tungsten bulb burnt it got more and more yellow? Well with flash every time you press the shutter the colour of the light from the flashtube is balanced to daylight. Power Modern flash units give huge amounts of power, released in a fraction of a second typically with a unit such as an Elinchrom this is around 1/2500th second!). For most home users a unit with a power of 250, 300, 500 or 600 watt/seconds is usually sufficient. Watt/seconds or Joules the same thing is the measure of the power that a flash unit can produce. So if your 600w/s unit was set up two metres from your subject and you were getting a flashmeter reading of f/16, then a 300w/s unit in the same place would give a stop less at f/11.



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## UNIT V

### **Equipment layout in TV studio chroma key, microphone, vision mixer**

A *chroma key* is a technique used in film, video and still photography to replace a portion of an image with a new image. This is most commonly used to replace a coloured background with a different setting.

The example on the right shows a shot taken against a green-screen background. The shot is then processed using editing software. The editor tells the software which colour to make transparent, sets a few parameters and defines a new background image.

Chroma keys can be done in post-production or in real-time. Television programs such as news and entertainment shows use them a lot.

Note that anything in the shot which falls within the specified colour range will be made transparent, so if a person wears a green shirt they may become semi-invisible!

The most common colours used in chroma keys are blue and green, because these colours are least likely to affect the foreground shot. Bluescreen and greenscreen sets are very common in film and television studios.





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## Microphone

A microphone is a device that captures audio by converting sound waves into an electrical signal. This signal can be amplified as an [analog](#) signal or may be converted to a [digital](#) signal, which can be processed by a [computer](#) or other digital audio device.

1. While all microphones (or "mics") serve the same basic function, they can capture audio in several different ways. Therefore, multiple classes of microphones exist. The three most common types are described below: **Dynamic** - Dynamic microphones are the most widely used microphones. They have a simple design that includes a magnet wrapped by a metal coil. A thin sheet called a diaphragm is placed on the front end of the magnet and transmits vibrations from sound waves to the coil. The coil then transfers these vibrations to electrical wires that transmit the sound as an electrical signal. Since dynamic microphones use a simple design, they are typically very durable and do not require electrical power.
2. **Condenser** - Condenser microphones are commonly used for audio recording purposes. They are known for their sensitivity and flat [frequency](#) response. Each condenser microphone includes a front plate (the diaphragm) and a back plate that is parallel to the front plate. When sound waves hit the diaphragm, it vibrates and alters the distance between the two plates. This change is transmitted as an electrical signal. Unlike dynamic microphones, condensers require electrical power. This current may be provided by an internal battery, but is most often provided as 48 volt "phantom power" from an external preamp or mixing console.
3. **Ribbon** - Ribbon microphones are also known for their high fidelity. They contain a thin ribbon made of a aluminum, duraluminum, or nanofilm, which is suspended in a magnetic field. Incoming sound waves make the ribbon vibrate, generating voltage proportional to the velocity of the vibration. This voltage is transmitted as an electrical signal. While early ribbon microphones required a transformer to increase the output voltage, modern ribbon mics have improved magnets that provide a stronger signal - in some cases even stronger than dynamic



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microphones. Though ribbon mics have been largely replaced by condensers, several models are still manufactured and used today.

Not only do microphones come in several different classes, they also use several types of directional patterns to capture audio. Some microphones are designed with a single "polar pattern," while others have switches that allow you to select the appropriate pattern for a specific recording purpose. Some of the most common patterns include:

1. **Cardioid** - a heart or bean-shaped pattern that captures audio from one direction; commonly used for recording vocals or a single instrument.
2. **Bidirectional** - a figure 8 pattern that captures audio from two separate directions; may be used for recoding audio from two different sources or to capture reverb.
3. **Omnidirectional** - a circular pattern that captures audio from all directions; often used to capture groups of vocalists or ambient sounds.

## vision mixer

A *vision mixer* (AKA *video switcher* or *production switcher*) refers to : What Does a Vision Mixer Do?

The main purpose of a vision mixer is to create a master output for a real-time video recording or broadcast. Typically vision mixers are used for live events, or any event where multiple sources need to be mixed in real-time (as opposed to [post-production editing](#)).

Vision mixers can also be used to create various visual effects, from simple mixes and wipes between sources to advanced composite effects.

### How Does Vision Mixing Work?

Vision mixers are conceptually similar to [audio mixers](#). They take multiple input sources, apply any desired effects or processing, and provide one or more outputs.

Most vision mixers are based around the *preview* bus and the *program* bus, each of which has it's own monitor.



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- The **program** bus is the main output feed, i.e. the vision which is being recorded or broadcast. Whichever source is on the program bus is said to be *online*.
- The **preview** bus is used to select and preview the source which is about to be put online.

A device used to mix multiple video sources into one or more master outputs.



## Video Editing Techniques

Video editing is the process of editing pieces video production footage, adding special effects and adding and editing sound recordings in post-production. If video editing did not exist it would mean everything would need to be done live, in the right order, with no mistakes. This in modern day would be close to impossible. Video editing has changed very much over the years as technology has changed and improved overall, but the principles of editing are very much the same.

Vsevolod Pudovkin was a Russian and soviet film-maker from the 1920's-1950's, during this time, Pudovkin developed the 5 principles of editing in his book, "Film Technique and Film Acting".



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### **Pudovkin's 5 principles of editing**

Pudovkin's techniques describe different ways that editing could be used to help the viewer understand the story better. Each technique is designed to create a specific reaction from the audience, something that Pudovkin calls *relational editing*.

**1. Contrast:** cutting between two different scenes which are completely opposites to show the contrast between them. For example, cut from a shot of a man driving a car, to a man taking public transport to really show the difference.

**2. Parallelism:** here you can connect two pretty unrelated scenes by cutting them together and focusing on a certain object or item in the scenes. For example, a shot of man in New York dialing a number and then a shot of a phone in Egypt ringing. This would make these scene's be related in the audiences head for later reference.

**3. Symbolism:** Again, more cutting between scenes, you move from your main scene to something which creates a symbolic connection for the audience. A good example of this would be a scene where somebody was getting bullied, and it cut to shots of a noose. This would show the audience that they are thinking of death/suicide because they are being bullied.

**4. Simultaneity:** This is used a lot in modern day: cutting between two simultaneous events to build up the suspense. For example - if in your film there is a part where the main character is running late for an exam. You could have shot of him running there and the exam hall where the teacher is waiting for him. This prolonging of time will build up suspense and will keep the audience interested in what is going on.

**5. Leit motif:** This 'reiteration of theme' involves repeating a shot or sequence at key moments for the audience to recognize. For example, in Friday the 13<sup>th</sup>, there was always a point of view shot from behind some sort of object looking at the victims. When this happened again the audience then recognized it.

### **Video editing device**

**Free and  
open-source**

Avidemux  
Blender  
Cinelerra  
Flowblade



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Kdenlive  
Kino  
LiVES  
Natron  
Open Movie Editor  
OpenShot  
Pitivi  
Shotcut  
VideoLAN Movie Creator  
VirtualDub  
VirtualDubMod

**Freeware**

Adobe Premiere Express  
Apple iMovie  
Avid Free DV  
Clips  
Debugmode Wax  
Lightworks  
Pinnacle Videospin  
VideoThang  
Windows Movie Maker

**Proprietary  
software**

Adobe Premiere Elements  
Adobe Premiere Pro  
DaVinci Resolve  
EditDV  
Edius  
Final Cut Express  
Final Cut Pro  
Forscene  
iMovie  
Lightworks  
Magix Movie Edit Pro  
MainActor  
Media 100  
Media Composer



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Pinnacle Studio  
PowerDirector  
Vegas Pro  
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Ulead MediaStudio Pro  
VideoPad