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Video Recording

Lighting Techniques

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Introduciton

•Light is the basic element of visual expression in film, television and scene.

•Proper lighting gives depth, three-dimensionality and a natural look to the frame.

•Light control directs the viewer's attention to the most important elements of the frame.

•The quality of lighting affects the perception of color, texture and space.

•Without the right light, even the best camera cannot give a professional result.

•Light is used for both aesthetic effects and technical production needs.

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Basic characteristics of the light

- **The intensity** determines the brightness level and contrast in the frame.
- **The direction** shapes the volume and emphasizes the contours of the object.
- **The color of the light** defines the atmosphere and temperature (warm or cold scene).
- **The quality** can be hard (sharp shadows) or soft (slight overhangs).
- **The beam shape** distinguishes between spot (directional) and flood (wide) effect.
- Understanding these characteristics is crucial for any type of production.

Image perception

- Light is electromagnetic radiation that is visible to the human eye in the range of 350 nm to 780 nm
- The spectral density of energy coming from some
- of the illuminated object $f(\lambda)$ can be presented:
-
- $$f(x, y, \lambda) = \rho(x, y, \lambda) I(\lambda)$$

- The $f(\lambda)$is called *radiation flux density* [W/m^3]
- Light that meets from only one component

is a monochromatic light

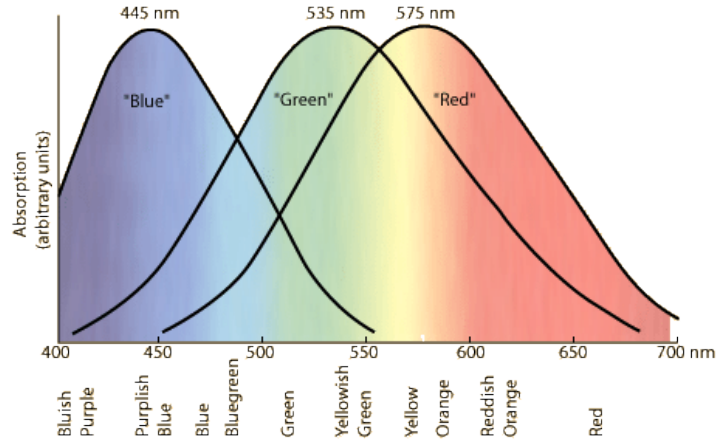

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Image perception

- Irradiance or irradiance [W/m^2]: $e_r(x,y)\int_0^\infty \mathrm{f}(x,y,\lambda)d\lambda$
- Radiation flux [W]: $P = \iint_{x,y} e_r(x,y)dxdy$
- Flux density, irradiance, radiation flux do not take into account the characteristics of the observer

Image perception

- Photometric sizes to a lower or greater take the characteristics of a "typical" observer
- If the spectral sensitivity of the observer is also included in equasion for irradiance, the size of the ILLUMINATION of a surface in space or lux (lx) is obtained:
- $l(x,y) = k \int_0^{\infty} \mathrm{f}(x,y,\lambda) v\lambda d\lambda$

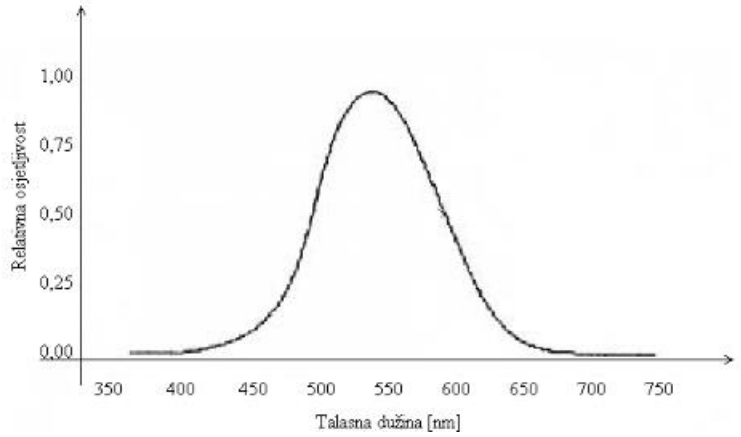


Image perception

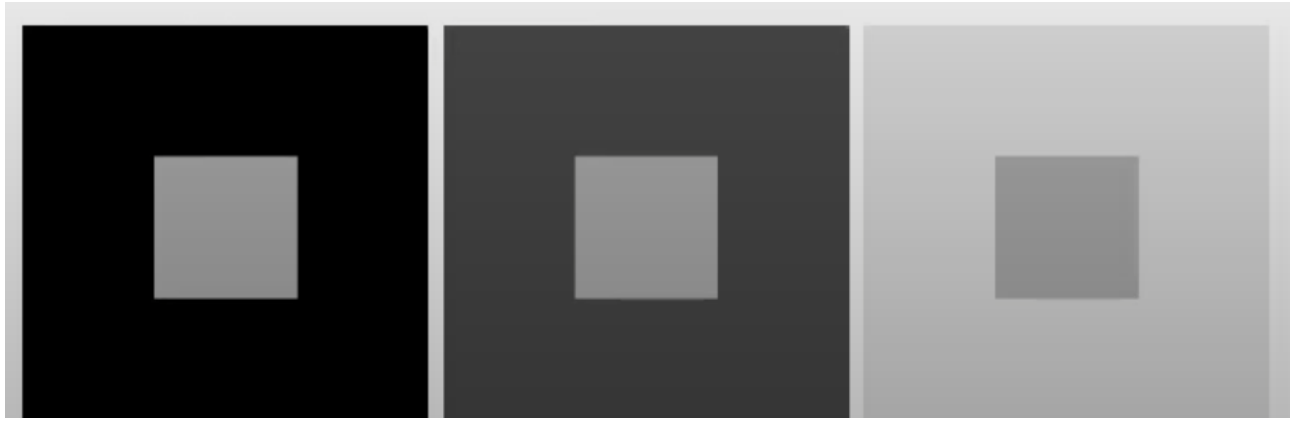
- By integrating brightness on a finite surface, a size called LUMINOUS FLUX or luminance is obtained and is expressed by a unit called *the lumen (ln):*

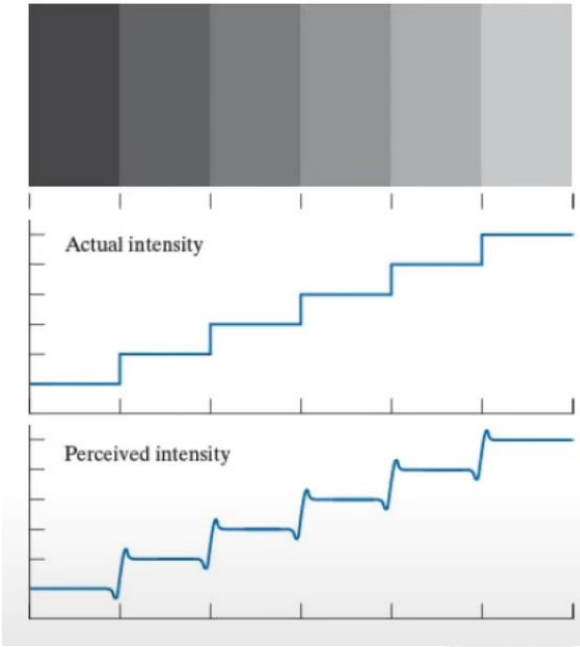
$$\Phi = \iint_{x,y} f(x,y)dxdy$$

- In other words, luminance represents the energy felt or seen by an observer

Image perception

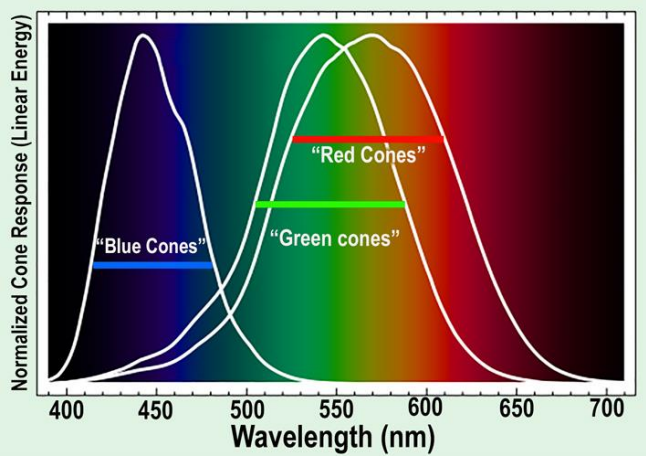
- The perception of brightness depends on two phenomena:
  - The visual system tends to underestimate or overestimate the brightness at the border between regions with different intensities
  - The perceived brightness of the region depends not only on its own intensity, but also on the environment (simultaneous contrast)





Color RGB models

- Color is an important carrier of visual information
- The eye is distinguished by several thousand shades of color, and only a few tens of gray
- There are 3 types of cons on the retina
- RGB (Red-Green-Blue) is an additive color model in which the addition of basic colors produces white color
- Each color is characterized by 3 attributes: brightness, hue or type of color (hue) and saturation
- RGB intensity is 0..255 or 0% to 1004
- **RGB** is just the concept of additive color mixing, without clearly defined primers, white dots and gamma functions. Covers 35% of the spectrum
- **sRGB** is **a standardized RGB space** with clearly defined parameters. Covers 35% of visible spectrum



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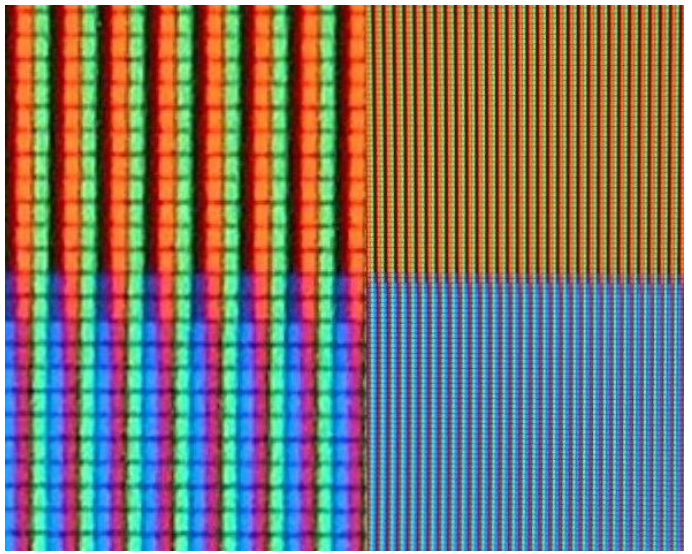
Color RGB models

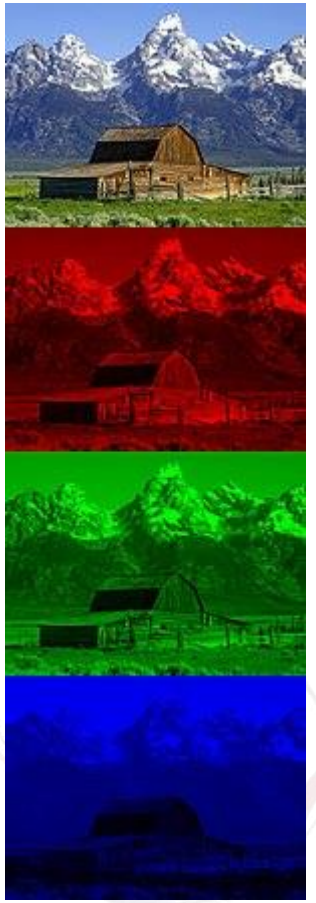
- Each color can be mathematically described as a linear combination of primary colors:

$$boja = R * e_R + G * e_G + B * e_B$$

$$Y = 0.299R + 0.587G + 0.114B$$

- The monitors use subpixels in red, green and blue.
- The cameras use RGB filters on the sensor (Bayer matrix).





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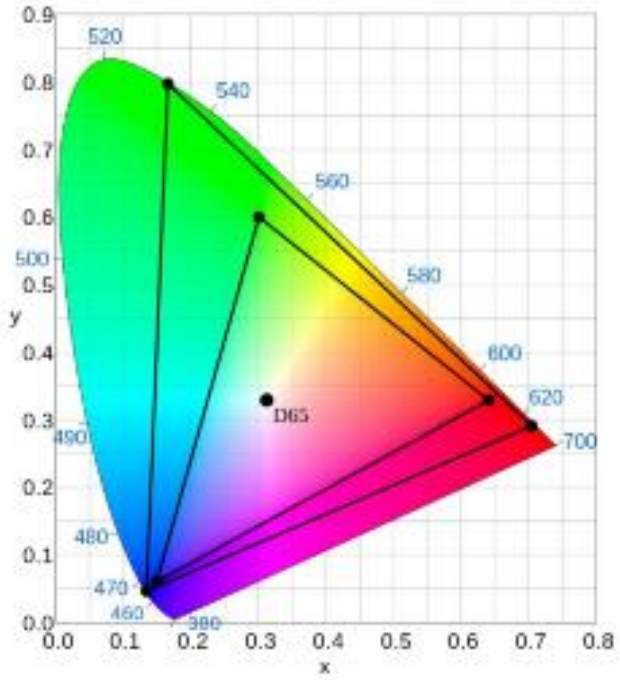
Color XYZ models

- XYZ represents the basic coordinate system for color representation independently of the device and other color systems are derived from it
- XYZ is not uniform – equal changes in value produce unequal perceptual color differences. Therefore, it is not very good for quantifying the difference between two colors.



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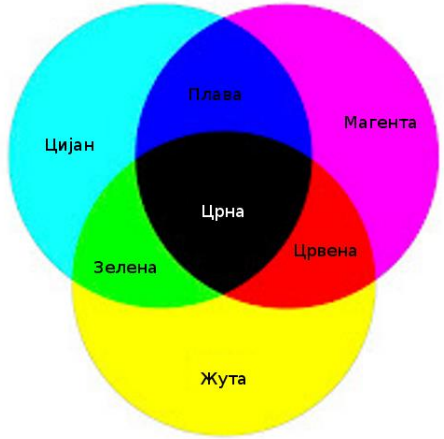
Color CMYK models

- Color rendering is obtained by filtering that subtracts the light of the primary color from the white complex light.
- The CMYK model is used in printing because colors are obtained by subtracting light from the white surface (paper).
- It starts from a white substrate and ink is added to absorb certain wavelengths of light.
- First we convert the RGB → CMY, then the CMY → CMYK.
- Theoretically, by mixing 100% cyan, magenta and yellow we should get black.
  - But in practice: Ink is not perfect. We get a dark brown color instead of pure black. That is why a special black channel (K) is introduced to ensure pure black color and reduce ink consumption.



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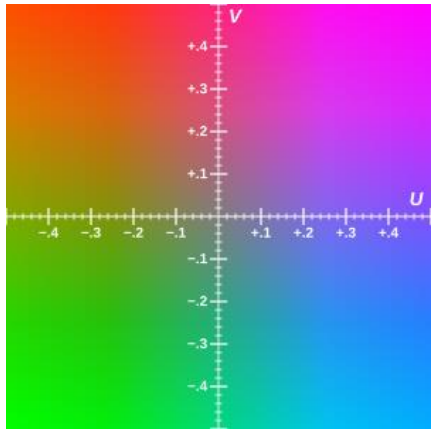
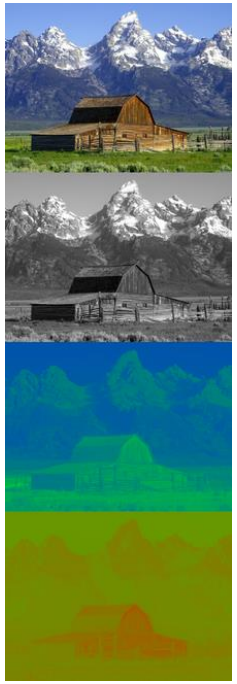
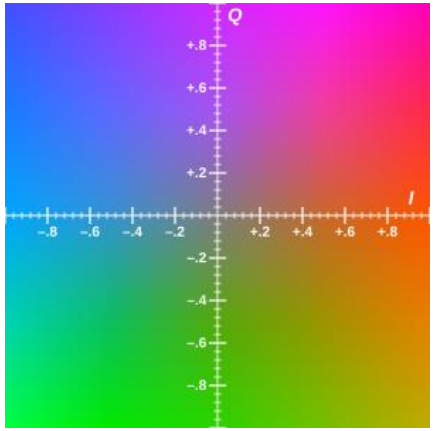
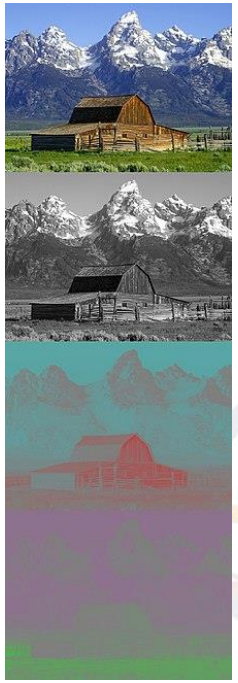
Color YUV models

- Compatible with black and white TVs.
- Efficient color transmission with minimum bandwidth.
- **Signal optimization in accordance with the perception of the human eye** (the eye is more sensitive to luminance than chrominance).
- Thus, the YUV and YIQ models were developed, which separate luminance (brightness) from chrominance (color information).



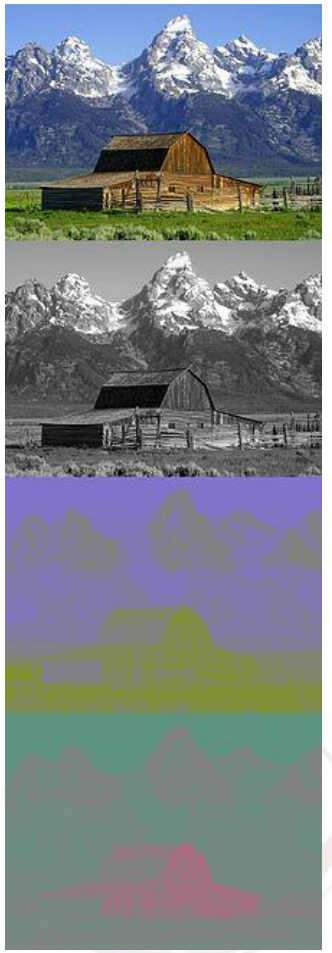






Color YCbCr models

- The YCbCr model is a digital variant of the YUV model
- The YCbCr model divides the image into three components:
  - Y (Luminance) – brightness information.
  - Cb (Chroma Blue) – difference between blue and luminance (U component in YUV model).
  - Cr (Chroma Red) – difference between red and luminance (V component in YUV model).
- The human eye is:
  - Very sensitive to light changes (Y).
  - Less sensitive to discoloration (Cb and Cr).



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HSV, HSL, and HSI color models

- It is more natural for people to think about colours in terms **of hue, saturation and lighting** than in RGB coordinates.
- These models are based on human color perception, not physical light mixing.
- They are used in graphic design, image processing and data visualization.
- They are independent of the device, as well as XYZ
- **HSV (Hue, Saturation, Value)** – uses lighting as a "value".

HSI (Hue, Saturation, Intensity) – uses the average intensity of the color components.

- **HSL (Hue, Saturation, Lightness)** – uses lighting as "brightness".

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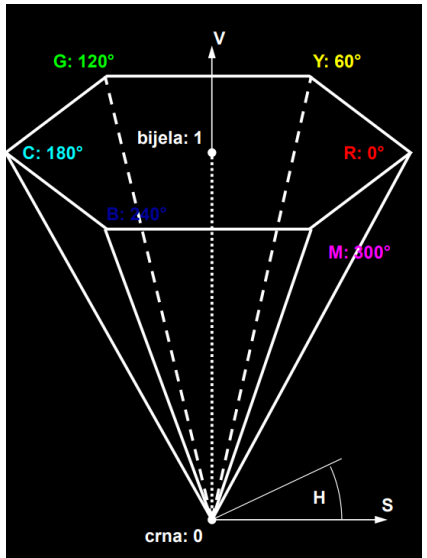
HSV

- **HSV (Hue, Saturation, Value)** is often used in graphic design, color picker tools, and computer graphics.
  - **H (Hue)**: describes the basic color in the spectrum (red, green, blue...).
  - **S (Saturation)**: measures how intense the color is.
  - **V (value)**: represents the brightness, i.e. how much is the color of the light.
- **Vertical axis (V)**: brightness (Value), rising from black (bottom) to white point (top).
- **Horizontal component (S)**: Saturation rises from the center to the outer edge.
- **Circular component (H)**: the hue (Hue) changes at an angle around the color axis.



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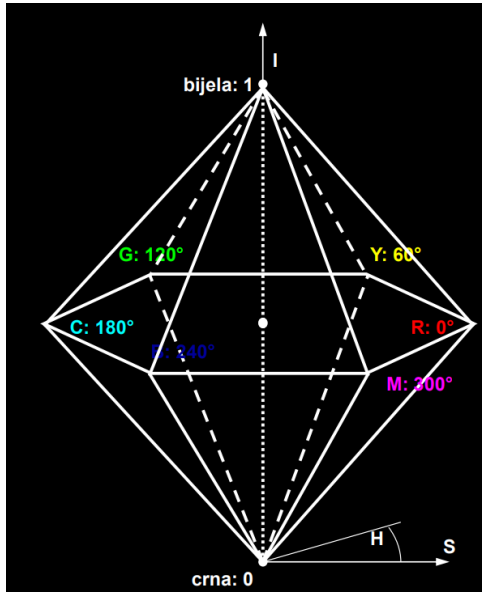
HSI Color Models

- The **HSI color model** (Hue, Saturation, Intensity) is a perceptual color model tailored to image processing, especially in analyses where it is important to separate information about hue, saturation, and light intensity.
- The attached graph represents the **diamond structure of the HSI color space**.

•**Vertical axis (I)**: intensity, rising from **black (bottom)** to **white (top)**.

•**Horizontal axis (S)**: the saturation rises from the center to the edge.

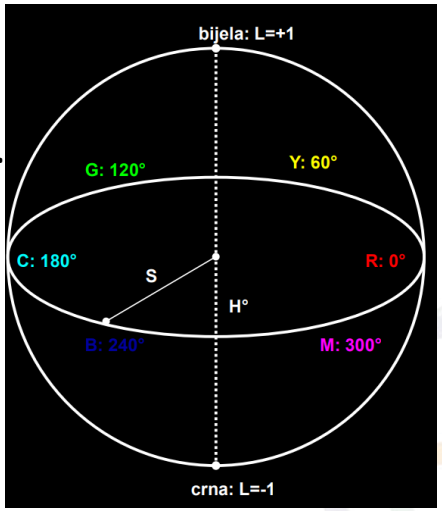
•**Circular dimension (H)**: the color shade is changed by rotation around the central axis.



HSL Color Models

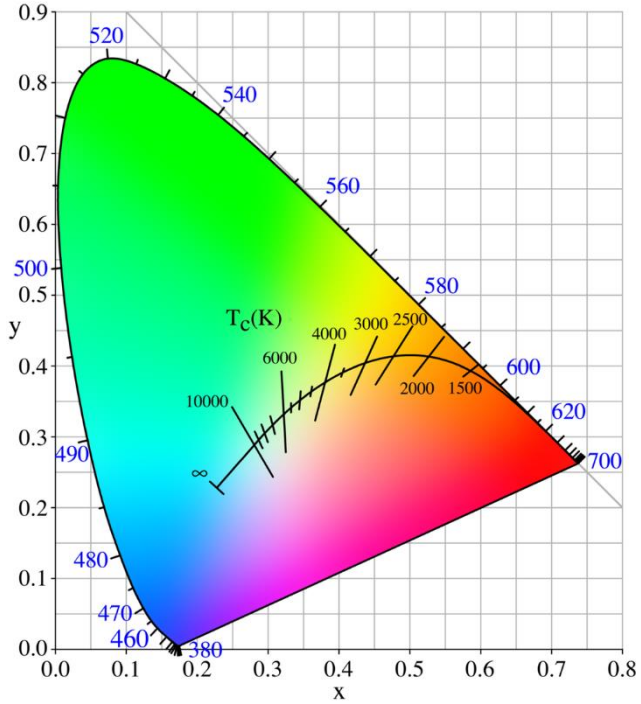
HSL (Hue, Saturation, Lightness) is similar to HSV but uses a different lighting concept

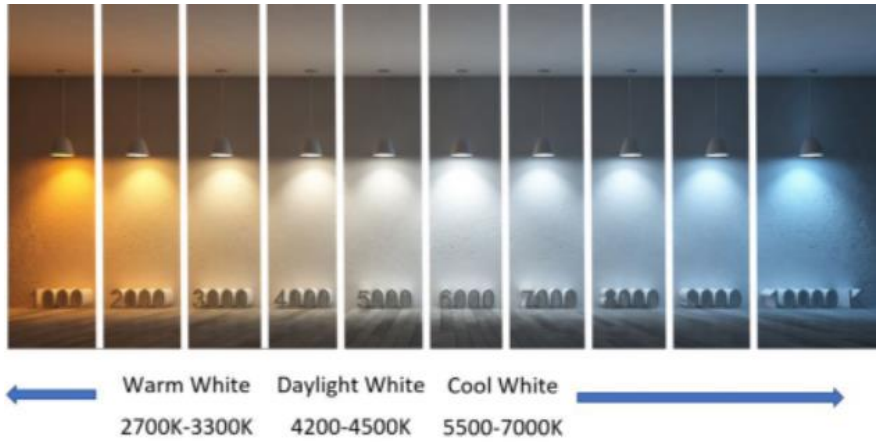
- HSL uses brightness, which is calculated as the mean of the maximum and minimum of the RGB components.
- HSV uses the maximum value of the component, while HSI uses the average value of all three RGB components.
- **H (Hue)**: describes the basic color in the spectrum.
- **S (Saturation)**: measures how intense the color is.
- **L (Lightness):** represents how bright the color is in relation to black and white.
- **Vertical axis (L)**: brightness, rising from **L = -1 (black)** to **L = +1 (white)**.
- **Horizontal axis (S)**: the saturation rises from the center to the edge.
- **Circular dimension (H)**: the color shade is changed by rotation around the central axis.

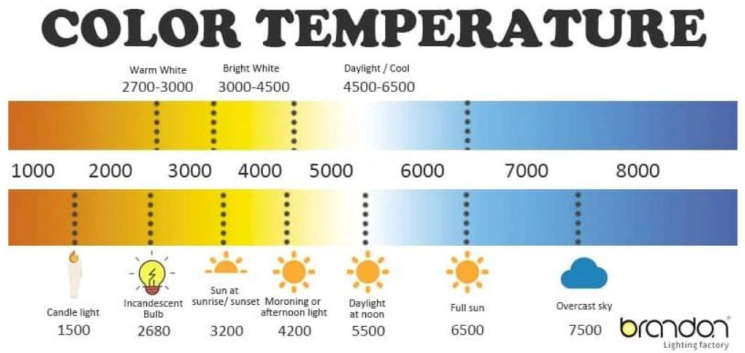


Color temperature

- The black body is a hypothetical body that absorbs all electromagnetic radiation without reflection. When heated, it emits light whose spectrum depends only on the temperature of the body.
- The color temperature describes the light spectrum of the source compared to the light spectrum of the black body.
- Planck's radiation law describes the distribution of blackbody radiation energy at different wavelengths:







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Natural and artificial light

- Natural light (sun, moonlight) depends on the time of day and weather conditions.
- Used in documentary and field productions for authenticity.
- Artificial light allows full control in the studio or on stage.
- Combining natural and artificial light requires precise color balance.
- Modern LED spotlights allow you to change the color temperature in real time.

Color	White	Blue	Red	Green	Yellow	Amber	Purple	Pink
References and meanings	Purity, revelation	Sadness, loneliness, romance	Anger, passion, blood	Wickedness, unnatural	Warming, calming	Comfort	Sense of opulence	Love, romance
Uses	Daylight	Moonlight, night time	Strong effects	Forest & leafy scenes, evil characters	Sunlight, strong effects	Interior scenes, firelight	Effects, romance	Effect and mood

Types of lights in production

- **Halogen / tungsten** lights – stable but with high heating.
- **Fluorescent** – energy efficient, but less spectrum control.
- **LED spotlights** – modern standard, wide color gamut, low consumption.
- **HMI lights** – strong and stable, often for film production.
- **Intelligent lights (moving heads)** – for stage and music shows.
- Each type has advantages and disadvantages depending on the application.


Floodlights

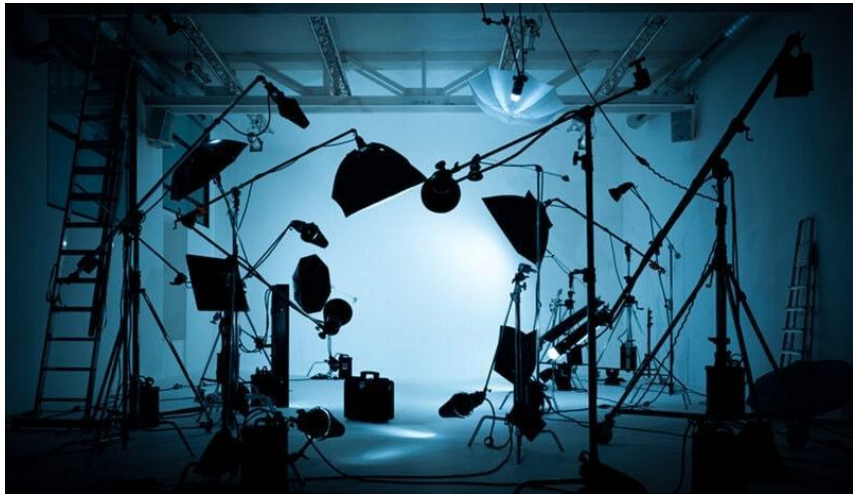

PARs


Profiles


Fresnels

Installation of lighting in the studio and on the stage

- Lighting is mounted **on** grids or **traverse** structures.
- **Fixed ceiling systems** with rails and pantographs are used in the studios.
- At concerts and events, lighting is attached to **aluminum truss structures**.
- Each light is provided **with a safety chain** for protection.
- The power supply is run by cables through grid or truss.
- Angle and height adjustment is done using **pantographs, brackets and tripods**.



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Light types by function in setup

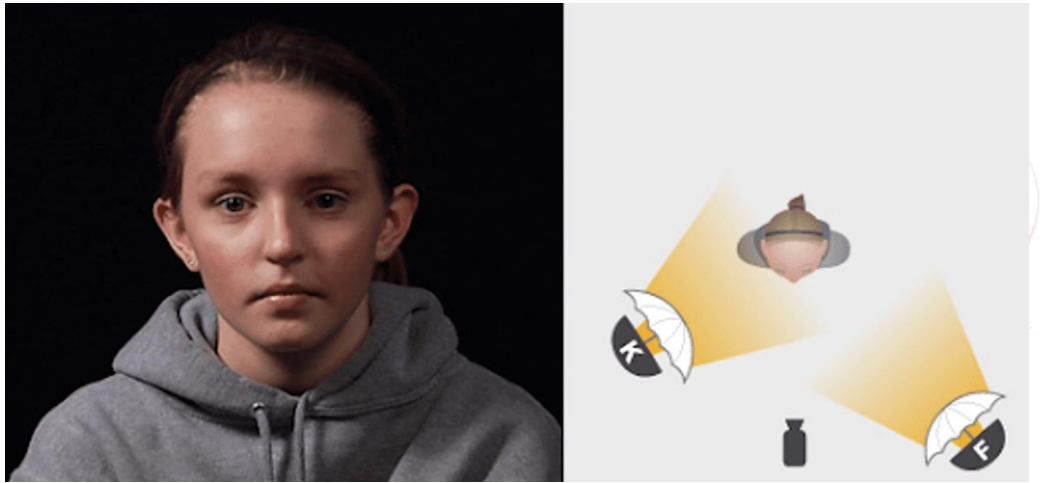
- **Key light** – the main light that models the face and gives a basic look.
- **Fill light** – a supplementary light that mitigates shadows from key lights.
- **Back light (rim, hair light)** – illuminates the subject from behind and separates it from the background.
- **Background light** – illuminates the scenery or background behind the subject.
- **Kicker light (edge light)** – additionally emphasizes the contours of the face or body from the back.
- **Special lights** – practicals, eye light, accent and effective lights.

Key light

- The most important and bright light in the setting.
- It is usually placed at an angle of ~45° to the subject's face.
- It models the face and gives the basic shape and texture.
- A Fresnel or LED spotlight is often used in the studio.
- The intensity of the key light determines the base exposure.
- Without the key light, the face looks flat and volumeless.

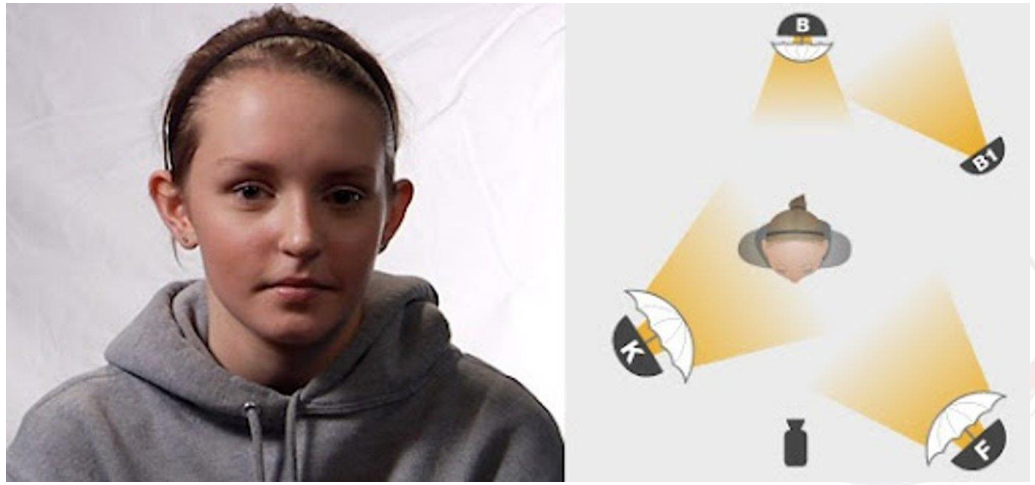
Fill light

- It serves to soften the shadows created by key light.
- It is placed on the opposite side of the key light, usually softer and diffused.
- Intensity is lower (e.g. 2:1 or 3:1 to key ratio).
- It can be achieved with a reflector, panel or reflective surface.
- The key/fill ratio determines the contrast of the image.
- Without fill light, we get a "dramatic" look with deep shadows.



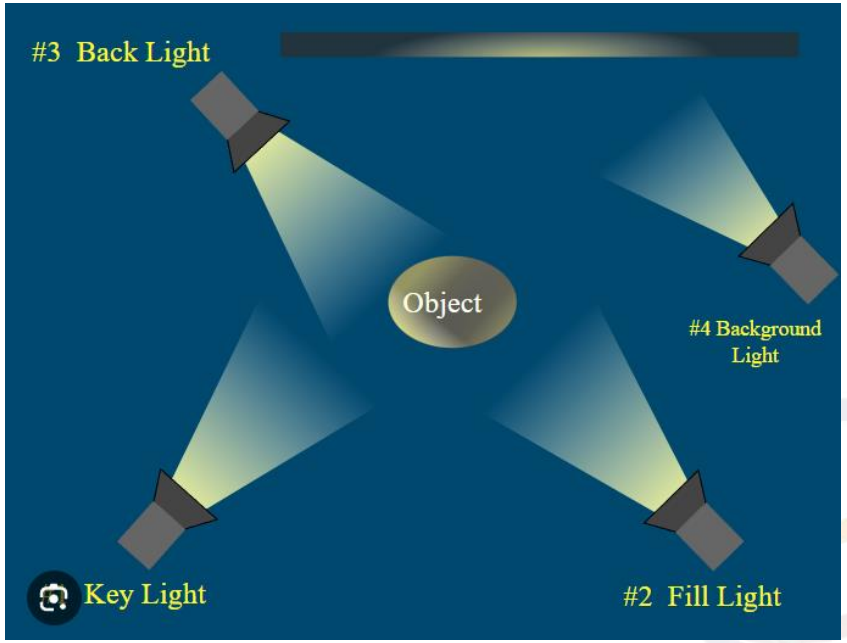
Back light (rim light, hair light)

- It is placed behind the subject, usually above the head.
- It separates the subject from the background and creates a light outline (halo effect).
- It emphasizes the contours and gives three-dimensionality.
- A weaker reflector with a diffuser is often used.
- It is standard in TV studios for interviews.
- Without the back light, the image looks “flattened”.



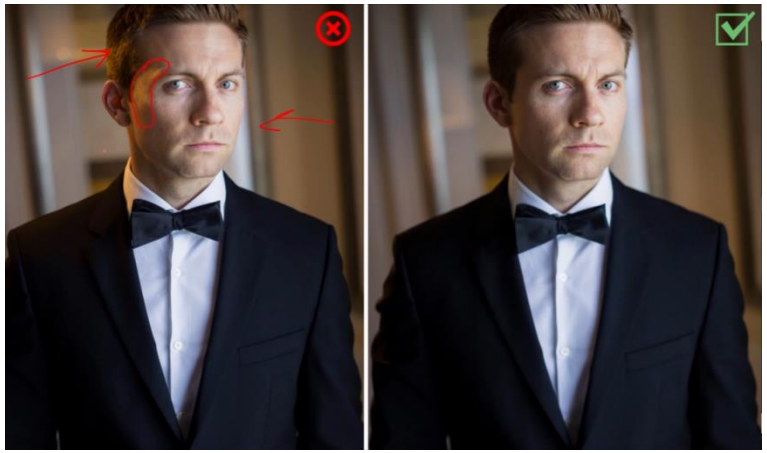
Background light

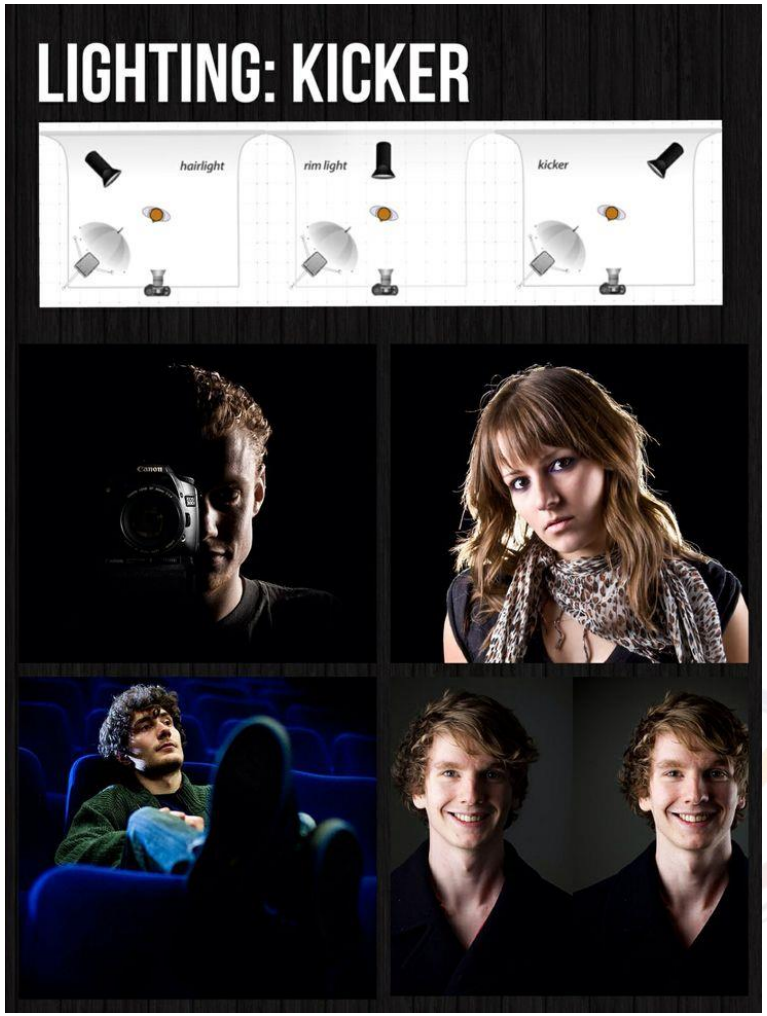
- It illuminates the background behind the subject, not the subject himself.
- Prevents background from being completely dark or monotonous.
- It can be used to highlight scenery or create depth.
- Often used in a 4-point setup.
- It can be colored for creative effects.
- It helps to clearly separate the character from the scene.



Kicker light (edge light)

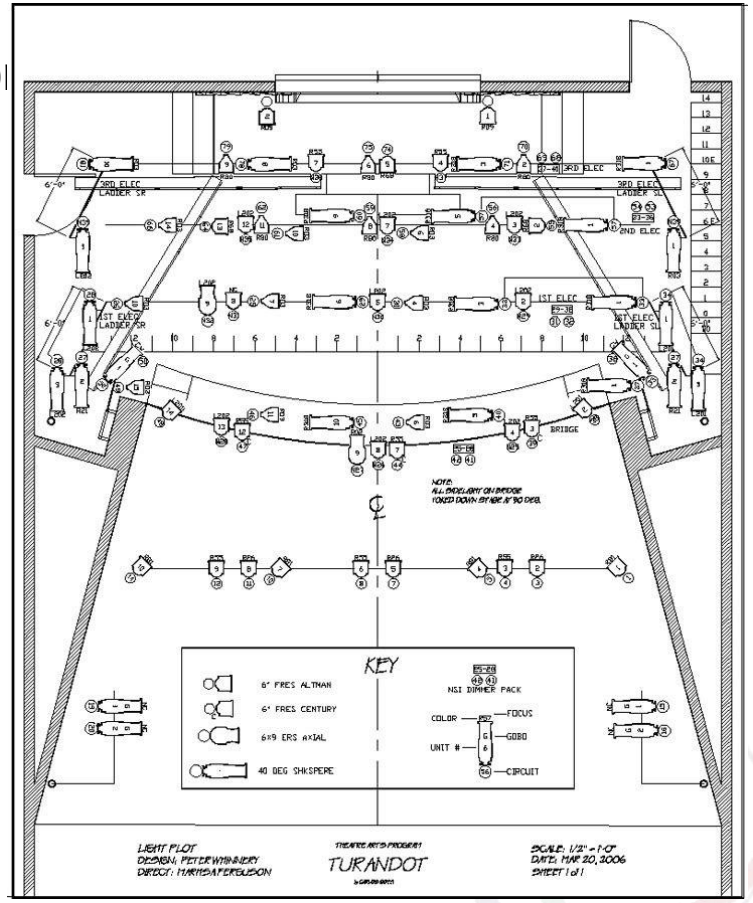
- The light coming from the rear, at an angle (usually 45°).
- Adds accent edges and contrast.
- Used in a 5-point setup or film production.
- It can accentuate hair, shoulders, or the edge of the face.
- It often gives a dramatic and aesthetic effect.
- Combined with back light for maximum result.





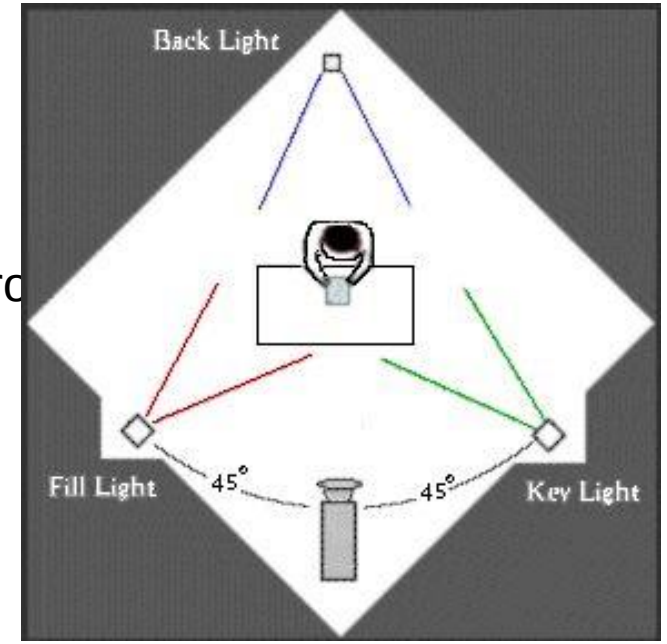
Settings

- The lighting setup defines the arrangement of lights around the subject o
- The goal is to achieve a natural look and three-dimensionality.
- Standard **3-point lighting** is most commonly used as the basis.
- Adding lights creates more advanced setups (4-point, 5-point).
- Each setup combines different **directions and light sources**.
- The light designer adapts the setup to the needs of the show or film.



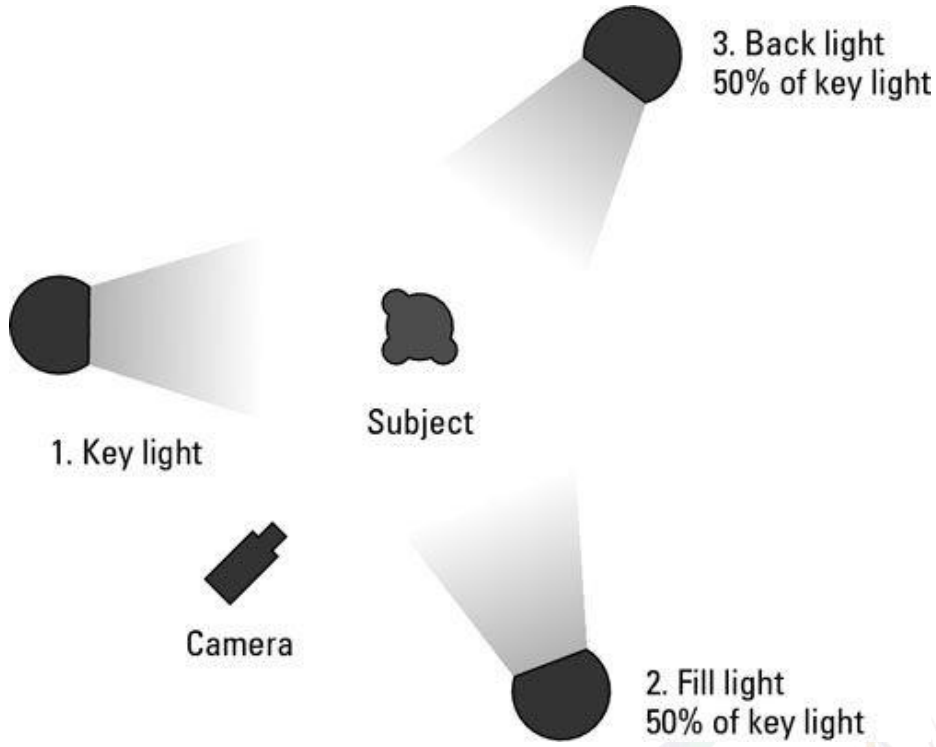
3-point lighting

- It consists of three lights: **Key light, Fill light and Back light**.
- **Key light** – main light, placed at an angle of ~45° on the side.
- **Fill light** – a weaker, softer light that softens shadows.
- **Back light (rim light)** – background, separates the subject from the backgro
- It provides a natural look and good contrast.
- Standard in TV, film and photographic production.



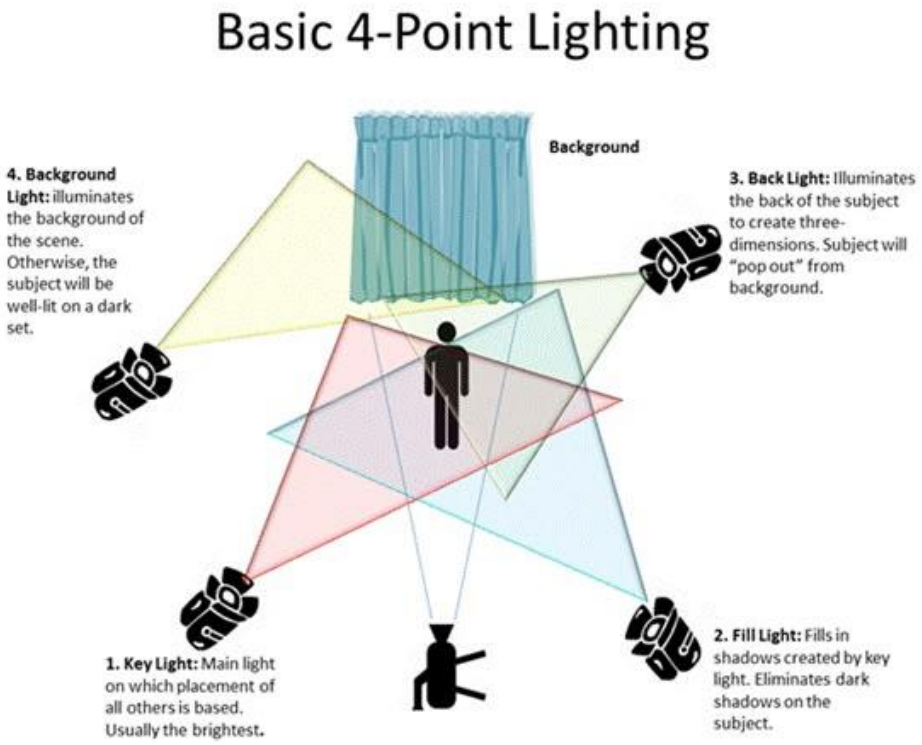
Light intensity and ratio in 3-point setup

- The most common ratio **Key : Fill = 2:1** (gives a natural look).
- Fill can be a completely off, more contrasting “low-key” style.
- The back light is usually of ~50–70% key light intensity.
- Intensity is measured by lux meters or camera exposure.
- Precise balance prevents “burnout” or total darkness.
- By changing the relationship, a different visual style is obtained.



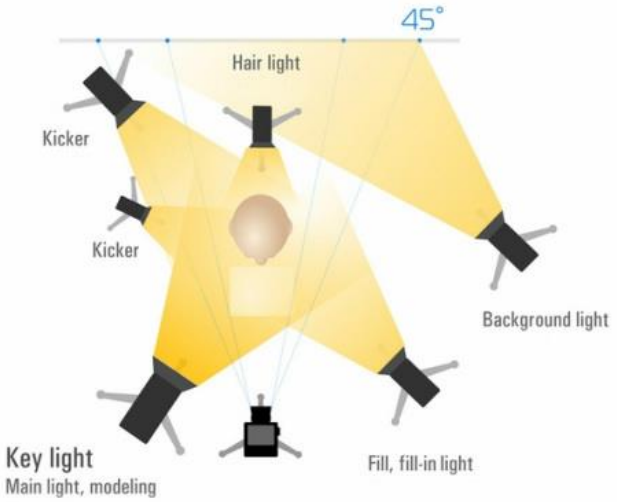
4-point lighting

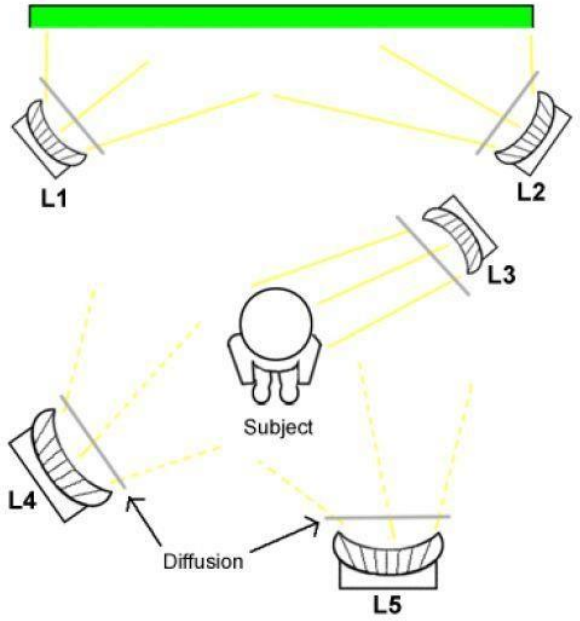
- **Background light** is added to the 3-point system.
- Used to illuminate the background behind the subject.
- It separates the subject from the set design and gives depth.
- Prevents the background from looking “dead” or completely black.
- It is often used in TV shows and interviews.
- The backlight can be colored for creative effects.



5-point lighting

- Another light is added in relation to the 4-point setup.
- **Kicker light** or additionally **rim light** is most commonly used.
- The kicker is placed behind the subject, at an angle, to emphasize the contours.
- It is often used in chroma key, a film to enhance drama and three-dimensionality.
- Can be combined with color filters for a special effect.
- Suitable for music and entertainment shows.





Typical Green Screen Layout
(screen, lighting, subject and diffusion)

Setup variants

- **Two-point lighting** – Key and Fill only, used in documentary recordings.
- **Single-point lighting** – Key light only, gives a dramatic look.
- **High-key lighting** – strong fill, minimal shadows, often in TV shows.
- **Low-key lighting** – weak filling, strong shadows, used in film/noir.
- **Cross lighting** – two side lamps for a symmetrical look.
- Variations depend on the genre and the desired effect.

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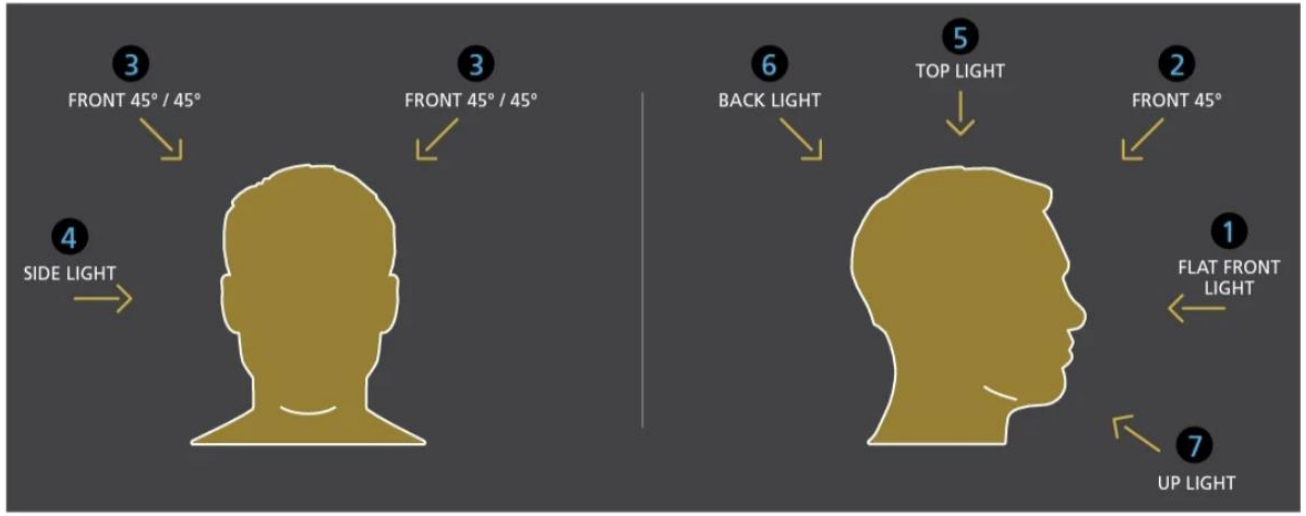
Introduction to light directions

- The direction of the light determines how the subject will look in the space.
- Different angles give different effects and moods.
- In studio production, the most common are front, side and back lights.
- Extreme angles for special effects are also used in film production.
- The combination of multiple directions creates a balance between realistic and artistic expression.
- The correct selection of the direction is the key to the natural and professional appearance of the image.



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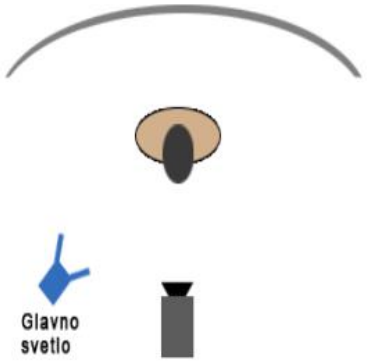
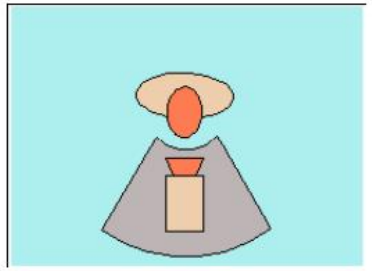
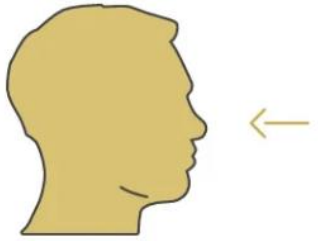
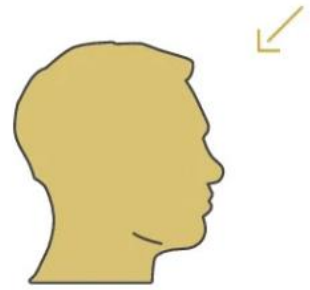
Front light

- It is placed directly in front of the subject or at a small angle.
- It gives even lighting, but can look “flat”.
- It is used in TV news and documentaries because of its neutral appearance.
- It does not emphasize shadows or the texture of the face.
- Easy to combine with supplementary light.
- Disadvantage: three-dimensionality is lost.



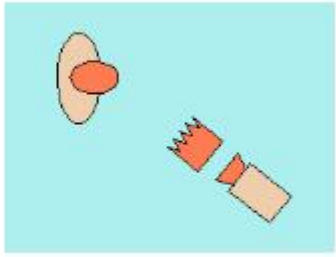






Headlight

•**Headlight** placed **right above the camera**, very low, so there are no shadows on the face – **no depth.** The image is sharp without depth, the presenter looks as if she is pasted on the background. Image is legible, looks sharp **without depth**

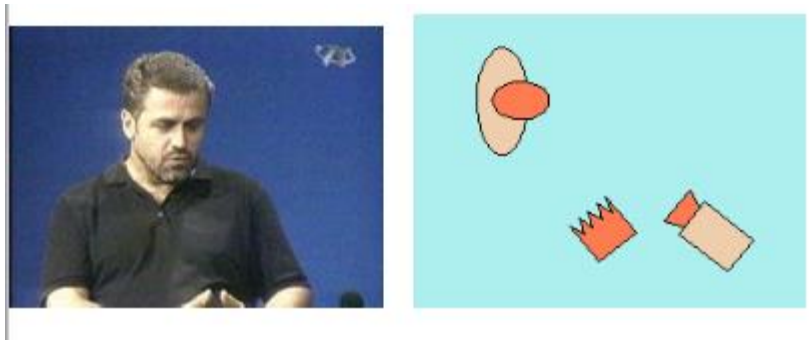


•**The main light** is shifted from the camera by **about ten degrees** to the right or left side – it **has a depth.** The result is a slight darkening of the opposite side of the face. The face is still well visible, but now you can feel the depth (volume).

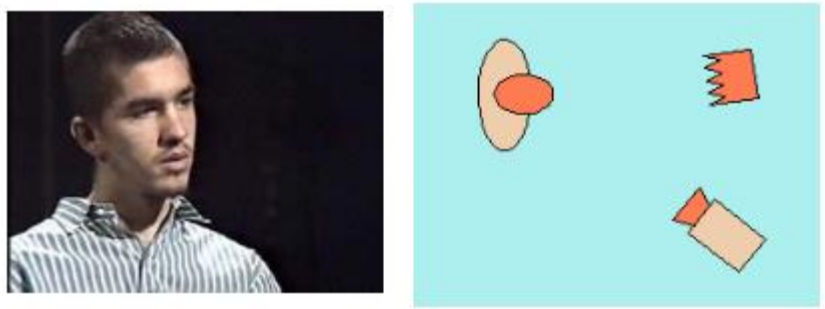
•The face is asymmetrical, one side **wider** and the other **narrower**. **The main light** should be placed from the direction of **the narrower side of the face**, so that the shadow visually narrows the wider side and thus establishes symmetry, because the face thus looks more regular and beautiful.

Headlight

- **The main light** comes from the direction of the **wider side of the face**, at the same time from the direction opposite to the view of the filmed person.
  The narrower side of the face remained in the shadows, which further disturbed the symmetry.



- **The main light** comes from the direction of **the narrower side of the face**, creates a shadow on the wider side and establishes symmetry. You can feel the depth in the image. The part of the face closer to the center of the frame is more illuminated.



Side light

•It is placed at an angle of 45 to 90° in on each side or 90 degreesand from the main world (safest to be placed at 45 from the camera). It should be lower than the main light, and softer.

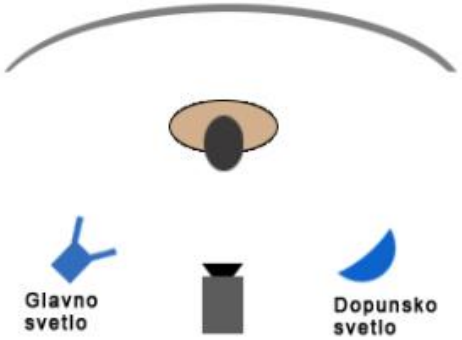
•Emphasizes volume, depth, and texture.

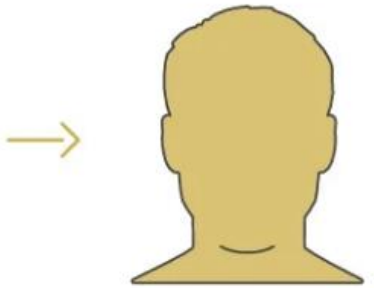
•It gives a dramatic and artistic look.

•It is often used in portrait photography and film scenes.

•It is necessary to fill the shadows with balance light.

•May accentuate facial wrinkles and irregularities.





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Example.

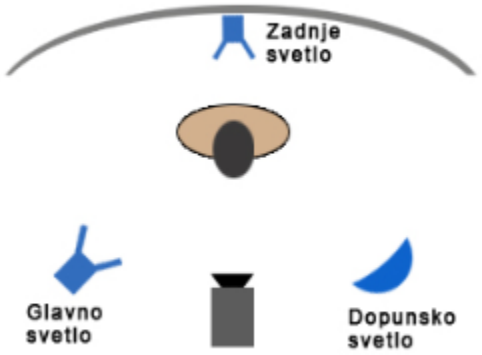
- **Face illuminated by two side lights**, no headlight

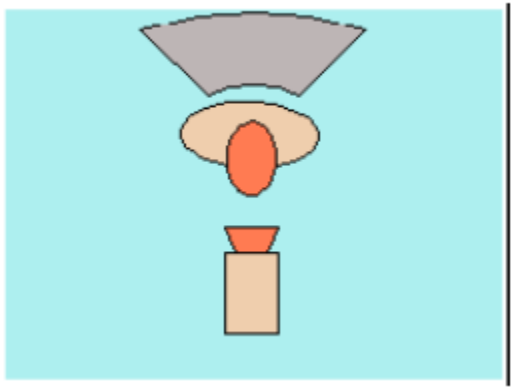
- **Face illuminated by a precisely positioned main light, without a supplementary light**, and looks very clean and tidy on one camera, but also very rough on the other camera

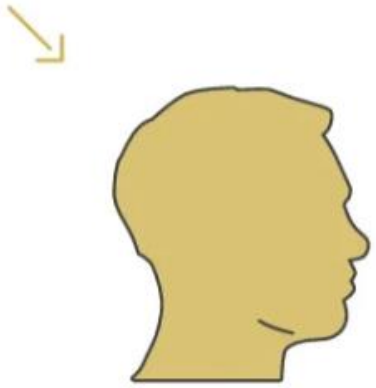
- **Key and fill** light placed **too high**

Back light

- It comes from behind the subject and separates it from the background.
- Creates a rim light around the head and shoulders.
- It gives a three-dimensional and professional look.
- Especially important in interviews and talk shows.
- It can be neutral or colored (for effect).
- Without it, the subject looks “flattened” in the frame.







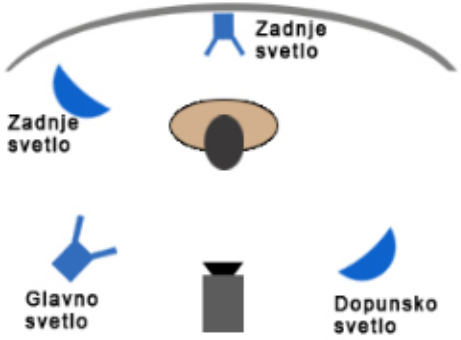
Back side light

•Back **side light** – to be placed on the side of the subject to be recorded, from 90° to 135° on each side

•is used to illuminate the background space and to obtain depth and separation. **The intensity of the background light should be about 2/3 of the intensity of the main light of the elements on the scene.**

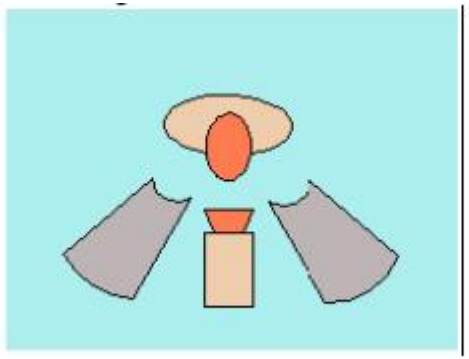
•This ensures that the central subject of the recording is separated from the background. If the key light is about 2,000 lx, the background light should be about 1,300 lx.

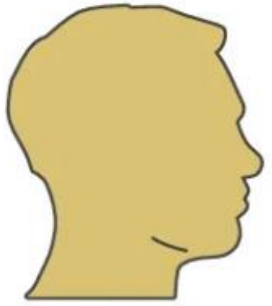
•Any type of light can be used as a background light, provided that it gives a generally uniform backlight, especially with chromaky, that it does not illuminate the subject and that the (flat) overall light intensity is uniform.



Bottom light

- It is placed under the subject, pointing upwards.
- It creates an unusual and often frightening effect.
- Used in horror movies and special effects.
- It emphasizes unnatural shadows on the face and body.
- It is rarely used in standard TV and film production.
- It can serve as part of the creative scene.





Three-quarter light

•**Three-quarter light** – installed from 30° to 50° on the side of the camera. **Three quarters of faces are illuminated and one quarter are in shadow.** This relationship between light and shadows best describes the depth (volume) of oval objects, including the human face.

•Not suitable for every person. Well executed, it gives firmness, character and volume to the face, but it can also seem very harsh.

•The three-quarter light requires precision of execution. A small movement of the head can disrupt its harmony. Therefore, it is not particularly suitable for multi-camera frames.

Three-quarter light

- **Bad image:** The right ratio between main and supplementary light should be found (2:1)
- Face illuminated from **3 positions:** left and right side light and front light
- The side lights modify the cheeks in an unpleasant way and create oblique shadows on both sides of the face as well as an unnatural shadow in the middle of the neck below the chin.
- The headlight can fix this, but it fails for two reasons: the **sidelights are too strong, and they are placed too high to create a part of the shadow under the chin.**

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Three-quarter light

- **Good picture:** the supplementary lights are weaker than the main one, they are lower than the main one, and their direction is no longer completely lateral, but they are shifted forward, thus mitigating unwanted face modeling.
- **The key light** is really the main one here, and the result is a cleaner image and clearer face volumes.

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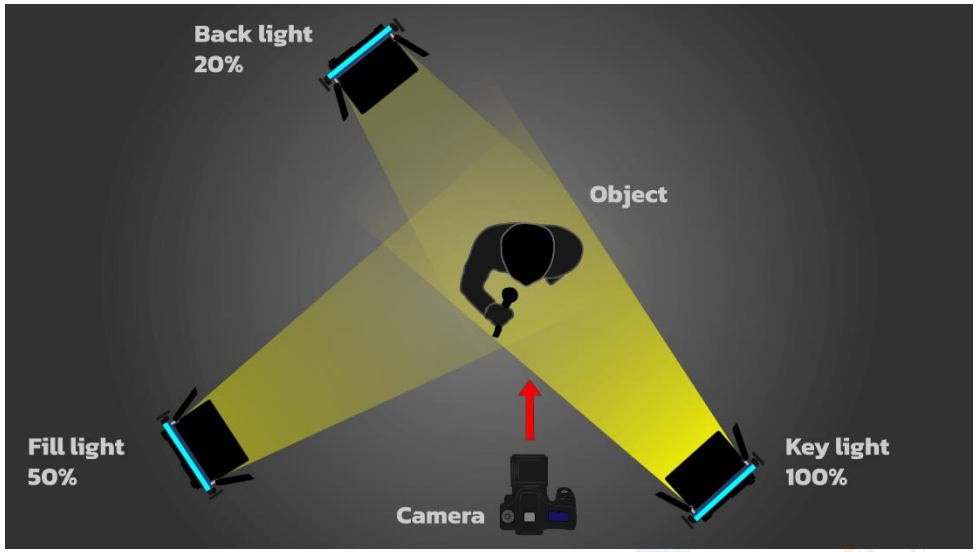
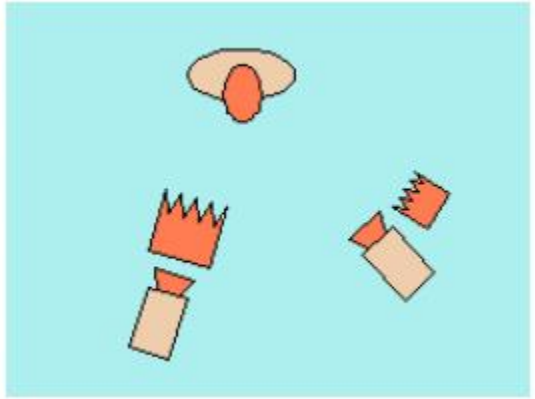
Single person illumination

- The classic setting uses a 3-point lighting system.
- The key is placed at an angle of 45° and a height above the eyes.
- Fill is used on the opposite side, softer and more diffuse.
- Back light separates the subject from the background.
- If there is a background, the background light is also used.
- The goal is a natural look with clearly defined facial contours.



Two-camera trailer

- The left camera captures a wider plan and the right camera captures a narrower plan. The main light is placed above the left and the supplementary light is placed next to the right camera.
- Both lights are hard, due to fears that soft supplementary light does not create unwanted shadows on the background.
- The frames in voice shows last much longer than in the feature program, so mistakes are easy to spot.
- *What is easier to make a light for speech shows or music??*



Illuminating two people

•Each person has their own pair of key and fill lights.

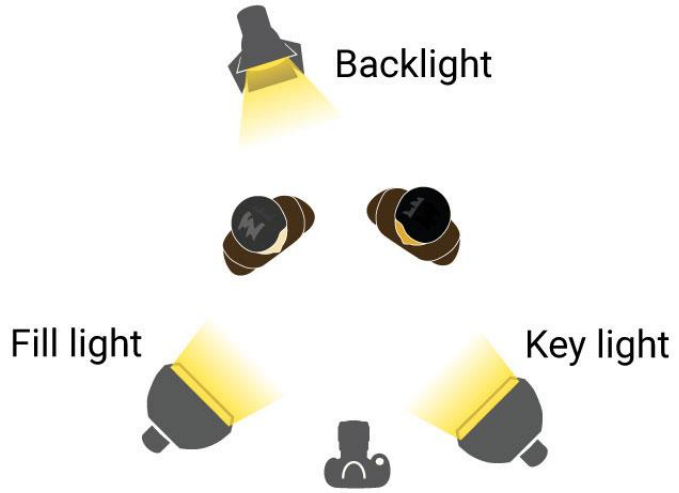
•The lights are placed symmetrically so that each person's face is properly illuminated.

•The central zone is additionally filled with a weak fill to avoid a sharp shadow between.

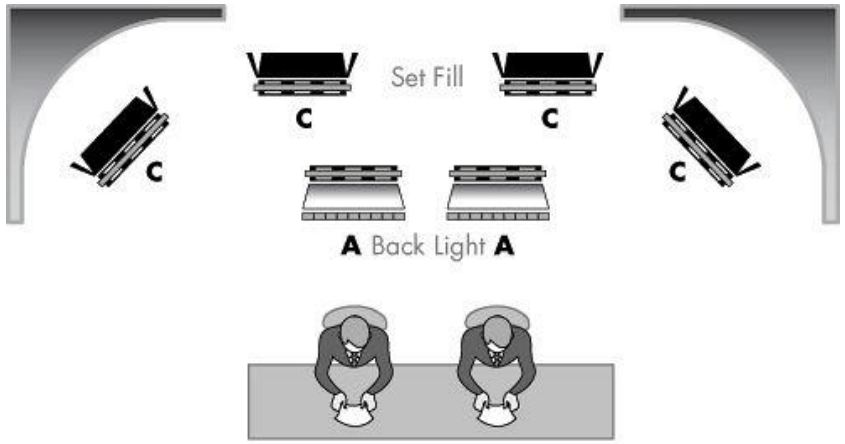
•The back light must cover both people evenly.

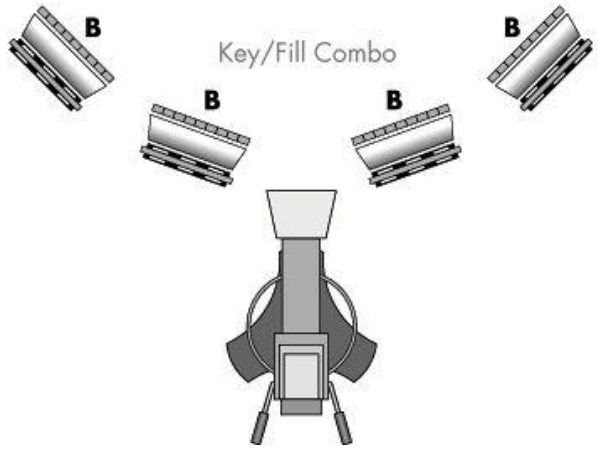
•The background lights up wider to cover the space between subjects.

•This technique is used in interviews and debate shows.



Example.





Two people, three cameras

- Camera 1 captures a close-up of the right person, camera 2 captures a total, and camera 3 captures a close-up of the left person.
- Cameras 1 and 3 also record duo-plan in which the closer person is in the foreground.
- In addition to the total, Camera 2 can also record closer plans.
- Each person is illuminated by a separate basic light position oriented towards the close-up camera.

Three-person conversation

•When two people talk, they usually look at each other and the **direction of view** determines the position of the key light.

•When three people talk, this rule applies to the left and right person, but not to the middle one. The middle person will watch the class from left to right, depending on which interlocutor they are talking to.

•In the picture, the main light is placed centrally, but there is a problem of shadows in the middle and side cameras

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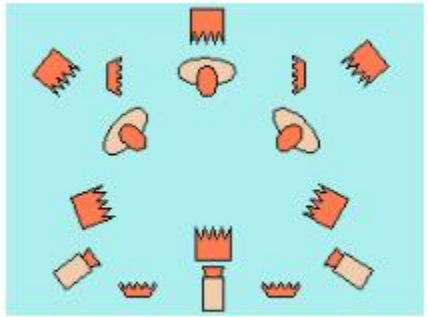
Three-person conversation

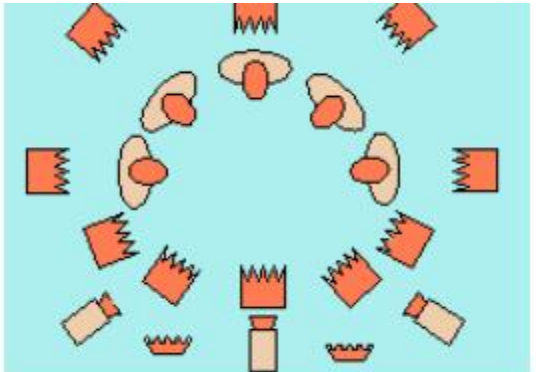
•In the figure, to avoid this, two supplementary lights were used, for the left and right sides of the face (usually spaced apart), or special supplementary lights are introduced.



Group talk

•Each person in the show should be illuminated with a basic set of lights: **main, fill and back light**.
•It is not necessary for each person to have a completely separate set of lights — adjacent persons can **share a common key light**.
•A common spotlight for multiple participants facilitates balance, but should not be too strong for anyone in the frame.
•**Fill lights** should be soft and slightly diffuse, placed on the sides of the studio.
•It is important to avoid too high contrast and shadows in the middle of the group.
•The headlights are placed according to the **direction of view** and the position of the close-up camera.
•For larger groups, the solution is a **careful arrangement of fill lights** so that the shadows are uniform and there are no overexposed parts.



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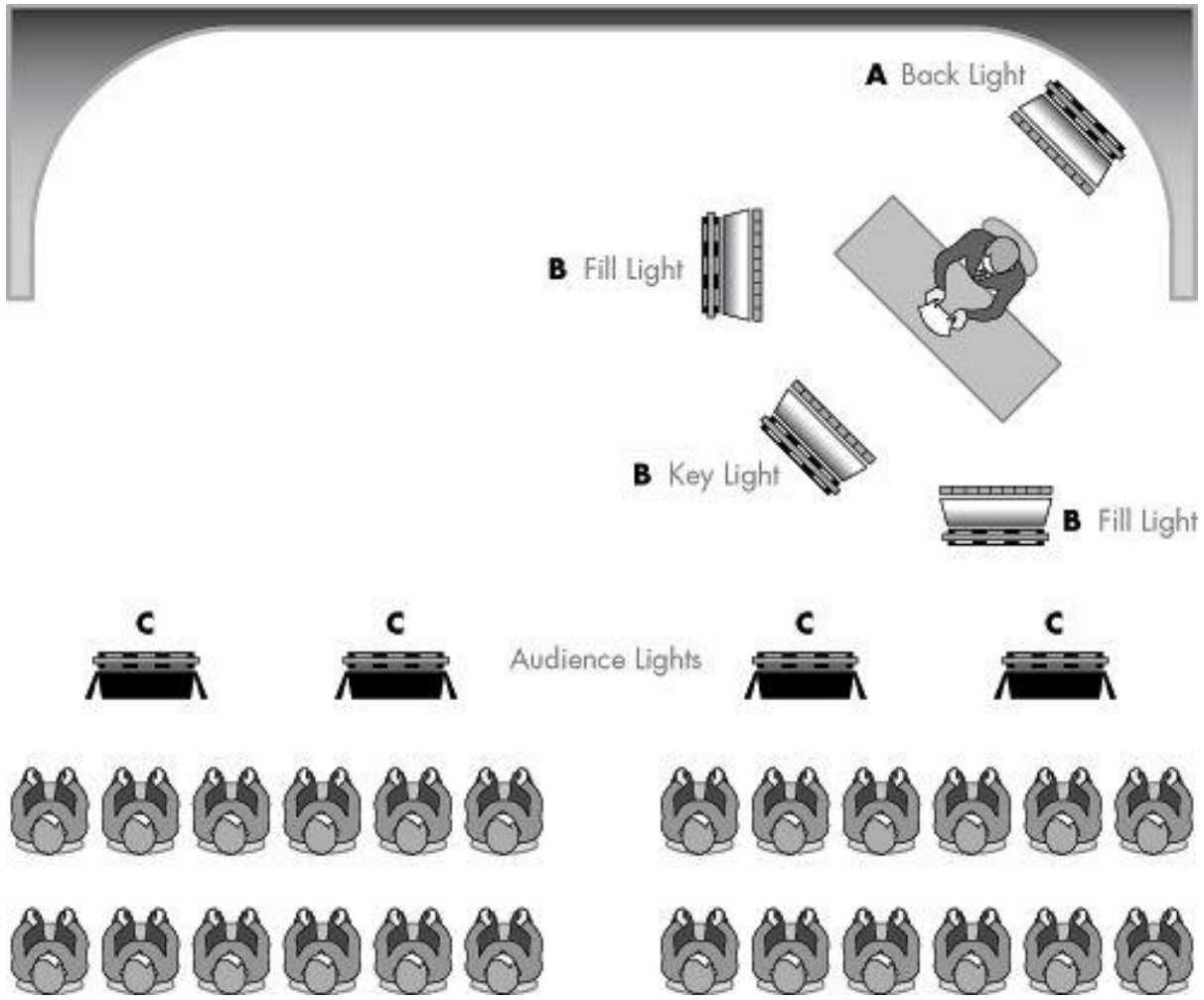
Illuminating Complex Emissions with Moving Contractors

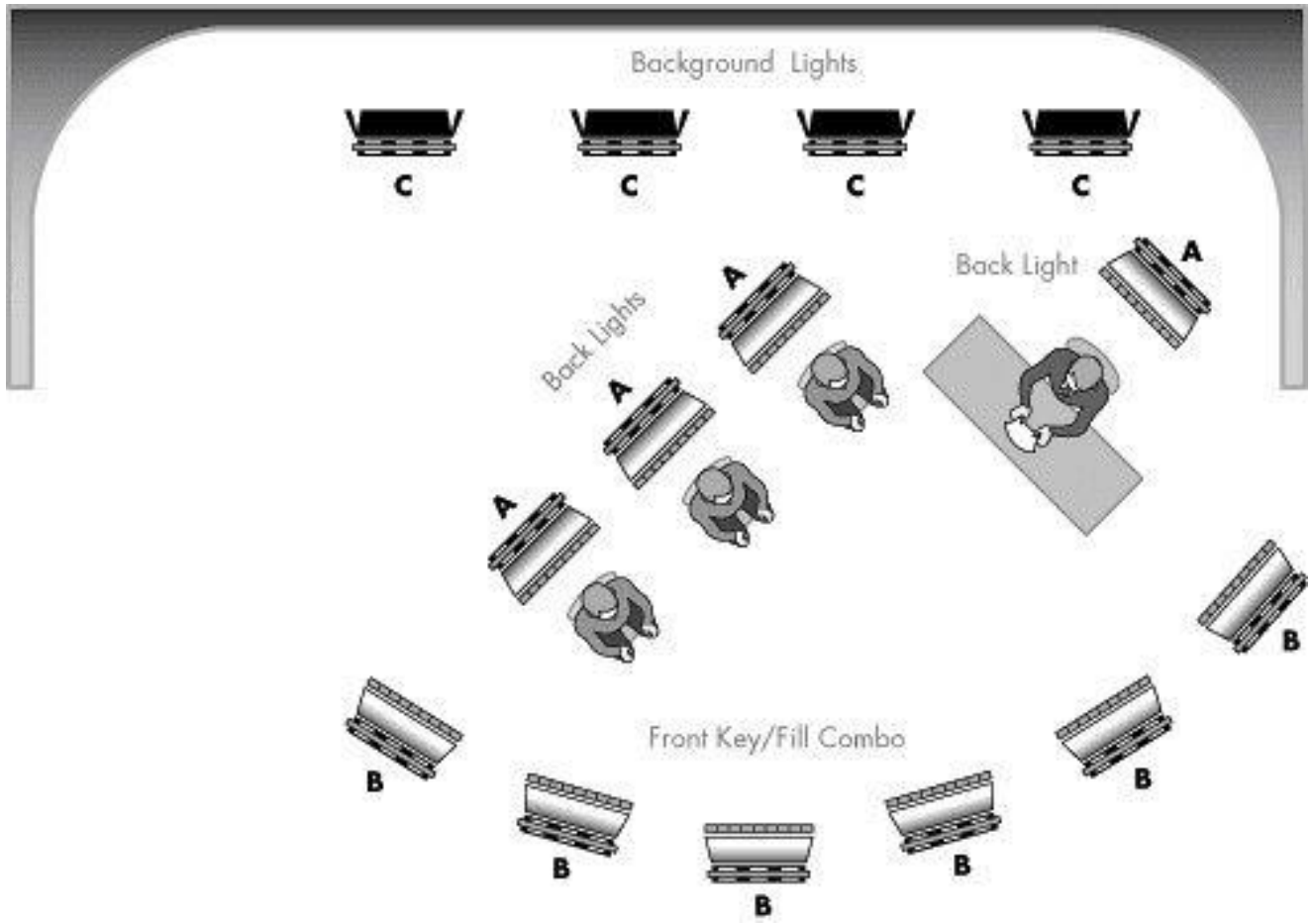
•In complex shows, contractors move between **static positions** — places where announcements are made or conversations are conducted.
•First, all static positions are illuminated, as **the scattered spotlight** usually covers part of the movement paths.
•**The contractor's paths** do not have to be perfectly illuminated, as they move short and errors are difficult to notice.
•After adjusting the static positions, the **uniformity of illumination** on the movement paths is checked.
•Experienced designers use simple methods: going through the frame, observing shadows and reflections on the hands or head.
•If necessary, the reflectors **are disconnected, moved or new ones are added**, in order to eliminate the "dark holes".
•The goal is to maintain the natural appearance of the light with **minimal changes in intensity** as the contractors move.



Example.


A Back Light
B Fill Light
B Key Light
B Fill Light
C
C
Audience Lights
C
C

Example.

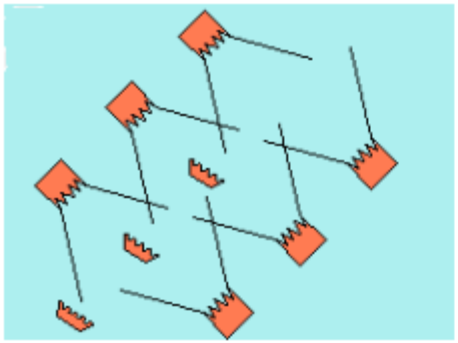

Background Lights
C
C
C
C
Back Lights
A
A
A
Back Light
A
B
B
B
B
B
Front Key/Fill Combo

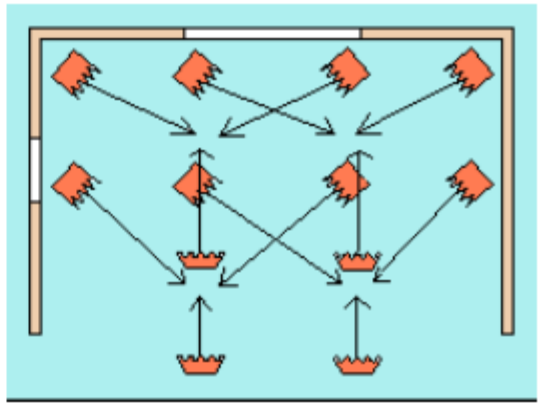
Illuminating Complex Emissions with Moving Contractors

•If the performers are constantly on the move and move around a large area, which is the case in shows that contain various games, etc., it is necessary to illuminate the entire area of the store evenly.

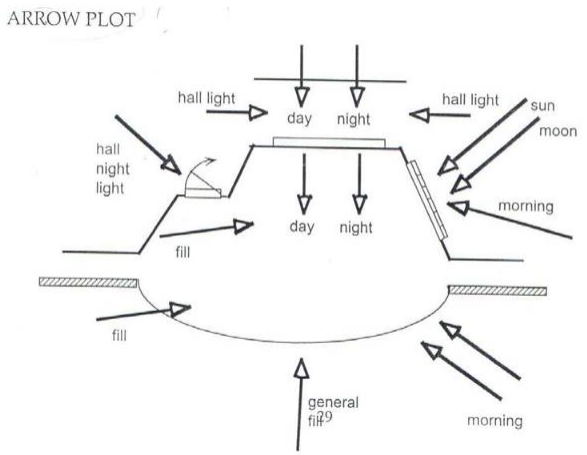
•This is achieved by connecting the beams of multiple reflectors in such a way that their beam angles touch each other.

•The problem of the movement of contractors in studio shows can also be effectively solved by applying a circular basic light position.





Koncept dizajna svetla predstavljen kroz nacrt sa strelicama (eng. *arrow plot*):



Illuminating Complex Emissions with Moving Contractors

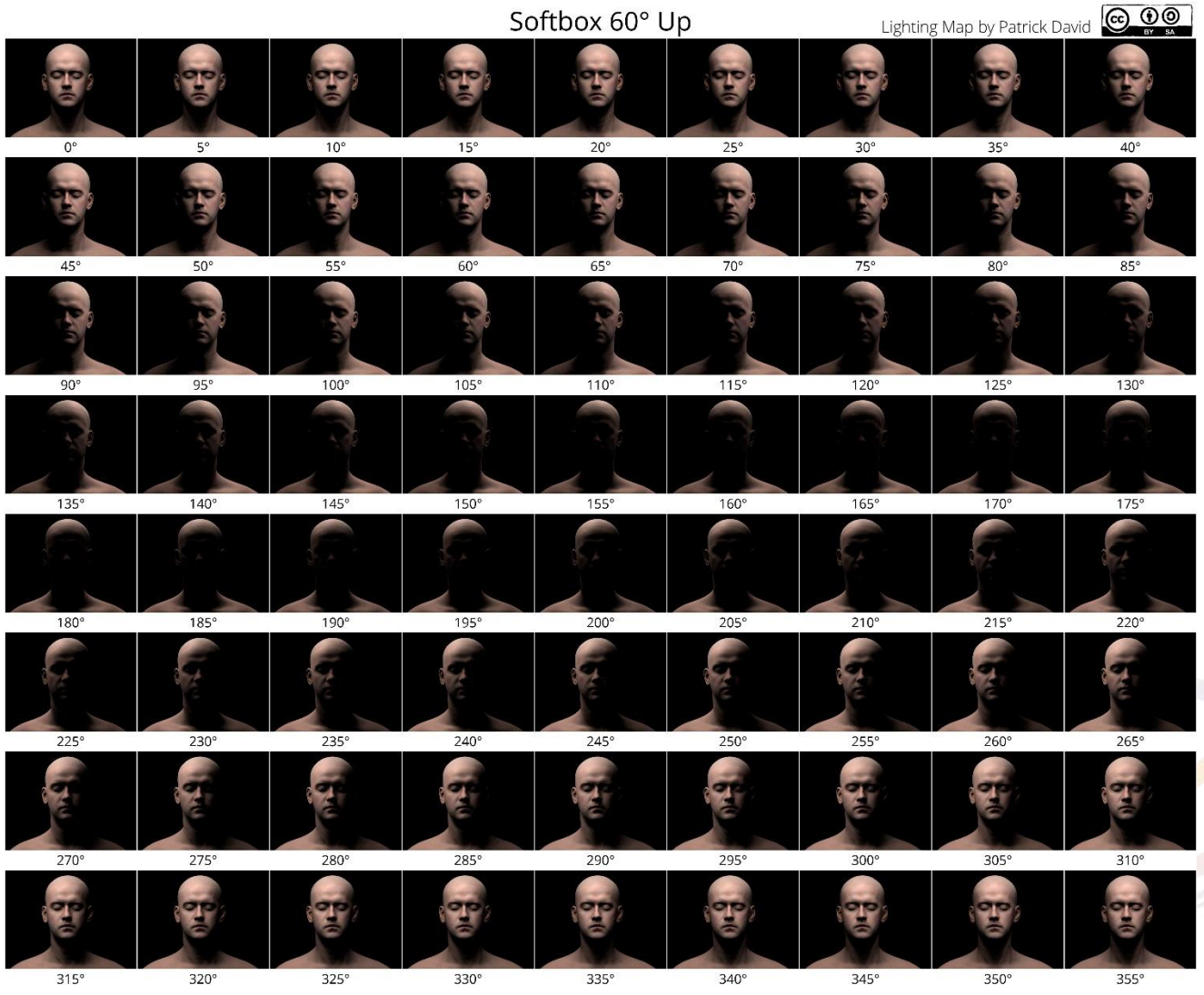
•In popular music shows, lighting is as important today as music itself, because it is an audio-visual experience.

•The approach to lighting a fun music show depends on the type of music, the specifics of the performer, the scenery and the available technique, but primarily from the light designer.

•Mandatory tasks, such as illuminating performers, in this genre are minimal and easily solved with escort videos. There are no rules for everything else, except those imposed by the light designer himself.

Example.


LIGHTING GUIDE
MASTER PRO PORTRAIT LIGHTING WITH THESE 24 ESSENTIAL STUDIO SET-UPS
REMBRANDT WITH A SOFTBOX
REMBRANDT THROUGH A BROLLY
REMBRANDT WITH A HONEYCOMB
REMBRANDT WITH A SILVER BROLLY
REMBRANDT SHORT
REMBRANDT BROAD
SPLIT
SPLIT WITH FILL
SPLIT/SHORT
SPLIT/BROAD
KEY WITH A CLOSE SOFTBOX
KEY WITH A FAR AWAY SOFTBOX
LOOP
BUTTERFLY
FLAT LIGHT
BADGER
CLAMSHELL
LOOP WITH A BACKGROUND LIGHT
LOOP WITH A RIM LIGHT
HIGH KEY
KEY AND FILL
KEY, FILL AND HAIR LIGHT
HARD KEY WITH KICKERS
COLOURED GELS
Digital Camera
www.digitalcameraworld.com


Softbox 60° Up
Lighting Map by Patrick David
0° 5° 10° 15° 20° 25° 30° 35° 40°
45° 50° 55° 60° 65° 70° 75° 80° 85°
90° 95° 100° 105° 110° 115° 120° 125° 130°
135° 140° 145° 150° 155° 160° 165° 170° 175°
180° 185° 190° 195° 200° 205° 210° 215° 220°
225° 230° 235° 240° 245° 250° 255° 260° 265°
270° 275° 280° 285° 290° 295° 300° 305° 310°
315° 320° 325° 330° 335° 340° 345° 350° 355°

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Example.

https://medium.com/@sukeshgtambi/24-portrait-character-lighting-setups-photography-cinematography-bdd7a967407c

WBnet

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Questions & Answers

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