

CAMERA OPERATOR



WHAT IS A CAMERA OPERATOR?

As camera operator, you are responsible for all cameras from powering on to powering down as well as the Multiview, Switcher. You are helping to tell an important story about God and about us. You determine what will be recorded or displayed on the screen for the viewer. Our objective for using this technology in worship is to engage the viewer, enhance their experience, and limit distraction.

WHEN & WHERE

Please arrive in the balcony by 10:15 AM (or as instructed)

SUNDAY CAMERA CHECKLIST

Power

1. **Power ON/OFF Black strip under station**
 - Atem/Multiview/Joystick/PTZ cameras
2. **Power SONY camera ON/OFF - button on camera**
3. **Lamp ON /OFF**

Set White Balance

1. **PTZ Cameras**
2. **Sony Camera**

Streaming

1. **Start Stream (On Air) and Recording (REC) ~10:20am**
2. **Stop Stream (OFF) and Recording (STOP)**

CAMERAS

CAM1=Propresenter CAM2=PTZ Left CAM3=PTZ Back CAM4=Sony

CAMERA 1

You do not need to set anything, this is done by the computer operator. This camera will be the Slide screen. You will switch between fullscreen or Picture in Picture (PIP)



CAMERA 2 & 3

PTZ=Pan/Tilt/Zoom

1. The Joystick controls these cameras
 - Switch between cameras by pressing Cam2 or Cam3 on the Joystick
2. Move Camera: Joystick Up>Down>L>R
3. Zoom: Twist Knob L>R
4. Menu: Camera#>OSD(on screen display)>Control w/Joystick>OSD Enter>Exit=OSD
5. Set White Balance: Camera#>OSD>Scroll down to COLOR>Zoom on GREY CARD>OSD Enter>Exit=OSD



CAMERA 4

1. Set White Balance: Select Trash Can Button>Select Right>Enter Center Button>Balance with Grey Card>Enter Twice
 - a. Set Exposure: Select Down>Move Left or Right for More or Less exposure
2. Zoom with wide band on lens
3. Tripod is Very fluid
4. Check Pan, Tilt and Framing



SONY A6400

Power OFF (End of Service)

- Sony A6400
- Black PowerStrip
- Lamp



THE SWITCHER



ON Picture in Picture
OFF ON/OFF

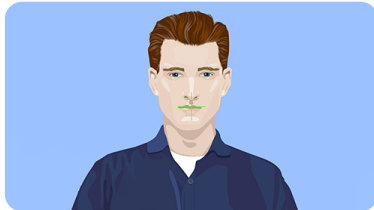
FTB Fade to Black

STILL Image from Media Bin

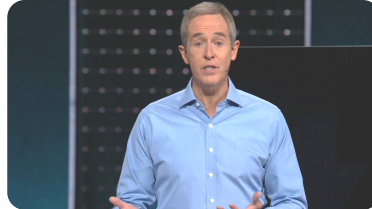
- 1** Camera 1: PROPRESENTER MEDIA
- 2** Camera 2: PRIMARY CAMERA
- 3** Camera 3: CUT AWAY CAMERA
- 4** Camera 4: Empty Slot



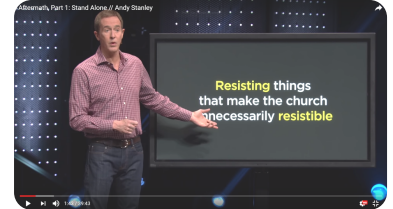
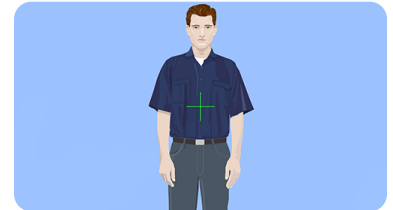
COMPOSING YOUR SHOT



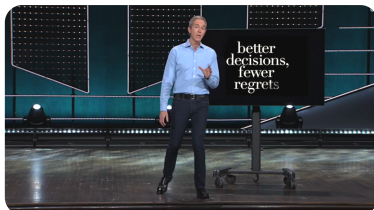
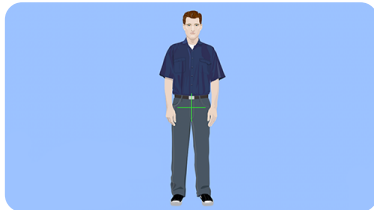
MEDIUM CLOSEUP / MCU
 This is a primary field of view (FoV) used for the presenter / teacher / preacher, lead vocalists and musicians, announcements and testimonials.



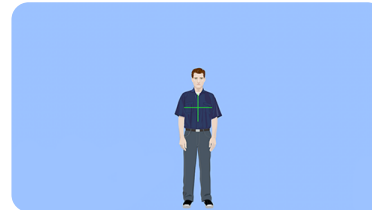
MEDIUM / MED / WAIST SHOT
 This is a primary FoV used for presenter / teacher / preachers, lead vocalists and musicians, or during announcements or testimonials.



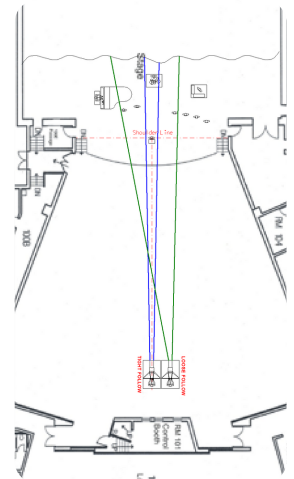
MEDIUM WIDE/ MWS / HEAD-TO-KNEES
 Medium Wide shots are the primary FoV for a presenter who may have a large on-camera prop – such as PIP. Medium Wide (and Wide) loose-follow shots are also commonly used when a presenter is moving around the stage.



WIDE / WS / HEAD TO TOE
 A WS is tighter or closer-in than a Extreme Wide shot. Wide shots and Medium Wide shots are the primary "loose-follow" cover views for presenters / teachers / preachers.



EXTREME WIDE / EWS / XWS
 The field of view typically at (or near) the optical extreme wide angle focal length the camera's lens may deliver. EWS is that field of view necessary to accommodate or establish the relevant environment.





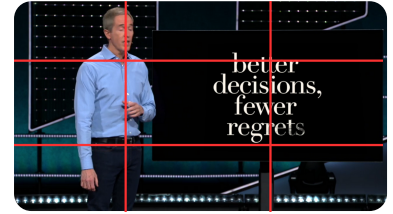
COMPOSING YOUR SHOT

**RULE OF THIRDS**

A composition theory based on dividing the screen into thirds vertically and horizontally and placing the main subject along those lines.

**CENTER FRAMING**

Where the centre of the frame is used to separate two distinct sides of the shot. These shots often utilise symmetry on either side of the frame.

**LOOKING ROOM**

is the amount of space between the subject and the edge of the screen they are facing. You should have more room in front of the subject than behind.

**HEAD ROOM****TOO MUCH HEAD ROOM****TOO LITTLE HEAD ROOM**

The amount of space between the top of a subject's head and the upper edge of the screen. The amount of headroom typically sought is commensurate to the tightness of the frame or Field of View. Tighter frames receive less headroom. Wider frames are given more headroom

SUMMARY

- PRACTICE YOUR MOVES during the band rehearsal
- CENTER on Pastor/Teacher/Speaker
- THIRDS on Musicians and pay attention to Looking room
- CHOOSE one musician at a time OR use the WIDE/EXTREME WIDE view
- It is important to be intentional not only regarding where the subject is positioned in the frame, but also headroom, nose room and what foreground and background objects are included or excluded from the shot's composition.
- When a camera is located on-center line (e.g.: tight or loose follow positions), compositions are typically center balanced, meaning the subject is framed horizontally center. If the subject turns their shoulders away from perpendicular to the camera the shot's composition should be adjusted for added nose room. If the subject is in motion walking off-stage, the shot's composition should include lead-room in the direction the subject is facing / moving.
- When a camera is located off-center line, compositions typically put the subject off center in the frame with nose room in the direction the talent is looking. The amount of nose room is commensurate to how much off-centerline the camera is located and how far off-perpendicular the subject's shoulders are. Further away from center-line typically entails greater nose or lead room. Closer to center-line typically means less nose or lead room.
- Especially when transitioning to or from a secondary off-centerline cameras, consider placing the subject's position in the frame – our point of interest – in the negative space left from the previous shot's field of view on-line. When transitioning from a secondary camera angle to another secondary camera angle, avoid having the point of interest in the same framing location shot to shot.
- The amount of headroom to be used is roughly commensurate to the field of view. Tighter shots have less headroom. Wider shots may have greater headroom. MCU (Medium close up) shots generally have about 6% headroom, roughly equivalent to an apple above the subject's hairline. MED (Medium) shots tend to have 7-8% headroom. CU shots will often have the top of the frame on or near the hair line. ECU shots (of a face) may have the top of the frame cutting across the forehead.



DEEPER CAMERA SETTINGS

Frame Rate: The speed at which images are shown

Best for Church= 24fps [Sony:24/Alpha:25/PTZ:24]
Typical FR 24/30/60

Aperture: fstop = How wide or closed the shutter is.

- Open/Lots of Light in/ 1.8 f stop
- Wide → Shallow depth of field (more out of focus)
- Closed/Squint/16 f stop
- Closed → Deep depth of field (more in focus)

ISO: Sensitivity to Light

Higher = ISO = More sensitive
Lower = ISO = Less Sensitive --> Boost to Brighten, But higher ISO = more NOISE
Keep below 400 / Under 1000 is OK ---> Just keep it as low as you can

Shutter Speed:

1/50 or 1/100 {Denominator 50, 100, etc... } 2:1 Rule (2x Frame Rate)
= for Livestream = 50!!

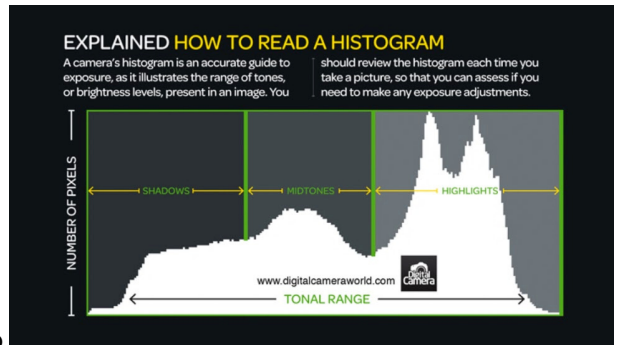
Exposure: How much light is let in (Over/Underexposed)

Detail in Bright/Dark/Mids

-2..-1..0..+1..+2

Keep METER closest to 0 as you can

UNDERexposed graph will lean LEFT
OVERexposed graph will lean RIGHT
CORRECT exposure will gradually climb in the middle



White Balance: Read in Kelvin

High= BLUE Low= RED
Manual #4500-5000 is a good start

Gain: Ease darkness w/o turning noisy

Dynamic Range: Sensor Capability (Unchangable)

Bokeh: Out of Focus

