

# Chapter 17

## Display Technologies

# Episode 17.01

Episode **Monitor Technologies**  
title:

Objective: 220-1201 3.1 Compare and contrast display components and attributes.

## Lower 3rds

mini-LED - smaller LED backlights to improve quality of display

## mini LED

mini-LED - smaller LED  
backlights to improve quality  
of display



Episode  
title:

Objective:

# Episode x.xx

Episode  
title:

Objective:

# Episode x.xx

Episode  
title:

Objective:

# Episode 17.08

Episode **Graphic Cards and Connections**  
title:

Objective:



## Lower 3rds

- OBJ - Incorrect input source
- OBJ - Physical cabling issues
- OBJ - Burnt-out bulb
- OBJ - Fuzzy image
- OBJ - Display burn-in
- OBJ - Dead pixels
- OBJ - Flashing screen
- OBJ - Incorrect color display
- OBJ - Audio issues
- OBJ - Dim image
- OBJ - Intermittent projector shutdown
- OBJ - Sizing issues
- OBJ - Distorted image

## Lower 3rds

Video problems occur in playback or projection, such as interruptions, freezing, stuttering, uneven motion, or no sound.

Common video projector issues include blank screen, fuzzy images, incorrect color, and power connections.

Display problems can be a blank or black screen, flickering or distorted visuals, incorrect colors, and dead pixels

## Video Devices

- Video
- Projectors
- Displays

## Video problems

- Interruptions
- Freezing
- Stuttering
- Uneven motion
- No sound

## Video projector issues

Common issues include:

- Blank screen
- Fuzzy images
- Incorrect color
- Power connections

## Display problems

- Blank or black screen
- Flickering
- Distorted visuals
- Incorrect colors
- Dead pixels

## Incorrect input source

“no signal input”

- Loose or damaged cable
- Incompatible resolution/refresh-rate
- Projector – bulb burnt out
  - Check the bulb
  - Check the connection
  - Verify resolution, refresh rate, and signal settings

## Issue with source device

PC, DVD or Blu-ray player

- Reboot device
- Non-connectivity issue:
  - Verify resolution, refresh rate, and signal settings



## Projector problems

“no signal error”

- Check projector settings
  - Resolution
  - Aspect ration
  - Refresh rate

## Physical cabling issues

- Check power and signal cables
- Look for damage
  - Frays
  - Cuts
  - Bent pins
- Test with new cables

## Fuzzy image

- Lens out-of-focus
- Improper resolution setting
- Loose cable
- Dust accumulation

## Display burn-in

- Pixels or sub-pixels too bright and cannot return to normal
- Can be repaired by a professional
- Power cycle to eliminate image retention

## Dead pixels

- Could be a stuck color
- Hot pixels:
  - White / yellow
  - Caused by overheating, power surge, manufacture defect
- Cold pixels:
  - Dark colors
  - Caused by physical damage, wear and tear, manufacture defect

## Flashing screen

- Brightness rapidly up and down
- Content comes and goes
- Horizontal and vertical bands
  - Corrupted device drivers
  - Incompatible application
  - Incorrect refresh rate
  - Display or power settings
  - Bad cable or graphics card
  - OS update incompatibility
  - Faulty display

## Incorrect color display

- Outdated device color profile
- Incorrect color settings
- Faulty graphics card
- Application conflict
- OS Update issue

## Projector audio issues

- Loose or faulty cable connection
- Source device issue
- Projector settings issue
- Perform regular maintenance to avoid and prevent issues



## Dim image on display

- Incorrect brightness setting
- Adaptive Brightness is enabled
- Power-saving setting
- Loose cable
- Outdated graphics driver
- Backlight issue

## Dim image on display

Troubleshooting:

- Run display self-test
- Check OS display settings
- Update the OS
- Reset to factory settings

## Intermittent projector shutdown

- Power supply
- Overheating
- Lamp failure

## Display sizing issues

- Incorrect OS screen resolution setting
- Adjust to recommended monitor setting to resolve

## Distorted image

- Pixelation
- Blurriness
- Color issues
- Causes:
  - Resolution mismatch
  - Outdated drivers
  - Overheating graphics card
  - Incorrect monitor setting
  - Electromagnetic interference