

---

# Technical Bulletin

---

## Dead pixels in multi-projector setup

This document provides information about dead pixels (usually red and always near a corner or an edge of the DMD) when using multiple projectors in image blended applications or geometrically corrected images (such as keystone correction, Mystique™, and so on). This failure does not affect the normal show as the dead pixels are masked out in blend zones.

The blend on the failing projectors is always set to output black. The following example explains why the pixels are set to black.



- The projector in the ceiling is used to illuminate a section on the floor (highlighted by the blue rectangle in the image above).
- Part of the projected image falls on the wall (the yellow rectangle in the image above).
- When the image is focused on the floor, the section of the image on the wall is not focused. Therefore, the media server outputs black to mask the image projected on the wall.
- The DMDs are set to the off position for an extended period while the laser is on causing the stuck pixels, usually on the red DMD (highlighted by the red rectangle in the image above).

The following show several use cases where some of the DMD pixels are permanently masked:

- The resolution of the content is lower than the resolution of the DMD (Letterbox and Pillarbox).
- Keystone correction is applied in large tilt angel installations.
- Poorly aligned overlay images use Mystique or Twist™ to improve the alignment.

### Resolution

To resolve the issue, exercise the DMD for 45 minutes daily:

1. Update the automation script to do one of the following:
  - Turn the laser on 45 before the normal start time.
  - Leave the laser on for 45 minutes after the normal shut down time.
2. During the 45 minutes, display the 50% Gray test pattern.
3. If the image is geometrically corrected using Mystique or Twist, disable the geometry correction during the 45 minutes.

Make sure to re-enable the geometry at the end of the 45 minutes.

## Affected products

The following products are affected:

- Christie M RGB Series
- Griffyn® Series

## Technical support

Technical support for Christie Enterprise products is available at:

- North and South America: +1-800-221-8025 or *Support.Americas@christiedigital.com*
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or *Support.EMEA@christiedigital.com*
- Asia Pacific (*support.apac@christiedigital.com*):
  - Australia: +61 (0)7 3624 4888 or *tech-Australia@christiedigital.com*
  - China: +86 10 6561 0240 or *tech-supportChina@christiedigital.com*
  - India: +91 (80) 6708 9999 or *tech-India@christiedigital.com*
  - Japan: 81-3-3599-7481
  - Singapore: +65 6877-8737 or *tech-Singapore@christiedigital.com*
  - South Korea: +82 2 702 1601 or *tech-Korea@christiedigital.com*