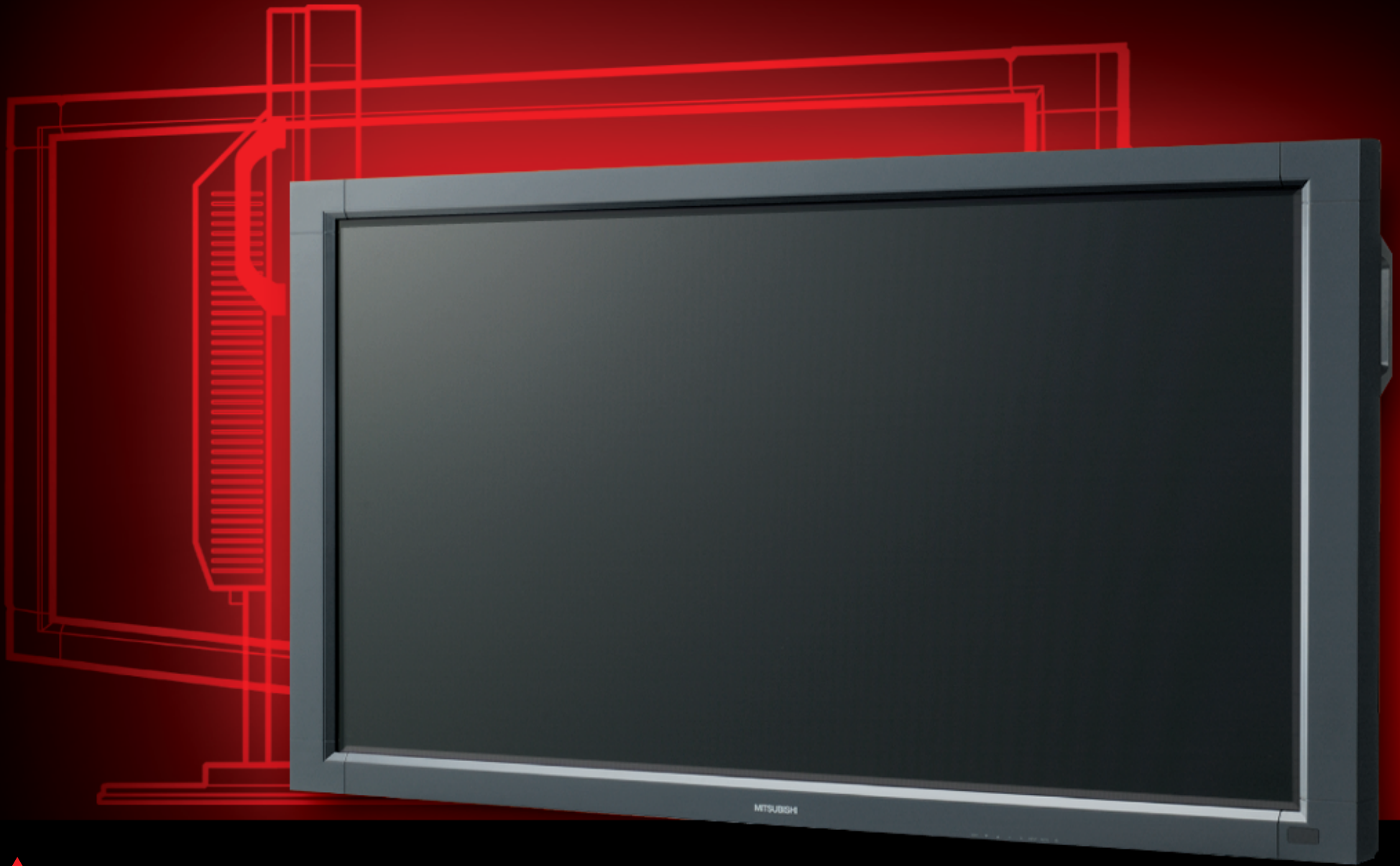


# IMAGE PERSISTENCE: LCD MONITORS



# IMAGE PERSISTENCE: LCD MONITORS

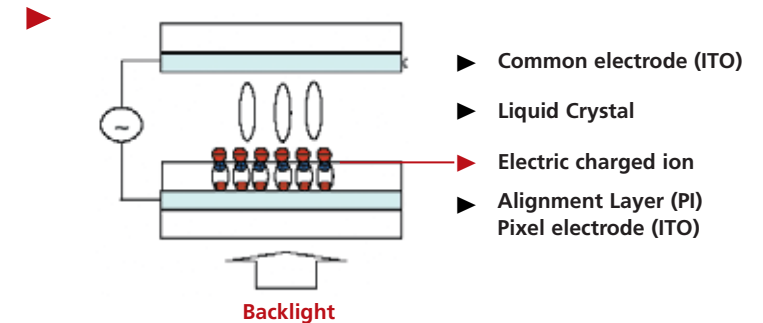
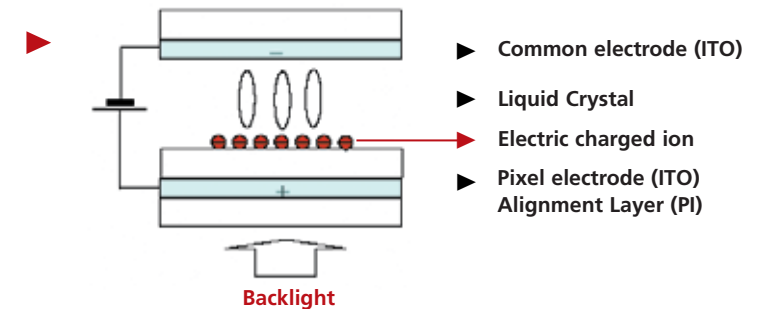
## HOW DOES IMAGE PERSISTENCE OCCUR?

When an LCD panel is continuously displaying the same image (graphic) for a long period of time, a trace of the image can remain visible due to an electric charge near an electrode causing a difference in potential between the electrodes controlling the alignment of the liquid crystals. This misalignment of liquid crystals will cause a residual or ghost-like images resulting in image persistence.

Image persistence is not a product defect, and all LCD products are subject to image persistence. Mitsubishi encourages correct usage of LCD Monitors. The series of Mitsubishi MDT LCD Monitors include features to help reduce the impurities that can result in image persistence.

**Image persistence can possibly lead to image sticking, where the previous image is permanently visible as a result of an image fixed for a long period of time.**

### NO IMAGE PERSISTENCE



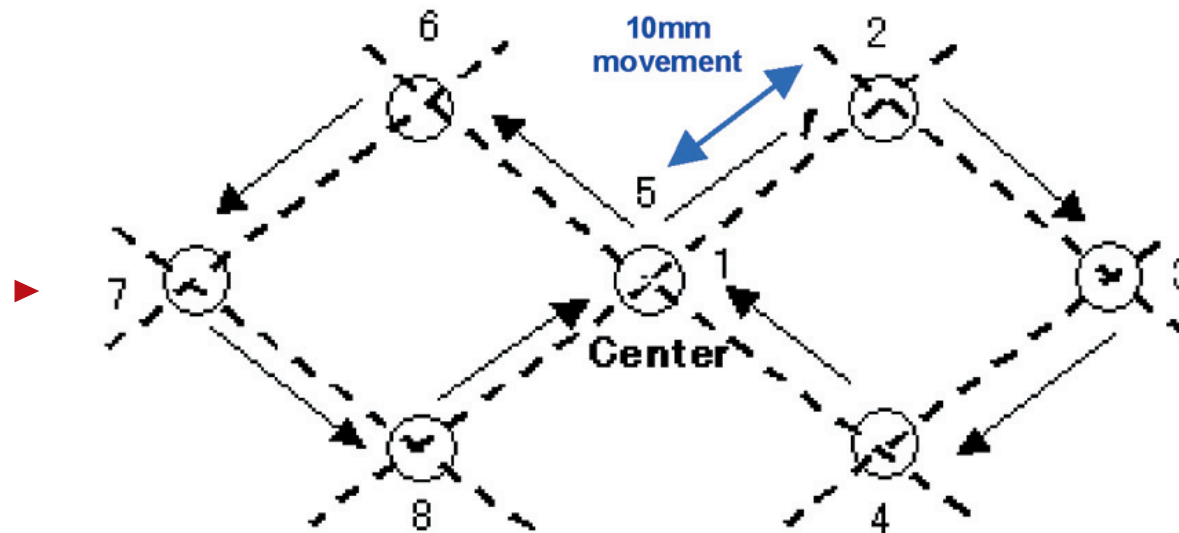
### IMAGE PERSISTENCE

# IMAGE PERSISTENCE: LCD MONITORS

## WHAT CAN I DO TO REDUCE IMAGE PERSISTENCE AND HELP ENSURE THE LIFE OF THE MDT LCD DISPLAY MONITOR?

### IMAGE ROTATION SUPPORT:

Image rotation prevents an image being in a stationary state. The displayed image is slightly expanded and moves periodically (up, down, left, right, movement options of approximately  $\pm 10\text{mm}$  from original position at user set intervals).



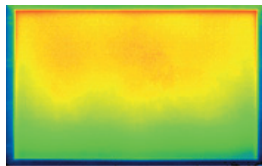
# IMAGE PERSISTENCE: LCD MONITORS

## SCREEN SAVER SUPPORT:

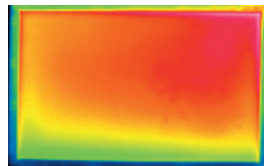
The screen saver support is one of the best options to protect the LCD Monitor from image persistence. The MDT LCD Monitors includes multiple screen saver options:

**GAMMA:** The Gamma "On" function provides a nonlinear tonal correction editing an image's gamma curve, used to manipulate image shadow detail and lighten the image without washing out the highlight areas. This function allows for a more uniform brightness and contrast measurements which will reduce image persistence.

**COOLING FAN:** The built-in cooling fan is helpful in reducing the overall LCD temperature, which is beneficial in the overall life of the LCD Monitor. The MDT cooling fan is automatically triggered when the LCD Monitor reaches a temperature threshold, so the monitor will always run cool.



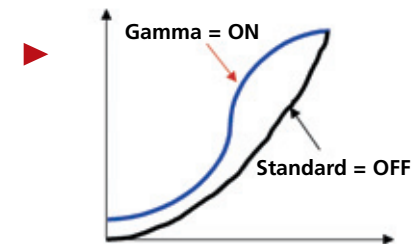
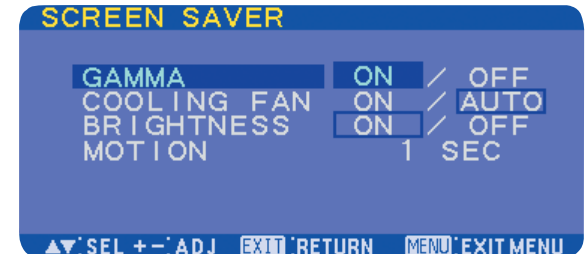
MDT LCD MONITOR  
WITH COOLING FAN



OTHER LCD MONITOR  
WITHOUT COOLING FAN

**BRIGHTNESS:** General rule if you run the LCD Monitor in high bright mode, you will run a higher risk of image persistence - recommend running in low bright mode.

**MOTION:** motion settings help reduce the likelihood of image persistence, since it prevents an image from being stagnantly displayed for long periods of time.



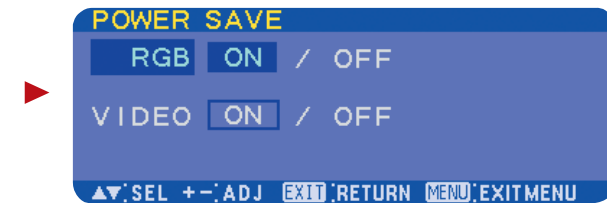
No affect to the screen performance  
by using optimized Gamma

# IMAGE PERSISTENCE: LCD MONITORS

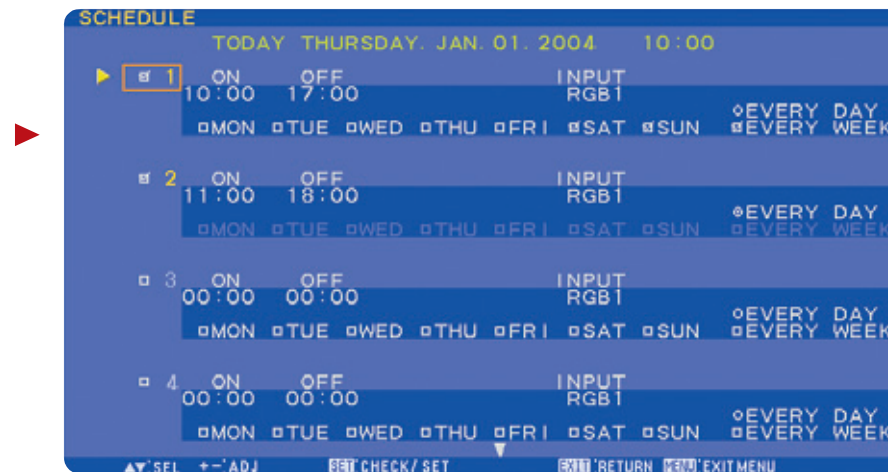
## TURN OFF THE LCD MONITOR WHEN NOT IN USE:

Turning off the LCD Monitor helps reset the LCD Panel and its liquid crystals. The MDT LCD Monitors offer various methods of turning off the LCD Monitor when the displays are not in use:

**POWER SAVE:** The Power Save feature detects when an input signal is no longer active and will automate the LCD Monitor in a Power Save state to save the life of the LCD panel.



**SCHEDULER FEATURE:** The built in Scheduler can be programmed to automate power on and power off of the LCD Monitor. It also supports the signals of input sources to help prolong the life of the LCD Monitor.



# IMAGE PERSISTENCE: LCD MONITORS

## ADDITIONAL TIPS

- ▶ Allow adequate ventilation around the LCD Monitor so heat can properly dissipate
- ▶ Power off the LCD Monitor for the same length of time the LCD Monitor has been powered on
- ▶ Don't block ventilation openings or place the LCD Monitor near a radiator or other heating sources
- ▶ Fixed images should not be displayed for long periods of time (prefer to change video pattern frequently)
- ▶ Encourage to change images for short image cycles (versus long cycles)
- ▶ Side border color function to reduce risk of image sticking for long periods of usage