

Meaning of Camera and Encoder LEDs

e-Watch® Cameras and Encoders have three LEDs located at the top right-hand of the front of the plastic bezel. These LEDs have meaning at startup, during video transmission, and during Panic Button events. The status of these LEDs can be a powerful tool to troubleshoot camera and transmission problems, and to notify personnel of responses to Panic Button events.

LED function is defined by firmware and is subject to change. This document describes firmware version 2.2.0.16. Please refer to Table 1.

Before power is applied, all of the LEDs will be off (state 0). When power is applied, the red and green LEDs will turn on (state 1). After approximately a half second, the blue LED will turn on (state 2) for about one-tenth second and then go off (state 3). About one second later the red and green LEDs will turn off (state 4). Three tenths of a second later the red and green LEDs will turn back on (state 5). During this state the green LED will flash off occasionally while the camera attempts to obtain an IP address from a DHCP server, if it is configured to do so. After an IP address is obtained, the blue LED will turn on and the green LED will blink at a steady rate (state 6).

State 6 is the normal operating state. The red and blue LEDs remain on. The green LED indicates network link status and activity. It will turn on when the link is up and blink with network activity.

If the camera is configured for DHCP, and the network connection is bad, the LEDs may remain in state 4 for up to five minutes. If the network connection is good, the LEDs will remain in state 5 until an IP address is obtained from a DHCP server.

When the camera is sending SIF and QSIF video streams, it will generate enough network activity for the green LED to blink at a steady rate. If the camera stops sending SIF video, the green LED blink rate will become somewhat erratic. If only the QSIF stream stops, the change in blink rate will probably not be noticeable. If both streams stop, the blink rate will become very erratic. The discussion of blink rate assumes the camera is NOT receiving the multicast streams from other cameras, or other high-rate network traffic. If the camera is receiving high-rate network traffic, the green LED will blink at a steady rate regardless of which video streams it is sending. This condition is abnormal, and implies an improperly configured network router or switch.

If the camera is equipped with a Panic Button, pressing the Panic Button will cause the red LED to blink rapidly (state 7). When the event is acknowledged at a ViewWatch™ monitor station, the red LED will stop blinking and the blue LED will blink rapidly (state 8). When the event is cleared at a ViewWatch monitor station, the LEDs will resume normal operation (state 6).

Table 1: LED Description

STATE	RED	GREEN	BLUE	DURATION	DESCRIPTION
0	OFF	OFF	OFF		Power off
1	ON	ON	OFF	0.5 second	Power applied / Hardware POR
2	ON	ON	ON	0.1 second	Begin initialization
3	ON	ON	OFF	1.0 second	Processor chip initialized
4	OFF	OFF	OFF	0.3 second	Begin Ethernet driver initialization
5	ON	ON/ BLINK	OFF	varies	Ethernet driver initialized
6	ON	BLINK	ON		IP Address obtained Normal operation
7	RAPID BLINK	BLINK	ON	until acknowledged	Panic Button detected
8	ON	BLINK	RAPID BLINK	until cleared	Panic Button acknowledged

e-Watch Corporation
7800 IH-10 West, Suite 720
San Antonio, TX 78230
USA

tel: (210) 349-2000
fax: (210) 341-1020

For more information:

email:
sales@e-watch.com

website:
www.e-watch.com

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