Camera Requirements for Bars and Night Clubs

Security Systems

Application Description

This Application Note describes the use of Dinion[XF] cameras where low lighting and smoke reduce visibility.

Introduction

Entertainment venues such as clubs and bars need to be vigilant for illegal activities such as the trade in recreational drugs, pick pocketing and for the safety concerns associated with crowded environments. The lighting and environmental conditions found in clubs and bars designed to give ambiance that attracts custom, frequently make it difficult for standard CCTV cameras to produce good video for security and safety purposes. In particular low ambient lighting combined with very bright highlights or spot lights are very challenging for video cameras. Often smoke generators are used on stages or dance floors. These all combine to produce situations that are particularly difficult for video cameras. The video processing technology of the Dinion[XF] cameras allow the best possible video to be obtained in these difficult lighting situation.

Problems that can be Encountered

Low Light Levels

This alone would be no real problem, modern high performance cameras such as the Dinion range can produce good video with low light levels, even when colour cameras are required. However, very high sensitivity cameras such as the Dinion[XF] should be considered in this type of environment for emergency situations, e.g. during power cuts when only emergency lighting is available. It is at these times that the additional sensitivity of the XF cameras comes into its own. In addition to the high sensitivity, additional features such as NightSense, Sens-Up and the day/night version, all boost sensitivity further. For the most extreme situations the monochrome camera has the ultimate sensitivity.

Extreme Contrast

The contrast between the low lit areas and the spotlights give the biggest challenge. Good video from all areas are normally required, but special video processing is necessary to reproduce the contrast on the display monitor. Again the special features built into the Dinion[XF] camera range ensure good results. The unique digital signal processing, with 15-bit accuracy of the Dinion[XF] ensures that the widest contrast range in the scene can be handled. In many scenes, especially with fixed cameras, there is an area much brighter or darker than the rest.

Using the back light compensation of the Dinion^{XF} camera, where the sensitive area can be precisely selected, the best balance between dark and light areas can be set up.

Smoke

Smoke from smoke machines, or cigar and cigarettes, produce a haze that dramatically reduces the contrast in the scene. Dinion cameras use automatic black level to restore the contrast, increasing scene visibility.

The solution

The challenges of lighting found in bars, clubs etc. need a range of advanced features to enable good usable video to be produced. The Dinion^{XF} have these features as standard in the camera. Not only that, the camera has 3 independent operating modes. These modes can be tuned to the various operating environments. Mode switching can be manual or automatic.

Night Sense - NightSense is a method of boosting the sensitivity of high-resolution Dinion colour cameras by 9 dB (a factor of 3!) by combining the signals of the colour image in a single monochrome picture.
Sens-Up - Sens-Up is used to increase sensitivity by integrating the signal from a number of consecutive frames to reduce noise.
Auto Black - Auto Black Compensation is a technique of boosting the video signal level to produce a full amplitude video signal, even when the scene contrast is less than the full range. The darkest part of the signal is set to black and the lightest part to white, thus increasing the contrast.
Back Light Compensation (BLC) - BLC selectively amplifies parts of the image to compensate for large contrast differences when part of the image is very brightly lit e.g. person in sunlit doorway.

Remote Set Up - One aspect of installation in this type of environment is the installation and set up. Ideally this should be done while customers are present, i.e. under real conditions. Apart from the physical installation the camera can be fully set up remotely e.g. from the monitoring using camera configuration software running on a PC or lap top and communicating directly with the camera over the standard video coax cable. The resulting picture can be viewed directly on the monitor. The camera modes can be fine tuned if necessary during normal business hours without interfering with the venueís operation.

User benefits

CCTV video is only useful when it has the necessary quality, especially important in emergency or difficult situations. The unique combination of advance performance and features of the Dinion^{XF} range provides the ideal solution for these application areas.

Typical system components		
	1/3″	1/2″
Colour cameras	LTC0485	LTC0610
Day/night cameras	LTC0495	LTC0620
Monochrome cameras	LTC0385	LTC0510

Bosch Security Systems
For more information please visit
www.boschsecuritysystems.com

BOSCH

Data subject to change without notice | Printed in The Netherlands | 2004 - 9922 141 01651en