

Closed Circuit Television (CCTV) Systems – Guidelines for Purchasers

This factsheet is intended to provide guidance for those wishing to install or enhance CCTV security systems at small and medium sized commercial premises. CCTV systems intended to cover public spaces (e.g., town or shopping centres, or large dispersed industrial complexes) are therefore beyond its scope. In general, the effectiveness of any CCTV system will be more dependent on overall system design and competent operation than its size or technical specification. Professional advice is therefore always appropriate.

Who can install CCTV?

In the absence of any regulation in this field, the answer is anyone! However, given most prospective purchasers limited knowledge of the subject, reliance must be placed upon professional and competent companies experienced in this field.

What type of system do you require?

By carefully considering the problem you wish to address and what you hope to achieve, you will be better able to:

- a) Decide if, or to what extent, CCTV is likely to be a solution.
- b) Discuss and clearly communicate your requirements with prospective installers.

Individual circumstances will dictate what system is appropriate, but in general the following aspects should be considered:

All Systems

- When and where the system will be operating (e.g., day or night, inside or outside) and the nature of any lighting available or required.
- Whether fixed or moveable cameras are appropriate, and whether they are to be visible (overt) or concealed (covert). If the latter, staff concerns about privacy may need consideration.

- Decide if colour or black and white pictures will be most useful. Colour is helpful to operators when live viewing (e.g., to help establish the colour of a car or a person's clothes) whereas black and white tends to give better picture detail (resolution), useful for recording fine features (e.g., car number plates or a person's face).
- Decide if you will need to view and/or record pictures on site, or at a separate location (remote monitoring centre).
- Ensure that the system cameras and components are sited to minimize the risk of interference.
- Check whether or not the provision of a back up power supply is feasible.
- Consider the system maintenance requirements, and who will need to undertake them. In general:
 - Cameras and housings will need to be cleaned and serviced every six months.
 - Recordings should be periodically checked for quality by a senior person.
 - Videotapes should be replaced, and tape recording heads cleaned, in accordance with the manufacturer's guidelines.
- Decide what training staff will be required to enable them to effectively operate the system.

On Site Recording Systems

- Recording equipment should not be situated in unmanned areas, as it may be interfered with. If recorders are to operate when the premises are unattended, they should be in a securely locked and preferably concealed area or enclosure to hinder theft of the tape(s) or equipment.
- Decide how the system is to detect the events you wish to monitor, i.e., whether cameras be activated by conventional alarm movement sensors or more sophisticated video motion detection.
- Real time recording is often appropriate to monitor events while the premises are attended, as

continuous footage is obtained and tapes can frequently be changed. When unattended, time lapse recording is usual, but a switch to real time recording should occur, and continue for a suitable time, if unauthorized access to a CCTV protected area is detected.

- Recording equipment should be correctly set to undertake accurate 'picture tagging', (i.e., recording the date/time within each recorded image).
- A sufficiently large bank of videotapes will need to be established to allow time for delayed discovery of an event, and still have the appropriate recording available for viewing. The police generally recommend one month's worth of tapes be retained. Tapes should be numbered and be re-used in strict order.
- A system should be put in place for routine monitoring of tape/picture quality by senior staff.

Remotely Monitored Systems

- Ensure that failure of, or deliberate interference with, vital parts of the CCTV system (e.g., the power supply, video signal to/from cameras and the transmission link to the remote monitoring centre) can be detected and communicated to the monitoring centre. To achieve this, suitable monitoring devices will need to be built into equipment or be separately installed. A robust system for notification of system failure/attack may involve an intruder alarm system having secure or monitored signalling to an alarm-receiving centre. If the alarm-receiving centre is different from the CCTV remote-monitoring centre, both should be provided with suitable details of each other and instructions on action to be taken in given circumstances.
- Given a time delay between system activation and the connection to the remote monitoring centre being established, the system should store and transmit upon connection, 'event/alarm image' pictures. This will give remote operators a clearer idea of what caused the activation, and what type of response may be appropriate.
- When connected to the site, remote operators should be able to view any camera and alter camera views. Particularly useful is the ability to broadcast an audible warning message to any persons seen on camera.
- Establish whether the proposed monitoring centre handles CCTV alone; or if handling other calls, such as intruder alarms, are dedicated CCTV employed operators.

- Check whether the monitoring centre is subject to any outside inspection.
- Create clear procedures on action to be taken by the CCTV monitoring centre (and any intruder alarm receiving centre), in response to viewed events and other types of signal received from the site (e.g., when will they telephone the police, security staff, maintenance engineers or the premise's keyholders). You should also check how long they will continue to view the site after an activation, and how all calls/actions will be logged.
- Keyholders should be willing to attend the premises promptly, know how to operate all relevant site security systems, have authority to authorize essential repairs, and be prepared to remain at the premises until adequate security has been restored.

Key Action Steps

- Decide what the problem is and what you wish the CCTV system to do.
- Choose prospective installers carefully and fully discuss your requirements. Obtain several quotations and check references.
- Ask your insurers for their comments. This is particularly important if you intend CCTV to replace some existing security measures (e.g., a conventional intruder alarm or permanent site manning).
- Consider the need for routine maintenance and the availability of service engineers in case of breakdown.
- Establish clear procedures for staff or monitoring centre operators to follow, and consider training requirements for staff.
- Regularly review system operation.

Useful Contacts

Canadian Alarm and Security Association
National Office
610 Alden Road Suite 100
Markham ON L3R 9Z1
(905) 513-0622
Toll Free 1-800-538-9919

Sources of further information

Other Aviva Hardfacts Numbers:
A-5598 - Closed Circuit Television (CCTV) - An Introduction.
A-5600 - Closed Circuit Television (CCTV) Systems - Glossary of Terms.