Signalling

Recent changes in the Association of Chief Police Officers (ACPO) policy requirements states that the police will only respond to a security system activation either as a result of a confirmed activation through a remotely monitored security system i.e. that two separate signalling systems using different signalling paths must be provided if the police are expected to attend a line cut. It is therefore required that dual path signalling is installed.

Types of signalling available:

Digital communicators:

This is the simplest link and comprises a digital communicator, which dials up the central station electronically via the public switched network (PSTN). Once a connection has been established a coded message is sent. After two successive messages have been identified from the communicator the central station then sends a shut down message. If the digital communicator cannot make contact with the central station, usually a further five attempts are made, after which the communicator shuts down.

There is no monitoring on the signalling path used by a digital communicator and in the event of a line fault or cut there is no indication in the central station. In view of this a digital communicator would not be adequate for commercial premises. Due to the recent changes to the ACPO policy the system is required have a monitored back up signalling link to the ARC in order to have police response. Therefore if a digital communicator is to be used it should be used within a DualCom GPRS system so that there are two separate signalling paths to the ARC.

DualCom GPRS

Essentially DualCom is a digital Communicator with a radio back-up using the Vodafone network. The primary signalling path is the radio connection with a back-up telephone connection. The telephone back up ensures that a signal can be transmitted should there be a fault or damage caused to primary radio connection. It is important to check the Vodafone signal strength in your area to get the full potential out of this signalling method.

DualCom is provided in grades 2, 3 and 4 and comprises of a radio connection with a digital communicator back-up.

The polling times (signalling times) are as follows:-

Grade 2 - polling frequency and fault reporting when both signalling paths fail simultaneously (i.e. when an intruder is able to enter the premises and smash the alarm controls so that both signals fail at the same time) – 24 hours

Grade 3 - Fault reporting if both signalling paths fail simultaneously - 1 hour.

Grade 4 - Fault reporting if both signalling paths fail simultaneously - 3 minutes.

As you can see from the above a grade 2 system is not secure and therefore it is recommend that at least grade 3 but preferably grade 4 is installed.

Changing grades of DualCom GPRS is a simple operation carried out by the central station for a small charge.

Even if an alarm system is Grade 2, in the case of Jewellers a Grade 4 signalling system should be used i.e. DualCom GPRS grade 4.

BT RedCare and RedCare GSM:

BT RedCare is a single path system that monitors an alarm over a BT phone line, alerting the Alarm Receiving Centre within seconds. The phone line is a continuously monitored service and from the first exchange/scanner the system is duplicated and diversely routed via a dedicated line to two host computers. From these the signal is sent directly via a dedicated line to the central station. The alarm information is transmitted rapidly at speech frequency when an event occurs. With RedCare line cuts indicate at the central station.

Unlike a digital communicator no dialing is involved, rather an electronic series of pulses are regularly transmitted via the phone line to the ARC. Should the phone line be cut no regular pulse is received at the ARC and a line cut condition is signaled resulting in police response.

However, since changes have been made to the ACPO policy which requires further communication after a line cut, conventional RedCare, as a stand alone system is no longer compliant. However, with a GSM radio connection, it is a Grade 4 signalling system. The secondary GSM path provides maximum protection and ensures alarm activations can continue to get through to the ARC, even if the phone line has been cut or damaged.

It is strongly recommended that for additional line integrity the customer should specify and arrange with BT "Total Care" service GUARANTEED 4 HOUR response to line faults. You will need to contact your local BT Sales Office for further details in this respect.

IP Monitored Alarm Systems:

These will take over from other forms of signalling in the next few years. The German test house, VdS, (http://www.vds.de/), have graded a system and BRE (http://www.bre.co.uk/) in the UK are about to grade a system.

IP alarm systems are connected to the ARC via a single broadband path. Therefore it is required that they are backed-up with a GPRS connection. The overall grade to be Grade 4 with the signalling ideally tested and graded by BRE, VdS or one of the other more reputable test houses. Subject to this these systems will be acceptable and probably a lot cheaper than RedCARE GSM and DualCom GPRS.

There are a number of IP systems available e.g. Webway 2424,

Webway 2424 offers a dual path system that monitors your alarm over the internet, i.e. using your broadband. The ARC is alerted within seconds if there is a fault or alarm activation. The system is backed up with a secondary mobile signalling path that is provided through a number of different service providers to supply maximum coverage wherever you are based. Alarm monitoring over a broadband line e.g. Webway 2424 offers a comprehensive monitoring service and system maintenance. All paths are continuously monitored with any single path failure detected and reported within 3 minutes. A simultaneous dual path failure is detected and reported in less than 6 minutes.

A minimum of Grade 4 signalling is required for high risk premises such as Jewellers, even if the alarm system itself is graded below Grade 4.