

Radio+ wireless system

A new secure wireless system Radio+ provides a fire detection and alarm system using secure wireless connections between the field devices and the control panels.

 **COOPER** Notification





Introduction

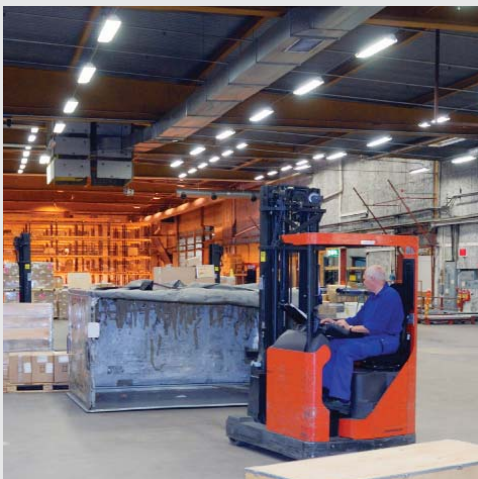
radio+

For both business and leisure radio technology is now common place. Such are the advances made in wireless technologies in recent years that most people use wireless devices without a second thought.

Using a new secure wireless system Radio+ provides a fire detection system using secure wireless connections between the field devices and the control panels.

Based on well proven components the sensors, sounders, beacons and call points give Radio+ a highly reliable foundation into which the wireless technology has been integrated to provide a fully featured analogue addressable fire detection and alarm system.

The development of Radio+ has tracked the progress of the European standard EN54-25 "Fire detection and fire alarm systems. Components using radio links", and has therefore been designed to conform fully with all aspects of this document.



The complete wireless system

System Features & Benefits

Wireless technology offers unique advantages when compared to the installation of wired detection and alarm systems:

Fast and simple installation – requiring only limited cabling, installation time is greatly reduced. Radio+ is ideally suited to situations where there are limited time periods for work to be undertaken, such as in educational, healthcare and retail establishments.

Cost saving – As devices only have to be fixed to the building, there is no need to run fire resistant cable, trunking, conduit or concealed cables, saving in both materials and labour. The use of multifunction components, such as the integrated Symphoni sounder beacon means there are fewer points to install leading to further economies in the installation process.

The unique survey and commissioning tool has been designed to allow these critical functions to be performed by a single person, again saving effort on site and reducing cost. A further consideration is the cost of the batteries used in the system, by standardising on easily available off the shelf batteries, and ultra-low power consumption to extend operational life and minimise system running costs.

Reduced disruption – the lack of cables also means that there is little damage to the fabric of the building, especially important in heritage sites or prestigious areas.

Apart from precious décor, the lack of invasion into the structure reduces mess and the risk that dust and rubble will enter vital areas which is particularly important in sterile and food preparation areas and other places where cleanliness is paramount.

Flexibility – changes to the configuration of a building and reconfiguration of the system can be accommodated both quickly and simply, minimising down time and essential for rapid refits.

For temporary installations or situations such as small retail outlets where occupation can change frequently the lack of cables means that an optimum system configuration can be maintained without major system reworking.

System Features:

- ADDRESSABLE 250 DEVICE SYSTEM
- RANGE GREATER THAN 1Km IN FREE AIR
- LOW PROFILE AESTHETICS
- EUROPEAN TONES, FULLY SYNCHRONISED
- DUAL ANTI-TAMPER FUNCTION
- MEETS THE REQUIREMENTS OF EN54-25
- FUTURE EXPANDABLE - VOICE / OTHER SYSTEM



Applications:

- **Fast Installation:**
Time limited situations – schools, hospitals.
- **Heritage:**
Limited disturbance to priceless décor, no go areas for cabling.
- **Temporary systems:**
Building sites, site-cabins, temporary structures.
- **Frequent reconfiguration:**
Flexible offices, small shops, display areas.
- **Difficult cable routes:**
Areas with difficult or limited access, or where disruption is unacceptable.



System overview

Basic system components:

- Touch Screen Panel
- Opto / heat detector
- Opto / heat detector / sounder / beacon
- Wall Sounder & Beacon
- Call Point
- Input / Output Module
- Boosters / Hybrids
- Survey / Installation Tool



Radio+ comprises a wide range of panels and field devices that integrate to form a fully featured, flexible wireless fire detection and alarm system meeting all current European standards.

Batteries

While control panels and signal boosters operate from battery backed mains supplies, like wired fire detection systems, the economy and reliability of wireless fire alarm systems are highly dependant on the cost and availability of the batteries used in the field devices such as the detectors, call points and sounders. Radio+ incorporates a number of novel features to allow operation in excess of three years from easily available standard AA alkaline cells. Battery replacement is therefore both economic and simple.

Monitoring functions ensure that early warning of low battery conditions is signalled and can be coordinated with normal maintenance procedures.

Control panel

The Radio+ Fire Control Panel is equipped to operate fully featured analogue addressable fire systems with bi-directional communication to all devices and designed to comply with all current applicable European standards.

- 250 RADIO DEVICES PER PANEL
- 16 DETECTION ZONES
- LARGE LCD FOR CLEAR INDICATION OF STATUS AND PROGRAMMING
- COMPREHENSIVE PANEL I/O FACILITIES
- FULL BI-DIRECTIONAL RADIO COMMUNICATION

Hybrid panel

While the Radio+ control panel is designed to give the whole system wireless operation, the Radio+ Hybrid Controller is intended to be added to wired addressable Fire Detection & Alarm systems to give wireless coverage in specific areas only. It can be configured to operate with most addressable system protocols to provide local coverage for sensitive areas or temporary installations.

- 30 DEVICES PER PANEL
- FULL BI-DIRECTIONAL RADIO COMMUNICATION
- CONNECTS TO MAIN SYSTEM VIA ADDRESSABLE LOOP

Components



Detectors

Radio+ detectors are based on multi-sensor technologies using combinations of optical smoke detection and both fixed temperature and rate of rise heat detection. These elements can be selected to provide optimum detection of all types of fire and operating conditions.

Radio+ Detector

- MULTI-SENSOR TECHNOLOGY COMBINING OPTICAL SMOKE DETECTION AND CONFIGURABLE HEAT DETECTION (FIXED, R-O-R & HIGH TEMPERATURE)
- TAMPER ALARM
- FIRST FIX BASE
- CONCEALED ANTENNAS

Radio+ Detector AV Unit

AS RADIO+ DETECTOR INTEGRATED WITH:

- HIGHLY VISIBLE LED ALARM BEACON
- ALARM SOUNDER
- 4 VOLUME SETTINGS
- 8 TONES

Manual Call Point

Radio+ Manual Call Points share all the features of the Universal CX on which they are based, in addition a tamper switch is provided so that an alarm is transmitted to the Radio+ Control Panel if the call point is dismantled or removed.

- REASSURANCE LED
- GLASS OR PLASTIC RESETTABLE ELEMENT (BOTH PROVIDED)
- TAMPER ALARM
- CONCEALED ANTENNAS

Open Area Sounder & Beacon

Radio+ Sounder / Beacons are based on the Symphoni AV to provide a combined audible and visual alarm to suit applications affected by the Disabilities Discrimination Act.

- 100dB(A) SOUNDER
- INTEGRATED HIGHLY EFFICIENT LED BEACON
- TAMPER ALARM
- 4 VOLUME SETTINGS
- 8 TONES



Mini Control Panel

The Radio+ Mini Control Panel is an ideal solution for small installations where the full capabilities of the standard control panel are not required.

- 26 radio devices per Mini panel
- LCD for clear indication
- Full bi-directional radio communication
- EN54 mains power supply

Signal Booster

If the initial radio survey shows that there are areas of a building where signal levels are below that required for reliable operation, then Radio+ Signal Boosters can be located to provide the necessary improvement in signal strength.

- Wireless or cabled connection to main Control panel
- Full bi-directional radio communication
- Mains/battery EN54 power supply
- Up to 26 devices per booster
- Up to 8 boosters per Control panel

Input / Output Units

The Input / Output modules for the Radio+ plus system allow the transferring of signal between Radio+ and other fire and non-fire systems.

Radio+ 3 Channel I/O Module

- 3 Inputs
- 3 Outputs
- Fire or non-fire signals

Radio+ Single Channel I/O Module

- Single input
- Single output rated for mains operation

Radio+ Sounder controller

- 4 Monitored conventional sounder circuit outputs
- Individual control of each circuit
- EN54 mains derived power supply

Survey Kit

A radio survey is the key to correct and trouble-free functioning of any wireless fire detection system.

The Radio+ survey kit is supplied in a handy carrying case and operates both as an initial survey instrument and then as a commissioning tool once the equipment has been installed.

During the survey the equipment simulates both the control panel and the field devices and provides readings of signal quality by "pass / fail" LEDs and also by a digital readout.

At commissioning the hand held unit is used to stimulate each device via a short range radio signal so that addresses can be allocated and communication established with the main control panel or signal booster.

The hand held unit can also be mounted on a standard smoke test pole to allow the signal strength to be measured at the exact location where a device is to be fitted.

