

# Comet

## Central Automatic Testing

### Application

COMMAND EMERGENCY TEST or COMET is designed for organisations seeking an automated, efficient, cost effective and reliable means of meeting the mandatory requirement to conduct and record fully diagnostic tests on emergency lighting installations.

Its unique robust communication protocol allows it to monitor up to 16,000 luminaires making it particularly cost effective in larger buildings:

- Commercial offices
- Hospitals
- Education

### Operation

The COMET system will be commissioned at the end of installation so that details of every luminaire are recorded against each address. Test schedules will be pre-programmed so that the required tests will automatically take place on dates and times best suited to the occupier. COMET has three levels of test:

### Status

A brief check of mains supply, battery charge presence and general electrical conditions.

### Functional

An operational test putting the luminaire into emergency lighting mode for a few minutes to assess discharge conditions, light output, battery capacity etc.

### Duration

The same tests as 'Functional' but operating the luminaires for the full rated duration to ensure lamp condition at the end of duration.

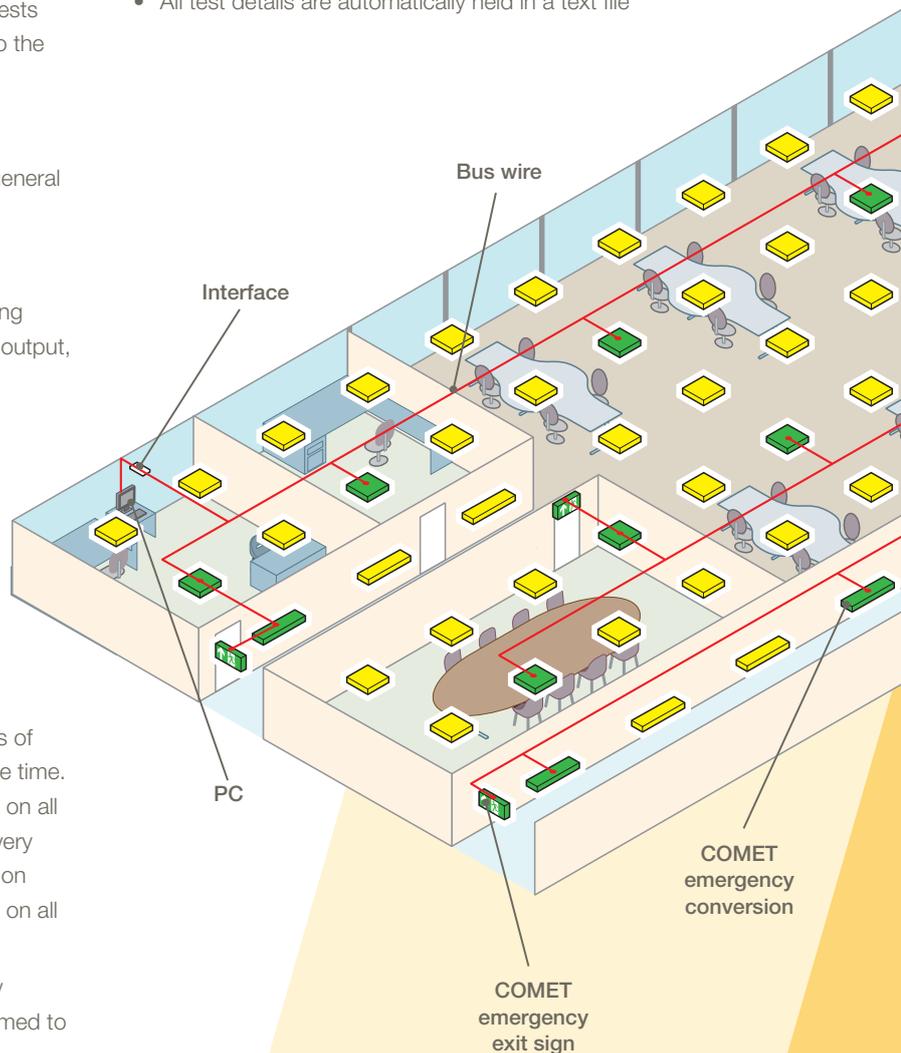
Any of these tests can be utilised at any time but a typical schedule would be to conduct status checks every week, Functional checks every month and duration checks every year in line with the European Standard.

The COMET software allows tests to be carried out on groups of luminaires to avoid all luminaires being discharged at the same time. For example it may be decided to conduct Functional checks on all even numbered addresses at 10.00pm on the 22nd day of every month and on all odd numbered addresses at the same time on the 26th day of every month, then conduct a full duration test on all luminaires at 1.00am on 31st December every year.

Every test is recorded in a text file for examination by any duly authorised person and the COMET software can be programmed to notify failures in various ways.

### Specification

- Designed for all projects using Whitecroft emergency luminaires
- Standard PC running Windows
- Single system can monitor up to 16,000 luminaires and different zones can be networked via a modem to a single central control position (recommended for larger projects)
- Simple twisted pair bus cable keeps installation cost low test schedules can be programmed to suit the use and occupancy of any building type
- Each luminaire has unique address and descriptive text file
- Times and dates of tests easily programmed
- Luminaires may be tested individually or in groups
- Failures indicated locally at the luminaire and on the central controller
- All test details are automatically held in a text file





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## System Components

### Interface Units

COMET Interface Units are required to allow a computer to communicate with up to 1000 Whitecroft intelligent lighting luminaires.

The Interface Units are connected to the computer's I/O ports by ethernet cables and the communication path to the luminaires is made via simple twisted pair cables. Each luminaire has a unique address and the system "polls" each address in turn. However, the twisted pair communication cables can be connected to luminaires in any order and using any parallel connection (multi spur, loop in/loop out, ring etc.).



### Stand Alone Emergency LED Units

Where remote emergency lighting is required, standalone emergency LED units can be used. Available in escape or open area distribution, for recessed or surface installation, these units are energy efficient and require minimal maintenance.



Recessed



Surface



Signage



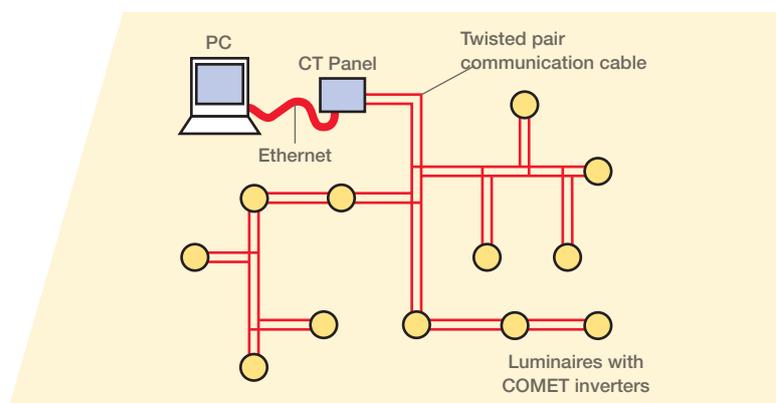
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### Communication Cables

The COMET system uses a very robust low baud communication protocol. There is no requirement for screened communication cables and any twisted pair, sized to minimise volt drop, will be acceptable. Whitecroft recommend 0.75mm<sup>2</sup> twisted pair (Belden 9407 or equivalent) for installations of up to 1000 luminaires (1000 metres of cable) and 2.5mm<sup>2</sup> twisted pair (Belden 9412 or equivalent) for larger installations involving long cable runs.

It is also recommended that for large installations COMET ISO data isolators are introduced in the communication cabling to break the installation into zones. This simplifies commissioning and the future addition of further

COMET luminaires. Isolators are recommended for every 20 luminaires.



Whitecroft Lighting luminaires can be supplied to be suitable for the use with COMET emergency test systems. Please confirm compatibility with the Whitecroft Technical Desk before placing your order.

*Note: It is essential that the position and address of every COMET luminaire is recorded during installation. Whitecroft can then arrange a fast and effective commissioning of the system prior to hand over.*