NEWSLETTER

THE INSTITUTION OF FIRE ENGINEERS (SINGAPORE BRANCH)

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JULY – AUGUST 2009

AUTOMATIC FIRE ALARM SYSTEMS AND DETECTORS

By David Goh, Convener of Working Group for CP 10:2005

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Why Use Fire Alarm System

A fire alarm system is intended to enable a fire to be detected at a sufficiently early stage so that people who are at risk can be made safe either by escaping from the fire, or by the fire being extinguished (also to prevent extensive property damage). Neither of these measures can be used until people are made aware of fire.

How is Fire Alarm Systems used to protect life and property?

It protects by:
- Detecting a fire at an early stage
- Alerting and evacuating occupants
- Notifying the relevant personnel
- Activating auxiliary functions e.g. smoke controls, lift homing, etc
- Identifying and guiding fire fighters

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Is Fire Alarm System a mandatory requirement?

Mandatory – By the relevant authority

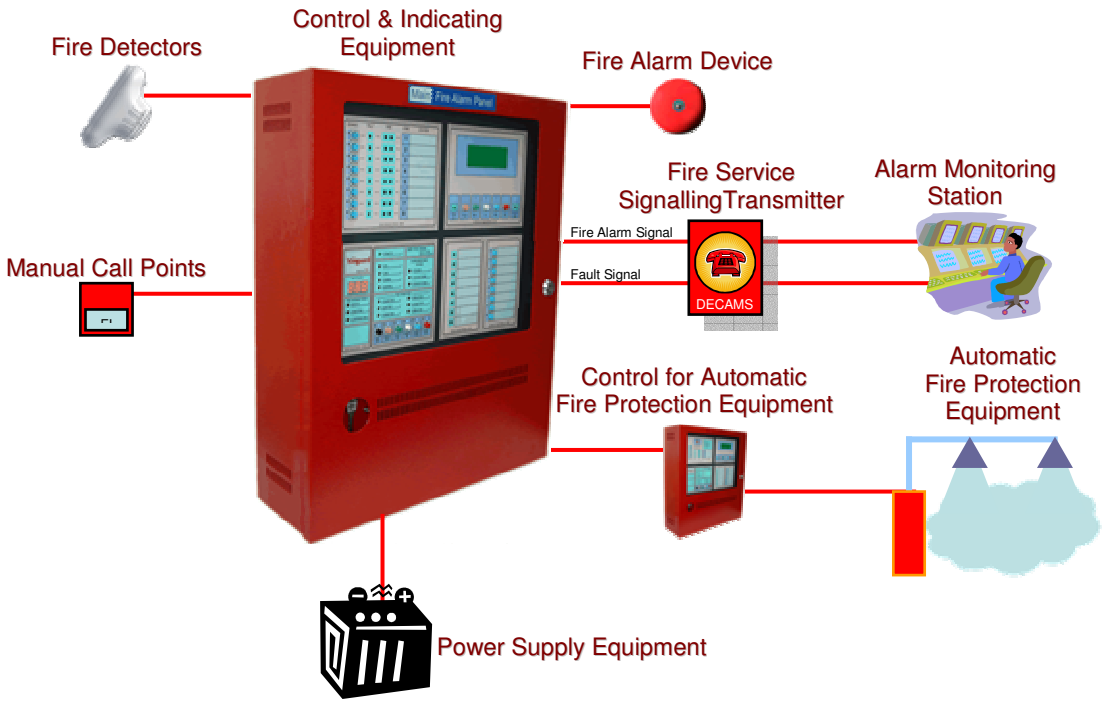
Non-mandatory – By Building Owner, Landlord & Insurance, etc.

- Code of Practice for Fire Precaution in Buildings 2007 (Fire Code 2007) – by SCDF

- Code of Practice for Installation and Servicing of Electrical Fire Alarm Systems (SS CP 10-225) – by Spring Singapore

What is a Fire Alarm System made up of?

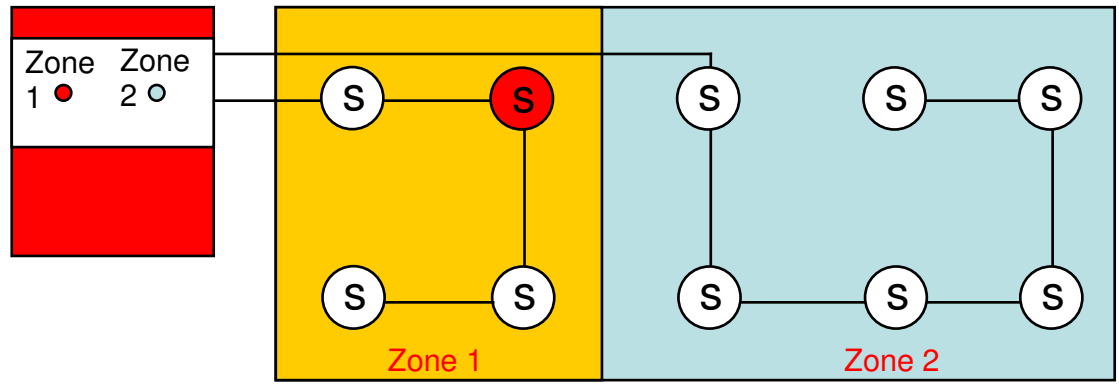
1 Smoke/Heat Detectors (Fire Detectors)
2 Alarm Panels) Control and Indicating Equipment)
3 Alarm Bells (Fire Alarm Devices)
4 Manual Call Points
5 DECAM Panel (Fire Services Signalling Transmitter)
6 DECAM Station (Alarm Monitoring Station)
7 Extinguishing Panels (Control for automatic fire protection equipment)
8 Gas/Sprinkler (Automatic fire protection equipment)
9 Charger/Battery (Power Supply Equipment)

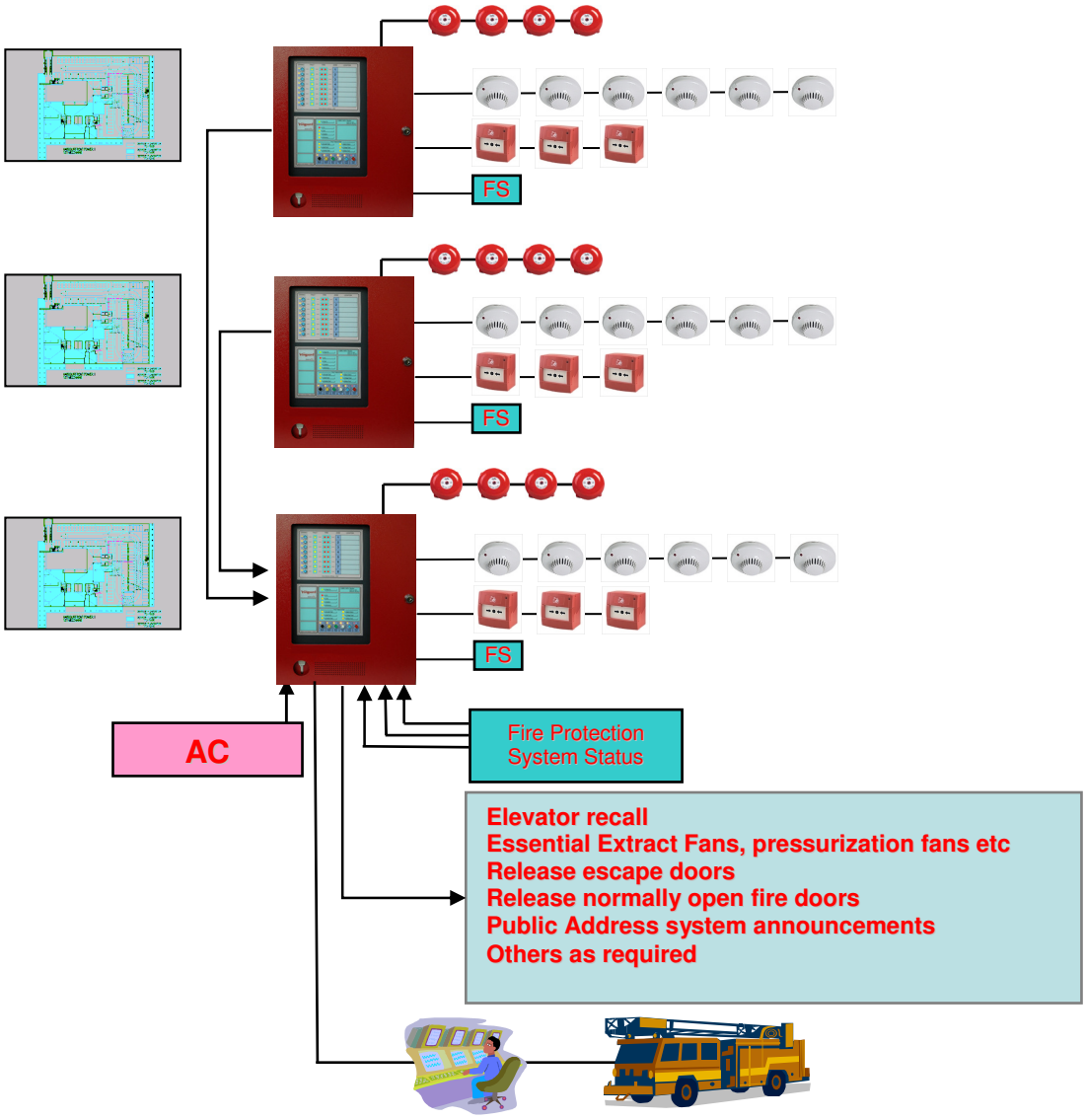


Types of Fire Alarm Systems in Use To-day

Non-addressable System

- also commonly known as “conventional”
- fire detectors are wired to the panel in groups known as zone
- identification of alarm status by zone
- fire detectors indicates either “Fire” or “Normal” status only
- system only indicates events but without event recording feature

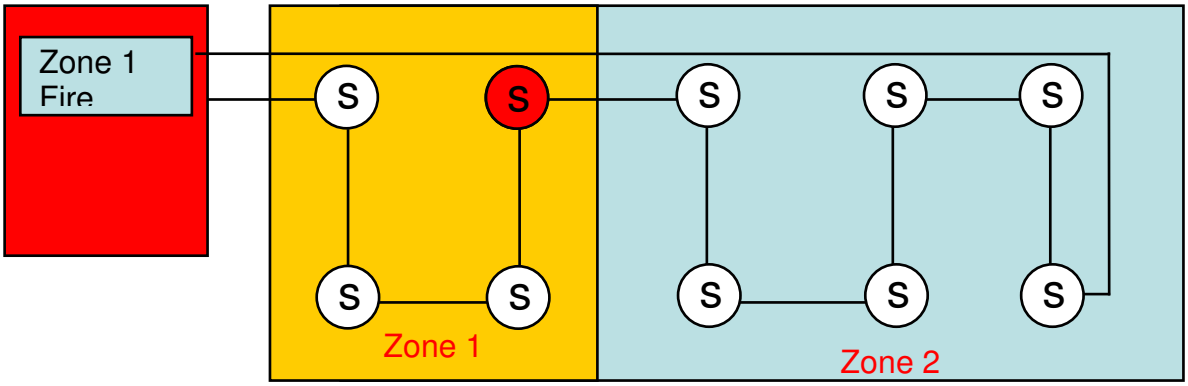


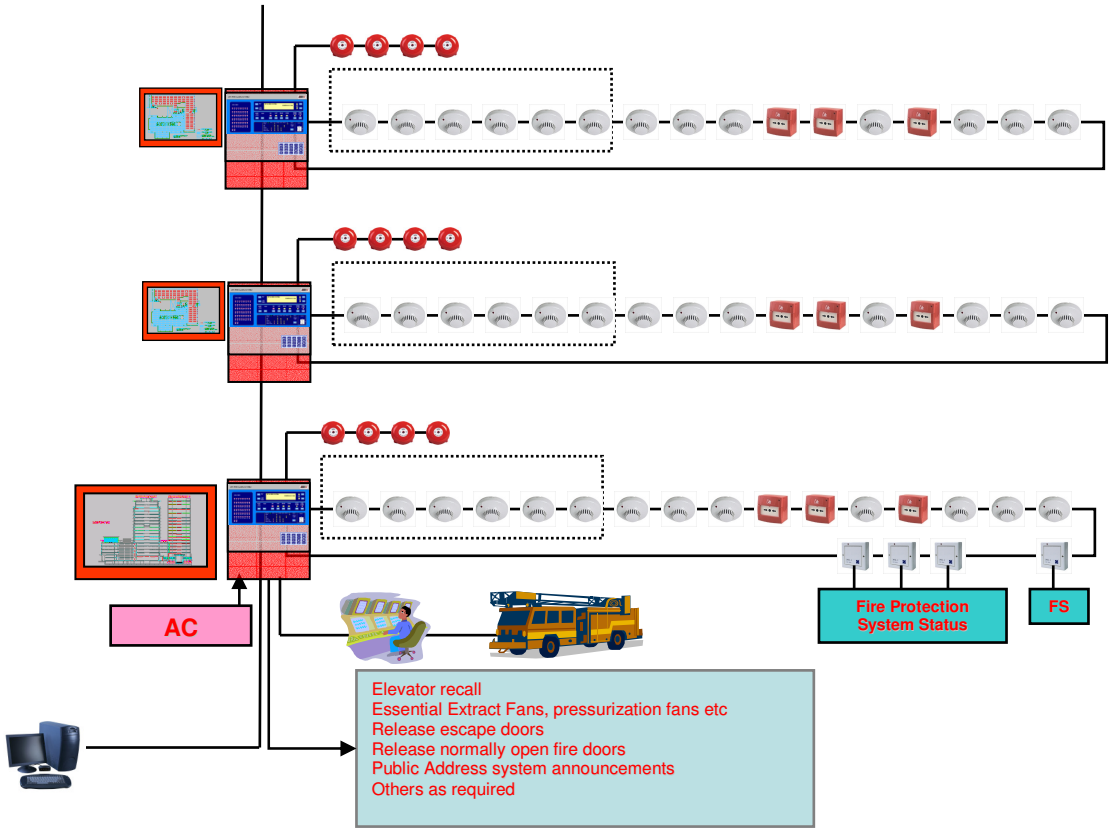


Typical Non-Addressable Fire Alarm System Configuration

Addressable System

- each fire detector is provided with an address
- identification of alarm status by zone and by address
- fire detectors indicates various condition such as smoke level
- indicates and records system events

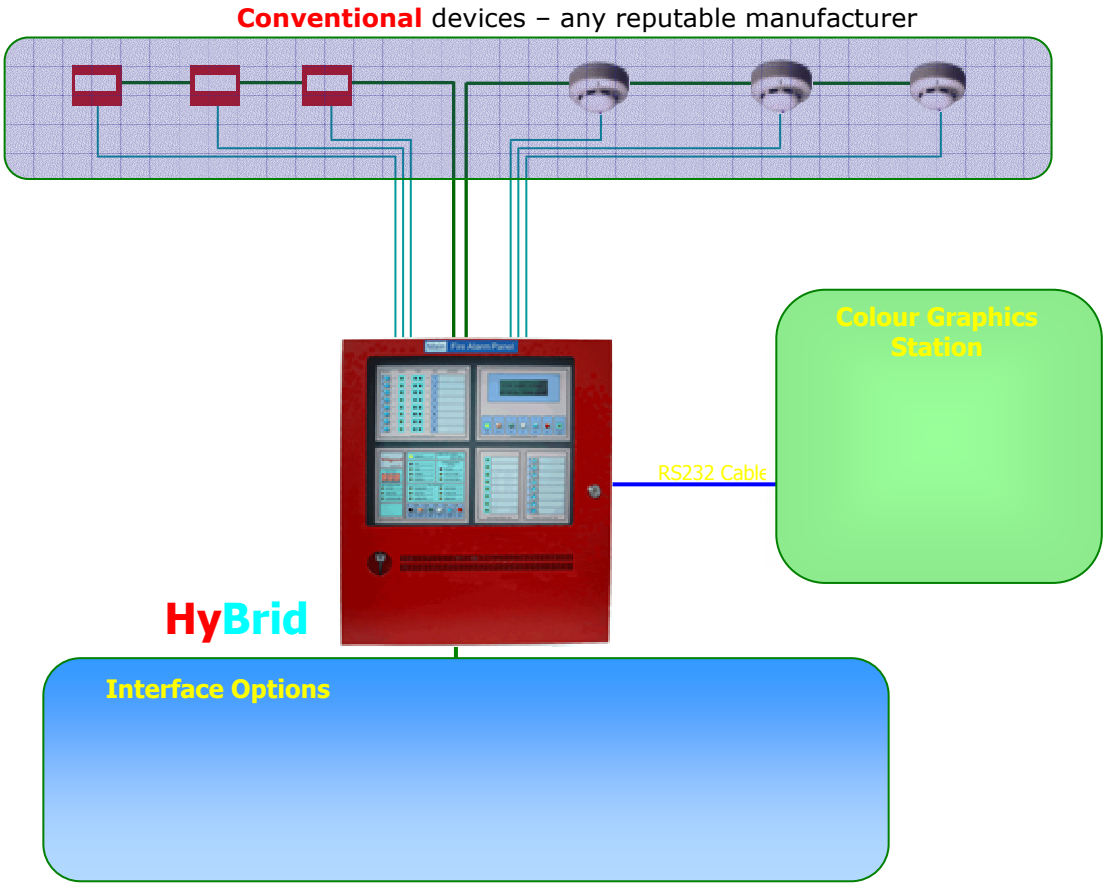




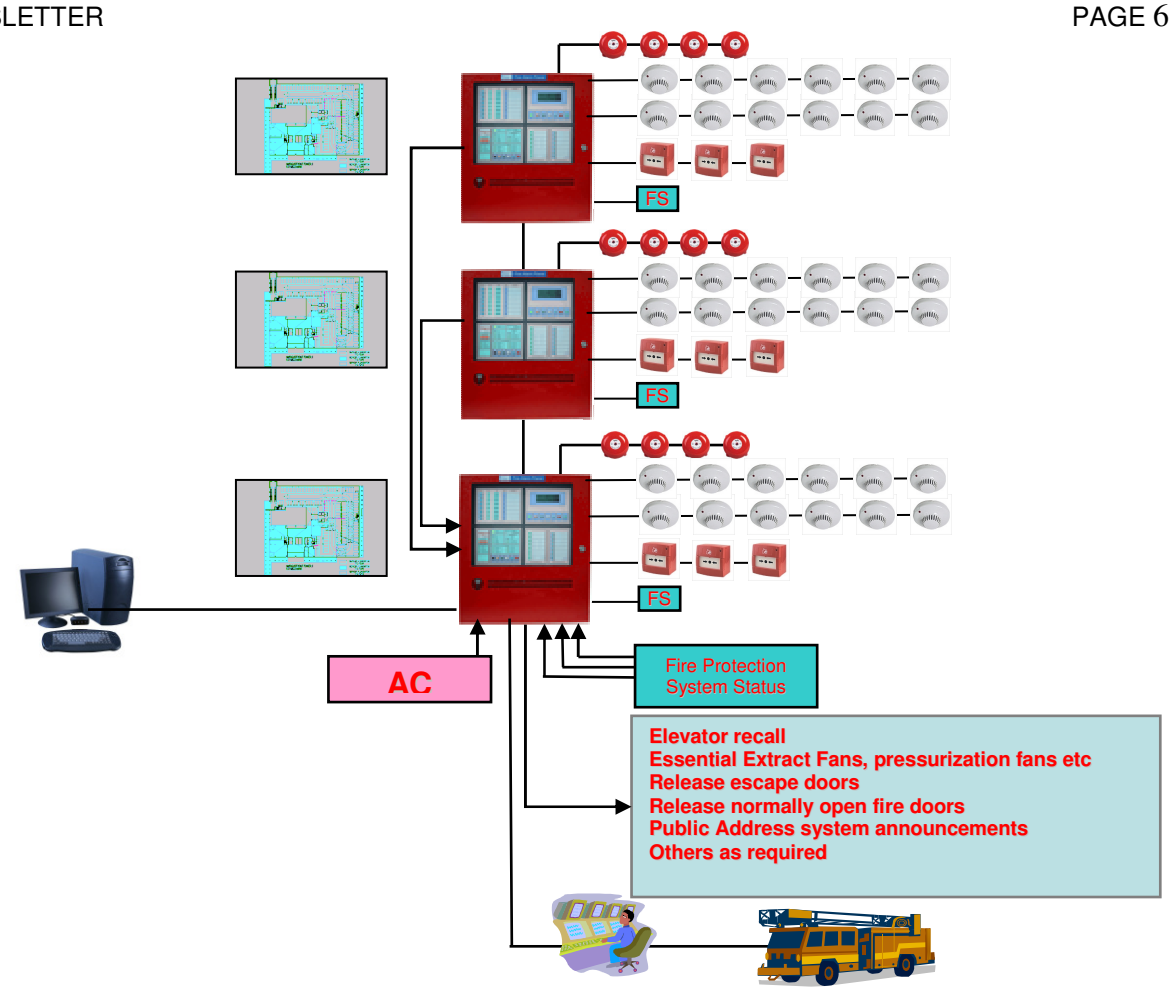
Typical Addressable Fire Alarm System Configuration

Hybrid System (conventional + addressable)

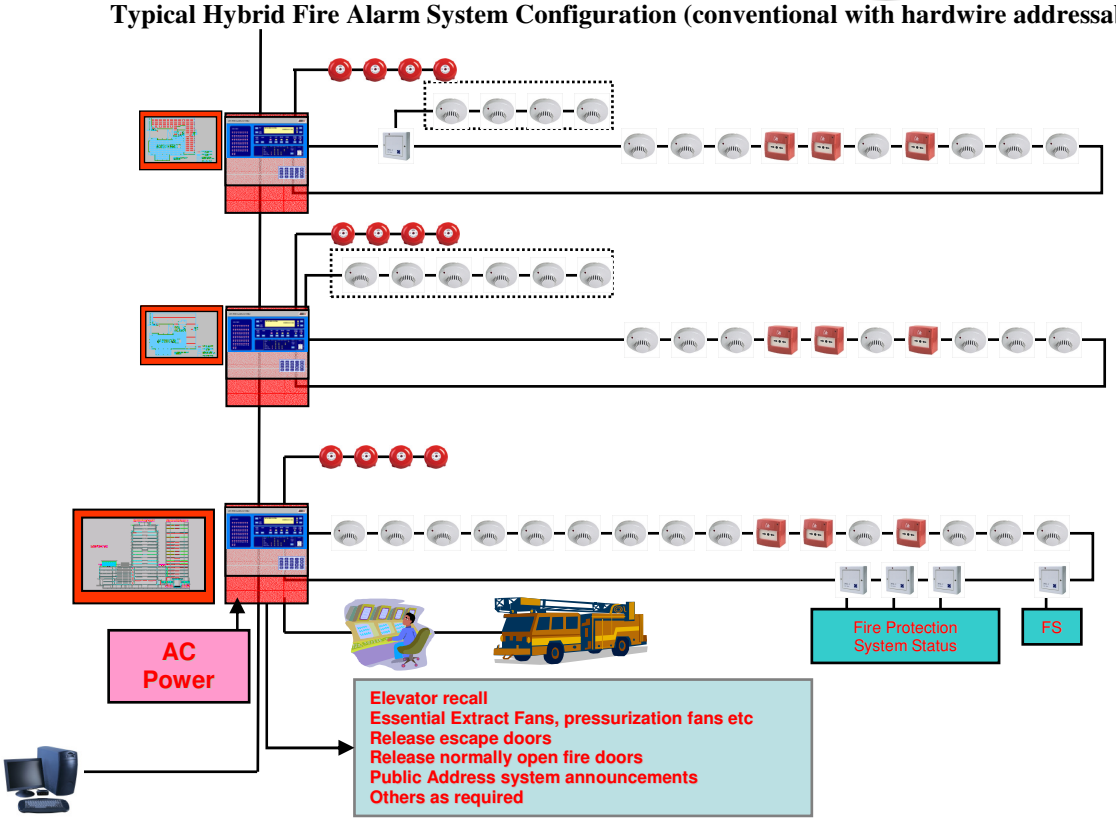
- a combination of features from both addressable and non-addressable systems
- either built from a basic conventional system with add-on hardwire addressable system
- or built from an addressable system with conventional module
- event recording and alarm management feature



Typical Hybrid Fire Alarm System Configuration (conventional with hardwire addressable add-on)



Typical Hybrid Fire Alarm System Configuration (conventional with hardwire addressable add-on)



Typical Hybrid Fire Alarm System Configuration (addressable with conventional module add-on)

……..To be continued in the next issue

IFE Examinations 2010

The following examinations are available in 2010:

IFE Level 2 Certificate (formerly the Preliminary) **Examination.**

IFE Level 3 Certificate (formerly the Intermediate) **Examination; Paper 1 and Paper 2.**

Successful candidates will be awarded the following qualification:-

IFE Level 3 Certificate in Fire Science, Operations, Safety and Management. (500/5922/1)
Success in this examination will also allow candidates to meet the academic requirement for membership of the Institution at Technician grade (TIFireE).

IFE Level 3 Diploma (formerly the Graduate) **Examination.**
A pass in the mandatory paper plus passes in three optional papers are required to achieve one of the following qualifications:

- **Fire Science, Operations and Safety.** (500/5923/3)
- **Fire Science and Fire Safety.** (500/6216/5)
- **Fire Science and Fire Service Operations.** (500/6215/3)

Success in this examination will also allow candidates to meet the academic requirement for membership of the Institution at Graduate grade (GIFireE).

The examination paper offered within the **Level 3 Diploma** are as follows:-

- Paper 1 Fire Safety (optional)
- Paper 2a Fire Service Operations - International (optional)
- Paper 2c Aero Fire Studies (optional)
- Paper 3 Fire Engineering Science (mandatory)
- Paper 4 Human Resource Management (optional)
- Paper 5 Fire Service Operations - UK (optional)
- Paper 6 Leadship & Management - UK (optional)

IFE Level 4 Certificate (formerly the Membership) **Examination.**

A pass in the two mandatory papers plus passes in two optional papers are required to achieve the following qualification:

- **Fire Science and Fire Safety.** (500/5924/5)

Success in this examination will also allow candidates to meet the academic requirement for membership of the Institution at Member grade (MIFireE).

The examination papers offered within the **Level 4 Certificate** are as follows:-

- Paper 1 Fire Engineering Science (mandatory)
- Paper 2 Fire Safety (mandatory)
- Paper 5 Strategic Human Resource Management (optional)
- Paper 6 Fire Service Operations (optional)
- Paper 7 Aero Fire Studies (optional)
- Paper 8 Fire Investigation (optional)
- Paper 11 Civil Emergency and Disaster Management (optional)

The fees for 2010 are as follows: -

Preliminary	$ 90.00
Intermediate (one paper)	$120.00
Intermediate (both papers)	$150,00
Graduate (per paper)	$150.00
Graduate (4 papers)	$360.00
Member (per paper)	$180.00
Member (4 papers)	$420.00

For those who are interested to sit for the examinations, please log on to our website: www.ife-singapore.org to download the examination time-table and form and return it to the Secretariat together with the examination fee to

The Institution of Fire Engineers
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by **Friday, 23 October 2009**

IFE STUDY AREA

The new IFE study area, which can be accessed at www.ifelearning.com, was launched in November 2008 and access to the material by individuals has been a great success. Due to the difficulties IFE students have had in the past in accessing learning and revision materials when studying for IFE qualifications and, perhaps of greater importance, in acquiring the underpinning knowledge and understanding for their particular risk-critical role in the fire sector, the IFE learning website, maintained by Merseyside Fire and Rescue Service in the UK and hosted via learnPro™ is now an invaluable and cost effective source of all study material.

By utilising www.ifelearning.com in this process of learning, members can have at their fingertips everything from e-learning modules covering generic risks, standard operating procedures, fire science modules to other materials covering the IFE qualification syllabi.

Feedback over the past nine months has been positive, with hundreds people worldwide purchasing access to the IFE site and several Fire and Rescue Services having linked this browser-based learning to each of their Stations. It is widely known that students with access to good study materials are more likely to succeed in their qualifications.

The individual cost to members to access all this material for a year is only £30, a huge saving on the purchase of the reading materials. A benefit of online modules is that students can practice key concepts and principles, test their knowledge, and access all reading material from one place.

If you would like to contact the Service personnel who manage the site and all the educational material, you can e-mail to Rob Pritchard who, amongst several disciplines, has responsibility for operational and risk critical training at Merseyside Fire and Rescue Service at RobPritchard@merseyfire.gov.uk.

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WISH

ALL MUSLIM MEMBERS SELAMAT HARI RAYA ADILFITRI