

# A guide to the care, maintenance and servicing of Apollo products





## Why do I need to maintain my Apollo equipment?

For continued effectiveness and efficiency of operation of your fire detection system and for the same reasons you installed the system originally:

- ▲ protection of life
- ▲ protection of property
- ▲ compliance with standards and regulations

*Information in this leaflet is intended for general guidance only - if your fire detection system is situated in corrosive, humid or otherwise adverse conditions, please contact Apollo Technical Sales Department who will advise you on the correct procedures to follow.*

At Apollo Fire Detectors Limited, we take the utmost care during design, development and production to ensure that the products we supply are of the highest quality. In addition, we offer a number of products and services designed to enable our customers to ensure their Apollo equipment continues to perform to the required standards - this brochure highlights a number of these products and services.



## Apollo recommends that detectors are returned for cleaning and recalibration:

- if the current consumption of a conventional detector, in either quiescent or alarm state, is outside that published by Apollo, when tested on a test set.
- if the 'clean air' analogue value of an analogue addressable smoke detector reaches the limit published by Apollo.
- if functional testing with a smoke or heat test pole does not result in the correct operation of a detector, for example if a detector seems to take a long time to go into alarm or if it fails to go into alarm.
- when local regulations demand it
- for cosmetic reasons - if the detector casing has become stained and unsightly

*Please consult the relevant Engineering Product Guide to ascertain the correct values referred to above. Maintenance guidelines and part numbers for test equipment can be found in the Testing and Maintenance section of this brochure.*

# Service Department



To help ensure that your fire detection system operates to the same criteria as it did when it was first installed, Apollo offers a Service facility for Apollo detectors and ancillary products, such as interfaces and manual call points.



The following services are offered:

Detectors are cleaned and recalibrated so that they work within the same limits as newly manufactured detectors.

Manual call points, interfaces and ancillaries are cleaned and tested to ensure that they are still functioning within manufacturing limits.

Equipment which is found to be beyond economical repair (BER) or is older than its recommended working life can be disposed of - a small charge is made for this to cover the cost of investigation and disposal.

*A particularly useful feature of this service is that older models of Apollo detectors can be serviced (subject to them being within their recommended working life) which means that installations using Apollo detectors older than Series 60 and XP95 can have their life extended without having to change the bases or use a base adapter.*

## A dedicated service

Apollo's move to new premises in October 1996 gave the Service Department an opportunity to transform their operations. The most obvious advantage was an increase in the amount of space available, this had a number of benefits:

- being able to house more equipment, for the exclusive use of the Service Department
- easier unpacking of returned goods
- improved access to paperwork
- increased individual workspace,
- workflow could be engineered to the optimum level from the start
- scope for future growth and adaptation



## Five-day turnaround

The purpose-designed work area and flexible staffing levels, combined with effective administration processes, mean that we can guarantee a turnaround time of just **five working days** from receipt of goods at Apollo to despatch back to the customer.



## Ionisation detectors



Apollo Series 30, Series 60, Series 65, Series 90, XP95 and Discovery ionisation smoke detectors use a very low level activity radioactive isotope - Americium 241 with an activity of 33.3kBq/0.9 $\mu$ Curie. They have been tested by the National Radiological Protection Board and found to conform to the requirements of international standards for ionisation chamber smoke detectors. More details of this can be found in Apollo's Engineering Product Guides.



In the UK, there is no limit to how many Apollo ionisation detectors are installed in a fire protection system. Up to 500 can be stored in any premises, though there are stipulations on storage facilities if more than 100 are to be stored in a single building.

### Disposal of ionisation detectors

Apollo is authorised by the UK's Environment Agency to dispose of the radioactive sources used in all Apollo ionisation detectors, this includes the Mark I, Mark II, Series 30 and Series 90 detectors, as well as Series 60, Series 65, XP95 and Discovery detectors (and, of course, any variants or future developments of them). Costs are maintained at a very competitive level to ensure safe, legal disposal of radioactive sources.

#### Detectors should be returned to the Service Department at Apollo for disposal:

- at the end of their recommended working life of 10 years
- if they are no longer required, for example if they have been replaced or removed from a fire detection system
- if they have become damaged

**Please note that unauthorised disposal of radioactive sources can lead to prosecution.**

*When returning Apollo ionisation detectors for disposal or clean and recalibration, the following declaration should be included on your paperwork:*

'The Radioactive Material (Road Transport) (Great Britain) Regulations 2002, SI 2002 No.1093.

Radioactive Material Excepted Package, Instruments or Articles UN2911.'

*Check with the appropriate national authority whether any additional text needs to be included.*



# Testing and Maintenance

## Recommended maintenance programme



To keep it in good working order, your fire detection system should be subject to a routine maintenance programme, in accordance with local/national regulations. Apollo recommends that users of fire detection equipment enter into a maintenance and servicing agreement with the detector supplier. The following is a summary of Apollo's recommended maintenance schedule for detectors, based on UK code BS5839 part 1.

Over the course of a year, every detector in the system should be functionally tested at least once, using equipment from the range below - more frequently if installed in a dirty, dusty or corrosive atmosphere.

Visual inspection of detectors should take place more frequently - detectors which appear dirty on the outside are likely to be dirty on the inside. These can be cleaned without dismantling, using a vacuum cleaner with a brush attachment, which will remove light dust deposits. The detector case can be cleaned with a cloth dampened with

a solution of washing up liquid in water. Cleaning should be followed by functional testing.

Control equipment should be checked **daily** to ensure that normal operation is indicated. If any fault is indicated, this should be recorded in the log and action taken to rectify the fault. Ensure that any faults notified previously have been corrected.

Conventional detectors should be tested on a test set to ensure that current consumption in both quiescent and alarm state are in accordance with data published in the appropriate Engineering Product Guide.

Control equipment for analogue addressable detectors should be checked to ensure that the detectors are returning a 'clean air' value (value at 25°C for temperature detectors) which is within the limits shown in the appropriate Engineering Product Guide.

Detectors still returning values outside of these limits after cleaning should be replaced. They can be sent back to Apollo for full cleaning and recalibration.

*Note: It is vital that measures are taken to ensure that routine testing does not cause false alarms, unnecessary callout of the emergency services or unnecessary evacuation of the building.*

### To assist you in your maintenance program

Apollo provide a range of equipment to enable you to keep your system in good working order

#### For installation and removal of detectors:

Item	Part number	Refer to Apollo publication
Detector extract tool	29600-102	PP2008
Extension pole, 1.13m	29600-103	PP2008
Extension pole, 4.5m	29600-104	PP2008
1.5mm hexagonal driver (locks detectors to bases)	29600-095	
XPERT card insertion tool	45681-235	PP2000

#### For in-situ functional testing of individual detectors:

Item	Part number	
Smoke detector test pole	29600-100	PP2008
Aerosol test gas	29600-105	PP2008
Heat detector test pole (240V)	29600-101	PP2105
Heat detector test pole (110V)	29600-110	PP2105
Cordless heat tester kit	29600-212	PP2105
Cordless heat detector tester	29600-213	PP2105
Battery batons	29600-183	
Battery charger (no mains lead)	29600-214	
UK mains lead	29600-215	
EUR mains lead	29600-216	

#### Test sets:

Item	Part number	
XP95 test set	55000-870	PP1080
Printer for test set	29600-872	PP1080
Conventional detector test set	53832-020	PP1081
Discovery programmer	53832-030	PP2066



# Recommended working life

Detectors manufactured by Apollo have a recommended working life of 10 years when used in dry, non-corrosive atmospheres and provided that they are regularly inspected, tested, cleaned and recalibrated as outlined in this leaflet.

This period has been assessed on the basis of information provided by component suppliers and on around 20 years experience of servicing these products. Most Apollo detectors will continue to operate within specification after 10 years' service, however, gradual deterioration of integrity and reliability should be allowed for.

In the interests of safety and the avoidance of unwanted alarms, Apollo recommends the routine replacement of detectors after 10 years service.

The electro-chemical cell used in the Discovery carbon monoxide fire detector has a maximum life of seven years. High temperature or low relative humidity can, however, reduce the cell life and therefore detectors must be functionally tested at least once a year. Discovery CO detectors have a remote self test feature and this should be used to verify that the electro-chemical cell is active. Any detector failing these tests should be returned to Apollo's service department.

## How to determine the age of an Apollo detector

The age of an Apollo product can be determined by the serial number. However, due to factored products and changes within Apollo to improve production, the serial numbers formats have changed over time.

Below are the four formats used. All the serial number formats represent the same date i.e. April 2002.

<b>0402-25684</b>	The first two numbers represent the month and the second two the year
<b>020401</b>	The first two numbers represent the year, the second two the month and the third two the day
<b>020401/6A</b>	This format is the same as above but the addition of a build standard
<b>1502123</b>	This format is only used on sounders. The first two numbers are the week of the year and the second two are the year

Detectors manufactured by Apollo which do not have a serial number can only have their age determined by referring to serialised records held at Apollo. The absence of a serial number would mean that the detector was made before March 1981.

For more information regarding determining the age of Apollo detectors, please consult the table below or contact the Service Department.

Description	Part number	Date
Mark I ionisation smoke detectors	53541-101, 121	1969-1977
Mark I heat detectors	53531-101, 102, 201, 202, 303, 310	1973-1983
Mark II ionisation smoke detectors	53541-111, 113, 146, 147	1977-1985
Mark II optical smoke detectors	53551-101, 102, 103, 104	1983-1986
Series 30 heat detectors	53531-211, 214, 221, 231-234, 241	1984-1996
Series 30 ionisation smoke detectors	53541-151, 152, 156, 157	1984-1996
Series 20 optical smoke detectors	53551-201, 203, 204, 205	1986-1996
Series 90 temperature detector	54000-601	1986-1996
Series 90 ionisation smoke detector	54000-701	1986-1996
Series 90 optical smoke detector	54000-801	1986-1997
Series 60	55000-100, 101, 102, 103, 104, 200, 210, 300	1992
XP95	55000-400, 401, 500, 600, 885	1992
Discovery	58000-400, 500, 600, 700	1998
Series 65	55000-120, 121, 122, 215, 216, 217, 218, 219, 220, 315, 316, 317	1998
AlarmSense	55000-190, 390	1998
XPlorer	59000-405, 406, 605, 606, 700, 810, 910	2001



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