



Loop-powered Beacon Installation Guide

Troubleshooting

Before investigating individual units for faults, it is important to check the system wiring is fault free. Earth faults on data loops may cause communication errors. If an XP95 test set is used to test the beacon please note that constant interrogation of the device will cause a higher than normal flash rate and an analogue value of 16. To avoid this, operate the beacon and exit the single address test.

Note: Beacons may take 2–5 seconds to flash when first operated. During this period internal capacitors are charging and fault monitoring circuits are disabled. The beacon will return an analogue value of 16 in the first 5 seconds of operation, regardless of the state of the LED. (If the beacon has been powered up for 20 minutes before it is first operated, the capacitors will have been slowly charged and the LEDs and fault monitoring circuits will work as normal).

Fault Finding

| Problem | Possible Cause |
|--------------------------------------|--|
| No response or missing | Incorrect address setting Incorrect loop wiring Too many beacons between isolators |
| Beacon fails to operate | Control panel has incorrect cause and effect programming |
| Fault reported when beacon operating | Beacon LED failure |

General

This guide describes the installation of the Apollo Loop-powered Beacon. The beacon is available in three colour variants:

- red, part no. 55000-877
- amber, part no. 55000-879
- clear lens/red flash, part no. 55000-878

The beacon can be used in XP95 or Discovery analogue addressable fire detection systems provided it is connected to control panels using either the XP95 or Discovery protocols.

Note: the Loop-powered Beacon is not suitable for outdoor use.

Mounting Instructions

The beacon can be fitted to any XP95 or Discovery base and would normally be wall mounted.

The beacon may also be fitted to an ancillary base sounder, 45681-276, in which case the sounder will be controlled by the beacon.

If the use of an intelligent sounder is specified, the beacon is fitted to a mounting base which in turn is fitted to the intelligent sounder.

The loop-powered beacon must be assigned an address by coding the XPERT card in the usual way. A list of address settings is shown on page 2.

Locking screw

The beacon can be locked to the base in order to ensure system integrity. The locking screw is in the shoulder of the beacon. Insert a 1.5mm hexagonal key (Apollo part no 29600-095) and turn the screw clockwise to lock the beacon

Wiring details

The Loop-powered Beacon is polarity insensitive.

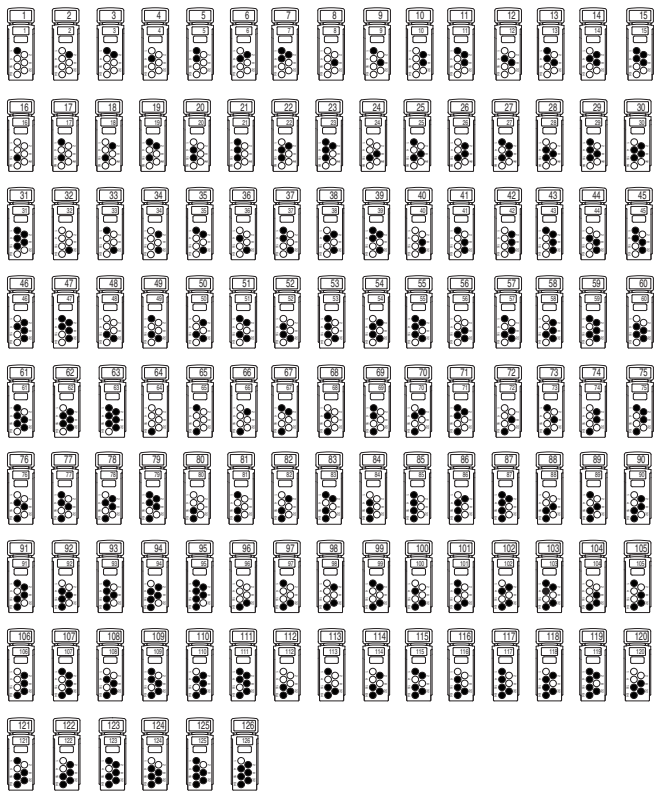
Connect the loop cables to the base or to the ancillary sounder, observing polarity. The base wiring terminals accept solid or stranded cables up to 2.5mm².

Address setting

The address of the beacon is set using the XPERT card

XPERT card addressing for XP95 and Discovery

Select the desired address and remove the pips indicated in black. Remove pips with a small screwdriver.



Drawing © Apollo Fire Detectors R Davies 2003

Technical data

| | |
|-------------------------------|---------------|
| Operating voltage | 17—28V DC |
| Current consumption at 24V DC | |
| quiescent | 150µA |
| switch-on surge | 1mA for 100ms |
| beacon operated | 3mA |

Up to 20 beacons may be fitted between standard XP95 isolators (part no. 55000-700/710/720) or isolating bases (part no. 45681-321) depending on the loop loading.

Loop Calculator is a program available as a free download (www.apollo-fire.co.uk) which is used to check the loading of any proposed loop design.

Protocol bit use

The beacon responds to interrogation by the control panel and is switched by means of the output (forward command) bits. The function of the output bits is given in the following table:

| Output Bit Settings | | | Beacon/Sounder action |
|------------------------------------|---|---|--|
| 2 | 1 | 0 | |
| 0 | 0 | 0 | Beacon off, ancillary sounder off (if connected) |
| 0 | 0 | 1 | Beacon on, ancillary sounder on (if connected) |
| 0 | 1 | 0 | Beacon on, ancillary sounder off (if connected) |
| 0 | 1 | 1 | Beacon on, ancillary sounder on (if connected) |
| <i>NB Output bit 2 is not used</i> | | | |

Input bits confirm the receipt of the corresponding output bits.

Note: the beacon may continue to flash for a short period after receipt of a valid command to turn off.