



XPÄNDER

Site Survey Instructions



Introduction

Radio waves have very different characteristics to wired links and it is necessary to ensure that every possible source of attenuation of the radio signal is identified and fully considered in the design of the system.

It is therefore essential that a full site survey is carried out as part of the system design prior to any XPander devices being installed. This preparatory work will ensure that good signal integrity is achieved.

The reliability of the data transmitted in the final system is determined by the site survey.

The RF Signal

The site survey kit (manufactured before 25/03/09), XPA-TE-14010-APO, comprises three parts,

Site Survey Tool	– 29600-457
Site Survey Interface	– 29600-455 (UK version, 2.5mm socket)
Battery Charger	– 29600-456 (UK version, 2.5mm socket)

The site survey kit (manufactured on or after 25/03/09), XPA-TE-14010-APO, comprises three parts,

Site Survey Tool	– 29600-457
Site Survey Interface	– 29600-475 (Multi-plug version, 5.5mm socket)
Battery Charger	– 29600-476 (Multi-plug version, 5.5mm socket)

Radio transmissions are sent from the Site Survey Interface to the Site Survey Tool, analysed and the strength of the signals displayed by the LED indicator.

The transmission radiates out in all directions. The radiated signal strength is stronger in the immediate vicinity of the Site Survey Interface and becomes weaker as the signal travels away.

The objective of the site survey is to ensure a consistently strong signal is received at the proposed position of the XPander field device. A weak signal may not always register; this will lead to unreliability in the final system.

Site Survey Instructions

1. Turn on the Site Survey Interface using the slide switch
2. Position the Site Survey Interface in the proposed location of the XPander interface
 - The minimum distance of metal objects from the interface is 400mm
 - The minimum distance to other electrical equipment e.g. computers, photocopiers, fax machines and other XPander interfaces is 2 metres (radius three dimensionally).
3. Switch on the Site Survey Tool by holding button one for 3 seconds
4. Press button three to select XPander survey mode, the red oval mode LED will light
 - The red oval mode LED must be illuminated prior to and at all times during signal testing
5. After 30 seconds the Site Survey Tool will begin to report signal strength using the LED display
 - The signal strength will be updated every 12 seconds. Each update will be signalled by a beep
6. Position the Site Survey Tool where the XPander device is to be fitted
 - The Site Survey Tool will now report the signal strength at this position
7. Record at least three signal strength readings
8. If two readings are 60% or above, the position of the XPander device is satisfactory
 - 60% is signalled, as shown on page 3, by at least two green LEDs
9. At this point record all information on the site survey sheet (PP2322) and move to the position of the next device

Notes:

These instructions are correct for ceiling heights less than 6m. For ceiling heights greater than 6m, the Site Survey Tool should be raised with special apparatus up to the likely position of the device to be fitted.

Button two is used to change the signal direction being reported.

When the signal direction indicator is on constantly the signal from the Site Survey Interface to the Site Survey Tool is being shown.

When the signal direction indicator is flashing, the signal from the Site Survey Tool to the Site Survey Interface is being shown.

It is not necessary to check both directions during the site survey; the unit should be left in the default (Site Survey Interface to Site Survey Tool) setting.

The indicator LEDs are blinking when the Site Survey Tool batteries are low.

The red LED will be illuminated whilst charging.

To switch the Site Survey Tool off hold button one for three seconds.

If not used the Site Survey Tool will automatically switch off after ten minutes.

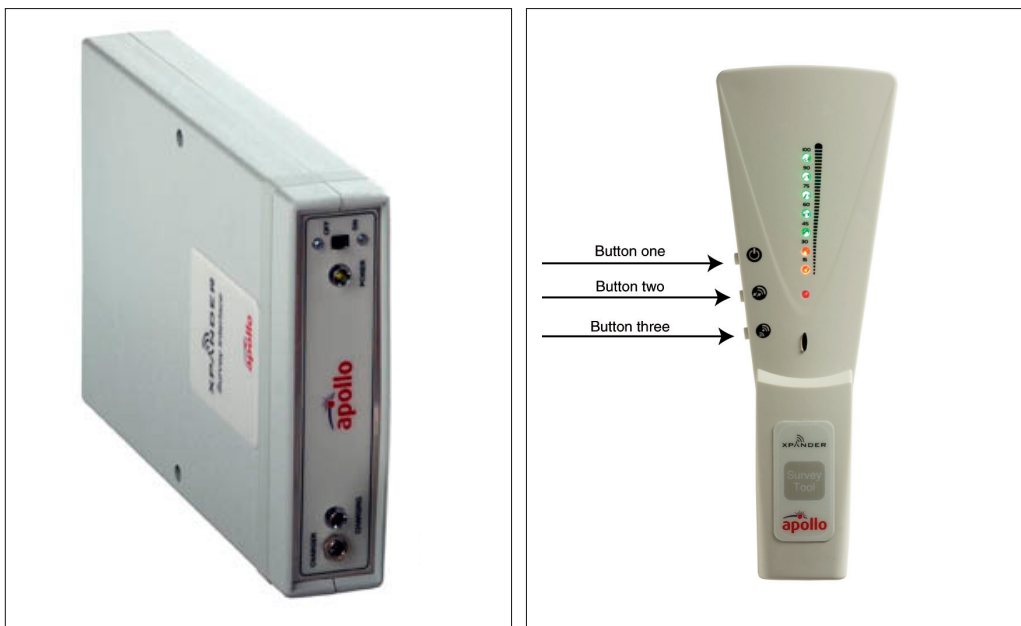


Fig 1 - Site Survey Interface and Site Survey Tool

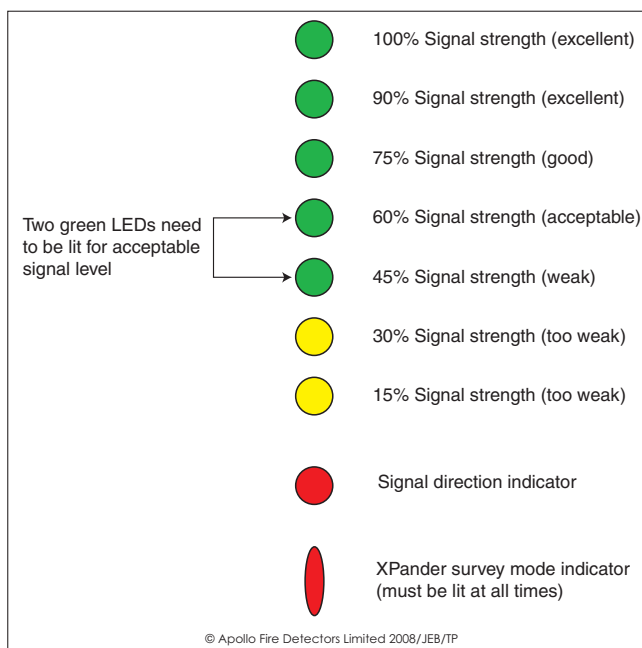


Fig 2 - Site Survey Tool LED indication

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Frequencies in use* CH1.....MHz CH2.....MHz

Background noise level*CH1.....% CH2.....%

** to be completed on install*

Building and construction notes

Status of building at the time of survey

Notes

This sheet needs to be completed and kept as commissioning and user documentation to comply with BS 5839 - 1 section 2-27 and section 5-39 & 40

Approved for installation

YES	NO
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Name

Signature

