

SmartCell

Demonstration kit User Guide

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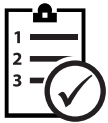
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Introduction

This user guide details how to use and configure the SmartCell Demonstration Kit. For advanced programming, refer to the 'SmartCell Programming Guide' (*TSD155*).

The SmartCell Demonstration Kit can be used to showcase the system and also to undertake system surveys, using the Signal Level Test feature.

Important notes



The procedures outlined in this document must be carefully followed.



SmartCell devices contain electronics that may be susceptible to damage from Electro Static Discharge (ESD). Take appropriate precautions when handling electronic boards.



To ensure correct operation, products must be used within the specified environmental operating conditions.

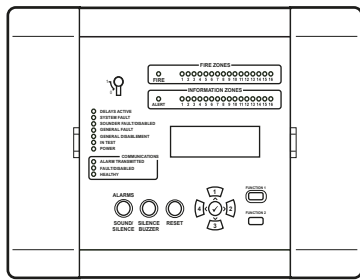


When carrying out wireless surveys, ensure surveyed positions are as close as possible to the proposed final location for optimum wireless performance.

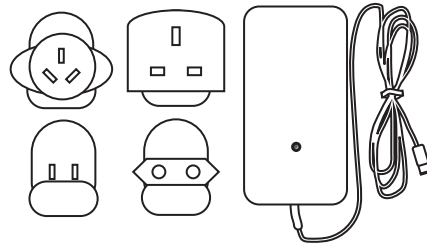


Devices are supplied pre-programmed to the system.

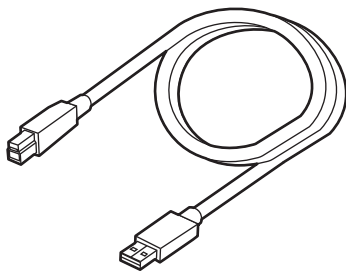
What's in the box



SmartCell
control panel



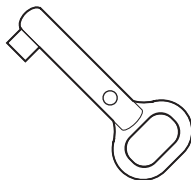
Universal
mains charger



USB A-B
cable



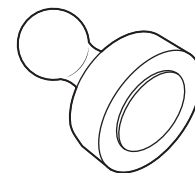
USB media
stick



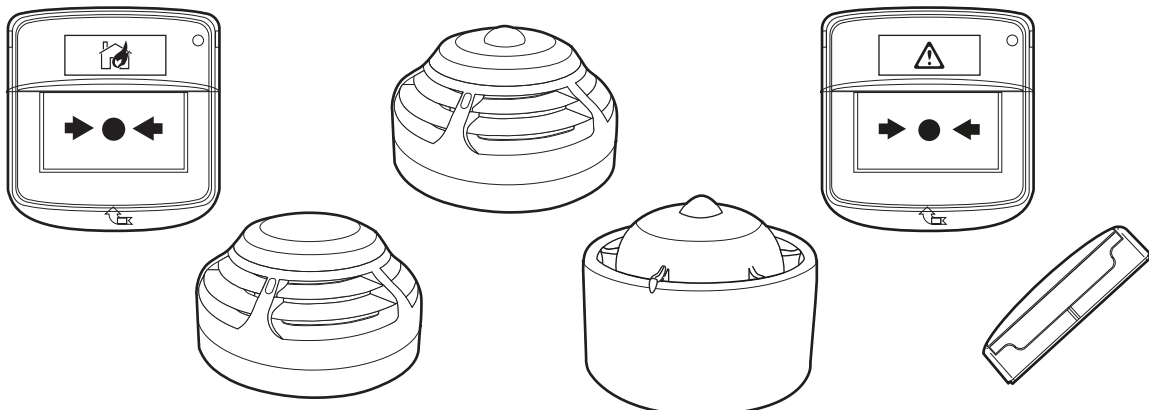
Enable
key



Allen
key

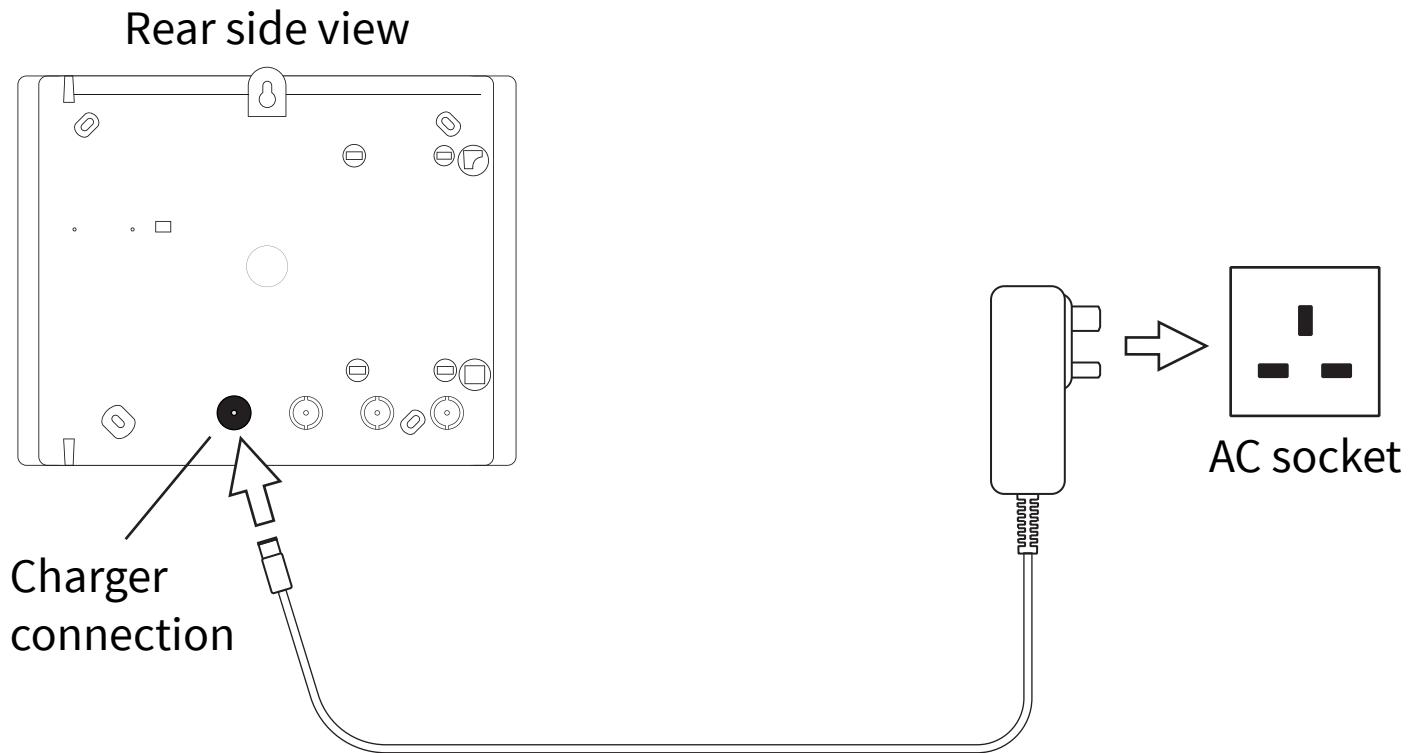


Log on
magnet

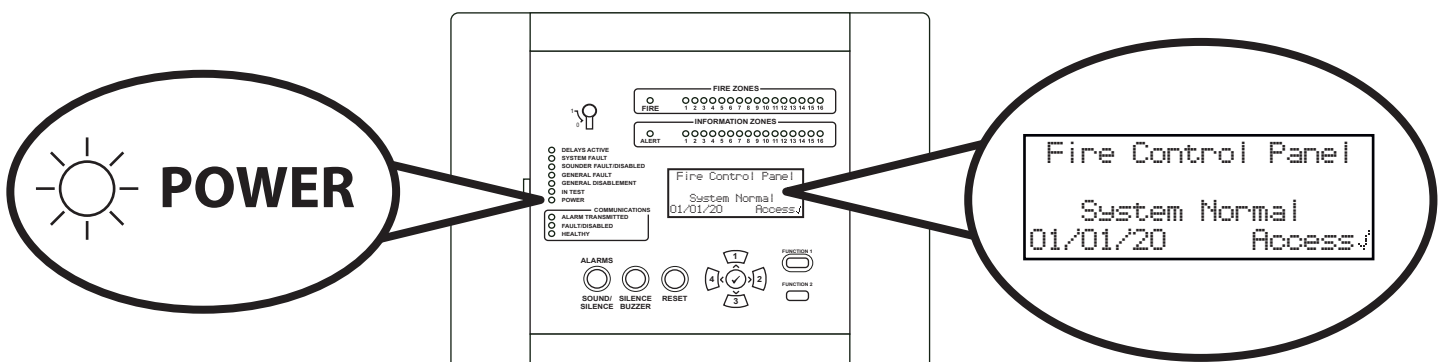


SmartCell wireless devices (device types may vary)

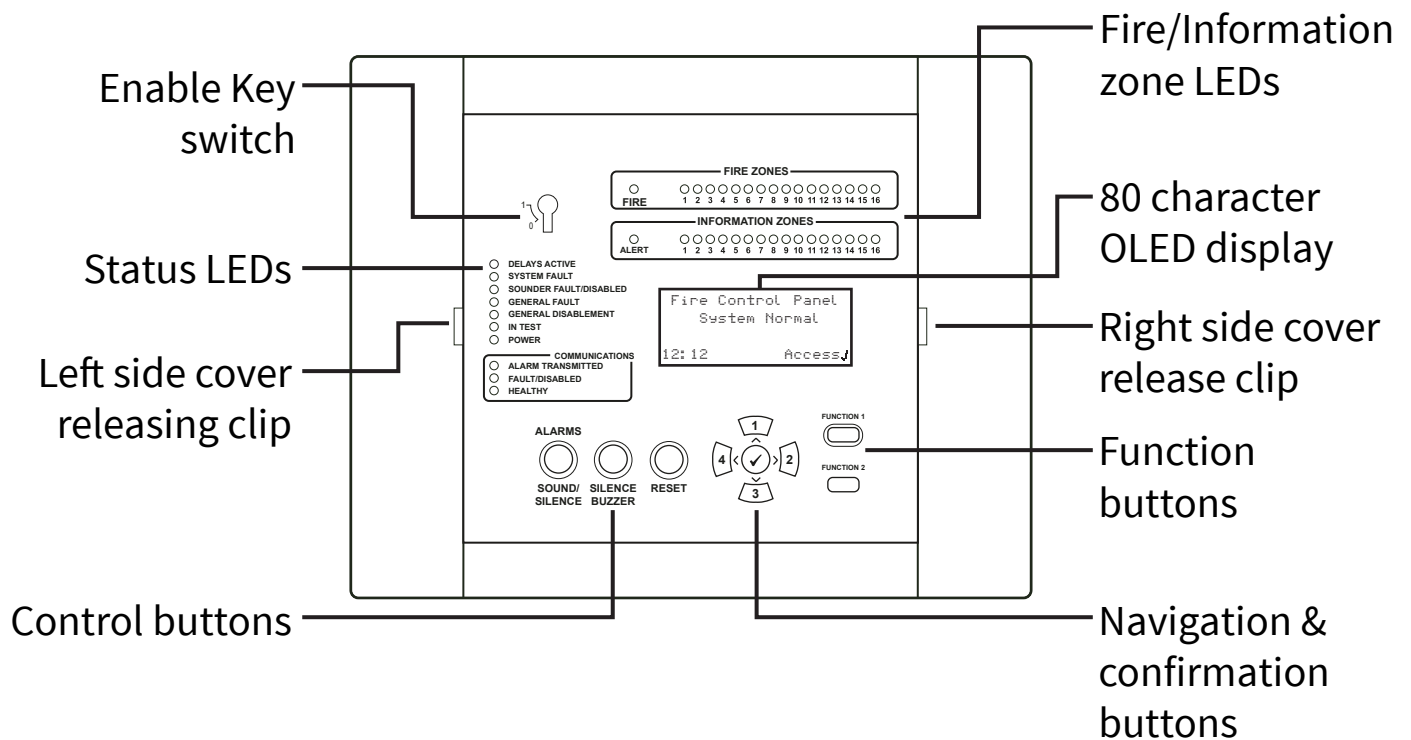
Apply power



- Apply power to the control panel.
- The green power LED will illuminate.
- All other LEDs should be extinguished.
- The screen should also display 'System Normal'.

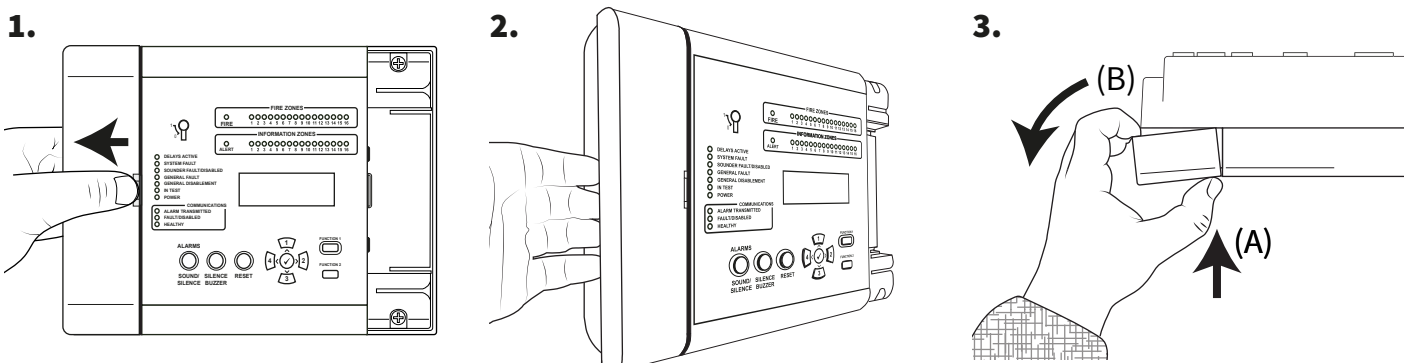


Control panel features



Side cover removal

The following steps illustrate how to remove the side covers:



Slide the side cover sideways, creating a gap as shown.

Position your fingers behind the cover's protruding edge.

Press the cover's releasing clip with your thumb (A), and simultaneously rotate the side panel anti-clockwise (B), as viewed overhead to remove the cover.

Engineer menu entry

The following steps are required to access the engineer menu (*access level 3*).

With the SmartCell control panel in its normal state (*enable key in the OFF position*), the screen will display:

```
Fire Control Panel
                System Normal
14:18                      Access✓
```

Press the  button and the screen will display:

```
For Access
Enter Code: _

Press ✓ To Complete
```

Enter the engineer PIN code (*default '333333'*), then press the  button to confirm. The screen will display:

```
* Welcome Service *
    Access Level 3
    Now Available
    All Buttons Active
```

Followed by:

```
*View System Status
    Enable/Disablesments
    Maintenance/Test
    Device Options      ⏻
```

All engineer menus are now available. You can now:

- Set the time & date
- Program devices to the system
- Allocate devices to zones
- Enter device and zone text
- Configure devices, i.e. device sensitivities, sounder tones etc.

Set time & date

From access level 3 (*as previously shown on page 7*), press the  button until the screen displays:

Press the  button and the screen will display:

Press the  button once. The screen will display:

Press the  button and the screen will display:

Press the  button and the screen will display:

To change the time, press the  button and the screen will display:
The following buttons are required to set the time:

```
*Panel Information
Language Select
Factory Access
Reports
```

```
→ Passwords
   Panel Options
   System Options
   Communications
```

```

  Passwords
→Panel Options
  System Options
  Communication

```

```

→Set Time & Date
  Lamp/Buzzer Test
  Panel Buzzer
  Front Screen Text 0

```

```

+?:? TIME
?/?/? DATE
DD/MM/YY FORMAT
Press J To Select

```

→ **??:??** TIME

Edit ◁ √ To Select

Button(s)	Action
	Increases and decreases the selected value.
	Moves the cursor between the hour and minute selections.
	Saves the changes and returns to the previous screen.



Note: the same process is used for changing the date.

Device attributes

From access level 3 (as previously shown on page 7), press the  button until the screen displays:

Press the  button and the screen will display:

Press the  button until the screen displays:

Press the  button and the screen will display:

Note: press  to change the type.

Press the  button and the screen will display:

Press the  button until the device to configure is shown. Press the  button and the screen will display:

Press the  button and the screen will display:

Available options for each device type are shown overleaf.

```
View System Status
Enable/Disablesments
Maintenance/Test
→Device Options  ◊
```

```
→Add New Device
Remove Device
Edit Settinas
Device Zone Text  ◊
```

```
Add New Device
Remove Device
→Edit Settinas
Device Zone Text  ◊
```

```
→Fire Devices
Information Devices
Panel I/O Devices
◊
```

```
A01          ID:001234
Sounder Detector
ID:001234
Devices ◊      Change>
```

```
A03          ID:001236
Sounder Detector
Beacon ID:001236
Devices ◊      Change>
```

```
→Text Description
Zone Details - Z00
Detection-      Dual
Smoke Sens- Normal◊
```

Menu Selection	Available options
Text Description	Refer to the 'Device location text' section overleaf.
Zone Details	Device zone allocation. The default zone is 0. It is however recommended that devices are allocated to zones. Zone 0 devices are not included in disablements and will always operate as default.
Detection	Detection selection of 'Dual' (smoke & heat), 'Smoke Only' or 'Heat Only'.
Smoke Sen	Smoke sensitivity selection of; 'Normal*†' and 'Normal + AVF'. The AVF option allows additional verification of the alarm condition before reporting.
Heat Sen	Heat sensitivity selection of; '58 °C static*†', '58 °C rate of rise*', '72 °C static*', '72 °C rate of rise*'. *
Monitoring	This option allows SmartDoor plunger release to be recorded in the event log. The default is 'ON'.
Indication	This feature links remote indicators to follow detector activation, either: 'By Device', or 'By Zone'. Default is 'OFF'.
Signal Path	Allows communication direct to the control panel or via a range extender, if available.
Sound Volume 🔊	Allows device sounder levels of; 'High' or 'Low'.
Self Sound	When enabled, the device will sound upon local alarm detection, whilst wireless communication with the control panel is lost.
Audio/Visual	Allows device sounder and beacon selection of; sounder & beacon, sounder only and beacon only.
O/P 1 OFF	Choose to switch the device's 'Output 1' off, when either the 'silence' or 'reset' button is pressed.
O/P 2 OFF	Choose to switch the device's 'Output 2' off, when either the 'silence' or 'reset' button is pressed.

*Approved EN54 sensitivities † Default dual sensitivities

Device location text

From access level 3 (as previously shown on page 7), press the  button until the screen displays:

```
View System Status
Enable/Disablenents
Maintenance/Test
→Device Options  ◊
```

Press the  button and the screen will display:

```
→Add New Device
Remove Device
Edit Settinas
Device Zone Text  ◊
```

Press the  button until the screen displays:

```
Add New Device
Remove Device
→Edit Settinas
Device Zone Text  ◊
```

Press the  button and the screen will display:

Note: press  to change the type.

```
→Fire Devices
Information Devices
Panel I/O Devices
◊
```

Press the  button and the screen will display the first device logged on to the system:

```
A01          ID:001234
Sounder Detector
ID:001234
Devices◊      Change>
```

Press the  button to scroll through the devices until the required device is shown. Press the  button:

Press the  button and the screen will display:

```
→Text Description
Zone Details - 200
Detection- Dual
Smoke Sens- Normal◊
```

Press the  button and the screen will display:

```
■Dual Detector
ID:001234

F1 ABC  F2 Delete
```

Refer to the 'Text entry' section overleaf.

Text entry

The following buttons will be required to enter new text descriptions:

Button	Action
	Moves the selected character through the alphabet (forwards), one character at a time.
	Moves the selected character through the alphabet (backwards), one character at a time.
	Moves the cursor (selected character) left, one character at a time.
	Moves the cursor (selected character) right, one character at a time.
FUNCTION 1 	Used to toggle character entry format between; upper case, lower case and number.
FUNCTION 2 	Provides a delete function; press for single character deletion, or press and hold to delete all text.
	Exits from the current screen. The user is asked whether to save the changes ( button for yes and  button for no).

Zone text

From access level 3 (*as previously shown on page 7*), press the  button until the screen displays:

```
View System Status
Enable/Disablenents
Maintenance/Test
→Device Options  ⏏
```

Press the  button and the screen will display:

```
→Add New Device
Remove Device
Edit Settinas
Device Zone Text  ⏏
```

Press the  button until the screen displays:

```
Add New Device
Remove Device
Edit Settinas
→Device Zone Text  ⏏
```

Press the  button and the screen will display:

```
→Fire Zones
Information Zones
⏏
```

Press the  button and the screen will display:

```
→00:Zone 00
01:Zone 01
02:Zone 02
Edit ⏏ ✓ To Enter
```

Press the  button until the → is alongside to zone to be re-text:

```
00:Zone 00
→01:Zone 01
02:Zone 02
Edit ⏏ ✓ To Enter
```

Press the  button and the screen will display:

```
█01:Zone 01

F1 ABC  F2 Delete
```

Refer to the ‘Text entry’ section (*page 12*), for details.

Sounder tones

The default fire tone is TONE 5. Available tones are shown overleaf. To change the fire or information tone, follow the steps below:

From access level 3 (*as previously shown on page 7*), press the  button until the screen displays:

```
*Panel Information
  Language Select
  Factory Access
  Reports
```

Press the  button and the screen will display:

```
*Passwords
  Panel Options
  System Options
  Communication
```

Press the  button until the screen displays:

```
Passwords
  Panel Options
  *System Options
  Communication
```

Press the  button and the screen will display:

```
*Healthy Indicator
  Default Tone Select
  Resound Options
  Sounder Duration
```

Press the  button once. The screen will display:

```
Healthy Indicator
  *Default Tone Select
  Resound Options
  Sounder Duration
```

Press the  button and the screen will display the currently selected tones:

```
*Fire Tone - 05
  Info Tone - 26
```

Press  to change the tone type if req. Press the  button and the screen will display:

```
970Hz - 630Hz, @1Hz
  05 Play>
Tone 05 ✓ To Select
```

Press the  and  buttons to view the available tones and press the  button to select the required tone:

```
800Hz - 970Hz, @1Hz
  03 Play>
Tone 03 ✓ To Select
```

TONE	TONE TYPE	TONE DESCRIPTION / APPLICATION
1.		970Hz
2.		800Hz/970Hz at 2Hz
3.		800Hz - 970Hz at 1Hz
4.		970Hz 1s OFF / 1s ON
5.		970Hz, 0.5s / 630Hz at 1 Hz **Default fire tone**
6.		554Hz, 0.1s / 440Hz, 0.4s (AFNOR NF S 32 001)
7.		500 - 1200Hz, 3.5s / 0.5s OFF (NEN 2575:2000 Dutch slow whoop)
8.		420Hz 0.6s ON / 0.6s OFF (Australia AS1670 Alert tone)
9.		1000 - 2500Hz, 0.5s/ 0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)
10.		550Hz / 440Hz at 0.5Hz
11.		970Hz, 0.5s ON / 0.5s OFF x 3 / 1.5s OFF (ISO 8201)
12.		2850Hz, 0.5s ON / 0.5s OFF x 3 / 1.5s OFF (ISO 8201)
13.		1200Hz - 500Hz at 1Hz (DIN 33 404)
14.		400Hz
15.		550Hz, 0.7s / 1000Hz, 0.33s
16.		1500Hz - 2700Hz at 3Hz
17.		750Hz
18.		2400Hz
19.		660Hz
20.		660Hz 1.8s ON / 1.8s OFF
21.		660Hz 0.15s ON / 0.15s OFF
22.		510Hz, 0.2s / 610Hz, 0.2s
23.		800 / 1000Hz 0.5s each (1Hz)
24.		250Hz - 1200Hz at 12Hz
25.		500Hz - 1200Hz at 0.33Hz
26.		2400Hz - 2900Hz at 9Hz **Default information tone**
27.		2400Hz - 2900Hz at 3Hz
28.		500 - 1200Hz, 0.5s/ 0.5s OFF x 3/1.5s OFF (AS1670 Evacuation)
29.		800Hz - 970Hz at 9Hz
30.		800Hz - 970Hz at 3Hz
31.		800Hz, 0.25s ON / 1s OFF
32.		500Hz - 1200Hz, 3.75s / 0.25s OFF (AS2220)

Note: Tones 1, 4, 5 and 7 are EN54-3 approved tones.

Device signal levels

From access level 3 (*as previously shown on page 7*), press the  button until the screen displays:

```
View System Status
Enable/Disablements
+Maintenance/Test
Device Options  ◊
```

Press the  button and the screen will display:

```
+Test Zones
Zone Walk Test
Test Event Listing
Sounder.O/P Test  ◊
```

Press the  button until the screen displays:

```
+Device Signal List
Device Battery List
Maintenance Date
Edit Service Code  ◊
```

Press the  button and the screen will display:

Note: press  to change the type.

```
+Fire Devices
Information Devices
◊
```

Press the  button and the screen will display:

```
+Good Signal      08
Low Signal        00
No Signal         00
More>
```

Pressing the  button will provide more information on the category highlighted:

```
Z01 A08          80dB
Dual Detector
First Floor Landing
GOOD Signal      █
```

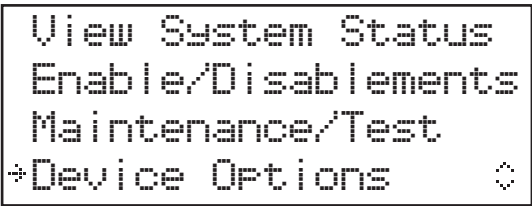


Note: It is important that all devices have GOOD signal levels to ensure the maximum robustness of wireless signalling.

If a device does not achieve a good signal level, for further guidance refer to the 'How to improve device signal levels' section within the 'SmartCell Programming Guide' (TSD155).

Signal level test

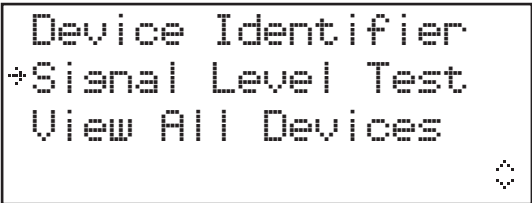
From access level 3 (as previously shown on page 7), press the  button until the screen displays:



Press the  button and the screen will display:



Press the  button until the screen displays:



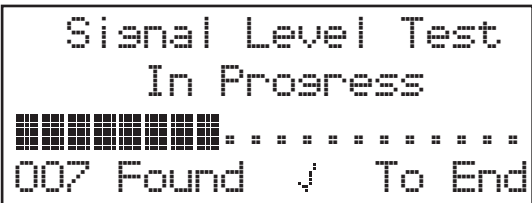
Press the  button and the screen will display:



Press the  button and the screen will display:

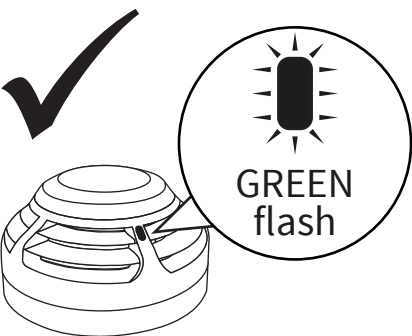


Press the  button and the devices will enter Signal Level Test mode.

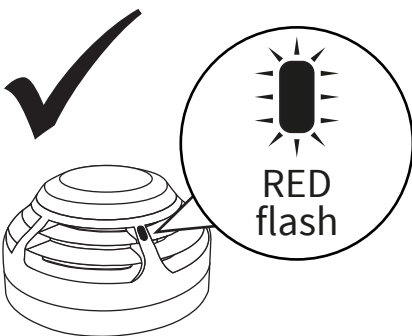


Status LED behaviour:

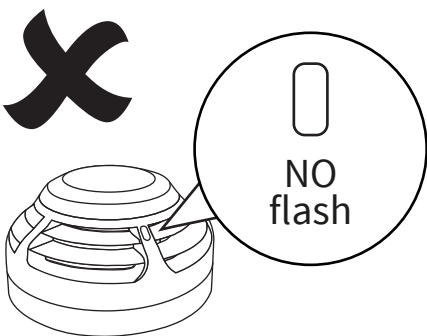
Good signal (>20dB)



Low signal (<20dB)



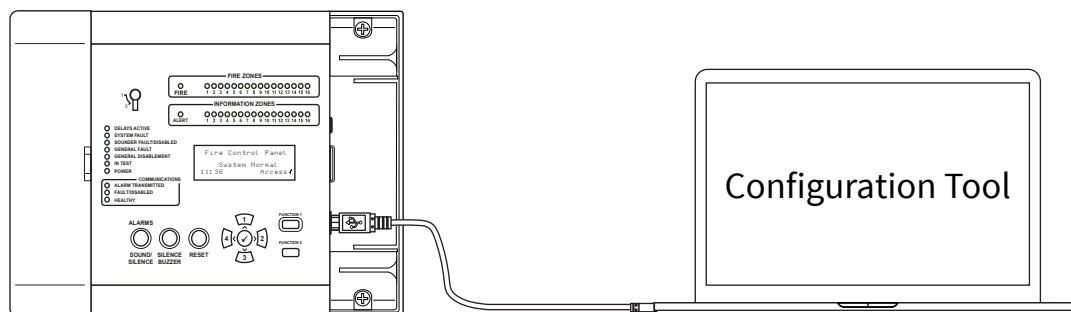
No signal



Set outputs

Default sounder operation is global. Any fire signal, in any zone, will cause all of the system's fire sounders to sound.

Alternative operation, such as zonal and two stage, plus sounder and output delays are also available, via the SmartCell configuration tool.



SmartCell Services configuration

If connection to SmartCell Services is required, Ethernet and/or 3G connections must be made as highlighted in the 'Panel wiring' section.



Installers must be registered to SmartCell Services before carrying out the following steps. To register, visit mysmartcell.com

With the required connections made and mains power present, the internal communications card must be switched on by following the steps below:

From access level 3 (*as previously shown on page 7*), press the **3** button until the screen displays:

```
+Panel Information
  Language Select
  Factory Access
  Reports
```

Press the **✓** button and the screen will display:

```
+Passwords
  Panel Options
  System Options
  Communication
```

Press the  button until the screen displays:

```
Passwords
Panel Options
System Options
→Communication
```

Press the  button and the screen will display:

```
→Read/Write USB
Remote Access
H/W Communicator
```

Press the  button and the screen will display:

```
Read/Write USB
→Remote Access
H/W Communicator
```

Press the  button and the screen will display:

```
→Remote Access OFF
√ Continue Change >
```

Press the  button and the screen will display:

```
Using Remote Access
May Incur Costs
< Cancel Confirm >
```

Press the  button and the screen will display:

```
For Access Enter
Activation Code:
Press √ To Complete
```

Enter the engineer PIN code (*default '333333'*), then press the  button to confirm. The screen will display:

```
→Remote Access ON
√ Continue Change >
```

Press the  button and the screen will display:

```
→Internal Comms
External Comms
```

Press the  button and the screen will display:

```
→View Status
Edit Options
Account settings
```

Press the  button and the screen will display:

```
View Status
→Edit Options
Account settings
◇
```

Press the  button and the screen will display:

```
→Module In Use      NO
Press √ To Select ◇
```

Press the  button and the screen will display:

```
Module In Use  ?
→NO
YES
Press √ To Select ◇
```

Press the  button and the screen will display:

```
Module In Use  ?
NO
→YES
Press √ To Select ◇
```

Press the  button and the screen will display:

```
Module In Use      YES
ARC Enable          NO
→Services           YES
Press √ To Select ◇
```

Press the  button to scroll through the list and press the  button to change any options that are currently set as no, to yes. Applicable options are shown below:

```
→Module In Use      YES
ARC Enable          YES
Services            YES
Remote Configs      YES
IP Port Used        YES
GPRS Used           YES
Stats               YES◇
```

Note: refer to the SmartCell Control Panel Programming Guide (TSD155) for full details of the above options.

Once complete, press the  button and the screen will display:

```
View Status
→Edit Options
Account settings
◇
```

Press the  button and the screen will display:

```
→View Status
Edit Options
Account settings
◇
```

Press the  button and the screen will display:

```
→Module In Use YES
Module Status OK
ARC Enable YES
Services YES◇
```

Press the  button to scroll through the list to check the status of the 'IP Status' and the 'GPRS Status' are as required, prior to account creation.

```
→Module In Use YES
Module Status OK
ARC Enable YES
Services YES
Remote Config YES
IP Port Used YES
IP Status OK
GPRS Used YES
GPRS Status OK
GPRS Sig GOOD
Stats YES◇
```

Once complete, press the  button and the screen will display:

```
→View Status
Edit Options
Account settings
◇
```

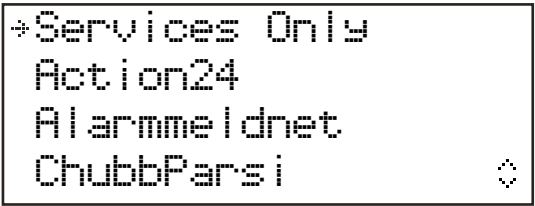
Press the  button and the screen will display:

```
View Status
Edit Options
→Account settings
◇
```

Press the  button and the screen will display:

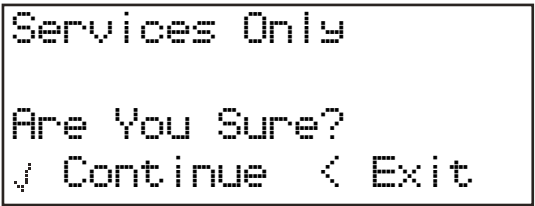
```
→Create Account
View Settings
Edit Settings
◇
```

Press the  button and the screen will show a list of available alarm receiving centres. If connection to an alarm receiving centre is not required, 'Services Only' can also be selected to initiate SmartCell Services:

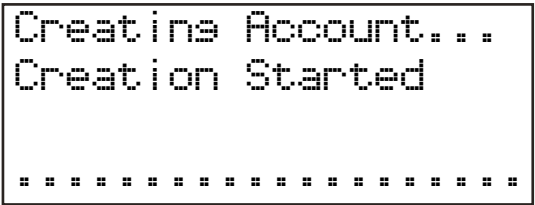


Note: care must be taken to select the correct option.

Press the  button and the screen will request confirmation as shown:

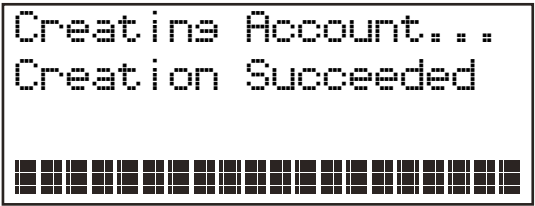


Press the  button and the screen will display:



Note: if using GPRS only this process can take up to 15 minutes. DO NOT cancel once the process has started.

Once completed confirmation of successful account creation will be shown:



The newly created panel account will now be available to claim within SmartCell Services.

Refer to the SmartCell Services Configuration Guide (MK344) for more information.

How to delete devices

Should a device require deleting from the system, follow the steps below:

From access level 3 (*as previously shown on page 7*), press the  button until the screen displays:

```
View System Status
Enable/Disablesments
Maintenance/Test
→Device Options  ⏏
```

Press the  button and the screen will display:

```
→Add New Device
Remove Device
Edit Settins
Device Zone Text  ⏏
```

Press the  button once. The screen will display:

```
Add New Device
→Remove Device
Edit Settins
Device Zone Text  ⏏
```

Press the  button and the screen will display:

Note: press  to change the type.

```
→Fire Device
Information Device
Range Extenders
✓ Select Type  ⏏
```

Press the  button and the screen will display:

```
Z00 A01
Soulder Detector
ID:001234
01/08  ⏏
```

Press the  button until the device to be deleted is shown and press the  button. The screen will display:

```
Z00 A02
Call Point
ID:001235
✓ Remove
```

Press the  button to confirm and the screen will display:

```
Z00 A02
Call Point
ID:001235
Removing> █
```

Followed by confirmation of the device's removal from the system:

```
Device Removed
Zone 00 Address 02
```

How to add devices

From access level 3 (as previously shown on page 7), press the  button until the screen displays:

```
View System Status
Enable/Disablesments
Maintenance/Test
→Device Options  ⏏
```

Press the  button and the screen will display:

```
→Add New Device
Remove Device
Edit Settings
Device Zone Text  ⏏
```

Press the  button and the screen will display:

```
→At Control Panel
At Device Location
Confisure Devices  ⏏
```

Press the  button until the screen displays:

```
At Control Panel
→At Device Location
Confisure Devices  ⏏
```

Press the  button and the screen will display:

```
Place Magnet Onto
New Devices
.....
00 Found  ✓ To End
```

Place the magnet on to the device log on point *. The device's LED will flash and the screen will display:

```
Place Magnet Onto
New Devices
.....
01 Found  ✓ To End
```

Press the  button to end. The screen will display:

```
Add Device ?
Dual Detector Sndr
Beacon ID:001234
01/01  ✓ Add  ⏏
```

Verify the device ident. Press  to confirm, or  to cancel. If accepted, the screen will display:

```
New FIRE
Dual Detector Sndr
Beacon ID:001234
Adding> ■.....⏏
```

Followed by:

Either continue adding new devices, or press **4** until the front screen is displayed.

New FIRE
Device Added
ID:001234
Zone 00 Address 01

* See the Magnet log on points section in the SmartCell Programming Guide (TSD155) for device log on points.

System maintenance

Observe local codes of practice when maintaining your SmartCell fire alarm system.

The manufacturer recommends a weekly test, to ensure correct system functionality.

Refer to the 'SmartCell Maintenance Guide' (MK298) for more information.

FAQs

Q: How do I put the zones into test?

A: *from access level 2 or 3 > ‘Maintenance/Test’ > ‘Test Zones’ > ‘Test All Zones’ > select required method (with or without sounders)*

Note: Full details including different methods of testing are outlined in the ‘SmartCell Programming Guide’ (TSD155).

Q: How do I take the zones out of test?

A: *from access level 2 or 3 > ‘Maintenance/Test’ > ‘Test Zones’ > ‘Restore Zones’*

Q: How do I view the event log?

A: *from access level 2 or 3 > ‘View System Status’ > ‘Event History’*

Q: How do I disable a device?

A: *from access level 2 or 3 > ‘Enable/Disabling’ > ‘Fire Devices’ > select required device*

Q: Why is my device not activating into alarm?

A: Firstly check if the device is added to the system. E.g. does the device generate a tamper event when removed from its mounting plate. Check the device’s configuration. E.g. is the device set as a smoke or heat detector? Finally, try putting the system into walk test mode. This puts the devices into rapid test mode, for ease of testing.

From access level 3 > ‘Maintenance/Test’ > ‘Zone Walk Test’

Q: Can I test an individual sounder?

A: Yes - *from access level 3 > ‘Maintenance/Test’ > ‘Sounder.O/P Test’*

Troubleshooting

Dev Type	Fault Displayed	Rectification Process
All	Battery Missing	Check batteries are fitted correctly.
Panel	Mains Fail	Check the mains supply.
Detector	Head Fault	Replace device.
Detector	Head Dirty	Check the device is in a clean environment and is free from smoke, dust and dirt. Replace device, or return to manufacturer.
All	In Tamper	Check the device is assembled correctly.
Input/ Output	Input Open / Short Circuit	Check the 20 kΩ end of line resistor is in place and that connections are secure.
All	No Signal Fault	Check device location to ensure no visible cause can be seen. Check device battery insertion and voltages. Refer to the SmartCell programming guide's 'How to improve device signal levels' section for more information.
All	Battery Low	Replace all device batteries with new specified batteries - see the associated device installation guide and replace within 30 days.
Panel	Battery / Charger Fail	Check the battery voltage and battery connection.
Call Point	Alarm	Check the device resettable element has been reset following alarm. If in alarm, clear the device using the reset key.
Detector	Alarm	Ensure the environment in the device's location is free of smoke, residue and dust.

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