800 SERIES
call system

Ideal for use in:

Hotels
Leisure centres
Nursing homes
Care homes
Hospitals
Shops
Lavatories
Guest houses
Gymnasiums
Fitness suites
Solariums
Police cells
Prisons
Factories
Warehouses
Offices
Reception areas
GP surgeries
Government buildings
Interview rooms
Housing offices
Restaurants
Changing rooms
and much, much more

800 SERIES
call system

Tried, trusted and respected by users and installers alike, C-TEC's 800 Series Call System is ideal for use in all types of private, commercial, residential and public sector buildings. Incorporating two different disabled persons toilet alarm kits, a wide range of indicator panels and an extensive array of system components, it is without doubt one of the most versatile and reliable conventional call systems on the market.

- Hundreds of applications - suitable for use in hotels, leisure centres, nursing homes, shops, offices, etc.
- Hard wired for total reliability - 4 to 6 core security cable is ideal for most installations.
- Wide range of indicator panels covering 1 to 90 zones.
- Extensive range of ancillaries including ceiling pulls, wall-mounting call points, monitoring points, water resistant alert points, stainless steel call points, overdoor lights, remote sounders, relays and call latch modules.
- 12V d.c. system - simple to install, easy to operate and highly reliable.
- Most wall-mounting plastic components fit standard 25mm single or double gang back boxes. Ceiling pulls and water resistant alert points are surface mountable.
- Attractive compact design blends perfectly into any sort of decor.
- All power supplies capable of 12V sealed lead acid battery charging.

- Two levels of call - standard (constant tone) and emergency (intermittent tone).
- Optional button or magnetic key reset facilities (dependent on items purchased).
- No limit to system size - components can be mixed and matched to meet the layout and call communication requirements of virtually any building - see typical applications diagram for details.
- Optional datalogging, paging and infrared staff attack facilities.
- FREE plan marking up and technical advice service available for larger systems.
- Extremely cost-effective - all components normally available ex-stock.
- Manufactured in the UK by an ISO 9001 accredited company with over 20 years' experience of making quality life safety and call system products.
- Can be used to help building managers and service providers comply with BS8300, the Disability Discrimination Act and the Care Standards Act.

New stainless steel ancillaries now available

WHAT IS AN 800 SERIES CALL SYSTEM?

In its simplest form, an 800 Series Call System: -
- Allows the general public, a member of staff or a patient to call for assistance;
- Confirms that the call has got through;
- Makes sure the caller is visited; and, if required;
- Allows extra or more urgent assistance to be summoned using an optional 'emergency' call facility.

However, the unrivalled flexibility and versatility of the 800 Series Call System means it can also be used to: -
- Inform staff that someone is being attacked via an optional infrared 'staff attack' facility.
- Monitor storage cupboards, cash offices and stock rooms for unauthorised access.
- Monitor doorbells, telephones and machinery for activation or failure.
- Send notification of calls to hand-held paging equipment.
- Provide a permanent printed record of all system and staff activity via optional datalogging equipment.

HOW DOES AN 800 SERIES CALL SYSTEM WORK?

Depending on the type of calling devices used, the system can be set up to operate as a **standard system** – on which standard (constant tone) calls are generated – or an **emergency system** – on which standard (constant tone) and emergency (intermittent tone) calls are generated.

On standard systems:

The user calls for assistance by activating a ceiling pull, standard call point, monitoring point, water resistant alert point or infrared ceiling receiver (as fitted). A red confidence light on the calling device illuminates to reassure the user that the call has been registered.

At the system's indicator panel(s), an indicator light illuminates and a buzzer sounds to inform staff that someone is in need of assistance. Relevant overdoor lights, remote sounders and area indicators also operate (as fitted) to provide additional audible and visual indication of the call.

A member of staff visits the calling room to assist the user and resets the calling device to return the system to normal.

On emergency systems:

In addition to doing everything a standard system does, a more urgent / extra level of assistance can be summoned by activating an 'emergency call' via an emergency call point, water resistant alert point or infrared ceiling receiver (as fitted).

Once activated, the red confidence light on the calling device will flash to confirm the emergency call has been registered and the relevant indicator panel light and its buzzer will flash and sound a more insistent tone to attract attention. Relevant overdoor lights, remote sounders and area indicators will also pulse (as fitted) to provide additional audible and visual indication of the emergency call.

WHICH SYSTEM SHOULD YOU CHOOSE?

The type of system required will depend upon the application and the needs of the user so always check with the approving authority/client before work commences.

In residential care homes, a standard system is normally acceptable as the main requirement is for the reset function to be carried out at the source of the call. In nursing homes, however, some authorities insist on standard and emergency call facilities so an emergency system may be required. In most other applications, such as shops, leisure centres, hotels and public sector buildings, the type of system and devices required will depend almost entirely on what the user wants to achieve. In most instances, referring to the typical applications diagram overleaf will help all interested parties come to a decision on what components should be purchased.

PLANNING A SYSTEM

The following points should be considered when designing or planning an 800 Series Call System.

Indicator panels

Indicator panels should be sited internally in a clean dry area which is readily accessible to staff. Various types and sizes are available covering 1 to 90 zones. Repeater panels are also available.

Call Points

Any number of call points (of any kind), reset points and overdoor lights can be wired onto one zone.

Standard call points (including ceiling pulls and monitoring points) will work on 800 Series standard <u>and</u> emergency systems but emergency call points will work on emergency systems only.

Some emergency call points can generate standard and emergency calls whereas others, such as water resistant alert points and stainless steel call points, can be set up to generate standard or emergency calls (not both).

Two methods of reset are available - button or magnetic key. Reset buttons are fine for non-secure applications but reset keys are usually preferred in care establishments as they help prevent patients inadvertently cancelling their own calls.

Call points without an on-board reset facility, such as ceiling pulls, must be reset via a reset point or call point with an on-board reset facility.

A full list of standard and emergency call points and the facilities they offer can be found at the back of this leaflet.

Ancillary calling devices

A tail call lead or hand/foot operated pneumatic pad can be connected to a call point's remote socket (if fitted) to generate a standard call. For safety reasons, a standard call will also be made if the ancillary calling device is inadvertently pulled from its socket.

Monitoring points

Monitoring points can be used to trigger a standard call if a fire exit, drug cupboard or storeroom is opened and can be isolated via an on-board keyswitch if required. They can also be connected to any device with a normally open or normally closed switch, such as a pressure mat, allowing it to operate as a standard call point when activated.

Call latch modules

Call latch modules operate in a similar way to monitoring points but are smaller (for discreet mounting) and do not include an onboard reset or isolating facility.

Infrared call points, ceiling receivers and transmitters

To help protect staff against aggressive visitors, distressed patients or intruders, infrared ceiling receivers and call points can be used in conjunction with infrared transmitters to remotely trigger standard and/or emergency calls. Up to three slave ceiling receivers can be connected to one master ceiling receiver or infrared call point to provide additional coverage in large or L shaped rooms. Infrared transmitters typically provide a 10m line-of-sight transmitting range.

Overdoor lights

Overdoor lights (if fitted) are normally installed outside rooms to increase call indication levels. If required, up to four zones can be connected to one overdoor light to provide area indication (in corridors, etc) with additional zones connectable via one or more input expanders.

Remote sounders

Up to three switchable or remote sounders can be connected to an indicator panel's sounder output to increase call levels.

Relay units

External strobes, sounders, beacons, etc, can be connected to any zone or group of zones via a 12V relay unit.

Datalogging and paging

A datalogger can be used to record the date, time, type and location of every call and reset and is ideal for verifying that staff have attended to calls and for analysing response times. Two paging options are also available - tone only and alphanumeric, the latter of which must be used in conjunction with a datalogger.

Master reset buttons

Some indicator panels have an optional master reset button. If enabled, this facility allows standard calls to be globally cancelled without the source of the call being investigated. As there is a definite requirement in most applications for the caller to be visited before the call is reset, this facility is normally only utilised in carefully managed staff-to-staff call systems. In most other instances we recommend this facility is disabled.

Mute buttons

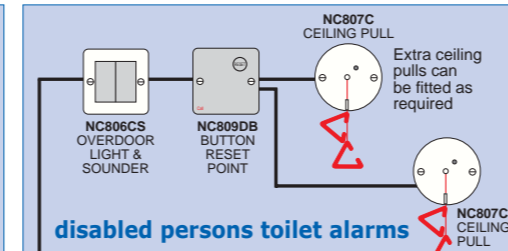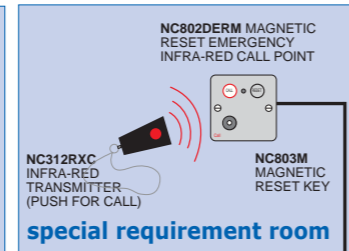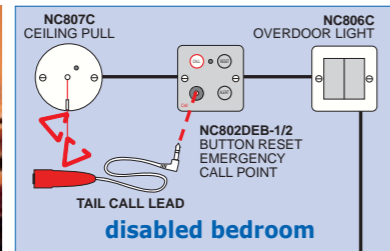All multi-zone emergency indicator panels are supplied with an optional mute button. If enabled, this allows any standard calls on the system to be silenced but leaves relevant indicator light(s) lit. Although a new call from a different call point will re-activate the sounders, to ensure callers are visited we recommend this facility is used only in very carefully managed systems. Emergency calls cannot be muted.
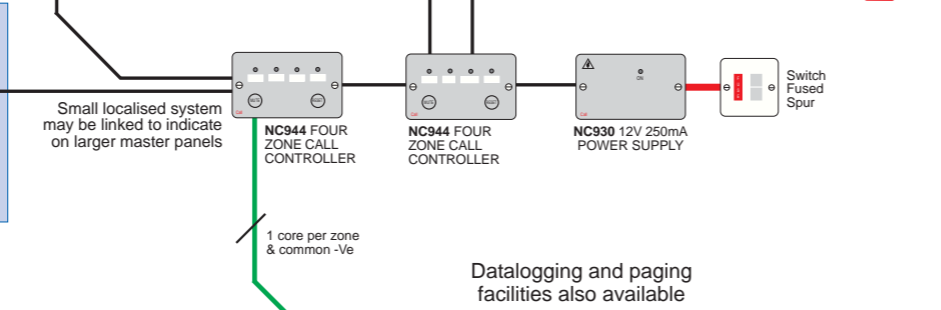
Typical Applications & Wiring Details
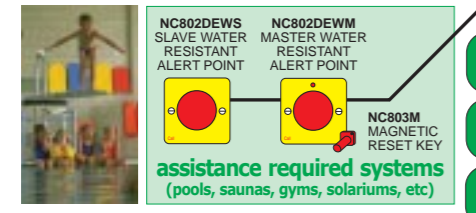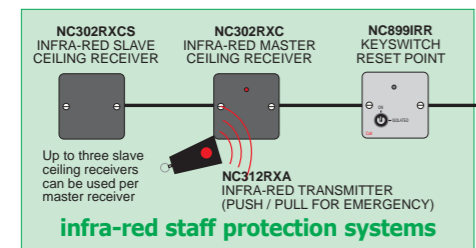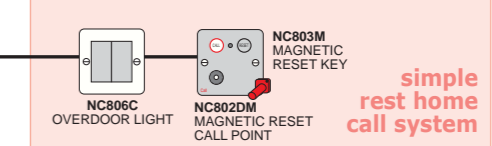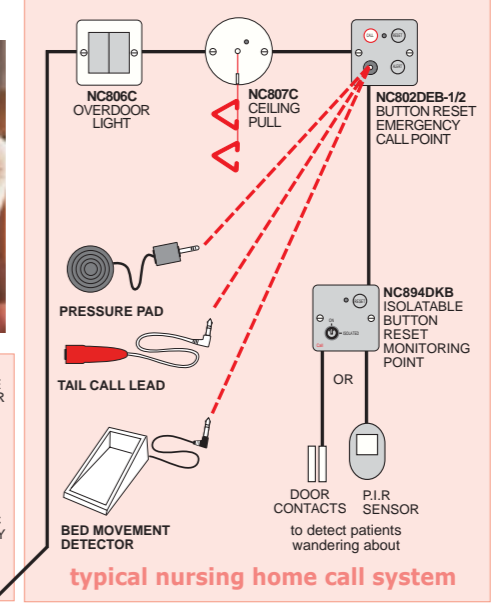
800 SERIES
call system

hotel & guest house call systems □

disabled bedroom

NC807C CEILING PULL
NC806C OVERDOOR LIGHT
NC802DEB-1/2 BUTTON RESET EMERGENCY CALL POINT
TAIL CALL LEAD

special requirement room

NC802DERM MAGNETIC RESET EMERGENCY INFRA-RED CALL POINT
NC312RXC INFRA-RED TRANSMITTER (PUSH FOR CALL)
NC803M MAGNETIC RESET KEY

disabled persons toilet alarms

NC807C CEILING PULL
NC806CS OVERDOOR LIGHT & SOUNDER
NC809DB BUTTON RESET POINT
Extra ceiling pulls can be fitted as required
NC807C CEILING PULL

kitchen, restaurant & conference room call systems

NC802DB BUTTON RESET CALL POINT
Small localised system may be linked to indicate on larger master panels
NC944 FOUR ZONE CALL CONTROLLER
NC944 FOUR ZONE CALL CONTROLLER
NC930 12V 250mA POWER SUPPLY
Switch Fused Spur

1 core per zone & common -Ve

Datalogging and paging facilities also available

nursing home & hospital call systems □

IMPORTANT: There is a definite requirement in nursecall systems for the reset function to be carried out at the room from which the call is made

NC806C OVERDOOR LIGHT
NC302RXC INFRA-RED MASTER CEILING RECEIVER
NC302RXCS INFRA-RED SLAVE CEILING RECEIVER
NC312RXA INFRA-RED TRANSMITTER (PUSH / PULL FOR EMERGENCY)
NC803M MAGNETIC RESET KEY
NC809DM MAGNETIC RESET POINT

staff attack and call systems in casualty areas

typical nursing home call system

NC806C OVERDOOR LIGHT
NC807C CEILING PULL
NC802DEB-1/2 BUTTON RESET EMERGENCY CALL POINT
PRESSURE PAD
TAIL CALL LEAD
BED MOVEMENT DETECTOR
NC894DKB ISOLATABLE BUTTON RESET MONITORING POINT
OR
DOOR CONTACTS   P.I.R SENSOR
to detect patients wandering about

simple rest home call system

NC806C OVERDOOR LIGHT
NC802DM MAGNETIC RESET CALL POINT
NC803M MAGNETIC RESET KEY

retail, sports & leisure call systems □

infra-red staff protection systems

NC302RXCS INFRA-RED SLAVE CEILING RECEIVER
NC302RXC INFRA-RED MASTER CEILING RECEIVER
NC899IRR KEYSWITCH RESET POINT
Up to three slave ceiling receivers can be used per master receiver
NC312RXA INFRA-RED TRANSMITTER (PUSH / PULL FOR EMERGENCY)

assistance required systems (pools, saunas, gyms, solariums, etc)
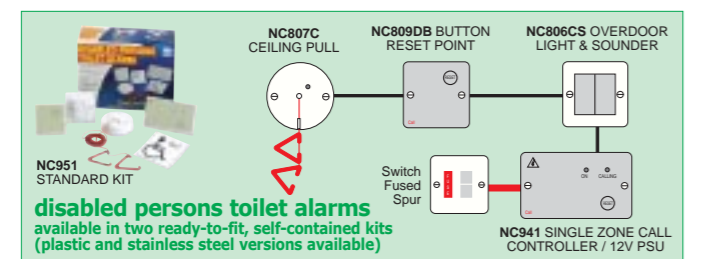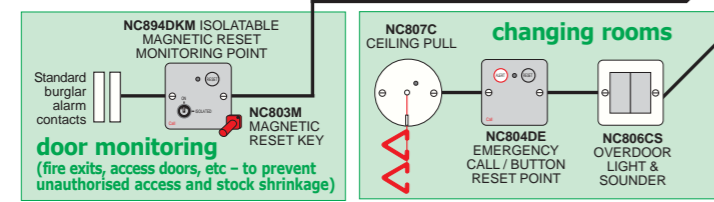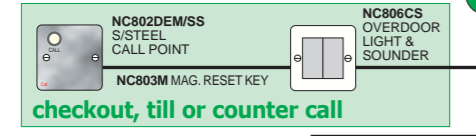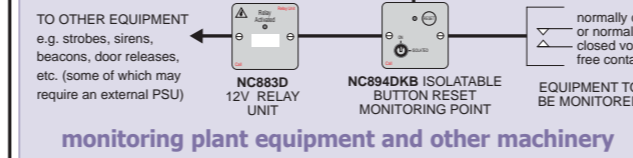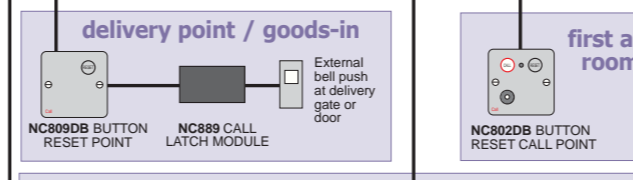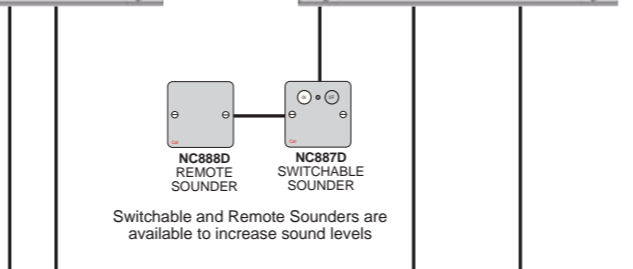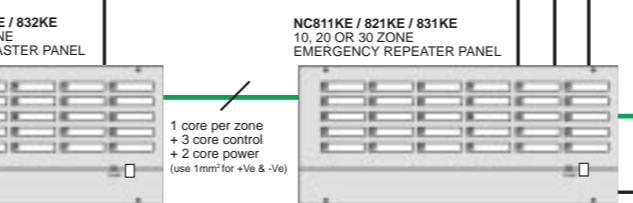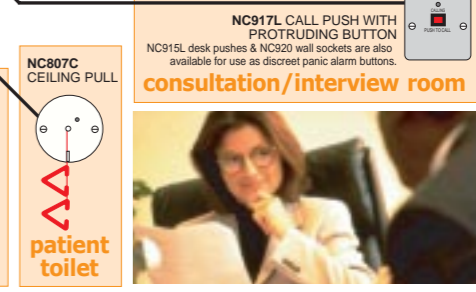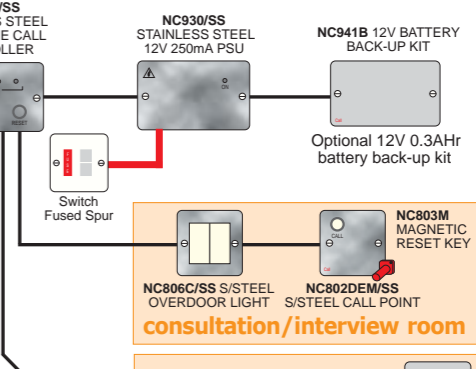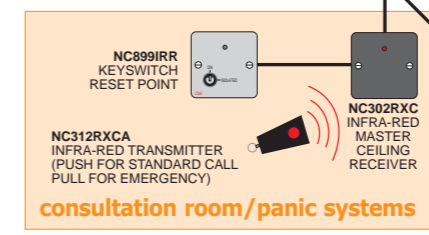
NC802DEWS SLAVE WATER RESISTANT ALERT POINT
NC802DEWM MASTER WATER RESISTANT ALERT POINT
NC803M MAGNETIC RESET KEY

checkout, till or counter call

NC802DEM/SS S/STEEL CALL POINT
NC803M MAG. RESET KEY
NC806CS OVERDOOR LIGHT & SOUNDER

door monitoring (fire exits, access doors, etc – to prevent unauthorised access and stock shrinkage)

NC894DKM ISOLATABLE MAGNETIC RESET MONITORING POINT
Standard burglar alarm contacts
NC803M MAGNETIC RESET KEY

changing rooms

NC807C CEILING PULL
NC804DE EMERGENCY CALL / BUTTON RESET POINT
NC806CS OVERDOOR LIGHT & SOUNDER

disabled persons toilet alarms
available in two ready-to-fit, self-contained kits (plastic and stainless steel versions available)

NC807C CEILING PULL
NC809DB BUTTON RESET POINT
NC806CS OVERDOOR LIGHT & SOUNDER
NC951 STANDARD KIT
Switch Fused Spur
NC941 SINGLE ZONE CALL CONTROLLER / 12V PSU

warehouse & factory call systems □

Switch Fused Spur

NC812KE / 822KE / 832KE 10, 20 OR 30 ZONE EMERGENCY MASTER PANEL

NC811KE / 821KE / 831KE 10, 20 OR 30 ZONE EMERGENCY REPEATER PANEL

1 core per zone + 3 core control + 2 core power (use 1mm² for +Ve & -Ve)

NC888D REMOTE SOUNDER
NC887D SWITCHABLE SOUNDER
Switchable and Remote Sounders are available to increase sound levels

delivery point / goods-in

NC809DB BUTTON RESET POINT
NC889 CALL LATCH MODULE
External bell push at delivery gate or door

first aid room

NC802DB BUTTON RESET CALL POINT

monitoring plant equipment and other machinery

TO OTHER EQUIPMENT e.g. strobes, sirens, beacons, door releases, etc. (some of which may require an external PSU)
NC883D 12V RELAY UNIT
NC894DKB ISOLATABLE BUTTON RESET MONITORING POINT
normally open or normally closed voltage free contacts
EQUIPMENT TO BE MONITORED

alarm call systems

NC899IRR KEYSWITCH RESET POINT
NC302RXC INFRA-RED MASTER CEILING RECEIVER
NC302RXCS INFRA-RED SLAVE CEILING RECEIVER
NC312RXA INFRA-RED TRANSMITTER (PUSH / PULL FOR EMERGENCY)

monitoring fire doors, etc

Door contacts
NC894DKB ISOLATABLE BUTTON RESET MONITORING POINT
NC806C OVERDOOR LIGHT

1 core per zone & common -Ve

Small localised system may be linked to indicate on larger master panels

NC944/SS STAINLESS STEEL FOUR ZONE CALL CONTROLLER
NC930/SS STAINLESS STEEL 12V 250mA PSU
NC941B 12V BATTERY BACK-UP KIT
Optional 12V 0.3AHr battery back-up kit
Switch Fused Spur

general surgery & interview room call systems □

consultation/interview room

NC806C/SS S/STEEL OVERDOOR LIGHT
NC802DEM/SS S/STEEL CALL POINT
NC803M MAGNETIC RESET KEY

consultation/interview room

NC917L CALL PUSH WITH PROTRUDING BUTTON
NC915L desk pushes & NC920 wall sockets are also available for use as discreet panic alarm buttons.

consultation room/panic systems

NC899IRR KEYSWITCH RESET POINT
NC312RXCA INFRA-RED TRANSMITTER (PUSH FOR STANDARD CALL PULL FOR EMERGENCY)
NC302RXC INFRA-RED MASTER CEILING RECEIVER

patient toilet

NC807C CEILING PULL

CABLE & WIRING DETAILS

EXTRA LOW VOLTAGE (7/0.2) SECURITY CABLE
- Typically 4 or 6 core dependent on layout and devices used (see right).
- Multi-core cable can be used to reduce wiring runs but more joints will result.
- We recommend you leave about 20-25% spare cores.
- DO NOT use solid core cable as it breaks easily.

220-240V MAINS FEED, e.g. 1mm T&E

OTHER (as specified)

- **STANDARD CALL POINTS** (including ceiling pulls, monitoring points and standard reset points): Run 1 signal wire per zone plus a common negative to the nearest panel
- **EMERGENCY CALL POINTS** (including infrared ceiling receivers and keyswitch reset points): Run 1 signal wire per zone plus a common negative and a common positive to the nearest panel
- **OVERDOOR LIGHTS:** Connect to the signal wire of the zone being indicated and to common negative and common positive
- **REMOTE SOUNDERS:** Usually connected directly to an indicator panel using two cores
- **INDICATOR PANELS / REPEATERS:** Wire as specified in diagram

800 Series Part Numbers & Product Descriptions

DISABLED PERSONS TOILET ALARM KITS
Include everything required for a BS8300 compliant disabled persons toilet alarm (except cables & fixings)

NC951	Standard disabled WC alarm kit c/w NC941 call controller, NC807C ceiling pull, NC806CS overdoor light & sounder, NC809DB button reset point & WC sticker
NC951/SS	Standard disabled WC alarm kit, s/steel c/w NC941/SS call controller, NC807C ceiling pull, NC806CS/SS overdoor light & sounder, NC809DB/SS button reset point & WC sticker

SINGLE ZONE EMERGENCY INDICATOR PANELS
Indicate standard and emergency calls

NC941	Single zone call controller c/w 12V 250mA PSU & reset button
NC941/SS	Single zone call controller, s/steel c/w 12V 250mA PSU & reset button
NC941B	0.3AHr battery backup kit for use with single zone call controller

4-12 ZONE EMERGENCY INDICATOR PANELS
Indicate standard and emergency calls

NC944	Four zone call controller c/w mute/reset button, requires 12V PSU
NC944/SS	Four zone call controller, s/steel c/w mute/reset button, requires 12V PSU
NC930	12V 250mA PSU powers up to 2 x four zone call controllers
NC930/SS	12V 250mA PSU, s/steel powers up to 2 x four zone call controllers
NC941B	0.3AHr battery backup kit for use with 12V 250mA PSU
NC925B1	12V 1A white boxed PSU powers up to 3 x four zone call controllers
AC284	2.1AHr backup battery for use with 12V 1A boxed PSU

10-30 ZONE EMERGENCY INDICATOR PANELS
Indicate standard and emergency calls

NC812KE	10 Zone Emergency master panel c/w 12V PSU, backup battery & mute button
NC811KE	10 Zone Emergency repeater panel
NC822KE	20 Zone Emergency master panel c/w 12V PSU, backup battery & mute button
NC821KE	20 Zone Emergency repeater panel
NC832KE	30 Zone Emergency master panel c/w 12V PSU, backup battery & mute button
NC831KE	30 Zone Emergency repeater panel

Larger panels available to order

10-30 ZONE STANDARD INDICATOR PANELS
Indicate standard calls ONLY

NC810K	10 Zone Standard master panel c/w 12V PSU & reset button
NC811K	10 Zone Standard repeater panel
NC820K	20 Zone Standard master panel c/w 12V PSU & reset button
NC821K	20 Zone Standard repeater panel
NC830K	30 Zone Standard master panel c/w 12V PSU & reset button
NC831K	30 Zone Standard repeater panel

Larger panels available to order

OVERDOOR LIGHTS AND SOUNDERS
Can be used to increase call indication levels

NC806C	Overdoor light
NC806CS	Overdoor light & sounder
NC806C/SS	Overdoor light, s/steel
NC806CS/SS	Overdoor light & sounder, s/steel
NC887D	Switchable sounder
NC888D	Remote sounder

STANDARD CALL POINTS
Generate standard calls only

NC807C	Ceiling pull unit No on-board reset, no remote socket
NC802DB	Standard call point Button reset, with remote socket
NC802DM	Standard call point Magnetic reset, with remote socket
NC917L	Standard call push with protruding button No on-board reset, no remote socket
NC802DEWM	Master water resistant alert point magnetic reset, no remote socket
NC802DEWS	Slave water resistant alert point Up to 10 per master
NC802DEM/SS	Stainless steel call point Magnetic reset, no remote socket

STANDARD MONITORING POINTS
Generate standard calls only

NC894DKB	Isolatable monitoring Point Button reset, no remote socket
NC894DKM	Isolatable Monitoring Point Magnetic reset, no remote socket

EMERGENCY CALL POINTS
Generate standard and/or emergency calls (as shown)

NC802DEB-1/2	Emergency call point Button reset, with remote socket, can generate standard & emergency calls
NC802DEM	Emergency call point Magnetic reset, with remote socket can generate standard & emergency calls
NC802DEWM	Master water resistant alert point magnetic reset, no remote socket, can generate standard or emergency calls (not both)
NC802DEWS	Slave water resistant alert point Max. 10 per master
NC802DEM/SS	Stainless steel call point Magnetic reset, no remote socket, can generate standard or emergency calls (not both)
NC804DE	Emergency call / reset point Button reset, no remote socket, can generate emergency calls only
NC809DEM	Emergency call / reset point Magnetic reset, no remote socket, can generate emergency calls only

INFRARED CALL POINTS & CEILING RECEIVERS
Generate standard and/or emergency calls when triggered by a compatible infrared transmitter

NC302RXC	Infrared master ceiling receiver No on-board reset, no remote socket
NC302RXCS	Infrared slave ceiling receiver Up to 3 per master.
NC802DERB	Infrared call point Button reset, with remote socket
NC802DERM	Infrared call point Magnetic reset, with remote socket

INFRARED TRANSMITTERS
For use with infrared call points & ceiling receivers

NC312RXA	Infrared transmitter Push/pull for emergency call
NC312RXCA	Infrared transmitter Push for standard call / pull for emergency
NC312RXC	Infrared transmitter Push for standard call only
NC312BM	Battery module for transmitter

RESET POINTS

NC809DB	Button reset point
NC809DB/SS	Button reset point, s/steel
NC809DM	Magnetic reset point
NC899IRR	Keyswitch reset point

MAGNETIC RESET KEYS
For use with all magnetic call points, monitoring points and reset points

NC803M/10	10 x magnetic reset keys
NC803M/50	50 x magnetic reset keys

ANCILLARY CALLING DEVICES
Generate standard call via a call point's remote socket

NC805C/6	1.8m (6ft) tail call lead
NC805C/14	4.2m (14ft) tail call lead
NC805D	1.2-3.6m (4-12ft) tail call lead
NC805P	Hand/foot pneumatic pad requires 1 x NC805AS
NC805AS	Remote air switch for NC805P
NC805MD	Portable movement detector

MISCELLANEOUS 800 SERIES DEVICES

NC899KD	Area isolator can be used to isolate areas/zones
NC884DE	Emergency 5:1 input expander can be used to provide area/zonal indication
NC885	Standard 5:1 input expander can be used to provide area/zonal indication
NC886C	Call latch module can trigger a call from a n/o or n/c switch
NC883D	12V relay unit can be used to switch sirens, strobes, etc.
NC848/10	10 x Anti-tamper screws can be used to secure stainless steel devices in high risk environments.

DATALOGGING & PAGING EQUIPMENT

DP800KPD	Datalogger c/w software & printer
DP800KD	Datalogger c/w software, no printer
DP830K	30 zone interface kit one required per 30 zones on DP800KPD or DP800KD datalogger
DP874DA	Transmitter for alphanumeric pagers Must be used in conjunction with a DP800KPD or DP800KD datalogger
DP877A	Alphanumeric display pager, group 1 For other pager groups add B,C,D,E,F,G or H to the order code
DP874B/4	Tone only UHF paging transmitter supplied with one tone-only pager
DP875/4	Extra tone-only pager

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LPCB
UKAS QUALITY MANAGEMENT 007

Quality System Certificate No. 176
Assessed to ISO9001 : 1994