



EMERGENCY CALL SYSTEM

Configuration Tool Guide

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1 OVERVIEW

The CareCall4 (CC4) Configuration Tool provides system administrators the ability to remotely configure CareCall4 Call Points, Digital Display Units, Sounders/Over-Door Lamps, and Dementia Care Monitors.

This tool is a plugin to the CareCall EDGE via TCP/IP and communicates through the Server to the connected devices. It may be installed on the same Server, connecting via loopback, or it may connect to CareCall EDGE remotely from another PC or location, provided a network pathway has been established to the Server.

Operating as a stand-alone application. Server connection parameters and TCP port allocation for connectivity between CareCall EDGE and the Configuration Tool can be established through a settings.ini file.

1.1 VERSION RELEVANCY

The contents of this guide are relevant to the following version:

CareCall4 Config Tool 1.00z

1.2 CHANGE LOG / OMISSIONS

Changes to newer versions not covered in detail are listed here next to their relevant release. Acknowledged omissions to be included in future versions are listed here.

CareCall3 backward compatibility added.	v1.00z
DCM compatibility added. See CareCall DCM Installer Guide	v1.00u



1.3 PREREQUISITES

- 32 or 64bit Windows 10, Server 2012/2016/2019 operating system.
- 30MB available memory.
- CareCall EDGE install with network connection or local loopback (127.0.0.1) if the CareCall4 Config Tool is hosted on the CareCall EDGE Server (see QMS-TEC-SD-00000003 for CareCall EDGE install requirements).
- A Miracle CareCall4 Coordinator with connected Call Points, Displays, Sounders/Overdoor Lights that are powered on and operational.
- Firewall opened for TCP port 6001, or other nominated TCP port for the Server and PC hosting the CareCall4 Configuration Tool.
- Knowledge of the IP address scheme for the CareCall4 system being connected to, in particular the CareCall4 Coordinators.

1.4 INSTALLATION

The application will be bundled with v4.02m server installer onwards, stored in the following directory:

C:\Program Files (x86)\CareCall EDGE Server\CC4 Config

A separate CC4 update package is also obtainable from Miracle support. A .zip folder is supplied containing the application executable and release notes. Extract the .zip folder to the installed directory above and replace all files when prompted.

The CareCall4 Config Tool application does not need installation itself; the executable may be run as is. It is recommended to store the executable in a folder off desktop and create a shortcut. This prevents accidental deletion of the automatically generated .config file which will retain some previously set parameters within the application.



2 CARECALL EDGE SETUP

Under the Communications tab in CareCall EDGE, ensure the CareCall4 Gateway is enabled and licensed (licensed features may be reviewed in the General Setup tab). Windows Defender Firewall must have an inbound rule for the allocated TCP port used. TCP port 6001 is the default.

Local IP Address may be configured to default route (0.0.0.0) which listens for any IPv4 address, not specific to any subnet nor adapter. Specifying an IP address will bind to a specific network adapter on the Server (i.e., 10.0.0.1). Accepted IP Addresses filters communications so that data is only processed from those addresses specified. Local Port is synonymous with TCP port. Press Apply after making any configuration changes.

All CareCall4 Coordinators must have a network pathway established to the Server.

1. Miracle CareCall4 Gateway

2. Enable/Disable Gateway.

3. Connection Status.

- a. Disconnected – check IP address.
- b. Waiting – connected to IP and awaiting CareCall4 devices.
- c. Device(s) Connected – connection to CareCall4 devices established and quantity indicated.
 - i. CareCall4 Coordinators add to quantity count.
 - ii. CareCall4 Config Tool connections add to quantity count.

4. IP Address of the network adapter receiving traffic from the CareCall4 System.

- a. Default route (0.0.0.0) may be used as a wildcard to listen in on any network adapter.
- b. Servers with multiple network adapters may benefit from targeting the IP address of that which is receiving CareCall4 traffic only.

5. TCP Port allocated for CareCall4 traffic.

- a. Default: 6001 (recommended).

6. Apply changes.

6 Apply

Close



3 MOXA CONFIGURATION

Ensure to gather the relevant network configuration details from the end-client's network solutions provider. It is important to ensure the IP details of the C4 Coordinator are final before learning call points to CareCall EDGE. Change of IP address will require re-learning all modular devices attached to that Coordinator.

Layer 3 networks will require gateway IP settings, whereas layer 2 networks may not. Be sure to inform network providers the TCP port in use for CareCall4 traffic (6001 default).

Do not attempt to replace MOXA or interfere with any of the internal Coordinator componentry without direct instruction from Miracle Electronics.

- C4 Coordinator IP Address
- Gateway IP Address
- Subnet Mask
- DNS Addresses
- CareCall EDGE Server IP Address

The following configuration example is based off a MOXA N-Port 5110A configuration. If the IP of the MOXA is unknown, Installers may use the N-Port Administrator application to search for and configure devices. Otherwise, navigate to the IP of the MOXA in your preferred browser. Configuration of basic settings for management purposes (such as names) are not shown here, though it is recommended.

3.1 SERIAL SETTINGS

MOXA® Total Solution for Industrial Device Networking

Model	- NPort 5110A	IP	- 192.168.1.161
Name	- NP5110A_183	Serial NO.	- 183

Serial Settings

Port 1

Port alias

Serial Settings

1. Baud rate: 115200

2. Data bits: 8

3. Stop bits: 1

4. Parity: None

5. Flow control: None

6. FIFO: ☒ Enable ☐ Disable

7. Interface: RS-232

8. Submit

1. Enter the Serial Settings Menu.
2. Serial Settings: 115200,N,8,1. No flow control. FIFO on.
3. Interface: RS-232.
4. Submit changes



3.2 NETWORK CONFIGURATION

The screenshot shows the MOXA web interface for 'Total Solution for Industrial Device Networking'. The top navigation bar includes fields for Model (NPort 5110A), Name (NP5110A_183), IP (192.168.1.161), and Serial NO. (183). The left sidebar contains a menu with 'Network Settings' highlighted. The main content area is titled 'Network Settings' and includes sections for 'Network Settings', 'IP Address Report', and 'LLDP Settings'. Numbered callouts are placed as follows: 1. On the 'Network Settings' menu item in the sidebar. 2. On the 'IP address' field. 3. On the 'Netmask' field. 4. On the 'Gateway' field. 5. On the 'IP configuration' dropdown menu. 6. On the 'DNS server 1' field. 7. On the 'Submit' button at the bottom.

1. Enter Network Settings menu.
2. IP Address of this Coordinator.
3. Subnet Mask (confirm with network provider).
4. Gateway (confirm with network provider).
5. IP Configuration must be static. Dynamic addresses are not permitted.
6. DNS Server address (confirm with network provider).
7. Submit changes.

3.3 OPERATING MODE

The screenshot shows the MOXA web interface for 'Total Solution for Industrial Device Networking'. The top navigation bar includes fields for Model (NPort 5110A), Name (NP5110A_183), IP (192.168.1.161), and Serial NO. (183). The left sidebar contains a menu with 'Port 1' highlighted. The main content area is titled 'Operation Modes' and includes a section for 'Port 1'. Numbered callouts are placed as follows: 1. On the 'Port 1' menu item in the sidebar. 2. On the 'Operation mode' dropdown menu. 3. On the 'Destination IP address 1' field. 4. On the 'Port' field for the first entry (6001).

1. Enter Operating Settings → Port 1.
2. Operation Mode: TCP Client.
3. Destination IP Address 1 is the IP address of the CareCall EDGE Server.
4. TCP Port (6001 default recommended).
5. Submit changes (not shown).



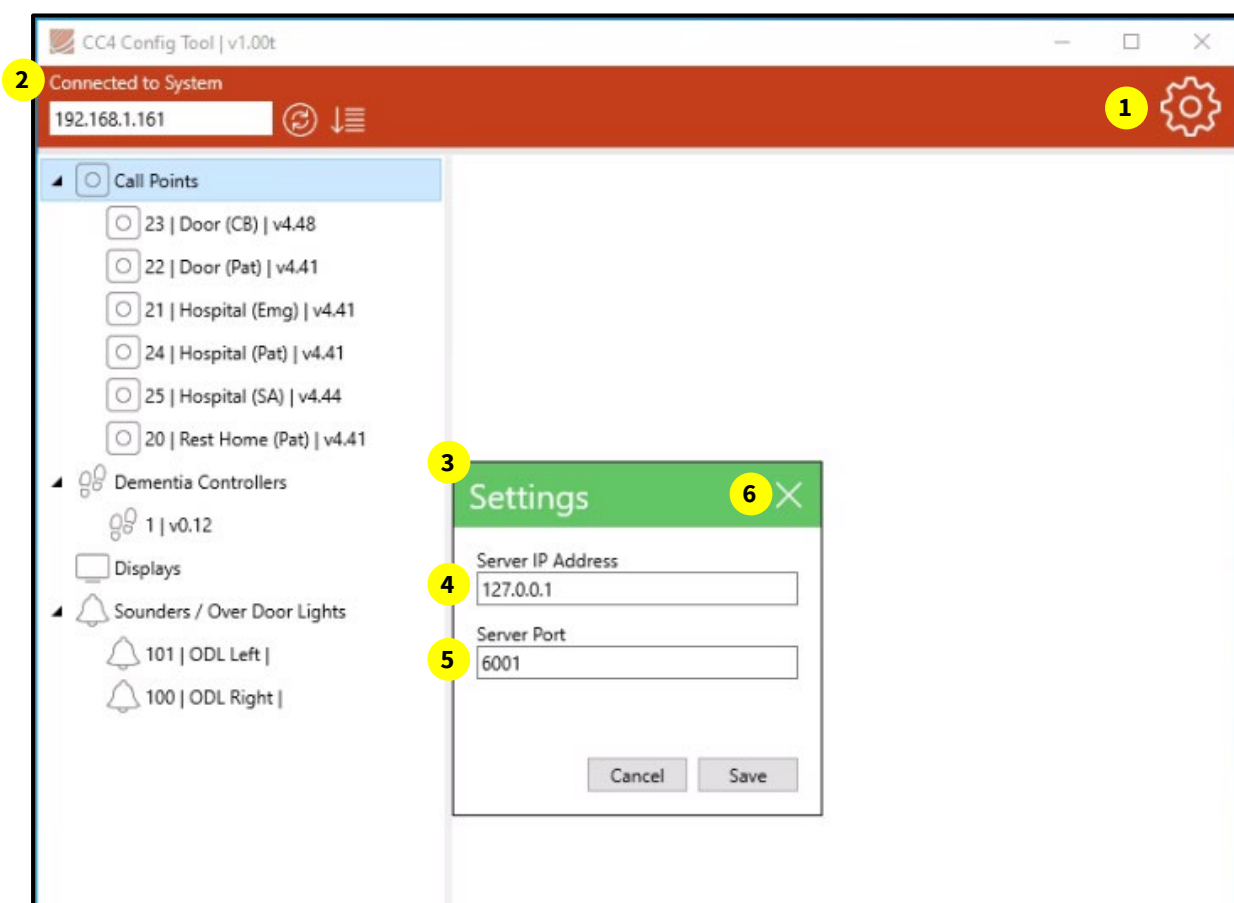
4 CONFIGURATION TOOL

4.1 INITIALISATION

Start the CareCall4 Configuration Tool and enter the settings menu, indicated by the sprocket icon (top right) and enter the Server IP Address and Server Port (TCP (“Local”) Port – 6001 default), and click Save.

Should the Configuration Tool be installed on the CareCall EDGE Server itself, the loopback address (127.0.0.1) should be entered as the Server IP Address, otherwise the IP address of the network adapter the Server uses for network uplink should be entered. A network pathway to the server is required when carrying out configuration on remote machines.

Once a connection is established the connection status (top left) will read “Connected to System”.



1. Open Settings pop-up.
2. Connection Status to CareCall EDGE Server.
 - a. Disconnected – check IP address.
 - b. Connected to System.
3. Settings pop-up.
4. CareCall EDGE Server IP Address.
 - a. Use loopback address (127.0.0.1) for local connections.
5. Server Port.
 - a. TCP Port allocated for CareCall4 traffic (default 6001 recommended).
6. Close Settings pop-up.



4.2 CONNECTING THE C4-COORDINATOR

Enter the IP address of the C4-Coordinator in the field provided (top left) and click the Refresh button to connect. The Refresh can be clicked again at any time to attempt reconnection.

Devices connected to the C4-Coordinator will populate in the list on the left-hand side as they are polled. The dropdown arrow will indicate whether the CareCall4 Config Tool has discovered devices and may be clicked to expand or collapse the list under each device type. The filter button will alternate between Bus Address and Modular Device name in descending order of devices of found. The firmware version will also be shown.

1. Enter the IP Address of the C4-Coordinator.
2. Refresh connection.
3. Filter device list.
 - a. Bus Address ascending order (1,2,3).
 - b. Modular Device alphabetical descending (a,b,c).
4. Collapse or expand devices.



5 CALL POINT CONFIGURATION

Select a Call Point to begin configuration. Basic settings (top) and Digitally Linked Call Point information will be populated upon selection.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 20 | Rest Home (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 22 | Door (Pat) | v4.41
- 23 | Door (CB) | v4.48
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: 20 | Rest Home (Pat) | v4.41

Serial Number: 76ECDA03

Bus Address: 20

Call Point Address: 20

Set

Reboot

Select

Linked Call Points: None Assigned

Input Setup

Features

Display

Back Light

Offline Alarms

RTLS

- ☐ Nurse Presence Can Cancel Patient Call
- ☐ Upgrade Patient Call To Staff Assist If Nurse Presence Is Active
- ☐ Hold Down Requires Both Call and Cancel
- ☐ Nurse Presence Canceled By Cancel Button
- ☐ Cancel LED Does Not Flash
- ☐ Feature Bit 5
- ☐ Feature Bit 6
- ☐ Feature Bit 7

Three Push Upgrade Detection Time (x 100ms)

One Button Press And Hold Detection Time (x 100ms)

Press And Hold Call And Cancel Detection Time (x 100ms)

Relay Output Setup

Relay Normally Closed

Get

Set

1. Description of selected device and bus address.
2. Factory set unique identifier.
3. Configurable numerical Bus Address identifier.
4. Set Bus Address.
 - a. Values between 1-499.
 - b. Sounders and Over-Door Lamps share the same Bus Address range.
5. Software Reboot the selected device.
6. Digitally linked call points.



Click Get to retrieve selected Call Point submenu configuration (bottom right). Once settings have been configured for each submenu tab, click Set to apply changes.

Copy will save all configuration in the tabbed areas to a clipboard which can then be pasted onto other Call Points. After clicking Copy, select the alternate Call Point to be given duplicate configuration and click Paste. It is not necessary to Set configuration after pasting. Click Get to confirm pasted configuration was successful.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 20 | Rest Home (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 22 | Door (Pat) | v4.41
- 23 | Door (CB) | v4.48
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: Call Point Address: 20

Serial Number: 76ECDA03

Bus Address: 20

Copy Paste

Set Reboot

Select Linked Call Points: None Assigned

Input Setup Features Display Back Light Offline Alarms RTLS

☒ Nurse Presence Can Cancel Patient Call

☒ Upgrade Patient Call To Staff Assist If Nurse Presence Is Active

☐ Hold Down Requires Both Call and Cancel

☒ Nurse Presence Canceled By Cancel Button

☐ Cancel LED Does Not Flash

☐ Feature Bit 5

☐ Feature Bit 6

☐ Feature Bit 7

Three Push Upgrade Detection Time (x 100ms): 20

One Button Press And Hold Detection Time (x 100ms): 50

Press And Hold Call And Cancel Detection Time (x 100ms): 10

Relay Output Setup: Momentary ☐ Relay Normally Closed

☒ Enable Buzzer

Get Set

1. Call Point configuration submenus.
2. Copy submenu configuration.
3. Paste copied submenu configuration.
4. Retrieve selected device submenu configuration.
5. Apply selected device submenu configuration.



5.1 INPUT SETTINGS

The Input Setup tab provides configuration options for all four physical activation methods: Button, Socket, [Socket] Pull-Out, Auxiliary.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 23 | Door (CB) | v4.48
- 22 | Door (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44
- 20 | Rest Home (Pat) | v4.41

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: Call Point Address: 23

Serial Number: 8EA41289

Bus Address: 23

Copy Paste

Set Reboot

Select Linked Call Points: None Assigned

Input Setup Features Display Back Light Offline Alarms RTLS

1 Input Setup

2 Big Button

3 Press

4 Patient Call

5 Button Follow

3 x Press

Emergency

Wet Area

Door

Hold

Release

Socket

Pull Out

Auxiliary

Get Set

1. Input Setup submenu.
2. Physical activation method.
3. Interaction type.
4. Alarm type.
5. Input options.



2. PHYSICAL ACTIVATION METHOD

How the call is being activated on the call point. Use the tick-box to enable or disable the relevant method.

Big Button	The primary activation button, labelled and coloured as per the intended priority level.
Socket	If applicable. 6.35mm socket input for peripheral components, where that component completes a dry relay circuit.
Pull-Out	If applicable. Where the 6.35mm socket has no component nor dummy-plug engaged.
Auxiliary	Where a component completes a dry relay circuit terminating between the rear auxiliary circuit and 0V.

3. INTERACTION TYPE

The interaction that was made through each activation method to generate the call. Time intervals are specified through the Features submenu. Use the tick boxes to enable or disable any interaction type for the relevant method.

Press	A single complete action* to actuate the relevant physical activation method. Activation will occur on initial state change but will escalate to the “Hold” type, if enabled and state is not returned to default.
3 × Press	Three complete actions* within the configured interval. Activation will occur on initial state change of the third action but will escalate to the “Hold” type, if enabled and state is not returned to default.
Hold	Activation will occur on initial state change, if enabled, and escalate to the Alarm Type selected for “Hold” type if action is not complete* within the configured interval.
Release	Alarm type selected for “Release” type will activate when the activation method is returned to default state.

*A complete action would be to change from a default state, then release to return to a default state. E.g., a button being pressed then released.

4. ALARM TYPES

Alarm types adhere to those stipulated in AS-3811. A non-configurable Self-Test Fail alarm type is transmitted upon failure of the capacitive touch button in CareCall4 Call Points. Offline alarms are virtual inputs generated within CareCall EDGE, contingent on supervision configuration and offset timer assignments.

Patient Call	ODL: Steady amber DDU: Green, Sound Profile 2.
Wet Area	ODL: Steady amber DDU: Green, Sound Profile 3.
Door	ODL: Steady amber DDU: Green, Sound Profile 1.
Staff Presence	ODL: Steady green DDU: Green, Sound Profile 0.
Staff Assist	ODL: Flashing amber DDU: Amber, Sound Profile 4.
Emergency	ODL: Flashing red DDU: Red, Sound Profile 6.



5. ALARM OPTIONS

Use the tick-box to enable or disable each option for the relevant activation method.

Button Follow	Activation will occur on initial state change and reset on completion of the action*.
Invert Input	Change the default state of the input, normally open or normally closed.
Relay	Changing the state of this activation method will also change the state between the rear relay terminals A and B.
Buzzer	Changing the state of this activation method will galvanise the rear piezo. Note, there is a global piezo enable/disable under the Features submenu.

*A complete action would be to change from a default state, then release to return to a default state. E.g., a button being pressed then released.



5.2 FEATURES

Global options.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 20 | Rest Home (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 22 | Door (Pat) | v4.41
- 23 | Door (CB) | v4.48
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: Call Point Address: 20

Serial Number: 76ECDA03

Bus Address: 20

Copy Paste

Select Linked Call Points: None Assigned

Input Setup **1** Features **2** Display Back Light Offline Alarms RTLS

3 ☒ Nurse Presence Can Cancel Patient Call

☒ Upgrade Patient Call To Staff Assist If Nurse Presence Is Active

☐ Hold Down Requires Both Call and Cancel

☒ Nurse Presence Canceled By Cancel Button

☐ Cancel LED Does Not Flash

4 ☐ Feature Bit 5

☐ Feature Bit 6

☐ Feature Bit 7

5 Three Push Upgrade Detection Time (x 100ms)

20

One Button Press And Hold Detection Time (x 100ms)

50

Press And Hold Call And Cancel Detection Time (x 100ms)

10

6 Relay Output Setup

Momentary ☐ Relay Normally Closed

☒ Enable Buzzer

Get Set

1. Features submenu.
2. Global features.
3. Feature bits, manufacturer use only.
4. Global intervals for time dependant activation method interaction types.
5. Rear relay terminals A and B options.
6. Global piezo enable/disable. Overrides individual input settings.



2. GLOBAL FEATURES

How the call is being activated on the call point. Use the tick-box to enable or disable the relevant method.

Nurse Presence Can Cancel Patient Call	Patient Call alarm type is cancelled by Staff Presence activations originating from CareCall4 portables or digitally linked fixed devices.
Upgrade Patient Call To Staff Assist If Nurse Presence Is Active	Inputs set to Patient Call alarm type will be escalated to Staff Assist while Staff Presence is active in the same location.
Hold Down Requires Both Call and Cancel	Not yet implemented. Leave off unless instructed by the manufacturer.
Nurse Presence Cancelled By Cancel Button	Manual press of cancel button will deactivate Staff Presence alarm types in the same location. Staff Presence alarms generated from CareCall4 Staff Badges will need to register in another location before reappearing as present on this call point after cancellation.
Cancel LED Does Not Flash	Cancel LED will not flash but will adhere to the settings configured under the Backlight submenu if they differ between active and inactive.

4. INTERACTION INTERVALS

Time interval configuration for “Hold” and “3 × Press” interaction types. These parameters are global and affect all activation methods.

Three Push Upgrade Detection Time (× 100ms)	Increments of 10. Three actions must be completed* within the specified time (product of parameter and multiplier in milliseconds). Activation will occur on initial state change of the third action.
One Button Push and Hold Detection Time (× 100ms)	Initial state change must be sustained longer than the specified time (product of parameter and multiplier in milliseconds). Activation will occur upon elapse.
Press and Hold Cancel Detection Time (× 100ms)	Not yet implemented.

5. RELAY OUTPUTS

Relay output settings. Relays are actuated based on the activation method, where enabled under the Input Setup submenu.

Disabled	Disable any relay interactions between the rear relay terminals A and B.
Momentary	Relay state is changed when activation method is ON.
Toggle	Relay state is changed with every complete action* of the activation method.
Latch	Relay state is changed and kept until the call point is reset.
Normally Closed	Change relay default state to normally closed.

*A complete action would be to change from a default state, then release to return to a default state. E.g., a button being pressed then released.



5.3 DISPLAY

In the event of system failure, where Call Points and DDU are no longer communicating to CareCall EDGE, messages can still be distributed to DDU independently. This is often referred to Coordinator Redundancy. All devices connected to the same C4 Coordinator will be able to intercommunicate. Call points hold a backup message in memory. The message and destination are configured in this submenu. Over-door light and DDU behaviour will be dictated by the alarm type.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 23 | Door (CB) | v4.48
- 22 | Door (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44
- 20 | Rest Home (Pat) | v4.41

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: Call Point Address: 23

Serial Number: 8EA41289

Bus Address: 23

Copy Paste

Set Reboot

Select Linked Call Points: None Assigned

Input Setup **1** Display Back Light Offline Alarms RTLS

2 Backup Display Message (13 char max)
CP023 HELP

3 Display Source (254 or 255)
254

4 Display Group Selection

- ☒ Enabled Displays (Always Enabled)
- ☒ Group 1
- ☐ Group 2
- ☐ Group 3
- ☐ Group 4
- ☐ Group 5
- ☐ Group 6
- ☐ Group 7

Get Set

1. Display submenu.
2. Backup message with a 13 character maximum.
3. Display source leave as 254 unless instructed by the manufacturer.
4. Display group selection. Relevant to displays connected to this coordinator only.



5.4 BACKLIGHT

Set the LED backlighting brightness for both active and inactive states. Applies to all activation methods. Cancel buttons can be set to steady rather than flashing through the Features submenu.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 23 | Door (CB) | v4.48
- 22 | Door (Pat) | v4.41
- 21 | Hospital (Emg) | v4.41
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44
- 20 | Rest Home (Pat) | v4.41

Dementia Controllers

Displays

Sounders / Over Door Lights

CC4 Master Call Point

Description: Call Point Address: 23

Serial Number: 8EA41289

Bus Address: 23

Copy Paste

Select Linked Call Points: None Assigned

Input Setup Features Display **1** Back Light Offline Alarms RTLS

2 Standby Call LED Brightness (0 to 10)
3

3 Active Call LED Brightness (0 to 10)
10

4 Standby Cancel LED Brightness (0 to 10)
3

5 Active Cancel LED Brightness (0 to 10)
10

Get Set

1. Backlight submenu.
2. Brightness of main button LED backlight when call point is inactive.
3. Brightness of main button LED backlight when call point is active.
4. Brightness of cancel button LED backlight when call point is inactive.
5. Brightness of cancel button LED backlight when call point is active.



5.5 OFFLINE ALARMS

CareCall4 Portables – Staff Badges and Resident Tags, can not only generate alarms themselves, but also trigger alarms from the nearest call point. A Resident Tag may be configured to generate a Patient Call alarm but the nearest CareCall4 Call Point may be configured to generate an Emergency.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points

- 23 | Door (CB) | v4.41
- 22 | Door (Pat) | v4.48
- 21 | Hospital (Emg) | v4.41
- 24 | Hospital (Pat) | v4.41
- 25 | Hospital (SA) | v4.44
- 20 | Rest Home (Pat) | v4.41

Dementia Controllers

- 1 | Change bus address of this device!

Displays

Sounders / Over Door Lights

- 101 | ODL Left |
- 100 | ODL Right |

CC4 Master Call Point

Description: Call Point Address: 23 Serial Number: 52ECDA03 Bus Address: 23

Copy Paste

Select Linked Call Points: None Assigned

Input Setup Features Display Back Lig 1 Offline Alarms RTLS

2 Tag Input 3 ☒ Enabled 6 ☒ Buzzer

4 Type 5 Patient Call 7 ☐ Relay

Type 2 Emergency

Badge Input ☒ Enabled ☒ Buzzer

Type 1 Staff Assist ☐ Relay

Type 2 Emergency

Get Set

1. Offline Alarms submenu.
2. CareCall4 Portable device type triggering this proximate alarm.
3. Enable or disable proximate alarm triggering from this device.
4. Alarm activation method (note, Resident Tags only generate Type 1 alarms).
5. Alarm type this call point will transmit where the relevant CareCall4 portable is in alarm and this call point is its most proximate device*.
6. Enable or disable buzzer when proximate alarms are triggered.
7. Actuate relay when proximate alarms are triggered.

*In terms of RF noise level, not necessarily physical proximity.



5.6 RTLS

Configuration options for radio-frequency and infrared sensitivities. Careful optimisation is prudent for maintaining a balance of functionality and minimising network traffic.

The screenshot shows a web-based configuration interface for the RTLS (Real-Time Location System) module. At the top, there are six tabs: 'Input Setup', 'Features', 'Display', 'Back Light', 'Offline Alarms', and 'RTLS'. The 'RTLS' tab is currently selected and highlighted. Below the tabs, the configuration options are as follows:

- IR LED Power Level:** A dropdown menu with 'Low' selected.
- RF Packet Signal Sensitivity At All Times (0 - 100%):** A numeric input field with a value of 49.61, flanked by left and right arrow buttons for adjustment.
- RF Packet Sensitivity When IR Is Detected (0 - 100%):** A numeric input field with a value of 45.67, flanked by left and right arrow buttons for adjustment.

IR LED POWER LEVEL

Infrared (IR) signalling is used for automatic Nurse Presence call type activations. Low, Medium, High, or Disabled are selectable options. The higher the power level, the further away a Staff Badge will be detected by the Call Point. It is recommended to start at a low power level and perform a practical test to determine the optimal range. High power levels may cause false Nurse Presence activations from passers-by carrying Staff Badges. A walk test must be conducted post-implementation.

RF PACKET SIGNAL SENSITIVITY AT ALL TIMES

Radio-frequency (RF) signalling is used for real-time location services. Increasing this value makes Call Point responsiveness to Staff Badges and Resident Tags more sensitive. Values should be kept as low as possible to reduce unnecessary network traffic. As a general guide, where the area of a room is $5 \times 5\text{m}^2$ a value of around 65% should be considered. Larger rooms, such as apartments, may require a higher value, consider 75%. Where dwellings are stand-alone, such as houses or villas, consider a value of around 85%. Walk testing by activating Staff Tags outside infrared range, should be conducted to optimise values. Values less than 50% will rarely be set.

RF PACKET SIGNAL SENSITIVITY WHEN IR IS DETECTED

IR location accuracy is considered to be more accurate than radio-frequency packet sensitivity therefore, in the event of IR detection, RF packet sensitivity can be reduced, minimising traffic across the network. Values less than 50% will rarely be set.



5.7 DIGITALLY LINKED CALL POINTS

Call Points may be digitally linked for common alarm cancellation. Click the Select button (see start of chapter) to open the linking menu. Up to 8 Call Points may be digitally linked.

The screenshot shows a window titled "Select Linked Call Points". At the top, there is a label "Tick Call Point(s) to select" followed by a sort icon (1) and a "Clear" button (2). Below this is a search bar (3) with the placeholder text "Enter name or address to search". The main area contains a list of call points, each preceded by a selection tick-box (4). The list is as follows:

- ☐ Call Point
- ☐ 23 | Door (CB)
- ☐ 22 | Door (Pat)
- ☐ 21 | Hospital (Emg)
- ☐ 24 | Hospital (Pat)
- ☐ 25 | Hospital (SA)
- ☐ 20 | Rest Home (Pat)

At the bottom of the window, it says "None selected". Below the window, there are two buttons: "Cancel" (5) and "Done" (6).

1. Sort list in descending alphabetical order based on Modular Device name or ascending numerical order based on bus address.
2. Clear all current links.
3. Filter list with search query.
4. Selection tick-box.
5. Exit without saving.
6. Save and exit.



6 DIGITAL DISPLAY UNITS (DDU)

DDU connected to the C4 Coordinator can be configured with this tool. Sounders within DDU are configured separately and must be linked to the relevant EDGE Hardware ID.

CC4 Config Tool | v1.00u

Connected to System
10.0.0.243

Call Points
Dementia Controllers
Displays
11 |
12 |
Sounders / Over Door Lights

CC4 Display
Description
DDU Address: 11
Bus Address
11
Set
Reboot

Settings
Edge Hardware ID: ☒ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7

Get Set

1. Description of selected device and bus address.
2. Configurable numerical Bus Address identifier.
3. Set Bus Address.
4. Software Reboot the selected device.
5. CareCall EDGE Hardware ID reference. Call Point backup messaging and Sounder linking rely on this Hardware ID. DDU groups are relevant to the coordinator. Cross communication with DDU connected to other coordinators requires Display Group management within CareCall EDGE.
6. Set EDGE Hardware ID. Note, there is no retrieving of currently configured EDGE Hardware ID – Get button has no function.



6.1 EDGE CONFIGURATION

CareCall EDGE recognises DDU as groups rather than individuals. Each C4 Coordinator can manage seven groups of displays, dictated by the EDGE Hardware ID, see previous page. The hardware of the Display configured within CareCall EDGE is the IP address of the C4 Coordinator amended by the group address.

Software Configuration

Communications General Setup Networking Priorities / Escalations Inputs / Call Points Output Devices/Groups Modular Devices Fingerprints Group Assignments

Output Devices / Groups

Show

☒ Displays ☒ Devices ☒ Groups ☒ Timers ☐ Show Members

Devices

Display Groups

Ground Floor

Displays

Display Group 1

Groups

Timers

<- Add

<- Delete

<- Search

Properties

Display Name: Display Group 1

Display Type: 12 Character

Send Hardware Reset

Display Protocol 1 Miracle LED Display 3 Any Port

Hardware ID: 2 10.32.106.230:1

Capcode:

IP Addresses: (One per line)

Trim Messages

Show Real Time Clock

Enable Night Mode (Dimming)

Day Mode Starts: 8 Hours 30 Minutes

Night Mode Starts: 20 Hours 30 Minutes

Delete Add New 4 Apply

Close

1. Select Miracle LED Display protocol.
2. Enter ID: "Coordinator IP : Group ID" (192.168.10.100:2).
3. Select Any Port for output.
4. Apply changes.

DISPLAY PRIORITIES AND SOUND PROFILES

Display priorities are ultimately dictated by CareCall EDGE and can be altered. If the C4-Coordinator loses communications to the server and begins processing calls independently, priorities will be handled as per the transmitted call type and configured response for each individual sounder in the ODL / Sounder Settings submenu.

Messages Displays

Display Message

Display: CC4 Display

Time: Day

Message: %CALLPOINTNAME%

Priority: 2

Save

Assigned Display Messages:

CC4 Display Day %CALLPOINTNAME% Priority: 2 <- Add



7 OVER-DOOR LAMPS AND SOUNDERS

Sounders and ODL utilise the same hardware. Sounders can be configured as part of a DDU or stand-alone. Reboot the device after setting the Bus Address. Click Get to confirm changes.

7.1 SOUNDER SETTINGS

The EDGE Display Hardware ID will match a Sounder to a Display Group on the same Coordinator, i.e., should the desired Display Group ID be 4, the Sounder EDGE Hardware ID should be the same. Stand-alone Sounders can be set to EDGE Display Hardware ID 99 and mapping to specific Call Points can be configured in the following tab. Day Volume only will be used in this mode of operation.

CC4 Config Tool | v1.00t

Connected to System
192.168.1.161

Call Points
Dementia Controllers
Displays
Sounders / Over Door Lights
101 | ODL Left |
100 | ODL Right |

CC4 Sounder/ Over...

Description: Sounder / ODL Address: 101
Bus Address: 101

Settings | Call Point Ranges

	Edge Display Hardware ID	Sound	Day Volume	Night Volume	Repeat Count	Repeat Delay Seconds
Nurse Presence 0	99	Ding	0 %	0 %	1	10
Door Alarm 1		Ding	86 %	78 %	1	10
Patient Call 2		Ding	86 %	78 %	1	10
Wet Area 3		Ding	86 %	86 %	2	5
Staff Assist 4		Ding	100 %	100 %	2	5
Emergency 5/6		Ding	100 %	100 %	1	0

Note: 50% volume and lower is silent, 100% is full volume

Default Device

Get Set

- EDGE Hardware ID reference. Relates to the display group (setting of same name, see DDU section) this sounder is being tethered to. For all ODL and stand-alone sounders, tether to ID 99.
- Alarm type each setting corresponds to. The number is the EDGE Display priority, configured per input through CareCall EDGE see previous page.
- Dropdown select the sound played for the adjacent alarm type.
- Day and night volumes. Time periods configured via CareCall EDGE.
- Number of times the sound is repeated. 0 is continuous.
- Delay between repeated sounds.
- Manufacturer use.
- Apply Sound Settings.



7.2 CALL POINT RANGES

Over-Door Lamps and Sounders set to EDGE Display Hardware ID 99 can be configured to respond to specific Call Point IDs.

If a Call Point Range is specified, ODL/Sounders will only retain EDGE Hardware ID 99. To assign Sounders to Display Groups, ensure the Call Point Range is blank (999 – 999).

The red cross will clear all settings for that row.

Settings

Call Point Ranges

	Start Address	Finish Address	EM	SA	WET	PAT	DR	NP
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒
✕	◀ 999 ▶	◀ 999 ▶	☒	☒	☒	☒	☒	☒

Get

Set

CALL TYPES

- EM Emergency
- SA Staff Assist
- WET Wet Area
- PAT Patient Call
- DR Door
- NP Nurse Presence