INSTALLER MANUAL

ASSIST NOTIFICATION SYSTEM

TEC-SD-00179-1.01

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1. INTRODUCTION

The ASSIST Notification System (ASSIST) by Miracle Electronics is a compact hard-wired solution allowing notifications to be raised and attended to in smaller installations where a full-scale nurse call system may be unsuitable.

1.1. REQUIREMENTS

The following is an example of the minimum tool requirements for installation of the ASSIST Notification System. It is not an exhaustive list of all tools required for cable installations (such as those requiring external containment).

Tools & Sundries List		
Tool	**✓**	**Comment**
Battery Drill	☐	Cable installation
Auger Pieces	☐	Cable installation
Multi-Tool (Renovator) / Drywall Saw	☐	Device fit-off apertures
Spirit Level	☐	Device fit-off
Screwdriver Set	☐	Various (Philips screws included w/ faceplates)
Terminal Screwdriver Set	☐	Small =< 2.1mm size required for Local Indicator
Side Cutters	☐	Cable installation & termination
Cable & Wire Strippers	☐	Cable installation & termination
Label Maker	☐	Device identification
Sundry	**✓**	**Comment**
Velcro / Cable Ties	☐	Cable management
Catenary Wire & Fixings	☐	Cable management
Flush Boxes / C-Clips	☐	Device fit-off
Screws	☐	Various

1.2. RESOURCES

Customer Portal

TEC-SD-00178	Quick Guide: ASSIST Notification System
SM-PDS-00129	ASSIST: System Controller Product Data Sheet
SM-PDS-00130	ASSIST: Button Product Data Sheet
SM-PDS-00131	ASSIST: Local Indicator Product Data Sheet
SM-PDS-00132	ASSIST: System Indicator Product Data Sheet

2. SYSTEM OVERVIEW

Four individual devices comprise the ASSIST Notification System, two of which are packaged together (ASSIST Button & Local Indicator). The minimum components required to realise a functional system are:

- 1 x ASSIST System Controller
- 1 x ASSIST Button with Local Indicator

Tonal alert notifications are broadcast from ASSIST System Indicators, responding to all active alerts. ASSIST Local Indicators respond to their connected ASSIST Buttons with visual indication only.

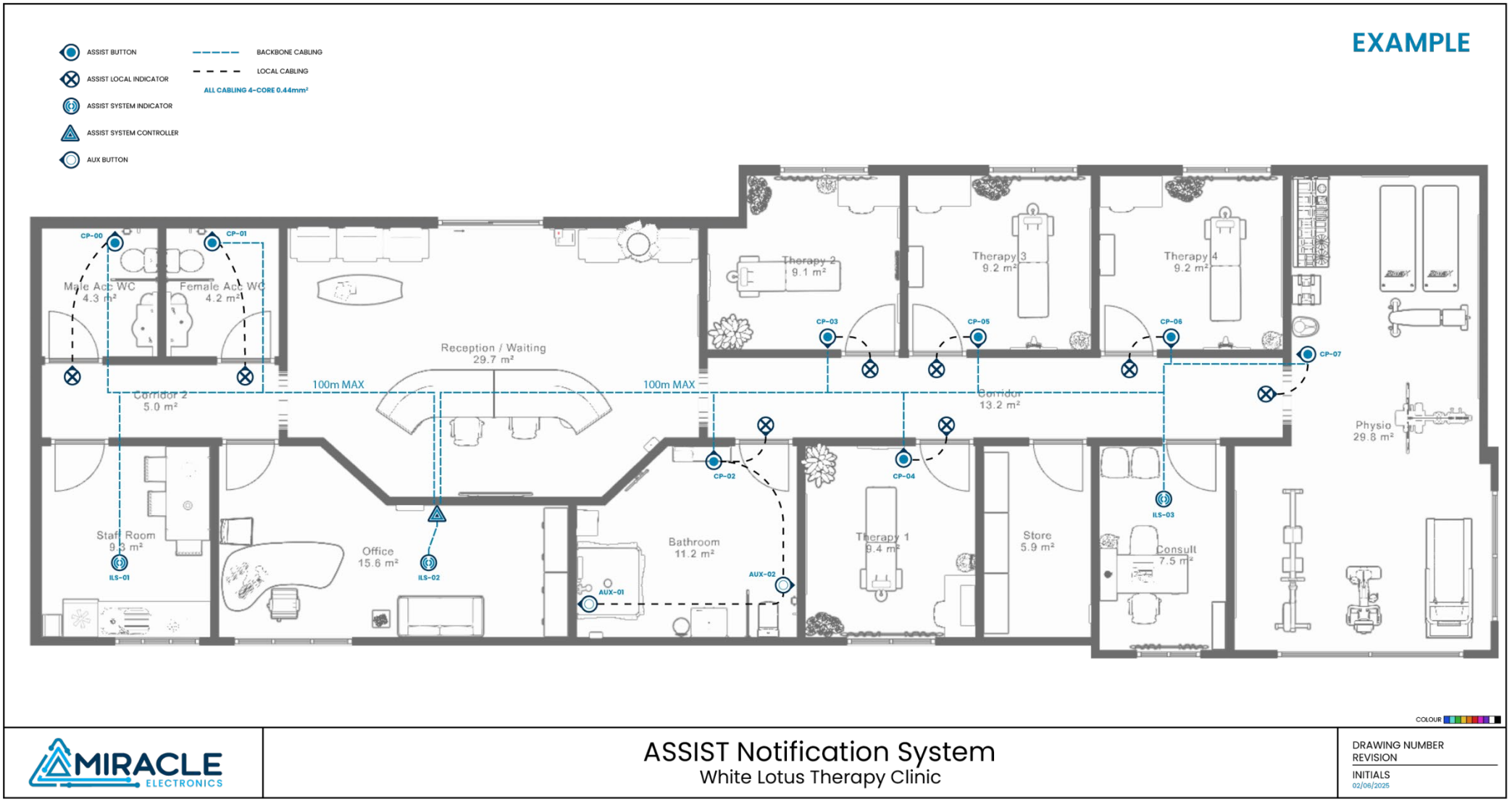
System Components	
Product Code	**Product Name**
AS-CB-1	ASSIST System Controller
AS-CP-1	ASSIST Local Indicator
AS-CP-1	ASSIST Button
AS-ILS-1	ASSIST System Indicator

System Priorities		
Level	**Colour**	**Tone**
Low	**Green**	Slow repeating single-chime
Medium	**Yellow**	Moderate repeating double-chime
High	**Red**	Rapid repeating single-chime

2.1. SYSTEM TESTING

After installation, each component should be tested. Ensure the priority colour of each ASSIST Button matches the connected ASSIST Local Indicator and any ASSIST System Indicator lights, and that the ASSIST System Indicator volume is adjusted suitably. Test any auxiliary connections and record the results in a schedule (see next).

3. SYSTEM LAYOUT



3.1. INSTALL SCHEDULE

System Schedule						
Device	**ID**	**Address**	**Location**	**Port**	**Notes**	**Test**
Button & Light	**CP-00**	**0**	Male AC WC	**1**		☐
Button & Light	**CP-01**	**1**	Female AC WC	**1**		☐
Button & Light	**CP-02**	**2**	Bathroom - Entrance	**2**	Steam area; gasket	☐
Button & Light	**CP-03**	**3**	Therapy 2	**2**	Steam area; gasket	☐
Button & Light	**CP-04**	**4**	Therapy 1	**2**		☐
Button & Light	**CP-05**	**5**	Therapy 3	**2**		☐
Button & Light	**CP-06**	**6**	Therapy 4	**2**		☐
Button & Light	**CP-07**	**7**	Physio	**2**		☐
System Indicator	**ILS-01**	n/a	Staff Room	**1**	Middle volume	☐
System Indicator	**ILS-02**	n/a	Office	**1**	Middle volume	☐
System Indicator	**ILS-03**	n/a	Consult	**2**	Middle volume	☐
Auxiliary	**AUX-01**	n/a	Bathroom – Shower	**CP-03**	High saturation; waterproof button	☐
Auxiliary	**AUX-02**	n/a	Bathroom – Toilet	**CP-03**	Auxiliary button	
System Controller	n/a	n/a	Office	n/a	Comms cabinet	☐

TIP

It is recommended to print adhesive labels and place them beneath faceplate surrounds, for future service identification.

3.2. COMPONENT LAYOUT

ASSIST System Controllers should be installed in an easily serviceable location with access to a **G**eneral-**P**urpose **O**utlet (GPO). Clearly label the power adapter at the outlet, warning not to remove. Controllers may be fed through an **U**ninterrupted **P**ower **S**upply (UPS) for backup, if required.

ASSIST Buttons should be installed in an easily accessible location for the intended use. If the button is purposed for indication only (i.e., indicating room availability or readiness), ensure the user can access the button seamlessly from their workstation.

If the button is purposed for help or warning notification (i.e., to summon a staff member or indicate an area is a danger), ensure the button is prominent and easily accessible. Typical installation heights for help/warning buttons are between 1200-1500mm AFFL.

> **NOTE**
>
> Be mindful of uniformity to other services. Try to maintain aesthetic centrelines with light switches and outlets.

> **NOTE**
>
> Be mindful when working from floorplans that buttons will not be obstructed by large portable item storage (such as trolleys) or joinery units.

ASSIST Local Indicators are wired directly to ASSIST Buttons (as opposed to in bus cabling sequence). Place them in corridors, above door frames, or in another easily noticeable location that clearly identifies the source of the notification.

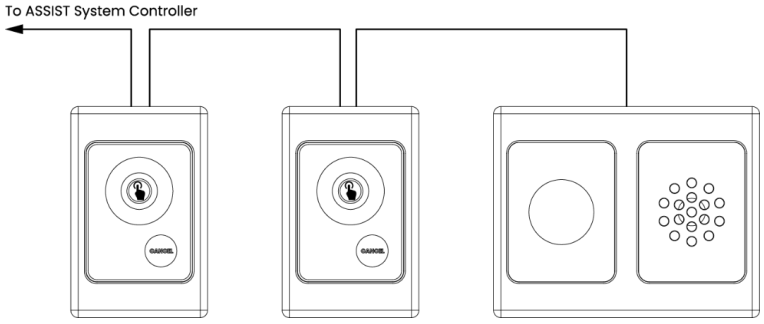
ASSIST System Indicators respond to all active alarms from buttons attached to the same controller. Place them in commonly used locations or staff areas where notifications should be broadcast. This may include reception areas, waiting areas / lobbies, staff rooms, offices, meeting / consultation rooms, or any other frequented location.

3.3. CABLING

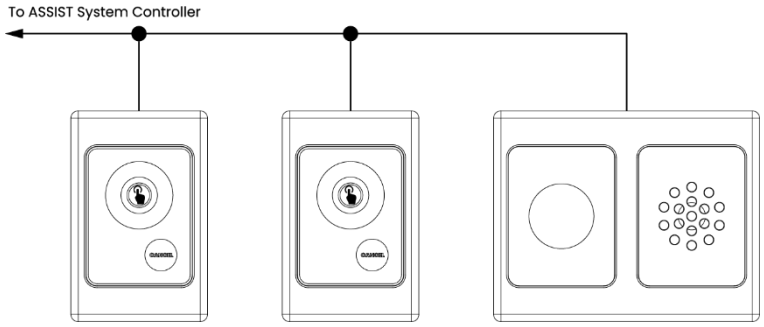
All cabling should be 4-core 0.44mm^2 or equivalent. Each Bus Port (x2) on the ASSIST Controller can accept a maximum of 11 x ASSIST Buttons with Local Indicator, *or* 11 x ASSIST System Indicators, *or* any combination thereof up to a maximum of 11 devices (where buttons with local indicators are treated as a single device). Backbone feeds should not exceed 100 metres to ensure reliable operation. Larger lengths may be possible with appropriately rated cable.

Bus cabling is installed in tree topology. A backbone feed may branch off from accessible junction points to ASSIST Buttons and ASSIST System Indicators, or loop-in and loop-out in a serial daisy-chain.

Serial Daisy-Chain



Junctions



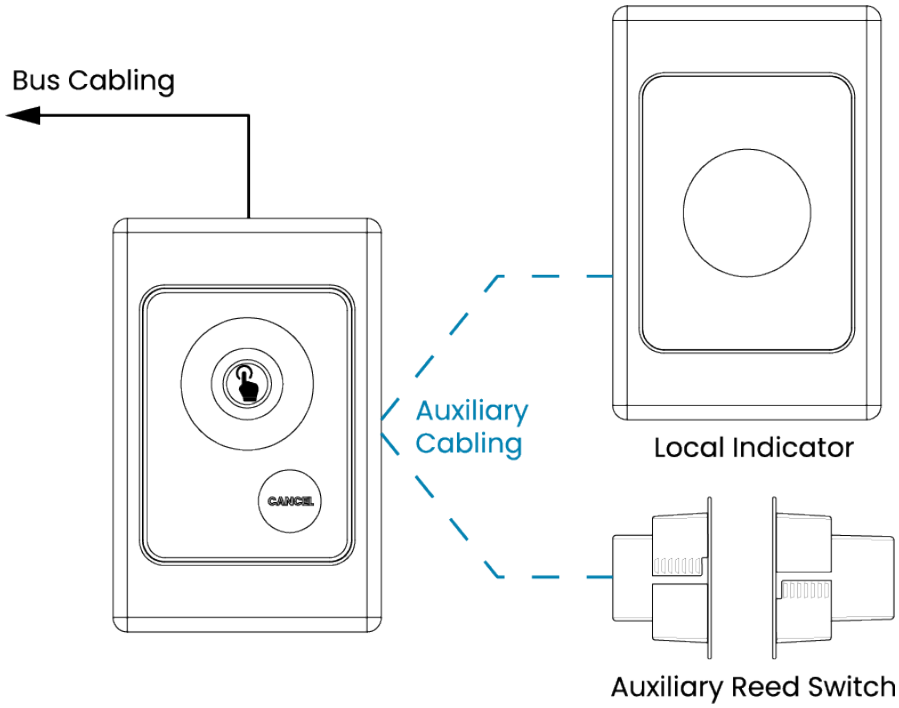
WARNING

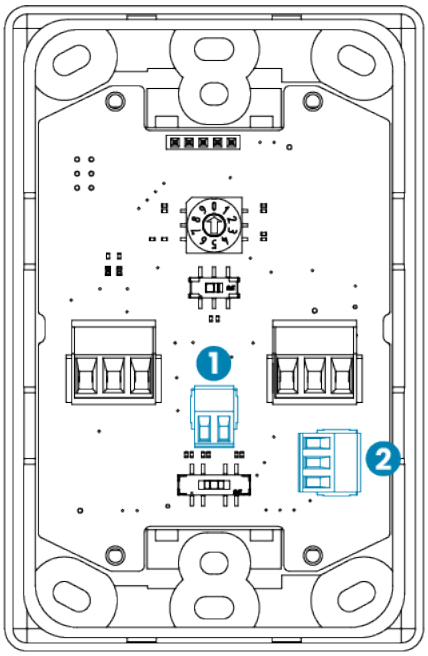
All junctions must be accessible to servicepeople.

TIP

Use of junctions may help preserve overall cable length.

ASSIST Local Indicators and any auxiliary connections downlink from the corresponding ASSIST Button, separately to bus cabling. Multiple buttons may be parallel-wired to trigger the same local indicator, but only where they are configured to the same priority level. Each button must still be configured to its own address.



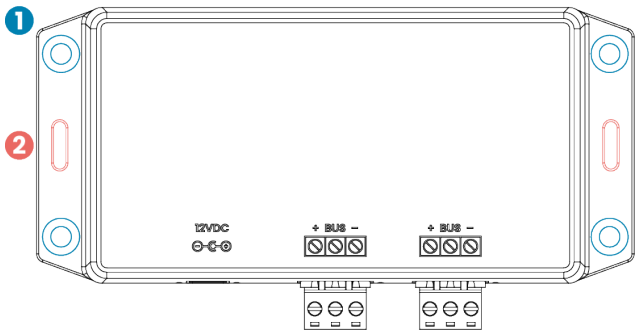


Auxiliary Connections	
ASSIST Button	
1	ASSIST Local Indicator Connection
2	Auxiliary Activate/Reset Connection

4. INSTALLATION

ASSIST System Controllers

If fixing to a drywall, insert wall plugs to screw apertures to ensure they do not loosen over time. If placing on a shelf or surface, it is recommended to secure the unit in-place. As it is light-weight hardware, future works conducted around the controller may cause it to shift and connections may come loose.



1. Screw Fixing Perforations
2. Slot Perforations for Cable Ties (or similar)

ASSIST Buttons & Indicators

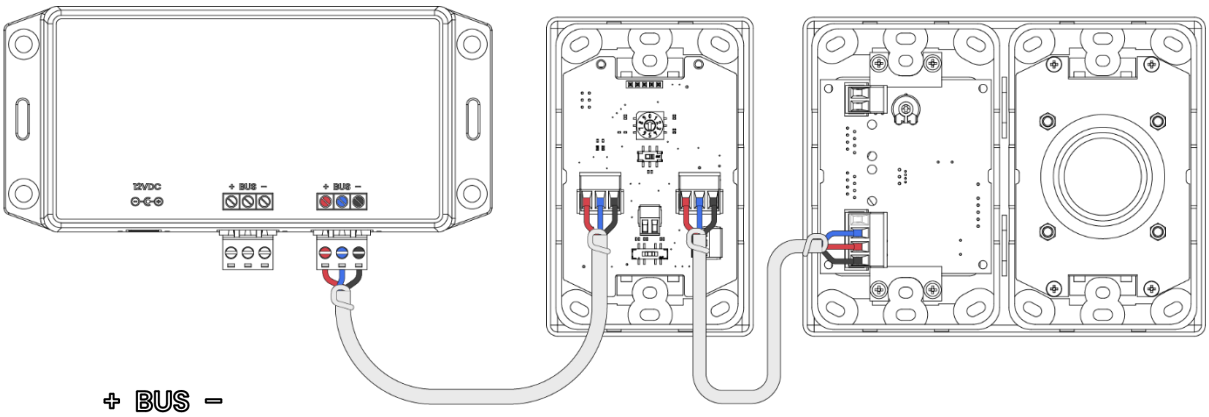
All devices must be affixed using a secure flush-mount medium (such as a flush box or C-clip) or to an appropriately sized mounting block. Flush boxes must be installed prior to walls being clad.

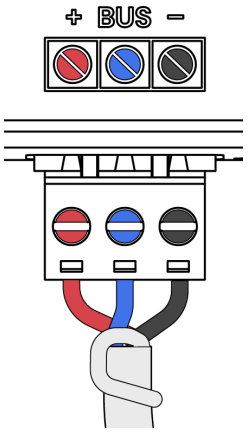
1. Using a drywall saw or multitool, carefully cut an area large enough to reveal the screw terminals of the affixing medium. If the device is being fit-off on a mounting block, ensure the aperture cut does not exceed the limits of the mounting block fixing apertures.
2. Terminate the cabling.
3. Ensure priority and address configuration is set for ASSIST Buttons and volume set for ASSIST System Indicators.
4. Using the faceplate screws provided and a spirit level, screw the device to the fixing medium.

> ⚠ **WARNING**
>
> Do not affix devices to drywalls / ceilings with timber screws and no plugs.

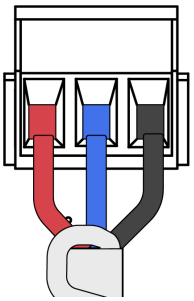
5. WIRING

Bus Wiring

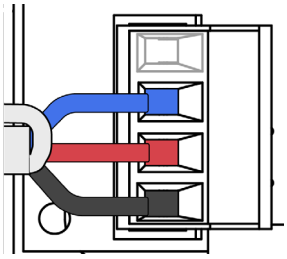




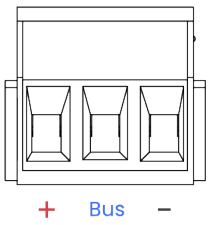
ASSIST Controller

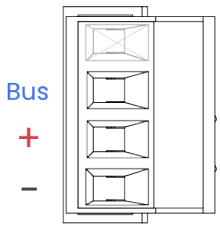


ASSIST Button



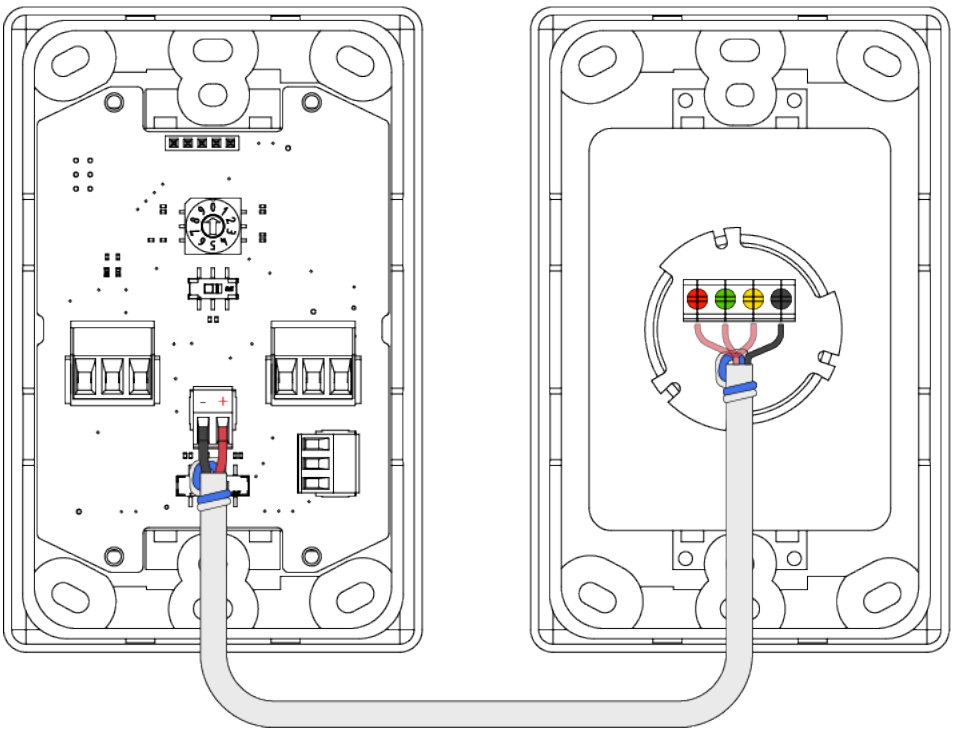
ASSIST System Indicator

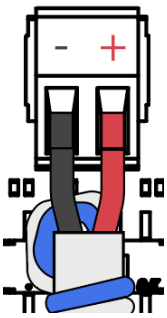




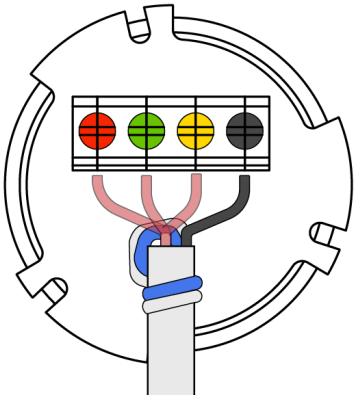
> **NOTE**
>
> Maintain a wiring convention. Use logical industry standard wire colouration for **V+** and **V-**.

Local Indicator Wiring

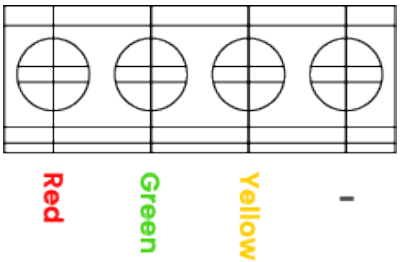




ASSIST Button

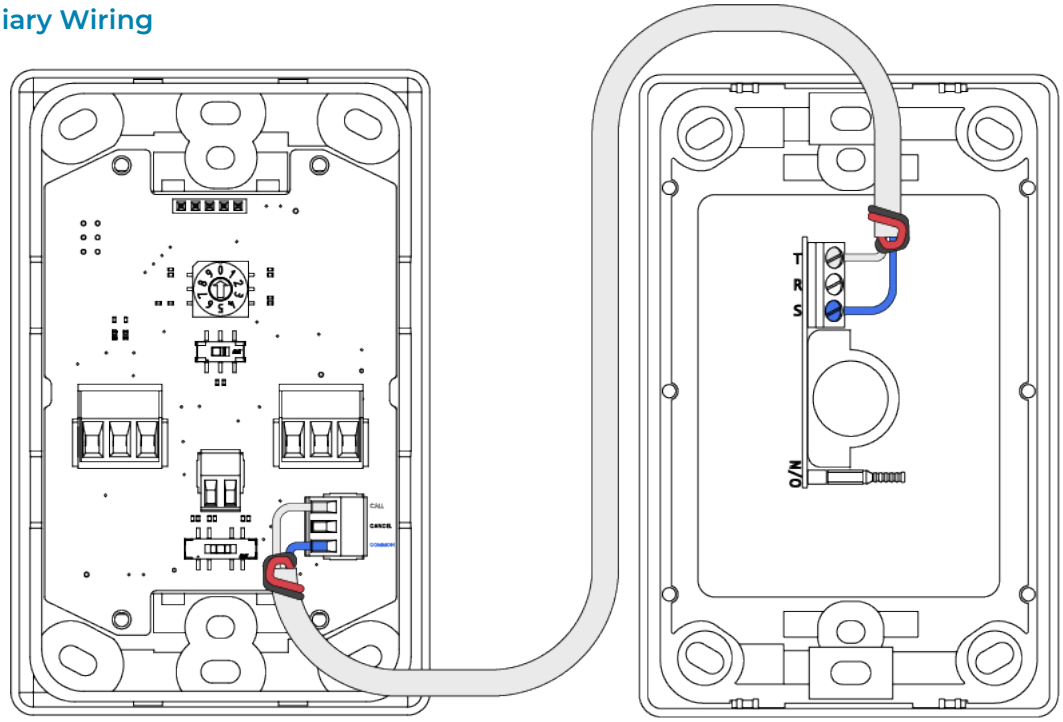


ASSIST Local Indicator

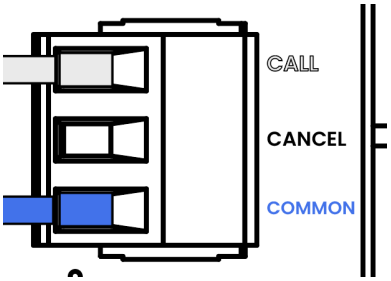


> **NOTE**
>
> Local Indicators respond to **one** priority only. Be sure to check the ASSIST Button setting matches.

Auxiliary Wiring



C3-CPCL-SOCKET



Auxiliary
Activate / Reset

NOTE

Any dry contact switching device can be wired to the auxiliary input, the example given is a Miracle Electronics Socket Plate.

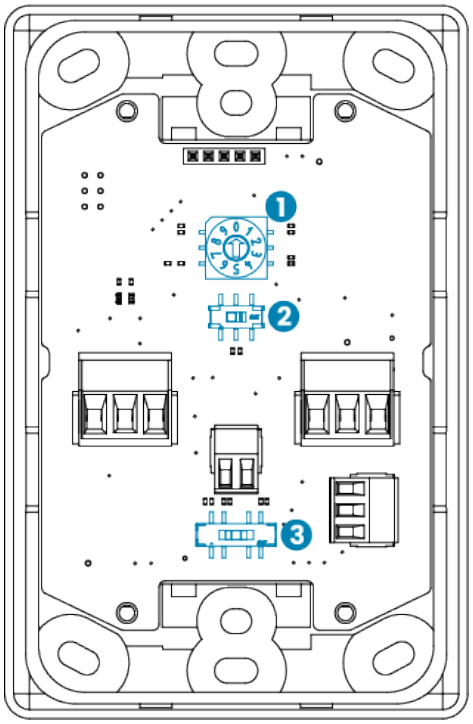
Auxiliary inputs are **Normally Open**. Combine with relays to operate as normally closed.

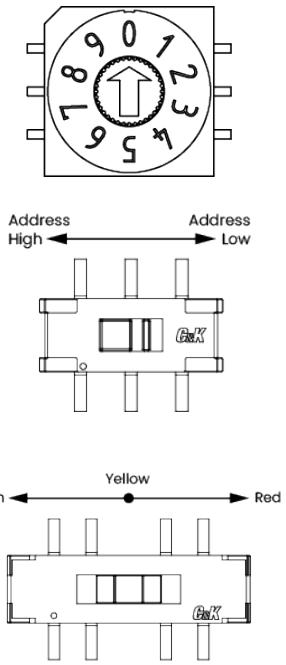
6. CONFIGURATION

ASSIST Buttons

On the reverse side of the ASSIST Button, **Priority** and **Address** configuration can be set. It is recommended to prepare a schedule prior to installation.

Use the dial to select an address (0-9) and use the Address Low/High switch to offset that by 10 (10-19). The priority switch has 3 positions: Low (**Green**), Medium (**Yellow**), High (**Red**). This will be reflected by the ASSIST Button's backlight.



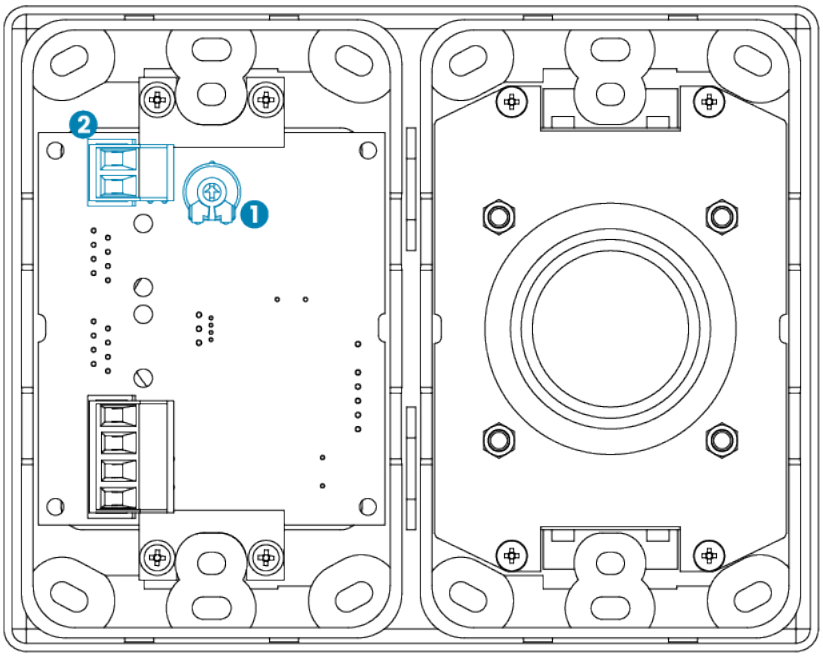


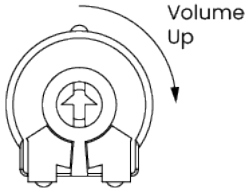
Configurable Items	
ASSIST Button	
1	Address dial (0-9)
2	Address Low/High
3	Priority

ASSIST System Indicators

The volume of System Indicators can be adjusted using the rear pot and a slot screwdriver. Speakers are pre-wired on supply.

Turn the dial clockwise (as per the orientation below) to increase the volume. Dialling the volume to its lowest point (counter-clockwise) does not make it silent; only very quiet.





Configurable Items	
ASSIST System Indicator	
1	Volume Adjustment Pot
2	Speaker Connection

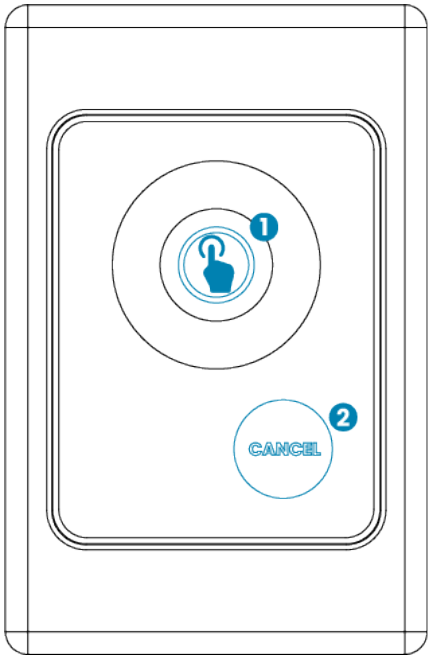
TIP

Confirm the tone volume is appropriate with the customer prior to fixing ASSIST System Indicators in place.

7. OPERATION

Activate and Reset

The backlight colour of the ASSIST Button reflects the colour that will be presented on both ASSIST Indicators and the tonal urgency of the ASSIST System Indicator. Press the button in the centre as indicated by the icon.



Operation	
ASSIST Button	
1	Activation Button
2	Cancel (Reset) Button

A single press of the activation button will provide momentary tonal reassurance, backlighting will briefly illuminate brighter, and the cancel button will begin to flash. Any connected ASSIST Local Indicators will illuminate. All ASSIST System Indicators will illuminate, and the corresponding priority tone will sound.

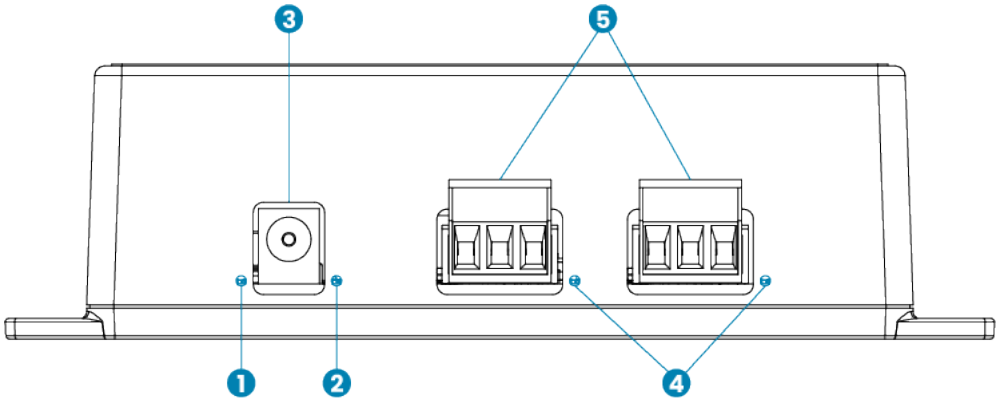
A single press of the cancel button will also provide a triple-tone for reassurance and the backlight will cease flashing. All indicators will reset upon cancellation.

Cleaning Mode

A triple-press of the cancel button will place the device into cleaning mode, suspending the activation button for ~10-seconds. Momentary tonal reassurance will sound, and the backlighting will flash brighter for the duration of cleaning mode. When cleaning mode is ending, a short countdown tone will sound three times before ceasing.

8. COMPONENTS

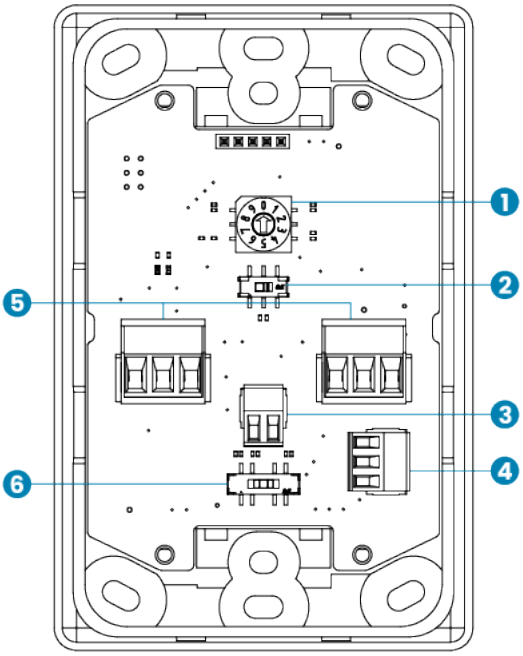
ASSIST System Controller



Components	
ASSIST Controller	
1	Power LED
2	Status LED
3	12VDC Connector
4	Fault LED
5	Bus Connectors

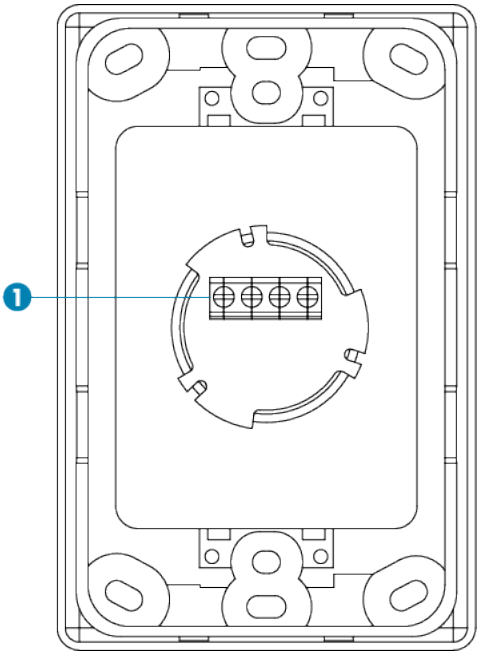
Controller LED	
LED	**Description**
Power LED	Illuminates **green** when powered.
Status LED	Flashes **green** when bus communications is established.
Fault LED	Illuminates **red** when bus ports are overloaded.

ASSIST Button



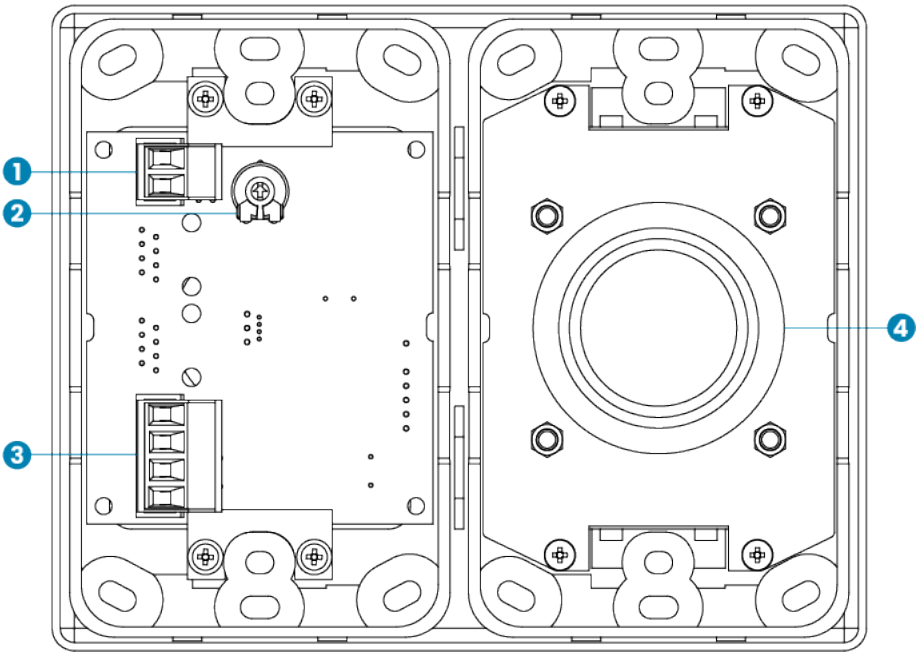
Components	
ASSIST Button	
1	Address Dial
2	Address Low/High Switch
3	ASSIST Local Indicator Connector
4	Auxiliary Activate/Cancel Connector
5	Bus Connectors
6	Priority Selection Switch

ASSIST Local Indicator



Components	
ASSIST Local Indicator	
1	ASSIST Button Connector

ASSIST System Indicator



Components	
ASSIST System Indicators	
1	Speaker Connector (Pre-Wired)
2	Address Dial
3	Bus Connector
4	Speaker

9. TROUBLESHOOTING

Troubleshooting		
	Trouble	**Possible Causes**
1	ASSIST Button won't power up	• Check terminations • Check for short-circuits • Ensure the controller is not overloaded
2	ASSIST Button is flashing green-red and beeping	Duplicate address. Use the dial and switch to change to an unoccupied address.
3	ASSIST Local Indicator is not illuminating	• Check terminations • Check for short-circuits
4	ASSIST Local Indicator is illuminating the incorrect colour	Wiring is incorrect. Re-terminate at the ASSIST Local Indicator to the correct terminal for the desired colour.
5	ASSIST System Indicator is not responding to calls	At the ASSIST System Indicator or related ASSIST Button • Check terminations • Check for short-circuits
6	ASSIST System Indicator is not resetting	An ASSIST Button has been disconnected from the bus while active. Residual/stuck alerts can be cleared by down-powering the ASSIST System Controller for around 10-seconds.
7	ASSIST System Indicator is flashing red-yellow	• Short-circuit between Bus and power (+12V or GND) • Check terminations
8	ASSIST System Controller has its fault LED illuminated	• Check for short-circuits • Ensure a bus port is not overloaded

9.1. COMPATIBLE PRODUCTS

Other Miracle Electronics products may also be compatible with the ASSIST Notification System, contact support for advice.

Compatible Products	
Code	**Description**
C3-CPCL-SOCKET	CareCall Socket Plate, Pull-Out Alarm Configurable
C3-CPCL-PULL-G/R	CareCall Universal Pull Cord, Green or Red Cord
C4-CPCL-PB-WA	CareCall4 Wet-Environment Button
PLA20753	Clipsal 2000 Gasket