



Install Guide

RPC

Regions. Aus, NZ, EMEA, Asia.

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EvacUElite Remote Paging Console

Item Number: 6310-RPC

Installation guide

1. Description Overview

The remote paging console unit (RPC) is a field connected ancillary device configured to the EvacUElite system. The unit consists of a compact desk mounted '*GUI Touchscreen*' with a gooseneck microphone.

The RPC provides additional public address system features utilising the Emergency Warning speaker system.

Each RPC can be configured to control specific **Paging Zones** and or **Paging Groups**

From the Ethernet port on DCPU (**Rack 1**) Up to 8 x RPC units can be interconnected using Cat5e/6 cable. The cabling requirements and various options for connecting multiple units is explained in this document. **240v AC Power Packs** are supplied with each RPC.

Use of splitter units means extending distances between RPCs and improves overall system integrity. These POE units may be the **preferred installation method** due to the building layout, reducing the potential for RPC outage and dealing with longer distances between RPC units **>100M**.

2. Desktop Image

Image for illustration purposes only



Each RPC generally requires a local 240vAC power source. The 24VDC plug pack connects to each RPC.

If **Ubiquiti POE devices** are installed this can reduce the need for 240V at every RPC. (Refer spec & drawings)

During emergency alarm events the Paging console functionality is overridden. Paging is treated as a **secondary priority** to make way for automatic Emergency tones & stored messages. The highest system priority is given to the Emergency Microphone and **SPEECH** button located on the EWCIE panel.

See following Manuals.

MAN 3189 RPC User-Operators Manual

MAN3137 EvacUElite Installation &Commissioning

MAN 3142 EvacUElite Programming Section 6.17 for RPC configuration.

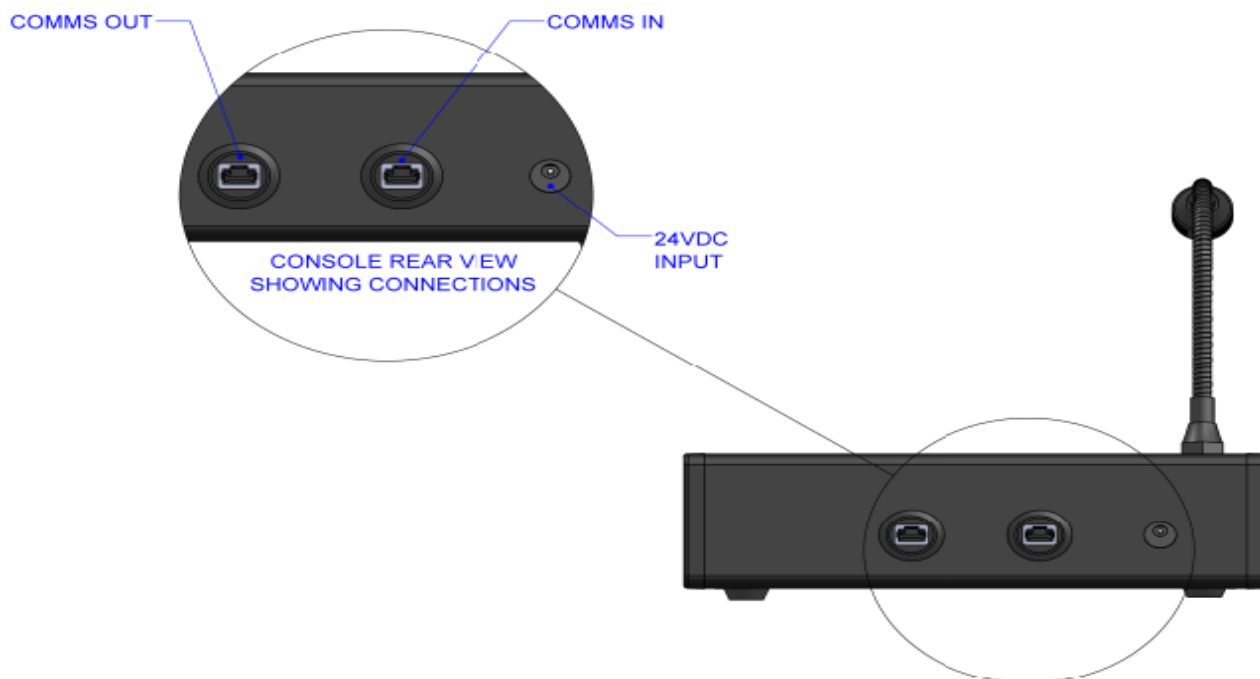
MAN 3169 Config FAQs

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3. Rear Elevation

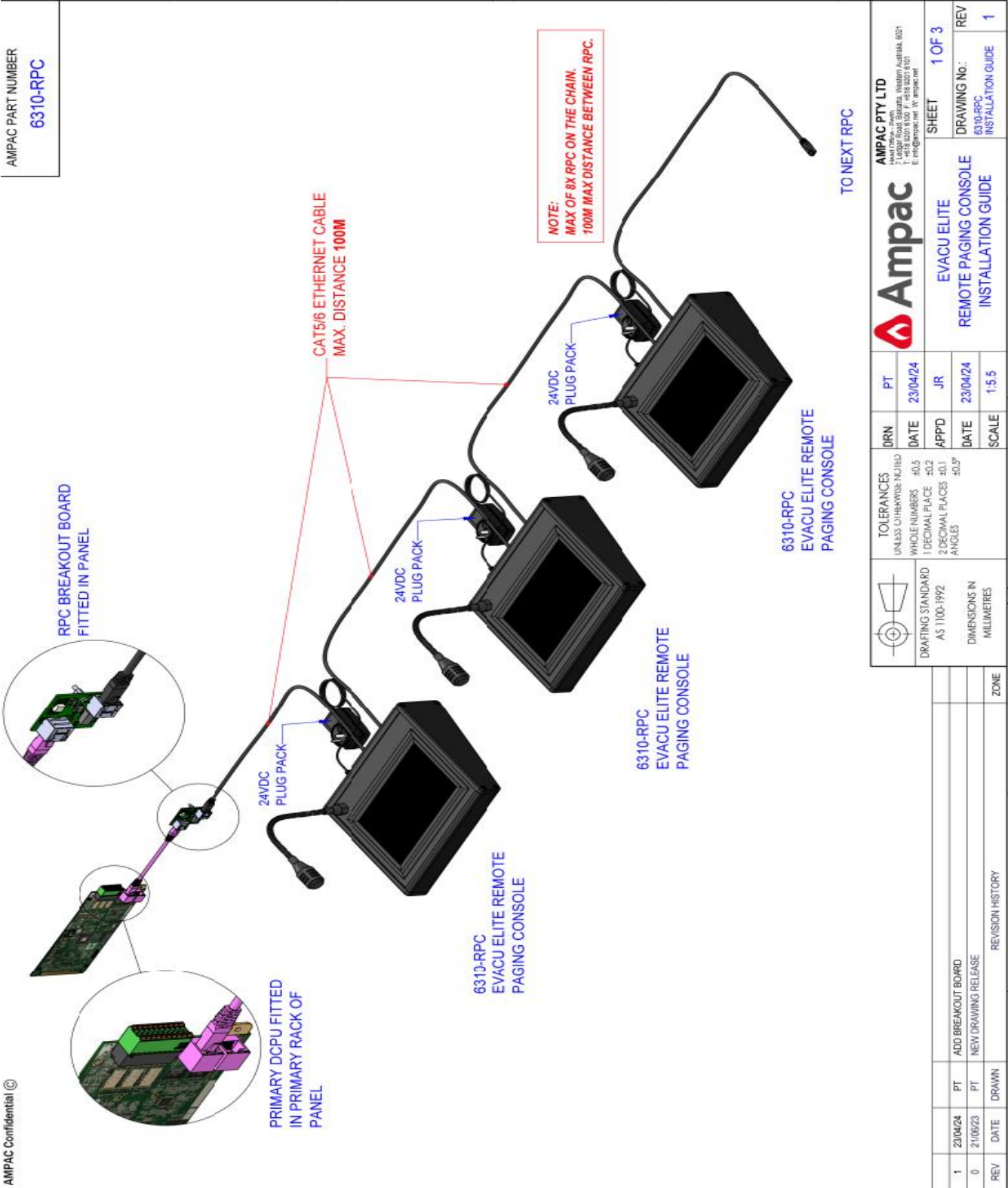


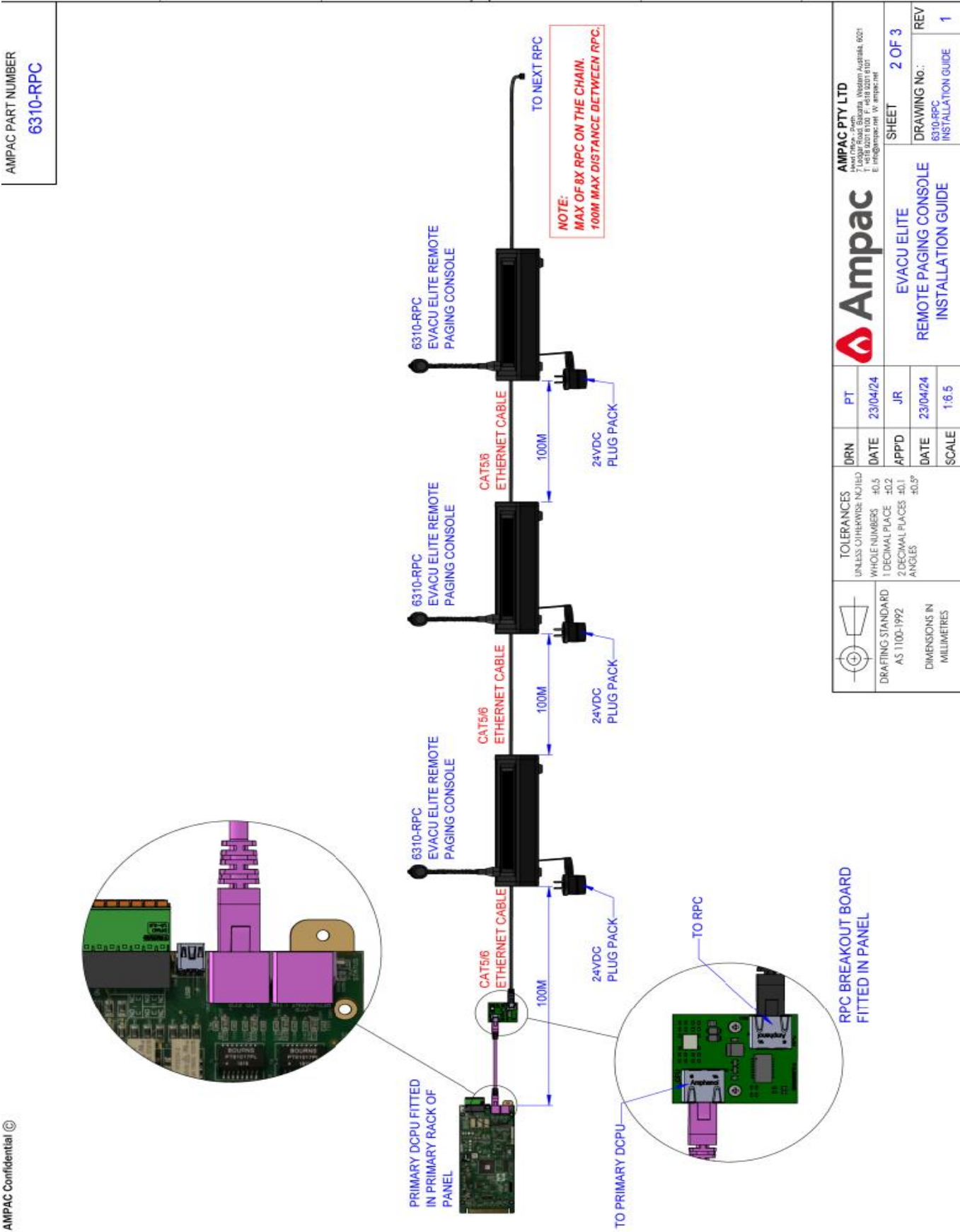
4. Cabling Requirements & Specification

Parameter	Detail
Cable type	Cat 5e/ 6 Comms
Cabling requirements.	Cat 5e/6 from DCPU through RPC Breakout board to RPC 1. Continuing between each RPC fitted from 1 to 8
Maximum distance between each Paging Console	<100m. (For distances >100M Use 4 Way splitters and or POE device as documented)
Power Requirements RPC 1-8 (Daisy chain)	Install 240V AC Plug packs at each RPC # 1 to RPC # 8
Options for distances >100M See illustration drawings	Install (Cat5e /6) into RPC Breakout board then into a 4-way Splitter <100M away . Wire up to 4 radial feeds from the splitter for 4 x RPCs <200M each leg Each 4-way splitter requires plug pack and local 240V AC supply. Alternatively, a Ubiquiti POE unit can be installed for distances >100M <300M.
Specification	
Maximum Number of Paging Consoles per node	8
Maximum Number of Paging Consoles per system	64
Maximum Number of Paging Zones	512
Maximum Number of Paging Groups	512
Enclosure Size o/a	270mm x 230mm x 80mm pus height of gooseneck
Enclosure Colour	Black
Enclosure IP Rating	Indoor Use Only
Quiescent Current	195 mA @ 24V DC (With User Interface ON)

5. Cabling Schematics

Daisy chain RPCs using the breakout board up to 8 RPC units.





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Alternative cabling schemes can be adopted using **2 types of 4-way splitter** and **Ubiquiti** POE units depending on the application. The following drawings illustrate a *mixture of options*!

Note Using the 4Way splitter delivers better RPC system integrity and installation flexibility than a daisy chain. It prevents one RPC failing multiple RPCs (or anything beyond a cable break),

- All options use Cat5e or Cat 6 ethernet cables and require power packs as ***indicated on drawings*** and a 240AC power source.
- Use Cat5e or better. 24AWG or larger. **Must be copper core** (not Copper Clad Aluminium (e.g. CCA or CCE). < 95 Ω/km per core.

The use of splitters or POE devices means greater distances between each RPC unit and distance from the panel node to suit most building layouts.

The solutions illustrated provide runs up to 100 and <300M distance by using the appropriate device types as shown.

Power sources, plug packs and the devices should be placed in known “serviceable locations” for ease of fault finding in cases where RPCs go offline.

Ubiquiti Instant POE Item No 6350-POE-CSO

This unit can connect to (both types of **TP-Link TL unit**) to a distance up to 200M away.

Each connected unit (to a 4-way splitter port) will allow you to connect to 2 RPCs maximum *(100M apart) in daisy chain configuration. The two RPCs in this arrangement **do not** require a plug pack connection.

Only two RPCs can be connected to each Ubiquiti instant PoE switch port.

TP-Link TL unit SG1006P Item No 6350-4WSPLIT-CSO

Use where:

You want to remove “*daisy chain risk*”

You have between **1-4 RPCs** connected (or 1-8 if you choose to fit 2 units of this type)

This unit is a 4-way splitter **requiring a 240vAC plug pack power source**.

Connects to the RPC breakout board <100M away

One RPC can be connected to “each port” x 4 up to 200M away ***with respective RPC plug packs***

Another 4-way splitter (slave type **TP-Link TL unit SG1005P-PD**) can be connected within a 100M distance range (for RPCs 5-8)

Ubiquiti instant POE unit can be connected to **each port** within 200M (allowing 2 x RPCs to daisy chained without the need for plug packs at both RPCs)

EvacUElite Remote Paging Console**Item Number: 6310-RPC****Installation guide****TP-Link TL unit SG1005P-PD Item No 6350-4WSPLIT-PD-CSO**

4-way splitter (**Type 2**) **This unit can only power 4 x RPCs in total,**

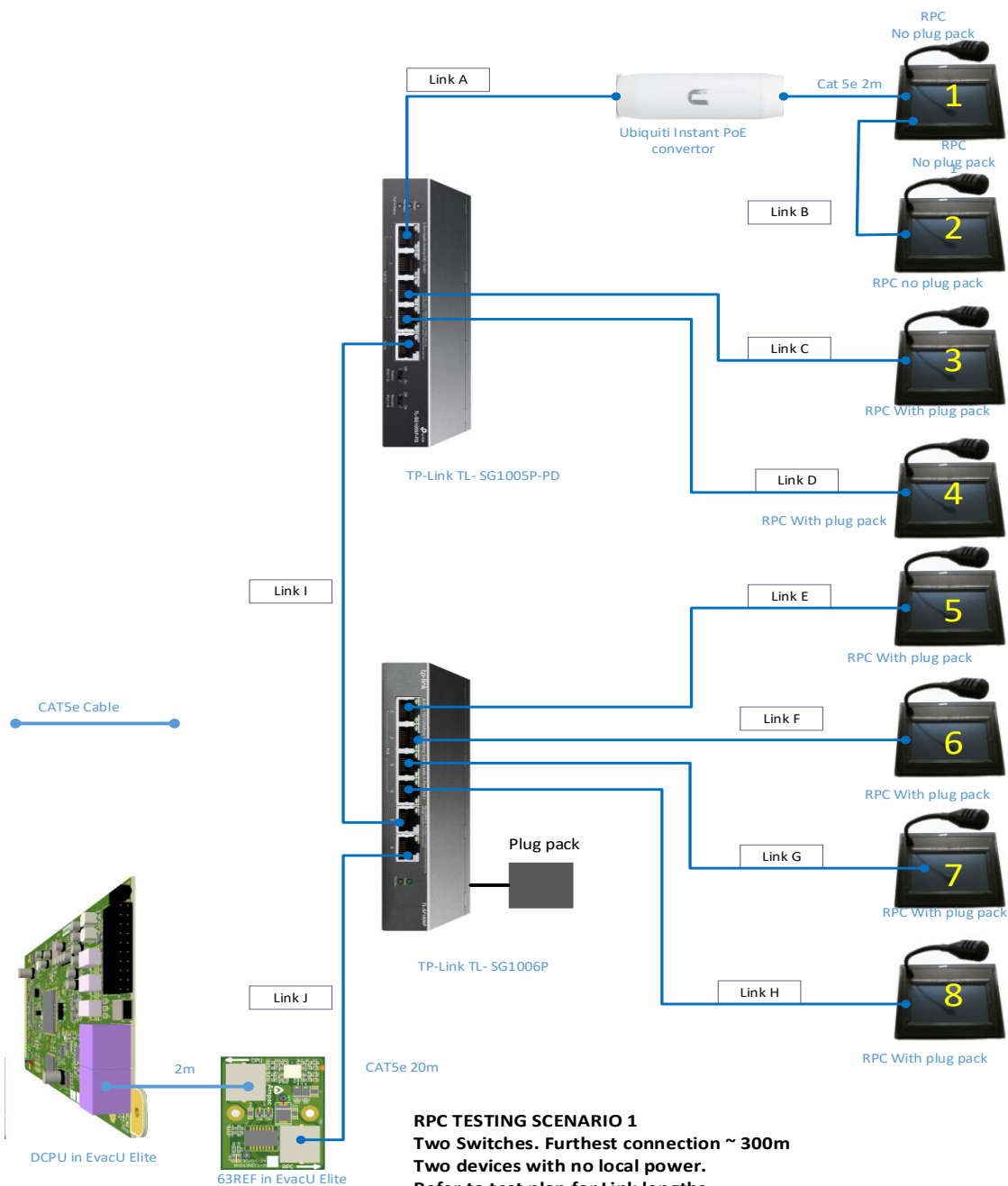
Use where: You have between **5-8 RPCs** connected.

No Plug pack is required at this **Type 2 splitter**.

One RPC can be connected to “each port” x 4 up to 200M away ***with respective RPC plug packs***

Ubiquiti instant POE unit can be connected to two **ports** within 200M (allowing 2 x RPCs to daisy chain without the need for plug packs at both RPCs)

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The distances below relate to the illustration drawing above.

Link J, I, B <100M

Link A <200M

Links C, D, <200M each.

Links E, F, G, H <200M.

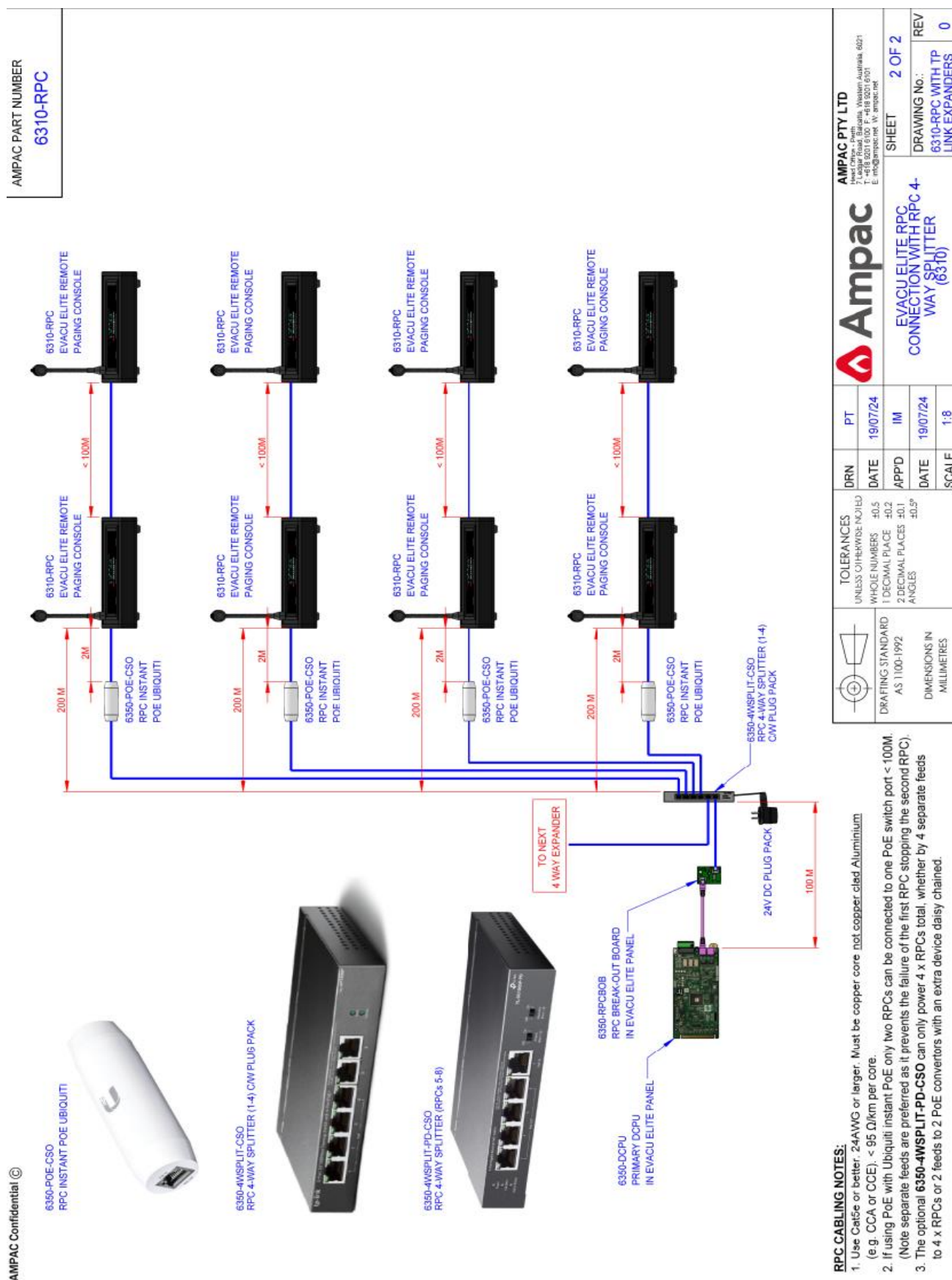
RPCs 1,2 **do not** need Plug packs.

RPCs 3,4,5,6,7,8 **need** plug packs

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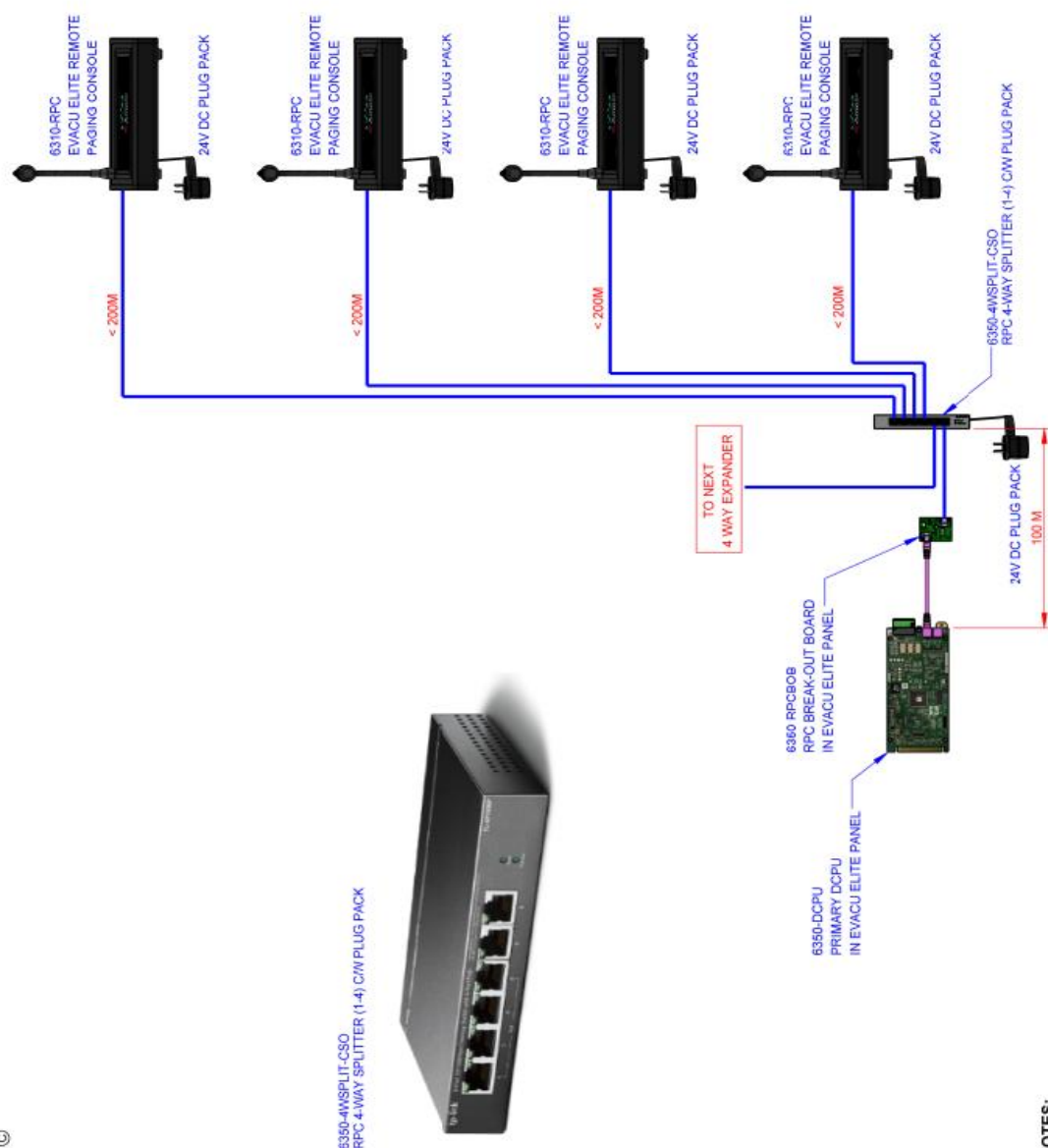
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AMPAC PART NUMBER
6310-RPC

RFQ CABLING NOTES:

1. Use Cat5e or better. 24AWG or larger. Must be copper core not copper clad Aluminium (e.g. CCA or CCE). < 95 Ω /km per core.

Note: Separate feeds are preferred to daisy chain. It prevents the failure of the first RPC stopping the second RPC.

[illegible]

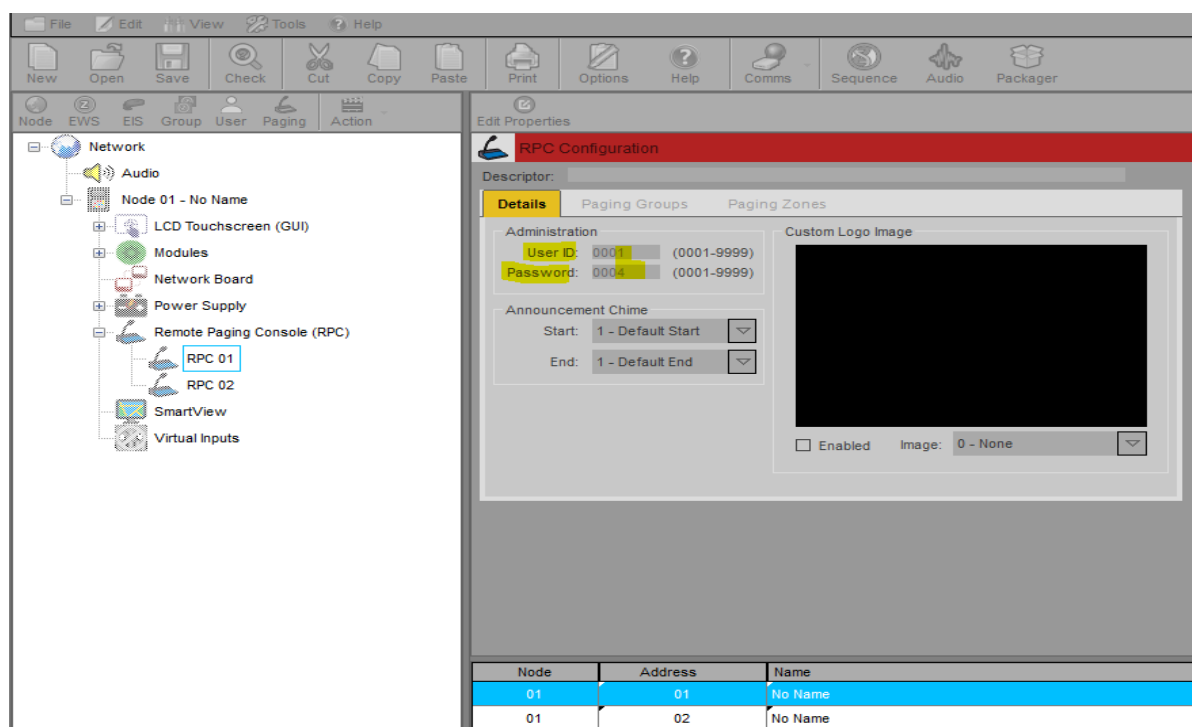
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6. Setting the Paging Console address on each unit

Check the Cat 5 cabling and RPC power requirements are cabled as per schematics (Section 5)

Each Paging Console must exist in the **configuration file** installed in the EvacUElite Panel. (Illustrated below) *see MAN 3142 section 6.17* for full configuration explanation.

Each RPC has a specified **Node** and **RPC address number** in the configuration. This dictates the Paging Zone and Group controls that are displayed on each console touchscreen.

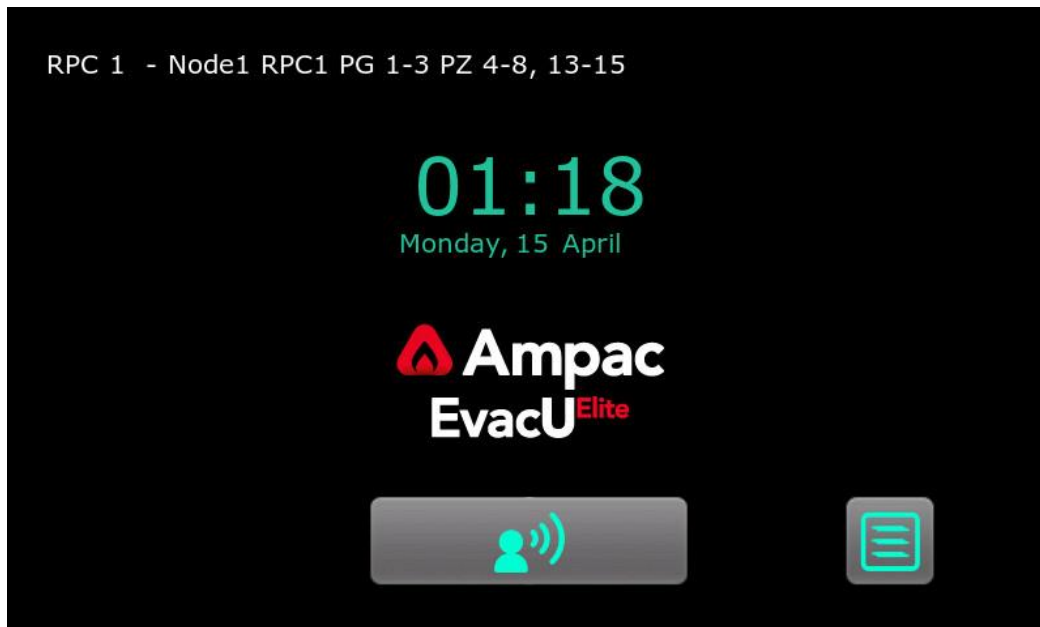


Start by addressing RPC 1. Then continue setting the other RPCs. Do this process in sequential order when you have >1.

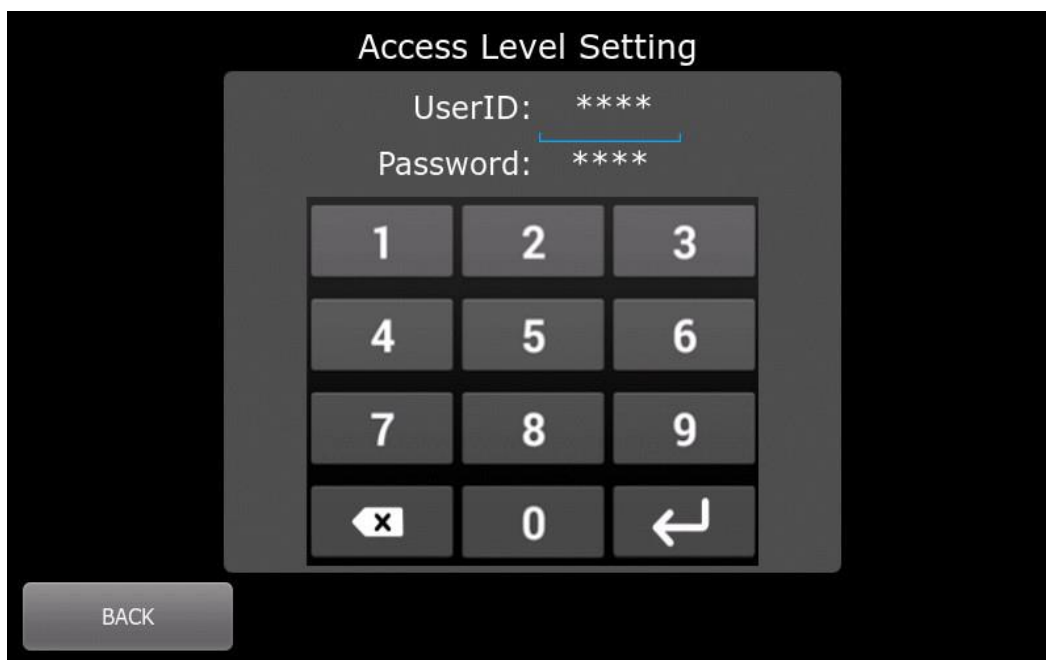
The RPC “address selection choices” appearing on the RPC **set up screen** will only show the address numbers which exist in your system configuration file **that have not been addressed**.



From the RPC **Idle screen** Press the Menu button



This will take you to the **Log in** screen.

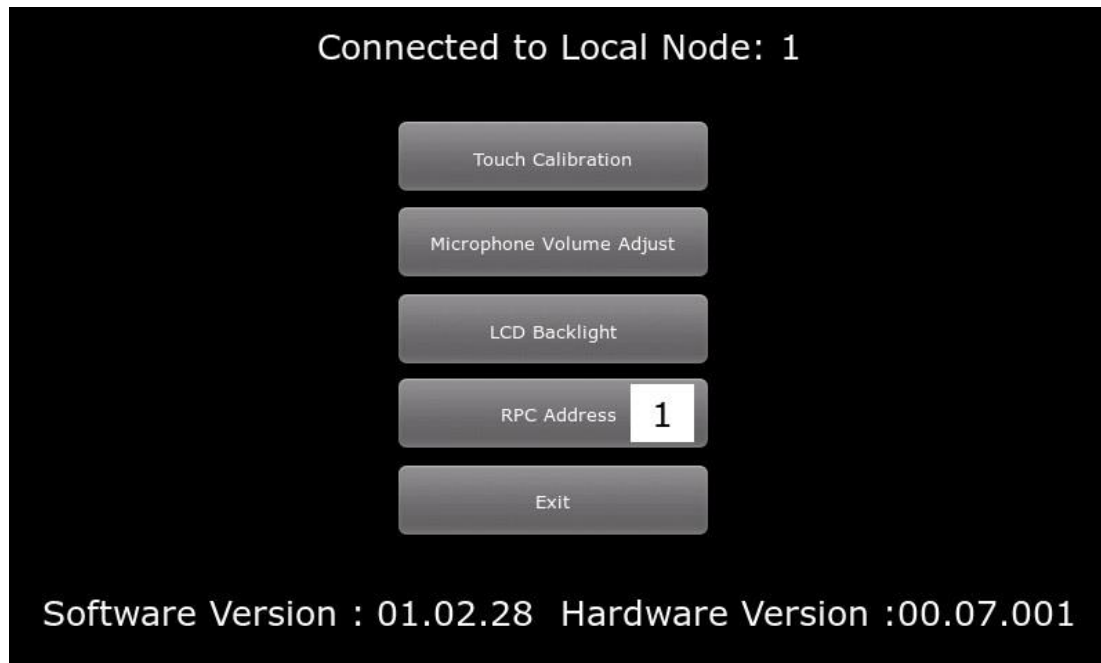


Enter the **RPC Access Code Settings** from **your configuration file**. Notice the config illustration on the previous page for **RPC 1**

User ID **1**

Password **4**

This will take you to the **RPC set up screen** where you select the **RPC address number**. You can duplicate the access level settings for every console number in the configuration OR each one can be set differently for security purposes.

Touchscreen Layout and address setting

1. Press on the RPC Address **Number**. Then use the Up and Down arrows to change the number.
2. When the correct address number is selected **Press** the address button again **to confirm the address**
3. Press the **Exit** button.
4. As a cross check *return to the address screen above to verify the **address setting selected** was saved correctly before moving onto the next unit.

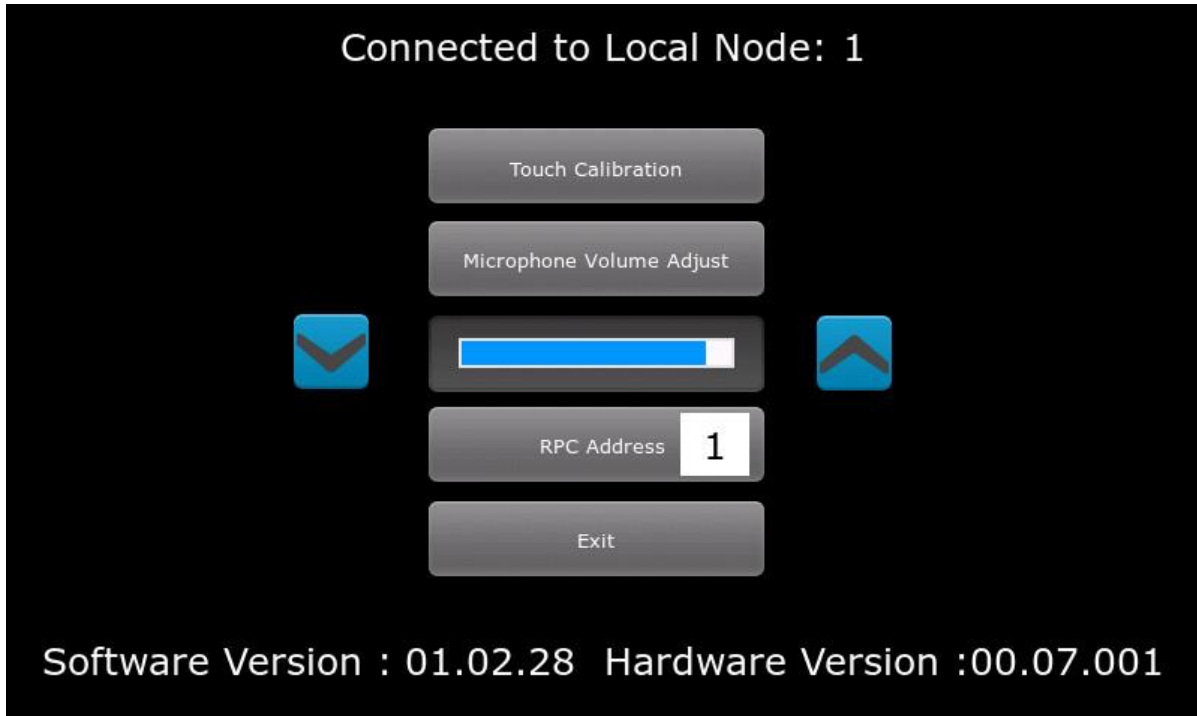


Touchscreen calibration prompts

Press the **plus icons** which appear on the Touch screen with your index finger. This will calibrate the touchscreen. A few plus icons will appear sequentially which test the screen area.

Microphone Volume adjustment.

Use the **up or down arrows** to alter the volume of microphone then **press** on the **blue bar** to save the setting.

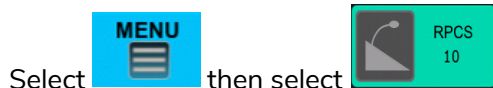
LCD Backlight adjustment

Use the **up or down arrows** to alter the backlight brightness then **press** on the **blue bar** to save the setting.

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7. Viewing RPCs from the EvacUElite Panel Menu Screen

Excerpts from MAN 3137 Section 6.6 and 6.3







This details the RPCs configured. How many, which node, address number and respective status. Example **N6 R1** means connected to **Node 6** and addressed as **RPC number 1**, status is **Normal**.



The RPCs list below will show everything it can see connected on the system, where  represents a disabled RPC and  means RPC is in fault or missing.

The RPC descriptors illustrated below include PG **paging groups** and or PZ **paging zones** controlled from each RPC unit. The descriptor appears on the RPC idle screen which is useful to confirm the RPC user screens.

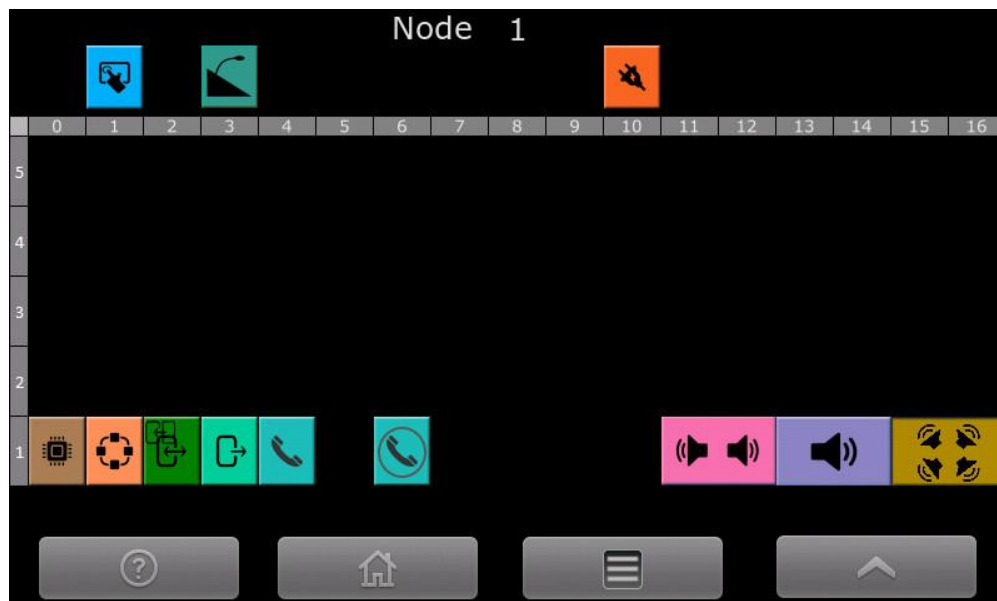
RPCs			
1	RPC1 PG 1-10, PZ 1-13 N1		N1 R1
2	RPC1 PG 1, PZ1-4 N3		N3 R1
3	RPC2 PG 2 3, PZ 4 5 6 N3		N3 R2
4	RPC3 PG 4 5, PZ 7,10 N3		N3 R3
5	RPC1 PG 1 2, PZ 7-13 N6		N6 R1
6	RPC2 PG 6-10, PZ 6-10 N6		N6 R2
7	RPC1 PG 1 2, PZ 5-10 N15		N15 R1
8	RPC2 PG 3 4, PZ 10-13 N15		N15 R2
9	RPC3 PG 4-8, PZ 4-8 N15		N15 R3
10	RPC1 PG 5 7 10, PZ 1-5 N17		N17 R1

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8. Viewing RPCs from the EvacUElite Panel Node Screens

Select  then 

Select an Individual Node screen by pressing  then Select the RPC ICON 



Selecting the RPC ICON allows you to review status of hardware and software versions and the condition of each.

9. Testing Method


Each RPC can be configured differently so it's important to test the Paging Configuration provides the outcomes required.

The RPC Operators Manual MAN 3189 explains "How to Use the Paging Console interface".

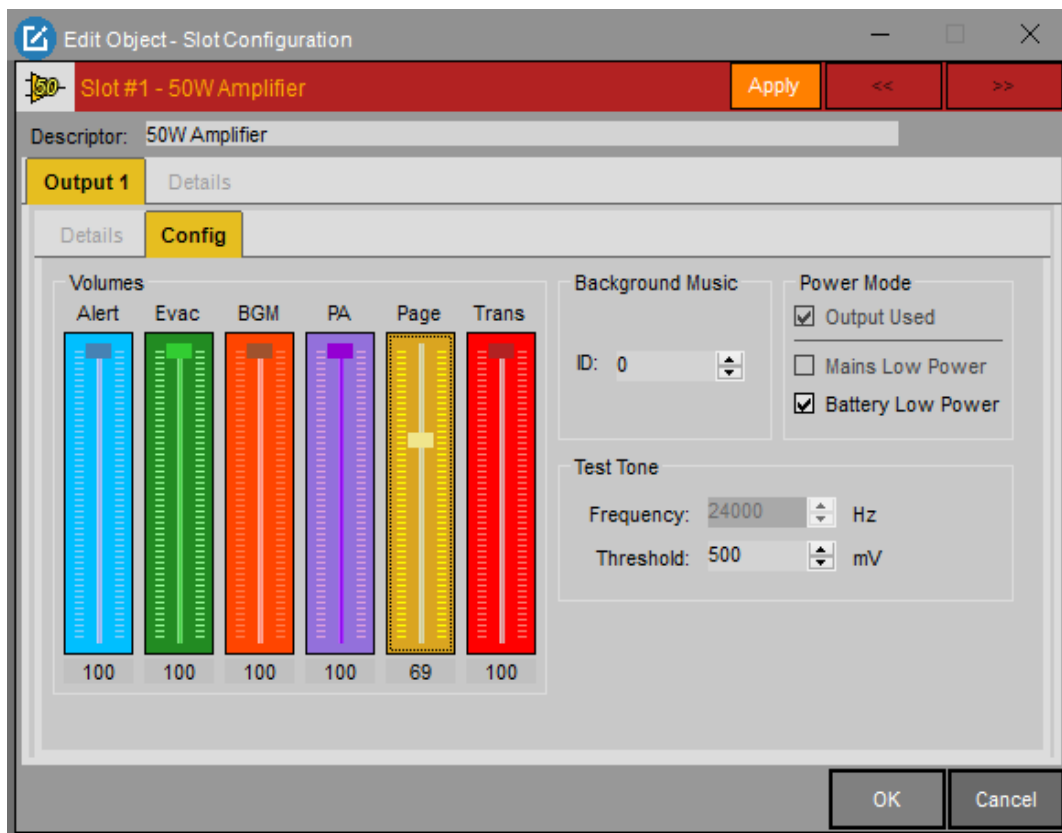
- Check each Paging console has power. If the screen is blank (in sleep mode) Press the RPC Touch Screen
- Check the RPC Idle screen appears.
- If not make sure the Plug Pack is connected to the RPC unit and the GPO is supplying 240V AC
- On the EvacUElite Panel Check your Node Screen & RPC icon (illustrated above) This will indicate if any faults are present. Press the RPC icon to reveal further clues, Disabled, Normal, Fault.

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Testing Paging Zones

- Press the Paging Menu  button on the idle screen.
- This will take you to the Main Screen detailing Paging Zones
- Each Paging Zone button should be activated and tested individually.
- Confirm each Paging Zone “descriptor” is correctly described on the RPC unit.
- Confirm the correct speakers are activated during each designated paging zone area.
- If your Paging Zones match your Emergency Warning Zone amplifier ‘one for one’ issuing a **Test tone** through the respective Amplifier from the EvacUElite panel will verify the **paging area** coverage
- Make RPC announcements to the zones. Check audio announcement is satisfactory.
- Conducting a verbal paging test with two people and a two-way radio is the ideal way to check area coverage, speech volume and general intelligibility of any paging announcements.
- Paging volume “Gain level” can be adjusted from the **RPC set up screen** as a global paging volume adjustment.
- Alternatively, from each amplifier setting you can adjust an individual amplifier for paging volume %. Shown below.

Paging Zone Gain adjustment from an individual amplifier



Testing Paging Groups

- Apply the same Test process applied to Paging Zones to any **Paging Groups** configured.
- With a Paging group you can manually activate the test tone through each of the multiple zone amplifiers to confirm speaker area coverage.
- Then test by doing some RPC announcements to the group. Check the audio announcement is satisfactory.
- The individual amplifiers for the Paging Volume Gain settings can be made the same value to achieve the desired paging volume. The default settings on all amplifiers are 100%.
- Conducting a verbal paging test with two people and a two-way radio is the ideal way to check area coverage and for general speech intelligibility and volume of paging announcements.