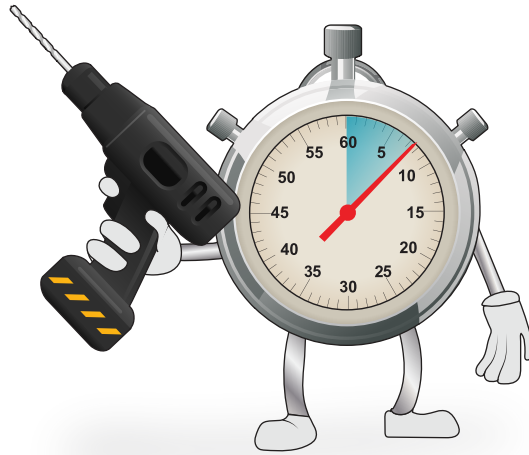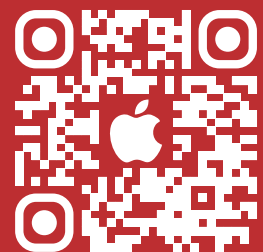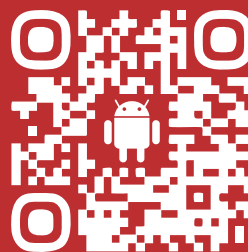# EMS FireCell

# RADIO NETWORK COMMUNICATOR (RNC)
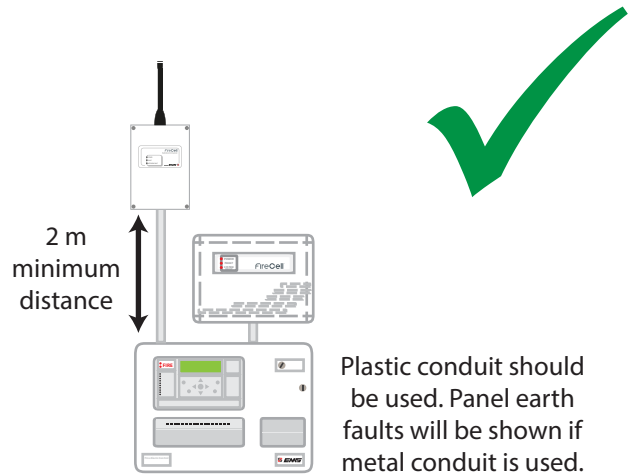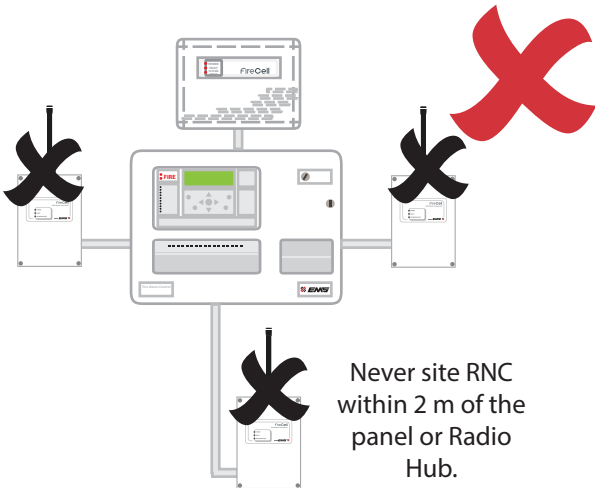## *For Syncro/Syncro AS*

QUICK START GUIDE
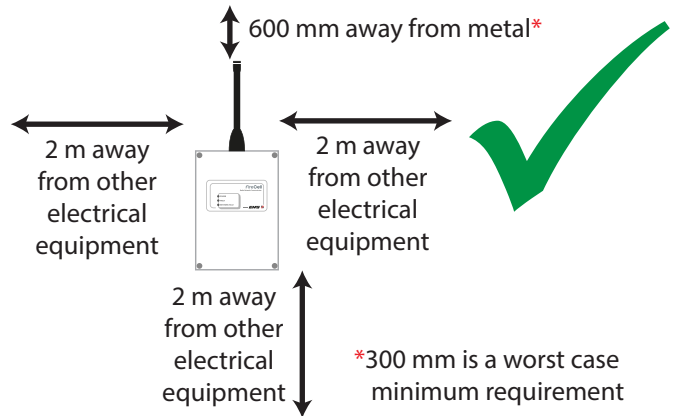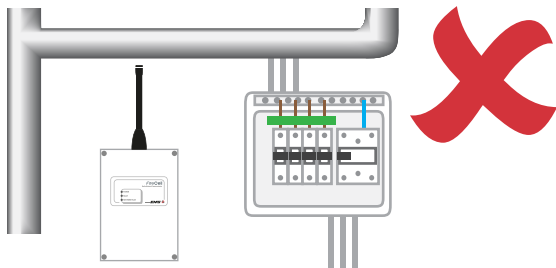

FireCell Guide

FREE mobile phone app

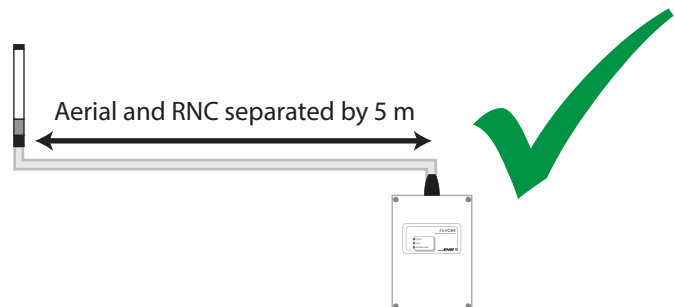# Step 1 - Identify RNC locations

If a radio survey has already been carried out, the survey will detail the recommended location of the Radio Network Communicators (RNCs) and also any aerial positions if required.

RNC

Syncro Control Panel

Remote High Gain Aerial

RNC

Syncro AS Control Panel
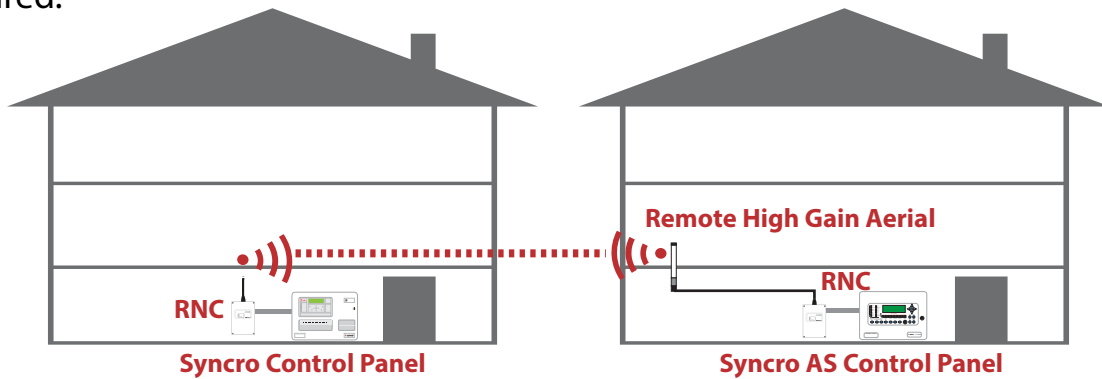
When connecting an RNC to a Syncro 2 or 4 loop panel, the recommended distance between metal objects from the aerial is 600 mm. The recommended distance to any other electrical equipment is 2 m.

600 mm away from metal*

2 m away from other electrical equipment

2 m away from other electrical equipment

2 m away from other electrical equipment

*300 mm is a worst case minimum requirement

Never site RNC within 2 m of the panel or Radio Hub.

2 m minimum distance

Plastic conduit should be used. Panel earth faults will be shown if metal conduit is used.

When connecting an RNC to a Syncro AS 1 or 2 loop panel, the same rules apply as set out above. In addition, a high gain aerial must also be fitted and sited a minimum distance of 5 m from the RNC.

Never site aerial within 5 m of the RNC when connected to a Syncro AS Panel.

Aerial and RNC separated by 5 m
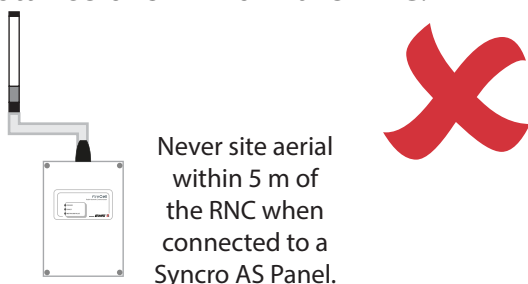
Step 2 - Identify cable entry location
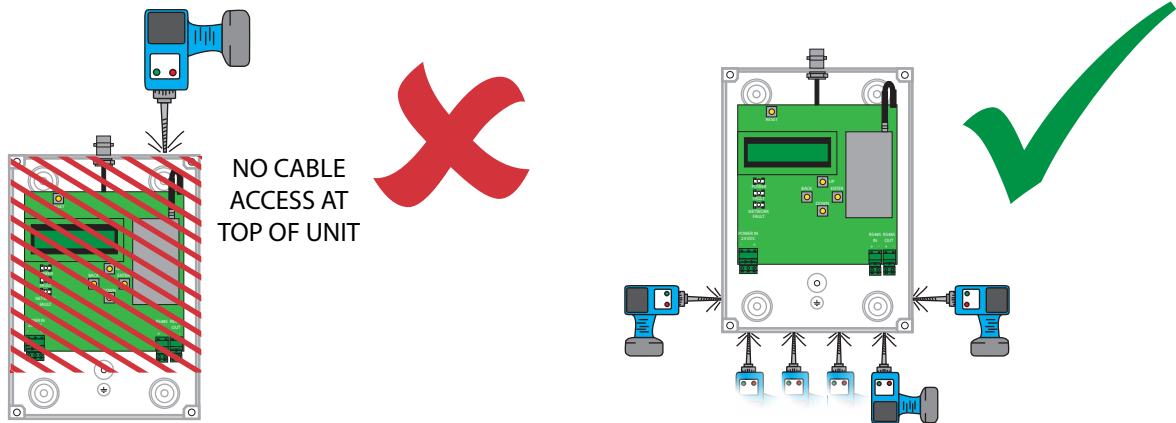
Open the unit to show the inner PCB. The cable entries can now be made. See entry points below:

NO CABLE ACCESS AT TOP OF UNIT

ALL CABLES TO BE ROUTED NEATLY AT THE BOTTOM OF THE BOX, AND NOT OVER THE PCB BOARD
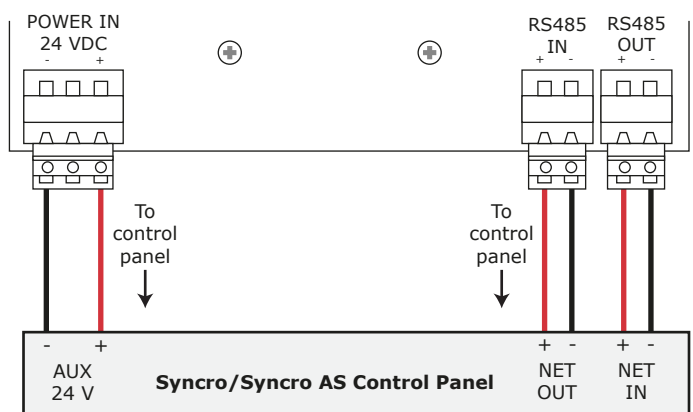
Step 3 - Fix the RNC to the wall

The unit can now be fixed to the wall. The RNC's fixing positions are as below:

Fixing position 1 ——————— Fixing position 2

Fixing position 3 ——————— Fixing position 4
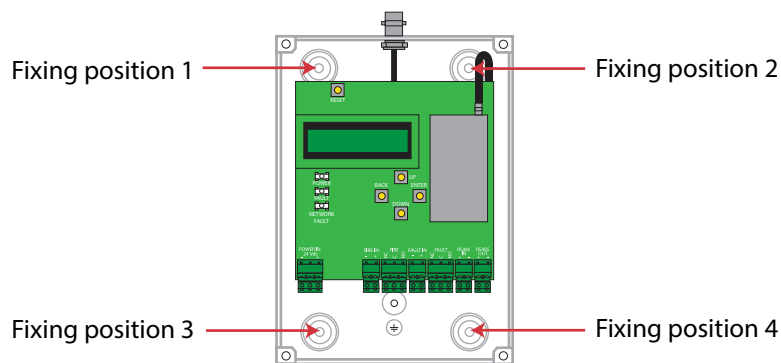
Step 4 - RNC to panel wiring

The cable must be passed through the entry points provided. Connections are detailed below:

RS485 BUS & POWER CONNECTIONS	
CONTROL PANEL	REMOTE NETWORK COMMUNICATOR
NET IN + ———	RS485 OUT +
NET IN - ———	RS485 OUT -
NET OUT + ———	RS485 IN +
NET OUT - ———	RS485 IN -
AUX 24V + ———	POWER IN +
AUX 24V - ———	POWER IN -

POWER IN 24 VDC

RS485 IN

RS485 OUT

To control panel

To control panel

- + AUX 24 V

Syncro/Syncro AS Control Panel

+ - NET OUT

+ - NET IN

Please note: Care must be taken to ensure that the all connections are made correctly before applying power to the unit. Damage may occur if cables are incorrectly connected.

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Step 5 - RNC configuration

Setting up of the RNC is carried out by completing the following:

MASTER PANEL'S RNC	SLAVE PANEL'S RNC
STEP A: At the control panel, set network card address to 1. See 'Network Card Setup'.	**STEP A:** At the control panel, set network card address between 2 & 16. See 'Network Card Setup'.
STEP B: At the RNC, 'Set Node Number' to 1 via menu. ***From front Screen> Node Setup> Set Node Number*** NOTE: The network card & the RNC addresses must match.	**STEP B:** At the RNC, 'Set Node Number' between 2 & 16 via menu. ***From front Screen> Node Setup> Set Node Number*** NOTE: The network card & the RNC addresses must match.
STEP C: Set site ID via menu. ***From front Screen> Node Setup> Set Site ID*** NOTE: Site ID is taken from this RNC's ident label.	**STEP C:** Set site ID via menu. ***From front Screen> Node Setup> Set Site ID*** NOTE: Site ID must match master panel RNC's ident.

Once steps A to C have been carried out at all RNCs go to step D.

Step D: From the master panel's RNC menu a 'Configure System' action must be performed ***From front Screen> Node Setup> Configure System***

NETWORK CARD SETUP

Where the above switch is set to address number 1

ADDRESS	SWITCH NUMBERS							
	1	2	3	4	5	6	7	8
1 =	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2 =	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3 =	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4 =	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5 =	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6 =	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7 =	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8 =	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9 =	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10 =	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11 =	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12 =	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13 =	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14 =	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15 =	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16 =	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF

Step 6 - Signal checks

Once configured, all RNCs will require a signal level check to ensure they are at an adequate level. The level received must be 30 dB or greater.
From front Screen> Node Status> Signal Level

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SCAN ME