

REFUGE CALL

(RS16 RADIALLY WIRED)



- Remote units – Hands free or telephone handset options available
- Master to remote and remote to master calling
- Fully monitored for open and short circuit cable failures.
- Remotes connected via : 2 core radial to each remote.
- DESIGNED TO MEET THE APPROPRIATE REQUIREMENTS OF BS5839 Pt.9 2002

Disabled Refuge Call

Radial Wired RS16

Installation manual

Contents

- 1) **Installation Procedure**
- 2) **Commissioning Procedure**
- 3) **System Test**
- 4) **Fault Indications**
- 5) **Fault Indication Table**

Note: In all cases please use Drawing C51064/C (at the back of this manual) for reference to the above sections.

Radial Wired RS16 Central Enclosure

1) **Installation Procedure** (refer to Dwg. C51064/C)

- Install central enclosure, with cable entry gland at top, at a height of approx 1.5 metres above floor height. Ensure fixings can support a load of 25 Kg.
- Fit line cards into motherboard locations (if not already fitted). Ensure cards are pushed right home, so that the nylon mounting pillar latches are engaged above the PCB. Fit link L9 to last (furthest right) line card only.

Connect Field Cabling:

A - Connect 5A (lighting rated) A.C. Mains supply (220 -240V) to appropriate (L)ive, (N)eutral and (E)arth terminals. (Max system load is 40 Watts).

N.B. Earth terminal must be connected to building earth.

B – Connect 2 core cable from each remote location to appropriate +/- terminal pair on this pcb (CS834). (N.B. The '+/-' polarity idents are for reference only – the remote location connections are not polarity conscious).

The following connections are optional, and are fitted only when the system specification requires these functions:

C – Volt free 'Fault Out' changeover contacts, for remote fault reporting. (Fault relay is normally energised).

D – Short these terminals with a volt free closing contact (rated 50mA or higher) to enable the system 'Anti Tamper' feature.

(The 'Anti Tamper' feature enables the system to automatically disable incoming calls, whilst retaining system monitoring of the remote cabling and outstations. The system is returned to full operation with this contact opened).

E – Volt free changeover contact – changes state with any call on the system. Use if remote call indication is required.

Remote Control Panel:

Where it is necessary to locate the master control panel remote from the main enclosure, it will be necessary to connect the two units with a 10 core (+screen) fire rated cable. If a twisted pair cable is used, then allocate the pairs sequentially (1st pair to terminals 1 and 2, 2nd pair to terminals 3 and 4 etc).

If the cable is a single multi-core, then the allocation is not critical, but where the cable run exceeds 200metres it may be necessary to ensure that the LED code pair (connections 9 and 10) does not use adjacent cores. This will ensure reliable data code reception.

Where more than one cable is employed, fit the LED code pair in a separate cable from the LIN, +V and 0V connections (connections 1, 2 and 3).

All cable screens should be connected to the 'Earth' terminal adjacent to terminal 10.

Radial wired RS16 Central Enclosure

2) Commissioning Procedure (refer to Dwg C51064/C)

Before applying any power to system:

F – Set SW1 to position 0

G – Set L11 to position '16'

H - Each line card (CS831) controls 4 remote units. Numbering on this drawing (not on the actual PCB) identifies which location applies.

The jumper link adjacent to each location should be fitted to ALL locations NOT in use.

DO NOT FIT JUMPER LINKS TO ACTIVE REMOTE LOCATIONS.

Confirm that L9 is fitted to the last (furthest right) line card.

J - Fit battery loom as indicated on this drawing. CHECK RED LEAD IS CONNECTED TO THE RED (+) BATTERY TERMINAL.

Plug the two way cable loom terminal to the 'Batt. +/-' terminals of PSU control pcb type CS779. (N.B. note that the system will not power up, until A.C. power is applied).

Apply A.C. power to the system.

Check if any fault indications are active. Refer to sections 4 and 5 to identify any indicated faults, and correct if necessary.

K – Calibrate Master Handset (CS830)

- N.B. This adjustment is only required where a second master handset is fitted to the system.
- Use a small bladed screwdriver to turn the RV1 anti clockwise until the 'M/HST' Led is illuminated.
- Turn RV1 clockwise until the Led goes out – turn a further quarter turn.

3) System Test (refer to Dwg. C51064/C)

Once the installation and commissioning procedures are complete, test for correct system operation, and fault reporting functions:

- Test all locations for correct call in / call out functions, by following the operational instructions listed on the Central control panel.
- Remove primary power, to check correct operation of battery support supply. Central control will report a fault condition.

The fault sounder will be activated on the main control panel, and the fault LED's will be illuminated with a slow flash pattern.

The fault out relay will be de-energised.

Press the 'silence fault / lamp test' switch on the control panel momentarily, to silence the fault sounder to an intermittent state.

Open the main enclosure to confirm display of the 'mains fail' and 'charge fail' fault LED's on the power supply control PCB ref. CS779.

Where utilised, check the function of the anti-tamper feature by applying a volt free closed contact across the Anti-tamper terminals on CS830.

Under this condition, any call made from a remote hands free outstation will be automatically cancelled by the central controller. Note that the remote outstation may respond locally with the call re-assurance tone, until such time as the unit is automatically reset by central command. The whole sequence will take less than five seconds.

An open circuit at the anti-tamper terminals will allow normal system operation.

Note that making a call out from the master is not affected by the anti-tamper status.

4) Fault Indications (refer to Dwg. C51064/C)

The numerical references on Dwg. C51064/C identify the function of all fault indications within the central enclosure. Note that any fault condition will cause the front panel fault Light Emitting Diodes (LED's) to indicate with a slow flashing pattern, and will activate the audible fault sounder as a continuous tone.

Pressing the 'Lamp Test / Silence Fault' switch will change the sounder function to intermittent. (A short 'reminder' bleep approx every 90 seconds). Generation of a second fault condition will reactivate the fault sounder to a continuous tone.

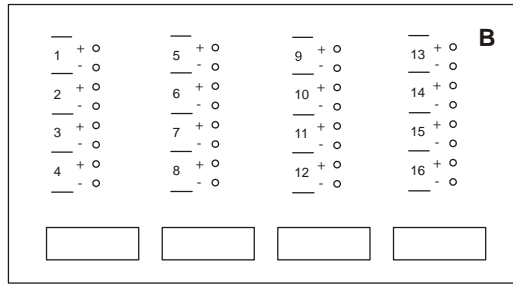
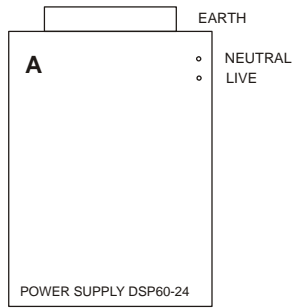
In the event of failure of a remote location call unit, the appropriate front panel remote location switch flash with the same slow on/off pattern as the front panel fault LED's.

With any other type of system fault, only the front panel fault LED's will flash, and further fault identification can be deduced by investigation of the internal central enclosure PCB mounted fault LED's.

The following table (Section 5) lists the various fault LED's, and describes the action to be taken to help identify the fault location.

5) Fault Indication Table (Radial ERS) (refer to Dwg. C51064/C)

Fault Indication	Nature of Fault	Action required to assist fault location	Action required to clear fault state, after correction
1 – 'P/C Fault'	Power supply (PSU) fault .	Check CS779 for PSU faults – follow procedures 9, 10 & 11 below.	-
2 – 'PCB Out'	Indicates line card disconnection, or 16 way ribbon cable connection fault.	Check all line cards for correct seating. Confirm ribbon cable is correctly latched. Confirm L9 is fitted to last (furthest right) line card.	-
3 – 'M/HST'	Master Handset short circuit or disconnected	Check master handset connections. Check Cat5e lead connection between CS830 and CS795.	-
4 – 'SW Code 1 Fail'	Failure of connection to CS575 switch matrix PCB.	Check connectors and cables between CS575 (on front door) and CS832 motherboard.	-
5 – 'SW Code 2 Fail'	Failure of connection to CS575 switch matrix PCB to second master (where fitted).	Check connections as 8 above, and additional field cabling to second master.	-
6 – 'LED code 1 fail'	Failure of connection to CS767 LED driver - or failure of 16 way ribbon connector to Matrix PCB (CS818) (mounted on front door).	Check connections between CS832, CS767 and CS818.	-
7 – 'LED code 2 fail'	Failure of LED code connection to second master control (where fitted).	Check connections as 6 above, and additional field cabling to second master.	-
8 – 'Load'	Indication of periodic battery load test.	No Fault.	-
9 – 'Mains Fail'	Failure of primary supply.	Check for primary power to enclosure – check for + 28V DC out from DSP60-24 Din Rail PSU.	Replace faulty DSP60-24 power supply if necessary.
10 – 'Batt Fail'	Failure of support battery(s) under load condition.	Move L3 on CS779 to position 'B' to reduce load interval to approx 1 minute. Momentarily press reset switch S to start new test sequence, and allow 2 minutes for repeat test. If 'Batt Fail' indicator illuminates again, replace batteries.	Press Reset switch S after replacement batteries are fitted. Return L3 on CS779 to position A.
11 – 'Charge fail'	Failure of battery connection or failure of primary supply.	Check battery connection loom, including the inline protection fuse. Replace if necessary (5A anti surge).	-



RADIAL WIRED ERS16 LINE CENTRAL ENCLOSURE

(see overleaf for Fault Indication table)

