

Functional Door Entry System

ContractR

Installation Manual

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Contents	Page
1. INTRODUCTION	2
2. SYSTEM OVERVIEW	2
2.1: FEATURES	2
2.2: SYSTEM DESCRIPTION.....	2
3. UNPACKING THE SYSTEM	4
4. INSTALLATION	5
4.1: INSTALLING THE CASE	5
4.2: INSTALLING THE MAIN CIRCUIT BOARD.....	5
5. WIRING THE SYSTEM	6
5.1: GENERAL WIRING & CABLE REQUIREMENTS	6
5.2 WIRING OVERVIEW.....	7
5.3: FUNCTIONAL ENTRANCE PANEL	10
5.3.1: CABLE INFORMATION.....	10
5.3.2: PANEL BUTTONS	11
5.3.3: PANEL AMPLIFIER.....	13
5.4: DWELLING HANDSET CONNECTION WIRING DETAILS	14
5.4.1: CABLE INFORMATION.....	15
5.5: DOOR LOCK RELEASES	15
5.5.1: LOCK CABLE INFORMATION.....	16
5.5.2: FAIL SAFE (FAIL UNLOCKED) LOCK RELEASE CONNECTION	17
5.5.3: N/C REQUEST TO EXIT SWITCHES.....	17
5.6: FAIL SECURE (FAIL LOCKED) LOCK RELEASE CONNECTION.....	18
5.6.1: N/O REQUEST TO EXIT SWITCHES	18
5.7: DOOR MONITORING CONTACTS	18
5.8 STROBE CONNECTION.....	19
5.9: BATTERY BACK UP.....	19
6. CONFIGURATION & SYSTEM SETUP	20
6.1: CALL & DOOR TONE VOLUME CONTROLS	20
6.2: MICROPHONE & LOUDSPEAKER VOLUME CONTROL.....	20
6.3: TRADE CLOCK 8 WAY CONTRACTR	21
6.4: TRADES CLOCK 15 WAY CONTRACTR	24
6.5: PRIVACY FUNCTION TIMER	27
6.6: LOCK RELEASE TIMER.....	28
6.7: DISABLE LOCK RELEASE SENSING	28
6.8: SYSTEM RESET.....	29
7. SPECIFICATION	29
8. CONTRACTR RANGE ORDERING INFORMATION	30
9. COMMISSIONING CHECK SHEET	31
10. DOOR ENTRY TELEPHONE INSTRUCTION LEAFLET	32

1. INTRODUCTION

This manual will assist in the successful installation of the 'ContractR' range of functional door entry systems. Please read carefully all the following sections prior to commencing installation. Planit Security Contracts Limited will not be responsible for any damage caused by faulty installation where these instructions have not been complied with.

2. SYSTEM OVERVIEW

2.1: Features

The ContractR Range consists of two models; the PU-C8/80 for door entry control for buildings of up to eight dwellings with a single entrance, and the PU-C15/80/2E for buildings of up to fifteen dwellings with dual entrance capabilities.

Both models feature trade access with a 24 hour clock and the ability to specify three trade access times over a 24 hour period. An external trade clock, with a greater programming range can be fitted if required.

The range is an economical solution to controlled door entry for small to medium sized applications and includes the following features:

- a. Supports up to fifteen individual handsets plus trade access.
- b. 24 hour trade clock with three months on board battery back up enabling up to three programmable access periods per 24 hours to be specified.
- c. Allows two entrance panels and associated door lock releases to be used, allowing callers to be automatically admitted access via the correct door (model PU-C15/80/2E only).
- d. System isolation in groups of four.
- e. Privacy facility allows each handset to be made unresponsive to calls for either a pre-determined time, or via toggle mode from the handset.
- f. Adjustable door release time.
- g. Full secrecy of speech, ie, conversation between caller and selected handset is not accessible from other handsets.
- h. Discrete lock release whereby only the handset called from the functional entrance panel may release the door.
- i. Built in battery back up (battery not supplied).

2.2: System Description

The ContractR range is a functional door entry system, whereby a visitor can call a resident by pressing a dedicated button on the outside entrance panel. The occupant can then have full duplex conversation with the visitor, and allow access to the premises via a button on the handset if required.

The system consists of a central unit, containing the main circuit board, battery back up (battery not supplied) and mains transformer. Each flat is connected via a model AT1131 handset (three types available), which allows conversation with the caller, and for the door to be released.

Additional options include:

- a. A privacy button with LED indication, allowing the user to temporarily disable the handset to prevent 'nuisance' calls (with handset AT1131/CNI).
- b. A door monitoring LED which flashes to indicate door lock release, and stays on permanently when the door is open. The 'door open' monitoring function is continuous, and present on all handsets all of the time when fitted (with handset AT1131/CNID).

A valuable feature of the ContractR model PU-C15/80/2E is the ability to connect two functional entrance panels and associated door lock releases; ie, the unit is ideal where a front and rear access are commonly used. A 'System Busy' LED is incorporated on both panels to inform a caller at one entrance panel if the other is in use, as communication with a dwelling can only be made from one entrance panel at any one time. All dwelling numbers can be accessed from either panel, and the correct door release is automatically activated from the handset.

The main circuit board is designed to make dual panel installation easy, with each of the two functional entrance panels and their associated audio, door lock releases and auxiliary connections arranged in two distinct banks on the board. All connections are clearly marked with respect to which panel they relate to, further assisting a logical and trouble free installation.

The system is designed to be used with both fail safe (fail unlocked) and fail secure (fail locked) 12V DC door lock releases with door monitoring via normally closed (N/C) contact switches.

Additional facilities included are a 12V/250mA auxiliary power source for the powering of additional items, such as strobes etc, and a battery back up facility to power the system in the event of the mains power supply failing.

3. UNPACKING THE SYSTEM

The ContractR range is supplied in one box. Please check to confirm you have the following contents:

- a. Steel case. The inside should have the mains transformer and main circuit board mounting lugs fitted to the back.
- b. Box containing the main circuit board.
- c. Installation pack containing fastenings, earth strap, spare fuse(s) and door lock release diodes.
- d. Instruction manual, pages 1- 26 inclusive.

Important Note: DO NOT fit the main circuit board into the case until the case has been installed, with all necessary cable entry holes drilled and all swarf and debris removed....See following Installation section.

4. INSTALLATION

4.1: Installing the Case

The installer should decide on the optimum position to site the system main circuit board taking into account the following factors:

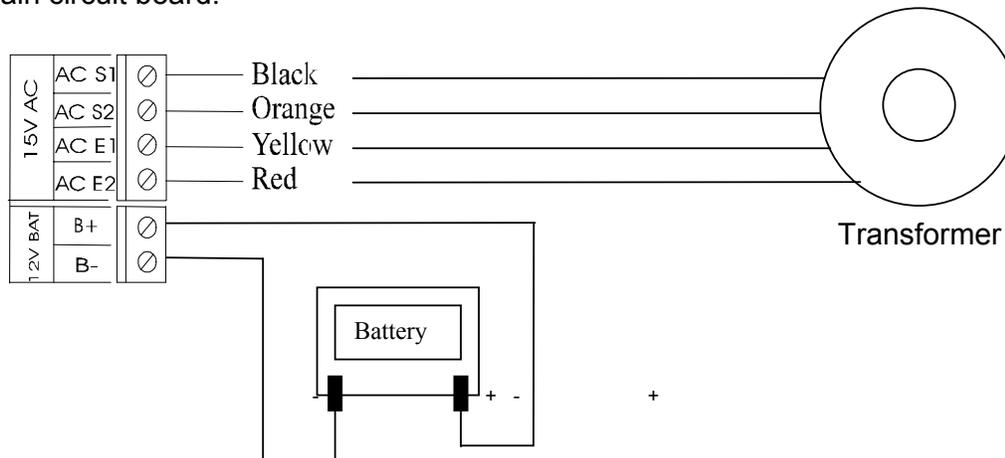
- The security of the system.
- Minimising the lengths of cable runs (especially CW1308).
- Accessibility for service.
- Current Edition of the IEE Regulations

An assessment of the cable requirements to the main circuit board should be made (ie how many dwelling handsets are to be connected) and, taking this into account, the case should be drilled for the cable access and the appropriate glands fitted. **Before drilling note the arrow on the case to ensure correct orientation, ie, the mains transformer should be situated to the lower left side of the case (see page 7).**

4.2: Installing the Main Circuit Board

Once a location is decided the steel case should be firmly attached to the wall. **Ensure the inside of the case is clean and free from any metal swarf or other debris.** The main circuit board can now be removed from its box and fitted onto its mounting lugs. Take note of the position of the mounting lugs in the case and orientate the main circuit board accordingly. Do not use undue force in this operation, the board should securely fit onto the lugs with gentle, firm pressure applied in the area adjacent to the mounting lugs.

Diagram showing connection of power to main circuit board.



Insert the connector from the mains transformer into the 15VAC socket on the main circuit board as shown in the diagram, taking note of the colour sequence.

5. WIRING THE SYSTEM

The success of an installation largely depends on the correct wire type being used, and the installation work being carried out by a competent person. It is the installer's responsibility to ensure that the correct wiring type is used and we will not be liable for any failure of the system where any deviation of these instructions has been made.

5.1: General Wiring & Cable Requirements

*The following wiring details and cable specifications relate to installing the ContractR series **without** any provision for spare conductors. Please note that many clients specify that installations must provide for a given percentage of spare conductors to allow for expansion of the system at a later date. It is the responsibility of the installer to check what the requirements of any particular installation are, and to increase the number of conductors in the cables accordingly.*

A working door entry control system involves the controlling main circuit board, and three other main components connected via cables to it. These are:

- a. The functional entrance panel.
- b. The handset in each dwelling.
- c. The door lock release controlling the access, and the door open monitoring switch.

Important Note:

Ensure earthing wire (cable A) has continuity between metal case, case lid and metal chassis of functional entrance panel(s).

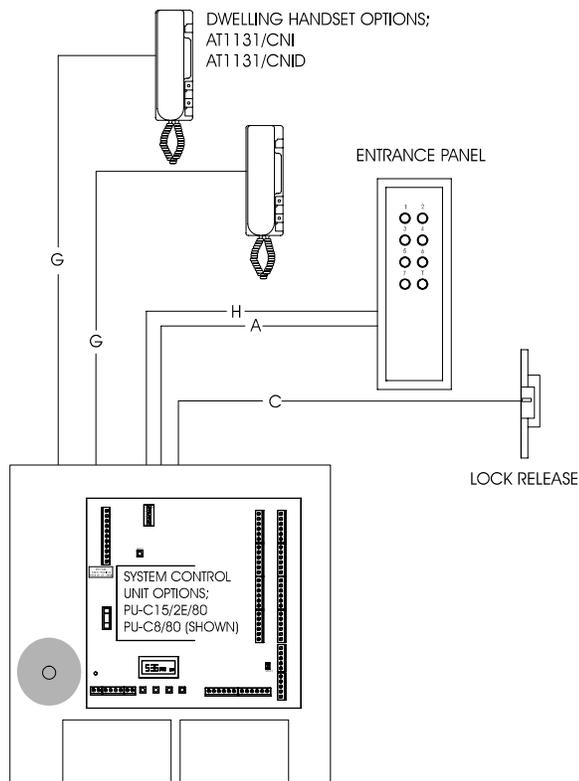
The model PU-C15/80/2E allows two functional entrance panels and up to fifteen dwelling handsets to be connected, giving access via two separate door lock releases.

The smaller model PU-C8/80 uses one functional entrance panel and up to eight dwelling handsets can be connected giving access via one door lock release.

5.2 Wiring Overview

For successful installation the following procedures should be carried out closely, using the correct cables as specified. The schematic below shows how the component parts of a system are connected.

Diagram showing wiring schematic of ContractR range, functional door entry system



Cable Specifications:

All multipair cables should be to CW1308 Specification unless otherwise stated.

Cable A: Single Earth (Chassis continuity)*

Cable C: 2x1mm² Single facility lock supply (Red & black)

Cable G: 8 Wire (4 pair) 0.5mm dia. Multipair cable (CW1308)

Cable H: multi pair cable to CW1308 specification.

Notes for Cable H

For model PU-C8/80, requiring up to eight call wires, 20 wire (10 pair) 0.5mm diameter multipair cable to CW1308 should be used. Maximum permitted cable run is 50m. For model PU-C15/80/2E which can require up to fifteen call wires, 30 Wire (15 pair) cable to the same specification should be used.

For the model PU-C15/80/2E where two entrance panels can be installed, each panel should be wired using its own dedicated cable run of CW1308 multicore cable.

*** Important Note:** Ensure earthing wire (cable A) has continuity between metal case, case lid and metal chassis of functional entrance panel(s).

Where CW1308 cable is specified the colour coding for the connections will be described as follows:

The **first** colour is the main predominant colour, and,

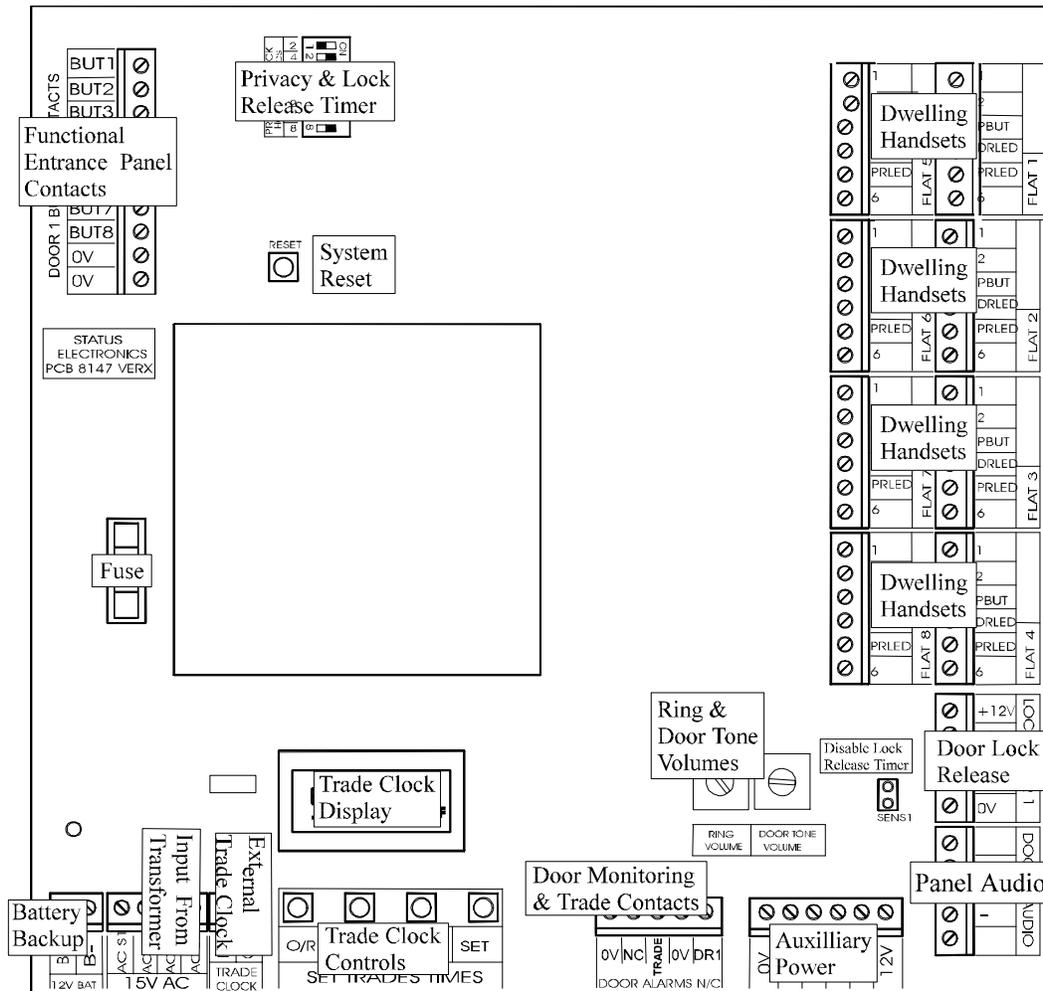
The **second** colour is the banding.

Therefore a wire described as 'Red of White' would be a red coloured wire with a white banding.

Connections to Model PU-C8/80

The diagram below shows where installation connections are made for the model PU-C8/80.

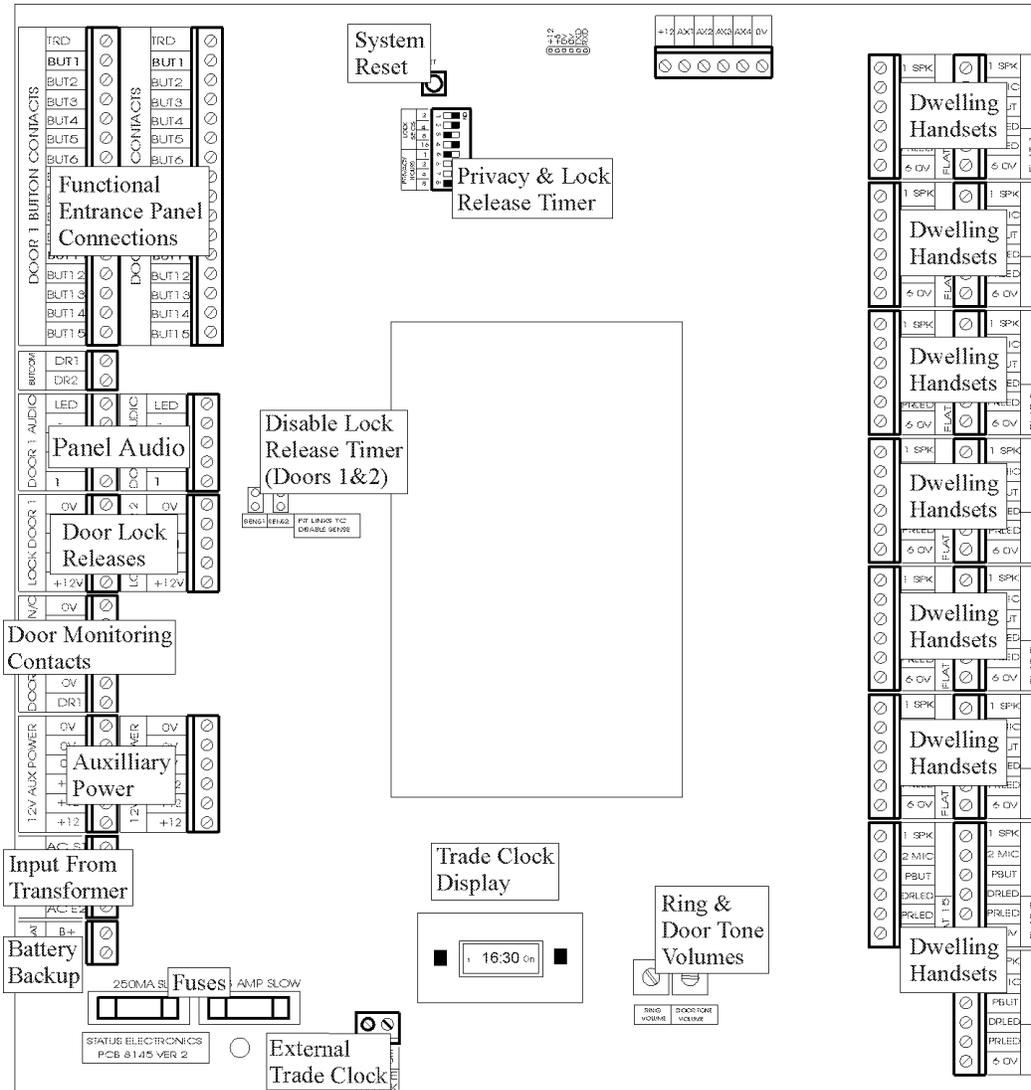
Diagram of ContractR model PU-C8/80 main circuit board layout.



Connections to Model PU-C15/80/2E

The diagram below shows where installation connections are made for the model PU-C15/80/2E.

Diagram of ContractR range model PU-C15/80/2E main circuit board layout



5.3: Functional Entrance Panel

The functional entrance panel comprises of the housing with the call buttons relating to each dwelling, plus the audio amplifier with microphone and loudspeaker used for two-way communication with the occupant and caller. For the model PU-C15/80/2E an 'Door Open' LED is incorporated and also a 'System Busy' LED for when two entrance panels are installed on the system.

5.3.1: Cable Information

For the model PU-C15/80/2E where up to fifteen dwelling handsets may be connected, CW1308, 30 wire (15 pair), 0.5mm diameter cable* should be used.

For the smaller model PU-C8/80 which accommodates up to eight dwelling handsets, CW1308 20 (10 pair), 0.5mm diameter cable* is sufficient.

**Refer to the note regarding spare conductors for system expansion on page 6.*

The maximum acceptable length for this cable is 50 metres. Lengths longer than this should be avoided as the voltage drop will lead to possible system malfunctions.

When connecting the entrance panel, please refer to the schematics on page 11 for the correct colour sequences.

Where CW1308 cable is specified the colour coding for the connections will be described as follows:

The **first** colour is the main predominant colour, and,

The **second** colour is the banding.

Therefore a wire described as 'Red of White' would be a red coloured wire with a white banding.

5.3.2: Panel Buttons

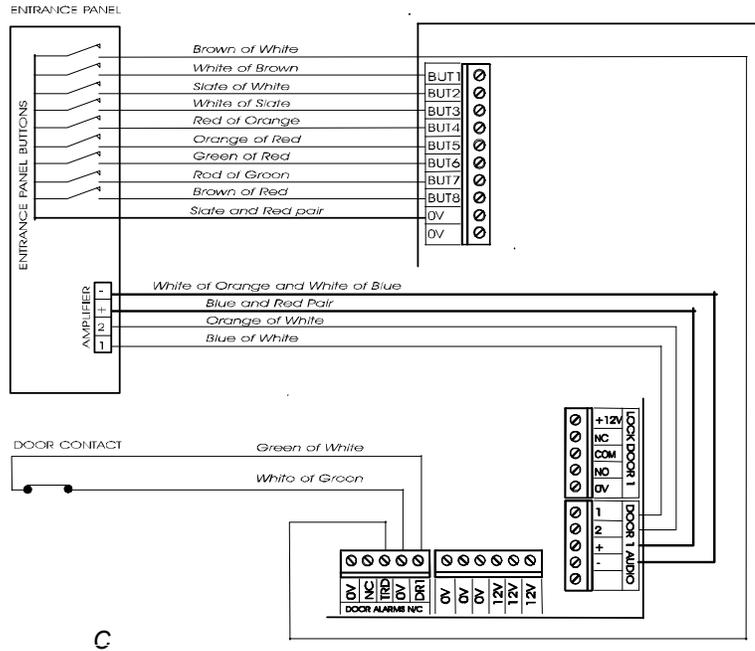
Entrance Panel Buttons Model PU-C8/80

Trade**	Brown of White
Button 1	White of brown
Button 2	Slate of White
Button 3	White of Slate
Button 4	Red of Orange
Button 5	Orange of Red
Button 6	Green of Red
Button 7	Red of Green
Button 8	Brown of Red
Common	Slate of Red and Red of Slate

Please note the common wire being made using both the Slate of Red and the Red of Slate wires to the 0V contact on the main circuit board. The doubling up of this wire is recommended otherwise a failure on this circuit will disable all the dwelling handsets.

Note: **Trade connection is made via the Trade contact on the 'Door Alarm' connecting block.

Diagram of Entrance Panel Connections, PU-C8/80.



C

Entrance Panel Buttons Model PU-C15/80/2E

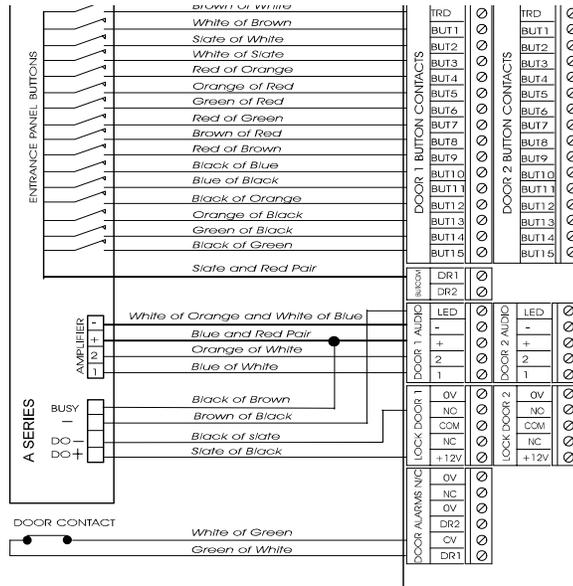
Trade	Brown of White
Button 1	White of Brown
Button 2	Slate of White
Button 3	White of Slate
Button 4	Red of Orange
Button 5	Orange of Red
Button 6	Green of Red
Button 7	Red of Green
Button 8	Brown of Red
Button 9	Red of Brown
Button 10	Black of Blue
Button 11	Blue of Black
Button 12	Black of Orange
Button 13	Orange of Black
Button 14	Green of Black
Button 15	Black of Green
Common	Slate of Red and Red of Slate

Two Panel Systems Only

System Busy	Brown & Black pair
LED	pair
Door Open	Black & Slate pair
LED	pair

Please note the common wire being made using both the Slate of Red and the Red of Slate wire to the 0V contact on the main circuit board. The doubling up of this wire is recommended otherwise a failure on this circuit will disable all the dwelling handsets.

Diagram of Entrance Panel Connections, PU-C15/80/2E.



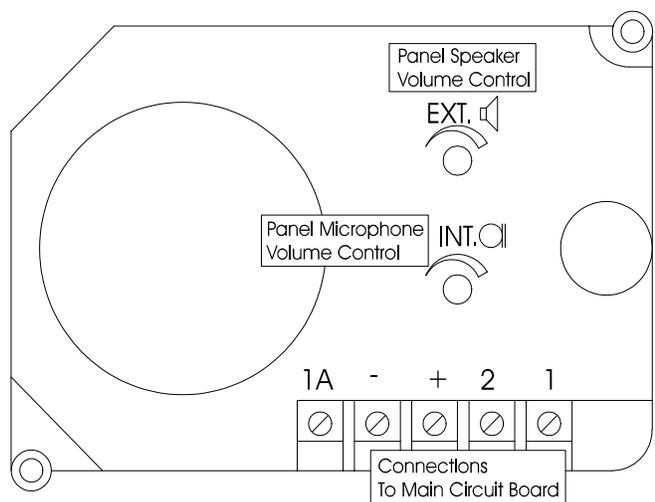
When a second entrance panel is being installed, wire as above to the second bank of door buttons and panel audio contacts on the main circuit board, using another length of 30 Wire CW1308 cable. The common wire for the second entrance panel buttons (Slate of Red and Red of Slate) should be connected to the DR2 contact.

“System busy” and, “Door Open” connections only apply when two functional entrance panels are installed. For these connections, use the 4-way terminal block marked, ‘A SERIES’ inside the functional entrance panel.

The ‘System busy’ LED should be connected via the Brown & Black pair, and the ‘Door open’ LED via the Black & Slate pair.

5.3.3: Panel Amplifier

Diagram of panel amplifier showing wiring connections



For the Model PU-C15/80/2E, if two entrance panels are to be connected, the second panel amplifier should be wired in exactly the same way as described, using a second length of 30 Wire CW1308 cable for the second panel.

Panel Amplifier (Speaker and Microphone)

The connection of the Panel Amplifier involves four terminals:

'1' (Mic), '2' (Spk), '+' (12V) and '-' (0V).

Note: Connection '1A' is not used in this installation.

Diagram of panel amplifier showing wiring connections.

The '+' (12V), and '-' (0V) connections are made using twisted pairs of wires, and so a total of six wires from the CW1308 cable are required.

The connections should be made as follows:

Panel Amplifier Terminal	Connecting Wire	Main Circuit Board (Marked Door Audio)
1	Blue of White	1
2	Orange of White	2
+ (Plus Symbol)	Blue of Red and Red of Blue	+
- (Minus Symbol)	White of Orange and White of Blue	-

Please Note: The doubling up of connections to the 12V and 0V terminals is recommended and reduces the power losses on this circuit.

In addition the Green of White and the White of Green wires from the CW1308 cable can be utilised for the Door Monitoring system. This is comprehensively covered under the 'Door Lock Releases' section.

5.4: Dwelling Handset Connection Wiring Details

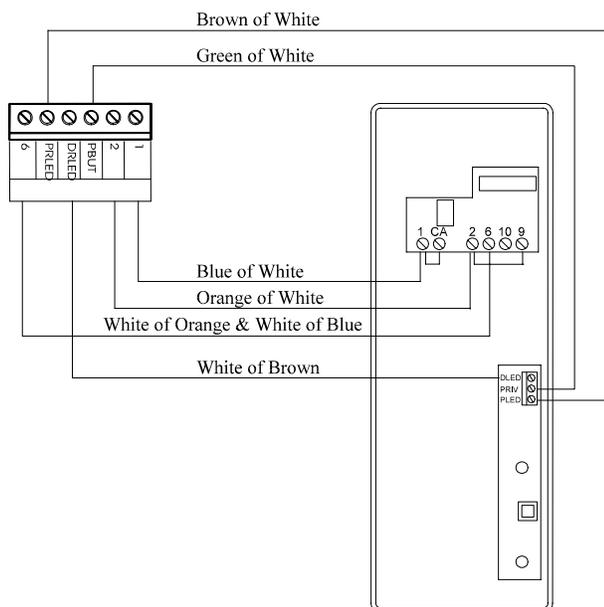
Each dwelling can be installed with a handset equipped with:

- a) A door release button.
- b) A privacy button which prevents the handset being called from the entrance panel until either a predetermined time has elapsed (settable on the main circuit board...see, 'System Setup'), or the occupant switches the facility off (AT1131/CN).
- c) An indicator LED which indicates the privacy facility has been activated (AT1131/CNI).
- d) A door monitoring LED which flashes on door lock release and stays on permanently whilst the door is open to indicate door release and door open, respectively (AT1131/CNID).

A **maximum of three** handsets can be fitted to any one extension. Check which handsets are being installed and which features require connection to the main circuit board.

The diagram below shows a schematic of the connection of the handset to the main circuit board.

Diagram showing schematic of handset to main circuit board connection



Handset AT1131

Features: Standard handset. Note links between, '1' & 'CA' and, '2' & '9'.

Handset AT1131/CN

Features: Standard handset with privacy button.

Handset AT1131/CNI

Features: Standard handset with privacy button plus LED indication.

Handset AT1131/CNID

Features: Standard handset with privacy button plus LED indication and Door Monitoring LED.

Note: Connection of, DRLED, PBUT and PRLED (main circuit board) to DLED, PRIV and PLED (handset) only applicable when fitting a handset equipped with the relevant Privacy/Indicator and Door Monitoring features.

5.4.1: Cable Information

Each dwelling handset requires connection via a CW1308, eight wire (four pair) cable*.

The following connections from the main circuit board to handset are required:
'1' (Spk), '2' (Mic), 'PBUT', 'DRLED', 'PRLED' and '6' (0V).

Connection to the handset should be made as follows:

Main Circuit Board Connection	Connecting Wire	Handset Connection
1	Blue of White	1
2	Orange of White	2
PBUT	Green of White	PRIV
DRLED	White of Brown	DLED
PRLED	Brown of White	PLED
6	White of Orange and White of blue	6

Please note the doubling up of the 0V terminals. This is advisable as the additional screening of the cable provided by the two wires reduces noise on the line and improves voice quality.

Please Note: The wiring details and cable specifications relate to installing the ContractR series **without any provisions for spare conductors. Please note that many clients specify that installations must provide for a given percentage of spare conductors to allow for expansion of the system at a later date. It is the responsibility of the installer to check what the requirements of any particular installation are, and increase the number of conductors in the cables accordingly.*

5.5: Door Lock Releases

Door lock releases fall into two distinct types: Fail Safe (fail unlocked), and Fail Secure (fail locked). It is absolutely vital that the installer identifies which is the type of release specified to be fitted, and ensures that the correct type is installed with the correct method of connection to the system.

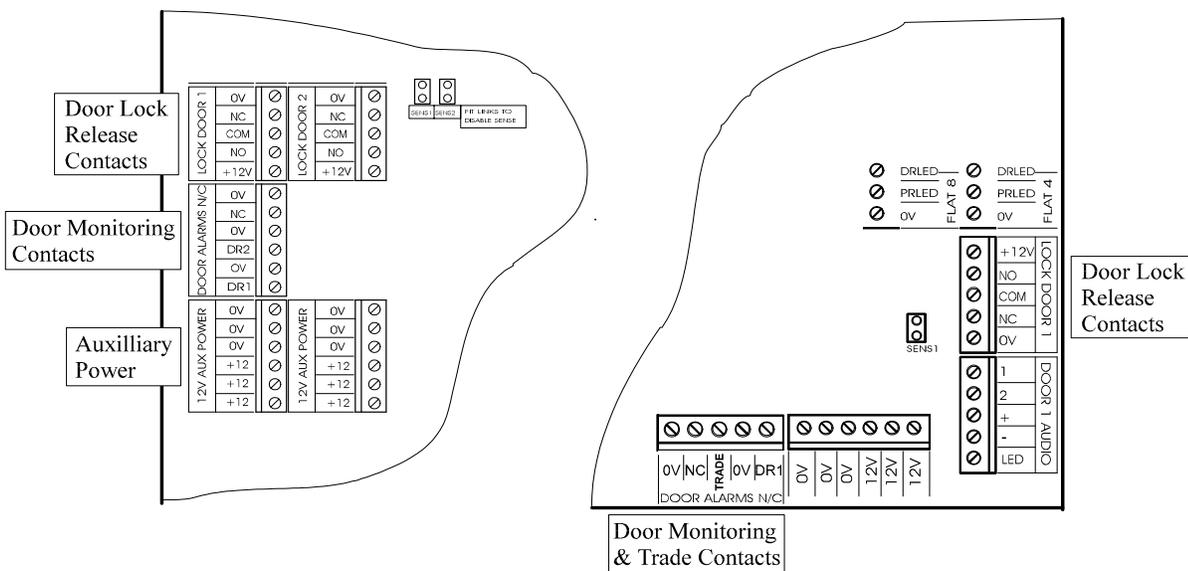
Important Note: The maximum current that the system can provide through any one lock circuit is 0.75 amps. It is the installer's responsibility to ensure that this limit is not exceeded. Currents in excess of this can lead to damage of the system and possible malfunction. Planit Security Contracts Limited., will not be responsible for damage caused where these limits have not been adhered to.

A *Fail Safe (fail unlocked)* door lock release requires power to be applied to it continuously for the door to remain locked. Should power be removed, either as a result of a power cut or from a flat occupant pressing the lock release button on a handset, then the lock will release.

A *Fail Secure (fail locked)* door lock release will deny access in its passive state, ie, it requires power to be applied to enable access. A power cut will therefore result in the door remaining in the locked, or secure state.

The diagram below shows the area of the main circuit board on both models where the door lock release and door monitoring connections are made.

*Diagram of ContractR range main circuit board lock release connections.
Model PU-C15/80/2E Model PU-C8/80*



Important note: The models PU-C15/80/2E & PU-C8/80 have different board legends for door lock release. Please refer to the main circuit board legends for the relative orientation of the contacts and ensure the correct connections are made.

5.5.1: Lock Cable Information

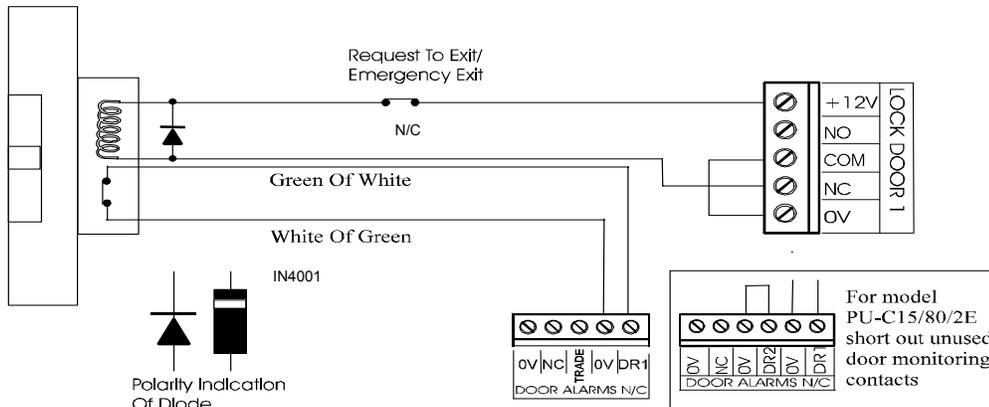
The cable to each door lock release should be two core with a diameter of at least 1mm on each conductor. To ensure reliable operation, the cable run between lock release and main circuit board should take into account the need to minimise any voltage drop. The maximum voltage drop allowed on this circuit is 2V.

5.5.2: Fail Safe (fail unlocked) Lock Release Connection

For the fitting of 'Fail Safe' type door lock releases, the connection of the lock release to the main circuit board should be made as follows:

NB: Conductors to door lock release must be a minimum of 1mm diameter.

Diagram of fail safe lock release connections (model PU-C8/80 shown) to 12V and N/C terminals, also showing link between 0V and common terminals and orientation of protecting diode.



The diode is to protect the main circuit board from back EMF on lock release. It should be fitted as close to the lock as possible, *not* in the main circuit board terminals. Ensure correct polarity of diode. Unused door monitoring contacts on model PU-C15/80/2E **MUST** be shorted by a link as shown in the diagram (see section on Door Monitoring Contacts for further information).

Please note that the N/C and N/O contacts on the relay refer to the relay in the powered up state, ie when power is applied to the main circuit board . In the unpowered state the contacts are reversed. In practice, this has no effect on the wiring details, but acts as an extra safety feature in that a system failure or malfunction would switch off power to a Fail Safe lock release, allowing access.

In addition to the wiring layout shown in the diagram, the relay contacts N/C, Common and N/O can be used as clean switching contacts, to a maximum rating of 30V DC @ 2A.

5.5.3: N/C Request To Exit Switches

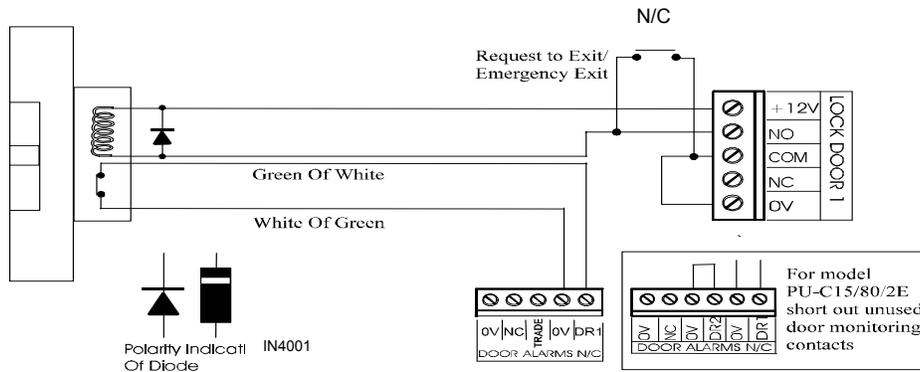
The normally closed (N/C), 'Request To Exit' switch should be wired in series with the lock on the 12V supply. As shown in the door lock wiring diagram, these switches are specified as single pole. Activation of the switch will also activate the door release timer (Unless 'disable lock sensing' enabled, see section 6.7, page 28/29).

5.6: Fail Secure (fail locked) Lock Release Connection

For the fitting of Fail Secure type door lock releases, the connection of the lock release to the main circuit board should be made as follows:

NB: Conductors to door lock release must be a minimum of 1mm diameter.

Diagram of fail secure door lock release connections (model PU-C15/80/2E shown) to 12V and N/O terminals, also showing link between 0V and common terminals and orientation of protecting diode.



The diode is to protect the main circuit board from back EMF on lock release. It should be fitted as close to the lock as possible, *not* in the main circuit board terminals. Ensure correct polarity of diode. Unused door monitoring contacts **MUST** be shorted by a link as shown in the diagram (see section on Door Monitoring Contacts for further information).

Please note that the N/C and N/O contacts on the relay refer to the relay in the powered up state, ie, when power is applied to the main circuit board. In the unpowered state the contacts are reversed.

In addition to the wiring layout shown in the diagram, the relay contacts N/C, Common and N/O can be used as clean switching contacts, to a maximum rating of 30V DC @ 2A.

5.6.1: N/O Request To Exit Switches

The normally closed (N/O), 'Request To Exit' switch should be wired in series with the lock on the 12V supply. As shown in the door lock wiring diagram, these switches are specified as single pole. Activation of the switch will also activate the door release timer (Unless 'disable lock sensing' enabled, see section 6.7, page 28/29).

5.7: Door Monitoring Contacts

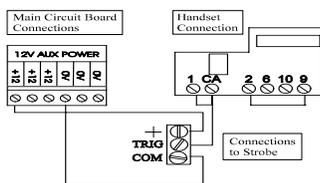
The door monitoring facility enables occupants in every connected flat to be aware when the door lock release has been activated and when the door has actually been opened. The monitoring system works on a normally closed (N/C) system. On activation of a door release command from a dwelling handset, the door monitoring LED will flash.

When the door is opened and the switch contacts broken, the monitoring LED on all dwelling handsets will remain continuously illuminated indicating that the building is insecure until the door is closed and the contacts revert back to their N/C state. For simplicity of installation it is possible to use two wires from the CW1308, 30 Wire cable that connects the functional entrance panel to the main circuit board, although the actual connections in this case are from the main circuit board to the door contacts. Refer to the diagrams Re: Fail Safe & Fail Secure connections for Door Monitoring wiring connections. **Ensure any unused door monitoring contacts are shorted out with a link.**

To use this cable, the Green of White and White of Green wires should be used, connected to the 0V and DR1/DR2 terminals (DR2 terminal only available on model PU-C15/80/2E). A connector block can then be installed inside the functional entrance panel where the wires can be extended to the door contacts.

5.8 Strobe Connection

Diagram showing connections for strobe

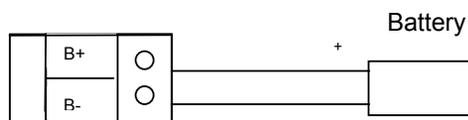


Additional equipment such as a strobe to alert deaf or the hard of hearing residents can be installed. In this instance power can be supplied from the 'Auxiliary' contacts on the main circuit board, with a trigger from the 'CA' Connection on the handset (see diagram).

5.9: Battery Back Up

Both models in the ContractR range feature battery back up, whereby the system will run from the back up battery (not supplied). The battery will automatically be recharged by the system on the restoration of the mains supply. It is the installer's responsibility to fit a suitable battery, which should be of the following specification:

Type: Sealed lead acid
Voltage: 12V
Capacity: 6Ah



The back up battery should be connected to the main circuit board via the contacts marked, '12V BAT'. Ensure correct polarity, ie, '+' to '+' and '-' to '-'.

A 12V 6Ah battery will provide **standby only** power for approximately 4 hours when fully charged. This time will be reduced by lock release and system traffic current consumption.

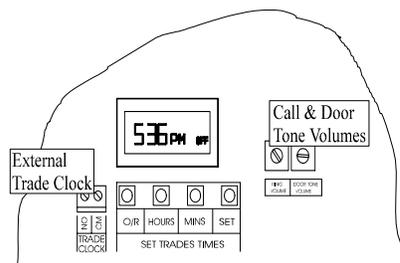
6. CONFIGURATION & SYSTEM SETUP

Important Note! In operation, the heatsink on the main circuit board will be hot!

6.1: Call & Door Tone Volume Controls

The system uses a 'reassurance' tone from the panel which confirms to the caller that the required dwelling is being contacted following the pressing of the appropriate button on the entrance panel. On being called the dwelling handset will produce a tone to alert the dwelling occupant to the call. In addition, a further tone is produced by the panel upon the door lock being released, to indicate to the caller that access is now possible. Both the entrance panel and handset tone volumes can be set by the relevant rotary potentiometer controls as indicated in the diagram. Turn clockwise to increase volume, anti-clockwise to decrease.

Diagram of main circuit board showing tone volume controls for panel & handsets.



6.2: Microphone & Loudspeaker Volume Control

On answering a call, the dwelling occupant can have a full duplex conversation with the caller (full secrecy of speech means that other dwelling handsets cannot be used to listen to this conversation). The volume of this conversation can be set by adjustment of the Microphone and Loudspeaker volume controls in the functional entrance panel amplifier

Volume is increased by turning each potentiometer in a clockwise direction, volume reduced in an anti-clockwise direction (see diagram on page 13).

6.3: Trade Clock 8 Way ContractR

The ContractR system is fitted with a trades clock which in normal operation displays the current time in 24 hour format.

An indicator at the top-left corner of the clock is lit to show whether the current time is within a trades period (left-hand indicator).

Adjusting the Clock

Commissioning Notes

If the ContractR system is being commissioned for the first time, it is necessary to adjust the position of a link on the main circuit board depending on whether the internal or an external trades clock is being used. If the internal trades clock is fitted, the link marked CS1 (situated to the left of the clock) must be fitted to the centre and right-hand pins (C & IN). If an external trades clock is fitted, the link must be fitted to the centre and left-hand pins (C & EX). Note that with an external clock selected, the internal clock will not display the time. When power is first applied to the ContractR, the circuitry performs a test of the clock. If the on-board battery has expired due to long storage, the clock may not operate correctly in which case the word "FAIL" will appear on the display 4 seconds after power is applied. If this happens, proceed as follows:-

Switch off mains power and disconnect the 12V battery (if fitted). Remove the jumper JP33 (marked "CLOCK - CONN BATT"). Switch the mains back on and observe the display for 4 seconds. If FAIL is indicated again, cycle the power once more. If any other characters appear on the display, the clock is functional and needs to be reset. Replace jumper JP33.

Resetting the Clock

Depress the PROG button above the clock. A small red light will appear between the first and second digits of the clock display to confirm that you have entered program mode. Press the OR button down and, while holding this button down, press SET. The display will read 0000. Now press PROG again. The small red light will extinguish.

Setting Current Time

Step 1.

Depress the PROG button above the clock. The clock will still display the current time but with the first LED indicator on the clock lit.

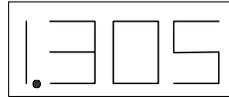
Note: At any time during the following procedure, the PROG button may be pressed again to leave program mode. The programming procedure may then be restarted by pressing PROG again to re-enter program mode.

Step 2.

Press the HOURS button until the correct hour is shown. Remember that this is in 24 hour format.

Step 3.

Press the MINS button until the correct minutes are shown.



In this example the time is now set to 13:05.

Setting the Date

Step 4.

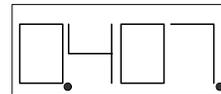
Press the SET button. The clock will display the current date and the first and last LED indicators on the clock will be lit.

Step 5.

Press the hours button until the correct month is shown on the first two digits of the display.

Step 6.

Press the minutes button until the correct date is shown.



In this example the date has been set to April 7th (0407).

Setting the Year

Step 7.

Press the SET button again. The clock will display the current year and day of week, and the second and third indicators on the clock will be lit. Note the date of the week (01 to 07) does not affect system operation and is there for your convenience only.

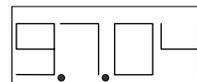
Step 8.

Press the HOURS button until the correct year is shown on the first two digits of the clock.

Step 9.

Press the MINS button until the correct day of week is shown on the second two digits of the clock.

In this example the day has been set to Thursday (9704). The year only shows the last two digits for information use only.



Setting The Trades Times

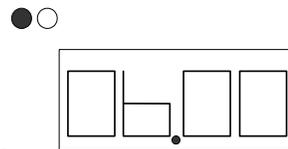
The clock supports three distinct periods when trades access is allowed. These periods are referred to as Trades-1, Trades-2 and Trades-3.

Step 10.

Press the SET button again. The clock will display the current Trades-1 on time. Note that the second indicator on the clock is lit to indicate a Trades-1 time and the left-hand indicator above the clock is lit to indicate that this is an 'on' time.

Step 11.

Press the HOURS button until the correct hours are shown, then press the MINS button until the correct minutes are shown.



In this example the Trades-1 on time has been set to 06:00.

Step 12.

By pressing the O/R button, it is possible to enable and disable this trades period. The right-hand indicator above the clock is lit when this trades period is enabled.

Step 13.

Press the SET button again. The clock will display the current Trades-1 off time. Note that the left-hand indicator above the clock is no longer lit to indicate an 'off' time. Press the HOURS and MINS buttons until the correct Trades-1 off time is displayed. Note that the O/R button has no effect when adjusting the 'off' time.

Step 14.

Repeat Steps 10 to 13 to enter the Trades-2 times.

Step 15.

Repeat Steps 10 to 13 once more to enter the Trades-3 times.

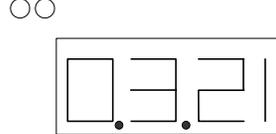
Setting British Summer Time Dates

Step 16.

Press the SET button again. The clock will display the current BST start date. Note that the first and second indicators on the clock are lit.

Step 17.

Press HOURS until the correct month is shown, then press MINS until the correct date is shown.



In this example, the date has been set to March 21st (0321)

Step 18.

Press the SET button again. The clock will display the current GMT start date. Note that the third and fourth indicators on the clock are lit.



In this example, the date has been set to October 21st (1021).

Step 20.

Press the PROG button to leave set mode. The clock will display the current time. Finally, press RESET to re-start the system.

Note: This clock DOES NOT have a manual trades override button.

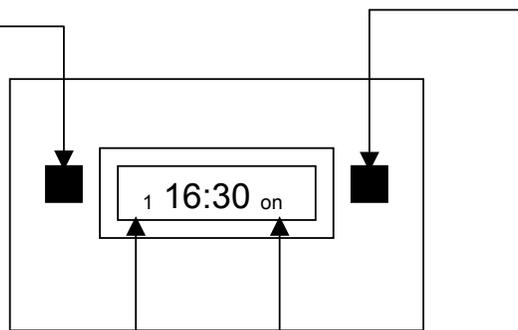
6.4: Trades Clock 15 Way ContractR

Change Button

Sets hours and minutes and self cancelling override

Programme Button

Used to select the clock time and the 4 ON/OFF programme times and to review the once set



Programme 1-4 indicator

ON/OFF

Output Status

Showing unit either

Programming

Only two setting buttons are required to change and program. In normal use the change button is used to manually override the clock. (Switch trades on and off outside trades on period). If override button is left on it will be reset by the next programmed on and off time.

The program button is only used when setting or adjusting the clock time or the 4 programmable on/off times, although it can be used to review the on/off times once they have been set.

By pressing the program button the clock hours begin to flash then by pressing the program button again the minutes begin to flash then as before by

pressing the program button you are able to change the 4No. programmable on-off times. Wherever the hours or minutes are flashing they maybe set using the change button. Once times have been set the program button is pressed again to proceed to the next stage.

Normal Operating Mode

In normal operation the time clock will display the correct time with the colon flashing. The output status will be shown by either ON or OFF on the display.

1. To Reset Display

To clear programmes from memory and reset the time controller, press and hold down both buttons until the display goes blank. Release the buttons and the display will fill with its complete range of characters and then clear to show the clock and hour digit flashing.

You are now in the clock setting mode at the beginning of the programming sequence.

Programming sequence

Setting Clock Time.

Programme 1 ON.	Programme 1 OFF.
Programme 2 ON.	Programme 2 OFF.
Programme 3 ON.	Programme 3 OFF.
Programme 4 ON.	Programme 4 OFF.

Note:

Button pauses greater than 1 minute will result in automatic return to the operating mode.

2. Setting Clock (after reset)

- a. **Hour Setting**-Press the change button to advance the hour setting. Note: For rapid hour elections press and hold down the change button.
- b. **Minute setting**-Press the program button once to select the minutes-Display shows clock symbol and minute digit flashing. Press the change button to advance the minutes setting. Note: For rapid selections press and hold down the change button.
- c. Press program button once-Clock is now set and display now shows ready for the first ON programme time with ON and hour digits flashing.

3. To Set Programme ON/OFF Times (after clock setting)

At Programme 1 ON Time

- a. Press change button to advance the hour setting.
- b. Press program button once to select the minute time- Display shows minute digit and ON flashing. Press change button to advance the minute setting.
- c. Press program button once –The first ON time is now set and display shows ready for the first OFF time.
- d. Now set the hours and minutes as explained before.
- e. Repeat steps i. to iv. To set the remainder of the 3 ON/OFF times as required. Note: Any unused ON/OFF programmes should be skipped until the display shows normal operating mode. **DO NOT** programme '0's into unused programmes.

4. Programme Review

To fast review the set programmes or for quick exit to normal operating mode press and hold the programme button.

5. Initiating Programme Mode

This can be initiated at any time during the normal operating mode. Press programme button and the clock, hours and minute symbols on the display will flash; this is the review mode. If any change to programmes is required press change button to initiate programme mode and then follow steps 2 and 3.

6. Cancelling Programmes

Any ON/OFF programme can be cancelled by clearing its ON and OFF time. Follow step 5 and when into ON or OFF programme to be cancelled press the change button until the hour digit shows '- -' then press the program button to clear the programme. The display will show hour and minute digits and ON or OFF flashing.

7. Self Cancelling Override

To change the output status from ON to OFF or vice versa during normal operation press the change button. The output status will change and indicate override is in operation by flashing

Note: This clock DOES HAVE a manual trades override button.

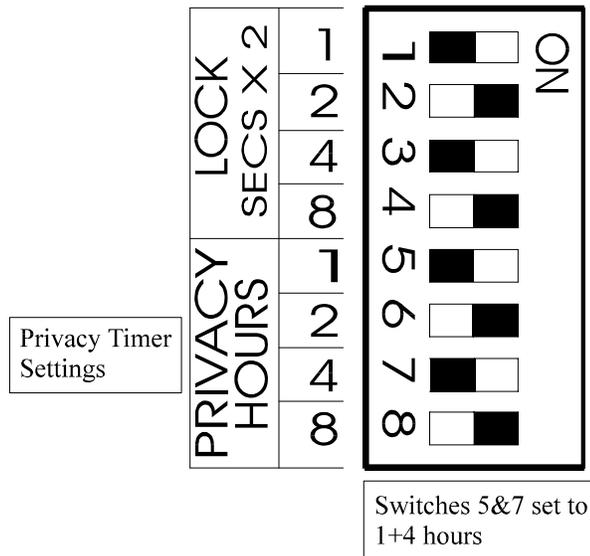
6.5: Privacy Function Timer

The ContractR range allows for each handset user to disable and restore the call function from their handset. An LED illuminates when the privacy function facility is in use as a reminder to the handset user that they are not accessible (Note: This function is only applicable on handsets equipped with a privacy function).

In addition, the system also incorporates a timer which will restore the call function to any handset after the privacy function has been in operation for a predetermined time. This prevents a handset user from accidentally forgetting that the call facility has been disabled and remaining permanently unobtainable.

The system default timer is set on the main circuit board by means of four DIL switches. Note that the switches are coloured white (see diagram).

Diagram of DIL switch set for five hours.



Time is selectable as 'building blocks' of 1, 2, 4 and 8 hours. This makes a total allowed time for the Privacy function of, 1+2+4+8=15 hours. Switches are set by moving them away from the main circuit board legends, ie, towards the 'ON' inscription on the DIL switch itself.

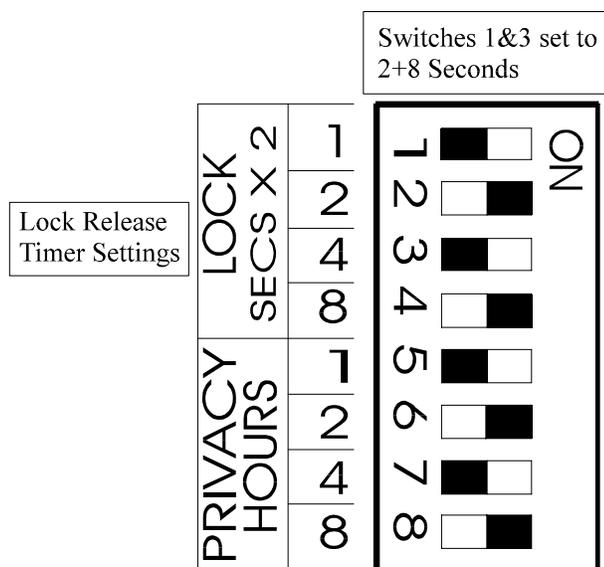
In the diagram the time is set at five hours (1+4 hours selected).

If all switches are set to the left, ie, no time selected, then the privacy time will be controlled directly via the user handset.

6.6: Lock Release Timer

The lock release timer sets the duration in seconds that the door lock will be released when either a dwelling handset or a 'Request to Exit' (RTE) switch allows access. The timer is set on the main circuit board by means of four DIL switches. Note that the switches are on the same 8 eight pin DIL switch as the Privacy function default timer, and are coloured white in the diagram.

Diagram of DIL switch set for 10 seconds.



Time is selectable as 'building blocks' of 2, 4, 8 and 16 seconds, which are then multiplied by a factor of 2. This makes a total allowed time for the door release function of, $2+4+8+16=30$ seconds. Switches are set by moving them away from the pcb legends, ie, towards the 'ON' inscription on the DIL switch itself.

In the diagram the time is set at 10 seconds (2+8 seconds selected).

6.7: Disable Lock Release Sensing

The lock sensing capability is responsible for the timed access following the initial release of the door lock. When the circuit is broken, by a 'Request to Exit' momentary switch for example, a current sensing circuit monitors the current drop in the lock circuit, and then automatically withholds power to this circuit for the set lock release time.

However, in installations where the system has to control several locks or a high power locking mechanism (ie a barrier), the ContractR main circuit board may not have sufficient power, and a secondary, relay powered lock circuit would be required. The ContractR main circuit board would then only be required to control the comparatively very low current of the switching relay.

In this example, if the lock circuit from the main circuit board is only driving a relay then the current is likely to be reduced to below the sensing threshold of the lock sensing circuit. The undesirable effect of this would be that the door release timer would be permanently on and the door would remain in an unsecured state.

The disable lock sensing facility allows the current sensing circuit to be disabled. This is achieved by installing a link over the two pins marked, 'SENS' on the main circuit board. For the ContractR model PU-C15/80/2E where two door lock releases may be controlled two sets of pins marked 'SENS1' and 'SENS2' are provided.

Please Note: If this facility is disabled, the access will only be available for the duration the momentary switch is depressed, ie, a short time period. It is important, therefore that the circuit directly powering the locks has its own lock sensing circuit to allow a timed access on lock release.

6.8: System Reset

The system reset will cancel all handset activated functions (ie, privacy). The system reset button does not effect the programmed privacy time, and this function will be available immediately following system reset.

7. Specification

Power requirements:	230V AC, Continuously wired supply.
Main Circuit Board Supply:	12V @0.75A DC Lock Supply. 12V @ 0.5A Auxiliary Supply.
Lock Timer	2-30 Seconds Safe/Secure switching.
Trades Clock:	24Hour, with three time periods per 24 hours.
Fuses:	PU-C15/80/2E: 250mA Slow Blow 20mm. 3A Slow Blow 20mm. PU-C8/80: 2A Slow Blow 20mm.

8. ContractR Range Ordering Information

The following list is a selection of the extensive product support for the ContractR range. Planit Security Contracts Limited can supply systems tailored to most applications. Please contact us at the number below to discuss your requirements.

<u>Description</u>	<u>Product Code</u>
System controller with provision for up to 15 telephone handsets & two entrance panels. Supplied with standard steel case with provision for 12V, 6Ah battery.	PU-C15/80/2E
As above in IP65 rated cabinet with standard locks.	PU-C15/80/2E/S
As above in IP65 rated cabinet with high security 'SID' locks.	PU-C15/80/2E/SL
System controller with provision for up to eight telephone handsets. Supplied with standard steel case with provision for 12V, 6Ah battery.	PU-C8/80
As above in IP65 rated cabinet with standard locks.	PU-C8/80/S
As above in IP65 rated cabinet with high security 'SID' locks.	PU-C8/80/SL
12V, 6Ah sealed lead acid battery.	PUA12-6
Telephone handset with lock release switch.	AT1131
As above with privacy switch.	AT1131/CN
As above with addition of privacy 'On/Off' indicator.	AT1131/CNI
As above with addition of door monitoring indicator.	AT1131/CNID
Strobe lamp for hard of hearing applications. Clear lens.	ATA1121/CLR/C
Extension call tone sounder.	ATA9854/40/C
Entrance panel amplifier	EPA5150/500

Planit Security Contracts Limited also supply a wide range of functional entrance panels and lock release units to suit this product in various applications. For further information please telephone your enquiry to:

01268 548248

Or fax your enquiry to us on

01268 548257

Please note: Enquiries can only be dealt with during normal working hours.

9. COMMISSIONING CHECK SHEET

Please note: Completion of this check sheet does not replace, negate or modify any contractual or legal obligations of the installer, including compliance with specific installation specifications or requirements as detailed in the Installer's Handbook supplied with this product.

CLIENT _____

SITE ADDRESS _____

CHANNEL	DWELLING	OPTIONAL					RESIDENT'S SIGNATURE	DATE
		AUDIO	LOCK RELEASE	PRIVACY SWITCH	PRIVACY INDICATOR	DOOR MONITORING INDICATOR		
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

	CALL BUTTONS	LOCK TIMER	AUDIO	SYSTEM BUSY
ENTRANCE 1				
ENTRANCE 2 (OPTIONAL)				

TRADES TIMES SET TO	(1)	:	TO	:
	(2)	:	TO	:
	(3)	:	TO	:

Commissioning Engineer _____ Signature _____

Commissioning Company _____ Date _____

10. Door Entry Telephone Instruction Leaflet

When the door entry telephone rings, pick the handset up. You will be able to speak to your caller in the same way as a normal telephone. To allow your caller to enter, release the door as instructed below.

1) To release the door.

Press the 'Lock Release' button. The red 'Door Open Indicator' will flash to confirm you have released the door for your visitor.

2) Door open indicator.

Upon the door being opened by the visitor, the 'door open' indicator will change from flashing to being constantly illuminated.

The light will stay on until the door has been securely closed.

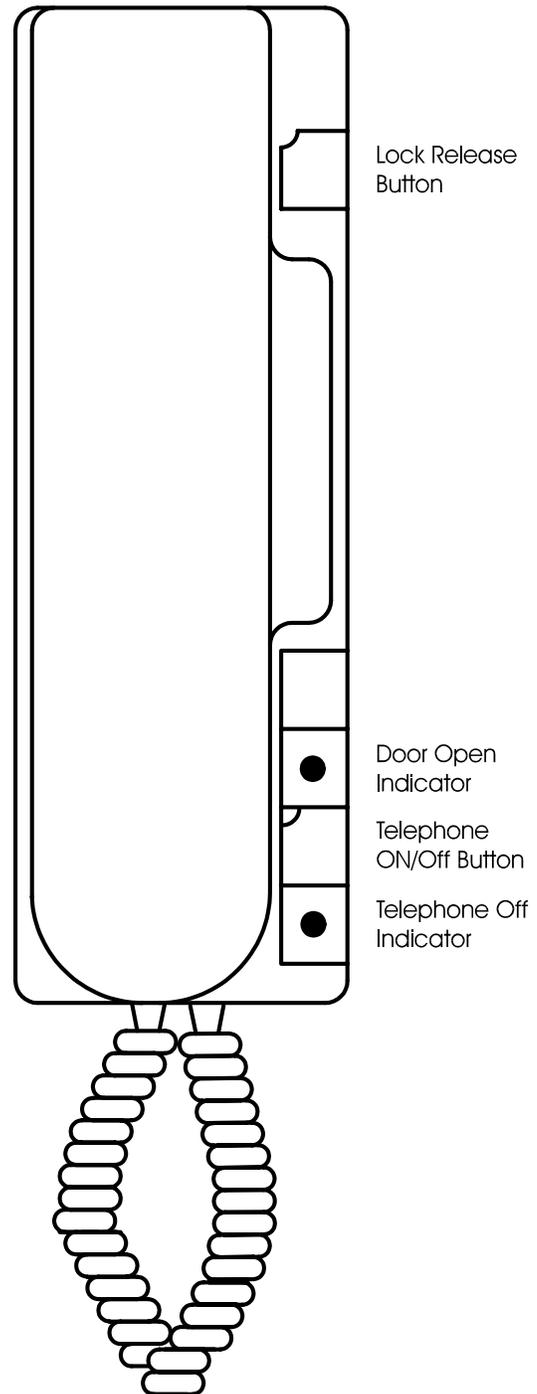
3) To switch the telephone off.

To switch the telephone off to give privacy from incoming calls, press the 'Telephone On/Off' button. The green 'Telephone Off' indicator will illuminate and the telephone will now be switched off.

No calls can be received when the 'Telephone Off' indicator is illuminated.

4) To switch the telephone back on.

Press the 'Telephone On/Off' button until the 'Telephone Off' indicator extinguishes.



Ten30/nid