

# **D200+ Auto-Dialler Installation/Operators Manual**

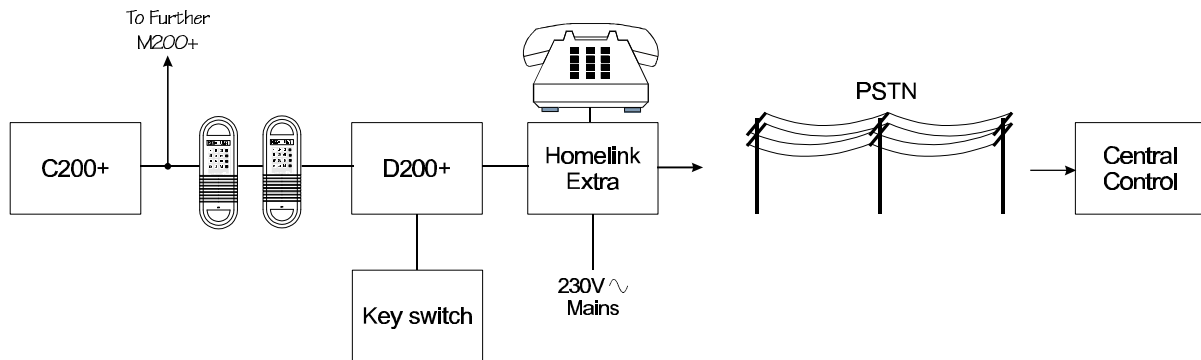
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## General Description



The D200+ Communicator in conjunction with the Scantronic Homelink Extra is designed to interface a Master 200+ Wardens Call System to an off-site Central Monitoring Station via the public telephone network (PSTN). When the Communicator is activated by a keyswitch, Emergency Alarm Calls will be automatically routed to this Central Station, where staff can then converse with the resident and determine the necessary course of action. Thus a number of M200+ sites can be efficiently covered by a few centrally located staff, either permanently or during limited hours, as required.

The Homelink Extra unit is mains powered (with battery backup) and connects to a standard telephone socket.

**Note** The Homelink Extra unit is a special variant developed exclusively for use with the D200+ communicator.

## Central Station Protocols

The following protocols are currently supported:

- Scantronic (Fast Format) (Model 6200 Receiver)
- Tunstall (Models subject to individual verification testing)
- SATA ( BS7369)

## Countries With Approval

The Scantronic Homelink Extra is currently approved in the following countries;

UK            Part No. 02020UK-05

Belgium     Part No. 02020B-05

Spain        TBA

France      TBA

Holland     TBA

Additional countries may gain approval in the future, please contact your supplier for a full list.

## Operational Description

### Switching Between Local and Central Control

The Master 200+ system can be switched between Local operation and Central Monitoring by a key switch (or another device) connected to the D200+ KSW input. The system will not switch to Central Control until all speech communication has terminated. Any attempt to use a Master or Monitor station whilst in Central mode will result in the room unit displaying CENTRAL CONTROL for 2 seconds. If the key switch is turned off while a call is in progress, the system will remain in Central mode until the call has been completed.

### Presence Lamp

An optional presence lamp can be fitted, usually adjacent to the keyswitch, to indicate that the system is under central control.

### Line-Failure Output

The D200+ has an output which will operate in the event of a telephone line failure. The output should be used as an indication that central monitoring is not currently possible, and an engineer must visit the site to rectify the fault. It is strongly recommended that the line fail output be connected to one of the following:

- A sounder or Indicator to alert on site maintenance staff.
- A secondary (speech less) auto-dialler which uses a separate telephone line to alert an off-site engineer.

The line-failure output can be delayed before activation (to avoid calling an engineer for transitory faults) see page 15.

## **Processing an Alarm Call**

When an alarm call is made, the D200+ unit transmits the call details to the Homelink Extra unit. The Homelink Extra then dials the Central Monitoring Station and waits for the connection to be established. The Central Monitoring receiver will display the Site Code and Room Unit Address to the operator who must then 'accept' the call to establish a speech connection. The operator must press the 'talk' button to speak to the resident and release again to listen.

When the conversation is finished, the operator can terminate the call by pressing 'shutdown'; should the operator fail to terminate the call, it will automatically disconnect after 2 minutes.

## **GroupMaster 200+ Software**

When using GroupMaster 200+ software and a D200+, only these alarm calls made within the group containing the D200+ are routed to the Central Monitoring Station.

## **Alarm Priority**

Once an alarm call has commenced dialling it cannot be interrupted; If a higher priority alarm call is received in the meantime (eg Call for Assistance) it must wait for the first call to complete. All Alarm calls generated by the M200+ system will be reported to the Central Monitoring Station as an 'Emergency Alarm' with the exception of a Fire alarm (see page 7).

## **Cancellation of Alarms**

While Central Monitoring is active, the following C200+ programmable options are overridden:

- ! Connected Call Timeout: becomes 2 minutes.
- ! Alarm Cancellation: Alarms will always cancel after shutdown or timeout.

There is a problem, however, with Smoke Detectors (see below) and other Alarm devices which have latching contacts applied to the Remote Inputs of the M200+ Room Unit. Because these devices cannot be cancelled, except by the intervention of on-site staff, they should not be used in conjunction with the D200+.

## **Fire Alarms**

The Smoke Detector Facility on the M200+ is intended as a supplementary feature, and cannot form part of an Approved Fire Alarm System.

The nature of Smoke detectors, placed within Living quarters, is such that false alarms are frequent (eg burning toast) and it is not usually appropriate to call the Emergency Services automatically without first establishing the cause of the smoke; normally a member of staff would speak to the resident or visit the flat (unless the approved fire-alarm system has also activated) and then reset the smoke detector. For this reason, (ie the need for on-site intervention) it is not recommended that Smoke Detectors be used in conjunction with the D200+ Communicator, on an M200+ system.

However, if smoke detectors are installed, then the D200+ will report Fire Alarms to the Central Monitoring Station in the same way as an ordinary alarm call. When the call is terminated the Alarm call will be 'put to sleep' for a pre-determined period ( an M200+ program setting) and will regenerate each time, until the site has been visited and the smoke detector has been reset.

## System Design

### Positioning the D200+ and Homelink Extra

The D200+ and Homelink Extra must be placed in a protected indoor environment. The Homelink Extra must be close to the D200+, a mains supply and a standard telephone socket.

### GroupMaster 200+ Software

When GroupMaster 200+ software is in use, the following restrictions apply:

- ! Only one D200+ can be fitted to the system.
- ! The D200+ unit must be connected to the M200+ bus of one controller only.
- ! The Flat numbering system for the site must be chosen to provide unique addresses for all units within the wider system, without duplication, and must easily be converted to a unique numeric address for transmission by the D200+. e.g. system 1 =A1-A40, system 2 = B1-B40 etc, see 'Flat number formats' page 13.



## Compatibility

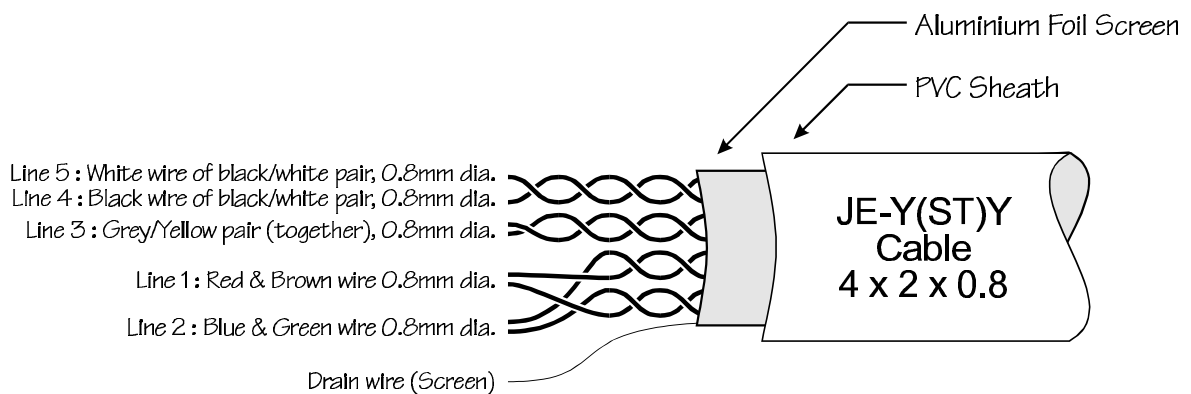
<b>Product</b>	<b>Compatible Version</b>
M200+	V1.0 or later
C200+	PCB Issue 2.1 or later Software V2.3 or later
GroupMaster 200+	Software V1.4 or later

## Cable Requirements

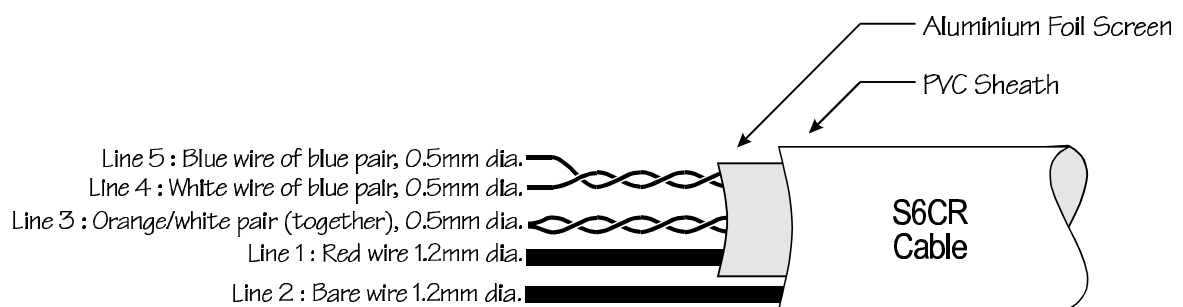
The D200+ is connected to the rest of the M200+ system using a 5 core cable which carries power, speech and data.

A single cable of type JE-Y(ST)Y, BSTL 'S6CR' (illustrated below) or equivalent, must be used to ensure correct operation of the system and compliance with European EMC directive (89/336/EEC).

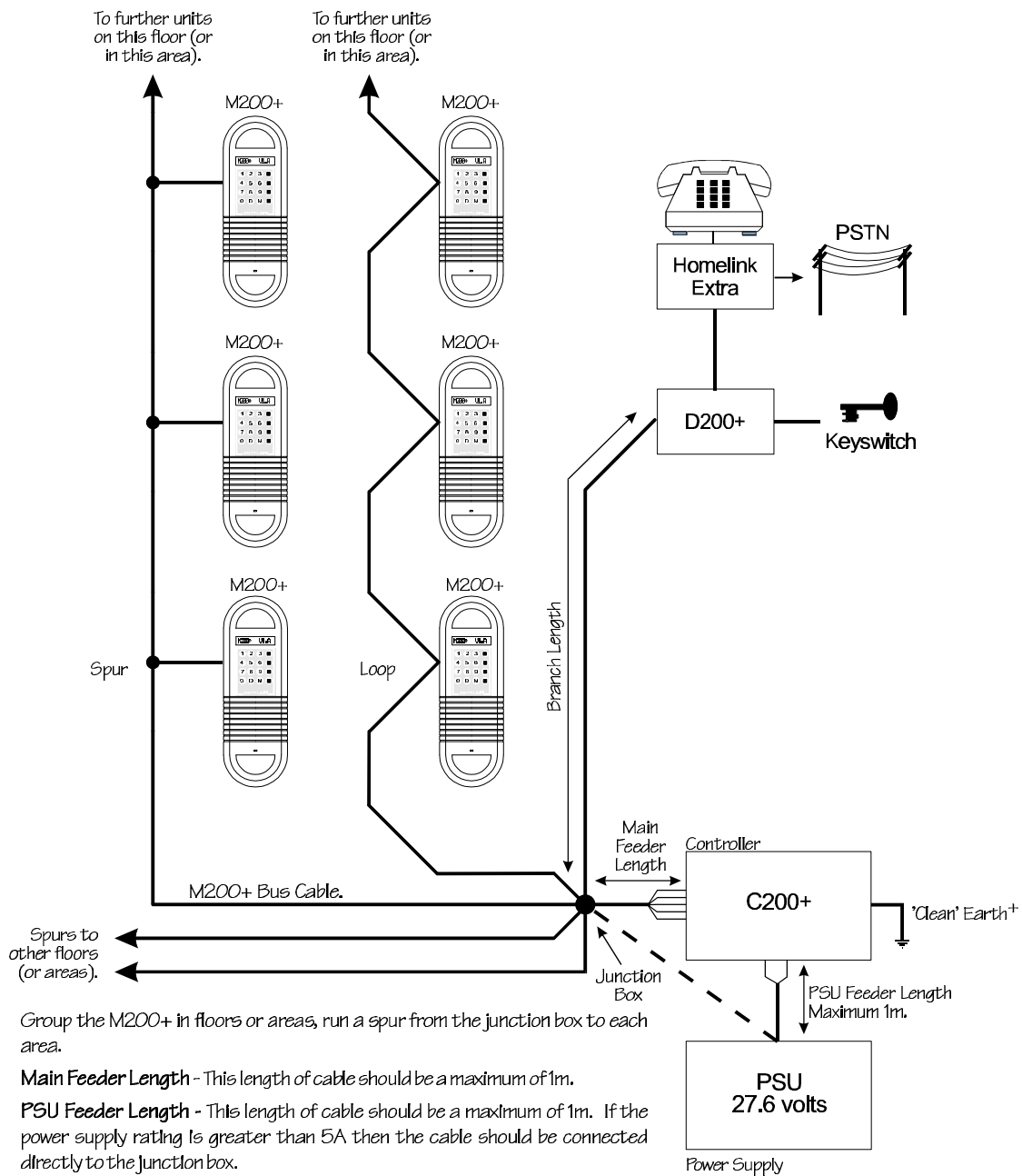
### JE-Y(ST)Y Cable Specification (For all new systems)



### S6CR Cable Specification (Upgrades to existing systems only, where cable is re-used)

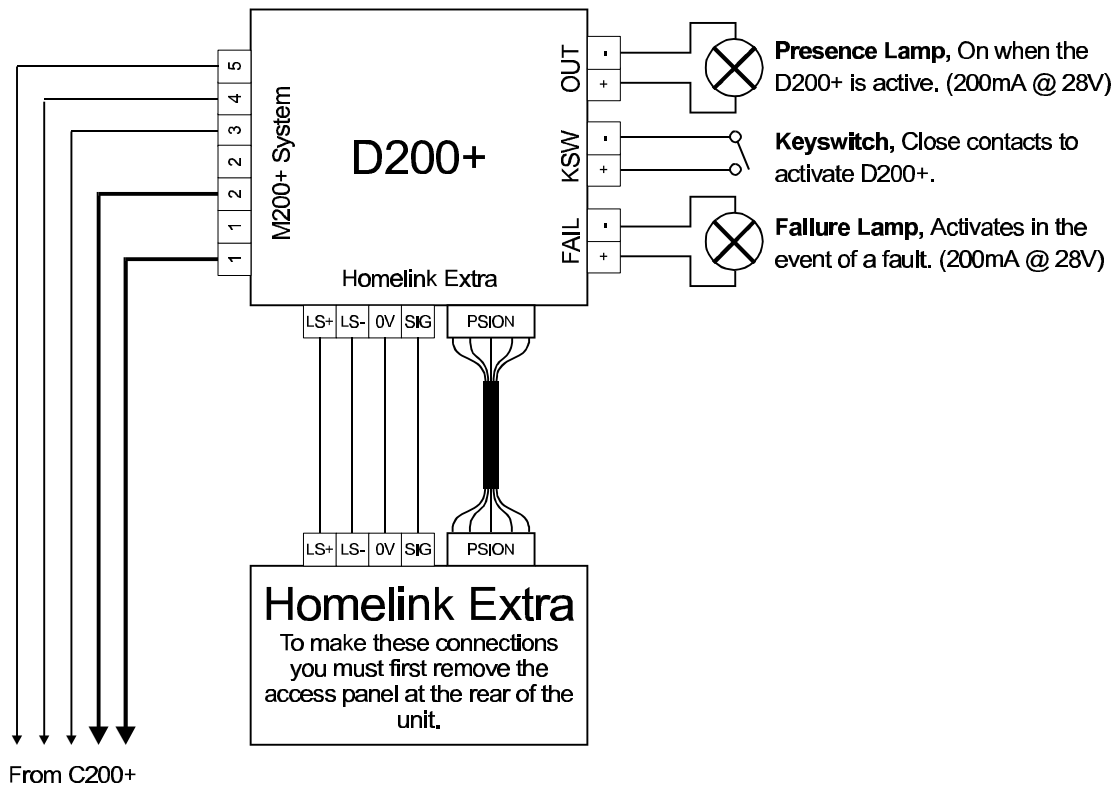


# Cable Planning



+ For further information refer to 'Controller (C200+) Wiring' (Master 200+ Wardens Call System Installation Manual).

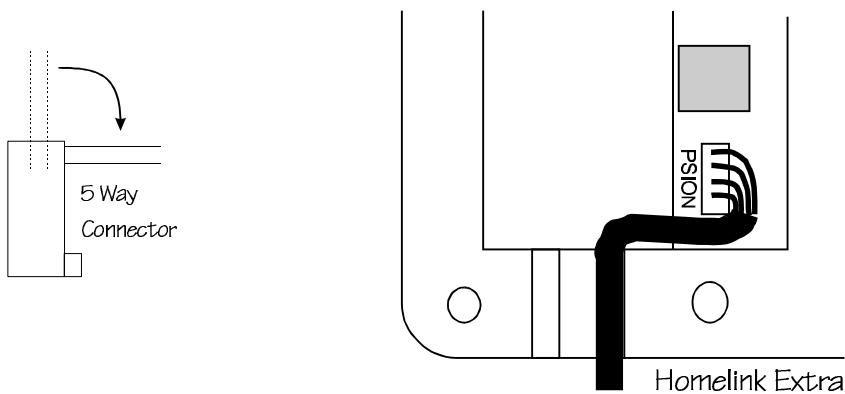
## D200+ Wiring



### Connecting the PSION Comms cable (Supplied with the D200+)

1. Bend the wires to 90°.

2. Route the cable as shown..





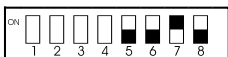






## **Power Supply Requirements**

To calculate the power requirement for the D200+ and the M200 system as a whole see M200+ Installation Manual.

## D200+ Setup

### Flat Number Formats

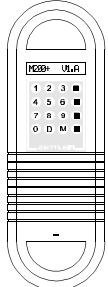
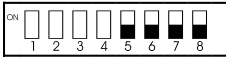
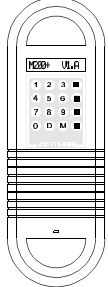

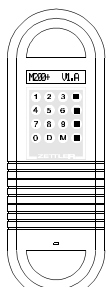

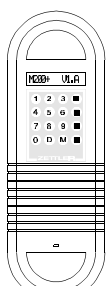

The Homelink Extra transmits data with each alarm call consisting of the flat number of the M200+ Unit appended to a fixed site code (programmed into the Homelink Extra). The total number of digits depends on the Central Monitoring Station format in use; Scantronic allows 4, 5 or 6 digits; Tunstall and SATA allow 8 digits.

DIP Switch	No	Algorithm used	
	1	2 digit logical (00 - 99)	
	2	3 digit logical (000 - 999)	
	3	2 digit flat (00 - 99)	All alpha characters lost
	4	3 digit flat (000 - 999) *	
	5	4 digit flat (0000 - 9999)	
	6	2 digit flat (00 - 99)	Alpha characters converted to numeric digits (A - 1, B - 2, ...)
	7	3 digit flat (000 - 999)	
	8	4 digit flat (0000 - 9999)	
		3 digit logical (000 - 999)	For future use: <b>DO NOT USE</b>

\* Factory default setting.

If the flat or logical number is too long or too short it is truncated or extended with zeros.

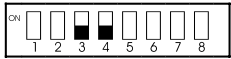
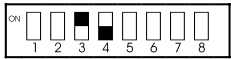


**Examples**

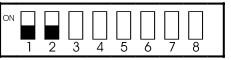
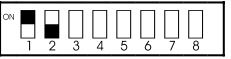
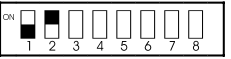
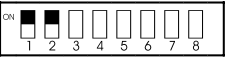
M200+ Settings	D200+ DIP Switch Settings	Homelink Extra Site Code	Number Reported to the Central Monitoring Station
 <p>Logical N°12 Flat N° 34B</p>	<p>Algorithm 1</p>  <p>2 Digit Logical</p>	<p>5478</p>	<p><b>547812</b></p>
 <p>Logical N°12 Flat N° 34B</p>	<p>Algorithm 4</p>  <p>3 Digit Flat</p>	<p>478</p>	<p><b>478034</b></p>
 <p>Logical N°12 Flat N° 34B</p>	<p>Algorithm 7</p>  <p>3 Digit Flat (Alpha characters converted)</p>	<p>934</p>	<p><b>934341</b></p>
 <p>Logical N°12 Flat N° 112A</p>	<p>Algorithm 4</p>  <p>4 Digit Flat (Alpha characters converted)</p>	<p>58</p>	<p><b>581120</b></p>

## Call Repetition And Failure Output Delay

When an alarm call is received it's details are passed to the Homelink Extra by the D200+. The Homelink Extra then dials each of its programmed telephone numbers in turn (or until one answers), the Homelink Extra will dial each number 3 times before reporting the failure to the D200+.

The D200+ will then pause a set time before trying again (Switches 3 & 4). Once the D200+ has waited the preset time without success, the failure output will switch on and the pause between attempts will then reduce (Switches 1 & 2).

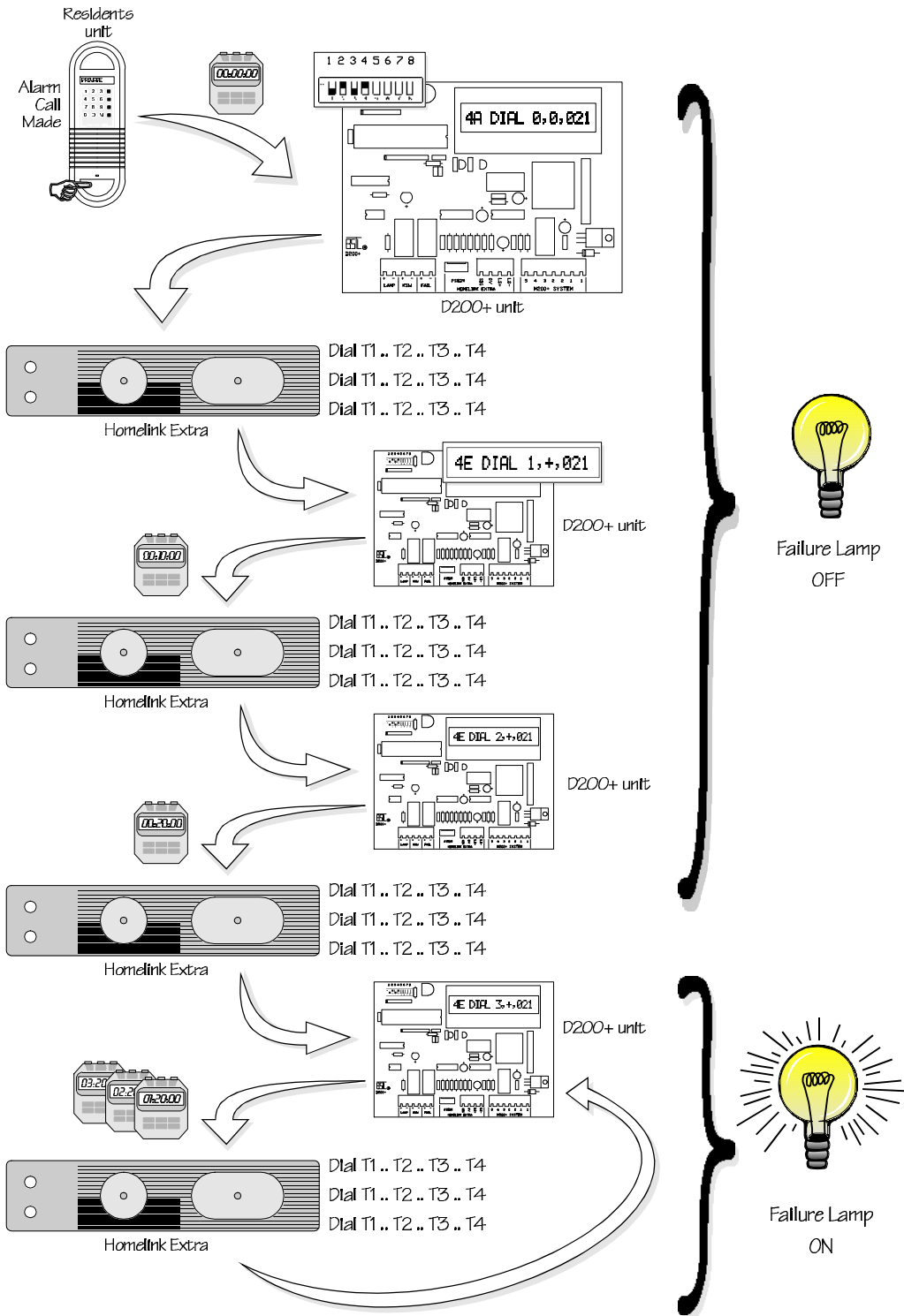
DIP Switch	Number of attempts	Pause between attempts	Delay before failure output activates
	1	0	Immediately after a failed connection attempt
	3	5	10mins
	3	10	20mins *
	6	12	1hr

DIP Switch	Pause between attempts (after failure output activates)
	10mins
	30mins
	1hr *
	2hr

\* Factory default setting.



**Example of a call that fails to connect.**



## Homelink Extra Setup

### Programming the Telephone numbers and Site Code

The Homelink Extra can be programmed with up to 4 alternative telephone numbers and a site code. This is a standard feature of the Homelink Extra unit and can be achieved in 4 ways:

- On-site, via a Psion organiser and RS232 cable connected to the Homelink Extra
- Scantronic will enable a laptop PC to be used in the near future.
- On-site, via a standard telephone (DTMF), plugged into the Homelink Extra unit<sup>1</sup>.
- Off-site, via the Central Monitoring station.

For full details on how to program the Homelink Extra see the 'Installer's Guide' supplied with the Homelink Extra.

### Testing the Homelink Extra in Isolation

In some circumstances it may be beneficial to establish if the Homelink Extra unit is functioning without the D200+. To do this;

1. Disconnect all cables from the D200+
2. Connect a Scantronic Remote Microphone/Loudspeaker (unit 2080).
3. Make an alarm call using the orange button on the front of the Homelink Extra.

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<sup>1</sup> With the Homelink Extra (Bell System Variant) no audible prompts (beeps) will be heard, therefore, it is advisable when programming from a tone-dial telephone to connect a Scantronic Remote Microphone/Loudspeaker unit 2080, or 8 Ohm 0.5W speaker between LS+ and LS- .

## Installation/Test Procedure

1. Install and test the whole M200+ system (D200+ Not yet connected) in accordance with the Master 200Plus Wardens Call System Installation Manual.
2. Setup the D200+ DIP Switches as required
3. Program the Homelink Extra Telephone numbers and site code.
4. Connect the M200+ Buss cable to the D200+ (1, 2, 3, 4, 5)
5. Connect the D200+ Keyswitch.
6. Switch on D200+ Keyswitch, observe the display 

2 D200+ ENABLED
-----------------
7. Using a standard telephone test the phone line by making a call
8. Connect the Homelink Extra to the D200+ (Audio and COMMs)
9. Make an alarm call on an M200+
10. Check the call connects, speech works in both directions, and the Central Monitoring Station received the correct data.

## Trouble-Shooting

Indicated Fault	Possible Cause
Display and LED1 of the D200+ blank under all circumstances.	<ul style="list-style-type: none"> <li>27.6V power open or short circuit check lines 1(+) and 2(-); Check PSU for possible blown fuse.</li> </ul>
D200+ Display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">D200+ V1.0</div>	<ul style="list-style-type: none"> <li>This message should only appear momentarily when power is first applied &amp; after test mode.</li> <li>If the message appears at other times look for low or intermittent voltage across 1 &amp; 2.</li> </ul>
D200+ Display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">FAULT 1</div>	<ul style="list-style-type: none"> <li>Data line 3 shorted to 2(-)</li> </ul>
D200+ Display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">FAULT 2</div>	<ul style="list-style-type: none"> <li>Data line 3 shorted to 1(+) or open circuit.</li> </ul>

Indicated Fault	Possible Cause
D200+ Display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">             FAULT 3           </div>	<ul style="list-style-type: none"> <li>• Data active but corrupted/incompatible</li> <li>• System voltage is low; the data line has an intermittent connection; the data line(3) is shorted to one of the speech lines (4 &amp; 5); an early incompatible version of the controller has been used.</li> </ul>
D200+ Display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">             FAULT 5           </div>	<ul style="list-style-type: none"> <li>• Old controller (C200+) software version, C200+ software must be V2.3 or later when used with a D200+</li> </ul>
D200+ Display Flashes:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">             LINE FAILURE           </div>	<ul style="list-style-type: none"> <li>• Check Homelink Extra's connection to the telephone socket; Test the line by making a call with a standard telephone.</li> </ul>
After making a call, D200+ display:- <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">             4A DIAL X,X,XXXX           </div> <p style="text-align: center;">to</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">             4E DIAL X,X,XXXX           </div>	<ul style="list-style-type: none"> <li>• Check the COMMs lead connecting the D200+ to the Homelink Extra</li> </ul>

<b>Indicated Fault</b>	<b>Possible Cause</b>
No or low Speech from the Central Monitoring Station	<ul style="list-style-type: none"><li>• Homelink Extra volume control set too low; Short/open circuit on LS+, LS- connections from the D200+ to Homelink Extra.</li></ul>
No speech to the Central Monitoring Station	<ul style="list-style-type: none"><li>• Short/open circuit on 0V, SIG connections from the D200+ to Homelink Extra.</li></ul>
No Speech in either direction	<ul style="list-style-type: none"><li>• Open/short circuit on lines (4 &amp; 5)</li></ul>

## D200+ Specification

### Supply

Voltage	(maximum)	28V D.C.	
	(minimum)	18V D.C.	
Current	(Idle)	35mA	
	(Active)	125mA	Excluding LAMP & FAIL outputs

### Outputs

FAIL	28V @ 200mA (6W) max
LAMP	28V @ 200mA (6W) max

### Inputs (KSW)

Volt free closing contacts (active when closed).

### Size

Height	240mm
Width	192mm
Depth	50mm

### Display

16 character alpha numeric LCD



Products comply with EMC directive 89/336/EEC

**Standards**

Emissions: Generic BSEN50081-1

Immunity: Generic BSEN50082-1 (IEC801-2, IEC801-6)